

Chapter 3: Everything 2.0

Overview

Have you read or seen much on the next evolution of the web called Web 2.0? Web 2.0 is a collection of technologies and frameworks that enable collaboration from a social perspective. We can see this transformation from Web 1.0 to the more collaborative Web 2.0 all around us. Products like Microsoft's SharePoint, IBM's Connections/Quickr, SocialText and many others are transforming the corporate landscape for knowledge. Outside the corporation, the success of Wikipedia, Folksonomies, RSS, and weblogs are undeniably changing every aspect of our lives.

If I were to ask you what Microsoft's fastest growing product is, which product would you choose? In 2003, *The Register* reported that SharePoint was the fastest growing product with over 30 million licenses. Collaborative products are not new and the Lotus Notes folks will sing in unison "been there, done that". Yet, 30 million licenses are nothing to sneeze at. The impact to traditional applications is enormous in the sense of how work is organized and value delivered.

Web 1.0

Web 1.0 focused on a read only web interface while web 2.0 focuses on the read-write capabilities where value emerges from the contribution of a large volume of users. The Internet as well as the Intranet initially focused on the command and control of information. Information was controlled by a relative small number of resources but distributed to a large number which spawned the massive growth of the web itself. Like television, the web allowed for the broadcasting of information to a large number of users. Unlike television, consumers now have the ability create, edit, and spread the message.

Inside the organization, the Intranet has changed the way organizations structure and operate their business. Specifically, the Intranet has centralized communications and corporate information as well as built a sense of community across organizational boundaries (McNay, 2000). Typical organizations will have office-based employees in various locations, telecommuting, and off-shoring staff. The traditional day by day communication landscape has changed from personal to electronic. The migration to electronic communications emerged as standards, technology and infrastructure matured. This allowed more information sharing and community building to occur without a requirement of physical location. Over the past several years Intranets have emerged as the key delivery mechanism for application and business information. Intranets may be thought of as providing the infrastructure for intra-organizational electronic commerce (Chellappa & Gupta, 2002). This allows organizations to utilize the technology to achieve its organizational goals and objectives. Web 1.0 allowed the organization to govern the information flow and focus on achieving the business goals. Unfortunately, most technologies fail to deliver competitive advantages over an extended period of time. Investments in information technology, while profoundly important, are less and less likely to deliver a competitive edge to an individual company (Carr, 2003). This is

especially true in the world of the Web 1.0 since much of the knowledge and information is disseminated all over the world as quickly as it gets published. Organizations are beginning to see that the command and control model is no longer effective at developing a high performance work force which opens the door for the next evolution in technologies as described by the Web 2.0 framework.

Web 2.0

While Web 2.0 has been debated by researchers as to who and when the concepts emerged, little argument exists that the technology has arrived. Unlike Web 1.0, this new technology encourages user participation and derives its greatest value when large communities contribute content. User generated metadata, information, and designs enable a much richer environment where the value is generated by the volume of employees. Sometimes referred to as sharing, collaboration, aggregate knowledge, or community driven content, social software creates the foundation of collective intelligence (Weiss, 2005). Much of the Web 2.0 technology is difficult to nail down an exact definition, the basic truth is that Web 2.0 emphasizes employee interaction, community, and openness (Millard & Ross, 2006). Along with these characteristics, Smith and Valdes (2005) added simple and lightweight technologies and decentralized processing to the mix. O'Reilly (2005) defined Web 2.0 as a platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an "architecture of participation, and going beyond the page metaphor of Web 1.0 to deliver rich user experiences. While Web 2.0 has many and often confusing definitions most include the concepts of weblogs, wikis, Really Simple Syndication (RSS), social tagging, mashups, and user defined content.

Weblogs or Blogs

Weblogs or blogs have become so ubiquitous that many people use the term synonymous for a "personal web site" (Blood, 2004). Unlike traditional Hypertext Markup Language (HTML) web pages, blogs offer the ability for the non-programmer to communicate on a regular basis. Traditional HTML style pages required knowledge of style, coding, and design in order to publish content that was basically read only from the consumer's point of view. Weblogs remove much of the constraints by providing a standard user interface that does not require customization. Weblogs originally emerged as a repository for linking but soon evolved to the ability to publish content and allow readers to become content providers. The essence of a blog can be defined by the format which includes small chunks of content referred to as posts, date stamped, reverse chronological order, and content expanded to include links, text and images (Baoill, 2004). The biggest advancement made with Weblogs is the permanence of the content which has a unique Universal Resource Locator (URL). This allows the content to be posted and along with the comments to define a permanent record of information. This is critical in that having a collaborative record that can be indexed by search engines will increase the utility and spread the information to a larger audience. With the advent of software like Wordpress

and Typepad, along with blog service companies like blogger.com, the weblog is fast becoming the communication medium of the new web.

Wikis

A Wiki is a web site that promotes the collaborative creation of content. Wiki pages can be edited by anyone at anytime. Informational content can be created and easily organized within the wiki environment and then reorganized as required (O'Neill, 2005). Wikis are currently in high demand in a large variety of fields, due to their simplicity and flexibility nature. Documentation, reporting, project management, online glossaries, and dictionaries, discussion groups, or general information applications are just a few examples of where the end user can provide value (Reinhold, 2006). The major difference between a wiki and blog is that the wiki user can alter the original content while the blog user can only add information in the form of comments. While stating that anyone can alter content, some large scale wiki environments have extensive role definitions which define who can perform functions of update, restore, delete, and creation. Wikipedia, like many wiki type projects, have readers, editors, administrators, patrollers, policy makers, subject matter experts, content maintainers, software developers, and system operators (Riehle, 2006). All of which create an environment open to sharing information and knowledge to a large group of users.

Wikis are making inroads inside the corporation where they are eliminated many barriers to communication. Companies like Disney, AT&T, Nokia, Kodak, Intel, Ebay, Emory, Motorola, Novell are integrating wiki based technology into the daily activities of doing business. With the constant focus on cost cutting, wiki technology allows the end user to update information without the need of technology resources. The ease of use, rollback, editing, and common usability framework are all key in the mass adoption of this technology.

RSS Technologies

Originally developed by Netscape, RSS was intended to publish news type information based upon a subscription framework (Lerner, 2004). Many Internet users have experienced the frustration of searching Internet sites for hours at a time to find relevant information. RSS is an XML based content-syndication protocol that allows web sites to share information as well as aggregate information based upon the users needs (Cold, 2006). In the simplest form, RSS shares the metadata about the content without actually delivering the entire information source. An author might publish the title, description, publish date, and copyrights to anyone that subscribes to the feed. The end user is required to have an application called an aggregator in order to receive the information. Upcoming releases in Microsoft Office, Internet Explorer, and Mozilla have RSS readers built in. By having the RSS aggregator application, end users are not required to visit each site in order to obtain information. From an end user perspective, the RSS technology changes the communication method from a search and discover to a notification model. Users can locate content that is pertinent to their job and subscribe to the communication in order to stay informed. Traditional email pushed messages to the end user while RSS is pulled. While this seems like a small change, the implications are enormous.

Social Tagging

Social tagging describes the collaborative activity of marking shared online content with keywords or tags as a way to organize content for future navigation, filtering, or search (Gibson, Teasley, & Yew, 2006). Traditional information architecture utilized a central taxonomy or classification scheme in order to place information into specific pre-defined buckets or categories. The assumption was that trained librarians understood more about information content and context than the average user. While this might have been true for the local library with the utilization of the Dewey Decimal system, the enormous amount of content on the Internet makes this type of system un-manageable. Tagging offers a number of benefits to the end user community. Perhaps the most important feature to the individual is the ability to bookmark the information in a way that is easier for them to recall at a later date. The benefit of this ability on a personal basis is obvious but what about the impact to the community at large. The idea of social tagging is allowing multiple users to tag content in a way that makes sense to them, by combining these tags, users create an environment where the opinions of the majority define the appropriateness of the tags themselves. The act of creating a collection of popular tags is referred to as a folksonomy which is defined as a folk taxonomy of important and emerging content within the user community (Ahn, Davis, Fake, Fox, Furnas, Golder, Marlow, Naaman, & Schachter, 2006). The vocabulary problem is defined by the fact that different users define content in different ways. The disagreement can lead to missed information or inefficient user interactions (Boyd, Davis, Marlow, & Naaman, 2006). One of the best examples of social tagging is Flickr which allows users to upload images and “tag” them with appropriate metadata keywords. Other users, who view your images, can also tag them with their concept of appropriate keywords. After a critical mass has been reached, the resulting tag collection will identify images correctly and without bias.

User Contributed Content

One of the basic themes of Web 2.0 is user contributed information. The value derived from the contributed content comes not from a subject matter expert, but rather from individuals whose small contributions add up. One example of user contributed content is the product review systems like Amazon.com and reputation systems used with ebay.com. A common practice of online merchants is to enable their customers to review or to express opinions on the products they have purchased (Hu & Liu, 2004). Online reviews are a major source of information for consumers and demonstrated enormous implications for a wide range of management activities, such as brand building, customer acquisition and retention, product development, and quality assurance (Hu, Pavlou, & Zhang, 2006). A person’s reputation is a valuable piece of information that can be used when deciding whether or not to interact or do business with. A reputation system is a bi-directional medium where buyers post feedback on sellers and vice versa. For example, eBay buyers voluntarily comment on the quality of service, their satisfaction with the items traded, and promptness of shipping. Sellers comment about the prompt payment from buyers, or respond to comments left by the buyer (Christodorescu, Ganapathy, Giffin, Kruger, Rubin, & Wang, 2005). Reputation systems may be categorized in three basic types: ranking, rating, and collaborative. Ranking systems use quantifiable measures of users’ behavior to generate a rating. Rating systems use explicit evaluations

given by users in order to define a measure of interest or trust. Finally, collaborative filtering systems determine the level of relationship between the two individuals before placing a weight on the information. For example, if a user has reviewed similar items in the past then the relevancy of a new rating will be higher (Davis, Farnham, & Jensen, 2002).

Mashups: Integrating Information

The final Web 2.0 technology describe the efforts around information integration or sometimes referred to as “mashups”. These applications can be combined to deliver additional value that the individual parts could not on their own. One example is HousingMaps.com that combines the Google mapping application with a real estate listing service on Craigslist.com (Jhingran, 2006). Chicagocrime.org overlays local crime statistics onto Google Maps so end users can see what crimes were committed recently. Another site synchronizes Yahoo! Inc.'s real-time traffic data with Google Maps. Much of the work with web services will enable greater extensions of mashups and combine many different businesses and business models. Organizations, like Amazon and Microsoft are embracing the mash-up movement by offering developers easier access to their data and services. Moreover, they're programming their services so that more computing tasks, such as displaying maps onscreen, get done on the users' Personal Computers rather than on their far-flung servers (Hof, 2005)

Web 2.0 Implications Overview

To really get the impact of the new 2.0 environment, we need to back up and take a look at this transformation from a different perspective, other than the technology view. We all have questions about this new medium and the corresponding technology. Here are a few of mine along with some insight into the possible answers.

Free Information

What happens when all information is free, freely available, to anyone, at anytime and from anywhere? With telecommunications, mobile devices, and ubiquitous networks, technology is making this a reality from San Francisco, CA to London, England. But, this is more than a technology advancement. Organization like Sun, Microsoft, IBM, Boeing, McDonalds, Wells Fargo and many others are publishing blogs that are exposing their business strategy to anyone that wants to read it. Wikipedia now boasts 2.4 million entries and the vast majority are annoyingly accurate. Considering that the average dictionary or encyclopedia only has 60,000 entries, Wikipedia extends knowledge far beyond where possible just a few years ago. Google, the search engine, is the first stop most of us go when we want to know something about someone or a product. They index over five billion information sources and handle over 91 million searches per day. Most of what you can read in books, magazine or from the research firms is freely available if you are willing to spend the time searching and evaluating. Seth Godin (1999) gives away one of his books, *The Boot Strappers Bible* while Tom Peters provides his presentation slides for every keynote he gives. A new Web 2.0 site, Slideshare.net, was developed so people can share presentations and slideshows. You can upload your PowerPoint, OpenOffice, Keynote or PDF presentations, tag them, embed them into your blog or website, browse others' presentations, and comment on individual slides. What's

more, the transcripts of your presentation will be indexed by internet search engines and show up in search results. Today, we see that the information is not the container of value but the knowledge that goes along with it. These field experts understand this and have no issue giving you their complete play book. They understand, the devil is in the details and in the execution. Massachusetts Institute of Technology (MIT) has made all or most of their course material freely available on the Internet. While a few of these are limited to chronological reading lists and discussion topics, a majority provide homework problems, exams and lecture notes. Some courses include interactive web demonstrations in Java or Matlab, complete textbooks written by MIT professors and streaming video lectures.

What happens when all information is free? Innovation and opportunity emerge, not just from new technology but from the application of the old. All information can be delivered with just a click of the mouse. It's ironic that information replaced gold as the most valuable resource and now, it's practically free.

Presence and Communications

What happens when all physical things have presence and communications capabilities? Let's start with you, the information worker. You carry your cell phone where ever you go. That pager never leaves your side and the phrase "Crackberry" hits way too close to home. The truth is that we now have the technology to stay in constant contact with anyone in the world. Text messaging, Instant Messaging, and other technologies have also reduced the latency of communications to the point of instantaneous. All of this communication capability comes at a price with information overload. Information overload is basically having too much information to make a decision or stay informed about a specific topic.

In an oversimplification, the vast majority of data captured revolves around the consumer transaction. This transaction begins with the initial order and travels all the way through delivery. In many cases, the transaction continues with customer support services. Radio Frequency Identification (RFID) tags may very well change this. RFID tags can do many things from sensing temperature changes to tracking products. Imagine a world where inventory can be automatically done by simply walking down the aisle of the supermarket. Groceries are automatically scanned and you can check out without even needing to stop at the register. RFID technology will add state information which will require enormous amounts data and storage. Our ability to store the data will be pale compared to the need for managing the volume of information. Performing business intelligence on the transaction data will need to be expanded to include the state data that will be collected. One can only dream of the value and utility that could be created with advanced business intelligence.

Global Positioning Systems (GPS) provide any vehicle the ability to communicate with satellites which orbit the earth twice a day at an elevation of 11,000 miles, emitting a continuous signal containing the satellite's time and position. The user devices then analyze the signals from three or more satellites to determine the device's precise location. Early systems provided accuracy to within about 70 feet. Further enhancements

can bring that number down to within one centimeter, even while the receiver is moving. Sears Holdings Corp. of Hoffman Estates, Ill., for example, recently implemented a new system to optimize routes for its 11,000 field service technicians. Called the Sears Smart Toolbox, Sears and Environmental Systems Research Institute, Inc. (ESRI) of Redlands, Calif, co-developed the applications. Each service vehicle contains a GPS, satellite and cellular communications system, as well as a wireless LAN access point. It also contains a ruggedized laptop from Itronix, a part of General Dynamics Corp. of Falls Church, Va. (Robb, 2006).

When everything has communication and presence capabilities, you will see instantaneous access to information. We will have access to state information which defines where something is in correlation to a business process. Imagine your refrigerator that is designed to track the inventory of what's inside and in the pantry. The system will be able to display expiration dates and the nutritional information of every item in the house. The system would be able to create menus for the week based on the inventory and create a shopping list. Systems will be far more agile and have the ability to adapt to the environment with little or no control from a human. This adaptation will result in integrating the various systems of the home to build an entire home eco-system that adapts to your lifestyle.

Frictionless Commerce

What happens when all organizational barriers and friction have been removed via technology? Organizational barriers are forms of control or governance that seemed appropriate in the past but now add little value to business. Wal-Mart's program for eliminating the "stupidest thing we do" program was about identifying this friction and removing it. The barriers can be difficult to spot because they are part of the culture or a part of the business process itself.

One of the best examples of removing barriers is Progressive Insurance. It would be a mistake to say that Progressive is in the insurance business. While they may sell insurance, they clearly are in the business of speed. In eight minutes you can get a quote from the online system. They freely publish the rates of their competitors in order to keep you from having to jump around from site to site. Better stated, they have removed the need for you to look around. Their biggest claim to fame has to be the speed at which they deliver the claims check after an accident. In many cases, the Progressive claims adjustor will arrive on the scene and have a final check in your hands in less than 20 minutes. With over three million inventory parts moved each day, Dell has focused on removing every element of friction out of their supply chain and ordering system. Throughout the product lifecycle, a dell computer will come into contact with over 400 suppliers. They are determined to remove barriers and ensure that they run as smoothly as possible by reducing the friction in every business process.

How about inside the corporation? Over the past three years, our organization has developed an online ordering system. The Approved Product Listing (APL) provides an online shopping experience for the corporate community for ordering standard products. Prior to the development of the system, orders required a form to be completed by the

end user and faxed around the organization for approvals. The form itself was complicated, confusing, and the source of an enormous amount of friction. The entire customer experience was a hassle from just trying to locate the form to actually fulfilling the order. Many people simply used their corporate credit card and bought online or from a local retailer. The APL changed this by offering a better product and service to the end user. Instead of faxing a complicated form, the APL shopping experience includes shopping cart functionality, account management, search integration, procurement processing, and order notifications which most people are familiar with. The essence of the APL is to take the enterprise IT architecture standards to a higher level of maturity where the basic processes are standardized and automated to insulate the end user from the complexities of the architecture environment. By utilizing a familiar framework like online shopping, the APL facilitates a greater adoption of the architecture standards while creating a satisfying customer experience. The value of this application is the fundamental removal of friction from the business processes. Orders that took 6-10 weeks, can now be completed in two. Three employees can do the work of 15, thus reducing the cost to the business. The collaborative environment that is constructed around the APL is an ecosystem that brings together the product experts with the internal consumer. This feedback loop ensures that the standard products meet the needs of the business.

Is it possible to create a frictionless environment? Removing barriers and friction isn't just about automation but also the development of a system around the business process. When we automated the ordering processes, we had a clearer vision of the entire ordering environment. The elimination of one barrier exposed three others in the accounting system, procurement process, and the architecture standards environment. The system could be expanded to include automatic price adjustments or bundling pricing by the vendors. Bulk purchases could be handled by combining orders which lowered the cost of doing business. Implementing a single system for ordering products allowed the company to have tighter security on the network. Until the friction was removed, no one understood the entire environment or the impact to the bottom line.

Consumption Value

What happens when the consumption of products increase the value? Suppose I go online and order a brand new F-150 pickup truck. Everyone in Georgia has a pickup truck; it's a state law. The price, including all of the additions, is around \$30,000. I drive that truck one mile down the road, now what is the value of that truck? My guess would be around \$25,000. That first mile is a killer from a value perspective.

In most cases when we consume products and service the value decreases along side. Not any more; organizations are beginning to figure this out. Take Ebay as an example, every transaction increases the ranking and rating of the buyer and seller. This will enable them to transact more in the future. Amazon has added book reviews, comments, tagging, wish lists, discussions and many other social opportunities for those that have read the book. The consumer is increasing the value of the product based on the consumption experience. The new web allows them to communicate that message to anyone at anytime.

Netflix is another example, with over a billion reviews, they have one of the ultimate databases for movie information in the industry. Recommendation systems such as those used by Netflix, Amazon, and other Web retailers are based on the principle that if two people enjoy the same product, they're likely to have other favorites in common too. Based upon this information, they developed an algorithm that will suggest movies that you haven't seen. This algorithm is so valuable that they are offering you a million dollars if you can improve it slightly. The company is putting out a call to researchers who specialize in machine learning, the type of artificial intelligence used to build systems that recommend music, books, and movies. The entrant who can increase the accuracy of the Netflix recommendation system, which is called Cinematch, by 10 percent by 2011 will win the prize (Greene, 2006). When the consumer can adjust the product value or sales then standardized products are a thing of the past. We have all been interested in what others have to say about books or movies. We want to see the critic's comments or what movies have been nominated for an academy award. This support has influenced our purchasing behavior for a very long time. The web simply expands this concept to everyone one in the world, not just the paid reviewers.

Would the Ford Pinto ever make it in this new environment? How long would it have taken the public to post comments and recommendations about products that fail to meet even the most basic of standards? Making products and services that meet the basic needs of the consumer is simply the price of entry in today's environment. Cars had a limited life span of 100,000 miles, washing machines lasted 5 years, and that eight track tape player was all you ever needed. Today, nothing is constant, everything changes, and what ever assumptions we have made in the past are no longer valid. The good news for the consumer is that they play a heavy role in the products success or failure.

Eight Days a Week

What happens when work can be done anywhere, by anyone, at anytime? There can't be a better example of this other than McDonalds outsourcing the drive thru to India. The idea is simple enough; instead of using minimum wage workers here in the United States, you will be speaking to a call center in India. The interesting point of this story is that unlike most outsourcing ventures, this isn't a cost saving venture. This is a revenue generation activity. How? The idea is simple, from the drive through perspective McDonalds is in the business of speed and a 5 second improvement can add up over time. Jean Abelson (2006) put it this way when she reviewed Wendy's effort. "I had absolutely no idea I was talking to someone in New Hampshire," Moncada said in a phone interview later that day. "Our order was ready at the window. It was really quick." It took a total of 66 seconds. The Burbank store is one of several Wendy's restaurants around the country that have been testing the concept, and franchisees plan to expand to at least 200 stores by next spring because the initial tests are so promising. Other fast-food companies, including Burger King, Panda Express, and McDonald's, have also started routing drive-through calls to remote locations to get faster and more accurate orders and let in-store employees concentrate on making food, keeping the store clean, and ringing up sales. The trend is transforming the fast-food industry in ways that are usually invisible to customers but can yield big results for the restaurants, which count on

the drive-through business for about two-thirds of all sales. Every second counts in the race to deliver food faster, and no chain takes that challenge more seriously than Wendy's, which held the top spot as the industry's speediest server for seven straight years until Checkers took first place this year, according to "The Best in Drive-thru 2006" report released last month by QSR magazine. Checkers' average order was delivered in 125.5 seconds, measured from the time the customer reaches the speaker until the bag of food is passed through the window.

Advanced technology and Feature Sets are No Longer enough

Imagine a world where delivering the most advanced product with the greatest number of features actually loses the war for customer's attention. This is exactly what happened to the feature rich Diamond Rio MP3 player. The Rio hit the world with a simple design, advanced features and a collection of technology advancements that forced the recording industry to file suit to protect their interest. Yet, today 75% of the market is owned by Apple's iPod which has far fewer features, cost more, and operates on top of a proprietary music format which cannot be accessed by other devices. On the surface, this seems to fly into the face of Web 2.0 openness. What happened to the traditional framework where value dictated the winners and losers?

Describing the competitive market where the Apple iPod competed head to head with the RIO is leaving out a few details. Specifically, the emergence of iTunes and the iTunes Music store altered the entire music ecosystem. The advanced functionality was transformed to the computer application which eliminated the need for that kind of feature set to be housed within the device. Add the ability to buy any song for \$0.99 and you have a complete transformation worth billions. What Apple delivered is the "music experience" for the end user. This transformation from the traditional buying CD's and loading the songs on the computer then trying to manage the music was Apple's greatest accomplishment.

The iPod story is an Enterprise 2.0 success story based on collaborative designs, viral marketing, and the implementation of the experience over technology and features. Businesses, organizations, and individuals are all changing the way in which value is delivered. Enterprise 2.0 is about you, your collaborative ability to contribute to the vast amount of knowledge in the world today. We are starting to see power shift from the few that controlled the flow of information to you; Times Person of the Year for 2006. The business implications of this new media are unclear. No one is really sure where the rich user interfaces, self-service, the long tail, agility, transparency, and the emergent components of trust are going to take us.

How did this happen?

The message is clear, we need a complete re-invention of every aspect of who we are and what we do. The 2.0 label is not really a numeric sequence, but rather a designation of a transformation. Take a look around at the different areas that are jumping on the 2.0 moniker: metadata 2.0, library 2.0, enterprise 2.0, employment 2.0, shareholder 2.0, customer 2.0 and many others. How did we get here and what conclusions can we draw from this opportunity?

Enterprise 0.0

In chapter one, we discussed the natural progression of work. This section continues that discussion with a focus on the enterprise. In 20th century, large organizations began to form. Perhaps, Henry Ford can be labeled as the leader for change for this area. Organizations could gain return on investment by creating repeatable processes, not unlike an assembly line. Large organizations were bound by hierarchal structures that created boundaries, friction and structure of ownership. A hierarchical organization is an organization structured in a way such that every entity in the organization, except one, is subordinate to another. This is the dominant mode of organization among large organizations; most corporations, governments, and organized religions are hierarchical organizations. Hierarchies denote a singular/group of power at the top, a number of assistants underneath and hundreds of servants beneath them. Hierarchy originally meant "rule by priests", and it is from the organization of hierarchical churches such as the Roman Catholic and Eastern Orthodox churches that the name of this concept arises. In these organizations, the pope or patriarch was the highest visible part of the hierarchy, with God as the nominal top of the hierarchy (Wikipedia, 2006). The industrial revolution had a profound impact on how large organizations operated. Executives assumed you needed a large degree of control in order to build a standard product. This control came in the form of time and motion studies, time management systems, and decision support. Employees were considered interchangeable due to the basic skills required with manual labor. This control created a sense of hierarchy where those at the top had the knowledge and those at the bottom were regulated to second class. This model worked well since value came from stable and consistent delivery of the product. However organizations were seeing the vast majority of manual labor was being automated and value was emerging from the innovation and customer experience. This customer experience was not gained from the top of the organization but rather the bottom.

Enterprise 1.0

Something started to change in the later part of the 20th century. Organizations, work, and people started to alter their behavior in so many ways. Organizations started to shrink due to outsourcing non-strategic functions like human resources and information technology operations. This made sense because we started to see the shift from cost centers to business value. This is not a trivial shift in mind set, this is a fundamental change in how business gets done. Prior to the 1990's, you never heard the concepts of return on investment, business value, or bottom line contribution. Cost centers, like information technology, were the price of doing business. That started to change and the focus of technology moved away from "paving the cow paths" to the generation of competitive advantage. Globalization produced lower production costs but not an equivalent increase in integration costs. Hence, work started to move to the lowest cost provider, for information technology, this meant operations to EDS, Integration to IBM, and software support to Accenture. Enterprise 1.0 did see a fair share of web and technology advancements including Customer Relationship Management (CRM), Service Oriented Architecture (SOA), Enterprise Resource Planning (ERP), and Enterprise Application Integration (EAI). The web brought us enormous amounts of information

and access to products and services. The web essentially destroyed business models like the travel agency and new car dealerships.

Within the enterprise, we moved away from localized documentation where the messages were kept locked inside the minds of management. The advent of the Intranet brought forth the concepts of a connected enterprise versus disconnected collections of business functions. The intranet is a protected environment that allows the organization to publish information for consumption across the enterprise. This allowed information to be distributed much more efficient than utilizing email or other forms of one on one communications. Unfortunately, this was still a one way communication medium where the information was controlled and edited by a communication group.

Enterprise 2.0

It seems like we hardly had the opportunity to perfect 1.0 when 2.0 emerged and once again, technology is in the middle of it all. What would Enterprise 2.0 look like? Well, look no further than Time Magazine's "Person of the Year" (2006): You. "It's a story about community and collaboration on a scale never seen before. It's about the cosmic compendium of knowledge Wikipedia and the million-channel people's network YouTube and the online metropolis MySpace. It's about the many wresting power from the few and helping one another for nothing and how that will not only change the world, but also change the way the world changes." Enterprise 2.0 is about you, your collaborative ability to contribute to the vast amount of knowledge in the world today. We are starting to see power shift from the few that commanded and controlled the flow of information to the many. The business implications of this new media are unclear. No one is really sure where the rich user interfaces, self-service, the long tail, agility, transparency, and the emergent components of trust are going to take us. Examples of organizations that are starting to get this stuff include Goldcorp.

The Goldcorp had purchased a mine with a history of low productivity and the company spent five years trying to increase the production. The mine was located in the Red lake district which had a history of producing gold; since the 19020's the area had produced over 24 million ounces. Rob McEwen knew there was gold on the property but the question remained where, how much, and the resources required in order to extract it. After spending a week at the Massachusetts Institute of Technology (MIT), he started to put several ideas together: Gold, Open Source, and the collaborative nature of the Enterprise 2.0. He would port 50 years of information including maps, reports, and geological reference information. However, the challenge would not go unrewarded; he added a \$500,000 prize to be divided among the finalists. The results were an increase of \$2.5 billion dollars of gold. The contributions included new software, applied mathematics, physics, and many other solutions. Goldcorp isn't the only company jumping on the band wagon; Staples runs a contest every year to find the next great office product and they are willing to offer \$25,000 for the best of the best. Since the inception of Invention Quest, Staples has received more than 22,000 entries and ideas. The 2005 contest drew the largest number of submissions to date. From the nearly 14,000 submissions, ten inventors were chosen to present their ideas at the Invention Quest Finals in New York City.

**NOKIA
888**



form follows you...

Figure 10.1: Nokia 888

You're not going to see this in stores any time soon. But if you'd like to get an idea of what Nokia thinks the future of communications will look like, take a look at the Nokia 888 communicator (Figure 10.1), a concept design that recently won Nokia's Benelux design contest. The bracelet-like 888 is envisioned to use a liquid battery, feature speech recognition, a flexible touch screen, and a touch sensitive body cover. A video showing off the device's potential features shows off close to a dozen functions, including an alarm clock, PDA, GPS, phone, push email receiver, digital wallet and, of course, jewelry. And, other than the "liquid battery," we can actually see this in the not-too-distant future (Pertont, 2005).

What does this transformation mean to organizations and individuals? Clearly, the new technologies make it easier to collect and share information at all levels of the organization. The ability of organizations to spin or manipulate customer's opinions will be limited. The current term used to describe this type of environment is openness. An open organization freely shares information up and down the food chain. Individuals are encouraged promote their experience, skills and knowledge. We will work networks internal and external of the corporate hierarchy in order to deliver value. Open organizations don't limit people but encourage interaction and innovation. The command and control that defined Enterprise 0.0 will be completely removed and the adaptive organization emerges. Organizations that operate in an open environment do so by trusting each other. Those that abuse that trust will be exposed and dealt with socially, if not within the management structure. As power shifted to the customer, power will also shift to the employee. Information will flow just as the transaction flowed with Enterprise 1.0. We are entering into a new world that we are only beginning to understand and embrace.

Personal Implications

Do you worry about globalization? How about India? The data and information is mounting against us.

- In 2007, The number 1 language of the Internet will be...
- In 2050, the number 1 economy will be...
Wait, an update: 2030 by a 2006 World Bank Article
- 80% of Wal-Mart's Suppliers are...
- Every 24 Minutes a Factory Opens in...
- 65,000 vs. 6,000,000 Students USA vs...
- The combined GDP of China and India will exceed the seven current wealthiest nations
- China is run by Engineers and Technologists while the United States is run by Lawyers
- United States Education Ranks 18th of 24 and Georgia Ranks 48th of 50; Up from 50th in 2004
- The 25% of the population in China with the highest IQ is greater than the total population in the United States
- In India, it's the top 28%
- China will soon become the number one English speaking country in the world

Asia will be a force in the coming years and very few of us are prepared to handle the increased level of performance. The diminishing demand for technology professionals (Labor) has an inverse relation with the increasing demand for Information Technology Talent. Labor, especially local labor, is a commodity that can easily be automated or moved over seas. With the advancements in technology, a call center employee can be sitting in Destin, FL or India and still provide great service. For the information worker, we have seen change and disruption as more and more jobs are moved to the lowest cost provider. While this change may seem sudden, the truth is that it is simply an evolution.

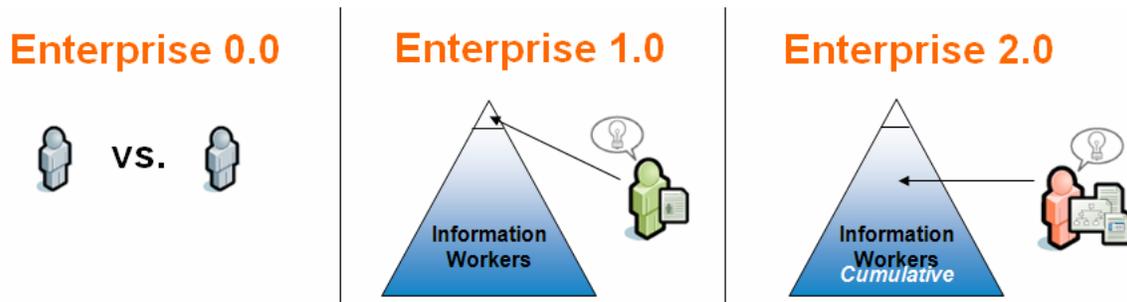


Figure 10.2: Competing in a New Environment.

When I started in Information Technology, I only had to compete with my co-workers; we worked in night operations on alternate days. The only exception was two to three times a month we would work as a team to processes month end reports and billing. This wasn't a bad job considering I was attending school during the day. Still, the point is that in order for me to move ahead, all I needed was to be a little bit better than the next person. I was protected by organizational boundaries and limited information flow in the industry. Keep in mind this was 1984 so technology jobs were not all that hot. This was the final calling card of what might be labeled Enterprise 0.0. As described earlier in this text, this was a command and control business model where organizations performed every task required in order to deliver value to the customer. I really saw this when I

went to work for Lummus Industries who manufactured Cotton Gins. They did everything from design, construction, sales, and engineering. Everything was an in-house activity. The integration costs were fairly low while production costs were high. While no one can state a specific date, Enterprise 1.0 emerged with the advent of the Internet. As information flowed and technology advanced, competition grew. I no longer just competed with the local labor. I had to compete with everyone around the world. People started to move around and Information Technology was no longer something hidden in the back office. Now, you had to be the best of the best. Managers could evaluate your skills along with anyone else through standardized tests or technology degrees. To be the best was to build your trademarks as this book has stressed. Those that published what they knew did so through articles, books, and conferences. They started consulting organizations and established themselves as the experts. All of us could read what they thought and learn from their best practices. The only way for them to stay at the top was to continue to push the envelope of trademark development. As someone that made it to the top of my field, I can tell you that you can never stop learning from those ahead of you. That all changes in Enterprise 2.0, you no longer know who is ahead of you or behind.

In Enterprise 2.0, we now compete not with the five people in front of us but the cumulative knowledge of everyone in the field. Let me say this again, in the old days I knew who the competition was, where they were and what they knew. Think of it as a landscape. In the physical world, I know the environment where I live, I know the people within my network, I have a really good idea of the weather, and I know what to expect most days. In 2.0 world, there is no landscape and nothing that would indicate the formation of one. We have no idea of who we are competing with nor how many. That's the issue with a world built upon the architecture of participation, you simply don't know, what you don't know.

The key component of Enterprise 2.0 is participation; we must all get involved and add to the body of knowledge. We must define who we are and what makes us special. "Good Enough" is no longer the definition of success. This road to transformation will be blocked by everyone up and down the food chain. Managers, who have made a career of controlling information, will feel out of control in this new world. However, managing the human imagination will be the corner stone of value delivery in this next environment. How will this manifestation occur? For each of us the drive will be different; some will be forced while others will choose.

In 2004, our organization started to look into collaborative solutions and the value that could be generated. The collaborative architecture environment included team workspaces, work flow, information access, integrated communications, Intranet platforms, presence, web conferencing, and many more. These technologies brought an entire new perspective to a traditional culture of command and control. Control is the key here. Corporations enjoy control because it is a great predictor of outcomes. The tighter the control, the more predictable the outcome will be. Collaborative applications eliminate the control and this can be unsettling for some. We have been taught that

without control chaos will emerge. Look around the web world and see where these assumptions have been wrong.

When Amazon allowed customer reviews, the prevailing opinion was that sales would drop with the negative comments, sales didn't drop they rose. When Ebay allowed seller and buyer feedback, the world said that the business model would crumble. When Google went to a value add business model versus an advertisement one, we all wondered what the end result would be. When Wikipedia started, everyone said that the quality of the information couldn't compete with published papers and encyclopedias. In the end, the errors in Wikipedia are less than 2 per 1,000 as revealed in a recent study as compared to the traditional encyclopedia. The point is that today, the architecture of participation seems far-fetched but in reality, we are simply in the early stages of the next revolution.

Summary

There is no mistaking that the architecture of participation is upon us and making inroads into the corporation. As we have automated and standardized on the vast majority of business processes, we tend to spend the majority of our time on the "out of scope" effort. The vast majority of employees don't do business processing anymore, due to the years of optimizing supply chains, outsourcing, automation, and stripping the costs and inefficiencies out of the back office (Tapscott & Williams, 2007). Hence the result of the transformation from Enterprise 0.0 to Enterprise 2.0. We must collaborate in order to continually raise the bar in productivity and value generation. The implications are clear; we must transform and reinvent every aspect of our environment including the business, the organization, and the individual.

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