

KEY ISSUES FOR IT EXECUTIVES 2011: CAUTIOUS OPTIMISM IN UNCERTAIN ECONOMIC TIMES

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Executive Summary

With the economy still unsettled, IT continues to be quite resilient. IT budgets, hiring, and salaries are rising closer to levels that preceded the recession. Nevertheless, the skies still haven't completely cleared and the economy continues to pose new challenges to organizations, and to cause some shifts in IT priorities. The data suggests that IT organizations are working aggressively and closely with their business partners to identify opportunities to improve business productivity, reduce business expenses via business process re-engineering, and increase business agility and speed-to-market.

Since its inception in 1980, the Society for Information Management (SIM) survey has helped IT leaders around the globe understand important issues and trends. This article presents the major findings based on survey responses from 275 U.S.-based organizations in the third quarter of 2011. The top five management concerns were:

- 1. IT and business alignment*
- 2. Business agility and speed to market*
- 3. Business process re-engineering*
- 4. Business productivity and cost reduction*
- 5. IT strategic planning*

This is the sixth in a series of MISQE-published reports based on the SIM membership survey. As in previous reports, this article also presents findings on key application and technology developments, and on various aspects of the IT organization.

IMPORTANCE OF IT MANAGEMENT ISSUES

Since 1980, the Society for Information Management (SIM), in a joint effort with different academic leaders, has conducted an annual survey of the key issues facing IT executives in the United States. One of the important strengths of this research is in its ability to identify important trends by comparing survey data from previous years. The 2011 SIM survey, conducted in the summer of 2011, 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, and IT organization structure)

This year, participants were asked to provide their top three managerial concerns from a list of 23 and their top five application and technology investments from a list of 51. Respondents were also asked questions pertaining to their spending and various IS organizational issues (see the Appendix for a description of the survey design).

This article presents the major insights gained from the 2011 survey in each of these three areas. It includes comparisons with earlier SIM survey results and, to recently

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Industry Classification	Number	Percentage
Finance/Banking	44	16.0%
Manufacturing	42	15.3%
Pharmaceutical/Healthcare	40	14.5%
Computer/Network Consulting	38	13.8%
Business Services	24	8.7%
Education	20	7.3%
Wholesale/Retail	10	3.6%
Government	9	3.3%
R&D/VAR/VAD	8	2.9%
Construction/ Utilities/Engineering	6	2.2%
External Services Provider (ESP)/ Data Processing Services	6	2.2%
Real Estate/Legal Services	5	1.8%
Executive Placement/Search	5	1.8%
Aerospace	4	1.5%
Food	4	1.5%
Communication Carrier	3	1.1%
Entertainment	3	1.1%
Computer-Related Wholesaler	2	0.7%
Transportation	2	0.7%
TOTAL	275	100.0%

published research. The 2011 survey findings are based on responses from IT executives representing 275 SIM organizations. Table 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 2009 survey, the current economic conundrum 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. However, 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 for 2011 are shown in Table 2, together with the comparative rankings since 2003. Hence, the reader can see how things

evolved from prior to the recent recession. The respondents were asked to identify their top three concerns. The top ten concerns across all respondents remained the same as 2009 (the first recession year) with some shifts in priorities, with one exception: Enterprise architecture moved onto the list, and Globalization moved off the top ten to No. 13.

The top management concern raised by IT executives in 2011 was IT and business alignment. This issue has been one of the top 3 management concerns since 2003 (see Table 2). Business agility and speed to market was ranked 2nd, as it did in 2010. Business process re-engineering was ranked 3rd, up two places from 2010. Business productivity and cost reduction was ranked 4th, down from No. 1 in the two prior recession years.

All four concerns relate to obtaining business-related returns from IT. The focus is not only on how to directly reduce IT costs, but on how to leverage IT to help improve business returns and reduce business expenses—a profound difference from previous recessions.

Table 2: Top 10 IT Management Concerns, 2003-2011*

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

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

Of the next six management concerns in the top ten, the only major change from last year was the No. 7 ranking for enterprise architecture, which had not been in the top ten list since 2004. IT strategic planning was ranked 5th; up one place from 2010. IT reliability and efficiency was ranked 6th, as it did in 2009, but down two places from 2010. The rest of the 2011 top 10 management concerns are: security and privacy (8th), revenue-generating IT innovations (9th), and IT cost reduction (10th).

1. IT and Business Alignment

Aligning IT and business has been a top concern of IT managers for almost 30 years. After dropping to 2nd place in 2009, and to 3rd place in 2010, it returned to top the list of management concerns in 2011. 90% of the respondents ranked it as among their top three concerns.

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. Recent academic research suggests that while IT business alignment has been improving, there is a strong correlation between alignment maturity and an organization's performance.¹

Moreover, the 2011 Gartner CIO Survey reveals that CIOs perceive their strategies to be intimately

connected with business strategies, a reflection of their objective to get closer to the business.² 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.³

2. Business Agility and Speed to Market

Business agility and speed to market has been in the top 3 for three consecutive years, and remained 2nd in 2011. It was ranked as the number one concern by 39 organizations—more than any other concern. 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.

3. Business Process Re-engineering

Business process re-engineering (BPR) was ranked as the 3rd most important concern, up from number 5 in 2010. It was ranked as the number one concern by 35 organizations. BPR is considered one of the most important solutions for leveraging IT's ability to reduce business expenses, including working with

1 See Dorociak, J. 2007. "The alignment between business and information systems strategies in small banks: An analysis of performance impact," Ph.D. dissertation, Capella University, and Ryan, T. 2010 "Business-IT alignment maturity: The correlation of performance indicators and alignment maturity within the commercial airline industry," Ph.D. dissertation, Capella University.

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

3 Lochan, D. and Shah, S. 2010. "How to bridge the IT alignment gap," *The Financial Times*, November 4, 2010. <http://www.ft.com/intl/cms/s/0/60089a24-e5f3-11d1-af15-00144feabdc0.html#axzz1bblqdnMQ>

business partners to re-engineer processes. In essence, IT today 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.

4. Business Productivity and Cost Reduction

After topping the list of management concerns for two years in a row, business productivity and cost reduction moved to number 4. Nevertheless, 31 organizations ranked this concern as number one. This management issue was introduced to the SIM survey in 2007, and has been ranked as a top ten concern ever since. According to a study by AT Kearney, to achieve the right level of IT spending, the IT department needs to work together with the business. CIOs 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.⁴

5. IT Strategic Planning

IT strategic planning has moved up from No. 6 in 2010, with 12 organizations selecting it as their top 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 should be just as important as during periods of strong economic growth.

6. IT Reliability and Efficiency

IT reliability and efficiency dropped to No. 6 after moving to No. 4 in 2010; it was 6th in 2009 and 8th in 2008, 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.

7. Enterprise Architecture

Enterprise architecture was the new entry in the top ten list for 2011, moving up to No. 7 from No. 13 in 2010. This concern was introduced to the SIM survey in the 1980s, and it was ranked among the top 10

management concerns. Since 2005 this concern has been in the mid-teens, but this year it returned to the top ten.

In today's environment, CIOs are under increased pressure from business leaders to show the business relevance and value of IT. Many CIOs are using enterprise architecture as a vehicle to help reduce expenses. This is especially true with the attention on virtualization and Cloud computing. According to Gartner, Inc., by 2016, 30% of Enterprise Architecture efforts will be supported via collaboration between business and IT, up from 9% percent in early 2011.⁵

8. Security and Privacy

Security and privacy was ranked 8th in 2011, up one place from 2010. 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 activities migrate to the Internet with more stakeholders using personal devices and the cloud, and the social networking trend continues to accelerate, the need to upgrade security and clarify the rights to privacy of the individual/corporate user and paying customers increases in tandem. 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 2012.⁶ While being on the top 10 management concerns list, Security was only ranked 11th among the most important technologies, indicating once again that security is recognized as a management issue, rather than purely a technical one.

9. Revenue-Generating IT Innovations

Revenue-generating IT innovations has dropped to No. 9 from No. 6 in 2010; it ranked 8th in 2009, 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. One way to generate new revenue is through IT innovations. A survey conducted by Harvey Nash shows that 74% of CIOs believe that to achieve the business-related objectives set by their CEO,

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

5 Gartner Press Release, "Gartner Says By 2016, 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>

6 Gartner Press Release, "Gartner Says Half of all Organizations Will Revise Their Privacy Policies by End-2012," August 8, 2011, <http://www.gartner.com/it/page.jsp?id=1761414>

technology innovation must be at the heart of the company's strategy. Those CIOs also believe that if their companies don't innovate and embrace new technologies, they will lose market share.⁷

10. IT Cost Reduction

IT cost reduction moved down from No. 8 in 2010 to No. 10 in 2011; in 2009 it was ranked 5th. During economic downturns, business executives usually expect all organizational functions, including IT, to greatly reduce their expenses and budgets. When the economy gets better, those pressures usually ease. While 17% of the respondents reported a cut in their IT budgets for 2011 (down from 35% in 2010 and 52% in 2009), 56% increased their budgets (up from 34% in 2010 and 25% in 2009). The budget projections for 2012, while continuing to improve, are approaching pre-recession levels with 51% of respondents saying they would increase their budgets (compared to only 38% in 2010 and 34% in 2009). These budget increases are approaching the pre-recession levels.

It should be noted that the current economic conditions have apparently lowered the priority of human resources (HR) considerations (e.g., hiring, retaining, motivating), as no HR concerns were ranked in the top 10 management concerns. IT HR considerations were ranked 17th, as they were in 2009, down from 13th in 2010.

THE TOP APPLICATIONS AND TECHNOLOGIES

The 2011 survey asked respondents to rank the importance of applications and technology investments by selecting their top five from a list of 51. New IT applications and technologies continue to be introduced and fuel the development of new products and services for all organizations. The list of choices in the survey continued to evolve from both the lead author's research as well as technologies added by survey participants. Table 3 lists the top 15 application and technology rankings for 2011, along with their ranking since 2003 (pre-recession).

From year to year, the top five applications and technologies have varied greatly over the years. The top five for 2011 are described below.

1. Business Intelligence

Business intelligence (BI) remained the top application/technology, having been in the top 3 since 2003. Global research conducted by Oxford Economics 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. BI includes data mining to identify valuable trends. Business executives believe that their organizations are data rich and insight poor. Increased competition and the recognition of the value of corporate data and information seem to have underlined the need for leveraging BI. Despite the high ranking of BI, it is often difficult to implement because it requires high quality data repositories to be integrated, which is not easy to achieve. Moreover, finding available resources with the appropriate combination of analytics and business skills can be a major inhibitor to BI deployment.

2. Cloud Computing

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 2011 it was ranked 2nd. At first glance this jump in ranking might suggest that cloud computing is now better understood and the solutions have become more mature. Additionally, 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.⁹ 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 industries like retail, transportation, industrials and financial services will demand more private and hybrid cloud offerings.¹⁰

However, the 2011 SIM survey also asked participants what percentage of their IT budgets was allocated to internal and external cloud services. On average for all respondents, 6% of IT budgets were allocated to internal cloud (with 20% of the companies allocating 10% or more of their budgets to the cloud, and 43% allocating less than 1%) and on average 5% are allocated to external cloud (with 11% of the companies allocating 10% or more, and 41% allocating less than 1%). While cloud computing is likely to remain one of the top technologies in the near

8 Oxford Economics, 2011, "The new digital economy: How it will transform business," http://www.citibank.com/transactionservices/home/docs/the_new_digital_economy.pdf

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

10 Heric, M., Kermisch, R., and Bertrand, S. 2011, "The five faces of the cloud," Bain & Company.

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

Table 3: Top Application and Technology Developments, 2003-2011

Application and Technology Development	2011	2010	2009	2008	2007	2006	2005	2004	2003
Business intelligence	1	1	1	2	2	2	3	2	1
Cloud computing	2	5	17						
Enterprise resource planning (ERP) systems	3	3	3	14	6		5		
Mobile and wireless applications	4	9	24						
Customer relationship management (CRM) systems	5	9	13						
Software as a service (SaaS, PaaS)	6	9	15						
Virtualization	7	2							
Collaborative and workflow tools	8	7	7						
Enterprise application integration/management (EAI/EAM)	9	18	5	12	32				3
Data mining	10	16	23						
Security	11	26		25	8	3	1	1	
ITIL/IT process management practices		22	8	3	4				
Knowledge management	12	22	24	28					
Server virtualization	13	6	2	5					
Continuity planning/disaster recovery	14	4	6	3	4				
Service-oriented architecture (SOA)	15		9						

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

future, companies are proceeding with its deployment cautiously. The long-term implications of Cloud computing are yet to be understood; it is analogous to the understanding of the long-term impact of PCs in the late 1980s.

3. Enterprise Resource Planning (ERP) Systems

Enterprise resource planning (ERP) remained in 3rd place in the list of application/technology priorities. They have remained at number 3 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 an effective vehicle to enable IT to quickly help its business partners reduce costs and improve productivity.

4. Mobile and Wireless Applications

Mobile and wireless applications were introduced to the list of key applications/technologies in 2009 when they were ranked 24th. In 2010 they tied for 9th

before jumping up to No. 4 in 2011. IT organizations are now being asked to support personal devices such as smartphones and tablets in an environment referred to as the consumerization of IT or BYOT (Bring Your Own Technology), as a replacement for office desktops or even laptops. Research conducted by Oxford Economics reveals that the majority of respondents (57%) said that mobile technologies would have the greatest positive impact on their business over the next five years. Survey respondents across companies of all sizes saw mobility as a “game changer.”¹¹

According to Gartner, Inc., worldwide sales of mobile devices to end users totaled 428.7 million units in the second quarter of 2011, a 16.5% increase from the second quarter of 2010.¹² Gartner, Inc. recently identified what it believes will be the most important mobile applications and trends for high-end devices in the next few years: location-based services, social

11 Oxford Economics, op. cit., 2011.

12 Gartner Press Release, “Gartner Says Sales of Mobile Devices in Second Quarter of 2011 Grew 16.5 Percent Year-on-Year; Smartphone Sales Grew 74 Percent,” August 11, 2011, <http://www.gartner.com/it/page.jsp?id=1764714>

Table 4: 2009-2011 IT Budget Allocation (Actual)

IT Budget Area	2011 Percentage	2010 Percentage	2009 Percentage
Internal Staff – Domestic	38%	43%	39%
Internal Staff – Offshore	2%	3%	4%
Outsourced Staff – Domestic	3%	7%	8%
Outsourced Staff – Offshore	2%	5%	4%
Consulting Services	11%	10%	12%
Hardware, Software, Network	44% (32% - Insourced) (12% - Outsourced)	32%	33%

networking, search, commerce, payment, context-aware service, object recognition, instant messaging, email and video.¹³

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. 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 2010¹⁴; this market is projected to total \$820 million in 2011.

IT BUDGETS

Changing economic conditions brought major changes to IT budgets. IT budgets were continuously on the increase from 2004 to 2007: 51% in 2004 to 61.3% in 2007. However, as the 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.

¹³ Gartner Press Release, "Gartner Identifies 10 Consumer Mobile Applications to Watch in 2012," February 10, 2011, <http://www.gartner.com/it/page.jsp?id=1544815>

¹⁴ Gartner Press Release, "Gartner Says the 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>

In 2011, 56% of the respondents reported rising IT budgets and 27% said they had remained flat; in all, 83% of IT budgets went up or remained flat. Their forecast for 2012 is similar: 51% of respondents said their IT budgets would increase in 2012 and 34% said they would remain flat. These numbers are approaching pre-recession levels.

On average, the IT budget reported in the 2011 SIM survey was 3.55% of corporate revenues, which was lower than the 3.8% range reported in the three previous years. Furthermore, compared to previous years, there were some changes in spending patterns in 2011. As Table 4 illustrates, staffing remains the largest component of IT budgets. In total, people resources account for about 56% of IT budgets when consulting and outsourced staff are included. Spending on infrastructure—that is, hardware, networking and software—was up to 44% of total spending, out of which 27% was outsourced infrastructure spending (12% of the 44%).

No big shifts in IT budget allocations are planned for 2012. Both offshore and domestic outsourcing are expected to be flat, and consulting services will remain at 11%.

The distribution of countries where the IT outsourcing budget was allocated in 2011 was India (58%), followed by China (10%), Mexico (7%), Western Europe (6%), Eastern Europe, the Caribbean, the Philippines (4% each), Brazil and Russia (3% each). One-third of the respondents reported no offshore outsourcing.

IT STAFF TRENDS

When considering salaries, the IT sector is back to pre-recession levels: 66% reported that IT salaries increased in 2011, up from 42% reporting increases in 2010 and 34% in 2009. When combined with the

Table 5: IT Onshore Outsourcing Allocation

IT Function	2011 Actual	2012 Projection
Maintain existing applications/services	28%	29%
Building new applications/services	27%	25%
Running Infrastructure	18%	17%
Help Desk	11%	12%
Management Consulting	8%	9%
No Onshore Outsourcing	8%	8%

Table 6: IT Offshore Outsourcing Allocation

IT Function	2011 Actual	2012 Projection
Maintain existing applications/services	24%	24%
Building new applications/services	21%	20%
Running Infrastructure	11%	12%
Help Desk	5%	5%
Management Consulting	6%	4%
No Offshore Outsourcing	33%	35%

26% that said salaries remained flat, a total of 92% of respondents reported that IT salaries did not decrease in 2010 (compared to 83% in 2010, 81% in 2009 and 96% in 2008). These results are consistent with *Computerworld's* survey that reveals increases in total average compensation; salaries and bonuses are all higher in 2011 compared to 2010. *CW* respondents reported an overall 1.5% salary increase and a 0.3% increase in bonuses.¹⁵

Looking forward to 2012, many organizations predicted the same or even better conditions: only 6% of the respondents think that IT salaries will decrease in 2012 and 67% project that salaries will increase. Combined with the 27% that think salaries will remain flat, 94% said that IT salaries would remain at the same level or increase compared to 2011, which is consistent with the pre-recession range.

In asking a new question this year regarding what the percentage of the company's personnel is IT, respondents indicated that 11.3% of their personnel are IT. At the same time, IT staff turnover remained at 5.51%, a very slight increase from an average of 5.5% in 2010. This turnover is significantly lower than the turnover in the pre-recession years when turnover surpassed 6%. The decline in the past couple of years can largely be attributed to the state of the job market for experienced IT professionals. Also, although the economy has been slowly improving, many of the baby-boomers are finding it difficult to retire. It will

be interesting to track staff turnover rate as the job market improves.

Furthermore, respondents were asked to indicate the anticipated percentage of their IT budget allocated to education and training. The projection for 2012 is 3.55%, a slight increase from 2011, but a significant change from 2009 when 3.09% was reported. There is an anticipated growth in interpersonal and management education, as well as in business intelligence and cloud computing training.

CIO TRENDS

Note: This December 2011 MISQE issue includes four research articles on the evolving CIO role and identifies a clear trend in greater collaboration with other C-level executives as part of digitization transformation efforts.

CIO Reporting Structure and Role of CIO

The roles of CIOs continued to evolve in 2011. Table 7 compares the reporting structure for the CIO or senior IT executive in 2005 versus 2010 and 2011. In the 2011 SIM survey, 49% report to the CEO, 32% to the CFO, 12% to the COO, 5% to a business unit executive, and 2% to other corporate executives.

¹⁵ Brandel, M., 2011. "Under pressure and underpaid," *Computerworld*, (45:7), pp. 14-17.

Table 7: CIO or Senior IT Executive Reporting

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

Table 8: CIO Time Spent on Activities

CIOs spend their time on:	In Percentage				
	2011	2010	2009	2008	2007
Architecture	6%	7%	7%	6%	8%
Human Resources	7%	7%	8%	7%	8%
IT Governance	9%	9%	10%	11%	11%
Non-IT	7%	11%	10%	6%	7%
Operations	12%	13%	15%	8%	8%
Relationship Management with Business	20%	18%	19%	26%	23%
Relationship Management with IT Staff	12%	11%	12%	15%	13%
Relationship Management with Vendors	7%	6%	0%	0%	0%
Software Development	5%	6%	6%	4%	6%
Strategy	15%	13%	15%	17%	16%

CIO Tenure

Compared to last year, there was a decrease in CIO tenure: 4.45 years, compared with 5.1 years in 2010. However, the 2011 numbers are consistent with the 2008 and 2009 responses.

The survey also asked respondents (who were mostly CIOs) to indicate where the CIOs in their organizations were hired from. 31% of the respondents said that their CIOs were hired from within the company's IT organization (compared to 38% in 2010). 61% of respondents said that their CIOs were hired from outside the company from an external IT organization (compared to 54% in 2010). 4% of respondents said that their CIOs were hired from within the company but outside of IT (the same percentage as in 2010) and 3% said that their CIOs were hired from outside the company from an organization outside of IT (compared to 4% in 2010). Overall, only 35% of respondents indicated that the CIOs were hired from within the company.

CIO Time on Activities

Established CIOs spend 77% of their time dealing with non-technical tasks, such as managing

relationships with the business (20%), IT staff (12%), and vendors (7%), strategies (15%), governance (9%), HR issues (7%) and non-IT (7%). Thus, they spend about 40% of their time on relationship management. CIOs spend 23% of their time on technical tasks; focusing on operations (12%), architecture (6%), and software development (5%). The distribution of CIO time spent on activities since 2007 is illustrated in Table 8. Overall, CIOs are spending more of their time in non-technical/operational areas in 2011—closer to the time allocation of pre-recession years.

IT ORGANIZATION STRUCTURE

The recent trends are that fewer organizations are reporting a highly centralized structure or a highly decentralized structure, and more are reporting a federal/hybrid structure.

One of the major factors that can affect the performance of the IT organization is the degree to which it is centralized, decentralized, or federalized. Centralized IT organizations are relatively lower; in the 2011 SIM survey, 61% of respondents said that their IT organizations were centralized, compared to

68% in 2010, 70.4% in 2009, 67.5% in 2008, 77% in 2007, 74% in 2006, and 72.3% in 2005. With a centralized IT structure, all of IT reports to a single IT unit, which can lead to improved economies of scale; the responsibility for all IT services typically resides with the corporate organization. The benefit of having a centralized structure is (or should be) consistency and standardization of IT management practices, and more flexibility in assigning IT staff.

Only 5% of respondents said that their IT organization is decentralized, an increase from the 2% in 2010, but a drop from 9.5% in 2009, 8.8% in 2008, 5% in 2007, 10.3% in 2006 and 9.9% in 2005. In a decentralized structure, each business unit has its own IT organization (including IT infrastructure). There is little or no coordination across business units or with the corporate unit; corporate IT primarily supports the corporate departmental staff and some enterprise applications. Business units that have a decentralized IT structure tend to be autonomous and usually focus more on achieving their own goals, rather than the IT function's goals. This makes those business units less effective,¹⁶ as they also present low alignment maturity assessment.

26% of U.S. respondents said that their IT organization is federated/hybrid—a slight decrease from 28% in 2010, but up from 18.4% in 2009, 22.2% in 2008, 18% in 2007, 15.7% in 2006, and 15.8% in 2005. The federated structure can achieve both centralization and decentralization benefits because it ensures corporate-wide synergy is maintained while leveraging the opportunity for business units to manage their own IT initiatives. A recent study shows that federated organization structures tend to have the highest alignment maturity assessment (3.67).¹⁷

SUMMARY

The combined impact of the prolonged economic conundrum, in concert with the impact of new technology investments such as for cloud computing, business intelligence, social networking and the consumerization of personal devices has made this a more complex IT management environment. Only about half of the top 15 application and technology developments in 2011 were also on the top 25 list in previous years, and almost all of the top 15 in 2011 were not on the list three years ago.

16 Sambamurthy, V., and Zmud, R. W. 1999. "Arrangements for Information Technology Governance: A Theory of Multiple Contingencies," *MIS Quarterly*, (23:2), pp. 261-290.

17 Luftman, J. and Ben-Zvi, T. 2011. "Strategic Alignment Maturity and Company Performance: A Structural Equation Model Validation," Unpublished working paper, Stevens Institute of Technology.

Although the current economic conditions are challenging for executives across the organization, IT has proven to be very resilient. There are cautious improvements in IT spending, with a steady progression towards pre-recession levels. Increased attention is being given to IT infrastructure spending, and infrastructure outsourcing and cloud investments are trending upward. Budgets, new hires, and salaries are again on the rise, although IT staff turnover is still low.

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. Today, 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.

APPENDIX: SIM SURVEY METHODS

The SIM survey has been conducted since 1980. Surveys prior to 2000 focused just on the top management concerns of the CIO. 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. The survey provides an opportunistic rather than a randomized sample and is presented as suggestive rather than generalizable.

The 2011 SIM survey was similar to previous ones in methodology and process. The questions were based on previous SIM surveys, with 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 2011. During June through August, 275 SIM member organizations had responded, which is a similar response rate to previous years. The data was analyzed, and key findings were presented during the 2011 SIM annual conference (SIMposium) in Orlando, FL.