



AAiT

Addis Ababa Institute of Technology

entrepreneurial

entrepreneur

business

Entrepreneurship

creation small

innovation
Wealth

new
venture

dollars
word
like

Definition

opportunity

substantial

generating

business

cost

time

capital

effort

resources

market

competition

customers

suppliers

regulation

technology

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business

model

theory

practice

research

education

development

growth

employment

innovation

entrepreneurship

business



AAiT

Addis Ababa Institute of Technology

Addis Ababa University
Addis Ababa institute of Technology

School of Civil and Environmental Engineering

Entrepreneurship for Engineers

Instructor: Tamru T.

2019/20 2nd sem



Chapter 3

Creating and Developing a Business

Creating and Developing a Business

- **Creativity and the Business Ideas**
- **Methods of Generating Business Ideas**
- **Creative Problem Solving**
- **Opportunity Identification**
- **Product Planning and Development Process**

Entrepreneurial path

- **To choose an entrepreneurial path**
 - Determine the areas where there is a need
 - Business idea
 - Identify opportunities
 - Research your idea
 - Take an inventory of your skills
 - Best match
 - Business idea  skill

Business Idea generation

- May start with a problem....a need....or an opportunity..etc
- It could be a New Idea....
- Or a modification of an Existing idea

Recognizing an Opportunity

- An active and systematic search of environment
- Fortuitous discovery
- Innovation
- Framing it positively
- Imagine or envision its development and exploitation



Recognizing an Opportunity

- **Judgement** : knowing what to pursue and what to drop
- **Experience**: tacit knowledge and understanding of the industry, reputation
- **Creativity**: way of thinking that generates new ideas:
- **Crucial skills**: networking, innovation, competencies and abilities

Cont'd

- **Innovation**
 - the act of introducing something new is one of the most difficult task for the entrepreneur
- **It takes the ability**
 - to create and conceptualize
 - Understand all the forces at work in the environment

Cont'd

- **Four basic types of innovation**
 - **Invention**: creation of new product, service,...
 - **Extension**: expansion of a product , service or process
 - **Duplication**: replication of an existing product or service adding own creative touch..to enhance competitiveness
 - **Synthesis**: combination of existing concepts and factors into new formulation



Generating Business Ideas

3.1. Generating Business Ideas

Entrepreneurship may exist in all economic sectors

- The primary sector: production of raw materials
- Secondary sector: manufacturing
- Tertiary sector: trading, banking etc...
- **Entrepreneurs are found in all sectors**
 - Engineering
 - Architecture
 - Medicine
 - Education
 - Research etc

Cont'd

- **Steps in Idea search**
 - Scanning the environment
 - Sensing an opportunity
 - List out all
 - The Feasible ...
 - And the not so feasible
- **Next step...**
 - Which of the needs would make commercial sense?
 - Examine the environment's impact on the business idea
 - Look beyond immediate opportunities to emerging trends
 - Modify, Adapt, rearrange, substitute, combine

Cont'd

To start with a new business idea

- **First Define the problem....**
 - May be a product is not available...
 - Or it is expensive
 - Or it could be improved....
 - Or made more attractive to the market ?
- **What solution do you propose?**
- **Based on this assessment what could be done?**

Cont'd

- **Define the frontiers of the solution**
 - Based on your
 - Personal skills
 - Technical
 - Marketing
 - Supply knowledge?
 - Actual or potential technologies available
- **Is the solution workable?**
- **Would it bring value to the market?**
- **Relate the idea to the market**

Cont'd

- **Focus on your**
 - Personal Skills and abilities assessment
 - What are your strengths.....weaknesses....opportunities....threats?
- SWOT analysis

Cont'd

- Why is it a good idea?
- What are the assumptions?
- What type of customer will buy it?
- Why?
- List ideas why the idea will NOT work
- List ideas why it will work.
- What are the differences?

Cont'd

- **Key Issues**
 - Timing
 - Feasibility of the idea
 - Suitability of the idea to the circumstances of the potential entrepreneur

Cont'd

- **Final decision**
 - Market aspects
 - Supply aspects
 - Infrastructure aspects
 - Management aspects
 - Financial aspects
 - Social and political environment

Potential sources of business ideas

- **Brainstorming** - Individually or in groups/teams
- **Own personal experiences** - What jobs have been done in the past? Have you started businesses before? What was learnt from success and failures?
- **Innovation and invention** - A flash of individual inspiration
- **Spotting flaws and errors in existing products** - Can something being done already be done better?

Cont'd

- Copying ideas from other countries
- Spotting trends and anticipating their impacts on people's lives
- Taking a scientific approach, working in a laboratory
- Noticing a gap in the market for something that is not currently being produced
- Purchasing a franchise

Cont'd

- **Consumers**
 - Informally monitor potential ideas and needs.
 - Formally arrange for consumers to express their opinions.
- **Existing Products and Services**
 - Analysis uncovers ways to improve offerings that may result in a new product or service.
- **Distribution Channels**
 - Channel members can help suggest and market new products.

Cont'd

- **Federal Government**
 - Files of the Patent Office can suggest new product possibilities.
 - New product ideas can come in response to government regulations.
- **Research and Development**
 - A formal endeavor connected with one's current employment.
 - An informal lab in a basement or garage.



Methods of Generating New Ideas

3.2 Methods of Generating New Ideas

- **Focus Groups**
 - A moderator leads a group of 8 to 14 participants through an open, in-depth discussion in a directive or nondirective manner.
 - An excellent method for generating and screening ideas and concepts.

Cont'd

- **Brainstorming**
 - Allows people to be stimulated to greater creativity.
 - Good ideas emerge when the brainstorming effort focuses on a specific product or market area.
 - Rules of brainstorming:
 - No criticism.
 - Freewheeling is encouraged.
 - Quantity of ideas is desired.
 - Combinations and improvements of ideas are encouraged.

Cont'd

- **Problem Inventory Analysis**
 - Consumers are provided with a list of problems and are asked to identify products that have those problems.
 - Results must be carefully evaluated as they may not actually reflect a new business opportunity.



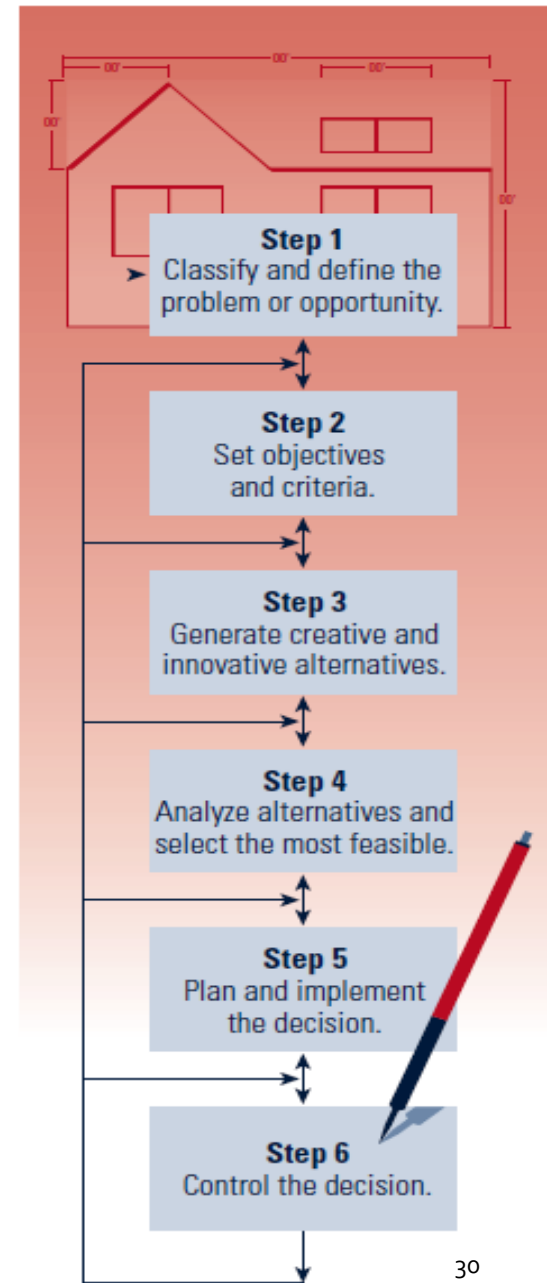
Creative Problem Solving

Creative Problem Solving

- **Problem**
 - Exists whenever objectives are not being met.
 - What is happening vs. what is wanted to happen
- **Problem Solving**
 - The process of taking corrective action to meet objectives.
- **Decision Making**
 - The process of selecting an alternative course of action that will solve a problem.
 - First decision is whether to take corrective action.

The Decision-Making Model

- A six-step process that when properly utilized increases chances of success in decision making and problem solving.



Decision-Making Styles

- **Reflexive Style**
 - Makes quick decisions without taking the time to get all the information that may be needed and without considering all the alternatives.
- **Reflective Style**
 - Takes plenty of time to make decisions, gathering considerable information and analyzing several alternatives.
- **Consistent Style**
 - Tends to make decisions without either rushing or wasting time.

Decision Structure

- **Programmed Decisions**
 - Recurring or routine situations in which the decision maker should use decision rules or organizational policies and procedures to make the decision.
- **Non-programmed Decisions**
 - Significant and nonrecurring and non-routine situations in which the decision maker should use the decision-making model.

Decision-Making Conditions

- **Certainty**
 - Each alternative's outcome is known in advance.
- **Risk**
 - Probabilities can be assigned to each outcome.
- **Uncertainty**
 - Lack of information or knowledge makes the outcome of each alternative unpredictable such that no probabilities can be determined.

Decision-Making Models

- **Rational Model (Classical Model)**
 - The decision maker attempts to use *optimizing*, selecting the best possible alternative.
- **The Bounded Rationality Model**
 - The decision maker selects the first alternative that meets the minimal criteria for solving the problem.

Continuum of Decision-Making Conditions

Uncertainty

Risk

Certainty



(Outcome of alternatives unpredictable)

(Outcome of alternatives predictable)

Define the Problem

- **Distinguish Symptoms from the Cause of the Problem**
 - List the observable and describable occurrences (symptoms) that indicate a problem exists.
 - Determine the cause of the problem.
 - Symptom: Customer dissatisfaction
 - Cause: Poorly trained employees
 - Solution: Implement customer relations training program for employees

Set Objectives and Criteria

- **Setting Objectives**

- Involves establishing clear objectives that will make for better decisions.
- Objectives state what the decisions should accomplish in solving a problem or taking advantage of an opportunity.

- **Setting Criteria**

- Involves setting standards that an alternative must meet to be selected as the decision that will accomplish the objective.

Generate Creative Alternatives

- **Innovation**
 - The implementation of a new idea
 - Product innovation (new things)
 - Process innovation (new way of doing things)
- **Creativity**
 - A way of thinking that generates new ideas

Cont'd

- **Brainstorming**
 - The process of suggesting many possible alternatives without evaluation.
- **Synectics**
 - The process of generating novel alternatives through role playing and fantasizing.
- **Nominal Grouping**
 - The process of generating and evaluating alternatives using a structured voting method that includes listing, recording, clarification, ranking, discussion, and voting to select an alternative.

Cont'd

- **Consensus Mapping**
 - The process of developing group agreement on a solution to a problem.
- **Delphi Technique**
 - The process of using a series of confidential questionnaires to refine a solution.

Responses That Kill Creativity

- "It can't be done."
- "We've never done it."
- "Has anyone else tried it?"
- "It won't work in our department (company/industry)."
- "It costs too much."
- "It isn't in the budget."
- "Let's form a committee."



Analyzing the Feasibility of Alternatives

- **Quantitative Techniques**
 - Break-even analysis
 - Capital budgeting
 - Payback
 - Discounted cash flow
 - Linear programming
 - Queuing theory
 - Probability theory



Plan, Implement, and Control

- **Plan**
 - Develop a plan of action and a schedule of implementation.
- **Implement the Plan**
 - Communicate and delegate for direct action.
- **Control**
 - Use checkpoints to determine whether the alternative is solving the problem.
 - Avoid *escalation of commitment* to a bad alternative.



Opportunity Identification



*Other people see things and say
'Why?'*

*But I dream things that never were
and say 'Why not?'*

George Bernard Shaw

Opportunity Identification

- Entrepreneurship is all about **opportunity**. Would-be entrepreneurs often have one of two things on their minds: "How do I come up with a good business idea?" and "Is this idea big enough to make a successful business?"
- To have a successful entrepreneurial endeavour, your idea needs to be an opportunity.

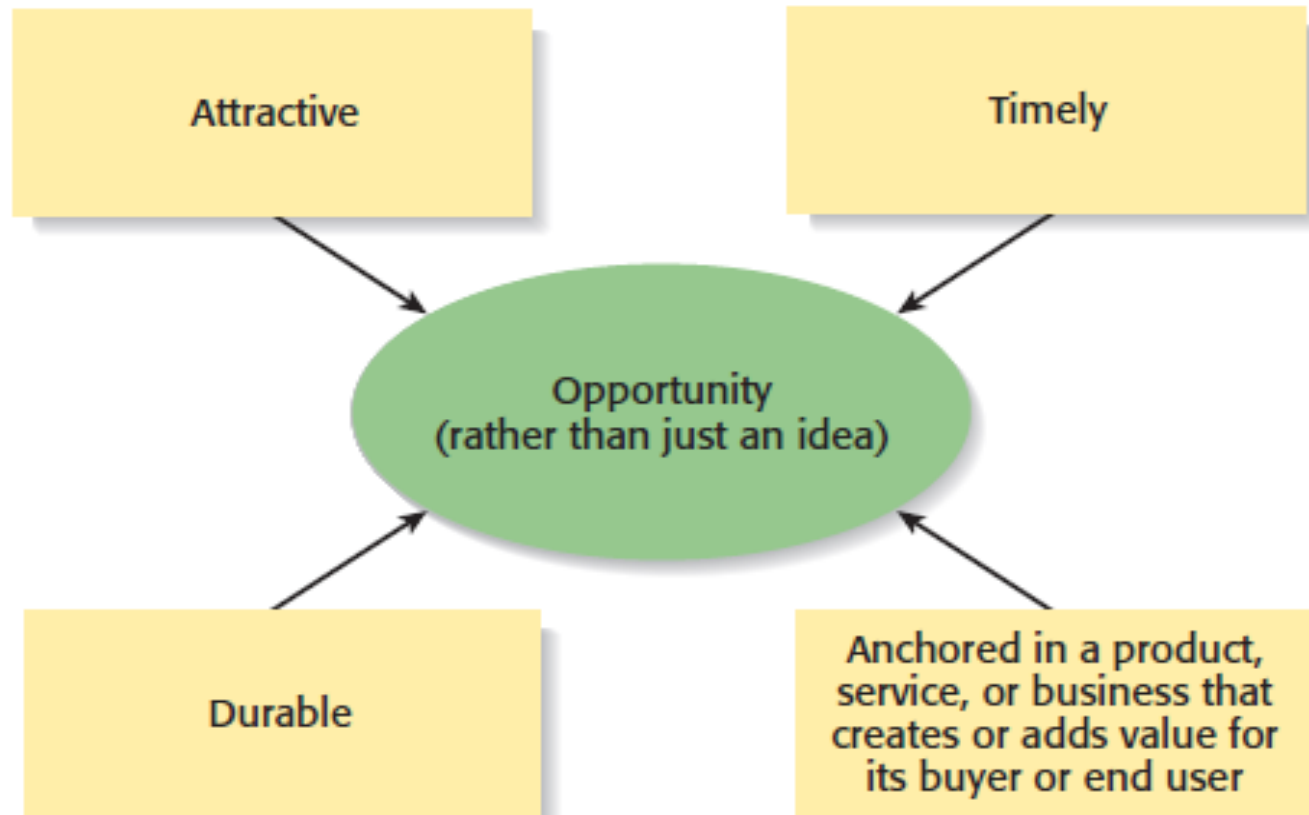
What is An Opportunity?

Opportunity Defined

An opportunity is a favorable set of circumstances that creates a need for a new product, service, or business.

Cont'd

Four Essential Qualities of an Opportunity



Three Ways to Identify an Opportunity

Observing Trends

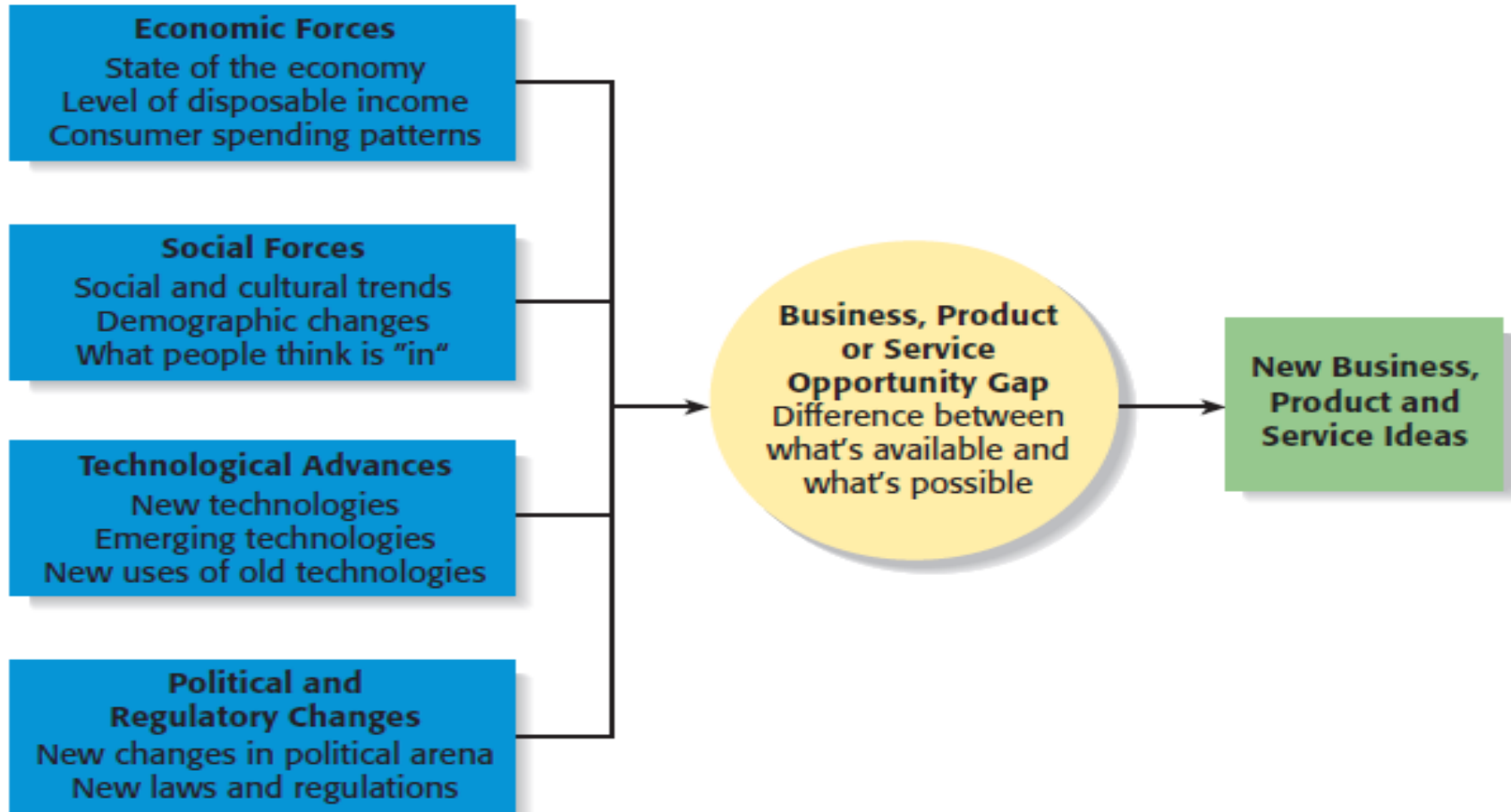
Solving a Problem

Finding Gaps in the
Marketplace

First Approach: Observing Trends

- **Observing Trends**
 - Trends create opportunities for entrepreneurs to pursue.
 - The most important trends are:
 - Economic forces
 - Social forces
 - Technological advances
 - Political action and regulatory change
 - It's important to be aware of changes in these areas.

Environmental Trends Suggesting Business or Product Opportunity Gaps



Second Approach: Solving a Problem

- **Solving a Problem**
 - Sometimes identifying opportunities simply involves noticing a problem and finding a way to solve it.
 - These problems can be pinpointed through observing trends and through more simple means, such as intuition, serendipity, or change.

Third Approach: Finding Gaps in the Marketplace

- **Gaps in the Marketplace**
 - A third approach to identifying opportunities is to find a gap in the marketplace.
 - A gap in the marketplace is often created when a product or service is needed by a specific group of people but doesn't represent a large enough market to be of interest to mainstream retailers or manufacturers.

Cont'd

Characteristics that tend to make some people better at recognizing opportunities than others

Prior Experience

Cognitive Factors

Social Networks

Creativity

a. Prior Experience

- Prior Industry Experience
 - Several studies have shown that prior experience in an industry helps an entrepreneur recognize business opportunities.
 - By working in an industry, an individual may spot a market niche that is underserved.
 - It is also possible that by working in an industry, an individual builds a network of social contacts who provide insights that lead to recognizing new opportunities.

b. Cognitive Factors

- **Cognitive Factors**
 - Studies have shown that opportunity recognition may be an innate skill or cognitive process.
 - Some people believe that entrepreneurs have a “sixth sense” that allows them to see opportunities that others miss.
 - This “sixth sense” is called entrepreneurial alertness, which is formally defined as the ability to notice things without engaging in deliberate search.

C. Social Networks

- **Social Networks**

- The extent and depth of an individual's social network affects opportunity recognition.
- People who build a substantial network of social and professional contacts will be exposed to more opportunities and ideas than people with sparse networks.
- Research results suggest that between 40% and 50% of people who start a business got ...their idea via a social contact.

- **Strong Tie Vs. Weak Tie Relationships**

- All of us have relationships with other people that are called "ties."

Cont'd

- **Nature of Strong-Tie Vs. Weak-Tie Relationships**
 - Strong-tie relationships are characterized by frequent interaction and form between coworkers, friends, and spouses.
 - Weak-tie relationships are characterized by infrequent interaction and form between casual acquaintances.
- **Result**
 - It is more likely that an entrepreneur will get new business ideas through weak-tie rather than strong-tie relationships.

Cont'd

Why weak-tie relationships lead to more new business ideas than strong-tie relationships

Strong-Tie Relationships

These relationships, which typically form between like-minded individuals, tend to reinforce insights and ideas that people already have.

Weak-Tie Relationships

These relationships, which form between casual acquaintances, are not as apt to be between like-minded individuals, so one person may say something to another that sparks a completely new idea.

Is your idea an opportunity?

- The difference between venture success and failure is a function of whether **your idea is truly an opportunity**.
- Before quitting your job and investing your own resources (as well as those of your family and friends), spend some time studying the viability of your idea.
- There are five major areas you need to fully understand prior to your launch:
 - (1) customers,
 - (2) competitors,
 - (3) suppliers and vendors,
 - (4) the government, and
 - (5) the broader global environment

i. The Customer

- Who is your customer? This broad question, the first you must answer, can be problematic.
- For instance, you might be tempted to think, if you're hoping to open a restaurant, that anyone who would want to eat in a restaurant is your customer: in other words, just about everyone in the world except for the few hundred hermits spread out across the country.
- But you need to narrow down your customer base so that you can optimize the features most important to your customer. So a better question is, "**Who is your core customer?**"
- *Understanding who your primary customer is lets you better direct your efforts and resources to reach that customer. You can further refine your definition.*

Cont'd

- Starting with your initial definition, break your customers down into three categories:
 - (1) primary target audience (PTA),
 - (2) secondary target audience (STA), and
 - (3) tertiary target audience (TTA).

Most of your attention should focus on the PTA.

These are the customers you believe are most likely to buy at a price that preserves your margins and with a frequency that reaches your target revenue.

ii. The Competition

- The would-be entrepreneurs often say, "I have a great idea, and the best part is there's NO COMPETITION." If that were true, then as long as you have a customer, you have a license to print money.
- However, most nascent entrepreneurs turn out to be defining their competition too narrowly.
- To fully identify the competition, start with the customer. How is the customer currently fulfilling the need or want you intend to fill? You must identify direct competitors, indirect competitors, and substitutes.
- The number and strength of your competitors mirror the market structure. In a mature market, the industry is likely consolidated, and the power of existing competitors is likely strong.

iii. Suppliers and Vendors

- Understanding the customers and competition is critical to determining whether your idea is indeed an opportunity, but other factors also need consideration.
- your suppliers can have tremendous power, and that will directly affect your margins.

For example, Microsoft, as the dominant operating system and core software provider, and Intel, as the dominant microprocessor supplier, have considerable power over PC manufacturers. Microsoft has gross margins of 81% and Intel has gross margins of 55%,³⁷ whereas average gross margins for PC manufacturers are between 8% and 33%.³⁸ Putting aside the strong competition in the mature PC market for a moment, the fact that suppliers have so much power lessens the opportunity potential for entrepreneurs entering the PC market-unless they find an innovation to supplant the Microsoft⁶⁴ operating system or the Intel chip.

iv. The Government

- Lower taxes, short time to register a new business, low level of regulations and so on.

v. The Global Environment

As the world marketplace becomes global, your opportunity is increasingly strengthened by looking overseas.



Product Planning and Development Process

New Product Strategies

(Developed by H. Igor Ansoff in the form of growth vectors)

Products Markets	Present	New
Present	Market penetration	Product development
New	Market development	Diversification

Cont'd

- **Market penetration** - Growth direction through increase in market share for present markets
- **Product development** - Creating new products to replace existing ones

This involves substantial modification of existing products or creation of new but related items that can be marketed to current customers through established channels:

- Developing new product features:
 - Modifying (change color, form, shape, etc.)
 - Magnify and minify
- Rearrange (layout, patterns, etc.)
- Developing additional models and sizes (product proliferation)⁹⁹

Cont'd

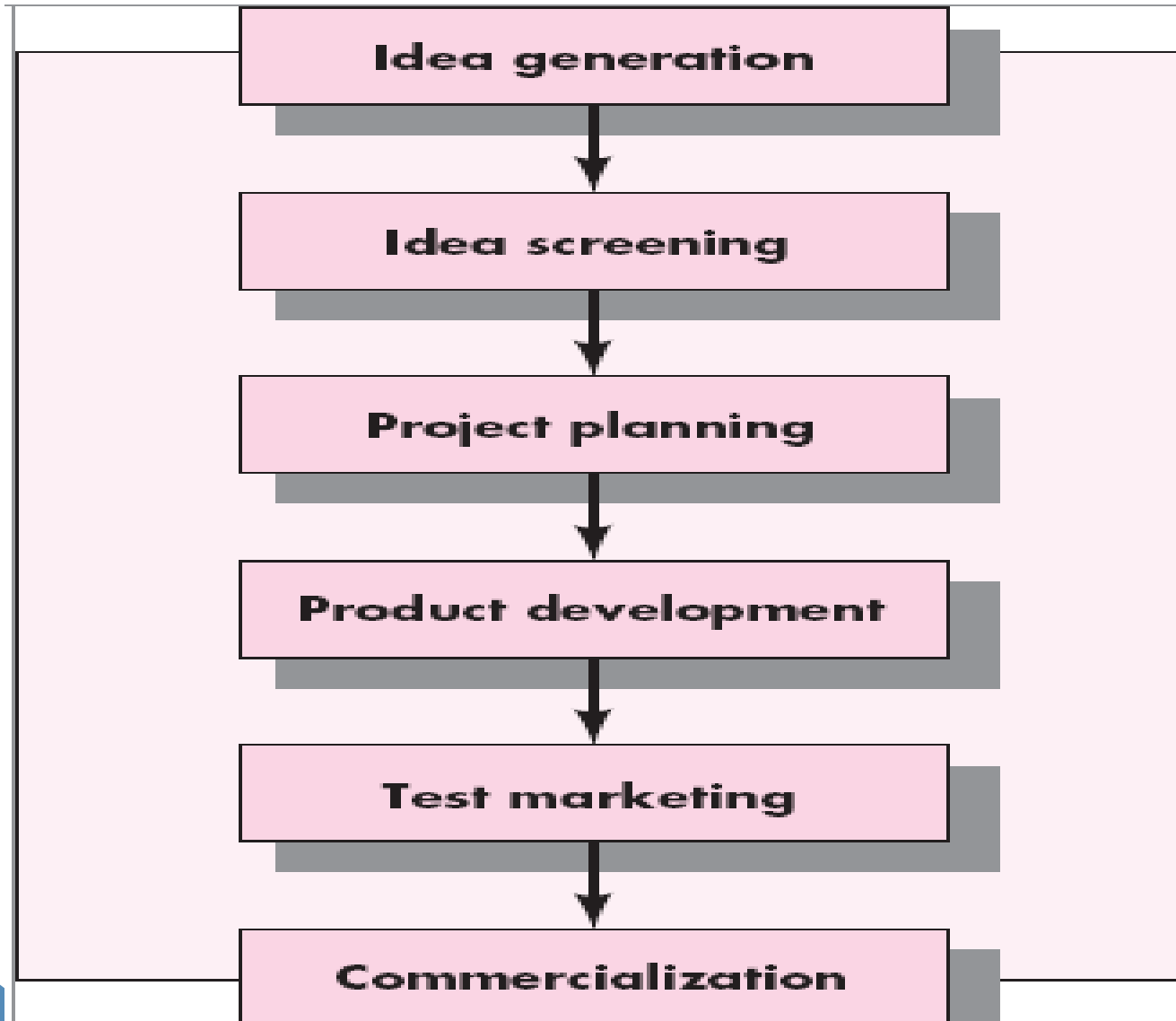
- **Market development** - Finding new customers for existing products
 - Is selling present products in new markets -additional regional, national and international expansions
 - Attracting other market segments through:
 - Developing product versions to appeal to other segments
 - Entering other channels of distribution
 - Advertising in other media

- **Diversification** - Developing new products and cultivating new markets
 - It is the process of adding new businesses to the company that are distinct from its established operations
 - It aims to create value or wealth in excess of what firms would enjoy without diversification.

Factors Associated with New Product Success

1. A superior differentiated product that is unique by virtue of features, benefits, quality, and value.
2. A market-driven and customer focused new product development process.
3. Predevelopment work prior to beginning the development process.
4. Clear and early product definition.
5. Appropriate internal organizational structure.
6. A product that is familiar to the company's current products and markets.
7. A new product development process that uses profiles of previous product successes.
8. Controls on the new product development process that ensure sound execution.
9. Sound execution rather than speed.
10. Support for the new product through friendly, courteous, prompt, and efficient customer service.

The New Product Development Process



Idea Generation

- Every product starts as an idea
 - Most ideas do not become products
- Idea generation - Requires recognizing available idea sources
 - Least expensive step in new product development
 - Top-management support - New product development must focus on meeting customer needs
 - Technology push and market pull research activities play an important role
 - Out-rotation - Involves placing employees in positions that require direct contact with customers, competitors, and other key outside groups

Idea Screening

- **Strategic risk** - Risk of not matching the role of a new product with a specific strategic need
- **Market risk** - Risk that a new product won't meet a market need in a value-added, differentiated way
- **Internal risk** - Risk that a new product won't be developed within the desired time and budget

Idea Screening

- **Strategic alliance** - A long-term partnership between two organizations designed to accomplish strategic goals of both parties
- **Potential benefits of strategic alliances include**
 - Increased access to technology, funding, and information
 - Market expansion and greater penetration of current markets
 - De-escalated competitive rivalries

Project Planning

- Analyze the proposal in terms of production, marketing, financial and competitive factors
- Establish a development budget with preliminary marketing and technical research
- Create a "rough form" product
 - Alternative product features and components specified
- Create a project plan with estimated costs, capital requirement, and manpower needs
- Review the project plan with top management

Product Development

- Upon evaluation, if all expectations are met, consider further research and testing

- Development report must spell out in detail
 - Results of the studies by the engineering department
 - Required plan design
 - Production facilities design
 - Tooling requirements
 - Marketing test plan
 - Financial program survey
 - Estimated release date

Measurements of New Product Performance

FINANCIAL CRITERIA

- Return on investment (ROI)
- Various profit margin measures
- Sales and sales growth
- Various profit measures
- Payback and payback period
- Internal rate of return (IRR)
- Return on assets (ROA)
- Return on equity (ROE)
- Breakeven and breakeven point
- Share and market share

Return on sales

Net present value (NPV)

NONFINANCIAL CRITERIA

Performance of new products

Market share achieved

Satisfaction of customer needs

Other market-related benefits

Strategic issues/fit/synergy

Technical aspects of production

Uniqueness of the new products

Test Marketing

- The main goal is to evaluate and adjust, if necessary, the marketing strategy to be used in the marketing mix
- Developers can use interaction with buyers as a foundation for future product development
- Throughout the process, findings are being analyzed and forecasts of volume developed
- Upon completion of the test market, prepare a final marketing plan in preparation for launch

Commercialization

- The firm commits to introducing the product into the marketplace
- Heavy emphasis is placed on organizational structure and management talent needed to implement the marketing strategy
- Follow-up to eliminate bugs in the design, production costs, quality control, and inventory requirements
- Procedures and responsibility for evaluating the success of the new product by comparison with projections are also finalized

Time to Market

- Defined as the elapsed time between product definition and marketplace product availability
- Well documented that companies that reach the market first with a new product enjoy both profit and market share advantages
- Increasingly, companies are bypassing time-consuming regional test markets, when feasible, in favor of national launches

Quality Level

- **Warranty** - Producer's statement of what it will do to compensate the buyer if the product is defective or does not work properly
 - To emphasize high quality, organizations generally offer customers more than implied warranties enforced by the courts
- **Guarantee** - An assurance that the product is as represented and will perform properly
 - Imply to some buyers that the manufacturer is confident of the new products' quality

Some Criteria for Determining Perceptions of Quality

1. *Performance*—How well does the product do what it is supposed to do?
2. *Features*—Does the product have any unique features that are desirable?
3. *Reliability*—Is the product likely to function well and not break down over a reasonable time period?
4. *Conformance*—Does the product conform to established standards for such things as safety?
5. *Durability*—How long will the product last before it will be worn out and have to be replaced?
6. *Serviceability*—How quickly and easily can any problems be corrected?
7. *Aesthetics*—How appealing is the product to the appropriate senses of sight, taste, smell, feel, and/or sound?
8. *Overall Evaluation*—Considering everything about the product, including its physical characteristics, manufacturer, brand image, packaging, and price, how good is this product?

New Product Decisions

- **Product features**
 - Fact or particular specification of the product
 - Determined by what it is that the customer wants offered
 - These wants are not created by effective marketers but rather are learned

- **Product design**
 - Can clearly differentiate a new product from competitors
 - Good design can add value to the new product
 - A well-designed product can please a customer without necessarily costing more

New Product Decisions

- **Product safety**
 - Safety is both an ethical and practical issue
 - Ethically, customers should not be harmed by using the product as intended
 - When users are harmed by a product, they may stop buying it, tell others about it, or sue the company
- Some products are inherently dangerous and can result in injury to users
 - It may be so expensive to make them safer that buyers cannot afford to buy them



Thank You !!!