

Zisheng Shao

The New Urban Area Development

A Case Study in China

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Dezhou CPPCC
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Foreword by Liu Taige

The urbanization that is taking place in China today is immense in scale and attracts attention from all over the world. That it has happened so rapidly and on such a massive scale is not without reason. There are many factors in its favor. To start with, the country is pro-development and pro-city planning. The current new initiatives to move towards a new model of urbanization in China that gives equal attention to large, medium, and small cities is clearly a step in the right direction. In addition, the clearly defined administrative structure, from the Ministry of Construction down to provinces, cities, and counties also works in favor of urbanization. At each level there are political leaders and government officials designated specifically to handle development and planning matters. This arrangement goes a long way towards ensuring administrative efficiency and speed. The fact that land in China is either government owned or collectively owned, and that people only have the right to use on lease, makes it easier for the government to assemble land for development. This is further helped by the fact that the country is basically financially sound and able to undertake development projects. On top of all these factors, Chinese officials at all political levels, having been actively involved in urbanization over the last three to four decades, have accumulated so much experience that they basically have a solid sense of what needs to be done and what should be avoided.

On the other hand, three to four decades of experience in urbanization and city planning terms is not long enough for a big country such as China to have gained a complete grasp of the issues related to implementing tasks in the most appropriate and effective way. For example, there is a tendency for officials to give priority to projects rather than to creating an optimal urban system through careful master planning. Also, under pressure of time, many cities take short cuts to get projects done quickly, resulting in sub-optimal end products. For those who are paying greater attention to city planning, there is a tendency to ‘shop around’ for ideas internationally. Occasionally they are seduced by sexy sound bites and often bulldoze through their personal pet ideas. These problems tend to be more pronounced in countries where political leaders wield a powerful influence on decision making.

The author of this book, Mr. Zisheng Shao, is clearly a keen observer of these phenomena, encompassing positive as well as negative aspects. His book is therefore clearly an attempt to inform those involved in urbanization and planning to be aware of the vast and diverse scope of work required to steer city development towards a more constructive and productive path. Mr. Shao is eminently suitable for such a task. In his long career in the Chinese government, particularly in his hometown Dezhou, he has been involved in urban planning and urban development, in government administration, and more recently has held political positions. Evidently he has been able to see the challenges and opportunities of Chinese urbanization from a variety of perspectives—as a professional, an administrator, and a politician. Not content with that, he also has read widely on urbanization, seeking out related books published both in China and other countries. These experiences have enabled him to organize the book almost as a kind of comprehensive checklist of all the major issues connected with urbanization and city planning. The book begins with a summary of planning theories, international and within China. It then goes on to talk about strategies and marketing of urban projects, planning and design of a city with reference to cultural consideration, and then implementation as well as the administration system required of a city.

In going through the book, I found a kindred spirit in Mr. Shao from many of the statements he made. For example, he referred to urban development as the biggest integrated man-made project. I cannot agree with him more. A city is indeed the largest man-made machine for living. It requires a lot of technical skills with high degrees of precision. He also mentioned that in urban development one should pay respect to history, nature, and ecology. In planning a city one should also strive for a balanced provision of infrastructure and amenities. Moreover, a city would do well to identify some if not all the projects with catalytic effects to spin off a virtual cycle of the development. These are words of wisdom which can only come from a person of rich experience.

I believe that the English translation of his book would go a long way to helping people outside China to have a better understanding of the issues and the possibilities of urbanization and planning in China today. Obviously the challenges and issues concerning urbanization in China and, in fact, in any country, are extremely complex. New issues will continue to confront those of us involved in planning. We need to continue to explore new concepts and new techniques to tackle these challenges. More specifically in China, with its lion share of big cities and mega-cities, it is imperative for all of us to continue to explore new theories and new ways to make these cities even more livable.

Foreword by Qiu Baoxing

Urbanization in China is now in a rapid stage of development and this is going to last for 20–30 years. It is a landmark event in the history of China’s modernization and development and in human progress. To move urbanization smoothly is the strategic mission put forward in the report of the 18th National Congress of the Communist Party of China (CPC). It is an important arrangement to promote the synchronous development of industrialization, informatization, and agricultural modernization and urbanization; it is a strategic focus to change the development mode, adjust economic structure, and promote scientific development; it is an important channel to solve problems facing agriculture, rural areas, and farmers, and to promote the harmonious development among regions and achieve the goal of an all-round well-off society. Therefore, we must be steadfast and brave in exploration and active in actions.

After World War II, the European countries turned their attention from warfare to economics. Eero Saarinen in Finland, a well-known designer of urban planning, was sharply aware of this change. In his opinion, all the large cities in the world should take a road of Organic Decentralization. The theory of Organic Decentralization was regarded as a blockbuster of urban planning. Towards the end of World War II, England had only a population of 36 million, of which 5 million had gathered to fight. As soon as the war ended, these 5 million people would get married, have children, and find jobs. “Where should they be relocated?” asked the wartime Prime Minister, Winston Churchill. In accordance with the Organic Decentralization theory, if the soldiers all swarmed into London, the city’s population would explode.

According to Saarinen’s theory, Churchill invited a group of designers to push forward the “New City Plan,” that is, over 30 satellite cities were to be deployed outside London. The way to enforce it was that, after the New Town Development Corporation was founded by the government, the land would first be expropriated by means of state financial borrowing as new town planning and infrastructure facility investment, then the land would be sold on to get money back for rolling development. British new town planning grew into a movement, influencing a

whole generation. The Greater London New Town Planning was followed by that of the Grand Paris. Both followed Saarinen's theory.

In China, this kind of decentralization should have started earlier. However, not only did we get to know about it late—we also cultivate doubts about its growth mechanism.

England has experienced many pains in exploring this issue and, in practice, it had the first, second, and third generations of new towns.

The first generation. They were called "Sleeping Towns" and had a small population, a simple function, and few jobs were on offer there. Most people swarmed into the old area in the morning, and back into the new one in the evening, causing a giant pendulum of urban traffic. This kind of new town has been proved unsuccessful.

The second generation. The designers of Churchill's time were aware that they should develop the second generation of new towns, which could shelter over 200,000 residents and offer 50 % jobs locally. In this way, at least 50 % of intercity transportation could be reduced.

The third generation. Following the second, the third was rapidly pushed out. It could house 300,000 people, and created sufficient jobs, realizing the balance between working and living. It not only guaranteed the economic vigor of the new area but also reduced the traffic pressure to the old.

In this way, British designers found the proper road to scientific planning and construction of new towns. During the construction process they come to the conclusion that the key of a new town's successful development is that its human settlement environment should be better; the public service should be more qualified; humans and nature should be more harmonious. Hence, a magnetic force against the old town could be formed and, with this repulsive force, the function and population of the old town would gradually transfer to the new one and organic decentralization could be realized.

In China, the leaders at different levels and the people are all worried about the excessive expansion of metropolises, for it is a worldwide epidemic. The bigger the cities become, the higher the commodity production benefit. Meanwhile, more jobs and public services are created, so people tend to live and work in such cities. As a result, the metropolis automatically absorbs population and causes a vicious circle of scale expansion, which has taken place many times in the history of world urbanization. In order to solve this kind of problem, the Chinese-type "new town plan" should be set up as quickly as possible.

Mr. Zisheng Shao has been an experienced director of management in Dezhou Urban and Rural Planning and Construction for many years, and was once responsible for the planning of Dezhou Hedong New Town. In his spare time he is devoted to urbanization theory and new urban area development law. With a strong sense of commitment and a profound desire to promote Chinese urbanization, he finished *The New Urban Area Development: a case study in China*. His commitment and desire are very valuable and most commendable.

Chinese urbanization is unprecedented in human large-scale practice and calls for deep theoretical exploration and thorough scientific guidance. The new urban

development, as an important component and basic approach of urbanization, impresses the world with its unmatched speed, size, and image, calling for a timely summary of practical experience and continuous innovation of theoretical studies. New urban area development in the west has passed by with few papers in the field. In comparison with urbanization theory studies, there are few works on new urban areas, and comprehensive studies are even fewer in China. *New Urban Area Development: a case study in China* written by Mr. Shao introduces systematically the progress of new urban area development and research efforts, and constructs a panoramic view of the new urban area strategy and development path on a thorough study of more than ten aspects, such as strategic orientation, planning and marketing, development and construction, investment, culture, mechanism, policies, types, and future development. This is a theoretical, systematic, and creative work on new city areas, a practical and operational introduction to the new urban area development. Of course, to construct a complete new urban area development theory requires continuous practice and enrichment.

I am sure that the new urban areas and the whole urbanization development will take a unique Chinese road and make a great contribution to Chinese modernization development and the common development of mankind as long as we work hard and handle things carefully.

October 2013

Qiu Baoxing
Vice Minister of China's Ministry of Housing
and Urban-Rural Construction
President of Chinese Society for Urban Studies

Preface to the English Version

I have paid close attention to the social response towards the Chinese version of this book, *New Urban Area Development: a case study in China*, since its publication by Chinese City Press in February, 2014. The good news is that it is given due attention, and has caused certain reactions among theoretical circles and public opinion. On May 6, 2014, *China Daily*, the most widely circulated newspaper in China, published a commentary by Dr. Wu Handi, who spoke very highly of the book. *China Enterprise News* and *Dazhong Daily*, etc., have successively published articles or messages, which are reprinted by people.com, sina.com, 163.com, and other famous websites in China. This is the very thing I hope to see but a little beyond my expectation. In this boisterous age where most people are informed by the “three screens” of mobile phone, computer, and television, those who can calm down and attentively read an academic paper to me are very few.

Since I finished writing the book, I have been paying attention to the new urban areas in the world, especially those in China, and wondering how to deepen the research and boost the development of new urban areas. At first I didn't have any plan to revise and polish the book, so not a single word in the original Chinese version had been altered. Later the world famous Springer Publishing Company intended to publish it and make it a book for readers of different social economic systems all over the world. Furthermore, in the process of urbanization, “empty city,” “sleeping city,” and “dead city” appeared in China, which demanded full attention in urban industrialization (that is to say, measures should be taken to develop industries in the new urban areas. Therefore, a special chapter about industry is added and some particular words are also changed. Here I feel obliged to make some remarks on three aspects for the friends who have an interest in this book.

Role of Government and Market in the Development of New Urban Areas

Position and role of government and market in the development of new urban areas is addressed first because it is not only an important theoretical issue but also a practical one. In different countries with different systems throughout the world and during different stages of urban development, the government, unlike the market, holds a different position and plays a different role, and hence their objectives differ. China carried out the socialist planned economy from 1949 to 1978. Some theories and practices for urban planning and construction were copied from the former Soviet Union. The government, having very strong control over planning, had total control and domination over urban development. For example, the central and local government had the final say on establishment ratification, functional orientation, planning and design, investment, and development of the new urban areas. Since 1978, a socialist market economy had gradually been put into practice. The government played a leading and regulating role whereas the market played a fundamental role. The central government began to loosen control over the development of the local government. Many places planned and established some new urban areas on their own, and an upsurge of development of new urban areas ensued. At the third plenary session of the 18th Central Committee of the CPC in 2013, it was suggested that the market should play a decisive role in resource allocation and help government play its role better. Thus, it is estimated that the role of the market in Chinese urban planning and construction will gradually increase.

In fact, the city, right from its birth, is a spontaneous behavior of society, or behavior of people, or strength of market. To plan and construct cities systematically and with initiative, and to develop new urban areas actively are actions of economic social development at a certain stage. Because of the difference in national conditions, especially in social systems, economic institutions, political and cultural background, etc., the government and the market play different roles in urban development. It is the same at different stages of urban development. Throughout the world, urban planning regulation that can embody government and administrative appears quite late. In 1909 in England, the first urban planning law in the world came into being, i.e., *Housing and Planning Law*. In 1932, *Urban and Rural Planning Law* was also enacted there. In many countries with a complete market economy, only the government has macroscopic guidance. The government is considered to be undemocratic if it takes too much controlling responsibility or carries out detailed planning. Each program should take a negotiated position. In some countries, governmental control over planning sometimes depends on the understanding and preference of the governmental leaders. For example, Mrs. Thatcher didn't agree to have planning. So as soon as she took office, all planning was abolished. However, it was found later that without planning there would be no way to control the environment and no way to run a city coordinately

and efficiently. Therefore, planning was restored. It seems that even in modern countries with an adequate legal system, the state leaders have a great impact on some systems and policies.

The city is a public place for humans to live and work in a community and an important carrier of all kinds of factors which, together, produce an effect. Especially in modern society, human and natural environment, national and international community, enterprise and society, and individual and collective factors have many contradictions and conflicts in terms of ecological maintenance and sustainable development. Complete market behavior cannot really take the responsibility for urban resources, energy and environment or achieve sustainable human development. This not only attracts the attention of some countries, but also more and more countries, governments, and social organizations unite together to meet the challenge by doing research and taking measures jointly. Pure market forces and enterprise behavior may have some effect in the short term for urbanization and the development of new areas, but it is difficult for it to last and be sustained. If government and social organization don't take measures to regulate and control, in the long run it can lead to disorder, confusion, and even destruction of the natural and human world. Thus mankind could pay a higher price to restore the ecological system.

In the process of urbanization, industrialization and informatization, we cannot do without the power and measures of government (or social organizations with certain authority) in law and administration, and without the planning means of government. For most cities, government must play an important part: for example, by macro-control and intervention in time, it can carry out research on strategic development, implement scientific planning, organize significant infrastructure construction, reinforce public administration and public security, and protect the natural and ecological environment. Of course, instead of being omnipotent, the role government can play is limited, and too much administrative power of government is likely to result in resource wastage and low efficiency. So respect the market rule and take full advantage of the market, which can lead to higher efficiency and greater benefit in resource allocation.

Therefore, in the development of new urban areas, we need organic integration, mutual employment, and mutual promotion of the two means—government and market—the visible hand and the invisible hand. Under the guidance of macroscopic planning, on condition that intensive development, sustainable development, and public interests are well guaranteed, do not hesitate to hand over development rights and production factors to the market so as to let strong market forces do all it can to boost and accomplish self-redemption. From this aspect, there are many mature ways in the world we can learn from. But pay attention to the practical situation of the city because any mechanical and inflexible imitation is doomed to frustration and even failure.

Value of Industry and Population in the Development of New Urban Areas

Although I have discussed the significance of industry and population for new urban areas, I still feel it necessary to reinforce it because of the appearance of the “empty city,” “sleeping city,” and “dead city” in China and the world. All successful experiences of developing new urban areas, at all times, and in all countries, have attached much importance to these two factors. Some new urban areas, which experience frustration and even failure, do not show full respect to the two aspects. Even if they have better infrastructures and better public facilities, it is still hard to help the new urban areas with sustainable and healthy development. Huilongguan—a new town in Beijing and Kangbashi—a new district in Erdos, Inner Mongolia Autonomous Region, are two typical examples which do not deal with the problem of industry and housing well. The former is a “sleeping city” with residents but no industry or job opportunities, and the latter is an “empty city” with some industries but few residents.

The essential role for a city is to let people live better. How to fulfill this goal for most people in the world depends on the supply of job opportunities, which, as source of living and income, can provide clothes, food, shelter, and transportation, and enable people to be decently dressed, well accommodated, and conveniently transported. This is the most basic human need. If people had an uncomfortable life, no source of income, or scant income, nobody would wish to stay in such a city. Therefore, population and industry mean a lot for a city. Hold on to these two aspects and, meanwhile, take an overall view, including the city’s function zoning, living environment, traffic facilities, and acceptability of people’s minds and bodies. Given a good ecological environment and service and leisure facilities, living quarters should be as close to the working place as possible, which people can reach in minimum time. It is desirable to restrict the single journey time to half an hour at most whether residents travel by bus or drive a car themselves. It, however, is difficult to achieve in big cities and often remains a dream. Especially in China, because of the rapid urban development, urban planning usually lags behind urban construction and some problems inevitably arise in function layout. For example, people in China would rather spend a great deal of money on a house and obtain its total ownership than rent a house. Even if the house they purchase or own is far away from their workplace, or they have to spend a couple of hours commuting, they are reluctant to rent a house nearer their workplace.

The planning area and population of many new urban areas in China, because of the political and economic system and land administration, are very large. Some of them are even several times larger than their original urban areas in size and the population exceeds the total population of the original city. This kind of unrealistic and avaricious thinking mode and development behavior often causes a waste of a great deal of resources and funds. As a result, such new urban areas develop into the “empty city,” “sleeping city,” or “dead city.” Some cities have to readjust the

planning and reduce the scale of the new urban districts, resulting in “half-cooked rice.”

Regarding the two elements—industry and population, some people, with a deeper understanding and greater emphasis on industrial employment, are able to recognize that long-term efforts are necessary to realize industrial clustering and employment increase. So they make new policies, attract investment, and try to solicit and arrange some industrial projects and job opportunities. However, lacking full recognition of the difficulty in population gathering and the importance of talented people, they seldom take effective measures. Actually, population increase of the new urban areas is a very difficult matter to deal with, and talented people play a decisive role in the development and the future of a city.

For an ordinary city, if it is not a regional central city with some industries and population, if it is not a key city, full of great potential for growth and assisted by national policy, if it is not a tourist city with rich resources, if it is not a breathtaking and attractive city, it is very difficult to absorb large numbers of foreign immigrants, aggregate a large population, and attract a lot of talent. It is a very slow process to depend just upon the natural increase of the city’s own population. Therefore, industry and population are two wheels or two wings which need to move on together and fly side by side. They should not be separated from each other. It is desirable to achieve industry and city integration, that is, integrate industry, employment, living, and the environment.

Development of Chinese New Urban Areas: A Big Market and a Grand Stage

China is in an important period of rapid development of urbanization, and urban construction is in full swing with changes taking place every day. Some new urban areas have sprung up like mushrooms. On March 5, 2014, Chinese Premier Li Keqiang pointed out in his “Report on Government Work” that “in the next period to come, we should focus our attention on the ‘three 100 million people’ problem. That is to say, help to transfer about 100 million agricultural people to urban residences; rebuild shanty towns and villages in the city where another 100 million people live; guide still another 100 million people in the mid-west to a nearby urbanization.” Stiglitz, former vice president of World Bank and winner of the Nobel Prize in Economics, has repeatedly said that high-tech in America and urbanization in China are two engines bringing about the world’s future economic growth.

Urbanization in China is a magnificent cause and a big market. To fulfill the goal and make development scientific, intensive, and sustainable, it needs strategic research, a marketing plan and planning by different experts in the world, a huge investment of international capital, and worldwide participation of all kinds of fields. Recently, some international strategic research, marketing, planning,

design, and investment organizations have rushed into China, and have achieved extraordinary accomplishments and high reputations. This is an urban age during which China is experiencing tremendous revolution. This is the most precious development opportunity in the world. Some people and organizations throughout the world engaged in planning, marketing, and investment, should participate early and actively in Chinese urbanization development. It provides a broad canvas where people can realize their magnificent dream and display their brilliant talent, and a grand stage where people can get profitable rewards continuously and boost the sustainable development of economy, culture, politics, and ecology of society.

At first I had no thoughts of publishing an English version for *New Urban Area Development: a case study in China*. The kind Ms. Zhang Miao, however, suggested she try Springer Publishing Company where she works. After I sent the Chinese version of this book to the publishing house, they agreed to publish it after discussion. I am very grateful for Ms. Zhang Miao and, because of her action, the book is given a chance to have more readers from all over the world. I would like to show my admiration for Ms. Li Yan who has edited the book with a very modest attitude and responsible spirit. My thanks should also be given to the teachers from the Foreign Languages School of Dezhou University, including Ms. Shi Qingling, Ms. Fan Lili, Mr. Zhang Shoufeng, Ms. Wang Xianxian, and Mr. Zhang Guoqiang, who have worked very hard to translate the book into English.

Mr. Liu Taige, the world famous urban planning expert and “Father of Singapore Planning,” is a leading authority in the professional field and academic circles whom I have admired for many years. In spite of his busy daily affairs, he has spared the time to write a preface to the English version. I really admire his deep love towards city and his great contribution to urban development in the world. I am greatly honored and encouraged by his kindness and support. Both his learning and his spirit are extremely highly valued.

I would like to express my deep gratitude to Ms. Ai Xiaona, the national registered planner, for her help and her professional suggestions, without which the Chinese version could not have become what it is now.

My family gives me unyielding support in my book writing and other activities, which helps me to calm down in my spare time to think and research. As the Chinese old saying goes, “No use saying thanks to express gratitude for great kindness,”—my deep gratitude is more than I can express in words.

I sincerely welcome you to put forward your advice and suggestions about this book. Thanks!

August 2014
Dezhou

Zisheng Shao

Preface for the Chinese Edition

From the late 1980s to the early 1990s, when the opening up and reforming accelerated, China stepped into a period of fast urbanization, with economic development zones and new urban areas being planned and constructed everywhere. Since the beginning of this century, a surging wave of new urban areas has formed throughout the country. Some call it a city-building movement and some regard it as the era of new urban areas. This wave in China will be lasting for at least a few decades.

This wave comes rapidly, exerting a wide and profound influence, and China is far from ready with regards to the associated theory, talent, capital, management, policies, and regulations. Consequently, it is unavoidable for new urban governments to make blind strategic decisions, crave for things big and foreign in planning, share the similar visual effects among different cities, waste investment and construction resources, make ecological environment imbalances, fail to provide security for land-lost peasants, and generally lag behind in organization and management.

In the development of new urban areas, some designers are incapable of carrying out their projects strategically and their overall design level is far from satisfactory. Because a large number of planning tasks arrive in quick succession, they have insufficient time to study, think, and compare, so their planning is dogmatic spatially and dull functionally. In addition, some local officials, ignorant of new urban area development laws, make blind decisions and give random instructions. Driven by performance, some try to plan and develop so quickly that a lot of problems arise in the development of new areas. If we do not change this situation immediately, the long-term development of politics, economics, society, ecology, and culture will be directly affected and so will the improvement of people's living, transportation, leisure, and working conditions. Therefore, it is of great significance to attach great importance, study earnestly, explore the natural laws when making policies and regulations, and guide scientifically to ensure Chinese new urban areas move steadily and soundly. *China is a vast country with a large population. Different regions have different situations. The diversification and gradual process of urbanization calls for steady development based on the lessons and experiences*

from industrialization. China is late in urbanization in the world. It possesses many advantages in city planning and construction. If we are earnest in guiding scientifically and planning and constructing carefully, we are sure to work wonders, move the urbanization efficiently, and make a great contribution to Chinese modernization and development.

Some developed countries in Europe and America as well as Japan have long been past the developing period of new urban areas on a large scale, but they are weak in theories and practice in this field. As time goes by, they move into the stage of transforming and upgrading cities. As we can see from the consulted documents, the number of related works and papers is comparatively small and theoretical studies are far behind the actual development, although China has achieved a lot in the field of new urban area development theories. The works can be generally divided into the following categories: The first is to focus on the introduction to what Kong Hong and foreign countries have done and experienced, such as *Introduction to New City Planning and Construction* by Zhang Jie, and *New Town Models: Case Studies of International Metropolis Construction* by Chen Jinsong, which introduce the history and experience of new town development abroad; The second is to introduce and study particular practices of new urban area development in some places in China, such as *Studies of New Urban Area Construction in China: A Case Study of Zhengzhou New Area* by Yu Xin'an, Wang Jianguo and Wan Shiwei, *New Town Development Path: A Case of Nibo Hangzhou Bay New Town Area* edited by Cheng Gang, and *The Study of Creative Planning of High-tech Zone* by Chen Jiaxiang. All these introduce comprehensively what the cities have done, but they explore a little in macro theoretical studies. The third is about what some Chinese experts and scholars are doing in the field of planning, for instance *New Urban Theory* by Fu Chonglan, *The Making of a Chinese Model New Town: Planning and Development of Suzhou Industrial Park* by Shi Kuang, Liu Hao, and Lin Zhongjie, and *Spatial Evolution of Contemporary New Town in China* by Duan Jin and Duan Ming. These are professional, technical, and exemplary but lack things integral and strategic. Finally, the writings touched upon in some comprehensive books on urban development. These works stress design, and touch little on such aspects as strategy, marketing, planning, investment, and policies. These are to be discussed in the following chapters.

Up to now, the city is the greatest invention human beings have ever made and the largest comprehensive project they have ever built systematically and purposefully with rich contents of politics, economics, society, and humanities. The new urban area is the delineation and construction of the great project of mankind. It is a strategic and systematic project, which needs to start from a strategic study. We should look before we leap—make a good job of marketing, then planning, and finally investment in construction and development. The new urban area is not an industrial duplication but something with cultural content. It should have its features. Therefore, system, management, and policies provide it with guaranteed success and a driving force.

This book starts with the course of new urban area development at all times and in all countries, and illustrates its new ideas, implemented procedures, measures to

promote such aspects as studies of strategy, promotion of marketing, planning, development and construction, investment policies, cultures, systems, policy guarantee, types, prospects, constructing a theoretical system, practical application, and a complete action roadmap for new town development, in order to ensure its predictability, scientific basis, and operability.

It has been more than 10 years since I began to cultivate the idea of new urban areas. In 2002, I was the director of Dezhou Urban Planning and Construction Administrative Department. In 2003 the development of Dezhou Hedong New Town was launched. I was the director of the New Urban Area Office, responsible for its planning management and the new town offices in 17 villages until 2008 when the New Town was taken over by Dezhou Economic Development Zone. During this period, the land was strictly controlled by the Chinese government, and the urban development was much discussed for dismantling and construction all over the country. We have experimented on its development from such aspects as new urban area planning, design, compensation for land acquisition, relocation of villagers and social securities, and investment and financing, which have made significant advances. I have some profound feelings about it. During the years 2005–2007, I was a student at Guanghua School of Management of Peking University, and finished the thesis *On New Town Construction During the Acceleration of Urbanization Development*, which won the Excellent Paper prize. Since then, I have been thinking about new urban area development and collecting materials in this field. I took advantage of the opportunities of tours abroad and business trips at home in order to do field observation and investigate from different angles. Busy as a bee, I did not have enough time to make a systematic study of it.

In March 2012, I was transferred to a new job. Confronting the situation where China was promoting urbanization vigorously and new urban areas were growing throughout the country, I felt a strong sense of commitment to do something for the urbanization in my country, that is, to study and explore the strategy and methods of new urban area development, based on my studies and practice, and the experience gained by others both at home and abroad. Therefore, in my spare time, I think, I consult, and I write.

The rich experiences accumulated in western urbanization should be learned from selectively. China has vast territory and a large population. Its cities vary a lot and develop quickly. The city is a phenomenal society with rich contents. New urban area development is a spectacular yet difficult cause for the Chinese. In the age of information where time passes quickly and knowledge explodes, it is of great necessity to construct a systematic new town area theory with lots of disciplines and a wide coverage of knowledge. Because of my other commitments I cannot do it completely and scientifically. However, I will try my best to do as much as I can.

Let's work together to promote the urbanization and development of new urban areas and make more people happy.

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Part I
Introduction

Chapter 1

The New Urban Area Evolution

Abstract In order to study the concept of the new urban area, it is of great importance to clarify what it is. This term has developed through different stages of “commune”, “working community”, “company town”, “garden city”, and “satellite city”.

1.1 Concept of the New Urban Area and Its Basic Features

In order to study the concept of the new urban area, it is of great importance to clarify what it is. This term has developed through different stages of “commune”, “working community”, “company town”, “garden city”, and “satellite city”.

The “commune”, originating from the Middle Ages, referred to the autonomous towns existing at that time in western Europe. Though a conceived organizational form, it expressed people’s idea of constructing an ideal urban society which sparked their minds into striving for it.

The “working community” was put forward by Irving in 1813 and he began to experiment on it. He introduced his ideas of number of residents, arable areas, buildings, general organizations, and public institutions in the community, and tried it out successively in Orbison in Britain and Indiana in America.

Chinese academia holds different opinions about the person who first used the term “new town” in history. The scholars represented by Professor Duan Jin, a designer in Southeast China University, think that Ebenezer Howard of England first applied the term in his book *The Garden City Tomorrow* in 1898, and defined it. In this important masterpiece, he introduces the idea of the Garden City and five principles underlying the urban-rural integration with specific planning. It pioneers the theory of new urban planning and construction, bringing a world reputation to the author and exerting influence in this field up to the present day.¹ However, a

¹Duan Jin. *Spatial Evolution of Contemporary New Town in China*, p. 1.

scholar named Chen Yumei holds a different view. She thinks that Osbourne first presented the term in 1918.² Thereafter, it began to be used in some developed countries such as Britain and America, and we generally translate it as *xīn chéng* in Chinese.

In 1915, Taylor of America (or Enwen) proposed to establish the “Satellite City” in the suburbs of large cities. In 1924, at the International Conference of Amsterdam, Holland, the Satellite City was defined as an independent city unit which had some features of a modern city economically, socially, and culturally, yet still remaining a derived product of a big city. The 1928 Greater London Planning suggested that satellite towns be built on the city outskirts and the population be decentralized from the urban industries and population distribution planning be introduced. By the 1940s, when Britain began to construct satellite towns around London on a large scale, the term “New Town” began to come into frequent use.

People throughout the world have different understandings of this term and act differently in realizing it. The term is so conspicuously epochal and regional that it varies with social systems, territories, and choice of investment methods. The generalization of the new town’s nature, features, and functions given by scholars of different countries from various perspectives are discussed below.

In *The Garden City Tomorrow*, Howard defined New Town as a relatively independent city community, which is designed to be a space unit for residence, industries, and public service centers, with the purpose of resettling people outside cities. *Encyclopedia Britannica* explains that it is a form of urban planning which aims to relocate urban populations and transfer a large number of residents outside of a city to a relatively independent new community where residential areas, hospitals, factories, centers of culture, entertainment, and shopping facilities are built. *The British New Town Act* in 1946 stipulates its guidelines, strategies, land use, and fund-raising for construction of new towns in a specific and more standard way.

American scholar Stanley D. Brunn defines the term even more strictly in *Cities of the World: World Regional Urban Development*. He thinks that the new town is different from the self-developing settlement or the big and medium-sized city, because it is a new city and a development area built with goals and planning. In that book, new town refers to an urban community planned comprehensively at the beginning, whose goal is to perfect itself as much as possible by means of encouraging the basic economic development and supply of different municipal services and facilities. *The American New Town Act* classifies four types of new towns: the new town surrounding a metropolis, the enlarged city based on the former one, the converted or extended town within a city, and the independent new town far away from megacities. The new town in America is not definitive and it covers a wide range. A vast stretch of residential area building development, no

²Chen Yumei. *Solving Four Contradictions is to the Key to Improve Vitality of New Town Development*, Economic Review. 2011(12).

matter whether it is on the outskirts or within a city, is called a new town, with its area varying from <1 to 40 km².³

The new town in Hong Kong is called *xīn shì zhèn*, which refers to the residential quarters, industrial areas, and related social service facilities built at a suitable location outside the city in order to attract more people to settle down and decentralize residents of older quarters, so that the increasing pressure on housing, transportation, employment, and basic infrastructure can be relieved and the expanding sprawl of the city can be avoided.

Some experts and scholars in China apply the concept of new town in their works, such as *On New Towns* by Fu Chonglan, *The Theory and Practice of New Town Planning: The Deduction of Garden City Idea for a Century* by Zhao Min and Zhang Jie, *Introduction to New Town Planning and Construction* by Zhang Jie, and *The New Town Patterns* by Chen Jinsong.

In the process of studying new towns, Chinese scholars have been stressing more the close relationship between the new urban area and metropolis urbanization. For instance, in *The New Town Organic Growth Planning: the Theoretical Analysis of New Towns Led by Industrial Development*, one of his series of studies titled *On Chinese Urbanization and Regional Sustainable Development*, Dr. Xing Haifeng thinks that the new town is “a relative independent city, which is designed and built to have a city-like scale and density, relying on some resources (transportation facilities, scenery, universities) at a considerable distance from the downtown area, as the space of metropolis expands in the process of urbanization.” In his *On New Town Development in Contemporary China: Situation Analysis and New Concept Interpretation*, Zhang Jie considers that the new town “located in the suburbs of megacities is a relatively independent city community with permanent green land separating them. It boasts its convenient transportation, complete facilities, and beautiful surroundings, and can share the functions of housing and industry in the central areas of big cities.” In his *Introduction*, Zhang Jie puts forward the concept of the city-like settlement, a place resembling cities. It refers to human settlements in the suburbs of large cities which possess the comprehensive urban functions of employment, residence, and shopping with the purpose of relocating industries and the population being decentralized from the city central areas. He points out four features of this new town: independent spatial structure, independent economy, social independence, and independence of planning. These features essentially differentiate new towns from *lěi xīn chéng*. This distinction is very instructive and meaningful.

As industry and urbanization move on, some industrial parks and industrial-city integrated new towns come forth continuously, and the definition of the new urban area began to be used. The year 1990 saw the establishment of Shanghai Pudong New Area. The “New Area” for the first time became a buzzword in Chinese economic society and urban construction at this new period of time,⁴ because the

³Zhang Jie. *Introduction to New Town Planning and Construction*, p. 180.

⁴Yu Xin'an. *Studies of Chinese New Urban Area Construction*, p. 10.

term new town is really inadequate to convey the actual urban development and it fails to encompass the content of a city to be studied. Meanwhile, the term “new area” is also very limited, because it does not show the urban features. In addition, it reminds people of two terms used in the Anti-Japanese War and the Liberation War: the old revolutionary area and the new area, which are thought to be geographical concepts and fail to convey the connotations of a city with plenty of form and commercial activities.

The differences between the new town and the new area easily lead to conceptual confusion and theoretical difficulties. Therefore, we consider here the term “new urban area”, which is used in the discussion about “old urban areas, new urban areas, and new rural communities” by Professor Li Yining from Beijing University and in *Study of Chinese New Urban Area Construction* by Yu Xin’an, Wang Jianguo, and Wan Shifei. We note that this term is more expressive and inclusive, and helps to guide and study the new urban area movement. That’s why the book uses the term “new urban area”.

Chinese people are good at integrating, dissolving, and transforming. They usually deal with imported goods either carefully or indifferently, no matter what it is. Is it a culture? A system? A lifestyle? A technology or a product? They try to imitate, clone, and finally use it. Some are manufactured into copycat products, and some are creatively made. The term “new urban area” goes through the same process. First it is strange, then familiar, and finally too unremarkable to be recognized. For instance, some buildings are also called new towns or new areas by their real estate developers, such as Oriental New Town, Chang’an New Town, and Jingjin New Town, and are very common in China. Some names are even more “in vogue”, such as Paris New Town, Vienna New Town, and Rome New Town. Even some local governments call their office buildings and industrial projects new urban areas.

In the scientific field, it is of great importance to make a clear distinction of definitions first in order to carry out scientific research. In a country, the definition of a new urban area and its connotation is clearly specified because it is concerned with the related policies to be enacted and enjoyed. Otherwise, once abused, the study of new urban areas encounter problems in becoming a specific and systematic science and people have difficulty in telling apart what is real from what is artificial, leaving loopholes for some real estate enterprises to turn some urban areas into real estate development.

What is the new urban area? The author thinks that it refers to a relatively independent area with comprehensive functions and prominent urban features designed and constructed by governments or other organizations in order to meet the demands of politics, economics, society, science, technology, culture, ecology, transportation, and military under the guidance of the national macro development strategy and regional development design. It is a relative concept and newly introduced. The reconstructed old city area is not called the new urban area. It has different sizes. In terms of its planning and construction areas, on the prefecture level it has an area of at least 10 km². According to the planning and construction

scale, different new urban areas should have different sizes. No matter what type it is, it should possess millions of square kilometers at least.

To be specific, there are two situations in the progress of new urban area development at home and abroad. One is the independent city constructed to meet the demands of the economic development of human society and population concentrations such as the ancient cities of Babylon, Egypt, and the ancient capital cities Xianyang and Bianliang (the present Kaifeng in Henan Province), Nanjing, Beijing, and the modern cities of Daqing and Shenzhen in China. The other is the much-discussed new urban area development, a term relative to old urban areas, namely, a place with urban features planned and constructed in the surrounding areas of a city, such as Pudong New Area of Shanghai and Zhejiang Qianjiang New Town. The second type is mainly discussed in this book.

Although the new urban area has different connotations in different stages, different interpretations in different fields, we should generalize its characteristics and find out some similarities in order to perform a good study on it. Following are the basic features of new urban areas.

In terms of planning, new urban areas should be completely planned. Through unified planning and design, the structures of space and function, even the city image and its color, are compatible. Meanwhile, as one means to solve urban problems, the new urban area is inevitably the product people consciously design and construct. This is how we differentiate it from the urban community which is sprawling out of control.

Spatially, new urban areas are somewhat independent. They keep a considerable distance from the old section. Some of them are next door to the old section, or separated from it by a river. However, despite of the distance, new urban areas are spatially independent with their regional space structure and specific functional location. It is certain that the association and communication between old and new areas are to be maintained through convenient transportation in order to realize the collaboration and division of labor and to move the regional coordinate development together.

Functionally, the new urban area is comprehensive. Its function should be clearly located with the focus on industries, or living, or working, or business, or comprehensiveness. However, no matter how it is located, it should be equipped with complete industrial foundation and public service function so that the residents can be employed. Sufficient houses should meet the demands of residents and the complete and relatively independent public facilities and services should be supported to get the area to run. Otherwise it could turn out to be a "Sleeping Town" or "Dormitory Town" with the single purpose of sleeping or a "Ghost Town" which is crowded in the day and deserted at night. All those mentioned above cannot be called new urban areas in a strict sense; they are nothing but city-like places or just districts of the old city.

Dimensionally, the new urban area has a considerable size. It should have enough land to be planned and constructed, sufficient for the population, industrial scale developments, and supporting facilities. With dozens of square kilometers of area and tens of thousands of people, it seems rather small; it should be at least

10 km² and hundreds of thousands of residents. In this way the municipal facilities can be allocated scientifically, the service industry can be developed, and the facilities and benefits of a certain size can be achieved so as to reach relative independence and self-development. As a result, the due function of new urban areas can be given to the go-ahead.

In addition, because new urban area management is somewhat independent, it should be an administrative management district with a certain format.

1.2 The Course of Development

The human history of civilization is one where humans walk from wildness to brilliant cities and towns, where the leisurely agricultural civilization develops into the urgent industrial one. In order to let more people enter cities from the countryside, realizing the dreams of working, living, communicating, and expressing in cities, humans have been building new urban areas in the way a large family builds or buys more houses for the increasing number of children.

Taking a general view of urban development history in the world, the earliest city appeared as a place for changing goods and the castle as a place for defense. According to what Lewis Mumford, the well-known urban theorist and social philosopher of USA, finds in *The City in History*, the city, as a definite new thing, is a product of combining the Neolithic culture with the older Paleolithic culture, and it first came into being during the transition from the former period to the latter.

Material evidence from archaeological excavations shows that the first group of cities appeared in West Asia around 3500 B.C., which covered Mesopotamia, an alluvial plain flooded by the Tigris and Euphrates, and the Iranian plateau, including Erker, Elihu, and the city of Babylon. The earliest cities in the Nile Valley appeared about 3100 B.C., which included Memphis and Thebes. The old cities in ancient India, America, Greece, and Rome all appeared at this time.

Up to mediaeval times, cities were on the decline from the fifth to the tenth centuries. The cities in Western Europe flourished during the ninth and tenth centuries. They first appeared in Italy, and then spread to the Netherlands, France, the Rhine river area, and the southern area in Germany. Cities and towns, big and small, mushroomed throughout Western Europe, and developed in large numbers and on a large scale, including Venice, Florence, Milan, Rome, and Paris. The rise of cities was pouring new energy and vigor into the developing Western European societies, while it bred new economic relations and social powers, and finally led to the profound change in societies; world history entered a new era. During this period, the cities in the Eastern Roman Empire, Russia, and Arabia developed rapidly.

In the late eighteenth century, the Industrial Revolution began to change the progress of human history, first in England, then the world. The revolution made new claims for urban development and triggered a new urban revolution. At this

time, people started to explore and experiment on building ideal cities to live in and develop, such as the garden city, the industrial city, and the linear city.

Stepping into the twentieth century, new urban area development speeded up. In 1903, Letchworth, the first garden city in England, was built. In 1919, the second garden city, Welwyn, was constructed. In 1935, the British government proposed the development of satellite new towns throughout the country, and four criteria were introduced. Up to World War II, people had conducted many exploring researches on urban planning and development.

After the war, the new urban area development stepped into a new stage. This happened first in England. In order to solve the problems of population explosion and the housing shortage after the war, the new urban area development was conducted on a large scale. From 1945 to 1981, 32 cities were built successively.⁵ New town development in Britain paved the way for humans to build new cities, and set up a good model. It really made a great contribution. France followed suit. In 1958, Paris first planned and constructed the new commercial area at La Defence of the western suburbs by axial spatial expansion mode. In 1965, *Paris Land Development and City Planning Guidelines* was formulated, stating that its radical concentric circle pattern was because of downtown crowdedness. In order to change the situation and the disordered sprawl, five new cities were proposed to be built on the north and south side of the city along the Seine River Valley. According to the multi-center space development pattern, the satellite cities represented by Tsukuba Science City were built outside of Tokyo, Japan. During this period, different from the new town development pattern in Britain, many developed countries such as America started new urban construction from city outskirts and constructed a series of new urban areas. From 1947 to the 1970s, America constructed 65 new cities among which 62 were located in the suburbs of megacities. By the 1970s and 1980s, some developed cities had accomplished their epoch-making urbanization, and new urban area development had come to an end. Urban development has gradually entered a stage of content transformation and functional perfection.

Chinese cities have a long history. Yangguzhen (a historical site) in Shanxi Province is recognized as the top among ten new archaeological findings of 2008. It is 6000 years old and covers a total area of about 800,000 m². Its excavation area is divided into south and north district. The south district is about 5615 m², and 23 different house sites were found together with 496 ash pits, 10 kilns, 8 urn coffins of the Yangshao period, 5273 pieces of pottery, 353 stone artifacts, 303 bone artifacts, and 16 shell artifacts. The rows of house sites and pottery kilns of Banpo four-phase culture are considered as the earliest cave architecture group as far as we know. Experts prove that it is possibly the earliest and the biggest city in China (Figs. 1.1 and 1.2).

Later, during the period of Longshan Culture around 4500–4000 years ago, several ancient cities appeared including Chengziya in Zhangqiu, Wangcun in Shouguang of Shandong Province, and Wangchenggang in Dengfeng of Henan

⁵Zhang Jie. *Introduction to New Town Planning and Construction*. p. 44.



Fig. 1.1 Yangguan relics of Shanxi Province



Fig. 1.2 Chinaware unearthed in Yangguan of Shanxi Province

Province. Between the twenty-first century B.C. and the sixteenth century B.C., Erlitou Ancient Town appeared in Xia Dynasty. In the sixteenth century B.C., Yinxu of Shang Dynasty appeared. In the eleventh century B.C., Wu Emperor of Zhou Dynasty founded the capital in Haojing. It was recorded in *Rituals of Chou* that the theory of Chinese ancient urban planning had almost taken shape during this period. The number of big cities increased greatly during the Spring and Autumn and Warring Periods. In the Qin Dynasty, the nation entered a building boom and the capital city, Xianyang, which was prosperous for a time, was unfortunately burnt down in during the peasant uprising led by Cheng Sheng and Wu Guang.

In the early years, the Han Dynasty spent 16 years building a large city as its capital at a place called Xiangju (later called Chang'an), which was close to Xianyang. The Toba Wei Dynasty moved its capital to Luoyang, building 320 districts, roads, and markets; hence, the industry and commerce of Luoyang developed quickly and its population increased to 300,000 or 400,000. Based on the Sui Dynasty, the Tang Dynasty had massive construction projects built, making Chang'an and Luoyang among the few largest cities in the world. The business development of the Song Dynasty brought a thorough and profound change to Chinese cities. The eastern capital, Bianliang (the present Kaifeng), was the capital of the Northern Song Dynasty and its largest commercial city, which greatly influenced the size, structure, and function of cities in later years. Chinese ancient cities underwent a change in form, system, nature, and function. Beijing, the capital city of the Yuan Dynasty and Ming dynasty, was influenced by the planning of Kaifeng.

In the Jin Dynasty, Beijing began to take the original form of being a city. In 1153, the Jin Dynasty moved its capital to Beijing, which was named Zhongdu, and underwent extension on a large scale. Zhongdu followed the planning of Bianjing of the Northern Song Dynasty and expanded its old city. At the beginning of the Yuan Dynasty, Kublai decided to desert the old capital and build a new one, which was the unparalleled Dadu depicted in the traveler's journal written by Marco Polo in Italy. The construction of the new capital laid the foundation for today's Beijing city. In the early years of the Ming Dynasty, this city was greatly expanded. First, its northern city wall was reduced; later the southern wall was expanded southwards. On the site of the old palace of the Yuan Dynasty, a little further to the south, the Forbidden City was built. The Qing Dynasty inherited Beijing city from the Ming Dynasty, and built a group of imperial gardens in the west suburbs. This city pattern lasted until Beijing was liberated.

The development of Chinese ancient cities mainly consisted of two types. One was the newly-built cities according to the planning of that time. They arose from the demands of politics and the military; for example, Yecheng, the capital city of the Wei Kingdom before the Sui Dynasty and the Tang Dynasty, Luoyang of the Northern Wei Dynasty, Chang'an in the Sui Dynasty and the Tang Dynasty, Dadu of the Jin Dynasty, Zhongdu (the present Fengyang) of the Ming Dynasty. The second was the cities gradually developed on the economic and social foundation, the transportation, and location advantages, such as Dongjing (Bianliang), Pingyangfu (Suzhou), and Yangzhou of the Song Dynasty.

Up to modern times, some new changes have taken place in urban development in some cities as the imperial countries invaded China and occupied the fields of politics, economics, and culture in the Opium War, as Chinese industry, commerce, and imperialism developed. Because of the long-term control of some imperialist countries, urban planning and construction carried a conspicuous and strong influence of colony, such as Qingdao, Guangzhou, and Haerbin. Some cities were developed by Chinese bureaucratic capitals and national capitals with the purpose of opening mining industries, such as Tangshan and Jiaozuo.

The new urban area development of People's Republic of China (PRC) started in the 1950s when everything was new and waiting to be done in this new century. As

a result, some new city areas were built around industrial developments and at the demand of national defense. Roughly, there were two situations. The first was to plan and construct some satellite cities in the surrounding areas of big cities, such as Shanghai and Beijing. From 1950 to 1954, the first overall city planning of Beijing looked at the way London and Moscow had gone. It radiated from the central city, covered an area of 600 km², and could house 6,000,000 residents in a shape resembling a pancake. At that moment, in the traffic line and space layout, the first, second, third, and fourth rings were basically designed, and the roads were a combination of rings and radioactive rays. The second was the small towns built for living in some energy bases, experimental bases involved with national defense strategy. Daqing Oilfield was discovered in 1959. As an important place well known for producing strategic resources, Daqing city was a gathering residential area which consisted of over 100,000 mud houses in the moorland. 1979 saw the foundation of Daqing city. In 1989, all the mud houses were gone and a modern new city began taking shape.

After the Chinese reformation and opening to the outside in 1978, new urban area development underwent fundamental changes at an unprecedented speed in history throughout the world. At the level of regional space structure, Chinese new urban development has experienced three echelons from East to West and three big tidal waves have gradually unfolded. Functionally it presents three stages: simple, comprehensive, and characteristic.

The first wave appeared in the early 1980s. In 1984, approved by the Chinese State Council, the first group of the economic and technological development zones was established in 14 coastal cities, which were the first new urban areas of contemporary China. Characteristically, the land was exchanged for investment, resources were used for obtaining markets, and industry led the development of urban infrastructure facilities. Dalian Economic and Technological Development Zone is the representative one. Shenzhen city, with only 30,000 people, was originally a small border town of Bao'an County in Guangzhou Province. In February 1979, the State Council issued document No. 38, which proposed that Shenzhen would be built into a new-type border city in the future years. Over 30 years of reforming and opening, this old small town was gone; instead, there stands a vigorous modern city.

The second wave arose in the late 1990s. Represented by the South tour speeches in 1992 by Deng Xiaoping, the chief designer and promoter of Chinese opening up and reforming, and the celebration of the Fourteenth Congress of the Communist Party, the Central Committee carried out a series of important policies and measures such as devolution of administrative power to lower levels, a new system of tax distribution, and involvement with the municipally affiliated counties, which greatly promoted investment and urban construction throughout the country, and a fresh round of new urban area development was initiated. The investment and industry in some big cities and coastal areas transferred to the central area. With the development of industry in the central area and big cities as well as the awaking of inlanders' minds, the new urban area development in the central area flourished. During this period, the new city area, with Zhengzhou New Town in Zhengzhou of

Henan Province as its representative, featured comprehensive functions and characteristic industries.

The third wave took place after the beginning of the twenty-first century when Chinese economic society entered a new stage of development. The Central Committee suggests the western exploration strategy, which provides a golden opportunity for the western regions to develop. The internalization and marketization then promote urban development and opening. Some cities in the mid-west regions take the opportunity to plan and construct a group of new cities, such as Tianfu New Town in Chengdu of Sichuan Province and Lanzhou New Town. Governments at all levels pay attention to the development of economy development zones and comprehensive new urban areas; meanwhile, they stress the planning and construction of new city areas characteristic of modern ecology, education, science, and technology. Sin-Singapore Eco-city of Tianjin and Chanba Ecological District of Xi'an in Shanxi Province were examples of this period (Table 1.1).

Table 1.1 The contrast of features of contemporary Chinese new urban areas during different periods

	The first generation of new towns	The second generation of new towns	Promise of the third generation of new towns
Urban area development strategy	Urbanization led by industrialization	Urbanization development strategy	Urbanization development strategy
Urban development policy	Key development of economic and technological development zones	Expand city scale, decentralize the old city organically	Urban and rural overall development, regional integration development
Urban space structure	Mono-center	Change from mono-center to multi-center	Multi-centers within the city, network among cities
Construction goal	Economic increase	Comprehensive new town	Application of eco-technology to construct sustainable development of demonstration area
Site selection principle	Cost priority	Regional priority	The area unusable under traditional conditions, such as saline and alkaline land, barren land
Starting mode	Industrial start-up	Catalyst to drive	Sustainable regional priority
Representative of new towns	Dalian Economic and Technological Development Zone	Guangzhou New Town	Tianjin Sino-Singapore Eco-city

Duan Jin, Duan Ming. *Spatial Evolution of Contemporary New Town in China*. p. 182

Notably, since 1990 when Shanghai Pudong New Area was launched, the Chinese government has been paying attention to the development of national comprehensive new urban areas. In November 2009, Tianjin Binhai New Area opened a new chapter. In June 2010, Chongqing Liangjiang New Area was established officially. In July 2011, Zhejiang Zhoushan Islands New Area became the first national island new area. In August 2012, the State Council approved the establishment of Lanzhou New Area. In October 2012, the National Development and Reform Commission published Nansha New Area Development Planning, so Nansha in Guangzhou of Guangdong Province became a national new area. The features of these six new areas run as follow. Their layouts are planned by the state, and the State Council set up the related policies; they are comprehensive new areas in the perspective of planning area, population size and orientation; they have higher level standards. Pudong New Area, Binhai New Area, and Liangjiang New Area have deputy provincial administrative specifications with very high potentials for politics and economic development. These six areas could become masterpieces in the history of Chinese new urban area development, the new growth measurement for regional development and the new landmark of opening and reforming in the new period.

1.3 The Motive of Development

Since the beginning of the twentieth century, human beings have been planning and constructing new urban areas consciously and on a large scale with the following considerations.

1. Population. Cities surely make life more beautiful. It is not only a dream but also a reality. Cities can offer more employment opportunities, complete public facilities, and more opportunities to start businesses and enrich life. Many people, especially young men with dreams, or those specializing in industrial and commercial operation, or people with artistic talent, leave their homeland and parents for cities or towns, though some of them are possibly penniless or without any professional skills. They curl up in the station, at the port, under the eaves, wander the street, or live in the suburbs, struggling and expectant. More and more people come here and gather together. Some of them have earned a considerable income. They have had a family and children. As a result, they demand residence and some public facilities. They build houses in the suburbs, building or renting houses at the city fringe. Gradually their settlements grow into new towns. Or they build houses within a city, and the existing population size is enlarged. At first, forced by having to survive, people behave spontaneously, blindly, and compulsively. With the development of cities, people begin to gather there rapidly. The urban population is so explosive that it may cause lots of dissatisfaction and pressure for housing, education, business, employment, and traffic. Hence, some residents must move outside. In order to

meet their immediate demands and orderly urban development requirements, the new urban areas must be planned and constructed.

Throughout the world, it was decades after World War II when this urban population exploded and the new urban development moved most effectively. After the war, thousands of British soldiers returned to their homeland which led to a housing shortage. The new town committee was therefore formed to take charge of new town construction. China is a country with a large population. After reforming and opening, streams of workers have gradually become a social trend and development is needed. Every year millions of people leave the countryside, the mountains, and small towns for the eastern coastal areas and big cities. As a result, the cities become crowded, and a series of problems arise involving housing, employment, traffic, and the environment. In short, the new urban space must be expanded. In Beijing, the permanent population increased by 500,000 annually from 2003 to 2009. In 2010, the permanent resident population exceeded to 1,800,000.⁶ It is therefore very necessary to find ways to expand the urban size, for instance, building new urban areas. The planning and construction department gathered ideas and suggestions from people of all walks of life as Hedong New Area of Dezhou in Shandong Province was launched. One citizen remarked that there are more children in the countryside and they need houses to get married when they grow up. Now that there are more people in the city it is impossible for them to huddle together, so new urban areas should be built.

2. Traffic. The traffic in cities is becoming more of a problem as the urban population increases, as the city size expands and people travel a long distance to work or to school, and as the number of cars grows. In the past the super cities such as New York, Tokyo, Beijing, and Shanghai were full of cars and very crowded. However, some medium-sized cities in the middle of China, even the counties, are beginning to have traffic jams now. Cars cannot progress until traffic lights change two or three times. This is mainly the result of more cars and more people in cities, aggravated by problems with the car industry development policy, unscientific road planning, and bad traffic management. The urban framework should therefore be broadened, the new urban areas being planned and constructed so that the density of people and vehicles can be diluted, and the distance between pedestrians and cars can be widened. If we plan and develop the new urban area well, realizing its comprehensive functions and enabling the new residents to be employed locally, live and prosper, a new city can gradually take shape.
3. Industrial development. With economic development, urban construction, and citizens' demand for an improved living environment, the old industrial enterprises, including those with good production and management, need to expand and those with serious pollution problems should be moved out, enabling

⁶School of Architecture in Tsinghua University. *New Towns and Villages*, p. 2.

construction of industrial parks. Some local governments are eager to move some industrial enterprises from the old areas to new ones in order to develop the local economy faster and wider. In order to vacate the occupied land in the old urban areas and realize the value-added profit of land and industrial upgrade, industrial enterprises urgently need to be moved out to the new urban areas. Therefore, the planning and construction of the new urban area is becoming a good choice. Since the 1990s, some cities in China have been moving their industrial enterprises out of the city, and using the vacated land to develop the service sector. It is a reflection of the reality of life, a necessary trend, and the right choice for city development.

4. **Environment.** Because of the restrictions from many aspects, cities used to select randomly the industrial projects it contained, so pollution is very common. It becomes more serious as the enterprises become larger and larger. The living and productivity of nearby residents are deeply affected; the improvement of the urban space structure and the development of the tertiary industry are under great pressure. The air smells bad in places around some chemical industries, whose production is very dangerous and threatens citizens' health and safety. It's very difficult to fight pollution and improve the safety of production, and more investment is needed. As a result, it is decided to transfer these polluted projects far away from cities, and new urban areas and industrial parks are thus established. Many cities find themselves in this situation.
5. **Land utilization.** As cities develop, the land for development in old urban areas is in short supply. According to the statistics, after World War II the construction land per capita in Paris was only one-fifth of the standard land use planning. In 2000, the old urban area of Guiyang had an area of 56 km² with a permanent population of 1,300,000. The proportion of 25,000 per km² was much higher than the national regulation of 85–100 m² per capita. It made Guiyang one of the cities with the highest population density in China, even in the world. Along the busiest Zhonghuabei Street in the city, the population density reached 50,000 per km² with 5 persons per m². The existing urban land resource had limited the urban development and improvement of human settlement. The municipal government of Guiyang had no choice but to plan and construct new urban areas. Through new urban area development and old city transformation and upgrading, Guiyang has undergone a great change (Fig. 1.3).
6. **Cost.** Old city transformation and renewal need a great deal of money and work—and the process is time-consuming. In some cities abroad, it takes nearly 10 years or even longer to relocate a project or expropriate a patch of land. Though less time spent in China, more men, materials, and money are always needed, and unpredictable elements such as petitioning frequently appear during the process. Sometimes there is a serious confrontation between the government and the landless people. Even excessive violence can be resorted to, such as self-mutilation or suicide. Expropriation and demolition of the old houses and buildings have a high cost in politics, the economy, and social security. However, new urban area planning and construction can reduce these risks with a low cost, small investment, fast speed, and good effects.



Fig. 1.3 Guiyang New Urban Area

7. Political reasons. To achieve national unity, national defense security, and balanced development among regions, the new urban areas are carefully planned and constructed.

There are other political reasons. China is a country with a large population and one of the fast developing countries in the world. Fast urbanization transfers a large number of peasants to cities where urban economics and social activities are increasing rapidly and agglomeration functioning is enhanced. Meanwhile, it triggers social change and intensifies different social contradictions, such as the concentration of a large population in cities, excessive urban development, traffic congestion, and environmental deterioration, which all impose great pressure on keeping cities on course. Some existing urban structures and sizes have seriously hampered the rapid development of urbanization. Therefore, we should expand the new urban development space, optimize the urban structure, promote its competitive capacity, and plan and construct new urban areas to relieve the stress of population growth in the old area. This is an inevitable part of urbanization.

In the first half of 2012, *World City Population Prospects in 2011* published by the Department of Economic and Social Affairs of the United Nations showed that the world population will increase to 9.3 billion from 7 billion in 40 years and 6.3 billion people will live in cities. It is Asia and Africa that will lead the global population growth, posing a new challenge to urban infrastructure facilities, housing, energy, disaster prevention, and making further requests for new urban area planning and construction. The development of new urban areas has actually become the need to improve the human settlement environment and promote economic and social development and primary features of future development in developing countries around the globe.

1.4 Patterns of Development

A pattern is a model or a methodology for solving problems from some aspect. During long-standing social practices, people generalize regularities, methods and modes of solving problems in things repeatedly occurring. These are patterns. Take the commercial pattern as an example. Usually there are two connotations: one is the specific method and approach of doing business; two is the constituent elements and their correlations. The pattern is a summary and it is specific, instructive, and replicable, so it can reduce man's repetitive thinking and study. A waste of manpower, material, and financial resources can be avoided. We would not want to do any useless job and go astray. In recent years, the commercial pattern has become one of the pet phrases some experts and scholars like to use and it provides both direction and impetus for enterprise development.

New urban area development is one of the great practices that human beings have had been involved with for thousands of years. It is a complicated system, which is a product of the interaction of society, politics, economics, culture, and ecology. Researchers and workers should generalize its regularities and make a set of scientific methods with the purpose of guiding us in promoting the development of new urban areas. The new urban area can then be developed better and faster.

1. Types. In terms of functional location, the new urban area consists of the comprehensive area, administrative and industrial areas, ecological, science and technology, residential areas, and others. The new urban areas of the same kind share a lot in functional location, space layout, and energy. This type is for reference. Different types have different function zones, planning requests, and construction methods. Chapter 10 is devoted to a detailed discussion of patterns.
2. Development methods and path modes. How to develop new urban areas? What are the developing methods and steps? Through case analysis, the stages of developing a new urban area usually consist of strategic study, programming and marketing, planning and designing, development and construction, and operation, followed by normal city management:

Strategic study → Programming and marketing → Planning and designing → Development and construction → Operation

The first stage of strategic study. We require a study of necessity and feasibility in order to locate its strategy, site, function, scale, and features. What new urban area are being planned and constructed? What is its development direction? What goal is to be achieved? What are the implementation steps? What measures should be taken to realize the goal? The first and basic task at this stage is to make clear and study these strategic and macro things.

The second stage of programming and marketing. To programme means to arrange. Marketing is to manage and to promote. We should study the situation where new urban areas develop and the goals we want to realize, and integrate

various resource elements in order to achieve the maximized value of planning and construction, the optimized development approach. Therefore, the main task of this stage is to decide what approaches and measures should be taken to move scientifically the development of new urban areas.

The third stage of planning and designing. The strategic location, programming and marketing are followed by the specific planning designing of establishing space layout, concrete patterns, style formats, and function arrangement. This stage focuses on the concrete planning of space, the fruit of strategic study and marketing.

The fourth stage of implementation. In accordance with the requests and prospects of the first three stages, we should raise funds, organize the crew, and construct, actualizing all strategies, policies, plans, and designs into concrete roads, parks, and the buildings of beautiful new urban areas.

The stages mentioned above are closely connected with each other and are mutually promoting. If the basic procedure is run contrary to these stages, the rule of new urban area development is violated and some errors or regrets are unavoidable.

3. The space component element patterns or component units. The comprehensive new urban areas are generally classified into the residential area, the industrial area, businesses and offices, the commercial area, and the leisure and recreation area. The new urban areas of different kinds and sizes have different internal component elements.
4. The main patterns of investment, development, and construction. Internationally, there are government-orientated types, market-orientated types, and government-market-diversified operation types. Because of the political and land systems of China, the new urban area development and the whole driving force is mostly pushed by the government assisted by the market and society.

It is certain that all patterns are the result of concentration and refinement. The new urban area development pattern is no exception. Pattern is pattern and formula is formula. Universality exists in particularity, and vice versa. New urban area development is universality, and every city has its own particularity. It is therefore difficult to copy by rote. We should start with reality and try to find a suitable way for new urban area development. During its development, through studying, borrowing, and creating, new urban area development can acquire vigor and vitality and humans can have new urban areas which are quite original and characteristic.

1.5 Term explanation

Term explanation: New urban area, new town, new district, city-like settlement, old town, main urban area, central urban area, mother town.

The terms mentioned above frequently appear in the book as well as in other works on urban planning and construction and new urban areas. They have various connotative explanations. In order to facilitate reading and further the theoretical development of new urban areas, the author presents a more standard explanation below.

1. New urban area, new town, new area. These three terms have the same basic meaning although they are applied at different periods and people use them differently. Comparatively speaking, the new urban area is advocated for its rich connotation and normative wording. They mainly refer to the comparatively independent areas planned and constructed with some comprehensive functions and remarkable urban features by governments or other organizations to meet the demands of politics, economics, society, science and technology, culture, ecology, transportation, and the military under the guidance of regional development strategy. The term new town appeared much earlier. From the twentieth century—when England began to plan and develop new towns—to today it is still used in some works, such as *New Urban Theory* by Fu Chonglan. The terms new area and old area were used during the period of the Anti-Japanese War (1937–1945) and the Liberation War (1945–1949). In the development and peace period, the revolutionary old area was frequently adopted. According to some experts, it is a term much applied in urban planning and construction, which started with the Pudong New Area development strategy implemented at the end of the twentieth century. It is still being used. For example, the state approved the establishment of Chongqing Shuangjiang New Area and Guangzhou Nansha New Area. The new urban area develops from the new town and the new area. It has been discussed in detail in the previous chapter, and it is now being much employed, for instance, the discourse of “old urban area, new urban area and rural new community” by Li Yining, *Studies of New Urban Area Construction in China* by Yu Xin’an, etc. This book adopts the concept of new urban area.
2. City-like settlement. In *Introduction to New Town Planning and Development*, Zhang Jie puts forward the term. He points out that the various new development areas emerging at the present stage should be defined as city-like settlement because most of them are not new towns in a strict sense although that is what they are called. This refers to a human settlement with comprehensive functions of employment, residence, and shopping, focusing on installing the decentralized population and industries from the city center, which is generally located near the large city. He continues to say that the new town has four remarkable features: space structure independence, economic independence, social independence, and planning independence, which are essentially different from town-like places.⁷
3. Old urban area, old town. These two concepts correspond to the new urban area and new town. They refer to the original urban area which has been developed and in which citizens are living.

⁷Zhang Jie. *The Introduction to New Town Planning and Construction*, p. 195

4. Main urban area, central urban area. These are concepts relative to the whole urban area. In a city, especially in the system of counties under city administration in China, the urban area and developed area are comparatively larger. The main urban area and central urban area are proposed in order to distinguish them. In each city, they cover different areas.
5. Mother city. This is a concept relative to a new town. Resembling a baby detaching itself from its mother, some new urban areas are separated from mother towns and exist independently. Of course, some cities, for instance, Las Vegas in America, Shengzhen City, Daqing City in China, were planned and constructed in a wild area or in the desert. They have no mother cities.

(Based on the relevant materials)

Chapter 2

Relevant Theories on New Urban Area Development

2.1 Garden City Theory

At the end of the nineteenth century, Ebenezer Howard from England, who specialized in city planning, unconventionally developed the Garden City Theory, which has significantly influenced new urban area construction and overall city planning of many countries in the world for more than 100 years.

In *Tomorrow: a Peaceful Path towards Real Reform* (1898), Howard holds that people should build an ideal city with all the rural and urban advantages, which he calls the garden city. Virtually, the garden city is a combination of city and country. In 1899, he founded the Garden Cities Association to spread his theory. In 1902, Howard republished his book entitled *Garden Cities of Tomorrow*. The next year he founded a company called Garden City Co. Limited and raised funds to purchase a patch of land 56 km away from London, where the first garden city, Letchworth, was established. In 1920, a second garden city, Welwyn Garden City, was started about 36 km northwest of London. The establishment of garden cities aroused worldwide attention, and many European countries rushed to follow suit.

In 1919, after consultation with Howard, the Garden Cities and Town Planning Association of England gave a clear definition of a Garden City. It was designed for health, life, and industry, and its size shouldn't be larger than what was enough to sustain a rich social life. It should be surrounded by a permanent belt of agricultural land. The land of the city was to be owned by the public and entrusted to a committee.

The garden city Howard has conceived includes two parts—the city and the country. Around the city is the agricultural land where the citizens often obtain provisions of fresh produce. Residents of the garden city live there and work there. All the land is owned by the people collectively and is leased when they want to use it. The city's income comes solely from the rent. Added value gained from construction and inhabitation on the land still belongs to the collective. The size of the

town must be limited so as to make it as convenient as possible for every household to have access to the natural space in the countryside.

Howard not only put forward the idea of the Garden City, but also applied detailed consideration in order to bring it into reality. He made specific suggestions on the source of funding, distribution of land, revenue, and expenditure of the urban finance, management, and administration of the Garden City.

Howard made a concrete planning for his ideal city and drew a diagram of it. He suggested that the total area of the Garden City should be 6,000 acres (1 acre = 0.405 ha). The city, with a coverage of 1,000 acres, is at the center; the agricultural land around it covering an area of 5,000 acres, including an agricultural college and sanatorium, besides cultivated land, pastures, fruit farms, and forests. Agricultural land is a reserved greenbelt, never to be abused. Of the 32,000 residents on this land, 30,000 people live in the city and another 2,000 people live scattered in the country. If the population of the city exceeds the restrictive size, it is necessary to build another new city. The garden city has a circular plane surface, whose semi-diameter is about 1,240 yards (1 yard = 0.9144 m). A park of about 145 acres is at the center, from which six main roads radiate outward, dividing the city into six regions. The outer region of the city is used for the construction of all kinds of factories, warehouses, and marketplaces. With one side facing the outermost ring road and the other side accommodating a ring-shaped railway branch line, transportation is very convenient (Fig. 2.1).

Howard also conceived the idea that several garden cities should form a city group around the central city, which he called “urban agglomerations free of slums and smoke”. With a recommended population of 58,000 people, the size of the central city should be a bit larger, together with its area. The cities should be linked by railway.

Concerning urban problems in modern society, Howard proposed pioneering planning ideas. In terms of city planning issues such as city size, layout structure, population density, greenbelt, and so on, he put forward a series of ingenious ideas, which made a relatively complete ideology of city planning. Garden City Theory has important enlightenment value for modern city planning and exerts a great impact upon some succeeding city planning theories, for example, Organic Decentralization Theory and Satellite Towns Theory. It also provides important guidance for the formation of some significant urban planning schemes and laws.

2.2 Satellite City Theory

The idea of Satellite City originated in England. It is Taylor from America who formally presented and used this concrete concept. Satellite city refers to some towns built outside big cities. They not only supply job opportunities but also offer perfect residence and public facilities. At the suburbs of big cities or other places nearby, the towns, with relative independence, are newly built or expanded to decentralize the population and industry of the central city. They are called “satellite

Satellite City Theory originated from Garden City Theory developed by Ebenezer Howard, a British social activist. He believed that around the central city there should be some smaller towns, which resemble satellites around a planet. According to Howard, when the second garden city, Welwyn Garden City, was planned, he had called it a “satellite town”. During the 1920s it was suggested in the advisory planning for London made by R. Unwin, a British architect, that population and employment be evacuated to nearby satellite towns. The term “satellite town” became popular and has been widely used ever since. Around the 1930s, London County Council used the term “quasi-sovereign satellite city”, which referred to a residential area with the characteristics of a dormitory town London suburb. According to the Greater London Plan initiated and composed by Patrick Abercrombie in 1944, eight towns were to be built in Outer London so as to evacuate the excess population; they were called satellite towns first and new towns later. The first generation satellite towns are dormitory towns: people live there but travel to work in the main city. The second generation satellite towns have some factories and public facilities where people can work close to home. The third generation satellite towns, almost independent of the main city, supply employment opportunities and the center is modern too. The fourth generation satellite towns nowadays have a multi-centered and open city structure, in which the satellite city and the main city are connected by high-speed traffic lines so that the function of the main city can be extended to the satellite cities. The major purpose of building satellite towns is to control overpopulation of big cities, disperse some industry and population, and, in the meanwhile, offset population attractiveness of the big cities towards the surrounding area.

Satellite City Theory, as a kind of positive urban planning theory, has a history of over 80 years. The satellite city is an inevitable product of modern city development. By sharing some functions of the central city, it is an extension of urban function. On the one hand, satellite towns are closely related to the central city; on the other hand, they are relatively independent. At the international conference held in Amsterdam in 1924 it was listed as one way to restrict the vicious expansion of big cities. It is generally considered that satellite towns can block the free population influx into big cities to some degree although it is relatively inefficient to evacuate the overcrowded urban population. This is testified to by the experience of many countries that it is difficult for satellite towns with a single urban function to achieve any desirable effect.

The current tendency of satellite towns is that the size of the city is becoming larger and larger; the distance from the central city is becoming further and further. This plays an important role in enhancing production corporation, supplying employment opportunities, balancing the male and female labor force, improving the quality of public facilities, and reinforcing the independence of satellite city.

2.3 Organic Decentralization Theory

Organic Decentralization Theory concerns urban development and spatial layout structure which Eliel Saarinen, a Finnish town planner, developed to cope with the various problems brought about by over-expansion of the big cities. According to Saarinen, cities disintegrate step by step: new towns do not abruptly separate from the central city but move away organically.

The overall Saarinen's theoretical system can be mainly manifested in his *The City—Its Growth, Its Decay, Its Future* published in 1943. He applies his knowledge about living organisms and the human body to research about cities and believes that a city, having the same inner sequence as the living organisms, is also an organism. A city is also made up of many cells with certain gaps in between. A living organism grows up by constant cell reproduction and each cell expands towards space nearby. Such space is reserved for cell reproduction in advance and thus can make the growth of the organism more flexible and less dangerous.

Saarinen maintains that, to control the decay of modern cities and promote urban development, three goals should be achieved. First, transfer all kinds of activities of the run-down area to suitable places according to a proposed plan. Second, renovate the above-mentioned emptied area and convert it for other most suitable purposes. Third, protect the value in use of both the old and the new. Therefore, organic decentralization is to divide the crowded areas of the big city into a couple of centralized units and then organize them into "correlated and functional concentrated points in activities". In this way, the originally dense urban area breaks up into individual towns separated by greenbelts.

Organic Decentralization Theory holds that some public and urban administrative department must be deployed at the center of the city. Both heavy and light industries should be evacuated out of the urban center. Because of the evacuation, a lot of empty land of large acreage in the city center should be used to increase green land and supply housing for those who have to work at the central area of the city, such as technicians, administrators, and dealers, so that they can enjoy family life nearby.

According to Organic Decentralization Theory, areas for personal daily life and work or "routine activities" as called by Saarinen should be aggregated. Areas for infrequent "occasional activities" (for example, competitions and performances), not needing to be restricted to a certain site, should be dispersed. Daily activities are taken on a certain domain as much as possible, the amount of traffic is reduced to a minimum, and mechanized vehicles are not always necessary. In daily life, people should travel on foot and make full use of modern transportation. Commuting to areas for occasional activities is no problem even if the journey is a little long, because in the green land beyond the domain of routine activities are major traffic roads, on which people can travel back and forth at high speed.

In 1915, Saarinen and Bethel Jung, entrusted by a private developer, made an expansion plan of 170,000 people for a Finnish Helsinki New Town Munkkiniemi-Haaga, also known as the "Greater Helsinki" plan. Conforming to the

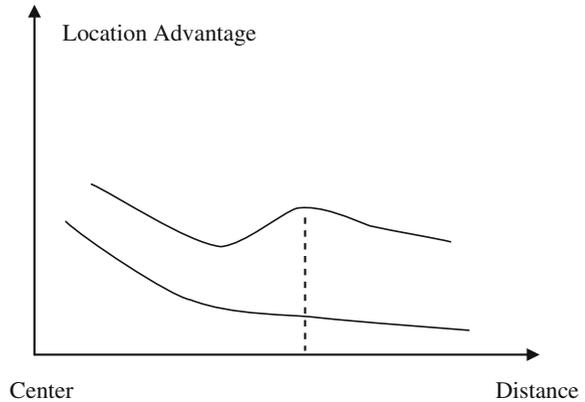
principles of Organic Decentralization Theory, it asserts that quasi-independent towns should be set up near to Helsinki, and the city should be given directed guidance to control its further expansion.

After World War II, many big cities in the West guided by Saarinen's Organic Decentralization Theory adjusted their urban development strategies and formed a healthy and orderly development mode. Greater London Plan and Grand Paris Plan are considered to be the most famous examples. Greater London Plan, completed in 1945, made an overall arrangement of spatial order for the metropolitan region around inner London. To attain the goal of evacuation, over ten new towns were to be built to receive the overspill population of London and help the postwar reconstruction by relieving the pressure of the city. Successful population evacuation should give credit to these new towns which broke down the function of London and supplied job opportunities at the same time. Later, although the government changed several times, the planning was carried out all the same, and a series of new towns were built. Since 1960, however, many scholars began to doubt the simple practice of the Organic Decentralization Theory applying rules of other subjects mechanically into city planning.

2.4 Theory of Urban Agglomeration Economies

Agglomerate economy theory is the classical principle of urban and regional economy theories. In 1909, the German economist Alfred Weber published his masterpiece *Industrial Location Theory*, in which he first mentioned that analysis and research of economic agglomeration's role should be strengthened. He defined agglomerate economy as benefit or economy gained from production or sale because of the production being carried out at the same place according to a certain scale. Agglomerate economy refers to "all kinds of benefits brought about by clustering of economic activities (not limited to a single industry) in space." It is a kind of systematic force to improve efficiency and reduce cost through economies of scale and scope. When multiple industries flock towards the city, agglomerate economy appears. This is urban agglomeration economy. At the early stage of agglomeration, agglomerate economy shows obvious effects: diseconomies of agglomeration are very weak and it is agglomerate economy that attracts the flow of population, commodities, and information. When it reaches a certain scale, a city is formed. Then the city expands its size more quickly. However, when the scale develops to a certain degree, the gradually robust diseconomies of agglomeration constantly impair the role of agglomerate economy. At this time, the inputs of marginal utility decrease progressively, and even aggravate the process of agglomeration towards decentralization, for example, the rocketing price of urban land, increasing congestion cost, serious destruction of ecological environment, etc. As a result, some of the urban enterprises and residents gradually move away and usually form a new agglomeration at the suburbs (Fig. 2.2).

Fig. 2.2 Changes of the urban agglomeration area (center)



Either agglomerate economy or diseconomies of agglomeration is a process of advantage location selection of resources, a process of economic factors moving and flocking towards the location providing the biggest advantage. Formation of new agglomerate centers is a result of evolution and adjustment of urban spatial structure. The process not only optimizes the structural upgrading transformation and adjustment of the original city center, but also drives coordinate development of the overall functions at urban areas.

2.5 Urban-Rural Integration Theory

As early as 1847 Engels had raised the concept of “urban and rural integration” in *The Principles of Communism*. However, in the city developmental theory field, it is Ebenezer Howard, a British social activist, who first put forward such an idea. In *Tomorrow: A Peaceful Path Towards Real Reform*, along with Garden City Theory, he also advocated to “replace the old social structure of urban-rural division with the new social structure of urban-rural integration”. “City and country have their own advantages and corresponding disadvantages although urban-rural integration can avoid the disadvantages of both.” “City and country must get married, and the happy combination ignite new hope, new life, and new civilization.” Urban-rural integration mainly has the following characteristics. Location of a Garden City should occupy agricultural land as little as possible. Whoever purchases urban land must set up or join a stock company. Urban population size should be limited to about 32,000 people. Land of Garden City should encompass a certain amount of agricultural land. Another new Garden City can be built nearby.

Arthur Lewis, an American scholar, is the first development economist who studied the influence of dual structure on economic development. In *Economic Development with Unlimited Supplies of Labor* (1954), he points out that developing countries usually have two totally different economic sectors: modern

industrial sector and traditional agricultural sector. The central center of economic development is the structural transformation from traditional agriculture to modern industry. McGee, a famous Canadian scholar, raised the concept of “desakota” (desa means “village”, and kota means “city”), which is used to describe the result of the dual action the city and the country have taken at the same place and time. It is neither rural nor urban but both rural and urban. Moreover, “with the emergence of desakota, metropolitan areas in the real sense come into being and rural-urban continuum become more urbanized at all levels.” That is to say, urbanization based on regional integrated development, in essence, is coordinated and integrated development between urban areas and rural areas.

Urban and Rural Integration Theory, as a goal concept for regional development, is becoming more and more widely accepted. It maintains that urban-rural integration, as an ideal development goal, gradually comes true in the long-term process of continuous optimization of regional social economy. This is a two-way process. This positive two-way evolution can take place between the city and the country and between the city and the region by absorbing advanced and healthy elements and discharging backward and undesirable elements of either. Under the condition of highly developed productive forces, urban and rural integration is a process in which the city and the country are combined together, share resources, market, and mutual environments with each other, and, finally, achieve a coordinated development in economy, society, and ecology. Urban and rural integration needs overall regional effort: on the one hand, reinforce the construction of the boundary network system between the city and the country and guide reasonable layout of regional space; on the other hand, rely on improving urban function and enhancing urban radiation, removing the obstacles of system and mechanism and encouraging the city to support the country.

Chapter 3

Literature Review of New Urban Area Theory in Contemporary China

Most of the theories in the world are based on practice and originate from it. However, theory is not practice itself. It is the summarization, generalization, induction, and inference of practice. Therefore, it has got some characteristics and laws of practice.

New urban area theory is no exception. It appeared at the early stages of capitalism development when cities developed rapidly and disorderly. In England, the most flourishing capitalist country at that time, a large number of peasants had flowed into cities, which expanded quickly and whose environment seriously deteriorated. Based on the former research results, Ebenezer Howard wrote the well-known *Garden Cities of Tomorrow*, which started the study of new urban area planning theory. Thereafter, the related studies in this field appeared. As times goes by, capitalist countries, especially the developed countries in the West, have passed the urbanization period, or, to be more appropriate, they have finished the historical mission of urbanization. The urban development has turned into a stage of renovation and improvement. Therefore the studies in this field are reducing gradually.

As contemporary China is at the height of urbanization development, there are many works and papers on new urban areas, which have influenced the development of new urban areas. However, compared with the studies on urbanization, planning, and construction, as well as the practice of fast urbanization, the studies in this field, especially the monographs and comprehensive works, are expected. In order to illustrate and help readers to understand, the book introduces the studies on new urban areas from three aspects: the comprehensive studies, the studies which are touched upon in other related works.

3.1 Comprehensive Studies

With many years of study and practice of urban planning, combined with his overseas special investigations, Professor Zhao Min in China Tongji University co-published with Dr. Zhang Jie a book entitled *The Theory and Practice of New City Planning—the Deduction of Garden City Ideas in a Century*. This book expounds in details the evolution of ideas from the garden city to the new town and

the development of practice, summarizes the experience of new urban area development at home and abroad, and introduces many cases of domestic new town planning. It provides guidance applicable to Chinese new urban area planning and construction. Prof. Zhao Min remarked “Up to now, this is the most complete and profound work on new urban area planning and construction.”¹

To enrich the teaching materials of China’s urban planning discipline, Dr. Zhang Jie revised his *The Theory and Practice* and compiled *Introduction to New Town Planning and Development* based on the former. This book mainly illustrates the early city planning concepts and the ideal city ideas, cases of modern city construction, new town movement, and new city development in the world. The most praiseworthy part of the book is its discussion about Chinese new city planning and construction, the principles and methods of new city development in the future. Anyway, it is a profound work on new urban area planning and construction.

Professor Fu Chonglan was first a historian in Chinese Academy of Social Sciences and then he turned his attention to the academic work of urban planning and the practical work. He has published many works on urban history, such as *The History of Chinese City Development*, *The History of Chinese Canal City Development*, and *The History of Lasa*. In 2005, he edited *New Urban Theory* which discusses the concept of the new city and its laws, and summarizes the international new city experience and studies the related questions of Chinese new city planning and development. Meanwhile, it offers an empirical analysis of new city planning and construction in Beijing and Zhu Hai. This book occupies a place in the history of Chinese new urban area research.

In recent years, Seiren Real Estate has been putting a high value on the study of urban theories. Its CEO, Chen Jinsong, has edited many valuable books, among which is *New Town Models—Cases of International Metropolis Development*. This book systematically introduces new city development in developed countries represented by England, France, Japan, and America by means of summarizing their basic features, experience, and disadvantages, and analyzing the development background and success factors of five new city types: edge city, TOD town, industrial town, city with deputy center, and new town with administrative center. Informative and rich in detailed analysis, and well-arranged, it is worth reading. This book makes a contribution to the introduction of new urban area studies of the world.

Planning New Towns is a book written under the leadership of Dr. Liu Shineng, president of Fulda City Development Research Institute. This book proposes the relevant things to be done to construct an ideal new city by depicting messes in new towns, pointing out the causes and the way for new towns. Compared with the other books mentioned above, it focuses on practice and is easy to follow. In promoting new urban area development, this book, original and pioneering, is worth reading.

Constructing New Beichuan, compiled by China Urban Planning and Design Institute and China Construction and Design Institute, summarizes the process and

¹Zhao Min. the preface of *Introduction to New Urban Area Planning and Construction*.

essential points of planning Beichuan county seat after the Wenchuan earthquake in 2008, showing the special new town constructed in a few years. It is a specific document studying the planning, design, and construction of new urban areas, and makes a great contribution to the study and assimilation of the architectural elements of Qiang people and the inheritance of their culture.

Regarding comprehensive works, there are several other books on new urban areas, either being planned or under construction. For example, *Studies of New Urban Area Construction in China*, by Yu Xin'an, Wang Jianguo, and Wan Shiwei, makes a complete review of Zhengzhou New Area's development. It consists of six sections covering decisions, construction, industry, evaluation, patterns, and prospects. This book sums up some successful approaches and makes tentative explorations into some aspects. Cheng Gang's *The Path Choice of New Town Development: A Case Study of Ningbo Hangzhouwan New Area* is a collective result of scholars from Ningbo University entrusted by Ningbo Hangzhouwan New Area Administrative Committee. Based on full investigations, it has introduced new ways and offered experience for some colleges and scientific research institutes to carry out the strategic study of Chinese new urban areas. In addition, *Research on the Development of Mi Dong New Area* by Wang Huixuan and Zhao Liming and *Observations of Chinese Urban Development* by Shi Fang, Yu Jin, and Wu Chengkun have made much contribution to the study and empirical analysis of Chinese new urban area development. It is certain that the works boast their comprehensiveness and macroscopic view because the writers specialize either in macro economic and social sciences or journalism. However, they touch little on such professional aspects as planning, design, investment, and construction. Anyway, these works, much valued as historical records and containing academic results, are of instructional significance in Chinese new urban area development.

3.2 Classified Studies

Many experts and scholars are studying new urban areas from different viewpoints, and they have obtained satisfactory results. Especially in the fields of urban planning and design, their studies are very professional and profound.

Spatial Evolution of Contemporary New Town in China: a case study and thinking about future planning by Duan Jin, Yin Ming, et al. under the leadership of Duan from Southeast University, presents the non-stop research results and exploration of more than 10 years by offering the first-hand data and empirical analysis of Yinzhou in Ningbo. It is a commendable work in studying new urban area space planning and development because they did a lot of in-depth analysis and thinking after having expanded their perspectives to the features of contemporary Chinese new towns at different stages and the trends of new city development towards the future.

Suzhou Industrial Park "is not an industrial park but a city, a new one with complete urban functions." This is a sentence quoted from *The Making of a Chinese*

Model New Town: Planning and Development of Suzhou Industrial Park by Professor Shi Kuang, Liu Hao, and Lin Zhongjie. As the first development project of industrial parks and new urban areas, which the Chinese and Singaporean governments collaborated to build, this park is a masterpiece and outstanding representative of contemporary Chinese new urban area planning and construction. As the chief designer for more than 10 years, Professor Shi has accumulated a lot of rich practical experience and thinking. Starting from the origins of modern city planning theories, he and other writers completely expounded the park's process, formulation, and management of planning, urban design, and architectural design, making some time-effect evaluations and focusing on the introduction of some methods for planning and design. It is an excellent book on studying Chinese new urban areas and the planning and design of industrial parks.

The School of Architecture in Tsinghua University started the journal *Urban and Regional Planning*. In 2011 *New Towns and Villages* was published, which contained five articles expounding new towns. *Chinese New Towns: 1979–1998* by Wu Tinghai, Yang Baojun, and Zhang Chengguo presents a theoretical discussion and empirical analysis of new urban areas and their development laws over 30 years since the reforming and opening, focusing on the capital urbanization with multiple perspectives of land systems, financial capital and banks, and national policy frameworks. It also discusses the future of Chinese new urban areas. *The International Experience of New City Planning and Development Practice and its Enlightenment* by Zhao Min and Wang Yuli illustrates the history and the current situation of new urban areas in England, France, Japan, America, Hong Kong, and China, and explores the success of Chinese new city development with several comments on it. *The Study of Shanghai New Town Development and Its Urban Space Structure System at the New Era* by Zheng Degao and Sun Juan analyzes the reasons why the governments of two central cities, Beijing and Shanghai, failed to be effective and intervene in new city planning, and proposes that the flourishing market-driven towns at the fringes of big cities should be incorporated into the government-orientated new town system. Under the system proposed, the towns at the fringe turn into cities; the industrial upgrading is combined with new town development; the free market is united with government guidance. This is the way of Chinese new city development for the future. Otherwise, it is hard to succeed in new town planning, which is nothing but a simple reflection of foreign theories and practice. *From "Large Community" to "New Town": Reorganization of "South China Residential Block"* by Yuan Qifeng and Wei Cheng, based on Guangzhou's urban development strategy, proposes to reconstruct the South China Residential Block so as to improve its urban communality and change the large community to a real urban neighborhood. *The Plan for Milton Keynes* explains the traditional understanding of the new town concept in the West by introducing the planning of the last new town in Britain. Although the articles mentioned above are not long, they all are very academic and theoretical. That's why these articles are collected in the book entitled *New Towns and Villages*, which is of great significance to the study of new urban area planning.

High speed rail (HSR) new towns are a kind of new city form of new urban area planning and construction arising in recent years. For example see *High-Speed Rail New Town—On the planning study and practice of Beijing-Shanghai High-speed Rail Jinan West Railway Station Area* by Wang Xinwen and Wang Disheng. Because the two authors are experts in the theory of urban planning and construction and have a lot of practical experience, the book is worth reading and can be used for reference. There are also other scholars and experts who are doing research in this field.

As for the classified studies of new urban areas, there are many works such as *Theory and Practice of Low-Carbon Cities* by Shen Qingji, An Chao, and Liu Shouchang, *Ideal Space* by Zhou Haibo, Zhu Xuhui, and Zhang Bang, and Shanghai Yinpai Engineering Consultants, Inc. and other articles concerning this topic. All these studies and results make a contribution to the formation and development of Chinese new urban areas theory.

3.3 Theoretical Studies Touched upon in Some Works

The new urban area is the primary form of urban development and an important platform and basic environment for human development. Some works on cities frequently involve discussions about new urban areas, and so do some about development. They are not illustrated here.

Apart from the three categories of studies above, there are many experts, scholars, and lovers of new urban area study who have done much in this field. Because of the limited space, the author apologizes for not covering more discussion.

Chapter 4

China Has Stepped into the New Urban Area Age

4.1 New Urban Areas Settle in Almost Every City in China

On October 16, 2012, when NDRC (National Development and Reform Commission) promulgated *Nansha New Area Development Planning*, Nansha in the capital of Guangzhou Province officially upgraded into a national new urban area and its development and construction rose to become part of national strategy. So far, Guangzhou Nansha New Area is the sixth national new area following Shanghai Pudong New Area, Tianjin Binhai New Area, Chongqing Liangjiang New Area, Zhoushan Islands New Area of Zhejiang, and Lanzhou New Area. Since the reform and opening up, there are over 100 national high and new technology zones approved by the Ministry of Science and Technology, and 90 national economic development zones approved by the Ministry of Business. In addition, there are also some new urban areas with different names such as the new-type industrial comprehensive reform pilot areas and the low carbon model cities. Many provincial and municipal governments have approved the establishment of development areas in their subordinate urban areas. For instance, every county in Shandong Province has a provincial development area. The media shows that, since 1984, 58 new urban areas have been established or are under construction in 13 prefecture-level cities in Jiangsu Province, 4.4 per city on average.¹ It is reported that the Great Northern Wilderness in northeast China, during the largest city-building movement, planned to construct 113 cities, and so did many cities and counties. In August 2013, the Reform and Development Center of Cities and Towns in NDRC carried out a survey of 12 provincial areas, showing that, among 144 prefecture-level cities, there are 133 cities which put forward intentions to construct new urban areas,

¹Duan Jin, Yin Ming, *Spatial Evolution of Contemporary New Town in China*. p. 4.

accounting for 92.4 %; 200 new urban areas have been designed and constructed, and every city averages out at 1.5 new urban areas.²

In China, there are all sorts of examination, approval and management from the governments at different levels as well as various functional divisions, and some local governments bury or skim off the report to the upper governments, when planning and constructing economic development zones and new urban areas. As a result, it is hard to find out how many development areas, industrial parks and new urban areas there are in China. The authentic number is far more than the statistic number released in the official statistics. *The new urban area has become the primary form in driving urbanization, the basic impetus of expanding cities, accelerating economic and social development, and improving people's livelihood, and the primary means for governments to manifest performance and creativity.*

4.2 Flying Urbanization: A Catalyst for the Construction of New Urban Areas

The concept of Chéng zhèn huà comes from the English word Urbanization, whose root “urban” means city or Chéng zhèn, and the noun suffix “-ization” means the process of happening or huà. Urbanization, a word taken to depict the evolution from rural to urban, originates from *The Basic Theories of Urbanization* written by Spanish engineer A. Serda in 1867. Urbanization really started after the Industrial Revolution and gradually becomes an economic, social phenomenon around the globe. It was not until the twentieth century that this term has become widely accepted by most scholars throughout the world. In the late 1970s the concept was introduced into academic circles in China. On October 11, 2000 the Fifth Plenary Session of the 15th CPC (Communist Party of China) Congress approved *Proposals for Formulating the 10th Five-Year Guidelines for National Economy and Social Development*. This is was the first time this term was used in Chinese highest official documents, exclusively referring to the process of transferring rural populations to urban areas.³ It is a comprehensive concept of showing the process of modern city development and its phases. It refers not only to cities, but towns as well, manifesting the latter's expansion in size, population growth, and development quality, including aspirations for progress in economics, politics, science, culture, and the ecological environment guided by sustainable strategies.

Literally, urbanization is the transformation from non-urban areas to urban areas, which consists not only of the city structure, the increase of city numbers, the expansion of city scale, and the concentration of population in urban areas, but also

²To Explore the Cut-off-mountain-to-build-city Secret of Yan'an, the Economic Observer, Sep. 2, 2013.

³Chengliang Wu, Jumei Bai. *Urbanization—Not Panacea to Stimulate the Development of Economic*, Global People, 2013/17.

the essential change of regional patterns of industries, diffusion of city culture, civilization, consciousness and spirit, reform of political and social mechanism, transfer of residents' identity, and their improvement of welfare. Therefore, the definition of urbanization includes quantity and quality, visible and invisible urbanization. From the perspective of quantity, urbanization means that rural regions turn into urban areas continuously, manifesting the expansion of city districts, the growth of urban population. From the quality's perspective, urbanization is a gradual process of being "assimilated" by cities, namely, advanced productivity in cities and modern culture are spreading and diffusing to rural areas, urban industrial structure is being upgraded, and urban construction and management is in continuous improvement, so as to meet the growing material and spiritual needs of residents. The urbanization level is an important indicator of measuring how a city develops by means of the proportion of the urban population in the total. It symbolizes urban modernization.

Looking around the world, it is after the Industrial Revolution that modern urbanization started. Britain was the first country in the world to realize urbanization. In the first stage, it spent about 100 years; in the mid-nineteenth century it entered the second stage of accelerating, which lasted 40—50 years with the urbanization level up to over 50 %. British urbanization had been nurtured and tutored successively by four advanced ideas, creating four pioneering undertakings in the history of urbanization. The four ideas are the ideal city put forward by Robert Irving, a utopian socialist, the theory of social reform by the social reformer Edwin Chadwick, the Garden City theory advocated by Ebenezer Howard, and the Two-way Movement concept. The four undertakings run as follow: it is the first to establish Garden City theory, the first to formulate City Planning Act as a public policy to intervene in and guide urbanization, the first to carry out the urban social security system to safeguard social fairness and justice, and the first to solve the city disease by means of overall rural-urban development. Britain made an outstanding contribution to global urbanization and its experiences are worth summarizing and learning from.⁴

As far as world population and urbanization is concerned, in the 100 years of the nineteenth century, the total population rose to 1.65 billion from 980 million at 0.5 % per year, in which the urban population reached 220 million from 50 million at 1.5 % annual growth, and its proportion increased from 5.1 to 13.3 %. By the end of the twentieth century, especially after WWII, global urbanization began to speed up. During the first 50 years of the twentieth century, the total population in the world increased by 851 million at an annual increase of 0.8 %. The urban population increased by 504 million at an annual increase of 2.4 % and its proportion rose to 29 %. According to the statistics published by the World Bank in 1997, in 47 years the increasing world population was up to 3,328 million with an annual increase of 29 %, and the increasing urban population reached 1,957 million at a rate of 2.8 % per year. The urban population proportion had reached 46 %.

⁴Liu Sidong. The Primary Experiences in Advancing Urbanization in Britain. *China Economic Times*, April 2, 2013.

The statistic of the World Bank shows that in 2003 the world urbanization level averaged 49.0 %, and the developed countries had almost finished their urbanization in the 1970s and 1980s with an urbanization level higher than 70 %. Since the 1990s, urban development has become an important feature of world economic and social development, and has changed human society rapidly at an unprecedented speed (Figs. 4.1 and 4.2)

Ray. M. Northam, the American geographer, has found that the urbanization process can be roughly depicted with a slightly gentle S-shaped curve, after studying the change pattern of urban population proportions over 100 or 200 years in Anglo-American countries. It consists of three stages: the first is the initial stage where the urbanization rate is below 30 % and urbanization speed is comparatively slow. When the urbanization rate is over 30 %, it enters the second stage where

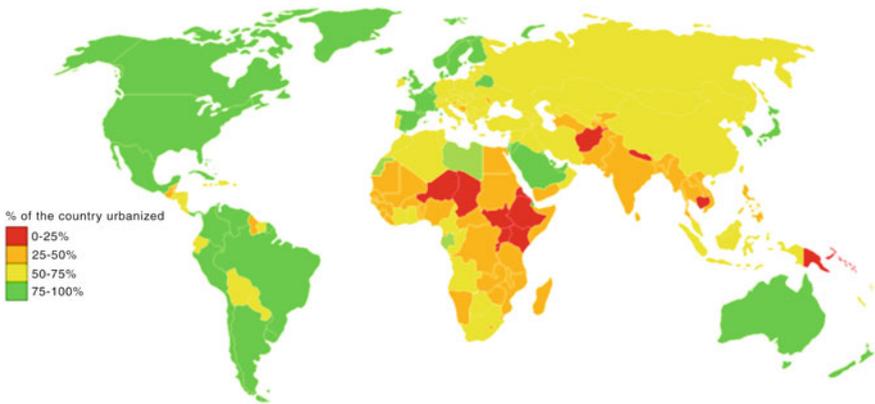


Fig. 4.1 Urbanization levels in the world in 2012

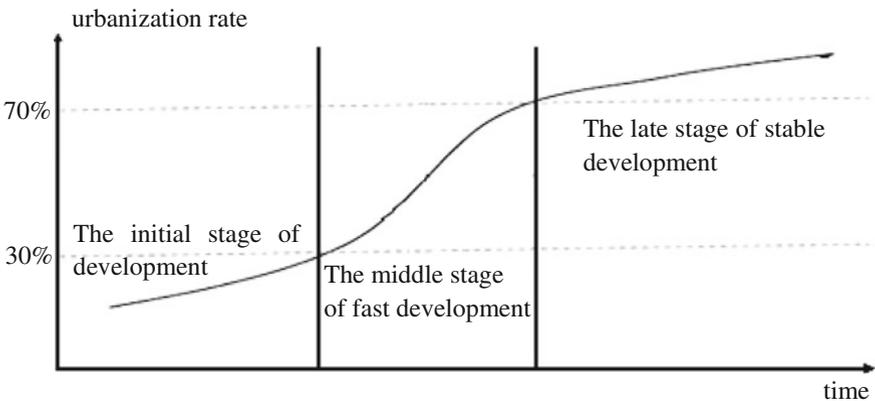


Fig. 4.2 Standard S-shaped curve of urbanization

urbanization speeds up. When the rate exceeds 70 %, the urbanization development is going slower, and the urban development is in its late stage of mature development.

Chinese urbanization is an important occurrence in human history and a wonder in world urbanization history. In the early 1980s there were 235 cities in China with less than 20 % urbanization rate. In 2010 there were 657 cities with 49.68 % urbanization rate. In 2011 the urbanization rate reached 51.3 %. In 2012, the urbanization rate amounted to 52.57 %, higher than the previous year by 1.3 %. The urban-and-rural structure underwent a dramatic change. The Chinese urbanization level has already exceeded the average urbanization level of other developing countries. China is now in a rapid process of urbanization and has stepped into the middle stage of accelerating urbanization. Because urbanization is advancing rapidly, the Chinese urbanization level is estimated to increase by more than 1 % in the latter period.

Fast developing urbanization, on the one hand, relies on the expansion of existing cities; on the other hand, it hastens new urban area development. Because of the limited urban capacity in middle-sized and small cities and the overcrowd large cities, the massive clustering of urban population, the fast development of industries, and the movement of urbanization rely mainly on the construction of new urban areas, as is also shown in the development of megacities in China. In the 1991 Beijing Urban Master Planning, fourteen satellite towns were proposed to be built, with a population of 10,000–25,000 in each city. In the 2004 Urban Master Planning, the urban space pattern with “two axes, two belts, and multi centers” was put forward. Among 11 new towns to be constructed, Tongzhou, Yizhuang, and Shunyi in east Beijing were focused on, each town housing 700,000–900,000 residents. In the 1984 Shanghai Urban Master Planning, 7 satellite cities were planned to construct, with a population of 100,000–200,000 in each. In the 1999 Urban Master Planning, Shanghai planned to build 11 new cities, among which Songjiang, Jiading, and Haigang were the key projects with 200,000–300,000 residents in each city. According to the news issued by Shanghai Design Bureau in 2012, Jiading New City and Songjiang New City in Shanghai would have been preliminarily set up as comprehensive node cities in the Yangtze River delta, clustering 1 million inhabitants by 2020. Putong Lingang New Town, Qingpu New Town, and Fengxian Nanqiao New Town would have been equipped with the advanced urban comprehensive radiation function, with 600,000–800,000 people living here. Ginshan New Town and Chongming Chengqiao New Town would have conspicuously improved their leading service functions to the surrounding area, with 200,000–400,000 people gathering here.

Chinese urbanization has experienced urban expansion and transformation stages and it has stepped into a period of new urban areas where new quarters are being developed and constructed. The expanding cities brought a lot of problems such as crowdedness, traffic jams, air pollution, and rocketing house price. And the demolish-old-building-and-construct-new-ones operation, which started in the early twentieth century, has been constrained or slowed down in recent years because of high costs and petitions, and designing and constructing new urban areas has become the new tide and movement of Chinese urbanization because of the low cost and fast speed.

4.3 Development of New Urban Areas: Basic Means to Promote Urbanization

Industrialization, urbanization, information-based modernization, and agricultural modernization are a must any modernized country in the world is sure to take, and they are the interactive, mutually promoting processes and rules involved in development. Industrialization is the engine of modernization and provides power for urbanization and agricultural modernization; urbanization is the carrier and platform of industrialization and agricultural modernization, providing the places and consumer markets for their development; information-based modernization exists throughout the modern economic society as an important force to hasten and move things on. Thereby, things move simultaneously, integrate deeply, and develop harmoniously.

In this way, China made some detours. Since 1949 when the People's Republic of China was founded, China has been attaching great importance to agricultural and industrial development, ignoring urban development, so Chinese urbanization lagged far behind the industrialization; agricultural modernization also lagged behind industrialization, and small town urbanization behind big cities. Since the reform and opening up, especially in recent years, the urbanization development in China has been given enough attention; however, rural development is comparatively lagging behind. Therefore, figuratively speaking, big city urbanization in our country has already kept up with that of developed countries, with cities resembling those of Europe and the countryside resembling African villages. It does make sense but needs reflection and improvement.

Mr. Zhou Qiren, a well-known scholar and professor in the National Development Institute of Beijing University, found that in 2011, the ratio of Chinese urbanization to industrialization was 1.09 (urbanization rate to industrialization rate was 51.3:46.8) and the world ratio was 1.09. The ratio in America, France, England, Germany, and Japan was 4.1, 4.11, 4.09, 2.64, and 2.48, respectively. China was thus far behind the levels of advanced countries. He concluded that the industrialization in China was advanced; however, urbanization was left behind. The pony of Chinese urbanization could not pull the big cart of industrialization; the retardation of urbanization hindered economic transformation. As a big strategy, Chinese urbanization had enough developing space and potential, and this was one important aspect of development in the next stage. We should pay close attention and implement this carefully.

What road should Chinese urbanization take? Professor Li Yining, a well-known economist, says in the preface of *Chinese Route and New Urbanization*, which he edited, that Chinese urbanization should consist of old urban areas, new urban areas, and new country communities, that is, the old urban areas are to be renovated into commercial areas and service areas by transferring factories outside; urbanization should be driven by the industrialization and the development of industrial new areas. In this way, urbanization becomes the new economic growth point in the future; new country communities are constructed so as to localize peasants.

Li Qiang, Chen Yulin, and Liu Jingming, scholars in Tsinghua University, state in *On the Moving Patterns of Chinese Urbanization* that the driving force of urbanization throughout the world in general could be divided into three categories: driving force from government, that from market, and that from civil society (agrarian society). Space development has four types: reconstruction within cities, urban sprawl, continuous development, independent development from old cities, and development by leaps and bounds. The movement pattern of Chinese urbanization consists of seven types: development area construction, new area and new town construction, urban sprawl, old city reconstruction, central business district construction, and industrialization of towns and villages.

Both theories mentioned above are reasonable and valuable. However, when considered carefully, they are far from scientific, exact, and appropriate. Any urbanization, no matter where it is, confronts the situation of continuous development, where the old cities continue to sprawl outward in space. For instance, some county towns spent a few decades expanding from several to scores of square kilometers. It is difficult to know whether it is an old urban area or a new urban area, for both terms fit the situation. Old and new are two relative concepts, which keep developing in time and space. Therefore, this category of old and new is not suitable here. Country communities remain rural areas. Building residential areas for peasants is only a change of the way they dwell. Their life style, production mode, and social security remain unchanged, so they are still peasants. In China, a place with 20,000 inhabitants can be called a town, so a community with thousands of residents must be developed according to the size, level, and facilities of towns. Only if the peasants enter towns and work there do their sources of income and life styles undergo a genuine change, along with their identities and the welfare they are entitled to. Thus they can become town residents. However, the construction of central commercial areas should not be the one separate mode of urbanization for it only goes through the motion of transforming old urban areas and upgrading the significance of cities or building functional areas by means of planning new urban areas, which are subordinate to either old urban areas or new urban areas. Industrialization of towns and villages should distinguish between agricultural industrialization and industrial industrialization, and the particular situation where it is hard to realize urbanization only through industrialization. It is necessary for towns to be equipped with matching infrastructure facilities, a considerable number of residents, and a certain town form. Therefore it is far-fetched to consider industrialization of villages as a mode of urbanization. The key point here is that urbanization does not mean that all the people throughout the country live in towns and the regional form of towns can take the place of the national layout. Throughout the world, where most countries possess both urban areas and rural areas, except for a few city countries such as the city state of Singapore, agriculture, peasants, and countryside are necessary at any time, especially in China, where a large number of the population needs a huge amount of food, vegetables, and other agricultural production.

Considering its moving mode, development road, scale and structure, Chinese urbanization should take the three forms of metropolis, medium-sized cities, and

towns. In the perspective of spatial structure, it should be the transformation of old urban areas, development of new urban areas, and expansion of small towns. Urban transformation is to expand peripherally by enlarging the old city size, lifting the population capacity, supporting the capacity of economics, society, and ecology, renewing the urban facilities by means of inner demolition, and improving the city level, taste, population, and economic scale. The new urban area construction and development is expected to plan and construct a new and separated urban area outside the old one. Small town expansion and promotion is to expand the scale of small towns and to promote their level. For instance, the villages and communities in some regions with fast economic development gradually become small towns. Although these three types take different leading forms and propulsion modes in the eastern, middle, and western regions of China and different provinces, their basic pattern, development trends are clear and inevitable.

To develop a large city agglomeration and city belt or to implement the strategy of integrating, the existing cities are to expand or to integrate with the old cities. In the world, seven big urban agglomerations have taken shape: the urban agglomeration along the Atlantic in the northeast US with New York at the center, great lakes urban agglomeration with Chicago as its center, Japan's Pacific urban agglomeration centering on Tokyo, England's urban agglomeration with the center of London, the urban agglomeration in northwest Europe centering on Paris, China's Yangze river delta urban agglomeration with the center of Shanghai, and China's Pearl river delta urban agglomeration with Hong Kong as its center. In China, there are four recognized urban agglomerations: Pearl river delta urban agglomeration, the Yangze river delta urban agglomeration, Beijing-tianjin-hebei urban agglomeration, and the urban agglomeration in the middle reach of the Yangze river. Six other urban agglomerations will be formed in the future: the urban agglomeration in the middle and south of Liaoning Province, Shandong Peninsula city group, Bashu urban agglomeration, central Henan urban agglomeration, the urban agglomeration in the west bank of the Taiwan strait, and Guan Zhong urban agglomeration.

Where a village government is in existence and where secondary and tertiary industry develops fast, some towns are planned and constructed to become small cities within various scales and levels. Zhejiang Province put forward the idea of "abolishing the village and establishing towns" and took concrete measures in "lowering the governance, expanding the purse strings, reform staffing, and safeguarding land use". In Qingdao city, five pilot township cities are being officially fostered. Ligezhaung town in Jiaozhou city, Nancun town in Pingdu city, Jiangshan town in Laixi city, Lancun town in Jimo city, and Bolizhen town in Huangdao district are to become the first group of experimental towns, and Qiangdao has introduced a series of supporting policies in the reform of household registration systems, financial system adjustment, and governance expansion.

These cities upgrading from towns are a favorable exercise and a good choice for some important economic towns along the coastal area and economically advanced places, but they should not spread to be too Careful consideration and implementation are needed, especially in the middle and western regions. They are

not only restricted by funds, projects, and population, but are influenced in the fields of investment efficiency, supporting facilities, and management resources. If they have no considerable scale, ancillary facilities need sizable funds to be invested, and it is hard to perform economies of scale—it costs a lot in construction and running. Because of fewer employment opportunities, low pay, and instability, some living, consumption, and entertainment facilities of small towns are hard to follow up, so the level and quality are by no means guaranteed. As a result, peasant workers are reluctant to work in such small towns. Even if they go there, they, especially young men, would not stay there long. In the long term, small towns are difficult to run.

Xuezhi Peng, working in Xingshan County office of Hubei Province, carried out a convincing survey of rural workers in cities. It shows that the current population flow trend is generally moving from market villages to county towns, from county towns to cities, and from cities to provincial capitals, showing a hierarchical order. Peasants go into cities, generally stepping over market villages and directly into county towns or the cities where the municipal government and the provincial government are located. The bearing capacity of industry hinders peasants going into market towns.⁵

Japan encountered the same problem in developing its small towns. Because of incomplete high-grade facilities for sports, entertainment, and service in small towns, some young men gradually went to live and work in big cities, leaving old people in small towns. As a result, the secondary and tertiary industries were shrinking as time went by, and eventually ceased. If China doesn't pay much attention to it, it would show up in the future.

We should break administrative divisions, design and construct some key towns according to plan, take some policies and measures to make them bigger, stronger, and better, and finally develop them into new urban areas. Therefore, the new urban area is the main form and important approach to move urbanization.

On September 25, 2013 it was reported by Urban Development Research Institute, Chinese Academy of Sciences that there were 668 cities (cities in terms of administrative divisions) in 1997 and the number reduced to 657 in 2010 because of the policy of turning city into district. It proposed that China should restart “county upgrades to city” as quickly as possible and meanwhile, choose a group of suitable designated towns throughout the country to pursue the policy gradually. The country close to the prefecture-level city is suggested to be turned into a district, whereas that far away from the prefecture-level city or other big cities with high population density and high level of urbanization and strong comprehensive strength may be turned into a city. As for the town domain, economic areas in the eastern developed regions may carry out “county upgrades to city” steadily, and those places can enjoy the organizational system of a city and administrative authority at country level. To draw a conclusion, this report is of great importance. *China should take a diversified and gradual road with multiform urbanization.*

⁵*Countryside Urbanization Should be Stressed*. China Daily, Oct. 8, 2013.

4.4 Achievements and Problems in New Urban Area Development of China

In recent decades, China's new urban area development has obtained a series of achievements.

First, it has provided power for economic and social development. The planning and construction of new urban areas give rise to the investment and development of social and economic aspects such as local industry, construction and installation, municipal infrastructure facilities, real estate, culture, and ecology. It has been playing a leading role by space-widening, platform-building, providing a carrier and injecting vigor and vitality for cities to expand in size, improving function and developing regions. If the early 15 years of China's reform and opening (1978–1992) is considered to be the harvest of rural reform and agricultural production, which has pushed China into a new era, the 20 years after 1992 is the planning and construction of new urban areas and economic development zones, with which China enters a new period of development.

Second, it has supplied a good location and environment for living and working for people. New urban areas pay attention to the settlement environment construction from such aspects as planning and design, infrastructure facilities, residence, offices, and forestation. Spatial arrangement, functional supportive facilities, and the adoption of new technology, new materials, and new technology are unprecedented in comparison with the old urban quarters. As a result, the new city has greatly improved people's living and working environments, changed China's rural-and-urban structure, and enhanced the urban function. This often leads to higher house price in new urban areas.

Finally, it has provided a guarantee for social harmony, development, and peace. Since China carried out the reformation and opening up, the rural labor force has run into surplus with the increase of agricultural population and improvement in labor productivity. As cities develop and resident numbers increase, a lot of jobs and better social security are needed. If there were no cities, especially new quarters, which could take in the labor force and create new jobs, a great hazard would have been posed for society and serious social problems might have been triggered.

As one means of moving Chinese science and fast development, new urban area development has solved the housing problem in cities, scattered industries, guided urban development, and prevented disordered urban sprawl. The new cities have attracted much of the rural population and diverted people from entering the big cities so that the population and employment pressures are greatly lessened. Shifting from limiting metropolitan spatial development to promoting regional balanced development as a whole, they have made a great contribution.

In developing new urban areas, China has gained rich experience, as outlined below.

Governments at all levels pay attention to and implement the planning and construction of new urban areas quite early on. Since the 1980s, the Chinese

government has been stressing the planning and construction of economic development zones, some of which are new urban area developments. A series of policies and measures have been carried out one after another, giving guidance in many aspects and a lot of support. The development of economic development zones is given special attention with many favorable policies and measures. Hence, a better result has been achieved.

China has paid attention to the experience and practice of new urban area planning and construction in the world. Learning from the experience of developing urban and industrial parks from Singapore, the Sino-Singaporean governments joined hands in constructing Suzhou Industrial Park and Sino-Singapore Tianjin Eco-city. In June 2011, China's Ministry of Housing and Rural-urban Construction and Japan's Land Infrastructure and Transport signed Cooperation Memorandum of Understanding about Promoting Ecological City Construction in Yangzhou of Jiangsu Province, establishing the project to build a Sino-Japan eco-city in cooperation at Dongying and Wenzhou. On August 4, 2012, Dongying municipal government and the representative of Japan's Overseas Eco-city Project Agreements officially signed the cooperative agreement. Both would jointly invest hundreds of billions of RMB according to this agreement, and establish a Sino-Japan eco-city with an area of 20.5 km² at the south exhibition area of the east part of Dongying city. It was reported in *Nihon Keizai Shimbun* of Japan that the syndication of 58 enterprises represented by Toshiba, Hitachi, and Mitsui Fudosan planned to invest 10,000 billion JPY (about 800 billion RMB), more than three times the cost of the Jianjin project, to the eco-city in Dongying and Wenzhou over 5–10 years. The goal of the China-Japan eco-city is that the new urban area with high level, low consumption, and energy efficiency is planned and constructed by means of using Japan's high-end environment-friendly energy-saving ideas and technology, making it a demonstration area of international eco-city development. The syndicate would participate in the construction of this model city at the planning period. This is the first in the field of Sino-Japan urban development. For various reasons, this project has a long way to go.

New urban areas are developed with many measures and forms of investment. In the 1980s, in the early period of developing new urban areas, the channel of investment was comparatively simple because it was basically the investment from governments at different levels. As new urban areas develop throughout the country, multiple investment subjects begin to be introduced with diversified investments and construction. Different from the methods most new quarters adopt to plan and construct, some township cities developed in Wenzhou of Zhejiang Province and Qingdao of Shandong Province may provide a method for Chinese urbanization.

The planning and construction of multi-typed new urban areas with much content are being focused upon. Industrial parks and economic development zones are primarily developed, and government departments at different levels design and construct comprehensive new quarters, implementing and creating many kinds of specialized and characteristic new areas such as the new administrative district, the

new industrial area, the science town, the eco-city, the university town, the solar town, etc.

In accelerating the planning and construction of new urban areas, China has encountered some problems. Chen Yumei points out in her paper titled *Solving Four Contradictions is the Key Point to Promote Vitality of New Urban Area Development* that there are four prominent contradictions in planning and constructing new towns in the macro perspective of state and local governments: the contradiction between fast development and unbalanced structure, the one between emphasis of economy and ignorance of livelihood, the one between land reliance and sustainable development, and the one between locally-driven and nationally-planned. We should say that her analysis is objective and appropriate.

New urban area development is the practice of urban planning and development and a historical necessity of a city developing from single to regional. There are both good and bad factors in the development of all things, and so it is in the new urban area development.

1. At the strategic levels of regional development and urbanization, the state fails to provide enough efficient guidance. As mentioned above, the state has been stressing the development of economic development zones, setting up many policies and measures with effective results. Meanwhile, the planning and construction of national new urban areas represented by Pudong New Area and Binhe New Area, which are very important in national strategy, are given a variety of support. However, in terms of the overall development of new urban areas throughout the country, there are still many problems in existence, such as lack of national development strategy, of regional overall layout, of overall development planning, of concrete policies and measures, and of effective guidance. Up to now, the state has not offered a strategic arrangement and specialized policies and regulations for new urban area development.
2. On implementing and operating, local governments have failed to conduct a strategic study, scientific debates, and a plan for marketing. In the last decade, some local leaders were eager to develop on their own, having seen new urban area development elsewhere. As a result, new towns mushroomed all over the country and were developed blindly. Some local governments didn't do the preliminary strategic study and the study of market research and functional orientation, and they had no clear analysis of themselves, of the situations, and of the functional orientation. The partition layouts they had were unreasonable because they did not consider fully how much office, business, industry, and residence would take be involved. As a result, the new urban area development initiated rather slowly, and the facilities did not support and develop very well. Some municipal governments and decision makers ignored the supporting facilities, bent on developing projects for their political careers. Even though the new quarters were developed, the projects closely connected with the life of the common people such as water supply, heating, gas, schools, hospitals, and markets were far from perfect. The occupation and utilization rates were so low that some empty cities and ghost cities came into being.

3. There are no profound studies and minute analyses of planning and design. They were churned out with the pursuit of big, alien, tall, and strange. Some towns claimed international bidding, global consultation, and international advanced ideas. However, the internationally advanced idea is often just one concept or one attempt, which symbolizes some design tendency and designers' thinking in developed countries. Some of the concepts are immature and some are compatible only with their particular situation, so in many respects they are unsuitable in China. Quite a few cities set too large a development goal, planning for two, three, or four times the current population. Some even plan a number of golf courses with the purpose of shaping the city image. Large cities become bigger and bigger, resembling spreading pancakes, and many middle-sized and small cities spread their urban development framework as well. The economically backward areas also follow suit by building big squares, wide roads, and foreign houses. Cities with a smaller population and no traffic problems also build roads with eight bidirectional lanes. Regarding foreign styles as beautiful, some cities try to build Roman square, the European street, the American street, etc. Without any regional culture, city individuality, and characteristics, the cities are too strange to be a surprise.
4. Land resources and various production elements are seriously squandered. Now many cities develop with a large area of land, and without any strict standard the land is covered with various facilities and misused. In 2003 there were more than 6,000 development areas throughout the country with a planning area of 36,000 km², exceeding the total area of the current urban development. In 1990–2003, the average growth of urban area in 31 cities of China nearly doubled.⁶ In some cities, the development zones and new urban areas occupy fertile land of dozens of square kilometers, leaving it idle, with grass growing in it. Even some government office building areas exceed hundreds of thousands of square kilometers, a great waste of land and resources.
5. Policies and regulations are lagging behind. The state and local governments fail to enact timely related laws, regulations, and policies concerning new urban areas, and planning and construction are not strictly and scientifically managed. Some local governments are actively searching for policies and measures favorable to development, but because of the lack of policies at national level, they have no choice but to feel their way over the stones when crossing the river. In this way, the development of new urban areas is widely carried out.
6. Peasant displacement and resettlement are not given enough attention. It is explicitly stipulated that the rural collective land ownership belongs to peasants, who have the right to possession, disposal, and the proceeds of the property in the Constitution of the People's Republic of China, Law of Land Administration of the People's Republic of China, the People's Republic of China Rural Land Contract Law, and the Property Law of the People's Republic of China. The Ministry of Land and Recourses have introduced *On Improving the Guidance of*

⁶Wu Xuean. *The Indispensable Memory of Cities* 'Unidade June 29, 2013.

Land Compensation and Resettlement System, demanding that local governments establish their own compensation standard according to their particular situations and safeguard the legitimate rights and interests of the levied peasants and land-users in accordance with the policy. However, because the problems of compensation standard and levied peasants' social security have remained unsolved for years, the interests of peasants are not effectively maintained. In spite of the specific formulation of landownership in rural areas, the land property subject is not yet clear. The implementation of land acquisition compensation policy has somewhat alleviated the peasants' survival problem, but essentially their long-term existence remains unsolved. In addition, the current law in China neither specifies the subject of liability in relocating the levied peasants, nor their basic living, employment, and social security. The policies and regulations to supervise and manage the compensation are far from complete, and some governments fail to show the compensation standard and procedures to peasants in time, and the transparency of land expropriation is inadequate, so the interests of peasants are damaged in several ways.

7. The new urban area investment channel is not varied. At present, the investment and financing of new urban area development are still very traditional with financial allocation, development loans from banks, and enterprises' self-raised funds as the main channel. Because the diversified investment system remains unfinished, urban development is underinvested and in serious debt. Moreover, the inner system of investment growth has not taken shape, and the investment, financing, and management platforms are less effective. As a result, difficulties with investment and financing have slowed down development in some places. Especially in recent years, the state has issued a series of policies of control, including the increasingly rigorous land and financial credit policies, which throw development into an unprecedented predicament of funding. Because of the single channel to finance and invest, there are no corresponding channels to make up the gap in funding after bank loans are tightened. Therefore, development is in serious trouble. Some local governments take on a lot of debt for the construction of new city areas, and normal operations in various areas and social security are influenced.

Objectively, the fast Chinese urbanization leads to the contradictions and problems mentioned above, which arise in the planning and construction of new urban areas. China is bent on agriculture with the purpose of solving the food problem, then developing industry and township enterprises, finally turning to develop urbanization and urban economy. This turn takes a short time and comes so suddenly that China is far from ready in such aspects as ideology, theoretical studies, talent training, fund accumulation, experience of management, and institutional mechanism. In a sense, Chinese urbanization and new urban area planning and construction are a tall order. New urban areas mushroom overnight and compete against each other for size, image, speed, and scenery. The singularity of the political system in China determines less democratic, scientific, and administrative decision-making and implementation, and there are no wide-ranging supervision,

checks, and balancing, and control and guidance to new quarters are less effective, let alone the standards. All pursue high growth, high speed, and are hungry for investment. Therefore, an evaluation system, objective, complete, and scientific, is requested for governments' work. The fiscal system serves meals to different diners from different pots, namely, it divides revenue and expenditure between the central and the local governments, and holds each responsible for balancing its budgets. The local governments pursue GDP growth and dine on fiscal revenue. Development is the first priority, and stability is the first responsibility. In comparison with transformation of old cities, the new urban area is developed with less petition demands, less resistance to demolition, less investment, fast construction effects, and outstanding results.

Besides these objective reasons, there are some old subjective and passive reasons. Because China has not experienced the capitalist society, people have insufficient knowledge of cities and capitals. Now some middle-aged men, especially those over 40 or 50, who basically grew up in the countryside and entered cities with cloth shoes and straw hats, are poorly educated and not open-minded. In the past they have never lived in a building of two or more storeys and have no systematic knowledge or practice of urban planning, construction, and management. Even the people who finished college are mostly not majors in urban planning and design, building construction, or landscape architecture, so they know nothing about urbanization and new urban area planning and construction. According to the survey, it is common to see non-majors working in the departments of planning and construction of some counties in the central and western regions as well as some cities in the east represented by Dezhou. Therefore, contradictions and problems inevitably appear in the planning and construction of new urban areas. Chinese administrative officials do not understand how to manage the operation of planning and construction and they have a strong achievement view. Because local officials have too much power, they do things at will. Some officials do not understand, but they pretend that they know everything. Ambitious for great achievements, they make quick decisions, air their opinions, and then go straight ahead. Some government workers blindly believe in experts and scholars in some academic institutions. As a matter of fact, teachers in the planning departments of some colleges in China are not qualified. Some colleges find that majors in planning and design of landscape are easy to employ, and it is easy to recruit more students, so they establish departments of planning and design of landscape. In these schools, professional teachers are in great need, and the students are not well-trained, so they have no basic professional knowledge. Even some majors, who are now working in the government as the backbone after graduation in 1980–1990 are not well equipped with knowledge of economics, society, or humanism. What they focus on is the urban space layout and urban features without studies of new urban areas, industrial development, and investment. Their study is not far-sighted and strategic. They do not care what the function is, how much investment is needed, and whether it can be developed, even though they can draw grids well and paint colorfully. This is also one of the important reasons why there are so many “empty” cities, why land resources are terribly wasted, and why cities

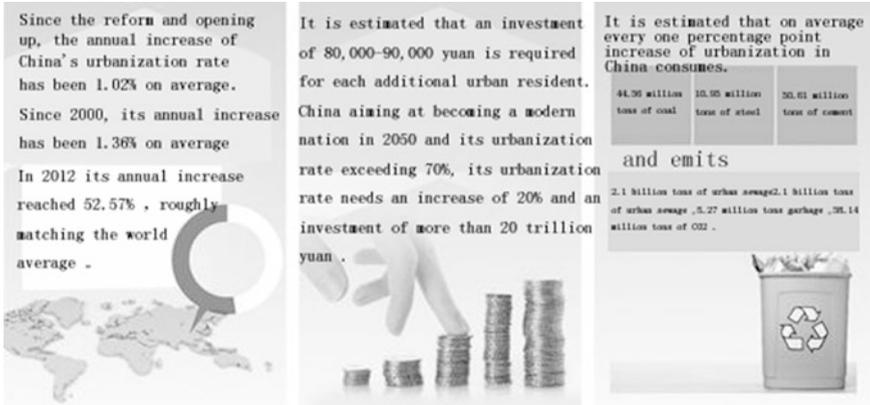


Fig. 4.3 Enumerating urbanization (China Daily, July 31, 2013)

and industries look the same. Considered from the particular need of urban development, a high-level designer should be an expert who is good at politics, economics, society, and humanism. Moreover, he should be far-sighted for planning, setting strategy, controlling resources, and guiding the future (Fig. 4.3).

Chapter 5

The Features of New Urban Area Theory Researches in This Book

Having summarized the theories of new urban areas proposed by scholars and experts from home and abroad and combined them with the particular situation in China, this book presents a systematic theory of new urban area development. Although there are many theoretical studies in contemporary China, the subject needs further exploration, for it is far from mature theoretically, comprehensively and practically. Most works only deal with space design and seldom touch upon other aspects. Some focus on theories and combine less with practical work, so they offer less guidance. Some enumerate the progress of new urban area development without theoretical generalization from the macro perspective. Some introduce the urban development in foreign countries, leaving contemporary Chinese urban development nearly untouched.

The tree of theory can flourish so long as it is deeply rooted in the Earth. China's new urban area development is the greatest event people have ever experienced in history. The innovation it brings about, the fields in which it is involved, and the effect it has on life, society, economics, and politics of the twenty-first century are unprecedented in any other country and at any one time. As a researcher, one should try to shoulder the historic mission, reflect the change thoroughly, generalize the theory, and try to guide and promote this tide. Therefore, this book explores new urban area development theory in the perspective of China, facing the world, summing up the history, reflecting the history, and looking forward to the future, in order to provide an original and theoretical way of thinking for the great Chinese urbanization. Below are the main features of this book.

5.1 A Comprehensive and Systematic Breakthrough

New urban area development, concerning politics, economics, culture, and ecology, is the combination of many fields such as history and reality, theory and practice, government and market, strategy and technology, funds and construction, leaders and experts, and departments and townspeople. The development is panoramic, so a broad stage is provided to organize and promote. The theoretical studies should be rich and multi-faceted. When preparing to write this book, the author considered that there are many aspects to be clarified, so 12 sections are scheduled covering

introduction, strategy, marketing, planning, development and construction, investments, cultures, systems and management, policies, patterns, the future, and appeal. In every section some theories are traced back to their original resources to generalize some research results. Through analysis and argument, new recognition is proposed. For example, in the first section, reviewing the progress of the planning and construction of new urban areas in the world, and analyzing the human's motivation for developing new urban areas, it presents the concept connotation of new urban areas and the basic characteristics, and sums up the development patterns. Meanwhile, it shows the basic development of Chinese new urban areas, summarizes the main achievements and experience, and analyzes some problems. What's more, it introduces the related theories in this field, and enumerates the contemporary studies in China, putting forward its own theoretical features. Theory, which is systematic and scientific, is something acquired and extracted from practice. Only by constructing it historically and realistically can a complete theoretical system be formed, and it would be possible to achieve the desired effect.

5.2 Being Creative and Theoretical

Creativity is required in practice, where theory grows. In the field of new urban area study, strategic study is the most important and the basis for good planning, design, and development. Otherwise, study and practice would be partial and broken—it is the way the blind rides a horse or the blind feels an elephant. Therefore, in strategic study, five aspects of orientation are discussed: goal, site, function, scale, and features, and some opinions are proposed. In the part concerned with feature orientation, industrial space and landscape features are discussed, respectively. The marketing of urban projects is a big issue, which China pays scant attention to. The related research started late and not many results have been obtained. Especially in urban marketing and new urban area marketing, because the governments at all levels did not pay due attention to it, the marketing is failing to be the important link to promote new urban area development. This book devotes considerate space to discussion, for instance, on important new urban area marketing, its strategies and facilities, attention to image and brand shaping of new areas, the marketing subjects, and the potential customers. All of these have seldom been touched upon in other works. Because coverage of them is much needed, the theoretical studies deal with them correspondingly.

5.3 Being Practical and Realistic

Theory should give feedback to practice and guide work in a simple and convenient way. In Chinese new urban area development, some places are short of theoretical and scientific guidance, generalization, and application of practical experience.

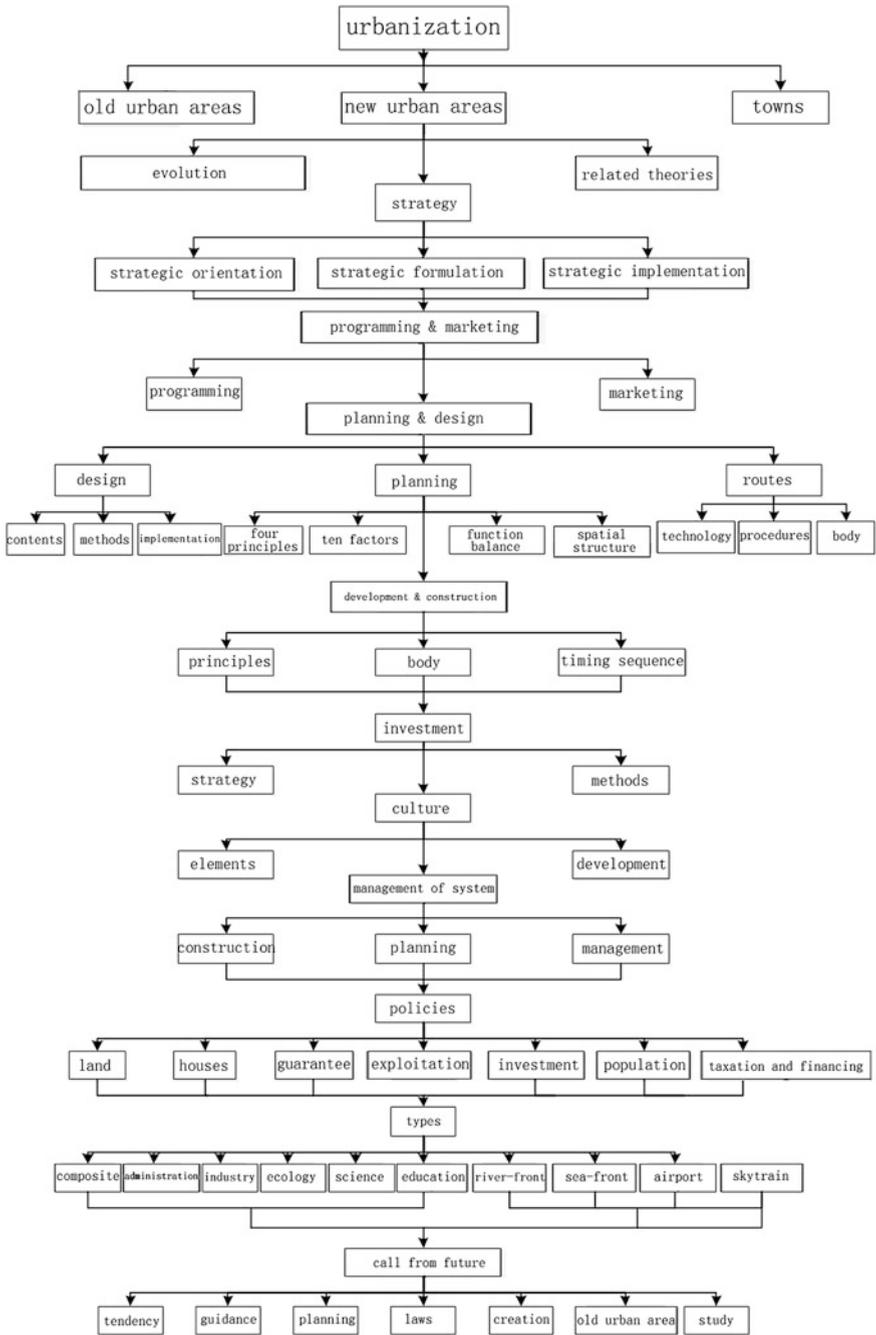


Fig. 5.1 Framework of new urban area strategy and path

In order to solve this problem and make up the insufficiency, this book puts theoretical and technical items, or points worthy of note in working, or some miscellaneous theories, into a simple formula or a diagram with the purpose of making them easy to understand at first sight. For example, a technical map is given after the chapter on planning. In the chapter on construction and development, the operation time sequence is specifically summed up. Because theory is required to be down to Earth, the new urban area study should be closely connected with the particular situations of contemporary China and provide guidance for practice. In the chapter on planning, it states first that all design is politics and this is the means adopted by government to regulate and control development and construction. Based on the reality of China, the book illustrates the management systems, basic policies, up-to-date city complexes, large community planning and construction, and rising urban operators. In a word, this book tries to keep up with the times in a realistic way and enriches vigorous new urban area practice with theory (Fig. 5.1).

Part II
On Strategy

Chapter 6

The Strategic Study on New Urban Areas

6.1 Strategic Study Is Top Design

The Columbia new town in Maryland, US was built in the 1960s. To set its development goals, 14 nationally renowned experts in economy, society, education, public health, and entertainment spent 6 months working together, and a lot of gratifying results have been achieved and have turned out to be successful. Columbia is therefore regarded by some experts and scholars as “a new town with a clear self-awareness in the course of urbanization”.¹

The planning and construction of the new urban area is of great significance both in national urbanization and in regional development involving some far-reaching issues such as territory planning, regional development, urban layouts, land resources, ecological environment, residents’ livelihood security, and key investment. Had it been better implemented, it could play the roles of promoting national comprehensive development, optimizing regional layouts, and improving people’s livelihood and well-being. Otherwise, it could result in empty, dead, or chaotic cities, squandering vast manpower, material, and financial resources. In short, it matters a lot and exerts long-range impacts.

The first things to do when planning and constructing a new urban area—carry out strategic research and take a bird’s view on the key issues in its development. The well-developed Shanghai Pudong New Area benefits from its non-stop focus on strategic research, decision-making, strategic orientation, and adjustment. Before that, the leaders of Shanghai and the state invited some experts and scholars from home and abroad to carry out extensive research and debate repeatedly. From 1990 to 1992, Deng Xiaoping, the chief designer of China’s reform and opening-up, spent the Spring Festival in Shanghai for three successive years, mapping out a series of strategic blueprint for Pudong’s development and opening-up: “Shanghai is our trump card”, “Pudong’s development and opening-up faces the world”,

¹Chen Jinsong, *New Town Models*, p. 76.

“I hope Shanghai people can further emancipate their minds, be more daring and quicken the pace”, “To develop Pudong will exert great impact. It is not only the issue of Pudong itself”, “Pudong develops later than Shenzhen, but it can set a much higher starting-point, I believe, it can surpass Shenzhen”. The statements made by these scholars and heads of state laid a strategic foundation for the development of Pudong.

“Without long-term strategy, short-term achievement is impossible; without full-scale consideration, simple action is impossible.” This old Chinese saying is full of conventional wisdom. The new urban area is a very complicated and closely-tied system, the construction of which must be analyzed and studied using the overall, systematic, and developing viewpoints and methods. We should therefore make a thorough study of it with a top design from a strategic position.

6.2 The Priorities of Strategic Study

1. The necessity, possibility, and feasibility of planning and constructing the new urban area—is it necessary to launch and develop the new urban area? Can the existing urban size undertake the task of urban development? Can the internal modification, renewal, and upgrading of the existing city improve the urban development and human settlements? Is it a must to plan and construct new cities? We need to organize the personnel of all aspects to investigate appropriately. If it is necessary to develop the new urban area, we should study whether all the necessary conditions are available. Then we should study whether national policies permit the initiation of the new urban area, how to solve the land resources, how to raise funds, how to guarantee ecological environment protection, and how to ensure the livelihood of peasants whose land has been expropriated. Meanwhile, the present urban size, capacity (population, land, infrastructure, and ecology), development potential, and prospect of development are to be studied, as are the conditions of regional cities, the surrounding cities’ sizes, function orientation, industry characteristics, and development potential. Finally, we should make ourselves familiar with the location, development direction, priorities, and measures to be taken with the city and the new urban area in regional competition. *Making decisions needs careful consideration when planning and constructing the new urban area.*
2. Study how to orientate the new urban area, such as its basic development goals, major functions, size, levels, space pattern, basic features, and its relationship with the old urban area and surrounding cities.
3. Study the specific location and space pattern of the new urban area, such as where to locate the new urban area, how to plan the internal space, and how to connect with the old urban area.
4. Study the leading industry and development features of the new urban area.
5. Study the area, population size, and economic capacity of the new urban area.

6. Study the development steps, construction cycle, and implementation order of the new urban area.
7. Study the land use and safeguard measures of the new urban area.
8. Study the aggregate investment, sources of funding, channels to repay, and payback period of the new urban area.
9. Study other advantages and constraint factors of the new urban area.

Based on the careful study of the above major issues, we can form a research report through overall consideration and coordinative contrasting, and propose strategic development goals, layouts, focuses and measures, as they are. The way China and Singapore join hands in constructing Suzhou Industrial Park and Tianjin Eco-city is worth learning.

6.3 The Subjects and Methods of Strategic Study

The organizational body to conduct strategic research and top design is usually the related state departments and local governments at all levels. Planning and construction of the new urban areas in China is dominated by the state and governments, so the relevant ministries and commissions of the state and local governments at all levels should be responsible for it, because the governments control a region's long-term plan, production factors such as land, funds, and management of the planning. For function's sake, the governments are required to manage, for the future, the major issues, the public utilities, and people's livelihood. In this way, the planned new urban area can take everything into consideration, combining both distal and proximal differences, and integrating social, economic, political, ecological, and landscape benefits to form a unification. In modern society, any other social organizations in China cannot replace the duty of the governments, and play only a secondary role to that of the governments. Any investment enterprises, especially those aiming at making benefits, always put short-term economic benefits first. They attach too much importance to the benefits to co-ordinate properly the long-term development and take into account profits from all aspects, and it is very hard to guarantee the overall effects and sustainable development of the new urban areas. The British government found many facilities not fully supported and property management unmanageable when it took over, in the last century, the new city which had been planned and constructed by investment companies. Man's social being determines his consciousness; his position determines his decision and duty. Because of different functions and the goals of the subject, the planned goals and approaches are different as well. The new city investment companies of the British government are similar to this, let alone some social investment and development enterprises.

The main body of strategic research should be specified. Before initiating the new urban areas, the local governments should invite professional planners to conduct the pilot strategic research which may bring the following advantages: the

two tasks concerned—the pilot strategic research and the ensuing planning and design—could be undertaken by a college and a research institute, or put in the charge of a team, their members familiar with the situation, which is convenient for the two continuous stages to connect, so that time and effort can be saved. However, the professional structure of some planners nowadays is bent on space planning, and they are familiar with space planning and design, but lack knowledge of economy, society, culture, and tourism. Their analysis report of the city and the new urban area often transcribes some speeches from the local government officials, picks some articles, and tags together some terms. Their strategic research is therefore weak in comprehensiveness and operability, less specific and poor in originality, so it is hard to create the development strategy to a high level and high quality.

In some other cities, marketing and planning agencies are invited to conduct the strategic research on the new urban area. These agencies, with new horizons, are capable of generalizing urban features, and frequently aggressive and inspiring. However, they have no deep knowledge of economy and society, nor practical experiences in urban investment and development, or solid professional knowledge in planning and design. Therefore, their strategic research is more qualitative than quantitative, more theoretical than practical, and more tactical than strategic or macroscopic. So the strategic results are often shelved and difficult to apply.

There are other cities which commission potential comprehensive universities to conduct the strategic research of the new urban areas. Hangzhou Bay New Zone in Ningbo commissioned Ningbo University to do the strategic research when it was initiated. Led by Chenggang, the principal, the school organized experts in region, economy, finance, planning, and ecology, and spent 10 months on systematic research, which has provided significant guidance to the development and construction of Hangzhou Bay. However, after careful consideration, we could still see that there was a gap between actual operations resulting from macroscopic and from repeated planning.

In some other cities, strategic research is conducted by the synthetic research agencies from home or abroad. For instance, the Macro-Economy Institute of National Development and Reform Commission of China is a research agency specializing in reform research and consulting, serving the national macro economy and social development, and offering decision-consulting services for governments of all levels and all industries. On one hand, it boasts a strong research capacity and a good mastery of economy and society, so its fruits have great practical value; on the other hand, it may be weak in urban planning.

Practice tells us that every planning and designing unit has its strengths and weaknesses: as the saying goes, “A foot may be too short in one case; an inch may be long enough in another.” Some units are strong in space planning, some have advantages in industry planning, but there are few which have both at a comprehensive level. Therefore, *in choosing a planning company for a new urban area, it is a good choice for the government to subdivide the related strategic research into different projects, which are to be put into the charge of proper companies, finally to be integrated by one deciding single company.* For instance, some researchers in

national and urban economic and social development can be invited to do strategic studies on economic, social, and industrial development; some designers can be engaged for space layout planning. Sino-Singapore Academic City in Guangzhou, China, invited the Macro-Economy Research Institute of National Development and Reform Commission to compile industry planning, and Liu Taige, known as the father of planning in Singapore, was responsible for concept planning. The strategic research and planning with components of this sort should be done at a high level, and must involve a high-level strategic program for organizing, synthesizing and integrating scientifically.

Competition is a good way to give full play to the mental faculties and to show up actual strength; comparison is a good way to screen excellence. The best way to conduct strategic research on new urban areas is to bid publicly or internationally if permitted, so as to select fine programs and excellent teams. For better selection, resources, and time saving, we can first request bids for conceptual research on overall strategies, compare programs of the participators, and select good programs and teams. Then we can invite the best companies to carry out in-depth and detailed strategic research.

Chapter 7

Strategy Orientation

Orientation must be done first no matter what other things are to be done. Who am I? Where am I from? Where am I going? These issues should be clarified so should research on new urban areas. The first job is to conduct strategic orientation well map out what kind of new urban areas is to be planned constructed.

The strategic orientation of the new urban area is a system which should cover positioning of goal, location, function, size, and features in large measure; moreover, these aspects are closely linked, interlocking, and interacting.

7.1 Goal Orientation

When Britain began to plan and construct new cities, its aim was to solve the housing problem after World War II. Later, it gradually changed and revised its original goal, as problems of employment and living facilities came up. As time went by and urban development required, Britain to set the goal of its new cities as “for both life and work, balance and independence”. In France, there are three main goals of new city construction: transportation is conveniently accessible, there are residences and employment, and supporting service facilities are efficient. When the US planned and constructed the biggest and most successful new city Liston, it put forward seven goals, two of which are core: one is that the new urban area should have complex functions, namely it should be a place of living, work, and leisure; the other is that it should be a lifetime city with housing diversification for a family where its members, young, middle-aged, and old, can live.

The goal is the direction and the banner. When researching strategically, we are certain to make clear the future development goals and directions of new urban areas, such as city location, sizes, functions, features, and roles in the regional development. As for these major issues, we should first have a clear idea about the goals, and then we can go on with work on other aspects. Otherwise, we end up rushing headlong into disaster and drifting along; as a result, we lose our direction, make things worse, and fail totally.

7.2 Location Orientation

Canberra City is the capital of Australia and also a young city. Just 200 years ago, it was a patch of barren land at the foot of the Australian Alps until founded in 1820. Later, some immigrants came for the pasture and it developed into a small town by 1840. In 1901, after the foundation of Australian federal government, there was an 8-year dispute between two big cities, Sidney and Melbourne, over the establishment of the capital. By 1911, the federal government passed a resolution of choosing a place with good weather, mountains, and water between the two cities to establish a new capital, so this open space, 238 km from Sidney and 507 km from Melbourne, was selected. This ended the dispute of both sides.

Location positioning refers to spatial orientation. It is often an important issue met early on, and can mean heated dispute to find a proper place to construct the new urban area. Sometimes the dispute is too argumentative to reach a unanimous decision. Or sometimes the opposition and resistance it causes are so strong that the site has to be changed eventually and sometimes at great cost. It is a frequent occurrence to encounter dispute because it involves the immediate interests of the country, regions, citizens, and their multiple interest groups, and the effects and image of the new urban area under construction. Even Britain, the old capitalist country, often met with such problems when constructing new urban areas. So they summarized their experiences as followed: *site selection of new urban areas must be carried out by the powerful state machine based on its need and advice widely sought from all walks of life.*

The site selection of new urban area should be considered within the pattern of land planning and regional development, and identified by comparing the key elements of politics, the economy, society, ecology, and stability. With all these things considered, we should compare them carefully and analyze the following aspects:

1. The site selection of new urban areas should conform to national development strategies, regional development strategies, and overall urban development planning. It was in 1992 when China and Singapore combined to co-construct an industrial park, and Shandong Province and Jiangsu Province had a heated dispute over the site selection. Even Jiang Zemin, the former general secretary of the CPC Central Committee, felt “inconvenient to take a clear position because it is hard to choose between one and the other as I love both”; nevertheless he thought “it is better to locate it in Suzhou, Jiangsu”.¹ As of now, the selection then is right because Suzhou, close to Pudong New Area, is located in the Yangtze River Delta development strategy region, which was under development at that time.

The year 2008 witnessed the construction of another ecological city jointly by the governments of China and Singapore. The Singaporean planners investigated many cities in China, especially those short of water because of drought,

¹Shi Kuang, Liu Hao, Lin Zhongjie. *The Making of a Chinese Model New Town: Planning and Development of Suzhou Industrial Park*, p. 33.

Fig. 7.1 Planning map of Sino-Singapore Eco-city



and finally locked their sights on Binhai New Area in Tianjin with 30 km² around. It was not on a whim for planners to draw the blueprint on sterile land which was one-third abandoned salt fields, alkali wasteland, and polluted water, respectively; it was fully considered by the Chinese Government from the strategy for developing Tianjin. In the words of Li Wenxian, the boarding chairman of Keppel Corporation in Singapore, “Sino-Singapore Tianjin Eco-city is located in Binhai New Area of Tianjin with great growth potential, the center of Bohai economic circle, which will become the third growth pole in China after Zhujiang and Yangtze deltas. This also indicates its quick economic growth drives the development of Sino-Singapore Tianjin Eco-city”.² The location of new urban areas, therefore, is primarily to comply with the national strategy, and to do it macroscopically and strategically (Fig. 7.1).

²From the website of Binhai New Area, Sept 29, 2010.

2. The site selection of new urban areas should conform to the urban development direction. Generally speaking, because of different functions of new urban areas and particular situations of the mother cities, the choices to be taken for this development vary. For instance, new urban areas, especially those with chemical pollutions, should be set downwind of the dominant wind direction of the city. Places with more trees near rivers and lakes are preferable for new urban residential areas. A location near main traffic thoroughfares is also a better choice for new urban areas. Doxiadis, the world-famous Greek architectural planner and founder of the theory of human gathering, considered three aspects of site selection when he conducted the most representative planning of his lifetime, the overall planning of Islamabad, the capital of Pakistan: the center of national development, a transportation hub, and a fine view of the environment. Potwar Highland was finally selected, relying on Rawalpindi to develop it. When Paris in France carried out new city planning and construction in the 1960 s, it planned and constructed six new cities: Sergei, Pontoise, Saint-Kang Dan-Frisoni, Marne-la-Vallée, Evry, and Melun-Sénard, along a parallel direction with the Seine River, taking two axes of southeast and northwest with one 75-km axis to the north and an 84-km one to the south as the direction of the urban extension. Each new city was 25–30 km away from Paris and was planned to have an area of 161 km² and a population of 300,000 to 1,000,000. This axis space expansion mode separates the traffic in the city center from periphery traffic. In this way, the traffic is convenient and leads to less transportation fees, so this pattern becomes a model in world history of new urban area construction and history of urban development. Tokyo in Japan forms a framework of great Tokyo consisting of the capital as a center and its surrounding new towns through planning and constructing seven sub-centers in the area surrounding the city center. The multi-centered space extension mode also becomes a model in central cities' development of new urban areas.
3. The site selection should have vast development space. New urban areas should be located in larger spaces and capacious hinterland where they can promote the development of new urban areas in the future rather than in crowded places where the new urban area cannot spread out and develop further.
4. The bearing capacity of eco-environment should be strong. The establishment of new urban areas calls for careful investigation and analysis of the ecological situations in the region, including ecological requirements of the regional development, the ecological capacity in the area, and the coordination with economic and social development. In the garden city assumption, Howard in Britain first put forward this ideal pattern, requiring the space layout of new urban areas, facilitating sunshine, air, and surrounding green belts. When the population size surpasses the ecological capacity, another new urban area should be set up.
5. New urban areas should keep a proper distance from the old areas, not too close and not too far away. Being too close is similar to cooking a pancake, spreading disorderly; too far away, it is difficult to initiate because of high cost and slow effect. New urban areas should keep different distances from the old because of their different sizes and functions. On one hand, new urban areas can be close to

the old cities if they are planned and constructed as dormitory cities for residents to live and to have convenient transportation, and to reduce the investment in the construction of the infrastructure by governments and other investors; on the other hand, new urban areas should keep a considerable distance from the old ones if we are going to construct new cities as administrative centers and move the national capital or local government agencies there. The move and new construction of the political, administrative, and economic center involves both national and regional long-term development plans. If we plan and construct totally independent new urban areas, a distance of a dozen kilometers is preferred. *The urban development goals, size, and situations of all aspects determine the distance between the new and the old for there is no uniform standard.* Built in 1967, Milton Keynes new city in Britain has been regarded as one of the most successful new cities developed on a large scale, and it lies to the west of London at a distance of 74 km. The seven sub-centers of Shinjuku, Ikebukuro, Shibuya, etc. around Tokyo in Japan are at a distance of 10 km from the capital center, and the science city of Tsukuba is 60 km away. The new urban area of Zaozhuang in Shangdong Province is pretty far away from the old area, so it is rather difficult to launch and construct it, but the development space is vast. Dr. Dong Ke thinks that new urban areas should keep some distance from the main urban areas, for proximity can make residents rely too much on the main area to the detriment of the new area, so that land exploitation is more active in the main areas, eventually ending in “fusion” of the two areas. This leads to a loss of the function of decentralizing the population of the main areas and alleviating their traffic pressure³ (Table 7.1).

6. The land should be in good condition. This includes such natural conditions as terrain, landform, geology, mineral deposits, and human factors involved with the nature of soil, above-ground buildings, and underground pipelines. Land conditions should be fit for construction with a good natural environment. Earth stability, gradient, and elevation need comprehensive evaluation. Places apt to fall victim to natural disasters such as floods, earthquakes, and landslides should be avoided as far as possible. Beichuan County in Sichuan Province suffered the greatest tragic loss because of the violent earthquake in 2008. According to the analysis by Zhang Peizhen, the head of the Geological Research Institute of China Earthquake Administration, there were four major causes of the earthquake: the seismogenic fault of Yingxiu-Beichuan crossed the whole county, the earthquake rupture displacement near the county was big and the earthquake released maximum energy here, the county was located on loose deposits on the river beach, and plenty of landslides and rock collapses worsened the disaster.⁴
7. The infrastructure should have apparent advantages. It's good to choose a place near the exits and entrances of airport terminals, ports, high-speed railways, and freeways, which is convenient for people to enter and leave, to come and go, and for goods to be loaded and unloaded. It can benefit the streaming of people,

³Dong Ke. *Social Physics Analysis of New Urban Planning and Construction*.

⁴China News, June 26th, 2008.

Table 7.1 Distances between the new area and the central area at the initial stage

Names	Location	Distance from the central city (km)
Tianjin Binhai New Area	Tianjin	50
Sino-Singapore Eco-city	Tianjin	45
Ningbo Yinzhou New District	Ningbo	50
Suzhou Industrial Park (New Area)	Suzhou	10
Ningbo New District of Hangzhou Bay	Ningbo	50
Zhengzhou New District	Zhengzhou	15

logistics, and element flow. Meanwhile, extensive and convenient communication and traffic can favorably help to plan and construct new fast channels.

8. Economic resources should obviously be favorable. The ancient Chinese attached great importance to this and recorded numerous site selections in *Book of Songs*. Guan Zhong, the famous statesman and thinker during the Spring and Autumn period and Warring States period, was the earliest great thinker and theorist studying city planning, layout and construction. He wrote about city location in his article *Chengma*: “The capital city shall be established near big river if not at the foot of mountains. It cannot be set high near the dry land in order to guarantee sufficient water, and it cannot be set low near the water in order to save the expense of building ditch and dam”. He wrote in his article *Duodi*: “The city shall be located in a place with plenty of water for residents to fetch, with waterways connecting for residents to drain.” In modern society, economic resources mainly include material, energy, information, and manpower, which are all necessary for the city. In all cases, the site selection of a new city should give priority to regions with rich national resources.
9. The new urban area should have a good social basis. This means that local residents are strongly identified with the city area; therefore, it is easy to do the work such as land acquisition, demolition, compensation, construction, and environmental protection which need cooperation from local residents. It is hard to push through the development of new urban areas smoothly without a solid foundation and a good social environment.

7.3 Function Orientation

City function is also called city role. Function orientation is the premise and foundation to study and work out the development strategies of new urban areas, and is also the core of overall strategies. Japan attached importance to function orientation, carrying out a number of programs and plans in the Metropolitan Region of Tokyo, endowing the roles of living, education, and commerce to the new city of Tama, at the same time making Chiba an international airport and industrial district, and Ibaraki the Science City. Each new urban area has a definite

leading orientation of function to ensure balanced and harmonious development of the whole Tokyo Metropolitan Region.

City function is divided into general, special, comprehensive, and leading. General function is the common character of cities, the one every city possesses. Special function is a city's individuality and peculiar function which distinguishes one city from another because of their essential quality and limitation, and determines the quality of one city or one kind of city and the development direction during a certain period, such as the function of transport hubs and tourist centers. This is the most crucial and important aspect of function orientation. Comprehensive function means a city with multiple and combined leading functions at the same time, and each has a pretty big action range and influence. For instance, all the big cities or megalopolises such as capitals and provincial capitals possess comprehensive functions. Leading function means a function in a dominant position which plays a guiding role among all the functions of the city. It influences or decides the operation of others, and even determines the city's nature and its development direction. It is consistent with or closely connected with special functions in some aspects.

New urban areas can be divided into international, national, and regional new urban areas according to regional levels and the different roles of economy, politics, society, culture, ecology, and security played in the country and regions, and individualities and features of cities themselves. For instance, Pudong New Area is an international one facing the whole world. Binhai New Area and Lanzhou New Area are national. The other new urban areas, however, set up by provinces, cities, and counties, are regional and local. New urban areas can be functionally divided into two kinds of areas: comprehensive areas and characteristic ones.

Comprehensive new urban areas are often given a variety of functions by state and local governments, such as Pudong New Area, Shenzhen, Lanzhou New Area, and New Beichuan County. There are many characteristic new urban areas, some focusing on transport, such as the New Urban Area of Zhengzhou Airport, some on industries, such as Suzhou Industrial Park, some on ecology, such as Sino-Singapore Tianjin Eco-City, and some on culture, such as Cannes in France, which is a small city along the southern coast and has become world-famous because of the annual film festival. It represents the fashion of film culture. Some places concentrate on science and technology, such as Silicon Valley in the USA, Tsukuba in Japan, Mianyang in China, which are the models of Science and Technology Cities. Some focus on national security, such as Sansha city in Hainan Province, newly established by the state. Some specialize in tourism, such as Honolulu in Hawaii, a bright pearl in the Pacific Ocean, more renowned than many other state capitals in the US. Las Vegas in the US is prosperous through gambling and is famous far and wide.

To study and ascertain the function orientation of new urban areas, first, we should analyze the regional size, population, resources, economy, society, culture, ecology, and transportation of central areas to make sure of the development goals and the prospects, the advantages of realizing these goals, and the limiting factors, especially the bottlenecks. Try to seek the truth from facts out of the particular situations; don't be subjective and fancy. Second, we should study the relevant contents of the proposed construction of new urban areas, such as future

development goals, the main direction, the plans for the development of industries, infrastructure and public facilities, etc., how much land is taken up, how much money is invested, how many residents are relocated, the time of planning and implementing, and so on. Third, we should analyze situations of the cities within the region, especially the development direction, basic features, sizes, advantages, and disadvantages of the cities in the neighborhood. We should know the positive factors and negative influences of new urban areas under way so as to use outside help to develop or to further the plans. Fourth, we must grasp the orientation and development requirements of the new urban area to be launched as well as those of the mother city by upper governments, according to national development strategies and functional divisions of regional development. Briefly, we should know well the situations of higher level governments, understand outside situations, find out what the masses are thinking, and be familiar with the ins and outs. We can be very determined if we are clear about all the situations, when scientific decisions and correct orientations can safely be made. On the basis of the above work, we can predict scientifically the new urban area development, putting forward corresponding urban development goals, indicators, and focuses, and determining function orientation of new urban areas.

The function orientation of new urban areas should not only follow the general rules, but also call for innovation, creation, and breakthrough. The similar strategic goals, inadequate individuality, and insufficient features constitute a big problem in new urban areas in China. For a considerable length of time, many new urban areas have placed the emphasis on the development of new industries, especially new energies, logistics, and IP industries. Some counties in the inland provinces considered a Software Park and service outsourcing as major sectors in the investment and investment promotion during development, which were really time-consuming, and later they found it hard to develop because the fundamental conditions of geography, transportation, talents, and market capacity in which to develop these industries are not available. Some experts point out that the areas with economic vitality are actually located in places with traditional industries, and there are a lot of new industries which are less efficient and demand state support. Mario Polis, the Canadian city expert, criticized in his masterpiece: "Although each region expects to attract high-tech industries, the natural advantages are fit for ordinary industries in most regions".⁵

Some new changes and tendencies in function orientation of new urban areas have recently emerged. First, its function changes from single to comprehensive. In the 1980s and 1990s, China stressed that the function of new urban areas should be single and pure, and required that new cities in the economic development zones only develop industries, say, processing and manufacturing without service industries such as dwelling houses and commerce, which resulted in some new urban areas also had industries without commerce, factory buildings without dwelling houses, mismatched facilities and inconveniences, so no one would want

⁵Mario Polis. *The Wealth & Poverty of Regions*, p. 17.

to stay there. People who lived in old urban areas and had to work in new ones resembled “commuting students”, who had to put up with great inconvenience such as going out early and returning late and traffic jams. New urban areas were nicknamed “human city in the day but ghost city at night”, because they only solved the problem of employment, leaving the housing problem unsolved. Not until 2000 did people improve their recognition of new urban areas and began to attach importance to industries, commerce, residence, leisure, and complete supporting facilities of schools and hospitals. This kind of change and adjustment is more practical and appropriate. As early as 1946, the British government required new cities to keep the balance between employment and living and to ensure residents of new cities can live conveniently and work near their residential areas.

Second, its function changes from the low-end to high-end. For a long time, because of the limitation of system, mechanism, and financial strain, the function orientation of new urban areas was relatively and passably low-end. The real portrayal of this kind of thought and method is “start it and then gradually perfect it”, that is to say, construct one part and plan it later, and construct what is needed. Later, people come to realize that this is a one-sided method and short-sighted waste, so they heighten the function orientation. They plan one and then complete it in one go, or they plan one and implement it step by step, gradually perfecting it.

Third, its function changes from sole qualitative function into quantitative indexing function. The function orientation should not only be conceptually qualitative, but also clearly quantitative, with clear direction and specific indicators, as to be maximally divided and quantified. In order to divide functional standards scientifically, the management committee of Sino-Singapore Eco-City invited many experts from home and abroad to investigate thoroughly. They spent more than 1 year working hard to compile the first set of indicators for eco-cities throughout the world as the quantitative indicators and the fundamental basis of its planning and construction. These indicators include 4 aspects as eco-environment health, social harmony and progress, vigorous economic efficiency, and regional coordination and integration, 22 controlling indicators, and 4 guiding indicators. For instance, the ratio of green buildings amounts to 100 %, the utilization ratio of renewable resources reaches 20 %, the utilization rate of non-traditional water resources such as water reclaiming, rainwater collection, and seawater desalinization exceeds 50 %, and the rate of green travel gets to 90 %. Sino-Singapore Eco-City dreams were to construct a truly green, environmentally friendly, sustainable eco-city to become a practical, reproducible, and malleable mode, to be adopted by other regions in China and other countries in the world. This is the standard, the pacesetter, and the lead.

The relationship with former main urban areas (central cities, old cities, mother cities, old urban districts) is an issue of function orientation which new urban areas can face, and is also a strategic issue involving many factors which needs to be clearly analyzed in space, size, and function.

One is the “dumbbell-type” joint development. New cities in Britain stress self-sufficiency, whereas new cities in Sweden are parts of their mother cities. *The essence of cities lies in the overall scale and agglomeration advantage and the key*

is to absorb, integrate, and develop jointly. From the angle of urban development competition throughout the world, the cities which have formed a rich foundation and accumulation of advantages over years are very rare. Therefore, main urban areas should keep developing competitive industries, knock-out products and the social cultural factors, which have taken shape, because their existence is reasonable, and it is not necessary to put in plenty of manpower, material, and financial resources to the old area, and then move to the new one. Similarly, new urban areas should develop vigorously and jointly instead of making a fresh start as long as there is no strong competition. Development of this kind can be both among regions and among enterprises. Surely, nowadays, in many places the enterprises in the main urban areas are moved directly to new urban areas on a larger scale and to a higher level. The practice of “retreat into three” and “vacating the cage to change the bird” is appropriate as long as it is beneficial to the whole urban development.

Two is dislocation development of crossing hands into the sleeves. Crossing hands means Chinese peasants used to cross their two hands in their sleeves of the cotton-padded jackets in order to keep warm in winter. Here the phrase is borrowed to imply that new urban areas develop differently from old urban areas in industry development, infrastructure, and city functions. Repetition and similarity are shunned; the internal competition and foundation-undermining are not permitted. This development mode can favorably mobilize the initiatives of both new areas and old ones, and plan and construct new urban areas well; it can also refresh and improve old areas so that they do not lose their vitality and luster on account of the development of the new urban areas; and it benefits the fusion of the two areas which finally develop into bigger metropolises with rich diversities.

Three is the gourd-typed innovative development. The gourd looks lovely with one end big and the other end small. It closely resembles the way two urban areas develop, with the old on a large scale and the small new one gradually growing as the downtown area. Some new urban areas are spatially larger than old ones. Some new areas are functionally more comprehensive and perfect. In industry, not only do the new urban areas exceed the old ones in size and level, but also they innovate in system and mechanism and greatly improve the eco-environment. After years of development and construction, this kind of new urban areas can gradually evolve into main urban areas. Dezhou City is close to the Grand Canal. It relies on the Grand Canal to develop and flourish, and it relies on roads to live. For many years, the city grows bigger and expands eastwards with the development of rivers and transportation. During the period of the Ming and Qing dynasties, the Grand Canal transport flourished, so the population and shops of the main urban area mainly gathered along the banks of the Canal. With the opening of the Beijing–Tianjin Railway in 1912, the main urban area developed eastwards. By the late 1970s, the transportation stopped because the Dezhou section of the Grand Canal dried up. Until 1998, the central urban area was constrained within the narrow scope west to the Canal and east to Cha River. In 1998, Dezhou Economic Development Zone was constructed with the building of the Beijing–Shanghai Expressway. In 2003, Dezhou started to plan and construct Hedong New City. In 2011, Dezhou constructed Gaotie New Area after the operation of the Beijing–Shanghai High-Speed

Railway. By the end of 2012, Dezhou had a constructed area of 136 km² (from *Statistical Bulletin of National Economic and Social Development in Dezhou in 2012*). The size of the constructed area of the whole new urban area (including Economic Development Zone, Hedong New City, and Gaotie New Area) was larger than the Decheng Area and the Grand Canal Development Area of the old urban area. Some development conditions in the new urban area are incomparable to the old area. With development in the following years, the size of the new urban area is further enlarged and the level is further improved. The new urban area becomes the one dominating the downtown development in politics, economics, and culture, playing the leading role in the economic and social development of the whole city.

Four is breeding development of mother-infant type. It means the old urban area is pregnant with the new area, that is to say, a city within another city, which is very common in the countries and regions with mature urbanization. For instance, Roppongi Hills new town in Japan is a city renewed and regenerated in the Tokyo Port Area. Zhongguancun in Beijing, China, is also a typical case in this respect.

With regard to landscape and image relations between the main urban areas and the new ones, Kisho Kurokawa, a Japanese master architect, said very vividly: “The old city and the new city are two facets of one city. The old city is a history, in which there are many historical ramparts and relics. According to what I know, in the old urban area of Zhengzhou, there are relics of ancient commercial city which cannot be reconstructed, so we should maintain its original style and features. The new city is the future of the city, so we should respect the history of the old city when constructing the new; meanwhile, we are creating history, creating history for the later generations when constructing the new.”⁶ Resembling exquisite double-sided embroidery and a colorful crystal, the new urban areas and the old ones together decorate the beautiful city. Someone said vividly and practically: “Retrospect in the old city and live in the new city”.

The relationship between the new urban areas and the old areas is determined by multiple factors and conditions such as the development strategies of regional economy and development goals of new urban areas. No matter what the relationship is, there is no doubt that the two areas constitute an integral whole. For the sake of development, they should co-exist harmoniously, improve each other, and develop together.

7.4 Scale Orientation

The city scale refers to urban population size, land use scale, and economy size. There is no specific standard of how big the city size should be. There are no scientific data about the best city size, and there are no lower and upper limits on

⁶Yu Xin'an et al. *Studies of New Urban Area Construction in China*, p. 75.

urban development scale because of different country sizes, city capacity, industry development, and urban development stages. The big Tokyo urban district, the world's most populous city with a population of over 30 million, is one of the most sanitary cities in the world with orderly management and a fine living environment. Some cities with populations of only tens of thousands in Europe are full of vigor and vitality in economy, and the people there live comfortably. Some other cities with no large population are very disordered, similar to grazing sheep. Therefore, it is unscientific and irrational to make a mandatory rule about the sizes of new urban areas. Of course, cities need certain sizes just as enterprises and economy should have economies of scale. Owing to the advantages of industrial clusters, talents, information, and capital can favorably assemble and interchange, and the traffic has an edge of convenient contact. *Generally speaking, as a city becomes larger, the more rapidly it grows and the more benefits it brings in.* At the present time, the global economy enters into "the day of the big city". As many as 200 big cities in the world, with a population of only one-seventh of that of the whole world, produce half of the economic output of the world. Big cities play roles bigger than their own shares in driving economic growth. Specific to a certain city, the possibility is theoretically infinite. The Earth with vast territory and abundant resources can hold very big cities and can form numerous "urban systems" in the future. "All the cities on Earth have the tendency to grow increasingly huge and contact more and more closely". Thus Doxiadis⁷ concluded that "by the end of the twenty-first century, all the cities on Earth would unite and become a unified universal city".⁸ It is hard to predict the size into which the cities in the world can develop. In fact, before the expected planning duration, urban master plans made by most cities broke the planning land use and population size in advance. *The expansion of city sizes is restricted and affected by transportation.* Of course, because of the factors of land cost, environment pollution, and traffic jams, *it is not the bigger the cities, the better. Middle-sized and small cities have vast development space, and are good places for attracting investment, living and leisure.*

Generally speaking, because of the different development stages and strategies, cities differ greatly from each other, so do the sizes of new urban areas. It is difficult to define a number approximate to the actual one of the new urban area, and it is hard to set a rigid standard because of different land use, population size, economic scale, development potential of existing cities, even cities of the same kind in the same country. Since 1984, the average planning area of 58 new urban areas in Jiangsu Province is 51.4 km², and the area of the new urban areas accounts for 58.48 % of the central urban area. As to the size of a single new city, the biggest

⁷Doxiadis: (1913–1975), famous Greek architect and city planner, established Ekistics after World War II, wrote a series of works, was in charge of and did some city planning, and exerted great influence on the sciences of human settlements and the practice in the world.

⁸Wu Liangyong. *An Introduction to Science of Human Settlement*, p. 298.

one is Wuxi-Taihu New Urban Area with 147.22 km²; the smallest is Huaian-Chuzhou New Urban Area with 7.76 km².⁹ Henan Province planned and constructed Zheng-Bian New Area between Zhengzhou City and Kaifeng City with a planning area of 2,077 km², which was approximately equal to the size of two Hong Kongs. In 2009, Tianjin City cancelled Tanggu District, Hangu District, and Dagang District under its jurisdiction, and established Binhai New Area with a planning area of 2,270 km². Dr. Dong Ke put forward the suggestion that that new urban areas should have a considerable size and should make the lowest operation cost of public service facilities as the calculation basis, and the size of new urban areas should have a minimum limit (about 10,000 people) to ensure that residents get full life services; meanwhile, adequate size can create enough opportunities for employment and development so as to produce enough “appeal” to residents. Of course, with the development of knowledge economy and financial economy, some areas are highly intensified, but there are some exceptions. For instance, the Financial Area in London, Britain, has an area of 30 km². The financial city has an area of 1 km², and there are 60,000 people going to work there every day. Roppongi Hills new town in Japan has a rather small area, but its population and economic aggregate are quite big.

As a research guide here, we can put forward several factors fully considered for reference to sizes of new urban areas. One is the overall planning and the development requirements for the entire city approved by state and local governments. Two is the situations of urban and rural population, resources, industries, and markets in the region. Three is conditions of resources, sizes, population density, traffic, and environmental pollution of this city, development potential, competitive advantages and constraints, future key elements of production, population aggregation, and development prospects. Four is financial conditions and the ability to raise funds for the city governments. Five is the land use in the planning and construction area of the new urban areas. Six is the anticipation of the planning and construction of new urban areas, that is, how many years we should spend constructing the areas (Tables 7.2 and 7.3).

At present, most new urban areas in China possess too large planning areas and overpopulation, and the planning areas of many new urban areas exceed that of the old areas. Some underdeveloped counties in northwest China planned and assumed new urban areas with areas of dozens of square kilometers, some cities at prefectural level planned new urban areas with areas up to 100 km². Such generous and massive planning and construction areas of new urban areas posed a series of problems such as excessive land being occupied, capital investment too large, infrastructure construction being wasted, peasants whose land was expropriated feeling psychological panic, the construction cycle and the anticipation of achieving the goals being too long. These problems would result in empty and lifeless cities.

If the planning and construction area is too large, it is certain to occupy plenty of land, much of which is cultivated land. According to statistics from relevant

⁹Duan Jin & Yin Ming. *Spatial Evolution of Contemporary New Town in China*, p. 4.

Table 7.2 Statistics of new urban areas planning in China

Name	Central city	Year	Planning population (× 10,000)	Planning area (km ²)	Management body
Pudong New Area	Shanghai City	1992	194	533	Management Committee of Pudong New Area
Tianjin Binhai New Area	Tianjin City	2009	600	350	People's government of Tianjin Binhai New Area
Sino-Singapore Eco-City	Tianjin City	2008	35	31	Management Committee of Sino-Singapore Eco-City
Sino-Singapore Knowledge City	Guangzhou City	2010	54	123	Management Committee of Sino-Singapore Knowledge City
Suzhou Industrial Park	Suzhou City	1994	60	288	Management Committee of Suzhou Industrial Park
Lanzhou New Area	Lanzhou City	2010	100	806	Management Committee of Lanzhou New Area
Zhengzhou New Area	Zhengzhou City	2009	380	387	Management Committee of Zhengzhou New Area
Xi'an Chanba Ecological District	Xi'an City	2004	55	129	Management Committee of Xi'an Chanba Ecological District
Hengqin New Area	Zhuhai City	2009	28	104	Management Committee of Hengqin New Area
Nansha New Area	Guangzhou City	2011	240	800	Government of Nansha New Area
Xijiang New Area	Chongqing City	2010	500	1,200	Management Committee of Xijiang New Area

(continued)

Table 7.2 (continued)

Name	Central city	Year	Planning population (× 10,000)	Planning area (km ²)	Management body
Qujiang New Area	Xi'an City	1993		41	Management Committee of Qujiang New Area, Provincial Tianfu New Area Planning and Construction Committee, construction and renovation committee of Chengdu, Meishan, Ziyang New Area
Tianfu New Area	Chengdu City	2011	600	650	
Zhoushan Archipelago New Area	Zhoushan City	2011	180	1,440	Management Committee of Zhoushan Archipelago New Area
Songjiang New Area	Shanghai City		60	60	Management Committee of Songjiang New Area

Note Subject to data when planning and launching

experts, in the construction of new urban areas around the country, the construction in most cities occupied cultivated and fertile land except for a few cities such as Tianjin, Hangzhou, which used wasteland and beach land in the early period of construction. Because the planning area was too large, a certain amount of occupied land was set aside, laid waste, and squandered. For instance, the media reported a few years ago that one county in the central regions occupied more than 1,000 mu fertile farmland against the rules to construct the new urban area. Some of the farmland became grassland and the roads became fields of sunning wheat for reasons such as being divorced from reality and finance. Meanwhile, there were cases of letting land idle and waste everywhere because some investors bought the land but did not use it or bought the land without paying—they wanted to wait for revaluation of the land or they failed to invest in it.

The super standard new urban area led to heavy investment in infrastructure. The population could not concentrate, a large number of previously constructed infrastructures were shelved, drainage pipes were clogged, and roads fell into decay and became full of weeds because the construction of industries and other facilities

Table 7.3 Main new town development cases in Japan

Name	Central city	Year	Planning population (× 10,000)	Planning area (hectare)	Development body
Qianli Town	Osaka	1961	15.5	1,150	Osaka—fu
Kouzouji Town	Nagoya	1961	8.1	702	Housing urban community
Quanbei New Town	Osaka	1964	18.0	1,511	Osaka—fu
Tsukuba Academic City	Tokyo	1965	11.4	2,700	Land department and community
Chiba New Town	Tokyo—Chiba	1966	34.0	2,913	Chiba Prefecture
Tama New Town	Tokyo	1967	37.3	3,016	Housing urban community and Toukyou-to
Gangbei New Town	Tokyo—Yokohama	1968	30.0	2,530	Housing urban community and Yokohama
Nagaoka New Town	Nagaoka	1975	1.0	440	Regional Community
Iwaki New Town	Iwaki	1975	2.5	530	Regional Community
Kibi Plateau City	Okayama	1980	0.6	430	Regional Community
Eight Prince New Town	Tokyo	1988	2.8	393	Housing urban community

Data Source Introduction to New Town Planning and Development, p. 68

could not keep up. Several years later, these facilities were to be reconstructed. Some new urban areas just played the “Empty City” trick.

7.5 Feature Orientation

Features are advantages and characteristics of new urban areas, and are core competence. *Featureless cities are mediocre cities.* Features mainly include cultural, industrial, space, and landscape features. Cultural features are the keynote and mainstream of urban culture. Industrial features are the focus and direction of urban industry development. Space features are the density, height, regional space arrangement, and layout of cities. Landscape features include ecology, buildings, and colors.

Hangzhou City in China features in water rhyme of West Lake. Xi'an City has the charm in antique beauty. Singapore is a city of garden, and the City of Paris flows with fashion and trends everywhere. These urban features take shape after decades or centuries, and are accumulated historically, naturally, and culturally. The features of new urban areas cannot come overnight; they require long-term development and historical deposition and need to be meticulously built with an overall plan. However, when planning and constructing new urban areas, we must carefully study the urban development direction and determine the required features of new urban areas according to natural gifts, historical endowment, and existing economic, cultural, and social conditions. In this regard, Dubai in the United Arab Emirates has racked their brains and obtained outstanding results. Their new urban areas are incomparable.

7.6 Roppongi Hills New Town in Japan

Roppongi Hills new town is located in Roppongi Six Chome Area of Tokyo Metropolitan Area. For many years, the streets of this area were very narrow; the buildings were obsolete and densely packed. This town was jointly built by several design firms such as the Jerde Partnership in the USA, KPF (Kohn Pedersen Fox Associates), etc. After 17 years of construction, the area was officially open in 2003, with a total construction area of 780,000 m². It is a building complex combining offices, residences, commercial and cultural facilities, hotels, luxurious theaters, and a broadcasting centre; it has the multi-functions of living, work, play, rest, learning, creating, etc. Roppongi Hills intertwines huge-scale, high-rise buildings with wide sidewalks and a large number of open spaces. Building gaps and large areas of garden landscapes on the roofs have become decisive green spaces in crowded Tokyo and have become famously representative of old city transformation and urban complexes. The redevelopment plan of Roppongi Hills new town combines good art planning and open space design, making the whole space more artistic and people-friendly. It not only provides residents with a comfortable space environment for urban living, offices, leisure, and shopping, but also brings a new thinking direction to urban design.

Construction function. The redevelopment plan of Roppongi Hills new town aims at building “a city among cities”, and its development is focused on showing the unique aspect of its art, landscape, and life. Roppongi Hills new town totally occupies an area of 0.11 hm² centers on Mori Tower, and is a super-large compound capital district with multiple functions and facilities for living, offices, entertainment, learning, rest, etc. There are about 20,000 people working there, and the average population coming and going every day is up to 10,000. The buildings in this town, including Asahi Television Headquarters (designed by the famous Japanese architect Fumihik Maki), the 54-storeyed Mori Tower, Grand Hyatt Hotel, Virgin studios, boutiques, theme restaurants, Japanese gardens, office buildings, art

galleries, outdoor theatres, housing units, open spaces, streets, public facilities, can meet almost all needs of urban life.

Traffic system. Roppongi Hills new town established a good local traffic system. When planning, it considered combining the subway transportation system with the urban public transportation system, and put the population shifts into the first consideration. It meditated the structure of the buildings with vertical flow lines, making the whole space full of level changes. Mori Building Corporation wanted to build a vertical city, changing the life flow line from the horizontal to the vertical so as to change people's living and living behavior modes. It led to more green land and public space by increasing the height of buildings, and reduced people's travel time by cutting the distance between offices and residential areas. The outdoor public spaces in this region are wide, and the greening rate is quite high too.

Construction of space. In the planning, Roppongi Hills new town had regional development combined with urban overall planning. In addition to keeping the existing drainage system and landscaping, it integrated the surrounding parks and square spaces; it made more than half of the planning area into outdoor open spaces and reinforced the fusion and coordination of regions and cities; it made full use of the subway transportation system and the urban public transportation system to combine regional commercial activities with Tokyo tourism as a whole. In its overall planning and design, it fully considered multiple needs of residents and tourists, which made Roppongi Hills new town one of the most watched emerging urban planning areas in the world. Its space construction can be roughly divided into five zones: North Tower, Metro Hat, Holly Wood Beauty Plaza, Hest Walk, and Keyakizaka Area.

Mori Building, the tallest main symbolic building in Roppongi Hills new town, is a building with 54 stories above ground and 6 stories under the ground, with an overall building area of 369,451 m² designed by KPF, a world-famous architecture firm. The building has a high-speed elevator directly to the top and escalators to every floor. West Walk is the high street consisting of some shops on the west side of the space under Mori Building and on the east side of the space under Grand Hyatt Hotel. This area combines a variety of shops, all kinds of fashion boutiques, restaurants, medical centers, banks, and other necessities stores to form a main shopping center and make people's life more convenient and comfortable. West Walk adopted the space design with a height of high-ceilinged four-storey building; the commercial area is six storeys high, with glass curtains as day-lighting roofs, which produce rich space level changes; with all kinds of colorful and interesting, beautiful store designs, supported with the appropriate landscape and recreational facilities, it becomes a simple and bright shopping place which makes people feel open and comfortable. Tokyo City View is located at the 52nd floor of Mori Building, connected with Mori Art Museum. It has 11-m-high floor-to-ceiling glass windows around the building, 360°. It is a wonderful experience to overlook the gorgeous night view of Tokyo city from this site which is full of the sense of open space.

Operational measures. Roppongi Hills new town has an annual marketing extension plan, holds activities with different themes every season, and makes

public the activity plan for the next month in advance to attract public participation. Combining with the tourism industry, it actively develops local tourism, artistic, cultural, and commercial activities. Roppongi Hills Arena is an outdoor multi-functional arena stage for public entertainment shows with a shield-typed dome which can be opened and it offers a place for outdoor activities regardless of weather. With switchable spray facility, it satisfies the need of a variety of venues and offers varied spaces. In addition, on all streets, on building walls, and in front of elevators in Roppongi Hills new town, they set up large and small screens to show all kinds of leasing and activity information, and to relay performance activities, to play a variety of commercial advertisements, and to pass on information.

Artistic, cultural, and recreational facilities. Roppongi Hills new town has become one of the main areas of culture in Tokyo with a large number of artistic, cultural, and recreational facilities. They planned and assembled the Mori Art Museum, viewing decks, membership clubs, academic institutions, etc., taking modern art as the theme of exhibitions and collections in the Mori Art Center in 49–54 stories in the Mori Building. Moreover, it fully considered and set up public art works and landscape recreational facilities in the whole construction process. There are in total 8 public art works and 11 pieces of street furniture of installation art set up on the sidewalks and in public places in this area. This landscape system planning, which cooperates with open space as a whole, becomes an important factor in the street landscape in Roppongi Hills new town. (This part is edited according to relative materials in Baidu Encyclopedia).

Chapter 8

Strategic Research and Formulation

The strategic research formulation of new urban areas mainly solve three issues: what's the status quo of the new urban areas what are the goals of the future development what are the strategic measures of realizing the goals? The three "whats" all begin with "W" are consequently also called "the three Ws".

8.1 To Analyze and Command the Strategic Foundation of New Urban Areas

To do something, one needs to start with figuring out one's position and coordinates, the internal and external environments, and the conditions lying ahead.

The first thing to do when studying and formulating new urban area strategies is to analyze the basic situations of new urban areas which mainly involve the situations of the region, people, administrative superiors, and other areas, so that we can see the advantages, disadvantages, and what are the development opportunities and challenges we are confronting.

1. The regional situations refer to the history and the present conditions. We can have a better understanding of the present time by drawing lessons from history. Through searching in history, we get to know the city's context such as historical evolution, changes of nature, humanistic views, economic development, etc., and we can grasp the history and rules of some issues and situations at present from the historical perspective. We need to know the history, and simultaneously analyze the status quo which involves the nature, geography, politics, economy, culture, society, ecology, transportation, etc.; every aspect is a system full of substance.
2. People and culture refers to the local culture and customs of the society in the city, which can be exquisite and delicate in one region, but crude and generous in another. To what degree people of all walks of life are aware of the new urban area is especially significant, such as whether they have consensus views on the development direction, size, and functions of the new urban area, what kind of anticipation, wishes. and advice they cultivate on the future development of the

urban area. The Chinese believe “union is strength”, whereas westerners stress “common values”. Jeb Brugmann, the internationally-renowned Canadian urbanologist, made an accurate comment: “The strategic starting point of urban construction always keeps pace with the basic local values, and the latter determine the selection, action and functions of the city. When they are consistent, there are more and more solutions for creating common goals and the strategic capability increases as well. The consistent value proposition instead of technological plan is the cornerstone of urban strategies”.¹ Thus we should have a clear understanding of people’s recognition, suggestions, etc., about new urban areas through multiple social investigations such as interviews and questionnaire, so that we can shoot the arrow at the target, seek common strategic goals, and win over more people to realize the common value basis.

3. The situation of administrative superiors means the requirements of the national development strategies for this city and new urban area, the orientation of territorial planning and regional planning, and policy provisions by the state and region. Without full-scale consideration, simple action is impracticable. These three aspects are of the same significance, especially in China, where the political requirements are high, the political institutions are highly unified, and many economic resources are controlled by the state and high government. The autonomy of high government and its departments are pretty powerful in policy provisions, and they enjoy a considerable exclusivity which concerns new urban area space size, land, finance, and tax. If we do not strive for and make use of these policies, there are chances that we make decisions blindly, act rashly, mess things up, and do things wrong.
4. The situation of other regions refers to the situations of similar cities and new urban areas, home and abroad, their successful practices, mature experiences, disadvantages, and the way the future development trend can inspire and guide this new urban area.

We should find the advantages and disadvantages of the new urban area’s development as well as the opportunities and challenges it faces with thorough comparison and consideration. *It is the advantages of one over the other that are really important.* Some new urban areas boast their good locations and convenient transportation; some boast rich resources and sufficient energy; some developed industries and adequate strength; some vast market and dense population. *Every area has its own advantages among which the most important is economic advantage rather than resource advantage. Only when resource advantage is transformed into economic advantage can it be a true resource and tangible advantage.* Meanwhile, every new urban area has its weaknesses and restraint factors, which should be carefully enumerated so that everyone can be clear about them. Hence, we know what the new urban area can do and what it cannot.

During its development, the new urban area confronts many opportunities and challenges which exist as they are and which can sometimes be transformed and

¹Jeb Brugmann. *Urban Revolution*, pp. 207, 208.

made use of. For a long time, in people's minds, Zaozhuang City in Shandong Province has been considered a coal city with exhausted resources and heavy pollution, and many people are not optimistic about it. However, it is a commercial port of the ancient Grand Canal and a place where the victory of Taierzhuang campaign was waged during the Anti-Japanese War. For the last few years, seeking opportunities as state and society from all walks of life has attached importance to it and supported history and culture, and the Zaozhuang municipal government has made a great effort in digging up the historical and cultural resources to reconstruct it into a dreamy place with the Grand Canal, the ancient city, and the war-retained city as a focus. This renovation creates a new history and stands out as a model of urban development in China and even the world.

Some opportunities are from inside, and others from outside. Shenzhen City was originally a little fishing village, and in the 1990s it made use of the advantage of proximity to Hong Kong and national development strategies, developing itself into a modern city over more than 10 years.

Some opportunities are realistic, some are visual and psychological. "Danger awareness" is often strengthened by people, but it frequently works well, playing the role of inspiring and castigating, and then transforming itself into an opportunity.

Some opportunities are natural history, natural talent, and self-creation. There are two famous new urban areas in the world constructed in the desert which have been developing very fast. One is Las Vegas in the US; the other is Dubai in the United Arab Emirates. There was a time in the past when the two cities' natural geographical conditions were awful and the population there was sparse. They were short of conditions for planning and constructing new urban areas. However, the two cities took advantage of the specific policies from their own countries, created opportunities, and worked wonders in the history of new urban area development in the world. Therefore, to establish new urban area strategies, we enhance advantages and avoid disadvantages, address our weaknesses and highlight our strengths, strive for advantages and discard the bad, pursue interests, avoid risks, and we should also seize opportunities and innovate resources, advantages, and strategies. In new urban areas, we want new creations and a new future.

8.2 To Set New Urban Area Strategic Goals

Based on analyzing and grasping relative situations of new urban areas, we should study and formulate the development strategy goals with height, width, depth, and thickness, and we should also be qualitative, quantitative, timed, and pacesetting, so that the specific goals, good organization, and scientific procedures can be achieved.

To have height means we should be equipped with a global vision, an international outlook, and a national mind. To formulate new urban area development strategies we need to analyze international and domestic situations carefully, such as development tendency in economic society, regional reconstruction patterns, and the development track of advanced cities. This height needs the determination of

development coordinates and strategic positions, and establishment of new urban area structures in order to have a bird's eye view of the new city area.

To have width means the strategic goals are wide, frontal with a large margin, that is to say, it can cover all aspects of politics, economy, culture, society, ecology, etc., and every aspect has its own indicator system and the indicators are interrelated.

To have depth means new urban areas not only have specific development strategies, but have specific strategies of spatial layout, economic development, and ecology as well, each aspect needing systematic study with certain supporting systems at work.

To have thickness means the strategies are enriched and diversified, have historical origins and future prospects, and have distinct stages and clear steps. When formulating new urban area development strategies, China usually sets 20 years as medium and long-term; in fact, it is quite near eye-sighted for the time is too short. The basic strategy is set for more than 50 years and the framework planning over 100 years. With the skin gone, to what can the hair attach? Without 100-year planning, the construction of 100-year buildings and 100-year cities loses its foundation. It can only be empty talk, a castle in the air. Except for a few cities, such as Pompeii, Babylon, Petra, Troy and Loulan, which lost their brilliance and died for such reasons as natural disaster, plague, war, etc., most cities in all countries have survived and developed for a long time. Of course, some cities are full of vigor and keep growing, whereas others become mired in a deep malaise and become dilapidated, because cities are huge living organisms and have the functions of resurrection, reproduction, and renewal. The media reported in the first half of 2013 that Detroit in the USA was declared bankrupt because of economic development, social stability, etc. As a matter of fact, it is easy to say but not that easy to implement bankruptcy, because the problems of how a city goes bankrupt, how to move residents, and how to deal with their houses involve a series of major issues of politics, society, the people's livelihoods, etc. The White House in the USA announced on Sept. 27, 2013 that they would offer more than 300 million dollars to aid and support Detroit to restore jobs and to build the public's confidence in the future.² The largest case of city bankruptcy in American history leads to a lot of thought, which has a profound influence on urban development, no matter what the final result is. Therefore, if we say a construction project is one of vital and lasting importance, new urban area development is a massive cause for a thousand years and involves a strategy for ten thousand years.

There are now a lot of urban strategic studies which expound with dry qualitative discussion, short of data analysis and model research, and it is hard to convince people and guide people even though it is scientifically justified. Therefore, we should pay attention to data analysis, applying techniques in data-analyzing. It is true of urban development, and especially of the new areas, which are backed with a series of development data, development indicators, time concepts, and node data.

²Reference News, Sept. 30th, 2013.

In this regard, Tianjin Sino-Singapore Eco-City has carried out a very beneficial exploration. Though the data are boring, they represent scientific research.

8.3 To Ensure Strategic Implementation

The first strategic and most important step in formulating a good new urban area strategy is to implement and realize the strategy, transforming it into the glorious reality of the new urban area.

The implementation of strategies needs to be completely immovable and long lasting. Nowadays, there is a negative phenomenon where people work carefully, enthusiastically, and devotedly when formulating new urban strategies, but do nothing to carry them out, just putting them on a shelf after the strategies are formulated. In short, a good beginning with great momentum on a spectacular scale ends in coldness and silence. Particularly when governments change office, and the leading bodies are readjusted together with the slogans, the strategies and the mind-set changed, the formulated strategies may even be revised and denied so that the executives are badly stuck for what to do. As a result, the new urban areas lose their development direction, with the strategies misplaced and the development nondescript. Thus, when we make new urban area strategies, we need to solicit opinions from people of all walks of life. Once the strategies are formulated, they should be discussed and adopted by the local people's Congress or the local Standing Committee of National People's Congress, then form resolutions, which cannot be arbitrarily changed and must be fulfilled. Openness and transparency are good ways to solve arbitrariness; social supervision is a good way to overcome the arbitrary decisions of the leaders. The new urban area strategies, after establishment, should be open to society through media such as newspapers, networks, etc., letting the whole of society know the strategies, spatial layouts, and function orientation, so that the forces of social supervision and restraint can be reinforced. *Of course, any strategy is bound to be the product of certain social development stages.* The world is developing, cities are changing, and new urban area strategies should also follow the tendency of economic social development and make timely and effective adjustment, which is a kind of optimization and improvement, and is normal and, in fact, a must. When adjusting, we see to it that we handle affairs according to the procedures, organize studies on them, and submit to the original approval agency to examine for approval, so that the strategies can be scientific, feasible, serious, and conscientious.

We should clearly define the responsibilities when implementing the strategies, and put them in place. New urban area strategy is a system. During the implementation, we need to subdivide the strategies, and put them in relevant units of the governments and the relevant main bodies of the new urban areas. Every department, every unit should produce the work plan and implementation steps, and then implements them year by year, item by item, and one by one, according to the division of labor.

8.4 Universe Singapore—Strategic Management of Singapore Government

Since the foundation of the country, Singapore has obtained a series of remarkable achievements. The government and some people of insight were not content with the status quo. They were instead worried about grinding to a halt. They thought deeply how to improve further the national development, keeping the country thriving and prosperous; many countries learned from Singapore's experiences and developed very quickly. How to face this competition? The Singapore government pool scores of departments, more than 200 public officials, experts, scholars, and social elites to discuss and study repeatedly, and then they establish *Universe Singapore State Strategies*, and implement them.

8.4.1 Analyzing the Status Quo

Through SWOT analysis we know the reason why Singapore succeeded was its key position of connecting with the world, which was its biggest advantage. Singapore is the pivot of international aviation, navigation, and commerce, and its global competitiveness ranks very highly. Its biggest disadvantage lies in its small territory and severe shortage of resources.

Singapore faces fierce competition under globalization, especially competition from Dubai, Shanghai, and Hong Kong. It faces changes in world power, mainly the rise of China and India. It also faces the opportunities of globalization and the knowledge economy era and meets the challenges of fierce competition under globalization. In order to continue its development advantage and present position, Singapore needs to review its successful experiences, renew its ideas, and be bold in innovation.

8.4.2 Establishing Strategies

1. Strategic vision: center and pivot connecting the world
 - How does the world see Singapore under this vision?
 - The World in Singapore
 - The World for Singapore
 - The World with Singapore
 - The World centers on Singapore
 - The World trusts Singapore
 - The World connected through Singapore
 - The World finds opportunity in Singapore
 - The World innovates in Singapore

- How is Singapore positioned in the world under this vision?
 - Singapore in the World
 - Singapore for the World
 - Singapore networked with the World
 - Singapore as a key in the World
 - Singapore leads the World
 - Singapore benchmarks for the World
 - Singapore finds opportunity in the World
 - Singapore innovates for the World

2. Four Strategies: integrity, new knowledge, connection, life

- Integrity. Singapore is renowned for its integrity, high quality, trustworthiness, high efficiency, rule of law, respect for intellectual property rights, and tough anti-corruption. Integrity is the brand of Singapore, which is the most valuable treasure in the knowledge economy era. Singapore represents high quality and can be a reference standard for other countries. We should maintain Singapore's integrity and provide high-quality and high value-added products and services for the world. The whole world is happy to consider the brand of Singapore.
- New knowledge. The new direction of Singapore's development is to create a knowledge-based economy, build an innovative entrepreneurial environment, attract diversified senior talents, promote more innovation entrepreneurship, and improve the quality of the labor force. The whole world is happy to invest, to start a business, and to innovate.
- Connection. We need to reinforce further the global pivot position of aviation and navigation, improve the relationship between transportation and commerce. We need more overseas friends to amplify our voices, increase our influence, expand our space, and strengthen emotional and cultural ties.
- Life. Singapore is an international cosmopolitan city; its quality of life is safe, orderly, environmental, convenient, healthy, and educational. With infinite energy, Singapore builds its urban esthetics and becomes the global cosmopolitan city that the whole world would like to live in, and it attracts people from all over the world to Singapore.

8.4.3 Strategy Implementation

Strategies not executed are only castles in the air. Without execution, there is no competitiveness. The obstacles to executing strategies mainly include that of vision and strategies, personnel, resources, and management.

The execution of Singapore strategy uses BSC (Balanced Scorecard Card) to reinforce the executive force, to set up comprehensively performance indicators from the four levels of customers, processes, learning and growth, and economy to

guide strategic actions. The BSC transforms organizational strategies and vision into a specific goal, indicator, target value, and action plan. The specific steps are as follows:

1. Evaluate organization and establish strategies
2. Determine the level and performance targets
3. Cause and effect linked strategy map
4. Make performance indicators
5. Establish target value and action plan
6. Decompose layers to layers
7. Determine the allocation of resources
8. Use the correct method for reporting results
9. Re-evaluate and revise BSC

(This part is revised according to Dr. Zhang Zhibin's lecture *Government Strategy Management*, in Nanyang Technological University in Singapore, and according to the blog entry by Big-Mouth Wild Wolf)

Part III
On Programming and Marketing

Chapter 9

New Urban Area Programming

9.1 The Differences Between Urban Programming and Urban Marketing

A programme is a plan for future events. The Chinese equivalent of programme is *cè huà*, a Chinese antique. This word first appeared in *Huainan Honglie*, a philosophical book written by Liu'an in the Western Han Dynasty. In the book of *History of the Late Han Dynasty* by Fanye of the Southern Song Dynasty, the same concept is also mentioned.

Marketing involves the activities operated to achieve the maximum interest in the demands of consumers. In *Cihai*, a Chinese encyclopedia, marketing is too simple and vague, though discussed.¹ Marketing might be imported from foreign culture. The author of this book has not researched into when this word was first used in China.

There are differences between programming and marketing, with the former focusing on the preliminary arrangement and strategic formulation, and the latter on operational and tactical maneuvers, applying strategies to campaigns etc. Programming emphasizes arrangement, whereas marketing attaches importance to action. Their relationship may be likened to the two complementary wheels of a bicycle, the front wheel responsible for orientation and route-taking, and the back for offering motive power and loading. We plan to achieve better marketing, and marketing demands the direction of programming and turns it into reality.

The differences between programming and marketing are not distinguished in some cases in China. It is acceptable to some extent when some experts mention them in combination, urban programming and marketing, for instance the theory of *7W2H Urban Programming and Marketing*, put forward by Zhuang Yizhao. In China, well-known senior designers such as Wang Zhigang and Chen Guoqing do the urban programming much earlier, whereas some younger ones, who specialize

¹*Cihai*, Book Four, p. 2752; Volume Three, p. 2075.

in marketing theories, do city marketing. Some foreign institutions such as the Kotler Marketing Group, which has long been concerned with city marketing, offers urban marketing and international business-attracting service in over 30 cities around the globe. As a matter of fact, most cases in China, whether urban programming or marketing, are basically the same, and they do the same things, regardless of different concepts, quality, research methods, and study priorities.

Academically, urban programming is different from urban marketing in the same way design is different from marketing. Chen Fang thinks in *Seven Guidelines in Urban Marketing* “N times of designing should be done in urban marketing.” Wang Zhigang puts forward his own methodology, in which he emphasizes the four steps in the process of programming.

In the course of writing this chapter, the author has consulted lots of documents and found that the disciplines in these two fields are too young and far from fully developed, especially urban programming. At the turn of this century, some intellectuals and advertisers, influenced by urban marketing thoughts and western marketing theories, rose to carry on their shoulders the flag of urban programming of city images and brands, pointing their staff who planned for enterprises, products, and real estate towards the urban design. Some designers usually skimmed off one or two terms and catchwords from a concept, an event, an anecdote, a legend, or a pretext, and boasted about it, or they programmed a festive observation and built an iconic project. They misunderstood it as urban programming or urban marketing. As a matter of fact, building a city is not easy, neither is the building of a new urban area. After a brief moment of artificial programming and marketing, there is nothing left. This is what happened in the initial phase of China’s urban programming. Afterwards, some experts did some urban marketing programming, city brand and image design, and city cultural theme design. There are many practical cases of this kind, but most of them are superficial and incomplete because of the lack of deep and regular theoretical study, especially the lack of follow-up publicity and promotion of municipal governments. We should study further, conclude carefully, and generalize theoretically to establish a complete, practical urban programming theory, learning and improving our marketing knowledge. Meanwhile, city marketing institutions should also take up the good points from urban programming, making it take root and flourish as quickly as possible.

Below are the main differences between urban programming and urban marketing based on some experiences and recognition.

First, they have different concepts. Based on investigation and analysis of the city’s existing resource elements, urban programming studies and establishes the city’s development goal, stages, and procedures to seek the maximized value, attract talent and tourists from home and abroad, and gather the production elements from all aspects, promoting sustainable and healthy development. It is dimensionally divided into overall and district programming. Regarding categories, it is divided into strategy programming, industry development programming, and cultural theme programming. As for urban marketing, the more authoritative definition is given by Phillip Kotler, US, in a series of works on regional marketing. This is the planning and design conducted to meet the requirements of a target market.

Successful territorial marketing should make citizens and enterprises content with their communities, and fulfill the aspirations of tourists and investors in the area. This definition points out the goal of urban marketing with requirements as its core term. Substantially, it is first and foremost a kind of systematic and strategic decision.

Second, they have different theoretical origins. Urban programming finds its roots in Chinese traditional philosophy and oriental wisdom, with some endowment of different factors of modern market economy, culture, advertisement, and promotion. Urban marketing is derived from marketing and national marketing theory and its theoretical foundation is the concepts and tools of marketing.

Third, they have different emphasis. Urban programming emphasizes its strategic study by means of determining the strategic position for a city, finding out the spot of activity, proliferation, and ignition of projects or other elements in order to motivate urban development and construction. Urban marketing, however, stresses strategic promotion, which strives to sell or publicize to the potential customers the city's products, enterprises, brands, cultural atmosphere, trade environment, investment factors, and other city resources by means of modern marketing promotion methods, regarding the city as an enterprise or a product.

Fourth, they adopt different methods. With emphasis on the qualitative study, urban programming seeks an opportunity for the city to develop, and generalizes and refines the soul and spirit of the city from its history, tradition, culture, natural and social endowments. Urban marketing pays much attention to market segmentation and quantitative comparison by means of studying features of producers and consumers. It is expressed by figures and talk of the market.

Fifth, they have different implementation subjects. Urban programming stresses the administrative behavior of the government, whereas urban marketing emphasizes the multiple marketing subjects, which are usually committees of representatives from different departments of the government, enterprises, and communities. It is capable of integrating and coordinating various industries and social sectors. Influenced by the Asian Financial Crisis at the turn of this century, Hong Kong once felt stuck and deeply depressed. In 2000, Hong Kong Special Administrative Region (SAR) government invited a large top brand adversary group, including Landor Associates, Burson Masteller, and Wirthin Worldwide, which are well-known for their international vision and rich brand operating experience, to establish Hong Kong's new brand image. After a survey, a flying dragon was introduced as a symbol of Hong Kong to present the city further, to promote its development.

At present there is a misunderstanding which holds that urban marketing is urban management. They are essentially different. Professor Guo Guoqing and Dr. Liu Yanping in the Business School of China's Renmin University, says in the paper entitled *The Latest Development of Urban Marketing Theoretical Studies and the Enlightenment* that there are at least four conspicuous distinctions.

One is that connotations and goals are different. Urban marketing aims to fulfill the demands of urban customers such as townspeople, investors, tourists, and enterprises, building the city's positive image and strengthening the capability to

support the public values of the city. Urban management aims to raise funds for urban construction and development and to liquidize and add in value the special state-owned assets of a city by normal market methods.

Two is that they use different methods. Urban marketing takes cities for its merchandise, which refers to the urban image and the related services. The city is improved to meet customers' demands by specialized marketing methods such as market segmentation, selection, orientation, and marketing communication. However, urban management also regards cities as its merchandise by locking urban land resources and related visible or invisible monopolistic resources. The methods it frequently applies are mostly those used to operate finance or capital project operations, for instance, urban land resources and other visible or invisible assets are managed by means of auction, rental, mortgage, naming and paid use, or urban development and construction projects are also taken for merchandise and managed by means of BTO, BOT, BOO, and demutualization.

Three is that they have different executive bodies. Urban marketing subjects from urban, regional, national, and international levels concern many stakeholders such as city governments, enterprises, residents, and social communities, whereas the urban management body is nothing but the city government itself.

Four is that the strategic formulation and executive process differ from each other. The characteristics of multiple subjects and objectives lead urban marketing to call for effective communication and coordination among urban stakeholders. Therefore, the urban marketing strategic formulation and executive processes are also a coordination process between urban marketers (including municipal governments). However, urban management strategic formulation and implementation are basically things within the framework of the governmental organization and system process.

9.2 New Urban Area Programming

It is a priority of urban programming to establish the scientific new urban area strategy. Comparatively speaking, this is the part which the designing agents and designers in China value most and are good at. However, it turns out to be far from satisfactory because of the insufficient macro-analysis, the intangible study of competitive surroundings, and incomplete analysis of one's situation. Overlooking new urban areas from the international viewpoint, national perspective, and regional level, we evaluate the new area from the features of the old one, discovering its merits and demerits by comparing the surrounding cities' development situation with the purpose of determining the new urban area strategy.

We seek and define the soul of a city in earnest. Wang Zhigang, a well-known designer in China, thinks that urban programming is a process of searching for a city's soul, which is authoritative, exclusive, and unique. Therefore, he defines the soul of Changde, Hunan Province, as "tour to Great Xiangxi and relax in Peach Garden." This method of establishing a city's soul or a concept through urban

design is now being applied by most designing institutions and governments. Some are so exquisite that the city's fame can reach pretty far such as Liaocheng, Venice in North China.

For the moment, urban programming gradually turns to urban cultural theme design. It is a good idea for some places and designing institutions to design city cards, souls, and images earnestly, and it turns out to be successful in some places. However, Chinese people think politically, unitarily, and identically that the things they sum up are somewhat vogueish, stodgy, and similar. For instance, in order to have the flexibility and moistness of water, there are many cities which are named "water city" such as China Water City, Oriental Water City, Water City South of the Yangtze River, and Northern Water City. As a result, the city cards and city souls vary just a little by sharing the same part name, and it is difficult for investors and consumers to differentiate and remember. Characteristic is individual, and feature gets lost because of a lack of dissimilarity and, finally, so does the due promotion effect. There are more than 20 cities which are observing kite festivals and ice-snow festivals. Whoever wants to make the city influential and attractive must spare no efforts in finding specific things. This needs meticulous work.

9.3 Catalyst Effect of New Urban Areas

Catalyst, originally a concept in chemistry, is a substance which causes or increases the rate of a chemical reaction, remaining unchanged in the process of the reaction. It is always used in small quantities. The catalytic effect is the influence to which degree the catalyst works on matters and the surroundings.

In the 1990s, Wayne Atto and Donn Logan, the American city designers, first put forward the concept of catalytic effect in their book *American Urban Architecture: Catalyst of Urban Design*. They said that an urban design triggers urban space evolution, thus stimulating the urban morphology growth and impelling the steady and gradual development of urban structure. In fact, the catalytic effect can be felt in manifold theories and practices. For example, the investment multiplier effect in economics, the agglomeration effect in sociology, the Doppler effect in physics, and the water wave theory in mathematics all reveal similar rules.

There are a lot of catalytic phenomena during the evolution of a city, which occur and develop under different kinds of catalytic effects. The catalyst sometimes takes a material shape, represented by the construction of a symbolic building, the scheduled launch of a city square, the opening of a road. Sometimes it takes a nonphysical shape, for example, a national sports event, an international forum, an important festival, the enacting of a state policy. In the 1980s, the strategic implementation of opening Chinese eastern and coastal regions hastened the rise of some new areas in the east. In the new century, the state has introduced the strategy and policies of developing the western regions and promoted the launch and development of some mid-west new city areas. National and international conferences of great significance, great culture exchanges, and sports events always

popularize certain places, which grow rapidly into new urban areas with national or international fame, e.g., Davos, located in Grisons south-east Switzerland, is originally an out-of-the-way small town near the border. Though called “the largest mountain skiing in Europe”, it has remained unknown for a long time. In 1971, Klaus Schwab, a professor at the Geneva Business School, founded the European Management Forum, which became increasingly influential around the globe. In 1987, it got its present name, World Economic Forum, and is held annually from the end of January to the beginning of February in Davos. It is also called Davos Forum or Winter Davos, where the world top 500 enterprises have talks with governments of different states and regions from around the world on global economic issues. That’s how the small town Davos gets its international fame. Boao Forum of Hainan in China is also a good example of this kind. The annual forum achieves very good regional development effects and comprehensive national policies. New urban area design needs deep analysis to spot and catch the city catalyst with the purpose of giving play to its catalyst effect.

A new urban area is a sustained development process in which catalytic effects of some projects, events, policies in planning, marketing, design, and development are activated and triggered. First, we are earnest in looking for the catalytic elements of new urban areas, namely, the tipping spot. Any new areas would possess some key elements to start with, catalysts and tipping spots, which call for a serious research and a thorough analysis in phases of strategic study, promotion, and design. The catalyst in Sino-Singapore Tianjin Eco-city is the first internationally ecologic standard design to promote China. The tipping spot in Jinan East New Area was the 11th national sports meeting in 2009 as well as the stadium built for the event. Second, we are explicit about the conducting direction and path of the catalytic energy. In accordance with the category of new areas, tipping elements, and the target audience, the scope of broadcasting, routes, and priorities can be determined in order to achieve the best effect and minimum cost. If the new urban area is tourism-orientated, what we do is segment the market which is designed to attract tourists, to divide key regions, and do a good promotional job. Finally, we try to pack it carefully and trigger it fully. As a result, scientific design and meticulous catalysis are needed in order to achieve the desired triggering effect.

Chapter 10

New Urban Area Marketing

10.1 Important Marketing

Taierzhuang of Zaozhuang city in Shandong Province is an ancient town with a long history, where wealthy businessmen from different places gathered and where various styles of buildings, northern and southern, were built. It was called “the first village under the sun” by Kangxi Emperor in the Qing Dynasty, for, when night came, the fishing boats with lights on were everywhere along the river, the songs from the boats could reach as far as ten *li*, and the business in the market lasted the whole night. However, the city was damaged in the war, leaving less than 10 % of the original one. In 2006, Zaozhuang city proposed to reconstruct the ancient town and spent 3 years collecting historical documents. On April 8, 2008, reconstruction started, and Taierzhuang Canal and Ancient Town Capital Investment Shares Limited Company, a state-owned national company, was founded, including five coal mine enterprise shareholders, each offering interest of 1 million tons of coal, equivalent to 40 million RMB as the initial capital.

To bring in “tour on a single horse”, a tourist service operator to Taierzhuang, the municipal director, who is responsible for the project, went to Yunnan Province to attract investment. The municipal committee and its government combined the efforts of the whole city to promote the small town, assigning the task of promotion and investment attraction to different departments in the urban area, each department responsible for one target city, with the stationed office responsible for orientated promoting, recommending, and organizing tourists, over 60 cities being designated as key locations of potential customers in the surrounding 300–500 km, the corresponding offices established, the initial funds of 30,000–50,000 yuan being appropriated to start services such as tourism recommendation, consulting, etc. In 2009, the “two-day tour” project office was founded and started the tour to Zaozhuang in 2 days. On May 1, 2010, Taierzhuang Ancient Town started the operation and sold at auction the tourism rights and the market management rights of the “two-day tour to Zaozhuang” project in 17 cities for tourists at home. Huge

advertising of “ancient Taierzhuang, a place to seek your dream” was undertaken at the High-Speed Railway Station in Shanghai and Beijing. A series of activities were planned, such as organization of various tourism festivals, strengthening event marketing, the inaugurated ceremony of exchange bases of mainland and Taiwan, Miss World touring, the national ancient city reconstruction forum, and the cultural visit of reporters and China’s sculpture forum, with the purpose of promoting market influence. Lian Zhan, the honorary chairman of the Kuomintang in Taiwan, Wu Boxiong, and Yu Muming, Taiwan New Party chairman, came to visit Taierzhuang one after another, respectively attending the foundation stone laying ceremony of landmark buildings of exchange bases on both sides of Taiwan Straits and the ancient city opening ceremony. On November 20, 2010, it succeeded in passing the national 4A scenic spot inspection, and went through the preliminary assessment of the 5A check. On September 6–9, 2012, the second Chinese Intangible Cultural Heritage Exposition was held in Taierzhuang. Within a few years, the ancient city was set up as the first communication base on both sides of Taiwan straits by National Office of Taiwan Affairs and the only national cultural heritage park by National Heritage Board. Since it was reconstructed, it has played a conspicuous role in driving the local economy. Before 2008, there was not a single five-star hotel in Zaozhuang, and less than 10,000 tourists stayed for the night. Now, 10 five-star hotels have been established or are under construction. Taierzhuang Ancient Town has now received over four million visitors since its trial operation on May Day in 2010. It was during the golden week of National Day of 2012 that the number of visitors reached 700,000. As for the promotion of its rebirth, despite some administrative acts and extraordinary measures, we have nothing to say but to admit that it is a typical new urban area design and a successful case of marketing (Fig. 10.1).

The twenty-first century is a time of urban marketing, when especially Chinese new urban areas, with characteristic of high number, large scale, sustainable development and keen competition, call for tremendous talent, technology, funds, information, and marketing measures to push forward their development. *Urban development is as good as economic development, which requires impetus and excitement.* It runs in the same way water is boiled. When boiling water, we provide stirring to conduct heat so that the water can be heated quickly and the stirring can



Fig. 10.1 Taierzhuang ancient town

prevent the boiling water from overflowing. Without marketing and promotion, both urban development and economic development would lack a good atmosphere, which would result in bad investment expectation. Therefore, it would be hard to stimulate the enthusiasm of investors, and there would be no big investment and development. Chinese urban marketing has just started and is characteristic of its comparatively poor theoretical studies, weak instructional policies, and the lack of strategic, substantial urban marketing institutions and comprehensive urban marketing projects of high quality. It needs reinforcement. *New urban area development calls for qualified strategic marketers and operators.*

10.2 Marketing Strategies and Tools

Urban marketing is a systemic and sustainable job with methods and tools. In 1960, Roma McCarthy, an American designer, for the first time summarized the enterprise marketing elements as a combination of four strategies in *Basic Marketing*: product, price, place, and promotion. Together with strategy, which is the well-known “four Ps” theory. In 1967, in his best-seller *Marketing Management: Analysis, Design and Control*, Philip Kotler confirmed this marketing combination method with four Ps as a core. S.K. Rainsto, a professor in the University of Helsinki of Finland, proposed a creative conclusion and refinement involving nine successful elements of regional marketing based on a deep analysis of the marketing cases in North Europe and America: planning agencies, promises and strategic analysis, regional identification and images, private-public collaboration, political agreement, global market, local development, process cooperation, and leadership, which is considered by experts as the most profound and splendid refinement and creation of urban marketing strategic elements.

In accordance with the “Four Ps” and the nine successful elements to analyze new urban area marketing elements, the following aspects should be taken into consideration. First, the marketing organization is needed. We compare and investigate the experienced marketing agencies to do the new urban area marketing work because they are equipped with specialized talents and a lot of experience. Second, strategic orientation is needed. We should have a deep analysis of the new urban area situation and put forward the strategic orientation, the development prospect, and the stage goals. Third, the new urban area image should be studied. It is to determine the identical system of new urban areas as products or goods, which is so specific and preferably unique that it can be identified and perceived by marketing targets. Of course, it sometimes keeps up with time and changes with it. Fourth, it is to determine new urban area marketing channels. That is, to find in what way and with what carrier can the marketing be undertaken. According to the actual conditions in China and the local particular situation, the government functionaries were assigned to promote in the relevant cities, the specialized organizations competed to purchase tourism projects, and the government organized various promotion activities. Therefore, the marketing of Taierzhuang

Ancient Town turned out to be effective. The kind of marketing represented by Taierzhuang is an exceptional success mode among Chinese cities. Most cities with little experience and study in this aspect pay scant attention to the function of marketing organizations. They have not carried out real promotions but have formulated some favorable terms (price) and done a little advertising (promotion).

10.3 Focus on Image-and-Brand Shaping

Among marketing concepts, image usually refers to the impression, patterns, and associations in the minds of customers, whereas brand is the recognition to which degree customers identify with the product. In some senses, the urban image and brand are both products of the city, and they are the important connotations and methods of urban marketing. The two terms are closely connected and overlap in some studies. In *Regional Marketing*, Kotler devoted considerable space to illustrating the design and promotion of regional (urban) images.

To shape new urban area brands and images, first one should analyze the city's advantages and conditions, especially to seek its specific recognition and fame, locating the brand and image and doing the core packing. For example, different from other cities in the world, Taierzhuang boasts its history and culture, so it is orientated as an ancient town surviving the war and as a water city by the ancient canal. Once the core concept is determined, it is then easily done. Second, we should let customers have wide recognition by adopting such methods of broadcasting as fabricating events, organizing activities, holding conferences, and making up stories. Finally, the image and brand should be maintained and managed well. To set up the urban brand and enhance the urban comprehensive competition, more available social resources should be attracted so as to push forward the favorable development of urban new areas.

10.4 Marketing Subjects

Multiple marketing subjects and goals are what differentiate urban marketing from enterprise marketing. How to formulate the uniformed marketing strategies to be approved rather than contradicted by different subjects? It demands enough capability to organize and coordinate, and a reasonable mechanism. As for urban marketing subjects, the segmented pattern of the urban administrative system should be broken because urban marketing is highly comprehensive and concerns different aspects of a city. Internationally, the marketing subject is usually the Place Marketing Committee consisting of representatives from branches of the municipal government, enterprises, and communities, which is responsible for formulation of marketing strategies, integration and coordination of investment from various industries and social sectors, and instructing and educating executive agencies. In

China, the marketing subjects should be governments on different levels and new urban area management committee because, in the planning and initial phase, the new quarter needs to be controlled by the government at macro level, and some matters need to be dealt with by the management committee. If the government fails to do the marketing, the management committee or other specialized agency may be authorized to do it.

10.5 Target Customers

In foreign countries, urban marketing customers are generally investment organizations and individuals, brand companies, and tourists. It is not the same in China. Because state agencies and enterprises directly under central management hold a large number of resources and funds, a city doing well in marketing would scoop up more rice from the pot of the country; namely, it can obtain more projects, funds, and resources, usually for free. Therefore, the marketing priorities in new urban areas should be state agencies, governments at all levels, enterprises directly under central management, and financial institutions. Meanwhile, we should do well in marketing management and enterprise marketing, giving full play to market power, calling for different social sectors to support the development of new urban areas.

What draws our attention is that new urban area marketing should pay attention to foreign governments and investment organizations. Because new urban area development is a comprehensive investment of large batch and high return, it is a big and good deal. It has therefore aroused the attention of some countries and international investment institutions. In this regard, what most new urban areas do is far from satisfactory, and there are still a lot of meticulous things to be done.

10.6 Case Study of Hong Kong's Flying Dragon Marketing

At the end of 2006, Ctrip published "Ten most popular scenic spots in 2006", and Hong Kong of China remains the first choice of mainland tourists on tour abroad. The achievement is a result of the urban marketing.

Hong Kong was experiencing problems at the turn of this century. Around 2000, influenced by the Asian financial storm, it was in an economic downturn. Outside, with Singapore developing well technically and Shanghai rising quickly, Hong Kong was somewhat threatened by their competitiveness in Asia. Considering factors such as the depression, the pressure from outside and the uncertainty of Hong Kong inhabitants and international society cast a shadow over the future of this city after it had returned to the motherland, and the government decided to launch a new urban branding campaign.

Brand setting. If Hong Kong urban marketing is regarded as a dragon, its brand setting should be the head of the dragon, which leads the urban marketing. Hong Kong's urban brand setting starts with core identity. Based on wide research and analysis of its image, the core value and essentials of the Hong Kong spirit were studied and extracted, and the kernel elements to identify regional brands were formulated. Through test and assessment, the Hong Kong brand finally won the theme "Asian International Metropolis", which is not only known to its inhabitants but also regarded as able to reflect the city's special image in Asia and throughout the world by Hong Kong and the international discussion group. The spiritual connotation of brand setting consists of the core value. Then what can represent the core value? The trans-department workgroup in the Hong Kong government formulated the brand's core value and its essentials: the core value is "civilized and progressive, free and open, smooth and steady, full of opportunities, and striving for excellence". Its spiritual essentials are worded as "bold in innovation, well-known metropolis, striving for excellence, master leadership, and perfect networks."

The brand's core value and Hong Kong's spiritual essentials are the key contents of its brand recognition, and meantime determine the design of thematic creation and its logo. On May 10, 2001, when Hong Kong *Fortune Forum* closed, Jianhua Dong, the chief executive in the Hong Kong Special Administrative Region (HKSAR), promoted to participants the Hong Kong brand—a flying dragon, which is well-designed and vivid, and highlights its historical background and cultural tradition. The designer ingeniously inserted two characters of Hong Kong and their initial letters H and K into the dragon pattern, and it shows that Hong Kong is a melting place of western and eastern cultures. The dragon's streamline posture indicates a thrusting life, symbolizing Hong Kong in a continuous evolution. The dragon is full of rhyme and very stylish, and it symbolizes that Hong Kong people, aggressive and strong-willed, are striving for creation and excellence. Side by side is the headline of the Asian International Metropolis, implying the city's important role that it undertakes in the international world. Therefore, the image logo of Hong Kong is not only a pattern, but a new valuable asset, a powerful instrument to foster its unified image.

Specialized teams. A flying dragon could not fly high in the sky without its wings. A specialized team is the indispensable dragon wings in the Hong Kong urban market. Since 2000, in order to establish its new brand image, the Hong Kong government has invited the assistance of great international top brand consulting groups, including Landor Associates, Burson Masteller, and Wirthlin Worldwide. All these members have not only international vision but also much experience of operating name brands. During the process of constructing the name brand, the consulting group conducted a lengthy, wide, and specialized market survey scientifically and precisely, and measured the image value of Hong Kong's name brand by means of quantitative analysis. It also made a wide survey among business circles and top-level government officials in Hong Kong and around the globe, adopting the proprietary brand image database system for the brand asset evaluation.

Government's specialized marketing organizations. In order to launch successfully the urban marketing, the Hong Kong government established perfect and

specialized marketing organizations. The Hong Kong SAR Secretary for Home Affairs and Information Services Department, as the core leading institutions, are responsible for the coordination of urban marketing. Other urban marketing organizations, under the guidance of urban name brand core value and the applicable speculation, design and carry out their work in promoting investment and enterprise services, promoting tourism and developing, communicating with citizens and employee service in accordance with the SAR developing mission and prospects as well as its marketing goal. The praiseworthy thing is that the public sectors in Hong Kong have a universal awareness of marketing and are equipped with some marketing skills, they have strong abilities to execute urban marketing strategies, and they make particularly good use of the application of urban marketing and cooperative marketing.

Brand promotion. Setting down “the dragon head” does not mean everything is all right. Good promotion relies more on brand promotion. If a sound system is to be maintained and promoted, its every aspect must be processed according to brand planning so as to guarantee the implementation of a giant brand project from establishment to operation. Hong Kong's well-known movie stars such as Liu Dehua, Cheng Long should be invited to be City brand image spokespersons for promoting the city to the world. The city brand image advertisement is changing constantly as the trend of fashion changes. The city should be promoted on TV channels such as ATV and TVB jade on a large scale and tourists invited to visit Hong Kong, which has spent a large amount of money making “city of life” promotional film, honorably winning an internationally-renowned Chris Prize. Then different promotional activities were organized such as “Asia's World City” writing and photo competition, Cathay Pacific Airways (CPA) Hong Kong Cup Trial, the Toronto Kite Festival where Hong Kong made its public appearance, the attendance of “Asia's world city” airliners at the international air show in Britain, Hong Kong's flying dragon show in Singapore, the Hong Kong brand image neon sign switch-on ceremony, the Hong Kong brand image show in Times Square of Causeway Bay, inland and international promotion activities with the theme “enjoy and love here”, and the Hong Kong sponsored Hong-Kong-Spirit sailing vessel entering the competition to cross the Atlantic with the purpose of attracting foreign investments. Transport vehicles at sea, in the air, and on the land can become “Asia's world city” advertising carriers. For instance, in 2001, the expedition to the west consisting of the celebrities of Hong Kong's industrial and commercial circles used a plane bearing the Hong Kong new brand image “flying dragon”.

(Based on the relevant documents)

Part IV
On Planning

Chapter 11

Four Principles of New Urban Area Planning

To learn the planning and designing of new urban areas, it is necessary for us to make clear what the influencing factors are. Generally speaking, the factors involve the four aspects of politics, economy, humanity, and ecology.

11.1 New Urban Area Planning Is Politically-Oriented

A city serves as the foundation of a nation. Since ancient times, rulers have regarded management of urban development as the essential principle in ruling the country. Hierarchy was once stressed in ancient Chinese architecture—to represent the supreme power of the rulers, the royal palace stands in an eminent place, generally in the center of the capital city. City size is strictly determined by the hierarchical principle and the capital city has the largest size. It is stated in *Zhouli*, a famous Chinese classic text, that ancient cities can be divided into three categories: the imperial city, a feudal prince's city in his kingdom, and a governor's city in his fief. They were built to different standards, with the city wall of the imperial city being the tallest and the streets the widest.

A discussion meeting on new urban planning was organized in Dezhou in 2003. A planning authority told me that urban planning was politics. His words impressed me a lot and I kept thinking it over and over. It has profound meaning. *New Town Planning Method*, newly published in 2015, points out that urban planning is one of the important policies for governments to control city space resources, guide rural and urban development, maintain social justice, and guarantee public security and benefits. Here, planning is the political approach for governments to readjust and control.

The city is hearth and home which humans pursue and develop, a supreme form where they live contentedly. It is an interactive machine of complex operation and calls for an organization to control and manage it on behalf of the national will and public interest. It is usually the urban government or the “state-like” political organization occurring in a particular city. Generally speaking, urban construction and development are carried out under the guidance of the government or other political organizations, conforming to the government's intentions, the

manifestation of official will and ideas. *The government acts as the final decision maker and promoter of planning.* Otherwise, the city is in a state of disunity. There is no easy way to implement construction, run it smoothly, plan scientifically, organize it rigorously, and manage it rigidly. The government is therefore the decision-maker for urban planning and design, organizer of urban construction and development, investor and manager. Even foreign experts believe that space is politically-oriented as well as ideological.¹ Because of the location advantage, national defense security, and regional development of the administrative center, the planning is greatly influenced by politics in western countries; for example, Canberra and Washington were chosen to be the capitals of Australia and America for political considerations.

Except for some particular countries, such as England, where landowners tried to build cities on their own land and finally had to hand them to the government, planning and constructing new urban areas are all proposed and organized by governments at all times and all over the world. Government provides a tangible and strong hand, performs incisively and strongly in urban construction as in other fields of the market economy, and often works wonders. Li Guangyao, Premier of Singapore, leading a strong government with a lot of responsibility, has transformed a chaotic island into the City of Garden famed all over the world. Mahammad, Prince of Dubai, leading the practical and bold government with original concepts and strong measures, has provided the country with a famous modern city, which is comparable to Hong Kong and New York and has stunned the world.²

As a state-owned country, constitution is the major law in China, and local governments have little room in promulgating laws and regulations. Here, the CPC is the sole ruling party—others are just participants. The urban land owned by the state is commissioned to the governments at all levels. Banking and finance is under the control of the state, and financial policies are steered by the state too. Therefore, *the promotion of urbanization, the formulation of urban policies, and the management of planning and construction of new urban areas are all the chief responsibility and basic behavior of the city government.* Planning is essentially a matter of a map; the procedure of examination and approval is done by pen; construction is a chess game. All these vividly depict matters usually determined by one or several persons. In new urban areas, the initial proposal, the strategic establishment, and the planning arrangement are all actions for the Party or governments; the length of planning expected, the level of construction, and the investment amount, limited by the terms for which the Party or the government serves in office, are deeply affected by the leaders in charge. Some leaders are so qualified and far-sighted that they might plan and start the new area, and construct it well; some are willing to be officials of peace and tranquility, adopting the principle of letting things take their own course. What they do is carry out some demolitions and patching; some crave greatness and success, eager to work on bigger planning

¹*New Towns and Villages*, the Commercial Press, p. 211.

²Yang Weiguo, Wang Yanfen, *Dubai: a Wonder in Desert*.

and build a large new urban area in order to have a niche in the history of the new area construction; some, eager for quick success and immediate benefits, do some vanity projects. In China, urban planning has political features and it should conform to the development strategy issued by the government. The target of city development is, in short, to comply with the decisions made by a few leaders. Restricted by the government, it is difficult for professional designers to carry out their work. They might be regarded as being ignorant of politics, making their planning difficult to get approved; even worse, they might be replaced. Under this situation, some planners are careful to plan in accordance with the intentions of the Party and governments.

To solve the problem, the fundamental way is to enhance the authority of planning in the institutional aspect by following the relevant legal policy to regulate the process. In Chinese colleges, urban planning and design is low volume and aesthetic considerations are even less. Many officials have no idea of urban planning and design from the professional perspective. They try to learn while they are working, although they are too busy with political affairs to acquire a good knowledge of it. They pretend to know everything and command blindly, extensive mistakes and waste thus occurring.

The human force contributing to the cause is most important to develop and promote urbanization. To achieve the great economic and political reform and succeed with such a pioneering undertaking, the training and education of the necessary staff is vital. Officials at all levels are required to participate in professional training or seminars held in the higher institutions, schools, or advanced cities both at home and abroad. Government officials should be very familiar with the basic knowledge of urban planning. They must learn to organize so as to make fewer mistakes. *As leaders of the Party and the governments, they should know that planning and construction is science. Devotion to the study and continuous practice can make an expert who can then have a say.* I often take the following example to illustrate this. People who have learned planimetry and solid geometry know that at first they fail to appreciate the relationship between dot, line, and surface because of their lack of ability. Later, they learn more and become familiar with the subject so that they can solve problems. Urban and construction planning are more complicated than this. In my opinion, leaders lacking professional knowledge should not be back seat drivers. The planners and management departments should talk the leaders into choosing a better alternative and into making correct decisions as much as possible by means of guiding and comparison.

11.2 Economy as the Basis for New Urban Area Planning

Urban planning reflects the economy. The scale, speed, efficiency, and power of economic development are the basic conditions of the planning and construction of new urban areas. Planning supplies the development with the blueprint and is restrained by the level of economic development. Development guarantees planning

and lays a foundation for the future. So economic power and industry development and employment, etc., of the municipal government should be given priority when planning the new area. *The revenue, finance, and ability to raise money of a city government are the fundamental basic factors of planning and constructing new areas.* As a result, future population, size, development prospects, and implementation should be fully taken into consideration when planning new urban areas. Annual revenue, land income, receipts not covered in the budgets, the sum of funds raised in the financing market, the income in developing and constructing new urban areas, and expected income after establishment should all be assessed, investigated, and calculated clearly in the departments of finance, statistics, planning, construction, urban assets management, and the government. When planning the investment size, we should calculate realistically. Some local governments and smaller planning agencies may ask for help from professionals if they fail to get required data because of their lack of experience and talent. Planning new urban areas should be based on practical grounds. What should be done is to cut ones coat according to one's cloth and cook the meal according to the amount of rice. However, some new areas have no clear idea of the basic situation, and they fail to carry out the proper planning so they have no choice but to do less. It is similar to making a new coat, which takes shape for once and for all.

Industry development and employment should be prioritized in terms of new area planning. As the case may be, the first generation of new cities in the UK and a metropolis such as Beijing and Shanghai in China have undergone challenges and difficulties. Therefore, be it comprehensive new areas or major functional areas, subsequent problems should be fully considered, such as the arrangement of industry sectors, business and service sectors, and employment opportunities, as long as they are a considerable distance away from the central city and of a considerable size. Otherwise, such a new urban area has no popularity, no vitality, and no drive for self-development, and it may turn out to be a sleeping city—or even a dead one.

Besides the enormous political and social benefits, new urban areas bring in tremendous economic profits, typically as new industrial areas, new high-tech areas, etc. Comprehensive-style and administrative-style new areas can play a strong role in driving economic development in the local area.

11.3 The Human Being as the Core of New Urban Area Planning

The human being, as the target of urbanization, plays the decisive role and the core drive for new urban development. It is the fundamental and ultimate objective of new urban construction to make people's lives better. This is the nature of a city. Therefore, when planning new urban areas, we should adhere to the core, establishing the development strategy, planning the functional areas, and determining the

specific positions of housing, transportation, service amenities, and planning conditions in order to make the new area more pleasant, convenient, and environment-friendly. As for this question, because of the different development stages between west and east, the different pressures they are facing, and the different focus of attention to mankind, they have different priorities when planning cities and new urban areas. The countries in the west pay more attention to living conditions and humanistic transportation, and the ecological environment in their planning. However, some planning in China stresses more how to develop, how to show the urban image, and how to show its beauty. The purpose of planning and construction is not to meet the demands of residents and enable them to live comfortably but to show off before the world in order to win prizes home and abroad. This runs against the nature of the city and is the most serious mistake in planning and construction in contemporary China.

Despite human nature, popularity is also the key to the successful new urban area. The ancient Chinese saying states that “The city benefits its residents,” which means that without the active presence of human beings, the city becomes an empty city—the man-made city would work out empty and dead. There have been a lot of reports about this recently. The county of Qingshui in Inner Mongolia invested over 6 billion yuan on constructing a new urban area in spite of its fiscal revenue of up to more than 30 million yuan. Ten years of new town construction can leave nothing but a great deal of unwanted buildings, for example, the controversial Kangbashi, a new town planned and constructed by Erdos, Inner Mongolia Autonomous region. With residents numbering 1.59 million and an acreage of 87,000 km², Erdos enjoys rich resources and high economic development. In 2000 Qingchunshan Economic Development Zone was founded and changed its name as Kangbashi New Area in 2004, which was positioned as the center of politics, culture, finance, scientific research, and education as well as a car manufacturing base of Erdos city. In May 2004, the new area was launched completely. In July 2006, the municipal government transferred its station to Kangbashi. It had a planning area of 355 km², among which an area of 155 km² is under control. The first-phase projects covered 32 km² and 5.3 billion yuan had been invested from 2004 to 2009. The Times in America reported on April, 5th, 2010 that Kangbasha in Inner Mongolia would possibly be the most desolate place, which was originally planned for 1 million people to live and thrive. It was well-nigh deserted with a few passing cars on the multi-lane highway. During the day, some governmental offices had their doors opened and the occasional plodders on the sidewalk resembled lonely and visionary survivors after a catastrophe in horror movies. Similar reports appeared in other media, for instance, passers by were fewer in number than street cleaners.

There are several reasons for the above-mentioned phenomenon. First, it is the population. Erdos city, with a population of only 1.59 million and an area of 87,000 km², is a sparsely-populated vast area. The economy develops fast, although few non-native investors and house purchasers are willing to live there permanently and it suffers in popularity, because of geographical position, climate, etc. Second, it is a fact that the infrastructure and public amenities develop rapidly whereas the construction of housing, offices, and schools lags behind. Third, it is the slow

development of industry. Lack of industry means lack of employment, which result in no occupancy of house and less popularity. Fourth, it is the real estate hype. According to the statistics, in 2005, the apartment price of property in Erdos was, on average, 1,000 yuan m^{-2} . However, in 2011, it rose to over 8,000 yuan and the highest was over 20,000 yuan m^{-2} . Buyers intended to invest and speculate rather than live in their properties. Thus, the cost of living in the new area was enhanced and those who had no intention of living there bought houses which then remained uninhabited. At night few lights were lit, a typical example of real estate bubbles.

The city goes through a process of development and maturity. It takes off with population and industry as its two wings and the supporting public amenities as its muscles, bones, and plumes. As long as Kangbashi takes effective measures, it is certain to develop its prosperity and bright future. Therefore, when planning new urban areas, we must clarify the situation regarding the exiting population, the population to be attracted in the future, together with how many live permanently and how many migrate. Meanwhile, the elements of industrial development and public amenities should be clarified, tied in with each other, and promoted. Otherwise the planning is short of its target and the basic goals and criteria would be difficult to grasp.

Social participation, public recognition, and social justice should be taken fully into consideration when planning new urban areas. Citizens' awareness of planning and development can exert a great influence on the unified understanding of all ranks and classes, the mobilization and strength gathering of all aspects of society, participation in development and construction, investment and employment, and living and consumption in new urban areas. They are concerned about the challenge the city is facing and future development, living conditions and improvement of the surroundings, steady employment opportunities, enhancement of living quality, and level of incomes. This is basic and mainstream. At the same time, we find that residents pay close attention to the long-term and future factors regarding the city, and even closer attention to the things around them, such as the street adjacent to their houses and the light coming in their windows. The institutions and residents in the old area show their approval and favor for the start of the new area on the one hand, but may nurture some worries and anxieties—and there are even some people who might be against it—on the other. The reason is that the former residents fear that the government ignores the old area when it plans and constructs the new one, leaving the old to get shabby and desolate. Are the roads to be maintained? Are the parks to be managed? After enterprises and administrative departments move to the new areas, it is inconvenient for workers to go to work and children to go to school. The people who have just moved to the new area prefer the new surroundings and are nostalgic about the culture and life in the old; the former district government and departments worry that their territory has been reduced and that they have less power; some are inactive about new area affairs, making many objections or even trying to thwart progress. These worries and reactions are usually true reflections, which are reasonable and normal, and they attract the municipal government's attention, guidance and control.

The planning and construction of new urban areas, a kind of adjustment of spatial layout, is redistribution of resources and reformation of interest patterns. Therefore, the government should unify the understanding of government management personnel and related staff, making clear the importance, necessity, and feasibility of starting new urban areas and planning blueprints in order to get the whole of society to participate voluntarily in the planning and construction of new urban areas. When Dezhou Hedong New Town was started, the related department organized a social investigation and publicity with the slogan “fly your dream in Hedong,” and adopted many measures to promote and educate the townspeople. It turned out to be effective.

Social justice shows up in the aspects of employment, education, medical care, and residence in new urban areas. The people concerned are mainly landless peasants, the original residents, those being employed and living in the new area. Its planning and construction usually pursue high levels, good taste, and involve distinct functional areas. Investors, developers, and operators invest in developing some top grade residences and expensive schools, hospitals, and business service facilities for economic reasons. Among the new residents, the majority are administrative officials, top managers, people with high incomes from arts and sports, and the young, so the new area becomes an area of wealthy people. The question is how to relocate land-lost peasants, original residents, migrant workers, and low-income people from the old area? This should be stressed at the planning and construction stages, considering layout of functions, distribution of grades, and implementation. For instance, in the planning and construction of accommodation, the houses of landless peasants and natives should be given priority. At the same time, low-cost houses should be planned and built so as to solve the housing problem for families with low incomes. Otherwise, new urban area work may be very passive and it would be difficult to implement house and land expropriation.

Common value orientation is the foundation of planning and constructing new urban areas. Value orientation refers to the basic standpoint, attitude, and manifested tendency held by a certain subject when facing or tackling various contradictions and confrontations. It can be categorized as theoretical, economic, aesthetic, social, political, and religious orientation. Value orientation possesses the functions of evaluation, passion, guidance, and behavior adjustment. People sound in body and mind all have their own particular value orientation.

The city is a panorama in which lies a colorful world. When lots of people are together and form a city, they have different value orientations. However, there is the mainstream, identified by the majority of people. In new urban area development, we must seek and reach the common value orientation. However, things are always different. At the start of the new area development, what the government keeps mainly in mind is how to construct quickly, build an image, and produce the best results; planners think more of the smart space layout, functional perfection, novel buildings, and beautiful surroundings; developers are more interested in land occupancy, more development, more profit to be achieved; the land-lost peasants consider compensation, employment, and housing; residents ponder convenient work, good transportation, improved housing, a comfortable life, and a nice

environment. In short, different states of mind, different ideas. Liu Taige, the Father of Planning in Singapore, when reflecting on the bad situation regarding the urban construction of Singapore after its independence in the 1960s, said that the great majority of people lived in shabby houses, though, they resisted moving to new residences. Planners were bent on making the urban planning more beautiful; President Li Guangyao took into account that they should lose no time in building the city so that countrymen could produce the patriotic mood and have a sense of belonging to the motherland. With their own responsibilities in mind, the planners, including Liu, knew that the president was getting too much pressure from different sides, construction should speed up, people's living conditions should be improved, and they combined successfully the different values pursued at planning. Now we can see that what the country, the people, the president, and Mr. Liu have done is very successful. *Analyzing the course which Singapore has taken, when we plan and construct new urban areas, we must make a concrete analysis of different value orientations, and combine them, so as to form the main leading values, which can be used as a reference in good planning.* Jeb Brugman, the well-known urbanist in Canada, acclaims in his masterpiece, *Welcome to the Urban Revolution: How Cities are Changing the World* that urban construction is to provide a solution for different interest groups. He continues to state that the strategic starting point of urban construction is always keeping pace with local values, and the latter may decide the choice, action, and function of a city. When urban construction stays the same with a basic value, there are more methods available to create the common goal, and strategic capability can be improved accordingly.³

11.4 Ecology as an Urgent Issue for New Urban Area Planning

Nowadays, more than half of the world's population lives in the cities. It is estimated that about 5 billion people, 60 % of the world's population, will live in urban areas by 2030. The related organization in UN forecasts that the world's population will reach 10 billion in 2100 and if the birthrate exceeds expectation, it will reach 15 billion. The Earth is home for human beings. With the increasing population and over-exploitation and development of land resources, scientists have set up nine security lines, among which biological diversity, nitrogen and phosphorus contamination, and fresh water drainage have been so severe, and the situation has nearly reached the point of no return. The article entitled *Stop exploiting the earth, otherwise the human beings shall need two earths in 20 years*, published on the website of The Times on October 13, 2010, points out that mankind plunders resources 1.5 times faster than resource replacement, and the lavish lifestyle of western countries has been devastating to the resources of equatorial areas. It is

³Jeb Brugman, *Welcome to the Urban Revolution: How Cities are Changing the World*, p. 207.

predicted by *Living Planet Report*, released once every 2 years by World Wildlife Fund (WWF) and the Zoological Society of London, that by 2030, if mankind continues to exploit land and sea at the current rate, mankind's survival will need two Earths in order to produce enough food, raw materials, and water resources, and to absorb all the carbon dioxide produced by human activities. It is also estimated that the demand for natural resources has doubled since 1966. It points out that the British ecological footprint per capita ranks 31st in the world, with 5 ha (hectares) per capita, higher than the 3 ha at the global level. If the proportion applied to other countries, 2.75 Earths would be needed for humans to survive. Cities consume the majority of energy and resources. Statistics show that nowadays urban residents are consuming almost 80 % of the global attainable resources. Besides, because of the explosion in world population, environmental contamination is growing worse than ever.

China's Urban Development Report (2012), the blueprint for city development, published officially on August 14, 2012 by the Institute of City Development and Environment under Chinese Academy of Social Science, states that facing the approaching urban-society-oriented era, Chinese urban development is confronted with a series of problems such as urban security and social differentiation.

The first challenge is that the high resources consumption is unsustainable. Rapid urban expansion leads to over-consumption of land resources. Land urbanization runs faster than that of population, and the mode that quantity outweighs quality has been difficult to sustain. Imbalance between water supply and demand in cities particularly stands out, with more than 420 cities in China short of water, among which 110 cities are badly in need of water and the shortage amounts to 10.5 billion m³. In cities, energy consumption soars and daily living energy consumption per capita is 1.54 times that of rural areas, and urban architecture energy consumption per square meter is 4.52 times that of rural areas. IEA predicts that urban energy consumption accounts for 79 % of overall consumption till 2015 and reach 83 % by 2030.

The second challenge is that the ecosystem pressure is becoming severe. In accordance with the new criteria, two out of three cities in China cannot meet the required standards for air quality, and the worst sites for air quality and water quality are at around 57.2 %; two out of three large and medium sized cities are besieged by traffic. In cities the natural vegetation coverage is comparatively low and the area of concrete building is expanding. Green land occupies less than 10 % of the entire construction area, along with a sharp shrinking of wetland, decrease of wildlife, over-exploitation of underground water, rapid decrease of land surface, and intense traffic pressure.

The city is leading and changing the world. It has improved the living environment yet damaged living conditions and is even threatening the resources and environment for later generations. This calls for a change in urban development. For one thing, optimize the environment in the old area and carry out repair work ecologically. Then, starting from planning, protect existing ecological system and construct the new one, giving priority to it.

First, respect nature and comply with it, protect the planning idea, and value the orientation of nature's ecological civilization. During new urban area design, people care much about short-term interests such as industry development and land resources utilization, while failing to protect and respect nature and the ecological environment. To make things worse, there appears to be some deforestation and destruction of nature. These are firmly related to the lack of ecology awareness. Meanwhile, some planners and experts are also held accountable. When planning the new area, we must be aware of, respect, and protect nature so as to utilize it and achieve sustainable development. Otherwise, we will be punished by nature. Environment protection and ecology optimization should be a basic concept, essential guide, and important criteria of urban planning.

Second, carry out ecological investigations and analysis, and assess ecological capacity. This mainly involves carrying out studies of the geological environment, land form, water, climate, soil, natural disaster, environment pollution, etc. Then conduct a comprehensive assessment of the spatial structure, size, function, and coordination degree of future developments of new urban areas. Planning is done only under the premise of sustainable environment resources. *We should respect cultural heritage, the pattern of water and mountain, and ecological surroundings, and protect natural scenery.*

Third, prioritize the protection of the eco-environment in new area planning. Make full use of the natural and existing ecosystem and construct the city in accordance with the natural situation. It is forbidden to remove hills and trees, and fill locations with water to build cities. The way Ningxia New Area removed 600 hills to build the city should be reflected in the perspective of regional function area planning in China and its feasibility. Yan'an's planning and construction of the new area on hills should be carried out step by step, respecting nature and construction laws. The planning of all kinds of new areas must be taken into consideration from the macro aspects of national and regional development, and should utilize existing landform, rivers, and plants.

Fourth, the ecosystem, consisting of green industry, green energy, green buildings, green transportation, green housing, and green life, should be shown, created, and constructed in the planning. Let's start from the planning and try to create and construct new urban areas.

Chapter 12

Ten Elements Concerning New Urban Area Planning

The above four rules determine new urban area planning. In addition, ten factors influencing new urban district planning need to be fully considered in planning the new area. The following are discussed in the sequence nature, economy, society, politics, and culture.

12.1 Location of the New Urban Area

Location is everything. The location of new urban area, whether around a big city or county, close to major traffic arteries or in the remote area, waterfront or far inland, makes a significant impact on the type, function, scale, and level of its planning. Besides, the strategic research part of this book has specifically discussed what should be noted in the choice of the location of new urban areas.

Long-term and inevitable disasters are triggered if the location of the city is unsuitable. New Orleans, the American city along the mouth of Mississippi river, thrived and suffered, both because of water. The average height of the urban area is 2.4 m below sea level, the lowest point as much as 3.4 ms below sea level. New Orleans city has Lake Pontchartrain to the north and Mississippi river to the south, the landscape of which resembles a shallow frying pan, with water at its edge. A levee of up to 100 miles was built to block floods as early as 1812. Studies made by geologists in the University of New Orleans suggest that the city continues to sink at the rate of 1 m per century. The residents will have to give up their hometown in a century. Unfortunately, things happened early. In September 2005, “Katrina” hurricane hit New Orleans at a speed of more than 300 km/h, blasting the city for several days. Although the hurricane center didn’t hit it, the levee was broken up in its low-lying terrain, leaving 80 % of the city inundated and New Orleans a “toxic lake” of materials leaking from chemical plants and oil refineries; 1,464 people died in the hurricane.

On September 1, 2008, hurricane Gustav attacked the city of New Orleans once again. This city, however, is not the one most severely affected by disasters. On September 18, 2013, Swiss Reinsurance Company released a list of the world’s most naturally disaster-prone city rankings, Tokyo, Japan—Yokohama area topped

the list, considering flood, storm surges, tsunamis, storms, and earthquakes all together. In the world's ten cities most vulnerable to natural disasters, China's Pearl River Delta and Shanghai, respectively, are ranked third and eighth.¹ Therefore, we must organize experts covering all aspects when planning the new city and investigating the location seriously, avoiding areas of frequent natural disasters.

What should be further explained is that the location of cities, especially new urban areas, becomes more important with the development of the economy, the convenience of modern transportation, and the revolution in information technology. Nowadays, people frequently need to communicate face to face; companies need to be near the capital markets, the talent market, the raw material market, and the consumer market. Therefore, the location of the new city close to major cities and other big cities, airports, ports, high-speed railways, etc., is becoming increasingly important. This is why entrepreneurs, investors, artists, social activists, and some modern social avant-courier personages spend increasing time in the airplane, living their life in a hurry. The reason why some medium and small cities, such as Guan, Hebei province, Jiashan, Zhejiang province, and Kunshan, Jiangsu province, developed so quickly is that they are close to Beijing and Shanghai, which give them enormous support. Hence, *when we plan a new urban area, location should be considered as a very important factor, and a precondition for a company investing in it.*

12.2 Geological Condition

Geology is the foundation of urban planning and construction. The environmental condition of geology directly constrains the development of a new urban area. In history, many cities have decayed and been destroyed by geological disasters and environmental changes. Pompeii was buried in volcanic ash 1,600 years ago. The Chinese ancient Loulan country capital, the capital of the Western Xia, declined because of desertification and the former Sizhou city sank to the bottom of the Hongze Lake because of crystal subsidence. With the increasing speed of urbanization, urban construction can lead to more and more environmental and geological problems.

For example, land subsidence and building cracks caused by excessive extraction of underground water and underground water pollution caused by buried poisonous materials deep in the ground are direct threat to a city. Large-scale infrastructure construction, resulting in hydrogeological condition deteriorating because of vegetation damage, waste dumps, roadbed engineering, excavation, underground caverns, and structural engineering, has a great impact on the surrounding geological environment. According to reports by "Information Times" and other media, the Canton CBA experienced surface subsidence twice in a row

¹Reference News. September 20, 2013.

because of the underground soft soil, raising concerns about the geological safety in this area. According to expert analysis, the large residential area of Guangzhou Jinshazhou and Baiyun key functional area, Metro Line 6 and Line 9 and other key construction projects and key planning areas, sitting in poor geological locations, face the prospect of geological disasters because of improper development. However, the New City of Pearl River and university town, located in soft soil, could suffer from the problem of settlement in the future. Nansha, on the south central axis line, is also facing the problem of soft soil.

Quality monitoring professional units can carry out geology searches and monitor, for instance, the stability of a site, searching for the quality and space distribution of the building rock soil, mainly problems of deformation; terrain conditions and topography, controlled by the geological structure, the result of modern geological forces inside and outside the Earth, which depend on the type and intensity of geomorphic conditions; natural resources in different regions have different priorities for the Geological Survey; distribution of earthquake faults, and so on. Relevant information would be collected, geological environment quality information systems would be established through surveys, providing the scientific basis for the new urban planning, site selection, and preliminary design of major projects, land use development, and geological disaster prevention.

12.3 Resources Condition

Resource is a term for all kinds of material elements, such as material factors, manpower, and financial factors within a country or region. The traditional theory of resources is divided into two categories, natural resources and social resources, the former covering such as land, water, forests, minerals, sunlight, air, etc., the latter including human resources, information resources, and material wealth created by labor. Modern resources can be divided by economic theory into natural resources, social resources, and human resources. Natural resources is as previously mentioned; social resources include capital resources, human resources, and technology resources, etc.; human resources involve information resources, cultural resources, and social systems. Resources may also be divided into development resources and existence resources.

The endowment and utilization of resources often determines the type and success of the city. Looking at China's urban development territory, we can find Songliao Plain oilfield and the mining born Daqing City, Yellow River Delta oilfields' led to the establishment of the Dongying City. The city, including Renqiu, Yumen, Karamay, founded because of the oil, succeed because of the oil, becoming an oil town, a petrochemical city. Shanxi formed a new city, Shuozhou City, in the 1990s because of the exploitation of PINGSHUO opencast mining.

Other cities, such as Datong city, Hegang, Pingdingshan, Huainan, Kailua, and Jincheng adopted the same development model. Iron ore resources led to cities such as Anshan, Manahan, Benxi, Panzhihua, and Baotou. In 1990, 8 out of 17 cities of

more than 500,000 people of Northeast China have the mining industry as their basis. For decades, with the rapid development of mining enterprises, China has seen about 300 mining towns emerge. *Resources breed industry; industry supports the city; the city supports people's lives.* Whether developed market economies or developing countries still lag behind, they spontaneously choose the course of city development together with the supporting resources. This is similar to humans choosing a city near to a river or the sea, a requirement for survival and development.

With the development of the mining industry, resources in some cities are gradually exhausted and the resource-based industry is constrained. Old Industrial Base in Northeast China is a typical case. After decades of mining, mineral resources dried up and the mining industry has been in decline. The economic structure becomes imbalanced, unemployment and poverty become more and more serious, alternative industries fail, the environment is severely damaged; it is difficult to maintain social stability and sustainable development.

We must therefore plan ahead. Resource-based cities need to upgrade, developing emerging industries. UAE is rich in oil resources, with proven oil reserves of 978 billion barrels, accounting for 9.5 % of world reserves, ranking third in the world. However, the Dubai government has a strong sense of crisis and innovation and they have long implemented a wide range of economic development strategies and succeed in transition. Now the oil industry accounts for only 6 % of the GDP there.

With the development of the modern economy, the role and status of natural resources, as a factor of productivity, in gradually decline, the status of sectors other than natural resources becomes increasingly important, and capital, knowledge, technology, and information become four pillars of economy development. Mankind is in the transition from an industrial society to a knowledge and information economic society. New city planning needs to change over time, taking social resource fully into consideration.

12.4 Space Hinterland

A new town involves planning and construction in a certain space—if there is no room there would be no new city.

The development of a new city would be constrained in a limited space. Therefore, a large hinterland space should be considered in selecting and planning the location of a new town to leave space for development.

Certainly, there is the matter of intensive use of land. The new city has to face the reality of aggregation effect, economies of scale, and density benefit. The space of a new town, small or large, is not enough. As U.S. space economist Hoover said, space is both an asset and a burden. Space is indeed an asset, a larger space has a stronger bearing capacity and, relatively, has more resources. The value of the land is related to its size. A larger space needs a larger investment to build the

infrastructure; if it can't be fully used in reality, then the expenditure to manage and maintain it would be a burden. There is the matter of density within the city, which is population of units per square kilometer. It is difficult to form a city in scarcely populated areas, and there is the matter of the waste of land in the infrastructure. This causes many problems. China is a populous country with limited resources and the per capita share of resources is low. As a result, we shouldn't adopt the approach of large scale and low density adopted by countries such as USA and Australia, but plan the space density in a proper way. Hence, in the choice of hinterland, we need to analyze the current condition and future prospect properly.

12.5 Development Demands

Demand promotes development and development propels demand in return. The city is a product of the demands of human society developing to a certain stage, constantly influencing and restricting by these various demands. Developing demands is the basis factor in deciding the scale and speed of new town planning and construction, which includes political demand, market demand, economical demand, social demand, citizen demand, etc. Planning easily becomes the puppet and tool of politics. It is true that the demands and decisions of government determine the scale and development speed of a new town, especially in China. *More important are the scale and development speed of new towns, which are ultimately determined by market demands; that is to say, there is no new town without demands, no booming city without a prosperous market.* There is no need to build a big mall, hospital, hotel, school, or square if there are an inadequate population and low consumption.

Around the year 2005, when a director of a new district management committee in a prefecture-level city of Jiangxi province made a search in Dezhou, he said they planned to build a new town of size about 20 km² in 3 years. I feel they are unrealistic after more enquiries about the population and fiscal revenue of their main urban area. Investors are too shrewd to invest a huge amount of money without strong demands. Although the government may by all means collect money to build some residences, no one would want to live or eat here. In the case of new city construction, market demand is the key point.

A "dead city" or an "empty city" is the result of a lack of market demand. Therefore it would seem sensible to raise the idea of building a city over a long period.

Nowadays, some new towns are planned and constructed regardless of the prevailing poor financial conditions with large scale and high investment, and it doesn't work well. A phenomenon noteworthy in China is that some local governments and administrations arrange activities in the subordinate county, piling great financial burdens onto the subordinate body. Many of the facilities eventually fall idle, requiring a great deal of money to manage and maintain. Moreover, it is unnecessary to build broad roads and large squares when there are not enough

citizens and tourists. There are some roads in European cities more than 30 m wide, their number of cars being bigger than China. However, what should count is not the width of the road but the organization of the traffic. Piazza San Marco in Venice, Italy is known as one of the world's most beautiful squares, although its area is only 1 ha. The largest European square is the Vatican's St. Peter's Square, which can accommodate 50,000 people in only 6 ha. Moscow's Red Square is just 5 ha. It is unnecessary for China to build a new city plaza comparable to Tiananmen Square.

12.6 Neighboring Cities

As old proverb says, if you live with a limp person you learn to limp; it means everything would be influenced by the surrounding conditions. Similarly, the condition of surrounding cities would have a great impact on a new city. Kunshan, Jiangsu Province, became an international capital intensive investment zone and the head of China's 100 counties because of the convenience of its closeness to Shanghai. Shenzhen emerged with the advantage of adjoining Hong Kong, driven by technology, capital, information, industry, and high quality talent.

Certainly, at the stage of expanding the factors of scale and production, a city's attraction effect and collection effect are mighty, making it difficult for surrounding cities to share the production factors and compete with those cities. Tianjin is a city on the rise over the last decade, and would benefit surrounding cities, especially medium and small cities. It is an opportunity for surrounding cities to develop on their own while taking advantage of the production factors drained from the big city.

When planning a new city, we need to study fully the condition of surrounding cities, including the area, population, industry, talent, technology, capital, social development, future development objectives and priorities, etc., analyzing what they plan to develop and what they want to knock out and transfer, and which strategy the new city should adopt—a service and integration strategy or a radiation and dislocation strategy for development. Analyzing the condition of their traffic infrastructure and road condition to make a holistic plan, Qihe County, Shandong Province, took advantage of its proximity to Jinan, making a great effort to integrate into the development of Jinan and become the back garden of Jinan city, planning and constructing Sea world, Qilu City, and some of the roads and other infrastructure to attract Jinan people to invest, live, and spend time here.

12.7 Investment and Financing Capacity

A city is made of steel, cement, asphalt, and green plants, whereas the scale, quality, taste, etc. are often determined by economic strength, especially investment and financing capacity. When planning the new city, we must analyze the level of government financial resources, investment and financing capacity, investment

capacity, and debt repayment ability in order to predict the future development of the new city and to plan and decide the scale, function, and level of the city in an active and steady way. I discuss the problem further in detail in the following investment chapter.

12.8 Industrial Development

Industry and urban population are the two wheels driving the development of the city. Industry determines and supports the city. The city hosts the industry, promoting industrial development and restructuring. What kind of industry appears, what kind of new city rises?

After 1949, the new cities in China appeared with industry characteristics in three stages: from 1949 to 1978, the national focus was on the development of the third-tier cities, key industrial enterprises, and some large projects were developed in inland areas, some new cities appearing with the major developments of national defense and energy industry, such as Mianyang city. After 1978, with the implementation of the coastal open strategy, the eastern coastal areas of new urban areas sprang up like bamboo, as with the emergence of Shenzhen, Weihai, Pudong, and some other cities with high-tech industries. In the third stage, the government implemented the central and western development strategy, and some central and western cities played an important role in enabling other cities to thrive.

We need to plan new towns in line with industry according to regional industrial characteristics. Nowadays, the new energy industry, electronic information industry, and tourism industry develop rapidly, some areas having many advantages, which should enable them to seize the opportunity to project the new city in this respect. According to reports, there are about 600,000 French retirees moving to the southern warm Mediterranean areas. Similarly, the various climates in China can be key points to consider in new town planning.

12.9 Regional and National Demand

Singapore is a city state, which is rare in the world. In most cases, the city is part of a country, and a nation is composed of many cities. A city of mature development and management would have specific and definite requirements of regional and city development. Similarly, an area would also have the function, space, industry, etc. arrangements for the cities within the region, which makes the new city subordinate to national and regional requirements when combining the new city's development plan with the national development strategy.

The new city is not starting to drive the development of population and industry, but is also adhering to the strategy of economic development, national security and stability, and the district balanced development. Therefore, when planning new urban

areas, we must start from the macro perspective and master the layout of the urban system and specific requirements so as to determine the development strategy of the new city in order to promote and facilitate its development.

12.10 Cultural Heritage

The buildings, structures, shapes, and colors of the city are the city's cultural expression and representation, giving a person an external impression and feeling, which is very important. If these factors are incorporated successfully, we won't have the problem of thousands of the cities looking becoming the same. More importantly, every city has its inherent culture, which not only determines the external image of the city, but also the development direction, speed, and "flavor" of the city.

The last few chapters of this book specifically discuss the problem of the cultural construction of a new city. What I want to talk about here is that every city should pay attention to culture, inherit culture, and make good construction of culture. At the same time, we should keep pace with the times, drawing from others and creating its own style in planning the new town.

12.11 The Truth About Ghost Town in Angola

On July 2nd, 2012, the BBC reported a housing project in Angola undertaken by CITIC. The report was titled Ghost Town in Angola built by Chinese. As is reported, the total investment is over \$3,500,000,000 and all about is dead silence with locked doors, empty balconies, and few cars. Only 220 apartments out of the first 2,800 apartments in 1 year were sold out because local people couldn't afford them. This satellite town, which could hold 500,000 people, had become an abandoned Ghost Town. As soon as the report was released, both in Angola and at home, it caused a stir.

The project is located in the southern suburbs of Luanda, the capital of Angola, Kilamba Kiaxi. The originally designed bearing capacity of this zone is 350,000 people, but continuous armed conflicts led to a large influxes of refugees. The population in this zone has reached 6,500,000 and most people lived in slums. The whole zone was crowded and most of the houses are extraordinarily poor and in need of repair. The transformation of old urban districts and construction of new ones are urgently required.

In 2008, the Angolan government proposed that they should construct millions of apartments nationwide and determined to promote social housing construction engineering in the southern suburbs of Luanda, Kilamba Kiaxi, which was named K K project for short. K K project's total planned area was 54 km² with plans to invest \$10,000,000,000 in total and to resettle 500,000 people. However, the

first-stage construction contract's total is about \$3,535,000,000 and it was undertaken by CITIC.

In August of 2008, the K K zone, which had been silent for a long time, was no longer silent. Hundreds of thousands of Chinese builders gradually marched in and set up in the marsh and wilderness. Then they commenced K K engineering construction. According to the introduction of Peng Ming who was vice president of Angola Project Department in CITIC, K K's first-stage construction occupied 8.8 km², including 710 high-rise apartments (with 20,000 apartments and 246 basement shop units), 24 kindergartens, 9 primary schools, 8 middle schools, 2 transformer substations, 13 switching stations, 77 substations, 1 water treatment plant with daily treatment capacity of 40,000 tons, and 1 sewage treatment plant with daily treatment capacity of 35,000 tons; municipal supporting facilities within this zone included main roads, minor roads, and branch roads stretching 400 km and a municipal water-supplying system, polluted-water system, rainwater system, electricity system, communication system, traffic signals system, and a garden landscape project. There were also hospitals, police stations, fire stations, gas stations, and churches, and a commercial zone supported by this residential zone as well as public facilities, including administration and service center for the community.

After 4 years, K K project's first-stage construction has nearly ended. Through the joint struggle of 120,000 Chinese builders and 6,000 Angolan workers, such a modernized satellite town rose up in the southern suburbs of Luanda that it became a construction project with the most advanced design notion, most perfect function, and most complete supporting facilities.

When driving into K K project when it was under construction, it always impressed us with a feeling of amazement. A new city is so good that it can compare with modern housing engineering of any country. Meanwhile, it made a sharp contrast with crowded and run-down old towns. The Chinese in Angola and local blacks said there were indeed radical changes from old town to K K new zone.

At the commencement of K K project, Angolans attached the expectation of a good life to it. Angola's president inspected it many times and he demanded that all Angola's departments of government supported K K project construction jointly. K K project has become a super housing project that the whole African continent focused on. Heads of state and government from more than ten countries praised K K project highly and confirmed the social and economic benefits and model effects for the whole of Africa.

In July of 2011, K K first-stage project had finished, including four zones, 2,800 apartments, and all municipal supporting facilities, and it was delivered to the proprietors after checking. Angola's President cut the ribbon in person in the transferring ceremony and praised highly the great contributions that Chinese builders had made to the Angolan post-war project. He said: "K K new city, as an example of Angola's urban construction, leads all the social housing projects of Angola, lay a solid foundation, and become a bright jewel of African people's houses."

Referring to the report of western media about Ghost Town, Liu Guigen, who is vice president of CITIC and general manager of Angola Project Department, said when interviewed by our newspaper: "Opinion about Ghost Town is partial and too subjective and there is considerable discrepancy in it."

Liu said "Most zones and municipal supporting facilities of K K project are in the last stage at present. The project is not finished and is still not inspected, so it's clear that nobody can enter these houses. It is irresponsible to criticize an unfinished empty housing project." Angola is very satisfied with the new city according to the Angolan proprietors, and more than 700,000 people have registered for purchasing these houses at present.

What the reporter saw on the spot was that new city was still closed, residents were scarce, and people were not allowed to enter without strict examination by police at the entrance.

Liu Guigen indicated that the cost of purchase of the first 2,800 houses was low. Apart from being influenced by waiting for the project to complete, rumor about the price being lowered by Angola's government, waiting for the public transport system to be ready, and Angolan bank's interest rate for credit being lowered, it's in close agreement with K K project's overall planning and the operation ideas of Angola's government.

Drew, who was representative and supervising engineer of K K project, appointed by its investor Angola Petroleum Corporation, didn't approve of this. He said: "Don't care about it. Angola Petroleum Corporation estimated that there would be 10,000 residents at least in K K new city within this year."

Angola's government placed great expectation on K K project. In 2011, Angola's government elevated K K new zone to city status. The situation where a residential zone is elevated to city status is very rare, so Joaquin Israel became its first mayor.

When our reporter interviewed Israel, he indicated that a considerable number of Angolans would move into K K new city where they could enjoy municipal supporting facilities such as water, electricity, transportation, municipal government, a water supplies bureau, an electric bureau, police stations, banks, supermarkets, and property companies. About Ghost Town, he said: "I never worried about the prospect of the new city and the government will make overall arrangements. K K will be a modernized new city with a model effect and, as its first mayor, I am filled with confidence about its future." (Adapted according to the report of Wang Bingfei who was Xinhua Network's reporter in Luanda on July 9th, 2012).

Chapter 13

Functional Balance of New Urban Area Planning

A city is a relatively large society, which has a complex synthesis and encompassing system for sanitation, utilities, land usage, housing, and transportation. Both comprehensive and specific new urban areas should be planned based on this fact. Some new urban areas tend to be too simple or too comprehensive. Because of the simplicity of function, as well as the influence of concentrated industry and residential scale, this kind of area is far from realizing its aim to serve resident living. To some extent, the pendulum rhythm of life turns the city into a “sleeping city.” A different kind of area could tend to copy the old area, with its lack of emphasis and characteristics. Realizing the goal of a new urban area should be in accordance with the development strategy, trying to make the functional orientation accurate, arranging the functional factors reasonably, and dividing the functional partitions scientifically.

13.1 New Urban Areas and Old Urban Areas

The fact that most of the new city is derived from the old city produces two problems: one is the functional orientation, the other is the relationship with the old area. The function of the new city should be defined clearly in making the development strategy and positioning the new area. However, many new urban areas didn't organize strategy research seriously. As a result, there is no long-term strategic objectives, no scientific strategic steps, and no strategic measures in the city plan. The new city planning unit and planners who are responsible for the planning of new urban areas face some preliminary ideas of government leaders, which are not systematic and, comprehensive, thereby increasing the difficulties of planning.

Only by comparing can we differentiate the old and new areas and explore the relationship between them. The key point is to ascertain the actual conditions and arrange things accordingly during the progress of planning. We should develop them mutually and enable them to live in harmony with each other.

The old and new urban areas infiltrate and integrate symbiotically. They are different in their urban morphology and spatial arrangement, and the differences are

obvious over a certain period of time. As time goes by, the new urban area gradually becomes old. This situation is common in cities around the world, many urban areas having developed in this way: first, the new area became old; second, built a new area which turned into an old one; third, rebuild an area and repeated the previous step. As a result, the city began to grow and develop, and prospered anyway. Of course, the urban scale, architectural style, etc., show the ring of urban development, and such traces are evident.

Another situation is the built-up area, such as Chengdu Tianfu New Area and Chongqing Liangjiang New Area. The government plan places the old area in the new area. The scope of Chengdu Tianfu New Area planning includes the Southern District of Chengdu Hi-tech Zone, Longquan District, Shuangliu County, Xinjin County, Pengshan County of Meishan, Renshou County, Jianyang, a total of 3 cities, 7 counties (cities, districts), 37 townships (towns), the planning area being 1,578 km², the built up area accounting for a large proportion, approximately 150 km². Chongqing Liangjiang New Area is located north of the Yangtze River in Chongqing City, east of the Jialing River, including three administrative districts (Jiangbei District, Yubei District, Beipei District), economic and technological development zones, high-tech development zones, and inland Cuntan bonded port area. The total planning area is 1,200 km², and the planned construction area is 550 km². The old and the new also share areas in these two big cities. Benefitting from a new management system and new development goals, the new area in the city can enjoy some of the new preferential policies provided by our government.

Additionally, the new urban area absorbs the old urban area, which makes the new urban area larger once the new urban area has progressed to a certain advanced level. The State Council approved the adjustment of administrative divisions of Tianjin in November, 2009. Where Tanggu District, Hangu, and Dagang District are absorbed by Binhai New Area in a merger by absorption, the absorbed part is dissolved. The goal of this new development model is to expand further the economic growth and expand the scope of preferential policies. Taking this new development model into account, Tianjin has promoted the comprehensive development of relevant specialties.

Recently, *with the trend away from a single pattern to becoming involved with regionalization, integration, and internationalization, the planning of combining the old and new areas into one area is taken into consideration.*

The old and the new urban areas are different in stages and forms during development. The government should make overall plans and take all factors into consideration at all times. The formation of the new urban area is based on the old. *There are a large number of residents living in the old urban area. It concentrates the vast majority of people of the city and huge economic power, social power, cultural power, and political power.* This is happening every day, and the changes should be fully respected. At the same time, we should explore and utilize the buildings, transportation, and urban furniture facilities more efficiently. With the passage of time, some of the old facilities should be protected and restored. Only by loving and promoting the old areas can they maintain their rich charm for us.

13.2 Comprehensiveness and Singleness

How to deal with the relationship between comprehensiveness and singleness in function is a major problem in the development of a new urban area. Along with the development process of the new urban area, the overall trend is changing from singleness to comprehensiveness.

Mainly to solve the housing problem, Britain build 14 towns as its first generation of Metro from 1946 to 1950. Because of the small scale, low building density, single function, and lack of vigor and vitality, Britain was also planning to build its second generation of Metro from 1955 to 1966. Learning from the first generation problems, the government increased the development density and paid attention to the economic development problems of Metro. In order to strengthen further the infrastructure construction, improve the urban function, expand the size of cities, and reach more satisfactory results, the British government planned and constructed the third generation in the 1980s.

China's new urban development also processed from single function to the comprehensive function. In the mid 1980s, some of China's coastal cities began to build economic development zones, the emphasis being on the development of industrial processing, industrial manufacturing, etc., the type of function leading to a more industrial, unified, and less comprehensive new town. This conforms to the development of China's actual and periodic needs because industrial development is of prime importance. However, the industrial park or new town often pays attention to the problems of industrial development, neglecting the supporting functions, and problems arise from a lack of popularity and traffic not being convenient for employment, and these problems lead to adjustment of function zoning, land use planning, and rearrangement of some homes, schools, and life services. Meanwhile, we should see that for most new urban districts, if there is no definite oneness and specificity and only a copying of new urban district from old urban district, then there is no value and features there. After 2000, after summing up the experience of new urban area construction of the last century, we should now pay attention to the functions of comprehensive and compatibility. Some places, in accordance with the requirements and concept of the city, planned anew the economic development zone. Some places, in accordance with the standards of the new district, launched economic development zones. These steps effectively promoted economic development and urban construction.

Summarizing the development course of Chinese and foreign new town with regard to the urban functions, we must pay attention to the development of new comprehensive strategic objectives, and then plan using a comprehensive design. If oneness is needed, then design oneness. When comprehensiveness is designed, definite features must be included. At the time of planning and design of oneness, relative supporting functions should be there. No matter what, a certain degree of self balancing and relative independence should be achieved.

13.3 Industry and Residence

Industry and living remains a pair of contradictions which the new urban area is confronting in its planning, very differently in different countries, cities, or at different stages of the same country and the same city. It has been mentioned that Britain stressed residence and ignored industry when she planned the first generation of new towns. In the 1980s China paid attention to the development of industry without following up with living amenities. Different paths lead to the same destination, all finally leading to the new area of industry and living.

Different countries and cities in different stages of development have different purposes and different starting points. Some plan to move out the industry and enterprises in the old area; some plan to build a new industrial agglomeration and growth areas such as La defense in Paris, France and Pudong in Shanghai, China; some plan to evacuate the population in old areas and release the pressure of population and traffic, such as the generations of new towns in Britain and the new areas around Beijing and Shanghai in China. It is right to stress the importance of industry and living in urban development, but their mutual coordination and support should be kept in mind.

Industry is industry and development; residence is living, consumption, and support. A new urban area without industry and employment usually turn out to be a sleep city or a dormitory town. A new area without residence enjoys less popularity, life, and passion and can die. When we plan new urban areas, we not only stress the priority but also note the mutual support between living and industry. Specific planning should allocate resources reasonably according to the size, feature, support, distance from the old area, and traffic conditions of the new urban area to make people work and live conveniently, industry develop rapidly, and the urban surrounding more beautiful.

Chapter 14

Spatial Structure of New Urban Planning

The new urban spatial fabric is the overall layout of the whole city and its scientific division and arrangement of all kinds of functions. It is very important to have a reasonable spatial fabric for the scientific and effective operation of the new city area. The spatial fabric is mainly influenced by its location, natural environment, resource, function, transportation, investment, etc. At the same time, accordance with the old city area also matters. The city spatial fabric includes clustering pattern, spreading pattern, and so on. As to the internal spatial fabric of the new city, there are concentric patterns, hugging patterns, belt patterns, fan patterns, etc., with specific characteristics. This chapter mainly focuses on introducing some of them.

14.1 Group Urban Expansion and Suburbs Sprawl

In nature, plants commonly grow naturally and disorderly. However, in human society this situation is very different. Just as farmers always plant crops in a reasonable row or line so as to avoid disorderly growth, city planners need to take the gardening into consideration. It reflects the level of their management if the city green space system is in good order, which is common sense in gardening and necessary to produce city beauty.

The way a city expands includes clustering patterns and spreading patterns, etc. The spreading pattern has different styles. We can expand the city along the roads, rivers, etc., which is a kind of nature-oriented pattern. Beijing is typical of this kind, which expands circle by circle according to its natural environment. Though the problem constantly appears, expansion has to occur in that way. When planning to construct a new urban area, we can join onto one side of the old one based on its actual situation, which can take advantage of the old one's current resources and facilities. This is very convenient in the building of roads and transport facilities and also saves on cost. The pattern is a good choice and the main model for the city which is smaller in area, less in population, and slower in development. However, when it comes to the bigger cities, it should be discussed. Because the pattern has its own advantages, the new city area is restricted by the old one in its current spatial fabric, the tolerance of the infrastructure and environment capability, which

puts great pressure on the new city's living conditions, transportation, and environment protection. As a result, the spreading is not part of the new city's planning and construction but the old city's expansion. That's why some of the new ones are still similar to the old. The only choice with building roads is to do it in line with the old ones, otherwise there are overlaps.

"Waters with small area should be gathered, while ones with big area should be divided" is the principle of Chinese garden-building. It also applies to the spreading city. The clustering pattern is the scientific way for big cities and metropolis spreading. The way to use it is to build a new city area with certain scale and relatively adequate function, which is within a certain distance from the downtown area. Through convenient transportation, the two integrate with each other. In terms of the spatial form it displays, we can divide it into three categories: group clustering pattern, belt clustering pattern, and circular clustering pattern. According to the number of cores in it, we can also divide it into multi-core clustering pattern and mono-core clustering pattern. This kind of city fabric has many merits. First, it distances the new city area from the old one, which means it is easier to make the city larger. This pattern avoids the two scrambling for resources and leaves enough for both. Second, not only does it make it easier to construct a new city area but also it can promote the original one. Chairman Mao once said that we have no burden to write words and draw pictures on a piece of paper which is not used. Under that pattern, the new city area resembles that very piece of paper. We can make plans on it with less difficulty and cost. When construction of the new city area is finished, it appeals to the population and industry of the old one to alter and optimize it. Third, it contributes to improving the manufacturing and living facilities, thus forming a new center. Fourth, it helps to perfect traffic conditions. Once the new city area becomes a new center, transporting between the two centers becomes less, which decreases the traffic burden of the new city area and the traffic congestion of the old one.

However, it is obvious that the clustering pattern has shortcomings as well. This pattern may separate the connection of the whole city. The new city area covers much land and the pattern may reduce the scale benefit of the infrastructures and public facilities, thus impacting the popularity and prosperity of the city. Therefore the planners should be prudent in adopting the clustering pattern.

14.2 Plate Structure and the Others

The pattern of the inner pattern of the new city area is variable. The concentric circle pattern is a kind of fabric which most cities, especially cities in a plain area, usually adopt. The city takes the administration, square, and landmark building, etc., as its center and then expands from the center out. Surrounding a hill, a lake, a cathedral, etc., is the typical characteristic of the hugging pattern. Coastal cities often use the fan pattern, which takes the harbor as the center or takes the bay as the

starting point, then spreads to the mainland. The belt pattern is the pattern where the city spreads along the river and traffic line.

A city's plate theory and central plate fabric theory probably originate from the plate tectonics of the African and American continents, as introduced by Alfred Lothar Wegene. Soon after, "plate" was widely used in industry, the press, urban planning, etc. City plate fabric is a pattern which unites the inner space and the functional structure. By using the "plate," city planners divide the whole city into living area, office area, shopping area, leisure area, and entertainment area. Each area has its own feature and at the same time they maintain a close relationship with each other by road and traffic.

The patterns above all have advantages and disadvantages. However, considering the multifunction, resource sharing, value extension, traffic connection, and intensive effectiveness, the plate fabric is superior to others.

When planning the city, the city planners should take various considerations, including the city's natural condition, geography, traffic condition, scale, religion, and so on, and make reasonable plans accordingly.

14.3 Large Communities

The large community and city complex are two important forms of city inner spatial pattern and the main carrier which is often used in new urban spatial fabric and functional structure. The former mainly deals with the city's inhabitation structure or living structure, whereas the latter emphasizes more the commercial and integrated structure. We discuss these in the following paragraphs.

Let's find out about the big community first. The word "community" came from Latin, which means things in common and close partnership. It was translated by the famous socialist in China, Mr. Fei Xiaotong, who translated the word from the German sociologist Tonnies F. in the twentieth century. In the opinion of Prof. Wu Liangyong (a famous Chinese architect), community (neighborhood) is an important layer between city and architecture. As for the system of urban fabric, it can be called district; for social organization, it can be called neighborhood; for the relationship between urban and rural area, it can be called small town. The big community has been very popular in western countries and has permeated into the economic, social, and urban structure. However, for a long time, in China, little study has been put into it, the idea of big issues has not come to a consensus, and a lack of instructions and implementations on the urban community planning still applies here.

The residential area in China has had its own character in different periods. Before 1949, the city residential area was featured by nationality or concession. Since 1949, the city in China has developed very fast. However, residents mostly lived in traditional houses, in which a whole family might squeeze. Between the 1950s and 1980s, some governmental agencies and factories gathered money and built houses for their employees. Most were one-story constructions with high population density and not far from the workplace, so the living environment was

not very good. People who worked together lived together, whereas, if they were not work colleagues they lived far from each other. After the 1980s, thanks to the deepening of the reform and opening up, and the speedy development of society, the cities were reconstructed successively on a large scale. The city center expanded to the periphery. Therefore, the situation was that the old residential area, the employee's area, and the new area coexisted in the city. However, community planning is not scientific with lots of shortcomings for various reasons. So the big community should be taken into consideration when we design the new urban fabric (Fig. 14.1).

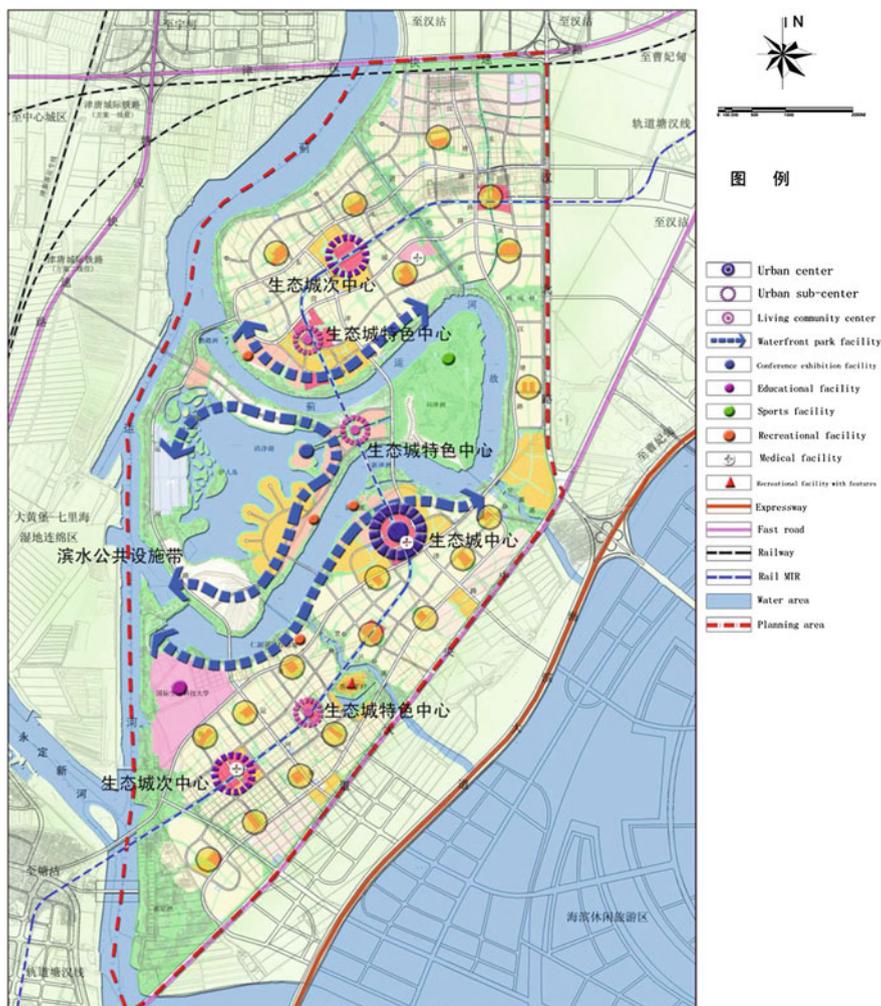


Fig. 14.1 Layout of public facilities in Sino-Singapore Eco-city

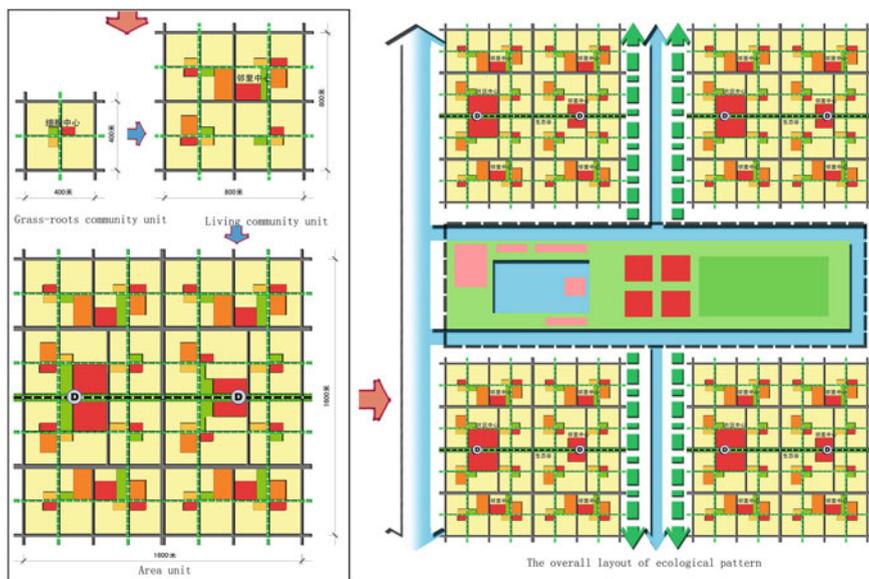


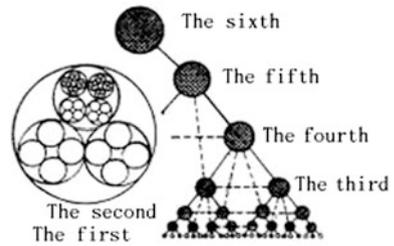
Fig. 14.2 Layout of Sino-Singapore Eco-city community

First, when the city planners begin on the general planning of the new city area, they should have an integral arrangement of the big community. They should make a very thorough investigation and analysis of the population and its structure, traffic conditions, etc. Then the city planners should decide on the important items, including the specific location, scale, and facilities for the community (Fig. 14.2).

Second, the community must be on an appropriate scale. It is very difficult to define the concrete scale of the big community because the new city's function orientation, the scale, the distance from the old one, and the public facilities are different. If the planned communities are too small, it is difficult to form scale merits and equip the corresponding facilities. If they are too big, problems arise in transportation and the environment. Some experts suggest controlling the scale to 5,000 per community or so. In Dezhou city, Shandong Province, there were 8,319 villages, each with about 524 people. It was obvious that that situation was not reasonable because of the high cost of village organizations, high burden of the farmers, high waste of farmlands, and various other disadvantages. Since 2008, Dezhou city has been actively promoting the process of rural urbanization. The planners plan to reduce the villages to 3,070 rural communities and then make them into 710 big communities. It may take 10–15 years to finish it. The ideal situation is that there are 5,000 people in every community so that there are 10,000 people in every town and 20,000 in the city center district.

Third, the infrastructure should be well programmed and well equipped. The infrastructure within the community, such as the living, commercial, cultural, amusing, medical, and physical fitness facilities and items either in or out of the

Fig. 14.3 The hierarchy of community



community, such as schools and kindergartens, should be arranged scientifically and reasonably.

Fourth, the transportation in or out the community should be very convenient. There are many problems in the city, especially the crowded mass and the traffic jams. Too many people and cars cause the crowded situation which has become one of the biggest headaches of the city. Thanks to city managers' and planners' effort, we do make certain progress. However, on the whole, traffic congestion is more and more serious, and even spreads to the towns and counties around the city. Now, the city managers, the car industry, and the citizens are urged to make cooperative efforts to solve the problem. Specific to the big community, the planning should be close to the roads and the traffic stations so that it is convenient for the citizens to go out (Fig. 14.3).

A habitable community should not only be equipped with adequate facilities and offer high-quality living conditions to the residents, but also have diversity of departments, office areas, and shopping malls. One of the biggest and most successful models of this type is a new city called Liston in America. It was designed by Robert Simon who was also the first resident there and had been there since the construction of the city. The community he designed was a sustainable one, which provided the residents with all kinds of houses at a proper price, meeting the different needs of different families, ages, and levels of income. With schools, libraries, churches, kindergartens, and amusement facilities, etc., the community can offer satisfactory services to all the citizens. This kind of city will surely become a whole-life city (Fig. 14.4).

14.4 Urban Complexes

The urban complex, a product of urban development at a certain stage, is a new type of modern urban spatial form and an important form of plate tectonics in the spatial layout of the new city area. Planning and construction of an urban complex has been a hot topic and investment hotspot in recent years among cities and the real estate sector.

The urban complex is exotic, which spread from abroad in the 1990s. Its English name is HOPSCA, which is an abbreviation for a combination of the six first letters



Fig. 14.4 The new town of Liston in America

of Hotel, Office, Park, Shopping mall, Convention center, Apartment. The urban complex combines three or more of the city's functions of commercial, business, office, residential, hotel, entertainment, relaxation, conference, and transportation to build an interdependent and mutually reinforcing dynamic relationship, thus forming a multifunctional and high efficiency complex. The urban complex basically has all the features of the modern city, so it is also known as the "city within a city."

The urban complex is different from architectural complex. The architectural complex, also known as multi-purpose building, is the accumulation of the number and types of buildings. This synthesis does not generate a new comprehensive system and local change is independent of the overall big picture. The urban complex is the optimal combination of the various constituent parts, and they co-exist in an organic system.

The urban complex and the Central Business District are also different. CBD is the abbreviation of Central Business District, which was originally proposed by Burgess, a representative character of urban geography of the United States in 1920. CBD is the core area in the concentric model of urban structure and the most central part of the city and includes department stores, offices, entertainment venues, and public buildings, although generally it does not have the function of living. Some scholars believe that the central business district of Manhattan Island of New York City is Wall Street, whereas the urban complex is the Rockefeller Center. Of course, many cities and some people confuse the central business district with the city

complex—it is not definitely wrong. What we frequently say and talk about may have become a convention or a kind of public opinion. However, as a science studying the city, it's better to distinguish between the two concepts.

By comparing the developing process of urban complex, architectural complex, and the central business district, we can make it clear just what their differences are. In the late 1920s, John Davidson, Junior, Rockefeller began planning the construction of a building on Manhattan island of New York City. Originally he intended to prepare for the constructing of an opera house for the Metropolitan Opera. However, because of the economic crisis and the stock market crash, he changed his mind and began to invest in the construction of a business group centered on 14 architectural skyscrapers. Groundbreaking started on May 17th, 1930 and completed the first phase on November 1st, 1939. Its first phase was classical style. The new four modern-styled buildings built in the 1960s formed an architectural complex. Covering an area of 22 acres and consisting of 19 buildings, its total construction area is 676,000 m² and the floor area ratio is up to 18. In the following several decades, it was always seen by the world as a symbol of New York City and even the United States, and the top companies stationed here are beyond count. However, the Rockefeller Center in its early development lacked basic housing and hotel functions which the urban complex has. It is therefore difficult to form a good supporting coordination, and thus the Center was somewhat depressed and unpopular. Then, in 1963, the Hilton hotel with 2,153 guest rooms was built at the periphery of the Rockefeller Center. The sunken plaza was reconstructed and commercial development was organically combined with public entertainment, relaxation, and living. In this way the Rockefeller Center was brought into popularity and vitality and developed into an urban complex. Experience of the Rockefeller Center has proved that the urban complex is one of the development directions of the city (Fig. 14.5).

City of La Défense in Paris is recognized as the world's first true and most representative urban complex. La Défense district is located in the northwest of Paris and at the western part of the main axis of Paris. In 1958 there was a severe lack of commercial space in urban areas of Paris. Because of this, the French government decided to implement the largest urban plan in the latter half of the twentieth century to meet the urgent demand for commercial office space, as well as to respond to the construction of Rockefeller Center. On September 9th, 1958, the La Défense Area Development Company was founded and began the implementation of this great construction program. After 40 years, the task was successfully completed in 2001. A total of 2.47 million m² of office was built, among which the business district covered 2.15 million m² and the park district covered 320,000 m². A total of 15,600 residential units were constructed, which can accommodate 39,300 people. Among the 15,600 residential units, the business district had a construction of 10,100 housing units which can accommodate 21,000 people and the park district had 5,588 residential construction which can accommodate 18,300 people. Half the largest companies in France have offices here. It covered an area of 105,000 m² and was the Europe's largest commercial center. It was also Europe's largest bus transfer center with an intersection of the ERE high-speed subway,



Fig. 14.5 Rockefeller Center, USA

number 1 Metro Line, the 14th highway, the 2nd subway, etc. A pedestrian system which covers 67 ha was built. The transport facilities are perfect, for it has 26,000 parking spaces under centralized management. It completed the construction of a park covering an area of 25 ha. One-tenth of the land in the business district was used as green space, which was planted with more than 400 species of plants. It constructed an open-air museum exhibiting 60 modern sculptures. The environment and greening system is great. With its self-contained complete functions, a beautiful environment, and an excellent facilities, La Défense has become a modern city, integrating the functions of office, business, shopping, living, and relaxation, which attracts about 2 million visitors each year. The success of La Défense not only adds a modern look to classic Paris but also puts forward a new direction of development for the world's major cities. After that, the Roppongi in Tokyo and the Pacific Place in Hong Kong have been built and put into use (Fig. 14.6).

The development of an urban complex in China began in the 1990s. Although the history of development is short, it plays a significant role in the promotion of the city's economic and social development, improvement of city taste, the shaping of city image, the increase of investment efficiency, and other aspects of development, soon showing a strong momentum of development. Its development and construction is very fast and within a dozen years it spreads from the Chinese big cities to middle-sized and small cities. In some cities, some investors can complete an urban complex and put it into use in just a few years. Almost all cities in China and



Fig. 14.6 La Défense, France

even some counties and townships are scrambling to build urban complexes, so the urban complex can be seen everywhere in the country. There are many enterprises participating in the construction of an urban complex, including some real estate companies which originally vowed to engage in housing or engage in the development of other industries. Wanda, China Resources, Cade, COFCO Corporation, Vanke, and some other enterprises engaging in the construction of urban complexes have become China's famous brands of urban real estate development enterprises and market leader teams on urban complexes.

Chinese people have a habit of following trends in their way of thinking. First, when they do not know some new things, they criticize and gossip about these things and rarely accept them. Once they have known or become familiar with the new situation, then it quickly becomes popular and people scramble to do things relevant to it. In particular, China's market economy has only been developing for a short time, and institutional mechanisms are inadequate and investment experience of enterprises or society as a whole is insufficient, thus producing ignorance and randomness in investment. As to the development of the urban complex, there exist many problems such as lack of foresight in choosing location, haste in investing, similarity of planning and design, extensive forms of development and construction, small-scale facilities, and other issues. Investors in some cities are anxious to achieve quick success and get instant benefits in the development and construction of urban complex projects. Influenced by many of the city government's quick

achievements and images, some projects are hastily planned, the locations are not carefully chosen, and the scales are not big enough. Some investment enterprises only concentrate on high speed operations and high returns on investment within 2–3 years, which makes the implementation of a project difficult. The planning and design of some urban complexes are monotonous and the design effect has little individuality. Each city complex has a similar pattern and style, even using the same design drawing, and therefore the city does not have its own features and culture. China's booming cities are asking some of the investment and development companies to plan and construct a number of high-grade urban complexes, which can live up to the features of this great city era.

In China, when it comes to the urban complex, we cannot fail to mention Dalian, the leader of the urban complex in China. From its foundation in 1988 to the year 2013, Wanda Group has formed five big industries including commercial real estate, luxury hotels, tourism investment, cultural industries, and chain stores. In 2012, the enterprise assets of Wanda were 300 billion Yuan and annual income was 141.7 billion Yuan. With 20.2 billion Yuan in taxes, its net profit was more than 10 billion Yuan. Wanda Group has opened 49 Wanda Plazas, 26 five-star hotels, 730 cinema screens, 40 department stores, and 45 hypermarkets. Its real estate area is 9.03 million m². The Wanda Group plans to open 120 Wanda Plazas and hold 24 million m² of real estate by 2015, to rank first in real estate enterprises of the world, and to become a world-class enterprise. Wanda Plaza has become the commercial landmark in some cities of China. Wang Jianlin is a legendary figure in China's economic circles and has made important contributions to urban development in China. In 2013 he topped the Forbes China rich list with his net assets of 86 billion Yuan (Fig. 14.7).

The appearance of this structural form of urban complex is determined by market demand and economic and social structures. It is the product of market economy and urban development at a certain stage.

First, the urban complex is the inevitable result of the development and changes in the industrial structure. A notable feature in the development of modern economy and society, especially in cities, is the rapid development of tertiary industry. It gradually occupies the largest part of the industrial structure and becomes the main component of the urban economy. Some factories and workshops for manufacturing and processing are gradually shifted from the city to the countryside or somewhere else, and some of the services sector occupies an important position in the city. "Suppress the second industry and develop the third industry" is what the Chinese people said. The rapid development of tertiary industry requires the city to provide space for development and a relatively large place, which is the basic impetus for the development of the urban complex.

Second, the urban complex is an inexorable trend of development and changes in the consumption structure. With the development of the city and improvement in social income, consumption has changed from the past basic household items into the clothing, cosmetics, and other luxury items. Bazaars and small stalls are fewer, grain stores are unseen, having been replaced by supermarkets and department stores. People now tend to be centralized, purchasing and shopping on weekend.



Fig. 14.7 Wanda urban complex

Young adults in their twenties or thirties become the main customers for shopping and entertainment. They choose affordable restaurants for dinner, and then watch movies, sing, and so on. All these need urban complexes which can provide the places for relaxation, entertainment, shopping, etc.

Third, the urban complex is the result of changes in the employment structure. With the changes in industrial structure and consumption structure, the employment structure is changing too. The amount of white-collar is increasing and blue-collar decreasing. People spend more time on processing business and administrative affairs in the office and less time on working in factories and workshops. More people are working with computers and less are doing manual labor. The floating and external population is increasing, the original inhabitants becoming relatively less. Under these conditions, the construction of offices and commerce sites is in demand, as well as the construction of hotels serving the floating population.

Fourth, the urban complex is a requirement of urban residents for living and transport. With changes in the above-mentioned structures, some of the people working in the city have a new requirement for a more convenient, quiet, and economical place to live and enjoy life and work, reducing the time spent on the way to work and reducing traffic congestion and noise. The urban complex with multifunctional commercial, business, hotel, and residential has come into being.

When planning the construction of the urban complex in the new city area, the following aspects should be noted. First, site selection is very important. In the old city area, there are urban complexes located in the core area as well as at the edge of the city. Some people say that the site selection of Wanda Plaza is not in the core area of the city, although this argument is not comprehensive. Wanda Plaza in Jinan

is located opposite the most prosperous commercial Grand View Garden, as well as being in the core areas of other cities. Factors determining site selection are the level of traffic accessibility, the level of land price granted by the government, and the flow rate of people. The core factor of site selection is how investment returns. In the new city area, where people flow and trade flow are relatively low, some investors are reluctant to invest in the construction of the urban complexes. For this reason, site selection is very important. Generally speaking, site selection should follow three principles. The first is convenient transportation. The site must near at least one of the city's main roads, which is convenient for vehicles to come in and out. The second is that the urban complex must be close to the residential district in the new city area, which has a certain popularity and some fixed customers. After the opening of the Beijing–Shanghai high-speed railway, cities along the line planned and constructed some new towns served by the railway. Some cities planned the construction of urban complexes near the high-speed railway station. Some investors and developers are not satisfied with the site selection for the plan because the people flow and trade flow are not steady near the station, so the plan is difficult to implement. The high-speed railway station is both passing station and transfer station, where passengers come and go for a short time, even shorter than the time for which they stay at the airport, so there is no time for accommodation and consumption. Even though it has some consumers, they are not shopping continuously, but just occasionally buy something, eat a meal, and then they leave. Although the shopping center needs constant and repeated consumption, it needs to have fixed consumer groups and “returning customers.” Experienced investors do not depend on the flowing people in the development of urban complex. The third aspect is a broad space. Hundreds of thousands of square meters of site can win simply by its large scale. A relatively large parking space and convenient parking can be more competitive than in the urban complex in the old city area.

Plan to keep the traffic flow smooth, along with the city main road, subway, and inter-city traffic. Plan to build side roads which won't affect the normal traffic on the main road. Plan to build overpasses, corridors, underground passages, and connect the building to public spaces and the metro station to make travel more convenient.

Selecting entrances correctly is very important. Urban complexes should have multiple entrances. The main doors should be placed on several main roads and urban roads or other important convergences, making it easy for customers to go in and out of the underground parking facility. Pedestrian routes are very important; after entering the city complex, under normal circumstances, pedestrians automatically walk along the right side to go shopping.

Fourthly, a landmark building and a modern urban landscape should be designed into the plan. This is a symbol of the strength of the investment and development companies, and also gives the would-be user a sense of the service on offer. From the source of the urban complex Rockefeller Center, to La Défense of France, Roppongi of Japan, Pacific Place of Hong Kong, all of them have a landmark building. In this regard, China is pursuing a number of recent urban complex investment returns, but not doing enough to improve the quality and the level of need.

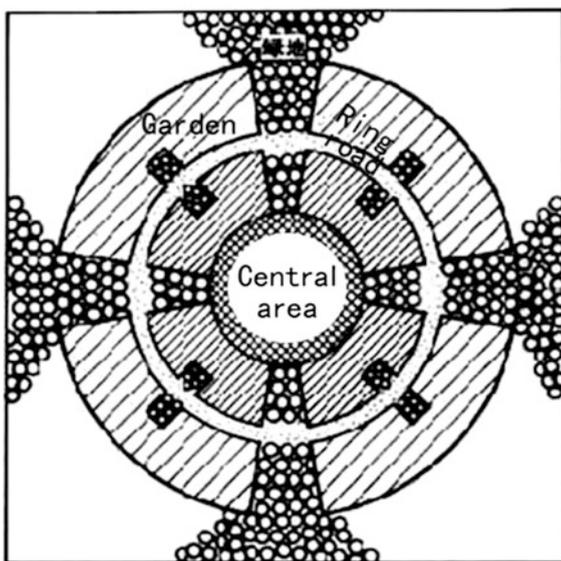
14.5 Wedge-Shaped Green Land

Green Garden is not only the basic component of the urban ecosystem, but also the significant connotation of the urban special pattern. The layout pattern includes massive green spaces, band-shaped greens, mixed greens, and wedge-shaped greens. A uniform layout of green areas provides equitable access to the public, combined with other forms of square. A uniform urban green space layout is enjoyed by the citizens, this being the basic form of urban greening. However, for improving the urban microclimate and enhancing the overall image of the new city, the effect is obvious. Band-shaped greens involve the use of river systems, urban roads, old city walls, and other factors. This layout makes full use of existing green urban resources, improving the urban landscape effect. The mixed green is in the form of a variety of combinations of green gardens consisting of more complete systems which can take a variety of forms of long greens to play a multifaceted role. The above three types of green space are commonly seen.

The green wedge was proposed by Beveridge in 1896 after a long delay in getting real implementation in cities (German G. Albers "Introduction to theory and practice of urban planning", p. 182). Green wedge space runs to the city from the suburbs and the center of the market, changing from wide to narrow, and thus called a wedge in the city master plan (Fig. 14.8).

The basic function of green wedge is to improve the urban climate and make air quality better. Now every city is reinforced by asphalt, cement, stone, brick, and other forms of hard material. The steel and stone lead to the city absorbing a large amount of solar radiation and, as a result, the drinking water quality is bad;

Fig. 14.8 Map of a green wedge



air temperature is higher than in the suburbs, population density is lower, and quality of life is lower.

Green wedge can quickly and continuously affect air flow and the provision of fresh air. This green form enables more residents to be in contact with things green. Meanwhile, the Green Belt green wedge is formed, which can effectively improve the urban landscape and image. The green wedge is aimed at improving the urban environment and the ecological environment of physical space and urban organic development. It has a role in the maintenance and protection of urban biodiversity and promotes the sustainable development of the city, improving the urban ecological environment. Many large cities, such as Beijing and Shanghai, have adopted many measures, planning to construct this kind of green form in the last two decades.

However, many city professionals and administrative personnel in China, have recognized the importance of the green wedge relatively late. In particular, some locations between hills, low-lying basins of the city, and heavily polluted cities, should be determined to engage in green wedge building. In old city planning, construction of this green wedge is related to land, housing, roads, and many other issues. Making full use of existing roads, rivers, and other forms of green space, formation of green wedges can be slow. Urban planning and construction of new green wedges is relatively much easier, and should be actively pursued.

When planning is to be based on ecological principles, priority should be given from the beginning in new urban planning, and when considering the urban ecosystem, green systems and green wedge should determine the location, scale, and features. Generally, the wedge-shaped green space planning should have a minimum width of 20 m. In the actual plan, because it comes down to the size of the city, the number of green wedges and many other related matters depend on the specific circumstances of planning. The old industrial park should be avoided because of the possible introduction of bad air into the new, and high hills should be avoided because of possible obstacles.

Rivers, lakes, and wetlands represent the city's green and green lung; they are a great treasure and an important city heritage, a gift of nature with the endowment of history.

Rivers are often the city's largest green duct, full of trees, water, and air resources, with a greater, fresh, and moist air flow. For the purification of urban air, lakes and wetlands are Pearl City, for example, has a wedge-shaped green. It is of great importance in beautifying the city's image. Planning a green wedge should make full use of rivers, lakes, wetlands, and more trees should also be planned. Green wedge planning and construction involves planting trees, eventually forming the suburbs with a combination of point, line, plane, and the natural harmony of urban green space landscape ecological systems.

Chapter 15

New Areas Urban Designing

15.1 Urban Design of High Importance

In the practice of the new urban district planning and construction, a big problem is that the overall effect after construction is different from the blueprint that we planned. So what goes wrong? The crux of the problem lies in the lack of integrity, coordination, and visionary effect, and, worse still, the absence of the overall city design.

It turns out that what we see every day is the planar graph of urban planning, a two-dimensional space, a miniature image. If the rendering planning is 1:1,000, this corresponds to the view we get from a helicopter at an altitude of 1,000 m. Without strong professionalism it is difficult to predict the effect after implementation.

What we usually see is not a planar graph in the drawing, nor a two-dimensional representation of the city, but a three-dimensional space and three-dimensional effect. People are unable to enjoy a full view when appreciating a city because of its large and high buildings. Planning, architectural design, and a single building cannot express the total beauty and coordination of city's overall landscape. Zhou Laixiang, a famous esthetician and professor of Shandong University said "Beauty is the harmony." The city design includes the urban planning and construction elements of the city's overall harmony and coordination.

Shenzhen City and Suzhou City are two Chinese cities which were designed early. Shi Kuang, the Chinese architectural design master and chief designer of Suzhou industrial park, felt strongly that "what Suzhou industrial park shows to the world is partly because of the planning, although a larger proportion is the outcome of the design."¹

¹Shi Kuang and etc. *The Making of a Chinese Model New Town*, p. 169.

As a scientific practice activity, city design has a long history with many classical cases. However, as a special modernity science concept, city design was proposed at the International Association of Personnel in the 1930 s. American Architectural Association officially adopted the concept of city design in 1965.² Some scholars think that city design, as a discipline and independent occupation area, was truly established in the 1950s.³ Since then, urban design, as a new discipline, separated from the city planning and architecture and gradually matured.

In China, city design is still a young discipline and such a course in Chinese universities has been rather late in coming. The entire community, including architectural designers and professionals, still lack the proper understanding of city design, let alone in-depth research and extensive applications. Therefore, to understand and command city design completely and scientifically, it is a must to analyze and identify the inter-relationship between city planning, city designing, and architectural designing.

15.2 Urban Planning and Design, Urban Architectural Design

What is urban design? International and domestic experts and scholars have given various opinions on the interpretation of this concept which I do not repeat here. *Encyclopedia Britannica* explains that urban design is the rational processing and art arrangement of forms of the urban environment. Chinese *Cihai* denotes that urban design is the overall concept and arrangement of the city's size and space environment. Both explanations are similar and reveal the meaning of urban design, which is the overall spatial form of urban environmental design and layout arrangements.

Urban planning is an overall layout and specific arrangement and management of economic and social development of the city, land usage, spatial layout, and the construction of a comprehensive deployment, specific arrangements, and implementation management in a certain period. Architectural design is the expression of the internal functions, space layout, and appearance of the architecture according to the task of building designers before construction of the building. Here, there are several views of the differences between the meanings of the three.

From the management function viewpoint, urban planning is the united management of the designated function of city, objectives, size, development direction, land, and construction based on economic, social, political, cultural, ecological, etc., factors, with the purpose of sustainable development of the city and more a

²Zhu Tiezhen, *Urban Development Studies*, p. 269.

³Shi Kuang and etc. *The Making of a Chinese Model New Town*, p. 117.

comfortable lifestyle for its people. Urban planning forms the first milestone of urban future development through determining land utilization conditions.⁴ Urban planning is an integrated design and a comprehensive layout and arrangement in space in terms of all the material elements such as urban construction, transportation, mountains, water, forest, squares, etc to coordinate the urban space and attract its residents.

Professor Wu Liangyong said “Urban design is a comprehensive professional field, we are asking for a way to living environment planning of urban design concepts, namely the coordination of the development of regional area—city—community—building space and good quality and size order in human settlements in terms of ecology, life, culture, aesthetics, etc.”⁵ To make the buildings economical, affordable, sturdy, and beautiful, the principles of architectural design lies in reasonable arrangements of various functions and space as well as coordination with the surrounding environment and external conditions.

From the form of expression, urban planning is often rational, with the important characteristics of conceptualization, abstraction, and datamation, whereas urban design and architectural design are often emotional, with the expression of specific graphic and color performance.

From the performance metric, urban planning is macroscopic with a spacious area. Urban design is Madhyamapratipad, involving a distinctive street, a place, an area of the skyline, a particular color, or a proportion. Architectural design is microscopic, which is part of the urban design.

From the spatial composition and effect of practical performance, urban planning is two-dimensional, indicated through one plane or multiple planes, whereas urban design and architectural design are three-dimensional. With the forms of expression, urban planning is a surface, urban design is sometimes a line (skyline) or a three-dimensional region, whereas architectural design is a monomer, in most cases, a point.

From the time of implementation, urban planning and urban design are often long-term and predictable processes, taking a long time from planning to full implementation. The time spent on an architectural design process to the completion of the actual building is relatively short, often a few months or a few years.

From the status, urban planning is in the dominant position, urban design is in the leading position, and architectural design is in the subordinate position.

Despite the differences between various functions and commitment, urban planning, urban design and architectural design are closely linked and complementary to each other, depicting the grand picture of the city.

⁴[Germany]G • Albers, *An Introduction to the theory and practice of urban planning*, p. 193.

⁵Wu Liangyong. *An Introduction to Science of Human Settlement*, p. 128.

15.3 Design Contents

From the perspective of the position of urban design in urban planning, urban design includes the overall urban design, urban local design, and urban professional design (such as the city's historic landscape design, etc.). In accordance with the macro, meso, and micro levels of urban design, it can be divided into the overall urban design, divisional design, and district design. Regardless of its classification, urban design should include overall urban space design, urban centers and plazas design, the central business district and the city complex urban design, residential urban design, business and commercial street urban design, mountain and nature design, water regional urban design, landscape urban design, historical style urban design, urban and environmental sketch design, and so on.

15.4 Design Formulation Methods

Urban design serves the needs of urban planning throughout the entire process of urban planning and implementation at all levels. Urban design should be organized firmly after urban planning. Specific preparation methods can be divided into several aspects:

1. Preliminary studies. Extensive research should be done and relevant information should be collected to have a comprehensive understanding of the new city, especially the nature of the city, the orientation of urban planning, development objectives, development characteristics, the scale of development, culture, customs, and so on. It is necessary to understand the intention of the city government and urban planning and design units. Thus, a comprehensive understanding of the policy maker's intention over space structure and characters would add more confidence to new urban planning.
2. Setting up a target. Determining the overall objectives of urban design, overall direction, highlighting features, and implementation steps by analyzing and studying.
3. Design scheme. The organizing personnel carry on the specific urban design. Mid-design, we need to communicate with the design management department or government policy makers and managers in order to adjust and improve the scheme timely and properly.
4. Enacting a detailed plan.
5. Reporting results to urban planning and management administration and governmental decision-makers and confirm the final plan. Development is a prominent characteristic of the city and change is the eternal theme of the city. The city is changing, people's awareness is growing, and urban planning has been gradually deepened and optimized. Urban design needs a certain degree of flexibility and dynamics to adjust gradually and properly.

15.5 Design Execution and Implementation

In China, the government and the community, and even some design staff working in urban planning and architectural design, could not appreciate urban design from the depths of their soul. Preparation of urban design is not essential to the process—the results of the work still have no legal standing. Therefore, the implementation of urban design is more difficult than that of urban planning and architecture design. We should adopt legal and relevant measures to emphasize the execution and implementation of urban design.

Focus on the legal perspective to improve the legal effect of urban design and the execution. In the United States, zoning laws and urban design guidelines control the city form from an overall perspective with strict rules. However, in China, there is no specific law or regulation on urban design which is not yet a legal planning stage. Shenzhen City passed the *Shenzhen Urban Planning Regulation* in 1998, which has established the legal status of urban design and proposed the specific requirements for the preparation and implementation of urban design. Shenzhen, a special administrative region, has special legislative power which would not apply to other cities. Although ordinary cities may have the power to enact their local regulations, it is urgent to enact local legislation actively which may take many forms. Meanwhile, effort should be made to call for national legislation to ensure urban design legally.

Focus on the planning perspective to guarantee the execution and implementation of urban design. *When the category of urban design achievements are put into urban planning and management, implementation of specific projects, issued by the planning conditions, land selling conditions, conditions issued by the architectural design, and urban design conditions should be included. In approving the project planning results and the architectural design work, strict implementation of urban design approval conditions should be taken to ensure the implementation is in place.*

Focus on the implementation of urban design, the development, architectural design, and building level. Architectural design units should consider urban design condition as a given topic, with the planning and management initiated in accordance with the requirements demanded by the contractors and the management department. Investment and development units often consider more of its floor area ratio, building area, and investment efficiency plots rather than perform urban design for various reasons. To overcome this problem, one should, on the one hand, depend on the quality and reliability of the design units, and on other, rely on government decision-makers' resolute attitude and planning management.

Chapter 16

Guide for New Urban Area Planning and Designing

16.1 Guidelines

The process determines the result, and the procedure guarantees the effect. Planning and designing of the new city is a strategic task, which is very complex and important work. We must study the working method carefully, adhering to the correct line to improve our work scientifically and efficiently.

16.1.1 The Route of New Urban Development Technology

Any of the main units, including the state, local governments, and enterprises, should comply with the technical route in the planning and construction of new urban areas. Otherwise, it takes short cuts, resembling eating “half cooked rice.” The main technical work in the new city program can be represented by the following formula:

Strategic research → Programming and marketing → Urban planning → Urban design → Architectural design → Exploitation and construction

1. Organize force to carry out the research on the new urban district strategy
2. Organize programming and marketing
3. Organize urban planning
4. Organize urban design
5. Organize architectural design and civic design, etc.
6. Organize development and construction

16.2 Working Procedures

From the perspective of working practice, the planning and design of new urban areas should be taken seriously and follow a certain procedure:

Taking the task → Research and study → Going out to inspect → Domestic and international bidding → Bid opening and confirming the planning and design units → Planning and design → Organizing evaluation → Making decisions

We can learn lessons from the experience of other cities. It doesn't matter that in many cities government policy makers and personnel of urban planning and design management units have no practical experience. A city is not only the crystallization of human wisdom, talent, and labor collected through thousands of years, rebuilt from the wars and natural disasters, but also a great work of art of great beauty. Everything comes from repeated work and great effort. There is no short cut for a new urban district to plan and design a sound district but to learn from cities being constructed or those already built, which is more important and urgent.

The experts have more theoretical knowledge but less attachment to the city than local government officials in the era of high speed of urbanization. Many design and planning units are tired of tackling the burden of such heavy tasks, which leads to poor performance. This requires government officials, especially policy makers, to learn more about planning and design in order to have sharper judgment. Therefore, the government should organize personnel to go out and study similar districts to learn from their experiences.

There is a well-known Chinese proverb saying that we are supposed to purchase a product through comparison among suppliers. This also applies to making choices from the various competition. In fast-paced modern society, new urban area planning and design involve comprehensive knowledge of politics, economics, society, culture, and zoology. It is difficult to be knowledgeable in all these aspects and therefore domestic and international bidding is a good solution to evaluate planning and design achievement.

In Australia, Sydney and Melbourne were striving to be the capital city. Finally, in 1913, Canberra, was declared the capital and the dispute was resolved. The federal government hosted an urban design competition worldwide. A year later, the scheme of the famous American landscape designer, 36-year-old Chicago native Walter Burley Griffin won the competition from the 137 versions submitted. The original design of the Canberra street map depicted by him and his wife (also an architect) drawn on a piece of cotton still remains in the National Archives of Australia. Construction finished in 1927, lasting a total of 14 years, having been suspended for some time because of World War I. Finally, they picked a traditional name—Canberra—which means a place of togetherness. The past century has proved it to be an excellent scheme.

Similarly, in 2001, when Henan planned its Zhengzhou New District, the Zhengzhou municipal government issued an invitation to 16 well-known domestic and international planning and design units to produce a design that could represent the new century, which would stand for new Zhengzhou, a high starting point and

high quality requirements. After careful selection and business negotiations, the final choice was the Japanese firms Kisho Kurokawa, the U.S. SASAKI, China Urban Planning and Design Institute, and other units involved in the planning and design competition. The chairman of the Architectural Society of China, former Vice Minister of Construction and the Ministry of Construction Song Chunhua Chen Xiaoli, chief planner for the assessment of the head of more than 30 domestic and foreign experts, carried out a further review, and the Japanese Kisho Kurokawa, outstanding with its concepts and solutions of unique charm, was favored by all the experts. Then the Zhengzhou municipal government publicly displayed to the community the planning program and conducted a survey, more than 90 % of the

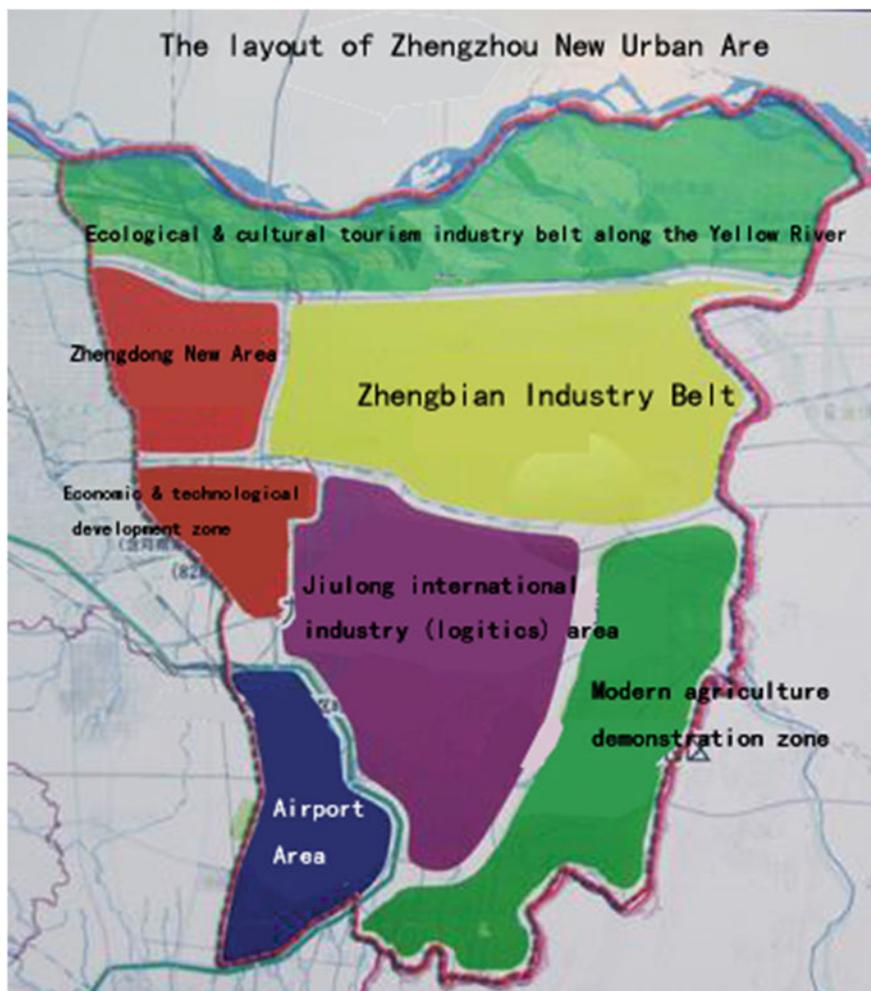


Fig. 16.1 Layout of Zhengzhou new urban area

respondents agreeing with Kurokawa's program. In March 2002, Zhengzhou Municipal People's Congress passed a resolution in the form of local regulations on the planning scheme. In July 2002, Mr. Kurokawa won the first "Urban Planning and Design Excellence Award" at the annual meeting of the World Union of Architects (Fig. 16.1).

I should say that western countries have accomplished well their task of new urban construction, their young technical staff not having had much experience, especially compared to China's new urban districts with hundreds of thousands of people. However, they are familiar with city life, work experience, and attitudes towards modern life. China's planning and design units have some advantages, although more fickle and productive compared with some foreign planning and design units. Therefore, it is a scientific decision to use both foreign and domestic designers to draw up blueprints for new urban districts jointly.

16.3 Main Forces

Human beings are the masters, designers, constructors, and owners of the new urban districts. We are supposed to study and make certain of who the main bodies are for new urban planning and construction, what their positions are, and how they act in the construction of new urban areas. Generally speaking, there are two main forces in the planning and construction of new urban districts; one is the organizational body and the other individual main bodies, as shown below:

Organizational body: The state → Local government → Relevant governmental departments or units → Planning and design marketing units → Financial sector → Investment enterprises → Development and construction units → Rural collectivity

Individual bodies: National leaders → Seniors of local government → Personnel of government administrative departments → Experts from the planning and design organizations → Investors → Builders → Landowners or administrative staff → Citizens

In the above organization of main bodies, the state is in the position of introducing laws and regulations, formulating macro development planning, although it does not directly take an active part in new urban planning and design. However, the state directly leads and participates in the construction of the capital, the state's major new urban migration, urban construction of new urban of military significance, security, and other strategic resources. From Washington DC, Canberra, Brasilia, and Brazil, to Korea Sejong Metropolis, all nations directly take part in the discussion of site selection, determination of planning, implementation of investment, and organization of construction. The Chinese national government generally does not directly involve itself with urban planning and design, important new urban constructions being authorized by local government organizations, such as Shenzhen, Nansha city and so on. However, there are special circumstances, and some new cities of special significance were directly led and organized by the

national government, such as Beichuan County, Sichuan Province, which was under the direct leadership of the State Council and was carefully conducted by the State Ministry of Housing and Urban Planning Institute of China, China Architecture Design Institute “Guo ZiHao” national planning and design units. The investment was determined in accordance with the national “one province to help one county,” invested by Shandong province. The development of the city in Western countries mostly depends on the local government and market forces. Even for the issue of urban development, the authority of local government is far less limited than in China. City government is the main body in new urban planning, which designs the construction. The city is in political, economic, social, cultural, and ecological dominance in modern society, which plays a very important role in a variety of organizations in a country. In China, the new city is controlled by the city government, which is also the main body of new urban constructors and designers and the leading organization.

Enterprise plays a crucial role in urban development, where the driving force and the vitality lie. From the rise of the city, the main source of funds for urban construction and sustainable development, the popularity of the city, the corporate investment and construction, the enterprises are of great importance. Cheung Hong Kong, Wanda Dalian, Vanke Shenzhen, and other large enterprises, contribute a lot in the construction of urban planning and design in long-term development, with a long and very important contribution. Enterprises tend to not understand the development of the cities, and they construct casually sometimes, disobedient of city planning, and even stand in opposition to the city and the people, especially some larger companies. In fact, only if the company cooperates well with the government, can the city make a difference. From the beginning of the last century, when the British began planning the construction of the Metro, there have been many examples of enterprises participating in the construction of new urban planning and design, some are even very successful. However, when analyzed from the new urban planning and design practice point of view, the organizational form of the enterprise itself, the pursuit of the goal, the social management, the analysis of social awareness of the business, the corporate’s power and capacity are always limited. It is difficult to do well in the design and construction of the new city once entirely under single control. General enterprises, especially the private sector, should not bear all the tasks of new urban planning, design, and construction. Certainly, it is viable and helpful for enterprises to join together in the specific tasks involved in the construction under the guidance of the government’s unified planning.

The existence and maintenance of any city is the result of operation of all governments and all sectors of society, organizations, and many political forces. To promote the construction of new urban planning and design, there should be good collaboration in all aspects, unifying ideological understandings of each subject, mobilizing and organizing all levels of personnel involved, bringing together all aspects of power, planning together, designing together, and building together.

The new city is a very complex and organic link between the various aspects of the system, between human, natural, political, economic, social, and ecological

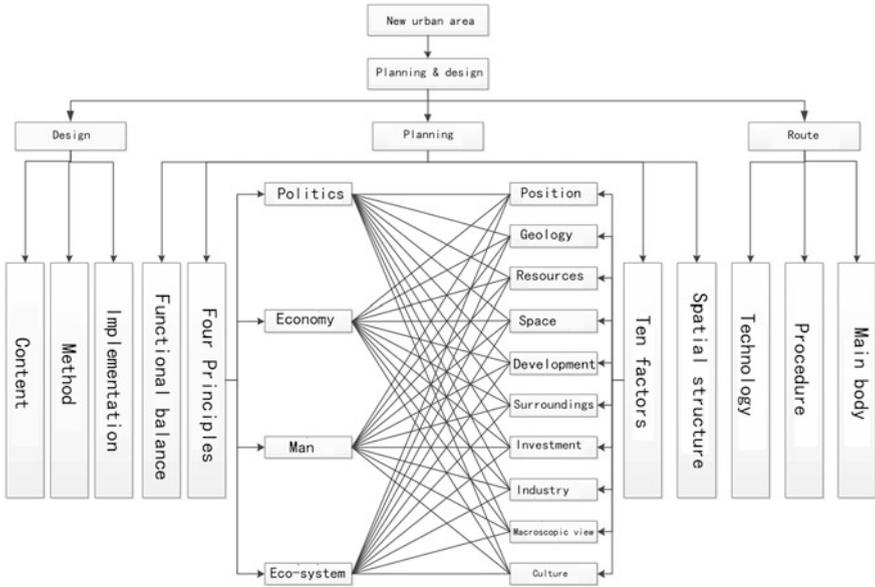


Fig. 16.2 Essential content of new urban area planning

factors, etc., between function and space, between the various elements of location, geology, resources, demand, and investment, closely linked in the planning and design. The human is the core of the new city, even the principle of planning and design. People plan a new city and benefit from the new city. Therefore, *when we plan and design a new city, we must put people's interests first, sparing no effort to enable the people to live better, work better, be happy, and be joyful* (Fig. 16.2).

Part V
Development and Construction

Chapter 17

The Basic Principles for Development and Construction

Planning is the macroscopic grasp and strategic arrangement for a city's spatial distribution and functional integration, whereas design is aimed at solving the problems of esthetics and the architectural form of a city. Development and construction is not only the landing and materialization of planning and design, but also its deepening and perfection. In particular, some strategic research and plans are so macroscopic that they need to be made more specific during the stage of development and construction. In planning and design, there are some rough outlines, some look good in the multi-media and plans, but there is a big gap between reality and design, calling for revision and elevation during development and construction. So working hard during this stage plays an important role in promoting the general effect of the new urban area, elevating the advancing speed, and achieving anticipated strategic goals.

17.1 Human-Oriented

For whom is the city built? Is it built for displaying the government's achievements and a city's image or for improving the citizens' production and living conditions and achieving a city's sustainable development? This is what we must be clear about before we develop and construct a city. *In recent years, the biggest fault of city planning and construction is that the planners forget or depart from the essence of city—to make people's lives better.* Now some places still cannot look at this basic question clearly from the correct angle, or they put the cart before the horse. They take development and construction as a sort of achievement of government, an image of development, and a way of showing off. Instead of considering for whom the new urban area is built and who is going to use it, they just decide between them the scale of the development zone, architectural shapes, finishing materials, and construction spans. For example, some places plan to build roads over 100 m wide, the main road with 10 or 12 lanes and no sidewalks, ignoring pedestrians having to cross the road. Even where there are sidewalks, they are made of stones such as marble or granite, not only uncomfortable to walk on but also cannot absorb rain water in summer and are slippery when it snows in winter.

Why don't they use air brick, water stone, or pitch, which are cheaper and more practical? Some squares cover hundreds of acres, with ups and downs, inconvenient for citizens to walk and exercise on. So we should put citizens' demands, security, convenience, comfort, and pleasure first when developing and constructing new urban areas, never put the cart before the horse.

17.2 Adhering to Principles and Respecting Originality

An achievement made in design and planning is a blueprint of development and construction as well as the fruits of professionals' hard and meticulous work. We must develop and construct our city according to it—commonsense and a golden rule. However, Chinese planning and design is usually so rough that much room for imagination and improvement is left in development and construction. Some planning drawings are disconnected from construction drawings, and the company in charge of construction would alter the planning drawings during the stages of extended design and construction drawing design. Some companies often adjust the plan during the stages of development and construction, considering the constraints of materials, time limits, and costs, which is forbidden by law. If the original planning and design is not meticulous, it is the original design company who should complement and improve it. Even when it is necessary to modify it during the process of development and construction, the companies should conduct the development and construction via the modified proposal of the design company. Even upon completion of the projects, they should be maintained on the basis of the original planning and design proposals rather than be changed casually. Some administrators actually tamper rashly with the original proposals, totally without understanding what the intentions and ideas of the planners were in the first place, which is unacceptable.

17.3 Environmental-Friendly and Low-Carbon

All that exists in nature is adaptable to it, and most of it is in harmony with human beings. It is not difficult for people who have been to Europe to find that the trees and flowers at the roadside are very natural and ecological, without any artificial traces, which is pleasing and refreshing. Usually there are trees, flowers, and other vegetation growing freely at the original site of the new urban area, which have been there for years. In development and construction, we should try our best to protect and preserve them. If we fail to preserve them, we should transplant them to another place. *Especially for trees in villages and factories, the government should lay down a policy for the acquisition and protection of those trees and make it public before the new area starts, so that they are not cut down at will.* Meanwhile, we should pay attention to the issues of low-carbon environmental protection and

value and freely apply new energies, new materials, new crafts and new technologies in order to facilitate low-carbon environmental protection. Especially for the amount and proportion of renewable resources, green architecture, and green traffic, in order to ensure the new urban area's green ecology and environmental protection, the governors should not only carry out a study, make special arrangements, and set a rigid index system and control objectives, but also develop green production, green spending, and green traffic.

17.4 Properly Advanced and Scientifically Organized

City construction develops so rapidly that it changes with each passing day. The standards of development, construction, and technology rises speedily and various ornamental materials improve constantly. In the course of developing and constructing the new urban area, planners need advanced thinking, advanced vision, and advanced investment. Otherwise it is out of date and “move backward” during construction. However, advancement needs to be moderate, “Eating and wearing on the basis of family property”, ensuring standards in terms of the city's strength, and arranging things selectively in terms of the project's function. For important buildings and infrastructure, governors must invest boldly and make them as perfect as possible, not make do. However, when it comes to rules, they should be moderate, proper, and timely. To ensure the project and program are scientific, quality, and secure, it is necessary to arrange their schedules appropriately and build rigorously.

17.5 Intensive Management and Frugality

Resources in any country or any city are limited, so when developing and constructing a new urban area, builders must save resources, consume rationally, and construct an intensive pattern city. Zhongzheng Square in Taiwan is a major arena within the island and witness to a span of history. The materials used to pave the square are common floor tiles and pitch, which are impressive by their simplicity and grand, reflecting a sort of taste and pursuit of designers and builders. The National Park of America is famous worldwide, but its sidewalks use simple and common materials, green and ecologic. Roaming there, we can feel the natural atmosphere of trees and the solemnity of surrounding buildings. Taiwan is rich enough, but even so its major city construction projects are not luxurious, deserving further reflection and study. It is unnecessary to be so extravagant and luxurious, because a city is just a place of gathering, and buildings and squares are its appliances and layout. Resembling a man who becomes a rich man overnight, with too much makeup, luxurious clothes, and jewelry, this is totally without cultural taste and foundation. In the case of construction, we must first emphasize frugality.

Exploit land in an intensive way, never expand and sprawl without a plan, and never pursue the highest building, the largest square, and the widest street. Be thrifty when selecting materials and spend as little money as possible while achieving the same effect, making intensiveness and frugality fashionable pursuits and standards.

17.6 Strive for Excellence to Ensure High Quality

Professionals who have been to America, Japan, and Germany generally believe that the design styles of some of their architecture are almost the same as ours, but leave people with a wonderful impression. The reason is that they are very particular about the materials used, technological level, and construction quality. This is true of wearing a suit—if it is different in fabric, tailoring, and craft, its degree of beauty is different too. So in the development and construction stages, the builders must have strict quality checks for selecting the construction team and materials. They should also follow a strict procedure, and stress quality and detail when constructing. To guarantee the quality, there must be a reasonable working schedule. Many Chinese projects are decided hurriedly, started hurriedly, constructed hurriedly, and completed hurriedly, so the quality is totally not guaranteed. “Slow but careful work makes a skilled workman,”—some important projects must spend enough time to build themselves into excellent ones. It is of great importance to select building and decoration materials. There are two Chinese sayings to express this: one is “good prescription need authentic medicines”, the other is “good ingredients make good courses.” On the issues of development and construction, only good architecture, good decorative materials, and good craft can convey a good effect from design. The world’s famous architecture design master Bei Yuming, an American-Chinese, overlooked almost everything, even a stone and a potted landscape, only to achieve an ideal effect of his design—Suzhou Museum. To choose a pine for Shanshui Garden, in spite of being 80 years old, he himself trudged 350 km to find it. “The mountain has its fame because of its height”—his scientific and rigorous spirits are worthy of respect and learning.

17.7 Development and Construction in Accordance with the Law

Developing and constructing a new urban area is a reason to air and fulfill dreams and is stimulating and promising work. Meanwhile, the new urban area is a blank sheet, there is much room to improve and governors have wide authority to control the planning and design, land grant, development, construction, approval, and charges. The new urban area needs to advance rapidly and some work doesn’t

follow the rules and procedures for overemphasizing efficiency. On this occasion, if people can do it legally, cases of irregularity and delinquency easily occur. In the case of construction, China has encountered many problems in this respect. There is no easy way—the best way is to work according to the laws and regulated programs. To be exact, that is to plan and impose taxes on land and houses according to the law, to examine and approve the plan and design according to the law, to develop and construct legally, and to strengthen administration and law enforcement legally.

Chapter 18

Subjects and Models

18.1 Government as the Leader and the Organizer

In this pattern, the government leads the plan and design of the new municipal district, in charge of its investment, development, construction, and administration. Britain, France, and Singapore mainly adopt this pattern, but differently in some ways.

England and France adopt the pattern of direct investment and construction. The construction of England's new districts was not only commenced early, but was also standard and in order. The New Town Act which was issued many times by the government regulates clearly: the new district should be administered by central government.

Central government determines the layout of new district, examines and approves the development plan, directs the development of the new district's industries, appoints the staff of the New District Development Company, and assigns full-time inspectors to convene public hearings. The central government environmental affairs minister has the authority to examine and approve a new district's development plan, determine its site, control all the capital of development, and establish the New District Development Company. After the New District Development Company is established, according to the requirements of the government, it works out the plan, confiscates and leases land, and constructs infrastructure and houses. When a new district's construction is basically completed, the New District Development Company transfers the new district's assets to a new district committee which is appointed by central government to manage. The right of housing management is transferred to local government via a new district committee. Regarding the division of powers between the new district development company and local government, though adjusted many times, the construction of the new district is mainly directed by central government and the new district development company affiliated to it whereas local government just plays a limited role in managing and assisting.

The new city's administration and management in France is directly the responsibility of central government and its affiliations—a new city construction and development company and a new city agglomeration united committee. Between them, the new city development and construction company is the decision-making body, which is responsible for organizing the new city's planning research, project design, land leasing, and so on, whereas the new city agglomeration united committee takes charge of the new city's administration. Central government directly includes the new city's development expenses into the state budget, taking over most of the expense in the new city's development. Local government is in charge of administration.

In some respects, such as city planning, land approval, development, and construction, Singapore is a highly centralized country as other various economic and social administrations. All the land is controlled by government and all the land used must get a grant from the government except for less than the 28 % historically individually occupied city land. City planning is mainly administered by the Ministry of National Development and the Urban Redevelopment Authority performs its function. Housing and Development is a development and construction company run directly by the government, responsible for a series of work, for example, new district planning and design, land acquisition, construction, and administration. Building capital is mainly from nationals and public funds.

18.2 Market Operation with the Leading Role of the Government

This pattern is mainly employed in China's mainland cities and Hong Kong Special Administrative Regions. China's land is owned by the state and organized by the Planning and Construction Department and the Department of Land and Resources and Administration Committee which the government appoints.

Hong Kong government takes charge of formulation, implementation, and supervision. The Planning Department is responsible for new district planning and design, whereas the Territory and Development Department takes charge of the design and implementation of land development and construction engineering. Hong Kong government has invested a lot of money in sea reclamation, district extension, and development and construction of nine towns. Meanwhile, it guides and encourages corporations to invest in infrastructure and housing development and to reap the benefits.

18.3 Society and Market as the Major Role with Governmental Support

America is a typical market economy in terms of new district construction; the government takes a marketization path. Early in 1968, it passed the New Town Development Act, which regulates the Ministry of Housing and City Construction, and can provide the individual developer with a credit guarantee. In 1970, it passed the Housing and Urban Development Law that encourage states to establish development companies and allow private development companies to undertake the tasks of land development and new district construction. The government gives overall planning, instructions, and reviews, as well as considerable subsidies and tax advantages for infrastructure construction.

Japan's new district construction, which is largely supported by social development, is mainly along the private railway. Japan's railway is privately operated, apart from railway business, and the railway companies develop real estate along the railways and cooperate with landowners and developers to establish new companies and develop and construct new districts. Domo new district in Tokyo is the biggest new district that Japan's private railway company has developed.

18.4 Market Operation with Cooperation Among Governments from Various Countries

This pattern is typical of Suzhou Industrial Zone, jointly developed by China and Singapore, and Sino-Singapore Tianjin Eco-city. The planning and land of new municipal district was in the charge of both of the governments and some organizations they jointly founded, and the personnel they selected, whereas the jointly established company took charge of development and construction.

All the above new district's development and construction patterns have advantages and disadvantages. Adopting this government-dominant and government-organized pattern helped the government to integrate territorial planning and coordinate land, population, and capital, so at the macro level it enables the government to reach the highest efficiency. On the downside, the government controls too much to make full use of the market mechanism and the initiative of the corporation's and society's participation is low. If it adopts the government-dominant and market-operated pattern, it stimulates the government and corporation to play an important role in both sides. The government just controls what it should control and manages what it should manage, and the rest is given to the market. This pattern is fit for China. With the market-based and government-sponsored pattern, it can give full play to the initiative and creativity of market and society and conforms to the principle of less but better administration in a market economy. However, the blindness of the market and the pursuit of maximum interests easily leads to short-term investment, development, and

construction, causing some problems in the new district's development and administration. That the governments cooperate with each other to develop and construct the new district is a globalized trend in economic and urban development. However, because of the differences in the country's system and law and the concept of planning and construction in the new district, there is a need to coordinate carefully.

With its vast territory, there are significant differences, from central government to provinces, municipalities and autonomous regions, to cities, counties, towns and villages, and they must clarify the financial differences. So there are considerable differences in the pattern of new district's development and construction. First, central government, except for some significant issues such as establishment of state-level new economic zones and introduction of policies for Shanghai Pudong New municipal district and Tianjin Binhai New municipal district etc., can't establish, plan, construct, and manage in detail as do England, France, and Singapore. There is no need to manage everything and it can't be both controlled totally and managed well. Second, local governments adopt different patterns for the new district's development and construction in terms of different cases. Some take the government-dominant policy whereas some take the policy which the government, market, and corporation combine. Third, most cities adopt Hong Kong's successful practices, namely, the government takes charge of the major part of the new district's planning, land management, and infrastructure investment, meanwhile introducing policies, opening the market of development and construction, and motivating corporations and society to participate in infrastructure investment and secure housing construction, letting corporations develop the housing market. Because of different cases in different countries and cities, what is most suitable is best.

Chapter 19

City Operator

19.1 Qualities of City Operators

The city operator is a mix of governmental organizations and corporations which exert the means of law, administration and economy comprehensively through marketization to integrate and optimize urban resources overall and elevate the levels in planning and design, development and construction, and management and operation, and facilitate urban industry development and social advancement to produce good social, economic, and ecological benefits.

There are many kinds of city operators from the perspective of the main operator; one is the city operator which the government establishes. It is sponsored and registered by the government and operated by an officer from government. The government allocates or transfers resources and assets to corporations and they are also given full authority over management, for example, British New City Development Company and Lianfa Investment Limited Company, dominated by China's Hubei Provincial Government. The other is the market-oriented city operator. It usually obtains investment from private enterprises and joint-stock companies, has strong capabilities of investment and financing and certain development and construction operating capacity, and is willing to cooperate with the city government through running urban resources, thus acquiring long-term economic interests. For example, Japan's Railway Company, China's Huaxia Happiness Inheritance, Liandong U Valley, and so on. In the case of operation scope, it can be composed of urban integrated operator and urban specific operator. Chinese corporations, such as Huaxia Happiness Inheritance and Liandong U Valley, not only operate the city's assets such as land, but also conduct industry planning and investment attraction.

If the city operator is compared with a common real estate developer, the former makes a big breakthrough and surpasses itself in intension and extension. As far as exploitative position is concerned, the former is involved with integral development, forming the whole city's function or regional function; the latter with

developing the single accommodating project. The task of the former is to integrate and optimize all the resources in a city or a region, and of the latter to develop land resources. In terms of the tasks, city operators not only undertake the mission of city development and construction as housing developers, but take charge of city planning, capital collection, and integration of the city's assets. Some city's operators, such as Huaxia Happiness Inheritance and Liandong U Valley, are responsible for industry investment attraction. In relations with government, the former is a principal-agent relationship, the latter a relationship of transferral and business. Compared with investors, they not only invest for the city, but also take part in planning, developing, constructing, and operating. Compared with urban planning companies, they not only plan but also implement, combining strategic research, planning, investment, development, and construction into one.

In recent years in China, city operator has become a fashionable term and some housing developers and investment enterprises are keen to address themselves as city operators to advocate and lobby the governments and banks, hoping to gain more lands, capital, and favorable policies. Nevertheless, no matter how it is dressed up, they are mostly housing developers, builders, and infrastructure investors, and there is still a big gap between them and city operators. The real governmental city operator is rare in China.

In 2012, the Party School of CCCPC issued a project results report, namely *The Development of Urbanization and City Operation*. It took a typical project that was led by Beijing Resources Group Company as the key research case and systematically stated the characteristics of city operator's ability and five standards. The first is that city operators need to harbor a prospective vision towards urbanization and urban development, be concerned about urban development tendencies and layouts, and search for their own room to develop in the development of national and regional urbanization, keeping their vision high and insight profound. The second is that city operators not only maximize their self-interest, but, starting with general social interest, the corporation's social value needs to be reflected to the public. The third is that city operators are the provider of the city's comprehensive functions, so they can assist the government to achieve the elevation of city's comprehensive functions and cater for every need of urban population. The fourth is that city operators are the integrators of all kinds of resources. They must also possess the ability of strong control and integration on industrial resources connected with production and people's livelihood resources connected with life. The fifth is that city operators should keep sound cooperative relations with government. The core of these features and standards is the degree of relations with government, resources integration, and operating space and time. As research and discussion, this report is of great significance and value.

19.2 The New Urban Area Calls for City Operators

Developing and constructing a new urban district is a complicated thing as well as a new cause for a district, a country, and its decision-makers and executors. Every government, especially those of some developing countries, need experts, professional knowledge, and management experience in developing and construction as well as capital and channels for raising money and collecting financial recourses, all requiring city operators' participation. From the perspective of strategic planning and urban resources integration, city operators' wisdom and experience are needed. From the viewpoint of development and construction, city operators' professional power is needed. As for raising and spending money and city management, city operators need to provide an all-around specialized operational service.

From the perspective of realistic practice, some urban governments achieve good performance in strategic planning, money raising, development and construction, investment attraction, etc., through cooperation with city operators. Chinese Construction Company, Zhongtian City Investment Company, Zhuo'er Development Company, Happy Chinese Inheritance, and Liandong U Valley have made some beneficial exploration and acquired some experience in these areas. Happy Chinese Inheritance Ltd., founded in 1998, is an enterprise group centered on investing and operating development areas. Its core business covers park development and operation and urban development and construction. The company owns an organization of farm-out and highly-efficient coordination, including 2,714 working staff, and employees with Master degrees or above numbering 299. Among the top management teams, many of the administrators are from the top 500 in the world. Through leading the development requirements of regions and enterprises, the company made accurate strategic positioning with built industry clusters and central urban districts, and formed three major business systems ranging from park construction, investment attraction, to city operation, and explored a unique 'industrial new city' pattern which involved industry-and-city fusion, park expansion, mutual promotion of urban construction, and mutual development of government and corporation. The development zones which the company invested and operated have been all around Hebei Province, Tianjin, Tsingtao, Shenyang etc., and the number of development zones entrusted is eight.

19.3 City Operators Should Support the Government

During new urban district development and construction, compared with city operators, the government plays a key role. It is the government that determines the way of new urban district development and construction and determines whether it should adopt methods involving the overall city operation and with which city operator they should cooperate.

The government needs to handle it macroscopically, namely, when choosing a city operation's pattern long term and from new urban district's development point of view. The government should know about this city's professionals who are expert at city planning and design, construction, investment and financing, etc., and what the advantages and disadvantages are. Those big cities such as Shanghai and Shenzhen are full of talent, with experience of developing and constructing new urban districts, and if they start a new urban district, they can totally depend on government planning and construction departments and investing and financing organizations. They can operate directly, or form a new city operating company so that they develop and operate the new urban district independently. For most medium and small cities, especially those second-and-third-tier cities which lack professionals, experience, and capital, it is necessary to hire a strong and experienced city operator company to develop and construct the new urban district. What the government pays for is the resources, but what it gains is professional experience, capital, speed, and other benefits.

The government should conduct city operation in accordance with the law. The amount of money invested in the cooperation between governments and city operators is very large and the operation time is very long. Matters of law and regulations which involve land, fees, and repayments being in large numbers, it must conduct city operation in a lawful, scientific, and serious manner. The government not only needs to organize personnel for each functional department and employ experienced legal staffs, but should also have serious and solid negotiations with city operators and sign official contracts which should be approved by the Standing Committee of the NPC at the same level.

There should be a timely follow-up for the government. Developing and constructing a new urban district covers many areas and coordinating tasks are heavy. As a company, city operators can't deal with affairs of acquisition and compensation of land and house and the construction environment. So many affairs require the coordination and service of the government. The government offers services in research and scheming, planning and design, land transfer, housing acquisition, project approval, etc., providing a good guarantee.

19.4 City Operator Should Rise to the Challenge

Many countries in the world which are in the stage of fast urbanization, especially China, India, and some African countries, are now undergoing unprecedented new urban district construction. For city operators who invest and construct cities, it is a golden opportunity. Not only does it have a broad development stage and create the company's immortal works and make great corporation, but it produces large returns on investment.

City operators participate in new urban district construction, and they acquire outstanding benefits in at least four respects. One is integrated benefits. In the development and construction of a new urban district, there are huge profits in land

development and consolidation, project development, infrastructure construction, engineering construction, and so on. These profits, according to regular project executing methods, are usually acquired by investors, developers, municipal engineering and construction companies, respectively. City operators, investors, and constructors can also get the above-mentioned comprehensive profits. City operators can also control the pace of new urban district development and construction and control housing market so that they can gain some monopoly profits. Of course, this kind of monopoly may be interfered with by the governments and conditioned by market supply and demand, but if operating well, this sort of profit for city operators is hard to give up and decline. Another is early benefits. Early benefits come from the investment but, of course, investment is full of risks at the same time. “Ducks know first when spring comes”, “Cicadas leave earliest when autumn falls.” City operators learn a great many things about new urban district development goals, planning, lands, policies, etc. Through bargaining negotiations with the government, they can obtain much cheaper land and projects in advance and achieve early development and construction profits. Third is benefits of scale. The number of the projects in which city operators invest and construct is not one or two, and these projects are also not executed in just a year or two, so there are good benefits of scale. Fourth is operational benefits. There is much to do on the orderly arrangement of investment and development projects, district, time and space, coordination of planning, land, and development, and the scientific promotion of housing, business, infrastructure, and public utility. Therefore city operators can strategize and these things can produce multiple benefits for them. *Investment is a process which needs time and patience, and only by long-term planning, comprehensive arrangements, and total advancement can it produce constant, huge, and stable benefits.*

These benefits for city operators can be seen by many corporations, but a few operators can get these “peaches”, mainly because of their vision, investment strength, operation capability, and courage, together with their human resources. Those companies which aspire to take on the role of city operators and are engaging in city operation should emphasize the importance of six abilities and their appreciation of three key points.

Regarding these six abilities, the first is macro decision-making abilities for city operation, namely knowing domestic and international trends, mastering urban development rules, understanding new urban district’s construction features, and making decisions timely and scientifically during the participation of the new urban district’s operation. The second is the abilities of city planning and marketing. This is the basic work of city operators as well as the precondition which can handle the new urban district’s operation well. It must be carried out seriously, or it is hard to organize effective operation. The third is the abilities of fund raising and operation. From the viewpoint of investment, any city operator should raise funds from financial units and capital markets and operate these funds for a long time, maintaining stable capital flows and stamina investment, otherwise nothing is sustainable. The fourth is various abilities of operation of development elements that coordinate every link—the strategic study in the early stage, planning and

marketing, planning and design, and development and construction, integrating all kinds of resources—new urban district's lands, companies, taxation, assets and capital of the company, and exercising all the powers from government, market, and society, owned as well as used by ourselves. The fifth is industry attraction ability. *The government gives a warm welcome to those city operators who introduce projects and capital for new urban districts and what it values most is industrial investment, long-term investment, and projects which offer long-term benefits.* Huaxia Happiness Inheritance and Jingdong U Valley and so on make bold explorations in this respect. The sixth is the ability to organize and coordinate. It helps city operators be good at dealing with governments, banks, some development and construction companies, and village collectives, solves a variety of difficulties and questions properly which developing and constructing new urban districts can confront and tackle the relationships with all the sides appropriately so that they can develop and construct new urban district coordinately and coherently.

Regarding the three key points, one is strategic vision. City operators look up at the starry sky and strengthen the observation and analysis of policies, opening eyes to the whole world, keeping in mind the overall situation, and enjoying a panoramic picture. The company without strategic vision dares not and cannot become city operator, as it is difficult for them to make big investments and developments in new urban districts. The second is a talented team. The success of the cause depends on talent and great causes need excellent teams. Talent is to the work what team is to the cause. Not only do city operators need professionals in strategy, scheming, marketing, planning, and investment, but also need generalists who know various intelligences well and are proficient in operating. The third is a scientific city operation pattern—for example, the pattern of the Jurong Industrial Park that Singapore Jurong Town Corporation invested in and constructed and the pattern of Suzhou Industrial Park which the Singapore government invested in and operated successfully. Huaxia Happiness Inheritance and Liandong U Valley springing up in China are exploring operation patterns positively. Here, we hope and expect these corporations and more investment and development corporations to plunge themselves into the boom of new urban district development, present their talents, and fulfill their ambition in the process of urbanization at home and abroad.

Chapter 20

The Development of Construction Sequence

New urban district development and construction is big system engineering, lasting a long time and with wide coverage. There is much to do regarding how to respect market economic regulations according to national political systems and political requirements and to respect the reality and organize and implement in a scientific, proper, and orderly way. For urban government and new urban district's operators, the factors which influence and determine the new urban district's timing sequence of development and construction are mainly the new urban district's development goal, strategy and investment, layout of space and function, and value of land utility. Meanwhile, different types of new urban district's timing sequences of development and construction have different requirements.

20.1 Influence of Investment Capacities and Benefits

It is basic elements that determine the timing sequence of development and construction, such as how much money the new urban district's development and construction need, from where the capital can be raised, and how to use it. If capital is plentiful, infrastructure such as houses, industry, roads, parks, etc., and supporting facilities such as businesses, schools, hotels, etc., can be planned and designed at one time, developed and constructed together, and finished together. This way, construction of a new urban district can be accomplished in one, with speed and good well furnished image. This is the ideal state that governments at all levels want to achieve and the best choice for some local governments with the economic strength to start new urban districts. However, it is really rare that cities meet these conditions. The economy of most cities is not so prosperous that they can employ capital and economic strength to organize it. As a new urban district is mainly invested in by the market and society, no matter how strong or weak city operators are, they usually don't organize and implement new urban district's functions simultaneously considering investment, power, and benefit, but proceed one after another. The only difference is the speed and strength of investment. Some governments lack money, so after setting the plan of the new urban district, they

transfer some commercial and residential land and raise some money, and then move on to develop and construct elsewhere.

However, roads are the new urban district's skeleton and the fundamental condition for developing and constructing various kinds of new urban districts. Whatever the financial situation, the capital must be given high priority for planning and construction, planning beforehand, investing beforehand, and constructing beforehand. If they put the cart before the horse, things do not proceed as desired.

20.2 Influence of New Urban Areas Types

New urban districts are composed of varieties of types, such as mixed model, administrative model, industrial model, residential model, educational model, scientific model, ecologic model, etc. These new urban districts of different types have different requirements regarding timing, sequence of development, and construction.

Take new urban districts of mixed model for example; they are comprehensive new urban districts which are equipped with many kinds of functions, such as Shanghai Pudong New Urban District, Tianjin Binhai New Urban District, Zhengzhou New Urban District of Henan Province and Shenzhen, etc. These new urban districts usually have large scale, complete functions involving great investment and lots of time in developing and constructing. The functional facilities of this type of new urban district are very important, led by infrastructure when started and making roads, water supply, power supply, gas supply, heat supply, communications and networks smoothly and successfully. During the early stage, some people take a wait-and-see, skeptical and negative attitude, whereas others are reluctant to work and live in the new urban district because of the inconvenience in employment, living, shopping, schooling, and health care. A few years after starting Pudong New Urban District, word was spread in Shanghai: a bed in Puxi is better than a house in Pudong. So as can be seen, new urban district's facilities are really important.

The situation of Pudong New Urban District in Shanghai is even more so, let alone other regions whose economic strength and supporting capacity are far from those of Shanghai. The discussion and concern in society is the reflection of reality and it is worrying. In the early stage of a new urban district, its infrastructure is mismatched and imperfect; for example, leaking water today, making noise tomorrow, both causing great inconvenience. So we must make great efforts to optimize and improve the infrastructure in time. However, government-led or market-based, the new urban district's public supporting facilities are necessary, otherwise it is hard to gather popularity and attract investment, easily leading to a city of men in the daytime but a city of ghosts at night, even an empty city or ghost city. Renewing and optimizing the environment can provide excellent working and living conditions for different people and offer supporting facilities and service for investment and development.

The real estate industry is necessary to solve the problems of habitation and life in new urban districts and is also an important industry that can raise construction

capital and gather popularity for new urban districts. So the real estate industry should be put in the prime position and organized and followed up promptly and developed with plan and priority. After accomplishing the planning of a new urban district, some places take the real estate industry as the new urban district's leading industry and pioneer industry, and hurry to transfer land. If following the requirements of planning and operation, infrastructure should be developed first and then land can be transferred; first develop the environment and then build houses. This is also basic common sense. However, some places plan and construct a new urban district with weak financial resources of government and capital, which is embarrassing for them, and they could resort to the real estate industry market and transfer land first. This is China's reality and this is the method used by some cities. So we suggest that it is best to study a new urban district's development strategy seriously, raise construction funds at an early stage, organize and arrange infrastructure, construction, and real estate industry development, and finally form an overall linked development and construction pattern.

In the comprehensive new urban district, whether the administrative workplace of government moves or where it moves to is very important for the development of a country and a city. The struggle for the capital site has occurred in some countries such as America and Australia. *Foreign cities usually cluster in the business districts, markets, and factories, establishing cities alongside markets, so market economy plays an important role. China's cities are different: because some living and development elements along with some resources, capital, and examination and approval are controlled by government, city development trends usually follows the government's footsteps.* Where the government is located is where a city develops quickest. New urban district setup and construction usually takes administrative office facilities construction as a major industry. Zhengzhou New Urban District and Eastern Jinan New Urban District are at an early stage; thereby they invest and construct new comprehensive office facilities for the government first. In terms of the timing sequence for development, construction, and investment, this is scientific and reasonable. Therefore it can gather popularity, strengthen investors' confidence, and elevate the price of land transfer. Of course, the premise is to obey what national policy requires for office facilities construction.

Some facilities with new urban function are necessary for urban development and the citizen's life; however, ordinary old districts are often blank in this respect or on a small scale and at a low level. Whether launching the strategy of the new urban district as the starting point or considering land, demolition, construction costs, and overall effect, we should put emphasis on the new urban district's construction. Zhengzhou New Urban District was planned in 2001 and was perfected step by step until 2002. On January 20th, 2003, Zhengzhou International Convention Center was regarded as one of the landmark buildings and held a ground-breaking ceremony, so from that time Zhengzhou New Urban District began to be constructed until it was completed and put into use. Henan Art Center was begun in December 2003 and was put into use on November 11th, 2007. At that time, local people and outside investors were given a pioneering impression of it. After that, work was completed on a museum, gymnasium, and opera house to

promote and facilitate the development of the economic development area and the whole new urban district.

A new urban district based on industry development should follow the principle of prioritizing infrastructure and industrial projects when being organized and implemented. At the early stages of startup we should concentrate on investing and constructing infrastructure of key areas, basically partially supporting the new urban district. Meanwhile, we should select some projects with great investment and strong driving influence and start it quickly so it can form a certain development atmosphere and attract more investment.

20.3 Influence of Space Layout

In the planning stage, the new urban district's function division and spatial arrangements must be ensured. This arrangement is the blueprint of the new urban district and the real state of the future city. At the early stage of startup, we should give priority to the tipping point and the growth which mainly lead to promotion and stimulation, and concentrate on developing major projects and constructing core areas, then forming key areas. In the period of its expansion, according to the new urban district's geological features and types, it is either built along roads and rivers in a line and the axis spreads outward or is developed in a centripetal and ring-layer pattern along central areas, lakes, and hills. During the period of basic maturity in development and construction of a new urban district, what we mainly do is perfect supporting facilities and promote the balanced development of every function area and thereby elevate the level and taste of the new urban district.

Let us examine the development of spatial structure in Shanghai Pudong New Urban District. From 1990 to 1995, Pudong New Urban District put more than 220,000,000,000 yuan into the construction of 10 major infrastructure projects, including Yangpu Bridge, Nanpu Bridge, the Inner Ring Road, Yanggao Road Widening, Waigaoqiao Power Plant, Lingqiao Waterworks, and the second-stage construction of gasworks. So it connected Pudong with Puxi and improved investment environment and urban landscape. From 1996 to 2000, there was a large amount of money, more than 600,000,000,000 yuan, which was invested in Pudong International Airport, Pudong International Information Port, the first-stage construction of Pudong Deepwater Port, the first-stage project of No.2 line subway, the second-stage construction of Waigaoqiao Power Plant, the Outer Ring Road, Water Supply and Drainage Engineering, Huang-p'u Chiang Cross-river Tunnel Project, and the natural gas project of East China Sea, building the framework of a modern new urban district. In terms of regional space propulsion, in the early stage of Pudong New Urban District's development they gave priority to Lujiazui Finance and Trade Zone, Jinqiao Export Processing Zone, Zhangjiang High-tech Park, and Waigaoqiao Bonded Area so as to form the pattern of group development and build the initial spatial form. After that, according to Shanghai Urban Overall Planning and Pudong New Urban District Development Strategy, Shanghai focused on and

formed high-level service industry clusters within inner ring, high-tech core areas between the outer ring and the inner ring, and the three levels of Binjiang Coastal Development Zone outside the outer ring. During the period of the 11th 5-year plan, Pudong New Urban District further optimized urban form and functional layout and fully developed the east–west development axis from Hongqiao Airport to Pudong Airport (One Axis), the general development axis along the riverside of Huang-p'u Chiang, and the one-river-and-three-bridge high-tech industry belt and coastal general development belt, Waigaoqiao Functional Area, Jinqiao Functional Area, Lujiazui Functional Area, Zhangjiang Functional Area, Sanlin Functional Area, and Chuangsha Functional Area. Pudong New Urban District has come into mature urban form step by step and has exhibited a structured network development.

20.4 Respect for the Regularities for Land Exploitation and Utilization

Land is a city's most important resource and urban government's biggest resource, as well as a special commodity. During the development and construction of a new urban district, on the one hand the government should control it strictly and use it scientifically to achieve intensive and sustainable development, and on the other hand, the market should play a fundamental role in resource allocation to produce maximum benefits.

A policy of annual land transfer, phased development, and intensive use should be carried out. Any new urban district at scale should be developed in a planned and orderly way and made impossible to come into flower unless the government has a strong investment portfolio and fund-raising ability and there is no land acquisition and house demolition. The initial planning and development area of Suzhou Industrial Park New City is considered on the standard of 70 km² and the area of the first-stage development and construction is 8 km². In 2001, Hamburg, Germany started construction of a new harbor city, though the new harbor city covered just 157 ha, which was produced in segments from east to west. In addition, they will not complete the whole task of planning and construction until 2025. In terms of land transfer, the government adopted an approach whereby the investors whose planning scheme was excellent and whose development capacity and quality was guaranteed would have access to negotiate with government. Only when government and investors reached an agreement was land transferred. For those who didn't take up the planning scheme or made land idle, the government had the right to take the land (People's Daily, May 6th, 2013). This practice is a good choice for elevating the level of planning and construction and accelerating development as well as controlling the price of land, land hype, and land flipping.

On the issue of land transfers, some are caused by political systems; some are the result of the pursuit of achievements in governments. Some decision-makers of governments don't know about the development law of new urban districts; some

hurry to raise money, so at the start-up initial stage of the new urban district, they transfer lands in large area and imagine large-scale development, large-scale construction, and a great effect, causing the governments to transfer land at a low price and the new urban districts are developed at a low level; thus they influence sustainable development of the new urban district. One thing should be clear: "Rome was not built in a day," and urban growth has its own laws. Development and construction of a new urban district is a process in proper sequence, haste makes waste. Supporting infrastructure and public facilities need time, whereas industrial cluster and population concentration need time as well. Infrastructure and public facilities invested in by government and business and housing development invested in by society are influenced and conditioned by market demands and social demands. Investors especially are usually very familiar with market demands and some even know everything about it, so no matter how much land is transferred and how low the price of land is set, they won't bargain for a loss, but they control the development rhythm with various excuses according to market demands, advancing carefully. Therefore government must make land transfer overall plans and annual plans to supply land without causing saturation, transferring land year by year and step by step.

An intensive and compact development pattern should be followed. Hong Kong was originally a desert island with limited area and resource shortages. They performed a complete spatial development strategy on how to develop and construct an Oriental Pearl in a limited area. In 1955, Hong Kong government initially chose Kwun Tong of Kowloon to develop by way of land reclamation. Then the government launched the second generation of new towns and the third generation of new towns, such as Oura, Yuen long, Fanling, and Sheung Shui. What makes investors feel vital and prosperous is to develop centrally to reach a certain regional scale and form a prosperous cityscape. Then they develop other places. This pattern of intensive development and rolling advancement produces good development benefits and leads to sustainable development as well as reserves of idyllic scenery of vast area with complete and dense vegetation. At the turn of this century, the development area covered 18 % of the total area of Hong Kong. This pattern of development and construction is worth following.

Some new urban districts in China made plans for areas covering dozens of square kilometers or hundreds of square kilometers, and was divided into a number of sections according to functions. After a few years, a dozen projects and even scores of projects were put into many desolate functional sections. The companies that had invested and completed had no popularity and fortune, whereas the companies that came to investigate and invest here felt no business opportunity, no atmosphere, and no confidence. In this way, it's hard to develop and construct new urban districts successfully. *So the new urban districts should adhere to central planning and intensive development, and make intensive investment in key areas as well as concentrate on constructing so as to form aggregation effects, benefits of scale, and an overall good image.*

One should push forward with the marketization of primary land development. Municipal investment companies affiliated to the government take charge of the

development of primary land development or strategic investors are introduced into the primary land development link. The government authorizes qualified market-oriented companies for primary land development. Therefore they conduct demolition, compensation, rehousing, and infrastructure construction in terms of the planning and agreement to make construction conditions of land in this district meet what is required. Then they can transfer land-use to the market.

20.5 Three Urban Development Modes: TOD, SOD, and AOD

1. TOD Development Mode

TOD is the abbreviation of Transit-Oriented Development. The government promotes the comprehensive development of the trinity—transportation, road system, and land utilization—through transit-oriented comprehensive land use planning to achieve an organic coordination model of compact development in every city group. As a city management pattern from city planning, it has been adopted by urban governments of western countries, and is emerging in China as well.

The key in employing TOD is that governments take advantage of priorities that monopoly planning brings, and then in the field of planning and development they expropriate a large region composed of uncultivated land and perform infrastructure construction, mainly transportation infrastructure construction, through up-front costs. Then, centering on transport sites, they do well in the development and utilization of surrounding lands and let residents, employees, and shoppers take public transportation or go on foot—convenient, safe, and environmental. The investment that the governments put into infrastructure is mainly from value-added land, namely selling cultivated lands with a solid infrastructure and balancing the cost of construction by a spread between uncultivated and cultivated lands.

2. SOD Development Mode

SOD, full name Service-Oriented Development, is a development mode led by social service facilities construction. When the government plans the region of future development and takes advantage of administrative monopoly and transfers administration or other city functions in space via planning, municipal facilities and social facilities are formed synchronously and widen the gap of the price between cultivated and uncultivated land, thus gaining function adjustment of spatial elements and fund guarantees that they need. There are many classic cases at home and abroad.

Transfer and relocation of the administrative center to government brings a demonstrable effect and the psychological anticipation is considerable. Especially in China, social resources are dominated by government at all levels; the distribution of administrative centers is very effective in leading the urban development tendency and development priorities. They not only construct good supporting infrastructure and public services in the region where the administrative center stands,

but also contribute to the formation of human flow, material flow, and capital flow. As a result, it becomes an urban center in politics, economy, and culture.

3. AOD Development Mode

AOD, full name Anticipation-Oriented Development, is a development mode led by rational anticipation of planning. This is a method involving urban planning and urban management integration. By releasing information on areas that the city plans to develop, the government leads social forces to estimate up-front costs and early construction in terms of established planning and forms an environment and atmosphere consistent with planning targets as soon as possible. At the appropriate time, the government can achieve the original intention of planning and construction at low cost. For example, Hangzhou government introduced the idea of AOD for CBD district which will be formed in the future. In the core area of CBD located at the south bank of Qianjiang New Urban District, the government requisitions land in advance at low price and releases information about governmental future planning intent to form strong social expectations and lead developers to become involved with corresponding development in the surrounding areas, stimulating formation of a matching environment and atmosphere as soon as possible. Then the government develops in the core area of CBD to gain good economic and social benefits.

In the above three modes, the premise is governmental monopoly on the information of urban planning, although the key is the control and management of land and the aim is to achieve the city's sustainable development and comprehensive benefits.

(Arranging in terms of related materials)

Part VI
Investments

Chapter 21

Characteristics of New Urban Area Investments

21.1 Enormous in Amount and High in Intensity

A large investment is needed in the construction of new urban areas. As can be seen from publicly available information, a huge amount of money—billions, tens of billions, or even hundreds of billions—has been invested to launch a new urban area. For instance, the investments for the High-Speed Railway New Area in the west of Jinan, Shandong Province, the Xingang Airport New Area in southern Beijing, and Beijing Mentougou New District are estimated at 350 billion yuan, 84 billion yuan, and 100 billion yuan respectively.

In the initial period of a new urban area, an enormous and intensive investment is needed to conduct the tasks of planning and design, land acquisition compensation, compensation for land expropriations and housing demolitions, and infrastructure construction. As a rule, 200 million yuan are required to construct the infrastructure for 1 km² in the plain areas, although more investment is needed in hilly and mountainous regions. Therefore, without an enormous and intensive investment, it is difficult to launch a new urban area successfully.

21.2 Long in Duration

It takes more than 10 years, even several decades, to launch a new urban area and build it into a mature city of a certain size. Some local governments expect a new urban area to be launched in 3 years, to take shape in 5 years, and to form a city in 10 years. This time requirement to some extent reflects the construction law of new urban areas. In fact, there is great difference between the formation of a city and its maturity. The fact that a young man is 17 or 18 years old and has grown to adult height does not necessarily mean that he is mature. A city is a complex organic system, which needs continual investment in its construction, development, and

improvement. It is not only the result of economic development, but also a most powerful dynamo boosting economic development. Yet a large amount of financial, human, and material resources is often consumed in the process of constructing, maintaining, and promoting a new urban area, which means the expenditure is far greater than the output at this stage. Therefore, a city is also a large body of social consumption, which involves continual financial support.

21.3 Distinct in Phases

In the starting period of a new urban area, the chief investment entity is the local government, focusing on infrastructure construction. Then social and enterprise investments come in when the investment environment and the urban framework take shape. For instance, real estate developers invest in residential and commercial facilities, high-tech industry companies invest in building factories, and the tertiary industry enterprises establish hotels and develop recreational projects. The government investment itself involves several stages: First the government must invest in land expropriation, demolition, and infrastructure construction, in order to establish the framework of the new urban area and to create a great environment for further development. Then the government has to invest in schools, kindergartens, hospitals, and other ancillary public service facilities. If the new urban area is a comprehensive one or a high-end and tasteful one, the government would also have to invest in museums, theaters, and other cultural and recreational facilities. According to a report by the “21 Century Business Herald”, the Liangjiang New Area in Chongqing Municipality divides its capital investment into three different phases, all characterized by “532” but with different meanings. The first phase (2010–2012) was its starting period during which the New Area had little revenue, 50 % of the investment was from bank loans, 30 % gathered by issuing bonds or new financial products, and 20 % from fiscal revenue, such as capital fund, tax returns in the process of land acquisition, deed taxes generated during construction, and corporate taxes and dues. In 2013 alone, which was a transition period between the first and second phases, 40 billion was invested. Among them, 32 billion was invested in fixed assets in industrial parks, and 8 billion was used to repay capital and interest. The ratio of investments from bank loans, financial products, and financial investment were still 50, 30, and 20 %, respectively. The second phase is another case of “532” in which 50 % of the investment is from bank loans, 30 % from fiscal revenue, and 20 % by issuing bonds, and begins to finance directly from the capital market by making two projects go public. In the third phase of investment, fiscal revenue, bank loans, and other financing sources account for 50, 30, and 20 %, respectively. The time allocation and the ratio between investments in this investment plan are prospective. In short, in the process of formulating the development strategy, concrete investment, and financing plans for a new urban area, it improves on the work’s predictability and feasibility to understand and grasp its investment phases. Yet the circumstances differ from city to city, so there are no

uniform formulas and patterns and local governments have to make policies according to the reality.

21.4 More Room for Government Regulation

The transformation and upgrade of the old quarters is often restricted by some factors, such as the land property ownership, the geographical scope of land use, housing expropriation, and demolition. It is therefore more difficult to make plans and takes a longer time to construct for narrower options, higher costs of investment, and heavier coordination tasks. Meanwhile, new urban areas are vast in space, it is easier to expropriate land and houses, and therefore it is easier to make plans and it takes less time to construct. In terms of investment, the cost is lower but efficiency is higher. There are rich land resources and a large number of projects for the government to regulate. Some of the financing and investment can be obtained from the land transfer fees. Some low-profit projects can be bundled with other lucrative projects; Some government infrastructure projects can be entrusted to investment units together with real estate projects. In the process of building new urban areas, there is more room for the government to regulate resources and manage investments, so there is much to do for the government.

Chapter 22

Grasping New Urban Area Investment Strategy

22.1 A Government-Led, Strengthened Co-ordination

In his “*Two Points of Historical Experience of Urbanization*”, Mr. Wu Gou observes that there are two traditions of urbanization in Chinese history. One is urbanization driven by political forces where most cities are developed on the basis of political centers established by the state; the other is driven by economic forces where most cities are originated from regional economic centers (markets) which are spontaneously formed. Mr. Wu infers that, prior to the Song Dynasty, almost all cities were driven and constructed by the national government out of military and political needs.

Let’s put it aside whether cities were formed spontaneously or driven by political forces. Viewed from the perspective of history of urban development, ever since the state and government came into being, the construction and management of cities has been one of the most important and fundamental responsibilities of national governments, and cities have been one of the most important places to get tax revenues and consolidate the governments’ dominant position.

Although the nature of the city is to make our lives better, the basic goal the enterprises pursue is economic interests, maximum profits, and especially short-term earnings. They have no responsibility or intentions to take care of public interests and maintain the order of the city, which are what the government should take charge of. Government is the representative of national interests and the largest market entity, who controls the national and municipal resources, and its main function is to safeguard the best and the long-term interests of the general public. In the development and construction of a new urban area, the government has the means and a great capacity to regulate resources and raise funds, and benefits most from its development in the future (taxes and so on), so the government should and must be the leader in the investment and construction of a new urban area.

In the U.K., the *New Town Act* in 1946 stipulated that each year the Treasury would, on behalf of central government, grant a loan of 50 million pounds to new town development companies as development funds. In 1974, the government loan had reached 1.5 billion pounds per annum.¹ Meanwhile, other Western countries also supported and controlled the construction and development of new urban areas in different ways.

In China, the central government has been supporting Shenzhen, Pudong, Binhai, and other national new areas by financial, taxation, and other means since the 1980s. Similarly, local governments have also taken measures to invest and construct their own new areas. Being short of attention and money, the central government is unable to support local governments with much money in their efforts to construct new urban areas. With most new urban areas constructed at the expense of local governments, it is very difficult for the central government to control them by investment means. If the central government gives permission by examining and approving their urban planning, the local governments construct them. Even if the central government does not approve, they still do everything possible to construct them. In a word, they cannot get any fund from central government, with or without its approval. Therefore, it is up to the local governments to decide whether new urban areas should be constructed.

City governments control new urban investment mainly through planning, land, finance, taxes, fees, and other administrative measures, supplemented by market-based means. When conducting strategic research and planning for new urban areas, the governments should first seriously study and decide on the strategies of investment and financing, analyze and estimate how much is needed in all, in each phase and for each project, respectively? They also have to consider where to raise these funds, how much they can get through government finance, bank loans and other sources of financing, and how to repay them. The amount of investment, financing, and reimbursement should be classified according to the year, the entity, and the main channel, and be implemented step by step in accordance with the plan.

In order to play its leading role in the investment and financing of new urban areas, the government has to control and coordinate the main resources, especially money from land leasing, market financing, taxes and dues; the government has to control the investments in major projects, and has to take complete control of the investment and financing (by the financial sector); the government has to develop and construct it in a planned, orderly, efficient, and systematic way. The government cannot leave investment and financing to their own devices, or they could run out of control and become a huge debt burden.

¹Zhang Jie. *Introduction to New Town Planning and Development*, p. 178.

22.2 Market-Oriented and Diversified Financing

According to the nature of investment, urban construction can be divided into competitive, fundamental, and public welfare projects. Competitive projects mainly refer to the general development and construction projects with higher investment efficiency and more competition. These are mainly invested and operated independently by enterprises that make decisions on their own and take full responsibility for their own profits and losses. Fundamental projects mainly refer to (1) the infrastructure projects that are naturally monopolistic, require large amount of investment but yield little and usually take longer construction periods, (2) some basic industrial projects that requires great support from the government, and (3) the pillar industrial projects that are in line with the economic scale and can directly enhance national and local economic strength. These can be further divided into non-operating and operating items. Non-operating items are mainly public service facilities such as roads, squares, landscaping, lighting, and so on, which are for social and ecological benefits. Generally these projects should be based on financial investment of the government because they are free of any fees, taxes, or sources of funding. There are a large number of operating items, which can be classified into pure-operating (such as toll highways, toll bridges) and quasi-operating items (such as the supply of heat, water, and natural gas). The government should support enterprises investing in this kind of projects by means of policies and subsidies. Public welfare projects mainly involve the office facilities built for cultural, educational, health, scientific, technological, sports, administrative, procuratorial, judicial, and public security organizations, as well as non-governmental organizations and so on, which are mainly supported by government financial investment.

The financial resources of any country or government are limited, and the government has to allocate financial resources to the whole of society. It is neither possible nor necessary for the government to invest in all the projects involved in a new urban area. For competitive projects and some operating items, the government should try to encourage enterprises to invest directly by bringing in market and competitive mechanisms. For some projects that require government investment, various forms and channels of financing should be taken according to the principles of market-orientation, efficiency, and pluralistic financing.

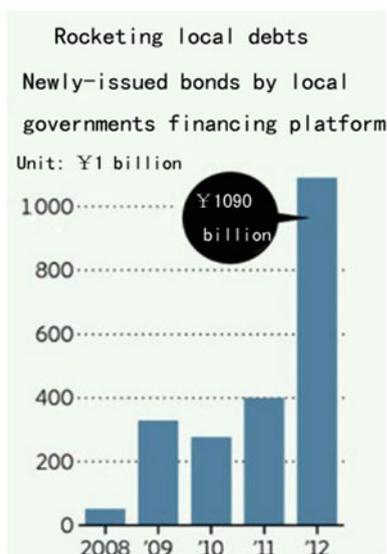
22.3 Supervised Legally, Risk-Controlled

On June 27th, 2011, Liu Jiayi, Auditor General of China's National Audit Office, revealed in his work report to the NPC Standing Committee that, by the end of 2010, the local debt in all the provinces, cities, and counties amounted to 10.717491 trillion yuan, of which the local governments had to repay 6.71 trillion yuan, accounting for 62.62 %; if the debt guaranteed by the governments was added, which would account for 70.45 %. According to an announcement by the

Audit Office, by the end of 2010, of the outstanding obligations disbursed by local governments at all levels, 5,946.689 billion (61.86 %) was spent in energy and infrastructure development such as transportation and municipal facilities and 1,020.883 billion (10.62 %) was used for the purchasing and storage of land. By the end of 2010, there are 78 municipal and 99 county-level governments whose debt ratio that the governments bear the responsibility to repay is higher than 100 %. Because of their lack of solvency, some local governments can only borrow new debts to repay the old ones. By the end of 2010, there are 22 municipal and 20 county-level governments whose ratio of “borrowing new debts to repay the old ones” is higher than 20 %. There are overdue debts in some areas, 4 municipal and 23 county-level governments whose ratio of overdue debts exceeds 10 %. The governmental financing platforms in many places encountered crises in capital chain. For the sake of overcoming the difficulties, many of them even resorted to trust or private high-interest loans. “People’s Daily” reported that up to 2012, urban construction investment bond issued in the inter-bank bond market totaled 636.79 billion, a 148 % rise over 2011. On October 23rd, “Reference News” published a report from the “Wall Street Journal”—“China wishes to figure out how massive the local debt is”. It reported that the size of various local debts was 15–30 trillion yuan, equivalent to 30–60 % of the total GDP, and offered a chart depicting the “rocketing local debts” (Fig. 22.1).

However, the audit department is in fact subordinate to the government, and most governments are reluctant to disclose the real amount of their debts. In addition to the debts under the direct control of the financial sectors at all levels, there are debts originating from BOT and construction debts incurred by departments of construction, water conservancy, transportation, and roads. If these

Fig. 22.1 Rocketing local debts (from the website of “Wall Street Journal”)



off-balance sheet debts are included, the actual debts for governments at all levels far exceed what the national government had publicized. What's the exact amount of debts owed by local governments? Nobody knows and maybe nobody wants to publicize, just as years ago nobody knew how much grain there was in the barns. Yet the audit departments should make it clear so as to get timely and effective control over the governmental debts.

We must strictly control the size of new government debts in the construction of new urban areas, and a new round of urbanization is not an excuse for over-heavy debt. Therefore, we should enhance the system construction for government borrowing and debt repayment in accordance with the law. First, an overall statistical system of local government debts should be established as soon as possible, so as to verify, classify, and resolve the stock of debt. Second, the repayment responsibility should be made clear. On the basis of cleaning up existing debt, the debt that must be shouldered by the government has to be defined clearly. According to the principle of "who borrows, who repays," we should intensify the unified management of government financing by the financial department and establish a debt service mechanism for local governments. We should determine which unit should be responsible for a certain debt, *stress the leadership of the financial department in the government debt management of the same level, and implement a government debt management system dominated by the financial department and participated by the other functional departments*. According to the status of local economic and social development, financial revenue and expenditure, and feasible project plans provided by the functional departments, the financial sector determines the short-term financing arrangement, repayment schedule, the size of local government medium-to-long-term financing and repayment deadlines, and analyzes and supervises the existing government debts regularly, to ensure they are repaid in time. Third, an overall and dynamic monitoring of local government should be conducted. We should compile a local government debt budget and incorporate it into the local government budget management, then report to the People's Congress or its Standing Committee of the same level for review and approval. For the other relevant debts the government bears no responsibility to repay, the competent authorities at all levels should examine strictly, control their scale, and establish a filing system. The "borrowing, supervision, use, and repayment" of debts should be taken as an important matter for assessing local government performance and economic responsibility during their term of office. Fourth, a repayment reserve system for government debts should be set up. We should establish a sinking fund reserve appropriate to the size of the liabilities, so as to cover the gap timely and effectively in the event of insolvency.

Chapter 23

Investment and Financing Strategy for New Urban Areas

23.1 Government Strengthening Investment and Financing Platforms

Government plays a leading role in the investment and financing of new urban areas. However, restricted by the current Chinese fiscal and financial system, the government and its financial department are constrained to take part in direct investment and financing. In order to launch a new urban area or conduct other aspects of urban construction, the government needs an organization to carry it out. Therefore, the government has to establish one or several investment and financing platforms (sometimes called investment and financing centers, or companies, or groups). Whatever the name, in nature most of them are solely owned by the government, with very few controlled by the government. From all over the practice, if the government wants to set up and make full use of these platforms, there are a few things it should do well.

First, the government should establish a sound system and improve its functions. In the investment and financing of urban construction, many cities are still operating under the system and mechanism of multiple financing, construction, and management by departments in charge of development and reform, urban construction, finance, transportation, public utilities and so on. With this approach, the enthusiasm of several departments can be mobilized, and the funds can be raised through several channels. However, under the existing financial system, the financing bodies are often small, weak, and it is difficult for them to raise funds, not to mention large funds. Meanwhile, with each of the financing bodies fighting its own battle, it becomes difficult for the government to control the risks involved in investment and management, and to supervise the debts, which can be a hidden problem.

In the construction of new urban areas, the government should establish and refine a new system and mechanism of investment and financing—to set up a decision-making organization for government investment and financing (sometimes

called leading group or joint conference) in charge of the major issues such as the overall planning, annual plan, examination and approval, and administration of investment and financing, with the chief executive of the government in charge and leaders of the relevant departments and units participating. Only in this way can the government investment and financing be integrated and coordinated. We should affirm its status of main channel, attaching the functions of financing, investment, operation, and management to it, and put under its uniform operation and management the urban construction assets and other government assets and rights once scattered between several government departments. By organizing or integrating such an investment and financing platform, we can establish a system and mechanism led by the government, operated in a uniform platform and based on market.

Second, the government should integrate the resources and enlarge the platform. The government investment and financing bodies are usually inadequate in assets, mortgage assets, and cash flow, and have difficulties in operation, so it is difficult for them to get large loans so as to operate effectively. Therefore, the financial department should try to supplement them with more funds in terms of land revenue and so on. More importantly, we should put under the uniform management of the investment and financing platform the urban construction assets and other government resources such as public utility assets and revenue and some of the government assets and fees, so as to expand their scale and improve the quality and operational capability of assets.

Third, the platform should be geared to the market and capital operation. The platform should abide by the requirements of modern corporate system, establish and refine the corporate structure, participate actively in the capital operation, improve on the management, reserve and operation of land, adding to its value and productivity, and do well in financing and investment.

During the construction of new urban areas, the developed countries in the West attach great importance to the construction and use of the investment and financing platform. With the *New Town Act* put into effect in 1946, the British government established a new town development company, which was responsible to central government, and authorized it to take charge of the development and construction of new towns. Central government provided it with the funds needed, including staff salaries, various purchasing expenses, and investment in infrastructure and construction projects. The company should repay the principal and interest twice a year and pay it off in 60 years, with the same interest rate as the current bank loan interest rates. The company had great power in making development plans, land acquisition and operation, the use of public funds, and so on. The key is that the company could get the land at its current price, and therefore can benefit from its future appreciation as a result of the construction of new urban areas.

Singapore is especially adept at investing or controlling investment and financing companies and making use of them to implement the development, construction, and operation of industrial parks and new urban areas. Jurong Industrial Park and Sci-Tech City are invested in and constructed by the government-owned JTC Corporation, which later set up a subsidiary company—Ascendas Group. In addition to its expansion in Singapore, Ascendas Group also

strives to expand abroad—it developed and constructed some international technological regions and industrial parks in Indonesia, the Philippines, China, Vietnam, and India in 1991, 1993, 1996, 1995, and 2000, respectively. In June 2005, Ascendas and Dalian Software Park invested \$200 million and launched the Dalian Ascendas IT Park, which is the first software park jointly built by Ascendas and China, each taking a 50 % stake. It was completed by the end of 2006.

Chinese government and enterprises should learn from Singapore and actively participate in the construction of new urban areas both at home and abroad with the help of the existing state-owned enterprises or newly-formed state-owned investment groups. *Some state-owned enterprises, especially large enterprises directly under the central government, should not be contented with being the top bidder for land at home, but should take the initiative to go global and show their talents abroad in the planning and construction of new urban areas.*

23.2 Enterprises Actively Investing in New Urban Areas

The City of Irvine is 50 km southwest in California, with an area of 88 km² and a population of 210,000. It is one of the most successful cities in America and the world that was developed and constructed by a private company. Irvine is a planned city in the first place, gradually developed with the investment of the Irvine Company which is founded by the Irvine family. In 1959 at the request of the University of California, Irvine Company agreed to donate 1,000 acres of land as its new campus, and the state government also donated an additional 500 acres of land. William Pereira (the architect hired by the University of California, Irvine) and the Irvine Company believed it necessary to establish a city of 50,000 people in communities surrounding the university, with industrial, commercial, residential and recreational areas, and greenbelts. In 1960, William Pereira designed a new community surrounding the campus of University of California at Irvine, which covers an area of 405 km² and can accommodate 100,000 residents. In 1964, the plan was approved by the Orange County government. In the following year, the campus of University of California at Irvine officially opened and attracted nationwide attention for its master plans, which were enriched and improved by successors. In 1970, Ray Watson, Richard Rees, and other architects intended to set up a community of 500,000 people on 243 km² of land, and submitted to the government a plan on land utilization and transportation system. On December 28, 1971, the community residents voted to incorporate the City of Irvine. In 1977, the Irvine Company invited four renowned Philadelphia-based planning and design firms—Wallace, Maikheg, Robert, and Totti—to conduct a further study on its urban design. However, this year the company was acquired by a consortium, which resulted in a reduction in the development scale of the Irvine area and separation of Irvine's planning and design functions from the company. During the late 1980s, under the influence of environmentalism, more than half the farm was reserved as open space, about 178.2 km² of farmland was protected as natural

habitats, and 24.3 km² of land were reserved for parks and open spaces. The future layout of the city would be centered on these protected natural habitats, parks, and open spaces.

Within 30 years, Irvine developed from a fledgling small town into a favorite common destination and the “Technology Coast of California,” attracting many high-tech companies. People from all over the nation flocked here, attracted by its safe living environment, artful system of transportation, healthy and competitive business atmosphere, formal and complete educational institutions, and harmonious way of life. In 2003, among the cities with more than 100,000 people on the west coast, Irvine ranked fifth in the Money Magazine list of top cities worth living in. Irvine was at the top in the list of top ten safest cities in the U.S. issued by FBI on June 6, 2005. There is much experience to be drawn from the successful development of Irvine. One of the most important factors is that it sticks to the market-oriented operation mechanism and principle of urban development—it is invested in, planned, constructed, and managed by a social firm, the Irvine Company. Irvine is a planned boom town driven and tested by the market, without any government directives or administrative intervention, with people abiding by the law and maintaining market rules. It is the market-based operation that makes the planning and construction of the whole city always geared to the market, leading to profit maximization and sustainable development. The market-based operation mechanism continues to enliven Irvine.

Japan is also very successful in terms of urging enterprises to invest in the construction of new urban areas. The majority of industrial parks in Japan are built by non-governmental forces, with only a small fraction by the government. The basic procedure for non-governmental forces to initiate an industrial park requires six or more non-governmental companies of a certain size (excluding large enterprises) to organize themselves into a synergistic combination; then it is up to the synergistic combination to apply to the local government. With the approval of the government and the federation of small and medium business associations, the synergistic combination can conduct land development, either by the combination or by developers organized by it. According to statistics, the Japanese had built 4,591 industrial parks of all kinds by the 1990s, including 47 constructed by national or regional gemeinwesens and business guidance centers, 941 by local government or government-led consortiums, and 3,603 by synergistic combinations of private enterprises. Japan has taken full advantage of non-governmental construction and management resources, and has established a mechanism for enterprises investing in, managing, and developing industrial parks.

On the basis of investing and constructing new urban areas and economic zones at home, Japan also followed Singapore and started to develop and construct industrial parks and new urban areas abroad with the help of companies. In June 2011, The Ministry of Housing and Urban-Rural Development of China and the Ministry of Land, Infrastructure, Transport and Tourism of Japan signed the “Memorandum of Understanding on Cooperated Promotion of Eco-city Construction” in Yangzhou City, Jiangsu Province, which stated that both parties would cooperate to build eco-cities in Dongying City, Shandong Province, and

Wenzhou City, Zhejiang Province. On August 4, 2012, Dongying municipal government and the representatives of the Overseas Eco-city Council of Japan officially signed a joint agreement to build an eco-city. The alliance of Japanese enterprises composed of more than 50 well-known companies including Toshiba and Hitachi were actively involved in it. On May 25, 2013, the Japanese consortium, including Mitsubishi, Marubeni, and Sumitomo, signed a memorandum of understanding on the joint development of Thilawa Special Economic Zone in Yangon with the Burmese consortium comprised of nine joint-stock companies. Located 25 km south of Yangon City, with a planned area of 2,400 ha, the special economic zone aims to attract investments in new- and high-tech industries, labor-intensive industries, and textile and manufacturing industries. Japan accounted for 49 % of its shares, whereas Myanmar accounted for 51 %. This investment is a major strategic initiative which deserves the attention of China and other relevant countries.

A giant in Indian building company, Hindustan Construction Company, invested heavily in creating a new town of science and technology which is about 130 miles southeast of Bombay, and about 40 miles from Pune. Planned to host 5 towns and 300,000 people, the world-class new town will be home to many knowledge-based industries including medicine, software, biotechnology, and modern films. Planned and designed in accordance with the principles of “New Urbanism,” it is pedestrian-friendly with multiple functions, with commerce and residence inter-mixed, laying great emphasis on an ecological environment. The company takes full charge of the management of the new town except for public security and taxation.

In new urban areas, there is usually more land, with more projects waiting for investment, and with more opportunities. Especially in its launching period, aimed at embellishing its image and enhancing its performance as soon as possible, the government often sets lower thresholds for new projects, charges less for land leasing, and implements more preferential policies on charges and taxes. Enterprises should seize the opportunity to investigate the new urban area, select projects, acquire land, and make an investment as early as possible. It turns out that many enterprises often hesitate to invest in the new urban area, only recognizing its disadvantages such as its inadequacy in infrastructure and popularity without ever recognizing its advantages and potential. This is a sign of their short-sightedness. In fact, a new urban area is an important way of urbanization which is the direction of urban development and the focus of government investment. *Enterprises that possess strategic insight are those that can select projects to investment according to the direction and strategy for urban development set by the government.* Some investment enterprises purchase land in a newly-launched urban area, and the price of the land and the residential or commercial facilities developed on it would have multiplied in a few years. Some industrial corporations have realized rapid development because they put the money saved in the acquisition of land into the expansion of the company, and have their costs reduced by savings on taxes and fees. In particular, some enterprises in the old quarter agree to move to the new urban area, and the government gives part of the land revenue to them in the form

Table 23.1 Commonly used market-based financing methods

Patterns	Meaning	Applicable conditions	Application
Public private partnership (PPP)	Partnership between public sectors and private enterprises: the government does not transfer all the responsibility for the project to the private enterprises, but shares the responsibility and financing risks with the parties involved in the cooperation	Large-scale municipal infrastructure projects involving not only big investment but also complicated issues of financing, construction, operation, management, and so on	Railways, subways, ports, large-scale urban utilities
Build-transfer (BT)	Government (or its authorized agencies) confer an infrastructure project stated in the contract to the investor who is to undertake the financing and construction of the project in accordance with the Government's request within the specified time, and when the contract expires the government (or its authorized agencies) repurchase the project at the contracted time	Whatever the nature of the project, it is applicable as long as the project meets certain conditions of guaranteed payment during the period of deferred payment, and there are enough funds to repay at the maturity date	Various types of government investment projects
Build-operate-transfer (BOT)	The government confers a project to the special purpose corporation established by the project sponsor through a concession agreement during the prescribed concession period, and the project company is responsible for the investment and financing, construction, operation, and maintenance of the project and uses the proceeds to repay the loans. When the concession period expires, the government takes over the infrastructure for free	Projects with the capability of operating and loan refunding, or projects that can sustain their operation and obtain a reasonable return by government subsidies or support	Roads, bridges, health care, sanitation, water supply, gas, public transportation, and so on

(continued)

Table 23.1 (continued)

Patterns	Meaning	Applicable conditions	Application
Transfer-operate-transfer (TOT)	Obtaining project financing through the transfer of usufruct or property of existing production projects within a certain period in exchange for construction funds	Ditto	Ditto
Asset-backed-securitization (ABS)	A way of financing by which an enterprise issues corporate bonds or commercial papers in capital markets with financial assets support so as to realize illiquid financial assets	(1) A stable cash inflow for the portfolio of assets. (2) Assets are owned by an enterprise as a legal person. (3) Raising no less than 800 million yuan, repay in 4 to 5 years. (4) Arranging no less than 200 million yuan for debt service each year	Various types of project assets highly secure and with a stable cash flow
Initial public offerings (IPO)	IPO means a company sells its shares to the public for the first time and it is a way of corporate equity financing; it is the first time a company sells its shares to the public, and is a way of financing with corporate equity	(1) Classified into main board, second board at home and abroad. (2) Subdivided into H shares, A shares, S chips, N Shares, K shares, J shares, etc.	High-quality companies in operational industries
Corporate bonds	A way of debt financing by which a corporation issues bonds and repays the capital and interest within a certain period of time in accordance with the legal procedures	(1) Net assets meeting the specified requirements. (2) Profitable in three successive fiscal years. (3) Good cash flow, able to repay the debt at the maturity date. (4) The balance of bonds issued should not exceed 40 % of its net assets. As to the bonds for fixed assets investment projects, the total amount issued should not exceed 20 % of the total investment	Large state-owned enterprises, and projects demanding to raise more than 500 million by corporate bonds

(continued)

Table 23.1 (continued)

Patterns	Meaning	Applicable conditions	Application
Short-term financing bills	A way of short-term debt financing by which an enterprise issues and trades negotiable securities in the inter-bank bond market in accordance with the conditions and procedures prescribed by the state and agrees to repay the capital and interest within a certain period of time	(1) Corporations with net assets worth over 400 million. (2) With a stable source of funding, making profit in the recent fiscal year. (3) With good liquidity and strong solvency ability at the maturity date. (4) The balance of bonds issued should not exceed 40 % of its net assets	Invested in projects on a short-term basis (within 1 year)
Trust products	Issue the usufruct of operational assets of infrastructure, manage social assets, and circulate necessary funds in a variety of ways including loans, investments, leasing, and sale	(1) Risk and return analysis. (2) Financing scale of the project. (3) The amount issued. (4) Affordability and supporting conditions	Projects with stable or guaranteed prospective earnings
Financial leasing	The lessor purchases for the purpose of financing an leased item selected by the lessee, and lease it to the lessee on a medium-to-long-term basis on condition that the lessee pay the rent	(1) Objects or equipment purchased by the lessor. (2) The absolute deadline for all financial leasing transactions should be over one year, and cannot be terminated. (3) Financial leasing involves three parties (lessee, lessor and suppliers) and two contracts (a trade contract and a financial leasing contract)	Projects demanding objects or equipment that are expensive to purchase and will be used for a long time

Ding Bokang. Investment and Financing in Urban Construction—Strategies, Patterns and Case Studies, pp. 10–11

of subsidies after the original land is sold out; in this way the relocated enterprises expand quickly and their quality is also improved.

Enterprises possessing strategic insight and yearning for long-term growth should take the initiative to invest in the new urban area, where there are plenty of opportunities.

23.3 Expanding the Investment and Financing Channels

The diversification of investment entities and financing channels is the only way to solve the money problem in the development of new urban areas, which proved a successful practice in developed countries and fast-growing cities. In the U.S., the principal financing channel in urban infrastructure construction is to issue municipal bonds. In Japan, the government tries to reduce the cost of infrastructure financing by establishing development banks and enacting “interim interest adjustment law.” Shanghai leads the nation in exploring investment and financing patterns—trust products were issued in the construction of the Outer Ring tunnel project, whereas insurance funds were used in the Qingcaosha drinking water project. Some cities such as Tianjin, Shenzhen, Zhuhai, Hefei, and Dezhou have taken new steps in the practice of fund raising such as making full use of capital markets and insurance funds, and issuing corporate bond.

We should increase the proportion of direct financing, make flexible use of various channels, including corporate bonds, stock market, and trust schemes, create new ways of direct financing, and encourage investment and financing entities of urban construction to cultivate a few listed companies through acquisitions, mergers, and other ways. For operational urban construction projects, we should encourage the operators to recover funds through the transfer of property or franchise rights so as to revitalize their stock assets. As to the quasi-operational or non-operational construction projects, we should encourage the government to select investors and operators publicly in various ways such as government buy-back, financial subsidies, fee and income support, and franchise grants. For construction projects involving the procurement of a lot of machinery and equipment, we should encourage the operators to take leases so as to solve the investment problem (Table 23.1).

Part VII
Industry

Chapter 24

Role of Industry in New Urban Areas

Industry, which can be very fundamental in establishing, boosting, and enlivening the city, matters a lot for a new urban area and even a city. Joel Kotkin, an American expert in futurology and urban affairs, asserts in his *The City: A Global History*, “Three key factors determine the comprehensive and healthy development of these cities, that is, holiness of the location, ability to provide safety and planning, and incentive function of commerce.” Commerce means energetic industry, market, and the overall economy. At present, some new urban areas are reduced to an “empty city,” “sleeping city,” and “dead city” just because, to a large degree, they do not have industries or their industries do not achieve full development, or their existing industries are in a stagnant state. To study and boost the development of new urban areas, we must face this problem, make careful explorations, and take measures to solve it. Therefore, when my book was confirmed to be published in English, I wrote this part and added it into the original.

24.1 Establishing and Boosting the City

Industry is the original cause of urban establishment. In Chinese “Chengshi” means city and it is a combination of “cheng” and “shi”—“cheng” refers to the town surrounded by city walls which are built for safety. It is said in *Guan Zi*, a book written by an ancient Chinese politician named Guan Zhong, that “inside the walls is ‘cheng’ and outside the walls is ‘guo’”. “Shi” refers to the market place where people exchange goods. It is said in *The Strategies During the Warring States Period*, another ancient book in China, that “I have heard that he who pursues fame is found in government and he who seeks profit is often seen at market.” Both “cheng” and “shi” are the most primitive and basic forms of the city. “Chengshi” first appears as a phrase in *Han Feizi*, a book written by an ancient Chinese politician named Han Fei, who said “though governmental officials are highly paid they cannot build up their power by relying on the city.” City is always considered to be a place with a dense population and prosperous industry and commerce.

Since time immemorial, the formations of many new urban areas in the world have resulted from the ideas and decisions at the early stage of planning and

construction. Some are established spontaneously with a certain industrial foundation, and some, benefiting from a government that complies with development needs, are extended to a larger scale. By the 1840s, the Industrial Revolution had come to an end. Before the revolution, the southeast of London had been the most economically developed and the most densely populated area in England. With the development of the Industrial Revolution, some big cities emerged in the northwest, rich in coal, such as Manchester, Birmingham, Liverpool, etc. All of these are examples where industry goes before city. In China, such cases are countless.

Some new urban areas are set up purely to develop some industries. Dongying city, Shandong Province, China, located at the mouth of Yellow River, was originally a very ordinary village. In April 1964, oil was struck by Chinese Petroleum Exploration Department nearby Dongying village. Since then, a petroleum campaign in North China has begun. With this petroleum exploration campaign, mining towns, made up of campaign headquarters and some offices of secondary units and logistics units, were gradually set up around Dongying village, which was called “base”. In March 1965, organizations at country level—the CPC Working Committee at Huimin Area of Dongying and Dongying Office—were established to support the petroleum campaign. A group of commercial, financial and postal agencies was also constructed to serve the mining area. To meet the development needs of the oilfield and Yellow River, the State Council of China decided to establish Dongying city on November 10, 1982. Later, the provincial Dongying city came into existence, including Kenli county and Lijin county, four communes of Guangrao county and Zhanhua county, one commune and three teams of Boxing county. Now Dongying city has developed into an emerging oil town and central city of Yellow River Delta.

24.2 Bringing Wealth and Promoting Business

Industry is both a powerful pillar and a sustaining driver for the survival and development of a city. In a general sense, industry can be primary, secondary, and tertiary, but in a city most industries are secondary and tertiary. For a city, the source of capital for education, police, urban administration, and social security, etc., is mainly the financial resources gained from industrial and commercial tax revenues. The scale, strength, competitiveness, and future growth of a city depend mainly upon the development of the secondary and tertiary industries. “Even a clever housewife cannot cook a meal without rice.” With low tax collection, short financial capital, and a cash-strapped government, a city cannot function well. It might fall into recession and even go into bankruptcy. Detroit, USA, is a good example in this respect. As Xiao Langping has reported in *Hongkong Wenhui Newspaper*, Detroit is only 1 of 15 cities which have petitioned for bankruptcy from 2008 (outbreak of financial crisis) to 2011. In January 2011, Jefferson county, the most populous in Alabama, submitted an application for bankruptcy to the US Bankruptcy Court. Its bankruptcy scale set a new record by exceeding \$4 billion.

In October 2011, Harrisburg, the capital of Pennsylvania, filed for bankruptcy to the Court. In 2012, three cities in California—Stockton, San Bernardino, and Mammoth Lake—successively declared themselves bankrupt. A city has no strength without financial resources and no financial resources without industry. New urban areas must take the path of building and boosting a city by relying on industry.

24.3 Gathering Popularity

Industry is the basic carrier and main place where the city dwellers can settle down, get employed, and increase income. Without popularity, there is no city. Lack of popularity is the major bottleneck for further development of some cities. Gathering and maintaining popularity is the major factor for the development of new urban areas. People, however, tend to be nostalgic and they are closely attached to their neighborhood, relatives, friends, and classmates, as well as their colleagues, after living for a long time in a city or region where the places are that they have been to, including schools, hospitals, supermarkets, working places, and career bases. Especially in China, relationship, kinship, and friendship rank above everything else. People value their family and interpersonal relation so much that it is difficult for them to leave family and hometown, and they do not like to move from one area to another or even from one city to another. This is different from the Western countries. Of course, with a higher degree of social openness and the growing up of the younger generation, travel and thus working radius is getting larger and larger. Some young people from the countryside and small and medium-sized cities, who go to study or work in big cities and coastal cities, choose to stay there rather than return to their hometown and family. Now even ordinary people move anywhere there are industry or jobs. No industry, no job; no job, no food—and no popularity. Kangbashi—a new urban area in Erdos, Inner Mongolia Autonomous Region—is an example to show that, in spite of huge investment in the infrastructure construction, lack of industrial projects and employment opportunities lead to the phenomenon of “empty city” and “ghost city”. Three billion tons of coal is buried underground at Yubari in Hokkaido, Japan. Coal being the only strong industry, the town is famous as “coal city” in Japan and gradually developed into a city. During its boom period, its total population amounted to 117, 000. However, its coal mines began to close from 1963 and by the 1990s the last one had shut down. The residents’ lives were greatly affected, civil servants and their salaries being drastically reduced and the population flowing out in great number. By 2000 the population was reduced to 140,000 and per capita government debt reached 4.8 million yen. In July 2006, the municipal government of Yubari was declared bankrupt. Because of the fund shortage, public welfare facilities were forced to shut down, and there were deserted gardens full of weeds and even fallen art galleries in the heavy snow because of lack of funding to remove the snow. *City includes people and people make up the city. Popularity means life and death for a city.*

When many countries—home and abroad—plan new urban areas, their primary concern is to evacuate excess population but they ignore industry. No industry means no jobs and no people means the new urban areas become “empty cities.” This is true for England in the nineteenth century. New urban areas in Beijing and Shanghai in the twentieth century have also experienced such setbacks. Therefore, industry has an inseparable and interactive relationship with new urban areas, cities, urbanization, and transfer of rural population. New urban areas and the city are platform and carrier for industrial development, providing room for industrial progress, supplying not only infrastructure and public facilities but also population, especially industrial population and consumer markets, so as to ensure conditions are right for industrial development.

Industry, as the engine of urban development, provides power for the development of the city and new urban areas and supplies jobs, tax revenues, and commodities. Industry, new urban areas, city, industry, and population must all be closely combined to ensure mutual advancement and development. We cannot consider industry alone, population alone, or city alone. In the urbanization process of China and some other countries, do not simply change agricultural land into urban land by “enclosing land into city”; do not simply change rural residents into urban residents by “changing identity,” let alone take measures to raise the urbanization rate. Otherwise, the development of new urban areas and urbanization is crippled and, as usual, haste makes waste.

In new urban areas, especially some large-scale economic zones and industrial parks, we should plan for not only factories and municipal facilities but also functional zones for residence and service, building supporting service facilities such as houses, schools, commerce, hotels, and entertainment. This is necessary and indispensable. Of course, small new urban areas, economic zones, and industrial parks, if not very far from the city, can make use of the resources from the city; it is then unnecessary to start anew and rebuild those resources.

China has been attaching much importance to the construction and development of economic zones at the early stage of reform and opening-up since 1978. Many people, including myself, took a one-sided view that this kind of industrial park could only manage industry rather than the development of housing and commerce. However, consequently, such industrial parks could hardly gain in popularity because of lack of supporting functions and the consequent inconvenience to life and work. This affected the development of economic zones to some degree. After 2010, people began to realize the importance of integrating industry and city. They endeavored to develop economic zones and industrial parks into new urban areas by adjusting their spatial layout and adding urban functions. As a result, the comprehensive attractiveness and competitiveness were effectively improved.

Chapter 25

Industry Positioning and Agglomeration

25.1 Scientific Industry Positioning

Very serious problems exist in some new urban areas because. during the early stage of running new urban areas, people do not carry out any strategic research, especially research on industry. Some professionals only make some spatial layout planning or copy the old development planning of a city—or build castles in the air—without doing the necessary research and exploration about the basic situation and industrial development of new urban areas. Some small and medium-sized cities in China lack qualified and experienced planning institutions and professionals. For every urban planning and design project, we invite planning and design departments in large cities, university professionals, and even some famous planning and design offices and “big shots” from abroad. These organizations and people may have very high professional levels but they do not really understand about the target new urban areas. Instead of minute study, they just work to plan everything after a brief and hurried look. So the new urban areas they have planned are divorced from reality: something familiar but paradoxical, and difficult to carry out and complete.

We should decide on strategic positioning for every city and every new urban area when considering the construction and making planning for it. This has been discussed in the previous chapters so I won't repeat it here. The most important part of strategic positioning is industry positioning, that is, to decide the direction, goal, scale, focus, measures, and so on, which are strategic problems concerning industry development in the long term.

To make a specific industry positioning, we should fully consider the factors concerning resources, energy, transportation, and existing industry. As the old Chinese saying goes, “live upon what the land can provide.” It means we should live on what we have and develop and utilize the resources and energy we can make full use of. It is wise of many people who do so. Develop certain industry and make certain products with the resources and energy we have. *Industry formats and city*

conditions are closely related to each other. City conditions are roots whereas industry formats are trees. Deep roots make big trees and big trees have leafy branches. This has been shown to be true by many cities throughout history all over the world. Therefore, planning resource-dependent and energy-dependent cities is the same path all countries in the world have trod for almost 300 years. Now when we construct new urban areas, given the opportunity, this path should still be followed because it can make use of the advantages of resources, talents, cost, and market, which are traditional advantages, historical endowments, and realistic foundations. If we seek far and neglect what is available at hand, what is gained does not make up for what is lost. Of course, some cities, which have developed and utilized resources early, are now facing the problem of resource exhaustion and need to make industrial adjustments and urban transformations. Industries of these cities are usually too resource-dependent and their industrial structures are too simple. Once the resources are used up, this kind of single industry causes many problems, such as recession of the industry, unemployment of the workers, and urban decay.

Perhaps because of the influence of resources or the inevitable result of world science and technology development, it is a general trend that, in the planning and construction of new urban areas, many places, whether strategic function positioning or specific industry positioning, put emphasis upon high-tech, high additional value, and export-oriented industry. By August 2014, the National Development and Reform Commission, called “the Second State Council” in China, ratified ten state-level new districts in place of the State Council (see Table 25.1).

After analyzing these new urban areas carefully, we can see their function and industry positioning have the following features:

1. Function and industry of new urban areas have high positioning levels. Some of the function positioning is oriented to the world, and some to China and Asia. Most industry positions take information technology, bio-medicine, finance, and modern services as leading industries.
2. Function and industry positions are clearly defined, but some are rather general and vague, are hard to find in public records, and difficult to analyze and assess. This reflects the fact that some new urban areas do not have clear development ideas and goals.
3. The planning size of new urban areas is becoming larger and larger. Some cover an area of hundreds of square kilometers and some others thousands of square kilometers. Such large area coverage gives us an impression that they are pursuing greatness blindly. As a result, some problems arise regarding policy making and implementation, construction of infrastructure facilities, and working systems and mechanisms. Some new urban areas probably cannot achieve effects as expected. Therefore, this practice is neither very rigorous nor scientific.

Function and industry positioning of new urban areas should be oriented to the world, the future, and high technology. Dezhou, Shandong province, was originally

Table 25.1 Function and industry positioning of Chinese state-level New Areas

Names	Function positioning	Industry positioning
Pudong New Area in Shanghai	Center of international finance, international shipping center, international economy center, and international trade center	Information technology, bio-medicine, automobile, finance, insurance, modern logistics, exhibition, tourism, information service
Binhai New Area in Tianjin	Gateway to the outside world in northern China, base of modern manufacturing and development transfer, northern international shipping center, and international logistics center	Electronic information, aerospace, petroleum and chemicals, equipment manufacturing, new and high technology industries
Chongqing Liangjiang New Area	Urban-rural comprehensive reform experimental area of China, important inland base of modern manufacturing and service, economic center of the upper Yangtze River, financial and innovation center, important inland gateway to the outside world, demonstration window of scientific development	Rail transport, electronic equipment, new energy automobile, national defense industry, electronic information
Zhoushan Islands New Area in Zhejiang	Commodity storage and transportation center of China, processing and trade transit center, important marine gateway to the outside world in the eastern region, demonstration area of scientific protection and development of seas and islands in China, important base of modern marine industry in China, leading area of coordinate development of land and sea in China	Port and navigation logistics, shipbuilding, marine engineering equipment, marine tourism, ocean fishing industry
Gansu Lanzhou New Area	Important economic growth pole in northwestern China, important national industry base, important strategic platform open to the west, demonstration area of undertaking industrial transfer	Equipment manufacturing, petroleum and chemicals, bio-medicine, new materials, new energy, cultural innovation, ecological environment
Nansha New Area in Guangzhou, Guangdong	GHM high quality living community and model of new urbanization, modern industry highland dominated by production servicing business, comprehensive service hub on the world's advanced level, innovation experimental zone of social management service, GHM demonstration area of comprehensive cooperation	High-end services, technology intelligence industry, port advanced manufacturing industry, marine industry, tourism and leisure industry

(continued)

Table 25.1 (continued)

Names	Function positioning	Industry positioning
Xixian New Area in Shanxi	Important hub open to the west in China, new engine of western development, and model of new urbanization with Chinese characteristics	Low-carbon and energy-saving environmental protection industry, advanced equipment manufacturing industry, high-tech industry, modern services, airport industry, warehousing logistics industry, ecological cultural tourism
Gui'an New Area in Guizhou	Inland new highland of open economy in China, experimental area of innovation development, clusters of high-end service industries, international tourist resort, leading areas of ecological civilization construction	Information industry, digital industry, special equipment manufacturing, high-end cultural longevity tourism, high-end services
West Coast New Area in Qingdao	Leading area of Chinese marine science and technology innovation freedom, strategic support base of deep sea development, innovation demonstration area of civil-military integration, leading area of marine economic international cooperation, experimental area of land and sea integration	Marine equipment manufacturing, marine transport logistics, marine cultural tourism, sea creatures, marine new materials, sea water desalination, marine new energy, blue finance
Jinpu New Area in Dalian	Strategic highland in China open to and cooperative with northeast Asia, important growth pole in leading northeast China to a comprehensive revitalization, leading area of transforming development mode of old industrial base, demonstration area of system and mechanism innovation and self innovation, leading area of new urbanization and urban and rural integration	Information industry, bio-medicine, new materials, new energy, high-end equipment manufacturing industry, petroleum and chemicals, modern services

an area of cotton planting and processing. During the 1980s, cotton output per year of this single city had once accounted for one-sixth of the total cotton production in the province and one tenth in the whole country. The cotton textile industry had once been the leading industry of the city, accounting for a large portion of the whole city's economy. After entering the twenty-first century, with the worldwide adjustment of the textile industry, Dezhou is undergoing industrial structure conversion and upgrading and the once glorious cotton textile industry is gradually disappearing from the list of leading industries. Some emerging industries quickly step onto the stage of economic development and begin to play a major role. In the function and industry positioning of Hedong New Area and Ecological Technology

City, Dezhou decided to take new energy, new materials, and environment protection as key industries, and has made great progress by taking effective measures. Thereby, Dezhou City has been awarded some epithets by governmental offices and organizations, such as China's "solar city," and "central air conditioner city," and by the state such as "national high-tech industrial base of biological industry," "new energy industrial base of National Torch Program," and "demonstration city of application of national renewable energy in architecture." Of course, a certain amount of cotton still grows in the countryside and some textile industries are still retained in the old industrial areas. However, instead of being the leading industry, it merely belongs to one of the traditional industries. In new urban areas, workshops of textile industry are no longer found.

25.2 Comprehensive Industrial Planning

After positioning the function and industry of new urban areas, we should plan scientifically according to the goals, scale, focus, and implementation procedures of industry and urban development, and then put the planning and the strategies into practice.

The focus of industrial planning is to decide functional arrangement and spatial layout. First of all, decide the nature of land use, industrial structure, residential arrangement, and the location of public facilities under the guidance of urban regional planning and overall planning of new urban areas. Then carry out specific planning for industrial structure and decide on geographic division and spatial arrangement of each industry. Tsukuba Science City of Japan has achieved great success in this area. In the 1960s, Japan changed from a trade-dependent country into a technology-dependent country. After several rounds of discussion about planning, it determined that industry takes the lead in encouraging the improvement of urban functions, and set up Tsukuba University for cultivation and development of dominant industries, made laws and preferential policy for industrial development, and held World Expo to encourage the improvement of urban functions. Thus, the development and integration of science, industry, and population of new urban areas have been effectively promoted (Fig. 25.1).

Tsukuba in Japan and Irvine in America are sister cities because the former is government-oriented whereas the latter, growing from large private business in the economic environment, is market-oriented. The government and market have played different roles in the two cities. Although industry positioning of both is high technology, industrial structure and development results are not the same. Industry of Tsukuba is unisubstructural and vulnerable to risks so it can be greatly influenced during macroeconomic fluctuations. The economy bubble bursting during the 1990s had a profound influence upon Tsukuba. Irvine, however, thanks to its rich industries, performed very well in the areas of manufacturing, services, logistics, and clothing. At the same time, its overall economy developed steadily in the circumstances of the American high-tech bubble burst during the 1990s.

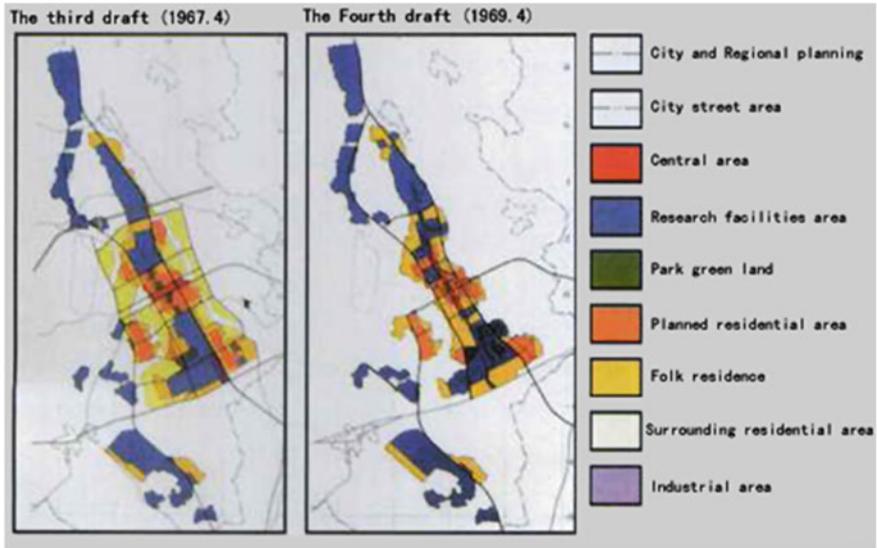


Fig. 25.1 Functional areas of Tsukuba, Science City in Japan

Every new urban area—with its own function and industry positioning, area, and definite development goals—should have its own function layout. The scientific layout is only relative and dynamic. Here the most important thing is to keep the functions balanced, promote intensive and sustainable development, and bring people convenient life and work. This includes the following factors.

Different industries should support each other and remain coordinated and balanced. The priority is to highlight the development of the leading industry and raise its concentration degree. Meanwhile, advancement of any industry needs the support and services provided by corresponding industries. The development of any enterprise also needs the cooperation and guarantee of some related enterprises. It is more so for some large industries and enterprises. This is why some industries usually cluster in one city or region. In the 1990s, leather shoe manufacturing was a very prosperous industry in Wenzhou, Zhejiang province, China, and gathered many relevant trades and enterprises around it. My colleagues and I intended to introduce some shoe-making enterprises into Dezhou City and made some preferential policies on behalf of government. However, the bosses of these enterprises said that however good the policies were in Dezhou, no fashionable shoes of high quality could be produced if there was no shoe-making raw material market and supporting industry clusters to make semi-products. The enterprises, lacking up-to-date knowledge about relevant information and techniques, couldn't manufacture shoes at low cost and rapid speed by employing skilled shoe-makers.

Therefore, instead of going to Dezhou, it is better to stay in Wenzhou where industry and products can support each other well. This complies completely with the laws of industrial agglomeration development.

Now some well-known enterprises and international companies put more emphasis on building brands and capital operations and make the effort to improve core competitiveness. On the other hand, they leave other enterprise organizations to cover material purchase, processing, parts supply, and logistics. Of course, some supporting facilities are not necessarily placed in one area, one new urban area, and even one country. However, many industries and enterprises pay great attention to regional support. At the core, efficiency and cost of the finished products is playing the major role. So when planning industry for the new urban areas, we should stress the planning and the allocation of leading industry and related industry, key enterprise, and associated enterprises.

Industry and urban function should remain coordinated and balanced. Industrial development should also remain balanced with urban population, infrastructure, and the necessary public facilities. In other words, urban population and basic functions should meet the needs of industrial development. We should estimate the amount of electricity, water, gas, heat, facilities, scale of sewage disposal, and how many people we need to employ, including the local people and outsiders according to the industrial development scale of new urban areas. Then we can calculate the number and size of public services, including houses, schools, kindergartens, parks, shops, hotels, etc., plan the elements of security and ecology necessary for a city, and try to achieve a rough balance.

The balance should be relative and open. For new urban areas far away from the old towns, considering transportation and operation cost, urban functions have to be relatively independent and self-contained. For the smaller new urban areas close to the old towns, it is sufficient to maintain the balance by making full use of the existing resources of the old town.

The balance should be dynamic, varying, and evolutionary. A balance should not only be achieved at the planning and construction stages but also be maintained in future development. Rapid industrial development brings about rapid industrial replacement and transformation. The changes are greater than those of the municipal and public facilities in the city because the sizes of administrative offices, businesses, and parks are relatively stable, whereas enterprises involve life and death, which means the prosperity of one may bring about the bankruptcy of another. Some enterprises develop very fast and demand expansion. Such expansion can be dealt with well if it occurs near the original enterprise but, in most cases, it is difficult to predict which enterprise has a fast development and to reserve developmental room for one enterprise at the planning and construction stages. Therefore, concerning the industrial development, new urban area planning should be flexible to make room for industrial development. For promising enterprises, room should be reserved appropriately for use if required.

25.3 Stress on Industrial Innovation to Grab High-End Industry

In industrial innovation, the most outstanding in the world is Dubai in UAE. Oil is their traditional dominant industry but, instead of living exclusively on the great profit made from selling oil, they have developed various industries, including tourism, an airline, and banking, by taking extraordinary measures and eventually creating a miracle in the history of new urban area development. Their practice proves that a new urban area and even an urban industry can be created and the development mode can be innovative.

Coincidentally, Shenzhen in China has also made an impressive achievement in the development of industrial innovation. It was originally an agricultural society where people lived by farming. In 1979 the city was set up and in 1980 it was determined to be a special economic zone of reform and opening up by NPC Standing Committee. Later, with the support of national policies and effort by the whole city, rapid development was brought about in the second and tertiary industries and the overall economic society. By 1996, Shenzhen had grown into a complete industrial society with a constantly rising percentage of tertiary industry. In terms of industrial development, at the beginning of the city's establishment, three-processing (processing of supplied materials, samples, and parts) and one-compensation (compensation trade) were the dominant production modes, and, as the starting point of development, this kind of industrial structure was traditional, simple, and low-level. In recent years, Shenzhen has made bold innovations to determine an economic development strategy of taking advanced and new technology as the leader, advanced industry as the basis, and the tertiary industry as the pillar. It scientifically controls the direction, focus, and time order of structural adjustments, constantly pushing forward upgrades and updates of the industrial structure. The city strives to develop many high-end industries, including cultural entertainment, financial insurance, information networking, bio-medicine, life and health, marine economy, and aviation and aerospace. Meanwhile, it gives impetus to the transformation and upgrading of traditional industries, such as clothing, clocks, furniture, glasses, jewelry, etc. In this way it ensures orderly coordination and overall optimization of the industrial structure and promotes a sustainable, healthy, and rapid development of the whole economic society. The practical experiences of Dubai and Shenzhen illustrate that only with extraordinary boldness and efforts can we achieve what others cannot. The new urban area should take courage to break through and surpass itself, daring to do something one has never done before and standing in the tide of times to innovate and create industries. Only in this way can they become the new pinnacles of high-end industrial development and continue in the forefront of world development.

When I wrote this part of the book, CCTV was broadcasting the program "Internet Age" and many articles concerning the internet were published one after another in newspapers and on the internet. Since the 1970s, the world information tide has gone through two important phases marked by information communication

and information content. What follows is a new tide of information, with a huge amount of data, internet, mobile internet, and cloud computing. How can we look at and welcome this tide?

The internet industry is developing rapidly and bringing about industrial revolution. Theoretically, there are different opinions about whether the internet can be considered as an industry and an industrial revolution. Jeremy Rifkin in America, the author of the world best-seller *The Third Industrial Revolution*, says “Information technology and the Internet themselves don’t bring about industrial revolution. To cause a new industrial revolution needs a combination of new communication technology and new energy systems, just as every important economic innovation in history. New communication systems never exist alone and they are a liquidity mechanism through new energy system management.”¹ The internet industry, based on modern and new internet technology, specializes in network resources collection, research, development, employment, production, storage, delivery, and marketing of information goods relating to internet information technology. It can provide industrial aggregation engaged in activities of comprehensive production with effective service for human survival and development. The basic features of this industry are digital distribution, huge amounts of information, fast speed, equal share, and wide application. As far as Chinese information consumption is concerned, the amount has exceeded ¥2,000 billion in 2013, 25 % more than the previous year. Especially information consumption based on the mobile internet has become the most active area with the largest room for growth. Tencent, one of the largest internet companies, began to develop Wechat. By November, 2013 it has developed into mobile instant communication software for the greatest user population with the number of registered users exceeding 0.6 billion and a market value of more than ¥150 billion.

As we all know, the mobile phone represents an industry with fierce market competition. In the 1990s, Motorola ruled the cell phone market in China and then it was Nokia that grabbed the largest portion. The good times didn’t last long when the two powers battled against each other and gradually they began to fall, successively, into recession. Since we entered the new century, Apple and Samsung have emerged as two rival tycoons. Under such circumstances, Beijing MIUI was officially established in April 2010. It specialized in the mobile internet services of independent R&D smart products. With great zeal they pioneered the development of a cell phone operating system by using the internet and encouraged fans to develop improved models. MIUI phones were put on the market in October, 2011. Within half a year, registered users exceeded 3 million and sales reached ¥31.6 billion in 2013. It is estimated that the volume could surpass ¥100 billion. This shows the huge power of the internet.

The internet is reshaping all industries, including the traditional industries such as finance, manufacturing, logistics, retail, education, medicine, etc. Even more than that, it is subversion and revolution. In fact, the internet, still at the early stages,

¹Jeremy Rifkin, *The Third Industrial Revolution*, pp. 14–15.

is growing rapidly as an industry. We still have large areas where we cannot imagine and see clearly. In the immense universe, the unknown is much more than the known. Likewise, the internet is a very large industry and promises great opportunities for development.

The internet is changing everything, including our production, consumption, life, and even politics, the economy, society, culture, and ecology in a particular manner and with special rules. It may sometimes make us feel imperfect and uncomfortable because of its sudden arrival. However, it still comes, fills the time and space of mankind, and is involved in human activities. It becomes a haunting elfin that humans cannot do without, making the world connected so that people can wander anywhere. *We are facing a world which is more open, more rapid, more equal, and more wonderful. In the great new age, we should have internet vision and minds.*

25.4 The Traditional Industry Should Be Transformed, Updated, and Upgraded

Throughout human history, industrial development has experienced a gradual process of primary, secondary, and tertiary industry, where each kind of industry constantly increases in speed, amount, and value and is constantly optimized. This is the law of industrial development.

In the early stages of many new urban areas, they often arrange some small low level projects to reach a certain scale as quickly as possible. With the development of new urban areas, some of these projects, after accumulating enough funds, experience, and clients, need to increase in size and level. Some others, because of wrong investment and management, go bankrupt and close down. The latter can be used by new urban areas to arrange better projects. The single industries of some new urban areas need to be optimized and restructured. It is an irresistible trend and an inevitable result for new urban areas at a certain stage of their development to raise their level and quality. President Xi Jinping of China vividly calls this kind of practice a metamorphosis process of “emptying the cage, removing the bird.”

Now the world is facing a double task in industrial development, that is, on the one hand, new industries spring up and flourish; on the other hand, traditional industries still play a very important role and show rejuvenation and prosperity after rehabilitation. It’s an important responsibility for new urban areas, municipal governments, and all countries to push forward the upgrading and transformation of traditional industries. Germany has taken early actions and practical measures. The country, as one of the most competitive countries in world manufacturing, is famous for machinery and equipment manufacturing as part of its national economy. Under the pressure of new age development it put forward “Industry 4.0” Plan at 2010 Hannover Messe to enhance its international competitiveness. In 2013, industrial, official, and academic experts made up a working group and published a report entitled *Securing the future of German manufacturing industry: recommendations for implementing the strategic initiative INDUSTRIE 4.0*. On August

20, 2014, The German Federal Government Cabinet passed “2014–2017 Digital Agenda,” which aimed to boost economic growth and provide drive for “Industry 4.0” by construction of digital technology equipment. The focus of Industry 4.0 is to combine information internet technology with traditional industrial manufacturing so as to improve production efficiency and achieve the best resource utilization. According to the estimate made by the German Academy of National Science and Engineering, “Industry 4.0” can increase the production efficiency of enterprises by 30 %. Siemens and Bosch, two renowned German companies, have taken steps forward.

China, as the largest machinery manufacturing country in the world, is facing a double challenge posed by the developed and developing countries. According to statistics from the China Enterprise Confederation, the top 500 enterprises of China dropped to 294 in 2009 and continued to decrease in the following years. In 2014, 260 enterprises were on the list, 7 enterprises less in total number than in 2013. In order to achieve transformation and upgrading, the Chinese Ministry of Industry and Information Technology in learning from Germany and is making the “2025 Made in China” Plan, in which the equipment manufacturing industry has got a “triple jump” roadmap. That is to say, by 2025, the Chinese equipment manufacturing industry will have joined the second tier in the world, with some of the competitive industries becoming powerful and strong. By 2035, China will have been in the forefront of the second tier in the world and will have developed into a real equipment manufacturing power. By 2050, it will have become a member of the first tier of world equipment manufacturing powers and will have turned into an influential power.

China has formed a number of influential industry aggregated zones and new urban areas. The high-end equipment manufacturing industry has established representative industry demonstration bases, including LuChaogang Harbor City, Tiexi district in Shenyang, Dalian bay area in Liaoning, and Deyang in Sichuan. Shipping and marine engineering equipment has formed industry cluster areas around Yangtze River Delta, Pearl River Delta, and Bohai Rim. Major brand enterprises of engineering machinery concentrate in some places, such as Xuzhou, Changsha, Liuzhou, and Linyi. Industrial robot parks are set up in Shenyang, Wuhu, Shanghai, Haerbin, and Guangzhou, etc. In the field of high-end equipment manufacturing, LuChaogang Harbor City is the best example of cluster aggregation.

LuChaogang Harbor City has a planned area of 241 km², consisting of five functional blocks—heavy equipment area, logistics parks, main industrial area, complex parks, and Fengxian garden. Since construction in 1996, they, in accord with the development strategy of “port used by city and city prospering with port,” take modern equipment manufacturing, modern logistics, and the shipping service industry as the leader, and take urban service as support. They make efforts to cultivate industrial clusters and speed up integration construction of the harbor city area. Now a new industry demonstration base of national industrialization has been established by combining various functions together, including major advanced equipment, civil aircraft manufacturing, modern logistics, marine technology, R&D services, export processing, and education training. New urban areas with a certain

scale have come into being. However, this is only one little spark in the painful adjustment period of Chinese equipment manufacturing. After going through the difficulties, the spark could cause conflagration. To fulfill the set goals, we still have a long way to go and need to make greater efforts. New urban areas are shouldering a heavy burden and are expected to accomplish a great deal in this regard.

Chapter 26

Industry and City Integration

In terms of industry-and-city integration, industry refers to the secondary and tertiary industries and city refers to the functions it possesses with the people, residences, infrastructure, public facilities, social security, and ecological surroundings within it. The integration of industry and city, through various measures such as scientific orientation, overall planning, rational layout, investment, and construction is designed to match and combine industry and people, city and people, industry and settlement, industry and infrastructure, and industry and social security, and to realize the coexistence of people and buildings, people and ecology, and people and nature, and hence a balanced development can come true with human orientation, city flourishing with industry, industry promoted by city and city-industry interaction, and rural-urban integration.

The fusion of industry and city consists of two situations: one is self-supporting, self-balancing, and self-converging in new urban areas; the second is to integrate resources in a city or within a big region so as to be complimentary with each other, and to achieve balance and blending. For instance, the industrial new urban area and the main urban area, the new urban area and the old, which are close to each other, can be mingled, and promoted together. The book gives priority to the former.

26.1 To Guide with Planning, and Unify Policies

Industry-city integration in the stages of strategic study and making plans for marketing need to be given due attention, the lack of which leads to detachment between industry and city, as, during this period, one needs to design and match people, industry, space, land, and supporting facilities. In China, because of its history and systems, there are three kinds of planning in reality: urban development planning, space planning, and land use planning, which belong to the departments of national development and reform, planning management, and land management, respectively. These three are always detached because of their different functions in real work and because their policies of planning are varied. This has exerted a

profound influence on development and construction in new urban areas and the whole region, and has been haunting the integration all along.

On October 1, 1949, the People's Republic of China was founded. To do well in developing socialism, China, referring to the former Soviet's experience, changed the State Planning Commission as the National Development and Reform Commission (NDRC) and formulates a national economic and social development plan every 5 years since 1953. By 2011, 12 5-year plans had been worked out except for 3 years of natural disaster. Nationally, this plan is first reported by the State Council to the National People's Congress and then approved by the latter and finally put into effect. Regionally, the plan, reported by the municipal, provincial, or county government to the corresponding People's Congress, is carried out after consultation. We should admit that the plans have made great a contribution to economic and social development. However, because the plan is macroscopic and devoid of content, lacking mandatory and continuous implementation, and the situation changes greatly in the economy, society, and politics, it turns out to a splendid plan with a quick implementation. Having agreed, the plan is to be shelved. Because of the position adjustment of some leaders, the focuses and approaches are frequently rectified, leaving the plan in the process of planning without any implementation.

Urban space design is the function of the Ministry of Housing and Urban-Rural Development on the national level, but the department is only responsible for macro policy-making, guidance, supervision, and the establishment of national urban system planning without referring to the details. Each city government and its planning management institute take charge of the urban-and-rural space design in the region. In accordance with the *Urban-Rural Planning Act of PRC*, the urban-rural planning should follow the planning of national economy and social development, and connect with the overall planning of land utilization. In practical work, because of the planning mentioned above, which is not mandatory and very general, the planning management agency only takes it for a reference, failing to actualize it in space and time when making the space planning. There is always differences and discrepancies in the recognition of urban function, development space, and project identification. To some city governments, the purpose of planning is not only space layout but also space expansion, integration, and increase of resources, that is, it should be adjusted till maximum urban interest can be obtained. As long as the space planning is made large, the blueprint is painted well, and the national land can be obtained for construction, so that more secondary and tertiary industries can be developed and hence the city made larger. In this way, the city and its government can occupy a place politically, economically, and socially. Therefore, the city government attaches great importance to space planning. However, this kind of urban space planning is frequently constrained by factors such as land index, approval from the government of higher levels, or the state. As a result, some planning cannot be put into practice. To solve this problem, some urban governments try to cut down some scale indicators for approval. In recent decades, the urban planning of many cities in China has broken the limited scale of

approval from the upper levels. What they can do is to revise the planning every few years for guidance in urban construction.

Land utilization planning, a restrictive design, aims to protect cultivated land and improve the efficiency of land use. It restricts the local area or city to developing and exploring land by means of distributing index from top to bottom, namely first from the state, then cities of different levels, then provincial and county governments. As a matter of fact, this conflicts with the impulse or desire for development and expansion cultivated by the urban and local governments. Under these circumstances, the local governments try to make an extensive planning of land use with the purpose of striving for the index of land occupation from the government at the upper levels. At the same time, they make great efforts to seek land for use, ignoring the positioning of space planning. Instead, they put the landing of industrial projects first. Therefore, it is hard for us to achieve the coordination of urban development planning, space planning, and land use planning, and the urban population and industry, city and industry, economy, society, culture, and ecology are difficult to mingle together and develop harmoniously.

The way to solve the problem is to unify three policies, that is, to combine the urban development planning, space planning, and land use planning. How to combine them? Guangzhou city in Guangdong province made the first experiment. They fused the hybrid information such as land boundary, space information, and construction projects onto one map, and brought the planning statistics, approval information, and real-time situation into the information interaction platform, establishing a comprehensive model of accepting business in departments of development, planning, and land resources, as well as a coordinated working mechanism by applying scientific and technical methods and informing internal working procedures. Hence, the urban-rural space resource and function layout can be optimized and the land can be intensively used so as to ensure the realization of urban functions. These explorations are very objective under the current system and worth learning from. The key of policy unification is the integration and harmony of functions in three departments: government planning, planning and management, and land management. They had better have a unified management. Otherwise, each department has its own function and benefits and policy unification is beyond reach. The unification demands simultaneous formulation, timely closure, and action in step. The simultaneous formulation is to be made up by people from the three departments, decided by the government collectively and implemented and coordinated together.

The city is a big system. It does not work when considered from just a few aspects, let alone just one. Based on the policy unification, we should combine and carry forward the professional planning of environment protection, fire control, transportation, municipal administration, culture, education, sports, public health, greening, and society, with the purpose of creating conditions and supplying guarantees for industry-city integration.

26.2 To Carry Forward the Synchronous Development of Industry and City

The public facilities in new urban areas of residence, schools, public health, sports, business, hotels, and entertainment should be developed with the purpose of serving, gathering, and delighting people. The synchronous development of industry and city must push forward the landing of the secondary and tertiary industries, focus on the industrial development, and plan and implement municipal and public facilities. The following points should be noted.

First of all, the industry-city development should be matched accurately. What's the area of the new urban area? How large is each functional area? How many people live there? How many supporting facilities are needed? In the phases of construction and development, to what degree and to what level should we work? We should calculate carefully and predict scientifically in order to have a clear aim and design. As the new urban area is developing and different industries are working and growing, the supporting facilities should be developed according to demand. If excessively built, the resources lie idle; people's lives and industrial development are influenced to a greater or lesser extent.

Second, it should develop moderately in advance. It is reasonable that the infrastructure development is ahead to moderate degree. Too fast and too early development can both have a great influence on the overall effect of the new urban area, for there are no people and projects, or less people with few projects. Or in a large area of dozens of square kilometers, where plenty of infrastructure is provided, the facilities lie idle, funds are wasted, and maintenance and management costs too high. With few high speed railway projects for new urban areas, one city government built roads with billions of investment loans in order to achieve supporting infrastructure conditions. This investment behavior is irresponsible and unscientific, and causes serious waste. Infrastructure development should be arranged in advance in moderation and in accordance with the real demands of people and projects.

Third, it should be developed intensively. With the promise of unified planning, it refers to the intensive investment, equipment, business attraction and project placement by the government within a certain limit. Haphazard scattering is prohibited. Singapore and Hong Kong provide good examples in this respect and they are worth learning from.

Fourth, it should be equipped openly. It means the infrastructure development and implementation of industrial-urban integration should be conducted by adopting the market approach with a broad mind and open view. The government is responsible for planning and public facilities development that enterprises cannot do. It also takes charge of mobilizing social organizations and market forces to invest new urban areas. That is to say, we should make use of the available resources in the nearby old quarter or other regions to develop the new area. For instance, an industrial park of tens of square kilometers, subordinate to some district government, has few projects and limited waste water. It could have used the

sewage treatment plant in the city to process polluted water; however, the government invested more than one hundred million yuan in building a sewage treatment plant in the park to brag about its complete functions. As a result, insufficient polluted water meant the equipment laid idle and cost a lot of operating and management expense. The company was stuck in debt. As the present time is one of resources integration, what we should do is to take the opportunity to develop, and consider how to make use of resources over a wider range.

26.3 To Find a Suitable Method for Improvement

On June 4, 2012, it is reported in *Getting Stuck in the New City*, an essay written by journalist Chen Wenya in *The Economic Observer*, that the delay of infrastructure building in Tongzhou, Shunyi, Daxing, and Fangshan caused inconvenience and trouble for residents in Beijing, a place with the national key investment guarantee. It would be understandable why the same problem arises in other new urban areas. Urban infrastructure development cannot catch up with the fast-growing population, which results in an empty city, dormitory town, or dead city. Therefore, we should make clear where the shoe pinches and find ways to deal with the particular situation.

Because the function of some new urban areas is not appropriately positioned or the macro situation takes profound change, they should keep pace with the times and pay close attention to the adjustment of strategic development by relocation and implementing change of function and priority. The economic development zones throughout the country have undergone a glorious history over 30 years, making a great contribution to opening and reforming, economic and social development, as well as urbanization. However, the present situation, international and within China, has changed dramatically. Internationally, because of the effects of financial crisis in America and the bond market in Europe, the overseas market has been sluggish. America and Europe have improved their market competitiveness through adjustment. Some neighboring countries and developing countries are contending for markets with China because they all have lower production costs. If the economic development areas are exported-orientated or rely on exportation, they would confront a great challenge. Domestically, because some economic policies tend to be strict, impartial, and transparent, some industries in over-capacity situations are restricted in various aspects such as land use and environment. They attract some low-level and polluting projects by means of selling land at a low price and bring in investment by reducing or remitting taxes. In some economic development areas the infrastructures are far from satisfactory, and it is difficult to introduce population and attract talents. In this situation, the economic development zones should adjust, formulate a new development strategy, improve quality, perfect function, and transform into scientific and technological, intensive, and ecological new urban areas.

We should admit that industrial-urban integration, industrial development, and perfection of urban functions are a gradual process, which demands enhancement step by step. Some new urban areas are especially constrained in population, planning, investment and land, so they cannot achieve the effects of integration of industry and city, and supporting development in a short time. "It is hard to start at the very beginning, and so is the process of construction. Auxiliary projects should first be developed and then we strive for perfection." I used these lines to illustrate how difficult the new urban area achieves functional perfection. When the new city area starts, it relates to planning, land acquisition, demolition, investment and construction, examination and approval from higher authorities, and adjustment and reorganization of regional administrative systems and working systems. Some of these are hard to deal with. In development and construction, there are many emergencies such as leaking here and steaming there. In addition, funds and construction manpower are always in short supply, so we can but be man-orientated and focus on the landing of the second and tertiary industries, implementing infrastructure development and perfection. It's normal and natural that some functions start early, some late, and some are incomplete in the new urban area development in any places or countries. Some new urban areas set "launch in 1 year, shaping in 3 years, and completion in 5 years" as their goal, which is understandable as an encouraging slogan. However, as a working plan and an action agenda, it talks rubbish and is impossible, or at least it is rather difficult because new areas are usually very large. Everything develops according to its inner regular pattern, and the development is a process. In initiating and constructing, industry and urban function should not be separated and bulldozed. We should follow the development law, deal with the relations between various aspects, seize key points, highlight priorities, make up for the weaknesses, and strive for a balanced provision of infrastructure and amenities, promoting the industry of the new urban area and perfecting its function.

26.4 The Process and Experience of the Industrial-Urban Integration of Irvine in America

Irvine, located in the southeast of California, USA, is one of the largest urban communities that the United States has planned. In 2011, it had a population of 218,000 and a total area of 65 km². Although with a short history, it has been regarded as the safest, most pleasant community with good industrial development and ecology. Especially in the last 10 years it has been ranking top in the Hot City list in America, so it becomes a model case for the integration of city and industry.

26.5 Development from Development Zone to Industrial-Urban Integration

Irvine boasts its good natural environment and convenient transportation. It is situated in the center of the technology coast in South California, the central area of Irvine Ranch, most of which is valleys and plains. To the south is the Pacific, and it has plenty of sunshine and a warm climate. It is less than a 1-h drive from Los Angeles.

What makes the city so appealing is its excellent ecological environment, an important factor. It is in constant pursuit of economic growth, social development, and harmonious coexistence with the ecological environment, which make it the most attractive city in the USA.

The urban development has undergone the following stages:

First is the farm and ranch management stage (1860–1959). In the 1860s and 1870s, James Irvine purchased successively 23 miles of ranch ranging from the Pacific coast to the Santa Ana River. In 1894, Irvine Company was founded, and gradually transformed the ranch into farms, olive groves, and orange orchards. In 1959, the last heir of the Irvine family passed away and the company has subsequently been managed by the chairman of the board.

Second is the college community planning stage (1960 to the late 1960s). As the Los Angeles metropolitan area continued to develop, Irvine Ranch found a new opportunity for development. In 1959, the company decided to sell 4.05 km² of land to California University at the price of \$1, a symbolic price. The California government donated about 2 km² to the university as a campus. During this period, the designers from Irvine Company and California University joined hands in planning: around the university a city was to be built, a new city which could shelter 50,000 people with a reasonable mix of industry, business, housing, and entertainment. In the mid-1960s, the Orange County government approved the community planning. Focusing on community development, Irvine Company took added measures such as reserving massive open spaces and setting up protection zones in the highly developed communities. It has laid an important foundation for the development of Irvine.

Third is the joint planning and development stage of Irvine industrial areas and communities (1970–2000). In 1970, the West Irvine Industrial Area (now called Irvine Business Complex) began to open to the outside and introduce businesses, and the residences of Turtle Rock, University Park, Walnut, and Culverdale were founded one after another around the campus. In December, 1971 the community residents voted for the foundation of Irvine city. In 1977, the Irvine Company invited the well-known Wallace, McHarg, Robert, and Tohti, four design and planning offices in Philadelphia, to make a plan which characterized the harmonious development of industrial areas and communities, especially with the idea of applying the botanical garden development, which offered an important approach for integration. In the late 1980s, Irvine conserved more than half of the farms and about 178.2 km² was planned as natural habitat protection and 24.3 km² for parks

Table 26.1 Some high-tech industry enterprises in Irving

Industry involved	High-tech enterprises
Biological pharmacy	Edward Life Science LLC, Allergan INC, B. Braun Medical INC, Alcon Laboratories, Pfizer INC, Sicom Pharmaceuticals, Teva Parenteral Medicines INC
Semiconductor and electric equipment	Broadcom, Hines Nurseries, Toshiba, Advantage Crown, Cannon, Epicor Software Corp., Western Digital, Cisco
Computer games	Blizzard Entertainment INC
Aircraft and car design	Parker Hannifi, Mazda, Kia, Lincoln-Mercury, Ford Motor Co., Volvo Cars, Aston Martin, Jaguar Cars, Land Rover, Toyota Material Processing, Daimler Chrysler
Professional services	Verizon Cello Partnership, Capital Group Companies LPS Agency, Western National Property, FedEx, Rxsolution INC Prescription Solutions

and open space. The urban planning and development mainly focused on natural habitat protection, parks, and open space for layout.

Fourth is the win-win stage of economy, society, ecology, and life (since 2000). As we enter the twenty-first century, the harmonious community living environment, the convenient transportation, the business atmosphere of benign competitiveness, the standard and perfect educational institutes persuade people to choose to live in Irvine, with the permanent population increasing from 10,000 in 1970 to 210,000 in 2011. According to the statistics from the FBI in 2010, the crime rate in Irvine was 83% lower than the national average and 85% lower than the state rate. It has the lowest crime rate among those with over 100,000 residents. The urban high-quality surroundings and education resources attract well-known international business institutions such as R&D centers, regional headquarters, and group headquarters, so it has earned the title of the second Silicon Valley. Different from the Silicon Valley, Irvine's high-tech industry has a much wider range, including semiconductors, wireless communication, biological pharmacy, computer games, and car design, which forms a polybasic industrial group (Table 26.1).

26.6 The Practice and Exploration of Irvine's Industrial-Urban Integration

Turning from a development area into a community city with a complete design, and being based on urban ecology, Irvine finally realizes its integration of industry and city. It develops in accordance with the following aspects.

Number one is to take a sustainable development strategy as the basic principle for urban planning and construction. The whole city's development originated from the private enterprise investment in the market economy environment. The big decision of the urban construction also pays attention to market factors, and the

planning is formulated in the direction of benefit maximization and sustainable development. It is actualized in the following ways.

First, the municipal construction aims at meeting population growth. Because the population is increasing, Irvine pays attention to infrastructure investment, renovation, and improvement. In the last 10 years, Irvine has made considerable growth in the spheres of permanent population, parks, public space area, and road building. There are tennis courts, swimming-pools, and tiny gardens in almost every community so that the people’s demands for entertainment and leisure can be satisfied.

Second, the ecological space pattern is environment-friendly. At the beginning, Irvine planned to reserve the natural water system and wetland and construct the complex ecological system with a multistage water system and green network as the framework, connecting more than 100 parks with man-made lakes in the city with the purpose of supplying residents with water sports (Table 26.2).

Third is to lower the pace of life and highlight the slow urban traffic system. Irvine’s traffic planning characterizes the improvement of slow traffic ratio, and the creation of low energy consumption, small occupation, efficiency, and good service. In Irvine, the high-density independent cycle lanes connect most residential, industrial, and public service areas and green spaces, creating the pleasant pace of going slow, which gradually becomes the first choice and an important component of the comprehensive function of urban communities. At present, this system has built two kinds of bike track: cycle lanes and those beside bus lane. The total length is 71.6 km.

Table 26.2 Contrast of industrial-urban integration in Irvine and Tsukuba Scientific City

	Irvine	Tsukuba Scientific City
Role of government	Irvine started to develop from private enterprise investment in the market economy. The government was founded after the urban establishment. The policies are market-orientated and the government makes its decisions on and for the market	The government played an active role in the early urban development, but in the late period the government orientation economy began to show its disadvantage. The need for a self-survival mechanism and blood-making function finally led the city to deviate from the beautiful scene painted in the planning
Industrial structure	The industrial structure guided by high technology is diversified. It has developed manufacturing, services, logistics, and clothing	The main industry is high technology. The single industrial structure has lower risk resistance capacity. The urban economy can be easily hit in macroeconomic fluctuation
Urban amenities	The investment source is private enterprises. The market-orientated investment mechanism makes developers aware of the importance of infrastructure. The amenities are appealing to the population, make higher profits, and realize win-win	Originally, the government planned to develop the city as a new city with high-tech industry, so the investment focuses on it. The input to amenities is comparatively insufficient, lowering the attraction to residents

Fourth, the architecture style is classic, harmonious, and matching. Irvine's planning considers various villages and every community has its own unified style, combining natural and humanist styles in different regions. In the process of design, the classic style is selected to infuse the exiting urban space so that it always remains in fashion. Four facades of buildings are guaranteed with the same style and materials. The integral urban image should not be spoilt when viewed from any perspective.

Number two is making sure the high-tech industry is stressed, giving impetus to multiple industrial structure development. Irvine has 17,000 companies, big and small. A lot of well-known enterprises have moved their headquarters or production development centers in Northern America into Irvine and formed a pattern with high-tech industry as a leading section, high-end services as a supporting factor, and traditional industry as an auxiliary part, such as the car industry, logistics, and clothing. Hence, Irvine has enhanced its anti-risk capability and has become more stable in its development. In the late 1990s, when the high-tech industry bubble burst, Silicon Valley had been seriously damaged, whereas Irvine's industrial development had not been significantly affected, its multiple industry patterns playing an important role.

Number three is concentrating on transit-oriented development (TOD) and ensuring that a good human settlement is being created. The most attractive part in United States New Urbanism is TOD, which attaches great importance to the hybrid configuration of land function, stressing a walking distance of no less than 600 m from the core area—which consists of the transport hub station and business facilities—to the boundaries of communities. It has become the key concept and pattern in city planning. That is, residence, the retail industry (catering, markets, and laundries), offices, and public space are set in a walking environment through a network connected with rapid bus transit, so that over 100 TOD communities are integrated within a single suitable regional development frame system. Every village has a Neighborhood Center and Neighborhood Park to meet the demands of residents' daily shopping and living. Hence, urban traffic pressure has been reduced. As the residents are having such a good quality of life, a series of complex urban problems have been solved such as land utilization rate, environment pollution, energy consumption, and traffic jams.

Number four is concentration on public security and education services. Promotion of community policing and standard for safety supervision is a continuation of Irvine's overall planning thoughts. Of the city budgets, one-third is spent on public security, which not only includes policemen's salaries, but also infrastructure development and planning for fighting crime. For instance, urban infrastructure development such as well-lit parking lots and broad vision streets must be examined by the police station so that a higher safety standard can be obtained. Meanwhile, according to the situation of community residents, the police adopt six languages to work with, including Chinese, Korean, Spanish, Persian, etc., and communication problems are effectively eliminated. Therefore, it has achieved remarkable results in preventing and reducing crime. With regard to education, Irvine Unified School District (IUSD) is generally considered to be one of the best

educational system in the USA, possessing 22 primary schools, 5 junior high schools, 4 senior high schools, and 1 high school of continuing education with student numbers exceeding 24,000. The schools provide a creative teaching plan, involving an open teaching environment, team cooperation in teaching methods, and excellent collaboration with the community. With the joint efforts of students, teachers, communities, and governments, the students in Irvine have better grades in learning, arts, and sports, and they receive more awards than the state and national average.

(Based on relevant material by Shanghai Science and Technology Development Center).

Chapter 27

Industrial Talent

New urban area development demands support from many aspects, and various factors and conditions for guarantee such as talent, funds, land, infrastructure, policies, laws, and social surrounding, among which talent is the most important and the core part. *Prospering talent may lead to the industry flourishing; declining talent may cause the industry to decay; industry relies on talent for growth; policies rely on talent to carry them out; the nation relies on talent to succeed.* Talents play a significant role in industrial development, urban growth, and the rise of the nation.

27.1 Industrial Development Demands a Large Number of Talented People

It is generally acknowledged that Silicon Valley in the USA is the most creative, vigorous, and competitive industrial park, and it is also one of the most successful new urban areas at the present stage. There is little controversy about this high recognition.

What is the secret of its success? Why has Silicon Valley guided the international high-tech industry for decades? There are a lot of papers illustrating this point. I think the secret of its success is talent, high-tech talent. America is a country with the largest number of talented people and the most densely populated with talented people. Silicon Valley is the focal point for high-tech talent, including scientists, engineers, entrepreneurs, financiers, and consultants wanted for industrial development. The excellent talented people from Stanford University and Berkeley University play a great role in promoting the development of the Valley. Well-educated professionals generally accounts for over 80 % of company personnel. According to a survey carried out a few years ago, there were more than 1,000,000 scientists and technicians from American and the world. Nearly 1000 of the fellows in the American Academy of Science hold posts there; over 30 were awarded the Nobel Prize. The Valley is the holy land in the mind of American youth and is also the arena and amusement park to create business for overseas students throughout the world. Outstanding people are attracted by its reputation.

According to statistics, immigrants with professional skills account for one-third of the Valley engineers. Among the immigrants from all over the world, Chinese and Indian immigrants have made a great contribution to the development of the Valley. The companies founded and run by immigrants account for one-third of the high-tech enterprises in the Valley and those by Chinese and Indians account for a quarter. The Chinese people are about one-third of the local population and Chinese holding high-tech companies about one-fifth.

Why is the Valley so appealing? Why are the talented people here so creative and original? It has an effect on industrial development throughout the world, especially in the high-tech industry, and we need to learn how the Valley attracts and inspires their talented staff. This needs studying from various aspects.

27.2 To Have an Original and Creative Culture

The original culture is open, has equal opportunities, tolerates failure, and respects success. The birth of Silicon Valley illustrates the point. In 1935, William Hewlett and David Packard wanted to work in the eastern regions when they graduated from Stanford. Frederick Terman, father of Silicon Valley, encouraged them to establish a business locally. These two young men gathered together \$538 and rented a garage; finally, HP was born and the garage entrepreneurial culture emerged. Heroes should not be judged by their origin. In Silicon Valley, the entrepreneurs are mostly young and full of challenging spirit. They enjoy working and pursue self-realization. There are many small companies consisting of two or three persons and most of them specialize in software development. They appear on the market after obtaining venture investment. After selling one company, young entrepreneurs start another. They enjoy creating companies. The well-known Silicon Graphics, Cisco, was founded by college students. In 1994, the Chinese student Yang Zhiyuan and his classmates composed a search program and put it on the school network. It was so well acclaimed that the network in the school became very crowded and aroused complaints from the school. Therefore they quit school and registered a company called Yahoo.

Stanford backs up the technology and talent in Silicon Valley. Their motto is “Die Luft der Freiheit weht” and they offer over 20 courses which cover the knowledge structure necessary to start a business. More than 95 % of students select at least one of these courses. In Silicon Valley young men are in the majority and they are open-minded, advocate freedom, and have active thinking. Here some office work and study are free and some management is flat and flexible, stressing results rather than processing. In this free atmosphere, the culture and spirit specific to Silicon Valley take shape and become core values unprecedented in the world. Of course, its freedom does not mean that there are no rules; it refers to the freedom of development and business creation based on general conceptual recognition under the standard social system and transparent market mechanism, breaking

through all bonds of traditional thinking. It is concentration of responsibility, duty, the legal system, equality, fair standards, and social morals.

Talented people have talents which make them different from common people in some way; some have prominent personalities; some have racing minds with free spirit; some are aggressive; some are reckless and desultory; some are arrogant and fearless of power and authorities. These talented people must be tolerated and encouraged and protected with a flexible system. We need favorable policies and treatment to guarantee this.

27.3 Rich University Industry Cluster Is Needed

The Silicon Valley area has eight universities and nine technical academies, including the famous Stanford University, Berkeley University, and California Institute of Technology. These organizations focus on training practical scientific and technological talented people, stressing the natural and engineering fields, and combination with companies. Stanford was founded in 1891. In 1920 when Fredrick Terman was the vice-president, he combined the university's scientific research with enterprises, creating a university-research-industry pattern to promote the development of Silicon Valley. There are dozens of new enterprises which start their businesses every week in the Valley, and the survival period of these small companies is less than 18 months on average. A company goes public every 5 days. An average of 62 persons become millionaires every day. Every year more than 2000 invention patents come out. Over 400 well-known venture investment companies throughout the world cluster here. The Valley has become the park for young people to create mystery and a heaven to realize their dreams.

New urban areas want to develop industry, especially high-end industry, so they have to rely on the talents, intelligence, science and technology, information resources and power from the universities and scientific research institutes. Governments and enterprises should join hands with these institutions. Only in this way can the industrial park get the required talent, resources, and scientific and technological backup, and reach the summit of science, technology, and industry.

27.4 Favorable Policies, High Wages, and Benefits

According to a salary survey report produced by The Wall Street Journal in 2012, the average annual salary of American software engineers amounted to \$92,600. The several top ones on the pay list are employed by famous companies such as Google and FaceBook. The highest are the software engineers of Google who get \$128,300 per capita every year. Next is FaceBook which offers \$123,600 per capita every year and Apple \$114,400. The wages offered by various companies are not so significantly different. For example, eBay pays \$108,800 per capita every year and

Zynga \$105,600. Software engineers are not only highly paid but they also receive other attractive benefits in stock rights and share options.

Wages and benefits are the real demands for human survival, important criteria to measure the contribution made by talented people to society, their productivity, and their social value. *Investment in talent is the best investment because the return on investment is the highest. Industrial talent is essential to the development of industry.* In offering talented people attractive wages and benefits, enterprises, cities, and nations offer competitive conditions to find the right people. A good salary, good research conditions, and good living conditions are necessary to attract high-end and creative talent with the purpose of developing the high-end industry.

27.5 Social Environment Should Be Tolerant

For social openness and tolerance, the industrial society is comparatively better than the agricultural society; urban areas are better than rural areas; large cities are better than middle-sized cities; immigrants countries are better than the non-immigrants. Shanghai and Shenzhen in China are immigrant cities, two of the first to open to the world. As an immigrant country, America is generally considered to be an open and tolerant society regardless of its occasional racial issues. Compared with agricultural society, the industrial society and cities have good education, developed economies, high income, and a high demand for human survival and development. Nowadays people have greater mobility and move further. People who have dreams and professional skills, especially young people, rush to cities for opportunities, starting businesses, improving themselves by moving from countryside, mountain villages, and grasslands. These people gather together and form a multinational, multiracial, multi-religious society with different languages, industries, and ages. They do not have the conventional prejudices of the original neighborhood, nor constraints from parents, nor traditional culture, and not too much of a psychological burden, so they can get along with each other and open their minds to communicate. Their inspiration can be easily sparked to create the future. An immigrant culture takes shape, so does a city and a country with cultural diversity. Hence, in economic and social development, the immigrant city develops faster than the non-immigrant city, immigrant countries faster than non-immigrant countries. Of course, in seeking the common value and creating and shaping urban culture, and in the recognition and treatment of racial and religious issues, immigrant cities and countries encounter some problems which do not exist in non-immigrant cities and countries, some of which are very troublesome and can last for a few years. However, if we take a correct perspective, and get on with each other equally, no doubt things can improve.

Silicon Valley is one of the gathering places with cultural diversity. The number of high-tech immigrants is still increasing. The excellent talent from all over the world creates the Silicon Valley culture in equal competitiveness. The open and tolerant culture appeals to talented people and brings them together. In 1976, Steven

Jobs and Steve Wozniak founded the Apple Company. In 1980, Apple appeared on the market, joining the ranks of world business. In 1985 Jobs introduced a new type of computer, but it was functionally inferior to IBM computers, causing the enterprise loss. Under this situation, Jobs still insisted on making the product development on his own and the company board voted unanimously to dismiss him. Jobs had no choice but to start another and worked hard at it. Five years later, his new product finally defeated IBM and Apple invited him back. If Jobs himself and the Apple company had not been broad minded, and the social environment had not been tolerant, this could never have happened.

The American city Detroit, the bankrupt city, makes a sharp contrast with Silicon Valley. It was originally a well-known automobile city. I got to know it when I was a young man. In the first half of the twentieth century, Detroit hosted General Motors, Ford Motors, and the Chrysler Group. In 1929, car production in Detroit amounted to 80 % in America and 70 % in the world. The flourishing of the automobile industry attracted a large number of southerners, and its population increased rapidly. In 1950, this reached 1,850,000. However, in recent years, Detroit encountered bankruptcy. According to the analysis, it was a joint effect of economy, society, and culture. Economically, Detroit has a single industry; its market competitiveness declined; its government was in debt and it was difficult to survive. Socially and culturally, the racial policies caused by racial politics led to racial conflicts and the social problems became serious. In 1943 a racial riot broke out in Detroit and another on July 23, 1967. The blacks burned down many houses, shops, and police stations owned by the whites. After the fire, the urban area of Detroit was nearly in ruins. A large number of middle-class whites and highly-qualified talented people fled away. Civilization had broken down in this city. The former prosperity was gone. By 2010, the population in Detroit had dropped to 713,777 and by 24 % of the demographic census in 2000. The people leaving the city were mostly whites, intellectuals, entrepreneurs, artists, and wealthy people. This had a decisive influence on the decline of Detroit and it shows the deeper contradictions in American society. We should draw a lesson from it.

The tolerance of society and the diversity of culture symbolize the prosperity of a city or a country. *Tolerance brings respect. Cities should be inclusive and collective. Otherwise citizens evaluate and select cities by "voting with their feet". If they feel the city is unpleasant or unfriendly, they will desert it.* Even though cities adopt measures to urge them to stay, it is hard to retain them, and harder to retain their talents. Jesus says in Matthew 10: "When they persecute you in this city, flee to another." In order to attract and inspire talented people to promote industrial development, the new urban areas should have favorable social and living surroundings and legal institutions, so that everyone can be equal politically, free in faith, comfortable in living, with the political system tolerant and the people safe.

Part VIII
On Cultures

Chapter 28

The Cultural Connotations of New Urban Areas

It is acknowledged by more and more people that culture gives human beings a sense of belonging. As the soul of a city, culture shows the city's unique charm and characteristics and is at the core of its competitive power. We should attach great importance to cultural development at the researching and strategy-making period of a new urban area, and continue unremittingly to enrich and improve it.

28.1 Culture Is Inspiring

Extraordinary, inspiring, and flavorful, culture is to be chewed and digested. Experts and scholars both at home and abroad define “culture” in a thousand different ways. What are at issue are the scope, forms, and development characteristics of culture. The well-known Chinese sociologist Deng Weizhi subdivides culture into three levels—large, medium, and small. Some scholars abroad such as Taylor and Kluckhohn classify culture into the mode of life, capabilities and habits, and ideology. Rao Huilin, an outstanding Chinese scholar, believes that culture is the totality of material and spiritual wealth created by art, knowledge, and ideas, and the corresponding social organizations, systems, and behaviors which come into being in the course of human society, stemming from the objective world and reacting upon the objective world. Although it is broad to some extent, this definition is quite comprehensive and adoptable viewed from its interpretation of culture, explanation of phenomena, and promotion of construction.

28.2 Urban Culture Is Colorful

The famous Chinese writer and cultural scholar Feng Jikai believes that culture is intangible.¹ Some other scholars hold the same view. In fact, culture is concrete, tangible, and visible, as well as invisible. Sometimes it functions imperceptibly,

¹Xu Mindan, Holding culture in awe, *The Solidarity*, March 30, 2013.

sometimes directly and eruptively. It exists in many different forms, mainly in architecture, cities, texts, books, and so on. Therefore, we cannot study culture without studying cities, and we cannot do without culture in urban planning, design, and construction.

A city is a great museum which is full of culture, spatially and temporally. Lewis Mumford, a famous American urbanologist and sociologist, wrote *The Culture of Cities*, which became a classic on urban culture. Then his masterpiece *The City in History* also expounds on urban culture in an incisive way. Anyone who wants to understand cities should read his works. Here are a few quotations:

The city, as one finds it in history, is the point of maximum concentration for the power and culture of a community.

The city in essence is the incarnation of humanity.

The chief function of the city is to convert power into form, energy into culture, dead matter into living symbols of art, biological reproduction into social creativity.

On the origin, gathering, and storage of culture in cities, there are some appropriate and vivid metaphors. For example, Lewis Mumford holds that a “city is a container of culture” which “stores, spreads and creates culture, probably three basic missions of the city.” Some scholars hold that a city resembles the growth rings of trees which indicate its growth year after year. Professor Colin Rowe of Cornell University put forward the concept of “collage city” which considers a city as a historic sediment, each era leaving its footprint (sediment) in the city. He advocates the coexistence of old and new in a city.

Urban cultures vary from city to city because of their different histories. There is a saying in China: “if you want to study a city with a history of 2,000 years, go to Xi’an; to study a city with a history of 500 years, go to Beijing; to study a city with a history of 100 years, go to Shanghai; to study a city with a history of 30 years, go to Shenzhen.” That is to say, cities manifest different characteristics at different historical stages. The year 2013 witnessed the 170th anniversary of Shanghai’s opening as a commercial port. Over the years, Shanghai culture has encompassed different contents at different periods, and has played different roles in China. Xu Jilin, a famous scholar of ideology and culture, claims in his “Reflections on Shanghai Culture” that the 1920s and 1930s witnessed a colorful Shanghai embracing a variety of Western traditions. However, now its cultural status is reduced, with its cultural richness castrated and abused.

Urban cultures also vary from place to place. The Wenchuan earthquake in Sichuan Province on May 12, 2008 was the most damaging and the deadliest earthquake to hit China since the 1976 Tangshan earthquake. From May 29 to June 6, 2008, together with the staff of the earthquake and disaster-relief headquarters of Shandong Province, the author of the book stayed in Mianyang City, 72 km from Beichuan County, which had the most casualties, and did aid work for Beichuan County. At that moment, the whole of Mianyang City was calm and peaceful, with some people playing mahjong in a few stores during the day, and some people practicing party dancing on the square early in the morning and at night. From these, I sensed the optimism and presence of mind of the Sichuanese people

cultivated by living in the “land of abundance” with green mountains and clear water, and began to comprehend why Deng Xiaoping, who could rule a great nation as if cooking a small delicacy, was born and bred in Sichuan Province. Each place has its own way of supporting its own inhabitants, and each city has its own culture.

Different types of cities have different cultures. Comparatively, the culture of industrial cities is rigorous and simple, because manufacturing and production enterprises take a large proportion and the industrial working class is the main body of society. The commercial and service-industry-developed cities and tourist cities are open, free, and romantic because of the size of the floating population. Immigrant cities boast their prominent features of diversity, tolerance, and openness. These differing cultural characteristics and atmospheres flow and exude in Chinese cities such as Xi’an, Chengdu, Shanghai, and Qingdao, which can be sensed and felt by everyone.

28.3 Connotations and Elements of New Urban Culture

The city is the aggregation of culture. Is there any culture in new urban areas? How to foster and shape culture? To begin with, let’s sort out the cultural elements composing the physical form of cities.

As a form of public art, architecture most distinctively and vividly reflects the culture of a new urban area. During our visits to Germany, the United Kingdom, and other European countries, the local people usually show us their churches and universities, which are part of their history and culture. In the United States we have witnessed the vogue of Fifth Avenue, the prosperity of Wall Street in New York, and a multitude of museums in Washington. Over the last one or two decades, Dubai of the United Arab Emirates has been the most daring on Earth in this regard. In just a few decades, there have been erected the Dubai Towers, the Burj Dubai, Diamond Ring Hotel, Burj Al Arab Hotel, Anara Building and some other world-famous magnificent buildings, row upon row, mostly in beige, reflecting Dubai’s unique, innovative, and audacious culture and urban style in their effort to build an international metropolis. What Dubai has done and innovated in urban architecture and culture awaits experts on development and construction to conduct a detailed study.

Structures such as chimneys, water towers, TV transmission towers, monuments, billboards, and memorial archways can adorn and beautify the urban environment, and even become landmarks in modern cities. For instance, Ruins of St. Paul is a symbol of Macau, and the Oriental Pearl TV Tower is a sign of Shanghai. Therefore, remaining structures such as the water towers and chimneys in some cities fossilize and symbolize the past, and should be well preserved and maintained. Given proper rehabilitation and renovation, they can be great urban works of art (Fig. 28.1).

What a beautiful structure, and how magically it was transformed! However, for many years China has committed two common mistakes in dealing with these

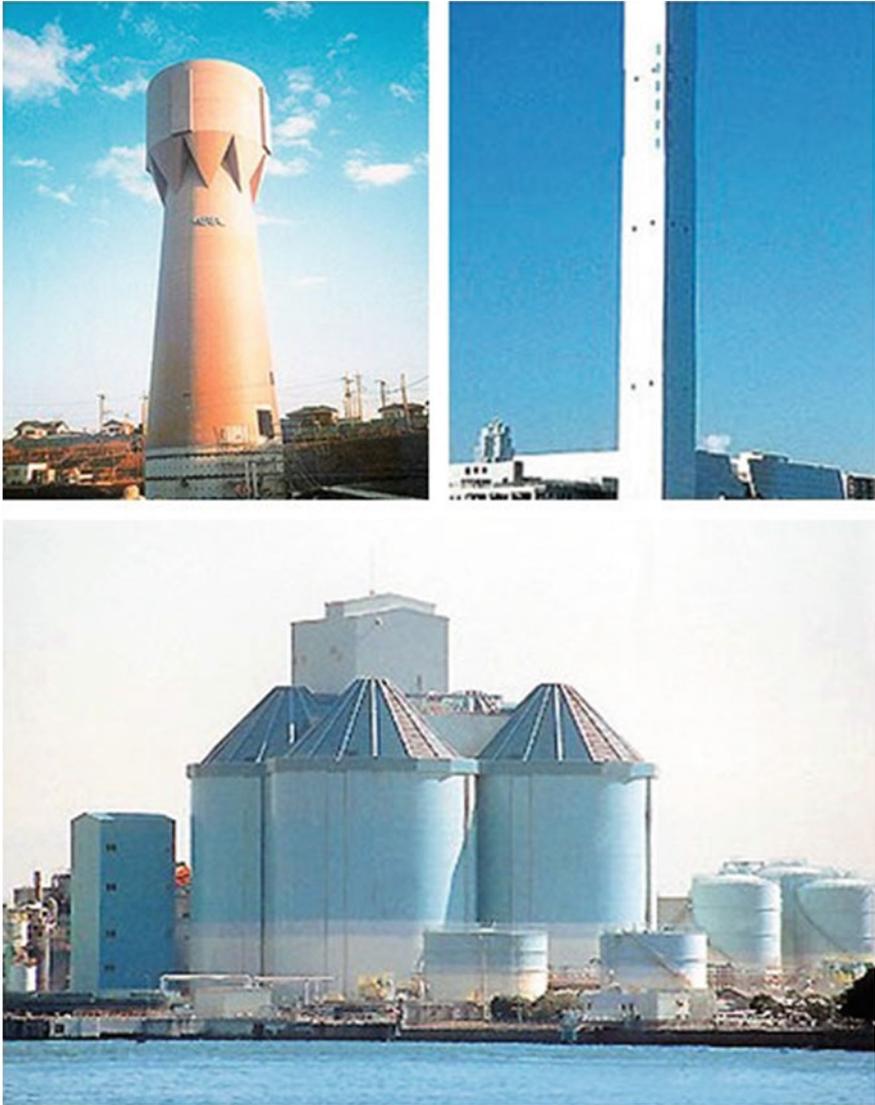


Fig. 28.1 Modeling art and design of industrial buildings in environmental science

structures: one is to demolish them seeing that the water towers or chimneys belonging to the units are out of service because water is supplied on a unified basis or the factory has moved away; the other is in the process of designing a new structure, where only its function is considered, with scarce or no consideration of its multifunctionality, interest, and its combination with the urban and social environments and industrial production. In this regard, we should draw a lesson

from Japan. Surrounded by the sea, Japan is an island country with frequent earthquakes and high winds. The Japanese lay great emphasis on surface treatment in their design of tall structures such as chimneys, making them large delightful artificial works of art, in harmony with the social environment. Therefore, in the process of constructing new urban areas, it is necessary to preserve the existing buildings and structures, which are an authentic preservation of history, and embellish or decorate them appropriately if necessary. Don't demolish it and let it go at that. Meanwhile, in the process of planning and construction of a new urban area, we should pay attention to the design of the chimneys, water towers, and TV transmission towers necessary in industry and people's living, so as to improve their comprehensive functions and effects.

As an important part of the urban landscape, the universal existence of striking urban furniture not only is a reflection of a city's character, quality, culture, and spirit, but also can effectively arouse the residents' sympathy and love for the city. The concept of urban furniture has been popular in recent years in China, borrowed from abroad. In fact, it refers to a variety of outdoor facilities in cities, including bus shelters, guide signs, tourist maps, transport facilities, telephone booths, mail boxes, garbage cans, water fountains, sanitary facilities, street lamps, landscape lamps, lighting safety facilities, sculptures, works of art, and art landscape facilities. Professor Yu Zhenglun, chief architect of China Urban Construction Design and Research Institute, has worked diligently on this subject for many years. In 2005 he published a book on urban furniture, which is of great value. When I come to a new city, I often keep an eye on the design and material of its urban furniture. In my opinion, small as urban furniture is, it should be an embodiment of the geographical characteristics, a reflection of the urban culture and environmental information. In 2005, some charming wooden bus shelters were installed on both sides of the road around the West Lake in Hangzhou. Dezhou Architectural Design Institute managed to make a few samples in Dezhou by taking pictures and measuring the size on site, but failed to produce the same effect in the streets of Dezhou as their counterparts in Hangzhou. The reasons may lie in the differences between the cultural background, environment, and taste of the two cities. To summarize, the design of urban furniture should be in line with the style and features of a city, with the local culture, with the architectural forms, colors, and spatial scales of urban public space, and with people's lifestyle.

The night scene is also an important manifestation of urban culture, reflecting the religious belief, level of development and consumption, and living habits of a city. At night, world famous cities such as New York, Tokyo, Beijing, Shanghai, Hong Kong, and Las Vegas are full of bright colors, and bustling as in the daytime. However, if you observe carefully, you find that the night lights and night scene of a city, even of a building, has its distinct cultural connotations and characteristics. For instance, the majority of night lights in commercial cities such as Hong Kong and Las Vegas are yellow, magnificent, and gorgeous. The night lights in Beijing are dignified and graceful because it is not only the political center of China but also an ancient city of culture. Known as the "kite capital of the world," Weifang, Shandong features street lamps resembling flying kites. In a word, we should pay

attention to planning and design of the night scene of a new urban area from the outset, so as to make people feel its cultural connotations in a comprehensive way.

Whereas the material aspect of urban culture is an external and superficial representation of a city's culture, the non-material cultural element is an internal reflection of a city's culture. The latter includes public beliefs, customs, myths, legends, historical stories, important figures, significant events, important cultural relics, geographical names, village names, and so on.

A geographical name tells a story whereas a village name tells the history of a village. Both are important historical and cultural resources. As to the old names, we should try our best to retain them or reuse them. Don't adopt new names hastily. There used to be a Xingyuan Village ("Xingyuan" means "Apricot Orchard" in Chinese) in Dezhou, Shandong Province. What a beautiful name! However, with the relocation of the villagers to a large community of villagers from several villages, it was deemed impossible to retain the village name of "Xingyuan." In order to retain this part of history, the Dezhou people named a beautiful bridge in a nearby park "Xingyuan Bridge." Located in the northwestern part of Paris, La Défense District is at the western end of the city's main axis. Its construction and development commenced in the 1950s. It is a symbol of modern Paris, bringing a strong modern breath to the ancient city. The name of the district comes from the statue of La Défense de Paris (literally means "The Defense of Paris"). La Défense was once a secluded nameless height in the western suburb of Paris. Between 1870 and 1871, during the Franco-Prussian War, the French were defeated and Paris was taken. A small group of French soldiers retreated to a nameless height here and resisted fiercely until their supplies and ammunition were exhausted and all of them died martyrs. Later a group of statues entitled "La Défense" was erected on the height to commemorate the soldiers who had defended Paris during the Franco-Prussian War. In the development and construction of the new district, the group of statues remained intact, and the whole district was named after it, making it famous around the world.

Chapter 29

Cultural Development of New Urban Areas

29.1 Retaining Its Historical and Cultural Heritage

Culture is based on the accumulation of human history, passed down from generation to generation. Living in the continuous course of culture and history, what we should do first and foremost is to preserve and inherit the cultural wealth created by our ancestors. Cities are rich in cultural heritage: Except for a handful of new urban areas planned and built in the desert or on saline-alkali soil, the vast majority of new urban areas, especially those planned and built surrounding large cities, have a number of buildings, structures, or historical legacies of their own in the initial period of planning and construction. Items such as an old building, a memorial archway, and an ancient river are all cultural symbols filled with historical information and the echo of history, manifesting memories and civilization of a city. These are history and culture of the place. The Municipal Exhibition Hall of Tangshan City, Hebei Province was set in three former ammunition depots built during the Japanese invasion of China and two granaries built in the 1980s. In the planning and design of the municipal exhibition hall in 2007, Tangshan Urban Planning Bureau decided to maintain and renovate these buildings, which worked wonderfully well and became an attraction of Tangshan. In this way, they not only saved investment, but also helped people in and out of the city to know of its history.

The foundation of urban cultural development is to search for the root of urban culture, to find out the fossils and undertones of a city, and the shells and pearls formed in the course of civilization. The planners and designers of a new urban area should conduct an in-depth investigation into the historical, political, economic, social, and developmental trends of both the new and old quarters, particularly their historical evolution, figures and events, historical and existing buildings, mountains, rivers, transport, industry, customs, and so on—in famous Chinese architect Wu Liangyong’s words, “search for the lost souls of a city.” In this respect, most planning and design units didn’t pay enough time and attention. They just did it in a

superficial and hasty way. There are two impressive examples. A few years ago, Ms Huang Hui, a planning architectural designer from Beijing, and another architect came to Dezhou to prepare for the planning and design of a project. They made a great effort to search for the traditional architectural features and cultural symbols of Dezhou. In 2008, invited to compile a cultural industry planning for Dezhou, the Cultural and Historic City Planning Research Center of Tongji University sent Professor Ruan Yisan, a famous urban historical and cultural scholar, to conduct an investigation and gather information. The planning they made even impressed the local people greatly, who had never expected that Dezhou commanded such an abundance of cultural resources. We should learn from their spirit and practice.

In actual work, we are faced with the contradictions between cultural inheritance and cultural development, between unified planning and key protection, between cultural facilities taking land and land utilization efficiency. Therefore, it is very important and difficult to protect local culture in the development and construction of a new urban area. Over the years, there have occurred many incidents of destruction of cultural relics in the construction of some Chinese cities. The most annoying and ridiculous is the demolition of the Former Residence of Liang Sicheng and Lin Huiyin on January 26, 2012, leaving only a small room next to the gatehouse. Mr. Liang devoted his whole life to the study and protection of ancient Chinese architecture, and wept over the demolition of the Beijing city walls. Never had he expected that his former residence (originally planned to be restored) would have suffered the same fate as the Beijing city walls one day in the twenty-first century. Awareness of heritage conservation in Western countries is stronger, but is also influenced by economic interests. According to the "Reference News," in the morning of March 27, 2013, under the protection of 250 policemen, Bauhaus Real Estate Company in Germany demolished part of the "East Side Gallery," which is the most well-known remaining part of the Berlin Wall, in preparation for the construction of luxury residential building. This was regarded as a scandal in Berlin, where more than 500 people protested against it. At the Forum of Chinese and German Writers organized by the Chinese Academy of Social Sciences on September 2, 2013, Mo Yan, famous Chinese writer, Nobel Prize winner, expressed his regret for this. In his opinion, a door should be opened in the wall, and the Berlin Wall itself should be kept as landscape forever, "after all, it is a witness of history, symbolizing a period of mental suffering."¹ Why did people destroy culture, in particular urban culture, again and again in the history and still do today? The reasons may be as follows. The first and foremost reason is people's ignorance. Some people, including those engaged in urban planning and construction and those engaged in cultural undertakings, do not know what is culture and what is historical culture, not to mention urban culture. Countless symbols of civilization were ruined during the war periods in Chinese history. The course of history was often totally reversed with each change of dynasty. Suffering from bitter slavery in the semi-colonial and semi-feudal society in modern times until the end of the

¹Mo Yan debating Ursula on personal writing experience, *Beijing News*. September 2, 2013.

1940s, the Chinese people had not experienced certain stages of capitalist society, such as the cultural prosperity during the Renaissance, had not been baptized systematically in the industrial civilization, and had not experienced the shock brought about by modern urban civilization. Therefore, they are unaware of the fact that industrial civilization is a somewhat destructive culture in rapid development, which can crush past achievements of civilization and can easily wash away historical heritage if we don't pay any attention to this destruction. The industrial civilization was introduced to China by the sudden brutal invasion of foreign warships and cannons. After the establishment of the People's Republic of China, she underwent "destroying the four dregs of society and establishing the four news" during the Cultural Revolution, which was a negation and holocaust of traditional Chinese culture, whose ideological basis and slogans were "overthrow," "revolt," and "rebellion," advocating theories such as "there's no making without breaking," "it is right to rebel," and "sweep away all the monsters and demons." All of these fell into the category of "destructive culture," which was lacking in education, understanding and protection of historical inheritance, spiritual heritage, cultural construction, and urban culture. Some cultural elites had profound insights into history and culture, but their words carried little weight because of their humble position, not to mention the other people in society whose appeal for cultural protection was even weaker and more superficial. This was the situation in Chinese history. Of course, some people, especially some leaders, should be responsible for it. However, the main cause is their ignorance. There are gaping holes in everyone's knowledge, and every era has its historical limitations.

Originally built as the Jinan Railway Station on the Tianjin–Pukou Railway, the old railway station in Jinan, Shandong Province was a typical Germanic-style public building designed by German architect Hermann Fischer in 1900s. It was once the largest railway station in Asia, the only Gothic architectural complex in the world, and was chosen by Tsinghua University and Tongji University as a sample case study in their textbooks on architecture. It was highly controversial whether to keep it or not. Some people believed that it should be demolished, viewing it as a symbol of Western imperialist aggression. Despite the strong opposition of some citizens and experts, with the demolition of the bell tower on the old railway station at 8:05am on July 1, 1992, gone forever was this famous transportation building, which had stood in Jinan for more than 80 years, cheering and seeing off innumerable passengers. What an irreversible regret and a permanent laughing stock in Chinese history and in the history of Chinese urban culture! We should take a historical lesson from it (Fig. 28.1).

The second reason is political tyranny. Typical examples include the Great Confucian purge (the burning of books and burying of scholars) in the Qin Dynasty, and the literary inquisition in the Qing Dynasty. There are also many similar examples that have happened in other countries, including the Western countries.

The third reason is the destruction of wars.

Fig. 28.1 The old railway station of Jinan



Fourth is natural disaster, which can also bring great disaster to culture.

Fifth is the spur of economic interests. Many historic buildings are brutally demolished or destroyed from time to time. For the purpose of selling more land, some governments turn a blind eye and a deaf ear to the demolition of cultural relics. Aimed at taking more land, building more apartments and earning more money, developers removed historic buildings unscrupulously. According to laws and regulations on the protection of cultural relics, in the course of construction of a project, all units and individuals that discover cultural relics should keep the scene intact and immediately report the fact. However, it has become a “hidden rule” that some construction units and investment units do not report things when cultural relics are found, for fear that the discovery of cultural relics might affect the construction progress and the implementation of the project.

The basic way to avoid similar destructions of urban heritage and urban culture in the future is to enhance education, enabling people, especially the decision-makers at all levels of the municipal government, to know and understand culture, to keep them in awe of culture and history, and to protect them consciously. Urban culture should be raised to the altitude of urban development strategy, considered and managed in a macroscopic and comprehensive way. Meanwhile, we should make a general survey of the urban cultural elements, list all of them, and make clear what are the administrative departments. Factors concerning historic protection planning should be included as a separate part of the master plan of a new urban area, or an individual file should be compiled. The planning and design staff should pay adequate attention to the protection work in the first place, trying to keep away from or maintain with planning any ancient villages and towns, ancient trees, ancient wells, ancient tombs, forts, lithoglyphs, monuments and historic buildings, creating a suitable surrounding environment for the protection of cultural relics through efficient design. In addition, we should ensure the continuation and development of urban culture by establishing and refining relevant laws and regulations, punishing those responsible for the destruction of urban culture in accordance with the law.

29.2 Highlighting Local Characteristics

Differing in geography, history, and type, each city has its own characteristics and distinct culture. The charm of a city stems from cultural individuality, which determines the characteristics of a city. Different types of new urban areas should be different in culture. Located on the Central Plains of China, Zhengzhou New Area in Henan Province fully reflects the characteristic of the Central Plains culture in its planning and design. According to dragon tales and the shape of the lake, the artificial lake is named Dragon Lake. The image of the CBD and its sub-center connected by a canal resembles a “ruyi,” which is an S-shaped ornamental object, usually made of jade, formerly a symbol of good luck. Culture-loaded sculptures such as dragon boats and the gathering of heroes reveals the profound traditional Chinese culture of the Central Plains. So do the hexagonal exhibition hotel, and the commercial and residential buildings designed in line with the Chinese courtyard house and nine-square grid. However, not knowing how to discover and develop local culture, some cities could only purchase some of the so-called urban sculpture (mass-produced in factories). Other cities had their trophies enlarged and made into sculptures placed downtown, reflecting not a shred of local characteristics and culture. At best, they can only act as the advertising towers or billboards of the city.

Whoever visits the new county town of Beichuan in Sichuan Province is impressed by its harmony with nature, its Qiang style and features, and the richness and miracle of Chinese traditional culture of human habitats. As the only Qiang Autonomous County in China, Beichuan County was razed to the ground in the earthquake of May 5, 2008. The new county town was planned and designed by the China Academy of Urban Planning and Design, China Architecture Design Institute, and many other outstanding experts from domestic planning and construction units brought together under the unified organization and command of the Chinese government. As a masterpiece of planning and design of new urban areas in China, the entire planning is centered on the spatial structure of “a ring of mountains, an ecological corridor, a recreation zone, a growth ridge, a chain of facilities, an axis of landscape,” following the design principle of reflecting the Qiang style and features. Upon completion, it has written a glorious chapter in the history of Chinese architecture.

Unfortunately, the miracle of Beichuan does not happen in most other cities. Taking the high-speed railway from Beijing to Shanghai, I was impressed by the railway stations carefully designed and constructed along the way, each with its distinct characteristics. I also found that almost every city with a station was planning to build a China Railway High-speed (CRH) new area. According to statistics, there are 24 stations along the 1,318-km Beijing-Shanghai high-speed railway, and about 20 cities are planning to construct CRH new areas. You can see people busy with development and construction everywhere, and some of them have already taken shape. However, unfortunately, they are similar in style, all dull and uninteresting, and mostly modern slab-type buildings or flat-roofed houses. If only the CRH new area of Xuzhou could manifest the cultural style and features of



Fig. 28.2 New county town of Beichuan, Sichuan Province

the Han Dynasty which is simple but vigorous, if only the CRH new area of Suzhou could highlight the Wu and Chu culture, if only each new urban area could have its own characteristics, what a beautiful landscape it would be! This could be the best advertisement for the city (Fig. 28.2).

29.3 Old and New Urban Areas Complementing Each Other

The old quarter is a museum and encyclopedia of a city's history and local culture. However, with the lapse of time, the old quarter has to be updated and upgraded—industrial plants are emptied and old houses are demolished, making way for high-rise residential buildings, commercial facilities, and public facilities. Meanwhile, cultural facilities in the old quarter are removed, obliterated, or replaced by new scenery. Therefore, the old quarter is not only a museum of the original urban culture, but also the birthplace and growing point of a new culture. As with an old house, sometimes the house may be the same in appearance but the people living in it are not the former ones, and the furnishings may also have been replaced. This is the history of mankind, and this is urban culture.

Only in development can culture remain alive. Only in continual absorption of new culture can the old quarter maintain its vitality. The new quarter should inherit the cultural heritage of the old one. What's more, the new quarter should also develop its new culture, as an inevitable trend in social and cultural development, cultural self-development. A great paradigm in urban development is Suzhou and Suzhou New District, resembling a wonderful piece of “double-sided embroidery”. On one side is the old quarter of Suzhou, in which the ancient town, gardens, folk houses, silk, embroidery, as well as Kunqu opera, Suzhou Opera, and *pingtan*

(a form of storytelling and ballad singing in Suzhou dialect) are all rich in ancient Gusu culture. On the other side, the Suzhou New District is based on the geographical, historical, and cultural reality of Suzhou, rooted in the Wu culture, and borrowed heavily from the development ideas of Singapore and other countries or regions, making it a successful combination of old and new, and of the native Wu culture and foreign culture. Highlighting its abundance of rivers and lakes, it designed some hydrological and historical sights. In short, complementing each other harmoniously, the two areas have composed one of the grandest and most harmonious symphonies in the cultural development of old and new quarters in China.

Southwest of Shanghai, Songjiang District covers a total area of 605 km², among which the planned Songjiang New Town covers a total area of 60 km². The Shanghai–Songjiang Highway runs through the town, dividing it into two areas—north and south. To the south is the old quarter, an ancient oriental town where Songjiang county seat has been for 1,250 years. To the north is the new quarter in European style. Composed of an old and a new quarter, Songjiang New Town is a city of two styles. Here the ancient and modern, national and Western, coexist and complement each other, making it a shining pearl.

29.4 Adept in Borrowing and Creative in Absorbing

Although inheritance serves as the foundation for culture protection, imitation is a must in the development of culture, and innovation is a substantive characteristic of culture.

Originally a small border town of only 30,000 people, with 2 or 3 streets, Shenzhen was established as the first special economic zone of China in 1980, under the advocacy of Deng Xiaoping. It has now developed into a modern metropolis with tens of millions of people. Culturally speaking, it was once a cultural desert, with few cultural relics and cultural facilities. It has been named a “City of Design” by the UNESCO, a “City of Libraries,” a “Piano City,” and an “animation base.” Ahead of the nation in many respects, it is remarkably successful in the development of cultural undertakings and industries, and has accumulated much valuable experience in the construction and development of Chinese culture. Shenzhen’s success lies in its ideas ahead of the time, its emphasis on success, its tolerance of failure, and its pursuit of dreams and excellence. Cultural development was established as a strategic measure and foundation of the city. Courageous to try, imitate, and innovate, they are determined to blaze a new trail, constantly breaking the shackles of outdated ideas and removing the institutional obstacles to the development of productivity and culture. In just a few decades they initiated the only national and international cultural industry fair, established the first culture assets and equity exchange in China, and generated a large number of leading cultural enterprises in China such as Acto, Huaqiang Technology, Tencent, and Animate China.

In the development of urban culture, Dubai is even more ambitious, courageous, venturesome, and influential. With an area of 3,885 km² and a population of no more than 3 million, Dubai is the most populous emirate in the United Arab Emirates. With one side to the sea, the other sides are surrounded by desert. The temperature in summer goes up to 50 °C, and the water people drink is obtained through desalination, which is costly. It is extraordinarily difficult to green the city because of the bad natural environment. There are few historical sites or tourist attractions. It was in these circumstances that the Dubai people miraculously made a modern international metropolis out of a desert with their lofty ambitions, their vision of the future, their indomitable spirit, and the diverse cultures. Dubai culture is based on the Islamic culture, but there are not only many devout Muslims, but also many Hindus, Sikhs, and Christians. All the religions are respected here, and are allowed to exist and develop. Meanwhile, guided by avant-garde ideas and high standards, they have taken some extraordinary measures. The Dubai government spared no expense on the introduction of talent and technology. It was not allowed to design two similar buildings in the new urban area. They invested heavily and built the Palm Islands, the largest shopping mall of the world, the highest tower in the world—Burj Khalifah, and a multimedia city, an Internet city, and a knowledge city in the technology park. In just a decade or two, Dubai rocked the world.

Urban culture is not static, but is fresh and alive. We should open our minds, embrace everything that is useful, absorb foreign culture with a positive attitude, and emphasize innovation and scientific guidance. Only in this way can we enliven, invigorate and strengthen urban culture, and furnish inexhaustible power for the development of the new urban area.

29.5 People-Oriented and Spirit-Molding

Ideology, spirit, and values are substantive characteristics of culture. It is important to attach more importance to the ideology, morality, spirit, and emotion of the people in the city, even more important than the inheritance of the materialized urban culture and the construction of cultural facilities. An important technique is to summarize, publicize, forge, and cultivate the urban spirit.

Urban spirit is a highly refined and accurate summary of a city's core values, unique culture, and inherent spirit. It is the soul of a city, and the spiritual pursuit and shared value of the citizenry. It is not only part of the national spirit but also a concrete expression of it. Meanwhile, it has the regional traces and cultural features of the city. It is the mother of citizen spirit, but broader and more profound. In the history of cities, those with unique cultural and spiritual temperaments are attractive, inspiring, and self-confident.

In the last decade or two, many cities in China have attached great importance to the role of urban spirit. Some cities summarized their urban spirit, and refined them into some wonderful statements and slogans, which played a good role in society. Nevertheless, through careful observation and analysis, we can see that in

summarizing the urban spirit, the tendency of conceptualization, homogenization, and politicization are prevalent at present. The words used by some cities are similar or the same, mostly fashionable political words, which resemble titles of the speech delivered by state leaders, or titles of newspaper editorials. This kind of summary is detached from the characteristics of the city and feelings of the people. Some cities choose patterned clichés composed of 6 or 8 Chinese characters (generally no more than 16 characters), which are often featureless and meaningless to the citizens.

Each city has its own original genes and initial foundation. Although with the passage of time some cities have changed rapidly, local culture is still to be found in the streets, buildings, communities, and public life, alive in each and every corner of the city, displaying some fragments or background colors now and then. This is the most primeval and basic elements of a city, as well as the character differentiating it from other cities. Following these basic elements, we should track down from ancient times to the present day the development of the city by an analysis of the major events and important figures in history, and uncover the spiritual world differentiating this city from others, finally extracting the spiritual factors which are most basic and natural for the city. Namely, we should let the citizens know who they are, where they are from, and where they are going. The name “Jingdezhen” is from Jingde Reign of the Song Dynasty (“Jingde” means “a grand scene, leniency, and mercy.”) The urban spirit of Jingdezhen is now inspired by “Jingde” which is culture-loaded and reflects the morality, generosity, and perseverance of the Jingdezhen people. The urban spirit of Suzhou is “literacy, harmony, innovation, tranquility,” which reflects the emphasis on education, openness, creativity, and confidence for the future.

When we are summarizing and extracting the urban spirit, we should discard the false, negative, and backward parts and retain the true, positive, and advanced parts according to the needs of the time, so as to inspire people to work hard. Only by careful selection and refinement can we seize the soul of the city. Determined in 2003 based on a discussion involving all the citizens, the urban spirit of Shanghai—“tolerance to diversity, pursuit of excellence”—reflected not only the local culture of this immigrant city since its opening as a commercial port in the Ming Dynasty, but also the core quality of Shanghai culture. With the advance of Shanghai’s modernization, especially in the environment of international development, it is necessary for Shanghai to be more open-minded and harmonious, and set loftier ambitions. At the Ninth Congress of Party Representatives at Shanghai in May 2007, Xi Jinping, then secretary of the Shanghai municipal Party committee, put forward in his report that Shanghai should “cultivate its urban spirit keeping pace with the times.” Later, after extensive consultation and careful consideration, “open-mindedness, sagacity, generosity, and modesty” were added to the urban spirit.

The Chinese people are straight and narrow in their way of thinking, and formal and rigid in their means of expression, such as the poetry of the Tang and Song dynasties, and the *baguwen* (eight-part essay) from the Ming and Qing dynasties. After the 1950s, affected by the ultra-left trend of thought, the Chinese people’s

thoughts were restricted, especially our style of writing. For instance, we attached much importance to the political connotations when we chose names for a child, or a road, or a new park, or a residential area, resulting in many repetitive names. This practice should change gradually. It is unnecessary to use 6, 8, or 16 Chinese characters in expressing the urban spirit, which may easily result in repetitions. Zhou Enlai, a famous state leader of China, tried several times to summarize the spirit of Lei Feng, and the second version was “Follow the examples of Comrade Lei Feng, learn from his distinct class stand, his revolutionary spirit of matching words with deeds, his selfless communist spirit, his heroic proletariat spirit of being ready to take up cudgels for a just cause without caring for one’s safety.” What a vivid, appropriate, and fluent summary! This is exactly what we should do when we summarize and extract the spirit of a city. What’s important is not the number of Chinese characters, but whether we can accurately convey the urban spirit, whether it can win public recognition and encourage the citizens to work arduously and vigorously, whether it can be the horn and banner in the development of a city.

Part IX
On System and Management

Chapter 30

Comprehensive Management System in New Urban Areas

30.1 The Connotation of the Comprehensive Management System

The city is an advanced place for living and the activities involved in the human development, and also a spiritual garden of which people are in constant pursuit. From the beginning, its construction and management have been more complicated than those of the country. The management system of urban planning and construction shows repetition, volatility, and diversity. Even in old countries such as Britain, and Germany, the management system concerning construction affairs is argumentative and repetitive.

Meanwhile, the system and its management in new urban areas is also an important and sensitive issue. From England, where new town construction first originated to China where urbanization is developing vigorously, there are still many debates and changes, and those in China are much discussed. Some cities have argued for years and have not made things clear through successive governments. Hence, the relation between the new urban area and the central city, the new city and the governmental departments, and the officers and the staff are affected, and so is the development of some work. The reason is because of the fast movement of urbanization and the great changes in cities and new urban areas. However, the Chinese political system is lagging behind and many contradictions arise, such as that between the current system and the fast movement of urbanization, the administration privilege and interests between the central city and the new area, and the current national laws and the new area's reform and innovation, which is where the shoe pinches. Of course, the management system involves the managers' powers and direct interests, so when deciding the new urban area system, some factors made by man would appear. In order to speed up the launch of the economy and development zone as well as the new urban area, a certain leader of a city decided to carry out the closed management of the new urban area's planning and construction management system so as to keep the municipal government

independent. The powers which can be transferred are all handed down to the zone. However, after the leader was promoted and was made responsible for the work of urban construction, he soon decided to take back all the management privileges of the new urban area. The management of planning and construction of the economy and development zone and the new area is dealt with by the municipal government. The positioning decides one's thinking, and the existence decides one's awareness. Man decides. There are a lot of nonstandard things in China. The system decides on the mechanism which determines efficiency. Individual behavior should be within the legal system; otherwise, contradictions arise to influence work and development. All in all, we should study the system and make it work.

History makes people wise. Let's take a look at the history of new urban area systems and management inside and outside of China. In 1952, Britain enacted *The New Town Development Act*, confirming that the development company was founded and authorized by the government to embrace unified planning and development. This company possessed a wide range of powers such as planning, land operation, and fund utilization. Afterwards, the new town committee was founded and took over the responsibilities of development and management. By the late 1970s, when the British government announced the end of new town planning and construction, some particular developments were carried out by some private companies. In China, since the opening and reform, several forms of management systems have evolved, such as the new urban area leading group, the management committee, government direct management, and services hosted by the government department of planning and construction.

The new urban area is the combination of the city and places outside the city, with the multifunction of being a function area and an administration area. Namely, it has both the task of developing the economy and the responsibilities of managing the urban society, economy, and culture. It is different from the various kinds of industrial parks and development zones, which have the single function of attracting investment and businesses, and developing industries. At the same time, it is a "new" area, so in some respects it cannot follow the old system of the former administrative areas. It should innovate. Therefore, being a functional area, the general new urban area should be endowed with some governmental administrative management function and kept independent, complete, and creative. Otherwise, it is hard to undertake the task of economic development and social management.

30.2 Comparison of Several Models

In China, the new urban area management system has the following models.

Establish the new urban area construction headquarters, which is mainly led by the government or the party committee leaders, with directors of the relevant departments and the local party committee as its members. Under its jurisdiction, there are the general affairs office, planning, and construction companies. Because of the lack of experience of developing the new city, this system is much used in

some places from the beginning of reform and opening. As an original and convenient working organization, it is also used at the start-up stage of the new urban area. There are merits. The leading body from the party committee, the government, and the new urban area is efficient in decision-making. The staff chosen temporarily from the existing departments are very capable in the simplified institution. However, there are also demerits. The management institution of the new urban area is a temporary one rather than a legal entity. It does not have legitimacy and it is difficult to handle affairs in accordance with the law in such aspects as the land expropriation, demolition, fund-raising and investment. The leaders are not exclusive and they cannot devote themselves entirely to the work. The management personnel think they are not permanent and so they tend to think short-term.

Establish the new urban area leading group. This management system is very similar to the former one and it is generally adopted in the fermentation of the new district or strategic study stage. Because it is at the very beginning, the administrative management structure is unsettled and someone or some establishment is needed to take care of these affairs. Therefore, a leading group is founded in advance. This group frequently lasts a long time. The team leader is from the party committee or the government. It is of great value as a form of organization for discussion, coordination, and decision-making. Of course, a specific management institution is necessary.

Establish the new urban area government independent from the central area. This system is often adopted in a new district which is larger, more comprehensive, and far away from the central city, or which is built in an original administrative region. In 1993, Shanghai city founded Pudong New Area Management Committee. The year 2000 saw the establishment of the Pudong people's government. Shenzhen Special Economic Zone was given the function of governmental management right from its establishment. This system has a sound body consisting of party and government organizations, National People's Congress (NPC), the Chinese People's Political Consultative Conference (CPPCC), the procuratorate, and the court of justice. It can implement completely the functions of construction, development, and management. Being less restrained by the upper functional department, it is more likely to make quick decisions, achieve fast planning, development, and management, and deal with some economic and social management affairs immediately. It is a development trend of the new urban area management system. However, its organizational body is excessively large with a growing number of staff. It is high in administrative cost but low in efficiency.

Establish the new urban area management committee. As an agency set up by the party committee and the government, it is not concerned with the National People's Congress (NPC), the Chinese People's Political Consultative Conference (CPPCC), the procuratorate, and the court of justice. Instead, it focuses on the establishment of the administrative service functional organizations, under the jurisdiction of which are the departments of development, construction, and management. These departments are given the power by the government to execute some management functions. It is a management system which has been much adopted in new urban areas since China's opening up and reformation. It boasts

many merits. It is the “light cavalry” or “front line headquarters” of the new urban area development, because it not only gives full play to the governmental administrative management function, but also overcomes the malpractice of the government original bloat, excessive staff, and low efficiency. Moreover, it can further the new area’s construction and development rapidly and efficiently, so it is a better alternative. However, because the new district is characterized by comprehensiveness, scale, and sociality, and its development goal and prospects is a city, a large city, or even a megacity, its total control is beyond the ability of the management committee, and it is difficult to promote the comprehensive development of the new area. As a result, some reform and innovation measures are taken throughout the country.

30.3 Creation and Adjustment of the Comprehensive Management System

With the development of the new urban area and the change of macro environment, the original management system in some places has already become unfit for the new development, and hence some adjustments and reforms have to be made, such as for Dalian, Tianjin and Shenzhen. The orientation and trend of the reform is to enlarge it and to make it more comprehensive and efficient. To enlarge it means to enlarge the new regional scope, administrative authority, and comprehensive management function of the subordinate departments of the management committee. To make it more comprehensive refers to the change from single industrial management to integrative management of the economic society, the change of driving force from promoting the industrial development to the comprehensive coordination of development, and the change from the mere planning and construction of the industrial park to that of the new urban areas. To make it more efficient refers to the establishment of the internal organizations in the new area. In short, it is a large urban area with a small efficient government.

Tianjin Binhai New Area is an outstanding example and its administrative management system has undergone a few big adjustments at various historic stages. In 1994, Tianjin decided to explore Binhai New Area and established the leading group. In 1995, the full-time office of the leading group was founded. In 2000, based on the office, the Binhai New Area the party working committee and management committee were founded as an agency arranged by Tianjin municipal party committee and the government. These organizations have played their important roles. However, as Binhai New Area becomes the national strategic area and the exploration and opening gradually develop, many contradictions and problems arise between the administrative system and realistic development—for instance, the inefficiency in the internal administration of Binhai New Area and the relative independence of the functional areas and the administration area in its jurisdiction. They each mind their own business and the planning is short of unified

coordination, so the resources cannot be allocated properly and efficiently, and lands, funds, and talent cannot flow smoothly. In 2008, when Binhai New Area hosted the Davos World Economics Forum, Tanggu area refused to put up the flags of Davos with the excuse of “none of my business”. The mayor of Tianjin city said “The problems brought about by the lagging administrative system reformation have stopped the development of Binhai New Area. We have no other alternative but to reform it.” In October 2009, the State Council approved the adjustment of Binhai New Area administrative division, which removed the administration districts of Tanggu, Hangu, and Dagang, and established the people’s government of Binhai New Area with those three old administrative districts under its jurisdiction. In 2012, Tianjin municipal government gave 65 approval subjects, functions, and powers to Binhai New Area. According to the law or the authorization mode, the new area government is authorized to execute the municipal economic management authority in its jurisdiction and gets all the possible approval authorities. On September 26, 2013, Tianjin party committee and the municipal government declared the removal of the working committee and the management committee in Tanggu, Hangu, and Dagang. Binhai New Area has direct management of sub-district offices. The system has undergone extensive reformation.

Chongqing Liangjiang New Area, the third national level in China in 2010, shows its ingenuity in its management system. Chongqing party committee and the municipal government founded the leading group led by the mayor. The “1+3” model is executed. “1” means unity and refers to the coordination, policy, planning, publicity, and agreement under the charge of the party working committee and the management committee. “3” means the parallel development mode carried by Liangjiang New Area party committee, the management committee, and the three administrative areas of Jiangbei, Yubei, and Beibei in dealing with tasks. On the development platform, three platforms, which are the management committee of Beibu New Area and Lianglu Cuntan free trade area directly under the municipal government, to which the business is entrusted, and the industrial development zone under the Liangjiang New Area management committee, lead the development of Liangjiang New Area. The social affairs management of the new area is still charged by these administrative areas of Jiangbei, Yubei, and Beibei. Because of the large area of the new district of Liangjiang, it adopts an “old and new quarter” development approach, where the management system of multilayer and multiple crossing, in turn, is adopted at its launch stage. However, this system is easier for people to mind their own business and grapple for resources. Without a powerful leading body, it is hard to coordinate. As a result, the implementation of this system arouses a large variety of discussion and analysis from experts.

When launched, Tianfu New Area in Sichuan province also carried out a reform of its system. The management system of “the provincial-and-urban construction, the city-based development” was applied. Sichuan Tianfu New Area planning and construction committee founded by the provincial party committee and the government is a special agency to be responsible for the planning and formulation of policies and measures. Meanwhile, Chengdu, Meishan, and Ziyang established respectively the new area construction committee, responsible for district planning,

detailed planning, urban planning, and management of construction in accordance with the concept planning and the overall planning of Tianfu New Area.

The two systems of Chongqing Liangjiang New Area and Sichuan Tianfu New Area have their own merits, but they are too hierarchical to be efficient and fruitful. The future alternative is for such systems to have a certain level of government of the new area, or a loose regional structure of city groups. We explore the new urban area and do something innovative.

The following principles should be followed to establish a system with a new style and high efficiency.

First, the system of the new area should fit in with the historical stage of development and the current national management system. If not, the new district cannot carry on the resources from the upper government and gather any advantages from the lower. It is free from the framework of systems and administrative coordination is more difficult.

Second, the new area's system should be creative and offer a breakthrough. We must break and integrate some current internal administrative management systems, gather all kinds of resources in the new area, reduce management levels and approval processes as much as possible, and carry out a type of management to enhance working efficiency.

Third, the new area's system is determined in accordance with its scale, function, and type, because the new districts have different sizes and functions. The choice must be favorable to planning and construction management and development. The method of establishing new areas in places such as Tianjin Binhai New Area is very effective. It is certain to bring some adjustments among regions and officials. If the adjustments involve the interests of some individuals or institutions, things must be properly handled.

Fourth, the new area's system should be independent and complete. Otherwise, management is short of functions and authority, and things become impossible to manage. When regional competition becomes intense and investment and business attraction become difficult, if the new urban area has inadequate management function it is impossible to carry out the work.

Chapter 31

System Planning of New Urban Areas

System planning is determined by a nation's political and economic systems as well as the comprehensive system of the new urban area. In some western countries, democracy and freedom are dominant in thinking. The stage of urban construction on a large scale has already passed. Now it waits to be perfected and improved, as is shown in modern urban construction. Consultation is mandatory and even some decision-makers are very skeptical or hold a negative view towards planning. As soon as Mrs. Thatcher, the former Prime Minister in Britain, took office, she got rid of all the planning. Of course, Britain restored planning later based on development and environment protection.¹ It was in the late twentieth century that Chinese cities began to pay attention to planning. Up to now, China has been exploring the planning system which varies with changes of politics, economic systems, and thinking. In the 1950s it was greatly influenced by the Soviet Union's system. After the reforming and opening in the 1980s, it has gone through three stages and four modes, namely the stage of centralization in the 1980s, the stage of local decentralization in the 1990s, and the stage of coexistence of multi-modes in the mid-1990s. There is the highly centralized Beijing mode, the highly decentralized Shanghai mode, the vertically managed Shenzhen mode, and the Guangzhou mode managed with two levels of government. As a matter of a fact, there is much argument and correction concerning the planning system.²

31.1 To Implement the Unified Planning System

The planning system of new urban areas in China is dominated by the government. Under this premise, it adopts the method of combining centralization and decentralization, as is determined by the particular situation in the city and in the country.

¹*Never Talk about the Will of People as Westerners Do*, Sothern Weekly, January 28, 2010.

²Cao Junjie, *Accelerating Innovation of Planning System to Meet "New City Times,"* China Construction News, July 28, 2009.

First of all, it is decided by the situation in China. The Chinese political system is highly centralized and unified. Government management including planning management systems is subordinate to the political system and it complies with and guarantees political needs. One of the important connotations of the Chinese economic system is dividing revenue and expenditure between central and local governments. More taxes, selling more land, and overcharging are demanded by the need to revitalize the local economy, by the people and local officials who want to have a good meal, and by government examination and official promotion. Governments on different levels, in turn, cultivate a strong desire and inner impulse to develop the economy, projects, and cities. When building the urban area, including the new urban area, they are straining for resources and projects. They follow one after the other to build the automobile market or real estate. Therefore, many repeat projects have been developed within many Chinese cities and have caused great waste. However, within a city, the division of functional areas, the allocation of resources, and the development of projects should be planned. Without strong planning, a city resembles a heap of loose sand. In China, the party committee and governmental leaders are the decision-makers in planning, and many of them have not carried out any systemic study, so they decide randomly. When approving a new project, they make a deal with investors, even though they are ignorant of the comprehensive benefits. They get promotion after holding a post for several years. Therefore, a rigid, unified, and comparatively stable planning is necessary.

Second, it is determined by the Chinese urban situation. *Cities are different from the countryside and their core is centralization, intensiveness, and optimization of resources allocation.* Chinese urban resource strain is conspicuous globally and will exist for a long time. In this respect, planning is to allocate resources, and one means to regulate and control. The purpose of planning is to construct an intense and compact new urban area.

Finally, it is determined by the situation of planning. Planning is strategic, long-sighted, and future-oriented. Chinese urban planning has a short history and the professionals are in great demand. There are quite a few majors in planning in some cities especially inland, small, and middle-sized cities. Taking some counties and districts in the west of Shandong province as an example, there is not a single graduate majoring in planning. In a developed city such as Ningbo Hangzhouwan New Area in Zhejiang province, professionals are also lacking and of poor quality.³ Early on, because planning capability is quite weak, we should use and concentrate all our efforts on having unified planning and construction.

³Cheng Gang, *New Town Development Path*.

31.2 Planning System Stresses the Division and Combination of Management Responsibilities

In new urban area planning management, the municipal government should carry out integrated planning and have centralized management based on the related policies and regulations, entrusting the new area with certain decision-making powers so that the specific planning can be flexible.

Specifically, the municipal government should be responsible for the organizational work for overall planning of the new urban area, the regulatory planning, and the development layout of the new area, land-use layout, comprehensive traffic system, and all kinds of specialized planning. The use of land for construction is also under the charge of the government. Its management department is mainly responsible for the detailed construction plan for the important area, the implementation, inspection and examination of the planning, and the approval of important projects. However, the detailed construction plan for the general region is generally handed to the new area for approval from the governmental planning department. Because of the vast territory, differences in sizes, functions, and levels of new areas, the management responsibilities should be dealt with practically and realistically.

31.3 Comparison of Planning Systems

There are mainly three systems of planning. The first is directly and completely managed by the government. The government or its planning department is responsible for the making, implementation, and supervision of all planning in the new urban area, all programs being handed to the department for approval. The new area has no decision-making power. This system, intensive, concise, and efficient, is more applicable in the middle-sized and small cities when the new urban area is launched. In some bigger new urban areas it seems that the government controls too much to be effective.

The second is closed-off management by the new urban area itself. This system features fast decisions, planning, and implementation, making it easier to activate the new area's enthusiasm and creativity. However, it is unfavorable to have unified planning for the city and to integrate and optimize resources, and repetitive construction is easily done. There are a lot of problems.

The third is the management combination of centralization and decentralization. It is dominated by the governmental planning management department and joined by the new urban area. This system is widely applied. Specifically, the governmental department of planning management establishes its branch in the new urban area with the staff and business under its leadership, and they are led by the department and the new area, respectively. It is an appropriate system for it not only maintains planning integrity and seriousness but also improves efficiency.

Hangzhouwan New Area implements the management system of “managed by Ningbo and planned by Cixi.” All the workers are under the leadership of the management committee of the new area. The number two seal of Cixi planning bureau is used at the time of approval in the new area. However, its number one seal is only used when reporting to the upper levels for approval. This system, specific to China, is a compromise of several systems.

Chapter 32

Development and Construction System

The new urban area's development and construction, unlike macro and rational planning, is very concrete and specific. It calls for land expropriation, demolition and removal, huge funding investment, coordination between financial establishments and construction units, and organization of construction. In the development and construction, the new urban area mainly adopts three systems: the government arranged type, the type dominated by the new urban area, and the government-and-the-new-urban-area-jointly-built type.

32.1 Government Arranged Type

The municipal government brings the infrastructure engineering and the development and construction projects of the new area into the local economic and social development planning, the financial budgets, and the annual plan for the urban development so as to organize integrally the urban development work in both the old area and the new. The plan is made, funds are raised and invested, and the implementation is organized by the government. The new urban area is only responsible for the land and house expropriation and compensation in the previous stage. The relocation of the landless peasants and the guarantee of construction environment are also their responsibility.

In terms of the development and construction system, the department of development and construction, subordinate to the municipal government, makes an overall arrangement, and a plan for development and construction of the new urban area according to the requirements of government. After the projects are accomplished, they are managed by the urban management department or the new urban area. However, the development and construction department of the new area is mainly responsible for previous coordination and late management.

There are advantages of this system. It enables the government to make use of the financing and investment platform to raise funds and it can undertake some key projects by mobilizing and organizing different powers from various departments involved in the development and innovation, construction, municipal administration, transportation, water conservancy, and environment protection. The talents of

development and construction in the departments of planning, construction and finance can be made best use of so as to form a driving force of scientific management; it enables the new urban area to focus its men, time, and money upon investment promotion, industrial development, and social affairs management. It also has shortcomings. There is a great possibility that the government has too many irons in the fire. Some departments cannot manage or they fail to manage well so as not to mobilize all aspects, especially the enthusiasm and creativity of the new urban area.

32.2 Type Dominated by the New Urban Area

The municipal government is mainly responsible for the extensive planning and coordination of the new urban area, and it does not concern itself with specific development and construction projects, which are dealt with by the new urban area itself. The concrete method is that the new area sets up the construction bureau, whose staff, work, and expenditure are under the jurisdiction of the new area government and whose business is guided by the related departments.

This system enables the new area to plan the infrastructure comprehensively, develop and construct, promote investment, and develop industry. Therefore the new urban area can effectively run its functions of land expropriation, compensation, development, and construction in order to promote its work. However, to everyone's disappointment, it cannot give full play to the government's resource superiority and the advantages of the governmental departments.

32.3 The-Government-and-the-New-Urban-Area-Jointly-Built Type

The municipal government and the new urban area have clearly distinct functions, and they join hands in promoting the development and construction of the new area. The government gives support in the form of men, money, material, policy, and investment to the new urban area. It also organizes some governmental departments to take part in the development of some key projects in the new district. Under the government's guidance and support, the new urban area devotes itself to development and construction.

This system is convenient for the city government to gather all forces to do important things. It boasts its financial strength and amount. Meanwhile, it does not stand in the front line of development and construction in the way the new urban area does, so it can deal with specific problems such as land expropriation and house removal. Therefore, it is favorable for the new district to carry out its work.

Chapter 33

Urban Management System

In its narrow sense, urban management here mainly refers to the city management of environmental hygiene, greening, municipal infrastructure, and advertising implemented by the urban management department of the municipal government. It does not include general city management of public security and environment protection.

Chinese cities are basically divided into four types: provincial, sub-provincial, municipal, and county-level. Except for the country-level cities, the others have two levels of governments: the municipal government and the district government. Chinese city management started very late and the laws and regulations are incomplete and lag behind, and there is no uniform law. Governmental departments are sometimes unsure of the responsibilities of law enforcement by comprehensive management, so there is no definite management for the city law enforcement administration. In 2008, the State Council determined the municipal government should take over the decision-making power of urban management responsibilities and systems, and every city government has the right to establish the terms of reference and management systems of its comprehensive administration sector. The local urban management system varies a lot with 100 cities and 100 city management systems. In 2009, China National Housing and Urban-rural Development carried out special research and formed a discussion draft of *Study on the System of City Management and Operation Mechanism of China*. Generally speaking, the whole research system is complete, theoretical, and original, and it can be operated. However, because it is a macro study, it might have adopted more suggestions from urban management departments at all levels and less advice from government. Chinese legislation and the government's rules and regulations are frequently investigated and drafted by the related departments, stressing the interests of different departments and ignoring voices from locals.

Under the current political, economic, and social system in China, the urban management system should take the following factors into consideration. First, the local government has far-ranging resources and means of politics, economy, and society, and any department is in a subordinate and detached position. *At the present stage in China, detaching themselves from the party committee and the government, the department and organization would find it hard to work, even to take a single step.* For instance, unauthorized construction is difficult to demolish

without the help of the related departments and the sub-district office. At present, China is a country dominated by government administrative power. Second, the city has a wide variety of affairs to manage and high administrative expenses. In accordance with scientific management theory, the municipal government has direct management in both depth and width, with high administrative costs but poor actual effects. The district government and the sub-district office, in turn, should give full play to organizational advantages by means of arranging employment for laid-off workers or the unemployed. The cost is low and it turns out to be effective socially. The city management department has no such advantages. Third, there is a need to distinguish the public resources of health, greening, and lighting from the specific resources of supplying water, power, gas, and heat. They should be managed differently. Fourth, the city management system should reflect the principles of “simplicity, efficiency, and unification.”

System is authorized. The municipal city should manage well the primary and important areas, and specific resources. Meanwhile, the government should transfer its powers to the locals and carry out hierarchy, classified management, and specialized contracting services. That is, some powers from the urban management department should be handed over to the district government, the subordinate office, or the neighborhood committee. They then become the main body of urban management, taking care of their own places. To the professional services such as water, power, gas, and heating, the municipal government adopts the method of centralized management. This system is the one which suits China’s national conditions with governments of two levels, management of three levels, and network of four levels. It is an effective long-term system.

Specifically for the establishment of management systems, the nation transfers powers to the local governments, because the cities have different sizes and foundations. It is difficult to have a highly unified system for a long time to come. The municipal government sets up the urban management comprehensive enforcement bureau with the purpose of coordination, supervision, evaluation, and professional management. The district government also establishes the corresponding institutions, which focus on specific organization and management. If the new urban area is small and is close to the central city, the municipal government may authorize the urban management department to manage it or the new district area entrusts it to do so when it initially starts up. It is not necessary to set up a new management department or a new management team.

Part X
On Policies

Chapter 34

Land Use and Compensation Policy

Policies are powerful. Some resemble the Ant Effect or the Butterfly Effect; some are explosive as are atomic bombs and cause powerful sensations and radiation effects. Production elements such as talent, funds, and technology are fluid and they move into place with favorable policies, good environments, and good conditions. If new urban areas are required to develop better and faster, favorable policies should be formulated and implemented. *The government is mainly responsible for the formulation and implementation of policies, which are the largest resource it possesses. New urban areas should create policies and give full play to their power.*

Land is the carrier of new urban areas and the basic resource for planning and constructing them. To carry out land-use planning and to enact a realistic land supply policy is the prerequisite to moving on the construction of new urban areas. The land policy concerning the interests of the central government, local governments, new urban areas, rural communities, peasants, and investment and construction units is very complicated for these groups may relate to each other directly. We take full advantage of this resource and handle successfully the relations between the different aspects. The basic precondition is that land use must be legal—otherwise it is illegal. The peasants' interest should receive due attention or it is difficult to acquire their land. A reasonable price for the land, a scientific land supply method, and a healthy incentive mechanism can be attractive to the investors. Meanwhile, the interests from the other aspects should receive equal attention so that a sustainable and fit development of new urban areas can be achieved.

34.1 Land Acquisition and Compensation Are a Big Issue

One morning in 2003, the writer, as the director of Dezhou Hedong New Urban Area Construction Management Office, went to see the landform in Changhe Park of the new urban area. This patch of land was about 1,500 mu, and was partly a deserted field of brick kilns and partly a field of trenches and croplands. Facing the empty, yellowish, and deserted land which had just been cleared of trees, houses, crops, and weeds, I stood bewildered. The peasants of Yanghzhuang had been living and growing crops here and they had been forced to leave their land, so how

could they make a living? At that time, the peasants were given more than ¥30,000 in compensation, which was not a large sum of money. After the land was expropriated, the many suburban peasants with less land were seriously influenced in their life and income. Land requisition and demolition are big issues in the development of new urban areas.

Peasants cultivate complex feelings towards their government when their land is acquired. First, they are panic-stricken. They have lived, worked, and had children in this field for generations. Some custom cultures such as living habits, relation with neighbors, friends and relatives have been formed in the agricultural life over a long time. When they hear that the government is going to expropriate their land, which they rely on, they feel lost. It is a great shock to their life and income. They keep thinking about what they may do in the future, where they may live, where to go to work, and what could happen when their children grow up. Certainly there are some peasants who are shocked ideologically and are somewhat insensitive. They sit around passively. They do not care whether the land is cultivated or not. They are not willing to help things expand. They stop renovating houses and buying furniture till their land is expropriated and their houses demolished. Finally, they resist land acquisition. They go to the units concerned for more information and appeal for help from the government and the new district management committee. To obtain more compensation for the requisitioned land and houses they would grow economic crops and trees, build houses on the idle homestead, and add more arbitrary extensions to their houses. This gives rise to a great workload in land acquisition, house acquisition, and compensation, wasting a lot of manpower, material, and money. It all has a negative influence.

Should peasants be blamed for this? No, absolutely not, because many aspects are involved such as state law, the land financial system, and contradictions in land use. The Constitution of the People's Republic of China maintains that urban land is owned by the state. The Land Law of the People's Republic of China dictates that any units or individuals must apply to use state-owned land in accordance with the law if they want to use land for construction. However, the state and the governments at all levels are now adopting a lower standard of land acquisition compensation, which gives rise to conflicts of interests between the local government and peasants during land requisitioning. On the one hand, peasants are reluctant to hand over their land; on the other, the government is not willing to increase compensation. Hence, the rural basic officials have to take many measures to complete the task of land requisition.

When planning and constructing new urban areas, land use is of great significance and is a tough job. Construction demands land and the land use indicator. Sometimes the examination and approval from the State Council and the Ministry of Land and Resources is mandatory in some cities. When deciding the location of the new urban area, we should know well where the basic agricultural land is and where the land for construction is. Only the construction land can be used. If there is no construction land, we should try to adjust the status of the land. In some places, the land is formed by cutting down hills and filling the sea. In other places,

rural communities are being built on with peasants' villages and houses demolished in order to vacate land. The replacement land use indicator is taken to the city for urban construction in this way.

34.2 Land Supply Must Be Scientifically Determined

The land supply should be classified. In Chinese cities, the construction land is divided into two categories: business project land and non-operating land. According to the current policy, the former generally refers to industry, business, tourism, entertainment, finance, service, and commercial residential buildings. It supplies land by means of inviting bids, auction, and listing. Service life is for 50 years and 70 years respectively, and the intention is to obtain interest. Non-operational items include constructive land for roads, squares, municipal administration, greens and schools, and political and legal institutions. The users are public institutions and the service life period is 50 years. The intended use is unprofitable and the land is supplied by transferring. New urban area development takes different land supply approaches according to the nature of the projects. In Chinese land and loan policies, the land allocated by the administration is prohibited from bank mortgage. Some development and constructive units are not willing to adopt the method of land assignment; instead they want to complete the transfer once and go through the procedures in order to meet the requirements needed for loan financing. The relevant governmental departments should respect the wishes of the land users, complying with the land transfer procedures and completing the certificate.

Land supply can be carried out in stages. At the initial period, the new urban area normally has a vast tract of land which is sparsely populated, and the infrastructure does not provide what is required. The organizers and executors are usually eager to carry out their business and start projects so that they can transfer the land at a lower price. Therefore, some enterprises and administrative institutions, who want to invest and develop in the new urban area, bargain with the officials on condition that they can take up more land and expropriate land at a low price, especially those developers who occupy more land and are in default on the land loan. They expropriate land without making real use of it, or without payment or less payment. With the land lying unoccupied, they develop it till the land value is enhanced and house prices rise. At this time, the new urban area confronts the pressure and choices between the fast development of image and fund-raising by land leasing, accelerating the launch of projects, and saving land resources. *The right way is to adopt one time planning and allocate land in stages. It should be supplied at different prices according to time limits. First come, first served, and those in emergent need should be considered first. Less land is preferable so that it can be developed in clusters.* At first the land to be allocated should be equipped with better infrastructure, good development and construction conditions so as to set up

the image as quickly as possible, and an obvious leading role to other projects. It should be a patch of land of a moderate area. In the middle of construction, infrastructure is nearly complete, some projects having been completed and come into service. Popularity and image are established. With a promising future, its land has been greatly enhanced. Some developers, especially big ones, compete to invest and develop projects. At this time we adopt the method of auction. The land to be transferred should be bigger. Later the land is running out, so land transfer should be taken into careful consideration and some land be reserved for future urban use.

Land supply varies for different districts. Because of different types and function areas, the initial function areas should be supplied with land prior to other areas in accordance with the plan. Land for functional areas should not be offered when infrastructure and construction conditions are incomplete. No matter what type the new urban area is, the land for infrastructure should be preferentially supplied because infrastructure should be built first. Then public facilities follow so as to be able to supply water, gas, and heat. In short, land should be supplied when it is actually needed.

34.3 Incentive Mechanism of Land Supply Should Be Established

In order to enhance the attractiveness of new urban area development and accelerate its development, we should manage the land efficiently by means of broadening land use mode and making it easier to use it. To those who want to invest in schools, hospitals, and offices, we adopt the land allocation method. To those who want to develop industry with a large sum of money but are not willing to purchase land because of financial difficulty, upon consultation, the government can invest in land pricing shares through the investment and financing companies of financial holdings, or the investment companies may use the land through legal channels involving renting, and repay the land rent or purchase the land when they are ready to develop. Those who are willing to buy land but find it difficult to make a one off purchase, they may be able to acquire the land by installment. Those who do not want to buy land may rent it and enjoy preferential treatment in accordance with the nature of the project and the amount of their investment. Those who are eager to get a loan or raise funds to develop the new urban area can submit photocopies of land, planning, and construction certificates on which the proposed use of the loan can be marked upon approval. Those who are to invest in constructing large urban complex projects can go through the land procedures flexibly according to the law because there are both residential and commercial areas in one district or one building. Anyway, we should try to encourage investment and development on a large scale.

34.4 Land Must Be Used Intensively

The protection of land resources should receive adequate attention. The land should be used properly, scientifically and intensively. New urban areas take up too much land, some taking up dozens or even thousands of square kilometers. We must keep strict control of the approval in the new urban areas; hence, new urban areas should be rigorously regulated. In particular, university towns, tourism regions, and vocational villages should be carefully testified, strictly controlled, and examined so as to avoid a waste of land. The new urban area should be rigorously planned. From the beginning of the overall planning, the investment rate, output capacity, and plot ratio of land per unit should be clearly specified. We should plan and design scientifically parks, roads, etc., correcting the misunderstanding that the larger the popular parks and squares and the wider the roads, the better they are. Constant comparison in this respect should cease. It is unnecessary for some industrial new towns to plan such broad streets and to build such large parks because there are insufficient people to warrant them.

Chapter 35

House Requisition, Compensation, and Resettlement Policy

35.1 House Requisition, Compensation, and Resettlement Are of Great Significance

During the start and development stages of the new urban area, house requisition, compensation and resettlement is a tough task, which concerns people's livelihood, stability, and development of relationships. If it is handled wrongly, the new area's construction is hard to fulfill, some farmers are sure to be discontented, and possibly wage a collective petition so that land acquisition and house demolition are even more difficult to carry out. We should therefore study and handle it carefully.

It is a difficult job because house problems in new urban areas are comparatively complicated. In terms of house property ownership, there are houses of individual property rights and collective ownership, houses with limited property rights on the edge of cities put up by natives or non-natives, those in the possession of schools and enterprises, office buildings, and enterprise workshops of rural collective ownership. In terms of types, there are houses, school buildings, factory buildings, and offices and business buildings along the street. In terms of areas, some villagers have one house of dozens of square meters; others have a few houses of hundreds of square meters. There are homesteads granted by the village collective, but not set up to prohibit sporadic construction in new urban areas by the government. Villages have control of different homestead areas and villagers possess houses in various areas. Things are different and varied, and the whole package is difficult to handle.

It is a tough job because the central government and its relevant departments have not enacted the policies and rules of land, house acquisition, and compensation, leaving local governments to fumble on their own. Different concepts, interpretations, and standards have brought a lot of problems to practical work. For instance, when a city was transforming a city inland river into a scenic spot, three standards were issued. The highway, water conservancy, and land departments gave out compensation according to their respective industry. Take the compensation for highway construction as another example. The national standard is higher than that

of some cities or counties. However, the compensation for other construction projects arranged by the local government is comparatively low. Local officials are afraid that people cannot understand and are psychologically thrown regarding different standards arising in the same country on the same land and at the same time. How can they carry out their work among such people? If the national and provincial standards are not followed, people hold different opinions about their compensation and are unwilling to move because of the transparency of policies. Although PRC has existed for over 60 years and city, highway, and railway construction has been going on for decades, the basic officials are still feeling stones when crossing the river. It's hard to do compensation work at the basic level. *The state ought to enact a unified and instructional compensation policy for collective land and house acquisition.*

It is a hard job because the peasants in the new urban area lose completely the basic conditions on which they have relied and developed after their land is expropriated, their ancestral graves are moved elsewhere, and their houses are demolished. All these things are suddenly gone and they find it hard to adapt themselves to their new situation. They are ready to take action. Therefore, without any definite and satisfactory answer, they organize collective petitions or resort to other action which may arouse the government's attention. In some places malignant cases can arise.

35.2 Compensation and Resettlement Policy Should Be Based on Family Numbers

For long-standing reasons, lots of villagers own different numbers of homesteads, which differ greatly in area. Because demolition is compensated in accordance with area, the villagers generally build houses illegally and erect storied buildings just in advance of removal in order to get more compensation. It is a tough to compensate and resettle for the want of a compensation system for collective land expropriation and building removal, and the current system lacks valid legal support. Certain officers with the right to distribute homesteads and the villagers who put up illegal houses are contented, although most villagers think this compensation is unfair to the honest people.

The collective land is the property and welfare shared by all the villagers and everyone enjoys equal rights. After the new urban area land is fully occupied, the common resource of land disappears. In this situation, *it is important to share the monetary value of these land resources impartially and reasonably and transform villagers into urban dwellers.* The reasonable alternative is to stick to human-orientated policy, ensuring that every villager is satisfied with the improved living environment and conditions by being provided with a dwelling place of a certain area. Since 2003, Dezhou new urban area and some counties adopted the compensation system of allocating houses based on the numbers of people in the

family and homestead. That is, the government demolished a homestead of about 0.3 to 0.4 mu and offered over ¥150,000. Every villager had the right to buy a house of over 40 m² at cost price. What's more, the government took special care according to family members. This method was greatly welcomed among most villagers and rural officials because it is unprejudiced and realistic. Not only was it respected, realistic, and different for each family to possess a house; it also maintained justice among farmers in terms of the settlement house area and price. In brief, the government compensated for the villagers' original homesteads, and let peasants purchase houses at cost price or less. Besides buying houses with the compensatory payments, most villagers spend the remnant on new furniture. Without taking money from their own pockets, their living conditions and living environment are improved. In this way, can rural house removal, peasant resettlement, and illegal building be solved?

Some peasants want monetary compensation instead of house compensation. They make reference to the sum of house and resettlement compensation most peasants have obtained. Because of the rapid increase of house prices in new urban areas, it is recommended that peasants have house compensation.

35.3 Other Compensation and Resettlement Policies

1. The compensation policy for dismantling houses on state-owned land. In 2011, House Acquisition from State-owned Land and Compensation Ordinance by the State Council has a clear stipulation and we should implement it carefully.
2. The compensation policy for dismantling non-natives' houses on collectively-owned land. Because the houses built on collectively-owned land are low cost, some urban dwellers and natives prefer to buy homesteads on the collective land. Then they build their own houses. Some people also buy houses built by the village collective organization. These houses are neither the same as villagers' houses nor citizens' apartments, because they have no land certificate or house property certificate, and they cannot be evaluated as can houses on the state-owned land. These people are not collective land owners and there is no possibility of compensating them in the same way as the peasants. An alternative is to guarantee their real interests by compensating them at a lower standard.
3. The compensation policy for dismantling rural collective housing. One way is to compensate according to the asset replacement price, and the other is to plan and construct a certain amount of collective housing in the community for resettling peasants.

35.4 Compensation Should Be Combined with Housing Settlement

No matter whether houses are on state-owned land or on collectively-owned land, a certain number of houses are generally built in the planned community of the new urban area to resettle those whose houses are expropriated, keep them in the new urban area, and reduce the occupation of the compensation fund as low as possible. This method is called home swapping.

When implementing compensation for dismantling houses, first settlement and then removal are best to persuade peasants and make it easier for them. Chinese peasants are understanding and considerate. Some new urban areas dismantle peasants' houses before they build houses for resettlement. Having no place to go, these people have to move in with relatives or rent houses. Some live in this way for a year or even longer. These people are very worried about their family members who might be terminally ill or die or marry in the tenement because the landlord does not like to see this, and the tenants themselves are also inconvenienced. Peasants should be allowed to rent houses temporarily and the government needs to provide these rentals. Because there are a great number of tenants and the time is long, this requires a lot of money. Therefore, the method of first settlement and then removal is advocated.

35.5 Let the Allocation Houses Become Commercial Houses

Hernando de Soto, the chairman of Peru Free and Democratic Society, is considered the most influential reformer in the world by Times and Forbes. He has drawn up the ownership reform plan for more than 20 countries and is the author of a well-known book called *The Mystery of Capital*. Many economists and even socialists have been thinking about such a question: why has the capitalist economic model been a great success in the western countries such as America, Western Europe, and Japan, whereas in many developing countries it remains stagnant? Facing the capital market, developing countries fail to get involved—it is as if there is a sheet of glass stopping them—why can't they enter? In Soto's opinion, because most developing countries have not established a capital transfer mechanism, they are short of capital for development.

Soto's views are compatible with the rural and peasants' particular situations in China. Chinese peasants have lived in the countryside and worked in the fields for generations, and their life is determined by nature. Therefore, a peasant or his family has little money and his children are unlikely to inherit any assets from him. There are reasons for this. First is that there is no a system to transfer assets into capital. Peasants' houses are built on collectively-owned land and they are not permitted to mortgage or arrange other transactions. The houses and land, material,

static, and inexpensive, cannot increase in value or be mortgaged or traded as capital. There is no way to acquire financial capital and the accumulation of wealth on their own is hard to achieve. There are a large number of peasants in the vast countryside of China. What an asset! What valuable capital! What great idleness and waste! In cities the land is state-owned. The house, inherited or purchased later, demands a commercial house certificate and land granting certificate. These two certificates can be mortgaged, a loan can be obtained or the capital can be realized by selling houses to start businesses, invest, or buy.

In the vast countryside of China, the reform of land ownership should be accelerated and peasants should be given contractual land user rights, homestead land user rights, and house property rights, which must be validated with certificates. With these three certificates, peasants can get mortgage loans. In a word, peasants are guaranteed money to live and start enterprises when they enter the towns.

In the process of house expropriation, compensation and resettlement, the new urban area should ensure peasants are able to live in commercial houses and obtain the national land certificate and house property certificate so that their house ownership, the credit for a mortgagee, and the exchange price have the same legal status and market value as those of citizens. This is not complicated. That is, the land to settle peasants is to be allocated according to the procedures set up by the state. As for the land transfer fees, the government adopts the method of first delivery and then refunding or arranging all payments via a bank without any cash. In this way, peasants' houses become commercial and can be mortgaged and sold. They are value-added at the same time. Peasants have funds to engage in other occupations. It creates conditions for peasants to become urban residents. It is a big issue in rural reform and development and a way to enrich peasants.

35.6 A Tide of Divorce Appears in Guiyang

In October and November of 2012, the Marriage Registry of Guiyang Yunyan District Civil Affairs Bureau was packed with people who wanted to divorce. A 90-year-old man was taken in a wheelchair by his children to file a divorce. A couple who had been married for 3 months came to divorce. Two generations of a family of peasants had come to divorce. The standard reason for their divorce was "having little in common, no affection between them, and quarrelling frequently." The men and their wives filled out their divorce document cheerfully and left happily. Eight workers began to work at 8:30 in the morning and went back home at 6:00 or 7:00 in the evening every day. Divorcing couples usually averaged out at 20 per day, but during the tide the number of divorcing couples increased to 120 per day.

The reason for these fake divorces was that according to the *Implementation of Homestead and House Registration on the Collectively-owned Land in Guiyang* and the *Provisional Rules of House Construction and Registration on Collectively-*

owned Land, the state-owned land house expropriation administration bureau of Yunyan district formulated the *Implementation of Confirmation of House Right on the Collectively-owned Land* and made it public on a large scale. It was stated that a family should possess a residence which was no more than 130 and 240 m² of construction area. It was believed that the government might consider it an illegal construction if the house was larger. A certain Mr. Lou, 68, in Gaicha Village of Qianling Town said that they decided to divorce in order to leave their children more houses under regular procedures although he and his wife had a profound love for each other. He found from the publicity materials that a family was entitled to enjoy a house of 240 m². If he divorced his wife, the family could be considered as two, which could enjoy 480 m².

House expropriation and compensation policy concerns citizens' livelihood and welfare, so we should make careful investigations, listen to public opinion, and take care of the demands of the masses, as a really favorable policy is to let people feel at peace with their life and jobs.

These absurd things are being repeated, and some extreme measures have been exposed. Yin Dingqian, a peasant in Yibin city of Sichuan province, first divorced his wife, then married his mother-in-law, then divorced her, and finally remarried his wife. He did so in order to obtain demolition compensation of over 10,000 yuan by increasing the family number. Of course, his behavior had been alleged to be fraud.

(Based on relevant documents)

Chapter 36

Social Security Policy

With the acceleration of new urban area development, landless peasants are becoming a large social group. *The National Land Use Planning Outline* shows that in 2000–2030 the arable land in China will extend to over 54,500,000 mu, and the number of land-lost peasants will amount to 110 million.¹ How to ensure a stable income and better life for them is an important job in the development of new urban areas and a national issue in the process of urbanization, to which the state should pay close attention.

36.1 Give an Urban Identity to the Landless Peasant

First of all, urbanization is man's urbanization, which is generally acknowledged. *Man's urbanization is first to change landless peasants, the vulnerable group, into townspeople.* Peasants make a great contribution to urbanization. They not only lose their basic means of production and husbandry, but also their long-standing living habits and lifestyle. They live in houses close to the city and should step over the threshold of household registration to become town dwellers. In fact, peasants' land in many new urban areas is expropriated. Although living in new urban areas, they remain peasants and cannot enjoy the welfare of townspeople. This is unfair. A study shows that there are 67 items involving treatments different from those of townspeople in the book of registered permanent residence. Therefore, when household registration reform is promoted, we shall consider peasants to be townspeople and realize their dream to become urban dwellers.

¹China Daily, October 12, 2012.

36.2 Actualize Policies of Social Securities

Gu Shengzu, an economist in China, thinks that peasants, the would-be townspeople, should enjoy employment, education, medical treatment, housing, and pensions,² which the Chinese government has been stressing. In 2006, *The Guidance on Vocational Training and Social Securities for Landless Peasants* issued by the General Office of the State Council requests security objects and levels. *The Property Law* promulgated in 2007 calls for the provision of security costs for land-lost peasants by law. In 2008, the Third Plenary Session of the 17th Central Committee of the Chinese Communist Party passed *The Decision on Issues of Promoting Rural Reform and Development*, stipulating the principle of security first and expropriation second, which has been implemented in most provinces, autonomous regions, and municipal cities directly under the central government. A great number of landless peasants are included in the sphere of social security. However, there are a lot of difficulties in implanting it because of different policies throughout the country, low security standards, and the non-availability of funds. We should improve the system, ensure the funding source, make policies cohesive, and supervise its implementation to ensure peasants' basic life and long-term livelihood.

36.3 Ensure Landless Peasants Have a Stable Income

Give a man a fish, and he eats for a day. The point of peasants' living is to ensure they have a reliable and stable income which means a stable job. This social group of landless peasant, similar to other peasants, knows little about urban professions such as business and industry, and they are worried about their new occupation when they are deprived of working in the fields. The government should therefore devote special funds to peasants' systematic and professional training so that most of them can acquire professional skills and restart their businesses. Peasants must be included in employment schemes and the government should take measures to support this program. Considering their culture and age, we should encourage and guide rural communities to develop property management, municipal administration, greening, and security companies so that peasants can be employed.

To enable landless peasants to urbanize synchronously, Shandong province suggests peasants enter the city with their land. That is, the peasants are left 25 % of their land, which is transferred to being state-owned, peasants thus becoming townspeople of property. However, policy has been an obstacle to transforming peasants to townspeople and it is therefore difficult to implement. Even so, this retain-land-to-settle-and-enter-city-with-land method turns out to be effective in some places. In some industrial new urban areas, the rural community builds some

²China Daily, January 17, 2013.

factory buildings, rents commercial facilities, and gets real estate development in order to increase income. However, some problems also arise at the same time. For instance, what will the landless villages and villagers do because their land has been expropriated by the government? In new urban areas, land use is planned and integrated, especially some non-industrial new urban areas, where the village collective leaves some land to develop in office and business projects. It is difficult to develop because a large investment and a long investment return time is needed. In some small- and medium-sized new urban areas the village lacks the funds to construct multi-storey buildings. As a temporary measure, the method of “enter-city-with-land” is beyond reproach, but in the long run, we’d better improve the land requisition compensation price in accordance with relevant policies and raise the social security standard of land-lost peasants to ensure their employment, pay, and security.

Chapter 37

Development Policy

37.1 Plan Scientifically and Advance Step by Step

The new urban area is an entirety and demands a development plan based on space and land use design, and its particular situations such as development demands, market demands, and capital construction investment. New urban development needs a large number of different funds which should be developed progressively. Singapore Yulang Industrial Park has an area of only 65 km². Since 1962, it has been developed in sequence from east to west, spreading from the initiative area to the whole comprehensive industrial area by means of clustering expansion. According to the industrial development demands over different periods, it has created land and development space, and spread up into the air, underground, and to the sea, accumulating experience of limited resources and boundless creativity. Guangzhou Sino-Singapore Knowledge City is dividing its development into three stages. In the initial period (2010–2015), land amounting to 10 km² has been developed and good innovation and enterprise systems have been formed. The gross domestic regional product amounts to ¥30 billion. Second is a fast development period (2015–2020). Land comprising 30 km² is to be developed. It will bring in some multinational enterprises with independent intellectual property rights and the gross domestic regional products will reach ¥100 billion. Third is the stage of prosperity (after 2020). Land of 60 km² is to be devoted to development and construction. It will assemble plenty of innovative fruits participating in international production and the gross domestic regional products will be worth ¥300 billion.

At the initial period of developing the new urban area, where to begin is a big issue. Generally speaking, there are four principles of propriety. One is to develop the infrastructure of roads, power, water, gas, and heating supply so as to invest in and construct projects, implement the industrial production, and provide inhabitants with good living conditions. Two is to develop the land with good supporting facilities, for it enjoys such high recognition that it can be transferred at a higher price. Early development can realize the land transfer money and some tax income,

and the new urban area image can be established as quickly as possible. However, land with poor infrastructure can only be occupied by developers although it can be transferred at a lower price. It waits to be developed till the infrastructure facilities provide support and the value increases. Three is to develop the land closer to the old urban areas. This land is close virtually and psychologically to the old urban area. It has better infrastructure facilities and more favorable developing conditions. The public resources of schools and hospitals are accessible. Of course, to promote the development of new urban areas extensively, an alternative way is to select the leapfrog development style, that is, to develop some urgent projects such as hotels and stadiums, which cater for conferences and big occasions, in a place far away from the old urban area. These projects have a low demand for infrastructure facilities. This place-oriented style is to put infrastructure construction first and it plays an important role in promoting new urban area development. Four is to give priority to the land with excellent conditions of development, so as to achieve benefits and build an image quickly. As so often is the case of polemology, the first war should be very carefully dealt with. The same principle should be followed in the development of new urban areas.

37.2 Release the First-Level Development Market of Land According to the Plan

Because of the influence of funds, efficiency, and financiers, the new urban area should charge the urban operator with the task of preliminary land adjustment only if some large investment and development company is available. However, two things must be taken into consideration. One is according to the particular situation of the area developed; it is implemented according to the plan and the place. It is not recommended to put everything in the hands of the investment and development companies, because it is then out of control in terms of land prices, development progress, and the real estate market. The other is to choose reputable and powerful companies instead of small or less experienced companies, or those who are bent on occupying land without development or with slow development, or wait to sell on at a higher price. Otherwise, it could exert unfavorable influence on the planning and development of the new urban area.

37.3 Encourage the New Urban Area and Control the Old One

Without encouragement and inclination, there would be no policy or the passion to develop. Without control and guidance, there would be no orientation, priority, and fast development. The government role is to gather powers and resources, and actualize goals by enacting and implementing policies.

The new urban area has not only competed with other regions and other new urban areas, but also contended for resources and raced to develop with the old quarter. In the early stage of development, because of inadequate infrastructure, poorly-matched public facilities, less employment and people, and inconvenient connection with the old, the new urban area is not as appealing as the old and it is hard to compete with it. The government should therefore enact and implement policies to control the old quarter.

When constructing La Défense, France adopted the policy of limiting office property in the central city. In 1995, Paris government prohibited new industrial projects in the city and encouraged the governmental offices to move outside. In 1958, it stipulated that the current industries and enterprises could not exceed 10 % of the existing space when improving and reconstructing. In 1959, it prohibited the construction of over 10,000 m² of office building in the urban area. Despite these rules and regulations, the development of La Défense was far from satisfactory till 1978. As a result, the Paris government decided to take further measures, which reinforced the control of strength and density of architectures, set up different tax rates in regions of Paris, and controlled enterprises moving to the central area. Meanwhile, the city government introduced a series of subsidy policies to attract businesses and industries to invest in La Défense. The congestion toll was charged to urban enterprises. Those factories with 500 m² moving from central Paris would enjoy 60 % of the compensation for demolition and the institutions would get 15–20 % of investment allowance.¹ The implementation of these comprehensive measures plays an important role in accelerating the development of La Défense.

To restrain the old and encourage the new does not mean to give up the old city and let it stop developing, but to control and develop the repeated construction of industries and projects of new urban areas, optimize the living environment of the old quarter, disperse its development space, develop its proper projects, and do more greening and things citizens are badly in need of in accordance with the overall strategy of the urban development and the urban function and space location. For instance, many cities in China encourage the development of secondary industry in the new urban area and tertiary industry in the old. Of course, it should abide by the functional location of the new and old urban quarters. If the new urban area is focusing on tourism, education, science and technology, this method is not appropriate. The situation decides policies, as it is the core of formulating and implementing policies.

¹Chen Jinsong, *New Town Patterns*, pp. 203–204.

Chapter 38

Investment Policy

38.1 Policy Is a Resource and Fund

It is essential for the new urban area to start multiple channels and raise a lot of funds. The formulation and implementation of appealing investment policy is the premise and guarantee to achieve this goal.

Each city has its own resources and advantages. Some are natural resources, such as water, petroleum, gas, and minerals; some are human resources such as celebrities, events, elite schools, legends, human relations, and talent; some are surroundings and geographical positions, for instance, places close to the sea coast and rivers, large cities, the country border, airports, ports, high-speed railway stations, and traffic thoroughfares. We should take advantage of these resources and formulate and issue policies so as to attract funds. There are a lot of successful cities in the world and it is difficult to list them all.

Registered permanent residence or *hukou* is a resource, which not only introduces population but also attracts and gathers money. The developed countries in the west are adept at it. In July 2004, Germany passed the *Immigration Law*, which says that if a foreign national registers a company with registered fund of €25,000 (¥250,000) and runs it successfully for 3 years, he can apply for a long-term resident visa (green card). With the green card, he can settle anywhere and anytime in Germany and is free to move in and out of the European Union. After 3 years with the card in his hand, the family of the applicant can enjoy more welfare such as unemployment compensation and the right to vote and be elected. They may apply for German citizenship and continue to keep their foreign nationality. At the same time, the green card can be kept permanently. They may also go to other European Union countries to work legally. On September 17, 1997, the Beijing government issued *Trial Measures for the Construction of Small Pilot Towns Household Registration Management in Suburb of Beijing City*, which allows investment immigrants and registered permanent citizens to enjoy the rights to go to school, to be employed, and to receive medical treatment as Beijing natives. Cities such as Shanghai and Tianjin

carried out blue account *hukou* policies successively and have gathered large sums of money. In the 1980s and 1990s, many counties in China adopted the policy of selling a “non-agricultural population policy.” That is, the people engaging in agriculture can acquire the identity of being a town person after paying a certain amount of money. In this way the government and related institutions made a lot of money.

Some places are poor in underground resources as well as above-ground resources, but if they search for resources, visible or invisible, and carry out the corresponding measures, they can make something out of nothing. For instance, Shishi in Fujian province was originally a small town with limited agricultural acreage and frequent natural disasters. It is a place with poor natural endowments. After the reform and open up, it gave full play to the advantage of having plenty of overseas Chinese people and developed the fashion industry. Since 1987, when it became a country-level city approved by the State Council, it has been developing very fast. Singapore and Las Vegas in the US are both places with poor natural resources. They are becoming well-known tourist cities throughout the world because they formulate special policies. The key point is to focus on advantages, attract funds, and gather powers, with policies as a driving force.

38.2 Enact Investment Policy Scientifically

An entrepreneur dealing with investment once said that investing is similar to marrying off a daughter and both of them demand a careful investigation and a final settlement. In fact, some investments are much more complicated than marrying off a daughter. In modern society, marriage is something between two young people and others hardly ever interfere. However, the investment of some enterprises has to be approved by the board. Investment mainly concerns man, fund, and project. Man is the decision-maker, fund is the capital, and project is a carrier. All the personnel involved are important.

According to Abraham Maslow’s hierarchy of needs, man’s needs rise from low to high, resembling a staircase. They are classified as physiology, safety, emotion, belonging, and esteem and self-fulfillment. Except for these five needs, investors demand a high return of investment. “Come for money” is a real portrait of these people. It is a key point of enacting a policy for investors to earn money as quickly as possible. For example, in terms of reducing the development cost for investors, the new urban area carries out the policies of lowering the land price or installments, tax preference, and making things free of charge. In terms of hastening payback time, it carries out policies of shortening time limits of administrative examination and approval, improving work efficiency. In terms of enhancing investors’ confidence, such policies should be enacted and implemented. Investors see a bright prospect and regard it as an opportunity to develop, so they are willing to dish out money from their pockets. Foreign investors care about the legal environment, and Chinese investors pay attention to the governmental transition. We should pay attention to it when enacting policies.

38.3 Implement Investment Policy with a Focus

Investment policy, characterized with universality, is a regulation which is stable within a length of time. In the course of development we find a breakthrough based on different stages and investments.

The new urban area at its initial and demonstration period is short of funds from the government, projects from society, and weak in infrastructure, so investors are always watching and suspicious, and hesitate to invest. At this time we should carry out favorable policies for them so as to guide and encourage others.

We should focus attracting large investments. Because strategic investors have large sums for investment, a leading role in industry, and great development potential and social impact, we should adopt special measures to attract them, especially the world top 500 enterprises and key enterprises within China.

We should center on the new urban area's development location and type, giving play to the function of policy. In the strategic study of the new urban area, its orientation and scale of development should be determined. Within limits, it is possible for the new urban area to bring in money and projects. The projects conforming to the new quarter's characteristics and development shall be given priority.

Chapter 39

Population Policy

Population density and quality are important factors which determine the success of a new urban area. Enterprises and industries have economies of scale, so does the urban population. Without a certain number of people, the new area is less animated and lacks business atmosphere. The operation of the municipal public facilities, the development of housing and real estate, and the development of tertiary industry are all constrained. Industry and population are always two complementary wheels of urban development. Something went wrong with the wheels which led to the bankruptcy of Detroit, a car city in the US. There are now a lot of people who are in ignorance of it and fail to provide decent measures and policies. Meanwhile, we realize that without a qualified population it is hard to develop high-tech and high-value-added industry, hence the city is less competitive. Therefore, we should study and implement a population policy.

The Chinese population policy is a great issue much discussed. The new urban area population policy is mainly concerned with the household registration system and its implementation. At present, China is one of the few countries where household registration is carried out. A person's identity is determined before his or her birth. From the moment he or she is born, a person is labeled with a rural or urban identity. Most people carry the sticker throughout their lives. This identity brings a sharp contrast in a man's value and social welfare. Family background cannot be chosen, but the system can and it resembles a thick glass door. In spite of the reform and opening, the household registration system with some related welfare has been declining, but essential progress is still not attainable. It is hard to detach oneself from it. In February 2012, *Notice on Actively and Steadily Pushing Forward the Reform of the Household Registration Management* by the State Council was aimed at reforming the household registration system but failed because a lot of things are involved such as the infrastructure of great investment, the public facility, the urban social management, schooling, employment, and social security. *To gather residents and develop, the new urban area should liberalize the household registration and formulate policies so as to attract more people to settle down and live in the new urban area.*

Suqian in Jiangsu province, a prefecture-level city in 1996 when counties were withdrawn and cities were established, has been growing fast after a development of nearly 10 years and has exerted the function of being a central city, but its population

has lagged far behind. To multiply its urban population in 5 years, in September 2006, Suqian party committee and the municipal government formulated. *On the Policy of Realizing the Multiplication of Population in the Central City in 5 Years*, which states explicitly that Suqian should focus on activating business creation and expanding employment under the principle of strengthening the city with industry, letting the city flourish with tertiary industry, developing the city with introducing investment, and enabling people to live happily to push the gathering of population in the central area. It continues to be stated that the population will have reached 600,000 by 2010, making the city the center of the new-emerging industrial and commercial cities in the region, the best human settlement, and one of education and industry agglomeration. Suqian originated 38 favorable policies for the population to double. The method, applied at that time, shows that the Suqian people are very far-sighted, have a clear thinking, and are easy to handle. It is a valuable lesson.

The population policy problem has become the negative energy of Chinese urbanization and the focus of the whole nation. We should adopt the policy which permits peasants to be townspeople. The landless peasants have lost the land on which they are dependent and which was taken at a low price. They have made great sacrifice and contribution to the urbanization in China, so they should be the residents in the new urban area and enjoy citizens welfare. The government should remove the restriction on peasants entering the city, and the policy of immigrant population settlement, and adopt active measures and policies to attract the best talent. We should encourage investment and immigration, and formulate the related policies. Tianjin Sino-Singapore Eco-city relaxed the blue stamped residence registration in the latter half of 2012 and the standard was lowered to ¥600,000 from ¥800,000, namely, a house is bought with a one-off payment of ¥600,000 in cash and the owner gets the blue stamped residence registration in Binhai New Area.

The human being is one species which likes to move and to make a choice. The younger he is, the more he wants to move. Talented people prefer to move and they long for jobs and life in larger cities. Some want to make a living, and some want to start businesses; some want to be free and easy. They are Chain Immigrants, a term from Saskia Sassen. If a family member, a relative, or a neighbor settles down in one city and has a stable source of income, his relatives and friends follow suit. *As the Chinese new urban areas develop and urban hukou is gradually released, a new wave of immigration might have emerged.* The regional structure of population in Chinese society, the age of rural population, and sexual structure undergo a dramatic change. The population gathers and bulges in cities along the eastern coast, large cities, megacities, and the central cities in the central and western regions. The population in some rural areas, especially in the central and western regions, decrease. Some young people, some minorities, and some skilled people swarm into cities, forming another large population migration which becomes a milestone in the urban history of the world. Therefore, after the introduction of a series of policies for moving urbanization, releasing the urban hukou policy, some big changes can take place in Chinese economic and social development. The strategy and policy makers and the developed and underdeveloped regions should all make preparations for the coming of this historic moment.

39.1 On the Policy of Realizing the Multiplication of Population in the Central Suqian City in 5 Years

During the Eleventh-Five-Year period, Suqian government focuses on activating business creation and expanding employment under the principle of strengthening the city with industry, letting the city flourish with tertiary industry, developing the city by introducing investment, and enabling people to live happily to push the gathering of population in the central area. The population in the central area is sure to double in 5 years and will have risen to 600,000 by 2010.

39.1.1 To Increase Population via Investment

39.1.2 Increase the Population to Start Businesses and to Be Employed

Encourage the development of the blue-collar apartments in the development zones—the urban economic zone, Hubin new town development zone, Suyu economic and development zone, and Sucheng economic and development zone. The apartments are built with the intention of renting them out at a low price or selling them to the enterprises or their employees in the district.

On the premise of not changing the land function, the enterprises are encouraged to build apartments for their workers to rent so as to avoid a variety of stipulated fees within the scope of urban rights.

College graduates are encouraged to start businesses and they can settle down first and then start their undertaking. For those who want to start up, from the day the business is started, taxes such as business tax, urban construction and maintenance tax, additional education tax, income tax, and all administrative charges such as management fees, registration fees, and license fees are all exempted for 3 years. Graduates who go to private enterprises and who start their businesses are offered file management services free of charge. Eligible ones can be awarded corresponding professional positions and they can be admitted preferentially by the state establishments and the public institutions when they recruit.

Outbound personnel are encouraged to start their business in their hometown. For those with fixed assets of over ¥2 million, their children can choose the public school for free. For those who invest in public welfare undertakings and whose investment accounts for half of the total investment, they are free to name the project.

The urban threshold should be lowered to enable entry. Those who operate in the new market are not charged industrial and commercial fees for the first 2 years, and

for the following 3 years, only half the fees are charged. The tax policy is “Refund after taxed”. The treasuries will settle the amount annually. All the taxes belonging to local government per tax policy will be refunded for the first two years and 50 % of the local taxes will be refunded for the later three years.

The urban function of the development area should be enhanced. Encourage the establishment of the banking services, ATM and POS in the development area. Those who need to construct private business premises or site occupancy can use the land transferred at a zero revenue by the government and not be charged the different stipulated fees within the scope of urban rights. For the banks who establish branches in the development zone, the office land is transferred at half the government minimum protective price.

Group-forming of over 3,000 households in the development zone should be encouraged. Build the new style community with well-supported public facilities of education, medical treatment, shopping, and entertainment. The construction of service facilities in communities are exempted from the various fees.

Open more bus lines from the urban area to the development zone. The deficit of transit buses is made up by the Public Transport Company and the Financial Bureau in the development zone.

39.1.3 Increase School Enrolment

All senior high schools in the rural areas of Suyu district and Sucheng district should be moved into the urban area within 2 years when they can enjoy the preferential policies for non-state-run schools. The introduction of new talent should be encouraged. If those with Bachelor degrees or above, senior professional titles, those with talent or special skills, or people who are in great demand by Suqian city start their businesses or work in this city, the personnel agency can be implemented according to the method of talent management. Schools of basic, vocational and higher education should be encouraged to expand their size. Enlarge recruitment in the three counties and outside the city as well as beyond Jiangsu province. Develop the intermediary agencies of all kinds of education and the agency teams. The person who can recruit one student of professional education is to be awarded ¥50. Set up a special prize for education intermediary services. If an intermediary institution and agent can recruit over 1,500 vocational students every year from outside the city for 3 years consecutively or the total enrolment amounts to over 5,000 over 3 years, they are to get a single reward of ¥80,000–100,000, which is paid by the Finance Bureau. The non-native students in vocational schools receive the flexible educational system and the credit system. They can support their studies by working. When they have enough credits, they get their diplomas. For needy students, the school lowers tuition fees and gives them a certain level of living allowance. Children of migrant workers should attend nearby schools and enjoy the same welfare as those with the urban hukou.

39.1.4 Increase the Population to Shop and Entertain

39.1.5 Increase the Urban Living Population

The policy of hukou should be extended. Those who possess legal residence in the urban area, or a fixed job, or education training personnel can have household registration unconditionally. Native peasants who live in the city may obtain registration for their family members. Encourage house and tenements purchase in the city. The house bought in the urban area is not limited by the conditions that a single house has a construction area of 144 m² and the knock down price is 1.44 times higher at the same level. Contract tax is levied at 1.5 % and business houses tax at 3 %. The difference between the tax rates prescribed by the state is made up by the financial department at the same level. The garage without property right will be levied a tax also. The business taxation will be postponed for those individuals who have purchased the common houses within urban area over two years. Support and encourage residents and real estate development enterprises to let their vacant houses and commercial buildings. They enjoy a 3-year first-pay-then-award policy.

39.1.6 Clarify Targets and Responsibilities

According to the goal, the total population will reach 600,000, which includes the additional 250,000 people in the central city by 2010. Suyu district will have 70,000 new residents; Sucheng district 90,000 residents; the urban economy and development zone 60,000 people; Hubin New Town district 30,000; the target of doubling population at the central city in 5 years is included in the annual assessment for these districts and the relevant city departments. In terms of the total task, the municipal government further breaks down chronological progress goals, and supervises the periodic inspection and the implementation of policies. For those who fail to complete the annual target or to execute policies, the leader is criticized.

(Compiled according to the relevant materials)

Chapter 40

Fiscal and Taxation Policy

40.1 Implement the Independent Financial System

Which financial system is adopted is of significance to move the development of the new urban area. There is much discussion about it, but the comparatively effective one is to introduce an independent fiscal system. On December 28, 2001, Zhengzhou New Area management committee was founded. On May 15, 2002, Zhengzhou municipal government issued *Notice on the Establishment of the First Level Finance in Zheng Dong New District*, which states that Zhengzhou New Area will introduce the first level finance from 2002 and establish the corresponding coffers. Besides the fixed income set by the state and the province, 80 % of the land paid income within the scope of the expropriated land (the other 20 % is turned over to the provincial finance), different facility expenses, and the taxes and dues during the period of development and construction are all left to the new district. Implement the revenue-sharing system and leave all the revenue so that the new area can finish the accumulation and rolling development itself. *The Decision of Speeding up the Development and Construction of Ningbo Hangzhou Bay New Area* by Ningbo municipal Party committee and government states explicitly that the new district introduces the independent fiscal system and has to itself 100 % of the local financial revenue income and 100 % of the land net income, from which 70 % must be specifically used for infrastructure and ancillary facilities in the new area.

The independent fiscal system introduced in the new district helps to perfect the function of the new area, and to activate its enthusiasm and creativity. When the new area issues and implements favorable policies of finance and taxation, and fee-collecting, it needs the finance for its platform and support. Without independent finance it is hard for the new district to carry out some measures.

40.2 Implement a Favorable Tax Policy

It is a rigorous policy for the state to levy tax according to the law and this policy has been accepted and followed by governments and enterprises throughout the country. The purpose of planning and constructing new urban areas is to develop, but some places intend to increase tax income. The rule here is to give before you receive and to raise chickens before they lay eggs. There is nothing to do in obtaining tax income but to introduce the investment enterprises and the companies of supporting services and let them develop. Of course, the development of new urban areas demands a large sum of money, which can be raised by taxes. It is hard to choose. The right choice is that most new urban areas prefer the favorable tax policy.

It is not easy to implement the preferential tax policy. In most provinces and autonomous regions of China, the right to tax reduction and exemption, and the responsibility of daily management, is the responsibility of the revenue department. Therefore, the revenue department should be very well coordinated. If a special tax policy is adopted, the state and other relevant ministries should be coordinated. The tax policy of Shanghai Pudong New Area, Tianjin Bin Hai New Area, and Zhuhai Hengqin New Area is approved by the State Council. The policy in Zhuhai Hengqin New Area is more favorable than that of the special economic zone. Many new urban areas and investors both pay attention to the local tax policy and adopt the method of slow charge tax, exemption, and refunding to enhance investment development.

40.3 Insist on Low Charge Policy

The administrative undertaking charge from some important and monopolistic enterprises in China is controlled by the National Development and Reform Commission and the Ministry of Finance. NDCR is responsible for the examination and approval of the administration fee standards and is the treasury for charge items. The local government mainly takes charge of the formulation of some smaller items, which involve standard charging such as fees for supporting infrastructure construction. Compared with the tax policy, the charging standard, the amount, the length of time, and the reduction, exemption, and relief are all decided by the local government. The local government should formulate the charge policy for the new urban area and decentralize its authority to the new district, who decides on this itself.

The charge of supporting infrastructure construction fees in the new district, though concerning finance and no small sum, should lower its standards in order to attract investment. Key development and those which concern people's livelihoods should be supported by adopting the policy of reduction, exemption, and relief.

We should back up investors and encourage old areas and non-natives to start up their businesses, live, and consume in the new area. There are many areas in this policy which need work.

40.4 Zhuhai Hengqin New Area Implements a More Favorable Policy Than that of the Special Economic Zone

Xinhua net Zhuhai on August 6, 2011 The State Council has recently approved that Zhuhai Hengqin New Area should introduce a more favorable policy than that of the Special Economic Zone, which is used to construct the closely cooperated new carrier between Guangdong, Hang Kong, and Macao, and reshape Zhuhai's new development advantage, promote Macao moderate economic development, and maintain the long-term prosperity and stability in regions of Hong Kong and Macao.

Zhuhai Hengqin New Area has an area of 106.46 m². It is located in the south of Zhuhai city, west of the Pearl River, and adjacent to Hong Kong and Macao. On June 24, 2009, the executive meeting of the State Council passed *Hengqin Overall Development Planning*, which states that Hengqin will be built in a close cooperation demonstration zone in Pearl River Delta and serving Hang Kong and Macao with its prior development. On August 14, 2009, the State Council passed *The Overall Planning of Hengqin's Development*.

According to the approval from the State Council, Zhuhai Hengqin New Area should innovate customs system. The port between Hengqin and Macao carries out the front-line management and the place between Hengqin and the inner land introduces the second tier management. The hierarchy management is implemented under the principle of released front-line management and the second tier management, which includes the detachment between people and goods, involves classified management. It is accepted that people may live in Hengqin. And Hengqin is allowed to develop living consumption of commercial facilities, commercial retail services, travel and leisure, business services, financial services, cultural creativity, medicine health care, science research, and high-tech industry. The people are managed according to the present pattern when passing the customs between Hengqin and Macao; meanwhile, measures are carried out to enable Macao inhabitants to pass the customs of Hengqin.

The State Council approved the preferential tax policy that was introduced in Zhuhai Hengqin New Area. The main points run as follow. Goods imported from overseas and related to production are dealt with by record management and they are free of tax and under bond, except for imported goods of life consumption, commercial real estate development projects, and those stipulated in the legal documents. Goods from Hengqin to the inner land should go through customs

clearance procedures in accordance with the relevant provisions and the tax is levied according to its actual inspection, with the exception of goods with duty paid earlier. Production-related goods in the inner land sold in Hengqin are regarded as exported and the duties are drawn back according to the provision, except for imported goods of life consumption, commercial real estate development projects, and those stipulated in the legal documents. Hengqin enterprises sell the duty-free and bonded goods to individuals (including the duty-free and bonded materials for production of goods), and they should complete the corresponding import taxes according to the provision (Xinhua net).

Chapter 41

Designing, Enactment and Implementation of Policies

41.1 Designing Policies

What policies does the new urban area demand? How to enact these policies and implement them? Careful planning and design is needed, because the planning and development of the new urban area is a big issue, something that is new and difficult. Most people who are engaged in new urban areas are short of experience and they should study it. The planning and construction of the new area usually involves the old area, higher levels governments, and the relevant departments, whose interests are touched in the aspects of function and jurisdiction when enacting policies. If the work of coordination is not dealt with properly, there is a possibility that obstacles turn up in the process of signing the policy paper and implementing it. As a result, a careful study of higher-level policy is necessary. Some policy provisions should be used as the foundation for making policies in new urban areas. Go out to study other people's experiences and combine them with reality, using them as evidence to win over policy support. When inspecting, the most favorable route is planned. Invite the leader of government to lead the tour and the supervisors in the relevant departments to join in so that they can see at first hand and learn from it. Strive for the important and necessary policies. For the general policies, strategy is needed. The method of eating bread should be used—namely, eat a small slice of it first, slice following slice, and finally the whole bread. In a word, the policies are enacted in a planned way, methodically, and with focus and good measure.

41.2 Enactment of Policies

Who makes policies and what they contain matter to the development of new urban areas. Generally speaking, the policy of the new urban area strategy is enacted by the upper government. In October 2003, Hangzhou city issued *Some Suggestions on Accelerating the Construction of Qianjiang New City*. In October 2009, Zhengzhou city passed *The Decision of Accelerating the Constructing Zhengzhou New Area*. In November 2009, Ningbo city enacted *The Decision of Accelerating the Constructing Ningbo Hangzhou Bay New Area*. In May 2011, Shanghai municipal government issued *Some Suggestions on Accelerating the Construction of New Area*. It is common for the upper governments to decide the macro policy for the new urban area. Because of the different factors concerning its position, function, and the specialty of policies, the new urban area is recognized very highly socially, and the government of the upper two levels sometimes decides the policies. In June 1990, Shanghai municipal government approved by the State Council issued *The Instruction of the Development and Opening Pudong*, which passes ten policies and measures. In March 2006, the State Council approved five supporting policies for Tianjin Binhai New Area. In May 2006, the State Council enacted *Suggestions of Furthering the Development and Opening of Tianjin Binhai New Area*.

No matter what policies they are, the leaders in the new urban area should organize personnel and devote time and energy to the study and analysis, and put forward the original plan so as to make the policies more operative.

41.3 Implementation of Policies

In China, the implementation of policies is a great issue. When the policy from the upper government involves their interests, some establishments overtly agree but covertly oppose. They postpone the implementation to carry it out until it is wanted. Therefore the supervision and check of the implementation of policies is necessary.

Part XI
On Patterns

Chapter 42

New Urban Complex

Pattern refers to the type and style of new urban areas. To study the urban patterns and distinguish them can be useful in formulating development strategy for new urban areas and helpful for new urban planning, construction and development. According to different functions, new urban areas can be classified into urban complex, administrative pattern, industrial pattern, residential pattern, ecological pattern, pattern of science and technology, educational pattern, knowledge-based pattern, traffic pattern, and so on. New urban areas of different patterns overlap in some aspects yet each one has a different emphasis and unique connotation. In this book, some patterns of the above are chosen to be elaborated.

A new urban complex, or comprehensive new urban area, is a type of new urban area with multiple functions, such as industry, residence, office, business, leisure, etc. This type of new urban area may be a new independent city, a civic center, or just a sub-civic center. Canberra in Australia, Las Vegas in USA, Shenzhen, Shanghai Pudong New Area, Zhengzhou New District in Henan, China are all such cases.

42.1 Cause and Impetus for Development

In order to achieve a development strategy and target of economy, politics, society, culture, and ecology, a country or region would have to make tactical layouts in the structure of cities and land space. It may be necessary to plan and build some multi-functional, comprehensive boom cities. Las Vegas was an obscure little village with a small population over 100 years ago. After the discovery of gold and silver at the beginning of the last century, a large influx of prospectors rushed into the city, and it began to boom. During the American Great Depression, Nevada State Assembly approbated an act of legalizing gambling in order to ride out the economic crisis in 1931 and Las Vegas became a town of gambling. Thus it has risen rapidly. Now it is a city famous for its huge industry complex of tourism, shopping, and hotels, with the central industry of gambling. In the world, nine out of the ten top largest resorts are located in Las Vegas. It is the fastest growing city and the largest in Nevada, USA. Covering just 340 km² with a population of

552,500 (statistics from 2006), Las Vegas attracts up to 38.9 million tourists every year. It is one of the most well-known vocational resorts in the world and has got the reputation of Entertainment Capital of the World and Town of Marriage.

Some other country or city, in order to tackle problems of overcrowding, traffic jams, or stagnant development would have to plan new urban areas and develop some comprehensive ones. Paris, capital of France since the thirteenth century, has been developing rapidly. There has been a high concentration in the downtown area, but traffic tension has worsened living conditions there. In order to consolidate the important position of Paris, as well as France, as a commercial, transportation, and cultural center, optimize urban structure, and restore and retain part of the city ruins, the municipal government of Paris decided to build a modern sub-center in La Défense. After decades of building on an area of only 1 km² of land, a modern new urban area came into being with a myriad of skyscrapers. With offices, businesses, shopping, residences, and leisure facilities, it has become the premier business center of the metropolitan area of Paris, the largest office area, and, furthermore, a symbol of modern Paris. The Large Arches—a famous representative building of La Défense district—which combines the artistic charm of classical architecture and modern office functions as one—is a miracle in the history of architecture.

Since the 1980s, the planning and construction of Chinese new urban complexes has few equals in the world. In the 1980s, Shenzhen became a frontier city in China's reform and opening cause. And in the 1990s, Shanghai Pudong New Area appeared before us afresh with a new look. At the beginning of this century, Zhengzhou New District, Tianjin Binhai New Area, and some other newly built urban areas are all very good examples of the new urban complex.

42.2 Principles Deserving Attention

Strategy formulation first. The planning and construction of a new urban area complex, involving national development strategy planning, regional development layout, use of land resources, environmental carrying capacity, funds raising for construction, and some other problems, are of great significance either in a country or a region. In this regard, the strategy, without any hasty decisions and blind organization and implementation, ought to be conducted only after preliminary studies and full argument.

Comprehensive support is needed. On the basis of strategic development, new urban complex construction has to start with planning and design, with careful study of the functional partition, spatial layout and supporting infrastructure problems, with particular attention to the industry, residential living, office, employment, education, medical care, transportation, and other matters. Otherwise, it is never easy to succeed.

Traffic conditions are important. There are not only traffic problems inside these new urban areas, but also problems of population flow and logistics connecting with

the urban center. Especially in the initial stage of construction, good transport facilities are necessary to guarantee the commute of newly-employed personnel. Some well-known important cities in the world such as those in Japan, La Défense of Paris, etc., have all got efficient transporting system connecting the old area and the new. To forge close links between the old urban area and the new one, Dezhou erected six bridges over the river separating the two areas. Whether planning and building rail transit, or just building an elevated road, or taking other measures to improve traffic flow, all should be sorted out and organized in the old and new areas to ensure an unimpeded transport system.

If possible, the executive should take the lead. Construction of the new city complex, especially deputy central cities, requires a large amount of investment, plenty of population flow, and logistics. Whether relocating government administrative organizations or not has an important effect. Especially in China, the location and developing direction of government agencies play a very important role in guiding the urban development and have leading roles in it. Therefore, Zhengzhou New District of Henan Province, Jinan Eastern New Town of Shandong Province, Dezhou Hedong New Area, and so on are all cases of migrating the administrative center of a city to new a urban area. There have been good results.

Chapter 43

New Administrative Urban Area

Since Seoul became the capital of South Korea in 1948, it has been in a central position, as the political, economic, and cultural center of the country, to take command of nearly 100,000 km² of land and about 48 million people. However, many years of “uneven development strategy” led to a dense population, high land prices, traffic congestion, environmental pollution, and, all above, become obstacles to the development of Seoul. To alleviate pressure on the city, balance the developmental level of the country, and avoid setting the capital city within firing range of North Korean long-range artillery at any time, a new capital was determined to be built in Sejong, which was longitudinally in the middle of the land. It is located 120 km south of Seoul, covering an area of 465 km² with a population of 12 million. After 10 years of careful construction and repeated demonstration, Sejong City was formally established on July 1, 2012. From the second half of 2012, 36 agencies began to move to Sejong City, including a chamber, nine ministries, two sections, two offices, as well as some other subordinate institutions, i.e., South Korea Prime Minister Room, Planning Ministry of Finance, Ministry of Land, Ministry of Environment, and so on. And Premier Room is the first government department that has moved to Sejong. More than 10,000 civil servants of the Central government work in Sejong. Meanwhile, about ten key sectors, including the Presidential Blue House, Congress, Department of Defense, and Ministry of Foreign Affairs still remain in Seoul.

Full deliberation and careful decision-making are very important. South Korea proposed to move the capital to Sejong City in 2002, started construction in 2007, and officially moved the capital in 2012 after many debates and suspensions. Dispute about moving the capital was so unimaginably intense that it involved several Presidents and Premiers, even the whole country. Now, as one country with two capitals, wasteful investment, administrative efficiency and other issues, there are still many controversies.

With the migration of the capital and the relocation of the administrative center, it becomes a nationwide event and a major event for the capital, and thus controversy is inevitable. There is an old Chinese saying: “no magistrate repairs his inquisition chamber,” that is to say, officials at the office do not build their working chamber, suggesting officials rarely construct administrative offices. In ancient China there was slow population growth and less administrative officials, and to

govern with inaction and little construction can reduce the burden on the people. In contrast, the construction of costly bureaucratic chambers would make work for the masses and waste money. However, in modern society, the economy and society develop rapidly, the urban population and vehicle numbers increase drastically, environmental pressure becomes greater, so regarding national and regional development strategies, to construct new urban areas for some places is necessary, but requiring strong human, material, and financial resources. However, it affects the interests of many people, values, and investments. In particular, civil servants, businessmen, and citizens of the original administrative center are always nostalgic, and they often take opposed attitudes for fear that the construction of new administrative urban area might bring them inconvenience and harm. According to the latest survey results released by the Korean SBS, taking into account children's education and spouse's work, 37 % of the civil servants of central authority, who have to move to Sejong City to work, want to live alone there, and 12 % of the people choose to work in Sejong in the day and return to Seoul in the evening; most civil servants do not want to relocate their families. Nevertheless, with gradual development of Sejong City and increase of the new-generation civil servants, national decisions can be gradually implemented.

In modern China the construction of a new administrative urban area has an innate drive because of the idea of administrative achievement formed on the basis of the political system, the rapid development of urbanization, as well as the strong pull of administration building, and thus many municipal governments try everything possible to do it. In this regard, necessary analysis should be conducted to see whether there is the need for urban development, whether it is a need for new urban area development, whether it is a need for administrative offices. If really necessary, the government should have full debates on it and solicit suggestions extensively before construction. Then it must proceed in accordance with the procedures after a rigorous approval. Finally, to determine scientifically the scale and level of construction is necessary, especially to control strictly the scale, standard, and grade of government administrative offices, insisting on thrifty construction and avoiding blind comparisons.

Chapter 44

New Industrial Urban Area

The new industrial urban area is a new type of urban area in which industries serve as the main body, industrial parks as the carrier, and the infrastructure construction has some functions of cities. The new industrial urban area, unlike industrial parks, is basically designed to be a new urban area led by industry, supported with integrated facilities, which is a city in essence, whereas the industrial park is mainly composed of a purely functional industrial park. From the perspective of functional orientation, the former is carrying industrial development, residence of population, commerce, recreation, and many other functions, with integrity and comprehensiveness; the latter is purely industrial and economic in function, with unity and technicality. The new industrial urban area is an integration of industry and city and both are complementary to each other.

New industrial urban areas are gradually established during the development of the industrial revolution. From the 1840s, Britain, France, Germany, and other typical capitalist countries have completed industrial revolution one after another. Consequently, these countries have changed a lot in economic geography layout, population distribution, urban layout, and structure. A large amount of people, capital, and resources flowed into the plants, into towns and cities, into areas along traffic lines, and some plants gathered together to form a new industrial town, some towns formed into small cities, and small cities into big ones. Lewis Mumford, a famous expert on the history of the city, said that during this period “the power to generate new cities is from mines, factories and railways,” and called these new cities “coke cities”. The population of Manchester in the UK was 12,000 in 1760 and in the 1850s it rose to 400,000.¹ This is the first climax in the construction of new industrial cities although a large-scale construction movement of industrial cities actually began after World War II. Britain launched the New Town Movement first with a typical representative, Harrow new town. Harrow new town planning began in 1947. It was designed to cover an area of 2,560 ha with an original population of 60,000, later changed to 80,000 people, 4 residential areas, 2 industrial areas, and service facilities. The new town stressed features as a city and gave less consideration to economy, and therefore it experienced employment problems and slow development of population. After the 1950s, especially since the

¹Shen Yulin. *Foreign Cities Construction History*, p. 97.

1960s, as the industrial structure in western developed countries gradually improved to high-end level, it planned and built a number of new industrial urban areas.

New industrial urban construction in China began in the 1950s. In 1953, Beijing proposed to take on the form of “conurbation and subsidiary” in urban layout, and planned to build more than 40 satellite towns including Changping and Shunyi. In 1958, the urban layout of the “decentralized conglomerate” was put forward, considering placing more than 60 projects including metallurgy, machinery, chemicals, etc., in satellite towns. Meanwhile, Shanghai went faster in this regard. In the early 1950s it had developed eight industrial zones one after another in the urban fringe. At the end of 1959, Shanghai had planned and constructed five industrial satellite cities: Minhang, Wujing, Anting, Songjing, and Jiading. As the economy gradually developed, industrial urban construction in China expanded across the country, most notably in Daqing city. There were several ranches before, but with the discovery and exploitation of large oil fields, Daqing gradually developed into a new industrial urban area based on petroleum and petrochemical industries. After China’s reform and opening up, the development of the new industrial urban area entered the golden age. The main reasons are as follows:

1. On the basis of summing up advantageous experience and unfavorable lessons in the developing process, industrial parks have been gradually transformed into new urban areas. Various economic development zones, industrial parks are of simple structure, and are single function at the beginning. With the rapid development of these areas, industries there have been expanding, the population growing, and it was found that these parks are human cities during the day with population flow and busy logistics, and become ghost towns at night. There seem to be not only housing problems for employees, but serious difficulties in their transport, life support, and children’s education. In this regard, to develop purely industrial parks is not practical and to build new urban areas with comprehensive functions is necessary, that is to say, new urban areas should integrate industry and city functions.
2. A strong push by industry and the population for diffusion from metropolises is the path taken by some developed countries in the world, and now China’s large cities are also engaging in this. With the development of large cities, population, industry, and traffic there need to be evacuated. Practice has shown that simply constructing a sleeping city for migrants, or just establishing parks to migrate industries, only to result in a pendulum mobility of population and traffic, cannot solve housing difficulties, traffic congestion, environmental pollution, and other problems in major cities. However, to build new industrial urban areas, with the supporting construction of industrial, residential, and commercial service facilities, with their advantages both as city and industries, is an effective way to solve these problems. In March 2012, Beijing issued “*A Plan for Beijing City to Implement the Construction of Important New Towns during 12th Five Year Period*,” clearly put stating that the solution to developmental problems in future is to develop new towns and, furthermore, to implement the “City-and-Industry

Linkage” principle. Among them, Tongzhou, Shunyi, and Yizhuang are three that have been earmarked for development. Now a number of new industrial urban areas have emerged around Beijing.

3. There is a to develop regional economy in some places. A few years ago, Tongzhou was famous under the title “sleeping city,” and it has been “a well-established city with weak industries” over the years, and Yizhuang was dubbed “an empty town.” These issues should be resolved through the linkage of industry and city. Some central cities need to shift industries and population. At the same time, some other regions, in urgent need of attracting investment and merchants, are trying to develop some industries to expand tax sources, and thus a number of new industrial urban areas are spawned in those regions. Gu’an county in Hebei Province, China, is a prominent example. It is 50 km due south of Beijing Tiananmen Square. In 2002, Gu’an seized the opportunity of population and industries transfer from Beijing, and took an approach of initial planning, professional investment, and innovative service to commence its new town construction. Over 10 years, it has grown into a well-known industrial base in northern China for three main industries—electronic information, automobile parts, and high-end equipment manufacture. Now it is a new industrial town with high-end supporting urban constructions, such as the Fupeng five-star hotel, Central Park, City Planning Exhibition Hall, Entrepreneurship Building, Headquarters Park, Peacock Square, and so on. In 2011, it completed fixed assets investment of 10.03 billion RMB, achieved financial revenues of 630 million RMB, and over 2 million people were employed in industrial parks there. On June 28, 2012, Chinese County Economic Development High-Level Forum entered Gu’an. Li Yining, a famous Chinese economist, and Austan Goolsbee, a well-known American economist, together with other renowned experts and scholars at home and abroad, were specially invited to the forum. Experts attending the conference believed that Gu’an’s industrial new town mode provided a new way of thinking for Chinese urbanization.
4. An internal drive is needed from the development of some large investment groups. In China, Liando Group has invested in the development of four industrial towns one after another in Beijing, Shenyang, and Wuxi.² China Fortune Land Development Limited Corporation firmly grasped the historic opportunities of industrial upgrade and regional division resulting from international industry transfer and metropolitan urbanization. Focusing on circum-capital regional economic promotion and metropolitan spillover demand, it created a “new industrial urban area mode,” in which industrial parks development and urban construction mutually reinforce each other.

Some key features of successful industrial urban areas are summarized as follows. First, industry makes boom city, and boom city boosts industries, the two interact with each other and become integrated. Second, industries lead comprehensive support and integrated development. Third, overall planning involves three

²*Economic Observer*, August 16, 2010.

parts (urban planning, land use planning, industrial planning) combined into one. Fourth, it is necessary to build up a strong team to invite and attract investment and merchants, and to explore a set of scientific investment approaches.

In terms of the new industrial urban area, industry is a broad concept, including both secondary and tertiary industries. Some industrial urban areas develop primary industry, some develop tertiary industry. New industrial urban areas then become the mainline of Chinese new urban construction.

It is worth noting that, in new urban planning and construction, real estate development has some characteristics: quick revenue from previous auctioned land, quick gathered population, and quick establishment of building image. Whether governments or enterprises investing in industrial urban areas, they have inner impulses to gain short-term benefits, raise funds for construction, produce good administrative achievements, and set up a good image. So they require urgent transfer of land to gain benefits. However, the auction and transfer of land must obey the plan, strictly control area and scale, and should not change the features of new industrial urban area. Otherwise, if the industrial urban area grows into a residential urban area based on real estate, it would lose its value, which is a failure of decision and strategy, the biggest flaw of new urban planning and construction.

Chapter 45

New Eco-City, Low-Carbon New City, Low-Carbon Eco-City, Sun City

New Eco-city, Low-Carbon New City, Low-Carbon Eco-city, Sun City, Green City, New Energy Demonstration City, etc.— all of these are new urban areas with similar names and meanings. They are proposed and implemented under a profound ideological, historical, and realistic background. The existing industrial civilization, or traditional way of urban planning and construction, not only brought mankind a vital revolution in production and lifestyle but also did great damage to the ecological environment of the atmosphere as well as the Earth; therefore, nature occasionally punishes and retaliates against man. Floods, storms, droughts, and other natural disasters are sometimes acts of God and sometimes caused by humans themselves. After entering the new century, in a large area of East China and Northeast China, fog and haze emerged. It has done great harm to human health and development. These problems, if not being carefully considered, could not only seriously affect normal human production and life at present, but also bring unpredictable problems for the survival and development of future generations. Cities are the main cause of these problems. On the basis of summarizing these profound lessons and reflecting on them, mankind needs a developing ecological civilization. They think and explore new avenues and morphology for urban development. Because preliminary experiments and exploration are conducted under different circumstances, with different urban or national characteristics, different specialties engaged, and different paths chosen, there have appeared many different ways for new urban development, such as new eco-city, low carbon new city, green city, sun city, and so on. This is how these names with similar references appear. Furthermore, they have recently become fashionable and frequently promote concepts in new urban construction.

Statistics from Academic Exchange Department, Chinese Urban Science Research Council show that, by February 2011, of 287 Chinese municipal level cities or above, 230 have proposed the “eco-city” as their city-building goal, accounting for 80.1 %, 133 cities taking “Low Carbon City” as their goal, accounting for 46.3 %. Combining the above two building goals, 259 cities put forward the building goal of low-carbon eco-city or something close, accounting for 90.2 %.¹ According to data collected by

¹Li Xun, Liu Yan. “Opportunities Coexist with Challenges, and Hope with Pressure,” *China Construction News*, May 30, 2011.



Fig. 45.1 Flowering eco-city projects in China (quoted from *Southern Weekly*)

Li Xun, Liu Yan, there are over 40 kinds of names for the “eco-city” building goal put forward in China at present, for instance, “Eco-city,” “Green Eco-city,” “Livable Eco-city,” and over 15 kinds of names for the building goal of “Low Carbon City,” such as “Low Carbon City,” “Low-Carbon Industrial Base City,” “Low-Carbon Pioneer City,” and so on. It should be noted that it reflects China and the population here, valuing human civilization and emphasizing ecological urban construction. From this, we can see the correct direction and positive mainstream of urban development. There are also deviation and disorientation in understanding and behavior, both in need of proper guidance, active exploration, and scientific practice (Fig. 45.1).

As for eco-city, low-carbon city, low-carbon eco-city, and sun city, how to define and distinguish the four concepts is ambiguous in theory and practice at present. This is because human studies started late in the field, theoretical research is not yet mature, and practice is still ongoing, so there exists conceptual confusion. In fact, these titles, as well as their respective goals, merely put particular emphasis on planning, construction, and developing models. There is neither division of quantitative indicators nor signs for qualitative distinction. In essence, there is no difference between them. They all aim at sustainable development with a core meaning in common, green urban transformation.

45.1 About the New Eco-City

What is the notion of the eco-city and its basic features. Who first invented the term *eco-city*? For this question, different kinds of information show different ideas. Some argue that the United States pioneered by Richard Register in 1979,² some state that the Russian ecologist O·Yanitsky proposed the term in 1987,³ and others claim it was used in the research process of the “Man and Biosphere” program by UNESCO in the 1970s.⁴

As for the connotation of the term *eco-city*, a variety of experts and scholars have interpreted it differently. Register considered *eco-city* as the “one in balance with nature.” His definition is brief, but a little too simple. Early cities with some low thatched cottages or production houses cannot be *eco-cities*. Carefully summarized, *eco-city* is a modern urban form produced with the guidance of ecological theory, in which economy, society, and ecology develop jointly. It aims at yielding a harmonious relationship between man and Nature, and a win-win achievement of both development and environment. In actual representation, there are two forms. One is to conduct a long-term, sustained ecological construction and renovation to the original cities. Examples are some advanced cities all over the globe, such as London in the UK, Shenzhen in China, Curitiba in Brazil, and so on. Because of the impact of ideology, social recognition, funding, legal stipulations, and existing urban reality, it takes a long time, as well as great effort, to implement this kind of regenerative *eco-city*. Even if we persist, there are relatively few truly successful examples. The other one is to plan and build a new *eco-city*, i.e., a newly-constructed ecological urban area. In *eco-city* planning and construction standards stipulated by the British government, the first one of which prescribed that the *eco-city* should be a new settlement (new town) and each ecological town should include at least 5,000–10,000 families. In this regard, there are Abu Dhabi *Eco-city* invested heavily in by UAE, Beddington *Eco-Village* in UK, and the German *Eco-city Erlangen*⁵ as representatives. In China, Tianjin Sino-Singapore *Eco-city* and Tangshan Caofeidian *Eco-city* are relevant. This chapter mainly discusses *Eco-cities* of such a kind.

45.1.1 Main Features

The first thing is economizing land, water, energy, and materials comprehensively. In terms of land use, in principle there should be no farmland occupation, or a

²Du Naifei, “Lost Eco-Cities in China”, *Southern Weekend*, 2010.12.1.

³Baidu Encyclopedia, “Eco-city”.

⁴Feng Zhenzhen, Shi Wenbin. “Sino-Singapore Tianjin Eco-city Established Key Performance Indicator (KPI) Framework”.

⁵Shen Qingji, etc. *Theory and Practice of Low Carbon Cities*.

balance between land occupation and retrieval. In cooperation with Singapore in 2007, the Chinese government proposed four requirements for construction and location. The first is a resource-saving and environment-neighboring choice. Meanwhile, they proposed not to occupy farmland, preferring places lacking water resources. Tianjin excelled in the fierce competition with other three candidate cities, Tangshan, Urumqi, and Baotou. An important reason is that of 30 km² of land in Tianjin, only 2 % is arable land, 1 % is occupied by villages, and the rest is mainly saline. In terms of water conservation, water shortage is a worldwide problem and a major issue affecting human survival and development of mankind, which has not yet been fully recognized. New eco-cities ought to manage to handle water problems by saving water, reusing water, and collecting rainwater. Although some new urban areas have excavated large areas of lakes, most of them did not consider future problems of water sources, did not consider the problem of the cost of water, and did not consider problems of water reuse and rainwater collection, all of which are worthy of attention. As for energy efficiency, energy-saving measures should be taken in architecture, transportation, industry, living, and so on. In addition, new energy sources should be adopted extensively. In terms of saving materials, it is urgent to save raw materials, non-renewable resources, and it is necessary to promote the use of new materials vigorously.

The second requirement is integrated use of various ways and means, i.e., ecology, economy, society, politics and culture. The new eco-city is a huge eco-system and a comprehensive, three-dimensional whole. In order to save costs and reduce construction difficulties, we should integrate ecological ideas, technologies, techniques, and means, keep them penetrating and running through every aspect, every part of new urban construction, such as infrastructure, housing construction, transportation, industrial development, living habits and environmental protection. Meanwhile, it is necessary to take a variety of measures in economy, society, politics, culture, and law to promote and implement fully.

The third requirement is extensive innovations in technology, techniques, management, policies, institutions, mechanism, and other urban elements. New eco-city construction is a revolution in urban planning and construction. It is a kind of innovative, modern city without ready-made theory and practice, worthy of multifaceted innovation.

45.1.2 Efforts Needed in Planning and Construction of New Eco-City

Developing a comprehensive system of clear and specific ecological indicators and norms is necessary. At present there is no unitary standards the for eco-city, and therefore, to build Sino-Singapore Eco-city in Tianjin, over one hundred experts from Singapore and China collaboratively drew up the first set of standards in the world. It is “*Sino-Singapore Tianjin Eco-city Established Key Performance*

Indicator (KPI) Framework,” including 22 controlling indicators and 4 leading indicators, 51 core elements, 129 key procedures, 275 control objectives, and 723 specific measures. All the above constitute a road map for implementation, forming a new urban planning, construction, and management model oriented by a quantitative index. This is the most important innovation of Sino-Singapore Eco-city in Tianjin. After several years of practice, the system has become an important, replicable, promotable pattern. The new eco-city, at the time of planning and construction, should take Sino-Singapore Eco-city in Tianjin as an example and model. During the preparation and plan-making period, it is necessary to develop a comprehensive specific overall objective and system of standards to be followed. Certainly, every place has its own specific circumstances, so the development of standards must be adapted to local conditions, promoting local advantages, and highlighting special features.

Stressing integration of industry and city, and improving industry support is very important. It is noted by media reports that Sino-Singapore Eco-city in Tianjin is facing a ghost-town-like quagmire, population and industry hollowing. Starting 5 years ago, it has completed part of projects, covering an area of 8 km² with 12 residential districts, but only got a resident population of 4,000 people. This is far behind the standard urban land occupation figure in China, i.e., an accommodation of 10,000 people per square kilometer of built-up area. The problem arises for many reasons. One of them is that, as 30 km² is planned to be built in 10 years in the master plan, only 3 or 4 km² of industrial land is not commensurate with the population size in the whole city. Inaccessibility of traffic is also a big problem, basically going out on foot, illness relying on Baidu diagnosis, weekends leaning on couch, passing vacations on the Internet.⁶ *Therefore, as with all the other urban areas, the planning and construction of the eco-city should match residential functions with the industrial scale, maintaining traffic flow.*

Mobilizing and organizing forces of all aspects to join in the implementation is desirable. The new ecological urban area is an exploration and innovation of future urban development. Under the existing conditions, it is of high cost, large investment, and long construction period looked at in the short term. However, in the long run, it would become a livable and industrial city of low cost and good environment. Building an eco-city tends to require great effort in technology, finance, and other aspects. Professor Eero Paller Hammer from Finland, known as “Father of the eco-city,” claims that “the first true eco-city is a specimen, and such a specimen is often much more expensive in the cost than latecomers.”⁷ In fact, ecological technologies develop swiftly and local eco-city constructions vary widely; it is not just the first eco-city that attracts big investment—the second, third, and subsequent investments in eco-cities are also larger than with ordinary urban construction. Thus, the early gestation of the eco-city requires extensive discussion, integrated ideas, and understanding of all aspects to form a consensus. As for planning and

⁶*Economic Observer*, 2013.9.23.

⁷Peng Ligu. “Lost Eco-cities in China”, *Southern Weekend*, 2010.11.25.

design of the eco-city, it needs to invite a wide range of domestic and international tenders, and many experts and scholars in various fields to participate, providing a comprehensive, innovative solution. When raising funds, it is best to publicize and recommend projects to international monetary organizations and ecological organizations.

45.1.3 Issues Deserving Attention and Solution from the Nation in Planning and Construction of the Eco-City

Emphasis should be made on working out the master plan, the medium- and long-term action plan in the construction of the eco-city, then actively and steadily carrying out operations in a planned, systematic manner. New eco-city construction is a path and direction of urban development, strategic initiatives to enhance urban competitiveness, and a fundamental way to improve the quality of urban life and the condition of the working environment. Nations need to organize relevant experts and units from the strategic height of economic and social development and urban livelihood improvement to conduct extensive research and seminar demonstrations. They can then develop medium- and long-term national action plans, determine clear objectives, key areas, key cities, important industries, major technology, approach and steps, policies and measures for development in order to reach a working situation with unitary ideas, clear directions, and behavioral norms. They should resolutely prevent and overcome sudden herding-up-and-disappear phenomena and try hard to reduce blindness in decision-making, arbitrariness in working, and luxury in construction.

Work should be done on establishing and improving laws and regulations, policies and measures, technical specifications, and management services, four areas of security system in new eco-city construction. Pay close attention to the drafting and introduction of laws and regulations related to eco-city construction so that working staff have basic rules—in land use, resource utilization, finance, tax, and other aspects—of national level to follow. Study and formulate some policies and measures, especially in guiding and supporting ecological urban areas—there must be tangible initiatives. Develop technical specifications to ensure the systematic use of advanced and practical technology and equipment. Clearly appoint specific management and guidance departments to resolve current problems of multiple construction, environmental protection, development and reform, with other departments jointly assigned to multiple managing.

Attention should be paid to national level guidance, support and assessment, and strengthening international exchanges and cooperation. In addition to very few metropolises in the world, most cities do not have a strong personnel strength in eco-city planning and construction. So the country needs to organize some experts at macro-level to offer some specific guidance and help. Construction of the

ecological city calls for a lot of capital investment, and requires the country to tilt and support in the areas of building energy-saving, transport facilities, industrial development, and other aspects. For new eco-city construction it is necessary to organize experts to conduct pre-feasibility studies, mid-term assessment, and post-assessment, constantly summing up experience and exploring the way forward.

45.2 About the Low-Carbon New City

The concept of low-carbon city was first launched by the British. Now it is very popular throughout the world, and in China it has become an official goal of development encouraged by the government.

What is a low-carbon city? Simply speaking, it is the city with low carbon emissions; specifically, the term refers to a city of economic, social, and ecological coordination, taking low-carbon economy as the developing model and direction, low-carbon life as a behavioral characteristic, and low-carbon society as a building goal. Building a low-carbon city is quite a complicated and systematic project involving multiple fields of economy, society, ecology, and so on. Since early 2008, Chinese State Ministry of Housing and Urban-Rural Development and World Wide Fund for Nature took Shanghai and Baoding City as two pilot projects in the mainland of China, jointly launching “Low-Carbon Cities.” On July 19, 2010, China’s National Development and Reform Commission issued *Notifications on carrying out the pilot work of low-carbon city and provinces*, which determined the five provinces of Guangdong, Liaoning, Hubei, Shaanxi, and Yunnan, and the eight cities of Tianjin, Chongqing, Shenzhen, Xiamen, Hangzhou, Nanchang, Guiyang, and Baoding as China’s first national pilot low-carbon provinces and cities. Subsequently, it launched the second pilot batch of national low-carbon cities and provinces, covering Beijing City, Shanghai City, Hainan Province, Shijiazhuang City, Qinhuangdao City, Jincheng City, Hulun Buir City, Jilin City, Greater Xing’an Mountains Region, Suzhou City, Huai’an City, Zhenjiang City, Ningbo City, Wenzhou City, Chizhou City, Nanping City, Jingdezhen City, Ganzhou City, Qingdao City, Jiyuan City, Wuhan City, Guangzhou City, Guilin City, Guangyuan City, Zunyi City, KunMing City, Yan’an City, Jinchang City, and Urumqi City. So far, China has identified 6 low-carbon pilot provinces and 36 low-carbon pilot cities. Of 31 provinces (municipalities or autonomous regions) in the Chinese mainland, apart from Hunan, Ningxia, Tibet, and Qinghai, each region has at least one low-carbon pilot city. In other words, low-carbon pilot projects have been basically in full swing in the whole country. On January 19, 2011, National Low-Carbon Economy Media Alliance, composed of over 100 Chinese news media and some managers from the field of low-carbon industry, released *Evaluation System of China Low-Carbon Cities* in Beijing for the first time. The evaluation is looking at municipal cities in Chinese mainland, involving an urban low-carbon development planning indicator, mass media indicator, new energy, renewable

energy, and low-carbon product application rate, urban green coverage rate, and low-carbon travel indicators, low-carbon construction indicator, urban air quality indicator-days of first-level air quality of the year, direct carbon reduction indicator of the city, estimates of public satisfaction and supporting rate, whether a serious violation against low-carbon economic development occurs or not in the year, ten major items in total. Data from the evaluation system are collected in accordance with 21 national and industrial evaluating measurements, for instance building energy efficiency, urban green lighting, water-saving cities, green building, carbon reduction index in industrial development, forest carbon sink construction index, urban low-carbon policy and implementation index, and so on. The issue of the evaluation system, the first of its kind in China, provides standards and bases for China's future construction of low-carbon cities. It is known that the number of applicants for building low-carbon cities in China has exceeded 100. The main features of low-carbon city are as follows.

The first is to make urban development low-carbon under the premise of economic growth. Economic growth is the core of urban development, the fundamental way to solve all problems including carbon emissions. We advocate the optimization of the industrial structure, realization of cleaner production, the intent to ensure the stability of urban social and economic development and, at the same time, maximizing the efficient use of resources and energy and minimizing the emission of contamination, including greenhouse gases. A sizeable industry is an important pillar of urban economic and social development, and a strong leading power for urban economic development. At present there is a large proportion of "heavy chemical industry" in some cities of relatively developed provinces, and underdeveloped western provinces are also actively introducing chemistry, petrochemical, metallurgy, building materials, and other projects, and these projects are classified into industry of high energy-consumption and high pollution. The introduction of these projects can not only accelerate economic growth, but also occupy the environmental space of regional development. It becomes an obstacle in low-carbon city development, which must be overcome.

The second feature is to keep urban energy consumption low-carbon. *Energy consumption is an important dimension of urban development, and is the main source of carbon emission.* Currently, a major problem in the development of low-carbon city is the coal-based energy structure in China, resulting in a high energy-consuming and high emitting industry. Therefore, the elimination of industrial (especially in high energy-consuming industries) backward production energy, and the increase of the clean energy proportion in urban energy-consuming structure in short term, are primary means to change "carbon-based energy" to "hydrogen-based energy," and to achieve lower urban carbon emission. In the long run, we not only need to improve energy efficiency, but also promote the use of clean energy, encouraging the use of various new energy.

The third feature is to make urban social life low-carbon, mainly concerning building energy, transportation systems, residential consumption, and so on. From two batches of pilot ecological cities launched in China, we can see these are existing cities without new urban areas. In fact, as in comprehensive discussion of



Fig. 45.2 Design drawings of Seoul Commune 2026

constructing ecological cities, it is a very difficult thing to construct a new eco-city in an existing city. For China, it is reasonable to build low-carbon urban areas. Highly praised by some foreign media, “Seoul Commune 2026,” known as the head of “10 Cities of the Future,” is designed by Mass Studies in South Korea, located in the southern district of Seoul near Han River. It is planned to cover 400,000 km² and to be completed in 16 years. This new urban area is composed of 15 giant “Green Towers” ranging from 16 floors to 53 floors, and the surface of the buildings is to be covered with green planting. The transportation is very convenient for there are highways connecting these “Green Towers,” which are several hundred meters high. Each “Green Tower” comes with several huge spherical bulges, inside which there are to be pedestrian streets, schools, hospitals, and other public amenities. In addition to the sphere, the remainder of the “Green Tower” is designed as residential space for citizens. It achieves energy self-sufficiency by solar power generating device installed in the building structure (Fig. 45.2).⁸

Scientific urban planning is the first step in building a low-carbon city. Construction of low-carbon new urban areas should start from low-carbon planning. A strict overall plan and design of low-carbon buildings, low-carbon transport, and low-carbon industry make new urban master planning and professional planning consistent with sustainable development principles and promote low-carbon urban development at source. In terms of planning industry, choose some low-carbon industrial projects to improve the quality of development, improve the emission

⁸“Reference News,” 2010.6.30.

standards of various types of enterprises, and improve access conditions for iron and steel, building materials, chemical, power, and light industry. *In transportation planning, try to plan and build as many pedestrian systems, cycling systems, bus systems—“three major systems”—as possible.* Also control the number of private transport travel services and promote green travel to reduce carbon emission from urban transport as much as possible. Copenhagen in Denmark has a reputation as “Bicycle City,” one-third of people there cycling to work. Malmo of Sweden collects solar energy in summer for winter heating and stores ice water in winter for summer cooling. Planning and construction of low-carbon new urban areas is a social activity which needs to mobilize the government, business, and society to participate in jointly. So fully consider the regional resource endowment, social developing situation, and environment-carrying capacity relating to the new urban area, define their own position according to different circumstances and take a distinctive developing path for a low-carbon new area.

45.3 About the Low-Carbon New Eco-City

The concept of low-carbon eco-city was first proposed by Qiu Baoxing, the Deputy Minister of Housing and Urban Construction Department of China, in 2009.⁹ He is an expert and scholar-official, serving as the mayor of famous Chinese city Hangzhou, and has been an official of Department of Housing and Urban-Rural Development of China for a long time. Having got both practical experience of long-term working in local cities and countries and rich solid theoretical level experience, Dr. Qiu has written books, especially in the field of the low-carbon eco-city.

The low-carbon eco-city is a combination of a low-carbon city with ecological goals to achieve zero carbon emission. It is a complex system of sustainable natural and artificial environments, in which Nature harmoniously co-exists with ecological economics and social harmony, and is ecologically perfect. On this topic, Deputy Minister Qiu has expounded a lot. In addition, the book *Theory and Practice of Low-Carbon Cities*, written by Shen Qingji, An Chao, and Liu Changshou, is an important piece of work in this area with very detailed discussion.

The low-carbon new eco-city is a new type of urban area characterized by zero (low) carbon emission, which is planned and constructed with comprehensive utilization of various low-carbon and ecological technologies, facilities, and tools under the guidance of low-carbon and ecological principles. Truly speaking, it is more comprehensive in content, more integrated in planning and design, and more sophisticated and systematic in technology, with higher standards in development and construction than the purely low-carbon city, an eco-city of a new type. In the course of urbanization in China and the world, in a new wave of urban

⁹Shen Qingji, An Chao, Liu Changshou. *Theory and Practice of Low-Carbon Cities*, p. 107.

development, man should explore seriously, practice boldly, try to establish a benchmark, and continuously push forward.

45.4 About Sun City

Sun City is an important masterpiece by the Italian Communist Campanella in 1622, who was an early visionary. The book describes an idealistic fictional city with no private property, with everyone participating in labor, supplies being distributed according to demand, 4 h of daily work per person, and the remaining time for reading and entertainment.

Sun worship has long been a cultural phenomenon of the human race, and spiritual pursuit of many peoples in the world. Planning and construction of sun cities are a manifestation of human ecological thinking, and a new exploration by human beings to utilize solar energy and construct sustainable developing cities. According to the survey of Li Dexiang, a professor of Tsinghua University, Linz of Austria is a famous sun city with a high degree of direct use of thermal and photovoltaic sunlight in the city. Meng Lihui, general secretary of Urban Environment Management Research Center of Fudan University, found around the world today dozens of sun cities constructed or under construction, 25 in USA, 7 in Australia, and 1 in New Zealand. In China there are various names and titles associated with sun city: Dezhou City in Shandong Province is China Sun City, and Rizhao City of Shandong Province, Dunhuang City of Gansu Province, Baoding City of Hebei Province, and Kunming City of Yunnan Province have similar or relatives title and practical activity. Of course, these cities have different emphases. Dezhou, mainly focusing on light and heat, gradually developed the photovoltaic industry and extensively use it in the city. Dunhuang applies photoelectric technology, concentrating on building large-scale photoelectric grid-connected systems. Baoding integrates and utilizes a variety of solar technologies. Kunming mainly applies cryogenic solar thermal technology and promotes solar water heaters. The cities discussed above have carried out a lot of exploration in urban construction concepts and integrating various renewable energies. A few years ago, they were ahead of other cities, making a significant contribution to sustainable urban development in China and the world. However, whether these cities can develop further or not depends on the understanding and awareness of decision-makers and the managing staff of the cities.

The solar culture of Dezhou has a long history, “Hero Houyi shooting the Suns,” “Man Kuafu pursuing the Sun,” and other myths and legends originated here. In the 1990s, the solar thermal industry of Dezhou, represented by the Huang Ming Group, began to grow, and developed very quickly, so Dezhou became an early city to produce and use solar water heaters on a large scale. In March 2005, in response to the slogan proposed by the country, “adhere to the scientific development concept, build a conservation-oriented society,” following the trend of the times of sun economy, Dezhou proposed to create the urban brand of “China Sun City,” and to

implement the strategy of “China Sun City.” After that, a series of work, pre-planning, trademark registration, naming the city, policy development, strategic communication, industry promotion, etc., was carried out. Inviting experts to convene the forum and making a big discussion in the media, the brand *China Sun City* has been gradually recognized, supported by the community. In September 2005, Dezhou was jointly named “China Sun City” by China Solar Energy Society, Chinese Solar Professional Committee of Associations of Comprehensive Utilization of Resources, and Professional Committee of Solar Thermal Utilization of Associations of Rural Energy. In December of that year, Dezhou set up “China Sun City” Strategy Promotion Committee, with a subordinate working office. The municipal government issued a series of policy measures one after another, *Suggestions on Accelerating the Implementation of the China Sun City Strategy*, *Implementing Suggestions on Accelerating Promotion and Utilization of Solar Energy*, and so on. China Construction Research Institute was commissioned to develop Sun City construction standards, then established a system of “China Sun City” building standards and fixed guidelines for technology promoting and applying solar and other renewable energy, so that the “China Sun City” strategy has made solid progress. A lot of domestic and foreign government officials, experts of international organizations, and solar entrepreneurs from China and foreign countries are attracted to visit and investigate here. After continuous efforts, “China Sun City” construction of Dezhou City has achieved great results. On September 16, 2010, the fourth world conference of sun cities was held in Dezhou, and the next year the Second Solar Expo Fair was held, making the brand effect of China Sun City continue to spread. By now, a good situation has gradually come into being, in which solar energy industry development, its promotion and utilization, solar cultural brand effect, three aspects mutually reinforced, and “Dezhou Model” of Sun City construction is accepted step by step by the country and even the world. The former President of the World Association of Sun City, Chris Zijdeveld, came to investigate Dezhou eight times. He praised Dezhou City highly, believing Dezhou is not only Sun City of China, but Sun City of the world (Fig. 45.3).

As originally envisaged, these cities have reached the desired effect. Certainly they have encountered some problems at the time of construction. The first is issue



Fig. 45.3 Utilization of solar energy in Dezhou

of standards and planning. Sun City is a title used by society and local government, but not so named by the country without standard identification by the relevant national department and the criteria. On December 1, 2008, a delegation of Dezhou municipal government went to the German Embassy in China to exchange views on solar utilization and the construction of China Sun City. German Ambassador Michael Schaefer asked several times for the data related to measurements and indicators of China Sun City. This is not an easy question to answer. It reflects not only that there are different ways of thinking between western countries and China, but that Chinese people do not pay much attention to quantitative criteria, only stressing qualitative identification, not quantitative theory and identification. The second problem is the cost issue. Solar light and heat are really nice resources, electricity-saving, money-saving, secure and simple, but the photovoltaic technology is expensive and currently has a high failure rate. Dezhou and other cities invested a lot of money in the lighting use of solar energy photo-electricity. It is of great import to the world to know of the new energy developed from solar energy. Some western officials and experts talked a lot in this field, without much action and without much installation of photovoltaic street lights and landscape lights, mainly because of the cost and reluctant capital investment. The third problem is blind development. Some cities blindly developed a lot of new energy, regardless of the industrial basis, technology maturity, and market conditions of the industry, causing some problems. Surely, these are just some tributary problems, and some of them are influenced by the environment at large. This is what the future construction of Sun City should draw attention to.

45.5 Curitiba, Low-Carbon City in Brazil

Curitiba, in southern Brazil, has a population of about 1.28 million. It, a former gold-mining area, became the state capital, and developed into a modern city after World War II. Curitiba became famous after the 1990s thanks to Jamie Lena, who assumed the office of mayor three times, and was known as a person “having not only great gifts and bold strategy like a ruler, but soul and wisdom of a poet.” Before the 1970s, Curitiba, similar to most cities in Brazil, faced severe overcrowding, poverty, unemployment, environmental pollution, and other social and environmental problems. When Jamie became mayor of the city, adhering to the new concept of sustainable development, and supplemented by a small amount of government investment, he succeeded in stimulating the imagination and participating enthusiasm of the public through depicting a plain and specific vision, implementing cross-sectoral integration, creative and efficient, people-based, respectful citizens, seeing citizens as the owner and the participants of all public assets and services, green city, and other systematic development strategies. Within one generation there has been a fundamental change in the appearance of the city, and a great improvement in the quality of life of residents, under the premise of the protection and development of the ecological environment. And it won Jamie a

consensus and support of every mayor follow-up and the public. So Curitiba kept moving towards a sustainable developing goal. In 1990, Curitiba, Vancouver, Paris, Rome, and Sydney became the first batch of cities named the “Most Suitable Cities for Living” by the United Nations. Curitiba is one of the cities having the highest rates of urban greening in the world, and is called the Capital of Ecology in Brazil.

Curitiba is not a small city. With nearly 1 million cars, it is the city with the highest consumption per capita, at an average of 2.6 people a car, but no traffic and air pollution problems. This city gives priority to the development and use of public transport and, does its best to meet the travel needs of low-income urban residents, accounting for the majority of the population. Many private car owners switch to travel on bus, which is safe, fast, and cheap. Bus transportation in Curitiba is the busiest and densest traffic system in Brazil, transporting on average 1.9 million people per day. During peak hours of commute, people wait just 45 s to take the bus. Now 75 % of office workers in the city choose to use public transport. This rate is the highest of all cities around the world. Curitiba became the lowest car usage city in Brazil. Compared to other cities of the country, it can save 7 million gallons of fuel, so air in the city is fresher. Discharge of garbage should be charged, and this seems to be perfectly justified in other cities of the world, but in Curitiba, discharge of garbage is not only free but can be used in exchange for food.

In 1989, Curitiba municipal government launched a campaign called “Let Trash Be Not Waste Any More,” to mobilize all families of the city to separate recyclable materials from household waste. A company sent out a green truck to conduct kerbside recycling three times a week. It classifies recycling garbage into five categories—paper, glass, cans, and plastic can be used as industrial materials, and rotting vegetables, fruit, and other organic matter are used as agricultural fertilizers. Curitiba reuses daily paper recycling, equivalent to saving 1,200 trees from being cut down. The garbage closed loop recycling system saves nearly half of the cost of waste disposal, and the waste recycling fee was one of the largest municipal budget expenditures before. Meanwhile, the landfill of waste is reduced, together with the risk of groundwater contamination and penetration. Curitiba municipal government also funded a project of “junk purchases,” whereby citizens can exchange garbage for food. In each community of the city, garbage collection vehicles visit twice a week. They usually come in pairs, the one in front collecting “junk” and the one behind distributing food. Two kilograms of recycled materials can be exchanged for 1 kg of food, and you can also exchange junk for a bus ticket, exercise book, Christmas toy, and so on. To sum up, experience in building the city of Curitiba mainly lies in the guiding role of the government in ideas, conception, and making policies, and the government should comprehensively solve urban problems, adhering to people-based principles, respecting and protecting Nature, integrating man and city with Nature (edited according to information from Baidu).

Chapter 46

New Urban Area of Science and Technology, City of Science

46.1 Developmental Course of Science City

The new urban area of science and technology, or city of science, is established by planning and constructing research institutes, higher education institutions, and high-tech enterprises together. It is conducive to promoting the development of science and the city with good infrastructure, rich research resources, strong material and technology foundations, and a lot of information and data.

The science city was first launched in Silicon Valley, founded by the United States in 1950. Silicon Valley created the myth of science and technology and started a new economic era, causing many other developed countries and regions to follow suit. The former Soviet Union, in order to develop Siberia's natural gas resources and achieve economic development, decided to build Novosibirsk, Akademgorodok High-Tech Park Zone in May 1957. In 1961 they started the construction of Pushchino Biological Science City. In 1963 Japan began building Tsukuba Science City, Kansai Science City, and Kyushu Silicon Island. During this period, California Silicon Valley, Boston Scientific Complex No. 128, Cambridge Science Park, etc. were under construction. Currently, the world has more than 150 science cities of various types.

Science City in China was undoubtedly Mianyang Science City. On July 13, 1958, China established the Ninth Institute of Beijing, later renamed China Academy of Engineering Physics, starting the great battle in the march to nuclear weapons. After moving to Qinghai and Sichuan, in September 1983, the country concentrated "CAEP people" in Mianyang and built a modern science city. Covering 4 km², China Academy of Engineering Physics is a large-scale, well-equipped and beautiful science city. Science and Technology Museum of CAEP—the only nuclear science and technology museum in China—was formally opened to the general public on October 27, 1998, with visitors from all over the country visiting every day.

Zhongguancun is a science city created after China's reform and opening, originating from "Zhongguancun Electric Street" in the early 1980s. In May 1988,

the State Council approved the establishment of the Beijing New Technology Industry Development Experimental Zone, and in June 1999, the State Council approved the request for accelerating the construction of Zhongguancun Science and Technology Park Zone. In August 2005, the State Council made eight decisions to support strengthening Zhongguancun Science and Technology Park Zone. In March 2009, the State Council approved the construction of Zhongguancun National Innovation Demonstration Zone. And in 2011, the country clearly proposed the conversion of Zhongguancun into a science and technology innovation center with global influence.

Guangzhou Science City, started on December 28, 1998, is the core park zone of Guangzhou High-Tech Zone. It is located in Luogang District in the eastern part of Guangzhou City, Huangpu District and Eastern Development District to the east, Guangzhou new urban center-Zhujiang New City to the west, Baiyun to the north, Zhujiang River to the south, 18 km from Huangpu Port, 17 km from Baiyun Airport, and Guangzhou-Shenzhen Railway, Guangzhou-Shenzhen Highway, Guangzhou-Shantou Highway, and Guangzhou City Highway joining here. A 2-h drive from Guangzhou Science City can reach Hong Kong, providing a smooth channel for high-speed operation of logistics and information flow in Guangzhou Science City. This region, with scientific planning and design, excellent location, convenient transportation, and implementing ecological priority, has got a good starting point for planning, development, and construction. It is an important base for the development of high-tech industry in Guangzhou, the iconic technology projects of the twenty-first century, the model area of modern ecological garden city for the future, the best place to pioneer and live in Guangzhou, a modern new urban area, and leisure attractions. Guangzhou Science City has a planning area of 20.24 km², a starting area of 4 km², and five functional group areas: electronic information industry area, bio-pharmaceutical industry area, new materials and energy industry area, comprehensive research and development incubator service area, and ecological protection area. At present, it has built a 1 million km² incubator, and is speeding up the construction of 1 million km² accelerator, 1 million km² public technology platform, and 1 million km² living facilities, owning 285 research and development institutions of all types, among these, 7 national R & D institutions. The first phase of Science City headquarters economic zone has been completed, and the registered capital of first settled-in projects amounts to 10.5 billion RMB. In 2011, Guangzhou Science City achieved 240 billion RMB revenue.

46.2 Main Features of Science City

The formation of Science City usually relies on universities and research institutes, and some are formed on the basis of universities. To take Highway 128 Southwest of Boston Scientific Complex as an instance, there are not only hundreds of companies engaged in research and production nearby, but also the famous Harvard

University and Massachusetts Institute of Technology and other educational research institutions, as well as important national experimental centers, such as the federal government research center—Lincoln Laboratory.

The site selection and points distribution of Science City is quite meticulous and delicate. It is better to select a place not too far away from the central city, so some are located in the fringe area of an urban agglomeration, for example, it is only 25 km from Russian Science City to Novosibirsk City, 60 km from Tsukuba to Tokyo, 8 km to Tsuchiura City of Ibaraki Prefecture, and 20–30 km from Kansai Science City to Kyoto and Osaka respectively. To ensure high-quality research and teaching activities to be carried out, it needs good environmental and municipal facilities, better combined with water bodies, forests, and other natural environments as much as possible. The urban population is not very large, generally from tens of thousands to more than a hundred thousand. Basic resident population is the majority, and migrants are quite numerous.

The functional structure of Science City is sound and complete. There is a scientific research and production area, residential area, central business district, large public green area, etc., and among these there are, in the built-up area, research institutions, higher and secondary specialized schools, design institutes, experimental factories, and so on, accounting for most of Science City (in Tsukuba, accounting for 60 % of the built-up area). Inside the research and higher education area the units undergo distributions and configurations based on their contact with each other as well as the requirements to impact on the environment, such as setting the theoretical study of research institutions and universities in the urban public center and establishing a pilot plant in urban fringes, separated from the residential areas with green areas.

China attaches great importance to developing high-tech zones, but the high-tech zone, either from strategic positioning, or structure of function, still has a long way to go to catch up with the Science City. For a long time it has lacked the knowledge of planning and construction compared to the science city or new urban area of science and technology, and there have been insufficient constructions of this kind. In fact, Beijing, Shanghai, Guangzhou, Nanjing, Hangzhou, Xi'an, and some other cities in China are quite qualified to build a science city, so they should take more interest in this regard and improve their self-confidence to commence as soon as possible. According to media sources, in November 2011, Xi'an City of China, carried out an expert evaluation of Xi'an Science City Planning Proposal, preparing to construct Xi'an Science City in Fengdong New City, Xi Xian New Area. With 10 km² of planning area of approved demonstration area, and an 100,000 planning population, they are striving to create an important base for cultivating strategic emerging industries within 10 years. However, afterwards, there was little public disclosure of the news, so perhaps the venture is still being studied.

46.3 Creativity in Promoting Science City

As with other types of new urban development, in planning, construction, and management of science city, there are three patterns:

Government-led. This means that some major issues ranging from planning and site selection, function positioning, to size and grade, are up to the government of the country or the city to propose, organize, and implement, such as Siberian Science City of the former Soviet Union and Mianyang Science City of China. The advantage of this mode is that the government can make full use of a variety of political, economic, scientific, and other types of resources to give a quick design, quick start, and start to bear fruit. However, because of the concentration of power and resources, the single fund-raising channel, the basic role of the market in resource allocation, is often ignored. It is not conducive to mobilize the enthusiasm of all levels of society, so the development often lacks vitality and motivation.

Market-driven. This is represented by Silicon Valley in the United States. Silicon Valley is located at the original site of an American naval base, around which were shops of some technology companies. Later, some of the naval businesses relocated to southern California, San Diego, although some companies stayed, gradually developing aerospace business in the area. After World War II, although Stanford and other prestigious universities were here, there were no civilian technology companies, so university students could not find jobs after graduation, so were rushing off to the East Coast. Professor Frederick Terman of Stanford University chose a large patch of vacant land for real estate development. He pioneered an industrial park on it and allowed high-tech companies to hire. Later, some companies, such as Hewlett Packard, gradually developed here. Now Silicon Valley has become the cradle of American high-technology. This mode of development, starting with market demand, came into being, and spontaneously gathered and grew to follow the developing direction of the market. It could provide enterprises with a strong vitality, competitiveness. However, in the development of the science city, there is certain blindness, and a long-term self-regulating process.

Government power and market forces combined. Hsinchu Science-Based Industrial Park in Taiwan started construction in December 1980, taking the road of combing executive power with market forces, achieving great success. Taiwan's highest authorities were directly involved in the planning and positioning of Hsinchu as well as development strategy. The management department of Hsinchu Park was not only organizers of the planning and construction, but also direct participants in the development and management, offering policy guidance and unpaid investment to enterprises settled in the park. However, the authorities and the use of market forces and social resources has encouraged business investment and development, and consequently the park, personnel, and enterprises have been developing rapidly. According to the statistics, in Silicon Valley, the success rate of enterprises is 20 %, whereas in Hsinchu, Taiwan, corporate success rate is over 80 %.¹

¹Chen Jiayang, *Innovative High-Tech Zone Planning Study*, p. 137.

Beijing Changping District is planning to build a technology business district (TBD) along lines from Beiqing Road to Qibei Road, and Badaling Expressway, taking advantage of the intensive universities and intelligence in the capital city. The project covers 55 km² in total, with five functional areas: (1) technology and finance island, with primary industries of science and technology in banking, insurance, VC, PE, and software information service; (2) technology business center, embracing technology transfer, trade, science, and technology intermediary services and the gathering mobile internet industry; (3) northern Beijing Cyberport, developing energy-saving and environment protecting services and industrial internet; (4) Life Science Park, basically completed, with international influence; (5) technology sport park, providing green open space for the public and elite of technology in Beijing. TBD will try to explore a new developmental mode. A lot of social service functions, originally undertaken by local government, would become the responsibility of Beijing Science and Technology Business Construction Corporation, in order to build a platform for policy and social services, gradually changing from government domination throughout the work situation.

Chapter 47

New Educational Urban Area, University Town

The new educational urban area is a so-called university town. In the 1940s, American scholar Harris, in his research on the classification of the American city, considered cities with more than 25 % of the population having university enrollments as a university town. Taking American and British university towns as representatives of foreign university towns, there is the largest number of university towns in the United States as, according to the statistics, the USA has at least 58 university towns. As for famous university towns in foreign countries, there are Oxford University Town and Cambridge University Town in the UK, Harvard University Town in Boston and Massachusetts Institute of Technology University Town in the USA. In the existing academic environment, many are researching the university town from the perspective of education but few from the urban development perspective.

The University Town has a long history. Around the eleventh century, Salerno University, Bologna University in Italy, and Paris University in France were established one after the other. Paris University had a population of 50,000 or more, becoming a comprehensive university, a university town in embryo. From the thirteenth century to the eighteenth century, taking Oxford University and Cambridge University in Britain as representatives, universities expanded in size, gradually forming towns based on the university. From the beginning of eighteenth century, with some American university towns as representatives, the university town enlarged in scale, then grew into a formative pattern, becoming an important phenomenon in the development of higher education and new urban construction. Since the 1950s–1960s, some developed countries began building some university towns in order to meet the need for developing higher education, for instance, the State University Town in USA and Tsukuba University Town in Japan.¹ From the 1980–1990s, some developing countries have entered the stage of popularization of higher education, the governments investing in some new universities and concentrating the constructions of several universities or colleges in a certain area of a city. The university town phenomenon is accompanied by the development of

¹Yu Jianwei, Education, Development and Research Center of Ningbo City in Zhejiang Province, China, *Comparative Education Research*, 2002 (10).

higher education and urban construction, and as the demand for economic and social development growth for education is increasing, the university town is expanding and developing too.

As an urban phenomenon, the university town has some unique characteristics:

Large scale and quantity of school and high concentration. Boston is a relatively large university town in America, concentrating more than 60 universities and colleges including Harvard University, Massachusetts Institute of Technology, and other world-renowned universities. Among them, Harvard University and MIT are located in Cambridge town, where the population is up to 100,000 people. The famous University Town of Cambridge in the UK is roughly equal in size to Oxford University Town, with a population of about 100,000. Guangzhou University Town, planned to cover an area of 17.9 km² in the first phase, hold 200,000 college students. With an urban population of about 350,000, it could be seen to be equivalent to a medium-sized city. In 2004, the first batch of college freshmen settled in was from ten universities in Guangdong Province, and the second batch planned to settle in was from another five universities. In Shanghai, 7 universities have been settled in Songjiang University Town, with a population of around 80,000 students.

Sound urban function and supporting facilities. The university town is based on universities, supported by the city, with the main remit educational activities and relevant technology development activities, and the city merged with the university seamlessly. In the United States and United Kingdom, representative of other education-developed countries, the university town is generally located in small towns or cities of no more than 10,000 people, where the mobile population is very large, and the number of teaching staff and students is more than that of other residents. Many people find jobs inside the university town, serve the university town, and some industries of commerce, service, tourism, and so on also rely on the university to generate and directly drive business. The service industry in the community is mainly serving the university, the university town and its locating city being mutually integrated and interactively developed. The university town has no walls or school gates, and is a university campus itself, colleges being distributed across the urban streets, these streets going through the campus.

High openness, diversity, and sharing. The openness is not only reflected in the absence of fences and gates, but, more importantly, embodied in the sharing of ideas, personnel training, academic research, and resources. The American university town is more open in openness than that in the UK, teachers and students from around the world forming a diversified culture and a spirit of democracy and freedom. With the gradual rise of a variety of distance education programs, the university town become more open. The sharing nature is reflected in the shared resources between universities and between university and city. Oxford has 104 libraries in total and 8 museums, and Cambridge has nearly 100 libraries and 7 museums. Resources are shared in these towns, and a library reader card can be used freely in more than 100 libraries. Other cultural and sports venues and hospital facilities are open and shared throughout the city. In the American university town, students can freely elect courses in different universities according to their interests.

University town construction in China was an important phenomenon in the 1990s following university mergers and university enrollment expansion in the field of higher education in the cities. In August 2000, the construction of Langfang Oriental University Town in Hebei Province opened the prelude to Chinese university town development, followed by Shanghai Songjiang University Town and then, in succession, Beijing Changping and other university town construction. During the following 2 years, there were more than 50 university towns planned and constructed. It plays an important role in both new urban development and education revitalization, but there are also inaccurate positioning, large financial debt, serious waste of land, incomplete infrastructure, and other problems. From the perspective of new urban planning and construction, the development of the university town should do well in the following aspects.

With good planning and elaborately selected areas, universities can gather together to grow a city. The university town has two types of formation, one is natural formation, the other is active construction and, in China, the university town is generally made through new construction. This leads to high demands for the planning and design of the university town. The first thing to do is to conduct a good planning argument, then choose the right location. The university town is usually seated in small towns near metropolitan areas—Oxford and Cambridge are 70 km away from London, Guangzhou University Town is less than 15 km away from the urban area of Guangzhou, with a linear transport distance of 20 km. If it is too far away from the center of the city, it is not conducive to faculty housing, transportation, and teaching. It is necessary to highlight the advantages and characteristics of being both a university and a city, planned from the requirements of new urban area and designed from the population scale of university, to achieve results of rational university layouts, complete urban functions, and mutual shared resources of university and the city. In the process of planning and constructing the university town, the government should play a full role as manager to unitarily plan, design, and organize infrastructure construction, and arrange some affairs as a whole. Universities need to do well in the design and construction of the campus, on the basis of meeting the urban master plan and the required infrastructure construction.

Good establishment of infrastructure and community makes university town construction coordinate with urban development. Some cities could not coordinate university town construction with urban development, so the infrastructure, lagging behind, inadequately connects the urban facilities, bringing a lot of inconvenience and difficulty of construction. This is to be overcome.

Extensive mobilization of resources and increase of capital investment are desirable. Because of previous large investments and debts, financing channels are not outstanding in the Chinese university town, and the position of investing entities is unclear in these universities. University town construction funds should be invested mainly from government, corporations, private individuals, and schools, and these are important. Oriental University Town in Langfang and Songjiang University Town in Shanghai assume an operating mechanism of “university and enterprise constructing together, university as the subject, and universities in

cooperation.” Enterprises, investing in construction, have the property rights to urban facilities, implementing industrial operation and management. These enterprises provide all teaching and living facilities and good logistics services, whereas the universities put the consumer market to the enterprises, working by market principles. Universities settled into the university town compensate for the use of urban resources, running education independently under the guidance and coordination of the urban management department and the education department. Universities run the education, teaching activities not being affected by the enterprises. With complete urban function, the whole urban area is planned and constructed in the mode of urban community, forming an urban community with a core of several universities with a specific overall function and environmental characteristics. The construction and management of the urban areas stress utilization rate and sharing of resources, thereby improving the level of socialization.

Chapter 48

Waterfront New Urban Area

From this chapter, our study begins by focusing on riverfront area, seaport-front area, new airport town, and new skytrain area. The four types of urban areas are selected from the aspect of geographical location, whereas urban areas discussed in previous chapters are selected from functional categories. So the four urban areas and several functional urban areas in previous discussions not only contain each other but show different features of their own, respectively.

The common and biggest feature of these four new urban areas is “near,” near a river, near the sea, near an airport, and near a high-speed railway station. “Near” means neighboring, close to, or next to, and all are relative geological concepts. Do not simply and mechanically interpret as closely alongside the riverbank, coastline, high-speed railway, and airport fence, and anyway it is not secure to be close to the airport fence. However, their growth must be attributed to rivers, harbors, airports, and high-speed railway station, relying on the advantages in this regard to plan, construct, and develop.

Here we discuss them in the order of their appearance in space-time as below. The first one to talk about is the riverside new urban area.

(In China, river is conventionally called *Jiāng* or *Hé*.) River *Hé* is a waterway. *Jiāng* and *Hé* have both similarities and differences. According to the research of experts, most rivers in northern China are named *Hé*, such as Yellow River (*Huāng Hé* in Chinese), *Huaihe* River, *Luohe* River. Chinese southern rivers tend to be called *Jiang*, for example, the *Yangtze* River (*Changjiang* River in Chinese), *Zhujiang* River, and *Lijiang* River. However, there are exceptions, such as *Yalujiang* River, *Heilongjiang* River, and *Songjiang* River in the north. Chinese people often call small streams *Hé* and large rivers *Jiang*. In addition, generally Chinese people call foreign rivers *Hé*, not *Jiang*. On the whole, there is no qualitative difference between river *Hé* and river *Jiāng* in China, just different conventional wording.

In the agrarian age, in riverside areas there was water available to drink and use, and fertile land to live on, plant, and breed. Good conditions of survival, planting, and breeding facilitated human habitation and development, and gradually led to the development of a number of towns. In the industrial era, the river became a major transportation channel for mankind, and river water became a necessary condition for some industrial development, so along the river cities grew rapidly.

Fu Chonglan of China Academy of Social Sciences studied urban development along the canal in particular, and wrote a book entitled *History of Chinese Canal City Development*.

Yellow River is the mother river and cradle of the Chinese nation. It gave birth to the early cities in the country. Most Chinese cities are scattered over the seven major river systems, such as Yellow River, Yangtze River, and coastal areas. Statistics show that the downstream areas of China's seven major rivers, with dense population, urban concentration, and developed economics, accommodate half the population of the country, one third of the total arable land and economy.¹ The river delta, formed by estuary sediment, such as Yangtze River Delta, Zhujiang River Delta, and Yellow River Delta, is the most economically developed area, which has the highest degree of urbanization in China.

Urban development throughout the world is closely related to rivers. During the time 3500–3000 BC, the first batch of cities in the history of mankind appeared, first in the Nile basin, then Mesopotamia. Around 3000 BC, a unified kingdom was formed in Egypt, establishing its capital in Tjenu, and later built the new capital of Memphis. From 3000 to 2500 BC, the Sumerians in the Mesopotamia region began the process of forming the initial state, and there have been many city-states, primarily Eridu, Ur, Uruk, Lagash, and so on. Under the combined influence of the Nile and Mesopotamia civilization, cities also began to appear with the Hittites of Asia Minor and the Phoenicians of the eastern Mediterranean coast. At the turn of the nineteenth century BC to the eighteenth century BC, the Hittites built fortified cities, among them, Qusar, Nesa, and Zalpa as the most important. Phoenicia was similar to Mesopotamia. There had been many city-states, and the most important ones were Ugarit, Arwad, Bi Buller, Sidon, and Tyre. These cities developed handicraft industry and commerce, and did business with Egypt, Crete, and so on. At the same time more or less, the eastern Mediterranean island of Crete also found urban civilization.

Indian River is another cradle of human civilization. In 1922, first at Mohenjodaro of Sindh region, then at Harappa in West Punjab, people discovered ancient city ruins, and they are collectively known as the Harappa culture. The presence of the Harappa culture is estimated to have been 2500–1500 BC, but some other researchers traced it back to 3500 BC, making these two cities the earliest known cities in the world. In the Harappa period, residents mainly engaged in agriculture, but they also had quite a developed handicraft industry and commerce. The city had tall and thick walls, and occupied a large area. Around 2000 BC the two cities grew in a boom period with a population of about 20,000, and thus among the largest cities in the world at that time.

Mario Polis explored the secrets of urban prosperity and decline, and during the exploration he specialized in the relationship between water, waterways, and urban development. He believes the largest cities in all western countries are either on the riverside or near rivers, lakes, waterways, or harbors, except Madrid of Spain,

¹*The Survival and Development of River and City*, quoted from xinhuanet.com.

whose location is entirely a political decision. This is mainly related to the shipping and transportation costs, water being the basis for economic development. The Rhine gave birth to the largest regional urban density in Europe, forming the famous “blue banana” phenomenon. So did North American countries, whose first immigrants came from Europe, the first batch of cities therefore being built on the east coast.

According to Nan Yuesheng of Hebei Normal University in China, river shipment is a major factor in the formation of early urban development. There are five types of riverside city location: (1) shipping end location, because the waterway of upper stream is too shallow or has got waterfalls or other navigational obstacles so goods must be landed in this place, a factor in the formation and development of a city; (2) cascade transit point location, referring to a place where local waterways change in depth so the size and form of ship must be correspondingly transformed—it is just the transit activity that prompts urban formation and development here; (3) rivers intersection location, the confluence place of navigable tributaries and the river, so a lot of people and materials gather here to be distributed and transited—this kind of vast hinterland is a good location for cities to form and grow; (4) river crossing (ferry) location in a relatively narrow place of the river waterway—good to build a bridge or ferry so the place gradually forms a city; (5) lizard location, at the great bend in navigable rivers, often the most convenient part of the basin to transfer and exchange materials with other neighboring regions, promoting the formation and development of cities.

In modern times, compared to maritime transport, road transport, and rail transport, the position of river transport has decreased significantly. Port economy, or road bridge economy, has become an important way of development. The number of new riverside urban areas planned and constructed, has obviously decreased, compared to that of new coastal urban areas and urban areas near airports.

Now, about the planning and construction of new riverside urban areas, there are three issues that need attention.

The first issue is location of riverside roads. Some cities planned and constructed roads, even highways in close proximity to river banks, in order to keep road access and reduce demolition. This is debatable. Rivers in urban areas are very precious, some of them may be naturally formed over hundreds or thousands of years, even longer, some of them may be excavated by mankind. These precious resources should be well protected and utilized. *Human beings are born hydrophilic, and children are particularly fond of playing in the water. Moving with the water, neighboring the water, is common humanity. Both sides of the embankment are especially suitable for residence, tourism, and the development of tertiary industries.* However, a broad road located tightly along the river, with a high volume of vehicle traffic, artificially separates local residents from the river. It is not convenient. There is too much noise, affecting the use of this precious land. If necessary, some main roads should be planned and constructed a certain distance away from the river bank. However, it is scientific to arrange some residential areas, tourism, and the tertiary industry projects between the main road and river bank.

A pedestrian- or car-only path could be built close to the river bank. It doesn't have much traffic interference on the river scene and residential neighborhood. In order to facilitate outsiders driving into the river scenic area for a visit, the city could plan and build parking lots either on the main road or by small path close to the river bank together with some other tourist service centers. These should be decided according to the size of the river scenic area, the distance from the city center, and the number of visitors. A variety of approaches are available, but all should be people-oriented, to place most people's safety and happiness first.

The second issue is height of waterfront buildings. Some cities go well with tall buildings and plans are made to put them in close proximity to the river or waterway. As for ordinary rivers within cities, unlike the sea, the water surface width is limited. A series of high buildings resembling a high wall standing in front, not only give the river a sense of oppression, but also make the river visibly narrower, water surface visibly smaller. If tall buildings stand along the river, they shade buildings behind them. People living, working, dining in buildings behind could not see the river scenery. *River-front buildings, including lake-surrounding buildings, ought to be in the shape of an open pot, radiating outward from low to high, so that more people can see the water and view the scenery, let the water appear larger and more beautiful.* In this respect, the West Lake in Hangzhou achieved good results after many years of unremitting effort. Unfortunately, some places are irreparable.

The third issue is functional planning of riverside areas. That is to say, based on people, the best place should be designed to be residences, schools, tourism and public buildings to allow more people to enjoy the fresh air and beautiful river environment.

Chapter 49

Seafront New Urban Area

49.1 Notion of New Coastal Urban Area

The seafront new urban area, also known as new urban area with harbor, is the area along the coast, a new seaside city or new port city. *Chinese Statistical Yearbook of Ocean* makes it clear that coastal cities refer to municipalities or prefecture-level cities with a coastline, including all their subordinate districts, counties, and county-level cities. Some of the new coastal urban areas are farther away from the coastline and some closer.

49.2 Development of Coastal Cities

Coastal cities appeared quite early in the world. For example, social productivity throughout Greece has made significant progress between the eighth and sixth centuries BC. After strengthening trade with Mediterranean countries, Greece, through immigration, spread urban civilization to the western Mediterranean and Black Sea regions. The newly created cities of migrants—Naples, Syracuse of Italy, Marseille in southern Gaul, Sinop by the southern coast of the Black Sea, etc.—were all important industrial and commercial centers. In the late Middle Ages, i.e., from the fifteenth to the early seventeenth century, capitalism began to develop in some European countries, there was the Renaissance, and they began to open up some new routes. It was these new routes that caused the development center of capitalism to move from Italy to Britain and some other coastal countries of the North Sea, where many industrial and commercial cities gradually emerged.

Coastal cities arose quite early in China, too. In the Qin Dynasty or earlier, Panyu of Guangdong Province had become a foreign trade port. In the age of Three Kingdoms, Guangzhou Port had become China's premier port. The real rise of many emerging coastal cities in China has been in modern times. With the rapid

development of the world shipping industry, maritime industry, and trade, the economy has gradually changed in China. In particular, the armed aggression of a world power against China, starting from the Opium War, provided Chinese people with a new understanding of coastal cities and their development. The development shows a trend from east to west, north to south. Despite its inception in just 1843, Shanghai replaced Guangzhou in 1853 as the foreign trade center and the largest seaport city of China. Qingdao, Qinhuangdao, Dalian, and other coastal cities only have a hundred years or so of history. In the 1950s, to defend foreign aggression, China moved the industrial and critical facilities of coastal cities inland, so coastal urban development was affected to some degree. After the 1980s, the central government implemented the coastal development strategy, which strongly promoted investment, construction, and development of coastal cities. This is the fastest-growing period for new coastal urban area in the history of China. However, because China is a vast country, with relatively weak awareness of maritime power, she did not pay adequate attention to the development of coastal cities and relative regions or make adequate investment, so that later there appeared issues in the South China Sea and Diaoyu Islands. Now that issues of oceans, coastal development, and security have been referred to the national strategic level, there should be a new climax in the development of new coastal urban area in China.

49.3 Development Features of Seafront Areas

1. New urban area planning and construction rely on important ports and docks. The inception of Rizhao City in Shandong Province as a port is founded on the exports of Yanzhou Mining Group. In 1985, it was established as Rizhao City at county level approved by the State Council. In 1989 it was upgraded to a prefecture-level city. In only 20 years, Rizhao City had experienced great changes. As the east bridgehead for Shenhua economic zone, Huanghua City of Hebei Province had a vast economic hinterland, and in 1997 the State Council approved the construction of Huanghua Port. In 2010, Huanghua integrated port was officially opened. Currently, Huanghua City is developing and constructing Bohai new urban area with a population of millions of people.
2. New urban area planning and construction on a large scale make full use of beach land. Weifang City in Shandong Province takes advantage of more than 2,600 km² of northern coastal beach land resources, planning 1,000 km² of industrial development zone, 1,000 km² of ecological optimization zone, and 600 km² of modern agricultural zone. Weifang City has laid great emphasis on the development of three industry sectors, with the coastal district as the center, and Shoubei District, Changbei District as two wings, creating the pioneer district in the development of the Yellow River Delta. The northern coastal area will be built into a modern coastal new city with sound supporting facilities, developed industry, completed functions, a good ecological environment, and suitable conditions for both living and working. As for Caofeidian new urban

Table 49.1 Fact sheet for five new coastal urban areas

Name	Planning area (km ²)	Functional positioning	Strategic background
Tianjin Binhai New Area	2,270	Integrated	National level new urban area (2005)
Zhejiang Zhoushan Islands New Area	1,440	Integrated	National level new urban area (2011)
Hebei Bohai New Area	2,375	Integrated	Strategic new urban area of Hebei province
Hebei Tangshan Caofeidian New Area	1,943	Integrated	Strategic new urban area of Hebei province
Guangdong Zhuhai Hengqin New Area	106	Integrated	National level new urban area

area in Hebei Province, “there are deep grooves facing the sea, a shallow beach against the land, large oil fields underground, and a vast hinterland.” It has a planning area of 1,943 km², of which the industrial area is designed to cover 380 km².

3. New coastal urban area construction is highly favored by the country and region, and there is a vast hinterland for development. The new coastal area of Weifang City in Shandong Province and Caofeidian new urban area in Hebei Province are both major development projects in the respective provinces. Zhuhai Hengqin area in Fujian Province is the first demonstration zone of the close cooperation between Guangdong Province, Hong Kong, and Macao approved by the country. Cross-harbor tunnels connect Guangdong with Macao. Zhoushan Islands District in Zhejiang Province is the fourth new area of national level, following Shanghai Pudong New Area, Tianjin Binhai New Area, and Chongqing Liangjiang New Area, but it is the first marine economy-themed new area on the national strategic level. The new area covers the entire city of 1,440 km² land and 20,800 sea. The new coastal urban area plays quite a strong role in leading the economic hinterland, and often in this regard, new urban areas with airport cannot it.

With the implementation of China’s maritime power strategy, these new urban areas give play to the existing advantages of strategic location, port, industry, and policy provided by the country, and envisage big developments, finally becoming new strategic engines for economic and social development in China and an important expansion pole (Table 49.1).

Chapter 50

New Airport Urban Area

50.1 Studies and Functions of New Airport Urban Area

The new airport urban area is also known as aerotropolis, airport city, the aviation metropolitan area, airport commerce city, urban area near airport, and so on. It is usually called aerotropolis in China, but the title makes people feel strange—it is not popular. In Shanghai, it's called a new city near the port, leaving people not knowing whether it is a harbor or an airport. To facilitate the study of the new urban area and to distinguish the different types, it is better to choose the title of new airport urban area. No matter what the name is, the connotation is consistent, that is, a kind of urban area takes an airport as its core, then absorbs related commercial business, leisure, and entertainment activities on the basis of the aviation industry, making all developments jointly, thus forming a region of economic development, or a new form of urban development.

Concepts such as aerotropolis were first put forward by Professor John Casarda of the University of North Carolina. However, there are some inconsistencies about the time when he first proposed the term. Wang Baoyu and Tang Yuqing think it was in 1991,¹ Cao Yunchun claims it was in 2000,² and Sun Yanhai considered it to be 2007.³ It seems, in general, to be the end of the last or the beginning of the present century. John Casarda thought the “aerotropolis” referred to a large comprehensive area, in which the airport was the core, and around the airport were built some storage areas, office areas, shopping centers, convention centers, and even residential areas, golf course, and other facilities.

Since the 1990s, Chinese scholars have done some research on the new urban area with an airport. Liu Wujun published a book *World Aviation City of 21st Century*, and proposed the concepts “urban area near port” and “aviation city.” Du Manling and Wang Yaoqiu wrote an article “Aviation Logistics Highlights Airport

¹Wang Baoyu, Tang Yuqing. “Chinese Major Airport Economic Zone Planning Inquiry”.

²Sina Locke. “Aerotropolis Rise”.

³“A Development Overview of Foreign Commerce and Business Near Airport”.

Economy.” Li Xiaojiang published “Economic Development Zone Features of Airport Area.” Wang Baoyu and Tang Yuqing conducted a special exploration into airport economic area planning for large airports in China. On March 17, 2011, the first “Chinese National Gates Aerotropolis Summit” was successfully held in Beijing Capital International Airport. Zhang Huisheng, the executive vice president of China Academy of Urban Development, interpreted the planning prospects and development potential of the Capital Airport Area. Cao Yunchun, head of Airport Economic Research Institute of China Civil Aviation University and dean of Logistics Management Department of China Civil Aviation University, analyzed international aerotropolitan areas, and gave valuable advice on the important role of China Capital Airport in leading Beijing’s development.

On the role of the new airport urban area, there are a few sets of data. Estimates by international authority organizations show the input and output ratio of civil aviation is 1:8, whereas that of highway traffic is 1:5. Studies conducted by International Airport Council suggest that airport passenger throughput per million can produce total economic benefits of 130 million US dollars and provide 2,500 related jobs. According to research and analysis of relative experts, every million growth of China airport passenger throughput, can directly solve the unemployment of 1,000 people, and indirectly 3,700 people. As for the Capital Airport, if the passenger throughput growth is 7–8 million every year, there is an increase of nearly 400,000 finding employment every year.⁴ According to statistics from Oxford Economics, since 2003 the aviation industry has provided more than 250,000 jobs, contributing 22 billion US dollars in revenue to Dubai’s GDP, and accounting for 19 % of the total employed population in Dubai, and 28 % of Dubai’s GDP. The study also quantified wider economic benefits spawned by the aviation industry leveraging tourism and other related industries. Oxford Economics pointed out that the local expenditure in Dubai by tourists traveling there brought 134,000 jobs and created a 7.9 billion US dollars revenue for Dubai’s GDP. In the next decade, the importance of the aviation industry in Dubai can only continue to grow. Oxford Economics forecast, by the year 2020, the contributing amount to Dubai economy of the aviation industry will increase to 44.5 billion US dollars, accounting for 32 % of Dubai’s GDP, and it will provide 372,900 jobs, equivalent to 22 % of the local working population.⁵

In the past we used to say “to become rich, repair roads.” But now, to be open, build airports; to be strong, develop civil aviation. In the context of economic globalization, air transportation is not only an important means of transport, or way of transport; it can also gather a lot of people, goods, capital, technology flow, information flow, and other advantageous resources, producing a strong radiation and driving effect on regional economic and social development. It is the engine driving regional urban development and economic growth, the fast track for regional economy, the whole county melting into the global economy.

⁴Xiao Wei. “The Capital Airport: from an Airplane to a City”, *Beijing Business Today*, 2011.6.27.

⁵Liu Zhao. *Zhengzhou Daily*, 2013.4.22.

50.2 Development Situation of New Airport Urban Areas

In some developed countries the airport is large, its function is very wide, and the airport itself is a city. In some European airports, there are shopping malls, retail parks, business parks, warehouses and logistics parks, exhibition and conference centers, hotel and catering facilities, casinos, golf courses, race courses, theme parks and other recreational sports and leisure facilities, supporting facilities, and commercial facilities. The best airport city in the world is Amsterdam Schiphol Airport in Holland. Amsterdam Airport Business District, including Amsterdam Airport, partially Amsterdam city, and its surrounding areas, is an important logistics and business hub. It has attracted more than 300 international companies. The cargo transportation capacity of Incheon International Airport in Korean rank among the best in the world. The development plan of this airport area includes the logistics hub of northeast Asia, a large international conference center, shopping malls, and 330,000 km² of international business center. In Malaysia, the Kuala Lumpur Airport City project is planned to cover an area of 100 km², including the existing F1 racing arena, business parks, supermarkets, theme entertainment parks; in future planning, there will be a video hall, horse riding gymkhana, golf courses, fishing lake, shooting center, and other entertainment facilities. Now the airport has a five-star hotel, offering 440 rooms and it is planned to build at least four top hotels in the coming years. Munich Airport in Germany has 215 retail shops, 55 restaurants, bars, coffee bars, banks, post office, dry cleaning shop, swimming pool, SPA, barber shop, and shoe repair shop. Munich Airport Center can hold concerts and other large gatherings, with 10,000 km² of skating rink, 30,000 km² of commercial office space, medical centers, and an international conference center.

With the enthusiasm of Chinese airports construction gradually increasing throughout the country, the planning and construction of new urban areas with airports quickly spreads. According to incomplete statistics, 28 provinces or municipalities in China, are constructing 51 new urban area with airports.⁶ Not only Guangzhou, Zhengzhou, and other first tier cities and provincial capitals but also some third or fourth tier cities also want to try. On March 7, 2013, Chinese State Council officially approved Zhengzhou Airport Development Plan, which is currently the only functional area plan entering national level with the theme of aviation economy. Henan Province has a provincial jurisdiction that has conferred municipal administrative privileges on Zhengzhou Airport area.⁷

Industry insiders believe that if an airport's annual passenger capacity is less than 800,000 people, it is futile to consider other things unless the government pays out money. Some places do not understand the development law of new aviation urban areas, do not know that airports with few people and little logistics do not have the conditions to develop into a new airport urban area. Even if they get the investment and begin construction, it can only result in waste. If an individual in

⁶First Financial Network, 2013.7.16.

⁷First Economic Times, 2013.7.16.



Fig. 50.1 Zhengzhou Airport area planning renderings

first or second tier cities takes new airport urban area as a tipping point, this is not a bad idea for new urban area development. However, if third or fourth tier cities follow suit, there could be problems of irresponsibility and disguised land enclosure. The county and relevant governments should pay great attention and provide scientific guidance and overall management (Fig. 50.1).

50.3 Planning and Development of New Airport Urban Areas

The new airport urban area usually has a large planned area, large investment, and high-grade construction. The new airport city of Shaanxi Province is located in Xi Xian New Area, and is planned to cover 141 km². Shuangliu Airport of Sichuan Province has a planned area of 60 km², Tianjin Airport Industrial area 102 km², and Fuzhou new airport urban area 170 km². “A Regulatory Detailed Plan for Airport Area of Jinan City,” designed by China Academy of Urban Planning and Design, has passed the investigation and demonstration made by the expert group. As one of the important groups of “one city, two districts, four groups” master plan, it has a total control area of 214.5 km². The new airport urban area of Guangzhou City has a total planned area of 439 km², accounting for about 6 % of the urban area of Guangzhou, with a planned population of 2.2 million, involving Huadu and Baiyun District. Shanghai New Urban Area near Airport is located in the southeast of Pudong New Area, 76 km away from Shanghai People’s Square. It has a planned area of 453.26 km², ranging from Dazhi River in the north to the planning coastline

in the south, from the G1501 Expressway to the boundary of Fengxian, and Pudong New Area to the planning coastline in the east. Beijing's new airport site is selected in Lixian Town and Yufa Town of Daxing District, which is planned to cover 300 km². The construction started in 2011, and completion is expected in 2017. Planning of a new aviation city will be synchronized with it in Beijing, which is expected to get an investment of 84 billion RMB. The new aviation city will have an industrial layout of "one axis, two cores, three districts, and four groups", mainly intending to develop the air transport industry, aviation logistics, aviation-related high-tech industry, business and exhibition industry, leisure tourism, and other modern services. To consider planning area, investment, and grade, we have to select Dubai International Airport. It had just completed an expansion plan at a cost of 540 million US dollars by the end of 2000. Now investing 33 billion dollars, it has begun the construction of another airport, covering an area of 139.85 km² (54 square miles), which will become the world's largest and most advanced airport, and the corresponding new urban area will have a correspondingly large development.

The new airport urban area highlights key industries, clearly distinguishing different zones. Industries in new urban area is generally divided into several large areas of services, manufacturing, plant breeding, etc. Services are divided into human services and services for goods. Human services are such as shopping, accommodation, sports, entertainment, conferences, and exhibitions. Service for goods is mainly logistics, as cargo distribution centers with subcontracting, transit, storage, delivery, and other services. Manufacturing mainly consists of high-tech, high value-added, lightweight, small, simple courier industries. Planting industry focuses on flower planting, because the value of flowers is relatively high and they can be quickly transported to the purchasing city. The new urban area for air transport, in functional division, is generally divided into a core area and a common industrial district. Some are further divided into industrial district, business district, logistics district, commercial district, residential district, hotels, and entertainment centers. Shanghai New Airport Urban Area is composed of a main city area, heavy equipment industrial area, logistics park, main industrial area, comprehensive area, and Fengxian Airport Park. Tianjin Airport Industrial Zone is divided into the airport district, the university district (China Civil Aviation University), airport logistics park, logistics processing zone, and aviation technology industrial base. The core area of Guangzhou new airport urban area is divided into airport economic portal core area (economic base headquarters, high-end service area), aviation industry functional areas, and so on.

The new airport urban area has complete supporting functions. Because of a relatively long distance from the airport to the main city area, the function of new urban area should be quite perfect, so it could gain popularity and implement effective services. Zou Ruixia said, after studying new urban area with airport, a real airport city is not only a transportation hub of aviation, rail, and road, but the comprehensive integration of the central nervous system, combing people, business, logistics, shopping, information, and entertainment activities. It should provide 24 h comprehensive service for passengers and local residents. An airport city under

truly commercial operation needs a world-class Hilton Hotel, 18-hole golf course, and 17 ha of international exhibition center. London Heathrow International Airport is best, because it has a 4 km long shopping street, and the turnover of the airport's retail business accounts for 57 % of the airport revenue.⁸ Most Chinese airports are of relatively small size and incomplete function, and probably without a golf course, racing circuits, and theme park facilities. So foreign advanced experience should be learned from and, in time, used for expanding airport size and to improve the level of supporting facilities as well as integrated function. Some of the major airports in China are still striving to reach the size and grade of world top airports after 10 years of trying.

⁸*China Fortune*. 2014.6.14.

Chapter 51

New Skytrain Urban Area

51.1 An Important Phenomenon in the Development of New Skytrain Urban Area

As rivers, lakes, ocean, and piers have huge impacts on the production and development of cities, the railway has played a vital role in the rise and prosperity of cities too. Zhuzhou City in Hunan Province is known as a city dragged here by the train. In China and many other parts of the world there are many examples of this kind. It is the two tracks of railroad and traveling trains that help shape the city and promote its development.

High speed rail again pushes urban development to a new stage, and this time it is high-speed railway (HSR) new urban area. Its planning and construction rely on the high-speed railway station. In 1964, the first high-speed railway—Japan Tokaido Shinkansen (Tokyo–Osaka)—was put into use, marking the beginning of mankind entering the high-speed rail era. Currently, Japan, Korea, France, Germany, Spain, Italy, Denmark, the United States, and Taiwan, nine countries and regions of the world, have successively built high-speed railways. High speed rail, as a high-speed, efficient, comfortable, large volume system, not only brings new vitality to urban development, but also gave birth to the formation of a new urban space, forming a new type of urban area and promoting urban economic and social development.

The developed countries of the world have mature urban development, accessible transportation networks, and shaped layouts for business and other service industries, so they tend to build high-speed railway stations in old urban areas. After the operation of high-speed railway traffic, they just get some existing subway, rail, bus, and other lines through and connected, and get part of the urban space transformed, to form a new regional center—HSR new city. Few of these countries would wish to re-plan and construct a new urban area with high-speed railway station.

However, things are different in China. Because urban development needs to enlarge new space, the cost of old urban area transformation is high, and a high-speed railway station is generally sited on the outskirts, a certain distance from the old areas of the city. It is common practice to take the operation of high-speed railway traffic and the construction of a high-speed railway station as new coordinates, new marks to plan and construct the new urban area. So, with the opening of some high-speed railway in China, almost all cities along the high-speed rail lines are planning and constructing new urban areas with a high-speed railway station, and this leads to a new boom. According to statistics, there are 24 stations along the 1,318 km of the Beijing–Shanghai high-speed rail, and 20 of them are having new urban areas constructed along with the high-speed railway station.

With a “four vertical and four horizontal” backbone network for the 16,000 km high-speed railway in China, several hundreds of high-speed railway stations will be established along the rail line. The high-speed railway new urban area will become a unique urban phenomenon in the world.

51.2 About the Planning of New Skytrain Urban Areas

The construction of high-speed rail and high-speed railway stations, changing the Chinese economic landscape and urban pattern, is a major opportunity for China and its local cities to attract investment and develop. To turn the opportunity into reality, we must face a series of challenges, primarily identical planning, industry homogeneity, single transportation, simplistic matching, and so on. We must therefore push on from planning to undertake serious study and take feasible measures.

On the relationship of HSR new urban area and the urban planning, before planning the construction of high-speed rail, each city, in general, has got a master plan, and most of them do not fully take into account high-speed rail. In the development of high-speed rail lines, the country and relevant ministries, starting from the overall macro-development situation, propose and basically determine the lines and station sites and so on. They certainly consult fully with municipal governments and absorb their views. When high-speed rail is finally coming, on the one hand the railway authorities and its design units should consult with the city government and conform with the overall urban planning. On the other hand, the municipal governments ought to obey the requirements of the country’s overall strategy, adjust urban the overall urban planning timely and actively, according to the high-speed rail lines and stations, to accommodate the opportunities and problems brought by high-speed rail to urban development.

Jinan City of Shandong Province is an inland capital city of a coastal province, with mountains and water sources in the south, the Yellow river and Dezhou City in the north, the hinterland of development space being in the eastern and western areas. Over the years, the eastern area of Jinan City is much more prosperous than the western area, and the differences in house prices between the two areas is not small.

A few years ago, the issue of the city developing to the east or west had been debated from all aspects. In 2005, the ground breaking for Tangye New City, located in the eastern part of Jinan, took place, and accelerated the eastward pace of the center of gravity of Jinan City. On June 30, 2011, Beijing–Shanghai high-speed rail was open to traffic, and the construction of high-speed railway station in Jinan led to the development and construction of the western part of Jinan. This was an opportunity to make a great decision, that is, to relocate Jinan Duodian Air Force Airport, develop a new urban format, and construct a western new town. According to the plan, the western new town, covering an area of 55 km², with an investment budget of more than 350 billion RMB, will be built in 8–10 years. After completion, it can accommodate 600,000 people. Its planning and construction scale is much larger than that of the eastern town of Tangye with 18 km². The opening of the Beijing–Shanghai high-speed rail brings Jinan not only a high-speed railway station or a new urban area but a reconfiguration and development of urban space and resources, a major optimization and adjustment of the direction and focus in urban development. So, for high-speed rail construction as a great event and initiative in macro and global aspect of the country and regions, the city government must grasp this opportunity to guide the construction, not only fight for a better arrangement in aspects of lines, stations, park and ride times, and make full use of them, but also adjust the overall strategic planning and development of the city in a timely fashion, changing actively to deal with emergencies. Only in this way can they go with the flow of advanced development.

On the issue of distance between the railway station and the old city area, as previously mentioned, in this regard high-speed rail cities are different between China and western countries. The cities in western countries have been mature with the high-speed railway station placed in the old city area. In China, high-speed railway stations are put a few, a dozen kilometers away, and even further in sub-urban areas. This is because of different national and urban conditions, realistic and scientific. Dezhou City of Shandong Province on the Beijing–Shanghai high-speed railway had a station plan brewing at the beginning of the century, which had gone through two major changes and adjustments before finally selecting the site. It was in 2002 that the railway station was initially designed to be built between Dezhou Convention and Exhibition Center and the old city area, which is now the location of Guangchuan Avenue. At that time it was clearly felt wrong, being too close to the old urban area, the overhead high-speed rail line would hinder urban transport development with traffic noise interference, and the future development space for the downtown area would be very small. For the second time, the rail line and station were redesigned to the east of the Beijing–Shanghai Expressway, between the expressway and Jian River, but it was examined and considered still a little close to the old city area and that it ought to go eastward. After conference, the author of this book had a discussion with a young expert from a famous planning institute. The young expert showed that high-speed railway stations in developed countries were placed close to or inside cities, and was trying to convince everyone. However, the author still believes that, as China has a large population, urbanization is increasing and is not complete, so in the future there would be a lot of people

coming into the city and the city will have to be expanded in scale. Therefore, it's not beneficial for housing, transportation, and development to place high-speed rail lines and stations in old city areas. Cities in developed countries have become mature, and the population has been relatively stable, with mature supporting infrastructure. It resembles the fact that children and the elderly go to the store to buy clothes, children in a rapid growth period, buy clothes in bigger sizes so as to leave room for growth—this is called buy big not to buy small; elderly people with bodies shrinking year by year, find no necessity to buy bigger clothes, so buy a size just suitable. *Cities in China resemble children in their growing period, whereas foreign cities are mature as if adults or elderly people.* The leaders and relevant departments adopted reasonable advice and opinions at that time, and scientifically decided to put the railway station in its present position—15 km away from the old town area. It is obvious now that was just the right choice.

High speed railway stations should have good transport accessibility and mutual merging features. They should be planned and designed to combine with a variety of transportation vehicles, such as urban rail transit, coach, bus, taxi, private car, and even the airplane, to form a complete network. It should be quick to arrive and leave and easy to transfer, maintaining a smooth traffic flow. In this regard, Shanghai Hongqiao transportation transfer center is one of the best stations in China and combines a high-speed railway station, subway station, maglev train station, bus station, and airport as an intensive, convenient, and accessible whole. Some high-speed railway stations, because of inadequate communication between municipal governments and the planning and design institute, make automobile and pedestrian accessibility inconvenient, with car parking far away, and the railway station waiting room and underground garage inaccessible. Passengers usually walk a long distance after parking their car, and when the weather is not good they even go out to transfer in the rain or snow. This kind of lesson should be learnt.

51.3 To Build Upgraded New Skytrain Urban Areas

The high-speed rail line has shortened the distance between cities and changed the way people travel and live. For up to 500 km, high-speed rail travel is more efficient, convenient, and comfortable than airplanes. Further development of Chinese high-speed rail will have a great impact on the aviation industry. Data from Henan Airport Group showed that, after the opening of the Beijing–Guangzhou high-speed railway, flights from Zhengzhou to Beijing reduced from 11 to 4 flights and passengers from 90 % to about 50–60 %; Luoyang–Beijing flights reduced from 3 to only 1 per day.¹

High speed rail lines make some cities which were far from each other in the past come closer, help form a “one-hour economic circle,” “two-circle economic circle,”

¹*China Economic Weekly*, 2013 (4).

or “day trip” between cities, bringing economic and life style benefits to the country and regions and great changes to economic and social development.

Regarding the local industrial layouts of the high-speed railway new urban area, most are consistent with the existing or planned industries, relating to biological, chemical, manufacturing, and new energy industries. It is an active and feasible practice to develop a new urban area by a high-speed railway and develop industries through new urban area construction.

Of course, high-speed rail runs fast, and now the railway station is a fast turn-around point for passengers, who take high-speed rail to go out mainly for official reasons, business, travel activities, commuter travel, and a small amount of long-distance travel, but most of the passengers stay in the station for only a short time. When planning industries of the new urban area with high-speed railway station, it is necessary to focus on the actual demands of conventions, business, exhibitions, travel and commuting activities, to develop some tertiary industries. Only in this way can good use be made of the opportunity for industry development brought by high-speed rail.

For this reason, we should change our thoughts to make innovation and creativity, *learn from the practice of the new urban area with airport, make some commerce, business, conference, exhibition, and high-tech industries bigger and stronger, and plan and construct an upgraded version of the new urban area with high-speed railway station.* It is necessary to build a number of exhibition centers, conference centers, luxury hotels, and research buildings to attract the people of the metropolis and surrounding cities to visit for meeting exchanges, business, sports, entertainments, procurement of goods, exercise and travel, as well as research and teaching. Because, in addition to aviation and logistics functions and international long-distance passenger transport, high-speed rail has all the basic functions of a new urban area with airport. It also has more obvious advantages in convenience and comfort than does aviation. In particular, the high-speed railway station in small cities near the metropolis enables people to arrive in the morning and leave in the evening, and is quite favorable to accommodate exhibitions, meetings, and business, research. There are all the conditions to develop the new urban area with airport, and the possibility and feasibility to build an upgraded version of a new urban area with high-speed railway station.

Seoul’s Yongsan district, before the high-speed railway station was built, was faced with slow development, even economic recession. Seoul’s trading hub of electronic digital products is located in the north of Yongsan station, there are several large computer electronic centers, but the city environment is relatively messy. In the building process, the station house of Yongsan is built into a large building complex. Besides waiting for the rail, ticketing, and other basic functions, it is also a collection of digital product centers, cultural and recreational facilities, cinemas, fashion mall, catering services, and large parking facilities, promoting the construction of Yongsan station and development of the region. It has become a model for the development of the high-speed railway station (Fig. 51.1, Table 51.1).

The first thing to do in the development of an upgraded high-speed railway new urban area is to plot and plan carefully. It is necessary to analyze their strengths and

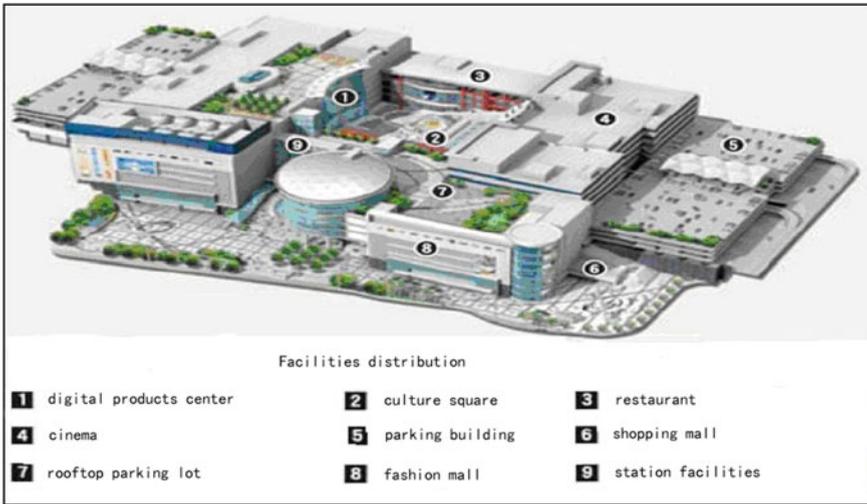


Fig. 51.1 Seoul Yongsan Station (from China high-speed railway construction and investment network)

weaknesses, fully grasping the service industry scale and developing potential of surrounding cities, especially the metropolis in terms of business, conventions, and other tertiary industries. There should also be in-depth summaries of developing experiences of the new urban area with airport, with careful studies of how people could do a good job in the merger and integration of the high-speed rail urban area with metropolises. On this basis, the subsequent work is to strengthen investment and construction for infrastructure and supporting facilities of the new urban area with high-speed railway stations, creating a good environment and complete conditions for public service, so that food, clothing, shelter, transportation, and recreational facilities are all available, and conventions, exhibitions, and research and service conditions are of good quality, forming a certain scale of advantages. Then, it needs to be combined with consumption in the main urban area to solve problem of popularity and commercial atmosphere, trying to seek national policies actively, such as taxes, fees, and other charge policies, so that the new urban area with high-speed railway station has got what the new urban area with airport has, and seeks for and creates what the new urban area with airport does not have. Decision-makers of the new urban area with high-speed railway station, with far sight, daring, and resolution, should boldly innovate and try. I believe there are good prospects for development.

The previous chapters have discussed the new urban complex, new administrative urban area, new industrial urban area, low-carbon eco-city (eco-city, low-carbon city, sun city), new urban area of science and technology, university town, seaport-front urban area, new urban area with airport, new urban area with high-speed railway station, and several other types. The new urban area of

Table 51.1 Comparison of the features of a high-speed railway new urban area and three other urban areas of rapid economic age

	Common features	Differences		
		High speed railway new urban area	New expressway urban area	New airport urban area
Purpose	To solve population and employment evacuation in big cities	To solve urbanized population and employment pressure in big cities	Mainly to house the outward evacuated population and employment from big cities	To develop high-end aviation industry chain, to build a high-end business service aviation city
Location	Located in the suburbs of big cities	Independent of central urban area, with green area separation, and convenient traffic	One of the city group, or part of the spreading suburbs, gradually rolling into one piece with the central city	Independent from the central city, away from the service range radiation of downtown area, as an edge city
Function	Residence, employment and other urban functions	Relative balanced population and jobs	Resident population not directly related to jobs	Relative balanced population and jobs
Industry	Has a certain scale of employment place, one of urban economic growth	Has leading industries, comprehensive economic growing trends	Relatively single industrial structure, highly specialized, economic development supported by leading industries	Not obvious subject advantage of industrial constitution
Social constitution	Relatively stable social entities	Equivalent to the size of small cities, with relatively independent social entities, comprehensive social constitution	Integral part of the city, with relatively simple social constitution	Independent of the city, not part of the city, but social constitution relies on the city with smaller size

(continued)

Table 51.1 (continued)

	Common features	Differences	New expressway urban area	New airport urban area	Ordinary rail hub cities
Circumstance	The overall environmental situation is better than that of old urban area	High speed railway new urban area Relatively independent social and economic integration, less susceptible to the city center, with plenty of green space, urban economic development of low carbon is supported by high technology, promoting low carbon life, good ecological environment can be maintained	Affected by urban central area, is not easy to control	Aviation industry demands good environment, good ecological environment, not easily influenced	Self-contained, free development
Traffic	Superior traffic location, better road system	Road system is self-contained and linked with urban center by fast roads or rail transport	Road system is part of the city	Road system is self-contained and can contact the city by fast roads	Road system is self-contained, and in contact with other cities by railway
Facilities	Has better public facilities and municipal utilities	Independently arranged within the scope of new urban area, and maintains good links with the city center	Partly relies on the original facility, partly newly built, affected by the city	Independently arranged within the scope of new urban area, not related to the center of the city	Self-contained system, free arrangement

Extracted from “An exploration to the spatial development mode of ‘high-speed railway new urban area’ in China—with example of cities along Beijing—Guangzhou high-speed rail” by Yuan Bo and Tao Wentao

residence has been mentioned several times in this book, and its full account needs to be taken of industry and employment, transportation, and other ancillary issues. To avoid duplication, apart from the table of contents there is not a single column to discuss this topic. In addition, there are new tourism urban areas, new cultural urban areas, new sporting urban areas, new financial urban areas, and so on, not undergoing special discussion because of the few construction achievements and the limited space in this book. These should be reserved for in-depth study in the future.

51.4 Top Ten New Cities with Highest Investment Value in China—Announced in 2012

China Real Estate Top 10 Research Group, constituted by the Development Research Center of the State Enterprise Institute, Real Estate Institute of Tsinghua University, and China Index Research Institute, has been continuously working for 9 years, since launching “China Top 100 Real Estate Business Research” in 2004 and 10 years since launching “China Top 10 Listed Real Estate Companies”. Their relevant research results caused widespread concern in the society, and have become an important standard by which to judge the strength of the real estate business and industry status.

Based on the analysis of the summary of research experience over the years, China Real Estate Top 10 Research Group established comprehensive research methods and evaluation systems for investment value, providing an objective assessment for investment value of national major new urban areas to identify and explore new urban areas with the highest investment values.

Rank	Name	Siting city
1	Tongzhou New Urban Area	Beijing
2	Jiading New Urban Area	Shanghai
3	Qianjiang New Urban Area	Hangzhou
4	Nanqiao New Urban Area	Shanghai
5	Zengcheng Town	Guangzhou
6	Tianfu New Urban Area	Chengdu
7	New Urban Area with Airport	Chongqing
8	Hexi New Urban Area	Nanjing
9	New Urban Area of Science and Technology	Wuhan
10	Jingjin New Urban Area	Tianjin

From the ranking list, Tongzhou New Urban Area in Beijing and Jiading New Urban Area in Shanghai, are ranked first and second, with Hangzhou Qianjiang New Urban Area and Shanghai Nanqiao New Urban Area following them. From regional characteristics, urban areas among the top ten are all located in first- or second-tier

cities, with relatively developed economic conditions. It indicates to some extent that there is a close relation between a new urban development and the development of its locating city.

In the list of new urban areas with highest investment value in 2012, Beijing Tongzhou New Urban Area has good performance, with advanced ranking in several areas: as for the extent and pace of urbanization index, it is ranked first for a high increasing rate in urbanization and resident population, and a greater potential future population; as for geographical advantages and supporting facilities, it is ranked second because of its closeness to Beijing international trade business district, a larger number of existing and planned subway greatly improving its accessibility to Beijing municipal area; regarding the real estate development indicator, it ranked second, there having been a lot of well-known housing enterprises stationed in Tongzhou New Urban Area, which also shows the real estate developers are optimistic about the future developing potential in this region.

1. Tongzhou New Urban Area

The new urban area has a total planned area of 155 km², the central area covering 48 km², including the core area of the canal, joint development area, living area, and a spare supporting area. It started with 16 km² construction of core area of the canal, the overall building scale is over 15 km², formed by three functional areas—cultural business and leisure district, high-end commercial district, and comprehensive exhibition and service district. Hydrophilic ecology, low-carbon environmental protection, and sustainable development will be the biggest shining points in Tongzhou new urban planning and construction.



2. Jiading New Urban Area

Jiading New Urban Area is one of the three key urban areas constructed in the “Eleventh Five-Year” period in Shanghai, planned to cover 200 km², with a population of 0.8–1 million. It is designed to be an integrated modern city, having a unified city effect with the central city area, harmony and combination of industry and city, and radiation power.



3. Qianjiang New Urban Area

Qianjiang New Urban Area is located on the north shore of Qiantangjiang River, about 4.5 km from West Lake Scenic Area. The first phase covers 15.8 km², and the second 5.2 km². Qianjiang new urban complex is mainly based on financial and business functions, supplemented by an urban hotel function. It helps Hangzhou create a financial center in the south wing of the Yangtze River Delta, and two financial cities will be built in this region, one in the west of the civic center, the other in the core area of the second phase of Qianjiang new urban area—Sibao.



4. Nanqiao New Urban Area

Nanqiao New Urban Area is one of the nine new cities in the “1966” urban and rural planning system proposed in the “Eleventh Five-Year” period of Shanghai, one of the three major new urban areas promoted primarily in “Twelfth Five-Year” period. It has got a planned area of 71.39 km², a planned control area of 84 km², and a population of 750,000. As a political, economic, and cultural center of Fengxian District, it will be built into a comprehensive service-oriented core urban area on the north shore of Hangzhou Bay in Shanghai, and will become an

important gateway hub for Great Pudong development and Shanghai, supporting Yangtze River Delta Southern Swing Area.



5. Zengcheng Town

The total area of Zengcheng town is 1,616 km², with a total population of 810,300 (in 2008). Zengcheng is sited in the Golden Corridor of Zhujing River Delta, abutting Guangzhou Economic and Technological Development Zone and Dongguan, Shenzhen. With developed industry and commerce, large developing space, and better prospects, “multi-city radiation effects” is an important component of the eastern section of Guangzhou, and the key area for Guangzhou to implement “Eastward” strategy.



6. Tianfu New Urban Area

Tianfu new urban area is planned to cover 37.5 km², have an employed population of 0.6 million, and a resident population of 2 million. Tianfu new urban area is committed to develop software and service outsourcing industry into the most competitive and representative strategic industries, to become a main gathering place for famous software companies, domestic and abroad, a mainstream manufacturing place for international software products, and a settling area for domestic and foreign talented people.



7. Chongqing New Urban Area with Airport

Chongqing New Urban Area with international airport, with a planned control range of about 46 km², consists of two parts—the core district and the auxiliary area. Its overall positioning is relying on Jiangbei International Airport to develop the aviation industry actively, achieve convergence with the North New Area, and build a modern airport hub with more perfect function and a comprehensively urban functional district with advanced service industry, so that make it a new growth point for economic development in Chongqing.



8. Nanjing Hexi New Urban Area

Hexi New Urban Area has a total area of 94 km², an existing population of 350,000 but a planned population of 600,000. Hexi New Urban Area is planned and designed to be a deputy urban center dominated by three major functions, business, trade and culture and sports, an upscale residential area stressing both housing and employment, and leisure touring area in the western part of Nanjing with special riverside scenery. It will be finally built into a new urban center in which the modern civilization is illuminated with riverside scenery, in accordance with the “overall planning, once expropriated, unified development, construction batch by batch” approach, becoming a modern new Nanjing flag area.



9. Wuhan New Urban Area of Science & Technology

This urban area has a planning area of 224 km² and planning population of 960,000. It is not just a single industrial park but a multi-complex city, on the basis of high-tech and related industries, with innovative service features, combined research and development, service, manufacturing, residence, and recreation all rolled into one. A variety of functions mixed together will shape a strong sense of belonging, forming attractive urban charm to promote long-term development of the city.



10. Jingjin New Urban Area

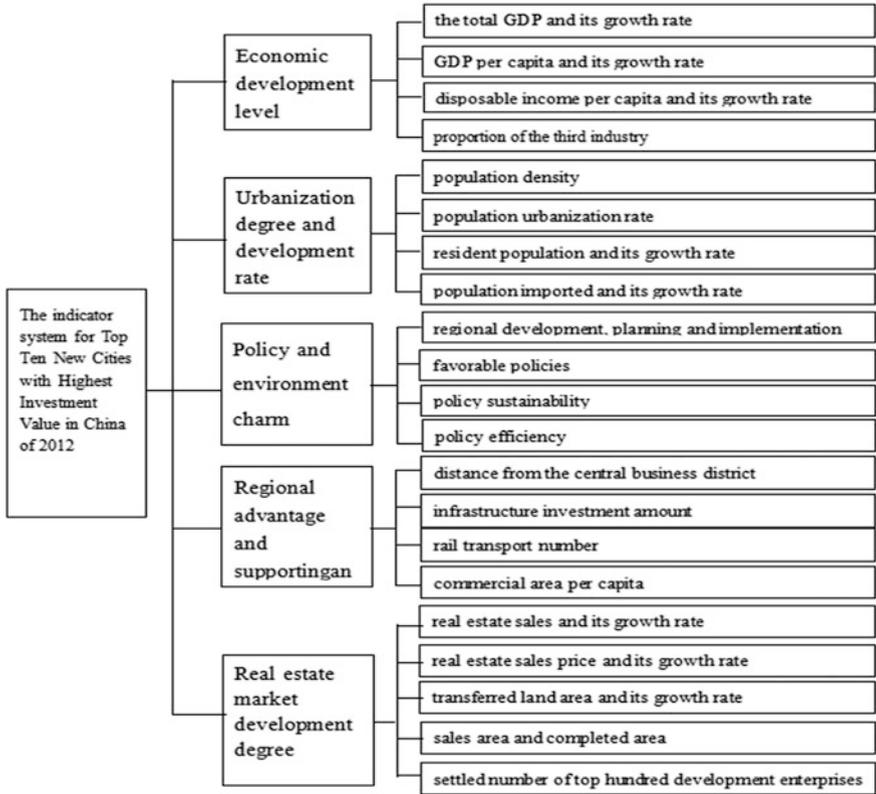
Jingjin New Urban Area is one of the 11 new urban areas planned by Tianjin City with the approval of the State Council in 2006. By the year 2020, the area will be 53 km² and the population scale up to 300,000. It is designed to become an important leisure and tourism service center, a modern service industry base with a specialty of spa recuperation, convention and exhibition, culture and education, and business and finance. In the future it will become a livable town highlighting northern water town features.



Method system

For the latest developments of major new urban areas all over the country, the research group established the research method and evaluation system of “2012 Thematic Studies of China Top 10 New Cities with Highest Investment Value.” It objectively evaluates the investment value of major new urban areas in China from

five aspects: economic developing level, urbanization degree, attractiveness of policy and environment, regional advantages and supporting facilities, and degree of real estate market development.



An indicator system for new urban area with highest investment value in China

Part XII
Future and Appeal

Chapter 52

Future of New Urban Area

In 2010, the world expo was held in Shanghai, with the theme “Better City, Better Life,” showing the world the latest achievements of mankind in terms of urban development and human life. It is a “symphony singing” modern city innovation and cultural integration, a grand dialogue of human civilization, playing important roles of declaration, demonstration, and leading in worldwide urban development, especially in the planning and construction of new urban areas. In continuous exploration and innovation of human beings, the new urban area is walking at a fast pace toward a brighter future.

52.1 The New Urban Area Will Become the Main Form and Basic Urban Pattern of Urbanization in Developing Countries

Urbanization in most countries of the world has basically gone through two different paths, one is through the expansion of the original urban area or old urban area, the other is by planning and constructing a new urban area. According to analysis conducted by experts, by the year 2025 there will be 27 super cities in the world, each with a large population over 10 million. All of these cities will be faced with the problems of environmental pollution, traffic congestion, and crime.¹ Expanding the existing urban size, saving land, and making full use of existing infrastructure, intense economic development, and scale advantages, having a strong endogenous impetus are all important ways of promoting urbanization. However, during the urban expansion, there are also overcrowding, traffic congestion, environmental pollution, high costs, and other problems which are not easy to solve. The right choice should be two roads taken simultaneously, transformation and expansion of old urban area on the one hand, exploring potential, expanding scales, increasing capacity, and improving quality and environment. Planning and construction of the new urban area, on the other hand, needs us to open up new and

¹“World Vision after 2013”, *Reference News*, 2012.12.31.

greater development space, make new explorations into human urban development, and build a more beautiful, ecological, and livable new urban area. Particularly in developing countries, the population grows quickly, industries agglomerate rapidly, and urban sprawl is overwhelming, so unless the planning and construction of new the urban areas follows promptly, there will be a low-level urban agglomeration area, bringing long-term adverse impact on urban development and human life. It is better to plan actively rather than passively, planning and building new urban areas, thereby solving the important problems arising from population growth and industrial development. Therefore, new urban area will become the basic spatial morphology and function carrier in the urbanization of developing countries.

A city, whether an old or new area, has broken a number of planning boundaries and administrative divisions, developing into its overall, integrated oneness. In the future, new urban areas and old urban areas will be connected as a whole, and cities connecting with each other will become a series of cities or metropolitan areas. Greek architecture planning expert Constantinos Apostolos Doxiadis, founder of Ekistics theory, predicated “the urban scale in the future is not that as people often imagine, such as pie-like covering the entire urban built-up area, but a bar-shaped reticular structure, mostly in coastal areas, linked together with original urban centers and main traffic roads.” “At the end of the twenty-first century, all cities on the planet linking together as a whole will become a unified universal city.”²

52.2 The New Urban Area Will Take on a Colorful Characterized Aspect

In terms of size, because of different national, regional, and urban situations there are differences in population, industry, resource richness, and the developing path, so the sizes of the new urban area, planned and built, are different. Some of the new urban areas cover hundreds of thousands of square kilometers, with a population of millions or even tens of millions of people, such as Chongqing Shuangjiang New Urban Area and Chengdu Tianfu New Urban Area. Some may be only a few square kilometers, a dozen square kilometers, with only tens of thousands or hundreds of thousands of people. This is dependent on national and urban strength, development needs, urban patterns, scale, and economical benefits. Large-scale cities have gathering advantages and economies of scale, whereas small-scale cities have fine, intensive, and efficient strengths. The variation in urban area scale will persist.

The overall trend is that the size of the city is growing. The main reason is that the Earth’s population is increasing and the urban population is growing faster. When taking the first census in 1953, China had a total population of 582,603,417 people and an urban population of 7,726 people. In the fifth census in 2000, there were in total 1.26333 billion people in the country, with an urban population of

²Wu Liangyong. *An Introduction to Science of Human Settlement*, pp. 298, 307.

455.94 million. Over 47 years, China's total population grew by 2.17 times and urban population grew by 5.90 times. The urban population growth will certainly need more housing, employment, schooling, medical care, and other facilities, so China is bound to construct houses, provide transportation and other public facilities, occupy farmland, expand the existing city size, or build new cities, and such things will continue to need to grow. Vice Minister of Chinese Ministry of Housing and Urban-Rural Construction Qiu Baoxing believes that, there will be two or three decades of rapid development for urbanization, during which the country is expected to have an annual 15–20 million farmers move into the cities and towns, and an annual new construction area of about 2 billion km², each city having a 5 % annual increase of built-up area.³ C.A. Doxiadis predicted that in the year 2025 the global population would reach 9.6 billion, in 2100 would reach 20 billion, and 95 % of people will be living in cities.⁴ Cities will continue to expand, there will be more cities, and more new urban areas will appear. It is an objective law, not being desired by anyone.

Large cities have advantages of scale, aggregation, and cost, they have plenty of talent, extensive information, convenient exchange facilities, more opportunities, good atmosphere of entrepreneurship, innovation and creation, higher probability of success, and much better economic benefits and social effects than small cities. This is why large companies buy or rent high-priced houses and build headquarters in large cities, why young talented people prefer to live in low houses crowded with several other people, drifting in big cities, why some writers and artists are willing to develop in the metropolis, why housing prices in large cities are several times higher than those in small ones, but there still needs to be a limitation policy for purchasing houses. And there are other factors. *Large-scale cities are indeed more bustling than smaller cities, indeed more developed in economy and society, and they certainly represent the future.* So, Mario Polis, when summing up the four golden rules in urban area growth, put urban scale in the first place, saying “city size as the first rule is not accidental, scale is the core issue.”⁵

In terms of architectural form, because of the different geographical characteristics, economic strength, population, and esthetic taste, there is a variety of building forms, super high buildings, high buildings, multi-floor building, and low buildings. New York, Tokyo, Beijing, Shanghai, Hong Kong, all bristling with skyscrapers, impress people with a sense of modern cities' strength and style. Some Scandinavian cities have relatively flat architectures, making people feel ecological, comfortable, and happy to remain. Dubai has its own building style, special and peculiar, which is a bold exploration of modern city and future urban development, and will lead a trend in planning and design, having shocked the whole world, causing some cities to follow and imitate. Doxiadis planned and designed

³Chinese Urban Science Research Institute edited, *China Low-Carbon Eco-City Development Strategy*, p. 3.

⁴Wu Liangyong. *An Introduction to Science of Human Settlement*, p. 299.

⁵Mario Polis. *The Wealth & Poverty of Regions*, p. 39.

Islamabad, Turkey, in which, with no grand buildings, it is difficult even to find a position to angle to shoot exciting and memorable landmark area and architectural pictures. However, the unpretentious style is quite applicable and very popular with local residents. It focuses on functionality as well as frugal style, and the planning style is something worthwhile studying by most country which are not affluent.

From statistics collected by American urban designer Peter Calthorpe, the average building height of Chinese urban residents accommodation in is ten levels, whereas in the United States it is only two levels.⁶ Whether high or low, buildings have their own advantages; not just high is esthetic and not just large is handsome, so a design being good or not depends on the factors of actual needs, practical function, and surrounding environment. There are more and more people on Earth, China has got a large population, and land, water, mineral resources, and energy are limited. Thus many people believe there should be as many high and super-high buildings built as possible to increase urban density, improve city image, and save land. Under the influence of this idea, some small cities, even some villages, are also engaged in the construction of high buildings. In fact, some new urban areas do not need to promote high, large, and splendid construction. *The reason is that cities must take ecology, convenience and livable feature as standards, and some commercial, office, and other public buildings can be moderately planned and constructed higher just in the centralized area; some residential buildings do not need to be built to a great height, especially not in small cities.* Therefore, the *Delos Declaration* “proposes to reconsider whether high buildings are applicable for family residences, and some cities are re-examining this idea.”⁷ Especially in the vast rural area, constrained by water supply, heating, cooling and so on, it is not necessary that housing construction and the corresponding lifestyle is in line with those of cities, because rural farming production mainly involves agricultural farming.

In terms of style and pattern, national institutions, cultural atmosphere, function and development trend of the world will all play an important role. As with China, in spatial layout, a traditional law-abiding, axis framework would be nice; with regard to architectural style, traditional Chinese architecture is spectacular and beautiful. However, with new urban areas planned or built, we find it difficult to see buildings in completely Chinese style, and it is especially rare to see Chinese architectural elements. This cannot be blamed on places, departments, or architects. It is a choice in human development, and is the general trend in urban planning and construction. Steel, cement materials, and civil engineering structures have different performances in building, and the industrial era has its own specialty in esthetics and functional demands. *Humans are born with a self-selection, self-elimination mechanism.* Now people rarely wear Zhongshan suits, cloth shoes, and cheongsam; food, drinks, and all the other daily commodities in life have long been difficult to distinguish between those made in China or overseas. Similarly, the new urban area

⁶Fortune China Net. *Re-conceiving Cities in China*, 2012.12.4.

⁷Wu Liangyong. *An Introduction to Science of Human Settlement*, p. 388.

shows diversity, a colorful nature in style and pattern, which is inevitable and understandable. Of course, China, as a big country with thousands of years of civilization and splendid culture, should have national-styled architecture and unique urban areas. We Chinese people should have confidence, should carry out these kinds of deeds, and should have this as our common calling to work together.

In terms of function, a pattern appears in which comprehensive new urban areas go hand in hand with characteristic new urban areas. Comprehensive new urban areas have complete functions, employment, educational, medical care convenience, extensively taking care of the population with strong development potential. Characteristic new urban area mainly include industrial patterns, science and technology patterns, tourism patterns, and transportation patterns as the main forms, clear in profession, strong in competition, becoming the basic form of future new urban area.

52.3 The New Urban Area Will Develop with a Higher Speed, More Efficiency, and a Better Image

The world is now in an era of knowledge explosion, an era of rapid accumulation of capital and other market factors, and an ever-changing era of science and technology promoting development. Man creates more rapid and splendid achievements. In promoting new urban development, the efficiency of planning and design, the amount and time of funding, rate of transporting building materials, and construction machinery power have never been paralleled, and they were unimaginable in the past. With regard to large-scale cities such as Shenzhen City, Shanghai Pudong Area, they grew into a certain scale in only 10 years or so. Dubai in the past was virtually unknown throughout the world—there is such a large area of desert that not many people were optimistic about the emirate. However, it has quietly risen to become a modern, open, and beautiful city and has won people's admiration and awe. New Beichuan County, Sichuan Province, from planning and design to completion, has taken only 3 years, yet it created a miracle. Future new urban planning and construction will be promoted and developed at high speed, which is unparalleled. Of course, it is not the sooner the better, because a city is complex with internal mechanism and rich content, and there is a relatively long time from establishment to maturity.

The planning and construction of a new urban area is to make a city more livable and to help economy and society develop faster. Development is for benefit; new urban development is for better economic, social, and ecological benefits. Among them, social benefit is foremost, although social benefit, ecological benefit, and economic benefit are promoted in harmony. In this respect, human awareness and ideological levels have been improved, they have more conscious understanding, a clearer grasp of the law of new urban planning, construction timing, and other aspects, and a stronger ability to organize and coordinate, so the new urban area

would be promoted with better benefits. *Because of this, Singapore, Japan, and some other countries have invested heavily in foreign countries to construct new urban areas, making great efforts in manufacturing and producing cities.* Some domestic and foreign strategic investors actively invest in the development of new urban areas.

Counties and townships, when planning an area or designing some streets, usually carefully select and commission planning and design institutes at municipal or provincial level, or universities, to implement the preparations. Some large planning and design projects for cities, especially large cities, often openly invite domestic or international bidding, hoping to build a world-class new urban area, buildings, and other urban facilities. In real life, social esthetic standards are improved, and the people concerned with urban planning and design want to comment on architecture, parks, and streets in the cities where they work, live, or pass through, both criticizing and praising. This shows that the whole of society pays attention to urban development and people are knowledgeable about planning and design. Under such conditions and in such environments, there will be a high level and more beautiful effect on planning and construction of the new urban area.

52.4 A Trend for New Urban Development Will Be Green, Environment Friendly, Intense, and Intelligent

Nowadays, cities have absorbed more than half the world's population, gathered the primary economic and social activities in the world, consumed 85 % of global energy and resources, and been responsible for 75 % of the global emissions of greenhouse gases.⁸ If this continues to follow the traditional development approach, the city and the Earth will be overwhelmed and development will be unsustainable. *Urbanization will be limited and constrained by environmental capacity.* The new urban area can no longer follow the old path of pollution first, treatment later. With some saving, ecological, environmental protection and resource, new urban areas will subsequently appear to meet the requirements, breaking through the old framework, and becoming the mainstream of new urban development.

About this, the author has mentioned some of the factors earlier in this book, in order to avoid duplication, here are several aspects highlighted. First is the issue of standard and scale. No standards, no goal. No specifications, no scientific action. It is necessary to make related standards, rules, and specifications in terms of planning scale, ecology, environmental protection, intensity, and other aspects for the various types of new urban area, so that there are rules for development to follow. Second is the issue of intensive development. Foster sustainable development and rational consumption conception; begin construction from strategic research, planning, and design; save land, resources, and energy. Guided by transportation orienting

⁸“Green Urban Development First”, *People Daily*, 2013.7.28.

development (TOD) mode, we should conduct scientific planning and construction of the new urban area space layout so that new urban area is more intensive, compact, and attractive. Third is overall promotion. Building a low-carbon, ecological, and green new urban area is a comprehensive project, a common task for the whole society. At present, and in the future, it is difficult to have big breakthroughs in the technologies of some building materials, transportation facilities, and so on. There should be supporting promotion and comprehensive implementation, i.e., mobilize society to live a low-carbon life, use low-carbon travel, and develop the corresponding green transportation, green architecture, green manufacture, and green industry. In short, green development, green living. Tianjin Sino-Singapore Eco-City in this respect has become an example, representing a new trend of urban development.

52.5 Cultural Construction Will Be Valued in New Urban Areas

The city is a cultural crystallization, a cultural incarnation, and a cultural medium. A city without culture is a soulless city; a new urban area not attaching importance to culture is of no competitiveness and cohesion. The new urban area bears historical responsibility to pass on heritage, although it should advance with the times, absorb foreign culture, and try to create new cultures. New urban areas such as Shenzhen, Shanghai Pudong, and Dubai of UAE, are models of innovative urban culture. Zhengzhou New District is the crystallization of the Central Plains culture. Suzhou New Urban Area, is a combination of Gusu culture heritage and learned urban culture from Singapore. Dezhou New Urban Area, in Shandong Province, is an exploration of new energy and solar culture. All successful new urban areas are seeking and discovering their historical footprint and symbols, absorbing and borrowing valuable foreign ingredients. It is a higher, more valuable pursuit in new urban development and strategic initiatives, leading mankind on to create a new future. Each new urban area should do preliminary research work in terms of cultural development, conduct comprehensive strategic positioning and marketing planning, dig up more inherent cultural elements of the city, and learn boldly from foreign cultures, depending on the type of new urban development.

Chapter 53

Appeal of the New Urban Area

53.1 Strengthening Macro Research and Scientific Guidance

The new urban area has become the main carrier of urbanization in China and some other developing countries, has formed a spectacular climax of planning and construction, and has accelerated in its moving forward. In particular, the Eighteenth Congress of the Communist Party of China paralleled urbanization with industrialization, information technology and agriculture modernization, harmoniously promoted them and put them into strategic implementation, stimulating enthusiasm about urbanization, so the planning and construction of new urban areas everywhere is warming up again. New urban area construction takes a lot of land, capital, steel, and cement, so the usage and consumption of various resources and energy are particularly great, which is a significant issue for China with a large population, whose development is driven by consuming a lot of resources and energy.

New urban area construction contributes a lot. It strongly promotes the comprehensive development of economy and society across the country on the one hand, playing an important role in achieving the great rejuvenation of the Chinese Dream. Meanwhile, on the other hand, it has brought great influence and impact to the country's current and long-term economic development, social life, and so on. In some cities, new urban area construction has exposed the problems of "empty city," "ghost town," and a lot of debt, and people must pay close attention to this. The planning and construction of the new urban area should be integrated into national development strategies. The country and governments at all levels should organize forces concerned to conduct a comprehensive investigation seriously, reflecting on past experiences and absorbing mature experience, analyzing problems, etc., so as to regularize things in line with national conditions, provincial conditions, municipal conditions, and county conditions, carrying out top-level design, making new urban area developing strategies at national and regional levels, and guiding new urban area construction in a timely manner. In this respect, new

urban area construction is in a spontaneously isolated state, and there is no unified overall strategy in the country. Some places have gone through a lot of detours, wasting a lot of resources, doing stupid things. Without a comprehensive, scientific urbanization strategy and new urban development guidelines, it is difficult to take the development direction and focus on urbanization. There will be a fragmented state, out of control with regard to strategy, and development will go awry with a lot of resources wasted, even causing some disasters. We should summarize experience and lessons in economic development, reform, and opening up, pay close attention to macro research and strategies development, and strengthen macro guidance of urbanization and new urban planning and construction. In this perspective, urbanization and new urban planning and construction in China are better slower than faster and more steady than hurried. Be sure to keep to strategy first, make decisions before moving.

53.2 Strengthening Territorial and Regional Planning

In terms of territorial and regional planning, developing countries have widely organized and implemented, accumulated a lot of mature experience. Chinese land planning began in the 1980s, developed rapidly on the whole, but went through a few detours. As urbanization in China accelerates, territorial planning of a new round must have a major breakthrough in the guiding ideology. The planning content, mainly guiding planning, should focus on coordinating the spatial layout of economic and social development, mutual relations between economic development and population, and resources and environment, trying to do a good job in industrial restructuring and layout, urban system planning, and major infrastructure network configuration, closely linking land construction, resources development and utilization, and environmental remediation and protection, to achieve harmony between man and nature, balance the situation between population, resources, environment, unity of society, and ecology, maintaining the sustainable development of society and the economy. In urbanization layout there should be clear distinctions between valued developing region, controlled developing region, and limited developing region, and all this should be implemented through the development of complementary measures to ensure regional space policy and corresponding laws, regulations, etc., to build a scientific and rational pattern of urbanization.

Some places in China have more mountains and hills, and limited land resources available, so they have the heavy tasks of protecting ecology, not good conditions for urban construction. They should not invest heavily in violation of the law, not cut mountains to fill gullies, or destroy ecology to build new urban area. Some places try building cities on mountains to avoid the risk of occupying farmland, not knowing about the serious destruction to beautiful scenery and the ecological environment. Therefore, we should attach importance to regional planning, improve the layout arrangements for the new urban area, determine development amount,

size, function, and basic implementation steps, and instruct the scientific layout and orderly development of the regional new urban area. It is necessary to break regional restrictions of administrative divisions, starting from the overall regional development, reasonably arrange the new urban area layout, and develop some selected new urban areas. We should include new urban planning and construction in national strategies. *The country should strictly divide functional areas, not engage in construction and development everywhere, and not plan and build new urban areas everywhere.* In the past, some places, in order to develop industrial and township enterprises, enthused every household and village with projects. As a result, nothing was achieved. Now we should never take a similar path in the construction of new urban area. Some places are suitable for growing food, so development should be based on food availability. Some places have beautiful landscapes which should be well protected; we should develop the tourism industry keeping environmental protection in mind. The key is national financial support in these areas—we cannot let these places remain trapped and struggling to develop.

53.3 Highlighting Legal Protection and Policy Guidelines

In the acceleration period of new urban development, capitalist countries always attach great importance to the legislative work involved with a new urban area as a measure to promote and protect healthy and successful implementation. Since Britain built the two satellite cities Letchworth in 1902 and Welwyn in 1920, it has made little headway in nearly 40 years. In 1946, Britain passed the “*New Towns Act*,” approved new town construction in the name of the government, setting aside land, establishing new town development corporations to plan and construct new towns, and allowed the government responsible to offer loans to these corporations and pay out by installments. In 1952, they further passed the “*New Town Development Act*,” with specific provisions for new town siting, establishment of new town development corporations, new town management authorization, and other issues. To adapt to new the situation, in 1976 the original new town act was amended to develop a new version of the “*New Town Act*.” The United States has conducted a lot of explorations on the aspect of new urban construction in the 1950–1960s, but encountered new problems of land use, transport means, and so on. Under the strong appeal of society, in 1968 they developed the “*Law of New Town Development*,” but the effect is not obvious. In 1970, the Congress of the USA passed the “*Law of Housing and Urban Development*.” Soon after the new bill was announced, 12 new urban development projects had received federal loan guarantee. It was a strong impetus to the construction of new cities. In order to control cities developing blindly to the suburbs, Colombia, after the completion of new urban planning, in August 1965 the county passed new urban zoning act, also approving the regions to be used in development. Japan attached great importance to the establishment of new city construction, and in 1963 formulated the “*New Residential Street, Market and Region Construction Act*” and developed the “*New*

Urban Planning Act” in 1968. All these laws and regulations make the whole operation of the new urban area achieve a legal status and safeguard and promote the development and construction of the new urban area.

China lags behind in the aspect of new urban planning, construction, and legislation, and until now there has been no legal regulations in this area. There are no statutory documents on the aspects of scale determination, function, planning and design, business operation and construction management, and so on. Everything is left for the local government to explore, which makes no legal basis for the development of a new city, with a lot of random and blind activity. Under the circumstances of new urban construction surging nationwide, legislation for new urban construction should be included in the national plan as soon as possible, and the government should organize legal workers and experienced personnel to improve legislative research and draft legal provisions. The “New Urban Area Law,” introduced as early as possible, should clearly determine the main goals, basic principles, operation modalities, and the functions of governments and departments at all levels in the new urban construction, so as to improve the legal, standardized level of the new urban area.

53.4 Developing New Urban Areas, and Renovating and Improving Old Urban Areas

The new urban area and old urban area are two basic forms of urban space layout in the process of urbanization, and they are interdependent regions, each with its own charisma. On the juxtaposition of the two, many places and local leaders tend to value the development and construction of the new urban area, neglecting the old urban area to some degree. This is wrong.

First, the old urban area is home to a large number of urban residents, or the vast majority live there. If you only invest in the construction of the new urban area and ignore the transformation and upgrade of the old urban area, it will affect the development and life of the old urban area, causing dissatisfaction from old urban area residents, which is contrary to the essence of cities.

Second, there is a need to transform and upgrade the old urban area. Because of the impact of past planning concepts, financial strength, raw building materials, incomplete infrastructure, and other factors, some buildings in old urban areas require maintenance and transformation; some streets and parks need to be upgraded and improved; some communication and traffic facilities adapted to earlier times need to be configured. Therefore, the old urban area must be transformed regularly.

Third, the planning and construction of the new urban area provides an opportunity to enhance and transform old urban area. In the twentieth century, the planning and design circle of Western countries had a profound effect on the concept of urban construction. One important point is to change the earlier practice

of major demolition and construction of the old urban area, requiring the old urban area to be gradually transformed and enhanced in various forms, taking the old urban development as the basis for new urban development. Under the influence of this idea, there have been a number of exquisite new urban areas appearing in Western countries, and some old cities and small town have been protected. Although focusing on the development of new urban areas, Britain has always stressed the implementation of a green belt policy, industrial layout control, and expansion policy of the old urban area, in particular emphasizing full implementation in order to improve the urban environment. Starting and building the new urban area has opened up new space for urban development, so that some industrial projects and high-density residential projects in the old urban area can be relocated to the new urban area, making the old urban area density less, the function complete, and the environment improved.

53.5 Keeping Constant Innovation and Originality

The city has always been a human creation by way of survival, development, and lifestyle, and is the main place for—and important carrier of—human innovation and creativity. *The future of urban development lies not in duplication and cloning of existing conditions, but in constant exploration, creating more innovative institutions, mechanisms, and new development elements.* Innovation is the lifeblood of urban development as well as its power source. Compared with the rural area, the urban area has more passion and conditions for innovation; it is the cradle of scientific creativity and an essential platform for economic and social creation.

Situations are different in different places, so the new urban area has neither unified strategy nor unified standard policy. Strategies and policies must be developed in line with local conditions. With human development and with urbanization and rapid advance of the new urban area, it is required to change actively in order to meet emergencies, utilizing constant innovation and creativity. The new urban area ought to have new standards, new initiatives, and a new image.

The so-called new standards are a series of indicator systems developed and introduced by the country to instruct new urban planning and construction scientifically; they are qualitative, quantitative, and standardized implemented. Chinese people, in their way of thinking and behavior, value visual thinking and location awareness, with insufficient attention to rational thinking and quantitative analysis. Among current city brands in China, some are local self-named and some are named by official departments or organizations, without any index requirement. Some types of new urban area are named by local government, quite different from the actual local situation. Some simply involve “trickery,” the reason why it is called new urban area is to sweeten their superiors for supporting policy, funding, projects, and performance achievement. From the viewpoint of the development of a nation or a country, we should pay attention to the quantitative analysis, the ancient Chinese saying “political tactics concealed in objective numbers” making

good sense. *New urban development should also establish a complete index system*, which is supposed to include ecological, economic, population, and regional conditions; planning and design indicators; new energy, new technology, new materials, new technology application standards; carrying indicators and construction data of environmental protection, afforestation, and ecology. These standard conditions should be higher than those of the old urban area and should reflect modern, garden, or ecology style. Otherwise they do not relate to the new urban area. Some new urban areas without superior conditions of planning and design, using old building materials which are not energy-saving, have never acquired the proper connotation and quality of a new urban area. So we should establish new standards and implement them to solve these problems.

The so-called new initiatives suggest the new urban area dare to innovate in some systems and mechanisms, boldly breaking the routine on measures and implementing effective policies. Otherwise, the new urban area will not achieve greatness, strong competitiveness, and cannot undergo successful development for a long time. Dubai is a good example in this regard. It has seen a lot of innovations in terms of planning and construction, which is a valuable lesson.

The so-called new image infers that the new urban area should have new ideas in planning and design, new architecture, a new green landscape, a new transportation system, and a new night scene. In this regard, Shanghai Pudong New Area, Henan Zhengzhou New District, and Shenzhen City have done very well. Some of their iconic zones and landmarks are bright, fresh, and memorable. Some new urban areas of second and third tier cities, such as Suzhou New Urban Area, Dezhou New Urban Area, and Luoyang New Urban Area, have made great endeavor in this regard, involving their special tastes and characteristics.

53.6 Enhancing Learning, Instruction, and Training

The urbanization rate in China has exceeded 50 %. In a new phase of accelerating development, new situations and new tasks require us to enhance learning, education, and training. Meanwhile, China's urbanization is facing the dual tasks of accelerating development and transformation development, multiple challenges of scientific development, intensive development, and ecological development. There is still a long way to go and still a lot of work to do.

There are a few countries, such as the United States and several other countries as representatives, that make use of market-oriented means to achieve the goal of urbanization. More common cases are countries or regions such as the United Kingdom, France, Japan, Singapore, and Hong Kong, which rely on the means of government regulation to achieve urbanization. Two different means of urbanization are special in their own way, identical by their final goal. In general, countries with abundant resources or large amounts of natural resources per capita tend to take a market-oriented approach. Countries with low natural resources per capita, such as Japan and Singapore, require careful planning, careful control, and the

government has taken the helm of urbanization. Urbanization in China is a government-led, market-oriented operation. China has a large population, mostly in rural areas. There is limited arable land, so it has always been a major problem to ensure adequate food production and consumption. There is only a small amount of natural resources per capita and inadequate energy, but the cities consume large amounts of water, electricity, and gas. In conclusion, we shoulder an important responsibility and heavy burden and, for the sake of the population and their offspring, we must maintain a good environment and prevent further contamination. Professionals at all levels of governments have heavy tasks and great responsibilities. China's urbanization is an entirely new version in human history, and to make it succeed as scientific, sustainable urbanization is a tough task.

Urban planning and construction is a science involving various aspects of knowledge. *Urban planning and construction is the practice of science*, and man needs a better life. It should not involve empty words but real action, leading to real results. Empty words would only cause waste and destruction, and these might even be seen as unforgivable crimes committed against humanity.

Urban planning and construction is also an art, a kind of public art. If other kinds of art are immature or not beautiful, it can remain in the art gallery or can be placed in some other private space, *but urban planning and construction is public art in a public space*, exposed in full view of a large judgmental crowd for many years. *Urban planning and construction is regrettable art*, in that it is often found unsatisfactory to some extent after startup, or completion, but then it has become a collection of public products or public art belonging to the public and society. Other than through certain official procedures, the designer or builder has no right to change anything.

Some people say if you go to Europe you feel classic architecture is retained there much more than in China—the trees are much higher. This observation is consistent with reality, but the key is how comprehensively and correctly one views this phenomenon.

First, urbanization started earlier in European countries, and because of their long histories there are more buildings. Chinese urbanization was 50–100 years later than in European countries, America, Japan, and other countries. Because of the different histories, there are gaps in building and structure accumulation. It resembles a collector—he tends to have a bigger collection after a longer time.

Second, traditional building materials in European countries are stones, and the pyramids and temples in ancient Egypt are a result of cultural and artistic expression. Ancient Greece is the cradle of European culture, giving Doric Order, Ionic Order, and Corinthian Order cultural and artistic beauty. Ancient Rome has developed stone arches and stone dome roofs. Chinese traditional buildings are mostly civil structure. After years of war, sunshine, wind, and fire, stone structures and civil engineering structures have different performances. The average life span of a UK construction is 132 years, ranking first in the world, 102 years for France, 80 years for most European countries, 74 years for the United States, but only 30 years for China. In 2001, China issued “Unified standards for reliability design

of building structures” by the Ministry of Housing and Urban-Rural Development, which decreed 50 years of life for general construction design.

Third, protection awareness and investment for buildings are different. Europeans pay much attention to the protection and maintenance of buildings. Annually their national, local governments and some professional organizations put up the money for building maintenance. In contrast, not only has China a weak awareness of the problem, but she constantly removes and destroys buildings as unwanted. The Cultural Revolution was a catastrophe to cultural and material wealth, dismantling many outstanding buildings. In recent years there have also been some reports of demolition of historic buildings. As less traditional buildings have gone through unnecessary demolitions, how could traditional architecture have increased?

Fourth, the question about the number of the trees falls basically within the same conditions regarding traditional architecture. Europe, Australia, the United States, and some other countries and regions, because of their fertile soil, climatic conditions, and shorter history of discovery and occupancy, mainly build cities in vast forests, whereas many Chinese cities are built on farmland and are soon renovated and expanded. China has a large population, more family members, and a shorter usage time for architecture. Farmers may put all their income into the construction of houses, and trees are cut down for housing pillars. Urban roads are constantly expanding, so roadside trees are inconvenient to leave in situ so, finally, there are few big trees. This is history, this is national and municipal conditions.

To promote urbanization, the first and foremost thing is to educate and train personnel. This is experience coming from long-term revolution, many years of reform and opening up and construction in China, and her unique advantages and power. China learned from war in the revolutionary war era and still learns a lot from the West after the reform and opening up. China has now reached a new historical juncture, faced with major strategic choice, which is to promote urbanization. For a long time now, most government officials have studied the issues of food and industry, paying little attention to aspects of urbanization, without enough study and research. For example, from a macro point of view, what is the way of Chinese urbanization, what is the strategic layout, what is the population distribution, how to use the land, how to raise funds, how to make resources and energy sustainable, how to avoid environmental problems, how to sustain development, etc., all these things concerning the long-term, overall situation, which needs careful research and scientific proof to be resolved in a comprehensive and correct way. As for a specific province, city, or county, how to plan at a high starting point, at a high level, how to construct in a high quality, how to run a new urban area effectively, all urgent things to be solved. The good news is that research articles in this field have been gradually increasing, learning and training work has attracted the attention of some local governments, and this is a good start.

There should be scientific arrangements for learning and training work. In China, planning and design institutes have large numbers of personnel, small departments, less professional generalists, and many people specializing in architecture planning without much knowledge of architectural design, and people who are good at

architectural design who do not know much about planning. In foreign architectural design firms there are usually only a few people, at most a dozen, and everyone is a generalist. So when organizing training work, it is better to recruit both professionals and personnel from local relevant departments in charge of the actual work of urbanization. Then the combination of theory and practice, experts and practitioners, will bring good results. Organizing personnel to compile handbooks on urbanization and new urban development, carrying out comprehensive and systematic study, using advanced scientific theories to prepare our minds, and promoting innovation by constant working practice—all these will help in the planning and construction of new urban areas at a high level in high quality, promoting urbanization more scientifically and more effectively, and making human homes more beautiful and better, where more people can live in harmony and happiness.

Postscript

Over 10 years of unremitting effort in practice and thinking, 1 year more of working from dawn to dusk, and even some holidays spent writing, have all been devoted to this book. Finally, I finished it. Used to being one of the working staff in urban construction front, I feel that I have realized a dream long buried deep in my soul, responsive to the call of the tide of urbanization development, and have contributed a little to national urbanization and new urban development. With this in mind, I feel very happy and somewhat relieved. Meanwhile, as the old Chinese says, “the ugly wife gotta see her in-laws sooner or later,” and I am looking forward to the comments from readers after the publication of this book.

Over the past year, I have had a sense of mission, urgent and intimate. Now Chinese urbanization is in full swing and new urban construction is magnificent, it has become an important driving force for China and the world’s economic and social development. In this great social, economic, political, cultural and ecological change, there are inevitably mistakes and shortcomings in some respects in some places which can trigger controversies in ideological and theoretical circles, and some occasional complaints from society. How to actualize the urbanization strategy, how to promote the new urban area development? As one who was engaged in this work for many years, I have heard, seen, and felt a lot. After reading and studying many books in this field at home and abroad, I have reflected a great deal. I feel deeply that this is the call of time and duty. We should be earnest in research and exploration, express genuine emotion, and complete valuable work of high quality as soon as possible, contributing to urbanization and new urban development in China.

Of course, because of the wide range of urbanization and new urban development and the knowledge involved, the particular situations of different cities, and the limited knowledge and vision of the author, there are certainly some imperfections, I implore everyone to make suggestions and criticisms.

In the writing and publishing process of this book, Dr. Qiu Baoxing, vice Minister of the Ministry of Housing and Urban-Rural Development of China, director of China Urban Studies, gives a great deal of encouragement and concern, and personally writes the preface for the book. Comrades such as Dr. Li Ting from Dezhou University, Qi Shaoran from Dezhou Municipal United Front Work

Department, Li Zhanhe from Dezhou Government Offices Administration, and others, made much efforts in charting, text layout, and other technical processing work. Here, I express my sincere thanks. Over the past years I have worked with leaders and colleagues in the fields of urban planning and design, development and construction, and management and services, and they provided me with a lot of support, theoretical knowledge, expertise, and practical work. Now they still give me lots of assistance, including text reviews of the book. There are several comrades who offer some valuable advice. Here, I express my deep gratitude for all the above. With a grateful and sincere heart, I dedicate this book to society, to the people who contribute to urbanization and new urban development in China and the world, to the leaders and colleagues who have worked side by side with me to promote urban planning, construction, management and development, and to the people who have worked towards the publishing of this book.

New urban areas, new strategies, and new paths are changing our lives, in China and throughout the world. Let us, under the guidance of the Eighteenth Congress of the Communist Party of China and the spirit of the Third Plenary Meeting of the Eighteenth Congress, seek truth and be practical, be enthusiastic and promising, work hard, strive to let more people enjoy the colorful scenery of the city, enjoy better life brought by new urban area development and urbanization, and achieve a common Chinese dream, a dream of the world. Do not let the great era down, do not let the great motherland down, do not let great people down.

December 2nd, 2013
In Dezhou

Shao Zisheng

Newspaper Resources

1. People's Daily
2. China Construction News
3. Reference News
4. 21st Century Business Herald
5. The Economic Observer
6. Southern Weekly
7. Tuan Jie Bao
8. Financial Times
9. Dazhong Daily
10. Dezhou Daily
11. River Morning Journal
12. China Real Estate Business
13. Xinhua Digest
14. China Economic Weekly
15. Urbanization
16. China Business News
17. The Beijing News
18. Economic Daily
19. Guangming Daily
20. Chinese CPPCC
21. China United Front
22. China Business Journal
23. Southern Weekly
24. Truth Seeking
25. Shenzhen Special Zone Daily
26. TIME (America)
27. The Times (Britain)
28. Information Times
29. Beijing Business Today
30. Zhengzhou Daily
31. Qilu Evening News

Website Resources

1. Baidu
2. Google
3. Phoenix
4. Singapore Zao Bao
5. Wikipedia
6. China Urban Development Network
7. Sina
8. First Financial Network
9. Douding Network
10. HowNet
11. 360
12. People's Net
13. cnki.net
14. Fortune China Network
15. SouFun
16. CRHnewcity.com
17. China News Network
18. Sina
19. NetEase

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1. Term explanation: New urban area, new town, new district, city-like settlement, old town, main urban area, central urban area, mother town
2. Roppongi Hills New Town in Japan
3. Universe Singapore—Strategic Management of Singapore Government
4. Case study of Hong Kong's flying dragon marketing
5. The truth about Ghost Town in Angola
6. Three Urban Development Modes: TOD, SOD, AOD
7. The process & experience of the industrial-urban integration of Irvine in America
8. A Tide of Divorce Appears in Guiyang
9. On the Policy of Realizing the Multiplication of Population in the Central Suqian City in 5 Years
10. Zhuhai Hengqin New Area implements a more favorable policy than that of the Special Economic Zone
11. Curitiba, Low-Carbon City in Brazil
12. Top Ten New Cities with Highest Investment Value in China of 2012 Announced

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