Market Pulse

2013 CIO Outlook

MANAGING INVESTMENTS IN EMERGING TECHNOLOGIES

To remain successful, IT leaders must perpetually investigate, prioritize, fund, adopt, and integrate multiple new technologies to support key business objectives.

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EXECUTIVE SUMMARY

Market Pulse

IDG Research Services has conducted annual surveys for the past few years that highlight a trend that is quite familiar to IT executives: The need to investigate, adopt, and integrate multiple new technologies is a never-ending cycle. Those innovations don't come discretely and one at a time. They overlap, and rarely neatly.

The encouraging news: According to the respondent base of 200, IT has an astonishing array of technologies from which to choose – all of which work together to increase productivity and efficiency in support of competitive advantage. Respondents are investing more in technology that will enable increasing productivity/ efficiency, the top business goal and the area where IT organizations are most effective at delivering value. Top technology investment priorities for 2013 include information/data security, mobile/wireless, virtualization, business intelligence (BI), cloud computing, and infrastructure/ data center.

The discouraging news: When so many technology trends overlap, it can be difficult for IT to identify where to focus resources. IT must move beyond its traditional emphasis on technology – hardware and software, no matter what its permutation – and strive even more to work with the business lines to support the latter's top-line priorities, such as increasing revenue and improving customer service. At the same time, the business must balance cost efficiency and business effectiveness, supporting investment that's financially justified.

Even so, IT executives have been dealing with challenges like this for years, and the survey results indicate that companies are not daunted by the current alternatives, rather they continue to invest in new technologies that bring value. Compared with previous years, this year's respondents are less likely to anticipate an increase in IT spending – but those reporting an increase cite larger jumps than other years.

While companies believe that cloud, mobility, social media, and analytics are important, there's still a gap between acknowledged importance and actual investment. Companies will only gain the efficiency they desire when they close this gap.

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IN SEARCH OF PRODUCTIVITY

IT's shopping list in 2013 contains no surprises. All the technologies touted as offering increased productivity for employees (mobile and wireless) and operational efficiency (cloud computing, infrastructure, and virtualization) top that list, along with ever-daunting data security. And while IT targets the where and how of data, focusing on the what – business intelligence and analytics – remains a concern.

IT is clearly focused on more than hardware and infrastructure. Respondents also cite the importance of investing in software services that enable business process management, better content and document management applications, and collaboration.

Social media, in which individuals create, share, and exchange information in virtual communities like Face-Book, LinkedIn, and Twitter, is another key area of potential investment. However, respondents continue to report low levels of effectiveness in leveraging social media. The business-to-business aspect of social media – taking advantage of recommendations and relationships –

remains a rich but underdeveloped opportunity area.

UNLOCKING BUDGET

When it comes to actual investment trends, the most recent IDG Research Services survey reveals some interesting anomalies. This year's respondents are less likely to anticipate an increase in IT spending versus in prior years, suggesting that IT is still expected to do more with less. This is a natural reaction when companies look upon their IT department as a cost center rather than a revenue generator. Companies that have reversed that thinking and invested in IT's ability to deliver business value are frequently rewarded by those investments. The others risk falling further behind trying to cut their way to business value.

New purchasing trends offer another possible explanation for lower IT budgets. When business units procure software-as-a-service (SaaS) applications in the public cloud, those costs often hit the business unit's budget, not IT's. Similarly, the boom in cloud computing suggests a shift from a capital expenses model to an operating expenses model. If IT takes advantage of platform-as-a-service (PaaS) or infrastructure-as-a-service (IaaS) options and purchases computing capacity on a per-use, per-user, or cycle basis, the organization incurs lower costs for infrastructure and lower total cost of ownership.

Interestingly, among those reporting an increase, the average estimated percent by which spending is expected to rise is the highest reported to date: 26 percent on average, versus an average of 20 percent

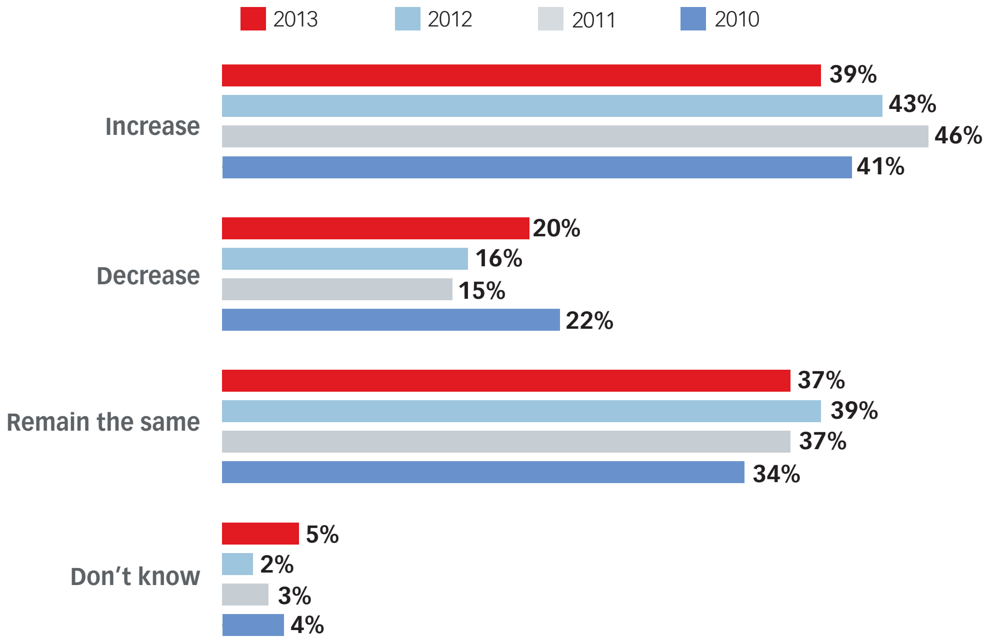
Top Investment Priorities for 2013

Include Information/Data Security, Mobile/Wireless, Virtualization, BI, Cloud Computing and Infrastructure/Data Center.

2013	Critical/Somewhat Important (NET)	Critical	Somewhat Important	Neutral	Not Very Important	Not at All Important
Information/Data Security	70%	36%	34%	24%	4%	-
Mobile/Wireless	65%	20%	45%	23%	7%	1%
Virtualization	61%	21%	40%	27%	6%	4%
Business Intelligence/Data Analytics	59%	26%	33%	29%	7%	3%
Cloud Computing/Open Source Technologies	58%	18%	40%	26%	5%	8%
Infrastructure/Data Center	58%	21%	37%	31%	4%	4%
CRM/Customer Service	53%	16%	38%	29%	8%	7%
Business Process Management	53%	14%	39%	32%	8%	4%
Content/Document Management	52%	15%	37%	34%	8%	4%
Web Services/SaaS	47%	15%	32%	36%	10%	4%
Collaboration Tools	47%	12%	35%	39%	10%	1%
Quality Assurance and Testing	43%	12%	31%	39%	10%	5%
Enterprise Resource Planning (ERP)	43%	20%	23%	34%	10%	10%
IT services Management (e.g. ITIL, CobiT)	38%	14%	25%	36%	14%	8%
Social Media (e.g. Video and Content Sharing, Sikis, Blogs, Social Networking)	37%	12%	25%	32%	16%	11%

SOURCE: IDG RESEARCH SERVICES, NOVEMBER 2013
NUMBER OF RESPONDENTS: 200

Expected Change in IT Spending Versus Previous Year



SOURCE: IDG RESEARCH SERVICES, NOVEMBER 2012
NUMBER OF RESPONDENTS: 200

in 2012, 13 percent in 2011, and 22 percent in 2010.

The potential reason for this shift may relate to the improving economic climate (in some industries, anyway), especially after three years of an ebbing economy. It may also reflect the results of companies that have already invested in new technologies that have resulted in competitive advantage. Not surprisingly, respondents report the highest expected levels of investment in technology that will enable increasing productivity and efficiency. Those two facets represent the top goal of business, but also, according to the survey results, the area where IT is most effective at delivering value.

WHERE COMPANIES ARE INVESTING

Drilling down into the areas where companies are investing reveals some intriguing results, especially relating to their commitment to technologies that may be on the cutting edge of maturity. The ranks of the so-called "fast followers" are swelling, perhaps because companies see the advantages competitors and those in other industries are deriving from technologies such as mobility and cloud.

The advantages of how mobility and cloud serve the business seem to be more intuitive than with other

KEY RESEARCH FINDINGS

» Compared with previous years, this year's respondents are less likely to anticipate an increase in IT spending – but those reporting an increase cite larger jumps than other years.

» Top technology investment priorities for 2013 include information/data security, mobile/wireless, virtualization, BI, cloud computing, and infrastructure/ data center.

» Respondents are investing more in technology that will enable increasing productivity/efficiency, the top business goal and the area where IT organizations are most effective at delivering value.

INTEGRATING MATURING TECHNOLOGIES INTO THE ENTERPRISE

One of the biggest challenges enterprises face with the introduction of increasingly important and maturing technologies – social media, mobility, analytics, and cloud – into their infrastructure is their integration. Why? Because it's not really about new applications to be installed – it's about new ways of doing business.

As a result, these technologies can't just be bolted on to existing business models; they have the capacity to transform those business models. Even more challenging, because these technologies are highly interrelated – consider uploading social media data to the cloud via mobile devices for subsequent analysis – IT must look upon their deployment holistically. They work best when they work together.

It's entirely possible that the successful deployment of these technologies will lead to the unbundling of tightly-coupled, industrial-age value chains, transforming key processes and, in some cases, entire industry structures. IT must be prepared.

technologies of the past – especially those that required process changes among employees. Because of their experience with consumer versions of cloud and mobile applications, employees are far more eager for the benefits they can deliver within the enterprise. Encouragement from end users – something that might have been rare in the past – is a strong motivator for IT.

Cloud. Survey results indicate that cloud is increasingly mature in the adoption cycle. While SaaS is the "as-a-service" model most likely to be used, 30 percent of respondents are actively researching or piloting IaaS models. Those companies cite reducing expenses as a top driver: 51 percent of the respondents report their companies are measuring or prioritizing cost savings from these investments (and these respondents are most often at large companies).

Additionally, roughly 4 in 10 respondents are deploying, piloting, or actively researching PaaS or business-process-as-a-service (BPaaS) models; the latter includes, through the deployment of process-specific APIs, such activities as e-commerce checkout, procurement, talent management, or even accounting.

Those who have already adopted such models represent a clear upward trend. Some 50 percent of this year's respondents indicate their organizations are migrating to or already have one or more applications/business processes in the cloud – a significant increase from 16 percent reporting the same in 2010.

Mobility. In this area more than any other, the desire for productivity and the lack of maturity present a dilemma for IT. The percentage of respondents whose companies are rapidly adopting mobile technology has doubled since 2012 (a jump from 5 to 10 percent), even though challenges remain with development across multiple, changing operating system platforms and devices. As if iOS and multiple versions of Android weren't difficult enough to navigate, Microsoft and BlackBerry continue to offer compelling options for enterprise mobile deployments. The benefit of conducting business anytime and anywhere is pushing IT into mobile technology, through a crowded vendor landscape and cloudy data access and security environment.

The reason is simple: Real-time access to information, frequently incorporating geologically specific parameters, is a boon for mobile employees in sales, logistics, distribution, and even support. Similarly, the ability to reach customers at the exact location they're liable to be making purchase decisions is driving companies to improve their mobile deployments.

Social Media. The importance of social media has steadily increased over the span of the IDG Research Services survey, growing from 28 percent in 2010 to 37 percent this year. Interestingly, it is the only area where the percentage of investment matches the level of

2013 Increases in IT Spending are Most Often Expected in the Areas of Mobile Technology and Cloud Computing

	Increase 2013	Increase 2012	Decrease 2013	Decrease 2012	Remain the same 2013	Remain the same 2012	Don't Know 2013	Don't Know 2012
Web/Mobile (NET)	55%	57%	11%	7%	32%	33%	3%	4%
Mobile	46%	48%	8%	4%	42%	42%	5%	6%
Web	33%	30%	13%	8%	52%	59%	3%	4%
Cloud Computing/Open Source Technologies*	46%	N/A	8%	N/A	41%	N/A	6%	N/A
Applications	43%	41%	17%	14%	38%	39%	3%	5%
Hardware	41%	30%	21%	26%	37%	39%	2%	6%
IT Compensation Costs *(including salaries, bonuses, and benefits but not stock incentives)*	41%	39%	12%	8%	44%	47%	4%	5%
Network infrastructure	35%	37%	15%	21%	49%	38%	2%	4%
Social Media*	28%	N/A	12%	N/A	53%	N/A	7%	N/A
Outsourced IT Services	26%	34%	23%	16%	47%	44%	6%	6%

** New categories for 2013*

SOURCE: IDG RESEARCH SERVICES, NOVEMBER 2013
NUMBER OF RESPONDENTS: 200

importance respondents ascribe to it. As noted earlier, it remains an immature area, with companies struggling to understand how to harness the advantages of recommendations and relationships.

If there are twin motivations in this category, it's the desire to be transparent and accessible while maintaining privacy and security, and complying with industry regulations. Respondents continue to report low effectiveness in leveraging social media to gain specific benefits; however, their reported levels of effectiveness have improved since last year – that represents a positive trend.

Analytics. Data complexity is growing, and CIOs are playing an increasing role as data stewards for a couple of reasons. First, with more applications digitized and greater facility of data feeds, companies are wrestling with more information overall. Second, companies struggle to aggregate the unstructured and semistructured data coming from other sources – social media, e-mail, documents, etc. – with structured transactional data for subsequent analysis. The number of respondents citing analytics as important has grown to 59 percent, slightly higher than in previous years. And nearly one-half of respondents report their companies have already implemented or are in the process of implementing strategic BI and data analytics initiatives.

The area of analytics becomes even more important as companies strive to translate data into foresight – understanding of customer sentiments and market direction in an effort to build and deliver the best products and services at the right time, using the right channel, at the right price point. For companies seeking to expand on this kind of potential, both IT and the business unit must understand the strategic implications of analytics.

A CAUSE FOR CONCERN: THE INCREASING ALIGNMENT GAP

If this year's survey reveals a larger concern, it's that less than 50 percent of respondents report they're investing in increasing effectiveness, increasing profitability, and providing higher-quality products – despite the reported level of importance of these goals to company success. For instance, 77 percent cite increasing productivity and efficiency as critical or somewhat important, but only 58 percent believe they are very or somewhat effective at it; 69 percent believe improving customer service is important, but only 54 percent believe they are effective at it.

Why do these gaps in priority vs. investment and investment vs. effectiveness exist? How can companies bridge these gaps and move first to efficiency and then to innovation? Conquering these issues remains a challenge.

Closing such gaps requires an understanding that these technologies, working together, have the power not just to improve business processes but to transform business models (see the sidebar, "Integrating Maturing Technologies into the Enterprise"). This applies not just to relatively new companies like Amazon and Netflix. Every company needs to embrace this transformational journey. The problem is that IT needs a foundation on which to build – innovations like mobility can't be deployed without an infrastructure that can support it. Performing while transforming is difficult, so it may be prudent to bring in third parties that can conduct assessments to help chart the path forward.

Two other challenges loom. First, companies spend so much on maintaining systems that they have little left for innovating. Companies should investigate opportunities to source common, utilitarian IT functions so they can focus more on strategic functions. Doing so, however, may lead directly to the second challenge: a skills gap within the organization. Before technologies mature, those skilled in its deployment can be expensive and hard to find. Again, consider third parties to provide not only sourcing services, but also the expertise to manage cutting-edge deployments.

Bottom line: Advances in social, mobile, analytics, and cloud technologies are disrupting "business as usual" across enterprises of all types, creating both tantalizing opportunities and perplexing new challenges. With assistance from the right strategic sourcing partners, companies can rationalize IT spending, free-up critical resources, and jointly map out strategies to address rapidly evolving business priorities.