CIO
CIO
C-suite
Studies

The Essential CIO

IBM

The illustration on the cover of this report represents
the more than 3,000 Chief Information Officers
who spoke with IBM as part of this study. Each point
represents approximately 20 participants, and the
colors represent the four CIO Mandates identified
in our analysis: Leverage, Expand, Transform and
Pioneer. For more detail, please turn to page 8.

This study is based on face-to-face conversations with more than 3,000 chief information officers worldwide.

Jeanette A. Horan
Vice President and Chief Information Officer
IBM Corporation

A note to fellow CIOs

Welcome to the biennial IBM Global Chief Information Officer Study, reflecting face-to-face conversations with over 3,000 CIOs from organizations of every size, sector and region. Through these conversations, we have gained a stronger sense of the primary issues impacting CIOs in the two years since our inaugural study.

One of the most compelling findings in the study is that CIOs are now increasingly in step with CEOs' top priorities. One priority they agree on is how critical it is for today's public and private sector organizations to derive insight from the huge volumes of data being amassed across the enterprise, and turn those insights into competitive advantage with tangible business benefits.

And yes, some long-held assumptions remain true. Every CIO still has to deliver excellence in the fundamentals: the secure and reliable delivery of information technology is one example. But it turns out that certain distinctions among organizations are important in understanding how CIOs can succeed in delivering against their businesses' particular strategic priorities.

At IBM, this means focusing on IT solutions—solutions that enable growth, accelerate enterprise performance and transform how people work. To achieve these goals, our mandate includes:

• Innovating through cloud computing, business analytics, acquisitions and other strategic initiatives.

• Automating and integrating business processes across the enterprise.

• Executing an IT strategy to support the workplace of the future, including a flexible system to support both mobility and the consumerization of IT.

Another strategic goal is to radically simplify IBM. So there is a continual focus on eliminating, simplifying, standardizing and automating work that prohibits integration or adds complexity. By 2015, we plan to cut in half our number of enterprise applications. Other key objectives are to dramatically improve cycle times and reduce transaction costs across the company with leaner, more agile processes. And to manage it all, we use dashboards to manage for business outcomes by providing a real-time view of the status of the business, from finance to infrastructure.

CIOs are lucky enough to have a unique end-to-end view of their businesses, and are the driving forces behind much of what it takes for companies to work smarter. They also look for ways to innovate in a complex global environment that promises even more change ahead. This latest study shares the collective experience and wisdom about how best to do that.

Thank you to all who invited us into your offices. Your candid responses and insightful conversations enabled us to articulate how today's CIOs can make essential differences in any organizational setting through both business and technical leadership.

Jeanette A. Horan
Vice President and Chief Information Officer
IBM Corporation

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Executive summary

How are technology leaders helping their organizations adapt to the
accelerating change and complexity that mark today's competitive and
economic landscape? To find out, we spoke in person with 3,018 CIOs,
spanning 71 countries and 18 industries.

This CIO Study is part of our ongoing C-suite Study Series, encompassing
interviews with more than 13,000 C-suite executives over the past six
years. Public and private sector CIOs described both the challenges and
opportunities from increasing complexity. They shared how they are
innovating with technology for organizational success. These in-person
conversations, along with our statistical analyses of responses, under-
score the ever-more vital role of the CIO. Importantly, we found that CIOs'
thinking today is more like that of CEOs than when we spoke with CIOs
two years ago.

In our last CEO Study, leaders told us that creative leadership, new
customer relationships and operating dexterity are the keys to twenty-first
century success.[1] Here, CIOs shed new light on how they focus their
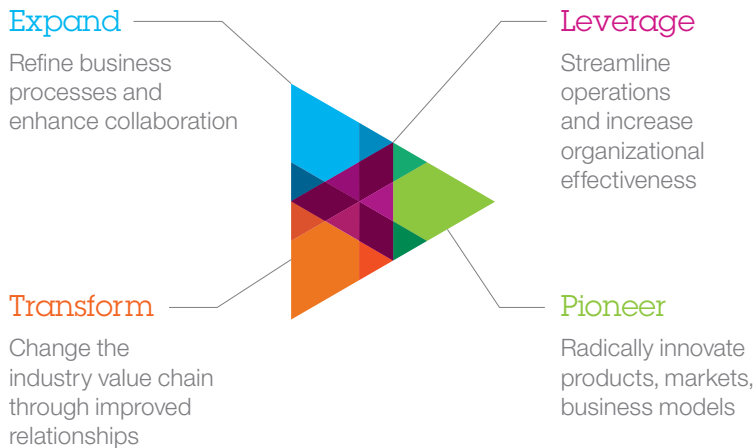efforts and their teams on these and other critical business objectives.

CIOs increasingly help their public and private sector organizations cope
with complexity by simplifying operations, business processes, products
and services. To increase competitiveness, 83 percent of CIOs have
visionary plans that include *business intelligence and analytics,* followed
by *mobility solutions* (74 percent) and *virtualization* (68 percent). Since
our 2009 Global CIO Study, *cloud computing* shot up in priority, selected
by 45 percent more CIOs than before and leaping into a tie for fourth
place with *business process management* (60 percent each).[2]

Both cloud computing and outsourcing are critical tools for CIOs to reallocate internal resources from routine system maintenance toward tasks that are most valuable to their organizations. *Master data management, customer analytics, data warehousing* and *visual information dashboards* are CIOs' top priorities for turning data into insights that lead to better and faster business decisions.

The CIO Mandate

While these priorities span the breadth of our global CIO sample, our study uncovered discernable differences among CIOs. Using state-of-the-art statistical and textual analysis of responses, we saw patterns that identified distinct approaches to IT leadership based on the specific needs and objectives of an organization.

Though virtually all CIOs are responsible for delivery of essential services—managing digital infrastructure and enforcing security, data integrity and system availability—our research identified four distinct "CIO Mandates" that are based *primarily* on how each organization views the role of IT.

Expand
Refine business processes and enhance collaboration

Leverage
Streamline operations and increase organizational effectiveness

Transform
Change the industry value chain through improved relationships

Pioneer
Radically innovate products, markets, business models

Leverage

These organizations view IT as a provider of fundamental technology services. Their CIOs are asked to leverage IT to streamline operations for greater organizational effectiveness.

Expand

This widespread mandate includes organizations that expect CIOs to manage a balanced set of responsibilities that range from fundamental to visionary. Their CIOs lead IT operations that help expand organizational capabilities by refining business processes and enhancing enterprise-wide collaboration.

Transform

Organizations with this mandate see IT primarily as providers of industry-specific solutions to change the business. These CIOs are called upon to help transform the industry value chain by enhancing relationships with customers, citizens, partners and internal clients.

Pioneer

Here, organizations view IT predominantly as a critical enabler of the business/organizational vision. This group of CIOs is invited to help pioneer or radically re-engineer products, markets and business models.

The road ahead for CIOs

To be successful, CIOs must understand the needs and goals of their organizations, agencies, divisions or business units, and deliver on their unique mandates. Communicating effectively with colleagues in the C-suite to reach explicit agreement on how IT can best support business objectives is vital. So is disseminating that understanding so that C-suite executives and other stakeholders acknowledge and support IT's primary focus.

Yet these mandates represent a snapshot in time. They can change with shifts in the economic, competitive or technological landscapes. When the objectives of the organization change, so too may the CIO Mandate. CIOs are uniquely positioned to help their organizations cope with the volatility and complexity of the twenty-first century— by generating valuable insight from data and serving as catalysts for innovation.

"The most value will come from being able to provide the right data to the right people in a secure way, and to deliver effective and stable operations."

Birgitte Drewes, CIO, Lægemiddelstyrelsen, Danish Medicines Agency

Who needs a CIO?

Major technological advances are reshaping business, government and society. Technology has become ubiquitous and data is expanding exponentially. In turn, the role of the CIO is growing more critical to organizations across the globe.
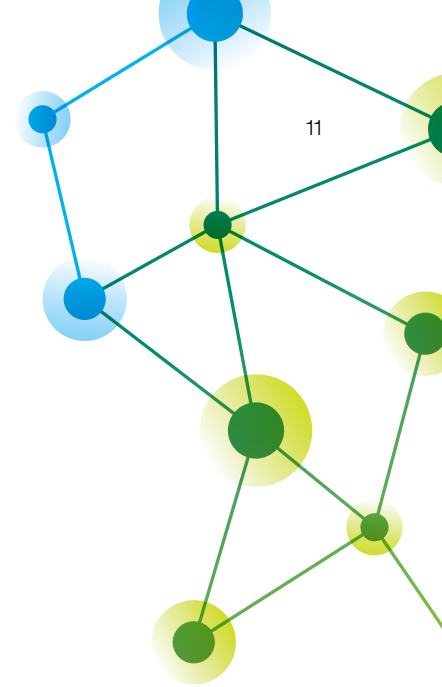
Managing the inescapable proliferation of data

We live in a world deeply infused with data. Vast quantities are being generated and captured as the world's economic and societal systems become more instrumented and interconnected. And those same systems are becoming ever-more connected and complex. All the while, the pace of change is unabated.

There are now more than a billion transistors per human, and they are not only found in servers, PCs, smartphones, tablets and MP3 players, but also in appliances and automobiles, power grids, roadways, railways and waterways. RFID tags and sensors are tracking products in supply chains for everything from pharmaceuticals to livestock. Global digital content created will increase some 30 times over the next ten years—to 35 zettabytes (that's a trillion gigabytes, or a 1 followed by 21 zeroes).[3]

This data bounty—and burden—impacts every function of enterprises and institutions. But the heaviest responsibility and the most promising opportunities of a new, hyper-information age fall where you would expect—on the desk of the Chief Information Officer. More than ever, CIOs are essential to capitalizing on complexity and managing the impact of external forces. As the generation, collection and analysis of data rises in importance to organizations of all stripes, so does the role of the CIO.

The shared executive agenda

As the ability to extract insights from structured and unstructured data increases in value, CIOs are moving closer to the locus of power in their organizations. Therefore, it should not come as a surprise that there is a stronger alignment in the thinking of CEOs and CIOs. When asked to rank the impact of external forces on their organizations, the newest ranking by CIOs more closely matched the list that CEOs identified in our 2010 study.[4]

In 2010, CEOs ranked *technological factors* as the second most important external force—after the perennial top answer, *market factors*—that will impact their organization over the next three to five years. Those same executives told us they operate in a world that is substantially more volatile, uncertain and complex.
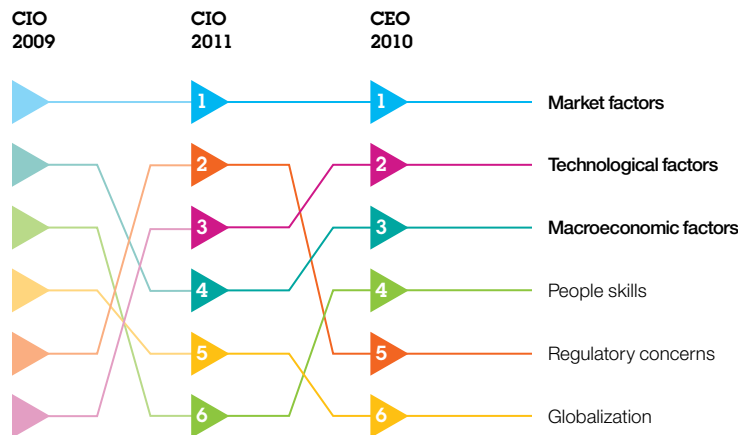

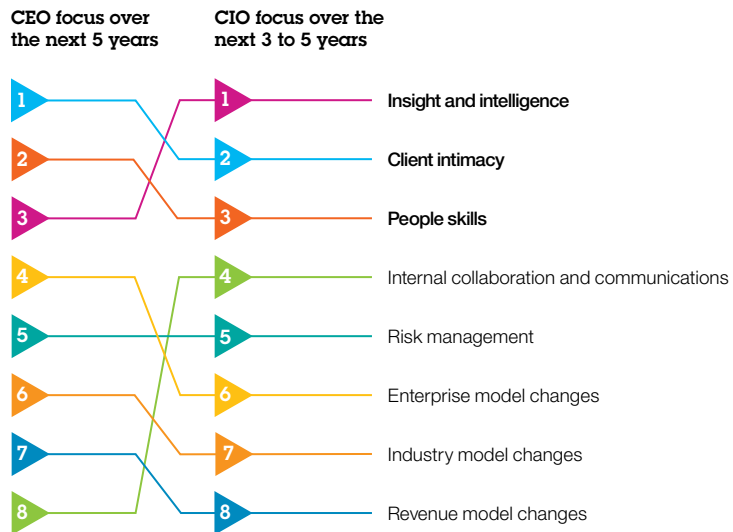| CIO 2009	CIO 2011	CEO 2010	
►	1	1	**Market factors**
►	2	2	**Technological factors**
►	3	3	**Macroeconomic factors**
►	4	4	People skills
►	5	5	Regulatory concerns
►	6	6	Globalization

Figure 1

Seeing eye-to-eye with the CEO CIOs' view of the most significant external forces impacting their organizations now aligns more closely to that of CEOs.

CIOs now demonstrate a strong alignment with this line of thinking and are highly focused on insight, clients and people skills to manage that complexity. Asked where they will focus IT to help their organizations' strategy over the next three to five years, the vast majority of CIOs identified *insight and intelligence*, *client intimacy* and *people skills* as their top three priorities, as did CEOs.

Figure 2

Priorities in sync CIOs and CEOs both aim to focus on insight and intelligence, client intimacy and people skills over the foreseeable future.

**CEO focus over
the next 5 years**

**CIO focus over the
next 3 to 5 years**

1	Insight and intelligence
2	Client intimacy
3	People skills
4	Internal collaboration and communications
5	Risk management
6	Enterprise model changes
7	Industry model changes
8	Revenue model changes

Expediting intelligence

Our research suggests that this new alignment comes as CEOs better understand the importance of technology. They increasingly rely on CIOs to turn data into usable information, information into intelligence and intelligence into better decisions.

As a result, CIOs are assessing multiple means to make better use of burgeoning data stores. *Business intelligence and analytics* is of utmost importance as CIOs' top visionary plan to increase competitiveness over the next three to five years. Although it was on the 2009 list, cloud computing took a giant leap. Now it has come of age, rising more than any other CIO priority. When asked how they will translate data into intelligence, CIOs named *master data management, customer analytics, data ware-housing* and *visual information dashboards*. Each initiative was cited by roughly two-thirds of our sample or more.

"We will provide the appropriate technology for the continuously changing business environment and more accurate information to the business."
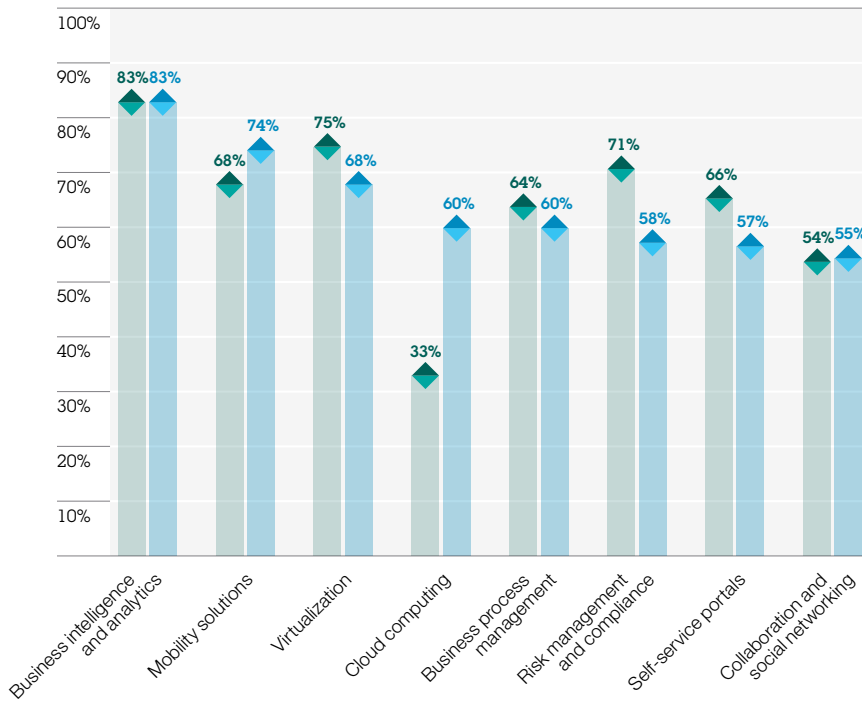
Zsolt Rasztovits, CIO, MKB Bank Zrt.

Figure 3

CIOs are recalibrating their toolsets While the top three priorities remain the same, mobility and cloud computing made the biggest leaps among their visionary plans.

◆ 2009
◆ 2011

Across our entire sample, CIOs voiced remarkable consensus on what it takes to successfully implement their IT strategy. CIOs identified the top three success factors for IT initiatives as putting in place the *correct IT/ business talent*, *managing beyond line responsibilities* and *creating the right conditions before starting*.

Where the paths diverge

Perhaps the most useful insight to emerge from this study, however, is not what makes CIOs the same, but what makes them different. The primary differences among the CIOs we spoke with lie in their organizations' business needs and goals, and how CIOs can achieve those goals by leveraging business and information technology.

CIOs everywhere spend at least a portion of their time on IT fundamentals like managing their organizations' digital infrastructure (setting standards, determining architectures, selecting vendors, and enforcing security, data integrity and system availability). Beyond managing these prerequisites, our research identified four distinct "CIO Mandates," based on how each organization views the role of IT: Leverage, Expand, Transform and Pioneer.

These mandates were derived from iterative cluster analysis, including state-of-the-art statistical and textual analysis of the thousands of CIO responses. It revealed typical response patterns associated with each mandate. Each pattern indicated a distinct approach to IT leadership derived from specific organizational needs.
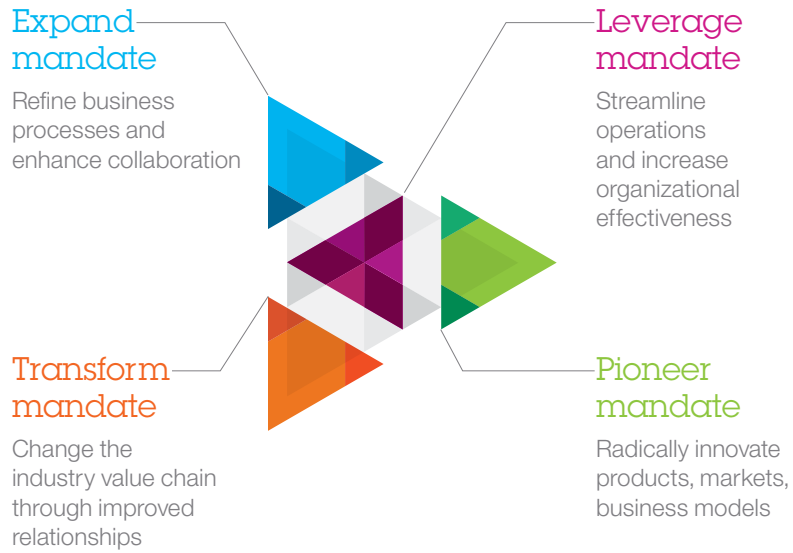
Expand mandate

Refine business processes and enhance collaboration

Leverage mandate

Streamline operations and increase organizational effectiveness

Transform mandate

Change the industry value chain through improved relationships

Pioneer mandate

Radically innovate products, markets, business models

Figure 4

The CIO Mandate Effective CIOs know and deliver on a mandate that is defined by the predominant goals of the enterprise.

"Profits are thin and hence, using technology for increasing efficiency in people and processes becomes ever-more important."

Vimal Goel, Chief Manager,
IT, HPCL — Mittal Energy Ltd

Of course, virtually all CIOs have some responsibilities in each of the areas that define the individual mandates. For example, even in the most innovative organizations, CIOs are still expected to manage the essentials of leveraging technology to boost efficiency; and CIOs operating with a Leverage mandate spend some of their time on initiatives that expand the value chain and help re-engineer the enterprise.

Which mandate a CIO operates within is determined by the needs and expectations of the business unit, agency or corporation. Individual organizations have a variety of technology needs and objectives based on an array of variables. These variables include industry segment, geography, competitive positioning, size, maturity and others. The CIO Mandate identified in our analysis establishes the *primary* focus of the CIO, as well as the core competencies required of the IT organization. That is why it is vitally important that each CIO has a clear understanding of his or her mandate. And, the entire organization must recognize it. The success of the IT function, and by extension the enterprise itself, truly depends on it.
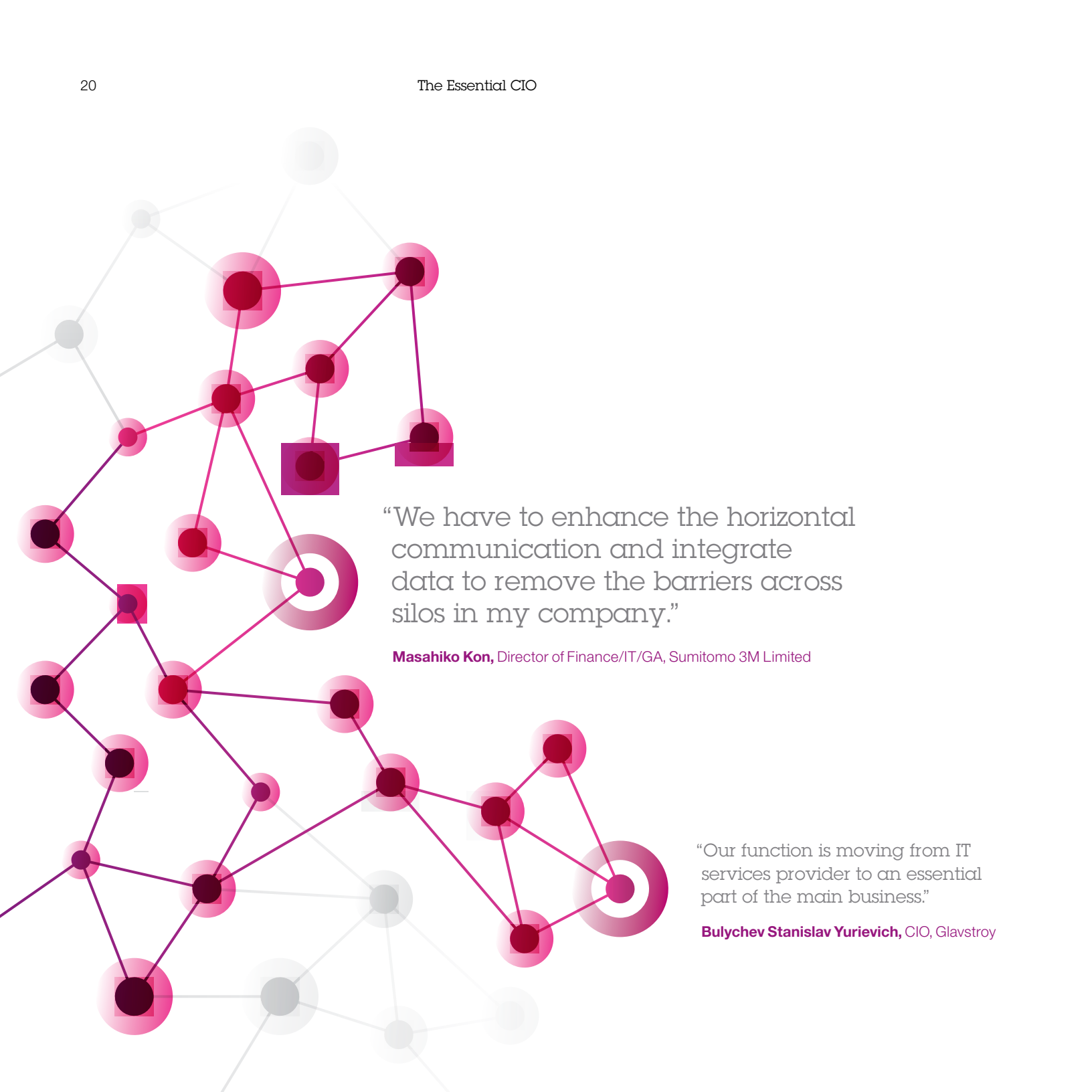
These mandates represent a snapshot in time. Any mandate can change due to shifts in the economic and competitive landscape or other factors that result in new organizational objectives. Our analysis shows that the four mandates exist across industries and geographies. But every organization has a dominant view of IT that empowers the CIO to achieve its goals.

Each mandate delivers value

Interestingly, we observed little correlation between financial performance and any particular CIO Mandate. CIOs can deliver real business value with every type of mandate. However, within each mandate, we did see some notable differences between top-performing organizations and underperforming organizations.

We asked respondents to assess their organizations' competitive position. Those who selected "substantially outperform industry peers" were identified as top performers, while those who selected "somewhat or substantially underperforming industry peers" were grouped as lower performers. In the chapters that follow, we highlight those areas where outperformers described substantially different plans compared to underperformers.

These mandates are not a progression or continuum of responsibilities for CIOs. With any mandate, savvy CIOs should be alert for opportunities to drive business value.

"We have to enhance the horizontal communication and integrate data to remove the barriers across silos in my company."

Masahiko Kon, Director of Finance/IT/GA, Sumitomo 3M Limited

"Our function is moving from IT services provider to an essential part of the main business."

Bulychev Stanislav Yurievich, CIO, Glavstroy

Leverage

Organizations that demand high-performance IT need CIOs to focus on managing essential IT activities and getting information to decision makers faster and more accurately.

The business expects CIOs operating with the Leverage mandate to concentrate about half of their efforts on the fundamentals of delivering IT services. Such organizations emphasize streamlining and simplifying technology to enhance organizational effectiveness.

Business view of IT

52% **Provider of fundamental technology services**

28% Facilitator of organizational process efficiency

14% Provider of industry-specific solutions to support business

6% Critical enabler of business/ organization vision

Engineering the well-oiled operation

Many industries across the globe are undergoing rapid, profound changes. Yet a small-but-solid foundation of the economy consists of relatively mature sectors. In these industries, efficient operations are more important to growth than attaining the utmost agility. Aerospace and Defense, Chemicals and Petroleum, and Industrial Products, for example, require large capital investments. Compared to their counterparts in other industries, such CIOs have less freedom to take on the risks associated with adopting new technology.

Figure 5

Mature industries seek the essentials
Mature industries that may be more risk-averse have the highest concentration of Leverage mandate organizations.
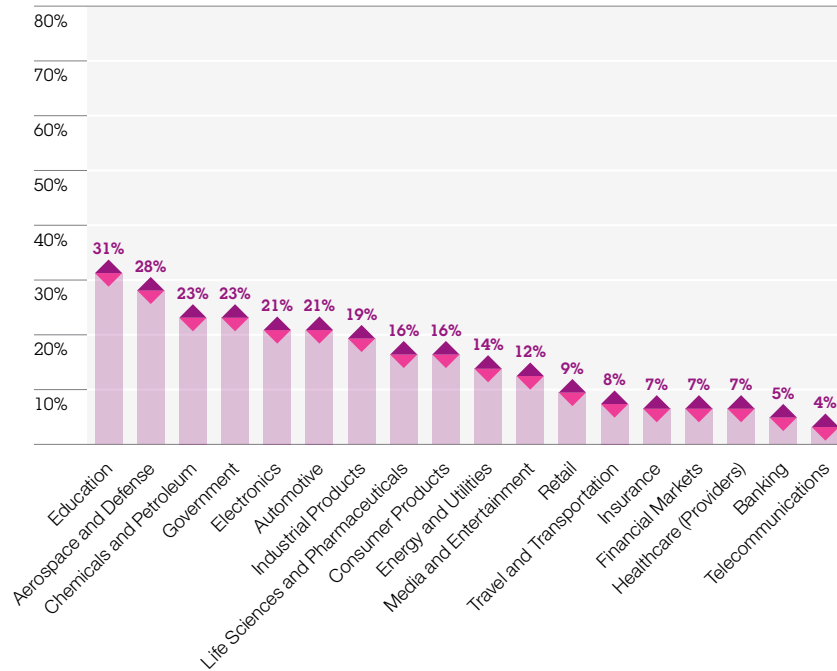
And for the public sector, technological advances, most notably Internet pervasiveness, have enabled e-government and vast improvements in how governments deliver services. Yet those services—public health and safety, construction and maintenance of critical infrastructure, social programs and the like—are relatively stable in the short term. The biggest challenge remains delivering more services to citizens at a lower cost.

Enhance organizational efficiency and effectiveness

Fourteen percent of CIOs we interviewed operate with a Leverage mandate. CIOs with this mandate drive improvements in governance and controls, procedures, internal collaboration and transparency between IT and the business.

CIOs whose responses correlate with a Leverage mandate are continually reviewing their legacy environment, with an eye toward cost control. To keep costs in check, their top tools are aimed at rationalizing, renewing and consolidating application portfolios and hardware environments over the next three to ten years.

Internal collaboration and *client interaction* are among the principal goals of Leverage mandate CIOs. Nearly three out of four expect changes to their internal collaboration processes to have high transformative potential for their organizations. And almost as many view changes in client interaction processes as high-impact initiatives. "We need to cope with change by re-engaging with our internal customers in a more intimate way," said one Government CIO in Australia. "The solution is part structural and part cultural."

"The ROI of many projects is very difficult to quantify. How do you measure the ROI of a cloud computing or SOA implementation and the increasing flexibility they provide the organization?"

Kalman Tiboldi, CIO, TVH—Group Thermote & Vanhalst

Figure 6

Collaboration and communication are key These IT leaders look to new technologies to improve how they work with clients.

▲ Low transformative potential
▲ Average transformative potential
▲ High transformative potential

Change internal collaboration processes

8%   18%   **74%**

Change client interaction processes

10%   21%   **69%**

"One of our main challenges is to find the technical resources required to meet the demands of our customers."

Tito Otero, CIO, Ferreyros S.A.A.

Learning from the plans of top performers

CIOs in top-performing Leverage mandate organizations approach several things quite differently than their lower performing peers. Nearly two-thirds more of these CIOs identified *sharing more information with clients* as a key customer relationship initiative. To do this, CIOs are providing tools that enhance internal communications, such as real-time message exchange, company blogs and other types of electronic and mobile collaboration.

Another success factor important to more CIOs from outperforming Leverage mandate companies was having the *correct IT/business talent*. Combining the right technology with employees that have the right skills is a goal of many. "We need our IT staff to be more business-centric to build trusted relationships with business units," one Education CIO in Australia told us.
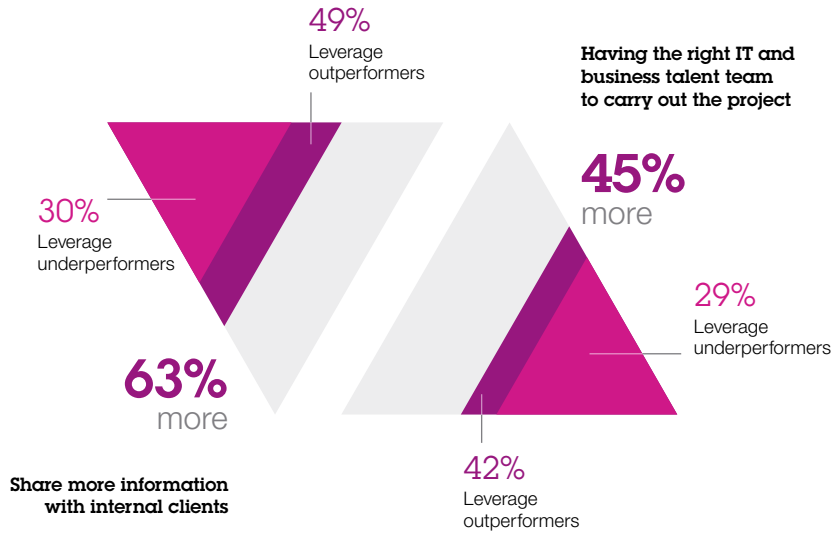
49%
Leverage
outperformers

30%
Leverage
underperformers

Having the right IT and
business talent team
to carry out the project

45%
more

29%
Leverage
underperformers

63%
more

**Share more information
with internal clients**

42%
Leverage
outperformers

Figure 7

Outperformers share more Top
performers prioritize sharing information
internally and tapping the right
people more than underperformers.

Recommendations

Deliver on the Leverage mandate

▶ **Open new communication channels** Make it a high priority to improve communication and collaboration throughout the organization, especially between the business and IT. Engage internal customers more fully in key IT planning and decision making processes.

▶ **Tap the right team** Carefully match the IT and business talents of your team to the tasks at hand. Implement rotational programs to expose IT personnel to the full range of enterprise operations, including customer-facing positions.

▶ **Standardize and consolidate** Standardize the IT infrastructure and related processes organization-wide. Evaluate and consolidate IT to address gaps and overlaps in the existing architecture. Improve IT governance. Implement basic business process management.

▶ **Update and renew** Think ahead to develop practical plans to gradually renew legacy systems and hardware. Introduce and test new technologies conservatively to align with organizational needs and priorities, and control legacy costs.

▶ **Discover the dashboard** Establish dashboards that leverage data collected to measure key business and IT metrics, including: ROI and revenue; customer satisfaction levels and other customer information; response time/time to market; system availability/downtime; and employee satisfaction.

AkzoNobel

Balancing IT efficiency with commercial agility

Case study

AkzoNobel is the world's largest paints and coatings company, and a major producer of specialty chemicals, with a presence in over 80 countries.[5] But it's got even bigger plans. It wants to boost its revenues from €14.6 billion to €20 billion (US$20.4 billion to US$28 billion) in the next few years.[6] The IT team has a key part to play in fulfilling that goal.

When Pieter Schoehuijs took over as CIO in 2009, he was tasked with strengthening the management and governance of IT, and aligning AkzoNobel's IT with its business drivers. The question was how to optimize the use of IT resources without compromising the flexibility of the business units. The paints, specialty chemicals and coatings business areas operate autonomously, which makes them very agile but precludes a completely shared infrastructure.

The IT department has focused on consolidating where possible to do so without restricting the business units. It created a shared telecommunications environment, data centers and business applications, supported by an electronic data interchange hub, intranet platform and corporate procurement system. It is also establishing shared standards and support desks, and integrating the back-office functions within the business units.

The number of ERP systems AkzoNobel uses has already been cut by over 30 percent. The paint businesses have shared management information systems, making it much easier to compare costs and revenues. And internal customer satisfaction has soared. But the IT department is not stopping there. It is, for example, implementing a tool to get real-time financial information via mobile devices, developing a set of best purchasing practices and actively making suggestions to the business units about how to use standard solutions and processes to save time and money.

over
30%
reduction in the number of ERP systems

Case study

Allied Beverage Group
Building a consolidated architecture

Allied Beverage Group is New Jersey's biggest wholesale distributor of wines and spirits. Formed from a three-way merger in the late 1990s, the group is now among the ten largest such distributors in the United States.[7]

In a marketplace where superb customer service differentiates, Allied needed stronger technology with which to compete. As Allied's predecessor firms each brought its own technologies, this served to fragment and disintegrate IT systems and the organization.

So, when Brian Margolies was brought in as the organization's first CIO in 2009, he immediately launched a 90-day review to find out what worked and what didn't. This resulted in a three-year, fully aligned, strategic IT plan. With Board support, he's realized nearly all his goals "on time and under budget" in only two years.

He consolidated most IT resources and applications in a shared services center, overhauled the network infrastructure and instilled much more discipline in the IT function, reducing system downtime from up to one hour per week to greater than 99 percent availability. A new self-service e-commerce portal is designed to transition the sales staff toward consultative selling and increased revenue, and even won an award for technical innovation.[8]

What's next on the list? Margolies wants to enhance the e-commerce engine with Web 2.0 capabilities and integrated content useful to supply chain partners, move to electronic proof of delivery and use predictive analysis to manage Allied's inventory.

"In our market,
regulatory impact
is significant, precluding various forms of competition that are commonplace in most industries. Innovative IT is critical to achieve a competitive advantage through excellent B2B customer service."
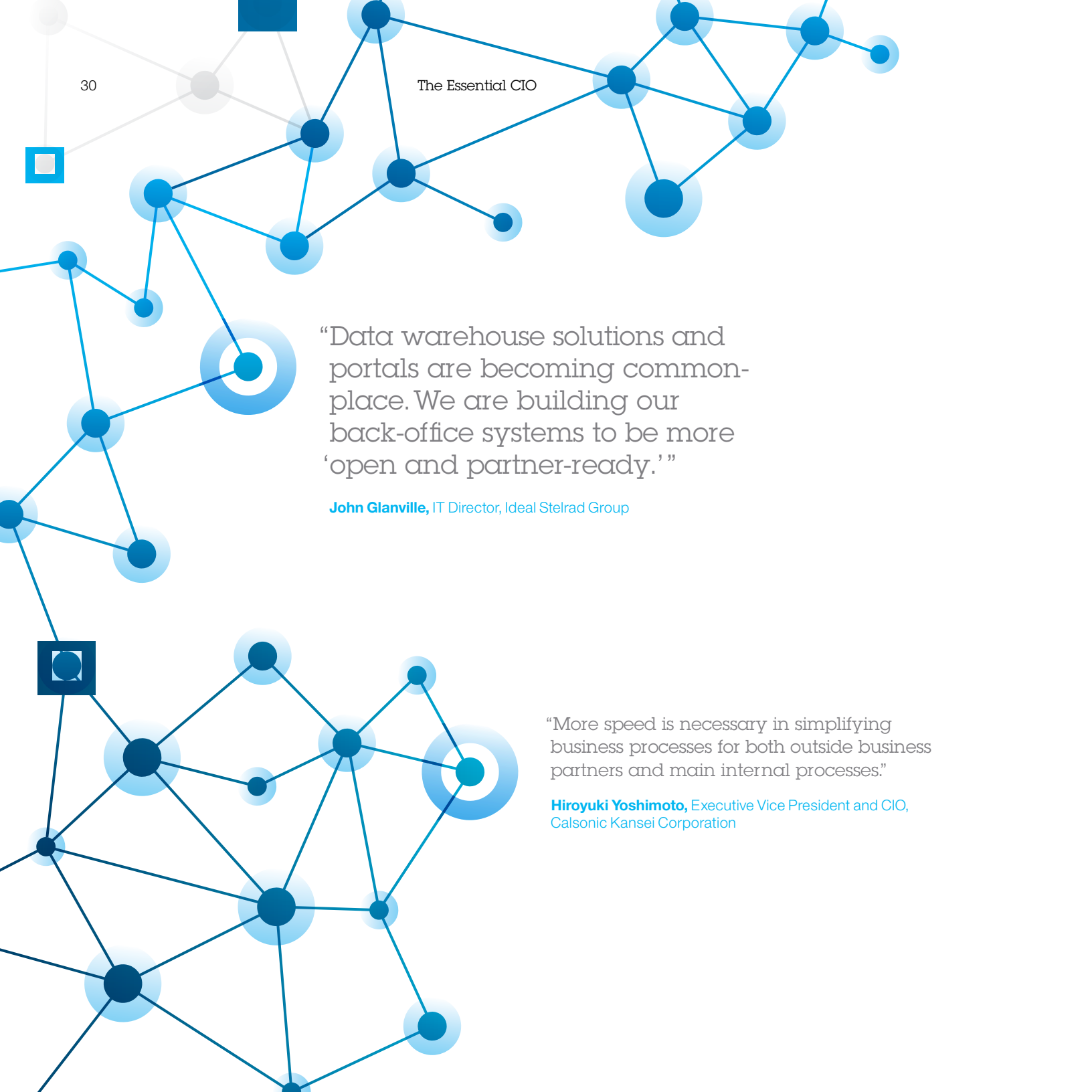
Brian Margolies, CIO,
Allied Beverage Group

Excel at Leveraging

Are you essential?

▶ In what ways will you enhance relationships and improve communication throughout the organization?

▶ What is your plan to get, keep and grow people with the IT and business skills that your team needs most?

▶ How many disparate architectures does your organization currently have, and why?

▶ Are you aggressive enough in rationalizing hardware and the application portfolio as part of controlling costs?

▶ How do your dashboards measure the value of IT in terms of business benefits?
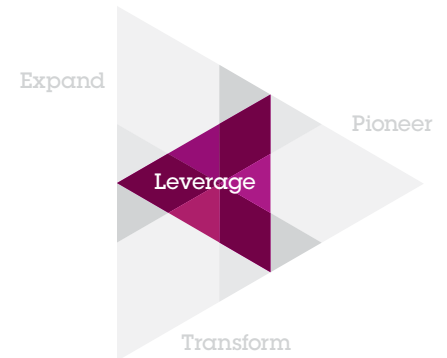
"Data warehouse solutions and portals are becoming commonplace. We are building our back-office systems to be more 'open and partner-ready.'"

John Glanville, IT Director, Ideal Stelrad Group

"More speed is necessary in simplifying business processes for both outside business partners and main internal processes."

Hiroyuki Yoshimoto, Executive Vice President and CIO, Calsonic Kansei Corporation

Expand

CIOs focused on cross-enterprise growth continuously tune business processes and internal collaboration to gain tighter integration.

Like all CIOs, those working with an Expand mandate are responsible for the fundamentals—a well-run digital infrastructure that offers data security, integrity and system availability. Yet, they must also continually refine operations to optimize efficiency and seek substantial competitive advantage with the help of IT. They are expected to create enterprise-wide efficiencies by streamlining business processes, improving collaboration across the enterprise and enabling faster, more effective decision making.

Business view of IT

27% Provider of fundamental technology services

32% **Facilitator of organizational process efficiency**

27% Provider of industry-specific solutions to support business

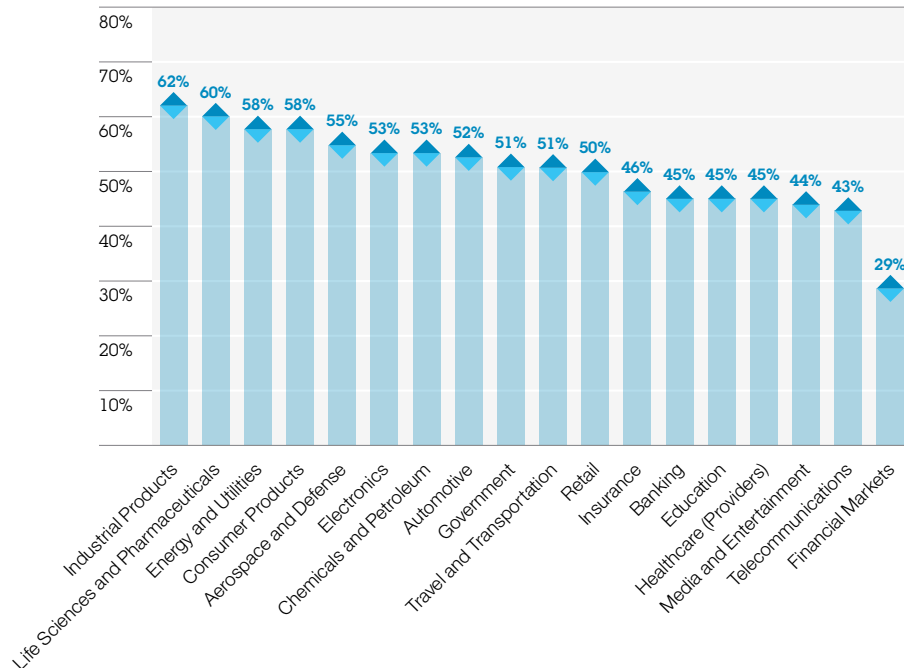15% Critical enabler of business/organization vision

Facilitating the optimal enterprise

CIOs associated with an Expand mandate are asked to help re-engineer
their organizations, making them faster, more flexible and better equipped
to turn data into insights. Half the CIOs we spoke with offered responses
that correlate with an Expand mandate. They were more than double the
size of any other group identified in our analysis. Simply put, it is what
organizations today are asking for most often from their CIOs.

CIOs operating in this type of organization have the most balanced mix
of responsibilities, allocating their energy relatively evenly across the full
spectrum from fundamental to visionary. The dominant view of IT in such
organizations is as *a facilitator of organizational process efficiency*. Yet
CIOs associated with this mandate estimated they spend, on average,
only slightly less time *providing fundamental IT services and providing
industry-specific solutions*. Their role as *a critical enabler of the
organization's vision* is less demanding, though far from insignificant.

Figure 8

The dominant CIO Mandate Expand
is the most common mandate within
all industry segments except Financial
Markets organizations, which employ
more Pioneer mandates.

Industry	Percentage
Industrial Products	62%
Life Sciences and Pharmaceuticals	60%
Energy and Utilities	58%
Consumer Products	58%
Aerospace and Defense	55%
Electronics	53%
Chemicals and Petroleum	53%
Automotive	52%
Government	51%
Travel and Transportation	51%
Retail	50%
Insurance	46%
Banking	45%
Education	45%
Healthcare (Providers)	45%
Media and Entertainment	44%
Telecommunications	43%
Financial Markets	29%

Partnering for profitability

Good things such as tighter integration of business and technology are high priorities for CIOs associated with the Expand mandate. Better integration allows CIOs to focus IT resources on the most critical needs of the business. CIOs are freeing staff and resources to meet these critical objectives by updating legacy systems with an eye toward modernization and outsourcing non-critical IT functions. They are deploying new interactive communication tools to spur collaboration and transparency, enhance the visibility of supply chain data and improve business process management.

Changing the mix of capabilities, knowledge and assets within the organization

14%   20%   66%

Doing everything in-house versus partnering

17%   18%   65%

In keeping with their interest in outsourcing, CIOs at organizations that demonstrate an Expand mandate are forsaking the *do-everything-in-house* approach that once characterized many IT shops and instead plan to *partner extensively.* Nearly four times as many said they plan to *partner* as those who will continue to use *in-house-only resources*. A similar two-thirds majority said they will *deeply change the mix* of capabilities, knowledge and assets within their organizations, compared to fewer than one in five who will stick with the *status quo*.

"The alignment of strategy, structure, and process is critical and IT plays a surprisingly large and important role in that. When these three are in perfect clarity, the business model is simplified and an enormous number of good things will happen."

John McDermott, CIO, Xerox Corporation

Figure 9

Finding trusted partners is vital Many Expand mandate CIOs look to partners as a fresh source of new skills and expertise.

▲ Maintain the current mix
▲ Both
▲ Deeply change the mix

▲ Do everything in-house
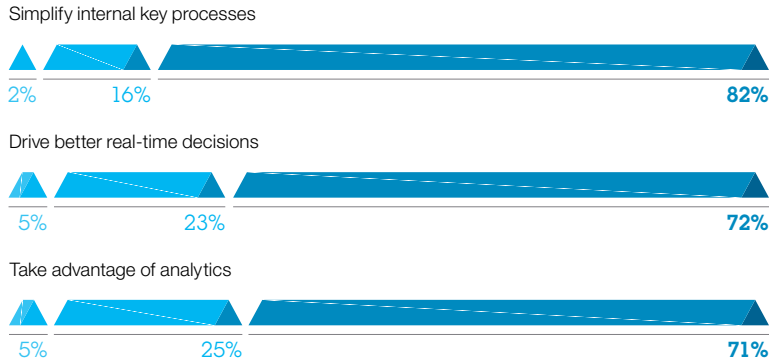▲ Both
▲ Partner extensively

Figure 10

Simplify and conquer CIOs with an Expand mandate streamline business processes and enable better decisions by leading in the use of analytics.

▲ No involvement
▲ Support
▲ Lead

Simplify, analyze and automate

Possibly the most critical requirement of organizations that demonstrate the Expand mandate is to enable better decision making. They look to IT to get the most timely, relevant and accurate information in the hands of business leaders when they need it. That's why process and product simplification and analytics to drive better real-time decision making are top priorities for Expand mandate CIOs. Advanced business process management tools can be critical in identifying inefficiencies and mapping internal processes to customer needs.

Simplify internal key processes

2%   16%   **82%**

Drive better real-time decisions

5%   23%   **72%**

Take advantage of analytics

5%   25%   **71%**

An overwhelming 98 percent of those CIOs said they would lead or support efforts to *simplify internal key processes*. A full 95 percent said they would lead or support efforts to *drive better real-time decisions* and *take advantage of analytics*. "We ask 'What is the specific business outcome to achieve?' and 'What are the required processes and capabilities?'" said an Electronics CIO in Australia. "Then we simplify and automate."

Outperformers collaborate and integrate

For CIOs in top-performing Expand mandate organizations, collaboration and integration are especially important. More than two-thirds of those CIOs said they would focus more on internal collaboration and communication, compared to less than half in underperforming organizations with an Expand mandate. Advanced collaboration suites with an array of functions—wikis, blogs, file repositories, event calendars, discussion boards, image and video galleries, collaboration spaces and others—are critical enablers for these CIOs.

Their focus on integration also separates the outperformers from the underperformers with an Expand mandate. More than twice the number of CIOs at top-performing organizations said they have *integrated business and technology for innovation* to a large extent than did CIOs at underperforming organizations. "Internal collaboration is a must, cultural issues have to be addressed, and knowledge has to be shared and used," a Banking CIO in India said.
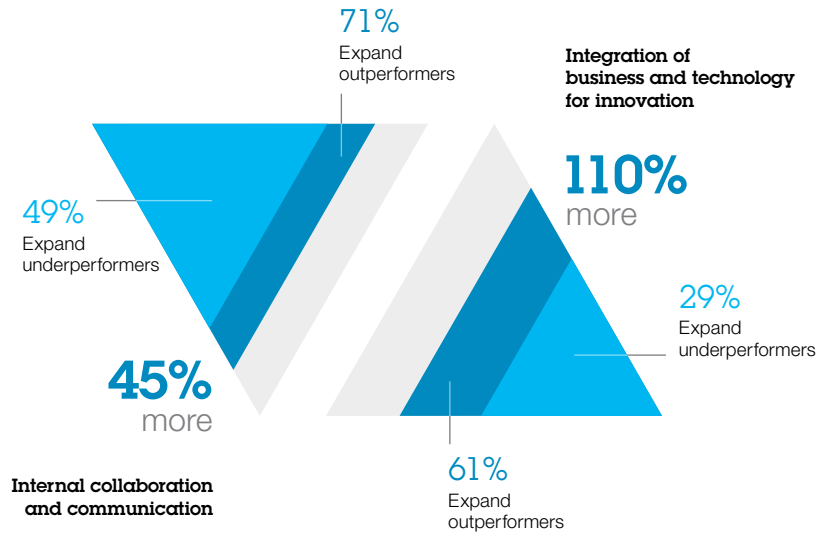
"Make sure that as we get bigger, we don't get more complex, but scale efficiently."

John Murray, CIO, EMTS—Etisalat Nigeria

"One important goal is continuous cultivation of the IT culture,"
a Banking CIO in Malaysia told us, "and being a partner to the
business to create value for customers, the organization, employees
and business partners."

Figure 11

Outperformers team with business More CIOs
in outperforming Expand organizations cited
integration and collaboration with the business
as keys to innovation than did underperformers.

71%
Expand
outperformers

**Integration of
business and technology
for innovation**

49%
Expand
underperformers

110%
more

29%
Expand
underperformers

45%
more

**Internal collaboration
and communication**

61%
Expand
outperformers

Recommendations

Deliver on the Expand mandate

▶ **Enable state-of-the-art collaboration** Evaluate and adopt new tools to strengthen enterprise-wide collaboration and real-time exchange of data. Explore and introduce unified messaging, mobile data solutions, anytime/anywhere models and desktop virtualization.

▶ **Tighten business and technology integration** Increase two-way transparency by involving internal clients in IT planning and decision making. Help IT staff focus on winning external customers and growing revenues, while encouraging business leaders to target innovation.

▶ **Focus on the core** Rely on trusted partners to handle non-strategic IT functions. Evaluate the benefits of outsourcing and cloud computing. Reallocate internal resources to perform tasks that are most valuable to the organization.

▶ **Simplify, automate and integrate** Implement advanced business process management. Align business processes with customer requirements.

▶ **Advance the metrics** Provide sophisticated dashboards through more advanced types of analytics, including: ROI and revenue; IT cost savings; advanced customer analytics; response time/time to market; end-user satisfaction; and differentiating IT performance factors.

Case study

YES BANK

Cashing in on clever outsourcing

Keeping IT costs to 9%

of total operating expenditure

YES BANK is one of India's fastest growing private sector banks. Founded in 2004, it has become a full-service commercial bank, with two national operating centers and 185 branches in 149 cities in just seven years.[9] The decision to outsource non-core IT tasks and concentrate on its primary banking business has fuelled much of this expansion.

The management of YES BANK realized at its inception that if the bank was to compete in a crowded sector, it would have to offer a distinctive value proposition and that technology could provide the differentiating factor. But rather than try to do everything itself, and incur huge capital costs in the process, the bank chose to outsource many of its technology requirements, Senior President and CIO Umesh Jain told us.

YES BANK retains control over all decisions about its IT strategy, governance and architecture, but relies on carefully selected external providers for commoditized assets and services like infrastructure management, application development and maintenance. It classifies these vendors as strategic or tactical, depending on the type of products or services they provide and their level of impact on the business. It monitors strategic vendors intensively, with regular reviews of their performance.

The bank also buys off-the-shelf products and services wherever possible, using a "best-of-need" rather than "best-of breed" purchasing philosophy. And it partners extensively with other organizations to co-create value, Jain explained.
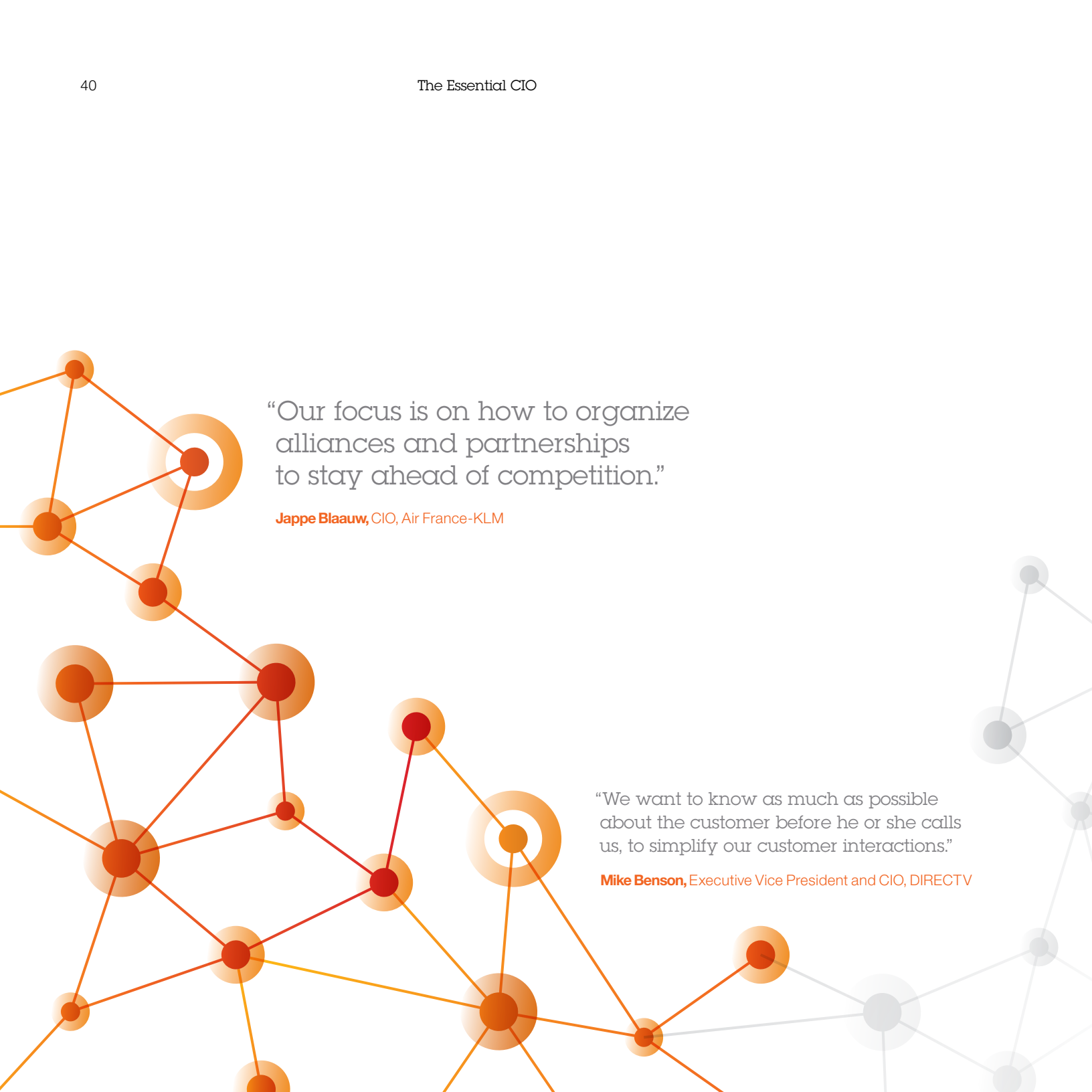
YES BANK's smart approach to outsourcing has served it well. It has succeeded in keeping its IT costs to 9 percent of total operating expenditure, compared with the industry average of 15 to 22 percent. Its flexible IT infrastructure remains capable of supporting future growth.

Excel at Expanding

Are you essential?

▶ What leading-edge collaboration tools have you implemented across the enterprise to help integrate technology with business?

▶ How deeply are your internal customers involved in your key planning and decision making processes?

▶ What is your plan to engage partners to outsource information technology functions?

▶ Which persistently inefficient processes can you eliminate or improve to increase customer satisfaction?

▶ How do you work with internal customers to ensure that dash-boards measure enterprise-wide key performance indicators?

Expand

Pioneer

Leverage

Transform
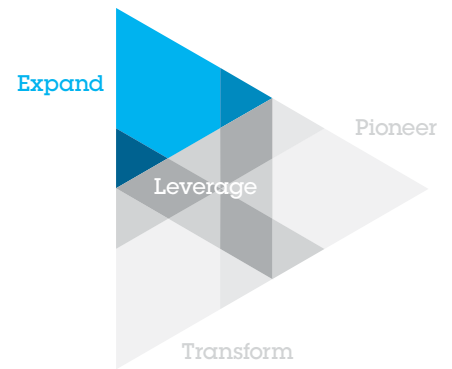
"Our focus is on how to organize
 alliances and partnerships
 to stay ahead of competition."

Jappe Blaauw, CIO, Air France-KLM

"We want to know as much as possible
 about the customer before he or she calls
 us, to simplify our customer interactions."

Mike Benson, Executive Vice President and CIO, DIRECTV

Transform

CIOs look beyond the boundaries of the enterprise to simplify business processes and generate real-time insights up and down the value chain.

Organizations that operate with a Transform mandate expect IT, more than anything else, to be a provider of industry-wide solutions to support business. On average, Transform mandate CIOs are expected to spend more than one-third of their time or budget fulfilling that role. Somewhat less of their energy is devoted to either visionary responsibilities or business process improvements. CIOs with this mandate are typically seen to have the essentials well in hand and spend much less time on such activities.

Business view of IT

14% Provider of fundamental technology services

26% Facilitator of organizational process efficiency

34% Provider of industry-specific solutions to support business

27% Critical enabler of business/organization vision

Simplifying the borderless business

The fragile global economy and increasingly fierce competition put new pressure on the value chains of many organizations. Those that must look beyond the four walls of the enterprise for an edge employ what we've identified as a Transform mandate. They call on their CIOs to help them challenge the *status quo*.

Nearly one-quarter of the CIOs we spoke to support organizations that operate with a Transform mandate, which is most common in Financial Services—including Insurance, Banking and Financial Markets. The Transform mandate is also more concentrated than average in Telecommunications, Healthcare and Retail, relatively dynamic industries that are feeling pressure to create new and stronger connections with end customers and other key stakeholders in their value chains to remain competitive.

Figure 12

A pervasive mandate Though not the dominant mandate in any one sector, Transform has a significant presence across a wide range of industries in our sample.
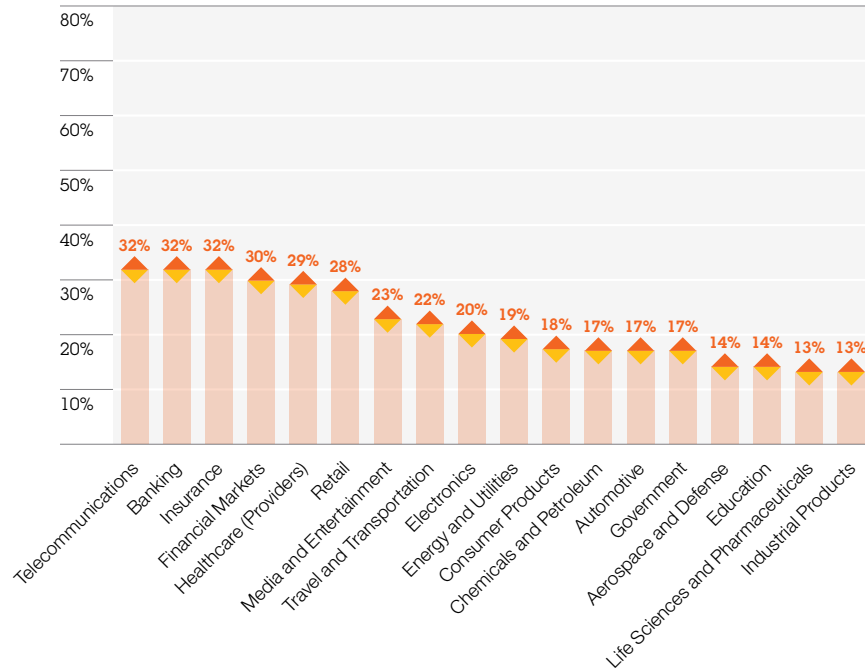
Reaching outside the organization

Beyond the delivery of basic IT services and business process improve-ments, Transform mandate CIOs are helping their public and private sector organizations fundamentally rethink the way they understand and interact with customers and partners alike. One key to extending the enterprise's reach is the use of "Big Data"—the vast volumes captured, for example, from instruments like sensors or RFID tags or data gleaned in real-time from millions of Web-based transactions.

And it's not just the volume of data that's exploding, but the velocity as well. Analyzing today's staggering volumes is beyond that of most traditional database management tools. To deal with them, real-time data collection and advanced analytics are a primary focus of organizations that have a Transform mandate. "To have real-time data feedback for the business improves visibility for better business management," said an Electronics CIO based in Taiwan.

Capturing the insights

So just how will CIOs unlock the insights their organizations are clamoring for? Analytics and data management hold the key to extracting greater value from data. Over the next three to five years, the majority of Transform mandate CIOs across our sample will focus on *customer analytics*, *product/service profitability analysis* and *master data management*.
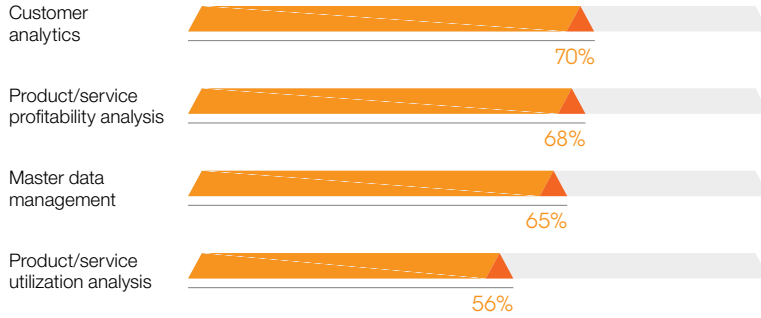
This means moving beyond traditional relational database management systems into the next generation of integrated data warehouses and analytical tools. A Consumer Products CIO in Australia said, "A master data management initiative will cleanse corporate data, facilitating our ability to deliver rich customer analytics for the business."

"We will be able to create value because we already have the content and the vision to make it useable in multiple devices. Our goal is to take that data, scrub it, and make it ubiquitous to the device."

Kevin Dabney, Executive Vice President and CIO, Wells Fargo—Wholesale Division

Figure 13

Gleaning greater insights Turning data into information and information into business intelligence is a top priority for Transform mandate CIOs.

Customer analytics — 70%

Product/service profitability analysis — 68%

Master data management — 65%

Product/service utilization analysis — 56%

Asked where they will focus IT to help their organizations' strategy in three to five years, the vast majority of CIOs we identified with a Transform mandate cited *leveraging better data with strong analytics to create insight and take actions*. "To create value, we will provide high-quality and accurate information to support business decisions," noted a Consumer Products CIO in Italy.

Figure 14

Enabling the intelligence enterprise Most Transform mandate CIOs will focus on a range of tools to drive better decision making over the next five years.

Leverage data to create insight — 80%

Drive better real-time decisions — 75%

Provide better business insights — 73%

Take advantage of analytics — 69%

Making things easier for clients and partners

According to the 2010 IBM CEO Study, better performers manage complexity on behalf of their organizations, customers and partners.[10] Not surprisingly, organizations that operate with the Transform mandate place substantial emphasis on simplification of both internal processes and interactions with citizens, clients and external partners.

An overwhelming 99 percent of Transform mandate CIOs identified initiatives to *simplify internal key processes* as among those they would lead or support, while 97 percent said they would lead or support efforts to *simplify for clients*. More than half also plan to lead initiatives to *simplify for external partners*, while a substantial portion will support such efforts.

Simplify internal key processes

| 1% | 15% | 84% |

Simplify for clients

| 4% | 22% | 75% |

Simplify for external partners

| 10% | 39% | 51% |
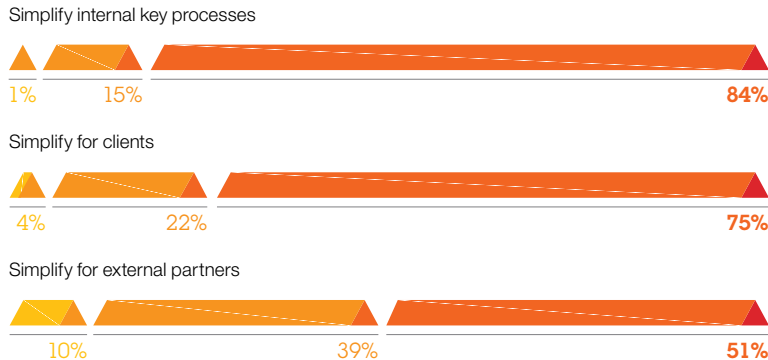
"The challenges are increasingly difficult when opening a store in a new country. It requires us to adapt our partnering model and technology, and we must be extremely dynamic to avoid blocking the evolution of the business."

Eduardo Risso, CIO, MANGO

Figure 15

Simplify, simplify, simplify Most Transform mandate CIOs are leading efforts to simplify both internal and external processes for clients and partners alike.

▲ No involvement
▲ Support
▲ Lead

Outperformers place a premium on helping the business act

Among CIOs whose responses correlated with this mandate, over 20 percent more of those from outperforming organizations expect to lead or support simplification initiatives.

Figure 16

Top performers focus on partners
Nearly one-quarter more outperforming Transform mandate organizations focus on simplifying for partners in the value chain than do underperformers.
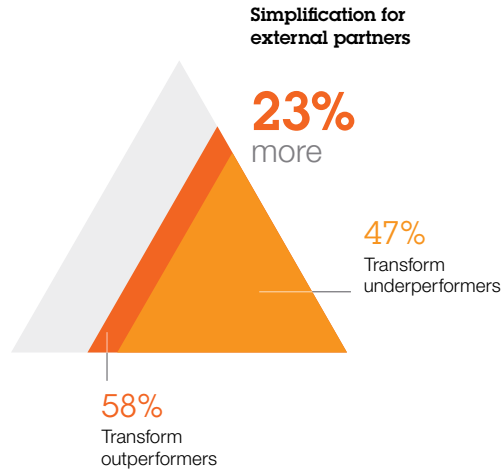
Simplification for external partners

23%
more

47%
Transform underperformers

58%
Transform outperformers

"To have real-time data feedback for the business improves visibility for better business management."

Kenny Tsai, CIO, Inventec Appliances Corp.

Enabling better decisions is a primary success factor for these CIOs. One-third more Transform mandate CIOs from top-performing organizations plan to support or lead initiatives to drive better decision making, compared to significantly fewer underperformers who cited this goal.

Another success factor is the use of *visual dashboards*. Fewer than half of CIOs at underperforming organizations plan to implement visual dashboards to support informed decision making, compared to nearly two-thirds of CIOs at top-performing organizations.

A Healthcare CIO in the United States said, "We constantly measure against our starting objectives which are easily quantifiable, such as ROI. We then display these results to the entire organization to make sure we are completely transparent."
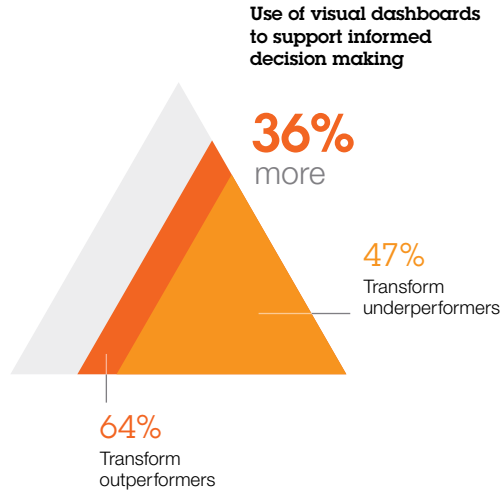
Use of visual dashboards to support informed decision making

36%
more

47%
Transform
underperformers

64%
Transform
outperformers

Figure 17

Outperformers visualize success More top-performing Transform mandate CIOs are prioritizing dashboards to foster better decision making than those at underperforming organizations.

Recommendations

Deliver on the Transform mandate

▶ **Simplify, simplify, simplify** Make your organization easier
  to do business with. Remove unnecessary complexity.
  Take on necessary complexity on behalf of your customers.

▶ **Make it real** Design dashboards that use real-time data collection.
  Collect, analyze and act on data about value chain-wide business
  and IT metrics, including: customer satisfaction levels; value-chain
  system speed; ROI and revenue; IT cost savings; end-user time
  savings; and talent retention.

▶ **Extend the value chain** Enhance and expand influence through-
  out the value chain. Increase transparency and collaboration
  to improve communications among customers and partners.

▶ **Harness more real-time data** Generate insights through feed-
  back collection, sentiment analysis and connecting CRM to
  social networks. Use the data explosion to grow relationships
  with all key stakeholders.

▶ **Analyze!** Dive deep into advanced analytics to develop insights
  into customer behavior, value chain relationships and competitive
  intelligence. Deploy text analysis to glean insights from structured
  and unstructured data, including blogs, customer service records
  and Web transactions.

Peterborough

Putting sustainability on the map

Most people recognize that it's crucial to make cities sustainable and Peterborough, in eastern England, is leading the way. Opportunity Peterborough, a not-for-profit-company established in 2005, has been working closely with the city council to promote Peterborough's regeneration and growth, and transform it into the UK's Environment Capital.

As part of this project, Opportunity Peterborough and Peterborough City Council are joining forces with a collaboration of public and private organizations to build a Web site that will monitor and analyze the city's energy, water and transport usage, and recycling rates. Work is already underway to put data on energy and water usage on the platform, with other environmental data set to follow. The data will ultimately be amalgamated to produce a real-time map of Peterborough's environmental performance.[11]

Residents will be able to log on to the site and get the information they need to make smarter decisions about how they use resources, Trevor Gibson, Director of Environment Capital for Opportunity Peterborough, explained. They'll also be able to get ideas for reducing their consumption, and provide feedback and suggestions themselves.

Meanwhile, city officials will be able to work more effectively with the utility companies to plan the long-term energy and water infrastructure that's required for a sustainable future. And, for the first time ever, utilities, government agencies and local businesses will be able to share information, creating a comprehensive view of the city's ecosystem that will let them make more ecologically minded decisions.

Case study

For the
first time,

utilities, government and businesses will share information.

Case study

"Following our latest innovations,

our customers saw that something big and unexpected was happening at the bank. They became eager to see what we would do next."

Olayinka Oni, CIO, Wema Bank

Wema Bank

Reaching customers in new ways

Wema Bank is Nigeria's oldest indigenous bank, but when it was fully privatized in mid-2009 it had acquired a reputation for being rather old-fashioned. Foreign and domestic competitors had also eroded its lead. So the new management team immediately embarked on a program to revitalize the bank, primarily by recapitalizing it, injecting fresh talent and strengthening the brand to appeal to younger customers and budding entrepreneurs.[12]

Olayinka Oni's mandate, as incoming CIO, was to create a robust and responsive IT platform to help facilitate the growth of the business. The bank's customers had already made it clear that they wanted alternative delivery channels. So, one of his top priorities was to provide IT support for the deployment of over 100 ATMs around the country. A second priority was the development of new services like mobile banking. In June 2010, Wema Bank launched a "cash on the go" service that lets accountholders with mobile phones transfer funds to other accountholders and non-customers alike, using the bank's ATM network.

Oni also created a new Facebook page, redesigned the corporate Web site and equipped the workforce with better productivity tools. And there's plenty more in the pipeline, including a Web-based core banking application that will enable easier and more accessible banking transactions.

Wema Bank's efforts have already paid dividends. The number of monthly ATM transactions has quadrupled, the Facebook page attracted over 1,000 followers within three months and the Web site's industry rating has risen. Employees can also manage and share data more efficiently, as well as spending more time cross-selling.
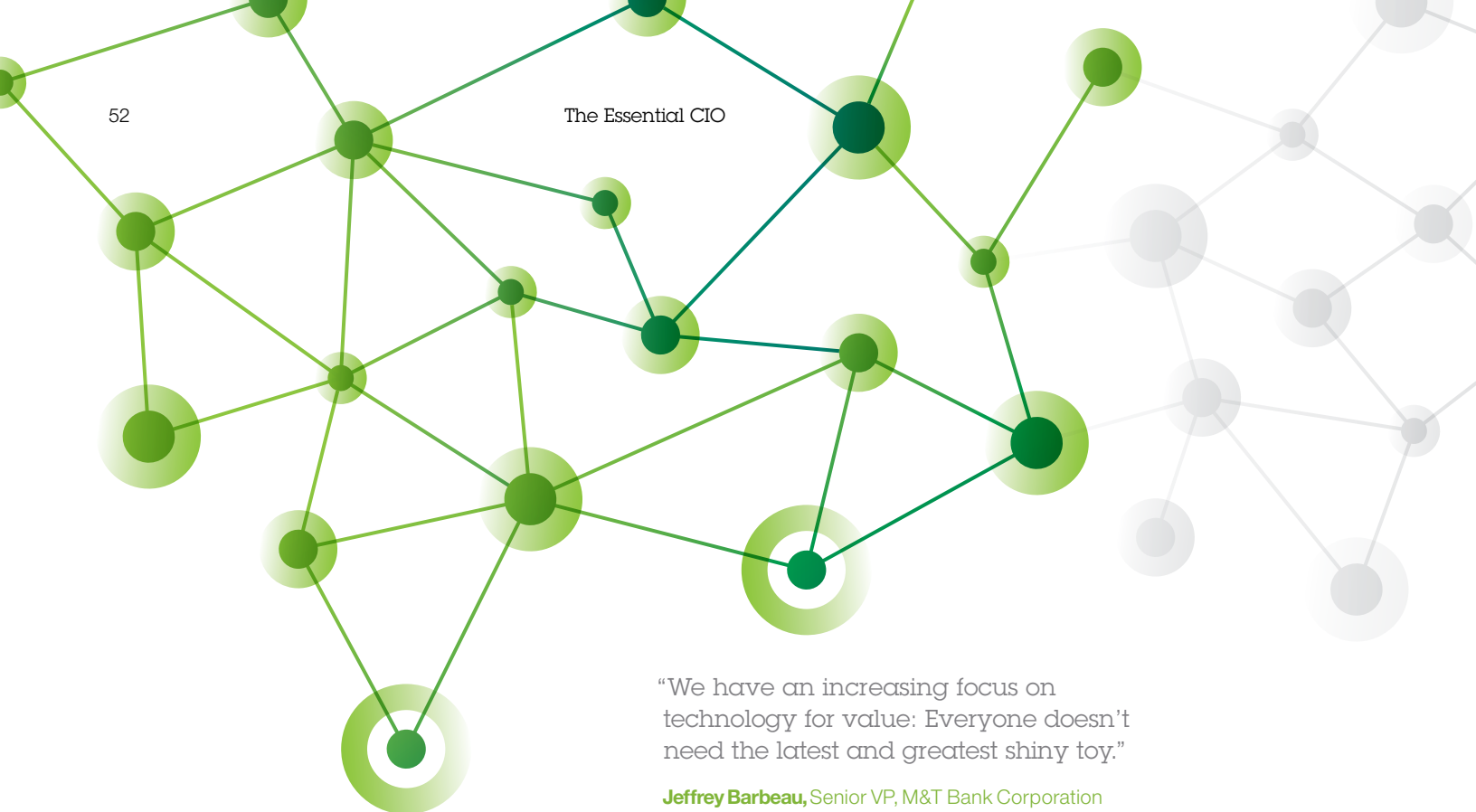
Excel at Transforming

Are you essential?

▶ What are your plans to simplify the customer experience, products and services to increase functionality, use and satisfaction?

▶ Does your dashboard design include real-time metrics, such as internal and external customer satisfaction levels, end-user time savings and talent retention?

▶ Are you introducing social media and collaboration capabilities to customers and partners, as well as internal clients?

▶ How do you take advantage of Big Data and new IT capabilities to achieve real-time insights?

▶ In what new ways are you exploiting leading-edge analytical skills and technology?

Expand

Pioneer

Leverage

Transform
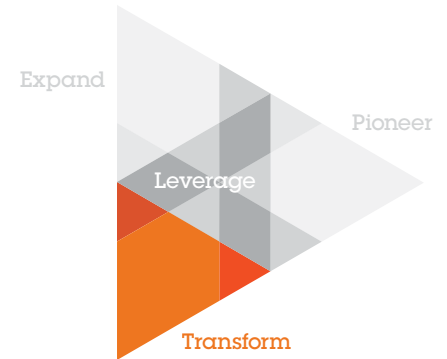
"We have an increasing focus on technology for value: Everyone doesn't need the latest and greatest shiny toy."

Jeffrey Barbeau, Senior VP, M&T Bank Corporation

"Stability is essential as connectivity across systems and regions means that any failure will have a much bigger customer impact than it would if they were not integrated."

Dave Gledhill, O&T Head, DBS Bank

Pioneer

These CIOs exhibit an entre-preneurial spirit and enable the radical redesign of products, markets and business models.

With a Pioneer mandate, CIOs are seen as critical enablers of the organization's vision and typically spend less than one-quarter of their time or budget on delivering fundamental IT services or business process efficiency. The dominant view of IT in Pioneer mandate organizations is as a catalyst for change, enabling everything from new products and new revenue streams to new markets and business models.

Business view of IT

8% Provider of fundamental technology services

14% Facilitator of organizational process efficiency

26% Provider of industry-specific solutions to support business

52% **Critical enabler of business/ organization vision**

> "When we improve or create new processes, we get closer to the customer and generate new revenue sources."
>
> **Angelo Figaro,** CIO, Renault do Brasil

Guiding the forward-thinking enterprise

For a number of organizations, it's no longer enough to maintain or even improve operating efficiency. They must reinvent themselves to keep pace with relentless advances in technology or dramatic changes in consumer behavior. The Media and Entertainment industry, for example, has experienced seismic shifts. Formidable new competitors have sprung from startups or entered the market from other sectors, while technology has changed social interaction and consumer consumption patterns irreversibly.

Likewise, Telecommunications is undergoing hyper-evolution as the relentless wireless revolution rolls on and the convergence of cable television, telephone and Internet access alters the competitive landscape. And Financial Markets organizations are facing new regulatory scrutiny while continuing to consolidate through mergers and acquisitions.

Representing thirteen percent of our sample, it's no surprise that Pioneer mandate organizations are often present within industries experiencing the brunt of rapid changes. The industry with the most CIOs with this mandate is Financial Markets—a full 35 percent of Financial Markets CIOs that we talked to. And 21 percent of surveyed CIOs in both Telecommunications, and Media and Entertainment work with a Pioneer mandate.
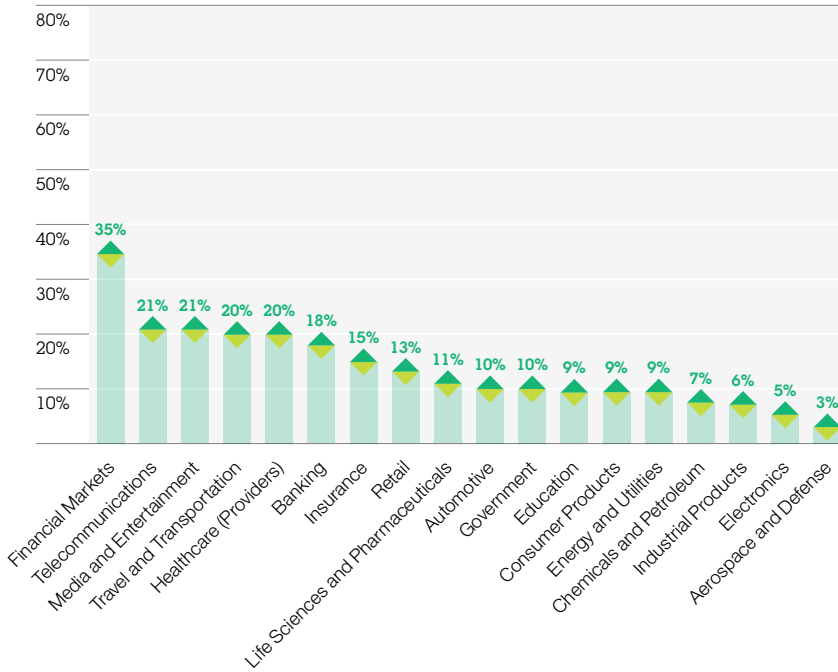
The mandate for the hyper-change era Though it exists across all industries in small proportions, the Pioneer mandate is most common in those subject to upheaval and business model volatility.

Change products, markets and business models

This group of CIOs ranked *product/service profitability analysis* and *product/service utilization analysis* as their top two priorities for turning data into usable intelligence. And they cited *adding new sources of revenue* as the highest impact of IT on their organizations over the next three to five years. Nearly half also cited *revenue model changes* as a key area of focus for IT over the same period.

CIOs are in a unique position within an organization. They help generate and have access to customer preference data, supply chain patterns, emerging trends—both within their organizations and from competitors—Internet behavior and response patterns, and so much more. Combining this data with marketing analytics can reveal previously undiscovered and unmet needs. It can lead to product innovations, massive process changes, cross-industry value chain cooperation and other synergies across industries.

Figure 19

Transformation through revenue and profit
Pioneer mandate CIOs prioritize initiatives that drive new revenue and boost profitability.

▲ Low transformative potential
▲ Average transformative potential
▲ High transformative potential

Product/service profitability analysis
16%   15%   68%

Product/service utilization analysis
16%   24%   60%

Adding new sources of revenue
21%   22%   57%

Revenue model changes
27%   25%   47%
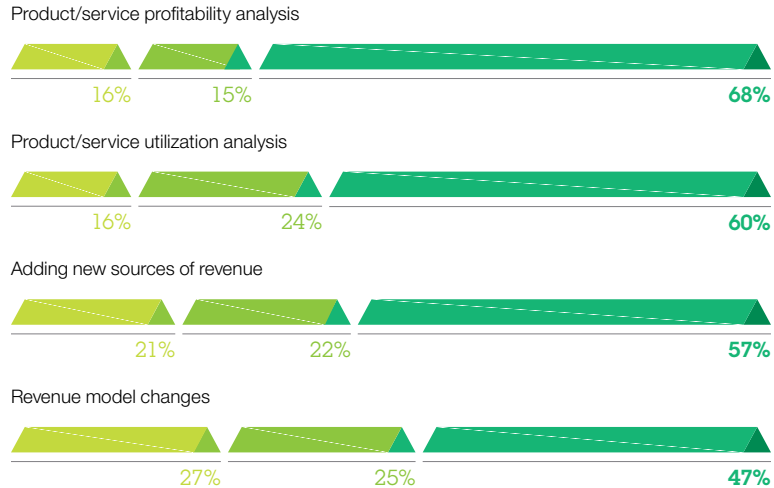
"We plan to increase revenue and profitability by providing the right platform to measure and analyze data."

Jean-Daniel Renevey, Head of Information Services, APAC, Roche Diagnostics Asia Pacific Pte Ltd

Outperformers seek higher revenue and profits

For CIOs with this mandate, a focus on developing a robust platform for data analysis seems to pay off. A significant gap is evident between Pioneer mandate CIOs in top-performing and underperforming organizations in how they prioritize profitability analysis. And, compared to under-performers, nearly twice as many CIOs in outperforming Pioneer mandate organizations as underperformers seek to add new sources of revenue.
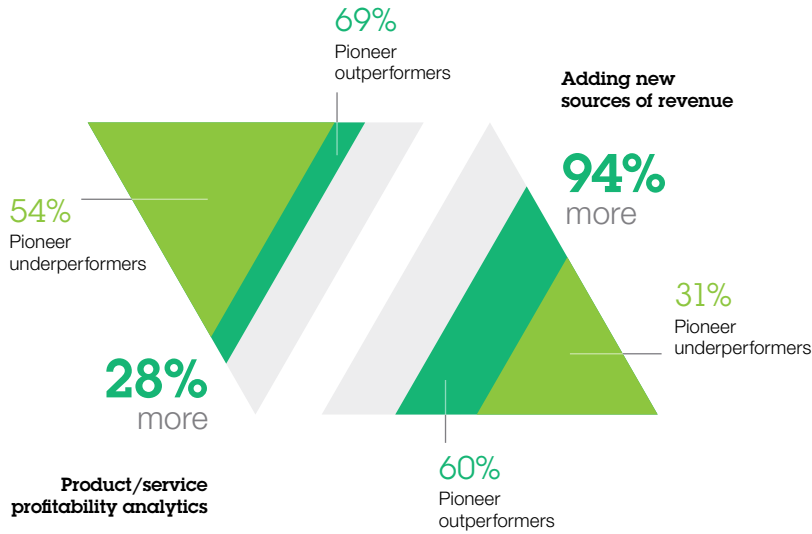
69%
Pioneer
outperformers

**Adding new
sources of revenue**

94%
more

54%
Pioneer
underperformers

31%
Pioneer
underperformers

28%
more

60%
Pioneer
outperformers

**Product/service
profitability analytics**

Figure 20

Top performers are revenue producers More
CIOs at outperforming Pioneer mandate
organizations emphasize profitability analytics,
and nearly twice as many focus on new
revenue sources than do underperformers.

"Every channel through which
we can reach and give service to
the end customer must be open."

Yavuz Ölken, CIO and COO, AXA Sigorta

Among the key analytic techniques that CIOs with Pioneer mandates are
utilizing to assess and improve performance is social network analysis.
A staggering 193 percent more of outperforming Pioneer mandate CIOs
prioritize social network analysis than do underperformers.

**Social network
analysis**

193%
more

44%
Pioneer
outperformers

15%
Pioneer
underperformers
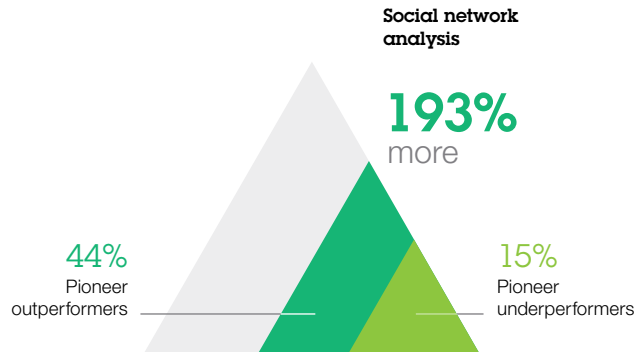
Figure 21

Customer intimacy is critical Nearly three
times as many CIOs in outperforming Pioneer
mandate organizations view social network
analysis as a top priority than their under-
performer counterparts.

Recommendations

Deliver on the Pioneer mandate

▶ **Innovate on the top line** Discover new sources of revenue through provocative invention. Execute visionary plans that can lead to new products, services, business models or new markets.

▶ **Act on deep customer understanding** Elevate the customer experience to entirely new levels by using social network analysis. Co-create and customize the customer experience in unprecedented ways.

▶ **Exceed the expectations** Innovate in the area of technology convergence. Extend beyond the value chain, across industries and markets. Take on undesired complexity for your customers. Do what has not yet been requested.

▶ **Develop a culture of analytics** Build predictive intelligence capabilities that can fundamentally change the business. Encourage widespread application of analytics to fully leverage business intelligence. Take an advanced look at what drives profitability.

▶ **Add dials to your dashboards** Offer dynamic dashboards using real-time data and use predictive analytics to provide situational metrics, including: formal business case monitoring; customer satisfaction; employee motivation; and social value and sustainability.

MTN

Bringing mobile banking to Africa

MTN Group is one of the leading telecommunications providers in Africa and the Middle East, with mobile licenses in 21 countries.[13] But it's the group's pioneering mobile wallet service that's recently been winning praise.

MTN MobileMoney lets people transfer cash and pay their utility bills easily, economically and securely, using their mobile phones. That's a huge boon in Africa, where 80 percent of families don't have bank accounts.[14] MobileMoney is now available in 11 countries and has attracted over 4.3 million subscribers since its launch in March 2009.[15]

MTN plans to roll out the service in the other countries it serves, but there's plenty more in the pipeline. In March 2011, the company joined forces with international insurance group Hollard Insurance to pilot mi-Life, the world's first mobile life insurance service, in Ghana.[16] MTN also intends to create a full banking service for mobile phone users, with an optional credit card.[17]

"We're shifting our focus away from technology to services," Jyoti Desai, MTN Group's Senior Vice President of Technology explained. "We're concentrating on providing low-cost solutions for rural communities and our strategy is to enable self-provisioning through mobile phones with different interfaces for differing literacy levels." It's a strategy that's made MTN Africa's top brand.[18]

Case study

over
4.3 million
subscribers in 11 countries

Case study

University of Warwick
Making connections the smart way

WMG (formerly Warwick Manufacturing Group), led by Professor Lord Kumar Bhattacharyya, is an academic department at the University of Warwick. Established in 1980, it's dedicated to developing innovative research and sharing that knowledge with the business community.[19] But WMG isn't just an intellectual hothouse; on the contrary, it's actively enabling economic impact.

Dr. Jay Bal and his team have built an extended enterprise system called the "West Midlands Collaborative Commerce Marketplace" that matches buyers and suppliers, and fosters collaboration—primarily in the engineering industries. The competence profiling system developed for the marketplace captures what companies can do, not just what they currently do. It has the goal of helping move these businesses from supplying components to systems, and into new market sectors. So how does it work?

The system automatically collates data on new business opportunities, including a wide range of tenders. It marries this information with a database containing detailed profiles of all the participating companies, based on their core skills and competencies, and alerts the companies. Members can use an intelligent partner formation system to find capable and compatible partners to help tackle an opportunity, and collaborate in secure online spaces.

Dr. Bal's collaborative commerce market has proved a big hit. Over 50,000 tenders a year flow through the system, and it has over 15,000 users from more than 10,000 member companies. In all, it helps generate more than €4 billion (US\$ 5.67 billion) worth of new business revenues per year for its members.[20]

over
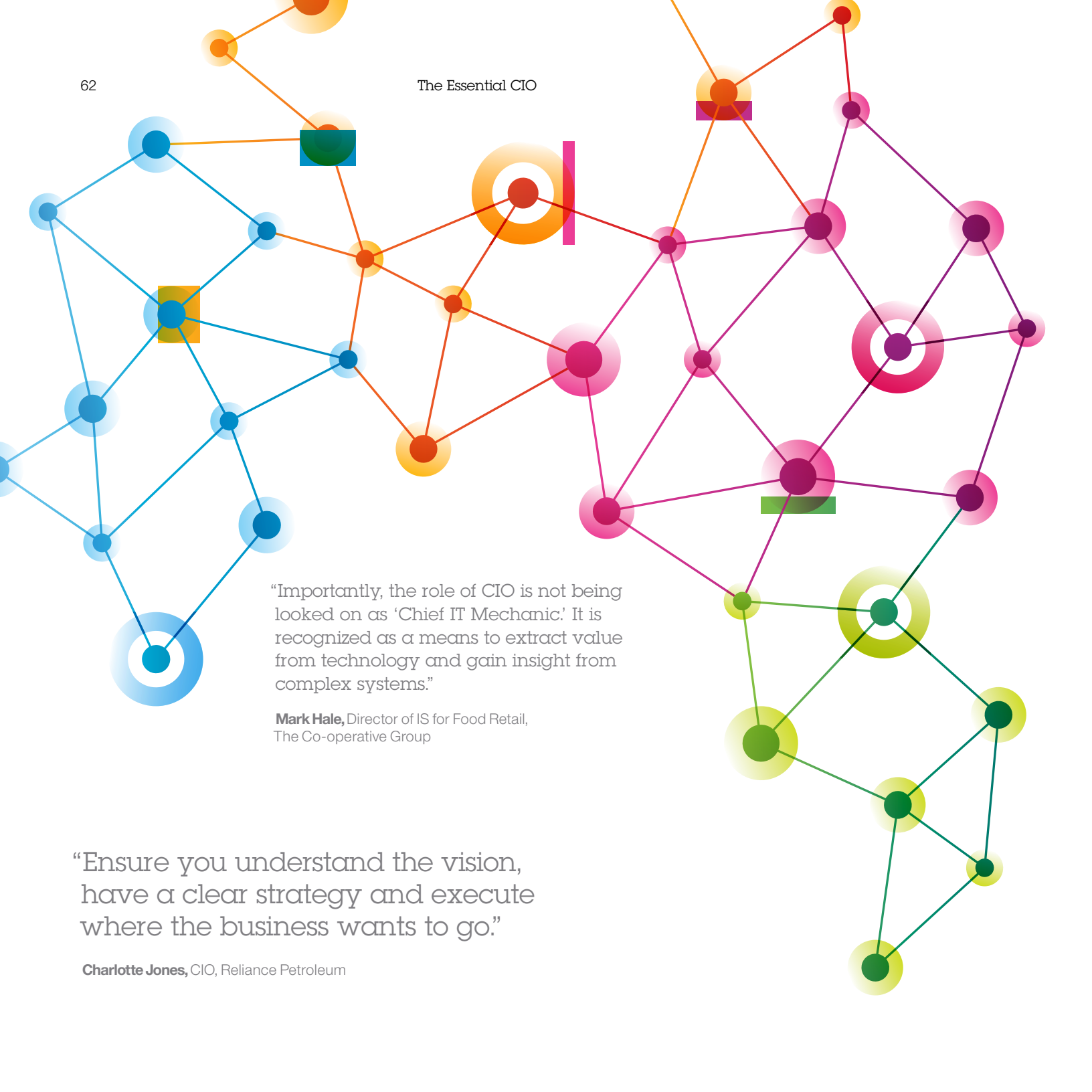# 15,000
users from more than
10,000 member companies

Excel at Pioneering

Are you essential?

▶ Which channels can you leverage to share ideas and co-create new products and services that delight your customers?

▶ How will you leverage social media and business intelligence to spot trends that present new customer opportunities?

▶ What are you doing to converge disparate technologies for the benefit of your organization, customers, value chain and beyond?

▶ How can you develop the talent to apply predictive intelligence to radically change your business model, products or industry?

▶ How will you design dynamic dashboards that leverage real-time data and predictive analytics?

Expand

Pioneer

Leverage

Transform
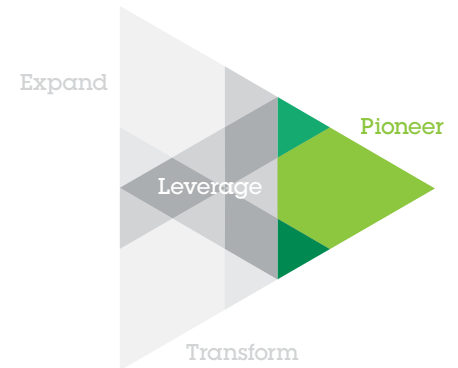
"Importantly, the role of CIO is not being looked on as 'Chief IT Mechanic.' It is recognized as a means to extract value from technology and gain insight from complex systems."

Mark Hale, Director of IS for Food Retail, The Co-operative Group

"Ensure you understand the vision, have a clear strategy and execute where the business wants to go."

Charlotte Jones, CIO, Reliance Petroleum

Excelling in your mandate

Delivering on the CIO Mandate is the key to success, all while keeping an eye on the horizon and fostering innovation.

CIO Mandates represent a single point in time. A mandate can change when an organization's needs and objectives change, perhaps in response to economic, competitive or technological forces. Mergers and acquisitions, for example, signal CIOs to quickly revisit their mandates with senior leadership. Regardless of mandate, our study shows that certain "essential actions" can prove valuable to CIOs.

What's ahead for CIOs

Clearly, the most successful CIOs will be those who understand and
deliver on their mandates. To be effective, CIOs must reach explicit
agreement with C-suite colleagues and other executives on the
organization's goals and how IT can best support and facilitate them.
And these agreements must be widely and clearly disseminated so
that all parts of the business understand and accept IT's primary focus.

Yet whether an organization requires an emphasis on delivery of essential
IT services or challenges the CIO to pioneer new opportunities, CIOs
need to innovate. With ongoing technological shifts, the seemingly endless
onslaught of data and the increasingly frenetic pace of change, making
incremental improvements to operations may no longer be sufficient.

Food for thought from each mandate, for every mandate

Having earned their trusted spot in the C-suite, CIOs are poised to help
lead even more than before. To be transformative in supporting their own
mandates, each can benefit from the nuggets of truth shared by others.

Leverage mandate CIO

"I have no idea how many applications we have, thousands maybe,
but we have to clean up this mess."

Expand mandate CIO

"Generally speaking, data is underutilized at our company. We really need
to focus more on viewing data holistically versus a 'shotgun approach.'"

Transform mandate CIO

"Now everyone is interested in everyone else; we are going to exchange
a lot of information among organizations in the ecosystem."

Pioneer mandate CIO

"We think we have something to gain from social networks, but we're not
mature enough yet to know what and how."

Essential actions: Start here

Our CIO interviews also revealed some common threads that hold across industries and countries. These commonalities underscored that no matter the mandate, much can be learned from each other's experiences. We encourage CIOs to use this list as a starting point for success:

▶ **Collaborate beyond what is currently imagined** Get everyone talking, via new channels, on new schedules and with new tools. Teach and enable your entire enterprise to connect as often and as effectively as possible with their own most important stakeholders.

▶ **Live simplification as a daily goal** Establish a culture of refusing to let complexity be a burden. Be relentless in the pursuit of easier ways to get work done. Solicit and act upon ideas to eliminate bureaucracy and inefficiencies, both internally and across the value chain.

▶ **Embrace the power of analytics** Educate yourself, your team and your organization about extracting meaning from unstructured data sources, predictive intelligence, social network analysis and sentiment mining.

▶ **Help grow profitability and seek new revenue** Know the most you can about your customers and potential customers. Think like an entrepreneur every day. Model and measure reactions to product, service and business model changes.

▶ **Provide unparalleled IT expertise** Learn exactly what your internal customers need most, now and in the future. Then, develop or acquire the necessary skills. Become the ultimate expert at understanding and integrating the newest technologies.

Continue the conversation at **ibm.com**/theessentialcio

"We are looking for new and innovative ideas that improve productivity and anticipate our customers' needs, but we still have to 'keep the trains running.'"

Kelly Carter, CIO, NASA HQ

How our research was conducted

This report is the second biennial 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 3,018 of them. Between November 2010 and February 2011, we interviewed this group, who represent different sizes of organizations in 71 countries and 18 industries.[21]

In our previous CIO Study, our analysis was centered on CIO results in terms of financial performance. We looked at profit before tax (PBT) growth to associate organizations with one of three growth levels: High, Medium or Low. For this study, we looked at how respondents assessed their organizations' competitive position. This told us what CIOs in higher performing organizations aspire to do. Those who selected "substantially outperform industry peers" were identified as top performers, while those who selected "somewhat or substantially underperforming industry peers" were grouped as lower performers.

In addition to these financial criteria, we also used iterative cluster analysis, including state-of-the-art statistical and textual analysis of CIO responses. It revealed typical response patterns to a series of four questions. This led to the discovery of what we call the four "CIO Mandates."

Each mandate is associated with a distinct approach to IT leadership that stems from the specific needs and objectives of that particular organization. To simplify the terminology in this report, we refer to these mandates based on the primary expectation a business has for its IT function:

Leverage These organizations view IT as a provider of fundamental technology services. Their CIOs are asked to leverage IT to streamline operations for greater organizational effectiveness.

Expand This widespread mandate includes organizations that expect CIOs to manage a balanced set of responsibilities that range from fundamental to visionary. Their CIOs lead IT operations that help expand organizational capabilities by refining business processes and enhancing enterprise-wide collaboration.

Transform Organizations with this mandate see IT primarily as providers of industry-specific solutions to change the business. These CIOs are called upon to help transform the industry value chain by enhancing relationships with customers, citizens, partners and internal clients.

Pioneer Here, organizations view IT predominantly as a critical enabler of the business/organizational vision. This group of CIOs is invited to help pioneer or radically re-engineer products, markets and business models.

Presenting our findings in terms of these mandates offers CIOs a way to consider what their own organizations need most from IT to achieve the highest success.
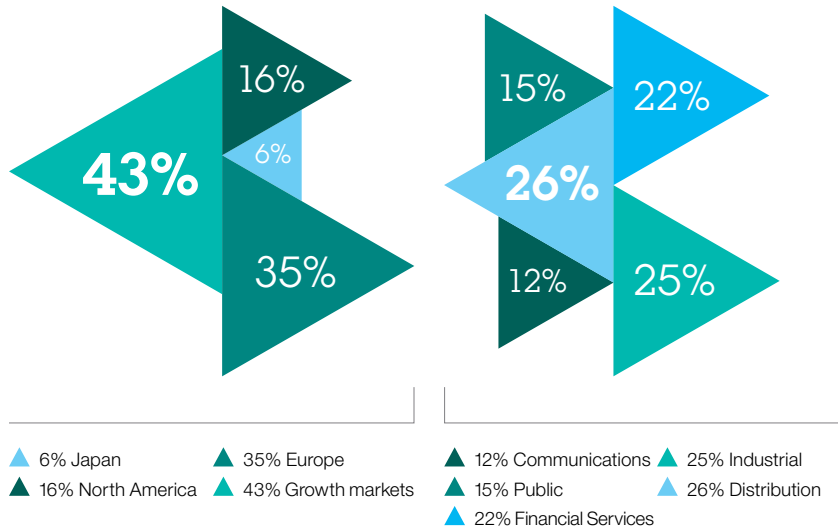
Figure 22

More than 3,000 CIOs worldwide participated in this study Our diverse sample was the largest group of C-suite respondents that IBM has interviewed face-to-face.

▲ 6% Japan ▲ 35% Europe
▲ 16% North America ▲ 43% Growth markets

▲ 12% Communications ▲ 25% Industrial
▲ 15% Public ▲ 26% Distribution
▲ 22% Financial Services

Acknowledgments

We would like to thank the 3,018 CIOs around the world who generously shared their time and insights with us. Special appreciation goes to the CIOs who allowed us to include case study examples or quotes from their interviews to highlight major themes throughout this report.

The right partner
for a changing world

At IBM, we collaborate with our clients, bringing together business insight, advanced research and technology to give them a distinct advantage in today's rapidly changing environment. Through our integrated approach to business design and execution, we help turn strategies into action. And with expertise in 17 industries and global capabilities that span 170 countries, we can help clients anticipate change and profit from new opportunities.

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. This Global Chief Information Officer Study is part of our ongoing C-suite Study Series.

Notes and sources

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21 CIOs we interviewed in the following countries were counted in the Growth Markets category: Argentina, Australia, Brazil, Bulgaria, Chile, China, Colombia, Croatia, Czech Republic, Ecuador, Egypt, Estonia, Hong Kong, Hungary, India, Indonesia, Kazakhstan, Kenya, Korea, Macao, Malaysia, Mexico, Nepal, New Zealand, Nigeria, Oman, Pakistan, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Sri Lanka, Taiwan, Tanzania, Thailand, Turkey, Uganda, Ukraine, United Arab Emirates, Uruguay, Venezuela and Vietnam.

   The Mature Markets category includes CIOs from: Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States.

   Our CIO respondents represented five sectors and 18 major industries. The Communications sector includes: media and entertainment; telecommunications; and energy and utilities. The Distribution sector includes: consumer products; life sciences and pharmaceuticals; retail; and travel and transportation. The Industrial sector includes: aerospace and defense; automotive; chemicals and petroleum; electronics; and industrial products. The Financial Services sector includes: banking; financial markets; and insurance. The Public sector includes: education; government; and healthcare.

For further information

For more information about this study, please send an e-mail to the IBM Institute for Business Value at **iibv@us.ibm.com**. We will arrange for you to be contacted by the appropriate IBM industry or regional expert.

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