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CIO Corner

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2011 IT Tech and Strategy Trends

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It's the time of year when everyone starts releasing their "top 10" lists. Most of these lists are very technology or tool centric and can be more visionary than practical. Few organizations face all of the items on such lists, and many items don't remain relevant for more than a couple of years—then they're either subsumed into the larger IT portfolio or they disappear into the annals of IT history as "technology that never was."

Very few lists address the softer skills and issues facing CIOs, who are tasked with solving broader enterprise challenges and building persistent IT organizations. These items should include skills that span beyond IT and improve both the execution and integration of IT across the entire enterprise constituent pool (including IT staff, business partners, customers, and external stakeholders).

Here, I present two separate lists for your consideration—one on tech trends and the other on strategic capabilities. I've ordered them based on my perception of the "average" enterprise, and I include items that should apply to most organizations.

Top 10 Tech Trends

This list includes tools and capabilities that the IT organization will face internally and that it will need to tactically apply or address in the coming year.

1. Cloud Computing

Cloud computing is a fuzzy term that masks a broad array of still undefined components that most IT organizations aren't yet properly addressing. It's easy to characterize as software-as-a-service, and obvious challenges include the actual technology underpinning cloud offerings, public versus private clouds, data security, and internal policies.

However, less-than-obvious issues include the prevailing sovereign laws of data and activity for the hosting nations, decisions on core versus noncore functions and data, and internal document-retention policies versus cloud-provider capability. Most organizations are rapidly running down the path of signing one-off contracts for services and are posting policies without considering cloud computing's longer-term challenges and opportunities.

2. Mobile Devices

Today's tech teams face decisions regarding the corporate use of iPhones, Blackberry smartphones, iPads, Droids, and so on. The current focus is to ensure that the enterprise can secure and support these devices. In the not-too-distant future, IT organizations will have to consider how to enable internal applications (existing and future) for optimum use and benefit by business teams.

3. Social Networking and Collaboration

Too many organizations are making the fatal mistake of thinking that a social media "solution" is to link Facebook or Twitter to their corporate websites or portals and to create a corporate policy on what employees can and can't do. Although the use of social media technologies is in its infancy (and therefore excuses the short-term thinking), many organizations are

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missing the potential value of social media to better connect them to their customers.

The Gap recently learned the value of social media after rolling out a new logo. After posting the logo online, it promptly pulled it following the outcry posted by users—which it monitored and quickly answered. If only Coke could have leveraged social media before rolling out New Coke back in 1985.

IT can leverage social media to gather customer input—rather than running focus groups, for example. In focus groups, the enterprise typically creates a narrow band of topics and filters responses. On the Web, in a properly monitored social media approach, customers can say what topics they want to discuss with unbridled passion. The job of the enterprise shifts to monitoring and interpreting. Imagine similarly analyzing what customers are saying about your competitors.

4. Analytics

Closely related to social networking is the ability to sift through and leverage the data you've already captured. Many firms capture too much data about uninteresting things and then find themselves "starving at the buffet table."

IT needs to play a much stronger role in decreasing the noise and better leveraging tools to empower businesses to extract value from IT systems investments. IT teams must be more engaged in capturing information from internal applications, contracted cloud applications, and the Web, and they must become much better equipped at synthesizing the data into something valuable to the business.

5. Responding to Chaos

If you thought managing change was hard over the last two decades, just wait. The phrase "chaos is the new normal" is becoming truer by the day.

IT teams must be prepared for new devices and applications, more expansive cloud choices, and potentially a higher risk of security issues as the reach of the enterprise expands into the cloud. If your IT team isn't "change ready," create a team development initiative as soon as practical to instill this capability and mindset.

6. Security

Don't make the common mistake of assuming that security means hardware, enterprise antivirus software, and employee policies. Too few organizations consider the full ramifications of lost mobile hardware and devices, undetected access to information on the cloud, intrusion through social engineering, malware or viruses, and insider threats (which can be as simple as an employee leaving the office with a client list).

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7. Video Conferencing

For years, this has been a luxury purchase reserved for super-large corporations. Recently, however, improvements in techniques for running effective video conferencing and dramatic advances in technology are making implementation cost-effective for all organizations.

Cisco has been promoting its TelePresence capability, and HP has announced that it will be offering low-cost solutions that might fall within target budgets for small to mid-size organizations. Focus on video conferencing from Web service providers (such as Google, Skype, and Vyew) and hardware advances (including mobile personal devices such as cell phones) will continue to drive a wider array of options and lower-cost solutions—all of which will mean broader implementation across the spectrum, from small businesses to megacorporations.

8. Green IT and Sustainability

While "going green" has an altruistic spin and benefits the environment, most enterprises do it to save money. In the US, enterprises predominately aim to reduce costs on energy, paper, hardware, or other items that affect the bottom line.

The EU, however, has regulations in place or pending that will require any company operating a facility to monitor, report on, and reduce that facility's environmental impact. It isn't clear if or how soon these more complex regulatory requirements might become a reality in the US, but enterprises should be prepared. For example, SAP has created an executive position dedicated to sustainability, and it's providing CIOs with presentations and materials useful in understanding the current and possible future landscape for green IT. Expect this to be on IT's radar for years to come.

9. Computing as a Utility

At the end of the '90s, many people extolled the imminent commoditization of IT, claiming there would be a convergence of devices, which we would plug into the wall like a toaster. It has taken over 10 years to get even close to IT becoming a basic utility, but

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we're finally closing in on at least part of this prediction.

Convergence is well underway on handheld device platforms. To some extent, the telecoms have driven the fiber, 3G/4G, and satellite networks to a point where bandwidth is getting very cheap (at least in the US—perhaps not in the EU). But the aspect that was missed at the time that's now becoming quite evident is that the content matters more than the bandwidth. The most interesting cell phone applications point to a social network to leverage cool data for useful purposes (like the Dairy-Queen locator on my iPhone).

IT departments will quickly learn that consumer use of that bandwidth and data will ultimately (and probably soon) point back into the enterprise in the form of increased expectations for nimble and useful access to data—on its own or combined with internal and external data (see items 2, 3 and 4—mobile devices, social networking, and analytics).

10. Device-Aware Applications

Add together many of the items from this list, and you'll quickly see that users who want an array of handheld devices also want more access to analytics and expect to merge all of this together in real time while on the go. Furthermore, they don't want to look at a cumbersome desktop application on their handheld screen—they won't tolerate the long trail of screen clicks necessary to move through an application designed for a keyboard and mouse. IT shops need to consider future application designs given the devices their extended workforce will be using.

Top 10 Strategic Capabilities

This list focuses on the CIO and targets the capabilities and development areas that apply within and beyond the IT organization.

1. Respond to Global Economic Change

There's plenty of evidence that we haven't completely solved the global economic issues. There are still risks in the EU nations of Portugal, Ireland, Greece, and Spain that could impact Europe, and currency valuation issues in China and the US will continue to plague a clear turnaround and growth. For global organizations, these challenges will continue to impact CIOs and technology projects as corporate executives continue to expect "more with less" from IT.

Although larger enterprises appear to be harboring enough capital to move forward or react quickly to change, there's still little willingness to do so, and global CIOs bear the brunt of the responses (or lack thereof). Likewise, many firms that have been exploring or testing global expansion are split between which BRIC countries (Brazil, Russia, India, and China) will be the best location over the next 20 years. Although China had the early lead in this global shift, India appears to be getting more attention recently, and the focus could soon turn to Brazil. CIOs must be positioning IT to be nimble so they're prepared for the burst that will eventually come (2011 or later).

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2. Develop and Manage IT Teams

The greatest weakness visible in most organizations is the giant gap between current executive leadership and the next two layers below. While the recent global recession has put a dent in tactical training for hard skills at the lower levels of IT, even less attention is being paid to cultivating the next generation of IT leaders.

The reduced workforce has caused many director and VP-level resources to become very tactically focused, resulting in staff who lack the awareness and skills necessary to identify, assess, decide, and act strategically. This problem is exacerbated by the business side taking the same approach, thereby cultivating a future generation of business leaders with an even smaller appreciation of IT's capability and value. Business and technology teams in every organization need skills to operate in a global workforce and properly manage all players involved in the IT delivery process.

3. Communicate with Executives

IT leaders have come to better understand the business and how to leverage IT, but we've made little progress in documenting, presenting, or selling what IT can do for the business. Not every IT leader can build mega-cool presentations that wow users like an Apple product launch, but very few even try.

Most IT presentations are too busy and technical, have too many slides, and lack vocabulary that even makes sense to non-tech executives—let alone identifies "value." To see some the leading

edge presentations, check out Nancy Duarte's *Slide:ology* (O'Reilly Media, 2008) and *Resonate* (Wiley, 2010). CIOs might not have the time or capability to create these types of messages and presentations, but IT needs someone on staff who can build and pitch the right message for the right outcome.

4. Transition the Budget

In the next several years (no one knows exactly when), enterprises will start spending money to grow their businesses. There won't be a starting gun to tell us when—it will be one or two firms who jump in and show success, and then more firms follow suit to keep up.

When that happens, organizations will expect IT to be ready to respond (without delay or excuse). IT will be expected to move from a cost-constrained budget to an investment-growth budget—and every item on the list will need to show value to the business. Conversations to understand those potential areas of investment when the growth cycle comes have to be done in advance, not when you realize your competitors are leaving you in their dust.

5. Manage Security

Re-read item 6 from the tech trends list. Most CIOs don't spend a lot of time with their security administrators. Don't assume that your infrastructure guy is the point person for all security decisions and investments. As a CIO, it's your responsibility to see the bigger picture, manage the total solution, assemble the right array of roles and talent to do so.

6. Manage Outsourcing

There's no doubt that the IT staff structure of 2011 is dramatically different from the type of organization that was needed in 2000 and that the shift to outside expertise (on-shore or off-shore) is expanding. As more technology vendors and providers interface with the enterprise (and not all of them through IT), the art and skill of the entire vendor management process is simultaneously becoming more important and difficult.

Too many organizations rely on key project managers or the project management office (PMO) to handle vendors, and very few actually understand how to efficiently leverage external help in a positive, partnering way. From a cost perspective, better vendor management directly impacts the bottom line. From a value perspective, better management of outsourcing can increase top-line revenue. Today, you can worry about the cost aspect, but in a couple of years, the best firms will be focusing on value.

7. Develop an Organizational Strategy

Many firms struggle with how to create an IT structure but rarely start with a stated goal for the enterprise or IT. All too often, firms align the IT team with the business structure (regional, product division, business units, and so on) and are then shocked when they can't manage globally. When they start to convert IT to a global team, it creates friction on the business side.

CIOs must push back to executive management when the notion of a "reorg" is presented and ensure that business, IT, and the whole enterprise are oriented for the change. This is paramount (as noted in this list's first four items) as organizations move through the ongoing globalization of the markets and the transition back to growth in the coming years. IT should work with the business for deliberate plans and not fall prey to one-sided org changes in a reactive stance.

8. Manage Your Portfolio

Unfortunately, this is a skill that few organizations have. As a profession, we need to find a way to lead the charge for better project selection in the enterprise. If a firm can't define a common target or potential business value, it's not likely that IT can do anything more than solid project execution and delivery.

However, we can start to improve the vision and business value stages through examples of success and ultimately through executive-led process definition. These changes won't come from the business or executives, and certainly not from a PMO—they must come from the CIO.

9. Lead Business Change for the Enterprise

If a CIO can make progress in terms of portfolio management, the logical next step will be to lead the charge on overall enterprise direction. Though unheard of in years past, there have been more and more examples of this transition taking place, and the frequency is increasing each year.

This isn't to say that CIOs are smarter or more intuitive—but as technology transitions from a tool to the epicenter of every firm's existence and success, CIOs are uniquely positioned to see the big, interconnected enterprise picture. In *The Lords of Strategy*, Walter Kiechel points out that although everyone believes that corporate strategy has been around forever, the rapidly changing globalization of markets has created a giant vacuum in effective strategy execution (Harvard Business School Press, 2010). CIOs who tackle the items on this list will find themselves better able to define and

shape strategy and execution for their organizations.

10. Transition to the New Workforce Generation

As the aging US workforce moves toward retirement (or not, depending upon how government policy and economics redefine the retirement age), firms must transition to a new Generation-Y workforce. If you skip past the hype about how Gen-Y wants day-spas at work and an uberflexible come-and-go-at-will work policy, you'll find a group of people who have dramatically different views from your current workforce in terms of problem definition, the precision of solutions, the level of immersion required to reach meaningful details, and output expectations.

The solution won't require a 100 percent change of behavior or beliefs for either the current or future workforce. However, the best firms will define a new point between the two to maximize benefits for the organization and employee.

Whether you're a CIO, an IT leader, a business executive, a consultant, a vendor, or an IT guru, these lists should provide a basis for research and discussion as you move through 2011.

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