

Enterprise 2.0

For Lou and Tabitha

Enterprise 2.0

How Social Software Will
Change the Future of Work

NIALL COOK

GOWER

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Published by
Gower Publishing Limited
Gower House
Croft Road
Aldershot
Hampshire
GU11 3HR
England

Gower Publishing Company
Suite 420
101 Cherry Street
Burlington
VT 05401-4405
USA

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British Library Cataloguing in Publication Data

Cook, Niall

Enterprise 2.0 : how social software will change the future
of work

1. Management – Communication systems – Social aspects
2. Social media – Economic aspects 3. Technological
innovations – Economic aspects 4. Organizational change

I. Title

306.3'6

ISBN-13: 9780566088001

Library of Congress Cataloging-in-Publication Data

Cook, Niall.

Enterprise 2.0 : how social software will change the future of work / by Niall Cook.
p. cm.

Includes bibliographical references and index.

ISBN 978-0-566-08800-1 (alk. paper)

1. Management--Communication systems--Social aspects. 2. Social media
--Economic aspects. 3. Technological innovations--Economic aspects. 4.
Organizational change. I. Title.

HD30.335.C66 2008
306.3'6--dc22

2008007603

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I have not attempted to cite here all the authorities and sources consulted in the preparation of this book. To do so would require a book in itself. In this world of social software where everyone is a journalist, the list would include almost everybody who has ever put digital ink to phosphor on the topics I cover.

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I must first acknowledge the role of my employer Hill & Knowlton, for not only having the foresight and bravery to encourage my experiments with social software, but also for allowing me to use the resulting experience and insights as the backbone for this book and many speeches and seminars. They have also kindly given permission to reproduce some previous articles in Part IV.

In this organization I benefit from working with some of the world's best thinkers on communications and many have been instrumental in developing the knowledge that has enabled me to write this book. In particular I would like to thank Hill & Knowlton's Chief Executive Officer Paul Taaffe, Chief Marketing Officer Anthony Burgess-Webb and UK Chief Executive Officer Sally Costerton for their support and advice.

Specific information and inspiration were contributed by: Marthin de Beer of Cisco Systems; Steve Clayton of Microsoft; Krishna De; Luis Derechin of JackBe; David Ferrabee of Hill & Knowlton; Keely Flint of BUPA; Ludovic Fourrage of Microsoft; Dion Hinchcliffe; Hugh MacLeod; Ross Mayfield of Socialtext; Jeff Nolan of Newsgator; Dave Pollard; M R Rangaswami of the Sand Hill Group; Scott Schioperay; Euan Semple; Thomas Vander Wal; Nathan Wallace of Janssen-Cilag; plus many others. I apologize in advance to those I may have missed, but I am indebted to them all for giving me the benefit of their own insight.

I am grateful too to Robert Campbell at the University of Toronto in Canada, for the thorough job he has done of reviewing such a limited body of existing knowledge in order to create the appendix. He has ably identified the

commonly agreed definitions, trends, opportunities and barriers, creating a valuable reference point in its own right for anyone interested in the use of social software in the enterprise.

To have Don Tapscott, one of the world's leading authorities on business strategy, write the foreword is both a privilege and an indication of the importance of the topic. Don has led the way when it comes to the application of technology in business and I am grateful to him for his contribution.

Thanks also go to my publisher Jonathan Norman from Gower, for believing in such an embryonic topic and leaving me to write without interference or interruption.

Most importantly, thanks to my wife Lou, who gave birth to our first daughter whilst I gave birth to my first book. She has provided a constant source of advice and support on topics that mean little to her, allowing and occasionally forcing me to ignore her needs so that I can work weekends and holidays to meet my deadlines.

Maybe now my family will begin to understand what I do at work.

Niall Cook

Foreword

The notion that the corporation is changing fundamentally has been around for decades – dating back to Peter Drucker’s seminal work in the 1980s on ‘The New Organization’. In 1992, I discussed what I called ‘The New Enterprise’ in my book *Paradigm Shift*, saying ‘the corporation of old simply doesn’t work anymore. Business transformation enabled by information is required to succeed in the new environment.’ I argued that a new enterprise was emerging – open, networked, truly global and focused on knowledge workers who were empowered to innovate. Other management thinkers developed similar views during this period.

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During the dot-com period of the mid to late 1990s there was a new surge in discussion of the fundamental changes to the corporation. In fact one magazine still around today was called *Business 2.0*.

But serious discussion of the new enterprise did not begin until almost a decade later. Why not? In hindsight these were ideas in waiting – waiting for fundamental changes in technology and the global business environment that pre-conditioned their success.

In particular, the technology of the past including the dot-com boom had relatively limited economic reach. And as with all big innovations throughout history, like the steam engine, electrical power, telephone or television, we saw a speculative bubble and crash. The next stage that evolves over a period of decades – the one we’re entering now – is when the technology comes of age and new business models come to fruition.

Today we can see that a fundamental change is occurring in how companies compete. In particular, the rise of the new web, or so-called Web 2.0, is enabling new business strategies and designs – that enable firms to create differentiated value and/or lower cost structures – and therefore competitive advantage.

Thanks to Web 2.0, companies are beginning to conceive, design, develop, and distribute products and services in profoundly new ways. The old notion that you have to attract, develop and retain the best and brightest inside your corporate boundaries is becoming obsolete. With costs of collaboration falling precipitously, companies can increasingly source ideas, innovations and uniquely qualified minds from a vast global pool of talent.

It is becoming clear that a new kind of enterprise is required – one that orchestrates resources, creates value and competes very differently from traditional firms. These new enterprises also drive important changes in their respective industries and even the rules of competition. My research and experience shows those that understand these changes can gain rapid advantage in their markets and build sustainable businesses. Collaborative innovation is growing at an accelerated pace due to the phenomenal success of early flag bearers. So garnering a head start in accumulating experience pays big dividends.

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There are important opportunities inside and beyond corporate walls. Recently, in part due to a widely read article on ‘Enterprise 2.0’ written by Harvard’s Andrew McAfee, the idea has become associated with collaboration inside the firm. While this is only one dimension of the new enterprise, it is a critical one. Managers can exploit social networks, wikis, blogs, tags, collaborative filtering, digital brainstorms, telepresence and other tools of what Anthony Williams and I call ‘the wiki workplace’ in our book *Wikinomics*. These tools enable powerful new approaches to collaboration that cut across organizational silos and unleash the power of human capital. Loosening hierarchies and giving more power to employees can lead to faster innovation, lower cost structures, greater agility, improved responsiveness to customers and more authenticity and respect in the marketplace. The nature of work is changing.

Niall Cook takes this discussion to the next level by explaining how social software can transform such collaboration. This book provides language and taxonomies that will be very helpful for any manager in understanding and harnessing the myriad new software tools and the opportunities they provide to transform the nature of work for the better.

Read, enjoy and prosper.

Don Tapscott¹

1 Don Tapscott is the author of eleven books on the application of technology to business and society, most recently with Anthony D Williams, *Wikinomics: How Mass Collaboration Changes Everything*. His forthcoming book is *Grown Up Digital – The Net Generation Comes of Age* (Autumn 2008).

Introduction

Have you ever wondered why there has been so much fuss about social software – whether focused externally on consumers or internally on employees – amongst those who use it, create it, report on it, and invest in it?

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Perhaps you are one of those tasked with introducing blogs, wikis or social networks into your organization alongside all your existing technologies? Maybe you know you ought to be thinking about it, but just don't know how to get started?

Or perhaps you are one of the many internal or external technology and change management advisers who need to educate clients asking for 'some of that social software stuff'.

Whatever has brought social software into your world, my intention in this book is to:

- shine a light on the current interest in social software inside the enterprise;
- ask what the concept means;
- test whether it really is different to existing 'enterprise software' or simply a repackaging of old ideas;
- provide examples of how different organizations are using social software;
- propose a practical framework for those who want to implement social software in their businesses;
- address some of the implications of introducing social software for leaders, internal and external advisers, and employees themselves;
- summarize how organizations are using social software outside the firewall to communicate, share, collaborate and connect with partners, customers and other constituencies;

- provide a review of relevant literature and sources for further reference.

The book is purposely divided into four parts, providing context, focus, practice and further consideration, allowing the reader to read from cover to cover, jump into a specific section, or refer back to the relevant parts at the appropriate time.

In this collaborative age, this book is just the beginning of the conversation. At the end of the main text you will find details of the wiki that has been created to encourage you to contribute your thoughts and opinions on everything you read here.

I *Social Media and Social Software*

1 The Social Media Explosion

MARKETS ARE CONVERSATIONS

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A powerful global conversation has begun. Through the Internet, people are discovering and inventing new ways to share relevant knowledge with blinding speed. As a direct result, markets are getting smarter – and getting smarter faster than most companies.

So begins the introduction to the 95 theses that make up *The Cluetrain Manifesto*, the book that, in April 1999, introduced the concept of markets as conversations. In the process its authors lambasted companies and their corporate mouthpieces for failing to come down from their ivory towers and engage in the dialogue that was already taking place on the Internet about their brands and products.

One of its core premises is that the people who make up markets in the age of the Internet communicate with each other in a human voice, yet most organizations only know how to speak in a corporate voice communicating just what they want their markets to hear. This misalignment, argues the manifesto, is leading to a lack of respect and trust, and thus provides opportunities for companies willing to engage in real two-way discussion with their markets, listening to their questions and concerns and responding openly and honestly.

For most organizations, this is a pretty difficult thing to do. They are encumbered by both real and manufactured barriers that stop the CEO – let alone a mere member of staff – speak either openly or honestly. In fact, as we will discover, it is these workers at the coalface that people actually want to talk to, and in many cases social software is already enabling this conversation, often under the corporate communications radar. *Cluetrain* thesis #84 says it best:

We know some people from your company. They're pretty cool online. Do you have any more like that you're hiding? Can they come out and play?

Yet talking to the market is seen by most companies as being the preserve of the marketing department, even though that ‘conversation’ is usually just one-way broadcasting, and getting louder and louder in a desperate attempt to attract attention. The problem is that consumers are listening less and less, particularly to the traditional media channels that many organizations continue to insist on prioritizing.

The same is also true inside organizations. Research continues to support the view that, despite the widespread reliance on one-way, mass-media internal communication channels – both traditional media such as magazines and newsletters and new media such as emails and streaming video, employees prefer to get information about their organization from their immediate managers (Larkin and Larkin 1994). Furthermore, the better that manager’s communication, the more satisfied employees are with all aspects of their work life. This would appear to indicate that broadcasting internal messages to staff is just as ineffective as broadcasting external messages to consumers. There’s a dialogue that needs to take place inside the organization as well as in the outside world, but like the external dialogue, this internal conversation needs to be done correctly. It’s not just about managers imparting the same information on the intranet that would have been put in the newsletter, but framing a discussion in a way that encourages engagement in the form of an intra-networked conversation.

Furthermore, employees do not believe that their organizations or their senior management are doing enough to help them become fully engaged and contribute to their companies’ success, according to professional services firm Towers Perrin (2007). Only 21 per cent of the employees surveyed as part of their global workforce study are engaged in their work, meaning they are willing to go the extra mile to help their organizations succeed. In fact, 38 per cent are partly or fully *disengaged*. This is particularly important when you consider that those businesses that had the highest levels of employee engagement in the survey achieved better financial results and were more successful in retaining their most valued employees.

The same study found that the company itself is the most important influencer of employee engagement. According to Towers Perrin’s Julie Gebauer:

People’s views about the company are also shaped more by what senior leaders say and do than by what the individuals’ direct bosses say or do. This too contradicts conventional wisdom and suggests that companies have a real opportunity to dramatically improve both engagement levels – starting with listening to what their own employees have to say.

There are many more books from accomplished authors that focus specifically on the topic of employee engagement. The point of introducing it here is to emphasize to companies who sign up to the principles laid down in *The Cluetrain Manifesto* that the internal conversation is just as – if not more – important than the external one. And it is against this backdrop that the relevance of social software will begin to become clear.

That said, not everyone thought that *The Cluetrain Manifesto* was quite so groundbreaking. In his review of the book in *PC Magazine* in 2002, John C. Dvorak was less than complimentary about both its concepts and authors:

The book is written by a cast of characters who were apparently caught up in the dot-com scene at its peak, and they managed to capture in one book almost all of the lunatic fringe dingbat thinking that characterized the Internet boom. Through the miracle of self-serving web logs – or blogs – they have managed to keep these now-retro thoughts alive and kicking in cult form.

Whether you truly believe that markets are conversations, that conversations are markets, or that it's all just 'lunatic fringe dingbat thinking', the authors of *The Cluetrain Manifesto* undoubtedly managed to predict the explosion of social media and many of the changes that companies have experienced since the book's first appearance in 1999. In some way, perhaps it also ignited the fuse of the social media explosion that we are currently experiencing.

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WHAT IS SOCIAL MEDIA?

In this more mature post-Cluetrain age, these conversations are now collectively referred to as *social media*, a wide-ranging term that encompasses the practice and resulting output of all kinds of information created online by those who were previously consumers of that media. The same media that was the sole domain of powerful organizations with the capacity to print and distribute their news and opinion.

Philosophically, social media describes the way in which content (particularly news and opinion) has become democratized by the Internet and the role people now play not only in consuming information and conveying it to others, but also in creating and sharing content with them, be it textual, aural or visual. For this reason, it is interchangeably referred to as consumer- or user-generated content. To some it represents the shift from broadcast to many-to-many media, rooted in the same conversation that *The Cluetrain Manifesto* authors propose now defines a market. To others it is nothing more than another passing fad, of interest only to those who have a vested interest in promoting the concepts that it represents.

Practically, social media is often defined by the categories of software tools that people use to undertake this consuming, conveying, creating and sharing content with them, be it categories such as blogs, podcasts, wikis and social networking that – having found their place on the Internet – are now making their way onto corporate intranets. These will be discussed in detail later in this book.

Various attempts have been made to define social media. In February 2007, Fast Company's Robert Scoble – previously of Microsoft and PodTech – highlighted the differences between 'old media' and social media:

When I say 'social media' or 'new media' I'm talking about Internet media that has the ability to interact with it in some way. I.e., not a press release like over on PR Newswire, but something like what we did over on Channel 9 where you could say 'Microsoft sucks' right underneath one of my videos.

Stowe Boyd (2007) offers an alternative, more cerebral definition:

Social Media ... is the way that we are organizing ourselves to communicate, to learn, and to understand the world and our place in it. And we just won't accept any models for that that aren't intensely social: we won't put up with large organizations telling us what is right, or true, or necessary. We will now have those conversations among ourselves, here, at the edge. Social Media has released us, freed us: and we won't go back.

Some even argue that the term should be avoided altogether. Doc Searls, one of the authors of *The Cluetrain Manifesto*, identifies the problem:

I avoid using the term 'social media'. I don't like it, and I don't even want to know what it means. I may talk about blogging and podcasting and syndication and tagging and stuff like that. But I never think about any of those things as 'media' and rarely visit their 'social' nature (though I am sure they have one) ... It's natural to want to lump technologies and practices together into categories that bear Greater Significance. But for some reason we still drag along the limiting concepts that the new stuff should help us escape, no matter what we call it.

For the purposes of this book, it is more valuable to focus on the general attributes of the phenomenon rather than detailed definitions or even existentialist discussions. Consider instead some of the characteristics of the tools that are enabling this new world.

Peripheral activity

Social media is perhaps the antithesis of mainstream Internet activity, in the sense that it takes place at the edges of the World Wide Web. Its peripheral nature often means that it exists in isolation linked by many nodes and niches, and only those who follow the relevant threads and connections may find it. This is a hard concept for senior executives to get their heads around. They have been conditioned to invest in and respond to those things that reach the biggest audience, but the Internet makes no distinction between mainstream and peripheral activity – in many cases, it actually brings the two together.

Many-to-many

Whereas much of the activity on the worldwide web to date has been of a broadcast nature (that is, one-to-many) social media is seen as *many-to-many*, because of the way in which it relies on the links between peers and aggregators of content for its distribution. For example, a conversation on a single topic (or meme) can be spread across multiple Internet locations, but is joined together by links in a way that ensures no one voice becomes the authority.

Transparency

Transparency has become one of the watchwords of the new Internet revolution, reflecting a similar trend in other spheres of life, from business and politics to media and entertainment. Social media purists believe that there should be no secrets any more, and anyone who tries to keep them will ultimately be exposed using the power of *their* media. Others see this as an ideology that simply doesn't reflect the real world; companies have to keep secrets, sometimes because the law forces them to do so or simply in order to retain any kind of competitive advantage.

Disruption

The Internet has a track record of disrupting the established ways of doing things, and probably always will. Just look at some of the biggest names in e-commerce such as Amazon and eBay. Today they have market capitalizations larger than some of the oldest and most respected companies in the world, yet when they emerged they used the unique nature of the Internet to turn entire industries upside down. Some commentators argue that social media is now doing the same to established media, removing the costs and barriers to entry – and distribution – of publishing news and information.

So far, the media industry is holding its ground, mainly by integrating this 'amateur' commentary into its existing 'professional' reporting, albeit a strategy not always welcomed by those professionals.

In November 2006, the BBC's Jeremy Paxman, renowned for his acerbic and incessant interviewing style when facing the British political elite, poked fun at the corporation's desire to elicit 'citizen' journalism in the form of videos uploaded to websites like YouTube, comparing it to one of the many home video entertainment shows. Closing his late night *Newsnight* show he said:

That's all from Newsnight tonight. Martha [Kearney] is being punished for some offence in a previous life by presenting tomorrow's programme. In the meantime, it's all available on the website, along with the editor's pathetic pleas for you to send us some bits of your old memories and the like, so we can become the BBC's version of 'Animals Do The Funniest Things'. Goodnight.

There is certainly some truth in these misgivings, but regardless of the views of journalists such as Paxman there is clearly something afoot in the consumer space that is finding its way into previously untouchable industries. Whether by invitation or as a gatecrasher, it is slowly blurring the boundaries between professional and amateur practice, as well as professional and personal lives.

THE POROUS MEMBRANE

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The concept of the porous membrane was first introduced by cartoonist and blogger Hugh MacLeod (2005) when explaining why corporate blogging works. MacLeod argues that in a situation where boundary y represents a company's market, area A represents the conversations taking place inside the company, and area B represents the conversations taking place outside in its market, boundary x is the membrane that separates the two (see Figure 1.1). He concludes: 'The more porous your membrane (x) the easier it is for the internal conversation to inform and align with the external conversation, and vice versa.'

Social media, and blogs in particular, have already begun to puncture this corporate membrane – sometimes from the inside out but more often from the outside in, completely beyond the control of the organization in question. Social media is creating a direct channel of communication between any employee and the people who make up their markets, bypassing the traditional mechanisms their employers have put in place to ensure only certain people are allowed to speak – and hence become their spokespeople.

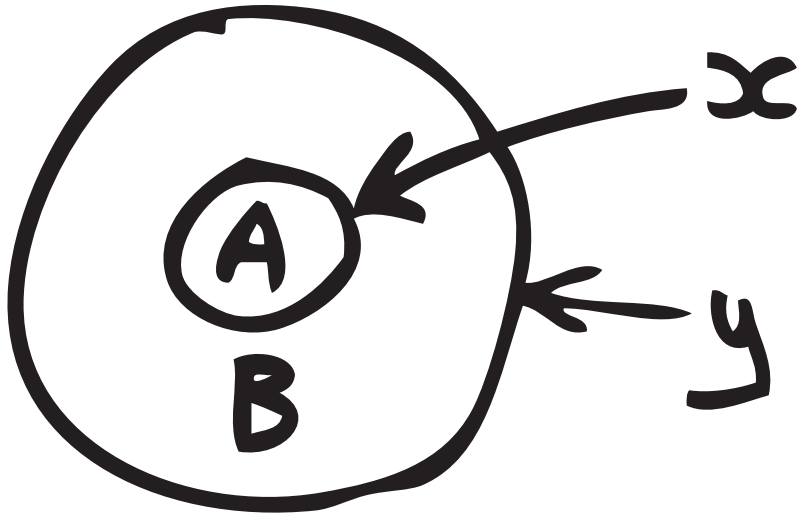


Figure 1.1 The porous membrane

© Hugh MacLeod, <http://www.gapingvoid.com>

In the world of social media, every employee is the spokesperson. They just don't necessarily know it.

In an interview for software company SAP, Doc Searls picks up on this concept to explain how business will change in the coming years as a result of social media (Israel 2007):

The walls of business will come down. That's the main effect of the Net itself. Companies are people and are learning to adapt to a world where everybody is connected, everybody contributes, and everybody is zero distance (or close enough) from everybody else. This is the 'flat world' Tom Friedman wrote 'The World is Flat' about, and he's right. Business on the whole has still not fully noticed this, however.

The issues and challenges of using social software to deliberately create conversations that transcend corporate boundaries are addressed in detail in Part IV of this book.

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INTERNAL HIERARCHIES ARE SUBVERTED

If MacLeod's corporate membrane does indeed become more porous and Searls's walls of business really do come down, then social media is going to subvert traditional hierarchies. Marketing will no longer be the preserve of the marketing department. If every employee has the capacity to talk to people in the market what will this mean for the 'official' spokespeople, or even the CEO? As social media permeates the corporation – officially or, more likely to begin with, unofficially – what will happen to the internal hierarchies? By encouraging staff to have open conversations with each other, regardless of level, then information no longer has to be passed down the organizational structure. Without information, many middle managers will have nothing left with which to assert their position in the hierarchy. Indirect communication that relies on intermediaries is slowly becoming a thing of the past. Expect to see the thing happening inside companies, as management focus moves from coercion to cooperation, and ultimately to co-creation.

So it won't just be the world that is flat, but the organization too. Thomas Friedman highlights the blurring boundaries between companies and different groups of workers in *The World is Flat*, as well as the relationships between communities and the businesses that operate within them. In short, the traditional roles of consumer, employee, citizen, taxpayer and shareholder have all become blurred and intertwined, stripped back to what they really are: people. As an entity made up of people, the organization of the future will not know where its barriers are – if indeed it has any. In fact, it will need to make a conscious decision to remove them in order to stay relevant. According to Don Tapscott and Anthony Williams (2006), 'in an age where mass collaboration can reshape an industry overnight, the old hierarchical

ways of organizing work and innovation do not afford the level of agility, creativity and connectivity that companies require to remain competitive in today's environment'.

That is why this new found role for technology will become one of the most disruptive forces in business – externally and internally – for years to come, and probably long after blogs, wikis and the like have been laid to rest. It is not a technological revolution at all, but a truly social one.

FROM WEB 1.0 TO WEB 2.0

In the consumer space, these factors have already started coming together, albeit under yet another label that draws commendation and consternation alike, *Web 2.0*. The supposed future of the web, it was heralded by Tim O'Reilly in November 2005. O'Reilly suggested a compact definition of the term (although it seems more a conceptual description) at the end of 2006:

Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as a platform, and an attempt to understand the rules for success on that new platform.

In the opening talk of the first ever Web 2.0 conference, O'Reilly and John Battelle summarized the key principles of Web 2.0:

- the web as a platform;
- data as the driving force;
- network effects created by an architecture of participation;
- innovation in assembly of systems and sites composed by pulling together features from distributed, independent developers;
- lightweight business models enabled by content and service syndication;
- the end of the software adoption cycle;
- software above the level of a single device;
- ease of picking-up by early adopters.

Further, they also provided for levels and corresponding examples of Web 2.0-ness:

- Level 3: applications which could only exist on the Internet, derived from the human connections and network effects – and growing in power the more people use them. Their examples included eBay, Wikipedia, Delicious and Skype.

- Level 2: applications which operate offline but which gain advantages from going online. Photo-sharing site Flickr is an example of a Level 2 Web 2.0 application.
- Level 1: applications also available offline but which gain features online. Examples include Google Docs, Google Spreadsheets and iTunes.
- Level 0: applications that would work as well offline.

CLASSIFYING SOCIAL SOFTWARE

There are four primary functions of social software, which I will refer to throughout this book as the 4Cs, for reasons that will be obvious.

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Communication

Communication platforms allow people to converse with others, either by text, image, voice or video – or a combination of these. Examples include discussion forums, blogs, instant messaging, social presence and virtual worlds.

Cooperation

Sharing software enables people to share content with others in structured and unstructured ways. Image and video sharing, social bookmarking and social cataloguing are all examples of sharing tools.

Collaboration

Collaboration tools encourage people to collaborate with each other on particular problems, directly and indirectly in both central and distributed ways. Examples include wikis and human-based (or evolutionary) computation.

Connection

Networking technologies make it possible for people to make connections with and between both content and other people. Social networking is the most prevalent example of a connecting technology, although enabling technologies such as tagging, syndication and mashups can also be included in this classification.

Of course this is quite a simple classification schema and the reality is not quite so one-dimensional. Rather, each of these social software applications (and others not yet invented) will tend to overlap multiple classifications. Each of these has internal business applications as well as external social ones, both topics that will be revisited later in the book when each area is examined in detail.

IMPLICATIONS FOR BUSINESS LEADERS, ADVISERS AND EMPLOYEES

There can be no doubt that these new technologies are giving employees power over corporate communication and reputation, the like of which has never been seen before. As a result the relationships both between employee and company and between each other are changing dramatically, reshaping their organizations – often from the bottom up.

As the world gets flatter and even the smallest companies begin to compete on a global scale, social software provides the means for a new generation of employees to connect with customers and their colleagues across geographical, functional and management boundaries. New entrants can be catapulted from obscurity into the limelight by their networks of connections, quite literally overnight. Tapscott and Williams (2006) predict that ‘in the years to come, this new mode of peer production will displace traditional corporation hierarchies as the key engine of wealth creation in the economy’.

This human instinct to connect is supported by the seismic shift in the psychological contract between employer and employee illustrated by John Smythe (2007) in his book, *The CEO: Chief Engagement Officer*:

Then		Now
<i>Cradle to grave</i>	>	<i>Portfolio careers</i>
<i>Loyalty</i>	>	<i>Transactional relationship</i>
<i>Dependence</i>	>	<i>Independence</i>
<i>‘Our human resources’</i>	>	<i>Creative talent on loan</i>
<i>Employees</i>	>	<i>Citizens</i>
<i>Big institutions</i>	>	<i>My own company</i>
<i>Command and control</i>	>	<i>Well-governed inclusivity</i>
<i>CEO = God</i>	>	<i>CEO = Guide</i>
<i>I left the company</i>	>	<i>I left my boss</i>
<i>Local community</i>	>	<i>Workplace communities</i>

As Smythe outlines, employees today are more concerned about the things that influence what they think and how they feel and behave:

- employability – they want to build their technical, leadership and managerial capabilities so that they can advance themselves and choose who they work for;

- the values, ethics and conduct of their employers;
- bosses and cultures which encourage them to participate appropriately and creatively in the decision making which affects their work;
- work–life balance.

This may go some way to explaining why employees will increasingly expect to be able to use the same ‘participatory’ tools in the workplace as they do for sharing pictures of their children with relatives or connecting with old colleagues and classmates. This social software will get used in the workplace regardless of whether companies are ready for it. It is more than likely that in some organizations it is already being used without the knowledge of the chief executive, chief information officer or information technology department.

As younger employees build self-organizing networks across traditional boundaries, their work will become more global and more immediate. They will not sit and wait for their employers to evaluate technologies and vendors, then deploy them on a 12-month roll-out schedule. Instead, they will use tools that are already available on the Internet for free. In the future, it will be easier and more cost-effective for organizations to let these workers organize themselves around social software, not the other way round.

To illustrate this point, take the example with which Harvard Business School associate professor Andrew McAfee (2006) opens his seminal article ‘Enterprise 2.0: The Dawn of Emergent Collaboration’. He reports how an employee in the London IT department of European investment bank Dresdner Kleinwort Wasserstein (DrKW) used his blog to suggest a new feature for the firm’s wiki software. Within an hour, a colleague had developed a solution and sent it to the team who look after the wiki. As McAfee says, ‘Within 64 minutes and without any project definition or planning, a presence display solution had been spontaneously taken from concept to implementation, then submitted to the person formally responsible.’

Some managers are sceptical. They see social software as something that their employees only do within a personal context. By bringing it inside the organization, they believe it will simply encourage employee gossip, replacing the water cooler as the place people go to waste time when they should be working. They are more concerned about productivity and profits than communication and collaboration.

Yet research shows that communication and collaboration technologies *can* make a positive difference to business performance. A multi-country study conducted by Harvard Business School (Iansiti et al. 2006) found that firms with superior information technology grow faster than their peers, their managers have more insight into their business and their workers are more productive.

The biggest challenge with this emerging area of social software is, therefore, how well managers and senior executives – not just technologists and early adopters – understand and apply it, topics that are addressed in the next two chapters.

2

The Birth of Social Software

WHY CONSIDER SOCIAL SOFTWARE?

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As I have begun to demonstrate, social software has covered our personal lives like a digital rash, fuelling huge growth in collaborative authoring platforms such as blogs, wikis and podcasts and massive expansion in social networking communities. The rise of new online businesses such as MySpace, YouTube, Digg, Delicious, Socialtext, Livejournal, Typepad and Friendster are testament to this. They embody what is being referred to as Web 2.0 and is attracting serious attention from consumers, the media, big business, and venture capitalists.

What they all have in common is the ability to facilitate interactions and conversations between people, resulting in the formation of networks made up of digital relationships. But there's even more to it than that. After all, we have been able to interact with other people online and create digital relationships for years. Now, however, we find ourselves in the midst of a 'perfect storm' where almost all the technological and economic barriers to entry have been removed, with a single focus on people. People connecting with each other; people sharing information in their own voices; people controlling what goes into the knowledge space. In other words, bottom-up rather than top-down. As consultant and blogger Stowe Boyd (2006) puts it:

The answer to nearly all 'why now?' questions is technology and money, and that is true here. The availability of low-cost, high bandwidth tools like blogs or systems like Ryze, when coupled with the critical mass of millions of self-motivated, gregarious and eager users of the Internet, means social software is certain to make it onto 'the next big thing' list. Investment groups are eager to find a successful business model in social software, and I am certain that there are many to be discovered in each of the three key areas that define social software.

Despite the wet blankets and the naysayers, we are witnessing the appearance of a new crop of inductive, bottom-up social software that lets individuals

network in what may appear to be crude approximations of meatworld [sic] social systems, but which actually are a better way to form groups and work them.

Perhaps just as interesting as the way that social software is transforming group interaction – across different time zones or in the same room – social software is destined to have a huge impact on how businesses get at their markets. So the essential elements of social software will be incorporated into more conventional software solutions, changing the way collaboration and communication is managed within and across businesses, and ultimately transforming how companies sell and interact with customers.

INTRODUCING SOCIAL SOFTWARE MEANS CEDING CONTROL

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The Cluetrain Manifesto, introduced in the previous chapter, predicted the downfall of traditional one-to-many marketing techniques in the age of the Internet. Perhaps less well-known are the insights into the changes that might take place in the workplace:

- companies make a religion of security, but this is largely a red herring. Most are protecting less against competitors than against their own market and workforce;
- as with networked markets, people are also talking to each other directly inside the company – and not just about rules and regulations, boardroom directives or bottom lines;
- such conversations are taking place today on corporate intranets. But only when the conditions are right;
- companies typically install intranets top-down to distribute HR policies and other corporate information that workers are doing their best to ignore;
- intranets naturally tend to route around boredom. The best are built bottom-up by engaged individuals cooperating to construct something far more valuable: an intranetworked corporate conversation;
- a healthy intranet organizes workers in many meanings of the word. Its effect is more radical than the agenda of any union;
- while this scares companies witless they also depend heavily on open intranets to generate and share critical knowledge. They need to resist the urge to ‘improve’ or control these networked conversations;
- when corporate intranets are not constrained by fear and legalistic rules, the type of conversation they encourage sounds remarkably like the conversation of the networked marketplace.

In fact, *The Cluetrain Manifesto's* central thesis when it comes to the workplace is that when networked markets meet networked workers, a completely new conversation begins to take place between and among markets and employees. Not only that, but the authors argue that this conversation can make both parties smarter and enable them both to discover their human voices.

This may be a stretch for some. After all, every human being already has a human voice. People don't need a conversation on the Internet in order to discover theirs. In reality, it's actually more about *humanizing* the company. The Internet – and social media specifically – is enabling companies to show that they are made up primarily of people, each of whom have thoughts, views, opinions and expertise to share, and are able to engage in a dialogue just like any other person. The result is the 'humanizing' of companies previously seen as powerful monolithic entities interested only in profit.

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In the same way that the Internet is shifting the balance of power from the publisher of information to the consumer, so too will employees come to demand and expect their employers to engage them in the decision-making process, rather than attempt to coerce them into implementing the decisions made by a select few – regardless of hierarchy. This is perfectly illustrated by change management consultant John Smythe (2007) in *The CEO: Chief Engagement Officer*.

Smythe argues that employee engagement is significantly driven by the degree to which people are usefully included in the decision-making process, both on a day-to-day basis and for highly strategic change, crisis and transformation. Employees do not want to work in command and control organizations, but want and expect well-governed inclusivity from their employers. Social software reinforces a culture that encourages them to participate appropriately and creatively in the decision making which affects their work.

Case study: Humanizing Microsoft

Microsoft is arguably one of the most powerful – and some say monopolistic – companies in the world. Constant criticism levelled at the organization provides it with a negative perception amongst many of its stakeholders. In May 2003, Microsoft hired Robert Scoble from NEC. He had been blogging for over two years already, often about Microsoft. Announcing the appointment on his blog (naturally), Scoble (2003) acknowledged the role that blogging had played in the move:

For one, it helped get me noticed. For two, it helped people inside Microsoft see how I thought without needing me to come up for an interview. For three, during the interviews, we were able to really get to the point of things, since they already knew my strengths and weaknesses.

Over the next few years, until his departure in June 2006, Scoble proceeded to put a human face on Microsoft. Some say he did more to humanize the company than any of its corporate marketing or communications campaigns, at least amongst the huge audience of software developers that Microsoft relies on so much.

In October of the same year, blogger and cartoonist Hugh MacLeod (2006) designed a poster 'for my buddies over at Microsoft', calling it the 'Blue Monster' (see Figure 2.1).

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According to MacLeod, the Blue Monster was designed as a conversation starter, following a conversation of his own with Microsoft's Steve Clayton. They wanted to find a way to shift the balance of power of Microsoft's communication from external negativity (media, competitors and detractors) to internal positivity (Microsoft's own employees). The cartoon was intended to stir up conversations about Microsoft of a different kind to the norm, resulting in internal conversations from the outside in. That is, not as part of a formal employee engagement or marketing communications programme, but through what *eWeek's* Joe Wilcox called 'home-brewed, moonshine marketing', where a Microsoft supporter designs a poster and uses his blog to encourage any Microsoft employee to download and use it to start conversations that might help them tell their side of the story.

Its overall impact is debatable (one only sees a small handful of examples of usage, mainly via MacLeod and Clayton's own blogs), although I doubt mass domination was the primary objective. MacLeod's aim was to give



Figure 2.1 Hugh MacLeod's 'Blue Monster' poster

© Hugh MacLeod, <http://www.gapingvoid.com>

Microsoft employees what he calls a ‘social object’, a device designed to generate conversation, and this strategy appears to have worked. At the time of writing (just over a year after its launch), there are 57,500 results on Google mentioning Microsoft and the Blue Monster, over 1,200 friends of the Blue Monster group that MacLeod and Clayton set up on Facebook, and – after the Blue Monster was put on a bottle of Stormhoek wine – a half-page feature in the *Financial Times*.

WHAT SOCIAL SOFTWARE LOOKS LIKE

In Chapter 1 I suggested a classification for social software – the 4Cs – that encompasses four broad areas – communication, cooperation, collaboration and connecting. Within these categories fall tools such as blogs, wikis, social bookmarking, tagging and really simple syndication (RSS), each with their own unique history and features. In the consumer space they are distributed along the adoption curve but when it comes to their use in business they have hardly featured, even though they offer clear benefits. It is worth briefly describing here the features of the main technologies, as we will revisit them throughout the rest of the book:

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Blogs: Blogs, or weblogs, are websites containing individual articles (posts) usually presented in reverse chronological order. Each post has its own URL (called a permalink) which makes it easy to find even after it has moved from the front page to an archive. In addition, many blogs encourage comments and trackbacks (comments in the form of a post made on the commenter’s blog, linking to the source post), and enable visitors to subscribe to updates using RSS (see below).

Wikis: A wiki is a website where the pages can be created, edited and linked collaboratively by anyone who has access to do so. In most cases a history of every change is retained so that all edits can be tracked and a previous version can be reinstated. The most popular publicly available wiki is Wikipedia (www.wikipedia.org) which, as of November 2007, contained over 9 million pages in 250-plus languages, edited by more than 75,000 active contributors. Again, many systems also allow commenting and allow visitors to subscribe via RSS to receive updates whenever pages are added or edited.

Social bookmarking: Social bookmarking is a way to store, organize, share and search bookmarks to web pages using a web service rather than the bookmarks (or favourites) functions of a web browser. Most services encourage people to ‘tag’ (see below) each bookmark with words that describe the meaning of the content, which then serve not only as an organizational structure but also as a way of connecting together bookmarks posted by different people on the same topic.

Tagging: Tagging is the process of assigning user-defined keywords to a piece of information, and can be done by the creator or the viewer of the content, depending on the system. These tags are often used to create aggregated informal classifications (or folksonomies), and as a navigation/discovery method. Tagging is widely used in blogs, wikis and social bookmarking, as well as other forms of social software.

RSS: RSS is a method of publishing frequently updated web content. Each RSS 'feed' is an XML-formatted document containing summaries or the full text of each item. When combined with an RSS aggregator or feed reading software, subscribers can automatically track a large number of websites without ever having to visit the sites again.

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The benefits of these and other social software technologies are becoming increasingly clear to consumers as they move from the early adopters to the early and late majorities. Blogs make the process of publishing thought and opinion quick and inexpensive and can become highly effective income-generating media properties. Wikis allow groups and communities to collaborate in a distributed way, saving time and money. Social bookmarking lets people access links they have saved across the Internet, helping them discover related information and people more efficiently. Tagging removes the need for a single editor to work out what every piece of content means and categorize it accordingly, and in turn help consumers find the information they are looking for based on the experiences of others like them, reducing effort. Finally RSS drastically reduces the amount of time required to constantly check websites to see whether they have been updated, and reduces email overloads.

Given such benefits, it is a logical next step for each of these technologies – and many more – to be applied in an enterprise context. As we will discover, companies are using internal blogs to share knowledge and create conversation, wikis to collaboratively publish documents, enterprise bookmarking to augment existing ways of finding information and social networking tools to manage expertise and tacit knowledge. The technology enablers that accompany social software, such as tagging and RSS, deliver additional benefits to the organization and the individuals using them, connecting a disparate collection of tools together to form a coherent enterprise ecosystem.

CHALLENGES PRESENTED BY SOCIAL SOFTWARE

The physical and conceptual boundaries between the internal and external worlds are crumbling. Consumer software is finding its way into businesses, and employees are using it to talk to people inside and outside the organization, often without their employer's knowledge. That's pretty scary for many chief executives and chief information officers and could explain why the immediate reaction of most companies is to block it. But before you press the red button, let me try and convince you why that's not always the right approach.

Organizations need to accept that social software is a reality in today's always on, on demand, business and technology landscape. What's more, the desire of employees to use it can be harnessed to achieve business impact with very little investment. With it come some fundamental changes to how employees connect and communicate with each other. This is something that every company will need to understand and exploit in order to deliver the working environment that their staff expect. The biggest change will be to the enterprise itself, most evident in the way they select and purchase software, as well as who buys it. For example, if a cross-geography team wants a way to collaborate on a project there are multiple wiki services already available on the Internet – at costs that can be claimed on personal expenses. Businesses will eventually have no option but to purchase this same software centrally, if only to curb managers' spending.

It also means that non-IT staff will become increasingly interested in the software tools they are buying and using. 'Good enough' will do, if it means they can have it now and at minimum cost. This has implications for both the CIO and their internal customers, who now have the ability to implement software within their functions without any IT involvement whatsoever.

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However, creating a social software infrastructure will be a challenge for most companies, with cultural and political issues to be addressed before any of these benefits can be realized. There are some organizations that simply won't gain from introducing such tools; others will need to resist the urge to deploy them in the same top-down way they know so well. Social software is also disruptive – it changes the role of knowledge management from 'command and control' to 'facilitate and aggregate'. This requires a very different way of thinking and possibly different internal team structures. Finally, consideration needs to be given as to how these tools integrate with existing formal information management systems, the owners of which will feel naturally threatened by cheaper, more usable software competing for employees' attention.

Before any of that can happen, the way in which organizations choose and purchase enterprise systems needs a rethink.

THE APPROACH TO ENTERPRISE SOFTWARE MUST CHANGE

Enterprise software has become ever more complex. Companies spend millions of dollars installing information and knowledge management systems, yet still struggle with the most basic challenge of persuading their employees to use them. For too long the focus has been on the buyer rather than the user, and this philosophy must shift if organizations want to see any of the benefits from an increased level of collaborative working amongst their employees.

First, the pricing must change. Ray Lane, once president of Oracle and lately a venture capitalist at Kleiner Perkins Caufield & Byers, says that software vendors must change their pricing models to compete with the large enterprise providers: ‘the entire software industry made one huge mistake in the late 1990s – it focused on buyers and not users’ (LaMonica 2006). It remains to be seen whether this will change (I very much doubt it), but this shift in the balance of power from buyer to user will be very much in evidence in new products and services, even those from the most established vendors.

So expect to see a renewed focus on user experience and ease of use. If it looks quick and simple, then one of the biggest barriers to adoption has already been overcome. Employees’ familiarity with consumer services like Google Earth or photo-sharing site Flickr are resulting in higher business-user expectations, according to analysts and software executives. ‘The design of business applications is more important than ever,’ says Joe Kraus, CEO of JotSpot. ‘If I’m a buyer at a manufacturing company and I’m using Google Earth to look at the plants of my competition, and the Siebel sales rep asks me to spend \$2 million on glorified database software, that causes a real disconnect.’

In the 1990s some enterprise software vendors were busy telling customers that even the simplest problems needed large, complex systems to solve them. Following the dot-com crash at the start of the millennium few of these vendors survived, usurped by cheap – if not free – alternatives. This trend continues unabated in the form of social software. As Peter Merholz (2005), president and founder of user experience firm Adaptive Path, puts it, ‘enterprise software is being eaten away from below’.

The buyers must change too. The value (and therefore the return on investment) in enterprise software was traditionally calculated on the assumption that everyone in the organization would use it. When they didn’t, the answer was to throw more resources at communicating, convincing and coercing usage. This supply-driven approach of forcing adoption simply doesn’t work with social software, a theme that will be revisited in Part III of this book.

Finally, the methods of delivering enterprise software also need to change. The three main methods have been:

1. packaged software: a licence to install software on the company’s servers;
2. Software as a Service (SaaS): remotely-hosted software usually delivered via a web browser, purchase on an on-demand basis;
3. software and professional services: a licence to install the software, but with additional professional services (e.g. customization, integration, etc.) provided by the vendor or a third party partner.

Software as a Service (SaaS) – the concept of renting externally hosted software – is becoming increasingly common as the method of delivering social software (perhaps driven by its online roots). This will undoubtedly contribute to the adoption of social software in smaller enterprises attracted by the prospect of outsourcing the effort of set up and maintenance to the vendor, only paying for what they need. No longer do such companies need to initiate large-scale implementation projects, with long lead times and massive enterprise infrastructure requirements. They can simply trial existing robust and secure services and purchase the ones that suit them best on a monthly, quarterly or annual basis. This means that smaller companies without the resources to deploy complex software can now access all the benefits previously available only to their larger competitors.

BRIEF HISTORY OF SOCIAL SOFTWARE

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To some extent, social software is nothing new. The founding principles of the Internet were centred on connecting communities and giving them the tools to communicate. Ten years on, and we finally have the technology, desire and means to realize this dream. People are using the Internet to connect with others like never before, and they are doing so with a wide range of simple – yet perfectly effective – tools.

Social software has a history that some argue goes back to attempts to define collaboration-driven software as early as 1945 when Vannevar Bush described a hypertext-like device in ‘As We May Think’. Bush was Director of the US Office of Scientific Research and Development and had coordinated the activities of some 6,000 leading American scientists in the application of science to warfare. ‘As We May Think’ was his call for those same ‘men of science’ – now the fighting had ceased – to turn to the task of making human knowledge more accessible. In the process he predicted many kinds of technology that were subsequently invented, including hypertext. The article, a reworked version of his 1939 ‘Mechanisation and the Record’, described a system called memex:

Consider a future device for individual use, which is a sort of mechanized private file and library. It needs a name, and, to coin one at random, ‘memex’ will do. A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory.

The article also describes some of the potential benefits of the memex machine to groups:

Wholly new forms of encyclopedias will appear, ready-made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified. The lawyer has at his touch the associated opinions

and decisions of his whole experience, and of the experience of friends and authorities. The patent attorney has on call the millions of issued patents, with familiar trails to every point of his client's interest. The physician, puzzled by its patient's reactions, strikes the trail established in studying an earlier similar case, and runs rapidly through analogous case histories, with side references to the classics for the pertinent anatomy and histology. The chemist, struggling with the synthesis of an organic compound, has all the chemical literature before him in his laboratory, with trails following the analogies of compounds, and side trails to their physical and chemical behavior.

In 1958, the Advanced Research Projects Agency (ARPA) was formed in the US, developing the first successful satellite. By 1962, ARPA had changed its focus and began to offer research grants to universities, under the leadership of J.C.R. Licklider. His efforts led to the creation of ARPANET and ultimately the Internet itself.

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Licklider was clearly a visionary, foreseeing the time when computers would be able to interact in real time with human beings, thus contributing to their ability to formulate insight and make decisions. In March 1960 his paper 'Man-Computer Symbiosis' set out this vision:

Man-computer symbiosis is an expected development in cooperative interaction between men and electronic computers. It will involve very close coupling between the human and the electronic members of the partnership. The main aims are 1) to let computers facilitate formulative thinking as they now facilitate the solution of formulated problems, and 2) to enable men and computers to cooperate in making decisions and controlling complex situations without inflexible dependence on predetermined programs.

In the anticipated symbiotic partnership, men will set the goals, formulate the hypotheses, determine the criteria, and perform the evaluations. Computing machines will do the routinizable work that must be done to prepare the way for insights and decisions in technical and scientific thinking.

Eight years later, with Robert Taylor, he wrote 'The Computer as a Communication Device' (Licklider and Taylor 1968), predicting 'in a few years, men will be able to communicate more effectively through a machine than face to face'. In so doing, he first introduced the concept of 'on-line interactive communities' and communities of interest:

In most fields they will consist of geographically separated members, sometimes grouped in small clusters and sometimes working individually. They will be communities not of common location, but of common interest. In each field, the overall community of interest will be large enough to support a comprehensive system of field-oriented programs and data.

In each geographical sector, the total number of users—summed over all the fields of interest—will be large enough to support extensive general-purpose information processing and storage facilities. All of these will be interconnected

by telecommunications channels. The whole will constitute a labile network of networks—ever-changing in both content and configuration.

What will go on inside? Eventually, every informational transaction of sufficient consequence to warrant the cost. Each secretary's typewriter, each data-gathering instrument, conceivably each dictation microphone, will feed into the network.

You will not send a letter or a telegram; you will simply identify the people whose files should be linked to yours and the parts to which they should be linked—and perhaps specify a coefficient of urgency. You will seldom make a telephone call; you will ask the network to link your consoles together.

It is worth remembering that this was written 40 years ago, yet could easily be describing many of the social networking and collaborative working communities that are just a few years old today.

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In October 1962 Douglas Engelbart (who went on to invent the computer mouse five years later) published 'Augmenting Human Intellect: A Conceptual Framework':

In such a future working relationship between human problem-solver and computer 'clerk,' the capability of the computer for executing mathematical processes would be used whenever it was needed. However, the computer has many other capabilities for manipulating and displaying information that can be of significant benefit to the human in nonmathematical processes of planning, organizing, studying, etc. Every person who does his thinking with symbolized concepts (whether in the form of the English language, pictographs, formal logic, or mathematics) should be able to benefit significantly.

The concept of networked augmented intelligence is attributed to Engelbart based on this pioneering work. He believed that technologies were needed that would allow humans to manipulate information directly – and thus improve individual and group processes for knowledge work – rather than allow the state of current technologies to dictate man's ability to interact with data. It is this thinking that led to his invention of the mouse, a tool for such interaction that we all take for granted today.

In the 1970s the focus was on 'office automation', a term coined by IBM but that eventually led to the Electronic Information Exchange System (EIES), widely regarded as the first major example of collaborative software. In 1977, EIES was being used to network scientists worldwide using email, chat and discussion groups, long before the existence of the Internet as we know it today. After seeing EIES, in 1978 Peter and Trudy Johnson-Lenz coined the term 'groupware', defining it as 'intentional group processes plus software to support them'. Those companies that developed such software in the 1980s subsequently adopted the term.

However, the academic community preferred Computer-Supported Cooperative (or Collaborative) Work, or CSCW, a term still used for the annual conference bearing its name produced by the Association for Computing Machinery (ACM). The cooperative/collaborative debate between the human-computer interaction and information systems communities is very relevant to today's social software, summed up visually by Scott Schopieray (2003).

Schopieray's model identifies cooperation as being focused on the product and collaboration on the process, yet the objective of both being to generate a result that is better than what could have been produced alone (see Figure 2.2).

The term groupware continued to be used everywhere except academia, and was put on the map by Robert Johansen's book of the same name, published in 1988. Christopher Allen (2004) of Alacrity Ventures laments the role of marketing in corrupting the term further:

Unfortunately, it was this success that was also the downfall of the term 'groupware', for it got co-opted by marketing. Initially the co-opting was done by Lotus Notes, which I personally didn't feel deserved to be called groupware, as it was really more of a multi-user database that could be used to make groupware, but wasn't actually groupware. Then Microsoft further corrupted the term when they released Microsoft Exchange Server and Outlook with calendaring features to compete with Lotus Notes, and called that groupware as well.

Possibly the most important catalyst of all came in 1989 which a young British engineer working at CERN in Switzerland circulated a proposal for an

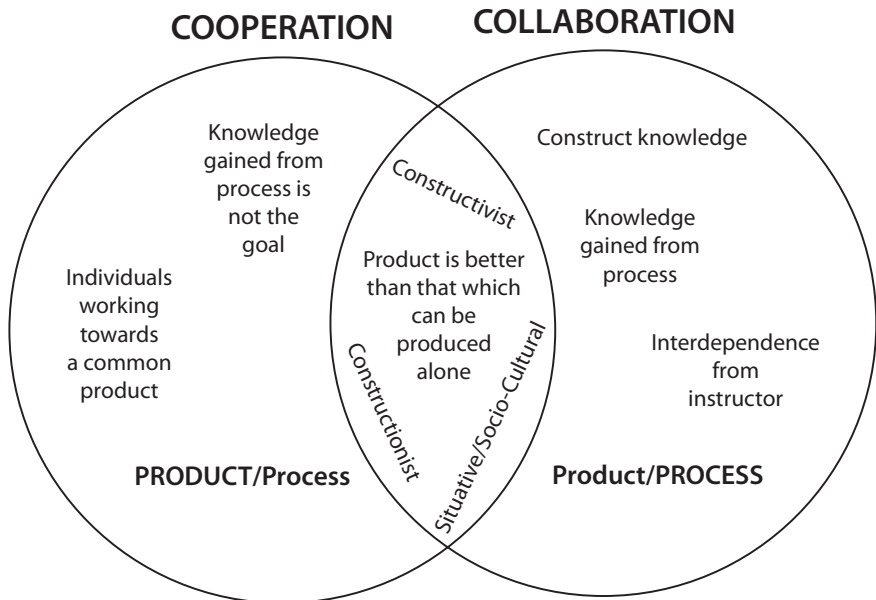


Figure 2.2 A comparison of cooperation and collaboration

© Scott Schopieray

in-house online document sharing system which he described as a 'web of notes with links'. His name was Tim Berners-Lee and he called his system the World Wide Web. The rest is now history.

As the use of the term groupware began to slow, and interest in the World Wide Web increased, 'social software' emerged as a way of describing functions that relied on user-selected filtering and evaluation. It was K. Eric Drexler, founder of the Foresight Institute, who is regarded as first using the term in this context in 'Hypertext Publishing and the Evolution of Knowledge', originally published at the Hypertext '87 conference (1991). In a reply to Christopher Allen (2004), Drexler explains why he used it:

I used the term 'social software' because I am concerned with communication and collaboration on all scales, including the whole of society. Thus, I see media at the scale of the World Wide Web as forms of social software.

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However, it took 15 years for social software to enter into more common usage, when the first Social Software Summit was held in November 2002.

Whilst social software was not limited to the Internet, and even existed before it, the term Web 2.0 has garnered more enthusiasm in recent times. However, many commentators see it as nothing more than a buzzword trying to bring together a collection of ideas, with a limited shelf life (indeed, already 'Web 3.0' is being discussed). Others see it as completely distinct from social software, being nothing more than a descriptor for a second generation of web-based services facilitating collaboration between its participants.

The Internet in itself, however, did not spark the social software phenomenon that we are experiencing today. It is true that many of the characteristics of today's social software are based on older forms suggested and developed by Bush, Licklider, ARPA, Engelbart, Drexler and others, but it is without doubt the convergence of technological, cultural and societal factors that has brought about the desire and ability for people to use technology to communicate, connect and collaborate with each other on a scale never before experienced.

APPLYING SOCIAL SOFTWARE TO BUSINESS

It didn't take long for people to start thinking about the similarities between this social software and the new 'Web 2.0' concepts outlined by Tim O'Reilly and John Battelle, and how this might play out in the enterprise. The first to put a name to this thinking was Harvard Business School's Andrew McAfee when in Spring 2006 he referred to 'Enterprise 2.0' in his *MIT Sloan Management Review* article 'Enterprise 2.0: The Dawn of Emergent Collaboration' (McAfee 2006). McAfee's latest definition reads thus:

Enterprise 2.0 is the use of emergent social software platforms within companies, or between companies and their partners or customers.

McAfee suggests that Enterprise 2.0 has become a reality because of three broad and converging trends:

1. *Simple, free platforms for self-expression*: McAfee quotes American journalist A.J. Liebling who said that ‘freedom of the press is limited to those who own one’, adding that the birth of free publishing platforms in the form of blogs means that those limits now apply only to those with neither the ability nor propensity for self-expression.
2. *Emergent structures, rather than imposed ones*: instead of imposing their own ideas about how platforms should be constructed, McAfee points out that technologists started to build tools that let structure *emerge*.
3. *Order from chaos*: the third trend in McAfee’s argument is the ability for people to quickly and easily filter, sort and prioritize the flood of new online content.

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Although he suggests otherwise, McAfee’s trends are still primarily technological, and it could be argued that alone they did not make Enterprise 2.0 a reality. In fact, it is hard to see why these trends are specific to the enterprise rather than the general Internet populace. As with all social movements, the social software movement represents the coming together of multiple trends out of which emerges a profound change in behaviour. Technology is just one element along with some of the seismic shifts taking place in both business and society.

He does, however, focus specifically on the failing practice of knowledge management. He believes that the information technologies that knowledge workers use for communication have historically been either *channels* (email, instant messaging, etc.) or *platforms* (e.g. intranets and portals), and they could not be more polarized. Channels allow information to be created by anyone, but consumed by very few (email threads are only visible to those who are included in them, for instance). Platforms, on the other hand, generally contain information that is available to the whole organization, yet generated by small groups.

Against this background, the focus of knowledge management in those organizations where the function exists has been to elicit information from people throughout the company – usually in a structured way – and put into a central system for everyone else to access. As anyone who has ever been on the receiving end of such requests can attest, this method of capturing information neither fits with the way most knowledge workers operate nor reflects what they produce. No wonder then that those trying to locate knowledge within an organization find it so difficult, and when they do find it more often than not it rarely provides the answer to their questions, which generally begin with: Who ...? How ...? or What ...?

McAfee heralds the arrival of new platforms that do not try to capture information in such an artificial way, but instead focus on the *practice*

(the activity involved in getting work done) and *output* (the product of that practice) of knowledge workers. Picking up on the example of the IT employees at Dresdner Kleinwort Wasserstein, he says:

The excerpts from the DrKW blogs, for example, record an interaction and its output, as well as the identities of three people involved. These blog entries are part of a platform that's readable by anyone in the company, and they're persistent. They make an episode of knowledge work widely and permanently visible.

Enterprise 2.0 was starting to gain understanding, supporters and case studies. But it still had a long way to go before even the early enterprise adopters could see its relevance.

3

Social Software in the Enterprise

Thanks to the efforts of Andrew McAfee in leading the charge, the application of social software in the enterprise is now widely referred to as Enterprise 2.0. As with all new terms, there have been many attempts to define it and many disagreements along the way (most notably a public spat with Wikipedia editors who refused to accept that the term warranted its own entry in the online encyclopaedia). Individual commentators have understandably looked at the issue from their own perspectives, preferring to explain it within the context of their expertise.

M.R. Rangaswami (2006) of investment and management firm Sand Hill Group sums up the wider themes:

Enterprise 2.0 is more than just Web 2.0 for business. Enterprise computing is far more complex than personal computing. It includes legacy environments, innumerable vendors, mismatched data sources, stringent regulations and far flung users. While Web 2.0 can deliver genuine advantages for both business users and consumers, the real 'Enterprise 2.0' will encompass a far broader and more complex vision.

Enterprise 2.0 is the synergy of a new set of technologies, development models and delivery methods that are used to develop business software and deliver it to users.

He identifies the key characteristics of Enterprise 2.0 software as being flexibility, simplicity and lightweight, created using a combination of technologies and development and delivery models, quite literally painting the big picture (see Figure 3.1).

In this model, Rangaswami suggests that there are three essential elements that sit between the developers of enterprise social software (whether vendors, internal IT departments, line-of-business units or service providers) and the end users: technology; development models; and delivery methods. With multiple options within each, there are also multiple routes that can be chosen to connect creator to consumer.

More than just Web 2.0, Enterprise 2.0 demands lightweight software that is easy to adopt, use and integrate and can be created and delivered using a variety of technologies and models.

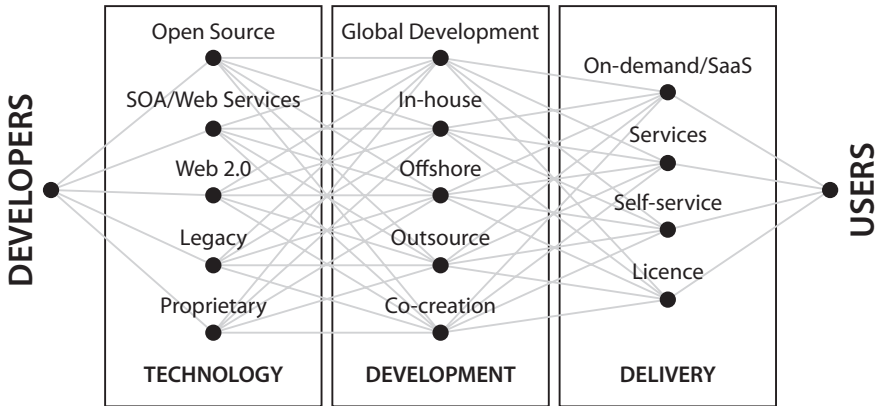


Figure 3.1 Enterprise 2.0: the big picture

© M R Rangaswami, <http://www.sandhill.com>

In addition to the debates over defining Enterprise 2.0, there have also been attempts to create classification models for it. The two most widely known are the SLATES and FLATNESSES mnemonics, proposed by McAfee and Dion Hinchcliffe respectively, both briefly summarized here.

SLATES

SLATES (search, links, authoring, tags, extensions and signals) is the acronym created by Harvard Business School associate professor Andrew McAfee to provide a framework around the use of social software in the business context. According to McAfee, each of the six components of the SLATES acronym provides an essential component of Enterprise 2.0.

Search

Knowledge workers must be able to find what they are looking for, not only through the use of page layout and navigation but more importantly by using keywords. In a survey by Forrester Research (Morris 2005), only 44 per cent of respondents said that it was easy to find what they were looking for on their intranet.

Links

Links provide guidance to knowledge workers about what is valuable and are one of the key indicators that search engines use to assess the importance of content in order to deliver accurate and relevant results. On the Internet this works well, but on most intranets linking is often restricted to a relatively

small group of knowledge managers or editors. By giving the entire company the ability to create links, the value of search increases.

Authoring

People have a desire to author, whether it be original thought, experience, a comment, a link and so on. When knowledge workers are given the tools to author information, the intranet changes from being created by a few to become a living body of linked, collective knowledge.

Tags

The Forrester Research survey (Morris 2005) showed that what knowledge workers wanted most, after better search results, was better categorization of content. Information architects often painstakingly create these *taxonomies* in an attempt to organize information by meaning; but by allowing employees to attach *tags* (one-word keywords) to the information they create *and* find valuable, *folksonomies* emerge based on actual practice.

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Extensions (or extrapolation)

The use of tags – combined with authoring and linking – allows knowledge systems to identify patterns and use these as extensions to information and relationships. For example, if 50 employees assign the same tag to different pieces of information, not only can that tag serve as a method of linking, but also as a method of valuing those contributions. These tags can extrapolate meaning and imply relationships across different departments and time zones, even when those people have never worked together before.

Signals

In the age of information overload, you may be thinking that by allowing knowledge workers to create even more information, links and tags, the problem of information overload will quickly be exacerbated. That's where signals come in, alerting users when new information of interest is created. Whilst these can be email alerts, technologies such as really simple syndication (RSS) allow employees to consume information in a much more efficient and controlled manner.

FLATNESSES

In October 2007, Dion Hinchcliffe augmented the SLATES components using the longer acronym of FLATNESSES (freeform, links, authorship, tagging, network-oriented, extensions, search, social, emergence and signals), having identified seven lessons learned from watching Enterprise 2.0 in action:

1. Enterprise 2.0 is going to happen in your organization whether you like it or not;

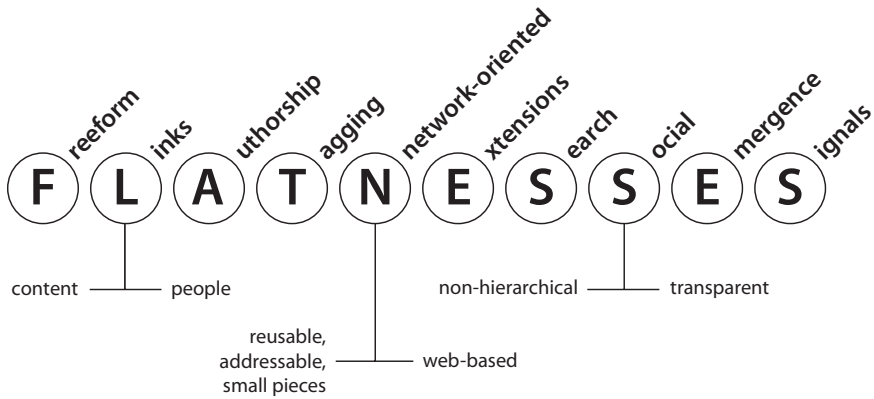


Figure 3.2 A more refined conception of Enterprise 2.0 for 2007?

© Dion Hinchcliffe, <http://blogs.zdnet.com/hinchcliffe>

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2. effective Enterprise 2.0 seems to involve more than just blogs and wikis;
3. Enterprise 2.0 is more a state of mind than a product you can purchase;
4. most businesses still need to educate their workers on the techniques and best practices of Enterprise 2.0 and social media;
5. the benefits of Enterprise 2.0 can be dramatic, but only build steadily over time;
6. Enterprise 2.0 doesn't seem to put older IT systems out of business;
7. your organization will begin to change in new ways because of Enterprise 2.0. Be ready.

He argues that McAfee's SLATES acronym fails to capture the essential social, emergent and freeform aspects of Enterprise 2.0, and presents FLATNESSES as a more refined conception of Enterprise 2.0 (see Figure 3.2 above).

Both of these mnemonics are useful in understanding some of the key characteristics of Enterprise 2.0, but for the uninitiated they can be somewhat daunting. They focus on the theoretical as opposed to the practical aspects of introducing social software into the enterprise. So, while they are essential in understanding the context, I feel a more pragmatic approach is required.

INTRODUCING THE 4CS APPROACH

For the purposes of categorizing the social software tools that will be covered in this book, I propose a more simple four-category classification model,

focused on the action involved rather than components or characteristics, which will be hereon referred to as the 4Cs approach:

1. communication;
2. cooperation;
3. collaboration;
4. connection.

Communication: communication platforms are those that allow people to converse with others, either by text, image, voice or video, or a combination of these.

Cooperation: sharing software enables people to share content with others in structured and unstructured ways.

Collaboration: collaboration tools encourage people to collaborate with each other on particular problems, directly and indirectly in both central and distributed ways.

Connection: networking technologies make it possible for people to make connections with and between both content and other people.

There is clearly some overlap between these categories, most notably in the case of cooperation and collaboration (Figure 2.2 in Chapter 2, Schopieray's Venn diagram, goes some way towards explaining this distinction). One can surmise that cooperation focuses on helping individuals work towards a common product where the knowledge gained from the process is not the goal, whereas collaboration is focused on the knowledge gained from the process of constructing something. Even so, both share the objective of enabling a group of individuals to produce something better than that which they could have produced alone.

In the context of social software, collaboration and connection require more formality than communications and cooperation, mainly because they depend on people to do things in a relatively structured manner. Likewise, collaboration and cooperation often require a higher level of interaction than connection and communication, because of the inherent focus on groups rather than individuals. These relationships can be visualized easily (see Figure 3.3) and should be considered within the context of the appropriate corporate culture when prioritizing the introduction of different forms of social software into an organization.

For example, a company with predominantly formal organizational structures and a culture of group interaction will benefit most from social software that enables collaboration. Conversely, an organization with an informal structure and a culture that rewards individual effort may prefer to invest in social

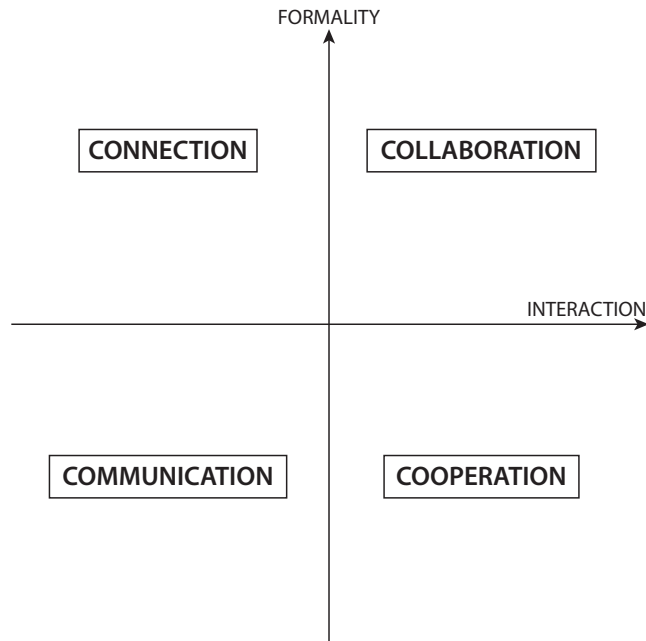


Figure 3.3 The 4Cs formality/interaction matrix

software to support communication. This framework can help any company decide where to focus their time and effort for most benefit, rather than being led by vendors trying to sell their blog/wiki/social networking solution without any understanding of the organizational structure or culture into which it will be introduced.

This approach can also be used to support organizational change. For example, if a company is trying to encourage a shift from individual effort to group problem solving, but within the confines of a relatively informal culture, then it should focus on cooperative social software that requires more interaction. Using this approach, it is possible to identify the preferred social software footprint for any organization. The examples below show the social software footprints for three different organizations (see Figure 3.4):

1. very informal, collaborative culture;
2. very formal, highly collaborative culture;
3. informal and formal, more focus on individual effort but some group problem solving.

The next step is to overlay some of the specific tools and technologies currently available – and any more that might emerge in the future – onto this matrix in order to map them directly to organizational culture (see Figure 3.5).

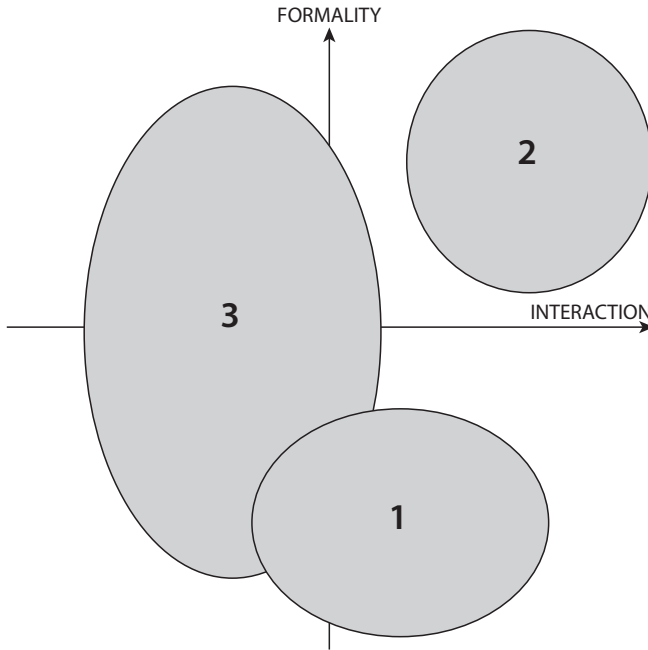


Figure 3.4 The social software footprints for three types of organization

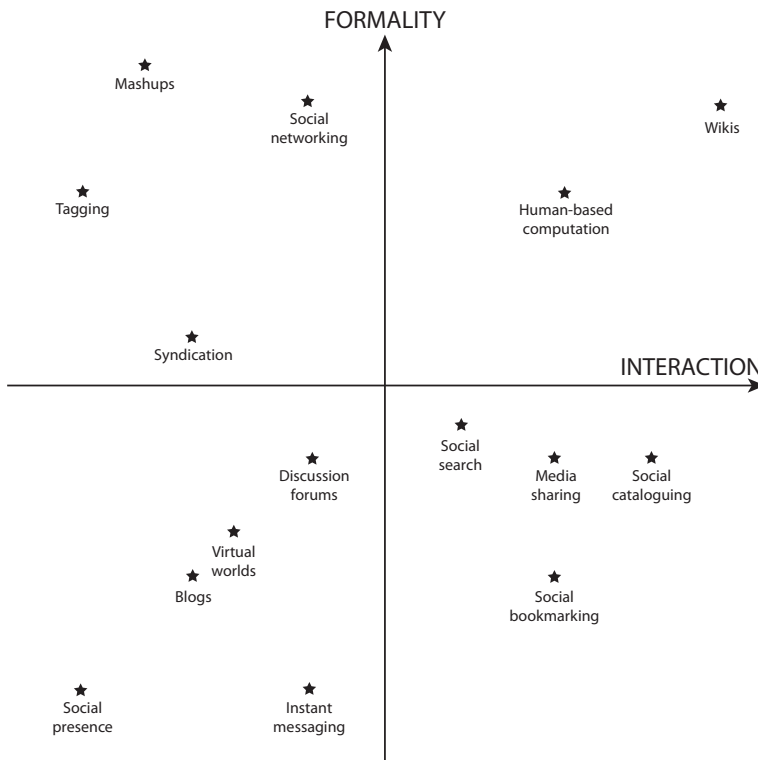


Figure 3.5 The 4Cs social software technology framework

In the next section, I present some specific case studies that demonstrate how companies are using these tools to help derive specific business benefit in each of the 4Cs categories.

II *The 4Cs Approach*

4

Communication

In any organization whose survival depends on individuals and groups maintaining effective and ongoing relationships, communication is critical. Such – and indeed any – relationships can only be built through some form of communication. It is therefore also a fundamental social process; a basic human need as well as a basic organizational one.

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In organizations there are different types of communication flow, including formal (prescribed and regulated), downward, upward, horizontal and networked, but the communication type most relevant to the application of social software is informal. In his article 'Informal Social Communication', Leon Festinger (1950) summarized the three motivators behind informal communication:

- 1 *people need to share with each other and agree on important opinions and attitudes in order to feel that they belong together in the group;*
- 2 *people need to share with superiors and others their hopes and ambitions in satisfaction of needs of achievement, affiliation and power;*
- 3 *people need to express emotions such as joy, anger, hostility and the like as a means of 'blowing off steam'.*

In many organizations, the intranet has always been a tool to support formal communication. Not only is it a formal – or downward – channel, but it also contains procedures and guidelines for sending, receiving and recording messages. A corporate intranet can rarely be described as *social* software – the nearest most companies get to that is an area where staff can post information about social events.

That's not to say intranet managers should spend the next year rebuilding their intranets to support informal communication, however. In all organizations there is a need for each of the different types of information flow to co-exist. The challenge is how to introduce informal social software tools and integrate them with the formal systems already in place. As I

propose in later chapters, at the current time it is probably more important to do *something* rather than leave a gap between the formal system and the total system of communication needs that staff will simply fill with their own tools.

In this chapter – and subsequent chapters covering the other three elements of the 4Cs system – I will present some of the most prevalent social software available to support informal organizational communication, with case studies where practicable.

DISCUSSION FORUMS

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Based on the concepts of both physical and electronic pre-Internet bulletin boards, discussion forums allow employees to initiate discussions for others to review and contribute to. These discussions might consist of questions, opinions, or responses to an event (for example, the latest staff meeting). Responses are generally posted one after another in a linear fashion, with all responses and the original topic collectively known as a thread.

Internal discussion forums will be familiar to most organizations as their first foray into the world of social software (although they probably didn't recognize or refer to it as such at the time). They appeal to the command and control mindset of many IT departments (and managers) as they can impose categories, rules and moderation over posts and replies. That is not necessarily a bad thing, but discussion forums invariably fall down when such control restricts either the type or immediacy of the conversations that take place. Attempts to control what people can and cannot talk about – over and above existing policies governing acceptable behaviour – almost always stifle rather than stimulate discussion.

Case study: British Broadcasting Corporation

When looking to introduce social computing tools on the intranet, the BBC's then head of knowledge management Euan Semple started with a discussion forum. 'Some of the group of editors I managed in the mid-1990s were spending more time on bulletin boards in the evenings helping other editors from other companies than they were helping the guy in the cutting room next door because we had taken away the spare time and spaces that let them do that. We had to give them an infrastructure or mechanism to talk to each other online,' he says.

Semple created *talk.gateway* (see Figure 4.1) to allow employees to ask questions, find answers, and simply connect with each other. The system was introduced by stealth. 'Instead of giving it a huge marketing push, I wanted news to spread by word of mouth,' says Semple. 'It's in the nature of these tools that people need to trust and get to know each other online if they are

FORUMS	INTEREST GROUP	TOPICS	REPLIES	LAST POST
T.G. Notices Introduction, guidelines and policies.		6	8	on the 21/11/2005 @ 15:47 by [User Name] Post: [Post Title]
Accommodation An area for people to offer or request accommodation.		379	116	yesterday @ 14:06 by [User Name] Post: [Post Title]
Bike Shed For people who cycle to work.	Cycling	81	628	yesterday @ 11:36 by [User Name] Post: [Post Title]
Book Cupboard A discussion forum for the Book Cupboard	Book Cupboard	22	159	today @ 15:48 by [User Name] Post: [Post Title]
Charity A place to request sponsorship, announce sales etc. and to discuss activities that benefit charities.		32	33	on the 06/02/2006 @ 11:00 by [User Name] Post: [Post Title]
Discuss T.G. Somewhere to discuss the good, the bad and the ugly about the new T.G. and get our collective heads around it.		95	355	on the 22/02/2006 @ 15:54 by [User Name] Post: [Post Title]
Environment Share your ideas, comments or queries on the environment with your colleagues.		15	91	yesterday @ 13:33 by [User Name] Post: [Post Title]
Fencing A place for staff to discuss Fencing	Fencing	3	3	on the 25/01/2006 @ 14:09 by [User Name] Post: [Post Title]

Figure 4.1 The BBC talk.gateway forum

to work.’ He continues, ‘If you make systems too serious or too business like, people won’t use them.’

Simple explains that, like any such system, there was an early adopter group who were mostly younger and more technologically proficient, but now contributors come from all parts of the BBC to discuss a wide variety of topics. There are discussions about the practical aspects of programme making, producers looking for contributors or research for their programmes and even suggestions for new programme ideas. Communication within the system falls into three distinct groups:

1. *Practical questions:* according to Simple, dozens of ‘how do I ...?’ and ‘where can I find ...?’ questions are asked and answered every week. Sometimes a question which may have had a simple answer and therefore only a few responses can get thousands of views because although the answer was straightforward, nobody knew it.
2. *Questions relating to how the organization goes about its work:* ‘Many staff don’t know the formal position on policies and until they need to know there is little incentive to find out,’ says Simple. ‘Very often there isn’t a single straightforward answer and different bits of the organization respond to problems differently.’ The challenge, he says, is how the company deals with difference and disagreement

in this area. 'If HR think they have a policy that is rigidly adhered to by the organization, only to find out from an online forum that different parts of the business interpret it differently, how should they respond?'

3. *Larger issues affecting staff:* staff forums get used a lot for letting off steam, says Semple (note how this corresponds to Festinger's third motivator for informal communication). He cites an example of the BBC choosing to broadcast *Jerry Springer: The Opera* in 2006 and in doing so provoking protests from Christian viewers. 'Inside the organization there was a similar range of views expressed and this sparked off a thread of around 300 posts on *talk.gateway*,' Semple explains. The thread developed into an involved debate about the organization's actions and of religion more broadly, and represented the first time that there had been a pan-BBC platform for such informal, yet vital, communication.

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The system is largely self-policing, self-organizing and self-managed. '[Staff] can talk about what they want, so long as they stay away from slander and other legal pitfalls,' says Semple. As a result of this 'hands-off' approach, *talk.gateway* has grown to such an extent that it has now been used by 23,000 of the organization's 26,000 employees.

Other communication and collaboration social software applications are increasingly replacing discussion forums. Blogs and wikis, for instance, allow distributed and spontaneous discussion to take place, negating the benefits of discussion forums for some organizations. That said, some of the newer social software techniques are being incorporated into discussion forum software, including syndication, instant messaging and social networking. This is likely to contribute to a resurgence in the use of discussion forums on corporate intranets as a means of encouraging emergent communication, with tighter integration with other tools. Forums certainly still have their place in providing a loose framework for discussion across an organization that might otherwise not allow for communication at all.

BLOGS

Blogs, short for web logs, are the online equivalent of journals. The author (known as a blogger) posts messages periodically, usually encouraging and allowing readers to comment. Furthermore, other bloggers can comment simply by writing a message on their own blog and linking to the source post, thus creating a chain of discussion distributed across multiple blogs.

In the enterprise, blogs are frequently used by individuals to communicate information to the whole organization, and by project teams (blogs can have multiple authors) to keep people up to date with their progress. Over time,

blogs can provide a rich seam of intellectual capital that can be tapped into long after the original authors have moved on.

There is always a danger with blogs that employees may think that what they have to say will be of no interest to the rest of the organization and may even open them up to criticism. The fact that blog posts are usually identifiable to an individual author makes it a much riskier pastime than simply stating the same information on an anonymous intranet page. Trust and confidence play important roles here. Employees need to trust their managers, peers and reports to accept what they have to say, and they need the confidence to say it. To some, blogs will provide a much more comfortable way to share their opinions, ambitions and emotions with others.

Blogs generally require less formality than forums. They are less structured, whereas forums often rely on pre-defined categories to channel discussion in specific areas. Nor do blogs rely on others to keep a conversation going in the way forums do.

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In general, internal blogs can support three main roles:

Knowledge management: an internal blog can be an effective personal information management tool in the same way as a notebook or a diary. By recording thoughts, ideas and opinions openly, they are not only recorded for the individual's benefit, but are also available to others in the organization who might have something to contribute, or even have a use for that information. They can act as effective filters of knowledge due to their speed, flexibility and ability to spread information easily.

Business intelligence: although blogs are generally informal and unstructured, the signals they capture can be aggregated in order to spot patterns in information and knowledge. These patterns can alert the organization to problems and issues missed by external business intelligence providers. For example, multiple employees blogging about a competitor announcement can quickly direct the collective attention of the organization to it. Equally, employees blogging about similar topics in different parts of the world (or even the organizational structure) unknowingly form communities of interest that might otherwise have gone unnoticed.

Project management: blogs also provide an effective way of capturing the unstructured or informal information and communication relating to a more structured or formal project. A project blog can be a vital resource for all project members, particularly new ones or those in virtual teams who rarely get the chance to meet face-to-face. A successful project blog isn't just a store of project information, but a record of the ideas, opinions and knowledge of all project members resulting from the interactions between them.

Case study: IBM

In May 2005, IBM published an announcement on its intranet encouraging all 320,000+ employees to consider blogging on an internal service that in the previous 18 months had already grown to 9,000 registered users across 65 countries, with over 3,000 blogs containing over 26,000 entries and comments (see Figure 4.2). Up to that point, all internal promotion was strictly word-of-mouth.

Philippe Borremans, then European lead for new media at IBM, explains some of the benefits of internal blogging: 'Internally it brings people with the same interests, views and specialities together. It forms community across a global workforce. It allows for our people to engage in conversations with peers from across the globe. It's a great way to innovate.'

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In an interview with Dan Greenfield, IBM's Chief Blogging Officer at the time, Christopher Barger (now at General Motors), explains how the company came to embrace blogging in such a big way: 'We've been doing jams [three-day directed brainstorming involving the entire company] since 2001 on a variety of subjects – and what we've learned from these directed conversations is that people are engaged and that the company can handle open, constructive conversation.'

Not everyone thinks that internal blogs are destined to succeed, though, partly due to their competing external counterparts. Microsoft's Paul Vick (2003), in response to his then colleague, Robert Scoble, offers four reasons why internal blogs don't work:

1. internal blogs allow us to make lots of assumptions about shared knowledge, meaning that they tend to be more dry and less interesting, which in turn makes them less fun to write;

The screenshot shows the IBM Blog Central Dashboard. At the top, there is a search bar and navigation links like 'Edit My Weblog', 'My Settings', and 'Login'. The main content area is titled 'Most recent weblog activity' and contains a table with columns for 'USER', 'TITLE', and 'CATEGORY'. Below the table, there are several blog entries with their respective titles and categories. On the left side, there is a sidebar with 'Related Links' and 'XML' options. At the bottom, there is a 'Powered by' logo and a small advertisement for 'Put Your Logo Here'.

USER	TITLE	CATEGORY
@jp.ibm.com	Japanese likes paying with CASH	Personal
@nl.ibm.com	Teamroom Professional Officially Available Now!	Knowledge Tools
@uk.ibm.com	Wireless - with no laptop	
@uk.ibm.com	Re: 2AM Eternal	Gadgets
@uk.ibm.com	"Put Your Logo Here" - Selling Out Bluepages	Through The Wire ...

Figure 4.2 IBM's Blog Central dashboard

2. the shared culture inside a company makes its people more decorous, with less disagreement to provoke lively debate and interesting discussion;
3. most of us spend our days talking to and emailing our colleagues. The last thing we want to do is write the equivalent of *another* memo;
4. internally there are a lot of resources available to employees that often trump blogs.

Whilst these points are valid in some cases, in general internal blogs for knowledge management, business intelligence and project management purposes would still appear to warrant investigation as useful communications tools.

INSTANT MESSAGING

Instant messaging allows one person to communicate with another (or with groups) over the Internet or an internal network in real time, using software installed on each person's computer. Friends or colleagues can be added to a contact list and their online status will be displayed. Instant messaging is normally text-based, but increasingly voice capability or VoIP technology is being built into the software so that real-time audio – and increasingly video – conversations can take place at no cost.

Online chat has traditionally been something people did with their friends as opposed to their colleagues. Yet there has been an increasing trend toward using instant messaging as a serious business tool, particularly in call centres where the speed at which an enquiry can be dealt with is directly linked to both customer satisfaction and operational efficiency. By providing direct access to other people, companies have created live knowledge bases – quite literally – of information and reference.

Those new to instant messaging – and there are still many – may wonder why it is so different to email. The closest analogy can be found in the traditional communications methods that both are used to replace. Email is the equivalent of sending a letter through the post, whereas instant messaging is more like a conversation with one or more people. Because you can see when people are available to chat but you can't actually see them (unless you are video conferencing over the Internet), it's a hybrid of a face-to-face and a telephone conversation.

One of the benefits to businesses of instant messaging is the ability for each member of staff to have multiple 'conversations' taking place at any one time and for any of those conversations to be either one-to-one or many-to-many. Taking our call centre example, an operator may have one chat session open with a specific colleague in a different department helping them answer

a customer query, as well as a 'team' session that all the members of their department participate in, helping them to tap into the collective experience to address the issue.

Like many other technologies that have their roots in the consumer-driven Internet, many organizations fear that instant messaging will provide yet another distraction to their staff, diverting them away from their 'proper' jobs and encouraging them to waste time by chatting to their friends. And that's before they even begin to consider the security risks and the corporate need to audit electronic communication. Yet like all communications technologies that have preceded it – telephone, fax, email – and all that are to come, there is always going to be the possibility of misuse or abuse by a minority. Each organization must decide if it wishes to deny the opportunity to those prepared to use these tools in the ways in which they are intended purely because of this. In my opinion, doing so is both short-sighted and misguided, and in many cases simply masks a much bigger cultural problem with employee trust, loyalty, engagement or just basic productivity.

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Besides, for those organizations concerned about such issues there are simple solutions. It is possible to run instant messaging networks behind the corporate firewall, for instance, immediately minimizing the threat of both inappropriate and malicious communication with the outside world. In this case, the biggest implementation challenge is for companies that already allow Internet-based instant messaging software such as MSN Messenger, AOL Instant Messenger and Yahoo! Messenger, and have a high usage of such services amongst their staff. These users are likely to strongly resist the introduction of a secure, internal-only instant messaging system that denies them the ability to continue using both the software they are used to and communicating with people outside the organization, whether they be customers, suppliers or friends.

SOCIAL PRESENCE

A relatively new phenomenon, social presence applications build on the concept of instant messaging by allowing people to send updates to a central location for onward distribution to all those who wish to know what they are doing. In the most common social presence applications, these updates can be both sent and received via the web, email, SMS or other PC and mobile applications, depending on the user's preferences.

Fred Stutzman (2007), Teaching Fellow at the University of North Carolina at Chapel Hill's School of Information and Library Science, has outlined three kinds of social presence – informational, temporal and geolocational – offering the following examples:

- *Informational* – Facebook (www.facebook.com): by answering the question, 'What are you doing right now?', Facebook's users provide a constant stream of informational presence data to their friends. This



Figure 4.3 The Facebook status update interface

Source: <http://www.facebook.com>

is placed into a status update feed that appears in Facebook and gets published as an RSS feed (see Figure 4.3). Stutzman likens this to social surveillance, where users are constantly aware of what their friends are doing.

- *Temporal – Twitter (www.twitter.com) and Jaiku (www.jaiku.com)*: Stutzman refers to services such as Twitter and Jaiku as ‘lifestreaming’ applications, primarily temporal in nature although increasingly used for informational and geolocational purposes. Like Facebook, Twitter asks its users, ‘What are you doing?’, in order to elicit presence data (see Figure 4.4). As Stutzman points out, whilst Twitter wasn’t designed as a presence tool its users ‘commonly post what they’re up to and where they’re going, and use the mobile integration to find one another at conferences and events’.
- *Geolocational – Loopt (www.loopt.com)*: geopresence tools like Loopt use location positioning technology such as GPS and Bluetooth embedded in mobile phones to track the location of a network of friends (see Figure 4.5). Such services visually show the location of these friends on maps accessed via a mobile device, alerting them when a friend is nearby, in order to encourage communication and connection.

In the corporate environment, social presence is still to gain traction but it promises much as a micro-blogging platform. For example, every employee could have an account on an internal social presence service that combines Stutzman’s information, temporal and geolocational presence types.

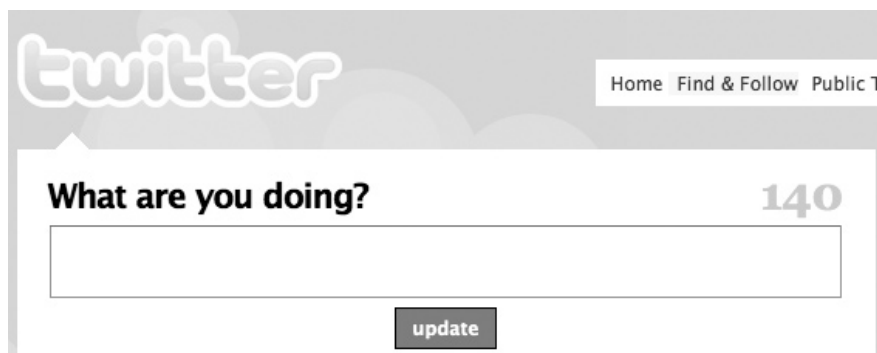


Figure 4.4 The Twitter status update interface

Source: <http://www.twitter.com>

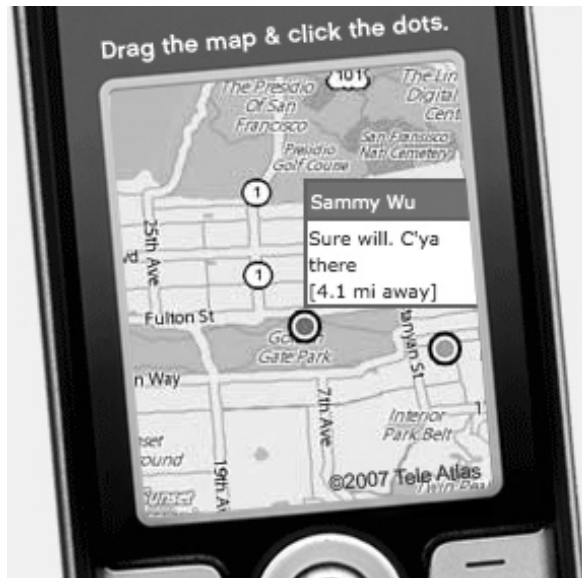


Figure 4.5 Loopt shows the location of contacts on mobile devices

Source: <http://www.loopt.com>

Whenever someone to whom they subscribe provides an update on what they are doing, or is in their vicinity, they get notified. They can also inform the system what they are doing, thus notifying their own followers.

Social presence can also be a powerful yet simple way for the organization to keep in touch with its employees. By subscribing to information channels from departments like human resources and IT, and individual channels from the management team, staff can be in control of the information they receive and be confident that it will be brief and to the point, no matter where they are.

It can also be used for knowledge management purposes. By subscribing to keywords (the name of a customer, for instance), an employee could be alerted whenever anyone in their organization mentions that company in a social presence update. For example, a salesperson could be working away on a proposal for ACME Widgets and update their status with that information. Someone else in the organization might have subscribed to the keyword 'ACME Widgets' because the company is a customer in another part of the world. That person receives a notification and a connection has been made that could make that proposal better. It's a simple example, but simplicity is the key to effectiveness with social software such as this.

VIRTUAL WORLDS

Virtual worlds allow people to meet and interact with others in a computer-based environment resembling the real world. Usually, each person has a

representation of themselves (an avatar) that they direct inside the world. Virtual worlds are already common in gaming and are also now spawning three-dimensional social networks where the only purpose of participation is to meet, communicate and connect with others. The most well known of these at the time of writing is Second Life, with almost 12 million registered 'residents' and four billion 'Linden dollars' in circulation.

In business, these intraverses provide environments for such diverse activities as holding meetings, conducting training, or simply socializing with colleagues. For example, IBM is building a virtual world to help its 370,000+ employees collaborate. IBM's innovation manager for collaborative development, Michael Ackerbauer, explains why you don't need to invest time and money trying to create a virtual version of the real world: 'Why do we need walls and ceilings to do a meeting? We've had meetings under water and up in the air. Meetings are where you want them to be.'

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IBM's *Metaverse* project even has its own equivalent of the water cooler in the form of a gigantic green boulder where employees can just have a chat. Ackerbauer believes that if people from different countries end up gathering round the boulder, then they're more likely to work together in the future. He also admits however that the focus so far has been on proving the concept and experimenting with ideas rather than attempting to deliver against pre-defined business value.

Some organizations are even going so far as to take inspiration from online gaming. Speaking to the BBC (Ward 2007), Dr Byron Reeves, a professor of education at Stanford University, said, 'The problems associated with distributed teams, collaboration and information overload right now are so severe, and the opportunities so good, that [firms] are willing to look at anything.'

For any company entering the world of social software, communication tools are the simplest, most inexpensive and often most effective methods of experimenting. They work best where the organizational culture is more informal than formal and where individual effort is rewarded over group problem-solving. However, if the company prioritizes group effort over individual achievement – or wishes to move to a culture where this is the case – then it may wish to consider tools that enable cooperation rather than communication.

5 Cooperation

As previously noted, it is important to appreciate the distinction between cooperation and collaboration before beginning to look at specific methods of supporting both actions with social software. Schopieray's Venn diagram in Chapter 2 (Figure 2.2) offers one way of looking at the differences (and overlaps). Table 5.1 attempts to consolidate some of the existing research on the distinction.

With cooperation we are therefore primarily concerned with social software that supports informal working where there are no pre-defined goals, where each individual contributor retains authority over their contribution, where information is shared as needed and where the software takes on the job of assembling data in order to show the combined picture.

As a result, cooperative social software almost always relies on a network effect to deliver maximum value to the organization as well as to the individual. In other words, the value of the system to each employee increases as more employees use it, thus increasing the overall value to their company. The

Table 5.1 The differences between cooperation and collaboration

Sources: Dillenbourg et al. 1995, Grover 1996

Cooperation	Collaboration
<ul style="list-style-type: none">• Division of labour, each person responsible for portion of work• Task is split into independent subtasks• Coordination only required when assembling partial results• Short term• Informal• No jointly defined goals• Individuals retain authority• Information shared as needed	<ul style="list-style-type: none">• Mutual engagement of participants in a coordinated effort to solve a problem• Cognitive processes divided into intertwined layers• Shared commitment and goals• Long term• Risks and rewards are shared• Collaborative structure determines authority

term 'network effect' was coined by Robert Metcalfe, the founder of Ethernet, referring quite literally to the computer network he had invented.

The value to an individual from software that depends on these network effects can be both direct and indirect. Direct value results from the individual's own use of the software, whereas indirect value results from others' use of the software in a manner that benefits others. It should come as no surprise, then, that sharing is one of the cornerstones of cooperative social software.

MEDIA SHARING

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Sharing photographs and videos is possibly one of the most popular uses of social software in the consumer space. At the time of writing, video-sharing service YouTube was reaching 12.5 per cent of the global internet population every day, ten times more than news sites from the likes of the BBC and the *Wall Street Journal*, a figure that was no doubt instrumental in Google's acquisition of YouTube in October 2006 for the equivalent of US\$1.65 billion.

The real power of media sharing comes when those files are embedded into other – usually web-based – applications. This is how YouTube and Flickr (image sharing) have become such global phenomena so quickly. By providing people with simple methods of embedding images and videos into their blog posts and web pages, they generate much more traffic than by simply expecting people to view them at source.

One might wonder what the application of such sharing might be in the enterprise and admittedly sharing images may be a little unlikely in most organizations. Video sharing, however, has great potential, particularly for informal virtual learning or other situations where it is beneficial to use moving images. Furthermore, such media sharing does not need to be limited to images and video. Any kind of file can be shared, including presentations and documents.

In fact, Google has already announced plans to offer YouTube's video-sharing capabilities to enterprises. Dave Girouard, vice president and general manager of enterprise at Google, explains: 'Our intention is to bring as much of Google's technology to the enterprise suite as possible, and using video to share information inside a business is an obvious need.'

Fine, you might say, but we can already share documents on our intranet. That is no doubt true, but effective *social* media sharing requires more than just a way to publish or download a document. Firstly, everyone needs to be able to create, publish and share. They must also be able to tag what they share with any keyword and extend the value of other documents through tagging, commenting and even voting. The technology must then be able

to extrapolate this information in order to identify patterns, relationships and common groupings of content and people, as well as provide methods (such as RSS) that allow people to easily filter documents for themselves and for others. In my experience, very few intranets – or even dedicated knowledge/document management systems – provide for such a level of social interaction.

Case study: Microsoft Academy Mobile

Academy Mobile is an internal social computing initiative that uses video and audio sharing as part of an online learning programme for Microsoft's field sales staff (see Figure 5.1). Its success depends on the desire of each employee to view, subscribe to and occasionally create the 5–10 minute video clips containing best practices relevant to the company. Staff can watch, listen to and share audio and video with their peers, subscribe to specific search queries, presenters or keywords and even download content onto their mobile devices.

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Describing how it was done, the Microsoft team highlights the importance of engaging their internal community: 'The Microsoft sales force is a vibrant, geographically dispersed, and very busy community. The success of an

The screenshot shows the Microsoft Academy Mobile website interface. At the top, the logo reads 'Academy Mobile do you dare to share?'. A search bar is positioned on the right. The main navigation includes 'Home', 'Podcasts', 'Podcasters', 'Upload Your Podcast', and 'Create Profile'. A 'Site Actions' dropdown is also visible. On the left, a 'Browse' sidebar lists categories like 'Smartphone Access', 'My Account', 'Time', 'Podcast Series', 'Podcast Topics', 'Language', and 'Need Help?'. The central content area features a 'Welcome to Academy Mobile Community Preview!' section with a video player and text: 'Do You Dare to Share? The highly anticipated launch of Academy Mobile brings social networking to your world of work. Built on SharePoint 2007, the Soapbox.com like platform enables you to watch and share, record and upload, and rant and rave about audio and video content. New to Academy Mobile? Start here... New to Podcasting? Start here...'. Below this is a filter section showing 'Showing: 1 of 12 of 169' items. A grid of podcast thumbnails is displayed, including 'Academy Mobile', 'Cybage1234', and 'Ruby's first podcast'. Each thumbnail shows a cover image, title, author, and publication details. On the right, there's a 'What's Hot?' section with a 'people ready' badge and a 'People-Ready Business Challenge' section with a 'Ruby's first podcast' highlight. At the bottom, a 'Popular Featured Podcasts' section lists recommendations like 'People Ready Microsoft Dynamics 630 Silverlight for BU...', 'Mixing VOIP with Communicator 2007', 'What's new in Communicator 2007', and 'IT: Win IT Pros winning in China'.

Figure 5.1 Microsoft's Academy Mobile home page

© Microsoft, <http://blogs.msdn.com/sharepoint>

initiative such as Academy Mobile largely depends on the desire of each individual in field sales to actively participate by frequently consuming content and at least occasionally creating some.' Some of the techniques they used to achieve this include:

- distributing memory cards to the sales force so that their mobile devices are ready to load and play videocasts and podcasts;
- a rewards programme to incentivize the top contributors with awards or points that could be used to redeem prizes;
- training sessions on how to create podcasts simply by using common software and hardware;
- a phone-to-podcast service;
- a studio facility to record professional quality videocasts.

SOCIAL BOOKMARKING

The concept of bookmarking web pages has been with us since the first web browsers. However, the bookmarking functions within today's browsers are still quite primitive, restricting the user to a private set of bookmarks associated with one browser or PC. Some desktop software has been developed to extend this functionality (e.g. more flexibility, synchronization and customization) but with limited distribution. In the mean time, tagging – the unstructured classification of online information – and RSS encourage people to tag and share interesting web pages with others, in the form of social bookmarking.

Social bookmarking services allow people to post links to web pages that they find useful or interesting, either for their own private reference or to share with others. In many cases they employ user-generated non-hierarchical keyword categorization systems (also known as folksonomies, in contrast to the tightly controlled taxonomies) where people tag their bookmarks with freely chosen keywords.

In business, however, little use has been made so far of social bookmarking tools as part of knowledge management or collective intelligence strategies, even though they have the potential to be used to collect all kinds of employee-contributed corporate intelligence – from research information and consumer insight to product ideas and news coverage. Furthermore, the ability to visualize the connections between employees and topics without them having to change their behaviour is something that should appeal to most organizations challenged by geographically dispersed and fragmented workforces.

In part, this lack of uptake is because the vast majority of existing social bookmarking services are aimed at individuals and – as yet – there is no clear choice of software for a company wishing to use social bookmarking tools inside their organization (for enterprise bookmarking).

Employees in many organizations are already using public social bookmarking services like Delicious, although this has an inherent problem. By sharing information designed for internal consumption in a public space, employees can unwittingly expose potentially sensitive information to the outside world in the form of URLs and tags. An employee might tag a competitor's website with the keyword 'acquisition', for example. Given that it is not very difficult to trace online identity nowadays, it is not impossible that the competitor could see that tag and work out the company that the contributor works for. It's an extreme example, but it illustrates some of the dangers involved in using social software designed for mass consumer use to share information intended purely for internal consumption.

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Many information architects and knowledge management professionals baulk at the thought of users generating the metadata on which their classification systems get based. Luckily there are some who see the potential, as Lee Bryant of social software consultancy Headshift recounts from his experience at the IPLC conference for information professionals:

What I found most encouraging was that even within the law firm library, a rarefied bastion of structure and order, information professionals could clearly see the potential for social filtering, social bookmarking and emergent metadata. There were none of the false dichotomies that might once have been raised between authority based on expertise and community-based authority; they were too smart for that and instinctively understood that both have a role to play.

One of the major benefits that results from enterprise bookmarking is the ability to locate expertise within the organization. In large companies in particular, finding someone who knows about a specific topic can be extremely difficult. Yet with enterprise bookmarking, it is relatively easy to find experts based on the tags they use most regularly. The assumption is that people who frequently use a certain tag will have an interest in (and therefore some knowledge of) that topic. Through no additional filling out of profiles, it therefore becomes a quick and simple procedure to identify experts, or at least augment existing expertise location systems with such intelligence.

Alternatively, an employee might wish to find others in their organization who share the same interests or knowledge (and therefore people they would want to connect and share information with). An enterprise bookmarking system would allow them to see colleagues related to them in this way by virtue of their bookmarking behaviour.

Whilst the two examples above help individual employees locate experts in a particular field, or those who share their own interests, what if you'd like to map the expertise within your entire company? In that case, it's a relatively simple process to extract all the connections from an enterprise bookmarking system and then visualize both a) the connections between individuals and b) the connections between topics and experts using social network analysis techniques.

Case study: BUPA

Leading private healthcare provider BUPA wanted to find ways to ensure that information flowed throughout the company, connecting people and information at the right time to maximize effective decision-making and corporate communications. The company identified social bookmarking as a way to share the implicit knowledge captured by their employees whilst browsing both the Internet and the BUPA intranet.

BUPA used social bookmarking to facilitate networking across the organization and create a knowledge base on the intranet (see Figure 5.2). In addition it analysed tag patterns to identify intellectual capital within the organization. By rolling out an enterprise bookmarking trial across several head office divisions, the organization discovered that about 10 per cent of users contributed to the knowledge base, with the remainder of users benefiting from discovering new information.

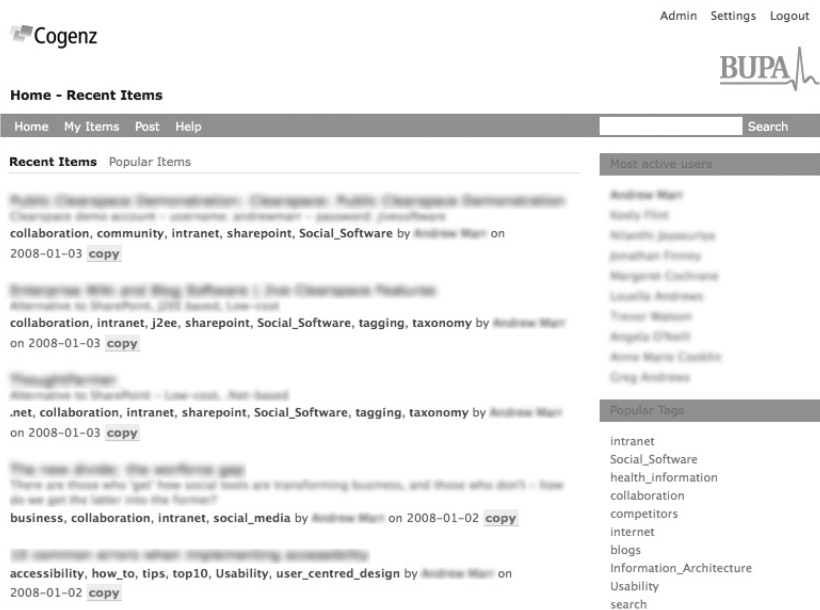


Figure 5.2 BUPA's enterprise social bookmarking pilot
© BUPA

BUPA's Lead Information Architect, Keely Flint, outlines some of the challenges:

- it takes a long time for people to get going; there is merit in getting a small, engaged group contributing items with things of interest;
- if it's not easy it won't be used, so avoid complexity;
- if people can't see the benefits immediately they won't use it and you can't force them to;
- the organization needs to market the idea and reasons to the wider employee base.

Summing up their learning, Flint identifies the key benefits as being quick and effective collection and distribution of links, creating knowledge assets in the process, as well as then being able to use this data to uncover expertise in the organization by finding people and their hidden skills.

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One of the cornerstones of social bookmarking in the enterprise is tagging, a method of connecting information in an emergent, informal way, which will be discussed in more detail in Chapter 7.

SOCIAL CATALOGUING

Like social bookmarking, social cataloguing relies on its contributors to build up databases of information on specific topics (and sometimes following predefined structures). Current consumer-focused social cataloguing applications cover things such as academic citations, books, music, products and wireless networks. In most cases, they include the ability to infer recommendation through voting or network theory.

In the enterprise, social cataloguing has endless possibilities. Any type of corporate data – such as competitor intelligence, supplier recommendations, or contact information – could be handed over to employees for collective management rather than relying on a single data owner or administrator and outdated data collection techniques.

At the time of writing there are few examples of social cataloguing applications in business, although that is more than likely due to the fact that many organizations prefer structured software designed specifically for each context for this kind of activity. Not only that, but they also employ people whose full-time job it is to do this work of cataloguing. Managers are reluctant to risk reducing their headcounts (and power bases) by replacing them with a piece of software that allows everyone to do the task and thus intermediate their reports – or even departments.

So, while I would not recommend throwing out your existing customer relationship management system, I have no doubt that there are spreadsheets and databases sitting on shared file servers that could be given a new lease of life as social catalogues where everyone can contribute their collective knowledge.

Cooperative social software is very good for enabling interaction in informal cultures, but for more formal organization structures, collaborative social software may be more appropriate. It can also be a natural progression from some of the cooperative social software platforms presented in this chapter.

6 Collaboration

To recap, collaborative social software is distinct from cooperative social software in that it supports the engagement of participants in a coordinated effort to solve a problem, with shared commitment and goals. The distinction between collaborative software and collaborative *social* software is less defined, however. One could argue that all collaboration is social, as it involves mutual engagement and relationship building. It is for this reason that the use of social software in business is often referred to as just collaborative software. For the purpose of this chapter, however, the focus is on *social software* that specifically supports collaboration.

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WIKIS

A wiki is a website whose pages can be collaboratively edited by anyone with the required level of access. The defining characteristic is generally recognized as the ease with which such edits can be made by people without any technical knowledge. Usually, every change is stored in the page's history so versions can be referred to, compared and restored if necessary.

Wikis are mostly used in organizations for live information that constantly changes, such as documentation, although some companies are beginning to use wiki technology for their entire intranets. Whilst this is not to be discouraged, it should be remembered that the main benefit of a wiki is the ability to edit collaboratively in real time rather than publish final versions of content. For this reason, wikis can become very effective when integrated with existing intranets or document management systems.

At European investment bank Dresdner Kleinwort Wasserstein, IT employees started using wikis informally to document new software. Following this, they began to migrate them into the broader workplace environment, with teams using the technology to get collaborative projects up and running quickly. After six months the traffic on the internal wiki exceeded that on the company's intranet. Not only that, but the most active employees have seen

email volume drop by three-quarters and meeting times cut in half – a clear example of more effective collaboration than would have been achieved with traditional software.

Wikis are the perfect tool for collaborative or distributed creation of documents. Rather than emailing drafts of documents to multiple recipients and collating comments and changes, those same individuals can directly change the text in a single place where everyone else can see and feed back on each revision. Furthermore, each version is kept in the document's history and can be referred – and even reverted – to at any time.

Companies using wikis have reported most success when giving participants a specific focus for their collaboration, such as meeting/conference agendas and policy documents (indeed, wikis are consistently cited by companies who have collaboratively developed policies for employee blogging – see Chapter 10).

This is just one of the success factors for wikis identified during a session on their implementation at the Online Community Unconference, led by Jim Cashel:

1. Wikis work well for groups that already know each other.
2. Wikis work well for co-assembly in addition to co-editing. Projects requiring different individuals to contribute different pieces of a whole lend themselves well to wikis. Aggressive co-editing of content is harder to effect.
3. Wikis work well when a clear nucleus is provided. Users are more likely to edit than create, so providing an instructive starting framework offering examples (and even stubs, encouraging people to edit from there) is helpful.
4. Wikis work well with a clear final product in mind. If you are building a user manual, a notes archive, or a conference website, having a well-defined final product is very helpful.
5. Wikis work well in documenting consensus rather than opinions. If you seek an archive of opinions tied to authorship, discussion forums are more effective.
6. Wikis work well with short deadlines, as they are easy to set up and build upon.

It is worth adding that wikis also require considerable behavioural change to effectively replace previous, inefficient ways of working. Those used to a publishing mentality will find the fact that a document could be in a constant state of draft somewhat uncomfortable. Others are simply not keen on changing in public what someone else – particularly a senior colleague – has written without first discussing it with them in private. As

Tapscott and Williams (2006) point out, ‘a wiki is more than just software for enabling multiple people to edit web sites. It is a metaphor for a new era of collaboration and participation’.

Case study: Janssen-Cilag

In 2006, research-based pharmaceutical company Janssen-Cilag replaced its static intranet in Australia with a wiki. Over the next 16 months, that decision proceeded to transform the company’s internal communication. The organization’s previous intranet, *InfoDownUnder*, was typical of many companies, with only a handful of content editors and the IT department the only ones able to physically publish content to the intranet (see Figure 6.1). Janssen-Cilag’s Nathan Wallace explains: ‘While some areas were lovingly maintained to a high standard, large sections of content were out of date. There was no search capability. Trust in the information was very low. News was distributed by email, not the web. The site featured excessive use of [blinking text], and ‘New!’ icons highlighting content that was up to three years old.’

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Wallace used the subsequent requirements-gathering sessions to pitch the idea of a wiki to his colleagues. His sales pitch went as follows:

- We need a system where editing is immediate and very simple.
- Getting people to contribute is hard, so we need to concentrate on letting people do things rather than worry about what they shouldn’t do.

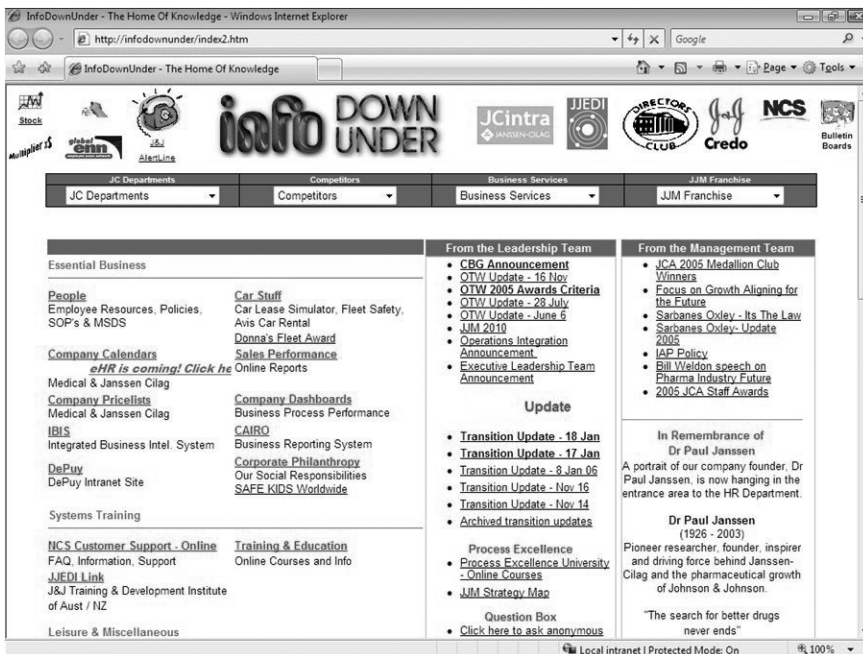


Figure 6.1 Janssen-Cilag’s pre-wiki intranet

© Janssen-Cilag

- The risk of letting anyone change anything is low, since we'll keep a complete history of changes so we can quickly undo mistakes and we can hold irresponsible individuals accountable for anything improper.

Predictably, the biggest concern over introducing a wiki was that staff might make improper changes to content. Wallace countered this by explaining to his colleagues that, if they really wanted to, employees could do similarly improper things already (like defacing posters on notice boards and so on), but the social forces at work mean that rarely happens. Better, he says, to leave these social forces to control behaviour than use technical restrictions that raise the barriers to collaboration.

Janssen-Cilag purchased and customized its pilot wiki-based intranet, called *JCIntra*, within two weeks and on a budget of AU\$11,000 (around £5,000 at the time of writing), launching it as the primary source of information for a relocation of its head office (see Figure 6.2). As Wallace says, 'nothing drives traffic like the seating plan for a new office!' The subject matter was ideal, as information was changing daily for the two weeks between the announcement of the move and the actual relocation. The success of that pilot resulted in executive approval to replace the existing intranet and over the next two weeks Wallace and his team worked with key content owners, showing them how to create pages and migrate their information.

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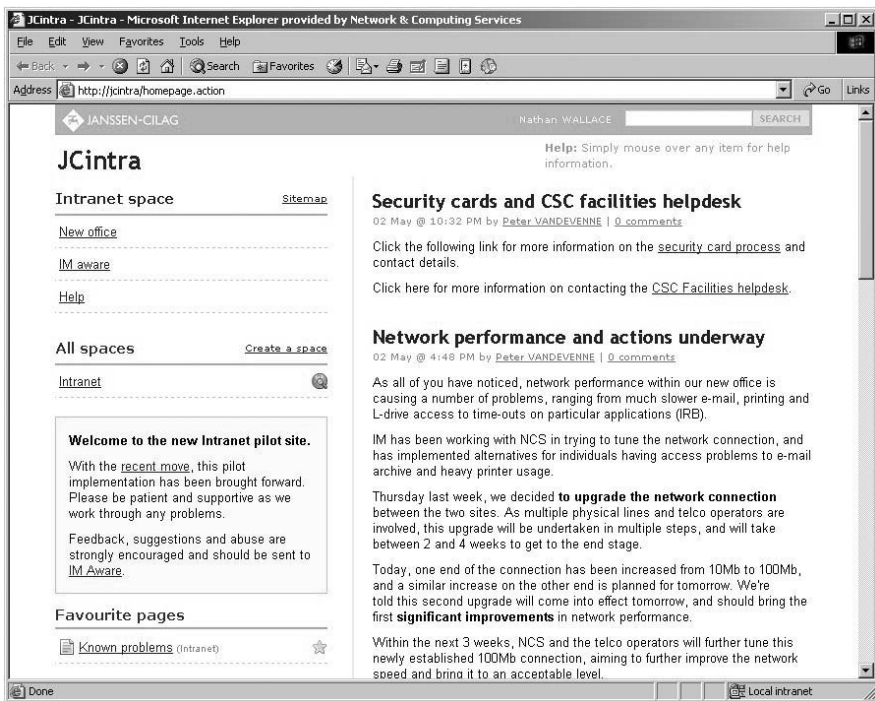


Figure 6.2 JCIntra pilot home page

© Janssen-Cilag

The new intranet was launched at an informal head office monthly meeting, where Wallace took just five minutes to demonstrate how easy it was to view, search, edit and maintain. 'That launch presentation remains the only formal training we've ever provided on how to use the system,' says Wallace, although he goes on to explain that continuing training consists of short one-on-one demonstrations and a detailed help section on the intranet.

According to Wallace, adoption of *JCIntra* has been remarkable. After only three months, 111 employees had contributed more than 5,000 changes. After 18 months, the intranet had over 23,000 contributions from 239 staff members (around 70 per cent of the total workforce). Most significantly, he says, the number of contributions per month has continued to grow: 'People are engaging and collaborating more with time, they are not losing steam as you might expect.' (See Figure 6.3.)

That said, Wallace does point out that 82 per cent of all the pages on *JCIntra* have just one author (not necessarily the same person), so it is not actually being used as a genuine wiki where multiple people make changes to the same piece of content. In fact, only 2 per cent of all content has more than three authors. Addressing this issue is one of Wallace's key areas of focus going forward. 'Currently [we] provide an open wiki (high capability maturity) but primarily use it as groupware (medium usage maturity) ... To continue our journey, [we] need to become comfortable with the idea that published

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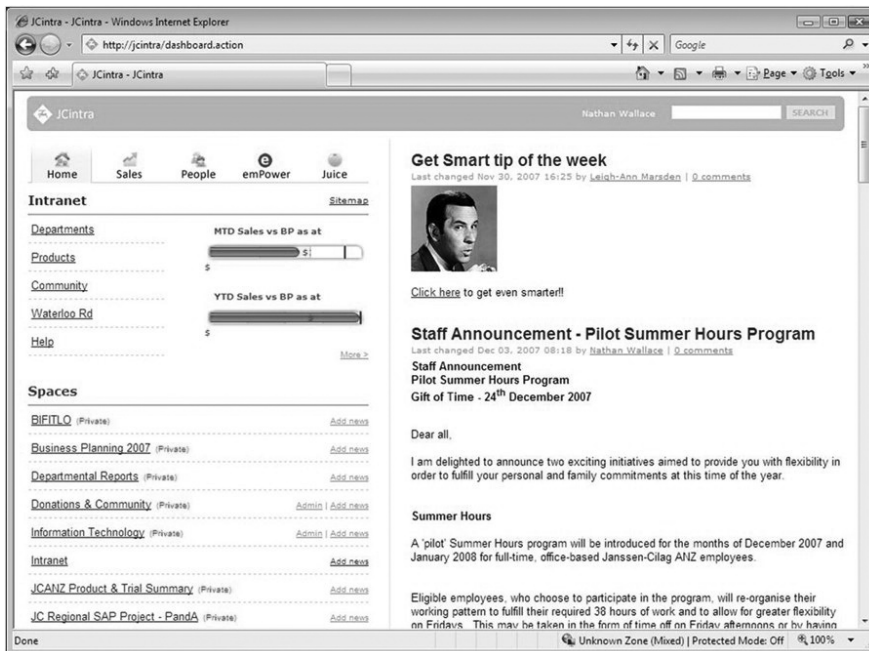


Figure 6.3 JCIntra home page

© Janssen-Cilag

content is not finalized,' he says. To achieve that, he says, employees need to make contributions that are not policy documents or announcements and edit work of information that is owned collectively.

The Janssen-Cilag case study illustrates one of the main challenges that almost all organizations introducing wikis will face, particularly if using the technology to replace an existing publishing system such as an intranet. Without the right context there is a danger that employees will simply see it as another content management system, a communication tool rather than a collaboration tool they can use to work together to achieve a shared goal.

HUMAN-BASED COMPUTATION

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Social software that uses human-based evolutionary computation relies on technology that allows humans to contribute solutions to specific problems as part of an evolutionary process. Those solutions in turn inform the software, enabling it to provide better information to the next person. In computer science, it is a technique where a computational process performs its function by outsourcing certain steps to humans (Kosorukoff 2001). This is in contrast to established systems, where a person gets the computer to solve the problem. In human-based computing, the roles are reversed; the computer asks a person or number of people to solve a problem, then collects, interprets and integrates their solutions into its own knowledge base.

Human-based computation is a complex area of research well beyond the scope of this short section, and its methods combine computers and humans in a variety of different roles. Alex Kosorukoff (2000) has grouped these methods into three classes, with the one most relevant to collaborative social software known as human-based genetic algorithm. Examples of this in practice include wikis (contributing and editing are two types of human-based innovation), as well as collaborative problem solving.

Its grandiose name belies the simplicity of the concept. In its most basic form it could support the capture and ranking of an individual contribution by a wider group of participants. The point is that people, not the system, do the work of analysing and recommending. This makes it particularly valuable in business as a method of collaboration and knowledge exchange, as it facilitates consensus and collective decision-making. For example, companies are using similar techniques to hold perpetual brainstorms and idea exchange amongst employees, and occasionally also with customers and the wider population. Some organizations have created internal prediction markets for business forecasting, applying the 'wisdom of crowds' concept (Surowiecki 2004) to complement or sometimes replace existing decision-making processes and making the bold assumption that everyone in the company acting together results in better decisions than when the CEO acts alone.

Case study: Oracle IdeaFactory

In June 2007, three members of Oracle's AppsLab team were chatting about how they could establish an ongoing dialogue with their colleagues in product strategy and capture the innovative ideas they had for Oracle's future products. They thought of several ways to do it: holding conference calls to exchange ideas on a regular basis; inviting their colleagues to collaborate on a wiki; or building a simple website to track their ideas.

They decided they needed a site where people could submit their ideas, tag them, have them rated by their peers and allow comments to be entered. Rich Manalang (2007), one of the team, liked to call it 'The Wall' – a place people could throw up ideas and see what sticks. 'The IdeaFactory is something that was interesting because it was badly needed by our teams – too many ideas weren't being shared and critiqued by the general Oracle ecosystem,' Rich says. 'So, we knew that if we built the IdeaFactory, it would get used a fair bit and would help Oracle product strategists be more collaborative.' Within 24 hours, Rich had built the site, and after a few enhancements *IdeaFactory* was live (see Figure 6.4).

News of the site spread virally across the company and six months on it was still receiving solid traffic and new ideas posted every day. The concept has

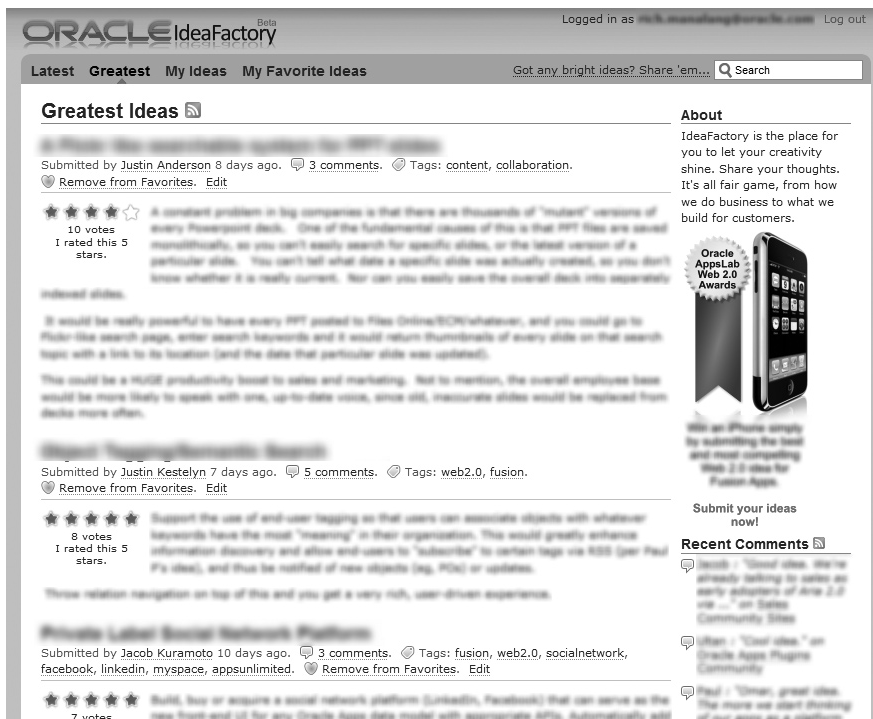


Figure 6.4 Oracle IdeaFactory

ORACLE Mix

Home People Groups Ideas Answers

Latest Ideas Greatest Ideas My Favorite My Ideas from everyone

2 Want it
Mix and Webcenter (Spaces) need to meet, fall in love, have a baby, and put it on the price list.
 Proposed by Pulverman, Ken Pulverman about 1 hour ago

Love the 2.0 energy exuding from every pore of Oracle these days. I think the right path is for us to merge our like solutions, package for use by our customers, and then be the exemplar of drinking our own champagne and measuring its positive corporate health benefits.

Save to favorites No comments yet Tags: Webcenter., Web, 2.0., Enterprise, products, you, can, buy., koolaid Products: [none]

4 Want it
PL/SQL unit testing framework
 Proposed by Raimonds Simanovskis about 12 hours ago

It would be good if Oracle would develop their own advanced PL/SQL unit testing framework which would be tightly integrated with Oracle database.

Currently there are just several open source frameworks (utPLSQL, pl/unit) and one from Quest (Code Tester for Oracle) but they are not as easy to... read more »

Save to favorites 2 comments Tags: testing, pl/sql Products: [none]

Figure 6.5 Oracle Mix

Source: <http://mix.oracle.com>

become so successful internally that Oracle now has an external version of *IdeaFactory* called Oracle Mix (<http://mix.oracle.com>) for its customers to share ideas with each other and the company (see Figure 6.5 above).

The final quadrant in the 4Cs matrix brings together those technologies that connect employees to content, content to content, and employees to employees.

7

Connection

Whilst the position of social software that enables connections in the top left quadrant of the 4Cs matrix implies that technologies in this category require little communication between employees, it is important to note that this refers primarily to direct, contiguous interaction. It is still a key element, but with these types of social software such interaction is distributed over time, between multiple individuals and even across different systems. It should also be remembered that cooperation and collaboration systems depend on direct interaction between people, whereas connection tools rely as much on connecting employees with content and each other.

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SOCIAL NETWORKING

Social network services enable people to connect online based on shared interests, hobbies, or causes. In general, social networking services allow users to create a profile and become friends with other users. In most cases, both users must confirm that they are friends before they are linked and privacy controls ensure that the user can choose who is able to view their profile or contact them. In addition, sub-networks can often be created via group affiliations or other commonalities – thus exposing any implicit networks within the system.

Social networking inside an enterprise is particularly valuable when the organization rewards individual effort but needs to encourage knowledge sharing and connection with others – perhaps across geographical or functional boundaries – or with a particularly young workforce primarily motivated by social connections rather than professional ones (the MySpace generation). As a result, internal applications of social networking that mix both personal and professional interests are highly likely to succeed.

Enterprise social networking can look very different from the consumer services that employees might be used to, relying instead on social network analysis techniques to extract connection information from existing interactions. However, some companies will rightly choose to mimic

these consumer services – and occasionally even use them – in an attempt to present them in a comparable light. Extensions to social networking software include tracking who staff communicate with by email or other means, ranking the strength of each relationship based on how often people communicate. As a result, it can act as a powerful tool in helping employees find common sources and contacts so they can compare and combine their connections in order to better benefit the business as a whole.

Case study: Serena Software

Serena Software is a firm with just over 800 employees with operations in 18 countries and at least 35 per cent of its staff working virtually. Its leadership wanted all employees to be better connected so they could be on the same level of understanding of, excitement about and commitment to this transition. They thought that using a social networking tool like Facebook represented the best way to take the whole company through a major transition.

Rather than spend time and money replicating the Facebook experience on its intranet, Serena simply created a private Facebook group just for its employees and built a few basic applications to reflect its intranet functions. Now it provides links to documents stored securely behind the firewall and access is just as secure as any other method, as the documents aren't available to anyone except Serena employees. For example, senior vice president of worldwide marketing, René Bonvanie, and his staff post press clippings and HR provides links to benefits information. Staff can connect with each other in the exact same way they do with their other Facebook friends.

In fact, Serena also has public Facebook groups to connect with customers and the broader marketplace. René says that some of his customer conversations have now moved away from email. Clients connect with René and his colleagues through Facebook. This approach has also helped Serena with its recruiting, as prospective employees send their resumé's through the system. Employee morale as well as employee retention have also increased, as the whole firm is better connected.

Many companies – and even more vendors and venture capitalists – see social networking as the holy grail of enterprise social software. This is partly because of the attention that the likes of Facebook, MySpace and others are receiving right now, and partly because getting employees to connect and work with others rather than reinvent the wheel can save time, effort and money. However, it's not as simple as just installing a system and thinking staff will apply their existing personal social networking habits inside the company as well. It is worth noting that the majority of connections made on social networking sites are between people who are already acquainted, so it's likely that if someone doesn't already know a colleague they're unlikely to make a connection with them.

TAGGING

The first of three *enabling* technologies discussed here, tagging is a technique employed throughout the range of social software tools. Tagging is intended to make information increasingly easy to search, discover and navigate over time. Users can usually see who created a specific tag and see the other tags that a person created. Tagging is the cornerstone of creating the user-generated taxonomies (known as folksonomies) that help people connect with content in social software and allow content from disparate sources to be aggregated into one subject-related place.

Many people believe that tagging provides a useful alternative to more traditional, controlled taxonomies and an employee-generated folksonomy could therefore be used to facilitate or reinforce workplace democracy. Either way, this metadata (data about data) is a critical factor in providing the context that people need to find and organize information and, according to Anne Gilliland-Swetland (1998), needs to reflect three features:

1. Content: What the information is about.
2. Context: What the information is, in terms of its authorship, time, location, type, etc.
3. Structure: What the information is related to, intrinsically or extrinsically.

In a recent report on social tagging, Forrester Research, Inc. (Owens et al. 2008) outlines some of the reasons why formalizing the creation of metadata in organizations rarely works:

Content creators lack time and incentives.

Content authors neglect metadata because of the extra time it takes to add descriptive features to information.

Professional taxonomists are hard to justify.

Most companies are unwilling to hire an army of such professional metadata specialists to organize their mountains of documents, emails, and intranet sites.

Metadata authoring tools are awkward.

Content management systems can make capturing or defining metadata an obscure or cumbersome step in the information management process.

Software automation has not reached its full potential.

Automatic software categorization is still limited in its ability to name a topical category or reconcile variations on the same word.

Owens defines social tagging as ‘the act of end users categorizing and retrieving content using open-ended labels called tags with the option to share tags with a community’. It allows users to group and categorize information from a wide variety of sources, enriching the information through a variety of perspectives not just that of a single taxonomist. These tags, says

Owens, reflect *any* features of information, offer subjectivity counterbalanced by diverse perspectives and have an open and simple structure.

It is perfectly possible for taxonomy and folksonomy to peacefully co-exist in organizations with formal metadata structures already in place. Owens advises such organizations to consider social tagging as disconnected from formal taxonomy (use it for different content in a different context) and distanced from professional intermediation (expect chaos to reign), although I believe that maximum benefit will actually be derived when the two are merged together into a hybrid taxonomy/folksonomy (a talksonomy, perhaps?).

SEARCH (AND SOCIAL SEARCH)

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Study after study shows that when it comes to searching enterprise content, employees' expectations are not being met. In too many companies staff just don't receive the results they want or expect from their internal search engines. They are either presented with nothing of value at all, or inundated with hundreds of results prioritized on the basis of what an intelligent – and often expensive – computer algorithm decides is relevant to their search term.

This algorithmic approach relies heavily on the author of a piece of content to determine the search terms under which it will be returned (using metadata), as well as the popularity and relevancy of other content (using hyperlinks). Whilst this method works well on the Internet where there is a large universe of information to index and site owners invest time and money influencing their search engine rankings, it is less effective for enterprise content.

Firstly, enterprises have smaller corpuses of information to be searched so it is harder to aggregate the data needed to determine relevance. Secondly, hyperlinks don't always carry the same weight on an intranet and are rarely used as a discovery or ranking mechanism. Finally, intranet authors do not have the same incentives as their Internet counterparts to index their content or use links as an *ad hoc* voting mechanism. Hence most enterprise search systems rely on trying to understand what a piece of content is about as the basis to determine relevancy, their algorithms attempting to match the intelligence of a human being.

Social search takes a different approach to the problem. Rather than using algorithms to replicate the complex human mind, it relies on human beings themselves to select the content that is important and index it using keywords that mean something *to them*, usually through the process of tagging. By tapping into the collective intelligence of a large group of people, social search engines build a universe of content that has not only already gone through a process of selection, but has also been tagged with keywords describing the *received* meaning, some of which may never even appear in the content.

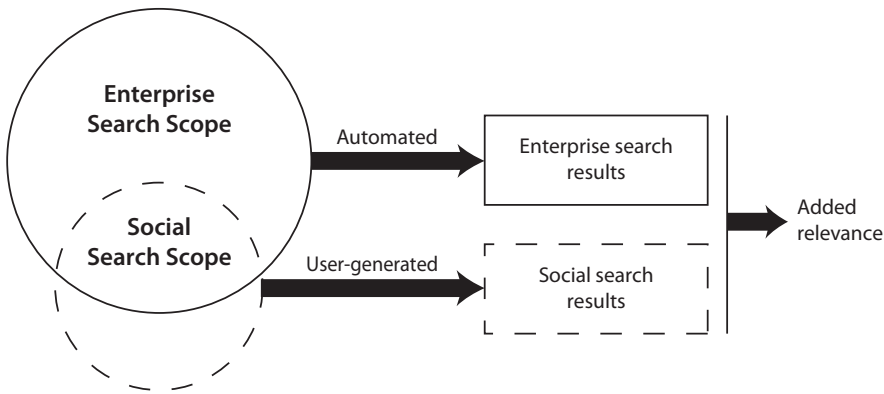


Figure 7.1 How social search augments enterprise search

The benefits of social search include less reliance on links to determine relevancy and increased relevancy because each result has been pre-selected by a human. Furthermore, indexing using human techniques goes beyond a computer's ability to analyse text, delivering results that are relevant from the *reader's* perspective rather than the author's.

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Like folksonomies built on tagging, social search is best applied in a business context by augmenting existing enterprise search systems, not as a replacement to them (see Figure 7.1 above).

Without a social search component, results are selected from the corpus based entirely on the search engine's algorithm. By adding social search to the mix, a subset of the corpus (and also any information that lies outside the corpus) is identified by employees as being important. Multiple people using multiple keywords further tag each item in this subset with keywords describing meaning. This employee-generated metadata can then be fed into the enterprise search – for example, by increasing the weighting of each item in the subset and/or adding the keywords to the metadata – delivering more accurate results to the searcher.

Internet search engines are already investing in services containing large collections of social search data (the most notable being Yahoo!'s acquisition of Delicious in 2005). It surely cannot be long before enterprise search providers begin to follow suit in an attempt to solve the problem of relevancy in search results inside the organization.

SYNDICATION

With all this information in far-flung corners of the globe, syndication is the only realistic way to filter it. Specifically, really simple syndication (RSS) is the format that has risen to the top of the pile and is now commonplace in all forms of social software (and an increasing amount of enterprise software).

An RSS feed (or sometimes web feed or channel) contains either a summary or the complete text of content from an RSS-enabled web service. This provides two benefits: first, it allows people to subscribe to their favourite sites and have new content delivered straight to them rather than checking manually; and second, it provides a consistent format for information to be extracted from one system for display or manipulation in another. For example, a single RSS feed published just once could be subscribed to by multiple employees, displayed on the home page of the intranet, in a desktop application, or accessed via a mobile device (see Figure 7.2).

RSS feeds can be viewed using feed reading or aggregation software. Many of these are web services themselves, but RSS is increasingly being supported in web browsers, operating systems and email clients. Various research studies show that the number of individuals knowingly using RSS readers is between 5 and 11 per cent of the US adult online population.

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In the enterprise, RSS has many uses for distributing information:

Internal communications: as organizations turn to social software tools for communication, cooperation and collaboration such as those outlined in previous chapters, RSS will serve as the primary method of receiving notifications of updates. As a result RSS can be used to push corporate information out to individuals, groups or the entire organization, whilst at the same time allowing the recipient to control what they receive, when and on what device.

Information aggregation and syndication: as well as corporate communication, RSS can deliver other forms of information to the employee, designed to reduce the amount of time they have to spend looking for it. Examples include: data feeds from external information providers; meeting notes; news clippings; internal and external blogs; audio and video; and notifications from applications. According to NewsGator Technologies, a provider of

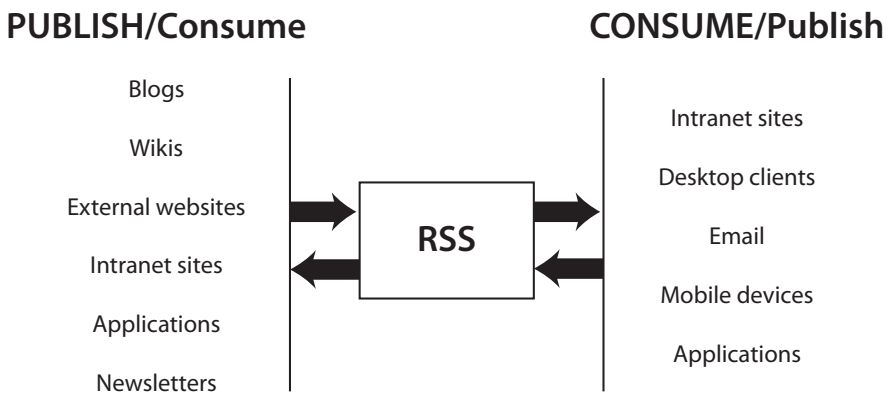


Figure 7.2 Using RSS to distribute corporate information

enterprise RSS solutions, even if an employee saved just five minutes each day (a conservative estimate based on their customer research) the return on investment could be significant, freeing up staff to spend more time focusing on more valuable tasks.

Enterprise 2.0 collaboration: for many organizations, RSS will be the glue that holds together its various experiments with the social software tools already outlined in this section. The success of many of these tools relies not just on active contribution but consumption of the information being created. It is this consumption that drives people to comment on a blog, change a wiki page, share a video or bookmark, or vote on an idea. If they don't know about the conversation, then they have no incentive to join in. All good social software will output RSS as standard, ensuring maximum consumption and therefore contribution.

Case study: Spencer Stuart

As one of the leading executive search consulting firms in the US, Spencer Stuart understands the value of information. Knowing what is happening at their clients' company or within the industry is critical for winning search assignments and placing candidates. As Trapper (John) Markelz, a senior project manager at the firms notes: 'Those consultants with a breadth of knowledge and understanding of the industry and talent pool do the best in terms of placements and client service.'

But keeping track of the different information sources – the web, blogosphere, premium content providers and so on – is extremely time-consuming. Since many of the consultants are self-proclaimed 'technophobes', ensuring they get relevant information in a way that they can easily consume is particularly challenging. RSS was to play a primary role in delivering timely alerts to a group of busy professionals.

Markelz and several of his colleagues had been using public web-based RSS readers on an individual basis. 'So much information isn't valuable because of the time it takes to get through it. With RSS, we quickly saw how it can make you much more productive and aware of information across a variety of relevant sources,' Markelz says. The company's goal was to make it as easy as possible to get information to the search consultants; yet individual readers aren't designed to have subscriptions handled at a central level, or share subscriptions and results across the organization.

The first phase of the project was to get knowledge workers in the firm to become smarter in the way they accessed information, so they were given access to both internal and external content both through their central RSS system (provided by NewsGator) and on their Microsoft SharePoint portal. In addition to making consultants more knowledgeable, they also became more productive since they can sift through relevant information in much

less time. 'Many things in the past that would have involved a number of manual processes to send alerts can now be accomplished by simply creating and subscribing people to a feed,' says Markelz. 'We have also seen an increase in participation on the intranet due to RSS notifications of new content or modified content, prompting people to read and contribute further.'

After seeing a lot of success with the first phase, the firm is now embarking on a more ambitious project. They want to automatically subscribe search consultants and their associates to all the relevant information they need on a company, its executives and industry news. Markelz is excited about what the future holds for RSS in his company. 'People are very excited here at Spencer Stuart that we are this committed to RSS as a delivery mechanism,' he notes. 'Blogs and other social media tools are going to become an important part of doing business, but just how valuable are they without a way to read and aggregate them? RSS aggregators are going to play an important role in the adoption of these Web 2.0 technologies.'

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MASHUPS

Increasingly, companies will want to combine many of the outputs from social software systems with existing enterprise applications and even external services. By making application programming interfaces (APIs) available, this can be done relatively quickly and easily. The result is something that has been termed mashup – a website or application that combines content from more than one source into an integrated experience.

Enterprise mashup platform provider, JackBe, offers a definition more relevant to the use of mashups in business: 'A mashup is a user-driven micro-integration of web-accessible data.' In other words, an application that is defined by the end user ('I want to mash up this and this and this'), integrated by technology (through merging, feeding, joining, filtering and annotating), all in a single web interface. The best way of understanding the potential applications of mashups is through a specific example.

Case study: US Defense Intelligence Agency

The Defense Intelligence Agency is a Department of Defense combat support agency and an important member of the United States intelligence community. With over 11,000 military and civilian employees worldwide, the DIA is a major producer and manager of foreign military intelligence. The DIA provides military intelligence to war fighters, defence policymakers and force planners, in the Department of Defense and the Intelligence Community, in support of US military planning and operations and weaponry.

In today's intelligence community the need to be technologically driven correlates directly to the centralization of information among various

government agencies. The need for rich and effective collaboration and integration solutions that enable communication flow throughout government departments are essential to building mission-critical applications. Based on these needs, the DIA deployed Overwatch, a virtual operating centre application that integrates multiple intelligence sources into a desktop-like intelligence asset dashboard for the real-time analysis of data (see Figure 7.3).

A typical intelligence-gathering process begins with a user selecting an area of responsibility such as a combatant command, which limits a variety of intelligence from different sources to that specific area. The user then selects the type of intelligence such as a facility, personnel, naval vessel, aircraft, event or travel, to further limit intelligence to that specific type. Additional filtering can be specified depending on the type. Once filtered, the resulting intelligence asset can be updated and comments made for rapid information sharing to occur. Users can save and share sets of information with other secured, authorized users.

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The DIA chose a mashup platform rather than a traditional software integration approach in order to eliminate significant development and deployment time. Overwatch addresses the DIA's information gathering and sharing challenges by empowering its staff to quickly paint a picture of situational awareness across various intelligence sources using drag-and-drop and bookmarking that is then re-used for future private briefings.

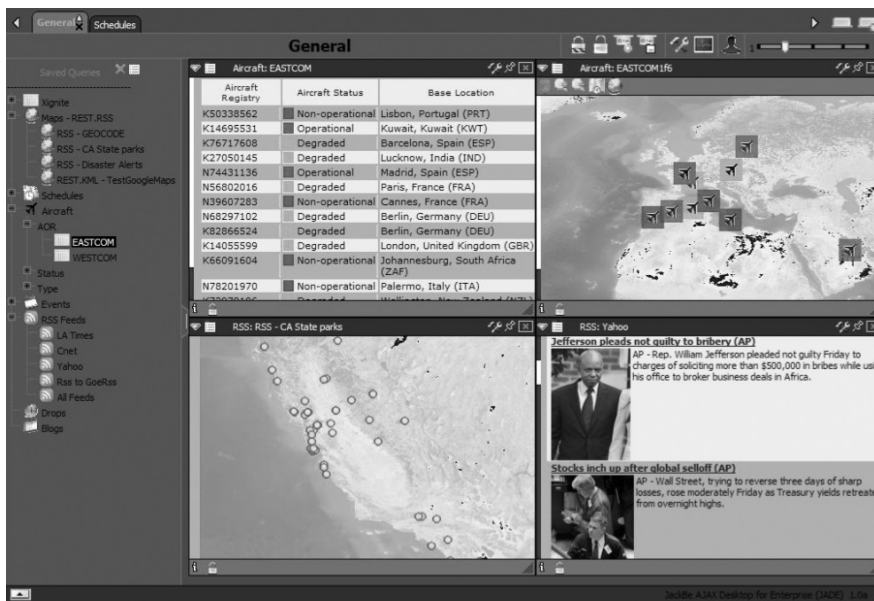


Figure 7.3 Overwatch, the DIA's enterprise mashup

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III *Implementing Social Software in the Enterprise*

8

Models for Success (and Failure)

THE MYSPACE WORKPLACE

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The biggest mistake made by many companies when it comes to emerging trends is to think that just because only a handful of their staff apply them now, the future is going to be no different. Bear in mind that within just five years, members of the MySpace generation are going to be entering the workforce, bringing their collaborative tools with them. If you don't have the software that allows them to search, link, author, tag, mashup and subscribe to business information in the ways *they* want to, they are going to do one of three things:

1. use third party software that does;
2. leave to join a competitor that does;
3. not want to work for you in the first place.

Social software is more than just an evolution, and it is perhaps unsurprising that some of those evangelizing its application in business – including the author – might see themselves as revolutionaries. They – and those who adopt it – like the way it challenges and disrupts the ways in which things get done. There is a growing chasm between the mindsets of C-suite executives and the new knowledge worker and it's getting wider by the day.

Younger employees in particular, such as new batches of graduates, are going to be pushing employers to allow them to use Web 2.0 technologies for their work. If their companies don't comply, then it's more than likely that they'll just use them anyway – without permission. As Marthin de Beer, a senior vice president at Cisco Systems, says:

The upcoming generation is going to have a major impact on business. He or she will expect to have access to their tools in the workplace. It would be like someone from my generation not having access to email and instant messaging. If they don't get this stuff, they probably won't be there for a long time.

Dennis Moore, when a general manager with SAP, concurred:

People are bringing from home an expectation of how computing should be. Ten or 20 years ago, people did not bring computing expectations to the office. Now people have better computer technologies at home ... People want to use their favourite technologies at work. They're satisfying themselves and not waiting for IT.

Don't assume that it's just a generational thing either; in a January 2007 study, management consultancy Booz Allen found that 42 per cent of MySpace users and 41 per cent of YouTube users were over the age of 35:

Web 2.0 seems to cut across age and gender and – more importantly to businesses – it influences purchase decisions ... The need to evolve existing business models by integrating the Web 2.0 environment is urgent.

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Social software consultant Thomas Vander Wal (2007) reports on the misconceptions around the corporate digital divide:

I have been working with technology and its adoption in corporations since the late 80s. The misperception that older people do not get technology, are foreign to the tools, and they will not ever get the technical tools has not changed. It is true that nearly all newer technologies come into the corporation by those just out of school and have relied on these tools in university to work intelligently to get their degree. But, those who are older do see the value in the tools once they have exposure and see the value to their work (getting their job done), particularly if the tools are relatively simple to use and can be adopted with simple instruction (if it needs a 10 to 200 page manual and more than 15 minutes of training to start using the product effectively adoption will be low) ... This is how we got e-mail, messaging, Blackberries, web pages, word processing, digital collaboration tools (the last few rounds and the current ones), etc. in the doors of small to large organizations.

If in doubt, block it

When faced with the onslaught of employees bringing social software into organizations on their own terms, the instinct of most senior managers is to fight it or, if they can, block it. The problem with this approach is that whilst it might solve the issue short-term it will eventually damage the business. Most of these employees are using technology to work faster and more efficiently and perhaps even for longer. What company wouldn't want that? So when management comes along and shuts it down, it's more likely than not an indication to employees that such innovation and working practice are neither encouraged nor valued. It's pretty obvious that the best talent won't stay long in that kind of environment.

Yes, it is true that some staff may not be using it to make themselves more productive (or at least not professionally), but is that really a good enough

reason to damage the personal effectiveness of those who are? The world of work is not immune to the consumerization trend and employees will vote with their feet if companies disconnect them from the technology that drives their networks.

Tom Davenport (2007) disagrees:

Since consumers control the content in Web 2.0, their power has naturally increased. But are there analogous trends within companies? I don't see them. Since employers pay employees, that gives them a certain power to start with. And while employees may trust other employees more than their senior management bosses, they are usually reluctant to say so publicly. Employees don't even fully control the content in their own emails (with widespread email surveillance and those embarrassing brand signatures many employees are forced to use), much less the overall messages that their companies send out into the world. In general, I wouldn't say the power held by employees has increased much in recent times, and with the decline of unions, the rise of the imperial CEO, etc., it would be easier to argue the opposite position.

I think Tom is both right and wrong at the same time. As I outlined in Chapter 1, the social contract between employer and employee is changing, and – in certain industries at least – attracting and retaining the best staff is one of the biggest challenges. In many cases – particularly in service industries – the best staff are also those who are the best connected and it is social software and social networks that are allowing them to build and strengthen those networks. An ex-colleague and I often joked that the day would come when a prospective employee would bring a social network map showing all their connections to a job interview. I'm not sure that idea was quite so far fetched now.

Lies, damn lies and statistics

In a survey of chief information officers published in March 2007, Forrester Research (Young 2007) found that social software was already being introduced into mid- to large-sized companies. Eighty-nine per cent said that they had already adopted at least one of blogs, wikis, podcasts, RSS, social networking and tagging. Thirty-five per cent said that they were using all six. However, as with all surveys these results should be taken with a light dose of salt, particularly given the small sample size of just 119.

At the start of that same year, business consulting firm McKinsey (2007) conducted a similar study. Their sample size was much bigger at 2,800 and covered multiple continents. This research found strong interest in social software in business but much less evidence of adoption with just 19 per cent being the highest proportion of companies investing in at least one platform. Perhaps more interestingly, the McKinsey study found that organizations in North America weren't necessarily leading the charge, being less likely to invest in social networking tools or to increase their investments over the next three years than Indian, Asian and European firms.

BARRIERS TO SUCCESS

According to a report in 2007 by professional services firm KPMG, security and culture are the biggest barriers to taking full advantage of social software in the business context. It also proposed that the reason many corporate wikis and blogs fail is a lack of active engagement and regular posting, concluding that gaining commitment from the ultimate participants is critical to success. It also highlighted the highest barrier to success of all: the fact that most companies' cultures will *need* to change or *be* changed as a result of the different ways of working that social software requires.

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Scepticism plays a big part too. More than half the business technologists surveyed by *InformationWeek* (Hoover 2007) expressed doubt about tools such as blogs, wikis and social networking, or were willing to adopt them but also wary of doing so. They cited familiar barriers: security, return on investment (or lack thereof) and their staff's skill in implementing and integrating them. The survey concludes, however, that companies ignore the movement at the risk of competitiveness. According to the study, Procter & Gamble's goal is to make it easier for its 140,000 employees to connect with each other and with outsiders, and the effort will be measured based on whether it helps get smart new products onto shelves faster. 'In a world where competition gets tougher every day, minutes really do count,' says P&G's Chief Information Officer Filippo Passerini.

Valuable information is a rare commodity in most businesses and those who possess it tend to guard it with their lives. They keep this information on their hard drives rather than in shared directories on the network and when the time does come to share it they limit distribution and ensure no one else can take credit for *their* corporate intellectual property. Many companies even incentivize their staff to work in this way – rewarding with promotions and bonuses those who are seen to be indispensable.

Yet social software is all about sharing and collaboration. To many people in business, the open and transparent way in which knowledge is shared on wikis and blogs is counterintuitive. What companies need to realize is that in a world where competitors in Asia and India can offer the same goods and services at a fifth of the cost, changing working habits, methods and tools is not just a nicety but also a *necessity*.

One of the biggest barriers to success comes when an organization is ready to standardize on a vendor for its social software tools. Up to that point it is acceptable – advisable even – to play the field, with different departments testing different systems in a crowdsourced way. At some point the IT department will want to bring these systems under their control, and research by Forrester (Young 2007) shows that they would prefer to invest in a suite of tools 'offered by a major incumbent vendor like Microsoft or IBM'. While this is good news for the IT department and Microsoft or IBM, it may not be

the best news for employees who like the informality and social nature of the tools they have already adopted.

This bottom-up organic adoption model also presents its own challenges for exactly the same reasons. The champions and supporters of social software in business could quickly create a counter-culture if they feel that their grassroots efforts are being hijacked and moulded into just another IT rollout. So first remember why this happened at all: because staff found value in these tools and wanted to change their ways of working. That is why any consolidation exercise must focus on completely aligning the interests of both the organization and the end user, not just choosing the easy option of implementing whatever an incumbent vendor tells you is social software.

There is also a huge amount of fear around social media and social software, some of it justified, some less so. Either way, it's real to those who feel it and this presents a long and rocky journey for any business. Alistair Behanna, CIO of Harvey Nash, sums this up: 'I think many people are afraid of [the ability to engage and then collaborate]. They're afraid of corporate blogs, for example. They're afraid of their own voice. They're afraid of too much collaboration.'

Whilst implementing a new wiki-based intranet for Janssen-Cilag, Nathan Wallace (2007) identified the need for organizations to mature both technically and culturally before being able to truly reap the benefits of social software (see Figure 8.1).

In the process, he identified two cultural barriers to collaboration: sharing knowledge adds more work ('I don't have time to share'); and sharing

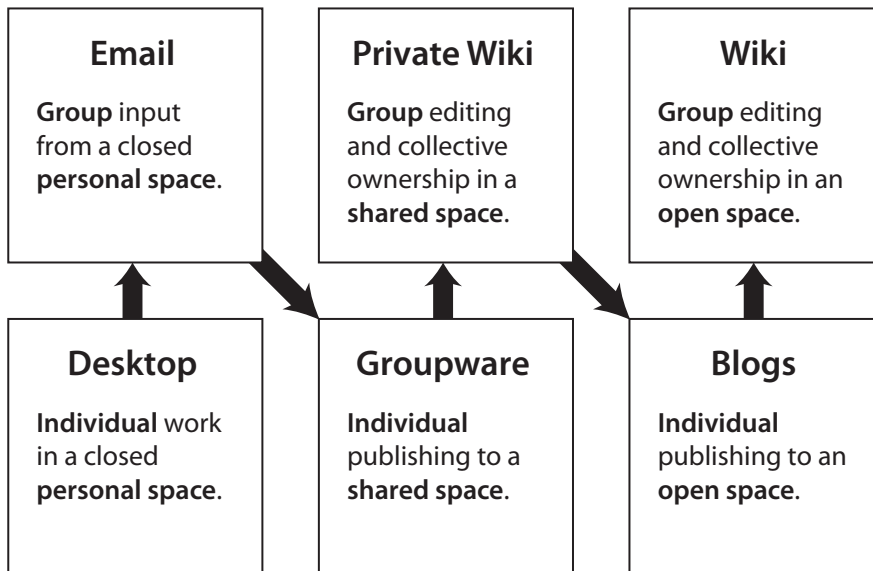


Figure 8.1 The enterprise collaboration maturity model

© Nathan Wallace, <http://www.e-gineer.com>

knowledge increases personal risk ('I don't want to share'). He offers some solutions towards minimizing – but not eliminating – each of these barriers.

First, remember that collaboration is long term, unlike the short-term nature of cooperation. The tools for collaboration should be designed to reduce the barriers to contributing: completely intuitive, no log in, one-click editing, instant gratification, and so on. Second, try to instil an expectation that work in progress is just as good as finished product. As he says, 'Publishing information early and often (rather than infrequently and completely) moves authorship away from essays and succinct conclusions towards sharing of insights and decisions'. He also believes that policy opportunities exist to migrate knowledge by requesting that the recipient will publish information shared verbally with them for wider consumption.

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Risk, he says, can be offset by increased rewards, such as recognition for contributions or performance objectives based around knowledge sharing, but this is always hard to implement and judge. Better to encourage employees to contribute to a flow of insights and decisions that are made as part of larger projects. Adding to the discussion is far less risky than publishing final knowledge or changing existing content for most contributors.

WORDS OF CAUTION

Some companies may not even have to worry about that. Many of the collaborative platforms that work so well on the public Internet do so because of their scale. They rely on Metcalfe's law that the value of a network to all its users increases each time another user participates. Inside an organization, however, the size of the network is finite, so there will come a point at which no additional value gets created because there are no users left. In smaller organizations this is clearly going to be a bigger issue than in larger ones.

At the Web 2.0 Summit in 2006, venture capitalist Paul Kedrosky questioned the value of social software in the enterprise (Farber 2006). 'Why will it work when it didn't work before? I'm not sitting around thinking it's a good time to use emergent social software,' he said. 'What is it going to replace? In the consumer market, social technology replaced other ways of interacting, but in the workplace what do they substitute for?'

No doubt Kedrosky speaks for many an IT manager, and in a way he is right. I doubt they are sitting around thinking it's a good time to use social software. The problem is that their employees *are* and what's more they are already using it. They're using it as a replacement for the ways the corporation *wants* their employees to interact with information and each other, which enterprise software so ably supports.

In fact, respected analyst firm Gartner predicts a large-scale shift in technology influence away from corporate IT departments to its consumers. In a keynote speech the company's director of global research, Peter Sondergaard, warned that this consumerization would be the most significant trend to have an impact on IT in the next ten years (Berlind 2006). 'Consumers are rapidly creating personal IT architectures capable of running corporate-style IT architectures,' he said. 'They have faster processors, more storage and more bandwidth.' Sondergaard's advice to corporate IT executives is to prepare for 'digital natives' who are so digitally astute that they will choose their own technologies without any consideration of the impact on their employers.

Social software vendors have already caught on to this trend. Whilst traditional enterprise software companies like IBM and Microsoft are incorporating social features into their offerings, dedicated social software companies are experimenting with a completely new business model. For instance, Avi Bryant of *Dabble DB* admits that his product specifically sets out to subvert IT by giving users the tools to create databases and reports themselves. His company targets end users rather than IT or the CIO, making it cheap enough for them to put on their credit card 'under the radar' of the IT department. Ross Mayfield, of leading enterprise wiki provider Socialtext, calls this the 'enterprise target with consumer approach'.

Jeff Nolan, formerly of SAP and now a vice president at NewsGator, believes that social software can be used for any business function. 'There are 1,500 processes that can benefit from the technology,' he says. 'The fundamental problem with traditional software is that developers are disconnected from users. Salesforce.com [online Customer Relationship Management] was successful by selling to end users and the company can see at any given moment what is being used in their software.'

Ross Mayfield's experience shows that social software becomes adopted on an official, sanctioned basis usually when an individual or team brings something in from the outside, generates usage and demand, and then works with IT to legitimize it. In a way, this is a fitting model for social software. Using this bottom-up, crowdsourcing approach, the most valuable services rise to the top of the organizational pile. Why go through a lengthy definition and evaluation process when you can tap into this collective or social procurement.

As ZDNet's Dan Farber (2006) sums up, 'There will be a tug of war, but in the end users will prevail. Bottom line, users unhappy with their tools won't be the most productive workers.'

IMPACT ON THE BUSINESS LANDSCAPE

The concept of open source has arguably been one of the key themes in today's Web 2.0 world. Legions of volunteers collectively contributing

towards products that are often more secure, more reliable and more useful than commercial efforts, the movement is not just a social phenomenon but encompasses many other walks of business life including advertising, marketing, news and customer service. This peer-produced output suggests that power ultimately lies with the majority working at the periphery rather than the few central players. The result is that the productive capacity of the world is increasingly coalescing on the web, using online services that encourage cooperation amongst people on the edge of the network.

In the context of business, this shift in power and control has the potential to have a devastating impact on the traditional assumptions and rules that are central to most organizations' business models. Yet very few companies are ready or able to deal with such changes. First, they cannot handle the pace of change. Their strategic planning processes do not allow them to take advantage of innovations that can become obsolete almost as soon as they reach maturity – by which time the opportunity has passed. Second, most of these innovations are disruptive. They are revolutionary not evolutionary and require organizations to take short-term risks with brands and reputations that are inherently long term. However, whole industries can be reconfigured in a very short space of time, so those who are not prepared to experiment in the short term run the even bigger risk of losing out in the long term. Disruptive innovation has no respect for tradition or heritage. Industries that have developed over decades can be turned upside down almost overnight. Unfortunately most individuals in organizations have no mandate to disrupt. The best they can hope for are incremental improvements that sustain their current positions.

Big companies have a much harder job on their hands than their smaller counterparts. The web has already proved itself as a leveller of competitive fields and the way in which Web 2.0 disrupts and subverts traditional hierarchies effectively means that the glue that holds an organization together begins to dissolve. For small businesses this isn't an issue. They are leaner, with fewer layers. Their glue hasn't yet had time to set.

In times of uncertainty and change such as those now being experienced, businesses need to allow their employees to break out of their formal organizational structures and even outside of the organization's own boundaries. Network theorist Duncan J. Watts (2003) reinforces this view in his book *Six Degrees: The Science of a Connected Age*:

A good strategy for building organizations that are capable of solving complex problems is to train individuals to react to ambiguity by searching through their social networks, rather than forcing them to build and contribute to centrally designed problem-solving tools and databases.

INSIDE OUT, BOTTOM UP

Against that background, we can begin to understand the context and stages required in implementing social software inside an organization. First, it is important to know what base we are starting from. There are five stages of maturity when it comes to an organization understanding and adopting social software in an enterprise setting. It is worth asking yourself which of these stages you consider your company to be at right now.

- Unawares: companies with little or no understanding of its role who don't know why they should care.
- Obstructors: companies with an understanding of its role but who feel threatened by its seemingly chaotic nature, thus are trying to find ways to stop employees doing it themselves.
- Neutrals: companies that understand its role but have neither the desire nor ability to deal with the impact it might have on their existing systems, organizational culture and structure.
- Supporters: companies that understand its role and are actively trying to find opportunities to use it, often against resistance from their IT departments.
- Champions: companies that understand its role and are already implementing and experimenting with different tools.

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It will come as no surprise to hear that the main challenge lies with the obstructors, for they are blind to the fact that their staff *will* find ways to use these technologies as they find them so valuable. In an article in *CIO* magazine Ben Worthen (2007) argues, 'the consumer technology universe has evolved to a point where it is, in essence, a fully functioning, alternative IT department'. He refers to it as the 'shadow IT department' – employees may turn to the corporate IT department first, but if they fail to provide an application that meets their needs within a reasonable period of time (and one that's not just functional but also aesthetic), then they will find free tools on the Internet that can.

Yet so many IT departments still cite security and compliance as reasons for restricting usage of such systems. As Gartner vice president and research fellow David Smith says, 'Never use security and compliance as an excuse for not doing the right thing. Never use these as sticks or excuses for controlling things. When you find that people have broken rules, the best thing to do is try to figure out why and to learn from it.'

On the other hand, some supporters think that the safest route is to purchase a single Enterprise 2.0 platform from a big vendor. Joe Schueller,

innovation manager in P&G's Global Business Services team, questions this approach:

'If I do everything in Microsoft, what does that do to your modularity, to flexibility? I wouldn't generalize that just to Microsoft. It's all the big vendors. IT also needs to learn how to incorporate tools employees bring in themselves.'

Many corporate IT departments would balk at Schueller's suggestion, perhaps because these tools are brought in from the public, consumer world of MySpace, Facebook and the like. That's a scary prospect for people used to controlling and dictating what employees can and cannot do. But as J.P. Rangaswami, CIO of Global Services at British Telecom, says, 'Part of the job of a CIO is to create policies that prevent artificial pockets of power based on secrets and individuals exploiting power and not sharing it. Personally I want to see those pockets of power destroyed.' And that includes the IT department.

In unaware, obstructor and neutral companies – and perhaps even in supporter and champion organizations to a lesser extent – the adoption of social software is currently being driven by the shadow IT department, the providers of the Internet-based tools that employees want to use. IT management therefore need to do three things:

1. spend more time listening to their employees;
2. accept that they are likely to be a step ahead in their understanding of social software;
3. realize that employees may already be using the tools they are only just beginning to think about.

FACTORS FOR SUCCESS

As can be seen from the examples contained in Part II of this book, some of the most successful social software implementations in companies share the following attributes:

Speed and flexibility: Oracle's IdeaFactory took just a few days to build. Janssen-Cilag's wiki-based intranet was purchased, customized and launched within two weeks. Even the Department of Defense's Overwatch mashup took significantly less time than if they had used a traditional software integration approach. Contrast this with the usual approach to introducing new tools and systems. It is certainly my experience that employees are much more forgiving if they get a solution with a few rough edges, if they get it quickly and it does the job.

Ease of use: most of the examples cited required very little training. So much so that they could be launched virally using word of mouth without a

complex communication and training programme. In fact, this peer-to-peer recommendation is probably one of the biggest reasons for rapid growth. Rather than the company saying 'go and use this system, it's great', employees are telling each other about it, something consumer marketers would die for.

Demand driven: in most cases, systems were built to respond to specific requests *from end users* and when they weren't they were considered to be experiments. Again, contrast this with the traditional top-down approach where a small group of people at the top of the organization identify a problem, spend 12 months identifying and implementing a solution, and a huge amount of resources launching it, only then to find that employees don't or won't use it because they don't buy in to the original problem.

Individual value first: one of the key factors in achieving success is the fact that the value created to the individual employee was put first and foremost in the design of each system. Organizational value came second and in fact only came at all as a result of putting the employee first.

Each of these factors is explored in more detail in Chapter 9, when it comes to implementation and adoption.

9 Implementation and Adoption

Not everything that needs to be done to support the use of social software in the workplace can be achieved by taking a bottom-up approach. Most employees cannot set up web servers on the corporate network and then install social software and integrate them with their authentication directories. The main infrastructure elements required to enable such grassroots initiatives still require an element of technological planning. The challenge for the corporate IT department is therefore to put this infrastructure in place and then get out of the way so their users can define – through usage – the direction and value of these applications through emergent behaviour.

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That said, in the course of this technological planning IT departments must take care not to apply the old rules of enterprise software to this social computing space. For instance, do not be tempted to conduct a detailed requirements analysis exercise with the gestation period of an elephant simply in order to choose a \$1,000 social software application. Instead, provide multiple platforms that will grow and evolve with use, connecting them together as they do so.

Equally, remember that most social software requires little or no training. In fact, if you choose those where the user experience is modelled on existing consumer tools you'll find that most of your users are already familiar with them. The 'killer app' in social software is simplicity – the best tools require no training (but then the same ought also to be true for enterprise software).

Finally, and this is where it gets really hairy for most organizations, don't think that you have to host everything inside your firewall. The fact is that the membrane that separates your staff from the outside world is getting thinner every day and most of them are already operating outside the firewall anyway. That's not to make light of legal and compliance requirements such as Sarbanes-Oxley, by the way. If you're seriously thinking about providing your staff with the freedom that social software brings for activities that demand high levels of data security and compliance, then you're barking up the completely wrong tree. You're probably better sticking with existing clunky enterprise systems for that.

Furthermore, it is a reality that at least one part of the enterprise software industry – and most of the social software sector – is providing Software as a Service (SaaS) using a hosted model. Whether you like this or not, what it means is that individual departments will increasingly have at their disposal ways of bypassing an IT function that doesn't give them the same kinds of tools that they are used to using in their personal lives. The cultural chasm between your web-savvy staff (who will only increase in number, by the way) and the IT department is getting wider every day.

A report on the consumerization of corporate IT from technology research firm Gartner concurs:

Our core hypothesis is that an agility-oriented, bifurcated strategy – one reliant on top-down control and management, the other dependent on bottom-up, free-market style selection – will ultimately let IT organizations play to their strengths while affording their enterprises maximum opportunity as well.

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Independent social software consultant Euan Semple (2007) explains this trend perfectly with his three – somewhat tongue-in-cheek – strategies for IT departments:

1. do nothing;
2. get out of the way;
3. keep the energy levels up.

His point was that whilst corporate IT can choose whether to *let* it happen, *make* it happen, or pretend it's not happening, the outcome will essentially be the same: social software is coming to your organization whether you like it or not. In a survey of 390 people working in large US companies conducted for New York City-based consulting firm Katzenbach Partners (2007), a third admitted ignoring their companies' rules when they found a better way to get things done.

Take the IT department who brought in a consultant to help them implement a corporate wiki platform, only to find that isolated wikis had already begun to proliferate in the organization without their knowledge or involvement. Or the worker who needed to collaborate on a project quickly and in real time so used his corporate credit card to purchase immediate access to the tools he needed online, rather than wait for his IT department to build a business case and secure funding. This consumerization of enterprise IT is only set to continue.

Professor Marty Anderson of the Olin Graduate School of Business at Babson College refers to corporate IT as a command architecture and shadow IT as an emergent one (Worthen 2007). The former responds to top-down orders, whereas the latter has no lever with which to manage them. The skill, he says, is in identifying where they intersect and coming up with a strategy

to deal with it. He offers an analogy with HR, explaining that companies have both a formal structure based on reporting hierarchies and an informal structure based on expertise, relationships and effectiveness. 'Good HR departments know where employees stand in both the formal and informal architectures and balance the two,' he says. 'IT needs to learn how to strike a similar balance ... Like the HR department that ignores the informal relationships in a company, the CIO might lose sight of how his users actually work. Corporate IT thereby loses its authority and, eventually, the CIO loses his job.'

THE SOCIAL STRUCTURE OF THE ENTERPRISE

Because social software relies on social rather than hierarchical interactions within the organization in order to succeed, it is vital to understand the key roles in any such structure. These can be loosely defined as:

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- creators;
- organizers;
- filterers;
- contributors;
- connectors.

Contrary to what many companies believe and reward, creators of information are by no means the most useful. They need organizers, filterers and contributors to categorize, rate and comment on what they produce for the benefit of the rest of the organization. This human filtering process is just as valuable as the job of information creation, if not more so.

The same is true for connectors. In the past, these were the employees in corridor meetings, smoking rooms and water cooler conversations. They discuss, forward and relay information through their own informal networks which bear no resemblance to the hierarchical structure of the company, acting as enablers of social interactions between employees and sometimes between layers of management. They are usually seen as a thorn in the side of most managers, who are frustrated by their inability to withhold information or to respect the order of corporate communication. Yet they play a critical role in tying together the social structure of the organization.

Don't be surprised if the creators in your organization account for as little as 10 per cent of the workforce. The same is true of the Internet and the proportion goes even lower if you single out those who create valuable or original content.

PRACTICAL APPROACHES TO GETTING STARTED

Dion Hinchcliffe, president and CTO of Web 2.0/Enterprise 2.0 consultancy Hinchcliffe and Company, offers the following advice on bringing Web 2.0 into the enterprise (Daniel 2007):

- sell the benefits of Enterprise 2.0 to management: start small with a project that solves a current business problem;
- understand how IT can benefit from Enterprise 2.0: IT can be a key enabler of Enterprise 2.0 by creating consistent security and effective search tools;
- do your homework on tools and platforms: use existing websites to compare products feature by feature;
- make sure you've covered your bases: use Andrew McAfee's SLATES checklist to get the most out of Web 2.0 applications in the enterprise;
- find (or be) an Enterprise 2.0 champion: spell out what these new tools should be used for and lead by example;
- keep tools simple and allow openness: employees must feel that being open doesn't carry negative consequences;
- realize that the world of Enterprise 2.0 is the world of the perpetual beta: to work effectively Enterprise 2.0 tools must be highly iterative. 'Never finished' is a good thing.

Dave Pollard (2007) suggest a different, more adaptable approach focused on empowering 'champions' to design and create social software experiments (see Figure 9.1).

These champions, he says, consist of three groups:

1. the organization's thought leaders: those considered innovative and ahead of the curve;
2. current users of social software: bloggers, RSS junkies, social bookmarkers and social networkers;
3. 'respected sponsors': those people whose use of social software would raise a few eyebrows and encourage others not to be left behind.

Rather than wait for senior management to organize them, these groups should self-organize, invest some time in their passion, have the courage to forge ahead and ultimately ask for forgiveness not permission, coaching the 'respected sponsors' along the way. Pollard recommends that the champions meet face-to-face to get those unfamiliar with the tools, the applications and the current state of the business up to speed, followed by some brainstorming to identify the opportunities and possibilities. Then they should design and

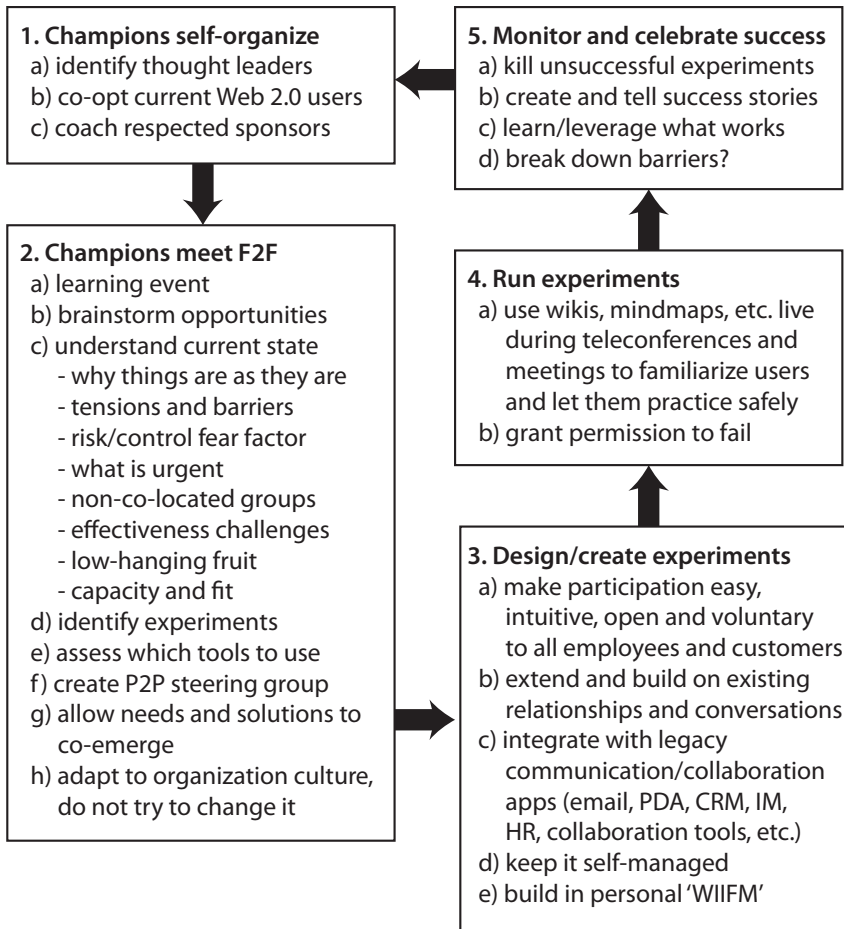


Figure 9.1 Web 2.0 collaboration experimentation methodology

© Dave Pollard, <http://blogs.salon.com/0002007/categories/businessInnovation/2007/04/25.html>

create the most promising collaboration experiments that meet five key criteria:

1. participation must be easy;
2. built on existing relationships;
3. integrated with existing tools and processes;
4. can be self-managed by the user without training;
5. contain personal value to the individual.

IMPLEMENTING THE 4CS APPROACH

The 4Cs approach introduced at the end of Part I and covered in detail in Part II outlines an action-led approach to employing social software in the

enterprise. The first thing to do, therefore, is to decide which of the 4Cs (communication, cooperation, collaboration and connection) a business problem or end-user request falls into (see Figure 9.2). You will find this a much easier way to channel the issue, rather than jumping straight to a solution.

If there is no specific problem or request, then first consider whether you need to implement anything at all. As we have found, the most successful examples of social software in business are demand led. However, there will be times when you may need to stimulate demand by just getting something out there. In this case, treat yourself or your team as the initiator of the request. Look at the problem or question from the end user's point of view – does it require a communication, cooperation, collaboration or connection solution?

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The following approach can then be used.

Identify demand

- Locate existing initiatives and champions inside the organization to implement social software tools – in this inside-out world, the best starting place for this is probably the Internet.

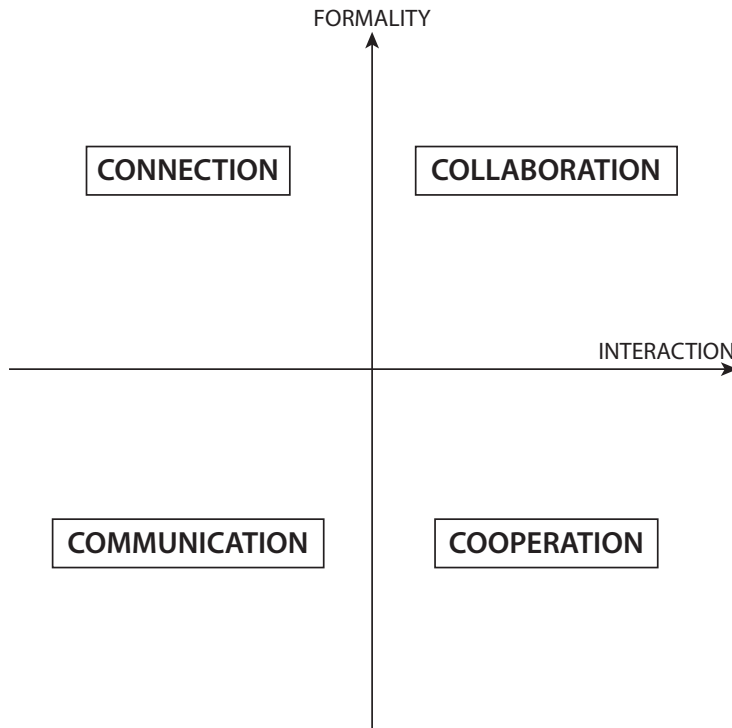


Figure 9.2 The 4Cs formality/interaction matrix

- Find out what existing public social software employees use – either for personal or professional purposes.
- Identify those people who would start using social software immediately if introduced into your organization.
- Define the ways in which you will measure success – hard and soft. Note that these don't have to be complicated.

Focus on ease of use, speed and flexibility and individual value

- Set up a small pilot in a single office or department with both the propensity to use the tools and the likelihood to benefit from such usage.
- Ensure the pilot group is constantly using the tools in ways that will achieve the success metrics.
- Get feedback from all pilot participants – what worked, what didn't and what needs to improve.
- Using all the information from the pilot, develop a case for wider adoption and roll-out.
- Use this to create a framework for how different business units can employ the same tools.

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ENCOURAGING USER ADOPTION

Much research has been undertaken into success factors for the adoption of technology innovations, and this applies equally to social software. In particular, Pan and Scarbrough (1998, 1999) outlined a theoretic model consisting of the three components required in order for a technology innovation (in this case a knowledge management system) to be successful:

- **Infrastructure:** the hardware/software that enables the physical/communicational contact between network members.
- **Infostructure:** the formal rules which govern the exchange between the participants in the network.
- **Infoculture:** the stock of background knowledge which actors [network members] take for granted and which is embedded in the social relations surrounding work group processes; core values and attitudes, reflected in employees and managers' willingness to exchange knowledge to solve company problems.

This simple three-step model clearly demonstrates the importance of culture on implementation and adoption of social software, which cannot be overstated.

Alongside an effective implementation strategy, adoption matters even more. There is little point investing time and effort into making software available in an organization if employees do not use it. This is even more relevant when it comes to social software. Whilst an enterprise system under-used by 25 per cent is simply under-performing by roughly the same percentage, social software depends on a certain level of participation in order to create any value at all. But just what is that level?

One thing is certain: for all its claims of ease of use and organic growth, companies cannot just make social software available and expect adoption to follow naturally. A proactive approach towards encouraging usage amongst early adopters and supporting those who follow it is an absolute necessity. Equally, the adoption strategy for the company itself must be considered. Are you taking a single social software suite approach or employing a collection of applications, connected together via technical and user interfaces? Both are valid in my opinion, although I question how many companies will reach this decision. Too often it will be driven by what has gone before (vendor-led) rather than what needs to be done (user-led). Some organizations argue that it is hard to manage a multiple application adoption strategy if the applications are always changing, but Lee Bryant of social software consultancy Headshift suggests a pragmatic point of view:

There is nothing wrong with a diverse software ecosystem as long as there are some basic standards for interoperability and in particular the sharing of data. If a department or a team want to do their own thing with a specific wiki or blog tool, for example, then as long as they don't expect full IT support and [Quality of Service] guarantees then that should be OK.

Adoption strategies can be both 'bottom up' and 'top down'. Bottom-up strategies rely on the software having an immediate usefulness to key members of staff, who convince those around them of that utility, who in turn do the same, and so on. Adoption is achieved in an organic, viral and social manner. Top-down strategies, on the other hand, rely on instructions being passed down the organizational hierarchy in a – usually – carefully planned and managed way. In effect, with a top-down approach staff might hear 'We want you to use this, it will help the company' from their managers, whereas with a bottom-up approach they hear 'Would you like to use this, it might help you in your job?' from their peers.

Both strategies have their own advantages and disadvantages and understanding these is critical to successful adoption of social software in any business (see Table 9.1).

Table 9.1 The advantages and disadvantages of bottom-up and top-down approaches

	Bottom up	Top down
Advantages	Encourages a collaborative culture Peer recommendation more credible The most useful systems actually get used	The message to staff can be 'controlled' Enforces the use of strategically important systems Essential for difficult to use software with high investment/training requirements
Disadvantages	Behaviours may develop that suit the individual rather than the company Adoption happens at its own pace	Often falls on deaf ears Requires constant reinforcement from superiors

As one might expect, in many – but not all – cases finding the optimum combination of both top-down and bottom-up strategies is required.

BOTTOM-UP ADOPTION

Enterprise wiki provider Socialtext (Mayfield 2006) recommends first identifying staff from all levels of the organization who would clearly benefit from the new software, helping them understand how it could help and progressing their usage so that they can realize the benefits for themselves. They describe these key users as those who are open to trying new software, hold influence amongst their peer group and have the support of their managers.

Using this starting point, the following staged approach is offered:

1. Identify key user groups: what are their requirements, objectives, shared projects and information flows?
2. Identify and understand key users: who are the influential and enthusiastic individuals within those user groups?
3. Convert key users into evangelists: use informal, face-to-face sessions and on-demand support to encourage adoption.
4. Turn evangelists into trainers: provide evangelists with ongoing support and materials to become trainers within their user groups.
5. Support bottom-up adoption and emergent behaviours: encourage experimentation and unexpected or innovative uses of social software.

One of the key elements of a bottom-up approach is the concept that the value to the individual (the employee) must take precedence over the value to the network (the company). This will be a very difficult concept for many CIOs and IT departments – let alone senior management – to get their heads around, used as they are to deploying systems initiated solely in order to deliver value to the company. The concept that enterprise software should put the needs of the individual ahead of those of the company will be completely foreign; too many systems don't even *meet* the needs of the user let alone start with them.

With this in mind, I'd like to propose a radical idea for social software projects: do not write any kind of business case for them. If the objective is to deliver value to the individual first, then organizations ought to be creating employee cases instead. So rather than focusing on business value (productivity increases, cost savings and return on investment), explain the value that will be delivered to the individual user, to other users as a result of each additional user's participation, and then – and only then – the resulting benefits to the business as a whole.

Web designer and developer Joshua Porter (2007) says, 'strong social sites build value one user at a time'. In other words, placing value on to the individual first means creating a system that is useful to one person even if nobody else uses it. If nobody uses it at all, then it's likely that you have a 'cold-start problem', which results from designing only for the network. In an organizational setting, this is why systems that depend on mass usage from day one often fail but, instead of focusing on fixing the problem of individual value, companies prefer to blame the users and choose to invest in new functionality, more training, increased internal marketing, or even incentives in order to encourage usage, which rarely work in the long term.

TOP-DOWN SUPPORT

Unless you work in a completely democratic organization, successful implementation can never just be based on bottom-up adoption. Management support is also required. In Pan and Scarbrough's (1998, 1999) analyses of implementation and adoption factors, they emphasized the importance of top management involvement. In the most successful cases, the leader of the organization acted as both visionary and champion, investing in the infrastructure and changing the incentive systems to encourage behavioural change.

The most challenging aspect of such support, however, is the need for it to be done in an open and transparent manner. Managers need to be prepared to trust staff to use social software tools appropriately, and realize that mistakes will get made.

Socialtext (Mayfield 2006) recommends an approach for managers that complements that of end users:

- Lead by example: in order to build trust, managers must be seen to be actively using the tools themselves.
- Lead by mandate: where culturally appropriate, managers should stipulate to their teams that the new tool must be used for a certain business task or process.
- Lead by reminding: when team members revert to the old methods, managers should intervene either by example or reinforcing any mandate.
- Ensure there is adequate support: managers must allow staff time to learn how to use these new tools and ensure they have the support they need.
- Ensure personal and business benefits reflect each other: managers have a role to play in ensuring staff understand how social software will help the company meet a specific objective that is aligned with their own personal benefits (for example, reducing unnecessary email traffic).

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AWARENESS, EDUCATION AND CULTURE

In organizations where a particularly cynical culture prevails, it is also prudent to analyse the excuses that people fall back on to explain why they don't use certain tools and ensure that there is adequate cover to negate them. In many cases, these will fall into one of three categories:

1. *Awareness*: staff simply aren't aware that the tools exist. Being told in an email, flyer or on the intranet does not mean that people are aware – awareness occurs when someone receives a message, not when it is sent.
2. *Education*: a lot of the time staff might be aware that the tools exist, but do not know why or how they should use them (or have developed misconceptions from peers). This requires clarification, training and ongoing support that is relevant to their roles.
3. *Social, cultural and political*: even with the right levels of awareness and education, there can be emotional barriers, such as not being used to the transparency and freedom that social software encourages, an organizational culture that doesn't reward collaboration, or purely political motives.

In addition, it is important to acknowledge the impact of different styles of working before introducing social software. BEA Systems' Enterprise 2.0 team

(2007) suggest that, when it comes to the adoption of such technologies in the workplace at least, there are three main concepts to consider:

1. People who know what they know.
As employees build their expertise many will also build their own stores of information designed to fill in the gaps that exist between personal productivity tools, desktop applications and enterprise services. These often sit outside official corporate systems meaning that the company misses out on the opportunities from aggregating and sharing this knowledge. It also leaves the company when the employee leaves or changes position.
2. People who know who they know.
Employees fill their knowledge gaps by identifying experts inside and outside of the company who they can leverage when needed. These informal social networks are fragile, breaking down when a node in the network or the connection between two nodes is lost.
3. People who know how to get work done.
Employees will only use technology when they perceive that it adds value to how they work.

Those who believe passionately in the positive force of introducing social software into an enterprise will predictably evangelize how it will change the way employees work, turn organizational hierarchies upside-down and create a culture of participation. However, those trying to understand if and how it is relevant to their business will generally want to first understand what the return on investment will be in terms of improved efficiency of people and process. Regardless of whether such soft or hard measures are sought, the culture of the organization in question is likely to be the biggest factor in deciding whether social software will have any kind of impact whatsoever.

Many organizations recognize the need for corporate cultural change, but this can only happen if behaviour changes first. Gandhi once said, 'be the change you want to see', and this is certainly sage advice for those using technology to effect such change. I am a strong advocate of technology as an agent or driver of change ('we want technology to directly change employee behaviour'), not just as an enabler as many organizations see it ('we want technology to follow the behavioural changes we are trying to instil'). Well-designed software that people want to use – and even enjoy using – because it provides them with personal value ahead of organizational value will have a much better chance of changing behaviour than workshops and posters and email newsletters. Did people have videos cluttering up their hard drives just waiting to be free before YouTube came along? No. YouTube was the catalyst for an explosion in amateur video production amongst the masses. That's behavioural change for you.

Implementation and adoption of social software would seem to go hand-in-hand but, as we have seen, an emergent, informal approach is often the most successful. By understanding and appreciating some of the models, motivators and barriers to usage, many of which are equally valid for other kinds of enterprise software implementations, and combining these with a consistent approach to social software designed to help employees communicate, cooperate, collaborate and connect, any organization can begin to reap the benefits of social software in the enterprise.

IV *Social Software Outside the Enterprise*

10 Join the Conversation

Most institutions today are zombies ... They have thoughts. Superficially, they look human. They can move around, talk and eat you but they are not alive. They have no feedback mechanisms. They are closed systems. They have exceptionally limited ability to sense what is going on inside and outside. Like all closed systems, they tend towards entropy. They are not human. They are a chimera.

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Rob Paterson (2007)

An increasing number of companies are demonstrating how the resurgence in communication, cooperation, collaboration and connection that is taking place in consumer technology can be harnessed and employed inside the enterprise. In the same way that the Internet gave rise to the intranet, Web 2.0 is undoubtedly giving rise to Enterprise 2.0. Whether you think that means a new set of technologies, a different philosophy, or a change in culture doesn't really matter. I have no doubt that whilst social software will not revolutionize the way we work, it will have a substantial impact on its future.

Arguably the biggest impact on the future of work won't be internal at all, but external. The way employees interact with customers, partners, even competitors will drastically change – and perhaps it already has. The corporate membrane is indeed getting more and more porous. Customers want to see inside your organization, they want to talk to the people who make it what it is; they want to hear their stories. What they don't want to hear is you telling them why your company, products and services are the best. There is value to be gained from external collaboration too, according to Don Tapscott and Anthony Williams (2006): 'firms that cultivate nimble, trust-based relationships with external collaborators are positioned to form vibrant business ecosystems that create value more effectively than hierarchically organized businesses.' Discussing this new promise of collaboration, they continue:

The pace of change and the evolving demands of customers are such firms can no longer depend only on internal capabilities to meet external needs. Nor can

they depend only on tightly coupled relationships with a handful of business partners to keep up with customer desires for speed, innovation and control. Instead, firms must engage and co-create in a dynamic fashion with everyone – partners, competitors, educators, government, and most of all, customers.

What's more, your employees want to talk to the marketplace too. They want to tell their story, what it's like working for you, how passionate they are (or not) and how your products are made. And they want to listen to what customers have to say, engage in open conversation, connect with them and disagree with other opinions.

They'll do all of this through social software, but it won't be through blogs and social networking tools on your intranet, it will be blogs and social networking tools *on the Internet*. The boundaries between our personal and professional online lives are crumbling. How your organization acknowledges and responds to that will have as much impact on your employees as what you do for them at work.

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In a survey published by McKinsey (2007), while 75 per cent of executives said they were using social software for managing collaboration internally, 70 per cent said they use it for interfacing with customers. It is therefore worth spending some time looking at the applications for social software *outside* the organization as well as inside. Other authors have covered the subject in much more depth, so I intend to only skim the surface here. The reference section later in this book provides further essential reading on the topic.

The Internet is finally starting to deliver one of the original objectives outlined by its inventor Tim Berners-Lee – to be a space for sharing information. Not a space for advertising, marketing, broadcasting or selling, but a space for communicating. Anyone involved in communicating on behalf of an organization – officially or unofficially – must therefore be able to understand and listen to the information that is being shared because it may mention their company's products, brands, associated companies and organizations. On occasions they will need to engage with these conversations, and some may even be brave enough to initiate the conversation.

It should come as no surprise, then, that the most popular websites right now are those that allow people to share and connect with each other. In most countries, blogging, social networking and video-sharing sites attract more traffic than any news website. People *are* communicating with each other online and they *are* talking about your company (and if they're not, then you have an even bigger problem).

THREATS AND OPPORTUNITIES

Too many organizations see social media as a threat – even though there are huge opportunities for direct communication with those participating in it

– the same people who are customers, shareholders or suppliers who may have a relationship with the company. Many of these threats are perceived after reading scare stories in the popular media, but even the real threats present opportunities for the company who truly wants to engage in open conversation.

Take the most serious threat, for example. Malicious attacks are directly intended to inflict some kind of reputational damage on an organization or individual. Yet they provide an opportunity to encourage others to support your position. A direct response is rarely recommended, but peer pressure can quickly redress the balance. Let's be clear: this isn't the same as rigging votes or posting anonymous messages, but about building a network of friends for a brand that will defend it in times of adversity, like a good friend who defends you in public.

Other people just want to ruffle your feathers because in their eyes you've done something wrong and they want you to respond. You don't have to respond directly, but you should do so before someone else does. However, the vast majority of threats are really just caused by misinformation or misinterpretation, so make sure your communication is clear and honest. There are also opportunities to facilitate conversations and add value to existing communities, but that requires organizations to evolve from wanting to control the conversation to becoming the facilitator of conversation. The objective is to give people reasons to talk.

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THE INTERNET NEVER FORGETS

If you choose to ignore this fundamental shift in the way people are communicating, there are plenty of examples that illustrate what can happen to you. Big brands like Apple, Kryptonite and Land Rover have learnt the hard way. In the US, one blogger had a terrible experience with Dell's customer service and his blog became a magnet for others with the same axe to grind. Ignoring the calls to join the conversation, Dell chose to close their online customer service forums. It was just a coincidence, said Dell, and no one has any evidence to the contrary, but that only served to fuel the discussion. In something of a turnaround, Dell has now embraced blogging as a way to talk to their customers directly and their Ideastorm site allows anyone to suggest ideas for how to improve their products and services. As a result, their social media reputation has been restored and they are engaging in a direct dialogue with their market.

Dell either wasn't listening, or decided that one individual wasn't influential enough to cause a problem. They didn't recognize how quickly and easily a lone voice could become a hub of discontent for thousands of others. They thought that ignoring it would make it die – but it didn't. Remember

one thing: the Internet – or rather Google – never forgets. Something your company did even 20 or 30 years ago can live on online.

It's not all doom and gloom though. These are just people airing their views, just like they do every day. Most will only write negatively about companies who say or do something they disagree with and even then there is no guarantee that it will make front page news. First, the opinion must have merit otherwise it won't be credible – the Internet is incredibly democratic and peers will ignore, object to and even correct things they feel are not warranted. The complaint must also be clear – a product not working, a service not delivered, a promise not acted on. Finally, the issue must be experienced by others – the more people, the louder the noise.

When a product works perfectly, the customer service is great and the company is keeping its promises, then – and only then – can it afford to ignore the conversation, although even then it still wouldn't be advisable.

THE CHALLENGES OF INTERNET COMMUNICATION

In the age of the Internet, an organization no longer controls the message about them – not that they ever did. The conversations that used to take place between their audiences are now taking place *amongst* their audience, but many companies don't know how to join in. They also rarely understand the different type of influence that these conversations carry. Influence is very different online – the ease of finding obscure information makes it just as influential as something that everyone reads. Listening to these conversations also presents challenges – although social media aggregation services like Technorati and Bloglines make it easy. The biggest challenge of all, however, is whether, when and how to engage in a discussion.

Organizations need to accept these challenges, listen to what is being said online and learn to think differently – and more directly. They need to take advice from people who know how to engage with these communities – who expect you to change the way you communicate and if you get it wrong, will say so. These people are your customers, citizens, shareholders, or other stakeholders. They may have something important to tell you – and vice versa.

If an organization does nothing else, it needs to listen to the conversations about issues that matter to them. Of course, it can always choose to ignore what is happening on the Internet and the way in which people are now interacting and communicating with each other, but I believe that we are experiencing a disruptive wave and the companies who choose not to ride it will end up getting washed away. The bigger organization may be better able to weather the storm, but it is still going to be a rough ride for them. But it doesn't have to be.

LISTEN, LEARN AND ENGAGE

In almost every presentation about blogging, experts will tell you to join the conversation. That is the same conversation made famous by *The Cluetrain Manifesto*, the bible of the blogging generation (see Chapter 1). This seminal work introduced the concept of markets as conversations; conversations that enable powerful new forms of social organization and knowledge exchange to emerge. These new, networked markets have no respect for companies unable or unwilling to speak as they do.

Yet the response to these fundamental changes is not just to create a blog. Cluetrain-savvy companies appreciate the need to communicate with their markets directly. The new three stage-mantra is:

1. listen to the conversations taking place about your markets, brand, company and competitors;
2. learn from the people with whom you hope to create relationships;
3. engage by speaking in your own language, share their concerns, and participate in their communities.

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Listen to the conversation

Listening to the blogosphere requires a combination of skills: searching, analysing and synthesizing. There are some simple techniques and models to help with this.

The Conversation Gap is a methodology first conceived by Edelman's Steve Rubel (2005) to illustrate the gap between the total number of conversations in the blogosphere about a product category and the proportion which mention a company or brand operating in the category. The conversation gap quantifies the size of the opportunity for a company to participate in conversations to its market.

By way of example, Figure 10.1 shows the gap between conversations in the six months to 4 January 2008 about MP3 players, and the proportion of those conversations that mention Sony's Walkman brand.

Is Sony missing an opportunity to talk to this market? Quite possibly, although that's not to say they need to engage in all these conversations. Some may not be relevant or provide an opportunity to build a network, but it's still important to know that they are active communities.

By contrast, the gap between conversations about MP3 players and the proportion where Apple's iPod is mentioned is considerably smaller (see Figure 10.2). This indicates a closer association, but the conversation about the iPod may not all be favourable (see the discussion on sentiment analysis, below). Brands need to listen to what the markets are saying, not just monitor mentions.

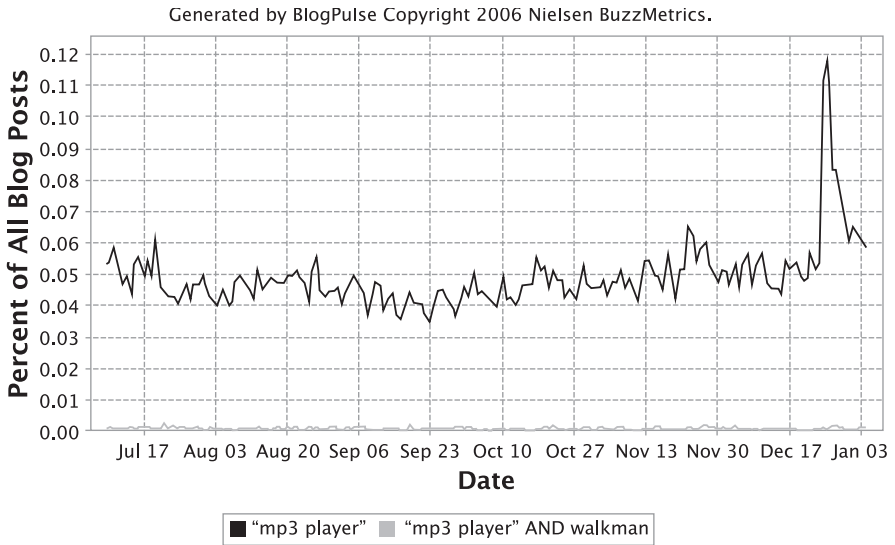


Figure 10.1 The conversation gap between MP3 players and Sony's Walkman

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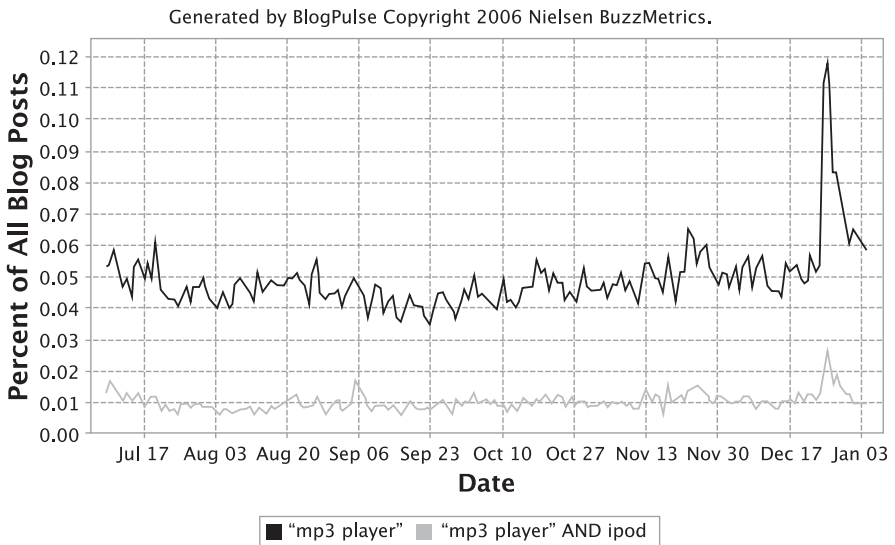


Figure 10.2 The conversation gap between MP3 players and Apple's iPod

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Another methodology based on the conversation gap is that offered by Gary Stein while he was an analyst with Jupiter Research. He defined the equities of a brand as those topics being mentioned in conversations about a brand, hence the equity share corresponds to the frequency at which each topic is mentioned. For example, let's assume that Nokia would like to participate in conversations about security, battery life and cancer. The equity share analysis in Figure 10.3 shows the relative frequency of each topic where the brand is discussed.

As Stein says, ‘if you’re running a campaign which seeks to boost your brand by building a particular concept, this could be a good tool’ as it can show you how each concept is faring over time. Equally, if there are associations or factors which can damage your brand you can also see how these play out. A variation on this theme is to track how multiple brands or companies fare against a single equity or concept. For example, really simple syndication (RSS) (see Figure 10.4).

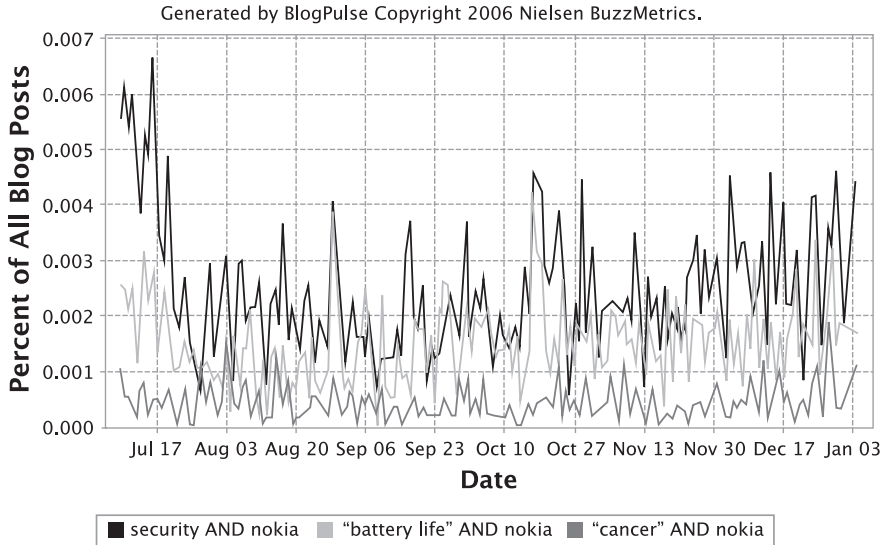


Figure 10.3 The equity share of different brand attributes

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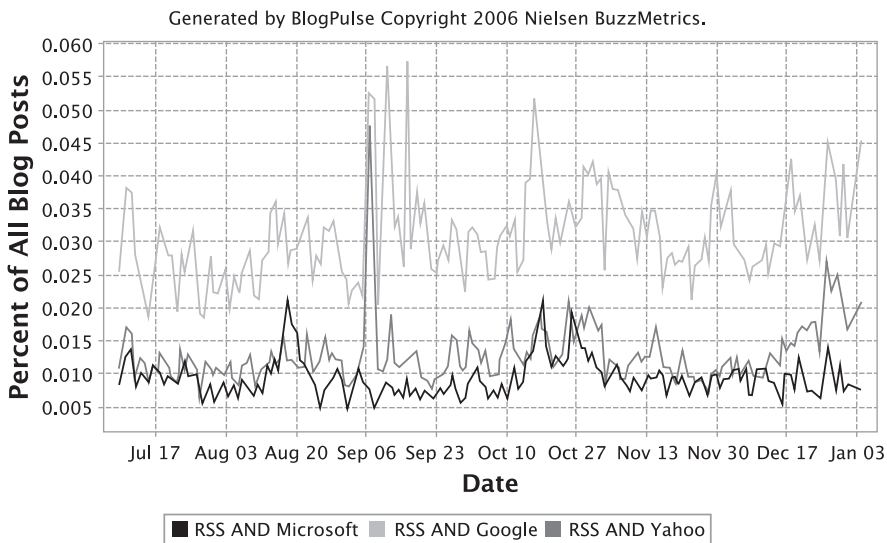


Figure 10.4 The equity share of three brands for a single attribute

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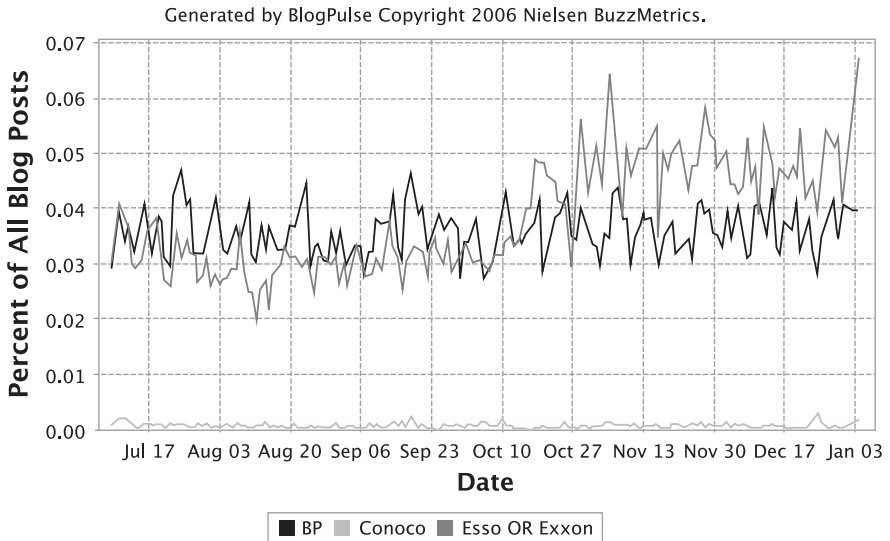


Figure 10.5 The share of buzz for BP, Conoco and Esso/Exxon

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Building on the competitive theme, the next technique measures the share of buzz for different companies in the same sector. For example, consider the share of buzz over the last six months for BP, Conoco and Esso/Exxon (see Figure 10.5 above).

It's one thing to know that there are conversations taking place about your sector or company; it's quite another to realize that the majority are negative (or positive) towards you.

Automated sentiment analysis has, until now, been the preserve of those willing to pay for it. However, new services can help you analyse relative positive and negative opinions. Trying to calculate favourability isn't perfect. But as long as it misinterprets both negative and positive opinion in equal proportions, then as a quick dip test for comparison it's a useful technique. It doesn't have to be expensive or take huge amounts of time either. Free services such as Opinmind and paid ones from the likes of Commetric have the capacity to undertake computer-based favourability analysis quickly and at a relatively low cost.

A TWO-WAY DIALOGUE

By now, you will understand the importance of listening to the conversations already taking place in the blogosphere about your markets, brand, company and competitors. Now comes the scary bit – engaging with the people participating in these discussions. That's right, a real conversation with real people; sadly, a strange concept for a lot of today's companies. But how do you engage?

First, you need to resist the natural urge to control, target or infiltrate social media – attempts to do so will incur the wrath of these citizen journalists and the resulting fallout will provide perfect fodder for the mainstream media. If you are more concerned about losing control than you are about communicating your position, then give it a miss.

If done properly, however, you are as entitled as any other individual or organization to participate in online conversation with your customers and in most cases it will be warmly welcomed. Contrary to what you might read in the popular media, bloggers are not just a bunch of activists waiting to attack you – although they will if you appear irresponsible or disrespectful by simply treating their space as another advertising medium.

The ground rules for participation are still undefined and open to interpretation. One person's contact and dialogue is another's spam and manipulation, a distinction that US mobile operator Sprint fell foul of when it invited a blogger in Denmark to join their Ambassadors Program. Even though he encourages contact through his blog, he felt that Sprint had breached the Danish Marketing Act and pulled them up for it on his blog.

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According to some commentators, before you can engage in a conversation with bloggers you must have a blog yourself. It's the badge that says you're part of the gang. I'm not sure it's a prerequisite but it is certainly advisable, particularly if you want to be completely transparent about your motives (which you should). Talking to bloggers about your product or position can deliver a number of benefits:

- it gets your side of a story heard, straight from the source;
- it generates word of mouth, assuming what you have to say is worth talking about;
- it provides instant feedback on what you have to offer;
- it allows you to communicate in your own voice, not corporate-speak;
- above all, it helps you build relationships based on trust.

A common method of getting feedback and generating word of mouth for a product – whether virtual or physical – is to give it to bloggers to use for free. Nokia, the afore-mentioned Sprint, wine company Stormhoek and many book publishers have already used this to good effect. However, before embarking on such a campaign you *must* consider the following:

- not everyone thinks this is appropriate – bloggers who are not approached may feel excluded or simply see it as a cynical marketing ploy and may then write negative things about what you are doing;

- get to know the people you want to talk to through their blogs. This involves finding them, reading their blogs and learning how they discover information;
- do not ask them to write things on their blog about the product;
- give them a means to ask questions and clarify – via your own blog, by email and instant messaging;
- accept that people will ignore you, or write negative – possibly nasty – things about your product.

It is also worth noting that this is becoming an increasingly common tactic and as a result blog owners are being saturated with free products, press releases and all kinds of other – sometimes completely irrelevant – marketing messages. Some lazy companies are simply not doing their research and the net result is a proliferation of what can only be described as spam. Some people have even resorted to publishing the email addresses of those who send unsolicited communications to them on their blogs in an attempt to expose their bad practice.

As a result, I recommend the following cautious approach:

1. identify the topics that are most closely aligned with your product or product attributes;
2. find bloggers who are passionate about these subjects using blog search engines;
3. get to know each blogger through their blogs by subscribing to their RSS feed and reading their blogs for at least a month;
4. decide if and how to best strike up a conversation (bear in mind data protection laws in their country, not yours);
5. if you use an agency, ensure they fully disclose their professional relationship to the blogger;
6. get their express permission to contact them with your news;
7. engage in an ongoing dialogue with them, either one-to-one or on their/your blog;
8. listen to what they write, comment on and link to and comment on it on your own blog.

SOCIAL NETWORKING FOR PROFESSIONALS

Social networking, made popular by students and teens flocking to sites like MySpace, Facebook and the like, now also has a firm place in the armoury of any employee wanting to build networks of colleagues, customers, partners

and competitors. Sites like LinkedIn offer professionals the opportunity to swap job details, contact information and networks themselves. Social networking is just another of the consumer technologies to cross over into the business world, albeit at a slower rate.

Despite this, employees are possibly more cautious about disclosing too much information to competitors, or simply embarrassing themselves or their companies online. Some companies are even blocking access to the most popular social networking sites, considering them a drain on productivity as employees spend too much of the working day connecting with friends and contacts.

Those with established networks might also be concerned about sharing their networks with others. Assistant Professor of Business Administration at Harvard Business School, Mikolaj Jan Piskorski, explains, 'Professionals are fairly protective about their social networks which they spend their whole lives to build' (Vascellaro 2007). If true, then this is a shame, because professional recruiters are increasingly turning to their social networks in order to get referrals for vacancies they are handling, so it pays to ensure your profile is as complete as possible.

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Guy Kawasaki (2007), co-founder of Truemors but probably best known as a software evangelist for Apple in the 1980s, compiled a list of the ten ways to increase the value of professional social networks (in this case, LinkedIn):

1. increase your visibility by adding connections;
2. improve your connectability by including a full employment history and linking to your profile from your email signature or blog;
3. improve your Google PageRank by creating a public profile and linking to it whenever you can;
4. enhance your search engine results by submitting your public profile URL to Google and Yahoo!;
5. perform blind, reverse and company reference checks;
6. increase the relevancy of your job search by including keywords that people might use to find you;
7. make a job interview go more smoothly by looking up the people that you're meeting;
8. gauge the health of a company by scrutinizing the rate of staff turnover;
9. gauge the health of an industry by finding people who worked for companies in the sector;
10. track startups.

The LinkedIn team even did a makeover of Kawasaki's profile, resulting in the following recommendations:

- add your voice, make it personal;
- connect with old colleagues;
- write and get recommendations;
- ask and answer questions;
- get a vanity URL;
- add substance to your summary;
- add specialities;
- add depth to your employment history;
- add your complete employment history;
- add website links, activities, interests and awards;
- explain why you want to be reached.

Krishna De (2008) offers some additional advice to those using social networks:

- you are always in control of who you invite to join your network;
- you can always decline an invitation to join someone's network;
- you are rarely inundated with invitations to join someone's network, so screening invitations takes little time.

She also posts the following on her own profile on professional social networking service, LinkedIn:

GUIDANCE FOR CONNECTING TO MY LINKEDIN NETWORK

Please read the following so that we can ensure that our connecting will be of benefit to you:

- 1 I love connecting people to great resources and other people that can assist them in achieving their professional goals, so yes please feel free to connect – I always try to respond to emails within 48 hours.*
- 2 I will always accept invitations from friends, business acquaintances and clients to join my network on LinkedIn.*
- 3 If we haven't met, I am open to connecting but please send an introductory note providing a little information about your background and how we would both benefit from connecting – a standard LinkedIn request to connect won't be responded to.*

- 4 *As I consider connecting people in my network to others as a recommendation and therefore want to ensure a quality connection for all concerned I will not usually forward requests to connect you to members of my LinkedIn network if I do not know you and your work.*
- 5 *Please ensure that you spend a little time writing a thoughtful and detailed request as to the benefit to the person in my network and why they would benefit in connecting to you. In return I promise to only send you relevant, well written requests.*

Professional social networks can be incredibly powerful tools, not only personally but also for the organizations those individuals represent. With a little effort, everybody in the company (and even those who have left) can build a social network that they can call on for sales, marketing and even recruiting purposes.

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POLICIES AND PROCEDURES

With all these new ways of communication, cooperating, collaborating and connecting come new risks and rewards. It would therefore be remiss of me not to include some information on how to create effective policy governing the use of social media by employees on behalf of companies. Because of the content, very few companies make their internal policies public so in this final chapter I primarily recount the experience of my employer, Hill & Knowlton, one of the leading international communications consultancies, to whom I am indebted for allowing me to share their internal thinking and principles.

As I have discovered through leading some of these exercises, policies can invoke strong emotional reactions in people. In every organization you will find those who prefer to take a *laissez faire* approach and those who feel that every possible risk must be accounted for – and every other possible point of view in between. The best solution I can offer for managing this conflict is to make the consultation process as open and transparent as possible, facilitating the result rather than trying to dictate it. If you're not in a highly regulated industry, you might also wish to consider asking for legal input at the *end* of the process, after the consultation with employees has taken place.

I believe that any organization using the full range of social media, internally and externally, should issue guidance in three areas:

1. personal use of social media;
2. professional use of social media on behalf of the organization;
3. officially sanctioned corporate blogging.

Whether you have separate policies or combine them together is a matter of preference – do whatever works best for your organization.

SETTING POLICY COLLABORATIVELY

Given the nature of the topic, it is advisable to practise what is being preached and use collaborative social software to engage employees in the process of drafting policies. It could be the perfect focus for a wiki experiment, for example, and this is how many organizations have reportedly got started with collaborative social software. By putting a rough framework into a format that staff can collaboratively edit and comment on, all feedback is visible to everyone so they get a sense of how others feel about what is being proposed. It then becomes much easier for reluctant contributors to agree or disagree with someone else rather than take the bold step of deleting or editing what they have written.

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There are some challenges with such an approach, however. First, if the consultation process involves a small group of people, a wiki might not be the best solution. Second, as with any forum, care must be taken to ensure that one or two strong voices don't overpower the conversation, deterring others from contributing. Third, at some point you need to decide when the consultation process ends – is it time bound, or only over when everyone consulted has had their say? Finally, it is ultimately the job of the facilitator to assess all areas of contention or conflict and propose a compromise solution that everyone accepts.

Case study: Hill & Knowlton

Hill & Knowlton had been advising clients about consumer-generated content since the early 1990s when the possibility of global publishing became available to anyone with the right technical skills. Initially, Usenet posts and attack sites from disgruntled customers and employees were the norm. The growth in Internet usage and, critically, the spread of simple platforms created the blogging phenomenon that represents the current stage of this self-publishing revolution. The company knew it needed to counsel clients about blogs – from both the points of view of brand promotion and of corporate reputation. But the blogosphere in early 2005 wasn't the same as what they had encountered in 1995. Following the 'walk before you talk' principle, the organization decided it needed to learn first hand what was going on and how to get it right in practice.

Early on, the majority of blogging was just personal publishing, so some employees joined in on an individual basis. As interest in the medium developed, the organization began to see the benefits of a single business blogging community over a disparate collection of individual blogs. A branded collective publishing environment would make it easy for different

subject, sector and geography communications experts to expose their insights for colleagues, clients and others to read, but there was also a potential conflict between individual rights and preferred best practice.

The company embarked on a three-step process:

1. Put advice and guidelines in place that would encourage employees to experiment with blogging on a personal basis, whilst ensuring they were aware of the commercial or legal consequences of what they might write.
2. Create a business blogging community that would allow any employee to write a blog under the corporate brand.
3. Advise clients credibly about blogs and other consumer-generated media, using the learning from the previous steps.

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The company started its publicly accessible corporate blogging community, *Collective Conversation*, working under the assumption that it would have a simple code of practice and let any member of staff create a blog for whatever purpose they wished. Chief Marketing Officer, Anthony Burgess-Webb identified the need to first address four key issues: access, control, propensity and quality, each of which could impact on the brand (see Figure 10.6).

The company needed to identify who within the organization would be allowed to create a blog (access) and the level of control it wanted to exert

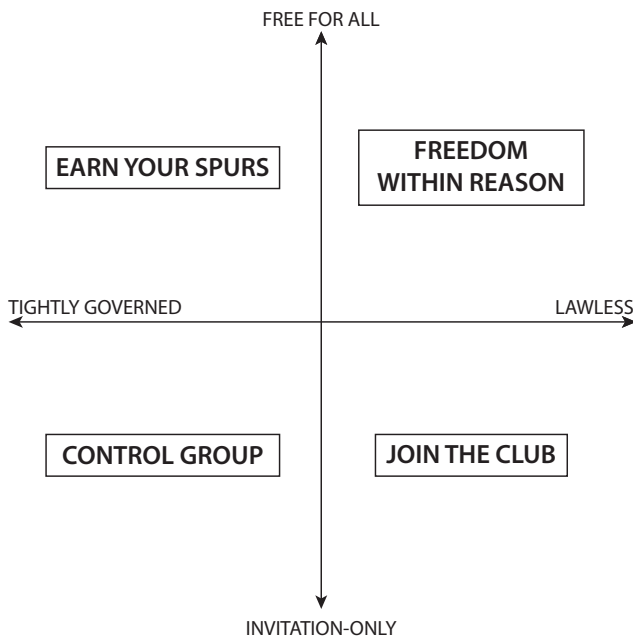


Figure 10.6 Corporate blogging access/control matrix

© Hill & Knowlton

over content (control). The firm believed that the overall value of the community would increase exponentially with the number of blogs created, so recommended open access. Control was a more difficult debate, as it could take many forms. The company finally agreed that no kind of moderation or systematic monitoring should be used, but a simple code of practice and trust in employees would ensure they became accountable for what they wrote.

The organization then moved on to address the correlation between the likelihood of staff actually blogging (propensity) and the quality of what they would write (see Figure 10.7). Its hypothesis was that those with the most interesting insights would probably be so busy that they wouldn't have the time or inclination to maintain a blog; and those that were extremely keen and eager – and had time – might not have anything especially insightful to say. Whilst clearly a generalization (the company knew it had both extremely experienced consultants who would participate and high-calibre graduates and other entrants with some excellent business thinking), this was in direct contrast to the desired result it wanted to achieve for the brand.

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This led to the development of four blogging personas that were eventually used as part of the internal registration process, with tongue-in-cheek labels to emphasize their provisional and caricature nature. These mapped to each quadrant on the quality/propensity scale:

1. those with both motivation and clear value to add;

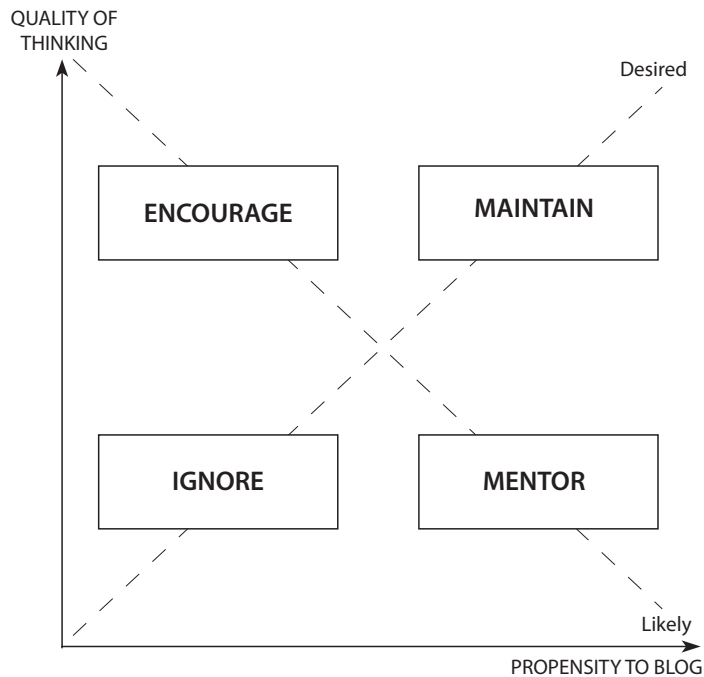


Figure 10.7 Corporate blogging propensity/quality graph

© Hill & Knowlton

2. those with a clear focus but no desire to share their thoughts on a blog;
3. those with neither desire nor a topic to write about;
4. those with little focus but a strong desire to be involved.

The company's decision to allow open access meant that they would not stop anyone from taking part, but needed a way to help people profile themselves so they could really think about whether it was something they wanted to do, rather than just getting involved for the sake of it. A self-assessment element to the online registration process provided the answer, offering intelligent suggestions based on the quadrant the employee placed themselves in (for example, those with little focus but strong desire were paired up with those with a clear focus but no desire).

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The final step in the process was to develop a simple code of practice that would be displayed on every participating employee's blog. Distinct from the employee blogging policy that the company had already published publicly and shared with staff, this was a ten-step code of conduct that each blogger must agree to abide by (six dos and four don'ts):

1. do respect other opinions;
2. do acknowledge and correct mistakes;
3. do preserve the original post;
4. do disclose conflicts of interest;
5. do ensure information is accurate;
6. do link to source materials;
7. do not criticize clients or colleagues;
8. do not breach your employment contract;
9. do not delete comments (unless offensive, spam or off topic);
10. do not delete a post (unless it breaches this code).

The company learnt a lot and is still learning – there have been times when things haven't quite gone to plan. It knows the journey will never be over, but it encourages any organization looking at corporate blogging to go through a similar process, offering the following words of advice:

- get both senior buy-in and grassroots support – early;
- go global if you can – otherwise you'll end up with multiple communities, policies and branding;
- map the benefits against your brand values and make sure there's a fit;

- set clear objectives – work out what you want to achieve and plan accordingly;
- make the business decisions first – the technology should follow;
- being the first in your sector can give you unexpected PR and business advantages;
- don't wait for everything to be perfect before you launch – chances are it never will be and you'll miss your window of opportunity;
- don't underestimate the time required after launch to nurture and prune;
- put guidelines and a code of practice in place – and make them visible to visitors;
- don't be afraid to experiment – on a small scale.

SOCIAL MEDIA ENGAGEMENT

With the increased scrutiny companies find themselves under since the Sarbanes-Oxley Act, the last thing most employers want is yet another policy for staff. Maybe this is why so many have still to wake up to the impact that blogging employees can have on their reputations. There have already been a number of high profile cases that highlight the need for companies to guide their *de facto* online spokespeople.

With the boundaries between employees' personal and professional lives getting fuzzier by the day, there is no harm in formulating guidance on something that someone, somewhere in every company is doing. At the very least it's a way to engage employees in an internal conversation, on a topic they probably know more about than any lawyer, human resource manager or corporate communications director.

One effect of proactively communicating such a policy is that employees realize they have obligations – moral and ethical, even legal – that influence what they should and shouldn't say on both personal and professional blogs. However, blogs aren't the only way to hold an online dialogue – there are many other social media channels where conversations about your company are being held.

This explosion of consumer-generated media means that a company's name, brands, products or people are now being openly discussed in public by people with differing knowledge levels, access to information, motivations, self-regulation frameworks and relationships with that company. To an extent, they can say what they want, when they want and how they want. Even without formal monitoring, these conversations will be noticed by the organization's employees – and therefore guidance is required to help them understand when and how to engage in online discussions on behalf of the company.

It is something that companies rarely think about, as they assume such behaviour is already covered by existing HR and IT policies. That may well be true, but with many companies still blissfully unaware of what their employees are saying online on their behalf, these same employees remain unaware of the impact of what they say on their company's reputation. They may think they are defending the company by editing a Wikipedia entry, commenting on a negative blog post, or emailing the webmaster of a sucks site, but without a proper understanding of the unwritten rules of engagement online they could be creating a potential public relations crisis.

So even if you think you don't need an employee blogging policy, you absolutely must have a social media policy. Every policy will need tailoring to the company in question, but here's what I recommend all should cover:

- what employees absolutely cannot say – legal and moral obligations extend to comments left on others' blogs, not just company owned ones;
- who to consult if employees are unsure – perhaps the line manager or HR team aren't the most appropriate people to advise in your organization;
- guidelines for specific websites – for example, it's against Wikipedia's policies for a company to edit its own entry. Employees need to know this too;
- how to decide whether to engage – there are some arguments the company just won't win, so engagement may be a fruitless exercise
- being anonymous – don't be (you generally aren't anyway, even if you think you are);
- pretending to be someone else – it may sound harmless to pretend to be a customer, but if employees get found out the impact on the company's reputation can be severe;
- letting others know about it – harness your employees to be the eyes and ears for interesting online conversation taking place about the company.

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The policies shouldn't stop at employees, either. Companies have many third parties representing them with different constituencies. The same rules need to be extended to those companies as well.

In summary, there is much for an organization to gain from listening to, learning from and engaging with some of the conversations that are taking place about their organizations on social media platforms on the Internet. The main risks come from not having developed a clear point of view on how this is to be done, who is to do it and what guidance needs to be put in place. In the same way that employees are bringing social software tools into the

company, they will also take it upon themselves to represent the organization in these public forums – intentionally or not. This is sometimes a good thing, particularly when loyal employees are defending the organization against criticism, but it can also work against you – for example, employees venting their frustrations on social networking sites about their managers, customers, working conditions, and so on, seems to be all the rage right now. With effective policies you can mitigate – but never eliminate – such situations, but the more you embrace social media and social software, encouraging conversation to take place rather than trying to stifle it, the more likely it is that you will create an understanding of what is and isn't appropriate.

11 Afterword

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If you have got this far, well done. I hope I have been able to enlighten you about the current interest in social software inside the enterprise and given you a better understanding of what the concept really means and why it is different from the traditional approach to enterprise software. Through the case studies generously provided by various companies and social software vendors, you have seen some practical examples of how other companies are already using social software and the 4Cs approach, and recommendations for implementation and adoption should hopefully provide a framework for introducing it into your own organization. I encourage you to refer to both the references and literature review which follow for additional insight and analysis into the topics most relevant to you.

If you take one thing away from this book it should be this: I am not suggesting that all – or even any – of these tools will be right for your organization, in part because there simply isn't enough evidence right now to demonstrate their business value. That's not to say, however, that there is no value in experimenting, as many of the organizations featured in this book and the various reports and publications quoted have done. For most social software the investment required is extremely low and thus the benefit does not have to be very high at all before value begins to be delivered. I simply encourage you to begin experimenting with social software platforms on a small scale at first, in order to begin to understand what will and won't work inside your organization.

In the same spirit of experimentation, I have decided to try one of my own. So accompanying this book is a wiki intended to keep the *Enterprise 2.0* dialogue going. Please take a look and collaborate, cooperate, communicate or simply connect with me. I will endeavour to ensure it becomes a living version of this book, updating it with new case studies and research as I come across it. As I have illustrated, however, the collective efforts of a multitude of people with different perspectives and opinions generally produce a much better result, so I encourage you to start by contributing your own thoughts on what you have read. You can find it at the website for the book: <http://www.enterprise2dot0.com>.

Good luck and thanks for reading.

APPENDIX

Social Software in the Enterprise – A Review of the Literature

Robert A Campbell, Ph.D.

The term ‘social software’ has been appearing in academic and popular publications for about 30 years, but it has only recently started to be used with reference to a democratizing trend in all aspects of computing. In the following pages, I report on the ways this term is being utilized in a broad range of publications to portray this growing trend. I begin with a brief discussion of my sources and method, and then the relevant material is presented chronologically in two sections, the first dealing with definitions and approaches, and the second covering opportunities and barriers. A concluding section summarizes the main findings of this review, and looks at the implications of developments in social software for management, employees, and IT departments.

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SOURCES AND METHOD

The availability of comprehensive and easily searchable research databases makes the task of constructing a literature review much simpler than it used to be. For this application, I selected ProQuest, a well-established business publication oriented academic database that brings together documents from a vast array of sources, including scholarly journals, magazines, trade journals, newspapers, government and industry reports, as well as doctoral dissertations. My method was fairly straightforward.

In late September of 2007, I entered the search term ‘social software’ into the database and initially limited my search to those instances where the term appeared in the title of documents. This search yielded a list of 57 publications. Of these, 12 appeared in scholarly journals, 19 in trade publications, and two were doctoral dissertations. I then expanded the range to include those instances where the term appeared anywhere in the text of the document. This search produced a list of 884 publications.

The only recent book-length publication explicitly mentioning the term social software in the title is *Social Software in Libraries: Building Collaboration*,

Communication and Community Online, by Meredith Farkas (2007) which, as its name implies, deals particularly with the library environment. It is interesting to note that a full 10 per cent (88) of the published works that mention social software somewhere in the text are based on library applications. However, other book-length works like *Managing Virtual Teams: Getting the Most From Wikis, Blogs, and Other Collaborative Tools* (Brown et al. 2007) clearly reflect the importance of this topic in the business environment. Other recent titles that are clearly designed to capitalize on the growing trend, include Klobas (2006), Scoble and Israel (2006), and Tapscott and Williams (2006).

As a means of verifying that I had selected the most appropriate database for this project, I performed the search for instances of the term 'social software' anywhere in the text of a document in two other popular databases, the first having a multidisciplinary focus and the second sharing with ProQuest an emphasis on business related publications. The search on Scopus yielded 73 documents, less than 10 per cent of the comparable ProQuest search, and the search using Business Source Premier yielded 283 documents, still only about 30 per cent of my earlier results. Satisfied with my choice, I proceeded to search on a variety of terms related to social software to get a more comprehensive view of the literature. The results are shown in Table A1.1.

As one would expect, there was a good deal of overlap with regards to instances where two or more of these terms appeared in the same document. For example, a combination of the terms 'blogs' and 'wikis' resulted in a list of 1,989 publications containing both terms somewhere in the text of the document. Combining 'social software' and 'enterprise software' gave only six publications, and 'blogs' with 'web 2.0' yielded 1,666 documents. The

Table A1.1 Search terms appearing in the ProQuest database

Search Term	In Title	In Text
Blogs	19,938	232,036
Discussion forums	219	20,274
Enterprise software	1,342	51,234
Enterprise 2.0	90	493
Instant messaging	2,773	62,414
RSS	1,970	4,545
Social bookmarking	21	483
Social computing	32	499
Social media	216	3,089
Web 2.0	1,289	10,843
Wikis	207	3,282

combination of 'blogs', 'instant messaging' and 'discussion forums' resulted in a list of 14 documents. Clearly, the number of distinct publications dealing directly with social software is still relatively small, perhaps as a reflection of the fact that talk about this new phenomenon is still far ahead of widespread adoption and systematic analysis.

DEFINITIONS AND APPROACHES

As far as I can determine, the earliest published reference to the term social software appears in an article entitled 'Decision Making in the Solar Age: Ecological Criteria for the Post-Economic Era' (Henderson 1981). The focus of this article is on the need to alter our fundamental criteria for decision-making, as we move from an oil-based economy to a world system that is more in sync with natural renewable energy sources and ecologically sound business practices. Specifically, the author states:

We need to begin inventorying all of the world's value systems since they represent resources as real as coal or oil, and provide the key human adaptive mechanism to changes in our environment. In essence, value systems are packages of social software which produce various mixes of behavioural outputs, technological furniture and organizational forms, which can be fitted to specific geographical regions and their ecological carrying capacity.

(Henderson 1981, p. 11)

As will become evident, this conception of social software as a manifestation of various human value systems is totally consistent with the views emerging in the computing and information management literature.

The first publication to use the term social software in its title is a book called *The Social Software of Accounting and Information Systems* (MacIntosh 1985). As with the Henderson article, this work is concerned with the transition from conventional top-down centralized management systems to ones that are more distributed and participatory. After reviewing the impact of personal computing and the emerging electronic office environment, particularly with reference to budgeting and financial reporting systems, MacIntosh suggests that information technology 'will be used to build information webs that will link all managers into one distributed network and so completely change our traditional authority and power hierarchies' (p. 269).

The more widespread use of the term social software within the context of discussions of emerging applications and attitudes towards product development and adoption appears to have occurred shortly after the O'Reilly Emerging Technology Conference in Santa Clara, California in April 2003. Davies (2003) reports that along with a general scepticism grounded in the notion that all software is social, advocates primarily view social software as a means of enhancing rather than replacing face-to-face interaction. From

this perspective, the objective of collaborative technologies such as blogs is to allow users to build on existing networks of friends, acquaintances and colleagues to enhance the social capital of their own organization or association. Davies suggests that the most likely applications for social software are going to be for 'people wanting to build local knowledge, maintain long-distance family ties, co-ordinate clubs or societies, and share knowledge around offices' (p. 37).

Reflecting on the commercial aspect of social software, Arnold (2003) talks about how interest groups and other structures can become 'monetized' through the use of advertising embedded in emails. He points to the great economic potential of such mechanisms, saying that: 'Social software gives often fragmented interests and users the services of a highly individualized utility' (p. 31). Arnold concludes that the proliferation of social software will lead to an increase in the volume of information available on the web. He further suggests, however, that the majority of search tools will unlikely be able to access effectively the information contained in blogs and other people-oriented applications. Finally, with respect to the role of computing professionals, he suggests that 'the task of indexing, abstracting and preserving this new digital content will be hard, underappreciated work' (p. 31).

Gillmor (2003) remarks that one driving force behind the emergence of social software is the fact that 'the smaller the group, the more immediate value in the relationship' (p. 1). Social software helps people to work more effectively by expanding our capacity to share ideas, organize ourselves and make better use of resources in real and virtual space. As reporter David Weinberger ('All Things Considered' 2003) indicates, 'social software is simple and unstructured enough to allow the group to build for themselves the chats and the mailing lists and the wikis that the group decides it needs. It's bottom-up and self-organizing, rather than top-down and management-organized'.

Christopher Allen (2004) defines social software as any software that supports group interaction. Perhaps more poetically, Jon Udell (2004) defines social software as 'whatever supports our actual human interaction as we colonize the virtual realm' (p. 47). Udell emphasizes that while social software systems share the same goals as knowledge management tools, namely, establishing group memory and team awareness, social software systems take into account the broad array of personal preferences, motivations, and 'rules of engagement' that typify human interaction. He provides a brief discussion of several new products. Groove provides an ultra-secure peer-to-peer shared workspace allowing groups to form across political and other jurisdictional boundaries. InFlow maps social networks in order to optimize team communication. Socialtext provides a workspace that is both blog and wiki at the same time, allowing people with different personalities and preferred modes of expression to share both their ideas and their identities. ActiveNet mines emails and other posted documents to ensure that individuals with shared interests or expertise have access to information produced by others

who might be members of other teams, working on separate projects, or perhaps are located elsewhere in the country or around the world. Traction TeamPage offers what it refers to as ‘enterprise blogging’, a mechanism that allows teams to collaborate, track issues and carry on a discussion and comment forum all in the same virtual space. Visible Path operates by relationship mining in order to expand potential business relationships by accessing established networks of individual contacts. Similarly, Spoke makes use of internal and external relationships to support sales and marketing activities. Udell warns that the balance between transparency and privacy might be one of the greatest challenges to social software systems.

In his doctoral dissertation on social software, Pacuit (2005) makes the following observation:

[W]hen designing computer software, programmers do not worry that the computer may suddenly not ‘feel like’ performing the next step of the algorithm. But in a setting where agents have individual preferences, such considerations must be taken into account.

(pp. 2–3)

Pacuit provides an explanation of research in social software, as including: modelling social situations, developing a theory of correctness of social procedures, and designing social procedures. With respect to the first of these, he indicates that the two main issues are representing an individual’s actions based on knowledge and obligations, and determining how information updating should be represented. On the second issue, researchers want to know how to determine the correctness of a particular piece of social software in the same way that they determine the correctness of a conventional algorithm. Finally, the third area of research is concerned with how well a particular social software design will work in real life situations. For similar analyses and contributions to this aspect of social software, see Rockwell (1997) and Pauly (2001).

Harder (2006) views the emergence of social software as a reflection of the evolution of the web from ‘read-only’ to ‘read-write-and-participate’. He suggests that the growing importance of social software is based in the fact that people are passionate about sharing their knowledge, their opinions, and their experiences. He states that it was the conventional role of libraries to serve as places for sharing knowledge in a free and open environment, promoting both diversity of opinion and freedom of expression.

Similarly, McAfee (2006) uses the acronym SLATES to differentiate the more participatory technology environment of Enterprise 2.0 from the older paradigm of WIMP (windows, icons, menus, and pointers) in which the users are strictly consumers of information. The six categories described by the SLATES acronym are:

1. search (keywords);
2. links (best pages);

3. authoring (blogs, wikis);
4. tags (folksonomies);
5. extensions (Amazon's ... if you liked that you might like ...);
6. signals (RSS).

McAfee indicates that new products developed within this framework must be easy to use and must not place constraints on workers with regard to how knowledge should be structured or categorized.

In a short article based on a conference presentation, Cohen (2006) describes three recently developed social software applications that he found particularly fascinating and useful. The first is coComment, which keeps track of all the blogs that a user has commented on, notifying the user when a new comment has been added, thus eliminating the need to constantly check individual blogs. The second is PXN8, an online image editor, and the third is Media-Convert, which allows users to convert media files from one format to another. What these three applications highlight is the multiplicity of social software and the need to make things easier for the user.

Ruth Ward (2006) describes the steps she took as Head of Knowledge Systems and Development at Allen & Overy to use social software as a means of improving internal communication and collaboration in a large multi-national law firm. Allen & Overy has 450 partners in 19 countries, with a total staff of 4,800. She outlines ten steps for success:

1. start small and work with just a few groups;
2. focus on groups who are enthusiastic and committed;
3. identify and involve the main site owner and other champions as soon as possible to develop a sense of shared ownership;
4. manage the expectations of the site owner in terms of their initial support for the site;
5. identify the group's objectives for the site at the outset;
6. review with the group how they currently try and meet those objectives and what software they use to do so;
7. make sure the group understands the business and cultural implications;
8. select software to meet the business needs and uses, not the other way round;
9. do not compromise on ease of use, which is a key selling point for both users and editors;
10. monitor the sites and give ongoing support and feedback.

In a related article, Thomas (2006) interviews Ward about the success of the social software project at Allen & Overy. Ward indicates that the initial idea was to build on the existing knowledge management structures within the firm which resided in teams of professional support lawyers that had expertise in a particular aspect of the firm's legal practice. Special community websites were created that combined the features of blogs and wikis. Eventually, just over 20 groups were established, with the largest serving about 150 people. Allen & Overy has moved into a new phase of extending access to the information flow within these know-how groups to key clients.

Manchester (2007) perhaps captures the spirit of social software best in remarking about the efforts being exerted in all business sectors 'to connect employees who have knowledge with those who need it' (p. 24). The author advocates embedding wikis, tagging, and RSS onto existing intranet systems. He makes three key points:

1. blogs and wikis can add greatly to an organization's strength, primarily putting the power to share knowledge and information into the hands of the employees themselves;
2. these tools all engage employees, put them in touch with one another, reward knowledge sharing, foster collaboration and encourage innovation;
3. it will be up to the practitioners who choose to introduce these tools to ensure that they serve the organization.

As he observes, companies that introduced these technologies have not done so for the 'coolness' factor, but rather because they saw how these tools could make them more competitive and more profitable.

Shifting the focus somewhat, Gotta (2007) explains that too many experts think of social software in terms of specific tools like blogs, wikis, tagging and social bookmarking, when the emphasis should be on understanding the design criteria and adoption patterns associated with these applications. The key points contained in his article are:

- social software can be used to create tools that focus on group interaction;
- software complements existing formal knowledge management processes;
- wikis and blogs have been used successfully in project management;
- suppliers such as IBM and Microsoft are incorporating social software.

He suggests that wider adoption of social software will be facilitated by the entry of major enterprise software suppliers into the market. As an example of

this, Taft (2007) reports on the case of Deutsche Bank having the confidence to move into social software through IBM Lotus Connections.

Chudnov (2007) focuses on metadata as a means of exploring how we as users have become the integral access points of social software systems. Based on his experience of developing library information systems, he provides three observations about metadata:

1. Descriptive metadata must provide access points to support discovery, relating of like items, and distinguishing between very similar items.
2. Metadata values must be indexed so that common user search patterns will lead to relevant items. Because an easy, helpful search box at the top of every page is how most people will use your applications.
3. Choices for metadata value forms (such as authorized headings or standardized date headings) must support necessary user interface functions, like result sorting, browsing by topic, and viewing results on a map (pp. 41–2).

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The author suggests that the last two points are fairly obvious requirements for a system that will actually be used. That is, metadata values must provide users with the results they are looking for and the forms must allow users to keep a record of search histories. With respect to the first point, Chudnov indicates that there has been an evolution from the old ‘author-title-subject’ approach of the library card catalogue to the Amazon type suggestion that ‘if you liked a book by author A then you might also like the work of author B’, and finally to the MySpace, Facebook type link, ‘your friend x likes this book by author A’. Chudnov explains that this evolution is linked to the so-called ‘Long Tail’ (see Anderson 2006) defined as ‘the ability of large-scale systems to help people with like interests find small-scale products that none of us might otherwise hear about’ (p. 42). Effective systems are those that allow for the easiest access among individuals. The author indicates that in some sense social software is based on the construction and maintenance of a reverse supply chain, wherein the user serves as both the consumer and the supplier of information. From the perspective of those producing the software, we become the commodity.

Chudnov’s views are corroborated by Schmidt (2007) within the context of the school system where he advocates the use of blogs, wikis, photo sharing, and instant messaging to facilitate participatory learning. School librarians and teachers can take advantage of skills that teens are going to develop anyway to make them an active part of the construction and delivery of their curriculum.

Preimesberger (2007) reviews four enterprise social bookmarking solutions that are presently available on the market from IBM Lotus, BEA, Connectbeam, and Cogenz. With respect to the nature of the products supplied by these vendors, the first two are software packages, the third

offers an appliance that is well integrated with existing search engines and the fourth provides a service. He looks at these products in terms of overall features, security and privacy issues, tagging methods, retrieval of information and finally price. Regarding security, Preimesberger states that at a minimum, systems should 'authenticate system access, integrate with existing identity repositories and restrict user access as needed' (p. 2). None of the systems reviewed did all three. In terms of retrieval, only Connectbeam allowed access through conventional search engines like Google.

In an essay on how ontologies are enabling development on the semantic web (see Berners-Lee et al. 2001), Gruber (2007) suggests that, unlike older taxonomic classification schemes such as the Dewey Decimal System used in libraries, tagging reflects collective intelligence and collaborative work. He attempts to construct a set of specifications for tagging that will maximize the effectiveness and adoption of collaborative data classification systems.

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Cheng et al. (2007) discuss software development as a social activity. They identify three key trends: increasing distribution of development teams, the extensibility of integrated development environments (IDEs) and the emergence of social software in Web 2.0. They report on the activities of the Jazz Research Project at IBM which was designed to provide a set of collaborative features for the Eclipse IDE. This involved placing the research team in a physical as well as virtual collaborative workspace and developing tools to maximize communication and sharing. Once the local site had been developed the team shifted its focus to the establishment of a multi-site version known as ActivitySpaces, which was organized with respect to space, tasks, artefacts and people, thus allowing participants to enter through the most appropriate point of contact. While the original research was carried out on the assumption that 'the natural habitat for a programmer is the IDE' (p. 54), the authors acknowledge that new technological developments are leading to shifts in both the physical and virtual work environments.

Lackie and Terrio (2007) are concerned to demonstrate to school librarians how social software tools can facilitate learning and enhance engagement with computer-savvy students. They review a selection of widely available and relatively inexpensive products and preface their review with a brief survey of relevant terminology. They describe mashups as collections of content from multiple sources that appear seamless to the end user. They define tags as user-specific descriptors that are assigned to bits of web content, thus engaging in a form of branding. APIs are application program interfaces, allowing communication between software programs, and folksonomies are informal classification systems for information. They define widgets as bits of multimedia components that can be customized and placed in any website.

Hirschorn (2007) writes that Facebook is the most important breakthrough application on the web since eBay. He argues that Facebook comes closest to the real promise of social media, of creating networks of people in a virtual

environment, where they can find each other. He acknowledges the critics, like tech blogger Jason Kottke, who says:

Everything you can do on Facebook with ease is possible using a loose coalition of blogging software, IM clients, email, Twitter, Flickr, Google Reader, etc. Sure, it's not as automatic or easy, but anyone can participate and the number of things to see and do on the web outnumbers the number of things you can see and do on Facebook by several orders of magnitude (and always will).

(p. 152)

Hirschorn suggests that while the openness and messiness of the web are the keys to its success, Facebook offers the right limitations with better packaging, thus making for ease of use and unquestionable popularity. He argues that if this model dominates the design of future applications, then initiatives like AOL 2.0 could be doomed to fail at the outset.

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Richmond (2007) refers to the phenomenon of social search, initiated by communities that serve as 'intelligence farms' to join people and ideas in ways that are segmented, organic, invisible, dynamic and meritocratic. In her opinion these social search communities are taking the place of Google and other conventional search engines, which have become overly manipulated by professional tricksters.

Stephens (2007a) surveys a number of ways in which various social software tools are being utilized in library settings. Regarding blogs, Stephens identifies three distinct trends. First, value-added blogging refers to the way in which, for example, continuous book review threads can lead to better service, improved outreach and professional development. Second, blogging administrators can improve internal and external communication, provide the opportunity for an open and unobtrusive form of human interaction, allow for the sharing of stories and thoughts and provide an effective means for the manager's voice to be heard. Furthermore, blogging can be used as a means of building a community website reflecting the views of all participants and providing a more comprehensive and grassroots sense of ownership. RSS can be used as a means of distributing notices of new materials to interested parties, as well as providing individual clients with a means of building a profile of preferences and interests. Instant messaging can enhance information service provision and the handling of questions and comments. Wikis provide an opportunity for staff and clients to operate as both users and producers of information. Flickr allows for the establishment of a more personal and communal feel to the institution, through images of history, current events and just having fun.

OPPORTUNITIES AND BARRIERS

Parikh (2002) uses the term 'social software' to refer to the process of constructing and verifying social procedures. His intention is to develop

a formalized theory of social procedure that would parallel our ability to construct and analyse computer algorithms. He draws his inspiration from philosophical investigations into the ambiguity of language and meaning, particularly as described by Wittgenstein and as studied through such processes as the iterated Prisoners' Dilemma in game theory. Parikh remarks:

People just aren't as tidy and well behaved as computers, they are wilful and forgetful and selfish. Moreover, different people have different ideas of what is the best thing to do in any given situation so that conflicts can arise even between well meaning individuals.

(p. 189)

One of the key elements of Parikh's analysis is the recognition of the importance to people of incentives for cooperation.

Kasper et al. (2006) discuss how developments in social software can help to make community foundations more effective by providing collective intelligence. They give the example of geographic information systems (GIS) that can be used to create smart maps, showing the distribution of local needs and providing a way to understand changing demographics. They advocate the use of social bookmarking and wikis for information sharing. They also point to the use of digital video for recording and distributing compelling stories of need, as well as documentation of successes. A similar approach would also support community building through social networking via MySpace or Facebook. They see tremendous potential in the development of web-based systems for mobilizing resources and action, such as e-philanthropy via online systems for connecting donors with potential recipients. The authors conclude by stressing the need for people in foundations and community service organizations to see advances in technology not as a threat but as an opportunity.

Owen et al. (2006) examine the intersection between the shift in education towards participation in knowledge creation and continuous learning and the shift in information technology towards more collaborative tools. They explore how we learn in an era of connection and collaboration, suggesting that information technology has led us to more than just e-learning and we are now in an era of c-learning, where learning takes place through conversation in a community. They comment:

Students can be members of online learning communities that contain other ages, cultures, and expertise. They have the opportunity to move beyond their geographic or social community and enter other communities, with the obvious implication that others can move in to theirs.

(p. 37)

Borrowing a term from Ito (2005), they characterize this flexibility as 'hypersocial exchange'. They go on to say:

Digital technology can, then, give young people the opportunity to take control of information and media to consume and produce cultures of importance and relevance to their own lives and identities.

(pp. 39–40)

Based on his study of European investment bank Dresdner Kleinwort Wasserstein, McAfee (2006) suggests that the success of social software implementation is tied in with the establishment and maintenance of a receptive culture, the use of a common platform, an informal rollout of new tools and a good deal of support and encouragement from managers. At the same time, he remarks that knowledge workers just might not take advantage of new tools, preferring their role as consumers rather than producers. Alternatively, he warns that the use of social software might lead to dissent and debate, creating an environment of change, with managers scrambling to retain control.

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Weinberger (2006) relates his experience attending a conference sponsored by the Central Intelligence Agency on how social software could support its intelligence analysts. In contrast to the highly compartmentalized structure and operating procedures of the CIA, Weinberger remarks that the best quality information is not the property of isolated experts, but the property of conversations. As he observes:

Instead of thinking that topical knowledge exists in the heads of experts, we now have the ability to go back to the original meaning of topic: topos, or place. By creating intranet places where experts can share and debate what they know, new, better and more timely knowledge emerges.

(p. 17)

He identifies two problems with the shared construction of knowledge. First, we do not know how to compensate people for being part of a team rather than for the work they produce on their own. Second, the basic working assumption at the CIA, and in many firms, is that an employee does not have a right to know something unless they have a specific need to know something.

Dudman (2006) reports on the issue of online rights and the efforts of the ORG (Open Rights Group) chaired by Suw Charman to extend civil liberties to the digital realm. The ORG was set up in 2005 to provide a way for members of the public to enter ongoing debates over digital rights management, privacy and copyright. Charman suggests: 'The most valuable media is what we create, not what we buy, and we are seeing an explosion in people creating their own media' (p. 26).

In discussion with Jeff De Cagna (2006), John Battelle, cofounder of *Wired*, suggests that the biggest change that has to take place in democratic societies

is for people to gain real control over information. What he calls the 'database of intentions' involves:

Taking control of that information individually and understanding from a societal point of view what it means for the individual to have control of that – what it means to have an economy that is driven by the individual click stream, so to speak, or information stream – is probably the next big wave.

(p. 33)

His remarks are framed within his analysis of the way in which Google has emerged as a search engine, an advertising company and a media company.

Through discussions with various analysts and consultants David Tebbutt (2006) identifies the major barriers to social software implementation. Managers were less willing to tell him directly why they are resisting social computing. The barriers are:

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1. losing control;
2. never trust an employee;
3. heard it all before;
4. rejecting social computing;
5. hierarchy anarchy.

Losing control has to do with democratization of power and with the containment of sensitive information. Examples of employee trust issues are such things as time being spent on 'non-work' activities on the web, leakage of information and the weakening of the divide between management and workers. The third point has to do with scepticism over the real benefit that will accrue from expenditures in software, training and altered patterns of work. The fourth point reflects the notion that some employees will reject social software because they will not see what it is in it for them. They might view it as extra work, or even as a threat to their job. Others, especially middle managers, might be afraid of making mistakes that will not only be accessible for all to see, but might work against promotion opportunities. The final point addresses the overall concern with subversion and disruption of traditional channels of communication and authority. Tebbutt relates an interesting comment from Al Tepper, head of online development at Caspian Publishing, regarding social software implementation, that 'if you've got something to hide, you've got something to fear'. Tebbutt suggests that this is bad news 'for those who maintain their position through manipulation, hoarding information, or playing politics' (p. 21).

Shuvra Mahmud (2006) of the BBC raises the issue of how the democratizing aspect of social software might pose a problem in countries like Iran and

China. Mahmud highlights a 2005 Amnesty International report that states: 'In both Iran and China, the authorities have increasingly targeted bloggers to stifle dissent. Bloggers are sometimes arrested and sites discussing political or social issues shut down or redirected to entertainment forums.' Both countries have created and encouraged pro-government blogs, while at the same time placing heavy controls on those that are critical. Mahmud points out that even in the face of oppression, social media are providing an opportunity for freedom of expression at a level never seen before. However, with the exception of some entities like Wikipedia, much of the current social software is only available to English-language speakers.

Friedlos (2007), who has yet to be drawn into social computing, suggests that while there are potential benefits to businesses with respect to internal and external communication from social software, the security issues still might lead to breaches of trust with existing customers. He reports that Cisco's chief executive anticipates that Web 2.0 will increase business productivity to a level that could surpass the dot-com boom.

Bradbury (2007) suggests that many companies will have to engage in a good deal of 'line-of-business' tinkering before they adopt social software schemes in a big way. He also indicates that social computing accentuates the tension between control and freedom with respect to definitions of management and work. Drastically increased bandwidth appears to be at the heart of social computing. The author contrasts conventional software platforms that became slower as more people used them and Web 2.0-based applications that do the opposite. The more people use them, the more effective they become.

Veitch and Murray (2007) discuss how a series of new product offerings allow for the implementation of usable and flexible social software without loss of administrative control. They also point to the challenge of finding software developers with adequate client-end skills.

In discussing the open source model of software development, Carr (2007) builds on ideas presented by Eric Raymond (1999) with respect to the notion of the cathedral and the bazaar, in which traditional development structures resemble the isolated and specialized construction of cathedrals, while initiatives like Linux rely on the large and diverse crowds that one would find in a bazaar. Carr states that the diverse agendas, interests and strengths of the crowd (see Page 2007) are most effective for refining a design, as well as finding and correcting errors. He doubts that a democratic participatory approach will yield many innovations. According to Carr, the success of Linux, as opposed to Wikipedia, is the result of the presence of a central authority responsible for synthesizing and ultimately incorporating suggestions. He suggests that real progress is most likely to be made when both structures are present.

Rogoway (2007) spoke with wiki pioneers Ward Cunningham (see Leuf and Cunningham 2001) and Jimmy Wales, who suggest that the key to success in

social software is to let anybody do anything, as long as you can reverse it, and as long as the process is visible.

In an article aimed at public accounting firms ('Is it Time' 2007), the following pros and cons of adopting a more sophisticated web presence are identified. On the positive side, adopting a new approach to the web allows you to better embrace the end user/client, create a platform for displaying leadership, convey a transparency that isn't always there when using stodgier, older approaches to web design, and harness third-party technologies to reinforce internal staff and external client relationships. On the negative side, you might have trouble delivering your message or vision or brand in new packaging or risk striking out when seeking to deliver compelling content, or overspending on early stage technologies. Even for small firms on a limited budget, a more sophisticated approach to the web can provide better content management, more precise search engine utilization, and the use of web stats to generate leads. However, as Matt Thomas of Digital Brewery Company observes in this article:

If your firm lacks soul or heart, and doesn't understand the concept of brands, or if there's a disconnect with the world around it, there's little chance its marketing will resonate with anyone.

(p. 14)

Murray (2007) reports that one-third of companies responding to a survey had launched an investigation into potential leakage of confidential or proprietary information by email and 5 per cent of companies surveyed had fired an employee for violating social networking rules. About one-third of the companies reported that they had actually hired someone whose job it was to check the content of outgoing emails and blogs.

Brad Whitworth, the senior communication manager for strategic alliances at Cisco (Streamlining Messages 2007), indicates that the most effective communication channels are those that help individual employees to do their jobs better. He suggests that the role of social media and collaborative tools are increasingly becoming the norm.

Carey (2007) presents the case of SAP who, through their launch of two social media initiatives – SDN (SAP Developers Network) and BPX (Business Process Experts) – managed to significantly increase levels of customer participation in and satisfaction with a wide array of product training, support and implementation activities. Participation even carries with it a reward system through which individuals gain recognition on national and international company forums.

In the first section of their article on social computing, Parameswaran and Whinston (2007) indicate that, compared to traditional computing, social computing demonstrates a number of characteristics at the agent/element

level and at the system/community level. At the level of a specific software application, social computing tends to:

- display highly dynamic content;
- possess peer feedback and unstructured quality control mechanisms;
- rely on open-source, easy-to-use development tools;
- possess high interoperability and portability;
- integrate well with a variety of external applications;
- have a locus of control close to the user; and
- be easy to use.

At a systems level, social computing displays:

- more decentralized organization;
- a highly dynamic state;
- transient membership;
- fluid boundaries that extend to overlap with client applications and systems;
- rich content enhanced by dissemination systems and peer influence mechanisms;
- highly mobile user identification and security;
- and is very scalable.

The authors are primarily concerned with the impact of social computing on the field of information systems more generally and on how the research agenda in this field will be affected by taking into account the characteristics listed above.

Mattson and Barnes (2007) carried out a survey of social software adoption among the fastest growing companies in the US, as identified by the Inc. 500. Companies were queried on their level of familiarity with and adoption of blogging, podcasting, online video, social networking and wikis. Based on responses from 121 firms, the authors conclude that there is a positive correlation between the rate of growth of companies and the adoption of social media.

Parameswaran and Whinston (2007) identify several possible sites for social computing research, including organizational form, governance structures, intellectual property rights, motivation for participation cooperation and altruism, public goods and free riding, reputation, social capital, online networks and objectivity through collaboration. They go on to suggest that as more businesses adopt social computing, research agendas will need to

expand to consider network effects, methods of entry into social computing, communities as customer interface, innovation, navigation, alignment of objectives, impact on market power, market research, corporate IT and segregation of Internet users.

LaChance (2007) explores the impact of social computing on information professionals indicating that among the possible benefits for IT personnel are:

- being viewed as a causal force delivering economic value to the organization;
- being viewed as the driver for properly applying the new technologies;
- stronger personal marketability and branding inside and outside the organization;
- positive new employer-independent online reputation;
- learning a set of highly transferable new skills (p. 34).

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She also indicates that organizations will be enabled to increase customer satisfaction, allow customers to connect with experts, empower their employees to find experts, ease post-acquisition integration, provide the 'whole product', understand and visualize real communication paths, extend the shelf-life of conferences, share knowledge, pull together the all-star team for specific customers and differentiate service with the brand of 'you'. She draws attention to the insights of Barabasi (2003) and Gladwell (2002) with respect to the power and ubiquity of networks.

In his review of the potential impact of Web 2.0 on records and information management (RIM) workers, Dearstyne (2007) identifies four trends that have driven the development of the 2.0 phenomenon:

1. the development and popularity of online social networks for exchanging personal information, photos, videos, and other information;
2. the broadening availability of easy-to-use software being developed by three distinct online communities: the toolmakers, the gatherers, and the entertainers;
3. the search for techniques to foster more productive use of information;
4. the rising importance of knowledge workers, who, to quote Davenport (2005, p. 10), have high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution, and application of knowledge (pp. 26–7).

Dearstyne then outlines the following eight challenges:

1. assigning responsibility for managing and being custodian of the information;
2. managing the creation, collection, storage, and dissemination of vast amounts of unstructured and constantly changing information;
3. controlling access to particular levels and types of information;
4. protecting the security and integrity of the information;
5. providing access tools;
6. assessing the legal implications of vast amounts of information in scattered systems and databases;
7. deciding how much information to make public;
8. using tools and techniques for RIM programs (pp. 28–32).

Harney (2007) addresses collaboration, suggesting that as businesses seek social computing solutions, they should turn to vendors that have a large user base and deep R&D pockets, have diversified capabilities, have robust SDKs (software development kits), offer complexity balanced with scalability, have a common repository for disparate components, feature Web 2.0 technologies and allow advanced integration of previously purchased components. Harney concludes that: 'customer-, user-, and community-based technological innovation will supplement IT department-determined solutions to yield greater democratisation of collaboration' (p. 38).

Reporting on a study of social software use by practitioners and recipients of Vocational Education and Training (VET) in Australia, Evans and Larri (2007) suggest that cognition and learning have changed among generations raised with computers. They further suggest that adult learning theory and delivery are in a catch-up mode, as learning styles and contexts change more quickly than educational bureaucracies can respond. The ubiquity of social software means that knowledge production and consumption is taking place at many levels and in many locations, calling into question traditional methods of formal knowledge transfer. The authors link the urgent need to respond to the training demands of the actual practice of knowledge work with the level of national economic competitiveness.

Stephens (2007b) lists a number of best practices regarding the implementation of social software in libraries in a '2.0 world'. These include: remember your mission and vision, be selective, create a prototype, encourage conversation, invite participation, learn the tools and teach the tools, give real world services a virtual space, replace or improve outdated methods, be mindful of technolust, tell stories, be creative and innovative, have presence, be the change you want to be, make time for 2.0, experience and play and participate. His overall message is one of participation and permission. In

other words, the only way to get others to participate is if you participate, no matter what your function or position. The element of permission refers to the idea that before social software can have an impact, time needs to be spent on education and experimentation. It is essential that management allow time for these activities and that employees feel that they have the blessing and support of their superiors and peers as they adopt these new tools. Stephens gives the examples of Learning 2.0 and Teaching 2.0 as successful initiatives aimed respectively at easing staff into social software and at making clients comfortable with using these new tools.

In their discussion of socio-technical development within IT, Patrick and Dotsika (2007) identify four problem areas that inhibit knowledge sharing in a development environment: knowledge modelling (tagging, taxonomies, folksonomies), standardization of information and access to services, security and maintenance, and scalability. They conclude that 'developing from within' facilitates knowledge sharing by building on existing social and technical systems (p. 404).

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CONCLUSION

Overall, the dominant theme throughout all of the literature reviewed above is that the hype about social software is well ahead of its adoption. Understanding just exactly what counts as social software, and what the real costs and benefits associated with it are, are open questions and significant challenges, especially when public recreational use of these applications is so widespread. The broader adoption in the library environment is perhaps a reflection of this ubiquitous public acceptance and adoption of means that facilitate interaction.

Among the challenges facing management are threats to personal autonomy and power, together with unclear guidelines or findings with respect to the real costs and benefits associated with adoption. One area that seems to be garnering a great deal of attention is the value of social computing in improving corporate and client communications (Call for Papers 2007).

Employees in some sense have the fewest difficulties in making the transition to social computing, because many people already use blogging, Flickr and other applications in their family and social lives. The problem comes when these tools become a normal part of the work day and the boundary between work and non-work becomes blurred. Definitions of tasks and functions, as well as performance measures, will all need to be renegotiated.

IT departments also face autonomy issues with the advent of social computing as the distinction between provider and user grows less clear. All aspects of information systems are affected, from design and delivery, through implementation and monitoring, to application and training. New skills, especially as they relate to clients and human factors, pose a serious challenge to the way in which computing professionals are trained, hired and utilized.

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Notes: Anonymous or uncredited news items and briefs are listed by their titles. All website and weblogs were accessed 18 January 2008.

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