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'Digital Natives' Take Charge;
Get Ready for the Democratization of IT

BY BRUCE MOLLOY

Today's workforce is being flooded by a new generation of "Digital Natives." These people are all around you. You might even be one yourself!

Digital Natives are people who have grown up with technology and instinctively use the web, instant messaging and social networking whenever they want to communicate, socialize or learn. They are accustomed to using consumer technology in their private lives and they expect similar capabilities in their professional lives, as well.

Unfortunately, instead of integration, they get frustration. While at home, "Digital Natives" use Google to filter the Internet; at work their enterprise systems lack similar searchability. At home, they check what friends are up to via YouTube and Flickr, but at work they might not even know what the person in the next cubicle does all day.

But times, as they say, are a-changing.

Until recently, IT was the exclusive turf of programmers. Not anymore. Changes in technology, demographics and the business environment are increasingly allowing users to customize their own tools. These users face new challenges of finding information in an environment that is growing ever more massive, dynamic and complex.

In the future, businesses will gain competitive advantage only by arming their front-line workers with the capability to sift through this sea of information more easily, nimbly and intelligently.

As such, we are truly on the verge of the democratization of information technology. The technologies of Web 2.0 -- blogs, wikis, and social networking sites like Facebook and MySpace -- share the common theme of harnessing user-generated content and collective intelligence. The value of this kind of community-generated content should not be underestimated.

The Democratization of Information Technology

Web 2.0 represents a fundamental evolution in how people find and process information.

These technologies are built around what O'Reilly Media has called "an architecture of participation." These tools have a snowballing effect; the more people use them, the more powerful they become.

Soon, the days of Enterprise computing will be a thing of the past. Enter Enterprise 2.0 – a term coined by Dr. Andrew P. McAfee of Harvard Business School. This evolution, driven by powerful demographic and technological forces, offers technologies that create the synergy of so called "network effects" in which the combined efforts of employees exceed the sum of individual ones.

Another hint that IT is being democratized is emergence of the "mashup" corporation. In the past, IT presided over a series of "silo" applications. Now companies realize that this information must be combined to meet the ever-changing demands of the business world. This has led the explosive proliferation of mashups (a term borrowed from the musical world that refers to the combination of song samples) or lightweight browser-based composite applications.

According to a survey by the Economist, 64 percent of executives said their companies are now using mashups or will be in the coming two years.

Increasingly, users are mashing up information themselves. This more nimble application of technology has enabled businesses to serve more small market niches—an idea captured in the Long Tail business model. Business units demand the ability to deploy computing at the speed of commerce.

These trends have reshaped the nature of corporate computing. In the past, IT departments have seen their role in terms of compliance, protecting data and maintaining the integrity of its enterprise systems. In the future, they must see their role as liberating data and giving users the resources they need to devise their own solutions. IT can no longer think of itself as a glassed-in department where everybody speaks an arcane code language. Rather, IT must become a provider of services that create value for the business in a language users understand. In short, IT must empower users to build the tools they need to do their jobs.

> Going forward, businesses will gain competitive advantage only by arming their employees with the capability to sift through this sea of information more easily, nimbly and intelligently.

Challenges Abound

So, the cat's out of the bag. The democratization of IT is no longer an underground movement. Yet, this Brave New World of Web 2.0 poses new challenges. Organizations must surmount these challenges to ensure that Web 2.0 becomes a corporate asset rather than an uncoordinated hodge podge of individual efforts. The two most critical challenges to overcome are information overload and user-friendliness – or the lack thereof.

Information Overload

The first challenge is the sheer volume of data unleashed by the information explosion. There are now more than 700 billion web pages, billions of blogs and billions of intranet sites. The challenge is no longer getting information but sifting through the mind-boggling abundance of it. And, once this information is found, it must be reformatted and stored in a repository where it can be quickly accessed again.

Many companies are drowning in information. Clients at hedge funds and financial institutions, report that even MBAs spend between a quarter and half their time searching, cutting, pasting and reformatting information from the web. One pharmaceutical company reported that applied mathematicians spent 90 percent of their time collecting information and only 10 percent of their time analyzing it.

Let's face it: given the speed at which information continues to explode, this problem isn't going away anytime soon.

User-friendliness

If users can't quickly mash up the tools they need, they'll miss business opportunities. And, if they don't have the ability to share their tools and information, the organization is simply squandering the potential fruits of collaboration.

The bottom line: people need better tools to navigate the vast sea of information spawned by web 2.0.

Solutions on the Way: Better Tools

People need easy-to-use, customizable tools that can be deployed quickly. Future success of mashups depends on several key elements: a foundation of reusable parts, ease of assembly and discoverability. And, as Gartner researchers have observed, "User-driven mashup environments are only as good as the building blocks."

Knowledge workers are valuable for the intelligence and insight they bring to their jobs. If forced to spend an inordinate amount of time searching for information, people are not utilizing their time effectively. They need tools that automatically retrieve and integrate pertinent information from the web and Enterprise applications and display it in a convenient dashboard.

In fact, at some point, the concept of search as we know it will become as obsolete as the dialup connection. The world needs a new approach with more precise, nimble agents that will scan information as thoroughly as we would ourselves —except they'll be on the job 24 hours a day.

Connotate, based in New Brunswick, allows users to create this exact type of software agent -- ones that optimize flow and integration of information from both inside and outside the enterprise. These intelligent agents turn the flood of information into actionable intelligence. In fact, Connotate Agent Community GEN2 platform allows anybody to create personal search agents using simple point and click and drag and drop techniques familiar to all computer users. No programming is required. These agents rely on patented technology developed by Rutgers University experts in data mining and machine learning to monitor, analyze, mashup and automatically deliver content around the clock.

Solutions like these bring us closer to the ideal of "user driven innovation." Simply put, this means giving users the ability to customize the tools of their trade. In today's Web-speed world, these people simply don't have time to translate their desires into a work order and to wait for a programmer to arrive. People on the front lines need the ability to design their own tools to reap the benefits of Web 2.0—and they need it now.

Bruce Molloy is the chief executive officer of Connotate. Connotate's intelligent software agents deliver to an array of output devices and create a Web 2.0 ecosystem for information access. Visit www.connotate.com for more information.