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Open Platforms, Open Standards, Open Source

Don Grantham

The world's population is estimated at 6.6 billion, and approximately 1 billion people are connected to the network, with millions joining each week. Consequently, for many companies, the network is becoming a core resource for engaging customers and creating a competitive advantage. This adaptation of technology is also having a huge impact on the role of IT and the value that IT brings to running a business.

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With these changes, the leadership challenge for the next decade will be the evolution of the CEO, CIO, and CTO roles and the awareness of the dynamics between them. These responsibilities will not only continue to mature individually but also with unity due to developing interdependencies. And the forward-looking, innovative companies that make this transition with speed, foresight, and clarity are the ones most likely to excel regardless of current size or longevity in the market.

Measuring Change in Years Rather than Decades

History is full of examples in which open standards prevailed because they grew markets, while proprietary systems failed because they didn't. Consider the escalating speed and rate of change in computing and communications during the last 25 years — from the mainframe era and Advanced Research Projects Agency Network (ARPANET) to the Internet and anywhere, anytime, anyplace computing on any device. Even when *Time* magazine named the computer "Person of the Year" in 1982, no one could have predicted how profoundly technology would change our personal lives and the way we do business.

Open source software is likely to have a far greater impact, and at an even faster rate of adoption. It is the single most important shift in the industry since the early 1980s. Why? Because it accelerates network computing adoption and fuels innovation in technology, customer services, and new business models.

From the CXO's perspective, open source offers three tremendous advantages:

1. It gives businesses the greatest choice
2. It lowers barriers to entry to low cost or no cost
3. It provides the most flexible, cost-efficient exit strategy (i.e., a low barrier to exit)

Open Source Offers Greater Choice and Flexibility

With open source software and advancements in virtualized architectures, organizations gain the freedom to choose what applications and infrastructure software they want to evaluate (at no cost), which of these solutions they want to deploy, and how they want to pay for that deployment — on-site licenses, hosted solutions, or software as a service (SaaS).

Failing to explore new business models that leverage open source software, virtualization architectures, and a commodity infrastructure is the equivalent of companies that ran their operations in the early 1990s without considering the impact of the Internet. CXOs who failed to understand the power of the network are no longer in those jobs because their companies no longer exist.

Open Source at SmugMug

Video interview with Don Grantham and Don McAskill, CEO of photo service SmugMug, on Sun technology and open source.

» View

The same is true of the potential impact of open source computing and its ability to fuel the datacenter of the future, which is more likely to be a utility service such as the telephone and electricity than today's massive, individualized hardware footprint.

Redshift, Blueshift: Fueling Innovation Everywhere
Today, regardless of industry or company size, businesses tend to view their investments in IT and the value it delivers in one of two ways: Redshift or Blueshift. CXOs that follow a Redshift philosophy use IT for competitive advantage in creating value for their customers. For example, automobile manufacturers incorporate software and computer chips that sync with satellites to provide services such as geo-mapping, help desks, music entertainment, telecommunications, and auto-locater censors.

As a result, their business models have expanded to include revenue streams from customer service check-ups for software updates and relationships with new partners such as LoJack and OnStar. New content, new devices, and new services equal new demands on the network, increasing the demand for complex, high-performance, and integrated business applications.

"Whether Redshift or Blueshift, organizations can use open source and open standards technology to maximize their objectives."

The Blueshift ideology is all about consolidation and doing more for less. Blueshifting organizations want to maximize the use of their IT assets and increase return on investments while living within existing energy, space, and cooling constraints. Ultimately, these organizations want the most efficient access to large-scale, general purpose computing resources.

Either way, organizations can use open source and open standards technology to maximize their objectives. In a recent meeting with Don McAskill, CEO of online photo service SmugMug, I asked if an open source strategy played a part in his company's vendor selection process.

"It's huge for us," McAskill said. "Our entire business is built on open source. Every company we partner with or buy from ... we want them to participate in the open source community and let us help fix our own problems. If something is closed, we only have one avenue of support. When it's open source we have whomever made it and the huge community who can help us." Watch the video interview.

Once organizations have a clear understanding of their objectives — reducing costs, increasing flexibility, leveraging technical expertise — CXOs should consider piloting new infrastructures and relationships to address those needs.

Open Source Makes Good Economic Sense
The shift to open source applications and commodity infrastructures is as inevitable as the rising of the tide. Why? It makes good economic sense.

Never before have so many been able to access so much computing power as easily and as instantaneously. A recent IDC study shows worldwide revenue for open source software will balloon to $5.8 billion in 2011 from $1.8 billion 2006. That's a growth rate three times faster than the total software market, according to IDC, though open source constitutes a mere 1 percent of worldwide software sales.

The network has changed the way people develop software, how they acquire it, and what they do with it to create value. Open source is fueling a Participation Age that lets innovators, such as developers, stand on the shoulders of technology giants to fuel their own success.

The challenge for CXOs is to identify the opportunities, see them for what they are worth in the eyes of their customers and the market as a whole, and adapt their business models to those conditions.

In Sun's view, open source is the ideal business model for today's massively connected global Web economy.

Regards,

Don Grantham
Executive Vice President
Global Sales & Services
Sun Microsystems, Inc.

Is Your Business Prepared If Disaster Strikes?

Keeping your business running in today's increasingly complex environment amid government regulations, natural disasters, and pandemic and terrorist threats is no small task. Disruption to your business can quickly translate into lost revenue, poor productivity, customer dissatisfaction, or worse.

Business continuity and disaster recovery are no longer optional, but how do you know if your plan is right for your business? Here to shed some light on the topic are two Sun experts, Hal Stern, senior vice president of global systems engineering, and Randy Chalfant, chief technology officer and distinguished marketing director.

Related Resources

- » Sun Business Continuity and Disaster Recovery Solutions
- » High Availability Learning Center
- » Webcast: Protecting Your Data from Disaster
- » White Paper: Aligning Disaster Recovery with Business Requirem

Q: Does every enterprise need to be concerned with disaster recovery and business continuity?

Hal: Yes, and it's important to note that they are different things. Many think of disaster recovery as high availability. But disaster recovery goes much further than dealing with a single point of failure in the infrastructure. Issues can include brand hiccups or poor customer satisfaction that lead to real business operations problems. A variety of studies have shown that after 48-72 hours, there can be a material impact on a company.

Business continuity and disaster recovery (BC/DR) are about more than the infrastructure going down. They run the spectrum from knowing what to do if your PC is stolen with sensitive data, to what happened to Sun in New York when a steam pipe exploded near our building and we were locked out for four days. How do you get people to work? How do you make sure employees can continue operations and deal with customers even without physical access to their office? You need to assess how long it will take to recover from an event — hours, days, or weeks?

Randy: Business continuity is critical not only for business reasons. There is legislation that says you must have the ability to recover your business. The Disaster Recovery Institute definition of a disaster is a sudden, unplanned catastrophic event causing unacceptable damage or loss. The cost of non-recovery is even larger because many businesses that don't recover quickly simply become insolvent.

However, this rationale often fails to resonate with business leaders. Something like 50 percent of organizations worldwide have disaster recovery capability, but of them, only 50 percent are tested. If you're not testing your ability to recover, there's no proven efficacy. Perhaps a better business case is needed, so that business leaders see the effect to the bottom line.

Q: What's the difference between business continuity and disaster recovery?

Randy: A disaster recovery plan defines the resources, actions, tasks, and data required to manage the technology recovery effort and is a component of business continuity. A business continuity plan is broader and applies to all arrangements and procedures that enable an organization to respond to a disaster.

Hal: The historical hard line dividing what IT does and what the business does is gone. Disaster recovery is

> ***"Something like 50 percent of organizations worldwide have disaster recovery capability, but of them, only 50 percent are tested."***

when something bad happens and you suffer the loss of infrastructure. Business continuity forces you to ask, "What we are going to do?" It's the public perception of your company while you're recovering from the disaster. Are your Web sites there? Can people place orders? How does your presence look to customers, partners, or competitors? BC and DR are intimately tied together, and a business continuity plan needs to be in place for any threat to your infrastructure.

Q: Some say that BC/DR is just an expensive insurance plan. Thoughts?

Randy: They're probably right. People often overbuild their infrastructure and don't have enough money left over to keep people operating it. Companies often buy a one-size-fits-all solution, which may be overkill. Only about 25 percent of infrastructures need a Tier One plan with the highest level of protection. It's an insurance policy with an associated cost, but the perception of it being expensive is mostly caused by implementations that are far greater than the application deserves.

Hal: The issue here is recovery time, so if you build an infrastructure that recovers quickly from a failure and you realize that you don't need that level for many of your applications, then you begin categorizing your applications based on the longest time you can be without them. It's one thing to go without email for a day, and another thing for the stock exchange to go down, where minutes are measured in millions of dollars.

Randy: I've noticed that the cost of a Tier One infrastructure that hits five nines (99.999 percent) availability for one company can be vastly different than it is for another. Hal used the example of Wall Street where huge amounts of money are at risk, so the infrastructure tends to be premium and justifiably so. Balance here is key, and that comes as a result of looking at the applications, cataloging them, categorizing them, reading the taxonomy, understanding the financial impact, and building against that set of criteria.

Q: Where does a company begin assessing its disaster recovery plan?

Randy: It starts with a business impact analysis. Every business is comprised of three things — top-line growth, operational efficiency, and risk reduction. There are processes designed to hit each of these, which become automated in an IT infrastructure. If you make a change in the infrastructure, you can expect X impact on business objectives. You determine how the financial environment is impacted with the current state of preparedness, and determine what IT resources are tied to the business resources. You then look at recovery point objectives (RPO) and recovery time objectives (RTO) and the data protection window. The net-net is a measure that says if the cost of the RTO and RPO is smaller than the financial business impact, implement the technology. If these are higher than the business impact, then either don't do it, or move down to a lower class of availability.

"To assess your plan, get all your business functional leads who would be affected by a disaster together to do scenario planning."

Hal: To assess your plan, get all your business functional leads who would be affected by a disaster together to do scenario planning. Pretend something just happened, discuss what happens next, walk through what employees see, what customers see, what the users see, what you say to the press. If a datacenter in New York City goes down, you can turn on a secondary site in New Jersey. But what if the system administrators can't physically get out there? You may have this assumption that you just turn on the other site when in fact there may be no one physically there to do it. Or phone access may be disrupted. You begin to look at other ways of remote management and what resources you can call on.

Start at the physical layers to determine what you're protecting and how you provide recovery for it. Decide who has access to what and create internal and external communications plans. Then layer on various risk management plans. The biggest component is understanding the architecture of everything you're trying to protect, so you don't leave out something that may not be under your control like your extra network link or the ability to shift your main operations from one location to another so that everything continues to work. It's not just a question of replicating components. At some point you do a post-event analysis to see what worked and what didn't. You always discover what breaks when it's under the most duress.

Q: Is BC/DR cheaper or more expensive to implement today than two or three years ago?

Randy: It's a lot more expensive if you continue to do things without thinking about it. It's a lot less expensive if you build a tiered infrastructure that's appropriate to the needs of the business.

Hal: It's cheaper to implement because you're hopefully thinking about being able to minimize the overhead cost of implementing disaster recovery or business continuity. At the same time, more infrastructure now is critical to the overall operation of the business such that there are more things needing to be included in the business continuity plan.

Q: Many companies are taking BC/DR back in house. Thoughts?

Randy: Good for them. I believe people should be the masters of their destiny, and too often I think people are misled by external interests that aren't aligned with the needs of their business. If companies understand the business needs, the cost of operations, the costs to sustaining an application's ability to deliver value to the business versus the cost to protect it, they're in a better position to make good decisions.

Hal: I see many new companies looking to outsource their entire infrastructure. They rent infrastructure rather than buy it, but they still have responsibility for building the plans around business continuity. So it's not a question of who owns the servers, or who has the license keys for the software — it's a question of who has responsibility for ensuring the continuous operations of the infrastructure. I see more and more companies owning up to their responsibilities there, regardless of who has the data center operational keys.

About Hal Stern
Hal Stern is Sun's senior vice president of Systems Engineering at Sun Microsystems, with responsibilities for technical leadership, training, and management of Sun's customer engineering teams in Global Sales and Services. In his 17 years with Sun, Stern has been CTO of Software, CTO of Sun Services, chief architect of Sun Professional Services, and CTO for Sun infrastructure products. His technical interests include security, performance, reliability, massive scale of networked systems, and data management models for the "read-write Web."

About Randy Chalfant
Randall Chalfant is responsible for Marketing Strategy and is the chief technology officer at Sun in Louisville, Colorado. Chalfant's expertise is represented by over 33 years experience in business development, storage, mainframes, open system servers, operating systems, applications, and networking solutions. Chalfant is responsible for a variety of technical, communication, and strategy goals at Sun. His responsibilities include driving the strategic sales process, and the analysis and development of advanced storage technologies and business strategies that drive new and emerging opportunities.

Unleashing Collaboration Through the Wiki Workplace

Don Tapscott

How are wikis and other social networking tools changing the ways companies compete? To find out, Sun caught up with Don Tapscott, co-author of the bestselling book, Wikinomics: How Mass Collaboration Changes Everything.

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» New Paradigm's Methods for Building the Wiki Workplace

Q: What is the wiki workplace and how does it fit into the overall concept of wikinomics?

A: The wiki workplace is a term Anthony Williams and I coined in Wikinomics to describe how new tools and approaches to management are changing the way companies collaborate to improve innovation and performance. Unlike the other models in wikinomics such as prosumers, ideagoras or open platforms, the wiki workplace primarily refers to collaboration within the enterprise, although the wiki workplace provides tools that allow employees to reach out to the rest of the world.

I use the term "wiki" as a metaphor. We're not just talking about wikis, but rather about all the emerging collaborative tools that get us beyond primitive technologies such as email. Companies that embrace the new tools tend to perform better — so the stakes are high.

Q: Which technologies make wikinomics and the wiki workplace possible?

A: This is more than providing people with the ability to co-edit Web-based documents. The wiki workplace uses a variety of Web 2.0 tools to increase collaboration capabilities in every industry. For example, Sun is known for its customer-engaging blogs, Xerox is using wikis extensively for research, and the BBC collects and publishes news with RSS feeds. Then you have Best Buy and its use of social networks to reach consumers, while T. Rowe Price uses tags to identify investment opportunities.

Other tools used to increase collaborative capabilities include forums, threaded discussions, collaborative filtering, jams, and digital brainstorms. But regardless of the type of Web 2.0 software, these tools are enablers for a mindset that eliminates traditional corporate hierarchical thinking. And by doing so, they increase collaboration and innovation.

Q: How does a wiki workplace help companies compete?

"The result is faster innovation, lower cost structures, greater agility, and improved responsiveness to customers."

A: Companies that build a wiki workplace get products to market faster by harnessing the innovation of many more people than traditional corporate structures allow. Employees can collaborate across organizational silos, work with more people, in more regions of the world, with less hassle and more enjoyment, than with earlier generations of workplace technology. The result is faster innovation, lower cost structures, greater agility, improved responsiveness to customers, and more authenticity and respect in the marketplace. These tools also enable companies to implement the other business models in wikinomics that open up innovation with the external world.

Frequently, people who come up with solutions in a wiki workplace environment aren't necessarily in a field traditionally associated with a particular problem. That's what the Goldcorp mining company discovered when it opened up its geological data for a particular location and asked the public for insight into where gold might be located. Many of the best submissions were from people who were not geologists. For $500,000 in prize money, Goldcorp discovered over $3 billion worth of gold, and the market value of the company went from $90 million to $10 billion.

Q: How does a wiki workplace make people more productive?

A: It addresses a big productivity problem: organizational bureaucracy. Let's face it. Companies are hierarchies divided into organizational silos where rigid processes used for basic functions inhibit effective collaboration. Removing traditional hierarchies and boundaries within a company unleashes the potential of human capital. When companies set up ways for people to collaborate as peers across organizational silos and boundaries, they get more innovation through more collaboration. At Best Buy, for example, the 20,000 technical people there design products for the company with very little management oversight.

Q: Are there situations in which a wiki workplace makes employees less productive?

A: Conceivably, yes, but to be honest with you, I haven't seen any situation where the wiki workplace makes employees less productive. The problem is the opposite: people are less productive because of traditional ways of organizing workforces. Most companies are so locked into old models of collaboration that they don't realize that many of their assumptions restrain opportunity. You can open up a lot of things and the sky won't fall — and if you do it right, you can share intellectual property in a thoughtful way that strengthens your organization.

Q: How much information should a company share with people outside the organization?

A: There are times when companies need to protect intellectual property, but not as often as people tend to believe. I often use a portfolio example to explain. Just as you have a portfolio in your mutual fund, you need a portfolio of intellectual property. Some information you'll want to protect, but still keep open to multiple departments within the company for the sake of increased collaboration. Other information is best shared with partners and customers, but a great deal of information should be placed in a commons for anyone to access.

It might seem counterintuitive, but the commons approach can make a lot of sense. Take something as tightly controlled as risk assessment. I'm inclined to believe the sub-prime mortgage crisis and the ensuing credit crunch and crisis came about in part because of secrecy, proprietary risk models that are closed, and lack of sharing. As it turns out, hoarding this kind of information and IP is just not a good business practice. If people in the mortgage industry had created a financial risk commons, the current credit crunch probably would not have occurred. Why don't we apply wikinomics and open source to risk? Wouldn't a rising tide lift all boats?

Q: How do you manage security in a wiki workplace?

A: If you mean technical security, it's a problem endemic to all systems. Build security into your architecture. If you're referring to the disclosure of information that could hurt a company, it's a human issue that needs to be managed. Companies that implement wiki workplaces have guidelines, just as they do with other ways of communicating and collaboration.

"It's a phony argument that openness undermines security. Done right, the opposite is true. Openness is the way to protect security."

Actually, Sun is a good example of this. Jonathan Schwartz decided that allowing employees to have blogs would be a great way to engage customers. There are some loose guidelines that come down to a very simple principle — don't do anything stupid. Have people communicate about the things they find interesting or where they have expertise.

It's a phony argument that openness undermines security. Done right, the opposite is true. Openness is the way to protect security — including national security! Several U.S. intelligence agencies have embraced the principles of wikinomics by launching Intellipedia, which uses mass collaboration to find terrorists and criminals. But opening up information really cuts against the grain of conventional wisdom, so people really need to think about the reasons their organizations keep certain kinds of information locked away.

Q: Any recommendations on how to get started with a wiki workplace?

A: You need to start with a strategic rationale of what drives your need for collaboration. Identify the opportunities

and figure out where your business can most benefit from sharing data. It's also important to understand how new collaboration tools make wiki workplace collaboration possible, and this is an area where people of my generation sometimes get lost.

Younger people find it easy to operate in a wiki workplace, because they're used to communicating and collaborating with social networking tools. That's why I tell people that they need to use these technologies themselves, personally, with their own fingers, to understand it. Personal use is a precondition for any kind of comprehension of the wiki workplace and wikinomics.

Try things out. Participate in a blog. Initiate an online idea jam. Build a set of RSS feeds. See what happens. What do you have to lose?

About Don Tapscott
Don Tapscott is chairman of New Paradigm, an international think tank recently acquired by the BSG Alliance. He is also an adjunct professor of management at the Joseph L. Rotman School of Management, University of Toronto. In addition to co-authoring *Wikinomics: How Mass Collaboration Changes Everything* with Anthony Williams, Tapscott is the author of 11 widely read books about information technology in business and society, including *Paradigm Shift*, *Growing Up Digital*, and *The Naked Corporation*.