MIS QUARTERLY EXECUTIVE

Key Issues for IT Executives 2012: Doing More with Less

This is the seventh in a series of MISQE-published reports based on an annual SIM membership survey. With the enduring economic uncertainties prevailing, these U.S.-based organizations are now focusing not only on leveraging IT to reduce business and IT expenses, but also to generate revenues from IT innovations. While IT budgets for hiring, and salary increases are on the rise, these increases are less than last year's when organizations were more optimistic that the economic conundrum was ending. There is also greater attention to reducing IT budgets through IT infrastructure spending (especially Cloud) and sourcing (especially offshore).

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Key IT Issues Included in the Survey

Since 1980, the Society for Information Management (SIM), in a joint effort with different research leaders, has conducted an annual survey of the key issues facing IT executives globally and in the United States in particular. One of the important strengths of this research is in its ability to identify important trends by comparing survey data from previous years. The 2012 SIM survey, conducted in the 2nd and 3rd quarter of 2012, once again focused on three important areas:

1. Management concerns

2. Application and technology investments

3. Organizational considerations (e.g., IT budgets, IT staff salaries, CIO position levels, decision making, and IT organization structure)

This year's participants were asked to provide their top three managerial concerns from a list of 21 and their top five application and technology investments from a list of 51. Respondents were also asked questions pertaining to their spending and various IT organizational issues (see the Appendix for a description of the survey design).

Figure 1: Respondents by Industry

Industry	Frequency	Percentage
Business Professional Services	34	17.4
Financial services, Real Estate, Insurance	29	14.9
Manufacturing, Auto, Industrial	19	9.7
Education	16	8.2
Healthcare	14	7.2
Public Sector, Non Profit	14	7.2
Media, Entertainment ,Travel and Leisure	12	6.2
Food & Beverage Consumer Packaged Goods	10	5.1
Hardware, Software, Networking Products and Services	10	5.1
Pharmaceutical , Biotechnology Life Sciences	9	4.6
Wholesale, Retail Trading	7	3.6
Chemicals Energy Utilities	5	2.6
Other	5	2.6
Construction	4	2,.1
Telecommunications	3	1.5
Aerospace / defense	2	1.0
Transportation, Warehousing	2	1.0
Total	195	100

As in the past, this paper presents the major insights gained from the 2012 survey in each of these three areas. It includes comparisons with earlier SIM survey results and to recently published research. The 2012 survey findings are based on responses from IT executives representing 195 SIM organizations. Figure 1 provides a breakdown of the respondents by industry.

The Top Ten Management Concerns

Since 1980, the top 10 management concerns have remained relatively constant. Under "normal" conditions, management considerations tend to evolve slowly over time. However, beginning with the 2008 survey, the current economic conundrum has impacted the priorities of managers; many of the top concerns of pre-recession years are no longer in the top 10, and new concerns have emerged. Four "traditional" top 10 concerns still remain on the list: IT business alignment, business process re-engineering, IT strategic planning, and security and privacy

The top 10 management concerns (what keeps CIOs awake at night) for 2012 are shown in Figure 2, together with the comparative rankings since 2003. Hence, the reader can see how things evolved from prior years to the current economic conundrum. All of the top ten concerns for 2011 remained for 2012, with some shifts in rankings in importance. Three of these concerns have also been among the top ten since 2003: IT and business alignment, IT strategic planning, and security and privacy.

The No. 1 management concern for IT executives in 2012 is business productivity & cost reduction. This issue has been one of the top 3 management concerns since 2009. IT and business alignment, ranked 2nd, has been a stable

Figure 2: Top 10 IT Management Concerns, 2003-2012*

IT Management Concerns	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Bus. productivity & cost reduction	1	4	1	1	7	4				
IT and business alignment	2	1	3	2	1	2	1	1	1	1
Business agility & speed to market	3	2	2	3	13	17	7		5	7
Revenue generating IT innovations	4	9	6	8	17					
IT cost reduction	5	10	8	5	7	4				
IT strategic planning	6	5	6	7	3	8	4	4	4	2
Business process reengineering	7	3	3	4	18	15	11	5	10	10
Enterprise architecture	8	7	13	11	11	33	15	15	9	8
Security and privacy	9	8	9	9	8	6	3	2	3	3
IT reliability and efficiency	10	6	3	6						

*Cells with blank data indicate that the issue was not asked in the survey.

top 3 management concern since 2003. Business agility & speed to market is ranked 3rd, down from No. 2 in the two prior recession years. These top 3 management concerns received a significantly larger number of selections than the remaining concerns. Revenue generating IT innovation has jumped from 9th position to 4th this year--perhaps an indicator of things to come.

The top four management concerns all relate to obtaining business-related value from IT. The main focus since the start of the recession has been on how to leverage IT to help improve business returns and reduce business expenses--not on how to directly reduce IT costs, a profound difference from previous recessions. However, IT cost reduction did move up to 5th place (from 10th place in 2011), with8% of the respondents rating IT cost reduction as their No. 1 focus for 2012. As will be discussed later, the predominant sources for this reduction will be from infrastructure (largely Cloud) and sourcing offshore.

It is also noteworthy that, once again, the current economic conditions have apparently lowered the priority of human resources (HR) considerations (e.g., hiring, retaining, motivating). IT HR considerations were ranked No. 16, similar to 2011 (17th), down from 13th in 2010.

1. Business Productivity and Cost Reduction

Moving up from fourth place to No. 1, 32 organizations ranked business productivity and cost reduction as their number one management concern. This management issue was introduced to the SIM survey in 2007, and has been ranked as a top ten concern ever since. Successful IT organizations are the ones that have been working with their business partners to reduce overall company expenses.

2. IT and Business Alignment

Aligning IT and business has been a top concern of IT managers for almost 30 years. After dropping to 3rd place in 2010, it was No. 1 in 2011, and in 2012 is now No. 2.

When considering this long-standing pervasive conundrum, it is not a question of being aligned versus misaligned, but rather leveraging the opportunities for enhancing the relationship among IT and business organizations to attain demonstrable success. Academic research previously reported suggests there is a strong correlation between alignment maturity and an organization's performance.[1] According to a study by AT Kearney, to achieve the right level of

1   For quantitative findings in doctoral dissertations, see: Dorociak, J. (Capella University, 2007); Poels, R. (University of Amsterdam, 2006); and Ryan, T. (Capella University, 2010). See also: Luftman, J.N. *Managing IT Resources*, 3rd edition, 2011.

IT spending, the IT organization needs to work together with the business. CIOs also need the support of their CEOs and their business peers; without this support, CIOs cannot effectively deliver demonstrable value and address the factors that drive IT costs.[2]

The 2011 Gartner CIO Survey revealed that CIOs perceived their strategies to be intimately connected with business strategies, a reflection of their objective to get closer to the business.[3] Nevertheless, there are still challenges that need to be addressed. For example, a recent Bain & Company survey of more than 500 senior executives found that despite devoting enormous resources and energy trying to align IT investments with their most important business needs, fewer than one in five believed that their efforts were succeeding.[4]

3. Business Agility and Speed to Market

Business agility and speed to market has been in the top 3 for four consecutive years, and is No. 3 in 2012. It was ranked as the number one concern by 27 organizations–second after business productivity & cost reduction (32 organizations). This management issue was introduced to the SIM survey in 2003, and before the recent recession, was ranked in the mid-teens. This suggests that the downturn in the U.S. economy has driven organizations to focus on responsive IT approaches that can deliver immediate value. Speed to market has become essential for business survival in today's economy.

4. Revenue Generating IT Innovations

Revenue generating IT innovations increased to No. 4 from No. 9in 2011; it ranked 6thin 2010, but 17th in 2008, when it was first included in the SIM survey. During a fragile economic period, executives must search for alternative ways of generating revenues. Given the recent downturn in earnings, organizations are seeking innovative ways to leverage IT. A survey conducted by Harvey Nash showed that 74% of CIOs believed that to achieve the business-related objectives set by their CEO, technology innovation must be at the heart of the company's strategy. Those CIOs also believed that if their companies didn't

innovate and embrace new technologies, they would lose market share.[5]

This survey also found, however, that a metric that captures new ideas/innovations was only ranked 10th in 2012. (For further discussion, see the IT Metrics discussion prior to the Summary section in this article.)

5. IT Cost Reduction

IT cost reduction moved up from No. 10 in 2011 to No. 5 in 2012; in 2010 it was ranked 8th. During economic downturns, business executives usually expect all organizational functions, including IT, to greatly reduce their expenses and budgets. In previous recessions IT was typically the first organization to have their budgets reduced. When the economy gets better, those pressures usually ease. In the two prior years, the IT focus was mainly on generating business cost reductions. This year, however, IT leaders must reduce IT costs as well, resulting in "*doing more with less.*"As discussed later in this paper, while 35% of the respondents reported a cut in their IT budgets for 2012 (up from 17% in 2011 and 35% in 2010), 48% increased their budgets (down from 56% in 2011but up from 34% in 2010). The budget projections for 2013, predict further IT budget cuts with 22% of respondents said they will decrease their budgets (compared to only 15% in 2011).

6. IT Strategic Planning

IT strategic planning was No. 6, and was No. 5 in 2011. This year, 34 organizations selected it as a top 3 concern. IT strategic planning has been a top 10 management concern since 1980. In the 1980s, it was continuously ranked as the top concern. For an IT organization to succeed in today's economy, having an IT strategic planning process is just as important as during periods of strong economic growth.

7. Business Process Re-engineering

Business process re-engineering (BPR) was ranked as the 7nd most important concern, down from number 3 in 2011. It was ranked as the number one concern by 13 organizations. BPR is considered one of the most important solutions for leveraging IT's ability to reduce business expenses, including working with business partners to re-engineer processes. In

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2   Eul, M., Freyberg, A., and Jaeger, R. "IT in the Telecom Industry: Reaching the Next Level," AT Kearney, 2010.

3   McDonald, M. and Aron, D. "Reimagining IT: The 2011 CIO Agenda," Gartner, 2011.

4   Lochan, D. and Shah, S. "How to Bridge the IT Alignment Gap," *The Financial Times*, November 4, 2010.

5   Nash, H. "CIO Survey, 2011: A New Age of Innovation?" Harvey Nash Plc, 2010?.

essence, IT is in the business of business process change. Technology alone is not sufficient; strong collaboration with the business to change how they leverage technology is required.

8. Enterprise Architecture

Enterprise architecture was the new entry in the top ten for 2011, moving up to No. 7 from No. 13 in 2010. This year it ranked 8th place. This concern was introduced to the SIM survey in the 1980s, and it was ranked among the top 10 management concerns for many years. Beginning in 2005 this concern has been in the mid-teens.

This return to the top 10 reflects a significant shift in today's environment, as many CIOs use enterprise architecture as a vehicle to help reduce expenses. This is especially true with the attention on virtualization and Cloud. According to Gartner, Inc., by 2016, 30% of enterprise architecture efforts will be supported via a collaboration between business and IT, up from 9% percent in early 2011.**[6]** The discussion in the Applications and Technologies section of this paper elaborates on this important architecture trend.

9. Security and Privacy

Security and privacy was ranked 9th in 2011, down one place from 2011. This concern has been on the top 10 list since 2003. Organizations maintain valuable information assets such as individuals' taxes, financial assets, medical records, job performance reviews, trade secrets, new product developments, and customer data, all of which need to be protected.

Moreover, as systems migrate to the Cloud and both the usage of mobile phones and tablets, and the social networking trend, have recently accelerated, the need to upgrade security and clarify the rights to privacy of the individual/corporate user (and customers).According to Gartner, Inc., virtually all organizations will review, and at least half of all organizations will also revise, their current privacy policies before year-end 2012.[7] The fact that Security was only ranked 32nd among the most important technologies for 2012 reinforces once again that

security is recognized as a management issue, rather than purely a technical one.

10. IT Reliability and Efficiency

IT reliability and efficiency dropped to No.10 after moving to No. 6 in 2011; it was 3rd in 2010 and 6th in 2009, when it was first introduced to the SIM survey. IT reliability and efficiency refers to the accuracy, timeliness, and reliability of the data and information delivered by IT. Management decisions are only as good as the reliability of the IT services used to support them. It is important to note that the focus here is on efficiency, not overall effectiveness.

The Top Applications and Technologies

The 2012 survey asked respondents to rank the importance of applications and technology investments by selecting their top five from a list of 51.This list of choices has continued to evolve from both the lead author's research as well as technologies added by survey participants, and the top five have varied greatly over the years.

Figure 3 lists the top 15 application and technology rankings for 2012, along with their ranking since 2003. Four of the top 15 were new to this year's survey. The top five for 2012 are described below.

1. Business Intelligence

Business intelligence (BI) remained the top application/technology (a clear standout), having been in the top 3 since 2003. (Note also that this year Big Data was added to the survey, and it ranked No. 10.) Global research published by Oxford Economics in 2011 identified business intelligence as the 2nd top technology for the next five years.[8] That research also revealed how companies value the ability to analyze information to rapidly inform decision-makers. A recent IBM MIT Sloan Management report found that companies that harness the power of big data

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6   [Gartner] "30 Percent of Enterprise Architecture Efforts Will Be Supported as a Collaboration Between Business and IT," March 29, 2011. http://www.gartner.com/it/page.jsp?id=1607914

7   [Gartner] "Half of All Organizations Will Revise Their Privacy Policies by End-2012,"August 8, 2011. http://www.gartner.com/it/page.jsp?id=1761414

8   Oxford Economics "The New Digital Economy: How it will Transform Business," 2011. http://www.citibank.com/transactionservices/home/docs/the_new_digital_economy.pdf

Figure 3: Top Application and Technology Developments, 2003-2012*

	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Business intelligence	1	1	1	1	2	2	2	3	2	1
Cloud Computing (SaaS, PaaS, IaaS)	2	2	5	17						
Enterprise resource planning (ERP) systems	3	3	3	3	14	6		5		
Collaborative and workflow tools	4	8	7	7						
Customer relationship management (CRM) systems	5	5	9	13						
Mobile and wireless applications	6	4	9	24						
BYOD (Bring Your Own Device)	7									
Enterprise application integration/management (EAI/EAM)	8	9	18	5	12	32				3
Business process management systems	9	16	12							
Big Data	10									
Apps developments	11									
Networks / communications	12									
Continuity planning/disaster recovery	13	14	4	6	3	4				
Social networking / media	14									
Virtualization	15	7	2							

*Cells with blank data indicate that the issue was not asked in the survey.

and analytics outperform those that do not by 220%.[9]

2. Cloud Computing[10]

Cloud computing was new to the list of key technologies in 2009, when it was ranked No. 17. In 2010 it jumped to No. 5 and in 2012 and 2011 it was ranked 2nd. The Gartner 2011 CIO Survey reveals that almost half of all CIOs surveyed expect to operate their applications and infrastructures via cloud technologies within the next five years.[11] Bain & Company predicts that over the next three years nearly 65% of the growth in cloud spending will come from companies that make little or no use of the cloud today—and that industries like retail, transportation, industrials and financial services will demand more private and hybrid cloud offerings.[12]

The 2012 SIM survey also asked participants what percentage of their IT budgets was allocated to internal and external cloud services. On average for all respondents, 5% of IT budgets were allocated to *internal* cloud; 12% of the companies allocated 10% or more of their budgets to the cloud, and 37% allocated less than 1%. On average, 4% of IT budgets was allocated to *external* cloud; 16% of the companies allocated 10% or more, and 41% allocated less than 1%. While cloud computing is likely to remain one of the top technologies in the near

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9   The 2011 IBM MIT BI report can be found at: http://sloanreview. mit.edu/feature/achieving-competitive-advantage-through-analytics/, "How to Survive in a World of Big Data" is the theme for the 2012 SIM Academic Workshop to be held pre-ICIS in Orlando, Florida, on December 15th, and will also be the theme for the December 2013 issue of *MIS Quarterly Executive*.

10   For articles on Cloud computing published in early 2012, see: Loebbecke, C. et al. "Assessing Cloud Readiness at Continental AG," *MIS Quarterly Executive* (11:1), March 2012, pp.11-23; and Iyer, B. and Henderson, J.C. "Business Value from Clouds: Learning from Users," *MIS Quarterly Executive* (11:1), March 2012, pp.51-60.

11   McDonald, M. and Aron, D., op. cit. 2011.

12   Heric, M., Kermisch, R. and Bertrand, S. "The Five Faces of the Cloud," Bain & Company, 2011.

future, these survey results suggest that while many companies are proceeding to initially invest in small cloud initiatives, it is anticipated that investments will continue to rise. However, the long-term implications remain unclear-- analogous to the lack of knowledge about the long-term impacts of PCs in the late 1980s.

3. Enterprise Resource Planning (ERP) Systems

Enterprise resource planning (ERP) remained in 3rd place on the list of application/technology priorities. It has remained this high during the years of the economic conundrum largely because ERP provides a vehicle for reducing business expenses, an important current management objective, as companies leverage IT to reengineer business processes. ERP is also an effective vehicle to enable IT to help its business partners reduce costs and improve productivity.

4. Collaborative and Workflow Tools[13]

New to the top 5 is collaborative and workflow tools. It ranked 8th in 2011 and is now 5th. This increase is driven by the demands for an increasingly mobile workforce. Organizations have also started to develop their own internal software Apps for mobile devices, as well as to support internal App stores with internal and commercial apps for use on employees' tablets and smartphones. App tools were also new to the list this year, and were ranked 11th.

5. Customer Relationship Management (CRM) Systems

Customer relationship management (CRM) systems were introduced to the list of key applications/technologies in 2009 when they were ranked 13th. In 2010 they tied for No. 9 before moving up to No. 5 in 2011 and 2012. CRM is a strategy for managing a company's interactions with its customers/clients. CRM systems organize, automate, and synchronize business processes related to sales, marketing, and customer service to enhance quality and efficiency, decrease overall costs and promote

enterprise agility. According to Gartner Inc., the worldwide social CRM market (which is subsumed in social networking) is forecast to reach over $1 billion in revenue by year-end 2012, up from approximately $625 million in 2010.[14]

IT Budgets

Overall, the changing economic conditions have brought major changes to IT budgets and budget allocations. The number of organizations reporting increasing IT budgets prior to the recession were typically around 60%. However, as the U.S. economy started slowing down, 54% of the respondents reported flat or decreasing budgets in 2008. In 2009, 75% of the respondents said their IT budgets had remained flat or decreased, and 66% indicated the same in 2010. In 2011, 56% of the respondents reported raising IT budgets, an indication of optimism regarding the turnaround of the economy. However, in 2012, the number of organizations increasing their IT budgets dropped to 47.9% with the expectation for 2013 showing a further decrease to 45.8%.

On average, the IT budget reported in the 2012 SIM survey was 4.94% of corporate revenues, which is significantly higher than the 3.5 to 3.9% range reported in the six previous years. While it appears that this important analytic is on the rise, given the current economic crisis we must keep in mind that some corporate revenues are significant lower,[15] and this may be an inappropriate conclusion.
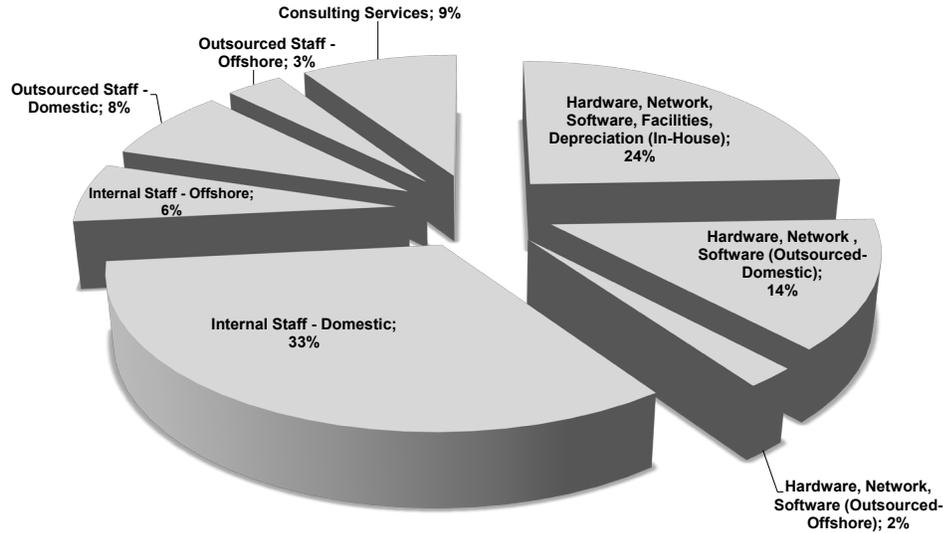
Figure 4 shows the percentages of the different IT budget components. For 2012, staffing remains the largest component of IT budgets: 59%, when consulting and outsourced staff are included. We also found that in these respondent organizations, 6.5% of their organizations' total internal staff is in IT (a new question in 2012). Although spending on infrastructure (e.g., hardware, networking and software) was up to 40% of total spending, both internal IT staff and domestic outsourcing are actually declining and anticipated to continue to decline in 2013, while offshore staffing and offshore outsourcing are on the rise. With IT cost reduction jumping to management

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13   For an example of how these types of tools are being used to create a mobile enterprise at Microsoft NL, see the article by E. van Heck et al. in this December 2012 *MIS Quarterly Executive* special issue on mobile IT management. For a discussion of strategies being used by organizations to find an appropriate support/control balance, see: Harris et al., "IT Consumerization: When Gadgets Turn into Enterprise IT Tools," *MIS Quarterly Executive* (11:3), Sept. 2012, pp.99-112.

14   [Gartner] "Market for Social CRM Is on Pace to Surpass $1 Billion in Revenue by Year-End 2012," August 30, 2011. http://www. gartner.com/it/page.jsp?id=1777938
15   See: http://www.thestrelnet.com/stock-market-news/11078128/ us-gdp-vs-revenue-vs-spending.html

Figure 4: 2012 IT Budget Allocation

concern No. 5, it makes sense that leveraging less expensive offshore workers is an initiative that many U.S. organizations are considering.

On the other hand, IT unemployment in the U.S. was reported in 2012 to be only at 3-4%, which was less than half of the overall U.S. unemployment rate according to Robert Half International. Since better access to IT skills also can be a rationale for offshoring, the reported offshore sourcing percentages could actually suggest that U.S. companies may be missing the offshoring opportunities offered today.

The distribution of countries where the IT offshore outsourcing budget was allocated in 2012 was India (43% down from 58% in 2011), followed by Western EU (13%, up from 6% in 2011), Philippines (12%, up from 4% in 2012), Eastern Europe (6%, up from 4% in 2011), Mexico (5%, no change) and several others.

Overall, the important IT budget message is that while last year it appeared that organizations were optimistic that the end of the economic conundrum was near, in mid-2012 SIM respondents had become more pessimistic about the economy.

IT Staff Trends

IT salaries are indicating similar trends as the overall IT budget. While last year 66% of the respondents indicated that their IT salaries where growing back to pre-recession levels, only 60% reported that IT salaries increased in 2012. This was still up from 42% reporting increases in 2010 and 34% in 2009, but the pre-recession number indicating salary increases was typically closer to 80%. Looking forward to 2013, 13% of the respondents think that IT salaries will decrease (up from 11% in 2011).

The 2012 IT staff turnover rate of 5.23% is a bit lower than the average of 5.8% over the last seven years. The decline in the past couple of years can largely be attributed to the state of the job market for experienced IT professionals and the difficulty that many baby-boomers are having in retiring due to the recession. It will be interesting to track staff turnover rate as the job market improves, and many baby-boomers choose to retire.

Respondents were also asked to indicate the anticipated percentage of their IT budget allocated to IT personnel education and training. The projection for 2013 is 2.99%, significantly lower than 2011 (3.23%), but somewhat higher compared with 2012 (2.87%). There is an anticipated growth in demand for interpersonal and management education topics in 2013, as well as business intelligence and cloud computing training.

Figure 5: CIO or Senior IT Executive Reporting, 2005 and 2010-2012

IT Executives Report to:	Percentage of Respondents				
	2012	2011	2010		2005
CEO	43%	49%	44%		42.6%
CFO	27%	32%	31%		21.8%
COO	16%	12%	11%	_____	20.8%
Business Unit Executive	7%	5%	4%		5.9%
Other Corporate Executive	7%	2%	10%		8.9%

CIO Trends

The roles of CIOs continued to evolve in 2012.[16]

CIO Reporting Structure

Figure 5 compares the reporting structure for the CIO or senior IT executive during the period 2005-2012. In the 2012 SIM survey, 43% report to the CEO, 27% to the CFO, 16% to the COO, 7% to a business unit executive, and 7% to other corporate executives (e.g., business unit vice presidents, marketing/sales executives, etc.).

CIO Tenure

There was an increase this year in the reported CIO tenure: 5.96 years compared to 4.45 years in 2011.The CIO tenure has been on the rise since the question was first asked in 2006, with an overall average of 4.59 years.

The survey also asked respondents (who were mostly CIOs) to indicate where CIOs were hired from. Overall, 42% of respondents indicated that the CIOs were hired from within the company: 37% of the respondents said that their CIOs were hired from within the company's IT organization (compared to 31% in 2011), 5% from outside of IT (compared to 4% in 2011). This means that more than half of the respondents said that their CIOs were hired from outside the company— primarily from an external IT organization; only 5% were hired from outside the company outside of IT. The overall message is that although most CIO hires are IT veterans, the

likelihood of being promoted to a CIO role within your own organization is less than 50%.

CIO Time on Activities

Established CIOs spend 77% of their time dealing with non-technical tasks. 45% of their time is spent managing relationships--with the business (24%), IT staff (13%), and vendors (8%); 12% on strategy, 10% on governance, 8% on HR issues. The breakdown for their time spent on technical tasks was: operations (11%), architecture (7%), and software development (6%). As can be seen in Figure 6, the distribution of CIO time spent on these activities has remained relatively constant since 2007 (when the question was first asked).

IT Organization Structure

A major IT organization characteristic is the degree to which its structure is centralized, decentralized, or some type of hybrid model. The continuing trend is that more organizations are reporting a federated type of hybrid IT organization structure.

Centralized IT organizations are somewhat lower: 61% (rounded) of the SIM respondents indicated that their IT organizations were centralized, compared to 70% during the pre-recession years. With a centralized IT structure, all of IT reports to a central—corporate— organization, which can facilitate economies of scale. Other benefits are standardization of IT management practices, and more flexibility in assigning IT staff.

Only 3% of respondents said that their IT organization is decentralized, a decrease from the 10% in the pre-recession years. In a decentralized structure, each business unit

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16   For recent field research documenting that IT governance has become more shared across C-level leaders, see the *MIS Quarterly Executive* December 2011 (10:4) special issue on the theme: "The New IS Leadership Roles for a Digital World."

Figure 6: CIO Time Spent on Activities, 2007-2012

CIOs spend their time on:	Percentage of Time					
	2012	2011	2010	2009	2008	2007
Architecture	7%	6%	7%	7%	6%	8%
Human Resources	8%	7%	7%	8%	7%	8%
IT Governance	10%	9%	9%	10%	11%	11%
Non-IT (e.g., external activities like management association support)	1%	7%	11%	10%	6%	7%
Operations	11%	12%	13%	15%	8%	8%
Relationship Management with Business	24%	20%	18%	19%	26%	23%
Relationship Management with IT Staff	13%	12%	11%	12%	15%	13%
Relationship Management with vendors	8%	7%	6%	Not asked	Not asked	Not asked
Software Development	6%	5%	6%	6%	4%	6%
Strategy	12%	15%	13%	15%	17%	16%

has its own IT organization (including IT infrastructure). There is little or no IT reporting or sharing of IT assets across business units. Business units that have a decentralized IT structure tend to be autonomous and usually focus more on achieving their own goals, rather than the goals of a corporate IT function.

33% of U.S. respondents indicated that their IT organization is federated/hybrid--a significant increase from the 16-18% of the pre-recession years. The federated structure can attain the benefits of both centralization and decentralization as it leverages corporate-wide synergies while taking advantage of the opportunity for business units to manage their own IT initiatives.

The remaining 4% (rounded) reported using a matrixed IT organization (3%), which is often a form of federated/hybrid or a networked IT structure (1%).

IT Metrics

A new question on this year's survey was how the IT organization is being measured. Respondents were invited to prioritize their current use of 14 different IT metrics and to project their IT metrics for 2013. As shown in Figure 7, the current and projected IT metrics

were very similar. The top rated IT analytic (by a significant margin) was projects delivered on time. Given that this is a traditional application project measure, this is not surprising. The next two IT metrics most frequently used are two other project metrics (ROI, and on budget), followed by service level agreements. However, several of the less frequently used metrics do in fact demonstrate IT value.

Summary

Although the current economic conditions are challenging for executives across the organization, IT has proven to be very resilient in the past few years. The 2012 survey found more cautious increases in IT spending, with a new focus on deploying revenue-generating products and services. However, the combined impact of the prolonged economic conundrum, in concert with new technology investment opportunities in cloud computing, business intelligence, social networking, big data and collaborative software for mobile devices, results in a more complex IT management environment. Only one-third of the top 15 technologies in 2012 were on the list in 2009.

Deploying new technologies with demonstrable results, more business

Figure 7: Actual 2012 and Projected 2013 IT Metrics

IT Metrics	2013 (projected)	2012 (actual)
Projects delivered on time	1	1
Project ROI	2	4
Projects delivered on budget	3	2
SLA targets	4	3
Productivity improvement	5	6
Increased customer/client satisfaction	6	5
Revenue growth	7	7
Innovation/new ideas	8	10
Increases in new products/services	9	8
Improved decision making	10	9
ROE	11	12
Industry specific measurements	12	11
Lower error rates	13	13
Earnings per share	14	14

productivity and cost reduction, but with a relatively flat IT budget, dominates 2012. The IT budget allocation increases are for infrastructure spending and offshore sourcing alternatives. IT budgets for new hires, and salaries, are expected to be even less optimistic in 2013, but IT staff turnover is expected to rise.

The relatively consistent top managerial concerns in pre-recession years have shifted toward concerns that are more related to the unique characteristics of the recent recession. In previous downturns, business executives simply asked their IT organizations to cut their budgets. In the past few years, with a slowly growing economy, business executives are rethinking the role of IT, and are expecting IT and business leaders to work closely together to improve business productivity, reduce business expenses via business process re-engineering, and increase business agility and speed to market. But having a recession for multiple years also means that IT organizations will have to reduce their investments and costs. This has created a special challenge for the CIO: *doing more with less.* However, the increased focus on

also leveraging IT to increase revenues will be interesting to monitor.

Appendix:
SIM Survey Methods

The SIM survey has been conducted since 1980. Surveys prior to 2000 focused just on the top management concerns. Since 2003, the survey has been extended to pursue more specific insights regarding the key IT issues of the day. A significant strength of this research is in its ability to identify important trends by comparing survey data from previous years. However, the survey results are based on an opportunistic rather than a randomized sample, and are presented as suggestive rather than generalizable.

The 2012 SIM survey was similar to previous ones in methodology and process. The survey structure was based on previous SIM surveys, with some questions modified based on previous results and suggestions from respondents and researchers (academic and industry). New questions were added based on (1) lists from other similar research, (2) input from SIM board members, and (3) the lead author's experience.

All 3,500+ SIM members were invited to take the online survey in June 2012. During June through September, 195 SIM member organizations had responded, which is somewhat lower than in previous years. The data was analyzed, and key findings were presented during the 2012 SIM annual conference (SIMposium) in Dallas, Texas.