

Knowledge Management and Enterprise Social Networking

Global Mobility Network, 24th January 2008



1. Introduction

This account of the Global Mobility Network's exploration of 'Knowledge Management and Enterprise Social Networking' is a first-cut attempt at identifying how enterprise social networking might facilitate knowledge management.

Network members attending the meeting were senior executives from a range of knowledge disciplines and organisations, including large companies, small businesses, and academia. Our aim was to explore the issues businesses need to consider in utilising enterprise social networking tools and working practices to enhance knowledge management.

The meeting was divided into two parts. The first part consisted of research input to provide trigger points for discussion. The rest of the session was an exploration of the topic from the diverse perspectives of the network members. To help us in the first part, Adrian Jones, VP Sales from Trampoline Systems, and Professor Colin-Coulson Thomas, Chairman of Cotoco Ltd and Don Fuller, CEO, were welcomed as guest speakers.

On reflection, the topic was ambitious. Knowledge Management is itself a debated concept and social networking, particularly in the enterprise, is surrounded by hype and lack of clarity.

This exploration starts with a context-setting introduction to the phenomenon of social networking, then observations from the keynote presentations are summarised before analysing issues arising from all the inputs, including the groups' discussions.

2. Social Networking Phenomenon

Ofcom¹ recently reported that,

"a greater proportion of UK internet users visit social networking sites than in any other key European country surveyed. They also visit these sites more frequently and spend more time on them".

The effect of people connecting, conversing and creating content online has been the fundamental re-structuring of entire industries, such as traditional broadcast media and the music industry. According to one source²,

"The avalanche of high quality videos, photos and emailed news material from citizens following the July 7 bombings in London marked a turning point for the BBC ... evolving from being a broadcaster to facilitator of news. Richard Sambrook (Director, BBC Global News Division) likened the increasing use of user-generated content to a sports game; the crowd was not only invading the field but also seeking to participate in the game, fundamentally changing the sport."

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² Social Computing: How Networks Erode Institutional Power, Forrester Research 2006

The phenomenal rise of people connecting, and creating and distributing user generated content through social networking sites has led to predictions about the potential of social networking to transform organisations. One source attributes to Don Tapscott, co-author of the popular management book *Wikinomics*³, the view that,

“the Facebook generation will wipe out the command control infrastructure in business today”⁴.

Whether or not he would go so far, Tapscott does propose in *Wikinomics* that new modes of peer production around self-organisation through social networks will challenge existing organisational structures based on hierarchy and control, and that it is the newest generation coming into the workforce that will force the change.

It is not unreasonable to speculate that young people might challenge existing working practices. After all, according to Castells et al.⁵,

“the interaction among social structure, social practice and new information technologies constitutes a profound social transformation. Young people have been the drivers of the diffusion of wireless communication technology in the developed world, setting behavioural trends that influence people of all ages”.

However, early clues that the new generation’s communication and collaboration habits will not be seamlessly absorbed within organisations are available in the large numbers of UK businesses banning social networking sites. If an article in the *Guardian* is accurate⁶, 70% of businesses in the UK have banned employee access to social networking sites like Facebook and YouTube.

The ESRC research programme *The Future of Work*⁷, involving 22 UK universities and conducted between 1998 and 2004, pointed to “a dramatic increase in the diffusion of new information and communication technologies in a wide range of jobs and occupations, but less dramatic advances in the management of people which might ultimately hold the key to the performance gains that so many companies wish to achieve”.

Similarly and more recently, a report on mobile work futures⁸ for Microsoft claimed that, “organisational and behavioural structures in the workplace are only now adapting to the digital infrastructure on which so much of modern life depends ... improving on this is critical for businesses seeking to compete internationally, and it requires a new type of relationship between employer and

³ Tapscott, D. And Williams, A.D.(2006). *Wikinomics: How Mass Collaboration Changes Everything*, Atlantic Books, London

⁴ http://www.ipbusinessmag.com/departments.php?department_id=7&article_id=200

⁵ Castells, M., Fernandez-Ardevol, M., Linchuan Qiu, J., Sey, A. (2007). *Mobile Communication and Society: A Global Perspective*. MIT Press, Cambridge, Massachusetts

⁶ The *Guardian*, Saturday 25.08.07

⁷ http://www.leeds.ac.uk/esrcfutureofwork/downloads/fow_publication_5.pdf

⁸

employee. A new generation of workers is keen to embrace more flexible and federated approaches to working”.

On the evidence of these research findings of the slowness of working practices to adapt to the performance-transforming potential of technology, and the dominant business reaction in banning social networking sites, it is not surprising that social networking in the enterprise are not yet leveraging the sort of radical change that Tapscott envisages. It may be that we are in a period of transition and that young people coming into the workforce will force behavioural change.

What behavioural, structural and procedural changes will need to take place to allow businesses to grasp the opportunities social networking creates for collaboration and knowledge management? Some of the issues and possibilities are explored in the keynote presentations and discussions.

3. Keynote Presentations

Adrian is VP Sales for Trampoline Systems, which produces systems that allow businesses to identify, monitor, measure and manage social networks, information flows and expertise. As information from a range of sources (including email, IM, wiki, blog, RSS, documents etc.) passes through the company's SONAR technology, it extracts connections and key themes. The technology then uses these to create social graphs, and information flows across the organization are presented as tag clouds.

Rather than speak about the software, Adrian discussed drivers underlying the need to understand and influence organisational network structures and dynamics, and to create support systems and processes that facilitate collaboration throughout increasingly dispersed organisational structures.

Choosing just one of these external drivers, he highlighted innovation and presented evidence that the main sources of innovation and new thinking within organisations are employees, business partners and clients. Surfacing connections among these people through enterprise social computing and supporting management systems enables businesses to manage knowledge effectively, harnessing and supporting collaboration and knowledge-sharing capability.

As well as identifying where innovation occurs, enterprise social computing enables businesses to find talent, identify expertise and make communication more efficient. Adrian concluded by saying that connecting people to people in networks that exhibit trust and commitment requires a mix of technology, people factors, organisational commitment and employee support.

Professor Colin Coulson-Thomas is Chairman of Cotoco. The company captures what top performers do and builds performance differentiators into software tools for others to learn from. Colin presented findings from research in over 4,000 companies into the characteristics of winning people in winning companies. Summary findings from the research are available on request.

Colin made several strong observations in his keynote talk. He began by saying that if he had fallen asleep for twenty years and had just awoken, he would not know that he had been asleep. Although communication technologies have the capability to transform organisational structures and working practices, and to support performance gains, the behaviours, attitudes and skills (or lack of) that prevent and enable high-performance remain the same.

His research shows that every organisation has crucial people who are 'superstar' performers. It also reveals that these important people are not being supported. Businesses need to be able to identify high performers, find out what they need to excel in their work, determine what's missing and provide resources and tools to provide the support they need.

Focus	Action
Determine	Determine what knowledge is required
Create	Create a learning strategy
Manage	Manage the learning created
Exploit	Create knowledge entrepreneurs
Apply	Develop job support tools

The knowledge management agenda outlined in the table is defined from the research.

Colin stressed that technology is neutral, and new technological applications within knowledge work can only influence productivity and how people do their jobs if there is exposure to change, recognition of the need to change, and acceptance and commitment to change. Winning companies create and deploy new technologies to exploit what they already have.

He finished by saying that many companies spend a fortune on sharing what everyone already knows, putting enormous effort into things that do not make a difference. Winning companies know that the best place to start is not with the 'walking overheads' but to make it easy for the high-performers to get hold of the tools and support they need to do their jobs. They also know how to capture knowledge of what makes high-performers effective and then create simple, scalable and cost effective support tools to transfer success capabilities to other people.

Don is CEO of Cotoco. He gave an example of one of his company's job support tools, which integrate the principles uncovered in the research programme. Don provided evidence from the Chartered Institute of Personnel Development (CIPD) indicating that on-the-job-training is regarded as the most effective form of learning.

Results from applying the tool to improve the performance of sales staff in one company included reduced cost of technical support, increases in sales by 25% and over a reduced length of the sales cycle, and direct benefits to the company of £3m within a year.

Key lessons in implementing job support tools include keeping it simple, and then using tools to improve processes and sharing good practice. The tools are most cost-effective with homogenous groups/tasks, and when focused on applications with the greatest impact.

4. Discussion Groups

The executives present at the meeting were allocated to four groups to consider,

- What is Enterprise Social Networking?
- What are the key drivers, enablers and barriers to Enterprise Social Networking in a knowledge management context?

Analysis of what constitutes enterprise social networking is deferred until the next section.

Drivers

The keywords and phrases for drivers are,

Rate of change, business challenges, fashion, global crisis / globalisation, complexity, human nature, Generation Y, need to foster innovation and drive competitive advantage, technology, attractive to talent, knowledge needs (to know more about something for competitive advantage), just-in-time knowledge, knowledge management (stopping decay), differentiator, need to share common goals, passions and interests, low maintenance, desire not to miss out, business growth, productivity, usefulness, finding knowledge precisely and accurately, raise own consciousness about something important to me, social esteem needs, improving oneself or the business.

Enablers

Technology with global reach, human nature, next generation, trust, change of context, choice of connection, facing complete reality, understanding, access to technology, youthful innovation, 'application savvy' generation, advances are wider familiarity with internet / web technology

Barriers

IT infrastructure and network capacity, fraud, fear of the consequences of a loss of control, risk of time wasting, human capacity, corporate governance, cost control, lack of trust, fashion versus delivery, defining your network, personal style, IP and sharing knowledge, is the source to be trusted, information security – how and where will the information end up or be used, threats of invasion, technophobia, confidentiality and privacy,

Observations

Are physical water 'cooler' conversations better than online conversation?

Opportunities for ideas are created by chance encounters.

Innovation often comes from mavericks.

We need a sense of belonging

Is there something missing in society?

There is a mis-match between corporate favourites and real experts and performers.

Features of technology and supporting management structures:

- Easy, intuitive interface to people and knowledge

- Secure and risk free environment

- Being able to articulate and disseminate knowledge efficiently

- Leader has a peer role and changes periodically

One creative person supplemented his or her text with pictures for the contribution 'breaking the anonymity of modern office work', with a smiley face for 'breaking' and a sad face with dark glasses for 'anonymity'. Similarly, 'finding who knows what' was accompanied by a drawing on an A-Z directory, a map and a compass showing North. The creativity continued with a heart to denote 'finding others with shared values and interests', and a skull and cross-bones (a very sweet one, though) accompanying 'viruses, spam and identity threat thefts.

5. Making Sense of It All

An attempt to summarise such rich insights from multiple sources inevitably reflect the view of the person doing the summarising; the account is incomplete and potentially biased. Network members are invited to make their contributions, which will be reflected in the final version.

What is Enterprise Social Networking?

Feedback from one of the groups suggested that terminology needed to be further explored. A range of definitions from blogs and research papers is therefore collated in the appendix, and together with the groups' definitions identifies the key elements of enterprise social networking.

Combining the O'Reilly and KPMG translation of the McAfee versions of Web 2.0 / Enterprise 2.0 technologies from the appendix we have,

“a suite of emergent technologies, which should adapt and get better as more is understood of how people use them, which are deployed within and beyond the four walls of an enterprise to harness the network effects of collaboration (collective intelligence)”.

The focus of these definitions are on technologies, their characteristics and deployment - albeit with the objective of facilitating and harnessing the dynamic outcomes of social relationships and engagement.

The Wikipedia definition of a social network conversely says nothing about technologies, focusing rather on the concept of a social structure as inter-dependent nodes, which of course are individual people linked within and across networks of relationships.

The inter-play between the formal and informal networks within an enterprise context is highlighted in the comprehensive definitions arising from the group discussions. Some of the discussion groups provided definitions, others came up with key words.

The definitions include,

‘informal communities reaching across the formal structure of an organisation and supply chain, generating value, ideas and community spirit.’

‘the enablement of loosely coupled, informal networks in order to promote the growth, knowledge sharing, knowledge management, and collaboration that drives effectiveness and competitive advantage.’

‘encapsulating your wider networks for trusted knowledge to add value and diversity to deliver.’

‘exchange of views or knowledge between individuals but available to a wider group.’

‘self-managing democratic community of common interests based on values and trust’

The keywords and phrases are,

connected easily, for what purpose, guiding principles – the sharing of talent and wisdom, lack of hierarchy?, rewarding, social rather than sociable, easy, fun and valuable to do what I need to do.’

Synthesising the O’Reilly / McAfee definitions with the network members’ definitions, enterprise social networking might therefore be seen as,

“dynamic, loosely-coupled, self-organised informal communities reaching and sharing knowledge across the formal structure of an organisation and supply chain, enabled by technologies and organisational structures, policies and processes that harness collective intelligence for effectiveness and competitive advantage”.

Issues Arising

Reflecting on the keynote content and input from literature and blogs, a distinction appears between enterprise social computing and enterprise social networking technologies.

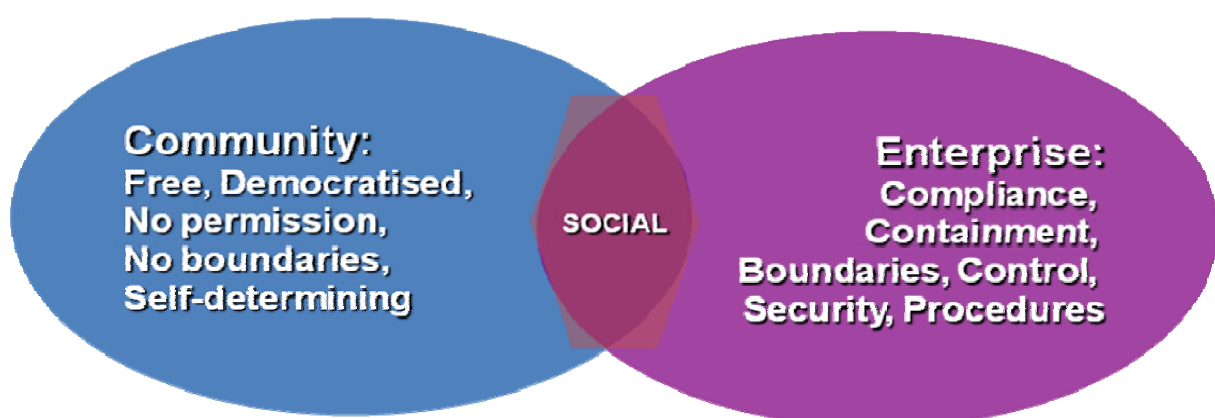
Enterprise social computing tools, exemplified by the Trampoline Systems SONAR technology which monitors and extracts connections and information flows across the organisation, is used by management to gather and analyse management information. These technologies are components of formal management systems used to track and control. They can identify who the effective networkers and high-performers are; surfacing and tracking their connections and enabling businesses to pin-point where the knowledge is and develop easy-to-use tools to support the high-performers in their work, allowing their knowledge to be captured and transferred to others.

Enterprise social networking tools on the other hand are aimed at connecting employees and emulate much of the functionality of online social networking sites. Danah Boyd, an ethnographer of digital culture, says that social networking sites have three core properties⁹:

- (1) profiles, which can be seen as a 'digital body' where people write about themselves – 'writing yourself into being'
- (2) friends, who comprise an imagined audience and a self-defined social group
- (3) comment structures that allow public interactions, and where relationships with others are displayed.

Enterprise social networking tools offer community and collaboration features like profiles as a core component, blogging, bookmarking, RSS, wikis, and the creation of self-defined, self-managed online communities¹⁰.

The two categories of technologies can be mapped onto the diagram, revealing the tensions between formal and informal organisational structures and systems.



⁹ <http://discovermagazine.com/videos/interview-danah-boyd/>

¹⁰ http://www-306.ibm.com/software/lotus/news/social_software.html#benefits

It is interesting to note that the discussions groups' definitions of enterprise social networking stressed informal networks as the source of knowledge creation and exchange. There are tension between formal and informal dynamics in organisations. Informal networks have long been recognised as sources of creativity (and negativity) but they are difficult to manage since they 'typically fly under management's radar, they elude control' and 'the greatest limitation of these ad hoc arrangements (informal networks) is that they can't be managed'¹¹.

Communities of social networks outside of enterprise control, which people have been joining in large numbers, are self-determining. Informal enterprise networks share the same self-determining characteristics but are subject to attempts to control them by formal management technologies and systems.

In their attempts to control and formalise, might there be a danger of businesses alienating the spontaneous sharing of passion and interests for self-esteem, fun and need for social connectivity which our executives identified as drivers of enterprise social networking? Moreover, the constant monitoring of communications and interactions, in the manner of Bentham's Panopticon¹², is not without ethical considerations. Much depends on the way information is monitored, by whom, how people are consulted and the use to which the information is put¹³.

Navigation the point of intersection between the two systems requires great leadership and management skill.

6. Conclusion

The topic explored was 'How might enterprise social networking facilitate knowledge management?'

Referring back to the keynote speakers and managing knowledge, there was convergence in both speakers' focus on the business imperative of understanding who the high-performers are, understanding where value is created and who creates it, and understanding the roles key people play in sourcing and acting on new, value-creating knowledge. Both positions supported the view that critical success factors could be determined and built into process and support tools.

The exploratory session raised many questions, and issues arising depend on clarification of terminology. There are four different contexts or contingencies that could be considered:

- individuals participating in business-focused social networks, like Xing or LinkedIn, or even Facebook for business purposes, for their own satisfaction. They might network with work colleagues or people outside their organisation's sphere of influence.

¹¹ Lowell, L et al. (2007). Harnessing the Power of Informal Employee Networks, The McKinsey Quarterly, No. 4

¹² <http://en.wikipedia.org/wiki/Panopticon>

¹³ White, M. Et al. (2004). Managing to Change? *British Workplaces and The Future of Work*. Palgrave, London

While this is not strictly enterprise social networking, it is one way in which high-performers can find new knowledge and then feed it back into their own organisation. In which case, a business could use a social computing tool like SONAR to track the resulting connections, information and knowledge flows.

- businesses supporting a corporate presence on public social networks like Facebook. We know that some businesses are using Facebook as a social networking portal linked to their management and technology systems behind the enterprise firewall.
- businesses providing closed enterprise social networking sites restricted to authorised people i.e. staff, partner companies or ex-employees. We do not know much about the extent of the dissemination, or success or otherwise of enterprise social networking sites.
- knowledge management is more commonly associated with communication and collaborative technologies, like blogs, wikis, RSS, discussion forums. These are far more purposeful tools than social networking, around which there is unease and fears about time-wasting.

Businesses can choose to adopt different approaches to informal networks. One way is to formalise them, 'building network infrastructures assigning 'leaders to focus discussions and combining hierarchy and collaboration to bring together natural professional communities'¹⁴. Alternatively, they can recognise their existence, provide appropriate tools and support and clear out of the way to let them get on with it.

Euan Semple, recognised as a pioneer in using blogs, wikis and discussion forums for knowledge management and innovation in organisations, makes the point in this blog entry and subsequent conversation with readers¹ that effort and time has to be devoted to deploying social media / collaboration tools to manage knowledge. People might be flocking to connect on social networking sites but much more effort, thought and support has to be given to applying similar tools within enterprises for business objectives, like managing knowledge.

¹⁴ Lowell, L et al. (2007). Harnessing the Power of Informal Employee Networks, The McKinsey Quarterly, No. 4

Appendix

One of the groups said that it was difficult to discuss the topic question without defining terminology. In retrospect, it would have been a good idea to have compiled this analysis of terminology before the network meeting.

Social Computing

According to Forrester¹⁵, social computing is,

“a social structure in which technology puts power in communities, not institutions”.

Consumer power is wreaking significant structural change in entire industries (traditional broadcasting and music), and changing how businesses communicate with consumers. User-generated content, often captured and distributed on mobile digital devices at the point of inspiration, is a key way in which communities are created typically through social networking sites and blogs.

People are adopting social computing technologies on their own terms, with no permission or direction and for their own purposes.

Social Networking

The Wikipedia definition of a social network¹⁶ is,

“a social structure made of nodes (which are generally individuals or organizations) that are tied by one or more specific types of interdependency”.

Patterns arising from links among nodes within social networks can be analysed through Social Network Analysis.

Social Networking Sites

Social networks can exist and function independently of technology, in which case they tend to be hidden and function out of sight. Social networking websites make visible the networks of connections among people that are usually hidden in the real world¹⁷.

Social networking sites vary in the facilities they provide but usually include personal profiles, comments and private messaging. They might additionally provide photo and video sharing, and built-in blogging¹⁸.

Social networking sites could be considered a subset of social computing, and the same observations apply that people participate on their own terms, with no permission or direction and for their own purposes.

¹⁵ Social Computing: How Networks Erode Institutional Power, Forrester Research 2006

¹⁶ http://en.wikipedia.org/wiki/Social_network

¹⁷ <http://www.commoncraft.com/video-social-networking>

¹⁸ <http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html>

Some social networking sites, LinkedIn and Xing for example, are business-focused and specifically link people in a business context. Other social networking sites like Facebook can be used for businesses purposes, with closed communities being created within Facebook for exclusive use of corporate members.

One innovative business, Serena Software, has a policy of allowing employees one hour of personal time during the workweek to spend on their Facebook profiles and connect with co-workers, customers, family and friends.¹⁹ The company has globally based 800 employees in 18 countries, with 35% of their employees working virtually. According to the Fasforward blog,

“the leadership wanted all employees to be better connected so they could be on the same level of understanding, excitement, and commitment to this transition. They also thought that using a web 2.0 tool, like Facebook, represented the best way to take the whole company into this new space...

Facebook, which is both free and a great example of web 2.0, seemed to be the right answer. They established a private Facebook group for Serena employees and they built a few simple custom Facebook apps to better enable intranet functions. Now they provide links through Facebook to documents stored securely behind the firewall. Access is just as secure as any other method. Serena employees go to specific people to get relevant information. For example, René and his staff provide press clippings and the HR people provide links to benefits information. In each case you learn about the people providing the information through their Facebook profiles, and not simply the content, itself.”

This sort of hybrid application of social networking sites in an enterprise context is an alternative to Enterprise Social Networking sites, described further on.

Enterprise Social Computing

Enterprise social computing is set to be adopted as an umbrella term for a newly emerging generation of business systems²⁰. Charles Armstrong, CEO of Trampoline Systems, is the person making the prediction. His company is responsible for one of these new generation technologies and approaches technology development from a social and ethnographic starting point.

The focus on social dynamics and ethnography is consistent with the Forrester definition of social computing. Unlike social computing, enterprise social computing technologies are deployed for business objectives and used in compliance with a company's strategic aims, policies and procedures.

Enterprise Social Networking

Enterprise social networking appears to refer to social networking sites designed for the enterprise, which emulate much of the functionality of social networking sites.

¹⁹ <http://www.fastforwardblog.com/2007/11/28/serena-has-adopted-facebook-as-their-intranet/>

²⁰ <http://www.fastforwardblog.com/2008/01/04/enterprise-social-computing-what-will-happen-in-2008/>

For IBM's enterprise social networking offering, this means profiles as a core component, blogging, bookmarking, and the creation of self-defined and self-managed online communities²¹. For Microsoft, planned features are expertise search, blogs, RSS feeds, and profiles within the company's SharePoint platform. Tools designed to let users create community websites, personal websites, wikis and mash-ups to foster collaboration are also specified as part of a raft of functionality²².

Enterprise 2.0 and Web 2.0

Terminology around networking and collaboration tools within and across the enterprise is emergent and therefore confusing. For example, Andrew McAfee at Harvard University is credited with coining the term Enterprise 2.0²³, translated in a recent KPMG report²⁴ as,

“the use of an entire suite of emergent technologies—wikis, blogs, tagging, and social networking tools—both within and beyond the four walls of an enterprise”.

The KPMG report has a very useful table of these emergent technologies, along with names of platform providers, and names of businesses that are using the technologies.

McAfee's Enterprise 2.0 conceptualisation is inspired by Tim O'Reilly's original use of the term Web 2.0. McAfee and O'Reilly continue to refine their definitions, and one of O'Reilly's revisions is²⁵,

“Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: Build applications that harness network effects to get better the more people use them - this is what I've elsewhere called 'harnessing collective intelligence'”.

The key features of the combination of these definitions are,

- a suite of emergent technologies, which should adapt and get better as more is understood of how people use the applications
- emergent technologies are deployed within and beyond 'the four walls of an enterprise'
- emergent technologies are deployed to harness network effects which translate into 'collective intelligence'.

O'Reilly and McAfee view Web 2.0 / Enterprise 2.0 from a predominantly technological perspective. The piece that is still missing is around workplace design, including forms of work organisation, working practices, structures and cultures that need to be in place for collective intelligence to be realised in practice.

²¹ http://www-306.ibm.com/software/lotus/news/social_software.html#benefits

²² <http://www.computerworlduk.com/technology/internet/web2/news/index.cfm?newsid=3630>

²³ Andrew P. McAfee (2006). 'Enterprise 2.0: The Dawn of Emergent Collaboration'. MIT Sloan Management Review, Vol. 47, No. 3, pp. 21-28

²⁴ Enterprise 2.0: Fad or Future? The Business Role for Social Software Platforms. KPMG International, 2007

²⁵ http://radar.oreilly.com/archives/2006/12/web_20_compact.html

They typically also include content sharing and collaboration features like blogging, bookmarking, RSS, wikis, and the creation of self-defined, self-managed online communities²⁶. These other computing tools will be explored in a separate briefing.

²⁶ http://www-306.ibm.com/software/lotus/news/social_software.html#benefits