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Raising your digital IQ

PwC's 4th Annual Digital IQ Survey:

Better integrating technology into the way your organization creates and delivers value

Executive summary

Ten years ago, corporations were the place to go for access to the best technology. Firms had faster Internet connections, more powerful computers, cutting-edge software, and, of course, the BlackBerry. Employees knew that the tools provided by their firms were far more powerful than their desktop computers at home, or their cell phones.

Yet in just a decade, that notion has reversed as technology has become increasingly powerful, affordable, and accessible to the public.

The rapid adoption of smartphones and tablets puts massive computing power into the pockets of consumers around the globe. Cloud computing provides access to software that once was out of reach. And social media connects friends, colleagues and people with similar interests, allowing them to share ideas, provide real-time product and service feedback, form action groups, and even innovate on new solutions to common problems.

As a result, new technologies and tools are increasingly adopted first in our everyday lives — and often are brought into the business world as a result of employee and customer demand. This is what we refer to today as the "consumerization" of IT.

Leading firms understand that being behind the curve on the strategic use of digital technologies weakens their ability to interact and strengthen relationships with customers, employees, and partners.

The consumerization of IT: The enterprise is starting to respond, but what will it do next?

This development has sweeping ramifications. Most organizations have not yet fully realized that their customers and employees expect to do business anytime, anywhere, and any way. Leading firms, however, understand that being behind the curve on the strategic use of technology not only puts their firms at a competitive disadvantage, but weakens their ability to interact and strengthen relationships with customers.

PwC's fourth annual Digital IQ survey of nearly 500 business and technology executives in the United States confirms that we are undergoing a fundamental transformation of how information and technology are used within the firm and in the marketplace.

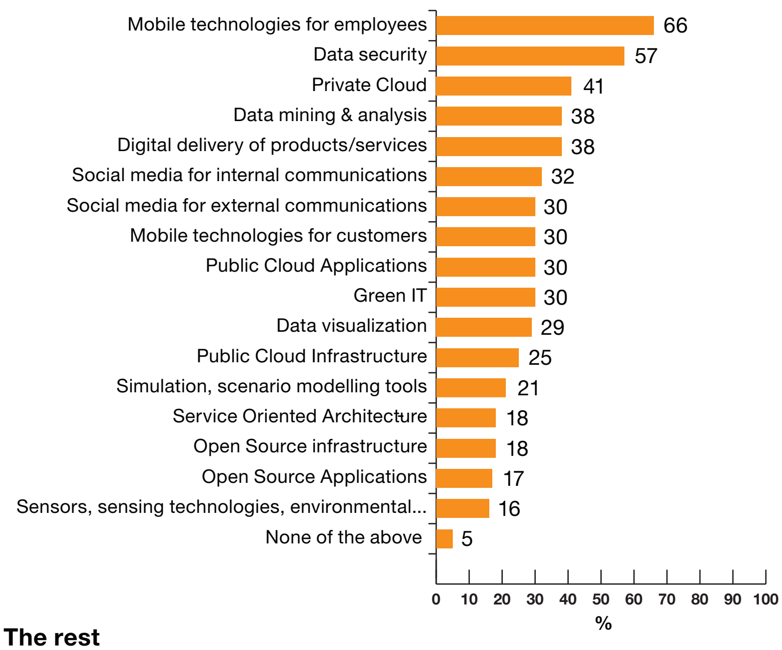
Whether you realize it or not, the "edge" of your organization has changed radically. Processes and relationships that used to end at your four walls are now out on mobile devices, in the cloud, and exchanged on social media.

The four key trends of aggressive adoption of the cloud (both private and public), increased mobility for both the employee and the customer, vast and persistent use of social media by almost all strata of society, and unprecedented access to data mean that any company with an "old-style," industrial, internally focused approach to IT is falling behind at an alarming rate. Figure 1 shows where respondents are investing in IT to fuel business growth.

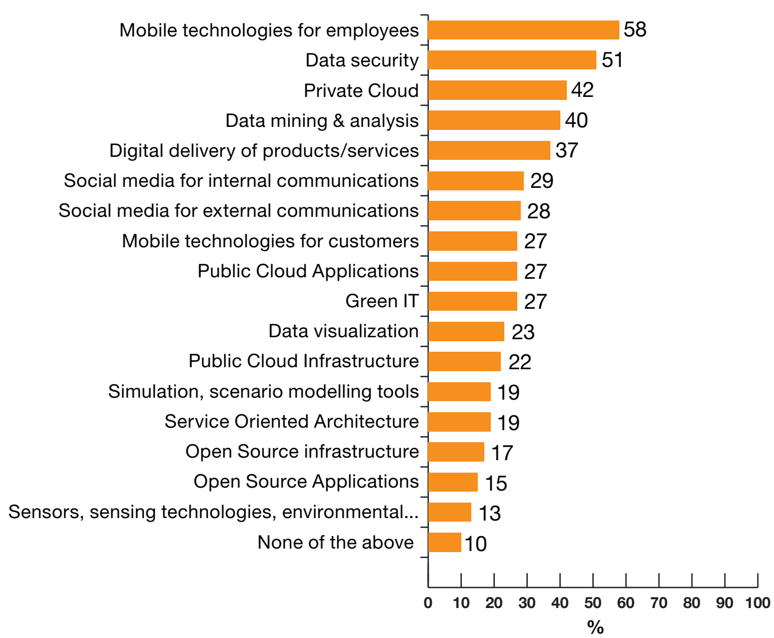
Figure 1: Where companies are investing in IT

Which of the following technologies are you currently investing in?

Top performers



The rest



Businesses must raise their digital IQ now or risk falling even further behind

"The core of the ecosystem for innovation has moved from inside the firm to out in the marketplace," says John Sviokla, a principal at PwC and the firm's business innovation leader. "Customer and employee expectations are being shaped by this new, dynamic, and exciting environment. If you miss this trend, you may be increasingly irrelevant to the market."

Raising your firm's digital IQ — that is, the way companies leverage digital technology and channels to meet customer needs as well as the needs of employees and business partners — will help you take full advantage of many of the recent changes in the global economy. In fact, we find that many of the top-performing organizations have mastered these important tasks, and expect them to pull ahead of their competitors even more aggressively as the world grows more digital, networked, and mobile.

What is a top performer?

Top performers rated their company in the top quartile for annual revenue, growth, profitability and innovation and reported they had revenue growth of more than 5% in the last 12 months.

What is digital IQ?

Digital IQ is a measure of how well companies understand the value of technology and weave it into the fabric of their organization.

Growing your digital IQ entails more than merely adopting the latest tools or having a large IT budget; it is about integrating technology into the way a company plans, innovates, measures results, interacts with customers and employees, and ultimately creates value.

Why care? Because growing your digital IQ can deepen the level of engagement you enjoy with your customers, employees, and business partners. It helps you improve your return on technology investments by more closely tying those investments to growing your business and solving business problems. After all, too many organizations adopt new digital solutions — such as social media platforms — without even understanding the business value (or what it should be).

As a result of our research, we have identified seven dimensions that comprise an organization's digital IQ: four technology components and three process components.

Technology components:

- **Mobility:** The firm's ability to provide mobile solutions to employees and customers, and "bake" mobility into the core processes of the organization.
- **Social media:** How well a company leverages social networks to inform all aspects of its operations.
- **Cloud computing:** The extent to which a firm uses cloud computing to make its business more flexible, adaptive, and competitive.
- **Business intelligence:** How broadly executives think about the types of data sources — both internal and external — used to identify early warning signs and new opportunities, make critical decisions, set strategies, and measure progress.

Process components:

- **Strategic planning:** This entails not only setting a corporate strategy that is well communicated across the enterprise, but ensuring that IT is front and center.
- **Mobilization:** A critical and often missed step whereby executives set out a roadmap and financial resources, and establish the team required to execute the corporate strategy.
- **Roadmap execution:** The ability to not only deliver products and projects on time, on budget, and within scope, but to ensure that the end result — even during times of dynamic change — creates overall value for the business.

Transforming your organization by adopting an outside-in approach to engaging the marketplace

An outside-in perspective is required to balance traditional thinking. But improving digital IQ means more than a technology upgrade; it requires significant changes in leadership thinking and corporate culture.

In some ways, better serving today's digitally empowered customer, employees, and business partners will — quite literally — mean turning your organization inside out to let in (and accommodate) the outside, market-driven trends we are seeing in the global marketplace. Processes and data that were once buried deep inside the organization must now be moved out to the "fringes" where your business touches the marketplace. Conversely, consumer wants, needs, preferences — and ways to engage them — must now find themselves at the very center of what it means to be a relevant, customer-centric organization.

The same applies to the wants, needs, and preferences of today's employees and business partners. They, too, must be put at the center of how you do business since employees and partners have been empowered equally by digital technologies and data transparency.

We have identified four technology-related rules of the digital enterprise that affect how executives need to rethink their strategies.

Everyone is a mobile consumer. Executives must recognize that many of the expectations of both employees and customers are affected by consumer-driven technologies. Employees — those mobile consumers inside your organization — want the tools they use for work to be as good as those they use in their personal lives. Customers, meanwhile, expect to interact with firms on the platform and device of their choice.

Our survey shows that while many firms are focused on developing better mobile tools for their workers, they are under-investing in solutions for their customers: 45% of all respondents say they interact with customers significantly using mobile channels, and less than one-third are currently investing in mobile technologies for customers. To truly take advantage of the mobile marketplace, executives should focus on creating mobile solutions for their customers and employees anywhere, anytime, in any way.

Social media is a critical data source. Never before has there been such a robust platform to learn about customers in a forum that is neither vendor- nor product-specific. But while social media certainly creates a new channel to engage clients and build loyalty, this is merely the tip of the iceberg. The real value of social media is in its ability to add a new dimension to the entire product life cycle.

"Many products and services have finite points in time during which there is a customer engagement," says Chris Curran, a principal at PwC and co-author of this study. "Social media, he adds, "allows you to create more regular interaction across the lifespan of a product or service." This information can be instrumental in wringing greater value from existing products while providing invaluable insight as new products are developed. Despite this, most companies have yet to embrace the benefits these tools can provide: Among the total pool of survey respondents, 37% have invested in social media tools to reach customers.

Moving business applications to the public cloud can make your firm more competitive. The development of the cloud is arguably the strongest driver of the consumerization of IT. Thanks to cloud computing, not only can consumers today access information on the Internet at incremental price points, they can actually solve complex problems, organize events on the fly, and perform hundreds of complicated tasks — all from their mobile devices.

If your firm isn't already this agile, it won't be long before your customers and other key stakeholders begin wondering why. Many firms are already starting to think about their next platform restructuring, and where their core systems will be managed. And, in an age of outsourcing, the cloud increasingly is an important part of those discussions.

This is perhaps the reason why investment in public cloud applications is on the rise. Among respondents that identify their firms as top performers, 30% are investing in public cloud applications and 87% expect that investment to increase in 2012. Private cloud investments still outweigh the public realm, however, suggesting that companies are embracing a hybrid approach — a positive step toward raising their Digital IQ.

Gain greater insight from business data by working from the outside in. According to Eric Schmidt of Google, "every two days, we create as much information as we did from the dawn of civilization up until 2003." The wealth of information created outside the organization is quickly outpacing that of the corporate world. As a result, executives must think more broadly about how to use external data to provide critical insight into operations, product development, and customer strategies. Access to the vast external data sets must be balanced with a strategy for searching, sorting, and filtering it to make it relevant.

Top performing companies report investing more to manage their volumes of data than those companies whose performance doesn't stand out. In fact, of all companies surveyed, 56% say they will be investing more in the coming year to collect customer data; 45% say they'll be investing more to measure operational performance.

Strategic IT remains a viable and vital business differentiator

Chief information officers (CIOs) are uniquely positioned to lead their organizations in the complex work of turning them inside out. Unlike the predictions of some pundits who say that IT is commoditizing, we see that those IT organizations that can effectively serve both their customers and their firm, deliver projects on time and on budget, and distill mountains of bits into meaningful insights are as rare as ever. In this way, IT's ability to drive business value is becoming more — not less — differentiated.

"Almost everyone — customers, employees, and suppliers — is an information worker," says Mr. Sviokla. "IT's actions determine how productive those people can be and is a core part of how a firm sets itself apart."

Chasing these new demands means that the CIO must not only be excellent at managing the internal factory, but also excel at mobilizing new plans into action. It also requires the CIO to find better ways to sift through and drive insight from the increasing torrent of data streaming from every manner of device and interaction, and to create a platform that can deliver these capabilities across a varied set of changing mobile devices.

Of course, changing information technology systems can be challenging. Software platforms don't rust, or show wear. And bad information often is an invisible problem people are willing to accept because it is very difficult to change. Our survey shows that top barriers to business success include an inability to gather and process information to make decisions, as well as the inability to adopt new technologies quickly enough. Addressing these issues at the executive level can lead to tremendous improvements and ultimately drive greater revenue.

IT organizations that can serve customers and their firm, deliver projects on time and on budget, and distill mountains of bits into meaningful insights are as rare as ever.

Figure 2: Top challenges

% stating somewhat concerned/extremely concerned	Top performers	The rest	Total
New market entrants	50%	47%	48%
Availability of key skills	61%	59%	59%
Energy costs	59%	53%	54%
Security of supply chain	61%	51%	52%
Permanent shift in consumer behaviors	65%	66%	66%
Inability to finance growth	42%	41%	41%
Inadequacy of basic infrastructure	38%	46%	45%
Increasing tax burden	58%	49%	51%
Inability to gather, understand and act on all the data about our customers	63%	70%	69%
Inability to quickly understand and adopt new information technologies needed to be competitive	58%	69%	67%

Digital IQ doesn't improve without an improvement in processes

As with our previous Digital IQ studies, we found that top-performing companies not only put IT at the heart of their strategies, they ensure that senior management actively helps to drive the mobilization and execution of those plans. Here are three key steps and what makes them so important.

Integrate IT leaders in the strategic planning process. Creating a strategic plan is the first step to implementing any sort of large-scale corporate effort. Of survey respondents overall, 68% say their firm has an effective overall corporate strategy that is likely to deliver success. Yet when it comes to communicating strategy, the numbers drop significantly — 49% of respondents say their firm's strategy is well communicated across the organization. Leading firms, meanwhile, put IT at the heart of their strategy: Among top performers, 86% said that their CEO is an active champion in the use of information technology to achieve the corporate strategy, compared with 56% for the rest.

Mobilizing the strategy is the critical but often forgotten catalyst for effective, sustainable change. In the mobilization stage, executives set plans and budgets against the overall strategy, creating a blueprint for how the strategy will be brought to life. Our data shows that too many companies forgo this critical step: While 77% of top performers say they have a single, multiyear roadmap for the overall business strategy, this figure drops to 54% for the rest. Furthermore, only 55% of those not identifying themselves as top performers say they understand the costs needed to implement the roadmap. The figures underscore the importance for CIOs, often the owner or major stakeholder in large IT-enabled programs, to have a carefully thought-out roadmap before implementing any large-scale initiative.

Focus execution on value delivered — not merely "on time, on budget." Considering that so many companies skip the mobilization stage, it comes as little surprise that the execution of projects is often hampered by unexpected consequences, resulting in missed deadlines, and overspending. Overall, 43% of respondents say that IT initiatives are frequently or always delivered on time — and the percentages are lower in terms of delivering on budget and within scope. Of course, these are only parts of the equation: "Being on time and on budget is often what executives think of as the key measures of successful project execution," says Mr. Curran. "What these measures leave out is the value the project intends to deliver to the business, and how much is actually realized."

So, just how can firms go about raising their digital IQ? Executives should begin by considering the following questions:

- *Are you prepared for the current and next generations of customer and employees, who are naturally adept with mobile devices?* Leading firms are already addressing today's reality and thinking about the future.
- *Do you have a social media strategy that extends past the marketing and sales functions?* Customers can provide a wealth of information not only about their preferences, but how you can improve your products and services. Social media should also play a role in corporate knowledge management and collaboration.
- *Have you considered the role cloud computing will play in your next application re-platforming?* Equally important is to consider how your competitors intend to leverage such approaches.
- *What sources of external information would most improve decision making and drive critical insight into operations?* Many firms still rely too heavily on only their internal data.
- *At what point in the strategic planning process does IT enter the discussion?* Firms that put IT and its leaders at the heart of their strategies are more likely to be successful.
- *How much effort is applied to mapping out the process for and determining who will lead the execution of your firm's strategy?* Too many companies skip this critical stage in the process.
- *Do your parameters for successful execution include periodic measurement and a post-rollout assessment of the overall value realized by the business?* Good project management is useless if initiatives do not provide measureable improvements.

About the survey

The fourth annual Digital IQ Survey was conducted by PwC and included responses from 489 US companies with annual revenues of more than $500 million (with an emphasis on those with $1 billion or more in revenue). Half of the respondents were business executives; the other half were IT executives. The survey covered a number of industries, including financial services, insurance, healthcare, and retail and technology. PwC thanks all participants for their time and insight.

Transforming the firm from the outside in: Everyone is a mobile customer

Outside-in strategy:

Put greater emphasis on creating mobile solutions for your customers, engaging them wherever they are — and making it simple to do business with you. Remember that your employees are mobile customers, too.

Mobility is reshaping the way the world connects. In 2010, according to research firm eMarketer, roughly 4.3 billion people around the world owned at least one mobile phone. By 2015, that number is expected to exceed 5.7 billion. China and India are fuelling most of this growth, according to the International Telecommunication Union. “For many people,” says Mr. Sviokla, “the mobile phone number is more reliable than their home address.”

Of course, mobility is a game changer for business, too. According to a 2011 study conducted by PwC and Oxford Economics titled The New Digital Economy: How it will transform business, a majority of global executives agreed that mobile technologies would have the greatest positive impact on their business over the next five years — more than any other technology. But how will those changes take shape?

From an operational perspective, companies are getting quite comfortable empowering their employees to do their jobs anywhere, anytime.

Business leaders must recognize that the expectations of both employees and customers are affected by consumer-driven technologies. Employees want the tools they use for work to be as good as those they use in their personal lives. Customers, meanwhile, expect to interact with firms on the platform and device of their choice.

From an operational perspective, companies are getting quite comfortable empowering their employees to do their jobs anywhere, anytime. According to our study, workers are fairly well equipped to deliver products and services using mobile technology, though there is room for improvement: 11% of all respondents have “everything they need” on a mobile platform. For top performers, that figure rises to one in five.

With regard to investments for employees, nearly all respondents will spend the same as or more than they did in 2011, indicating a commitment to arm the workforce with better mobile tools (see Figure 3). However, top performers will spend more than the overall pool of respondents: 44% will invest between $250,000 and $1 million, and 33% will invest more than $1 million. For the remaining respondents, those figures are 37% and 27%, respectively.

Figure 3: Mobile spending for employees

Overall

Are you currently investing in...

	Yes
Mobile technologies for employees?	59%
Number	288

What are your investment plans for 2012 for mobile technologies for employees?

	%
Will invest more in 2012	46
Will invest the same amount in 2012	48
Will invest less in 2012	7
Total %	100
Number	288

Do you plan to invest for the first time in 2012 in…?

	Yes
Mobile technologies for employees?	6%
Number	27

Top performers

Are you currently investing in...

	Yes
Mobile technologies for employees?	66%
Number	50

What are your investment plans for 2012 for mobile technologies for employees?

	%
Will invest more in 2012	44
Will invest the same amount in 2012	52
Will invest less in 2012	4
Total %	100
Number	50

Do you plan to invest for the first time in 2012 in…?

	Yes
Mobile technologies for employees?	5%
Number	4

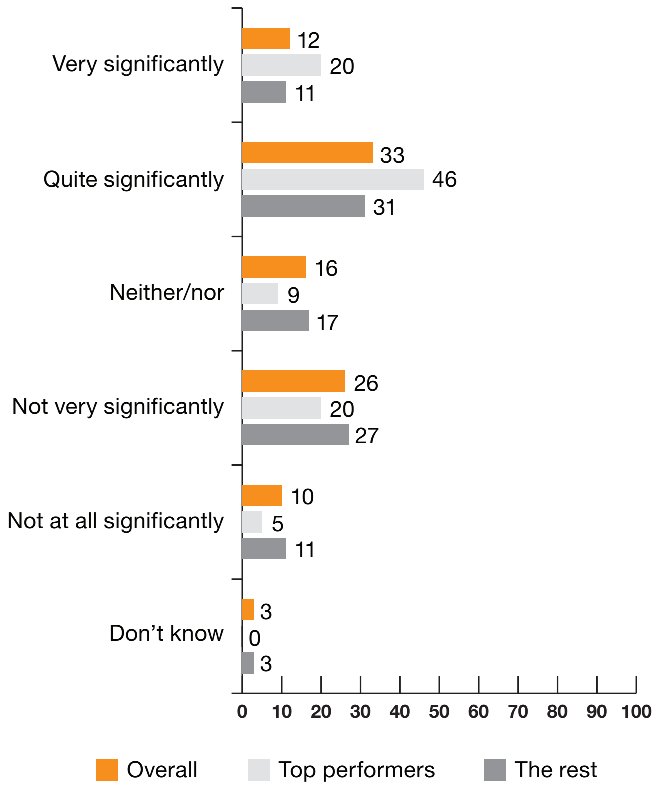
The picture looks rather different for consumers, however. The rapid adoption of mobile technologies has led to the emergence of entire new swaths of customers all over the globe. Yet our data show that 29% of respondents currently invest in mobile technologies for their customers. When asked to what extent their organizations interact with customers using mobile technology, 45% of respondents said quite (33%) or very (12%) significantly. For top performers, that number rises to 66% — as shown clearly in Figure 4, which depicts the level of mobile interactions with customers across different levels of company performance. Mr. Sviokla notes, “Meeting the mobile customer where they live means more than creating a mobile front end on your existing services and products. It’s a wholesale reinvention of how you think about service delivery.”

Survey responses do indicate, however, that companies are waking up to the need to ramp up their mobile strategies to reach customers: 64% say they will invest more in 2012 than they did in 2011. In fact, nearly one-third plan to spend more than $1 million.

Our data show that 59% of respondents currently invest in mobile technologies for their employees.

Figure 4: Mobile interaction with customers

To what extent is your organization interacting with customers using mobile technology?



To raise their firms' digital IQ, executives should continue to simultaneously build out their employees' mobile capabilities while also taking sharper focus on how to engage and support customers on their mobile devices. As the table below shows, those companies that perform this coordinated set of initiatives are much more likely to be top-performing firms. "The bottom line is that everyone is a mobile customer today," says Mr. Sviokla. To truly take advantage of the mobile marketplace, executives should focus on creating mobile solutions for their customers and employees anywhere, anytime, and in any way.

Table 1: What sets top performers apart

Top performers are more likely to have a mobile strategy that engages both employees and customers.

	Top performers	The rest
Interact with customers via mobile devices quite or very significantly.	66%	44%
Plan to invest more than $1 million in mobile solutions for customers in 2012.	50%	29%
Employees have some or everything they need to interact with customers using mobile technology.	91%	82%

To raise their firm's digital IQ, executives should take sharper focus on how to engage and support customers on their mobile devices.

Social media is a critical mode of engagement

Outside-in strategy:

Consider how greater interactions with customers and employees through social networking channels can improve product and service innovation, design, development, and support.

Somewhere between one-third and half of the companies in our survey are using all the major social media platforms for external communication with customers, internal engagement of employees, and connecting to business partners. These firms also are using blogs, wikis, and industry-specific communities (see Figure 5). We believe that this comprehensive use of social media by some firms signals an entirely new engagement platform.

Interestingly, though, there seems to be little connection between use of social media for external communications and actual commercial success. According to our data, 30% of firms identified as top performers use social media for external communities (see Figure 6). Among the rest of the survey respondents that figure is actually higher, at 37%.

Despite this, top-performing firms do report significant benefits from their social media activities and a willingness to spend more on social media in the coming year. In our work with clients, we have found that the organizations that achieve solid results from their social media efforts are those that use it not only as an outreach platform but also as a method to listen and engage.

The best companies integrate social media into their interactions with all their stakeholders.

Consider how your organization currently leverages customer feedback when designing or improving products and services. Are there points in the process that could benefit from greater insight about how they will be used in the marketplace? "Many products and services have finite points in time during which there is a customer engagement," says Mr. Curran. "Social media," he adds, "allows you to create more regular interaction across the lifespan of a product or service." This information can be instrumental in wringing greater value from existing products while providing invaluable insight as new products are developed.

Figure 5: Social media use for business

How do you and/or your company use these social media for business?

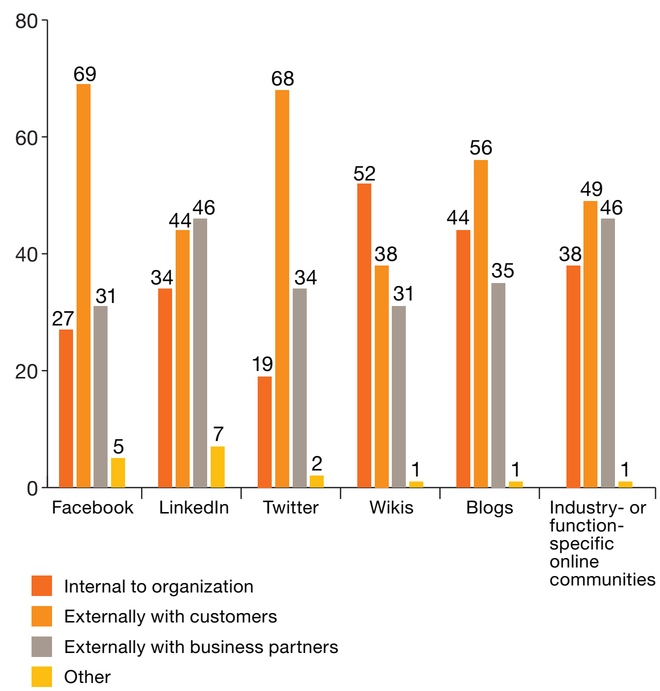


Figure 6: Investment for external use of social media

Top performers

Are you currently investing in...

	Yes
Social media for external communications?	30%
Number	23

What are your investment plans for 2012 for social media for external communications?

	%
Will invest more in 2012	48
Will invest the same amount in 2012	52
Will invest less in 2012	0
Total %	100
Number	23

Do you plan to invest for the first time in 2012 in…?

	Yes
Social media for external communications?	9%
Number	7

The rest

Are you currently investing in...

	Yes
Social media for external communications?	37%
Number	153

What are your investment plans for 2012 for social media for external communications?

	%
Will invest more in 2012	49
Will invest the same amount in 2012	40
Will invest less in 2012	11
Total %	100
Number	153

Do you plan to invest for the first time in 2012 in…?

	Yes
Social media for external communications?	7%
Number	30

Companies with a high digital IQ understand that while engaging in social media means ceding a certain amount of control over branding and messaging to platforms outside of the company's four walls, the insights gleaned from such activity can have a significant and measurable impact. If you are not actively engaging, at least consider starting by actively listening — to your customers, your employees, and your business partners.

Table 2: What sets top performers apart

Top performers are more likely to have embraced social media to engage internal and external stakeholders.

	Top performers	The rest
Say they have seen a significant benefit from their social media efforts	41%	24%
Expect their use of social media to increase	40%	26%
Expect to invest more than $1 million in social media for internal communications in 2012	36%	22%

Moving applications to the public cloud can make your firm more competitive

Outside-in strategy:

Start moving core business processes and applications into the cloud, taking a hybrid approach.

The development of the cloud is arguably the strongest driver of the consumerization of IT. Thanks to cloud computing, not only can anyone access vast stores of information on the Internet in a pay-per-use model, they can actually solve complex problems, organize events on the fly, and perform hundreds of complicated tasks — all from their mobile phones, tablets, and laptops. There is a major opportunity for companies to take advantage of the same economies of scale if they can get over some fundamental security, ownership, and governance issues.

If your firm isn't already this nimble, it won't be long before your customers begin wondering why. Many firms are already starting to think about their next platform restructuring, and where their core systems will be managed. In an age of outsourcing, the cloud increasingly is an important part of those discussions. "The great thing about cloud is that is decreases the cost of providing world class service to almost anyone," says Mr. Sviokla.

This is perhaps one reason why investment in public cloud services is on the upswing. Just over one in four (28%) respondents say their firms currently invest in public cloud applications, and 57% plan to increase their spending in 2012. Among top performers the figures are higher: 30% of top performers currently invest. This signals a robust base, with much more investment to come (see Figure 7).

Figure 7: Public clouds on the rise

Overall

Are you currently investing in...

	Yes
Public cloud applications	28%
Number	136

What are your investment plans for 2012 for public cloud applications?

	%
Will invest more in 2012	57
Will invest the same amount in 2012	33
Will invest less in 2012	10
Total %	100
Number	136

Do you plan to invest for the first time in 2012 in…?

	Yes
Public cloud applications	8%
Number	37

Top performers

Are you currently investing in...

	Yes
Public cloud applications	30%
Number	23

What are your investment plans for 2012 for public cloud applications?

	%
Will invest more in 2012	87
Will invest the same amount in 2012	13
Will invest less in 2012	0
Total %	100
Number	23

Do you plan to invest for the first time in 2012 in…?

	Yes
Public cloud applications	5%
Number	4

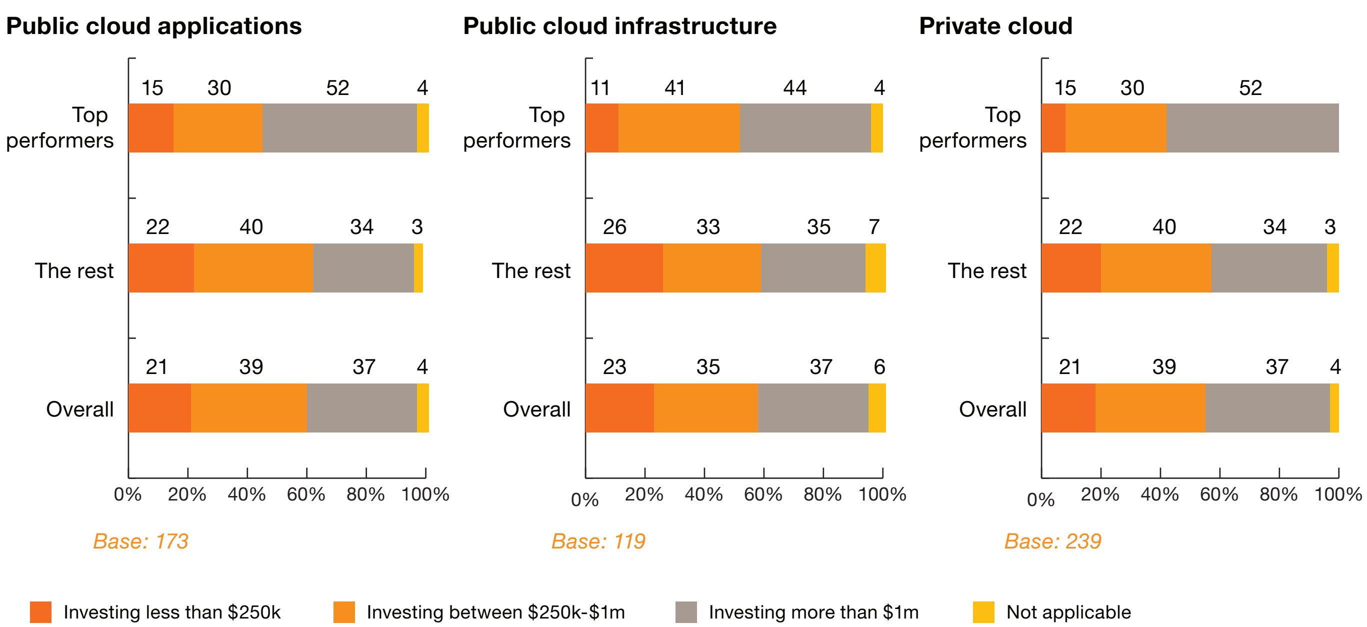
Private clouds outpace those in the public realm — 40% of all respondents are currently invested — and more than half of those respondents (52%) plan to increase spending in this area over the next 12 months. The public and private cloud figures suggest that firms are mixing the two cloud approaches based on their needs. Mr. Curran agrees: "The next step," he says, "is to move more core processing into the cloud, "and a lot of that will be done using a hybrid approach." In other words, this heralds a wholesale transformation of companies' information infrastructure both inside and outside the organization.

In terms of investment, it should come as little surprise that top performers are spending more aggressively than the rest of those polled: 52% of top performers will spend more than $1 million on public cloud applications, compared with just 34% for the remaining survey respondents. For private cloud investments the gap is even wider: 58% of top performers will invest more than $1 million, compared with 39% for the rest. Figure 8 details these trends.

Figure 8: Investment in public versus private cloud

Investment in public and private cloud

How would you characterize the type of investment in this/these technologies by your organization in 2012?



Understandably, executives remain concerned about the risks posed by putting their data and applications into the cloud. But in a global marketplace where the balance of economic power is shifting to emerging markets, new startups are leveraging the power of cloud and are unencumbered by legacy systems. Research firm Gartner estimates that half of the revenues generated from spending on cloud services — a market it expects will reach $148.8 billion by 2014 — will come from outside the United States. Adopting cloud solutions can make your firm more nimble — and competitive. "The beauty of the cloud is it allows for just the amount of data, system resources, or applications needed to be accessed and paid for," says Mr. Curran. And given the volatility in the world markets, having on-demand infrastructure is useful. Perhaps more importantly, it enables any organization to tap into an ecosystem of innovation.

Many firms are already starting to think about their next platform restructuring, and where their core systems will be managed. The cloud increasingly is an important part of those discussions.

Table 3: What sets top performers apart

When it comes to the cloud, top performers are making hefty investments.

Will spend more than $1m in 2012 on...	Top performers	The rest
private cloud applications in 2012	58%	39%
public cloud applications	52%	34%
public cloud infrastructure	44%	35%

Gain greater insight from business data by working from the outside in

Outside-in strategy:

Put greater emphasis on creating mobile solutions for your customers, engaging them wherever they are — and making it simple to do business with you. Remember that your employees are mobile customers, too.

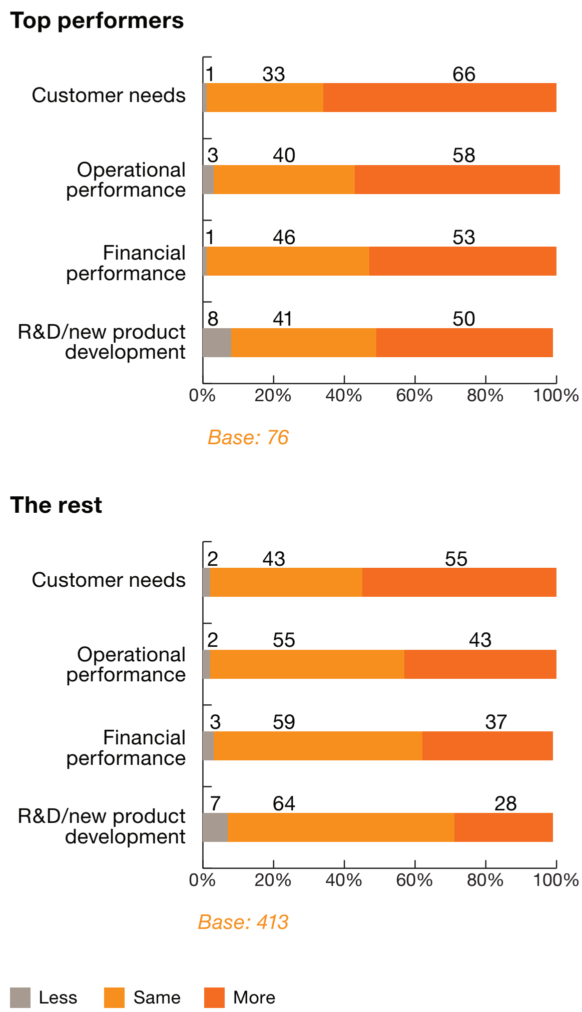
As a result of the sweeping changes in the global economy — new middle classes in emerging markets, increasing commodity price volatility, and greater risk aversion — turning data into information that can inform wise corporate decision making is more important than ever. Not only do companies collect more data than at any time in the past, but they need to access it and take action on it more swiftly.

Supporting a recognition of the volatility and risk associated with data, our study shows that top performers are more likely to be investing heavily in data collection and security. Furthermore, information on customer needs will be the main focus of data collection over the next year; 56% of respondents say they will collect more data on customers next year than they did this year. Among top performers, this figure rises to 66% (see Figure 9). This also underscores executives' concern about understanding customer behavior, particularly in new markets.

Top performers identified in our survey understand that data is currency in today's marketplace. As a result, they are far more likely to be investing heavily in this area than the rest of those polled.

Figure 9: Where top performers will invest in data analytics

How much of the following data subjects are you going to collect in the next year?

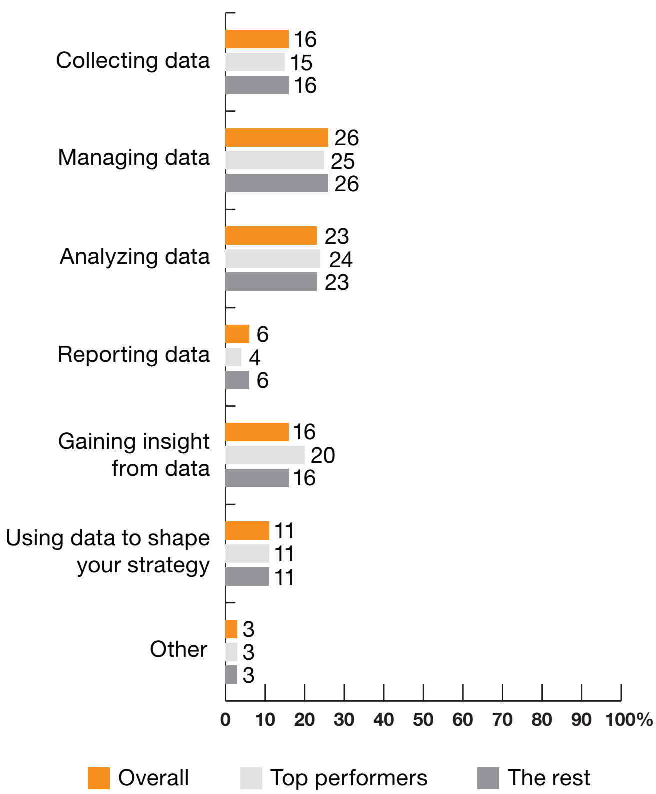


While all of this activity is critical to operations, executives must realize that there are many more data sources beyond the walls of the organization that can provide important insight into operations, product development, and customer strategies. Taking an "inside only" approach limits the firm's ability to spot global trends and prepare for shifts in the market.

Of course, finding the right information is increasingly difficult in an age when data is created at astounding rates. Given the sheer magnitude of information companies collect, it is not surprising that managing and analyzing data remain the greatest obstacles for all respondents.

Figure 10: Mobile interaction with customers

Which of the following areas presents the biggest challenge in terms of managing your data?



Managing and analyzing data are tied for the biggest challenge organizations face — each garnering one in four respondents. As Figure 10 shows, we did not see any significant difference between top performers and the rest in terms of data management issues. In our consulting work, we find those firms that gather the most insight are more likely to do a robust job of integrating internal data with external sources. Often the most important insights are derived from combining operational data with market and customer data. This type of information mash-up can often lead to a competitive advantage because it allows for new insights that come only through the creative combinations of facts. This is consistent with our finding that more of the top performers spend money on data integration (see Table 4). "Today we have a whole new host of sources to understand what might be of interest to our customers," says Mr. Curran. "And it's far easier today to use external data sources to predict shift and trends in the wider marketplace. If you're smart with your data approach, looking at the vast amounts of data combined with social media and smart analytics will help you prioritize opportunities to expand your business."

Table 4: What sets top performers apart

Top performers in our survey take data analytics very seriously.

	Top performers	The rest
Spent more than $1 million to integrate internal and third-party data across systems to better support decision making.	37%	29%
Data collection efforts in 2012 will focus on customer needs.	66%	55%
Will spend more than $1 million on data security over the next 12 months.	55%	34%

Digital IQ doesn't improve without an improvement in processes

CIOs are uniquely positioned to lead their organizations in the complex work of turning them inside out. Chasing these new demands means that the CIO should not only be excellent at managing the internal factory, but also excel at mobilizing new plans into action. It also requires the CIO to find better ways to sift through and drive insight from the increasing torrent of data streaming from every manner of device and interaction, and to create a platform that can deliver these capabilities across a varied set of changing mobile devices.

Of course, changing information technology systems can be challenging. Software platforms don't rust or show wear. And bad information often is an invisible problem people are willing to accept because it is very difficult to change. But addressing these issues at the executive level can lead to tremendous improvements, and ultimately drive greater revenue.

But while talking about increasing your firm's digital IQ is one thing, putting theory into practice is something else. In this section we explain the three key steps to turning concepts into reality, and the role top IT leaders play.

Strategic planning is where it starts

Naturally, creating a strategic plan is the first step to implementing any sort of large-scale corporate effort, whether it's to launch a new product line or roll out a new mobility initiative. Overall, just over two-thirds of survey respondents feel positively about their overarching corporate strategies: 68% say their firm has an effective overall corporate strategy that is likely to deliver success. Among top-performing firms that figure is considerably higher, at 89% — almost nine out of 10 (see Figure 11). However, when it comes to communicating that strategy, the numbers drop considerably — 49% of respondents overall agree or strongly agree that their firm's strategy is well communicated across the organization (76% among top performers).

Figure 11: Top performers focus on strategy

% agreeing/strongly agreeing	Top performers	The rest	Overall
Our company has an effective overall corporate strategy which will deliver likely success	89%	63%	68%
The strategy is well-communicated throughout the organization	76%	44%	49%
Business and IT leaders share the same detailed understanding of the corporate strategy	78%	49%	54%
Our CEO or senior-most business leader is an active champion in the use of information technology to achieve our strategy	86%	56%	60%

Top-performing companies are more likely to integrate IT in their strategic planning. Among the top performers in our survey, 86% agree or strongly agree that their CEO or senior-most business leader is an active champion in the use of information technology to achieve the corporate strategy, compared with 56% for the remaining respondents. Furthermore, top performers are more likely to have a CIO who not only reports directly to the CEO, but has very strong relationships with other C-suite executives as well as business unit leaders (see Figure 12). These are critical factors in making IT a strategic asset and encouraging a culture of innovation.

Chasing these new demands means that the CIO must be excellent at managing the internal factory, but also excel at mobilizing new plans into action.

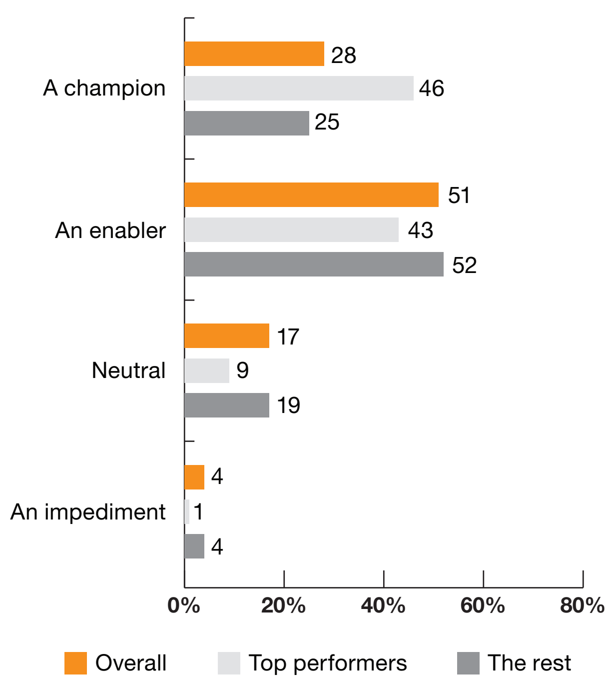
Figure 12: CIO relationships

% strong/very strong	Top performers	The rest	Overall
Between the CIO and CFO	78%	56%	59%
Between the CIO and CMO	63%	39%	42%
Between the CIO and CEO	78%	62%	64%
Between the CIO and Head of Strategy/CSO	68%	56%	49%
Between the CIO and Business Un	79%	54%	57%

Overall, respondents are most likely to say their CIO is an enabler in relation to their firm's growth strategy (see Figure 13). But among top performers, they are more likely to be seen as champions. This implies a far more strategic and active role in the company in terms of driving measurable results.

Figure 13: The CIO as business champion

In your view, would you describe your CIO in relation to your company's growth agenda as mainly:



The Innovative CIO

Not surprisingly, top-performing companies are more likely than the rest of those polled to say that CIOs need extensive leadership abilities — they are a critical part of the leadership team and need to drive cultural change as well as bottom-line growth. But for all respondents, the most important skill for the CIO is the ability to be an innovative thinker and apply IT to solve relevant industry and business issues.

Advancing the innovation agenda is a growing priority for many CIOs. For just as many others, however, innovation might be on their radar screen, but it's definitely not a priority. Those CIOs at the highest-performing companies continue to redefine what it means to be successful at their job by embracing their role as both innovation champion and enabler. In doing so, they are redefining what it means to be a successful CIO in support of the organization's growth agenda.

Looking specifically at respondents that describe their firms as highly innovative reveals some interesting data points about the role of IT and the CIO:

- 70% say the CIO reports to the CEO, compared with 59% of respondents whose firms are not highly innovative.
- 42% describe the CIO as a champion in relation to the company's growth agenda, compared with only 19% for remaining respondents.
- 73% agree or strongly agree that IT investments are made primarily to support growth initiatives and leverage emerging innovations such as mobile devices and social media.
- 61% are currently investing in mobile technologies for employees.
- 60% report that IT initiatives are frequently or always delivered on time.
- 56% say their IT organization was on target for its budget in 2010.

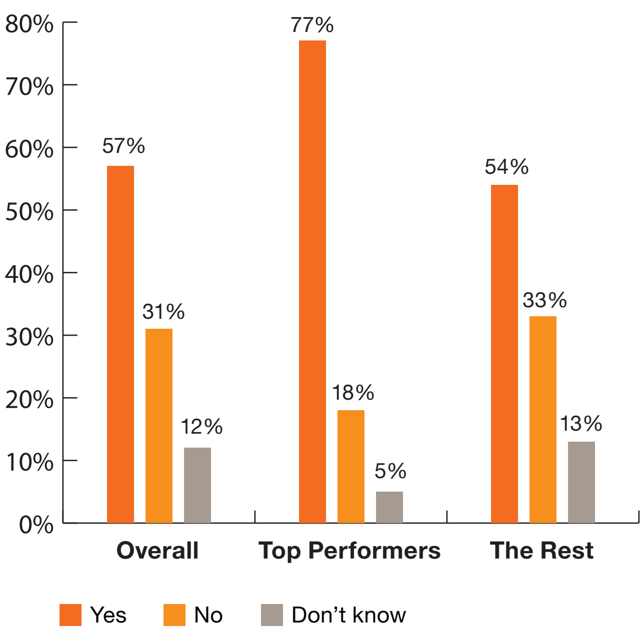
Mobilization is the critical — but often forgotten — catalyst for ensuring effective, sustainable change

Most executives think of execution as the next logical step once a strategy has been formed. But before a strategy can be executed, corporate leaders should go through an intermediate and critical second step: mobilization. In the mobilization stage, executives put specific plans and budgets against the overall strategy, creating a blueprint for how the strategy will be brought to life. It is during strategy mobilization that the future business models, policies, and practices are designed.

Our data shows that too many companies forgo this critical step. For example, while 77% of top performers say they have a single, multiyear roadmap for the overall business strategy, this figure drops to 54% for the remaining respondents (see Figure 14). And while 83% of top performers agree or strongly agree that they understand the costs needed to implement the roadmap, for the remaining respondents this figure is 55%. Similarly, 89% of top performers say their annual planning process effectively links to the strategic roadmap and overall strategy; that number drops to 63% for the rest of the survey participants.

Figure 14: Top performers more likely to have a multiyear roadmap

Does a single, multi-year roadmap for the overall business strategy exist within your organization?



Clearly, many firms are missing an important step that will help put their plans on more solid footing. "We've seen this over and over," says Mr. Curran. As an example, he recalls a large telecom firm that had plans to centralize its inventory. "There wasn't a whole lot of work done beforehand to understand the implications of that strategic decision, unfortunately," he says. As a result, "the project went millions of dollars over budget because the firm contracted to do the implementation work had to wait for the answers to fundamental business problems."

CIOs should make sure they have a carefully thought-out roadmap before implementing any large-scale initiative. Once the strategy has been decided, think not only about the costs that will be required to roll out successfully, but the human capital and physical resources as well. It would also serve you well to consider any scenarios that could adversely impact your plans, and form a Plan B for that event.

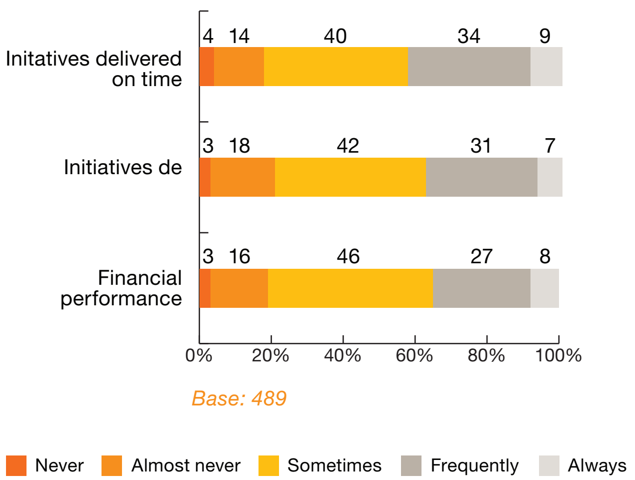
Back-to-basic execution involves learning to expect the unexpected

Considering that so many companies skip the mobilization stage, it comes as little surprise that the execution of projects is often hampered by unexpected consequences, resulting in missed deadlines and overspending. Figuring out how to assess progress and course correct when needed will be increasingly critical to delivering sustainable business impact and competitive advantage. Yet 43% of respondents say that IT initiatives are frequently or always delivered on time. The figures are even more dismal in terms of budget and scope (see Figure 15). Given the difficulty companies are experiencing in delivering to specifications, it's not surprising that when asked about their workload, 26% of all respondents said they could handle more large projects per year.

CIOs need to make sure they have a carefully thought-out roadmap before implementing any large-scale initiative.

Figure 15: IT projects often miss intended targets

On average, how often did strategic IT initiatives fall within each of the following delivery categories in the last 12 months?



% stating frequently or always	Top performers	The rest	Overall
Initiatives delivered on time	67%	38%	43%
Initiatives delivered at or below budget	54%	35%	38%
Initiatives delivered with 100% of planned scope	50%	33%	36%

The significant difference between top performers and the overall survey set further underscores that firms that are highly IT-enabled are better able to plan and execute effectively.

Among top performers, meanwhile, the figures are far more positive — more than two-thirds of respondents in this category said that IT projects were frequently or always delivered on time. The significant difference between top performers and the overall survey set further underscores that firms which are highly IT-enabled are better able to plan and execute effectively.

Of course, improving the hit rate for these targets is important, but keep in mind that they are only part of the equation. "Being on time and on budget is often what executives think of as the key measures of successful project execution," says Mr. Curran. "What these measures leave out is the value the project intends to deliver to the business, and how much is actually realized."

Table 5: What sets top performers apart

Top performers spend a significant amount of time planning, mobilizing and executing their strategies.

	Top performers	The rest
Say their company has an effective overall corporate strategy which will deliver likely success.	89%	63%
Strategy is well communicated throughout the organization.	76%	44%
Business and IT leaders share the same detailed understanding of the corporate strategy.	78%	49%
CEO or senior-most business leader is an active champion in the use of information technology to achieve our strategy.	86%	56%

Conclusion

Consumerization of IT is on the rise, and in our survey we continue to see a need to serve the mobile customer, move to cloud services, and use data more effectively. Moreover, organizations that have an integrated strategy — which includes technology — seem to perform better.

The challenge for the CIO is to drive superior execution and innovation, so that they can be part of the executive discussion. Within their own function, those who perform the hard work of linking strategy to specific programs and actions — as well as driving mobilization of the organization so that everyone knows how it adds value to the IT efforts — deliver more value. Put another way, just as the demands on the CIO continue to ramp up, with more and more innovative offerings available to companies and customers alike, the successful CIOs are those who can drive an integrated, operationally excellent strategy while being agile enough to meet the needs of the rapidly moving marketplace.

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To have a deeper conversation about how this subject may affect your business, please contact:

Chris Curran
Principal
(214) 754 5055
christopher.b.curran@us.pwc.com

Tom DeGarmo
Principal
(267) 330 2658
thomas.p.degarmo@us.pwc.com

John Sviokla
Principal
(617) 530 5359
john.sviokla@us.pwc.com

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