Enterprise 2.0 - What is it good for?

A 12-step guide to getting the most out of Web 2.0 tools and making it safe-for-purpose

Sue Bushell 06 May, 2008 16:00:22

Canberra-based knowledge economy and social computing evangelist Stephen Collins heard a quote earlier this year that perfectly describes the Enterprise 2.0 dilemma: "If you want to find out what tools your staff are finding most useful at the moment, just go and see what your IT department is blocking."

All too true, and not nearly as funny as it sounds at first glance, Collins declares. With Australia apparently several steps behind the US and Europe in Enterprise 2.0/Web 2.0/social media uptake, and corporate efforts at adoption thwarted by lack of real understanding, Collins is frustrated, calling this blocking attitude "frankly criminal".

"I'd love to get in the ear of some CIOs and CTOs and get them to understand that implementations of Enterprise 2.0/Web 2.0 tools aren't about the technology," Collins says. "These tools provide an easy-to-use platform for staff, clients and other stakeholders to engage with each other, to share information and collaborate. Failing to allow staff to do their jobs properly with the best tools can cost a big company millions of dollars.

"Too many organizations choose to block what they don't understand - it makes their environments easier to control. But what might the benefit be of truly understanding social media tools and allowing their use accompanied by a strong and appropriate proper use policy?"

Using Enterprise 2.0/Web 2.0 technologies is really all about enablement. Any C-level executive or line manager who fails to enable their organization's staff to do the best job they can, with the best tools they can, should probably spend a few heated hours in front of the board answering for their actions, he says.

And, with many of these tools being effectively free, Enterprise 2.0 is not hard to deliver. Major organizations that have had measurable financial and knowledge management gains through use of social media tools include SAP, IBM, Deloitte, KPMG, British Telecom and Morgan Stanley - none of them lightweights.

But they seemingly remain the exceptions to the rule.

"The biggest challenge is the lack of a cohesive 2.0 strategy, which serves to confuse users, stall adoption and make 2.0 technologies tough to manage," says Eli Weir, CTO of Seattle-based Visible Technologies. "How helpful is it to replace overstuffed e-mail inboxes with a confusing jumble of wikis, blogs and RSS feeds . . . with no measurable action taking place? The same problem exists in the marketing and service arenas, with now yet another layer of complexity for the enterprise to deal with."

A few months ago an online survey of IT leaders by Gartner found only one in seven organizations have a Web 2.0 strategy prepared, and few are ready for or are executing on Web 2.0. Gartner found few organizations knew how or where to begin determining the implications of Web 2.0. "These organizations are in for a rude awakening because we expect Web 2.0 to pose a greater threat to enterprises than the Web of the dotcom era," Gartner says.

"Given the importance and the potential impact of Web 2.0, we can only conclude that the absence of strategy stems from an inability to determine the implications for the organization's business models, Web presence, customers and employees. Organizations must increase their Web 2.0 awareness and capabilities now to prepare for the storm of

innovation to come."
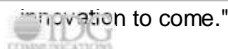
1.Time for a Wake-Up Call at the Top

Web 2.0 is here to stay and companies who ignore it do so at their peril.

S2 Intelligence managing director Dr Bruce McCabe recently predicted that by 2010 Enterprise 2.0 will be so pervasive no one will be able to go for a job where the interviewer isn't armed with a deep profile of all social connections they have made, including those they didn't want people knowing about. By that time too you can expect all leading governments to prepare new legislation using wikis; and 90 per cent of travel and hospitality businesses will be paying for advertising in mirror worlds such as Google Earth.

The first, most basic issue is to make Web 2.0 an agenda for the entire senior management of a company. While hype is an integral part of any new development, the challenges and opportunities presented by Web 2.0 are real and need to be dealt with as a "business" issue more than a "technology" issue, says Stan Relihan, President & CEO of eXpert Executive Search, who runs "Connections", a weekly audio podcast on the Art of Business Networking.

"I believe the most important challenge for the CIO is to make the key decision makers in the company aware and to ensure Web 2.0 becomes increasingly embedded in their current and future strategy," Relihan says.

No one in senior management can afford to be sceptical about Web 2.0, says Jeff Zweig, chief guru, Southeast Asia for Digital Marketing Specialists Web Guru Asia. Instead, they must engage both its challenges and the opportunities that it presents head on. And Zweig has glad tidings for the hesitant: since most companies and organizations are not even close to fulfilling the potential of Web 2.0 and those that get there first will position themselves well ahead of their competitors and also be viewed as innovators in their field, there is a significant first mover opportunity right now

2.Settle the Ownership Question

The problem of just figuring out where responsibility for managing all of this newfound social activity should lie is causing major headaches for many organizations.

Of course, the IT function must support the Web 2.0 implementation from a technical infrastructure and security perspective. The CIO must provide technical advice and recommend technologies and platforms the company should be using for internal Web 2.0 elements such as the corporate blog; handling security, performance and bandwidth management issues; and assessing and recommending productivity tools, Zweig says. However he believes the business strategy behind Web 2.0 should be owned by an organization's corporate communications department.

NetReturn Consulting Australia director Adam Bateson is less sure. Bateson says Enterprise 2.0 must not be left to business leaders alone. Such folk are unlikely to understand that Web 2.0 decisions may expose data from back-end systems that will lead to compliance challenges, and force the building of appropriate integration layers with workflow, ERP, CRM and the like.

"CIOs are often told to deploy new capabilities that include Web 2.0, but are not given the appropriate tools, time or budget to do so," Bateson says. "CIOs need to be included in decisions that involve Web 2.0 and given a well defined road map including business benefits, technology analysis, functional analysis and the like so they can be empowered to make the right technology decisions to support business improvements and initiatives."

Businesspeople also tend to underestimate the time and effort to maintain and run something like a blog or online community or interactive capability such as looking up a price online. Marketing teams will use up entire budgets on design and information architecture without assessing the cost of the technology deployment, giving CIOs the near

impossible task of building systems to support initiatives that have commenced without proper assessment of the technology requirements.

The CIOs involvement in decisions is essential to avoid such problems.

3.Borderless Creativity

The value to Web 2.0 within organizations is still emerging. However it is likely that these technologies will contribute to continued streamlining of the organizational structure, says Theresa Edgington, assistant professor Hankamer School of Business at Baylor University. "Numerous management levels are unnecessary when communication lines are improved. Command and control orders are less necessary when teams are self-managed, working collaboratively. Creativity is enhanced when one's team can be anyone, anywhere in the world," Edgington says.

"Web 2.0 technologies will be contributors to moving responsibilities out to the user departments. Other technologies will allow users to build mashups and the like, but Web 2.0 will aid CIOs to become the IT conductors of the new enterprise IT orchestra. Only some of the IT will remain in the IT department."

Steve Hodgkinson, Ovum Research Director, says Enterprise 2.0 is a genuine opportunity for technology to act as a catalyst for changes in organizational culture.

"Enterprise 2.0 is emerging as the most practical way of sharing and managing knowledge in a range of contexts, from team collaboration spaces to customer self-service forums," Hodgkinson says. "The root of its culture change power, however, is its ability to unleash the personal power of informal networks.

"These networks exist in all organizations, fuelled by mutual self interest or just a desire for comradeship and intellectual stimulation. The architecture of participation created by profiles, wikis, blogs and forums can lubricate the interactions that drive social networks, encouraging 'showing and sharing' and boosting collaboration. It can also make informal networks and their contributions more visible."

Hodgkinson says informal networks give organizations peripheral vision: cutting through the day-to-day nonsense, enabling more sensitive situational awareness, breakthrough thinking and access to the subtle levers of organizational change.

4.If You're Not Blogging, How Will You Know What People Are Saying About You Behind Your Back?

Blogging is much more than a fringe phenomenon and it is here to stay for better or worse, says Cutter Consortium senior consultant Stowe Boyd. Boyd points out that blogs are basically a Web 1.0 innovation but have recently grown in sophistication as the ideas that animate the Web 2.0 movement - including RSS, tags, widgets, and swarms - foster all sorts of innovations.

"David Weinberger, co-author of *The Cluetrain Manifesto*, once said: 'There are no smart companies, there are only smart conversations.' Companies that increase the likelihood of having smarter conversations with all constituents, internal and external, are simply more likely to succeed," Boyd says.

Boyd sees many positive examples of companies that have benefited from blogging, but warns that some companies have already found out the dangers of ignoring what is being said about them in the blogosphere. "The Kryptonite Lock disaster, in which bloggers discovered a way to unlock Kryptonite bicycle locks using nothing more than a Bic pen, something the company took days to respond to, is a case study in what not to do and how not to do it," he says.

And he advises companies to overcome their natural trepidation about blogging, born of fear of the inevitable loss of control, and concerns about confidentiality, leaking secrets, and unprofessional activities.

"Yes, companies should enact a blogging standard like that of Sun, which is: 'Don't do anything stupid', Boyd writes. "Blogging should be just another form of communication in the corporate policy manual, along with e-mail, letters, fax, and telephone calls, and should be subject to the same considerations: don't leak critical business information; don't do anything illegal; don't disparage others for their beliefs, background, race, or national origin; and don't call your boss a moron."

5.Consider the Dark Blog (But Be Ever Alert to the Dangers)

Companies still unconvinced should consider the value of the dedicated "dark blog" - the blog managed safely behind the firewall.

"Many blog technologies can be licensed and managed behind the firewall at an astonishingly low cost," Boyd writes. "Users can be trained in minutes, since blogging is only slightly more complex than writing e-mail. And technologies like RSS and memetrackers can be used so that people can remain in touch with what is going on through the network of conversations, within the lifeblood of the business, instead of waiting for quarterly management reports."

It is also easy to trial social project management tools like Basecamp (from 37signals) or Goplan (from Webreakstuff), to get a sense of where dedicated dark blog technology might be headed, or look to much heavier-weight solutions geared to the needs of larger corporations, with sophisticated access controls allowing fine-grained access rights management.

Oz Sultan, who handles Web 2.0 projects for *The Economist*, divides internal blogs into controlled blogs featuring direct - "and kind of absolute" - messaging from a corporate leader such as a CEO, CIO or CMO inside the organization, and internal blogs where a degree of commentary is allowed. The latter can be dangerous for CIOs, he points out, particularly where multiple factions inside the organization are cheerleading for competing technologies as large initiatives are being considered.

"Inside a smaller organization I think blogs are excellent, but the larger you get the more moderated it has to be, the more you have to review the comments, the more you may have to edit some of the comment that's coming back toward you," he says.

Blogs can also force a different way of thinking about the role of the CIO, says Joyent vice president, platform evangelism Rod Boothby, particularly when the organization turns to cloud computing as a delivery mechanism. (For the skinny on cloud computing, see "Cloud Computing: Not Just Pie in the Sky" page 61.)

It used to be that the CIO had to deliver everything, from the solution on the desktop all the way back to the servers. Not so any more, Boothby says. In a previous role at Ernst & Young Boothby says he ran into some "huge political difficulty" when trying to set up blogs and wikis behind the firewall.

"Not least of it was a very complex six-month process to try and order one Dell server and get it installed in our data centres so that I could install a simple blogging software behind the firewall," Boothby says. "You can't be agile, you can't be dynamic, you can't test out new technology for a short period of time if you have such a rigid infrastructure."

He says cloud computing, where computing is moved away from personal computers or an individual server to a "cloud" of software-controlled computers, can allow CIOs to decouple physical servers from the software they run on, and gives IT departments flexibility in experimenting with the new technologies.

"There are tremendous benefits to setting it up, but usually what [CIOs] are thinking about when they first do it is that they're rolling out virtualization software so that they can more easily manage the desktop computing - a lot of CIOs are excited about the technology from that perspective. I think very few of them realize the same technology can also be used to deliver for them a Web server infrastructure that allows their departments to quickly and easily experiment with blogs, wikis, SugarCRM without necessarily having to expose sensitive corporate data," he says.

6.Push Co-Creation

Most CIOs truly believe that networking is a waste of time for anyone but sales, marketing or PR people, notes Andrey Golub, social networks researcher/manager for some upward-looking open-source and open-community projects and co-founder of business networking club "Milan-IN", a LinkedIn base in Italy.

They're wrong, Golub says, time and experience have taught him that without networking and a network it's impossible to invent, develop new products or introduce them to market. *[Editor's note here: IMHO Mr Golub is wrong, too. I've found most CIOs to be keen networkers. Perhaps he's networking with the wrong people. - LK]*

"I started to do networking and it was just great - I could contact decision makers that I could never contact just with help of technical/marketing or through conferences," he says.

A recent McKinsey global survey: "Eight Business Technology Trends to Watch", notes companies can now achieve "co- creation" in essence by outsourcing innovation to business partners that work together in networks. But the McKinsey report also warns that companies pursuing this trend will have less control over innovation and the intellectual property that goes with it, and will end up competing for the attention and time of the best and most capable contributors.

Meanwhile consumers can also be harnessed into co-creation efforts, if companies capitalize on the Web 2.0-based evolution of the Internet into a more widespread platform for interaction, communication, and activism. Consumers increasingly want to engage online with one another and with organizations of all kinds, McKinsey says. Companies can tap this new mood of customer engagement for their economic benefit, by involving customers in design, testing, marketing and the after-sales process. However organizations need to be alert to the danger of being unduly influenced by information gleaned from a vocal minority, and of focusing on the immediate rather than longer-range needs of customers.

McKinsey believes companies moving this way must better understand the value of their human capital and manage different classes of contributors accordingly, and either build capabilities to engage talent globally or contract with talent aggregators that specialize in providing such services. Competitive advantage will shift to companies that can master the art of breaking down and recomposing tasks.

Jeff Sheard, channels director for Cisco Systems, and eXpert Executive Search's Stan Relihan say the advent of Web 2.0 had ushered in the beginning of the collaboration revolution.

Sheard's team at Cisco runs a secure Facebook group which allows members to share photos, videos, and ideas, as well as have fun and entertain each other. Meanwhile everyone at Cisco has access to a Second Life account and a suite of tools to build their avatar and start engaging in online meetings or virtual meetings.

"At Cisco John Chambers delivers his public addresses now both live and also through his avatar in Second Life and he reaches an entirely different demographic through Second Life. It's all about getting the message out there and communicating and engaging with a breadth of stakeholders that you would never otherwise be able to reach. And there's tremendous power and opportunities for corporate in being able to harness this," Sheard says.

Cutter Consortium analyst David Coleman points out that while there are currently numerous social media tools that are not yet available in the enterprise because of concerns over security, accountability and the ability of these tools to integrate with critical enterprise processes, new 3D collaborative environments may soon change the situation. Unlike

Second Life and other consumer-oriented tools, Coleman says, these new tools have been built for the enterprise and do provide security and a virtual space that offers some interesting collaborative capabilities.

7.Beware the Stealth Attack and Stay Alert to Operational Risk

CIOs also need a better understanding of which social networking sites are relatively safe and which potentially dangerous. Late last year Facebook admitted its Beacon ad service was far stealthier than previously acknowledged.

The controversial ad system was tracking users' off-Facebook activities even when they were logged off from the social-networking site, and even where those users had previously rejected offers to have their activities on specific external sites broadcast to their Facebook friends. While Facebook insisted it was deleting the data transmitted back to its servers, the claim sparked outrage and forced the modification of Beacon. Even so, analysts warn the proliferation of social networking services suggests such privacy violations are likely to continue.

Sultan says other privacy issues include the danger of personal information being on-sold to the new owners of an application, and employees uploading their entire Outlook address book to a social networking site. "There is a huge danger of the 'corporate common man' or 'corporate common woman' inadvertently exposing their employer to risk," he says.

"A lot of this is completely uncharted territory and you've got a lot of legality issues. The CIO needs to look at it from a policy perspective.

"Fifty per cent of companies in the US ban Facebook at work. You need to remember that there is a multitude of different devices that people will be accessing information on from work and you really can't be a Nazi about it. At the same time, you're going to have to try to address work efficiency, and keep the peace between multiple groups of people from completely different generations.

"So there's that kind of social and policy concern. There is also the technological concern of what are these applications doing? Are they scraping information? Are they being loaded onto desktops?"

Even so, Joyent 's Boothby sees little risk of blogs or wikis opening up holes in the firewall, since most such technology internally is controlled in the data centre. But he warns there is a risk for the CIO from an operational perspective.

The open Internet is about general communication, whereas behind the firewall, inside an organization it's about operational efficiency. The tools that were designed for open freewheeling communication are not necessarily the best tools to help you deliver operational efficiency behind the firewall, he warns. So while a wiki may be a good thing outside the firewall, it may not have sufficient structure to be successful behind the firewall.

"My opinion is that when CIOs are setting up and starting to use some of these things it's best to experiment in the small group, it's best to run it on the flexible infrastructure, and it's also best to think about things that actually have enough structure to solve specific problems."

"I think for true Enterprise 2.0 stuff, it will still take a little while before they are as prevalent as Excel, but that doesn't mean that companies can't successfully start to benefit from them very quickly," Boothby says.

8.Know That Mashups'll Mess You Up

Beware the mashup - Web applications that combine data from more than one source into a single integrated tool, described by *The New York Times* as being "at the heart of a generation of Lego-style software that is emblematic of

the second generation of the Internet".

While mashups may be growing in popularity, they have major security problems, warns Rick Welykochy, director of Australian company Praxis Services, who says the phenomenon reminds him of the notion of millions of monkeys typing on keyboards in an attempt to produce something legible. Plug-in and drag 'n' drop programming is not new, Welykochy points out. It is simply new to the Web. But often component "glue" in the form of programming "fu" (nous) is required to make components interact with each other correctly.

"I once watched someone drag 'n' drop a 'browser component' into a Delphi workspace windows. Voila! A new Web browser to take on the likes of Netscape and Internet Explorer. Not. A weak piece of componentry that was totally inadequate for its intended job.

"Methinks this is yet another novelty aimed at the me-too gadgetry generation that will have minimal if any use in the enterprise. Hey, but then again, the CEO of IBM predicted the need for only five or six computers worldwide back in the 1940s. So I could be wrong," Welykochy says.

9.Use It for Talent Attraction and Retention

In the face of all such security concerns Westpac CTO David Backley remains undeterred. Not only does Westpac let staff access Facebook at work, the bank has also built both a Westpac-branded site on Second Life, and a Web 2.0-style portal in-house.

While most CIOs still restrict employee access to social networking sites like Facebook, MySpace, YouTube and Second Life through fear of encouraging staff to time waste and concern about introduced security risks, Backley remains adamantly unflustered. There are security concerns around such technologies, he agrees, but as is true of many areas of technology adoption, the real issue is about culture.

"It's about the way people work," Backley says. "It's also about working in a much more dynamic demographic where we have people from multiple generations in the same business. The question for us is, if we want to attract and retain talent, how do we blend the needs of the organization for security - and for a bank that is number one - efficiency, and collaboration, and the expectation of people coming into the organization.

"The general traffic flow on Facebook doesn't have at this point in time something that we can see is a damaging payload," he says.

Rather than block access to Facebook at work, Westpac has opted to simply block those applications within Facebook that try to access closed ports, such as sending people a flower or a hug. To address security concerns the bank relies on both its general code of conduct and its technology code of use to regulate employee behaviour, and is working on developing a relatively simple guide to staying safe online.

"The thing is, it's very difficult to manage what people do outside of work, and just because we don't allow a certain traffic type through, doesn't mean people aren't going to access that information at home," Backley says. "I'd much rather that we had a level of understanding and governance around the use of social networks and give people credit for being intelligent adults, and allowed them to leverage their networks. I'd much rather have a thousand people on Facebook who are positively disposed towards the organization that they work for, rather than a whole discussion group around 'why can't we do this'.

"So it's balancing all of those issues which CIOs have about the business need, the requirements for security, the technology available, and the demographic that you work for."

Backley says Westpac is also considering introducing video YouTube-type capability internally for training, learning and development, and for getting messages and information out to branch networks and a wide audience. With Web technologies evolving so fast, the issue for CIOs is to find ways to iterate such technologies.

"You know, today's flavour might be podcasting, next year's might be something very different. Traditionally IT shops inside large

organizations have been very good at developing core systems and things, but not necessarily as good at iterating and throwing away yesterday's solution, because today's solution for the same problem is much better. And I think the Web 2.0 technologies allow you to do that because you can bring components together quickly and then disband them."

He says he has a person on staff who spends his days evaluating emerging technology.

10.Use It for Green Computing - As Long As Your Architecture Is Right

Cisco's Sheard says Enterprise 2.0 is already proving its worth in enhancing organizations' carbon emission reduction programs. Blogs, wikis, RSS feeds, mashups and social networking are all about helping people to collaborate and communicate more effectively. Sheard says not only can adoption of the technologies result in more current information getting into the hands of those who need it to make better decisions; it can be a boon to green computing.

Few organizations opted to make full use of videoconferencing capability, but now remote desktop videoconferencing and telepresence suites are filling the same role much more effectively, and dramatically reducing the need for employees to travel to meetings. Better still; employees like to use the new technologies. Cisco's videoconferencing suites were typically used for less than 1 percent of a typical corporate day; by contrast the company is running at 77 percent utilization of its telepresence suites. And more than half of the calls Sheard makes on his desk phone are now video calls, he says.

Better still, not only is the technology incredibly easy to use, he says the experience is so realistic most participants quickly forget they are not sitting across the desk face-to-face.

Cisco polls users at the end of every telepresence meeting to help it calculate the money it is saving, and the carbon credits it is building up using the technologies. "That's building every day," Sheard says.

But Sheard warns the architectural approach is absolutely critical to successful deployment of Enterprise 2.0. The days of being able to pull together new products and technologies as they arise are over, he says. Enterprise 2.0 makes it all the more essential for organizations to build a secure and stable architecture from the ground up, built not just with connectivity in mind, but also with respect to the data centre.

"We're seeing now networking technologies start to morph into the data centre, and for example, storage area networks are enabling virtualization of storage resources, and this gets back to the green agenda," Sheard says. "If you look at your average data centre, there are pockets of storage and pockets of CPU or computer power that are much underutilized. Within an architected intelligent network you are able to virtualize that resource and therefore make it available for the rest of the corporation as opposed to just a department, for example," he says.

11.Use It to Fix Enterprise Search

When most employees in any reasonably sized company find it easier to discover information on the Internet than to discover it internally within their organization, enterprise search is broken, says Mark Scrimshire, Senior Consulting Partner with Washington-based Hinchcliffe & Company. Seeking ways to address this challenge immediately brings into focus the differences between traditional IT and a Web 2.0 world.

The old style approach is to set up a team to review all the documents that you might want to make available to users, vet those documents and load them into a document management system. "Stop and think on this for a minute," Scrimshire says. "Does the Internet work this way? Of course it doesn't. If you want to change things you need to implement a search appliance and set it off to discover the gems of content that are buried in the deepest reaches of your intranet."

The big difference between intranet search and Internet search is that on the intranet there may be security controls that need to be recognized and adhered to. On the Internet everything is open.

"I have a suspicion that on many intranets there is a reliance on security by obscurity," Scrimshire says. "People have to know where information is kept. Enterprise search blows that wide open. The benefit for the vast majority of users is enormous but this is likely to throw many a security team into a wild spin. The problem is not insurmountable. Google and other search appliances will work with an organization's LDAP, Active Directory or other popular security schemes to comply with internal security controls.

"In my view, achieving Enterprise 2.0 starts with getting enterprise search working, and then gradually extending a common search dialogue box across all search services. A search engine, often Google, is the first stop for many people when looking for information on the Internet. Why should a company's intranet be any different?"

12.Accept That Good Governance Reduces Exposure

Enterprise 2.0 has become a board level topic for good reason, Sheard says. Without strong governance the organization is potentially exposed, so the framework within which all of this fits is vitally important. The CEO and chairman of an organization have to take an interest in the way that this technology is being used and where it fits, ensuring risks aren't being introduced into the organization inadvertently.

"If the board and the executive management stand for driving innovation in the business and a greater level of intimacy with their customers and their suppliers, if they're driving for shareholder protection of assets . . . if all of these things are high on their agenda then ultimately, this comes down to technology investments and the underpinning governance and plan by which those investments are made and protected, not just over the short term, but over the long term. That's a difficult thing to do when technology and the environment changes so quickly."

Sheard says he sees signs many CIOs and CXOs are prepared to take these technologies on board internally and run limited trials with groups that could be termed early adopters. Hunt out a group in the organization that is predisposed to show leadership in driving innovation to run the trial through to either a successful conclusion or else the point where it is clear the technology isn't going to work. Once that limited trial is proven you can start examining ways to scale it both within the organization and externally; exploring its usefulness in engaging suppliers to drive a closer and stickier relationship, for instance, and in extending the technology to other external stakeholders like customers.

The challenge is to do it fast, before the next evolution of technology starts to bite. "I wouldn't be a CIO for all the money in the world," Sheard says.

Sidebar | Enterprise 2.0: Five Innovations the CIO Shouldn't Miss
By Jack Santos

It's easy to get caught up in the buzz and media hype surrounding Enterprise 2.0, but some of this is worth your attention. For the CIO, these five things are something to keep on your personal "innovation radar":

1."Blogs Away" with New Communication Techniques

Department newsletters and "From the desk of" e-mails are quickly becoming outdated ways of communicating what is on an executive's mind. Getting your ideas out there, vetting them and branding yourself is what blogging is all about - and more and more CXOs are taking advantage of this important Web 2.0 innovation.

2.Social Networking - It's Not Just for Kids!

How people relate online continues to evolve, and the latest incarnation is Facebook. It's an innovation that is worth keeping your eye on, and it has major implications for collaboration, online company directories and how the current generation entering the workforce expects to interact. This last consideration is probably the single biggest reason you need to take Facebook seriously. In addition,

E2.0 social networking innovators like Facebook are on the leading edge of application integration - using mashup technology to introduce new functionality quickly. At the core is software from Google (like AJAX and Google Mashup Editor) and Microsoft products (like Popfly and Silverlight).

3.Unified Communications

The latest new buzzword that is often said in the breath following "Enterprise 2.0". No doubt, Voice over IP (VoIP) phone systems have come of age. They bring with them functionality like e-mail/voice-mail integration, ease of use and maintenance, and computer/phone integration that only a call centre manager could love. Microsoft's Office Communication Server and Cisco's Unified IP phones are leading the charge in one of the most watched changes of the guard since the Bolsheviks wiped out the Romanovs.

4.A Rolling MOSS Gathers No Stones

"Three's the charm" continues to be the mantra for Microsoft Product releases, and Microsoft Office SharePoint Server (MOSS) contributes to that folklore. First introduced in 2001 as SharePoint Team Services, then as SharePoint Server in 2003, the much more mature and ready-for-prime-time Microsoft Office SharePoint Server 2007 is making major inroads within large corporations as the base for collaborative applications. Not unlike the early years of Lotus Notes, MOSS provides a framework for quick and easy applications that integrate data and workflow in a browser-based front end. And like Notes, it can be viewed as either a challenge to manage for IT shops or an important innovation catalyst for business processes. CIOs can't afford to miss this tidal wave, or they'll get swept under.

5.AAA: Anytime, Anywhere, Anybody

Underneath many Enterprise 2.0 technologies is the expectation that pervasive mobility allows unlimited access through handheld devices. Innovations like Apple's iPhone, 3G high-speed cellular wireless access and 802.11n Wi-Fi are leveraging Enterprise 2.0 technology to truly make the mobile office ride on two feet. There is no place to hide, unless you press the Off button . . .

Jack Santos is an executive strategist at the Burton Group and has more than 28 years of IT executive leadership

Sidebar | The Organization As Media Entity
Enterprise 2.0 is about making that mass participation valuable

Increasingly, the best way to understand how any organization works is to think of it as a media entity, says Ross Dawson CEO, Advanced Human Technologies and Chairman, Future Exploration Network Advanced Human Technologies. Organizations create messages and information, take inputs from external media sources, and edit and publish content in an increasing diversity of formats, with e-mail and the intranet often predominant. Their employees are typical media consumers (and creators), deluged by choice, and often ineffective at cutting through with their own communication. As such, the current state of the media industry offers many lessons for organizations seeking to be more effective and productive.

Dawson says it's important for CIOs trying to come to terms with Enterprise 2.0 to realize it is less about a collection of new technologies and much more about shifting organizations into the next phase of work.

"The big picture is that organizations are collections of people, each with their own expertise and knowledge who come together to create value, and now that the new emergence of these technologies creates a whole new structure potentially for how people's talents are brought together inside of organizations, it really should be thought of from the perspective of how is the organization being transformed, or how could it be transformed to be more effective in creating value," he says.

The CIO's focus needs to be on the breadth of what is happening across the organization, not in the individual implementations. The value of blogging is not in the individual blogs, as much as in what collectively those blogs do to be able to make information more accessible, to be able to enhance working structures and practices in order to be able to facilitate the search and flow of information. That means the organization needs an architectural view in terms of how these essentially participatory bits of technologies are to be aggregated into things that will be of value to the organization.

And since one of the key challenges for the organization remains ensuring knowledge workers have access to the right information at the right time; it is vital that search functionality is incorporated from the start, rather than an afterthought. Dawson has devised the following key guides for CIOs:

1. It is about the architecture. Introducing individual and small group collaboration tools such as blogs, wikis, and virtual worlds can be useful for those who use them. However there is far more value to be gained from creating an architecture whereby activities across the enterprise are aggregated to create higher levels of value.

2. Capture inputs. Web 2.0 and Enterprise 2.0 are founded on people's inputs, so these must be captured in both explicit (opinions) and implicit (behaviours) forms. People should readily be able to contribute in any way including tagging, rating, social bookmarking and beyond, and the information captured in such a way that it can be applied within the enterprise architecture (see point one), particularly noting people's profiles, roles, and current activities.

3. Create relevance. Generic search is very limiting. People should be presented with information that is relevant to them and what they are doing. This is made possible by the profile-type information mentioned in point two. Unless you design information systems to make their outputs personally relevant, worker effectiveness will be constrained.

4. Establish guidelines. Guidelines need to be created on a number of fronts. The immediate issues include how employees use public social networks, open blogs and external applications that may have security risks. Beyond that, privacy is becoming a fundamental issue, where employees need to have complete clarity on what information is and isn't captured and how it is used.

5. Enable do-it-yourself applications. The future is in having knowledge workers almost never having to put in a request to IT again, but instead being able to address almost all of their information issues by recombining data and applications available inside and outside the organization to create the results that are useful to them.

6. Experiment! There are no answers yet. Despite the increasing number of case studies of organizations that are successfully using social media and Enterprise 2.0 tools, we are very far from having final answers or three-step plans for success. Every organization is different, the technology landscape is rapidly evolving, and companies must work out for themselves how the most value will be created. However not participating is not really an option. That is a choice for limiting organizational effectiveness and productivity, while competitors move ahead. The harder - yet more exciting, fun, and rewarding - path of implementing Enterprise 2.0 is becoming an imperative.

- S BUSHELL

Sidebar | Stowe Boyd on Web 2.0 in the Enterprise
The self-described media subversive talks about the provocation of Web 2.0 and the fear of change

A blogger, authority on social technologies and business, and senior consultant with Cutter Consortium, Stowe Boyd has strong opinions about Web 2.0. "I say what I feel, not what I think I should say," said Boyd early in his Web 2.0 presentation at the 2007 Cutter Consortium Summit in May. He made clear that he believes Web 2.0 is a revolution, with effects growing more powerful; ignoring them is analogous to ignoring the coming of the Internet not so long ago.

His presentation and the panel discussion afterward electrified the room. Fear of open information-sharing and unknown security issues mixed with intrigue about the possibilities of Web 2.0 turned the session into a powerfully divisive brew. Diann Daniel talked with Boyd at length to see what his thoughts were on all the emotion surrounding Web 2.0 in the enterprise.

CIO: Why does Web 2.0 arouse heated emotion in some IT professionals?

Stowe Boyd: Web 2.0, like other things that come along, challenges a lot of base assumptions people, particularly IT professionals who work inside big businesses, have about how to operate in the world.

First of all, they don't know anything about it. So they're starting at a personal disadvantage. There's this technology that's just sweeping out there in the consumer space and it doesn't fit in with their world view, they don't understand it. They've been working on Microsoft Exchange and Outlook and they're using the Microsoft stack in most of the places in their business. They use the Internet, but mostly they think about it in terms of security issues - that is, how to secure themselves from it.

All of a sudden you have this renaissance happening on the Web and with such technologies as open source challenging the established software players. It's all very destabilizing, and the natural tendency for a lot of people is to say, I don't like this and I'm going to resist it for as long as I can and I will try to rally people around me to help me resist the invasion of these new ideas. I hate to say it but that change-resistant behaviour is, for many, human nature.

Do you think that people who are suspicious of Web 2.0 can be convinced otherwise?

When I was young and green, I thought that I could make some great persuasive argument to convince people [to embrace a change], but now I know that's impossible. When people are not ready to be convinced, they have myriad techniques at their disposal to deny. Web 2.0 is a technological revolution, and the technological elite who are not a part of it will resist. "It's illegitimate, it's insecure, we don't understand it, what we've got works already. If it's so good, why am I not doing it already?"

That reminds me of some of the angry feedback CIO has got on articles about "shadow IT" and the thought that users are bringing into the enterprise various technologies. What are your thoughts on that?

I was at a big energy conglomerate a few years ago to talk to the CIO. I started my presentation. When the first slide - which was about instant messaging - went up, he said: "That's all very interesting but we don't allow instant messaging here."

I went in the hall, and I got the AV guy who had set up the projector to come in, and asked him: "So how many people in the building use IM?" He said: "Oh, 50 to 60 percent." A lot of people just want to wish it away. Beyond that, it's very difficult to plug all the holes.

So what will change the receptivity to Web 2.0 tools in the enterprise?

People like JP Rangaswami can revolutionize major corporations. It needs to be a person like that. You have to have people who are incredibly strong, incredibly visionary and are willing to embrace the benefits of openness and transparency. This is a guy who has an open e-mail policy; he gives access to his outgoing e-mails to everyone on his staff. They can read everything. His staff learns a tremendous

amount about what's he's thinking from reading his sent e-mails. Now that's a revolutionary approach to e-mail. There aren't very many JPs in the world, but you compare him to the typical CIO of a large corporation, and they're exactly the opposite, they are more worried about control. Worries about control, that's the more the typical thing I would expect to hear.

But isn't security important?

Security issues are important, but you don't want fear to dominate everything; it will stop innovation. It reminds of that science-fiction story in the future where the robots wouldn't let humans do anything. All humans could do is sit in a chair with our hands folded, robots did everything else for us. If you live like that, you don't get anything done.

JP proves how good it can be. In the best organizations, leaders will adopt the technology and figure out how to mitigate the risk.

More about Leader Computers, Apple, Morgan Stanley, Morgan, Ernst & Young, Ernst & Young, Burton Group, Google, Ovum Research, Ovum, Dialogue, Boss, Speed, SAP, Santos, Microsoft, Evolve, ACT, Exposure, Leader, Dell, Cisco Systems, Cisco, Cluetrain Manifesto, ADVENT, British Telecom, Cutter Consortium, eMotion, Gartner, General Communication, IBM, KPMG, Praxis, Excel, Westpac, Westpac