

Moving from the back office to the front lines

CIO insights from the Global C-suite Study



Chief Information Officer insights from the IBM C-suite Study

This report draws input from the 4,183 CxOs we interviewed as part of IBM's first study of the entire C-suite. It is the 17th in the ongoing series of CxO studies developed by the IBM Institute for Business Value. We now have data from more than 23,000 interviews stretching back to 2003.

Total CIOs interviewed	1,656
Japan	179
Asia-Pacific	216
Europe, Middle East and Africa	736
North America	228
South America	297

Introduction

In the first installment of our recent Global C-suite Study, we spoke in person with 4,183 top executives covering more than 20 industries to find out how CxOs are earning the loyalty of digitally enfranchised customers and citizens.¹ In this report we delve more deeply into what the 1,656 CIOs we interviewed are doing to help their enterprises become more “customer-activated.”

One thing is immediately obvious: just how far some CIOs have come in the past five years. In 2009, we reported that CIOs were rising up the management hierarchy and developing a new, more powerful voice. But they often had to juggle different roles to deal with conflicting goals.²

In 2011, we identified that CIOs were starting to think more like CEOs. They were becoming essential members of the C-suite, although there were marked disparities in the *mandates* they held — i.e., what the enterprises they worked for expected of the IT function. Most CIOs were helping to expand or transform their organizations. The rest were tasked with leveraging IT to make their organizations more effective, or pioneering radical innovation in the form of new products, markets and business models.³

“IT is much more highly considered than it used to be: other CxOs recognize the service we provide, as much as our professionalism.”

Michel Bloise, CIO, GSF, France

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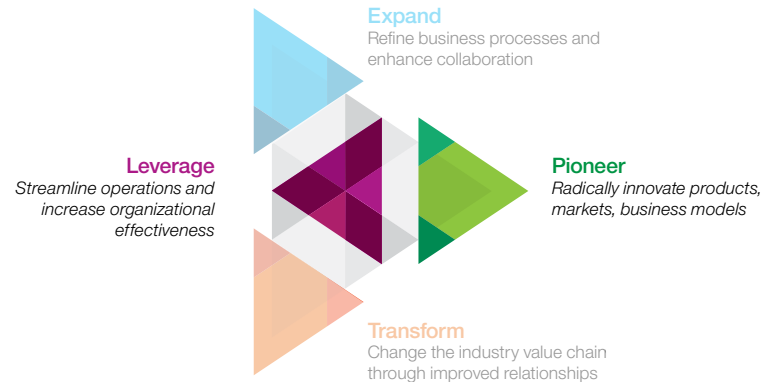
But during the past few years, there's been a shift to each end of the spectrum. The number of CIOs with a mandate to provide basic IT services has increased, as has the number with a mandate to pioneer and engineer innovation (see Figure 1).

In short, while some CIOs remain confined to their traditional domains, a growing number are seizing the opportunity to take on a far bigger role on the front lines of the business.

“There have been significant changes over the past six or seven years. One big change is accessibility. IT didn't always have an equal seat at the table. Now, my peers are far more tech-savvy,” Nick Smither, CIO of Ford Motor Company, told us.

Figure 1

Changing mandates: CIOs are separating into basic IT providers and pioneers of innovation.



How CIOs view the world

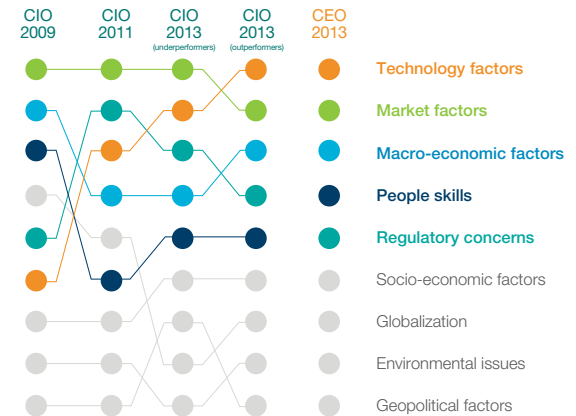
This evolving mandate doesn't necessarily mean that CIOs have the same perspective as their fellow CxOs. In fact, CIOs working in underperforming enterprises differ from CEOs in several respects. They believe market factors – not technology – will be the most powerful external force affecting their organizations in the coming three to five years. They also place more weight on regulatory concerns.

CIOs in outperforming enterprises, by contrast, see the world much more like CEOs.⁴ They, too, think technology, market factors and macro-economic factors will have the biggest impact – and rank them in precisely the same order of importance (see Figure 2).

What's also clear is that CIOs have altered their views substantially over time. They still include market pressures in their trio of top external forces, as they did in 2009. But technology has soared from sixth place to first or second on their lists. Interestingly, CIOs are less concerned about finding people with the right skills than they were five years ago. They are likewise less worried about regulation, which weighed heavily on their minds in 2011.

Figure 2

Pressure points: CIOs in outperforming enterprises are more in line with CEOs



“I want to see the IT function recognized as a partner, not a service provider, and help it evolve to gain the trust of the business.”

Rafael Corvalan, CIO, Tamedia, Switzerland

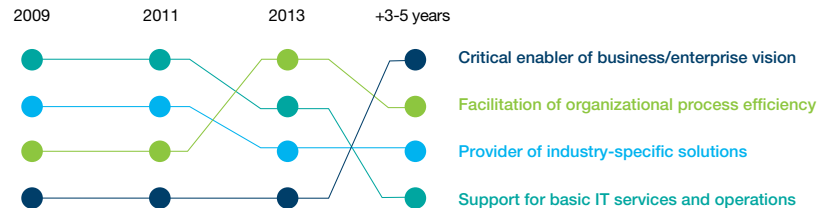
Moving from the back office to the front lines

No matter how individual CIOs rank the importance of technology, they’re certainly not discounting its power. On the contrary, they believe it’s crucial to position the IT function at a far higher level within the enterprise. In previous years, they told us, the IT function spent most of its time managing pipes and boxes. It has now graduated to creating more efficient processes. And, by 2018, CIOs expect it to play a critical role in enabling their organizations’ strategic vision (see Figure 3).

But they freely concede a lot of ground needs to be covered before then. Indeed, only two-thirds of CIOs think their IT departments have mastered the basics. And more than half say considerable room for improvement exists when it comes to performing more complex activities. “We need to anticipate the requirements of the business functions, help them understand how technology will impact them in the future and be efficient in managing change,” said a CIO from a European food producer.

Figure 3

Shifting goals: CIOs aspire to play a much bigger role in enabling strategy



Enabling the enterprise vision

So how do CIOs propose to reposition the IT function? By spending more time on customer-related activities. Nearly two-thirds of those we spoke with intend to focus more heavily on improving the customer experience. Many also plan to put more effort into sales and new business development, and marketing and communications (see Figure 4).

Their strongest ambitions reflect their desire to get closer to customers. More than four-fifths of CIOs are shifting gears – from the back office to the front office, where marketing, sales and customer services managers work to find, win and retain customers. A similar number say they will invest in new technologies and the corresponding people skills necessary to analyze customer data (see Figure 5).

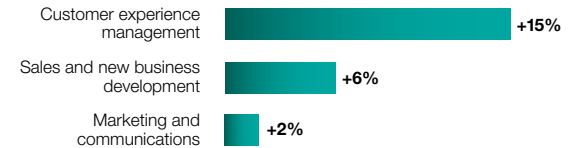
Figure 5

Frontal assault: CIOs want to adopt new technologies for connecting with customers



Figure 4

New turf: CIOs want to spend more time on customer-related activities



“Information continues to grow in importance. There is increased focus on strategically managing and operationalizing the data.”

CIO, Banking, Australia

“CIOs are driving more conversations focused on analytics, collaboration, security and the protection of intellectual property.”

CIO, Electronics, United States

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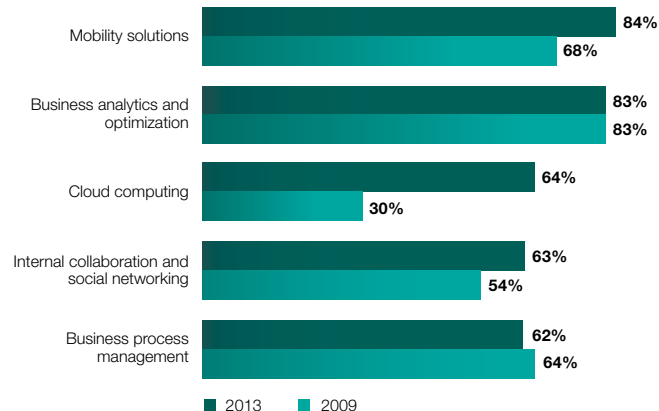
Mobility solutions have soared to the top of CIOs' visionary plans for making their organizations more competitive, moving alongside business analytics. And two-thirds of CIOs are exploring better ways to collaborate, via cloud computing and social networking tools, in order to develop and deliver what customers want — or uncover what they don't yet know they want (see Figure 6).

Although CIOs are acutely aware of the need to make their enterprises more responsive to the influence of customers — not just customer-centric but *customer-activated* — they're also conscious of how important it is to keep everything running smoothly. For CIOs, then, three specific issues are top of mind. They must:

- Engage with digitally enfranchised customers
- Excel at the basics
- Boost internal and external collaboration

Figure 6

Visionary plans: CIOs are focusing on technologies that support closer customer engagement



Engage with digitally enfranchised customers

CxOs everywhere recognize that the digital revolution is transforming the marketplace. The rise of smartphones and tablets has created a new conduit for reaching customers and recalibrated their expectations. Customers now want products, services and experiences that are tailored to their individual preferences, wherever they are, at whatever hour they choose. Cloud computing and social media are changing the way people live, work and interact, creating a networked economy.

Most CxOs expect digital channels to become one of the most predominant means of engaging with customers in the next few years. More than half say their organization already uses such channels, but nine out of ten anticipate doing so by 2018. And they're looking to CIOs to facilitate the shift.

Predictably, CIOs working in outperforming enterprises are way ahead of the pack. They are nearly twice as likely as their peers in underperforming enterprises to have a cohesive strategy for uniting the digital and physical elements of their businesses (see Figure 7).

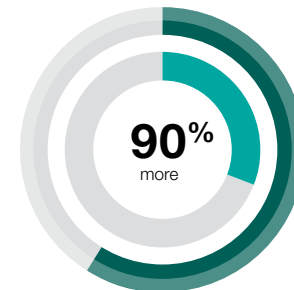
But engaging effectively with customers in the digital era isn't just about creating the right channels; it's also about understanding, anticipating and delivering what individual customers desire. CIOs appreciate the implications. They want, above all, to get better at drawing useful customer insights from the information their organizations collect.

“We’re digitizing the relationship, whether it’s with consumers, B2B or partners.”

Tom Gill, CIO, Plantronics, United States

Figure 7

Harmonized vision: CIOs in outperforming enterprises are more likely to have a cohesive digital-physical strategy



31%
Underperformers

59%
Outperformers

“We want to create an integrated, 24/7 customer experience across channels and services.”

CIO, Banking, Netherlands

Figure 8

Insight story: *CIOs are shifting their focus to tools that turn data into intelligence*

2011	2013
Master data management	Client analytics
Client analytics	Product/service profitability analysis
Data warehousing	Master data management
Visual dashboards	Data governance
Search capabilities	Visual dashboards

“We have to think about customers more: not just the customer experience, but whether something moves the dial on customer consideration metrics,” Matthew Young, CIO of European hotel group Travelodge, remarked. Kieran Harvey, Director of Broadcast Technology & IT at British commercial radio station Global, went even further:

“Our organization has evolved and our focus is creating unique experiences for our audiences and clients.”

Analytics, as CIOs recognize, is a prerequisite for generating such experiences. Unfortunately, turning raw statistics into intelligence is no easy task. “At present, we don’t have insights; just data,” the CIO of a hardware company ruefully noted.

This explains why so many respondents want to invest in new technologies for crunching the bytes. In 2011, CIOs were focused on organizing, managing and storing data, and making it easier to search. Today, they’re more concerned with making the data earn its keep.

Their first goal is to get a better understanding of customers, using sentiment mining, social network analysis and other such analytic tools to identify deeply buried behavioral patterns, predict new trends and prescribe the best response. Their second goal is to analyze the profitability of different products and services, and determine the ideal mix (see Figure 8).

Again, CIOs in outperforming enterprises lead the way. They are concentrating especially heavily on developing the resources to acquire deeper customer insights, both by combining internal and external data, and by using analytics (see Figures 9 and 10).

Figure 9

Mix and match: CIOs in outperforming enterprises prioritize combining internal and external data for better insights

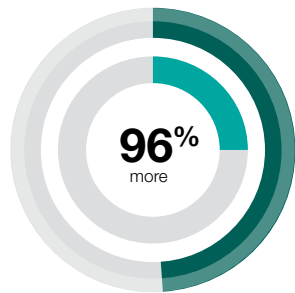
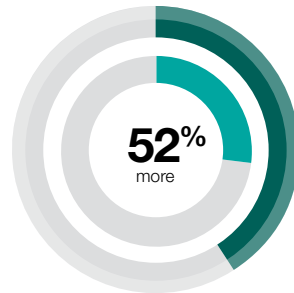


Figure 10

Wise to the prize: CIOs in outperforming enterprises put more emphasis on client analytics



“The CIO’s job is changing. We have to be ‘information stewards’ rather than ‘heads of technology’.”

Arian de Wit, General Manager - Information & Technology, NIWA, New Zealand

“After 30 years of focusing on technology, IT can finally fulfill its destiny. We’re moving from the big T to the big I in IT: information.”

Erwin Verstraelen, CIO, Aveve Group, Belgium

Taking action:

Architect the digital blueprint

Team up with the CMO to identify how best to integrate the enterprise's digital and physical elements for the benefit of the customer. Identify and implement the tools and processes needed by the enterprise to better understand and predict customer needs and desires.

Become an information steward

Organize the data your enterprise collects in a form that's digestible and dissectible. Implement or source analytics capabilities and tools to help you systematically track and measure broad behavioral trends, drill down from the aggregate to the individual, and generate new customer insights. Use forward-looking tools that will predict what is going to happen, rather than analyzing what has already occurred.

Educate the enterprise

Show your team how to teach others to use these tools. Create data analyst or data engineer roles within IT that can be shared with the business to not only understand the data, but also determine how best to help.

Excel at the basics

CIOs who play a strategic role still have to handle the nuts and bolts. “You’ve got to get the basics right: things like the data center, office automation, architectural standards and policy framework,” pointed out a CIO from Government Services in the Netherlands.

There are two areas where CIOs reveal their challenges. First, very few report that they have the infrastructure to manage big data properly. In fact, more than half said their big data platforms were neither scalable nor extensible. Yet outperforming enterprises are significantly more likely to have access to such a platform, suggesting that it’s a major source of competitive advantage (see Figure 11).

Lack of scalable, extensible IT systems can also prove very costly in the long run. A survey conducted by IBM and International Data Corporation (IDC) shows that keeping the servers running typically consumes 65 percent of the IT budget in companies with a basic data center, but only 47 percent in companies with a highly efficient data center.⁵ Maintaining a basic data center is much more expensive. One reason is the need to patch systems that are now used to perform tasks they were never designed to do, or to perform them on a scale that wasn’t previously envisaged.

Secondly, few CIOs have mastered the many challenges associated with managing IT risk. The average company now experiences 1,400 security attacks each week.⁶ And the situation is likely to become even worse, as more resources are moved outside the firewall.

Figure 11

Flexible features: Outperforming enterprises are far more likely to have scalable, extensible big data platforms

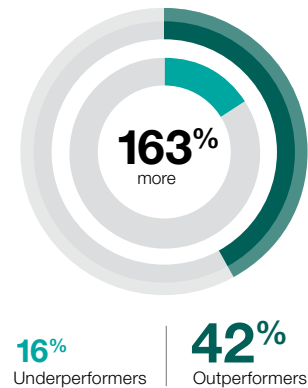
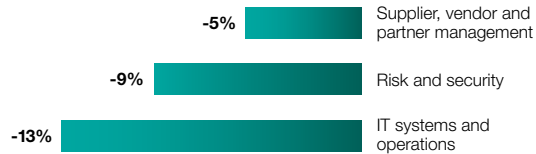
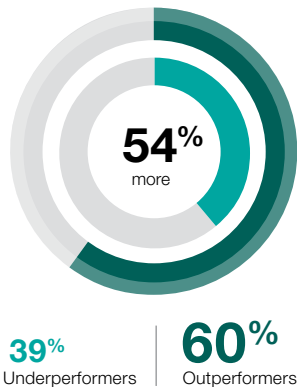


Figure 12

Danger sign: CIOs want to spend less time managing risk and security issues

**Figure 13**

Crunch time: CIOs in outperforming enterprises are making more effort to improve their resources for analyzing and managing risk



Interacting effectively with customers via digital channels entails becoming much more open. Employees, suppliers and customers all need direct access to corporate systems, and some of them may be using devices that aren't secure. "Mobility and security sit at opposite ends of the spectrum," commented a CIO from a Japanese bank.

That's not all. Many enterprises now hold more – and more sensitive – information about their customers than ever before. Any failure to protect that information is therefore likely to cause considerable anger. Indeed, the Ponemon Institute puts the reputation-related cost of a major data breach at nearly \$5.3 million.⁷ And in industries like banking and healthcare, where losing confidential customer data attracts punitive sanctions, the overall tab may well be much higher.

CIOs understand these threats, but one consequence of shifting their focus to customer-facing activities is that they plan to spend less time on risk and security. Their main target, as they try to restructure crammed schedules, is delegating some of the responsibility for safeguarding their IT infrastructure to other areas of the business or to employees elsewhere in the organization (see Figure 12).

Given that, CIOs are investigating new, more effective ways to bolster their organizational defenses. Those in outperforming enterprises are particularly likely to be investing in more sophisticated tools for measuring and managing risk in the coming few years (see Figure 13).

Taking action:

Get the basics right

Use a formal and structured architectural approach to define and develop the IT capabilities your business needs to function and grow. Determine which parts are strategic, core or simply a necessary cost of being in business. Identify the most effective way to develop or source the required capabilities in each area, e.g., cloud computing to provide scale and flexibility; or leveraging external partners to help create exceptional customer experiences in your mobile and online environments.

Build a big-data backbone

Create a flexible, user-friendly information platform for collecting, storing, modeling and analyzing massive data sets. Think in terms of building blocks. Use open-source architecture that can be easily integrated with your existing systems and extended to accommodate the growing volume and variety of data.

Eliminate cyber threats

Make security part of the everyday fabric of your organization's IT. Discover, classify and protect sensitive data. Secure your IT infrastructure with applications and processes for preventing, detecting and addressing security breaches. Use real-time intelligence to monitor your systems.

“You have to avoid jargon, eliminate techno-speak and adopt a ‘can-do’ attitude.”

Scott Blake, CIO, Bangor Savings Bank, United States

Boost internal and external collaboration

The basics may still pose certain challenges, but that hasn't stopped CIOs from considering another important issue: how best to encourage collaboration. It's not just what people know that determines their value; it's what they share. When employees, suppliers and partners cooperate, they can be more productive and innovative – and ultimately create more value for the organizations that employ them.

Seventy percent of CIOs expect to work with a wider group of partners in the future, and they're doing so in order to generate greater strategic and business value, rather than increase efficiency or reduce costs (see Figure 14).

They're also focusing on putting in tools to facilitate effective internal collaboration. CIOs in outperforming enterprises are in the vanguard of this movement: 82 percent aim to install social business tools to help employees and partners pool their brains, compared with just 69 percent of CIOs in underperforming enterprises.

Mobile technologies play a big part in their plans. Most CIOs want to cater to the needs of the growing number of employees who work outside a traditional office setting. They also have an eye on the opportunities for improving productivity.

Figure 14

Shifting ground: CIOs are turning to more collaborative business models and for more strategic purposes



Whether it's providing a salesperson with an up-to-date inventory, giving a repair technician access to specialist expertise or helping an employee solve a query by consulting a colleague, mobility can save time and effort. In fact, in IBM's recent survey titled "The upwardly mobile enterprise," 50 percent of respondents reported productivity improvements of more than 10 percent.⁸

CIOs in the most successful enterprises have generally made better progress. More than half told us their organizations are now equipped to do business anywhere, via any device (see Figure 15). But opinion is more divided when it comes to letting employees bring their own devices to work. Only 50 percent of CIOs include Bring Your Own Device (BYOD) in their visionary plans for making their organizations more competitive.

On the one hand, CIOs want to accommodate employees' technological preferences, wherever possible. On the other, they're cautious about the cost and complexity associated with managing numerous different tablets, smartphones and apps. "We're having a tough time figuring out the value of BYOD, as well as addressing the legal, security and privacy implications," one CIO remarked. More than 25 percent of the CIOs we spoke to report that they are holding off the enablement of BYOD in their mobile environments.

Figure 15

Movers and shakers: More than half of all outperforming enterprises can now do business anywhere, via any device

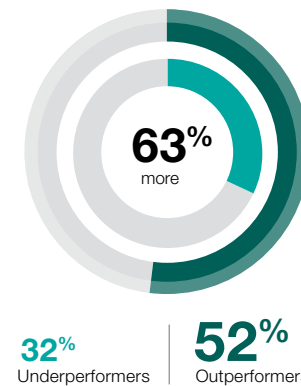
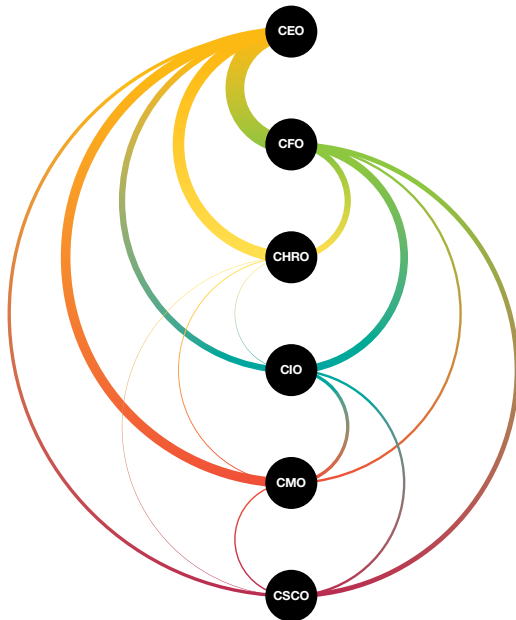


Figure 16

Strong links: CIOs work most closely with the CEO and CFO



Yet CIOs may ultimately have little choice in the matter. Many of the latest smartphones and tablets have far more powerful capabilities than the “standard” corporate issue. And tech-savvy employees will use whatever helps them do their jobs.⁹

It is not sufficient to simply facilitate collaboration, though. As we noted in our first report, CIOs also need to collaborate with their fellow CxOs to achieve their goals. So how are they doing on this score? We asked all our respondents which C-suite colleagues they work most closely with in a professional capacity. Not surprisingly, most CIOs have solid relationships with the two power players in the C-suite: the CEO and CFO. But, as indicated by the thickness of each connecting line in Figure 16, they have relatively fewer dealings with the rest of their colleagues.

We also asked CIOs which factors have most contributed to their success in getting things done. Several themes repeatedly occurred. Support from the rest of the C-suite was one common motif. A CIO from a credit-card organization spoke for many when he said, “It’s absolutely critical to have the CEO’s attention and support.”

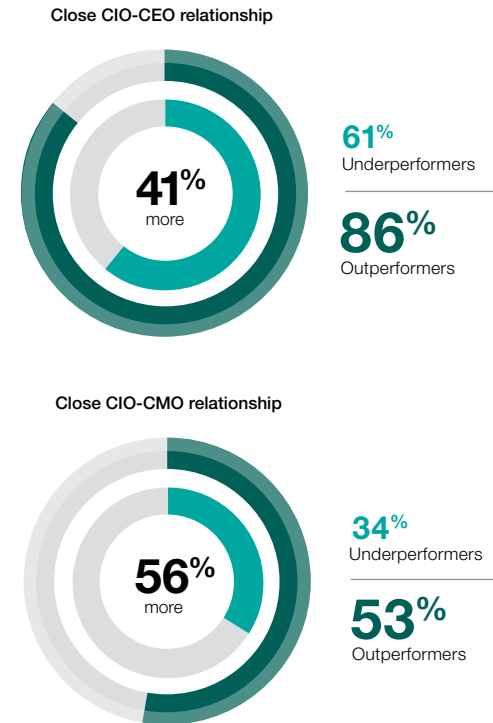
Other CIOs noted how important it was to partner with the CMO. “You need to be close to the business and have a shared understanding with the CMO,” observed a CIO from a banking organization in Europe. Another CIO from a financial services organization agreed: “Collaboration with the head of sales and marketing is essential.”

Our research confirms the validity of these comments. When we looked at how different CxOs interact, we discovered that organizations in which the CIO has a strong working relationship with the CEO are 40 percent more likely to excel. But when the CIO and the CMO work closely together, the difference is even more pronounced (see Figure 17).

If the support of fellow CxOs is crucial, so too is the commitment of the business units that use the IT function's services. "They must be fully and actively involved in any projects that concern them," remarked a CIO from a professional services firm. Marcello Damiani, Senior Vice President Information Systems of French biotech company Biomérieux, was more blunt: "The business units have to put some skin in the game." And since economic conditions remain volatile, CIOs want to be assured that decisions made today will still apply next year. "We need to have confidence in the future," one respondent explained.

So how do CIOs go about securing this support? First, by making sure the IT function is serving the needs of the business. IT strategy and corporate strategy must go hand-in-hand, as various respondents pointed out.

Figure 17
Potent blend: The CIO's relations with the CEO and CMO make a marked difference to an organization's performance



“The people on the business side must accurately understand the issues, as well as being committed to making the project succeed and willing to provide feedback.”

Sergey Zacepin, CIO, Transtelecom, Russia

But good communication skills are also critical. “We have to be able to speak the same language as the people in the business to identify what’s important and how to achieve it, and to get buy-in from the business units,” noted a CIO from a Scandinavian retailer.

It’s equally important to be candid. “You have to be honest about the *pain and gain*,” said Christoph Thiel, CIO of Austrian insurer ERGO Versicherung AG. And the conversation must go both ways. “A strong business case isn’t everything. Sometimes, a customer’s needs should override the business case,” Christoffer Ekelund, CIO of Swedish industrial products company Procurator, told us.

Much of the success that CIOs enjoy hinges on forming a collaborative relationship with the C-suite and the rest of the business. And that, in turn, entails communicating clearly and truthfully. But, if the IT function is to command credibility, it also has to deliver demonstrable results.

It helps to be involved in a project from the very start, CIOs explained. That way, they can participate in assessing the scale of the project, as well as the likely costs and consequences. Ultimately, however, “You must achieve what you said you would do and make a definable difference,” said the CIO of a metals and mining organization.

Taking action:

Collaborate around the clock

Put social business tools in place to let the people in your enterprise connect with colleagues and external stakeholders as easily as possible. Add social communications functionality to existing applications to support open dialog and make verbal knowledge as accessible as written knowledge. Encourage collaboration groups across and beyond the organization. Practice what you preach.

Strengthen relationships across the C-suite

Listen closely to your peers to clearly identify the business imperatives that will drive your technology initiatives – make them heroes. Understand and speak the language of business. Translate the goals, aspirations, frustrations and challenges of your stakeholders into specific programs of work that, with their active support, deliver clear and obvious results back to the business.

Look above the operational parapet

Partner with your C-suite colleagues to bring technology-powered business objectives to the table at an early stage in strategic discussions. Learn from CIOs in other organizations and industries. Get involved in managing the financial performance of the business, if you're not already doing so. And encourage your most promising employees to do a stint in other departments.

“The role of the CIO is shifting from just IT to that of a leader who can drive business performance.”

CIO, Chemicals and Petroleum, South Korea

The future of the CIO

To sum up, CIOs believe their place in the organizational pyramid has changed over the past five years. Many of them command more respect and possess more authority than they did previously, although they admit that they still face an uphill battle in some areas. And they are working more closely with their C-suite colleagues than ever before.

They also have big plans for the future. They want to assemble the infrastructure required to engage with digitally empowered customers and citizens, become more deeply involved in crafting the customer experience and stimulate collaboration (both inside and outside corporate walls). Above all, they want to assume a more strategic role.

This means moving from the back office to the front lines where the enterprise is focused on truly making the customer the center of what it does.

How we conducted our research

This report is the third installment in our ongoing Global C-suite Study, the seventeenth such IBM study to focus on the C-suite and the first to cover six major roles simultaneously. Our aim was to get a better understanding of the opportunities and challenges the members of the C-suite face, and how they are working together to support their organizations.

Between February and June 2013, we met with 4,183 top executives, representing a wide range of public and private sector enterprises in more than 20 industries and 70 countries. They included 884 Chief Executive Officers (CEOs), 576 Chief Financial Officers (CFOs), 342 Chief Human Resources Officers (CHROs), 1,656 Chief Information Officers (CIOs), 524 Chief Marketing Officers (CMOs) and 201 Chief Supply Chain Officers (CSCOs).

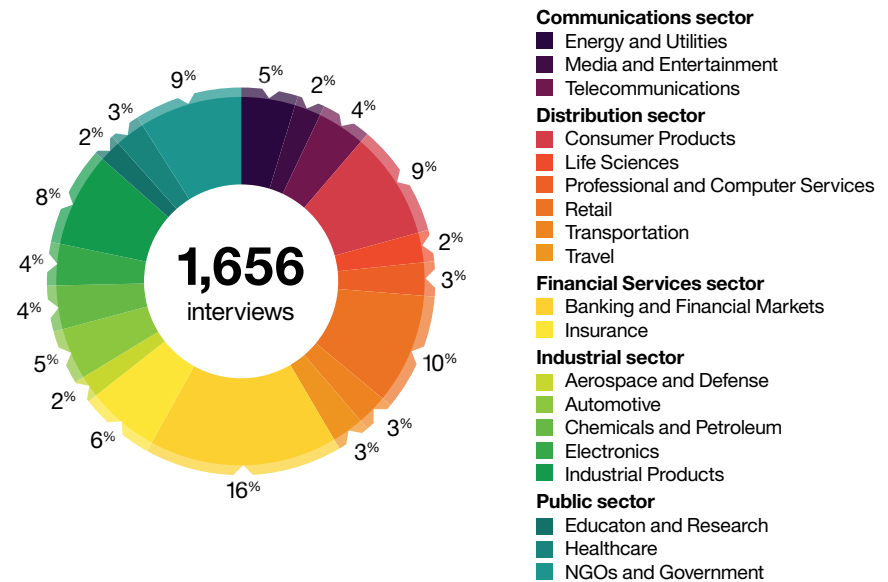
This installment focuses on the responses of the 1,656 CIOs from 62 countries who participated in our study (see Figure 18). It also compares their responses with those of the 2,527 other CxOs who contributed to our research.

We normalized the data to eliminate geographic distortions, using actual regional gross domestic product (GDP) for 2012. We also normalized for overrepresentation of individual roles, using a quota process to randomly select from oversampled CxOs.

Our research includes an analysis of the differences between the responses of CIOs in financially outperforming enterprises and those in underperforming enterprises, based on how CIOs assess their own organizations. We asked CIOs to rate their organization's three-year revenue growth and profitability relative to that of their industry peers. Enterprises that excelled against both measures were classified as outperformers; those with low rankings were classified as underperformers; and the rest were classified as peer performers.

Figure 18

Sector spread: We spoke with CIOs from more than 20 industries



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IBM Institute for Business Value

The IBM Institute for Business Value, part of IBM Global Business Services, develops fact-based strategic insights for senior business executives around critical public and private sector issues.

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