



The  
New Voice  
of the  
CIO

*Insights from the  
Global Chief Information  
Officer Study*



# Introduction

In a fast-moving environment, how can today's Chief Information Officer (CIO) make the biggest impact on behalf of the entire organization? To answer that question, we listened to over 2,500 CIOs worldwide. Included in this group were 287 Government CIOs from all levels of government. These one-hour, face-to-face conversations, along with our statistical analyses, made clearer the changing demands on CIOs. Not content to be known only as consummate IT experts or perpetual seekers of savings, some CIOs are redefining their role.

Citizens are increasingly demanding improved access to tailored public services, greater accountability and transparency of public officials, increased confidence in how governments handle their personal data and greater efficiency in service delivery all at the same time.

Political and government leaders are recognizing the importance of information and technology to address these issues which are at the heart of government modernization and transformation. They are imposing an urgency to perform because of the economic crisis. This puts the CIO center stage in governments' transformation plans to an extent never seen before—providing an opportunity for CIOs to redefine their role in order to fulfill these higher expectations.

The voice of the CIO is being heard in new ways—as CIOs are increasingly recognized as full-fledged members of the senior executive team. Government CIOs are becoming much more actively engaged in setting program and mission strategy, enabling business flexibility and change, and solving business problems. They are finding new ways to meaningfully contribute to public outcomes, not just to IT's issues.

Today's Government CIOs spend an impressive 57 percent of their time on activities that spur innovation. These activities include *generating buy-in for innovative plans, implementing new technologies* and *managing non-technology business issues*. Thirty-six percent is spent on essential, more traditional CIO tasks related to *managing the ongoing technology environment*. This includes reducing IT costs, mitigating enterprise risks and leveraging automation to reduce costs elsewhere in the organization. The remainder is dedicated to other activities.

CIOs universally acknowledge that some of their most important objectives too often seem to clash: *How can we support the introduction of new services while avoiding the disruption of existing services? How can I reduce costs while improving services? How will I balance the need to influence my organization's strategy with the need to provide top-notch IT support?*

These twin realities—recognition of the expanding role of IT and the urgency to perform—have created a catalyst for innovation, and reforming IT governance and management. These have been discussed for years with excellent examples of IT innovation in public sector organizations around the world. Yet CIOs report that there is a long way to go to realize the potential of IT and to satisfy both the public and their political leaders.

In this new environment, Government CIOs, like their private sector counterparts, need to integrate a new set of leadership roles which often conflict but are, in fact, complementary. They need to define these new roles in ways that accommodate the particular nature of the public sector in general, and their organizations in particular, which adds complexity and imposes constraints on implementing changes. Successfully managing these tensions will be key to the success and progress of their agencies, and government as a whole.

### **Complementary, yet sometimes conflicting roles**

An Electronics CIO summed it up well: “In IT, we are not magicians, but we are certainly jugglers.” On any given day, CIOs are poised for the unexpected, leading an organization that solves a myriad of problems for customers and citizens, both internal and external. Without question, information technology functions represent the “central nervous system” of most businesses and public institutions. But CIOs told us that they can only turn more attention to new technology ideas after addressing current IT needs.

After thousands of interviews, we found that successful CIOs actually blend three pairs of roles. At first glance, these dual roles seem contradictory, but they are actually complementary, requiring a balance of sometimes competing priorities. To characterize each role, we have coined a term that describes its dominant quality. At any given time, a CIO is:

- An Insightful Visionary *and* an Able Pragmatist
- A Savvy Value Creator *and* a Relentless Cost Cutter
- A Collaborative Business Leader *and* an Inspiring IT Manager.

By integrating these three pairs of roles, the Government CIO:

### ***Makes innovation real***

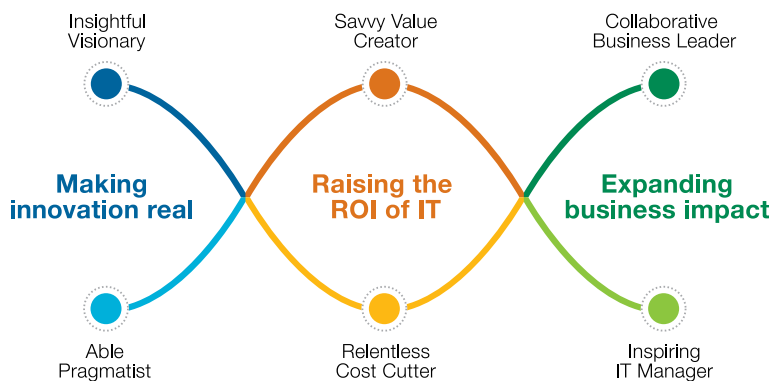
It's not enough just to plan for innovation—it needs a robust foundation. When acting as an Insightful Visionary, a CIO is perceptive, promoting a broad technology agenda to help program and mission areas benefit from leading-edge initiatives. The flip side of the Visionary is the Able Pragmatist role. As a Pragmatist, a CIO deals with the realities of the mission, operating environment, and culture. The Pragmatist also facilitates the productivity of current IT solutions to allow more time and budget for innovation.

### ***Raises the ROI of IT***

Using IT to enable program results is vital, accompanied by an ongoing focus on efficiency, higher productivity, and working within budget. A Savvy Value Creator finds new ways to help citizens, the organization, and government as a whole benefit from how data is used. The Relentless Cost Cutter, its counterpart, is focused on managing budgets well, and improving processes that eliminate or reduce unnecessary costs and realize operating efficiencies.

### ***Expands business impact***

To meaningfully contribute the most to the organization, proven savvy and expertise in program, mission, business and technical matters is vital. Part of the time, Government CIOs will engage with the enterprise as Collaborative Business Leaders, to drive new business initiatives and cultural shifts jointly with fellow CxOs. At other times, the Inspiring IT Manager role occupies center stage to motivate the IT organization and deliver superior IT performance.



**Adjusting the mix, one pair at a time**

It's no surprise that CIOs must reconcile seemingly opposing mindsets. But our findings revealed ways they can be more effective in this everyday balancing act. Even some experienced CIOs acknowledged that they are sufficiently strong in just one or two of the six CIO roles. Yet every role requires at least some attention.

The realities facing each individual influence how that CIO can and should manage change at any given time. Many factors affect decisions about how much emphasis to place on any single role. Among the other factors are policy, macroeconomic and regional conditions, industry-specific forces and various organizational characteristics, as well as the CIO's own skills and aspirations.

But despite the multiple forces in play, our findings show that successful CIOs discover ways to focus on high-value projects in support of their organizations. In the pages that follow, we share with you the voices of many Government CIOs and what they are doing to achieve three primary goals: to make innovation real, raise the ROI of IT and expand business (mission) impact.

# Making innovation real

## Insightful Visionary and Able Pragmatist



The Insightful Visionary is active in setting strategy and helps the public institution explore how technology can drive innovation in support of the mission and desired outcomes. The Able Pragmatist sets the stage for enacting innovation. Key Visionary actions are to: push business/technology integration, champion innovation and extend CIO influence. Key Pragmatist actions are to: enable the public institution's vision, make working together easy and concentrate on core competencies.

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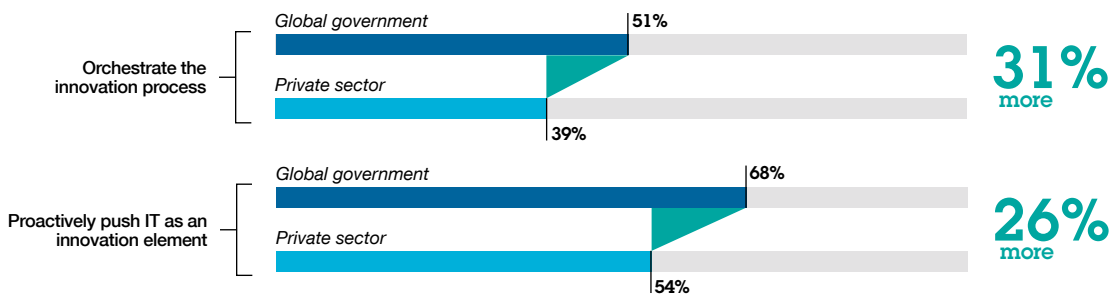
*“Driving innovation is one of the key elements in the work of a CIO.”*

CIO, Social Services Agency, Provincial Government, Germany

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**Figure 1 CIOs are expected to play critical roles in driving innovation**

Public Sector CIOs consider themselves active in orchestrating innovation and advocating IT as a key element of innovation.



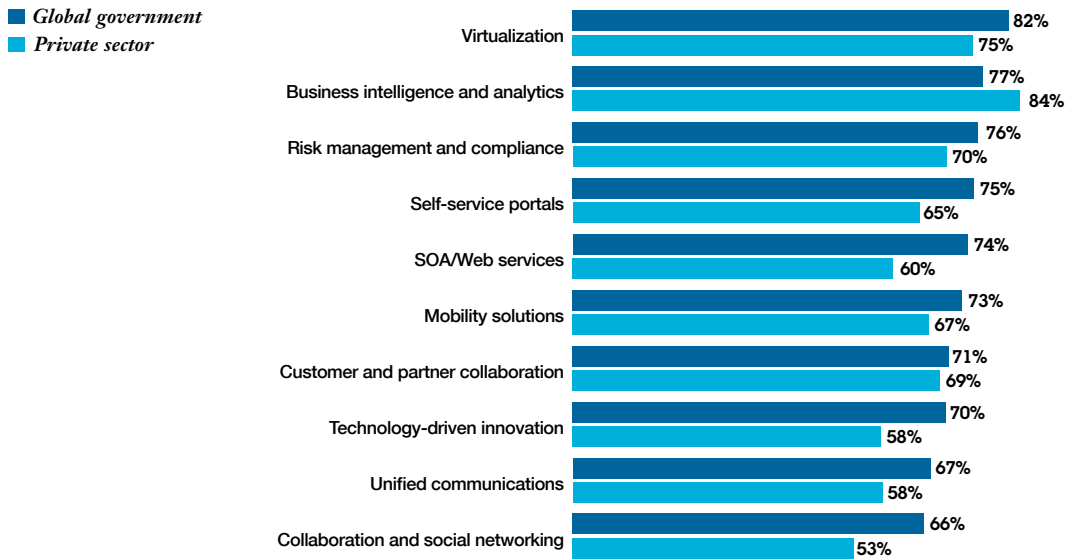
Government CIOs are actively orchestrating and promoting innovation. They are investigating many innovative technologies, prioritizing those that address their unique challenges. Yet CIOs recognize that, above all, they must continue to provide reliable services to their customers.

Government CIOs report that they increasingly are expected to play a critical role in driving innovation across their organization, across agencies, even across jurisdictions—state and local governments and at the national level. To do so they are embracing a different approach, working collaboratively with their colleagues in program areas to help their agencies find new ways to strategically apply the latest technologies.

Government CIOs are paying particular attention to technologies and approaches that address current business operations. Such technologies include virtualization, business intelligence and analytics, risk management and compliance, and self-service portals, among others.

**Figure 2 Visionary CIOs are prioritizing which innovative solutions address program and mission needs**

In almost all cases, Global Government CIOs exceeded private sector CIOs in visionary exploration and planning.



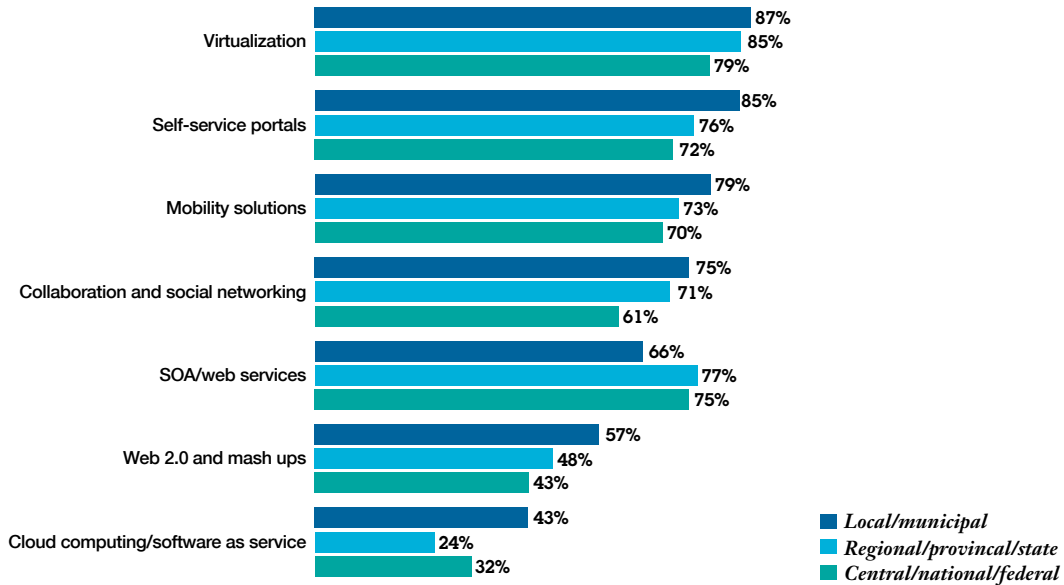
NOTE: CIOs were asked to select all applicable answers to the question, “What kind of visionary plans do you have for enhanced competitiveness?”

Local government CIOs appear to be leading Private Sector and other Government CIOs in planning how to deploy new IT uses. There are many reasons for this is particularly true in public sector organizations in countries considered to have more supportive approaches to government IT modernization, as ranked annually by the Economist Intelligence Unit.<sup>1</sup>

CIOs report they are keen to use these technologies to improve collaboration and productivity among agencies, within departments and with citizens. For example, many are exploring the use of social networking tools: deploying self-service portals, Web 2.0 and mash ups, and mobile tools.

Many Government CIOs act as Insightful Visionaries in their planning; and many are already converting plans into concrete actions. The challenge is to demonstrate the ability to deliver results, while contributing meaningfully to desired outcomes, leveraging their knowledge of what IT can do.

**Figure 3 CIOs’ visionary plans differ among the three levels of government**  
Local governments are leading the way in considering many innovative solutions.



Simultaneously, Government CIOs must continue to provide reliable services to citizens and public employees. At many levels of government, however, the work of CIOs is still largely seen more narrowly as delivering a utility. Thirty-two percent tell us that they are perceived by their program, mission and business counterparts as *providers of core technology services*, while just 22 percent said they are viewed as *critical enablers of the mission / business vision*.

Most Government CIOs would like to see a change in how they are perceived over time. One government CIO expressed the dilemma: “We would like to be seen as facilitators of organizational change and critical enablers of our business vision, but most perceive us to be the technology service providers.”

Government CIOs will only succeed if they are also Able Pragmatists who can efficiently and effectively perform routine technology operations—delivering what is already expected of them and freeing up time to devote to more business facing transformational activities.

**How well-positioned are you to deliver on expectations—visionary or otherwise?**

**To what extent are you exploring partnerships to allow greater focus on innovation?**

**How well can you articulate how different operating models can contribute to desired mission and program outcomes?**



# Raising the ROI of IT

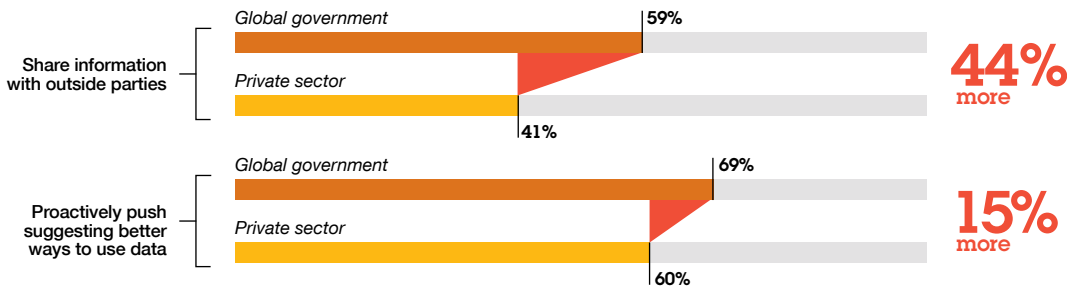
## Savvy Value Creator and Relentless Cost Cutter

The Savvy Value Creator devises better solutions by understanding customers' and citizens' information and service needs, while the Relentless Cost Cutter is vigilant about trimming unnecessary expenses wherever possible. To blend the two roles, a CIO has to be proactive in understanding constituents' needs while using innovative delivery methods. The Key Value Creator actions are to: make the data "sing," reach users and citizens in new ways, and enhance integration and transparency. Key Cost Cutter actions are to: standardize to economize, centralize the infrastructure and keep cost reduction a top priority.

*"We need to help the business work more effectively through collaboration and unlocking the value in our data."*

CIO, Quasi-government Organization, UK

**Figure 4 CIOs report increased demands to share information with many organizations**  
Public Sector CIOs are sharing information with outside parties to a greater extent – 44 percent more – than their private sector counterparts.



Government CIOs report the growing awareness among senior public officials about how information and technology can add value by transforming the way that the organization—and the government as a whole—operates and interacts with citizens.

Specifically, governments are realizing that the vast amounts of information they hold can be viewed as an asset to be strategically leveraged and managed better. They see increased collaboration, more and varied channels of communications, data integration and transparency as paths to better support programs and missions.

For information to be used to its full potential, data needs first to be reliable and secure. In the words of one government CIO, “As you get better governance, you spend more time on the visionary aspects of the CIO’s job.” However, a minority of Government CIOs are creating a strong data governance model to protect the reliability and security of data.<sup>2</sup> The reality for many was observed by a military CIO: “Data governance is our biggest problem.”

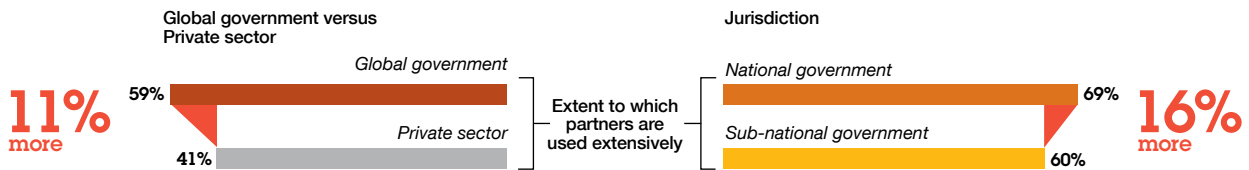
Simultaneously, though, government organizations are facing severe budgetary pressures. CIOs recognize that they are viewed as managers of cost centers—or overhead. They must be seen as delivering services as efficiently as possible while promoting better decision-making, and more efficient ways of operating through the use of information and technology.

Many challenges lie ahead. This raises a fundamental question: Will Government CIOs push forward? If so, will obstacles impede significant progress?

Overall, Government CIOs are aiming to make their operations more efficient—through centralize infrastructure and another is to work with external partners—16 percent more than Private Sector CIOs. Looking through the lens of jurisdiction, agencies at the national / federal level use partners more extensively than their regional and local government counterparts.

They report that their organizations use partners to do more than manage costs. They do it to make up for endemic skills shortages, defer risks and gain access to knowledge and experiences that are only available externally. A Government CIO admits, “We use a lot of third-party IT services for convenience, not because of strategy.”

**Figure 5 Government CIOs are collaborating more extensively with partners than those in the private sector**  
National governments did so at a higher rate than sub-national governments.

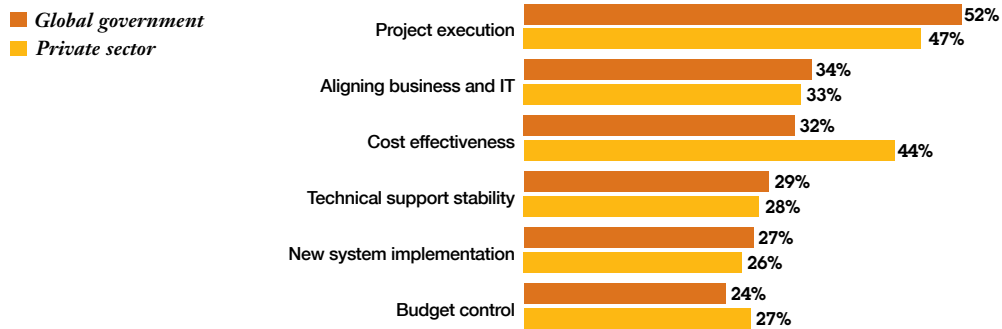


Government CIOs are measured by their senior leaders less on cost effectiveness and budget control than their private sector counterparts. Yet, given that budgetary pressures in government are intensifying, we expect these CIOs to become much more active in defining, measuring and managing their IT costs.

To do this, they will need to address structural issues that make it more difficult to manage IT expenses in government; for example, by increasing the flexibility of IT budgets within a fiscal year and charging end users based on usage. In some countries, political and legal constraints will need to be modified before more efficient IT operating models can be implemented.

**Figure 6** Project execution is what Government CIOs are measured on most

Government CIOs report less focus by their management on cost effectiveness and budget control than their private sector peers, but are on par with them when it comes to aligning business and IT.



NOTE: CIOs were asked what the three most important criteria that their management would use to measure their performance in 2009.

To what extent do you suggest new ways information can provide value?

To what degree do you influence the definition of the “value of information” and related operating models (including challenging existing models), and with whom?

How do your governance and management models provide for visibility, transparency and accountability? For information integrity, quality, security, availability and utility?

In what ways can you work with the policy and program areas of an agency or department to extract the maximum return from your current IT portfolio?

Are you able to measure progress in improving data value, governance and cost effectiveness of operations in a way that also engages your management colleagues so that it is seen as a shared mission?

# *Expanding business impact*



## **Collaborative Business Leader** *and* **Inspiring IT Manager**

The Business Leader thoroughly understands the organization's core mission, programs and business, building strong partnerships, internally and externally. The Inspiring IT Manager demonstrates personal, technical and business expertise while advocating for stronger skills across the IT organization. Key Business Leader actions are to: know the mission, related programs and the business, get involved with business peers in non-IT projects, and define present and measure IT in business terms. Key IT Manager actions are to: cultivate truly extraordinary IT talent, lead the IT forces and enhance the data. For many Government CIOs, a great challenge is to nurture and sustain the skills required of leading IT organizations.

Government CIOs are actively participating in creating, deciding and presenting strategies with their management team, particularly at sub-national levels, often more than their counterparts in the private sector. In short, they report generally higher participation in co-creating organizational strategy.

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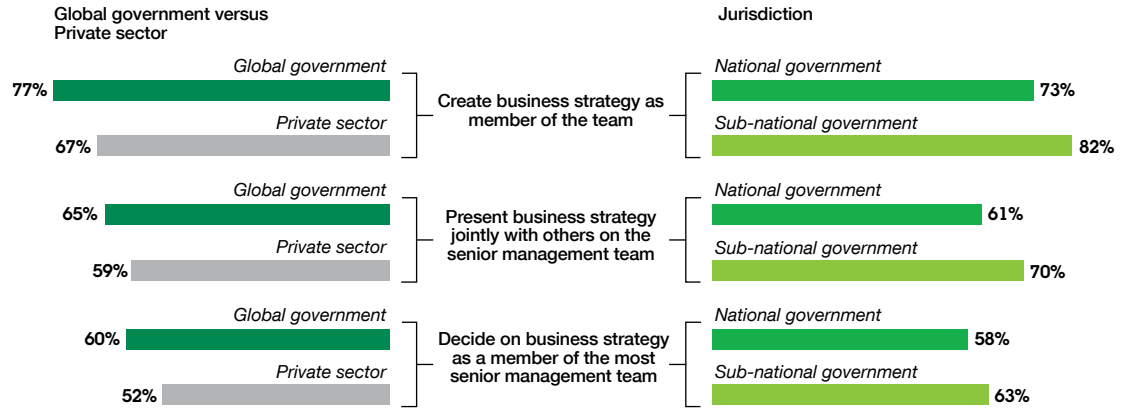
*“Collaborative project delivery models require lots of attention and governance, to marry the needs of the business people and technology folks.”*

CIO, Provincial Government Agency,  
Canada

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**Figure 7 Government CIOs are very involved in co-creating business strategies with fellow business leaders**

This suggests that business leaders recognize the importance of IT to delivering on strategic plans.

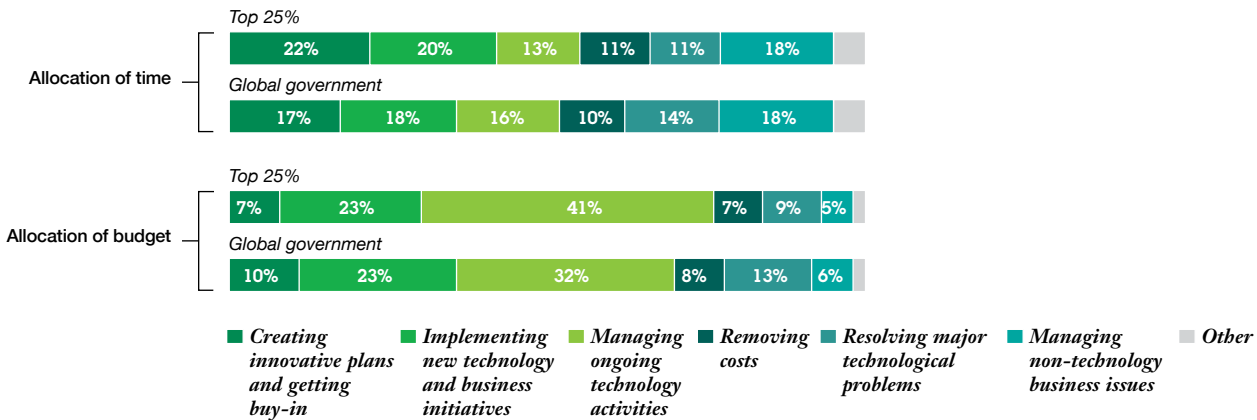


The question remains: Can Government CIOs deliver on the increased expectations being placed on their organizations by being more involved in strategy definition? To do so requires a focus on outcomes, as well as mission *and* program savvy. CIOs also need to understand non-IT operational problems, and must be able to articulate in business language how IT can address them while meaningfully contributing to outcomes.

While CIOs reported that they spent more time on operational matters than they wanted, they were increasing their focus on strategic issues, while still delivering ever-improving services.

Within the Public Sector, CIOs working in those countries most supportive of IT modernization spend less of their time managing ongoing technological activities and resolving major problems. More than other Government CIOs, this group instead spends a greater percentage of time creating plans and implementing new initiatives. But the more strategically focused CIOs also report spending a higher budget percentage on ongoing technological activities. This trend suggests that investments in routine operations may be helping to free up resources for the more strategic elements of their role.

**Figure 8 Government CIOs aim to spend increased time on strategic initiatives**  
 Government CIOs from the top 25 percent of countries spend less time and more budget in managing routine technology service delivery and operations relative to the overall global government sample.



Note: See “How our research was conducted” for detailed definition of “top 25 percent countries.”

To what extent do your management colleagues have a realistic appreciation of both IT’s potential to transform the public sector and the constraints to be overcome?

How do you collaborate with program areas, budgeting, finance, and procurement and acquisitions to advance the common mission?

How far along are you in balancing your organizational skills mix (for example, between technical expertise and project / program oversight)?

Are you making the progress you expected to attract, develop, and retain the right cadre of skills needed for a leading IT organization?

## Managing dual roles in the future

But despite the multiple forces at play, our findings show that CIOs have discovered ways to focus on what matters most to them and their organizations. The collective voice of more than 2,500 CIOs worldwide points to key actions to help CIOs attain their primary goals of making innovation real, raising the ROI of IT and expanding business impact.

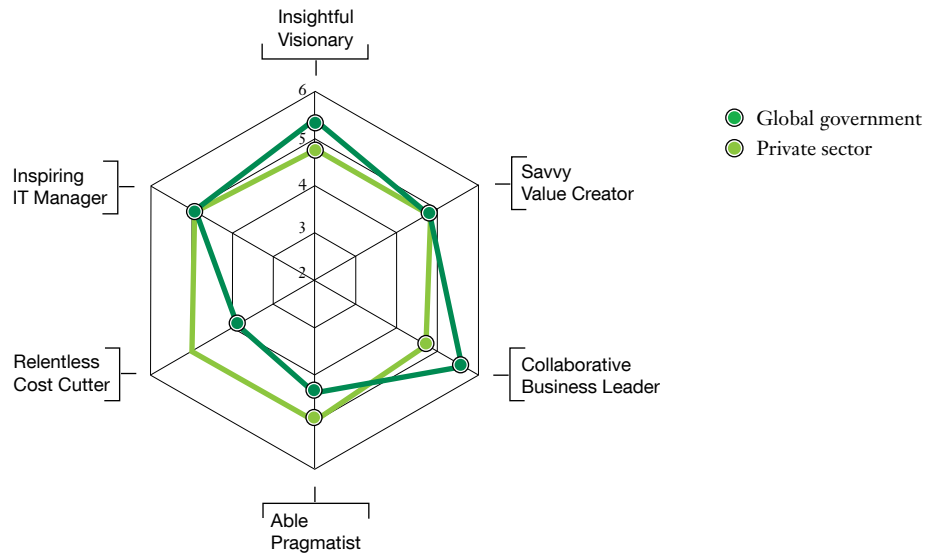
In the public sector, we observed that CIOs responded positively to the importance of innovation and expressed a strong interest in new technologies. Similarly, compared to their private sector cohorts, they scored higher as Collaborative Business Leaders and as Insightful Visionaries with regard to setting strategy with senior management.

They were keen to work with educational institutions, and governments at all levels to provide information and drive innovation. Not as clear was whether the survey results reflected achievement or aspiration, yet both are important to recognize *and* realize.

Government CIOs focused less than Private Sector CIOs on the Able Pragmatist role. They placed less emphasis on the Relentless Cost Cutter role too, resulting in part from constraints unique to the public sector that make it more difficult to act flexibly in managing operations and containing costs. However, Government CIOs are also worried about the future and how best to address growing demands for IT.

The keys for Government CIOs are to exploit their strengths and tackle their weaknesses by using their growing relationships with their agency program counterparts and with senior public officials across the government who now have an urgent appetite for transforming public administration. CIOs must work with public officials and the IT community to help them understand and ultimately overcome the constraints that historically held back the rapid implementation and application of IT that is now expected.

**Figure 9 Government CIOs ranked highest in the roles of Insightful Visionary and Collaborative Business Leader**  
 Compared to their private sector peers, Government CIOs ranked lowest on being Pragmatists and Cost Cutters.



Note: Raw response data for each of the three profiled groups were standardized, then converted to their respective positions on a normal distribution, using scale scores with a possible range of 0 to 10. The range of 2 to 6 depicted in the spider diagram is based on the actual range of responses.

In summary, Government CIOs have an excellent opportunity to establish themselves as central to the future development of the public sector. But it is a window of opportunity ... the time to seize it is now.

# What Government CIOs can do

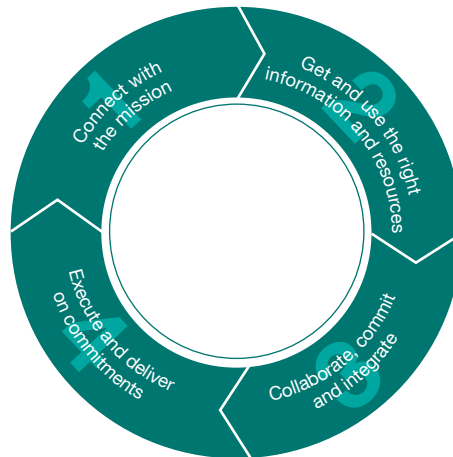
The Government CIO has a captive audience—many of the pressing challenges facing the public sector are IT related and senior public leaders increasingly understand this. To take up this opportunity, CIOs need to examine where adjustments are needed in how they manage the three pairs of CIO roles.

While Government CIOs face a number of challenges. Many are unique to the public sector, making it difficult to enact the required changes. Today's realities, however, present them with a window of opportunity to act: public leaders, current global economic crises and global issues have combined to compel unprecedented levels of change and collaboration.

These essential ingredients are helping to challenge and even lift many long-standing constraints faced by Government CIOs. The best CIOs will be both mission-driven and program-savvy, and focused on outcomes as they help public officials continue to transform public administration.

We have defined four steps that CIOs can take on the path to making innovation real, raising the ROI of IT and expanding business impact. This continuous journey consists of actions that incorporate the three pairs of CIO roles:

**Figure 10** We recommend four steps that CIOs can take to make innovation real, raise the ROI of IT and expand mission impact  
A disciplined approach to acting on recommendations – the how – is key to their leadership.



**Connect with the mission.** Raise the profile of the CIO through an informed and deliberate approach. Earn a place in the strategic dialogue and influence the organizational agenda. This includes understanding the business (program, mission) needs and desired outcomes.

**Get and use the right information and resources.** Make informed decisions, offer sound judgment, and equip the community with the right resources. Provide the right information to decision-makers and influencers. It is vital to use a transparent approach to analyze and assess risk, and make trade-offs. All of these are foundational to building trust among Government CIOs and their stakeholders. Also remember that talent matters—bringing the right talent to the challenge can make all the difference.

**Collaborate, commit and integrate.** Connect people, understand challenges and opportunities in context. Make commitments and bring the organization together to accomplish shared objectives.

**Execute and deliver on commitments.** Reliably make commitments, identify and assign resources, roles and responsibilities. Align authorities and accountabilities. The Government CIO must deliver results as promised and demonstrate progress toward shared public outcomes.

Over time, we expect Government CIOs to regularly assess progress and how much emphasis is appropriate on each of the three pairs of roles. Our profiles offer CIOs more structure to identifying where they want to increase their focus and how to do it. Whichever role you choose to emphasize, we look forward to working with you.

For further information, please send an e-mail to the IBM Institute for Business Value at [iibv@us.ibm.com](mailto:iibv@us.ibm.com), or to download the complete IBM Global Chief Information Officer Study, visit our Web site:

**[ibm.com/voiceofthecio](http://ibm.com/voiceofthecio)**

## How our research was conducted

This report features Government insights from the inaugural edition of our IBM Chief Information Officer (CIO) study – the latest in the ongoing C-Suite Study Series developed by the IBM Institute for Business Value. To better understand the challenges and goals of today's CIOs, we met face-to-face with 2,598 of them, in what is the largest known sample of these executives. Between January and April 2009, we interviewed these CIOs, who represent different sizes of organizations in 78 countries and 19 industries.<sup>3</sup>

We met with 287 Government CIOs, covering all levels of government: central / federal; regional / state; and local / municipal. As part of our analysis, we consulted the country rankings for “Government Policy and Vision” dimension of the Economist Intelligence Unit’s annual publication, E-Readiness Ranking 2009, which includes five dimensions of progress. Fifty percent of all government respondents came from countries in the top 25 percent as measured by this dimension. We compared overall government responses against responses of Government CIOs in leading countries in the “Government Policy and Vision” dimension, as well as against responses of their private sector counterparts.

## About the 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 industry-specific and cross-industry issues. Browse through our research library at [ibm.com/iibv](http://ibm.com/iibv).

## Notes and sources

- 1 Economist Intelligence Unit. "Government Policy and Vision" dimension. E-Readiness Rankings 2009. [http://www.eiu.com/site\\_info.asp?info\\_name=ereadiness&page=noads&rf=0](http://www.eiu.com/site_info.asp?info_name=ereadiness&page=noads&rf=0)
- 2 Based on ongoing IBV conversations with CIOs and other public officials.
- 3 CIOs we interviewed in the following countries were counted in the Growth Markets category: Argentina, Australia, Bahrain, Brazil, Cameroon, Chile, China, Colombia, Croatia, Czech Republic, Ecuador, Egypt, Gabon, Georgia, Ghana, Guinea, Hong Kong, Hungary, India, Indonesia, Malaysia, Mexico, Morocco, New Zealand, Nigeria, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, Saudi Arabia, Singapore, Slovenia, Slovakia, South Africa, Taiwan, Thailand, Tunisia, Turkey, Uruguay, Venezuela and Vietnam. The Western Europe category includes CIOs from: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Luxembourg, Monaco, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. The North America category consists of CIOs from: Bahamas, Canada, Cayman Islands, Jamaica, Trinidad/Tobago and the United States.

Our CIO respondents represented 19 industries. The Communications sector includes: media and entertainment; telecommunications; and energy and utilities. The Distribution sector includes: agriculture; airlines; consumer products and wholesale; food, beverages and tobacco; life sciences and pharmaceuticals; mail, package and freight delivery; professional services; railroads; real estate; retail; transportation and logistics; and travel and tourism. The Industrial sector includes: aerospace and defense; automotive; chemicals and petroleum; computers and office equipment; electronics; energy (production and refining); engineering and machinery; forest and paper products; industrial products; and network and other communications equipment. The Financial Services sector includes: banking; financial markets; and insurance. The Public sector includes: education; government and public service; and healthcare payers and providers.



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