Capitalizing on Complexity

Insights from the
Global Chief Executive
Officer Study

Implications for the CIO

IBM

Introduction

Complexity.

Does it give CIOs anxiety or make them excited for a challenge? Like the CEOs they support, how can CIOs adjust their view of complexity so they see it as an opportunity for success and not just a problem to extinguish?

According to the 2010 IBM Global CEO Study, over 1,500 Chief Executive Officers across the globe are experiencing increasing complexity in the business environment.[1] CEOs told us they operate in a world that is substantially more volatile and uncertain. Many shared the view that incremental changes are no longer sufficient in a world that is operating in fundamentally different ways. However, the standouts among them have been able to manage complexity more effectively than others. Analysis of the results of face-to-face CEO interviews revealed that CEOs are capitalizing on complexity in three important ways: by embodying creativity, reinventing customer relationships, and building operating dexterity wherever possible.

The CIO plays a critical role in helping CEOs realize their vision of harnessing complexity. To embody creative leadership, the CIO must act as a top advisor in creative uses of information technology and serve as an inspiring leader within the IT function. The CIO can also support the CEO's desire to improve customer relationships through deploying analytics and collaborative environments that deliver deeper insights into customer needs and preferences. To build operating dexterity, the CIO will need to play a vital role in creating flexible, efficient and high-performing information technology environments that can quickly adapt to changing business models.

Understanding these implications can help CIOs act as change agents in helping to drive transformation efforts across the enterprise, and more effectively fill the roles of strategist, enabler and collaborator within the C-suite. In this executive report, we highlight the key insights from the 2010 CEO Study and the associated implications for CIOs. As part of this report, we also draw upon insights garnered from the 2009 Global CIO Study, which is based on structured, face-to-face interviews with

over 2,500 CIOs from around the globe.[2] Combined, this collection of more than 4,000 in-depth meetings with CEOs and CIOs highlights the fact that, despite having very different roles in the enterprise, they often have complementary views and priorities.
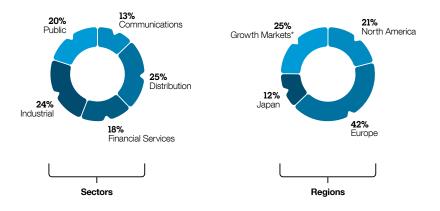
How the studies were conducted

The largest known sample of face-to-face CEO interviews, this new study is the latest in a six-year series of executive "C-suite" studies. The 2010 CEO Study represents more than 1,500 CEOs in 60 countries and 33 industries (see Figure 1). A comprehensive review and analysis of more than 10,000 interview quotes was also conducted. As part of the study, we identified "Standout" organizations that delivered superior performance during both the long term (four years) and recent short term (one year).

In our 2009 CIO Study, we spoke in person to over 2,500 CIOs in 78 countries and 19 industries to understand their goals and challenges. In that study, we conducted financial analysis to identify "High-growth" organizations based on 2004-2007 profit before tax (PBT) growth. Based on that analysis, we primarily refer to CIOs who work in organizations with high PBT growth as "High-growth CIOs."

Figure 1   **About our research**
Over 1,500 CEOs worldwide participated in the 2010 CEO Study.

CEOs and CIOs must navigate in a highly volatile, increasingly complex environment

Increasingly interconnected economies, enterprises, societies and governments have given rise to a more complex environment. According to the CEO Study, 60 percent of CEOs are already experiencing high levels of complexity in their operating environments and markets, and 79 percent expect the level of complexity to rise over the next five years.

At the same time, less than half of CEOs feel prepared for the increasing complexity ahead (see Figure 2). This represents a 30 point "complexity gap" between what those executives expect their organizations will face in the future and how well they anticipate handling it.
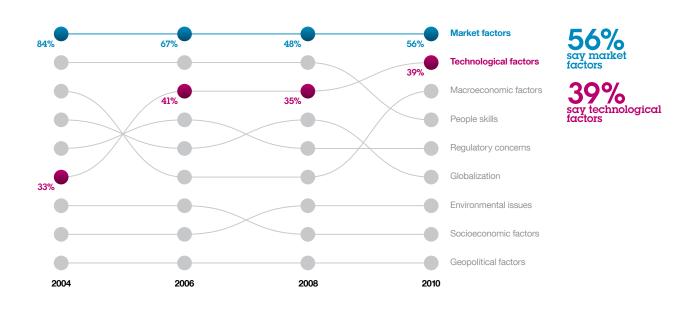
Figure 2   **The complexity gap**
While eight out of ten CEOs anticipate significant complexity ahead, less than half feel prepared to handle it.

Expect high/very high level of complexity over five years

79%

Feel prepared for expected complexity

49%

30%
complexity gap

At the same time, CEOs are recognizing that technology is playing a more critical role than it has in the past. In the survey, we see that technological factors are the second most important external force, trailing only market factors (see Figure 3). Technological factors ranked in sixth place just six years ago, and have since been steadily rising in importance. We may attribute this rise to the growing importance of technology to businesses, governments and consumers; the continued rise of the Internet and intelligent devices; and the continued, exponential rise in the velocity, volume and variety of information in our interconnected world.

Figure 3 **Top external factors**
The relative impact of technology as an external force rises year on year.

Market factors — 84% (2004), 67% (2006), 48% (2008), 56% (2010)

Technological factors — 33% (2004), 41% (2006), 35% (2008), 39% (2010)

Macroeconomic factors
People skills
Regulatory concerns
Globalization
Environmental issues
Socioeconomic factors
Geopolitical factors

2004   2006   2008   2010

56% say market factors
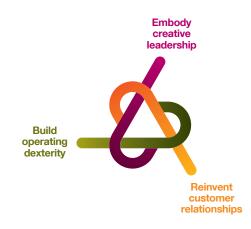
39% say technological factors

Consequently, CIOs will need to act as both strategy collaborators and technology managers to help CEOs more effectively get a handle on complexity. From the strategy side, they will need to demonstrate how technology can help the organization redefine itself to compete in the new, increasingly tangled business environment. At the same time, the CIO will have to ensure that the technology used within the organization helps to reduce, rather than fuel, the amount of uncertainty that CEOs are forced to cope with today.

Learning from top performers: Navigating complexity superbly

Certain organizations have historically delivered solid business results even in the recent economic downturn. These Standout organizations come from every industry and every part of the world. And importantly, they feel much more prepared for complexity.

Standouts extol the value of making decisions quickly, testing them in the market, and then making required course corrections. To capitalize on complexity, this group embodied creative leadership; reinvented customer relationships; and built operating dexterity.

CIOs can, and should, play an important role in supporting, facilitating and even leading the CEO toward the achievement of these goals. We'll explore each of these activities in more detail.

Embody creative leadership

Build operating dexterity

Reinvent customer relationships
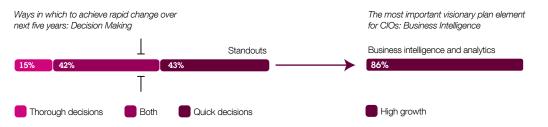
Embody creative leadership

Overall, creativity was ranked the number one leadership quality of CEOs. To succeed, Standouts don't aim to merely react to and support the status quo, they become inventive in how they view their businesses, markets and core business models. CEOs also said they needed to continually renew the ways those in their organizations interact with each other, customers, vendors and partners using a wide range of communication styles and tools.

The CIO can respond to this drive by nurturing creativity within the IT organization and driving the CEO's innovation agenda. CIOs can be enablers of new directions by testing, fulfilling and measuring the success of new operating models the organization wants to explore.

One important component of creative leadership is the ability to rapidly make decisions, an area where CEOs and CIOs often see eye-to-eye. In the 2010 CEO Study, Standouts were 54 percent more likely to favor quick decision-making over protracted planning processes. Similarly, in the 2009 CIO Study, CIOs' top response for the most important visionary element was the very technology that enables quick decision-making: business intelligence and analytics. This coupling of priorities makes sense: as senior business executives need faster access to better information that provides deeper insights, CIOs are looking to provide it through business intelligence and analytics (see Figure 4).

> *"A significant role of the CIO is to establish with senior executives that they not only need to focus on operations, but that they also need to bring innovation to their businesses."*
>
> **CIO,** Automotive company

Figure 4 **CEOs' decision styles and CIOs' visionary plans**
Standouts focus on making quick decisions even when facing uncertainty; CIOs' top visionary plan was business intelligence, which can support that CEO objective.

Ways in which to achieve rapid change over next five years: Decision Making

Standouts

| 15% | 42% | 43% |

The most important visionary plan element for CIOs: Business Intelligence

Business intelligence and analytics

| 86% |

■ Thorough decisions ■ Both ■ Quick decisions

■ High growth

Are you ready?

Imperatives for CEOs	Implications for the CIO
Embrace ambiguity: Reach beyond silos, exemplify breakthrough thinking and act despite uncertainty.	*Enable smarter decisions:* Provide new insights about the business through analytics to improve and speed decision-making. Support quick and effective decisions despite ambiguity. Use information management and collaboration tools to enable access to information and help break down organizational silos.
Take risks that disrupt legacy business models: Pilot radical innovations, continually tweak your models, and borrow from other industries' successes.	*Advocate the "art of the possible":* Explain how IT can enable and work with the business to define new models based on the application of new and/ or disruptive technologies. Enable continuous improvement by providing the insight and information to understand which elements of the business model are working, and which are not. Learn to manage and mitigate risk in deploying new capabilities, rather than avoiding it.
Leapfrog beyond "tried-and-true" management styles: Strengthen your ability to persuade and influence, coach other leaders, use a wide range of communication approaches.	*Enable the collaborative enterprise through technology:* Emulate creative leadership behaviors and enable new management styles across the organization. Leverage more "viral communications" and incorporate collaboration technology into daily interactions. Use technology to support a wider range of communication approaches.

Key questions to help CIOs embody creative leadership:
- *How will you leverage business analytics capabilities to empower the CEO and other leaders to make smarter business decisions?*
- *What is your approach for gaining and maintaining top-notch technical expertise so you can confidently express and advocate for technical solutions that best support the CEO's vision?*
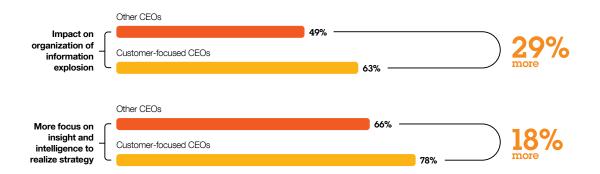- *How will you use IT to effectively support enterprise collaboration?*

Reinvent customer relationships

As CEOs from Standout organizations discussed their customer imperatives and goals, one theme continually came to the forefront: "Getting closer to customers." CEOs described the requirement to better understand and respond to customer needs through better collaboration and information sharing. While these are not necessarily new ideas, they are becoming increasingly more important today as CEOs are witnessing an explosion of customer information. This information is being generated from internal systems and interaction channels, as well as the vast array of unstructured information that consumers are providing online about their attitudes, preferences and needs.

Customer-centric CEOs exploit the information explosion to better understand and serve customers – they are 29 percent more likely to recognize the impact on the organization of the customer information explosion. Customer-focused CEOs are also 18 percent more likely to focus on customer information, insight and intelligence to realize their strategies (see Figure 5). These CEOs need customer-centric CIOs to fulfill their agendas through comprehensive customer information and analytics programs.

"Customer interaction and collaboration are the foundation of our business model."

CIO, Financial Services

Figure 5   **Leveraging the information explosion**
Customer-focused CEOs will use insight and intelligence to better serve customer needs.

Impact on organization of information explosion

Other CEOs
49%

Customer-focused CEOs
63%

29% more

More focus on insight and intelligence to realize strategy

Other CEOs
66%

Customer-focused CEOs
78%

18% more

"The challenge is to change from a push-model to a pull-model, where the customer expresses requirements and IT answers immediately."

CIO, Banking

Both CEOs and CIOs value customer collaboration and information sharing along with exploring new and different channels to better connect with customers (see Figure 6). CEOs want to be able to exchange more information with customers than ever before, not just to know customers better, but to support effective co-innovation and co-creation of products and services.

CIOs help meet customer expectations by better leveraging customer data and by providing greater levels of integration and transparency, as well as new channels.

The CIO is pivotal to the reinvention of the customer relationship. As customers continually use more electronic communications and channels in their interactions, the enterprise must gather and harness more of these customer information assets, and transform them into practical insights. The CIO has a profound role in leading customer analytics initiatives, improving the organization's ability to collect, store, analyze and act upon the myriad of sources of customer information now available.

CIOs should also look to information and technology for how they manage customer interactions, improve the customer experience and enable relationships across different channels.. One of the most important aspects is the degree to which customers are getting connected – and how organizations leverage new technologies to collaborate with customers one-to-one, one-to-many, and many-to-many. Customers become "part of the team," co-innovators and collaborators in designing new products, services and interactions.

Figure 6   **CEOs and CIOs both prioritize having deeper customer knowledge**
CIOs help meet customer expectations by better leveraging customer data and by providing greater levels of integration and transparency, as well as new channels.

CEOs' view of "How customer expectations will change over the next 5 years"

CIOs' view of changes in customer interaction

... and anticipate much greater levels of integration and transparency with customers

More collaboration, information sharing

69%

68%

New or different channels

51%

In five years, CIOs expect end-customers to continuously explore new channels...

74%

Are you ready?

Imperatives for CEOs	Implications for the CIO
Honor your customers above all else: Unprecedented level of focus, heightened customer exposure for every employee, measure what customers value.	*Build a customer-centric IT organization:* Embed customer centricity in everything the IT organization does. Measure customer value and provide insight that guides business decisions based on what offers the most customer value.
Use two-way collaboration to sync with customers: Make customers part of your team, solicit customer wants, co-innovate and interact with customers in new ways, deliver true process transparency.	*Enable customer interaction and collaboration:* Design customer interaction, transaction and collaboration systems not only to enable the creation of deeper customer insights and understanding, but also to engage the customer in co-innovation.
Profit from the information explosion: Tap the value of limitless data, use analytics to translate data into insight into action that creates business results, share information freely to build trust and improve customer relationships.	*Embrace business analytics to extend customer understanding:* Develop strengths in collecting, aggregating and analyzing customer data from both traditional and newer sources, including structured and unstructured formats, to build insights into customer needs and relationships.

Key questions to help CIOs reinvent customer relationships:
- *How will you create customer-centricity with a pervasive focus on understanding and serving both internal and external customers of your organization?*
- *In what ways can you support collaboration and interaction with customers through technology; and what plans do you have for enabling the technology to capture and synthesize customer input for business improvement?*
- *How will you make the IT environment capable of capturing, consolidating, synthesizing and analyzing diverse information sets for analytics purposes and, ultimately, for optimizing customer interactions?*

"Customer relations will require near-realtime information and the ability to change 'on the fly,' which will require innovation."

CIO, Energy and Utilities

Build operating dexterity

CEOs in Standout organizations recognize the value of nimble, agile enterprises that react well to, and even anticipate, the rapid changes inherent in complex environments. In the CEO study, they recounted the importance of simplifying operations and products to better manage complexity, but without sacrificing business benefit. Leading CEOs use iterative strategies that focus on making quick decisions and executing with speed, allowing their organizations to sense and respond to market imperatives rapidly, approach growth opportunities more aggressively, and quickly adjust to changes in the environment. They also adopt new business models that enable their enterprises to integrate globally, increase cost variability and exploit partnering to increase agility.

Perhaps more so than the other new actions discussed, building operating dexterity provides the greatest opportunity for the CIO, as an IT leader as well as the critical roles of "visionary leader" and business enabler. How a business infrastructure is designed, integrated and operated has a profound effect on how flexible or dexterous the organization can become. The IT infrastructure enables the company to sense and respond to market direction through the collection, analysis and dissemination of information. To respond to needed operating changes, the IT organization must be able to assist in making substantive change to capabilities, offerings and cost structures.

Simplification is one important aspect of capitalizing on complexity. Simplifying business processes (including IT processes) contributes to building a more flexible and manageable IT environment. CEOs from Standout organizations simplify operations and products to better manage complexity, with 61 percent agreeing that simplification is an important element of operating strategy. Likewise, the CIOs interviewed strive toward process standardization – a key simplification tactic – with 61 percent of High-growth CIOs citing it as important (see Figure 7).

Figure 7   **Building operational dexterity together**
The majority of Standouts intend to simplify operations; CIOs also aim to simplify and automate processes.

CEOs see changes to operating strategy: Simplify   *CIOs think business processes will be completely standardized and low cost*

Standouts   High growth

61%   61%

CEOs from Standout organizations consider execution speed to be a crucial capability for success over the next five years. CIOs will be called upon to deploy capabilities more rapidly, and provide faster time to business value.

Are you ready?

Imperatives for CEOs	Implications for the CIO
Simplify whenever possible: Simplify interactions with customers, simplify products and services by masking complexity, simplify for the organization and partners.	*Simplify whenever possible:* Develop and deploy simplified, streamlined business processes to improve efficiency and simplify operations, and apply these same concepts and solutions to the management of the infrastructure.
Manage systemic complexity: Put complexity to work for your stakeholders, take advantage of the benefits of analytics.	*Manage systemic complexity:* Proactively manage the complexity and efficiency of the IT environment. Find opportunities to simplify IT operations without diminishing business value.
Promote a mindset of speed and flexibility: Act quickly, push execution speed, course-correct as needed.	*Enable operating speed and flexibility:* Enable the organization to act quickly through an adaptable, efficient and flexible IT environment, leveraging strategic service providers.
Be "glocal": Leverage the world through partners, constantly tune your operating model – global where possible, local where necessary.	*Embrace "glocal" IT operations:* Leverage the world through partners, constantly tune your operating model to use the right skills in the right place at the right time.

Key questions to help CIOs build operating dexterity:
- *How does your organization utilize a process or discipline for continually simplifying business and IT processes where possible and desirable?*
- *How are you simplifying business infrastructure without sacrificing business benefit?*
- *How does your organization manage and leverage the potential benefits of systemic and organization complexity, both within the IT environment and in IT's ability to support the business?*
- *How will you design the IT environment to be flexible and adaptable to change, including the use of flexible operating models and service providers?*
- *What is your IT deployment strategy to find the optimal mix of global and local resources and operations?*

"We have a global team that can bring forward the best ideas from markets around the world to help us anticipate and react to changes in the marketplace, and adjust our operations as appropriate."

CEO, Electronics

Conclusion

Today, complexity rules and CEOs can't address it alone. It is CIOs who can help reduce its potential hurdles and leverage its potential advantages. To increase their effectiveness as members of the C-suite, CIOs must plan now to focus on enabling the organization to make faster decisions, and preparing the IT environment to accommodate rising levels of change and complexity. More than before, CEOs are expected to empower and depend on CIOs for creative leadership, better customer relationships and true operating dexterity.

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Notes and sources

1   "Capitalizing on Complexity:Insights from the IBM Global Chief
     Executive Officer Study." IBM Institute for Business Value. May
     2010. www.ibm.com/ceostudy.

2   "The New Voice of the CIO: Insights from the IBM Global Chief
     Information Officer Study." IBM Institute for Business Value.
     September 2009. www.ibm.com/voiceofthecio