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Navigating legacy: Charting the course to business value

2016–2017 global CIO survey

ABOUT DELOITTE'S CIO PROGRAM

CIOs hold one of the most complex and challenging roles in business today. Those who excel operate at the highest level to create value for their organizations. The Deloitte CIO program bolsters the value CIOs deliver as they advance along their career journeys. Through personalized lab experiences, leadership development and career connection opportunities, targeted networking, and distinctive research and insights, we empower, inform, and connect IT leaders in order to tackle what's next, now.

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Preface: Navigating legacy



In the 2015 global CIO survey, we showed you a map for creating CIO legacy. We defined “legacy” as how technology leaders deliver lasting value to

their organizations. A key finding was that effective CIOs add value in three distinct ways based on the needs of the business. **Trusted operators** ensure operational excellence, **change instigators** enable large business transformations, and **business co-creators** focus on revenue and growth. (See sidebar “CIO legacy pattern types” for more detail.) We also described how CIOs can diagnose their situation by recognizing their current pattern and identifying which pattern they should move toward to better meet the needs of their businesses.

This lens—the needs of the business—determines which pattern will most effectively enable CIOs to add lasting value by preparing themselves and developing the people and processes needed to deliver that value into the future. From the 2015 survey, we concluded that no pattern type is better than any other; indeed, successful CIOs can, and should, navigate from one pattern to another based on shifting business needs.

A path forward

Our goal for the 2015 survey was to help CIOs understand that they should adapt to meet the

CIO LEGACY PATTERN TYPES



Trusted operators deliver operational discipline within their organizations by focusing on cost, operational efficiency, and performance reliability. They also provide enabling technologies, support business transformation efforts, and align to business strategy.



Change instigators take the lead on technology-enabled business transformation and change initiatives. They allocate significant time to supporting business strategy and delivering emerging technologies.



Business co-creators spend most of their time driving business strategy and enabling change within their businesses to see that there is effective execution of the strategy.

dynamic requirements of their roles to create lasting value for their organization. This year, we plot the course. The theme of this year’s global CIO report—*navigating legacy*—focuses on how CIOs can chart the journey between pattern types as they look to create their legacy.

What informs your path? Nature versus nurture

Does the career path toward value creation depend on a CIO’s inherent personal traits and characteristics? In this year’s survey, we broadened our analysis to understand which factor contributed more to an effective CIO’s legacy of sustained value creation: personality traits, which we called “nature,” or the IT capabilities and teams built throughout their career, which we called “nurture.” To begin to answer this question, we looked at 20 personal or working-style attributes related to “nature,” and 10 IT capabilities and 12 leadership competencies related to “nurture.”

We found little correlation between a CIO’s nature and his or her ability to successfully deliver value against a particular set of business needs. There was, though, a high degree of correlation between *nurture* and CIO success. *Fortunately for the CIO, this means that a successful legacy is not bound by inherent nature or personality, but instead can be developed by building capabilities and teams in response to changing business needs.*

The needs of the business: A closer look

This year we also considered business priorities, which we compared to IT capabilities and investments. We discovered significant gaps between CIOs’ perception of how they are delivering value to the business and the business’s stated priorities and expectations. This is perhaps not surprising, given that IT investment commonly trails behind business expectations; however, these gaps become more prevalent in the “digital” era.

While we did not specifically gather data about how respondents define “digital,” we noticed that the gaps between business priorities and IT capabilities centered on components the market considers core to “digital”—customer focus, technology-enabled business growth, and business innovation.

If that’s the case, then the CIO is likely in an advantaged position. Many of the non-CIO leaders are often focused on some aspect of the “digital iceberg”: the chief marketing officer (CMO) focuses on customers, the chief operating officer (COO) on the Internet of Things (IoT) or supply chain, the chief financial officer (CFO) perhaps on analytics, and so on. What many business leaders currently regard as “digital” is predominately the part of the iceberg that shows above water. What lies below are often legacy systems, a rigid organizational culture, and antiquated processes that have encumbered the shift toward digital.

The CIO is well positioned to influence and support the whole digital iceberg and to help create the right strategy, platforms, and services to realize a holistic digital enterprise rather than a collection of disjointed departmental investments. If we are correct in our hypothesis that many business priorities are related to the digital agenda, then CIOs can be more responsive to bridging current gaps. Effective foresight enables them to effectively prepare themselves and their IT organizations to support the next business need and even *influence* the direction of the overall business.

Charting the course

This year’s report should allow CIOs to assess their current CIO pattern. More importantly, it will help them determine which pattern will enable them to deliver more value in the future so they can plot *how* to shift from one pattern to the other. How will you personally adapt to create lasting business value, and who will you bring along on your journey? How will you navigate through uncharted business expectations? And what, ultimately, is your destination?

Chapter 1: Nature versus nurture



IN this year’s research we set out to answer this question: How much control do CIOs have in creating a lasting legacy? According to our research, the answer is, a considerable amount. While many people regularly attribute a leader’s success to inherent personality traits that he or she possesses, our survey findings suggest otherwise. In fact, for CIOs surveyed, inherent traits and personal style appear to matter much less than the capabilities that they instill in their IT organizations—capabilities that can be delivered by CIOs of all personality types.

To reach this conclusion, we surveyed or interviewed 1,217 global CIOs, a process that helped us understand how much a CIO’s ability to create value for the business can be credited to “nature”—inherent personality and work-style attributes—versus “nurture”—the IT organization’s capabilities and the leadership competencies that the CIO builds on the job.

To look at *nature*, we identified 20 personality attributes—such as how a CIO makes decisions, works with others, and tolerates risk—that enabled us to pinpoint how and where CIOs differed by their legacy pattern. To look at *nurture*, we focused on

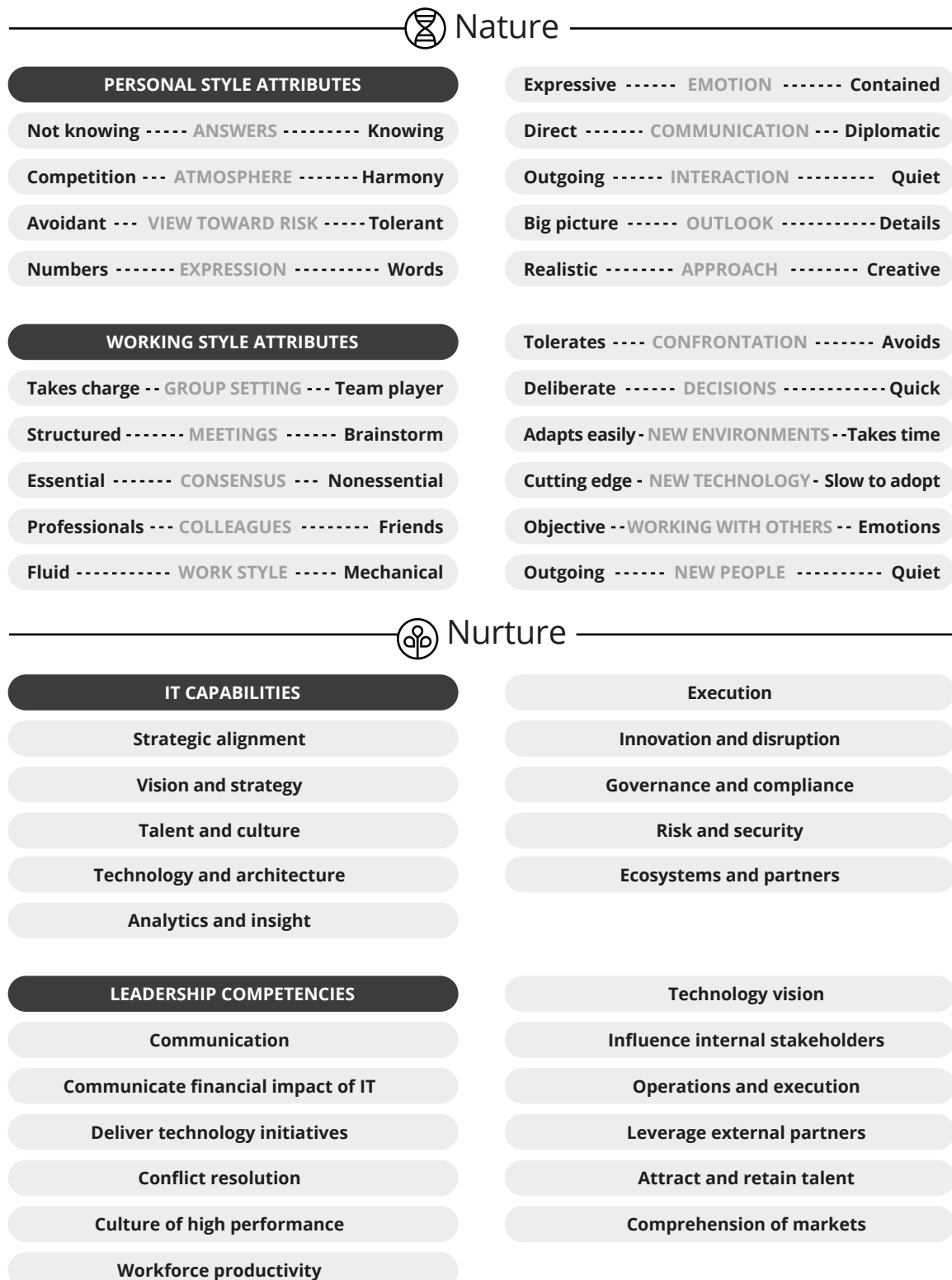
10 IT capabilities and 12 leadership competencies that CIOs develop and cultivate as leaders, such as the ability to articulate a technology vision and strategy, attract and retain talent, and maintain a high-performing culture (figure 1).

We started with the hypothesis that both nature and nurture contribute equally to a CIO’s success. We assumed that CIOs in all three legacy patterns employed a combination of personal attributes and IT capabilities to deliver on their mandate successfully. Our goal was to identify the nature and nurture attributes that differentiated CIOs across industries, geographies, organization size, and CIO legacy patterns.

Nature: Personality is not destiny

To our surprise, we found remarkable consistency among the 20 nature attributes that we examined. The distribution of these attributes did not vary much by organization size, industry, or geography. Perhaps most importantly, the three legacy pattern groups—trusted operators, change instigators, and

Figure 1. How we analyzed nature vs. nurture



Refer to the appendix, questions 7, 8, 9, 10, 22, and 23.

Graphic: Deloitte University Press | dupress.deloitte.com

business co-creators—all reported having similar personality traits.

The happy conclusion: CIOs' ability to create value is not limited by inherent, personality-based attributes. Instead, CIOs can position themselves to succeed by building the IT capabilities and skills required to adapt and respond to business needs within their organizations.

SEVENTY-FIVE PERCENT OF CIOs SHARE THE TOP SEVEN TRAITS

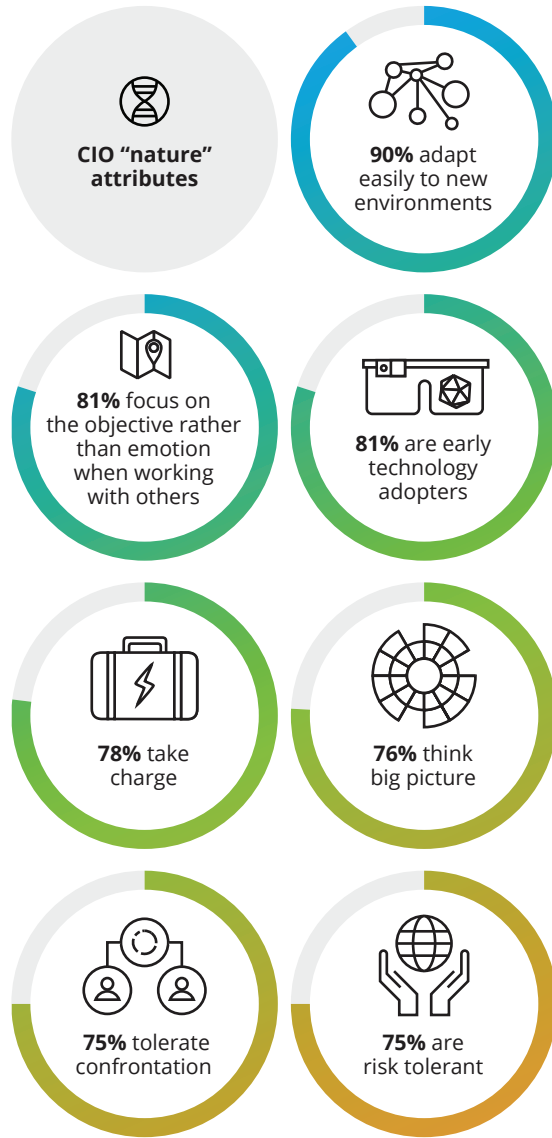
Globally, CIOs as a group are surprisingly similar in many of their personality traits and working styles (figure 2). Some of the top seven traits among CIOs may seem counterintuitive if one views the CIO simply as a technology steward. But, above and beyond their role as IT leader, CIOs are business leaders, and all seven traits are important in helping them succeed in their business leadership role. For example, given their responsibility for managing cyber risk, privacy, and security, one might expect CIOs' collective risk tolerance to be low—however, comfort with risk is often viewed as essential to drive innovation. CIOs as a group also demonstrate a tendency to be rational rather than emotional, with 81 percent of CIOs stating that they are more focused on objectives than on emotions in their interactions—an important trait that can help them stay focused on business objectives.

Overall, none of the personality traits most common to the CIOs in this year's survey are truly unexpected. However, our findings suggest that the role of the CIO fundamentally requires a specific type of executive leader to meet its dynamic requirements.

PATTERN TYPES MATTER, PERSONALITY DOESN'T

We originally assumed that certain personality attributes would be aligned to the specific ways in which CIOs drive value for organizations—that is, that CIOs within each of the three CIO legacy patterns would display a distinctive set of personal attributes. For example, we hypothesized that trusted operators would be less likely to be outgoing and more likely to be risk-averse than those in the

Figure 2. CIO personality traits and working styles



Refer to the appendix, questions 7 and 8.

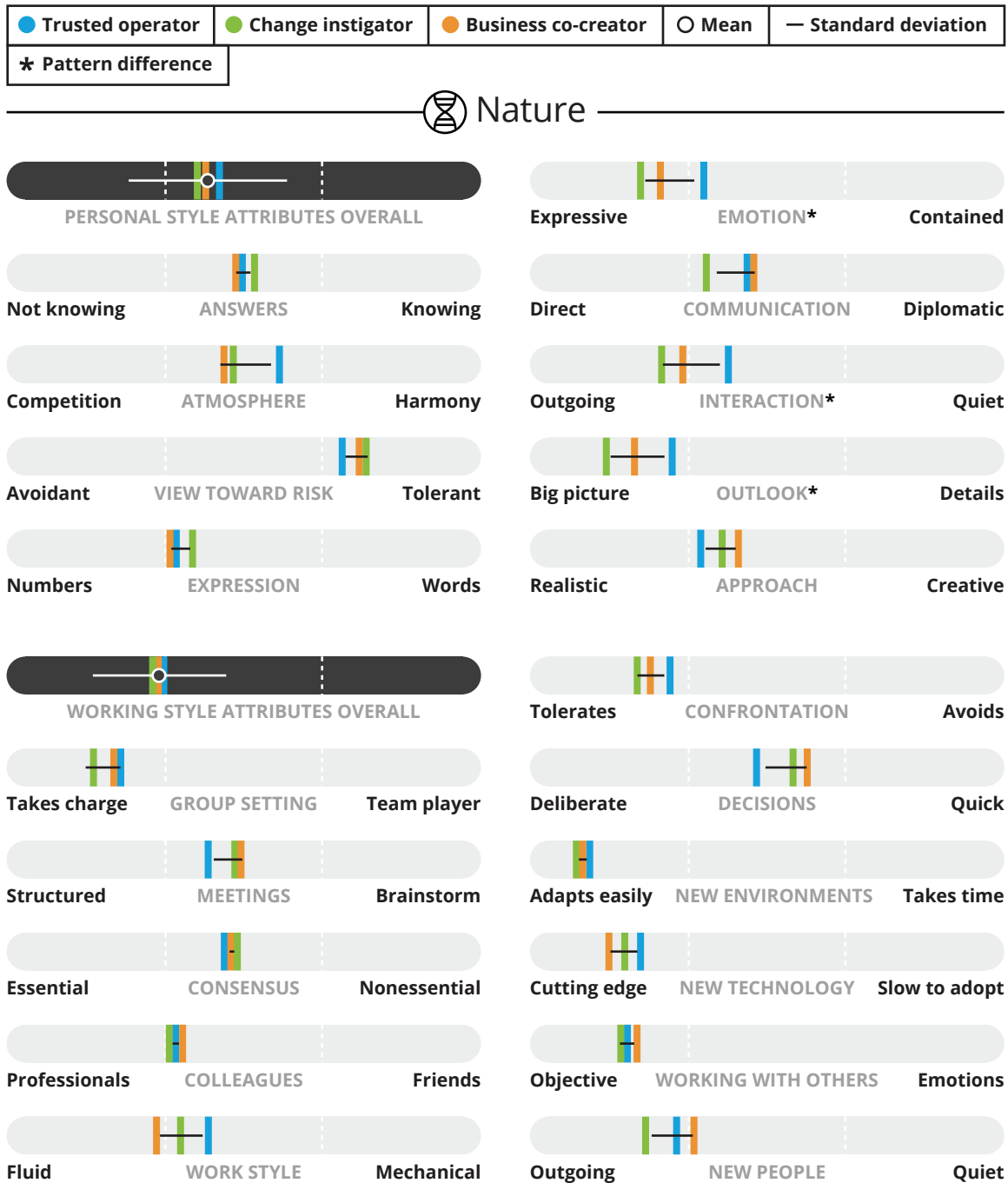
N=1,175. Source: Deloitte 2016–2017 CIO survey.

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other two groups. We also posited that business co-creators would be more focused on the bigger picture than those in the other two groups. However, our analysis found that only 3 of the 20 personality attributes—emotion, outlook, and interaction—were statistically different across the three CIO patterns (figure 3), and even those three did not result in wide differences.

Figure 3. CIOs can drive value regardless of personal nature

We asked CIOs to select their personality traits and working styles across 20 attributes on a 4-point scale; we found not only minimal variance between pattern types, but also that all CIOs tend to land in the middle of the spectrum. This suggests nature does not determine a CIO’s pattern, and all patterns can deliver value appropriately through nurture—relying on experience and adaptation to respond to business priorities and expectations.



Refer to the appendix, questions 7 and 8.

N=1,175. Source: Deloitte 2016–2017 CIO survey.

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DELOITTE'S EXECUTIVE LABS

The Deloitte Greenhouse hosts labs for client executives, their teams, or mixed groups that want to step outside business as usual to tackle complex challenges. Designed according to principles of group dynamics, environmental psychology, and innovation theory, the Greenhouse engages people intellectually, physically, and emotionally so they can take problem-solving to a new level. Deloitte's lab experiences address the unique challenges facing executives, especially those in transition, and enable them to gain traction. The Executive Lab is a one-day experience built to ensure executives hit the ground running and thrive in a new role or tackle a transformation. The agenda focuses on the three most important resources an executive must manage: time, talent, and relationships.

Learn more on our [home page](#).

CIOs' PERSONALITIES DIFFER FROM THOSE OF OTHER CXOS

Using similar personality profile data collected from more than 558 participants in Deloitte executive transition and team labs (see sidebar, "Deloitte's executive labs"), we found that a majority of individuals in every C-suite position shares similar traits: outgoing, detail-averse, spontaneous, risk-tolerant, adaptable, and decisive. However, CIOs

tended to differ from other CxOs in their greater tolerance of ambiguity, degree of competitiveness, and ability to think visually. Conversely, compared with other CxOs, CIOs were less relationship-oriented, personable, contemplative, and deliberate. Perhaps within a rapidly changing business and technology landscape, many CIOs do not have the liberty to be contemplative or deliberate. But one significant conclusion is that CIOs need to focus more on building, maintaining, and nurturing relationships. Attention to this possible blind spot may help CIOs in building stronger credibility as leaders (figure 4).






Nurture: CIOs can shape their own legacy

We asked CIOs about the capabilities—people, processes, and technologies—they build within their IT organizations to drive business value. We found the IT capabilities that CIOs build are a *much* bigger differentiator than personality traits in shaping a CIO's legacy. When asked to select the five IT capabilities most essential to their success, there was significant agreement among the CIOs surveyed (figure 5).





We also asked CIOs to assess the leadership competencies required to build and execute on these specific capabilities (figure 1). As we looked deeper at CIO competencies, we found there is

Figure 4. Compared to CxOs...

CIOs are more:

-  **Technical**
-  **Tech-savvy**
-  **Visual**
-  **Ambiguity-tolerant**
-  **Competitive**

CIOs are less:

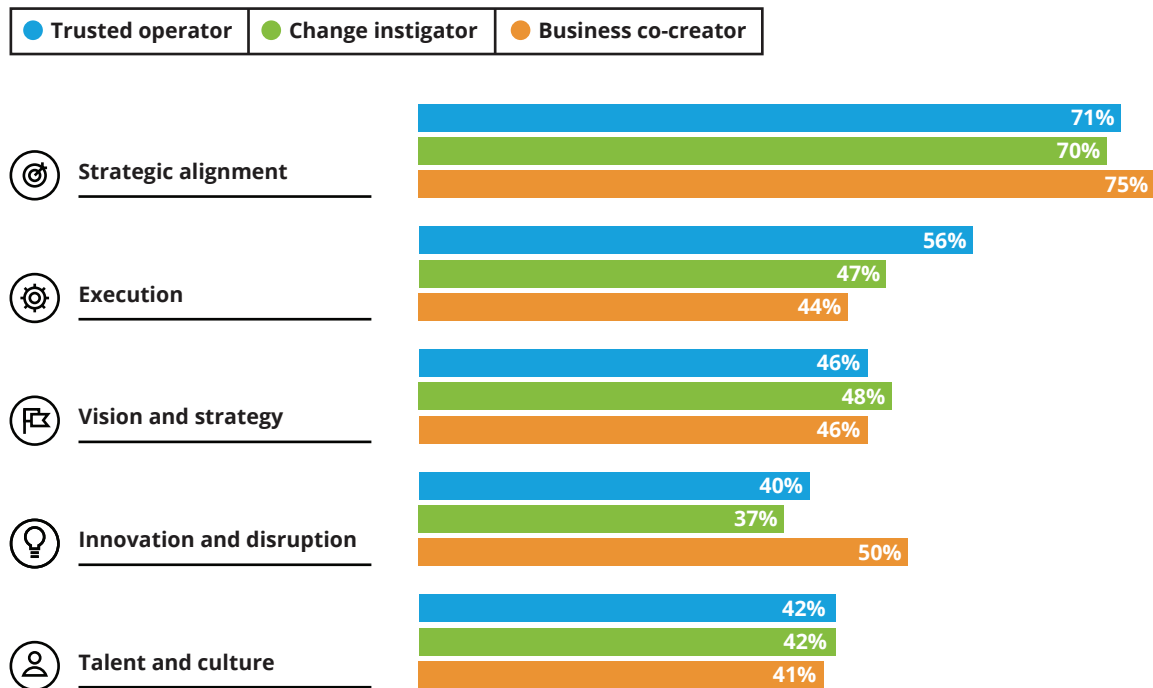
-  **Contemplative**
-  **Relationship-oriented**
-  **Risk averse**
-  **Deliberate**

Sample is composed of 2,958 professionals and 558 CxOs. The sample is relatively balanced across genders, industries, and organizational levels and has been collected through Deloitte transition or team labs as part of Business Chemistry assessments.

Source: Deloitte 2016–2017 CIO survey.

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Figure 5. Top five IT capabilities essential to CIO success



Refer to the appendix, question 22.

N=1,123. Source: Deloitte 2016–2017 CIO survey.

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a misalignment among CIOs' current strengths and the IT capabilities they should develop. The upside is CIOs are not bound by their personality or working-style attributes, but are free to shape their own legacy—and to do so, they must be adaptive in the face of evolving business expectations. According to the senior vice president and CIO of a large national financial services company, “As a CIO, you really need to be accepting of change—even embrace change—because I think that’s what the role is all about.”

CIOs AGREE ON THE TOP FIVE ESSENTIAL IT CAPABILITIES

As we looked at the IT capabilities that CIOs selected as essential to their success, we found surprisingly little variation in the capabilities that each of the three pattern types thought contributed most to a CIO’s success.

- **Strategic alignment.** Overwhelmingly, the top IT capability selected by respondents was the capacity to align IT activities to business

strategy and performance goals. About three out of four CIOs said this capability was essential to their success, including the CIO of a large US retailer, who told us, “The difference between good and bad IT organizations is business alignment.” Strategic alignment is not just about responding to business requests—this capability enables CIOs to *proactively* come up with solutions to address business challenges. Given the number of respondents that selected strategic alignment as a critical capability, we anticipated CIOs to have built leading-class processes around this capability. However, we found that only 5 percent of respondents who selected it as essential actually felt that it was a leading-class capability within their IT organization.

- **Execution.** Given the expectation that CIOs must execute on technology projects that deliver business solutions to drive performance and reduce costs, it’s no surprise that about one-half of CIOs selected execution as a top capability. CIOs are more likely to establish credibility within the

“I call it win with the basics. Let’s be really good at those things that are repeatable and predictable, including executing strategic projects.”

— *Johnson Lai, CIO, NuVasive, Inc.*

organization when they have a strong track record of delivering a reliable, consistent, scalable, and secure IT environment. While 55 percent of respondents selected execution as a key IT capability to build, only 21 percent acknowledged they actually are in the process of building core IT capabilities around project execution and solution delivery. Fortunately, 46 percent of the CIOs surveyed who selected execution as an IT capability essential to their personal success also recognized the importance of building an IT culture focused on execution, delivery, and operational excellence.

- **Vision and strategy.** Nearly 50 percent of our CIO respondents said “developing a vision and strategy” was an essential capability; however, one out of three reported it as an IT capability that does not currently exist within their organization. As CIOs develop a vision and strategy, it is important to set clear and unambiguous goals for delivering business value and clearly articulating how to achieve those goals. The vi-

“My role as CIO is more like 60 percent business and 40 percent technology. The footprint of IT and business is blurring; this is a very positive thing.”

— *Paul Rushton, CIO, IMI*

sion does not have to be complex or expansive; it can be a simple expression of intent that serves as a rallying cry for the IT organization and a clear articulation of IT’s role. Technology vision must evolve, however, as an organization’s business strategy, competitive landscape, and capabilities change.

- **Fostering innovation and disruption.** Technology—and therefore the CIO—is at the heart of most business innovations and disruptions. Recognizing this, 47 percent of participating CIOs selected “fostering innovation and disruption” as a capability essential to their success. However, the directive for innovation frequently comes from the business leaders without clear expectations attached. Innovation is not only a key capability CIOs need to build, but also one in which they need to play a leading role. CIOs are uniquely positioned to drive technology-led innovation and define new approaches to drive value to the business and customers. However, a significant number of CIOs (43 percent) acknowledged that this essential capability either currently does not exist or is still in the process of being built within their IT organizations.

“Think about the journey—be purposeful and pick a realistic time frame to transform.”

— *James McGlennon, executive vice president and CIO, Liberty Mutual*

- **Talent and culture.** This year, 45 percent of CIOs identified engaging, motivating, and acquiring talent as essential for success. In our interviews, many CIOs talked about their talent challenges: years of reinforcing mediocrity as the expectation, a hesitation to make the tough calls, the inability to secure the right talent to build the right capabilities—all which may lead to a suboptimal IT culture. We found that many CIOs we spoke to are actively looking for ways to

“Spend a lot less time on technology. Spend a lot more time on people. Earnestly engage and involve them. If they feel like they are part of the solution or part of the answer, they seem to produce. They’re happier and it all falls into place.”

— Kurt Thaus, senior vice president and CIO, Telephone & Data Systems, Inc.

shape and sometimes even transform their cultures because they realize that to keep high performers, their culture has to support, encourage, and engage those professionals. They also recognized the need to shift IT culture focus on meeting the needs of the business. Developing an IT culture where talent understands business drivers, customer expectations, and external market was selected by 51 percent of CIOs in our survey.

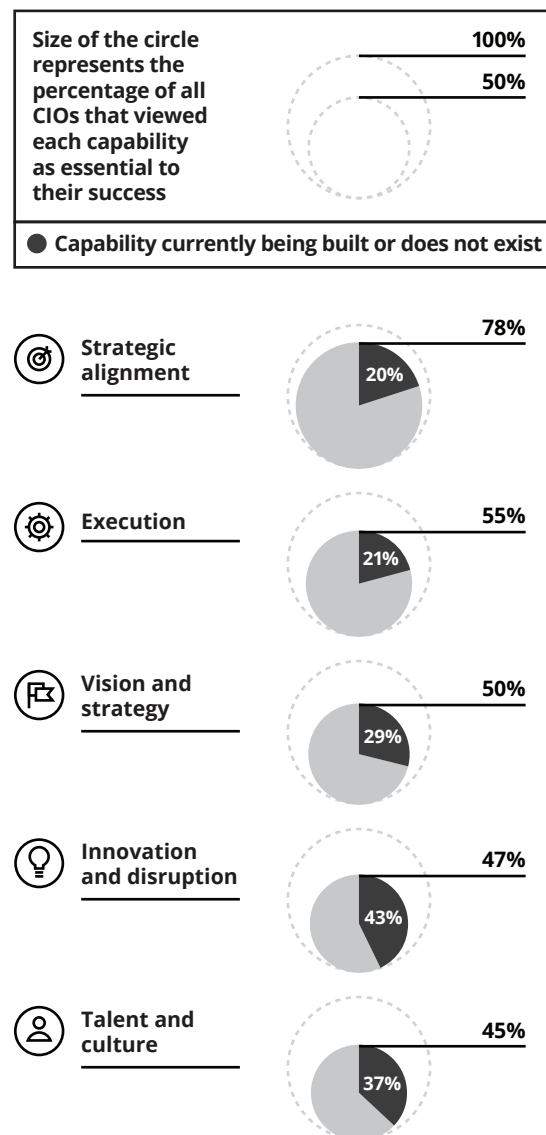
The good news is that CIOs of any pattern type are able to drive success through these IT capabilities—all firmly on the nurture side of the equation—by building the right team and setting a strategic technology vision. The not-so good news is that CIOs have some more work to do in building IT capabilities within their organizations—specifically when it comes to innovation and talent (figure 6).

We also found differences in how CIOs of different pattern types assessed their organization’s core IT capabilities. For example, we found that change instigators placed more importance on “engaging with ecosystem partners” than the other two pattern types. Interestingly, “engaging with ecosystem partners” was ranked the least important IT capability by CIOs overall. We will explore the capabilities that define each pattern type in detail in chapter 3 as we look at how CIOs navigate the journey between pattern types.

CIOs’ BIGGEST COMPETENCY GAPS ALIGN WITH THE MOST IMPORTANT CAPABILITIES

We also asked CIOs to assess their personal strength in leadership competencies. By leadership competencies, we refer to the specific skills a

Figure 6. IT capabilities gaps



Refer to the appendix, questions 22 and 23.

Q22: N=1,123; Q23: N=1,097. Source: Deloitte 2016–2017 CIO survey.

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“Adaptability is really important. Self-confidence is really important....Everyone understands the importance of technology now, so you don’t need to argue your case. You need to have confidence, and you need to adapt to change.”

— **Mike McNamara, executive vice president, CIO, CDO, Target Corporation**

CIO brings to the table to successfully cultivate IT capabilities, such as influencing internal stakeholders and communicating effectively. These skills enable a CIO to build an IT organization that drives high performance, business value, and overall success.

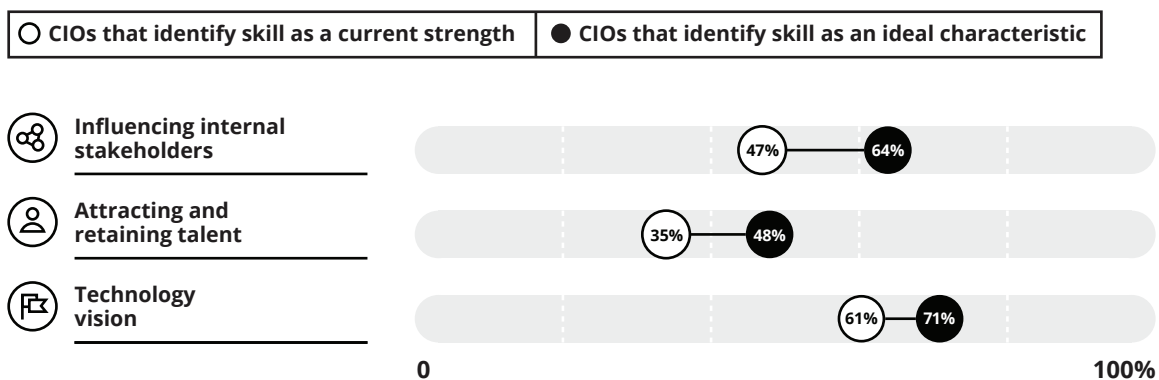
When assessing their own leadership competencies compared to what a successful technology leader ideally needs, CIOs exhibited gaps in several areas, most significantly in influencing internal stakeholders, attracting and retaining talent, and steering the technology vision (figure 7).

Astonishingly, all three of these competencies are essential to building the top five capabilities that CIOs identified as needed for success. The good news here is these skills are developable, and are typically learned through time and experience. CIOs play a pivotal role in influencing the overall culture and motivating their teams to align IT capabilities to business priorities; they can often in fact be the catalyst for driving cultural change within their IT organizations. When discussing how CIOs can lead change and influence IT culture, a CIO from a large retail company rightly stated, “It’s a lot of little day-to-day things that will set the tone, influence people, and make the change. There are lots of big words used in big transformations, but to drive change, you need to do the little things to set examples with your team and reinforce the fact that you will be measured.”

The bottom line: Successful CIOs shift and adjust to the need

In our interviews, when we asked CIOs to identify their top five leadership competencies, many CIOs had a hard time answering the question. We commonly heard answers like “it depends on the business need” or “it’s hard for me to pick from this list, because you need all of these strengths to succeed as a CIO.” We believe that this reflects

Figure 7. Current vs. ideal strengths



Refer to the appendix, questions 9 and 10.

Q9: N=1,161; Q10: N=1,097. Source: Deloitte 2016–2017 CIO survey.

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the ability of successful CIOs to use experience and invest in personal development to adjust their style based on business context.

This was an encouraging conclusion for us. It follows the findings in our data—that an individual’s personality is not a barrier to succeeding in the CIO role—and further validates our belief that savvy

CIOs are able to switch between CIO legacy patterns as business needs change. Our findings imply that CIOs are able to drive success through nurture: by developing the right competencies, building the right team, and setting a strategic technology vision. CIOs are better positioned than they may realize to navigate between patterns as business needs evolve and change.

Chapter 2: Aligning IT capabilities to business value



SO far, we have learned that CIOs have the power to drive value to their business through building IT capabilities and flexing leadership competencies. And, as we've noted, their legacy is largely a function of the value they create for the business. But just how does a CIO create business value? **CIOs create value by delivering IT capabilities that are in tune with business priorities.** Our data shows that CIOs agreed on top five business priorities (figure 8). While the

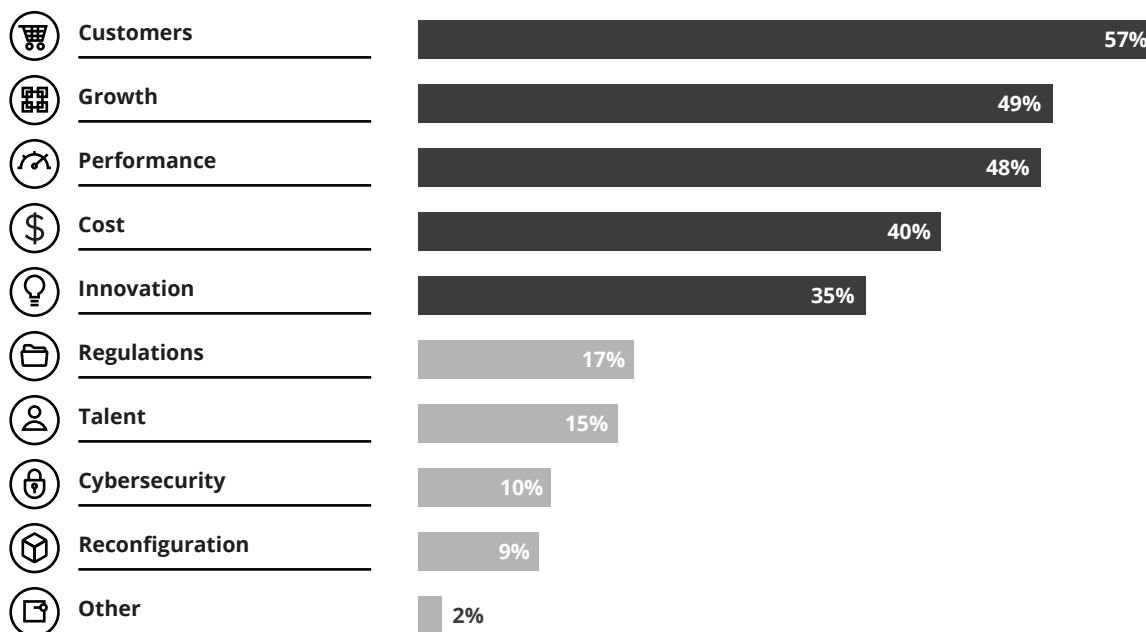
specific emphasis and focus on each of these may vary by individual business context, to improve business value, CIOs should build IT capabilities that support business priorities.

We often see a mismatch between business priorities and the CIO mandate because CIOs are lagging in building the appropriate IT capability. Adding an additional layer of complexity, business needs and priorities shift over time, and CIOs must be

“CIOs can either wait for our business leaders to become technology experts and figure out how to apply it in their lines of business, or we can step in and drive forward-thinking dialogue and bring our best ideas to the table. A key responsibility for me and my senior team is to focus on building and strengthening relationships with C-suite peers to better understand key business processes and drive thinking about how technology drives the impact.”

— *Steve Betts, senior vice president and CIO, Health Care Service Corporation*

Figure 8. Top business priorities



Refer to the appendix, question 5.

N=1,215. Source: Deloitte 2016–2017 CIO survey.

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equipped to handle these shifts. In this chapter, we explore how CIOs are steering their course among business priorities. We look specifically at areas where opportunities exist to bridge gaps between business expectations and IT capabilities.

Bridging the gaps: IT expectations and capabilities

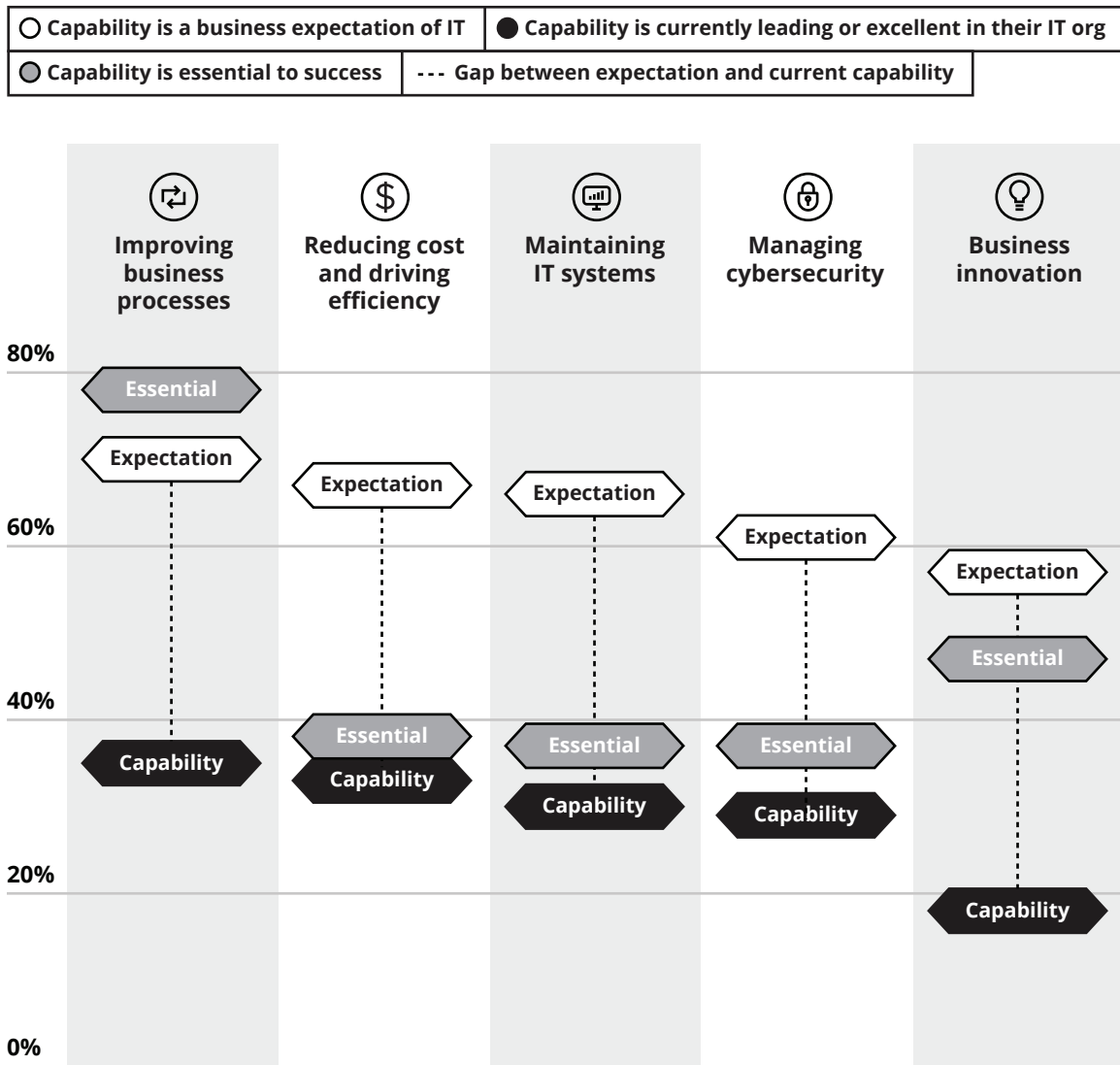
As business priorities shift and technology becomes ubiquitous in business operations, the expectations of IT to deliver on those priorities also significantly increases. Tim Glinatsis, CIO of General Dynamics subsidiary Bath Iron Works, hit the nail on the head when articulating his advice for other CIOs, “If you are not listening very carefully and don’t have your ears planted all over the business, you will miss what the changes are and you end up being irrelevant. You have to learn how to speak business so you can understand it and then listen for it.” Our survey data show that the business expectations of IT, IT capabilities, and business priorities are out of sync in several areas (figure 9). As mentioned earlier, business priorities are focused on customers and

innovation, while IT capabilities are still lagging in these areas, which is where CIOs can play a critical role. Yet the business expectations for CIOs still focus on maintenance, efficiency, cybersecurity, and business process improvement.

While business priorities may not always need to translate directly into IT activities, the data suggest that business leaders today are relying on IT to take on considerable responsibility for enabling revenue growth in addition to managing operational performance, cost reduction, and cybersecurity—but that CIOs may not be aligning IT capabilities to business priorities.

Many CIOs, in fact, may be overinvesting in certain capabilities without understanding the dynamics of the company and factors driving investments in those IT capabilities. We view this as a huge opportunity for CIOs to drive strategic alignment through the IT capabilities they deliver. In order to do so, CIOs need to ensure they are “in the know” and have a structured way of capturing what really matters when it comes to business priorities. As CIO Bennie Peek of Bell Helicopter told us, “Setting up a governance structure where there is a way to

Figure 9. Aligning the gaps: Business expectations vs. IT capabilities



Refer to the appendix, questions 4, 22, and 23.

Q4: N=1,150; Q22: N=1,123; Q23: N=1,097. Source: Deloitte 2016–2017 CIO survey.

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capture the voice, input, and in particular, priorities of business leaders is one of the integral elements of success.” To keep up with changing business needs, CIOs need to build the right set of capabilities in their IT organizations, enhance their own personal competencies, develop relationships with other executives, and find the right talent to drive business value in the context of business priorities.

OPPORTUNITIES TO BRIDGE THE GAPS

To understand the CIO’s opportunity to bridge gaps between business expectations and IT capabilities, we first looked at what CIOs said their organizations’ top business priorities were. We then examined the extent to which CIOs believe the business expects them to contribute to these priorities. Lastly, we compared these priorities and expectations to the

“[Customer] empowerment is a big focus in the coming years and is something the organization will prioritize and build up and increasingly support with digital solutions.”

— *Per Buchwaldt, CIO, Region Zealand*

IT capabilities that CIOs are building within their organizations and consider important to their success in meeting business mandates.

Enabling growth through a focus on customers and innovation: Three of the top five business priorities CIOs identified in this year’s survey—customers, innovation, and growth—are related to driving revenue. In line with these business priorities, CIOs reported that “assisting in business innovation and developing new products and services” (57 percent) and “developing the organization’s digital capabilities” (56 percent) are core expectations the business places on them.

In assessing their IT capabilities around innovation and disruption, 52 percent stated that this capability currently does not exist or is being built within their organization. Further, when we asked CIOs about their own leadership competencies, only 21 percent picked “understanding of markets and disruptive business forces” as a current strength, and only 26 percent said their IT organization’s skills in customer and digital experiences were above average or leading-class. Tellingly, too, 52 percent of CIOs stated they will be hiring for customer and digital skills in the next two years. These numbers suggest that, even though growth through an innovative focus on the customer is a huge business expectation, a majority of CIOs haven’t built innovation and disruption capabilities to meet the needs of the business.

Enhancing business operations by focusing on performance: Emerging technology advancements play a large role in enabling a

business to operate better, faster, and cheaper, which ultimately enhances business performance. Forty-eight percent of our surveyed CIOs ranked performance as their top business priority. An overwhelming majority of CIOs—70 percent—understand that they are expected to lower cost of operations while improving service levels to drive operational business performance. Our interviews revealed that many CIOs find it easier to obtain budget for these projects because there are tangible cost savings attached to such initiatives.

CIOs clearly appreciate the importance of their role in enabling business operations; as we noted earlier, execution and solution delivery ranked second as an IT capability essential to their success. However, despite this, many CIOs appear to

“Never feel like you are an order taker/pure service provider. IT is the only function that has the visibility of the entire business life cycle end to end.”

— *Zhanna Golodryga, senior vice president and CIO, Hess Corporation*

undervalue the need to build their own personal competencies around driving performance within their organizations. Only 27 percent of CIOs identified delivering complex technology projects as an important skill, and only 37 percent selected it as one of their top strengths.

Reducing business and IT costs: Forty percent of CIOs chose reducing operational and/or product costs as a business priority. Given the mandate within most organizations to control costs, managing IT efficiencies and costs are considered table stakes for a CIO—they are perpetually under pressure to manage IT capabilities and resources to deliver “more for less.” Reflecting this dynamic, CIOs reported that business leaders expect them to reduce IT costs and drive efficiency (67 percent) but also expect them to maintain availability and

performance of IT systems (66 percent) and simplify IT infrastructure and applications (46 percent).

IT capabilities around operational excellence lead to greater cost efficiencies and improved IT performance. So, however, does another capability on which surveyed CIOs placed less emphasis: leveraging an ecosystem partner or partners to drive agility and flexibility within the organization. Only 31 percent of CIOs view sourcing, vendor management, and leveraging suppliers and partners as a core capability essential to their success. This gap presents an opportunity for CIOs to proactively reassess ecosystem capabilities to see if there is room to drive additional business value.

Managing cybersecurity: Even though only 10 percent of CIOs reported that cybersecurity and IT risk management are a top business priority, these are still significant CIO responsibilities. Sixty-one percent of the CIOs in our study identified cybersecurity (managing risks and protecting digital assets) as a core expectation of them and the IT organization. The majority of CIOs also said that the business expects them to minimize risk (56 percent) and protect customer information (56 percent) when it comes to security investments. However, one-third feel that the business views security and risk management as a compliance chore, a cost to the business and/or an operational expense—which may not bode well for their ability

“It is important to improve the cost structure; not just the budget objective. Anyone can save a dollar; you just don’t spend it, but how do you create a structure where your unit costs are improving, where you can measure the value add?”

— **Kevin Lowell, vice president of information technology, U.S. Cellular**

“Rather than waiting for things to happen to you, you have to make things happen. Get in front of that train. I think [you have to take] calculated risks—the business wants that.”

— **Mary Gendron, senior vice president and CIO, Qualcomm, Inc.**

to secure investments from the business to support these activities.

Forty-five percent of CIOs said that cybersecurity will have a significant impact on their business in the next two years, a reason why perhaps 64 percent of surveyed CIOs expect their technology spend on cybersecurity to increase over the same time frame. Yet, surprisingly, only 37 percent picked cybersecurity as an IT capability key to their success.

Cybersecurity may not top the lists of business priorities, but it remains a constant boardroom agenda item. And many of these leaders place the accountability and ownership of cyber risk management squarely on the IT organization. Without fail, CIOs must make cybersecurity a top priority even if the business does not—because the failure to do so can ultimately derail a CIO’s journey to creating a lasting legacy. A cyber risk or breach is not just an IT issue, it’s a business issue. CIOs are responsible for proactively communicating, influencing, and informing the business and working with them to ensure an effective cyber strategy is given the appropriate importance on the priority scale within an organization.

Changing tides: From performance to customers

In our 2015 survey, CIOs reported that their businesses placed fairly equal emphasis on the top five priorities (nearly the same percentage of CIOs

picked each of the top five). Managing the bottom line received equal emphasis as growing the top line; CIOs almost unanimously told us that business leaders expected them to contribute to bottom-line business priorities and to enable or even drive top-line initiatives.

In contrast, this year we noticed an interesting shift as CIOs selected the top five business priorities for their organizations. We saw increases in the number of CIOs who identified top-line business priorities (customers, growth, and performance) as a priority, while we found a decrease in the number of CIOs who identified cost and innovation as a priority. The most notable change was the shift from **performance** to **customers** as the leading business priority. However, half of surveyed CIOs feel that the focus on customers as a business priority has translated into an expectation of IT.

CUSTOMERS ARE THE TOP PRIORITY; COST AND INNOVATION DROP IN IMPORTANCE

There was a 12 percent jump in the number of CIOs who identified customers as one of their top three business priorities, and a 5 percent increase in the number of CIOs who identified growth (figure

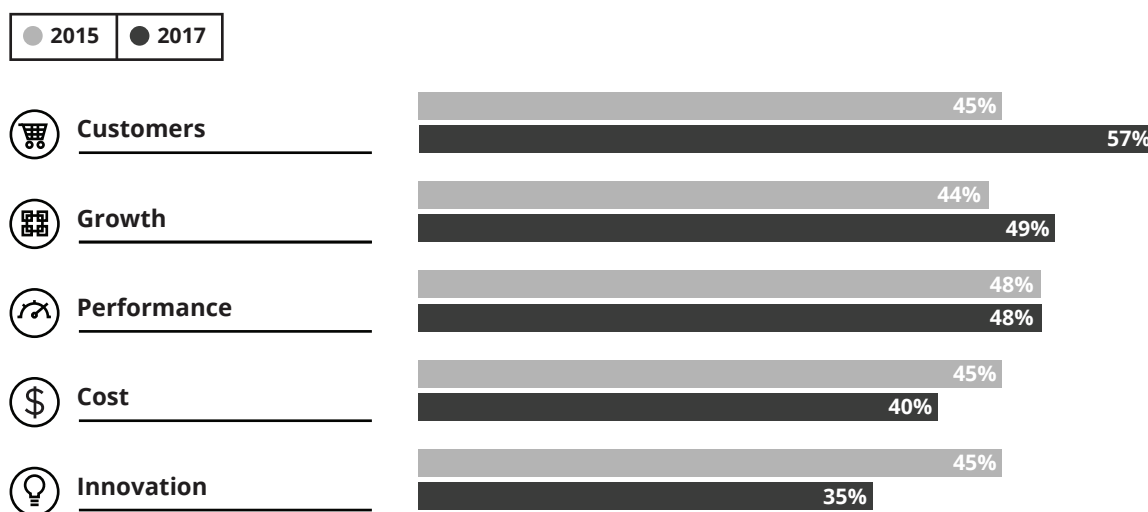
10). Furthermore, although 4 out of 10 CIOs still reported cost as a top-three business priority, cost declined in importance compared to last year. We saw a 10 percent decrease in the number of CIOs who pointed to innovation as a top-three priority.

Additionally, companies are distributing funding for innovation across the lines of business. CIOs surveyed reported a decrease of 11 percent IT budget allocation to support business innovation between last year and this year. Regarding this finding, we hypothesize that more companies are being prudent with their IT investments specifically around innovation as IT budgets become a significant part of the overall operational expense. Because innovation is no longer viewed solely as an IT department line item, CIOs need to partner closely with the business to drive innovation.

We also found that the shift toward the customer as the top business priority held true for eight out of the ten industries represented in our survey (figure 11). For the energy industry, performance and cost were the top concerns; the public sector prioritized regulations, cost, and cybersecurity.

Customers are an important driving force behind the business expectation for digital transformation. Business leaders know that engagement with

Figure 10. Shifting business priorities

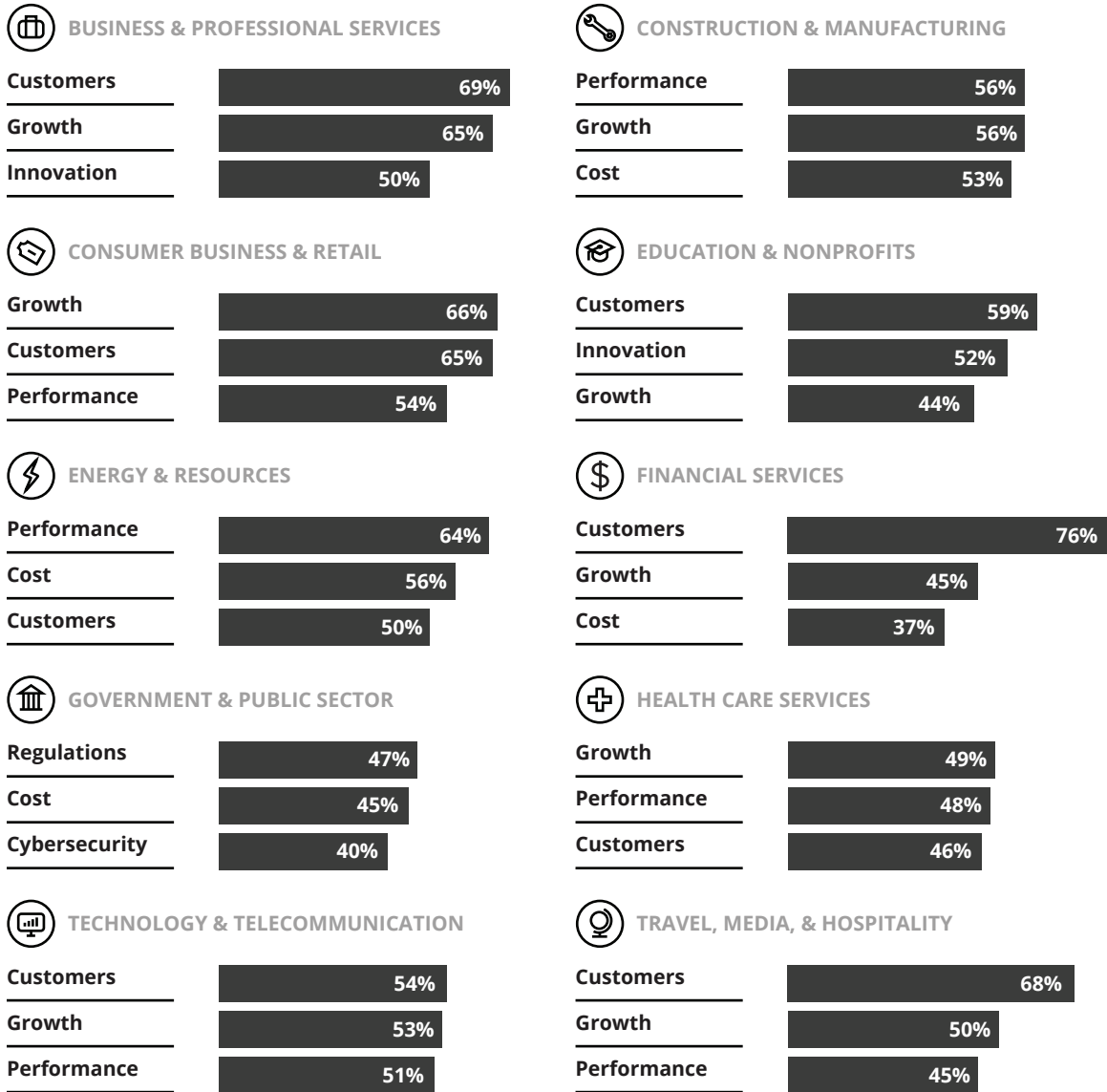


Refer to the appendix, question 5.

N=1,215. Source: Deloitte 2016–2017 CIO survey.

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Figure 11. Industry priorities



Refer to the appendix, question 5.

N=1,215. Source: Deloitte 2016–2017 CIO survey.

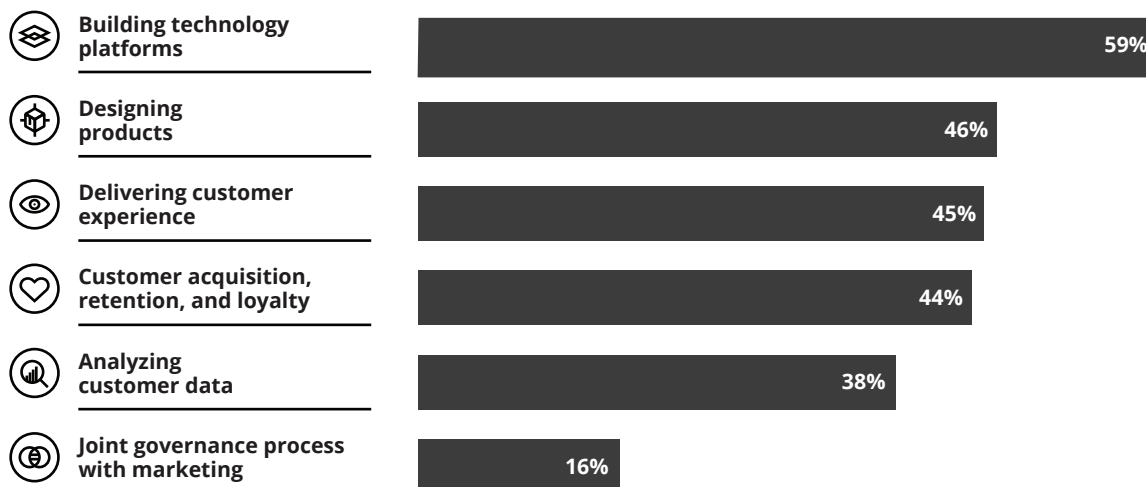
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customers requires strong digital capabilities. However, we found that, on the whole, IT capabilities are lagging vis-à-vis this business priority.

When we asked CIOs about their involvement in customer-focused initiatives within their companies (figure 12), the results were humbling. Only 59 percent of the surveyed CIOs are involved in building technology platforms for their company’s customers, while less than half (46 percent) are involved in designing products and services for

customers. About the same number of CIOs are involved in customer experience and customer data analysis. Only 16 percent reported having cross-functional teams and governance established with the marketing function—although many CIOs who had successfully delivered customer projects reiterated the importance of this in our interviews. Overall, this data suggests that most customer-centric initiatives are still siloed between the business and IT.

Figure 12. Customer-focused IT initiatives



Refer to the appendix, question 6.

N=1,140. Source: Deloitte 2016–2017 CIO survey.

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Further survey results around digital capabilities and investments suggest that CIOs may be underprepared to help their businesses execute against a customer-focused digital agenda. For instance, more than a quarter (28 percent) of CIOs felt that their IT organizations are below average in their current skill sets around digital; the biggest skill deficits identified were in developing a customer-digital experience and analytics. Moreover, to enable digital, CIOs will likely have to invest in digital technologies—but three out of four surveyed CIOs felt that they are *underinvesting* in emerging technologies.

The bottom line: Digital transformation is about more than customers

We started this chapter by presenting the chasms between business priorities, business expectations of IT, and IT’s capability to meet those expectations. The data suggests that the widest of these gaps lies in the CIO’s ability to support customers, growth, and innovation—what we contend covers the full spectrum of “digital” transformation.

As CIOs look to bridge these gaps, the greatest opportunity to do so may be through leading digital transformation initiatives, but more importantly

working with the business to define “digital” for their organizations. As we dug deeper into our data and reflected on the interview conversations we had with CIOs, it became apparent that CIOs feel that many business leaders are limiting their digital initiatives to customer-facing front-end tools and technologies. Others, however, tend to limit the CIO’s involvement in digital transformation, often bringing in a chief digital officer (CDO) or driving digital disruption within their individual business areas. When discussing digital transformation with us, Vittorio Cretella, CIO of Mars, Inc., noted the disparities between IT and the business when he said, “In the midst of digital disruption, IT is still not seen as core to business strategic decisions.” Some business leaders recognize that digital is a much broader set of activities that encompasses redefining how work gets done, reframing how business value can be created through emerging technologies, and driving new revenue models. When CIOs and business leaders think of digital transformation in this way, they can recognize that customer-facing tools and technologies, though essential, are only the tip of the digital iceberg (see “The digital iceberg” sidebar).

CIOs can also look for opportunities to improve their relationship with CDOs, while focusing on technologies to support digital enablement. CIOs in our survey say their relationship with the CDO

is limited (only 10 percent of CIOs report the CDO as one of their strongest relationships) and their involvement in customer-facing initiatives is small. Meanwhile, 82 percent of CIOs say their spend on legacy systems and core modernization will increase or hold steady over the next two years. This signals the enormous back-end transformation underway to support front-end customer demands. Technology investments in cloud, analytics, and cyber are also expected to increase, with 75 percent, 76 percent, and 64 percent of CIOs, respectively, expecting an increase in these areas—all likely contributing to the broader digital transformation efforts.

Digital transformation efforts go far beyond just interacting with customers; digital

presents an opportunity to rethink the role of technology for an organization. Whether it is industrial manufacturing companies collecting and analyzing IoT data to generate new revenue, public sector organizations offering citizens new ways to interact and improve public services, or health care companies experimenting with cognitive computing to better treat cancer, all these disruptions are possible because of technological and scientific disruptions on the front end, but they also require significant changes to back-end systems, technologies, and processes. CIOs are best equipped to understand and appreciate the enormity of the iceberg and steer their organizations through these turbulent times.

THE DIGITAL ICEBERG

As business priorities shift toward the customer, CIOs must continue to spend time looking at current and future business expectations around digital transformation. In this digital era, business leaders are increasingly focused on the “front” end of digital—the customer experience—but they may ignore the capabilities and skills needed to support digital initiatives. In reality, as most technology professionals appreciate, the front end is only the tip of the iceberg.

Digital is used today as shorthand for many things. Often, the most effective way to think about digital is to view it as a way to harness technological and scientific disruptions to reshape the way business value is created. Regardless of how digital is defined within an organization, for the CIO, digital transformation may be rooted in far more than just edgy digital solutions—it likely also means investments, legacy/core modernization, infrastructure consolidation, cybersecurity, data and analytics solutions, and emerging technologies. Adopting this broad view of digital can allow CIOs to not just respond to changing business needs, but to actively shape and drive them. CIOs can transform a conversation about individual technologies and their ROI to a more robust discussion about building a set of capabilities to support and drive the organization’s digital agenda. Enhancing the conversation in this way can allow CIOs to calibrate their technology investments, capabilities, and the talent needed to deliver value, today and in the future.

MORE THAN A QUARTER OF CIOS REPORT THEIR DIGITAL SKILLS ARE BELOW AVERAGE

Digital technologies surpassed analytics this year as the set of technologies CIOs thought would have the most impact on their organizations over the next two years. The link between digital technologies and customer focus was clear: Seventy-seven percent of CIOs who selected customers as a business priority indicated that they were also investing in digital. Also, 70 percent of the CIOs who indicated customers were a key business priority agreed that digital will significantly impact their business.

Further survey results around digital capabilities and investments suggest that CIOs may be underprepared to help their businesses execute a customer-focused digital agenda. For instance, more than a quarter (28 percent) of CIOs felt that their IT organizations are below average in their current skill sets around digital; the biggest skill deficits they identified were in customer and digital experience and analytics. Moreover, to enable digital, CIOs will likely have to invest in emerging technologies and analytics—but two out of five surveyed CIOs felt that they are underinvesting in emerging technologies and analytics. For example, a CIO from a large national insurance company told us, “You can’t do digital much better unless you’re a lot better in the data space as well.”

Chapter 3: Navigating the CIO journey



AS we've discussed, CIOs are uniquely positioned to spearhead digital initiatives, build IT capabilities, and enhance competencies to meet current business priorities. However, many savvy CIOs are looking not only at current business priorities and needs, but also at future business direction—and they are charting a course for that journey. The good news is that our findings show that CIOs have a great deal of control over their ability to proactively support and even influence their company's strategic direction. This is because CIOs' ability to drive value to their enterprise—as expressed in their adoption of one of the three CIO pattern types—is largely driven by the IT capabilities and leadership competencies they nurture in their IT organizations, not by their own individual personalities.

Our CIO survey respondents are already thinking about which pattern type is best aligned to their business' future needs to position themselves for success; 44 percent said that they wanted to adopt a different pattern (figure 13).

CIO patterns represent three distinct approaches for addressing specific business needs to create

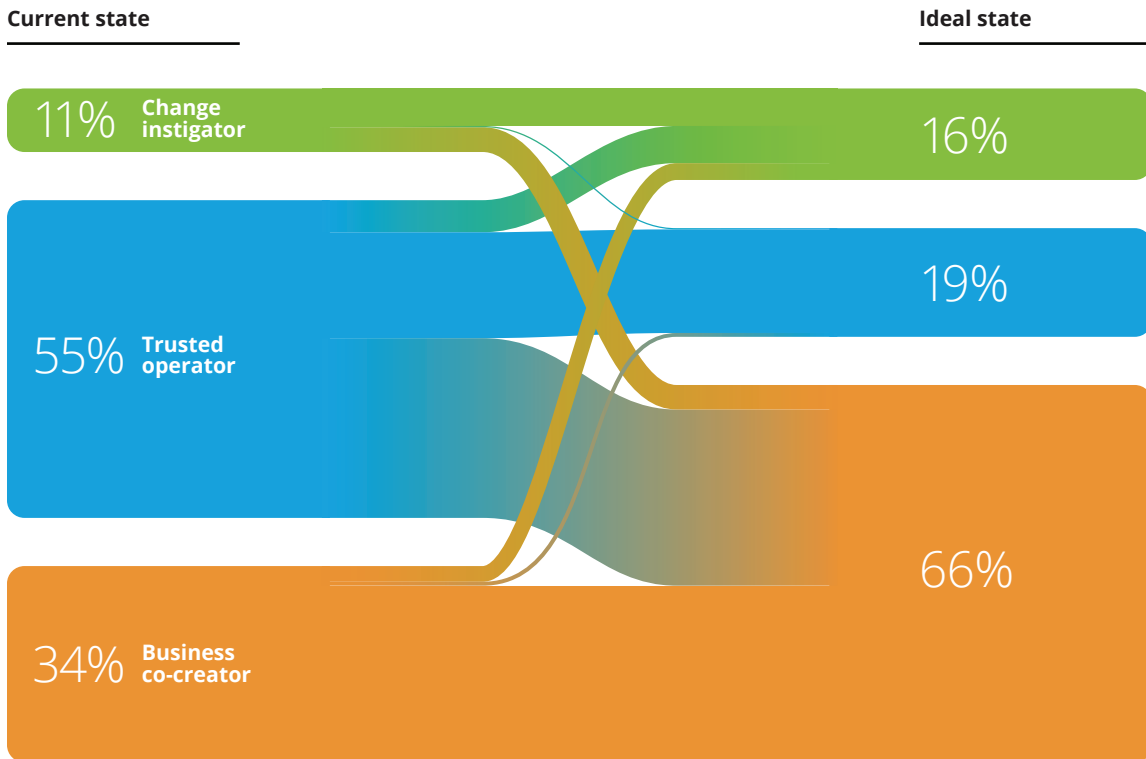
value, and CIOs need to shift between patterns to continue to be effective as business needs change. In this chapter, we highlight the key differentiators between pattern types in the context of changing business needs. To move from one pattern type to another, CIOs should consider adapting and driving change across four areas:

- IT capabilities
- Leadership competencies and influence
- Talent and culture
- Technology solutions and investments

Trusted operators: Adding value through operational efficiencies

Trusted operators make up 55 percent of all CIOs respondents; they tend to lead IT organizations where business expectations mandate a focus on cost, efficiency, performance, reliability, and security. Trusted operators are fairly evenly distributed across all industries.

Figure 13. CIO pattern journeys



Refer to the appendix, question 3.

N=1,216. Source: Deloitte 2016–2017 CIO survey.

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True to their mandate, two-thirds (67 percent) of trusted operators stated that operating and maintaining IT systems is a core business expectation, significantly more than other pattern types. A majority (56 percent) of trusted operators felt that project execution and solution delivery is an essential capability to nurture within their IT organizations. Trusted operators were also the least likely to be involved with the end customer—in fact,

12 percent reported having no involvement with any type of end-customer activities.

Our analysis suggests that a third (33 percent) of trusted operators expect to continue in their current pattern. Only 11 percent said their business context requires a shift to the change instigator pattern, but more than half (56 percent) of trusted operators anticipate making the journey toward the business co-creator pattern.

“Operations and execution is incredibly important in order to be a successful leader. If you have leaky ship then you will only go so far.”

— *Jason Allison, state CIO, State of Florida*

TRUSTED OPERATOR

This pattern primarily delivers operational discipline by focusing on cost, efficiency, performance, security, and reliability to support business cost-reduction efforts. Trusted operators are expected to concentrate their efforts on the fundamentals of delivering consistent, reliable, scalable, and secure technology—all while ensuring cost efficiency. *Data points represent number of survey respondents that selected each option based on their pattern type.*

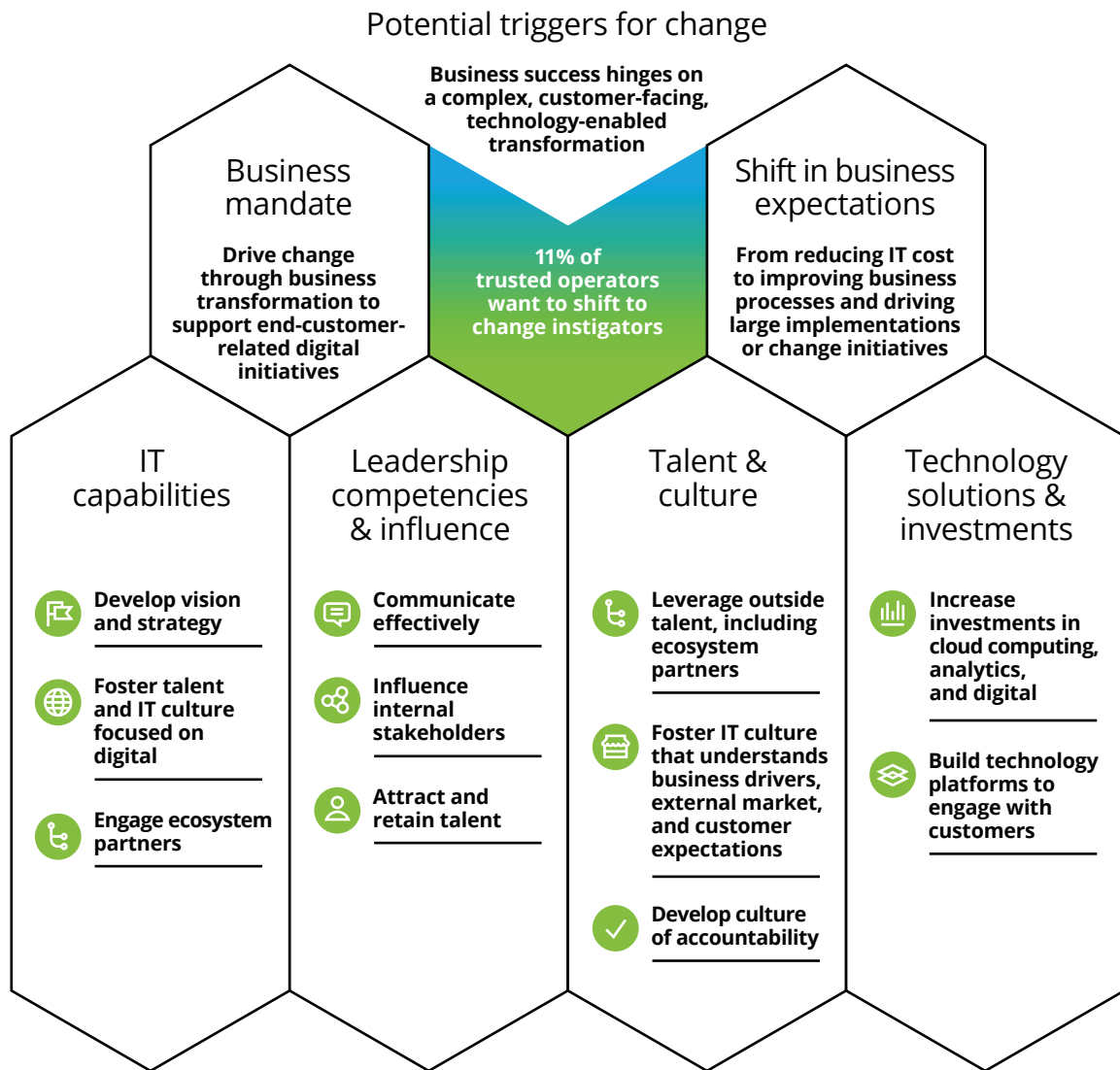


SHIFTING FROM TRUSTED OPERATOR TO CHANGE INSTIGATOR

Trusted operators need to step into the change instigator pattern when an organization increases

its appetite for transformation through technology-led innovation or wants to improve employee or customer engagement through digital capabilities. This transition requires CIOs to significantly change how they allocate their time across key areas. For

Figure 14. From trusted operator to change instigator



Key considerations and challenges

- **Acquire, retain, and engage technology staff**
- **Build relationships with other business leaders, especially those involved in large business transformation projects**
 - **Encourage a culture of calculated risk-taking and focus on outcomes**

“I think being a strong change leader is one of the key attributes of any CIO. The CIO role has fundamentally changed from one that was execution and operations focused to now being focused on building a technology-enabled business strategy partnership. That said, IT teams have to be focused on both delivery and operational excellence. The primary role of the CIO is an influential partner with the business leaders for how technology moves the business forward.”

— **Steve Betts, senior vice president and CIO, Health Care Service Corporation**

example, trusted operators spend 47 percent of their time leading operational activities, while change instigators spend only 18 percent of their time on operations. On the other hand, change instigators spend roughly 41 percent of their time leading change efforts.

More than any other pattern type, trusted operators reported reducing costs as their organization’s top business priority. In contrast, change instigators identified their organization’s top business priority as fostering innovation. Reallocating time and focus from managing operations and execution to driving change and innovation may prove a difficult transition for trusted operators. Such a shift will possibly require developing and grooming talent, enhancing personal competencies in communications and stakeholder influence, and building a culture and IT capabilities that support change and innovation. Trusted operators looking to drive technology-led business change will likely need to find ways to increase their cloud, analytics, and digital investments and use these investments to offer better technology platforms for their end customers.

In the journey from trusted operator to change instigator, one of the keys is to strategically infuse talent and motivate the existing staff to shift focus from operational excellence to business transformation—an evolution that requires CIOs to encourage a culture of calculated risk taking and a focus on outcome. One of the change instigator

CIOs we spoke to underscored the importance of talent, “You can have the best plan, you can have all of these pieces, but if you don’t have the talent to get the job done, who cares? It’s like professional sports. You can have the best strategy in the world, but if you don’t have the talent to drive it, you’re done, you’re out of it. The reason I’ve been successful, and why my team is successful, is because talent I have on the team drives everything.”

SHIFTING FROM TRUSTED OPERATOR TO BUSINESS CO-CREATOR

When technology becomes a competitive differentiator, the organization needs a business co-creator. The journey to a business co-creator will require trusted operators to change their focus from achieving and maintaining operational excellence to articulating and driving a strategic vision. However, it’s unlikely a CIO can devote a significant amount of time on strategy if his or her operational house is not in order. In our interviews, we found that many CIOs earned their place as a business co-creator only after establishing a solid track record of delivery or reducing IT operational expenses substantially over multiple budget cycles. Our analysis suggests that this trajectory is an aspiration for many CIOs—56 percent of trusted operators identified that they would like to be business co-creators.

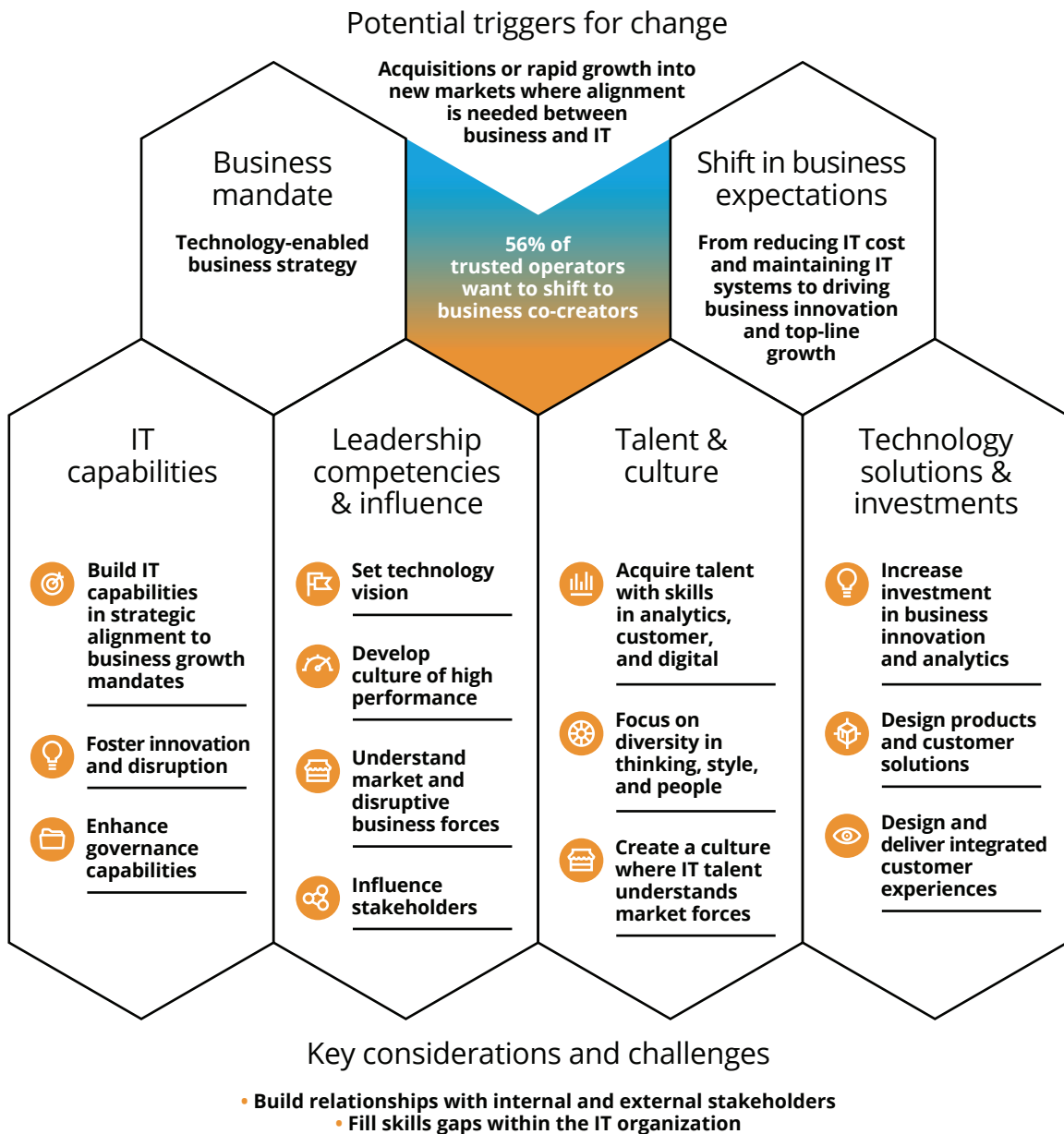
To become a business co-creator, trusted operators should spend substantially more time on developing, shaping, and influencing business strategy. Business

“It’s very hard to move to [a business co-creator] if you don’t believe it’s OK to make a mistake here and there.”

— **Bill Braun, CIO, Chevron Corporation**

co-creators estimated spending 39 percent of their time on these activities. A business co-creator’s ability to lead strategic alignment and partner with the business to support market growth is essential to the role. The business co-creators we surveyed reported setting technology vision as their strongest competency (62 percent). They hold themselves responsible for developing a culture of high performance and have a strong comprehension of

Figure 15. From trusted operator to business co-creator



“You have to always be on a lookout for the innovative technologies that are transforming companies and in some cases industries. When you have a really good understanding of the business, not just the pain points, you can see opportunities that can give our business a competitive advantage through the implementation of technology. The art of the possible is endless . . . from improving agility and efficiency all the way to digital transformation. Now is the right time to deliver extraordinary IT outcomes. It should never be technology for the sake of technology; it’s all about improvement of the business. We have to look at transformation examples inside and outside of oil and gas industry.”

— *Zhanna Golodryga, senior vice president and CIO, Hess Corporation*

the market and disruptive business forces. Trusted operators, in contrast, are less likely to point to any of these leadership competencies as strengths.

Compared to trusted operators—who often belong to organizations that are operationally focused and risk-averse—business co-creators more than any other pattern belong to organizations that greatly prioritize innovation. Trusted operators who need to transition to a business co-creator role should delegate operational and tactical activities and invest their time in learning and understanding the business—which requires them to first develop and maintain a reliable and secure IT environment. They should also spend time understanding and communicating the ROI of innovative technology investments to the business. Forty percent of business co-creators report having an excellent ability to articulate and solicit buy-in of technology investments and value, compared to only 22 percent of trusted operators.

A business co-creator’s success is judged by their contribution to the top line more than by their impact on the bottom line. In the shift from trusted operator to business co-creator, the primary expectations of the CIO change from cost reduction

and IT system efficiency to fostering innovation and driving growth through digital capabilities—which may be the hardest journey to navigate.

Change instigator: Enabling business transformation and customer value

Approximately 11 percent of CIOs surveyed are currently change instigators, who help their organizations navigate complex, technology-enabled business transformations and the resulting shifts in business processes, technology, and culture. Change instigators often actively look for ways to enhance the role of technology in their organizations.

As expected, a significant majority of change instigators surveyed believe that the business expects them to improve business processes (72 percent) and deliver digital capabilities (61 percent) by driving large implementations (52 percent). Change instigators are more likely to leverage their ecosystem partners to help them navigate the complex environment they manage—over a third (36

CHANGE INSTIGATOR

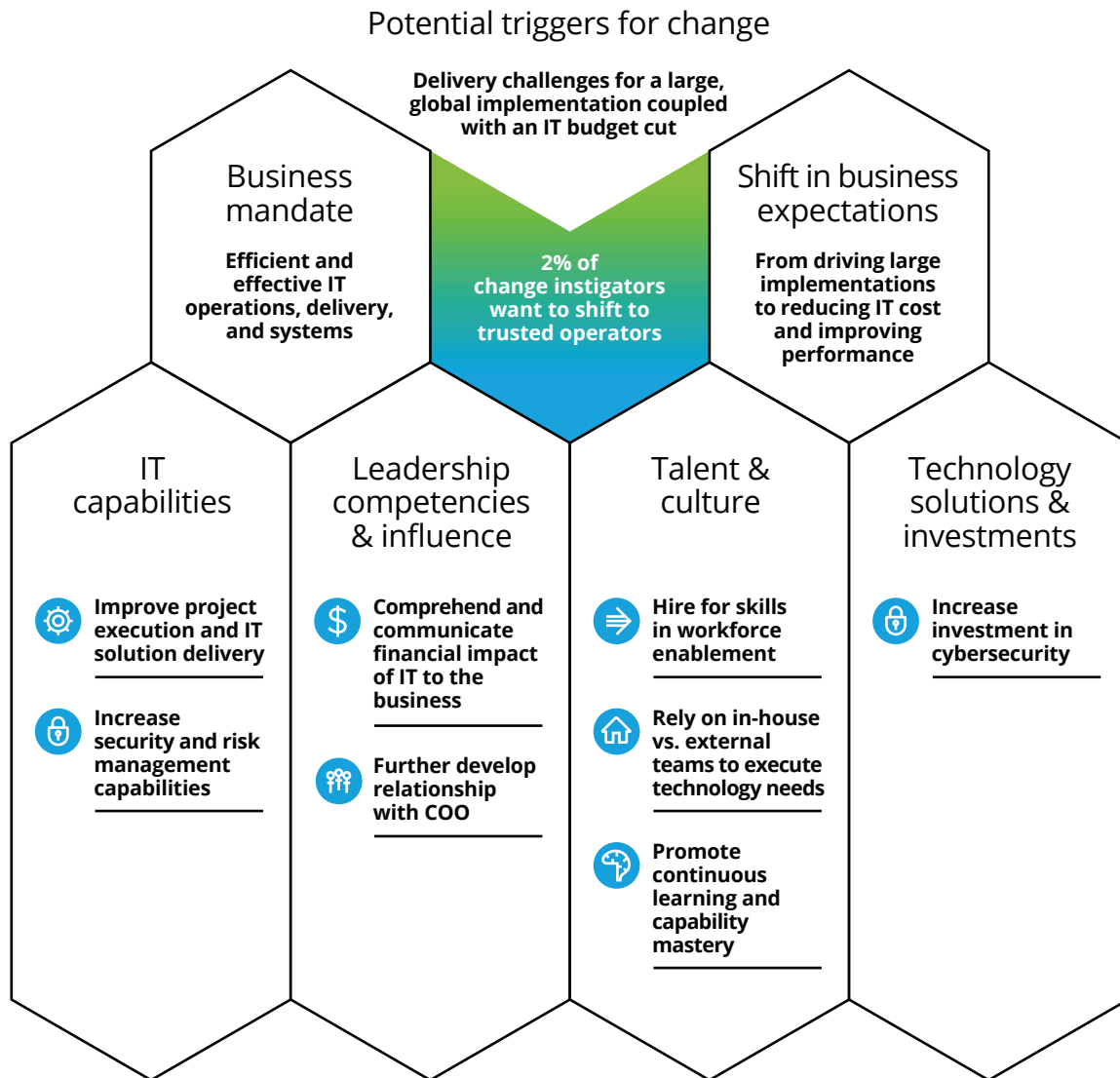
This pattern effectively steers their organizations through complex, multifaceted technology-enabled business transformation efforts. This often requires changes in business processes, enabling technologies, and most importantly, shifts in IT culture and the established way of doing things. Change instigators spend much of their time, naturally, initiating change, and ensuring technology infrastructure is in place to support this change. *Data points represent number of survey respondents that selected each option based on their pattern type.*



percent) believe that leveraging ecosystem partners is a core capability essential to their success, more than any other pattern type.

Most change instigators (59 percent) expect to remain in that pattern in the future. Thirty-nine percent want to make the journey toward the

Figure 16. From change instigator to trusted operator



Key considerations and challenges

- **Build technical credibility and relationships within IT, not just with business leaders**
 - Adjust to shift from leading to supporting change and strategic planning
- **Gain a deep understanding of IT's commitments to the business**
- **Fine-tune IT's executional capabilities**
- **May need to shift investments from business transformation and innovation to ensure infrastructure reliability, efficiency, and stability**

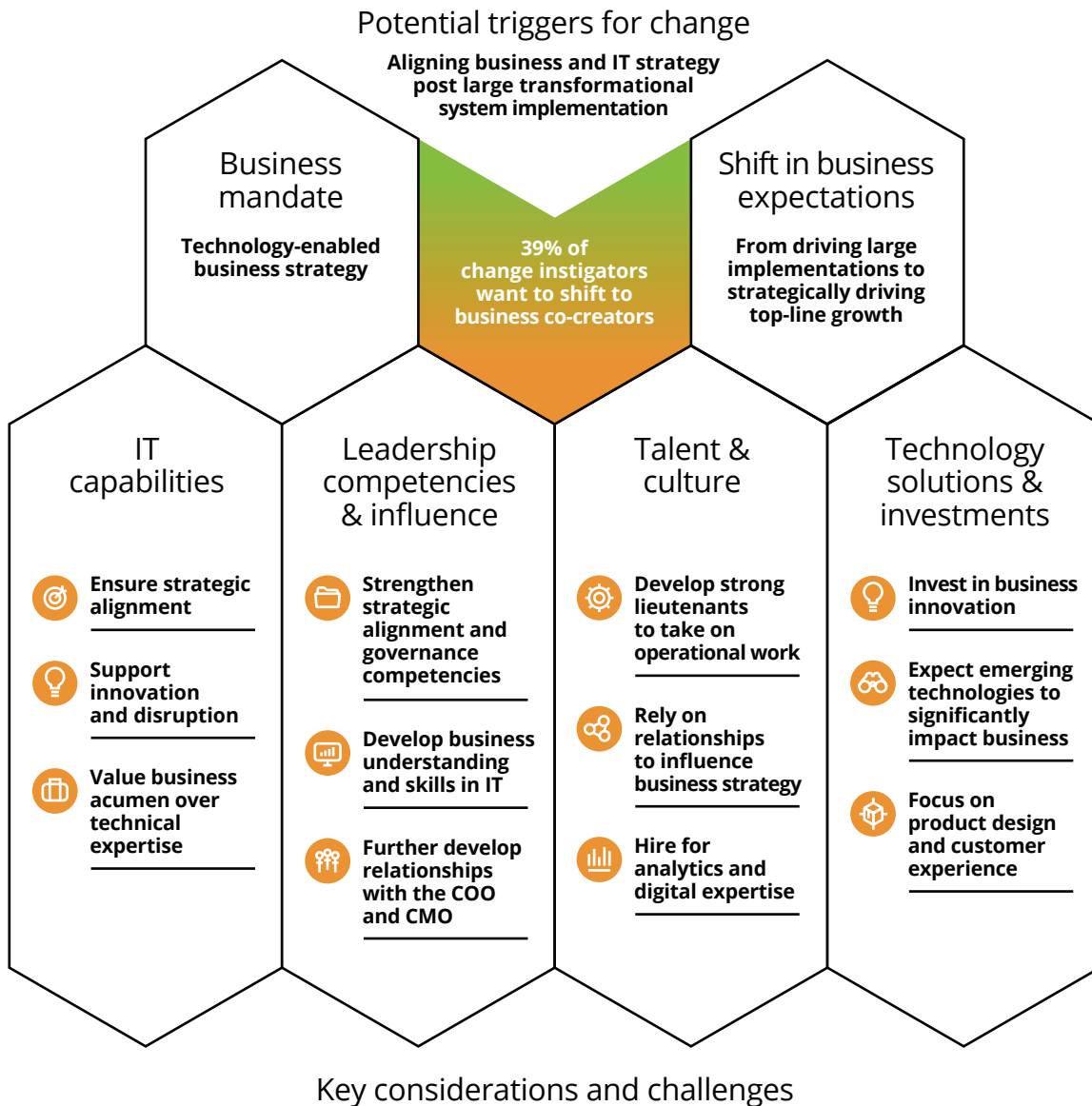
business co-creator pattern type, and only 2 percent said that they want to become trusted operators.

SHIFTING FROM CHANGE INSTIGATOR TO TRUSTED OPERATOR

Because of the potential for security breaches, delivery challenges in large technology

implementations, shrinking IT budgets, and other operational challenges, CIOs may need to address core IT operational areas before tackling other issues—which requires them to shift from change instigators to trusted operators. Other times, new CIOs are brought into an organization to specifically fill the change instigator role as a transformation agent—but inherit decades of uncoordinated and

Figure 17. From change instigator to business co-creator



“I want IT to be like the air you breathe, that you take for granted, because every minute [the business] is thinking and talking about IT is a minute they’re not talking to our customers.”

— **Ken Braud, senior vice president and CIO, Halliburton**

decentralized technology decisions that have created messy and complex IT environments requiring them to put on a trusted operator hat.

Change instigators that need to make the journey to the trusted operator role should spend the bulk of their energies in ensuring smooth operational performance. Trusted operators spend 47 percent of their time on operation and execution-related activities, while change instigators only spend 18 percent.

This change in priorities also means focusing on cost and efficiency as major drivers of IT value. This shift does not mean that the CIO should not contribute to change efforts or business strategy, but the expectation of a trusted operator is to support—not lead—change and strategic planning. Two out of three trusted operators (67 percent) selected maintenance and support of IT systems as a core expectation. Although only 2 percent of change instigators *identified* trusted operator as their desired future state, we suspect the reason for this shift is almost always a result of an event like a security breach or change in the CIO.

SHIFTING FROM CHANGE INSTIGATOR TO BUSINESS CO-CREATOR

It was not unanticipated to find that 39 percent of change instigators believed their business needs would require them to take on business co-creator as their future pattern type. Many CIOs told us that driving and successfully completing a large transformational change allowed them to build influence and credibility within their organizations—an essential attribute for a CIO shifting between these two pattern types. Change instigators intending to

become business co-creators must delegate some of their business transformation work to others to free up capacity to focus on strategic activities.

While change instigators spend 40 percent of their time driving change initiatives, business co-creators spend the same amount time contributing to business strategy. In our interviews, many business co-creators said that strong lieutenants and teams took over day-to-day operations, freeing up CIOs to focus on enabling business strategy. Change instigators already invest significant focus on talent, so providing greater leadership opportunities to their staff is a natural extension. Possibly because of their involvement with and influence over business strategy, business co-creators also control a greater portion—80 percent—of the IT budget, compared to change instigators.

Business co-creator: Driving business strategy through IT and innovation

Thirty-four percent of global CIOs are currently business co-creators. They have a knack for embedding IT into the fabric of the business, and they work to establish their credibility and build relationships across the organization to drive influence. One of their primary goals is to fuse IT investments with business strategy.

Business co-creators are distinctive in other ways: 62 percent believe that innovation is a core business expectation, more than any other pattern type, and 50 percent believe that innovation and disruption are core organizational capabilities that they need to develop. They also are more likely to

BUSINESS CO-CREATOR

This pattern focuses their time on business strategy, while balancing their efforts to provide enabling technologies and leading innovation initiatives. They work to establish their credibility and build relationships across the organization to drive influence. Business co-creators tend to have diverse backgrounds and successful track records of working in multiple business areas, including products, services, or even business models. *Data points represent number of survey respondents that selected each option based on their pattern type.*



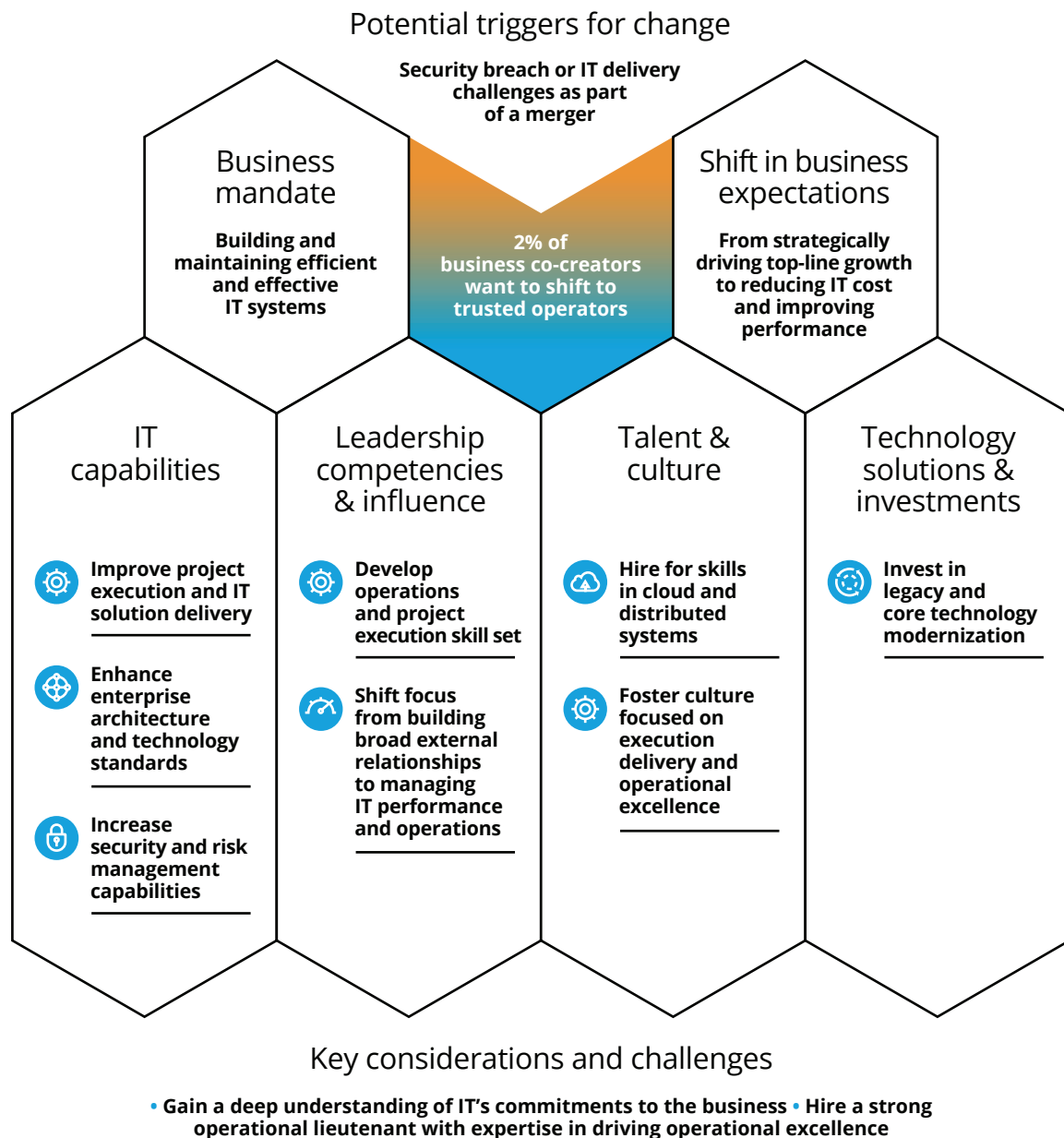
be in organizations that prioritize performance and growth over cost.

An overwhelming majority—90 percent—indicate that business needs will require them to continue to act as a business co-creator. Only 2 percent said they would need to navigate toward the trusted operator role, while 8 percent stated a need to shift to change instigator.

SHIFTING FROM BUSINESS CO-CREATOR TO TRUSTED OPERATOR

Only 2 percent of business co-creators anticipate that future business needs would require them to become trusted operators. Indeed, the transition usually goes the other way: In our conversations with CIOs who were relatively new to the business

Figure 18. From business co-creator to trusted operator



“My team’s job is to keep the car running smoothly; keep it on the center line. My job is to look ahead and see where we’re going.”

— *David Songco, CIO, National Institute of Child Health and Human Development*

“This isn’t little league; everybody doesn’t get a trophy just for participating. At the end of the day, there’s a scoreboard. You don’t get a pat on the back just because you try hard, you have to get the results.”

— *Brad Hildestad, executive vice president and CIO, COUNTRY Financial*

co-creator pattern, we found that many initially took on the role of trusted operator, building the IT organization’s skills and talent to operate the IT environment effectively and efficiently. However, in the event that the business is impacted by an inefficient or unstable IT environment, large system outages, data breaches, or other systemic challenges, the CIO must immediately reprioritize and respond by shoring up impacted systems. This does not mean, of course, that CIOs in this situation should halt all other activities. Trusted operators do not focus only on IT operations; they have to simultaneously keep engaging with peers on business strategy and managing any large transformational projects underway. But under certain circumstances, the CIO’s first priority is to invest in operating an efficient, secure, and reliable IT environment.

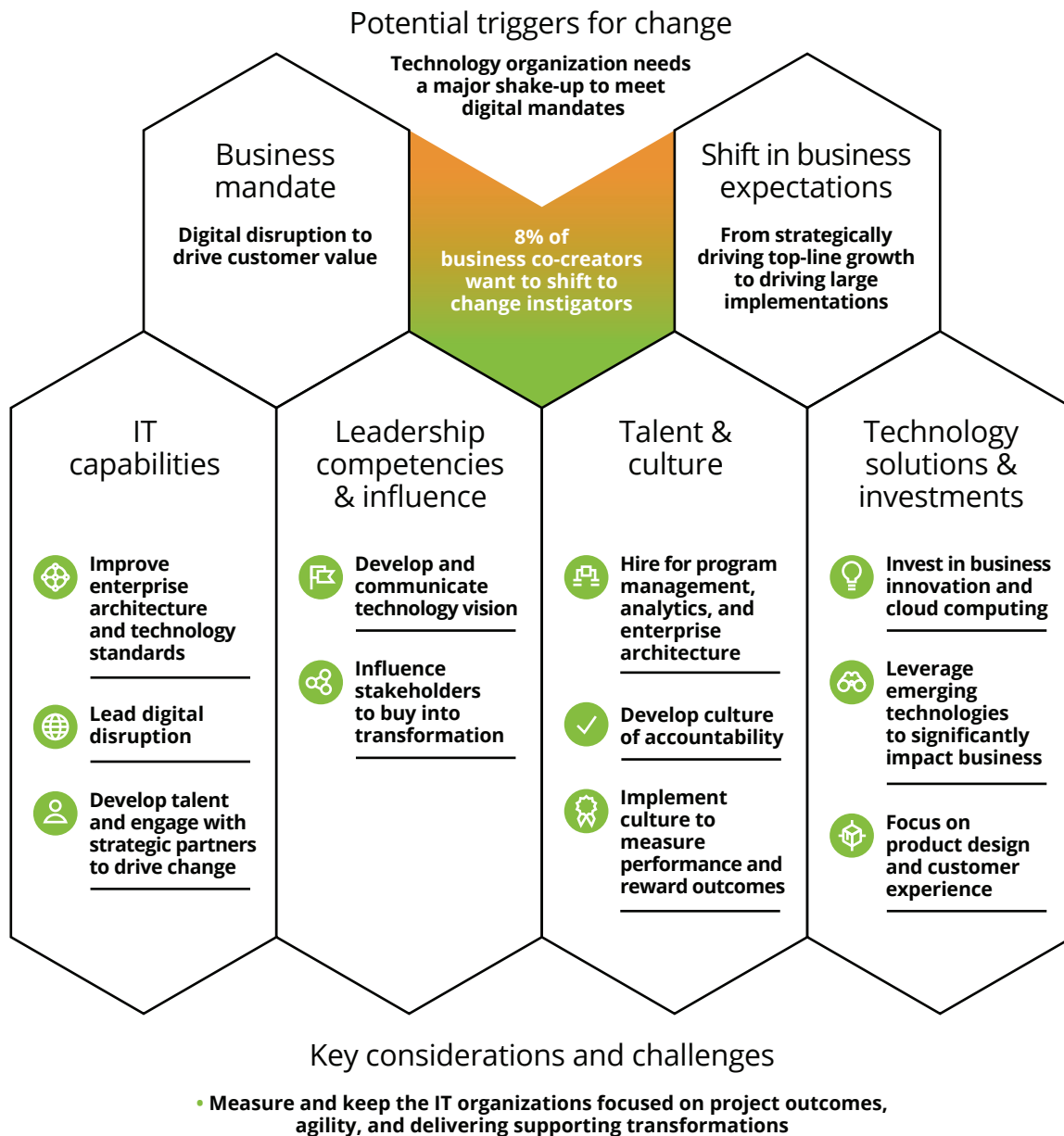
Business co-creators tend to spend 40 percent of their time on business strategy, while trusted operators spend almost half of their time on operations and execution. This significant change would require business co-creators to gain a deep understanding and appreciation for the complexities of operating an IT environment. A business co-creator making the move to trusted operator may want to hire a strong operational lieutenant with expertise and prior experience in driving operational excellence.

SHIFTING FROM BUSINESS CO-CREATOR TO CHANGE INSTIGATOR

When business success hinges on a complex, multiyear, technology-enabled business transformation, the organization requires a change instigator. Eight percent of business co-creators indicated that they ideally want to be change instigators. This need typically arises when a large business transformation is on the horizon or already underway—or when the technology organization needs a major shake-up in leadership, capabilities, or technology investments. A change instigator CIO is expected to disrupt the status quo and steer the organization toward calmer waters.

To make the transition to change instigator, business co-creators should double their time allocation on business transformation-related activities, from 18 percent to 34 percent, and cut the time they spend on change initiatives, from 38 percent to 20 percent. More than the other types, change instigators report that they are expected to improve business processes (72 percent), drive digital activities (61 percent), and lead large technology implementations (52 percent). Business co-creators moving to the change instigator pattern type should reorient themselves and their organizations to measuring project outcomes, maintaining agility, and delivering supporting transformations to meet these expectations.

Figure 19. From business co-creator to change instigator: Potential triggers for change



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The bottom line: Change is the only constant

We cannot stress enough this absolutely critical fact when it comes to CIO patterns: They are not permanent, but instead are “transitory states” that change the CIO’s focus, activities, and relationships

according to shifting business needs. In fact, it is probable that the 55 percent of CIOs who think that their current pattern is appropriate for the future are mistaken. It is also important to keep in mind that patterns are not absolute. In other words, business co-creators do not necessarily perform as that pattern type 100 percent of the time. In fact, business co-creators spend close to 40 percent of

their time managing operations and delivering enabling technologies.

The forward-thinking CIO will often fulfill current business expectations, look ahead to future business priorities, and then chart their course to the pattern that best fits what the business will require next. These are proactive activities: Business leaders will not necessarily tell you where to go. As leaders

within their organization, CIOs need to drive the business understanding of the latest and greatest technology, influence organizational leadership to use technology to support business needs, and advocate for appropriate technology deployments. Each CIO should think of himself or herself as a business leader and start setting their course based on an understanding of both present and future business priorities.

Chapter 4: Shaping your legacy by mapping the digital agenda



EVEN as business needs change and they navigate among pattern types in response, shape-shifting CIOs must take charge of their legacies by driving the organization’s digital transformation. Given the increased emphasis on customers as a business priority, digital transformation appears to be dominating the boardroom agenda—even though it’s often not clear what “digital” actually means. Most definitions of digital are shallow, and the expectations for the journey to a fully digital enterprise are optimistic. For many it means tinkering with the customer experience, but digital is much more than that. From what we understand, the source of the gaps in the digital space is driven by hype and disparity in expectation, perspective, and knowledge. CIOs can anticipate and address these gaps and transform their businesses into leading digital organizations—and in the process, shape their own legacies.

Digital re-defined

Early forays into digital tended to coalesce around a customer-focused stack, dealing with the Web, mobile, social, commerce, and content management. These mechanisms helped improve engagement

with the customer—the center of the story. Using digital, we interacted with customers as individuals and not as a sample. This was a very natural first step for digital.

Now, as digital has matured, it may be best defined to include a spectrum of objectives and supporting emerging technologies that drive precision and intimacy of information about behaviors, desires, and operational performance. Customers are not the only focus; digital is expanding to include employees, partners, business processes, products/offerings, and even broader competitive dynamics in and across industry boundaries. By this definition, digital manifests itself into predictive analytics and machine learning, IoT, robotics, cloud, cyber, and “mixed reality” (augmented and virtual reality). Digital is shorthand for these technologies, and for how they are combining to revolutionize experience, reshape how work gets done, and reimagine broader business growth. It is about all these technologies collectively, in various dimensions, with the speed to harness and innovate mechanisms. Digital allows us to rethink how we engage and do business, and because of its precision, we can rethink and reshape business.

“Much of what we’re doing to attract and retain new customers, while innovating our products and services, focuses on the digitization process. Our customer experience is evolving from traditional face-to-face agent contact as the reality of dealing with Millennials and Gen Z is in knowing how they operate, how they like to purchase, and how their methods differ from our customers of the past. We need to provide that ‘Amazon-like’ experience to make it easy to work with us via online channels. To attract and retain a strong customer base, we need to provide channels with which younger consumers are most comfortable.”

— *Julia Davis, senior vice president and CIO, Aflac, Inc.*

Three areas of opportunity

Digital has become a rallying cry for a wide variety of opportunities—all of which are in play in many organizations. Each organization likely has a different focus and a different set of digital priorities. Even within a company, different executives are likely to prioritize the digital embodiment closest to their individual purviews. A good starting point is to standardize verbiage, priorities, and in-flight investments. The digital agenda can and should drive toward multiple outcomes, but overlapping initiatives can cause redundancy of spend, dilution of resources, and complexity in managing the inevitable dependencies back to legacy systems, services, and data. Digital typically manifests in one of the following three categories:

- **Customer experience:** Growing competition and consumer power have eroded traditional product-based advantages, forcing companies to shift to a new battlefield—customer experience. Digital allows an unprecedented understanding of the behavior, preferences, and influence of an individual customer. Digital allows companies to create personalized, predictive, and dynamic experiences that transcend products, offerings, and channels that are centered on simplicity, utility, and authenticity. This requires integrating the entire business to demonstrate value at every customer touch point.
- **Digital at the core:** Digital can change how work gets done. In the same way that it can improve the customer experience, it can make the employee experience more interesting, efficient, and intuitive. But it is not just about augmenting and improving the employee experience—it is also about automating more of the underlying workload. This also includes systemic changes—an exceptional front-end strategy must be supported by an exceptional back office, which requires new expertise, processes, and systems, and potentially a new operating model.
- **Business transformation:** This is the broadest opportunity for digital. How can digital technologies be used to extend the core business and business model, enter new markets, and monetize assets in different ways? Enabling increased connectivity, addressing growing competition and consumer power, and disrupting others before you are disrupted all require new engage-

ments, new products, new business models and organizations, and new ecosystems.

Impedance mismatch: Prepare for digital disruption

In a recent study conducted by Deloitte and the *MIT Sloan Management Review*, 87 percent of executives responded that they believed digital technologies will disrupt their industry. Only 44 percent of those same executives said their organization is adequately preparing for these looming digital trends.¹

In that dichotomy, CIOs can find both great threat and great opportunity. On the downside, inadequate preparation for digital disruption could be interpreted as an indictment of the CIO and broader IT organization. Digital represents a broad range of domains and ambitions, but all share a strong technology underpinning. Shouldn't the executive in charge of technology be leading the charge?

Most organizations find themselves in a much more nuanced environment. Each of the non-CIO leaders is focused on some part of digital. The CMO centers on omnichannel customer engagement, the COO on robotic process automation and applying IoT to the supply chain, the CFO around analytics and blockchain-based inter-company transfers, and so on. The CIO, however, is positioned to visualize the digital “big picture” and help guide investments that build the right mix of new capabilities, new architectures, and new delivery models to avoid redundancy of spend on siloed or, even worse, conflicting solutions. Platforms focused on digital content, digital identity, data aggregation and analysis, integration, and orchestration can become powerful building blocks that amplify and accelerate all digital initiatives. Common approaches to security, reliability, scalability, extensibility, and maintainability can help bake enterprise-grade considerations into early prototypes and experiments, short-circuiting the time it will take to harden and expand digital efforts that need to be scaled and managed in production.

To help make those ambitions real, here are three considerations for CIOs looking to shape their organizations' digital agenda.

Connect ideas and solutions across the enterprise. Left to their own devices, functional leaders will likely tackle each of the three opportunities in independent ways, resulting in suboptimal investments and precluding broader adoption patterns. For example, the manufacturing group using the IoT for efficiency within the production line may not consider that the same IoT infrastructure can be used to monitor how products are being used in the market and to understand customer behaviors that can drive new products. CIOs can help broker and cross-pollinate ideas, and use the collective slate of business priorities to guide digital platform and underlying core modernization efforts. As a business co-creator, addressing this mismatch could be a huge opportunity for a CIO.

Lead IT enablement. CIOs will need to understand how to orient and organize the skill sets needed to support broader IT operating and delivery models and the internal opportunities these entail. This can be challenging if available IT resources are accustomed to legacy enterprise silos, processes, transaction execution, and yearly waterfall budget cycles. IT departments are in a period of transformation, evolving their operating, delivery, and organizational models. In hand, the entire IT stack is being modernized—infrastructure, applications, data, and even the scope, skills, and capabilities of IT's team members. Modernization efforts can be a way to achieve efficiency and cost savings, but CIOs should recognize these are not on the business's radar. In fact, less than half of the survey respondents say that simplifying IT infrastructure and applications is an explicit business priority (46 percent). Regardless, as a trusted operator, a CIO has tremendous opportunity to initiate broader change within the business of IT.

Explore new partnerships. There's no such thing as “too small to matter” when thinking about new potential partners, players, and spenders. How do you scan beyond traditional tech partners to drive new ideas and to source or acquire new capabilities? How do you build out the capabilities

with your partners on digital? Some organizations want a short tech solution, not a full-blown digital disruption. But how much of it is done in-house? Should you take advantage of advancements happening outside and team with other smaller partners? As a change instigator, a CIO has the opportunity to think beyond traditional partners.

The bottom line: CIOs can shape the path forward

Digital presents a challenging and exciting time for CIOs as they navigate business needs around digital technologies. But since the CIO has a unique purview

of digital's comprehensive potential reach across the organization, he or she can actually do more than anticipate—they can shape the direction. CIOs can forge the path forward—not by land-grabbing all facets of digital from individual executive sponsors, but by playing the role of conductor and enabler, rolling the disparate initiatives into a shared vision and pragmatically executing pieces with an eye toward the strategic endgame. Today's CIOs should accept this potential and execute on it for even greater legacy outcomes—not just for themselves and their IT teams, but for the business overall.

ENDNOTES

1. G. C. Kane, D. Palmer, A. N. Phillips, D. Kiron and N. Buckley, "Aligning the organization for its digital future," *MIT Sloan Management Review* and Deloitte University Press, July 2016.

Appendix: Survey questions and responses

DEMOGRAPHICS

Global view

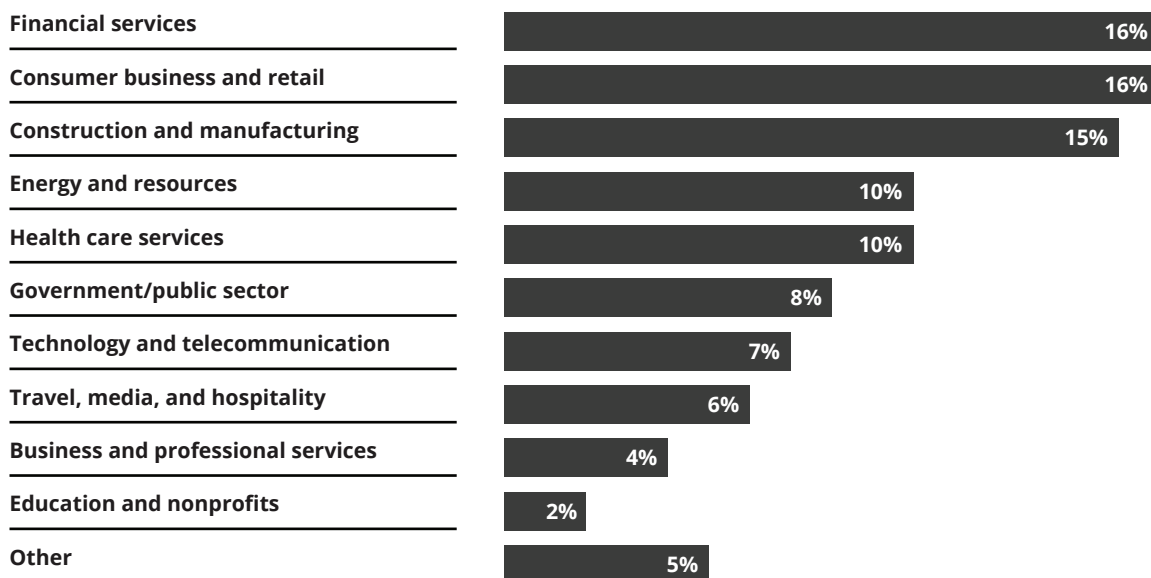
1,217 Survey participants **48** Participating countries **15%** Of participants from a Global 1000 company

Pattern type



N=1216

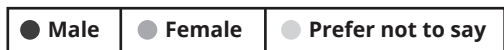
Industry



N=1,216

Source: Deloitte 2016–2017 CIO survey.

Gender



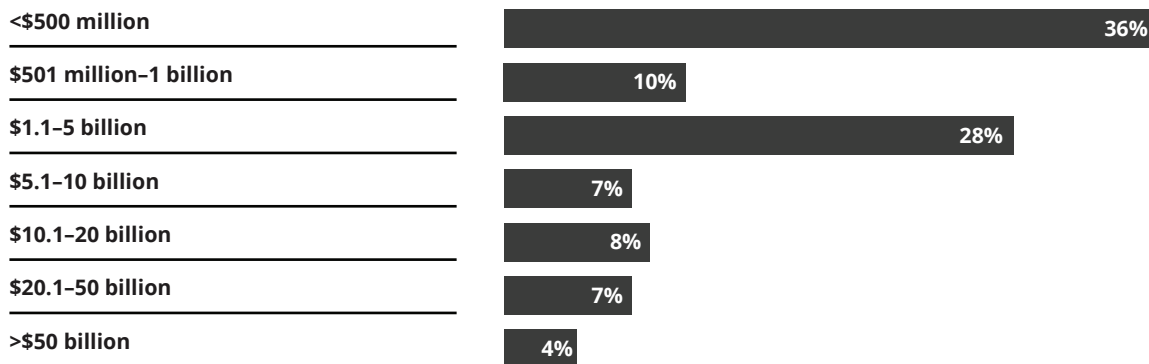
N=1,216

Geography



N=1,217

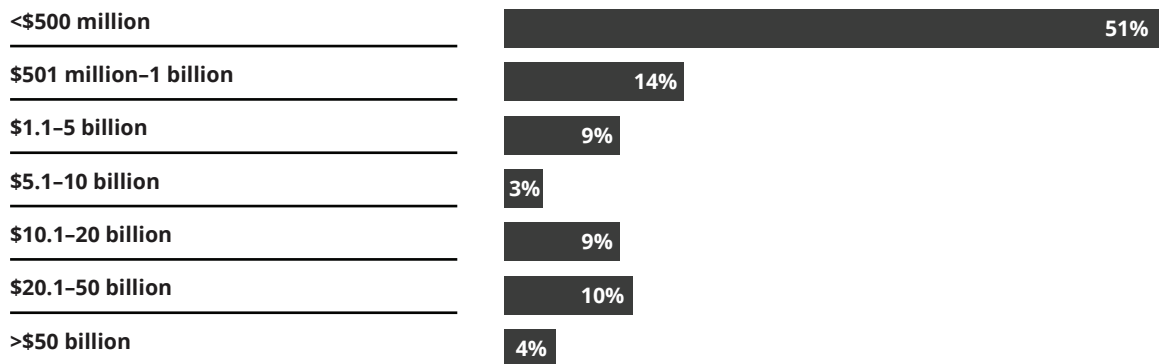
Worldwide revenue (commercial)



N=934

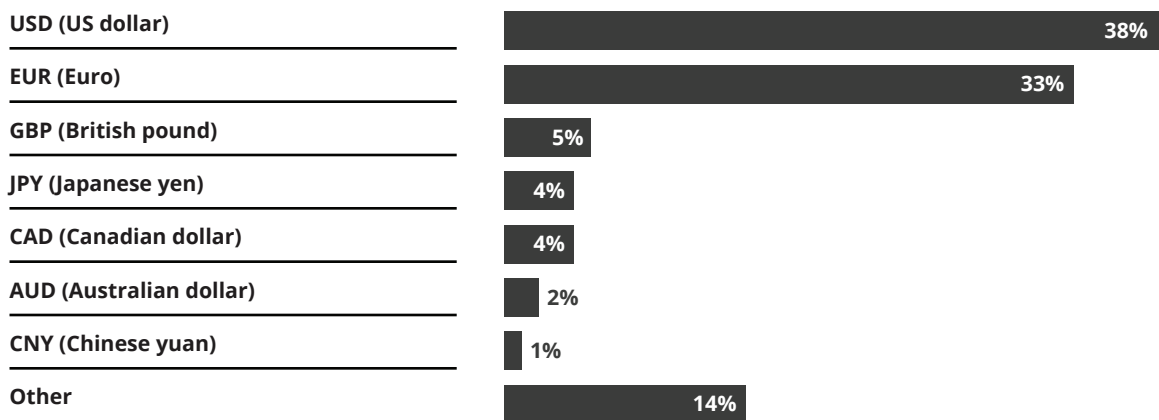
Source: Deloitte 2016-2017 CIO survey.

Overall spend (federal)



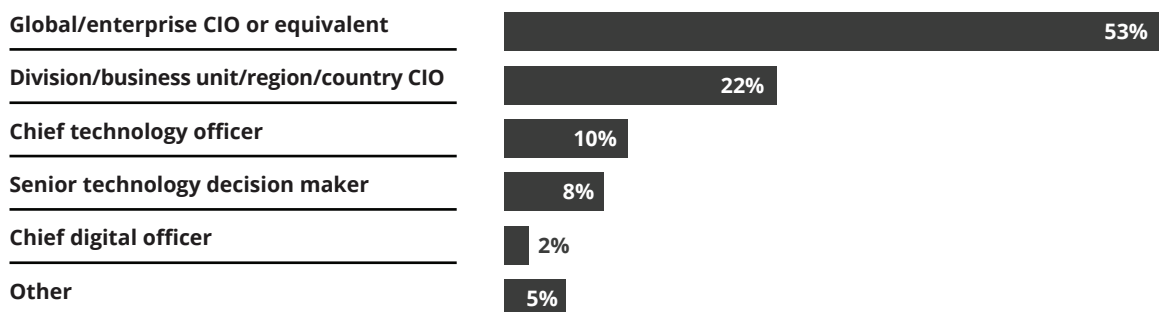
N=78

Currency



N=1,214

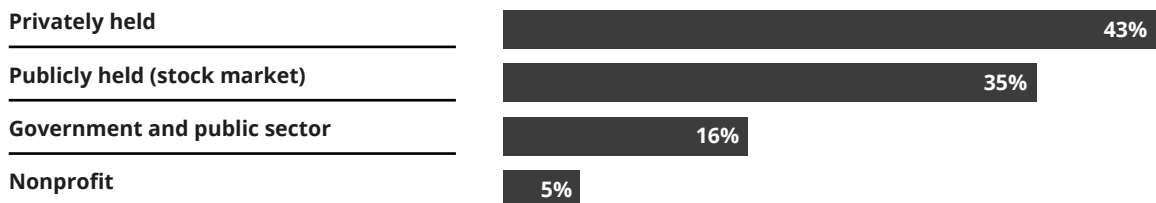
Current role



N=1,216

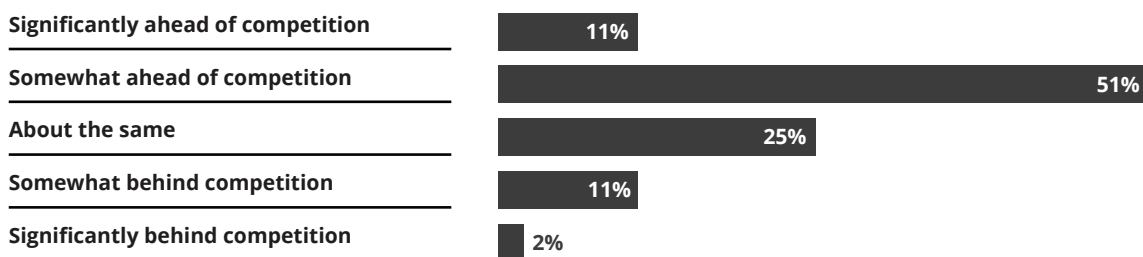
Source: Deloitte 2016–2017 CIO survey.

Organization category



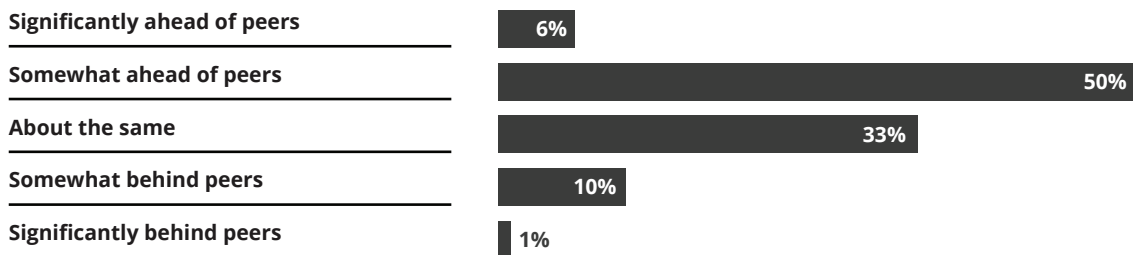
N=1,215

Business and financial performance relative to competitors (commercial)



N=1,094

Business and financial performance relative to peers (federal)



N=100

Source: Deloitte 2016–2017 CIO survey.

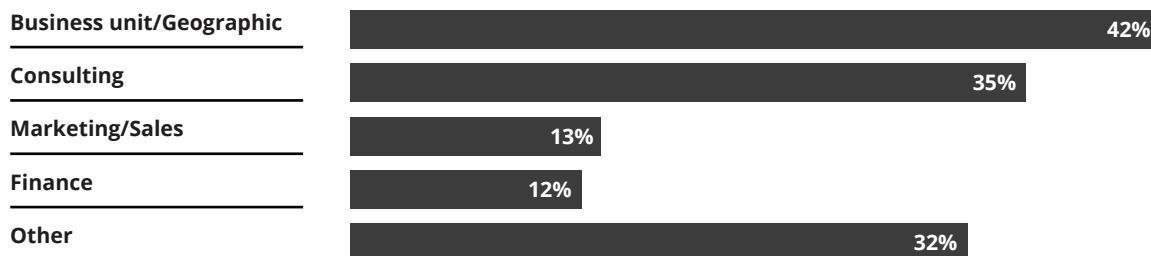
ENERGY, FOCUS, AND SKILL SET

Question 1. How long have you been in your current role?



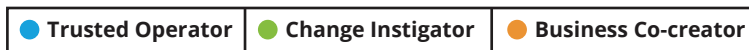
N=1,216

Question 2. Have you held any leadership roles outside of the IT organization? What other types of leadership roles?



N=1,213; 681

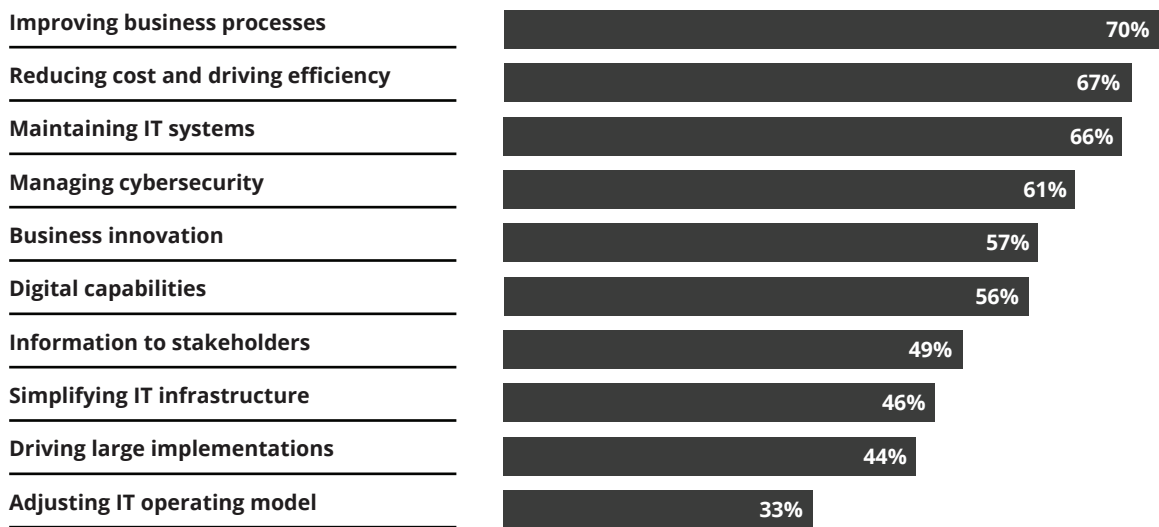
Question 3. How do you spend your time across the following areas?



N=1,216

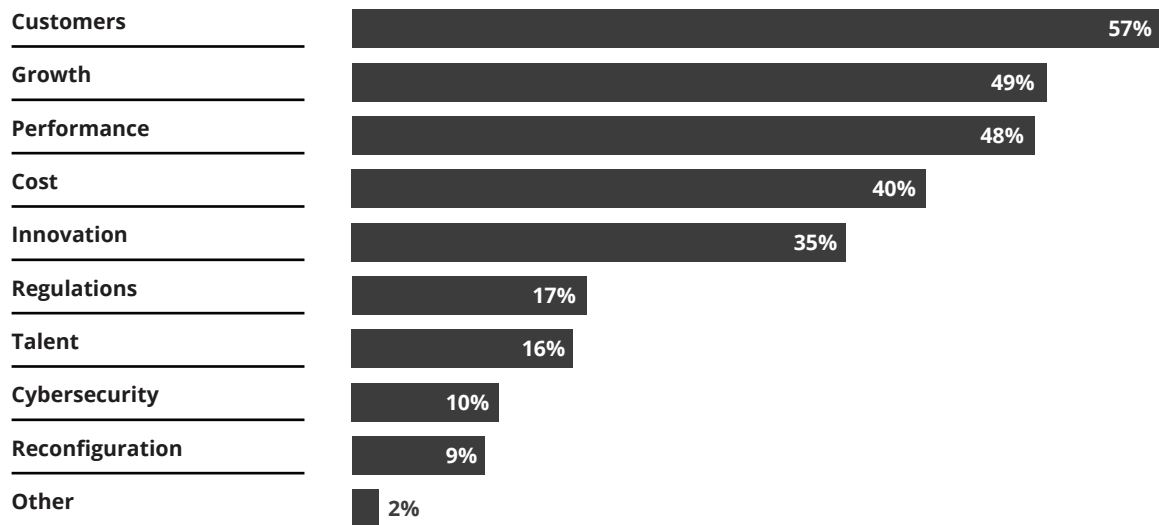
Source: Deloitte 2016–2017 CIO survey.

Question 4. What are the core expectations from the business of your IT organization/CIO?



N=1,150

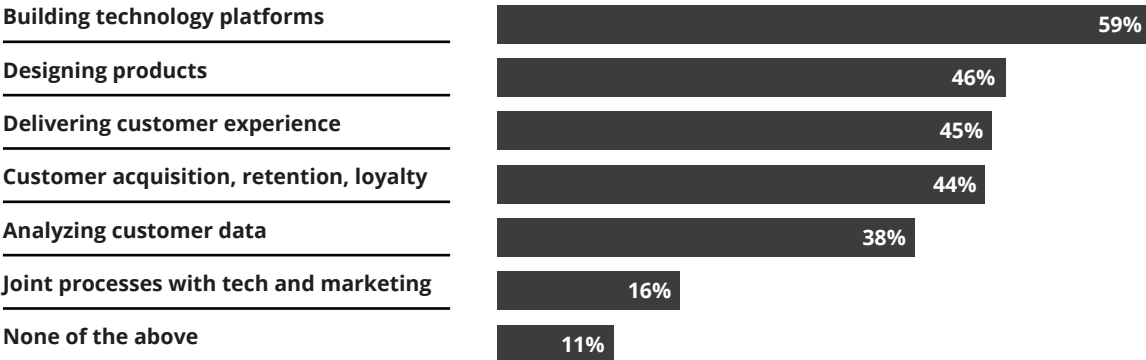
Question 5. What are your organization's top business priorities? (Select up to three)



N=1,215

Source: Deloitte 2016–2017 CIO survey.

Question 6. Which of the following statements is true about your IT organization’s view on the end customer?



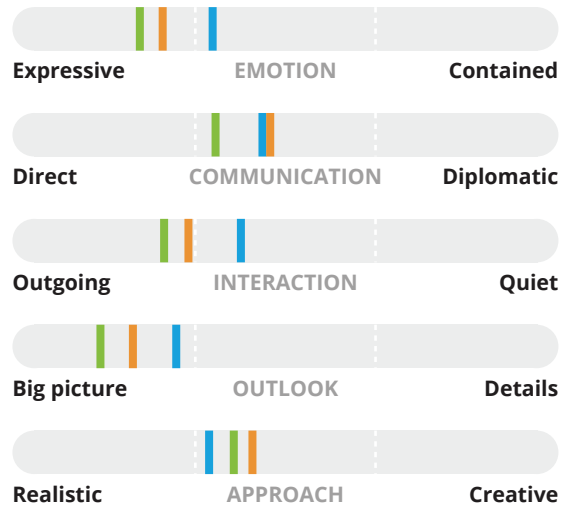
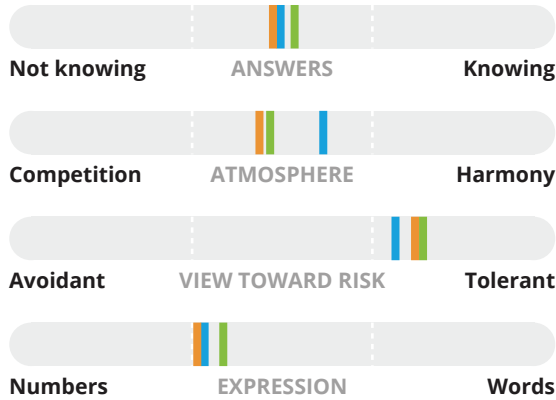
N=1,140

Source: Deloitte 2016–2017 CIO survey.

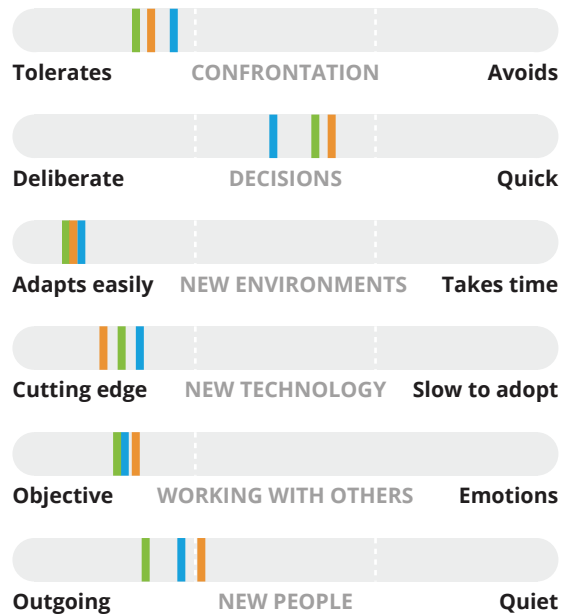
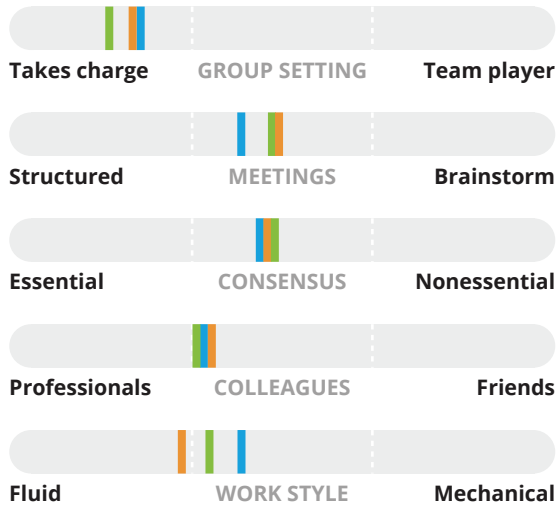
COMPETENCIES, TALENT, AND RELATIONSHIPS



Question 7. How would you describe your personal style?



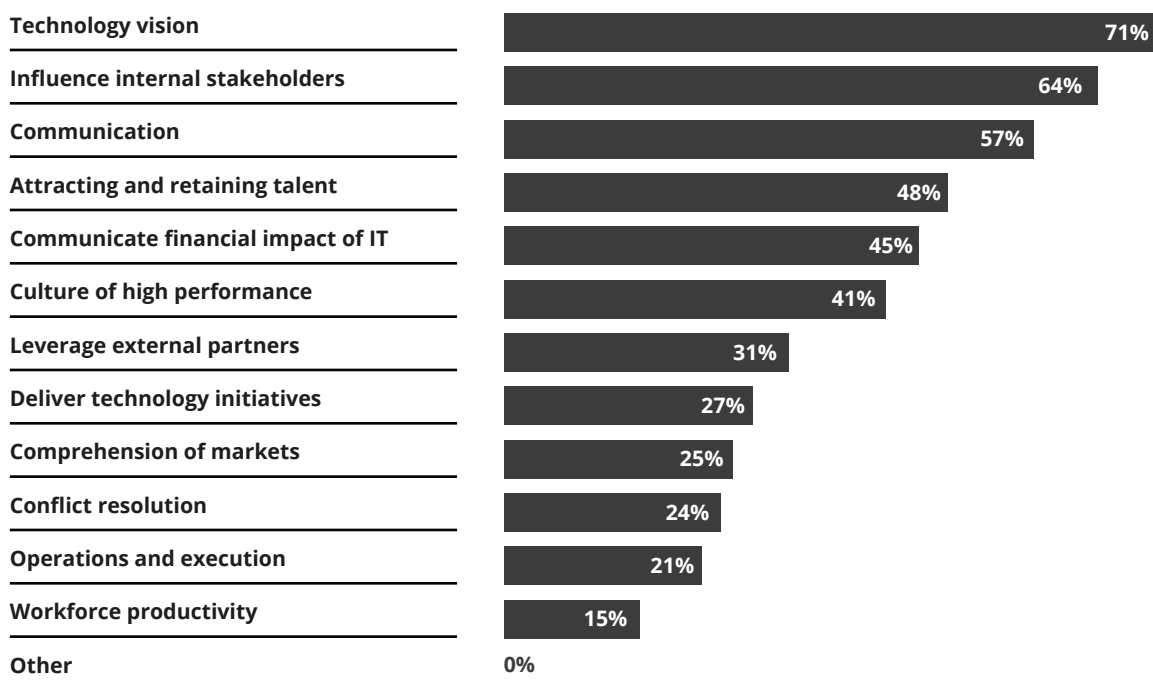
Question 8. How would you describe your working style?



N=1,175

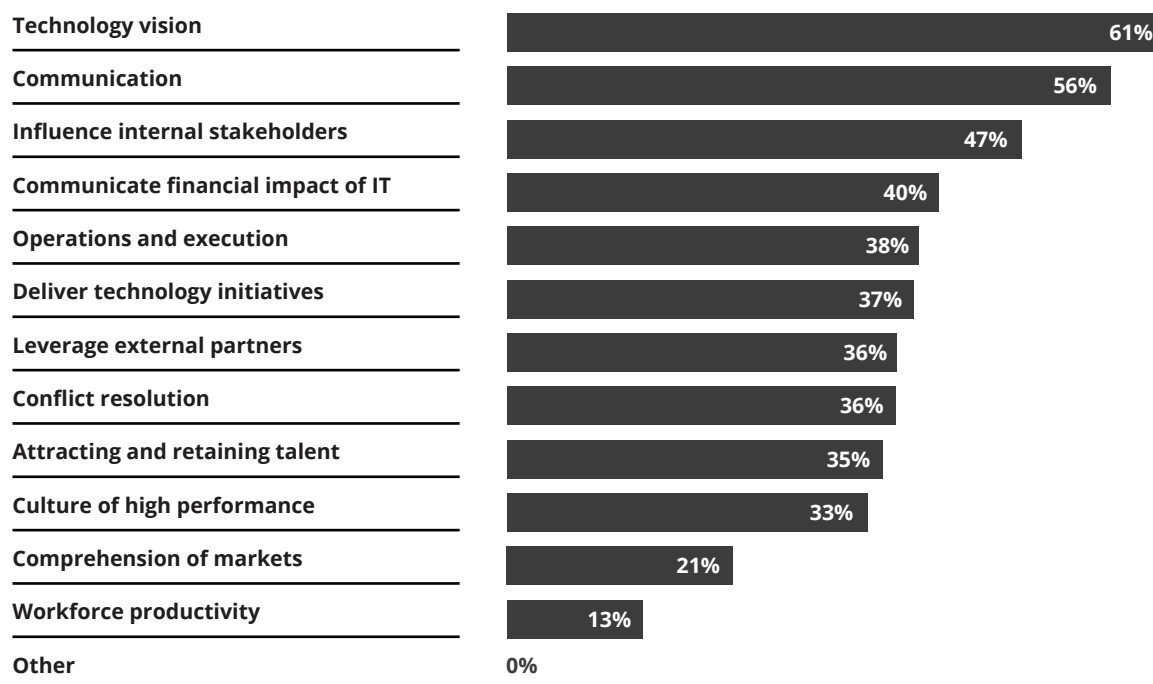
Source: Deloitte 2016–2017 CIO survey.

Question 9. What do you consider to be the differentiating characteristics of a successful tech leader? (Select up to five)



N=1,161

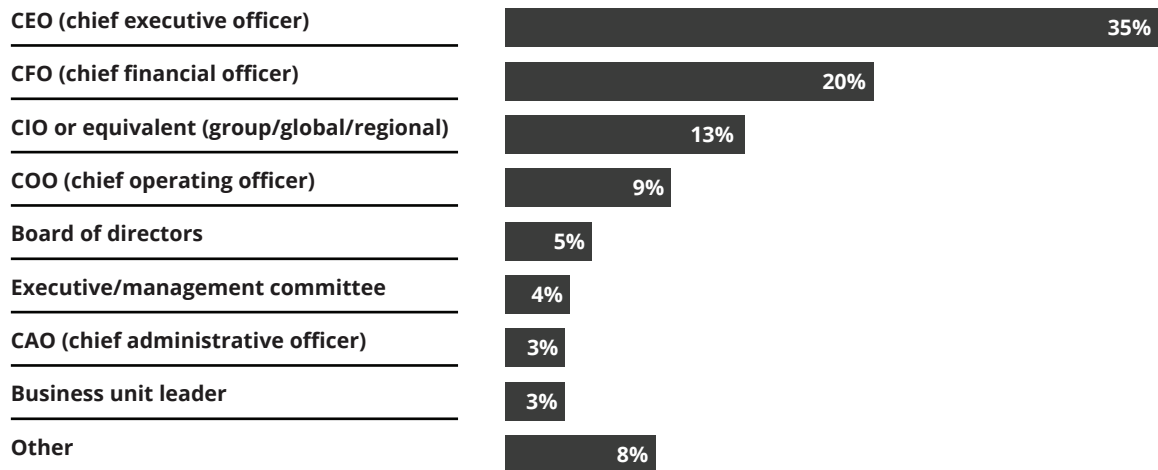
Question 10. Which of the following are your current strengths? (Select up to five)



N=1,152

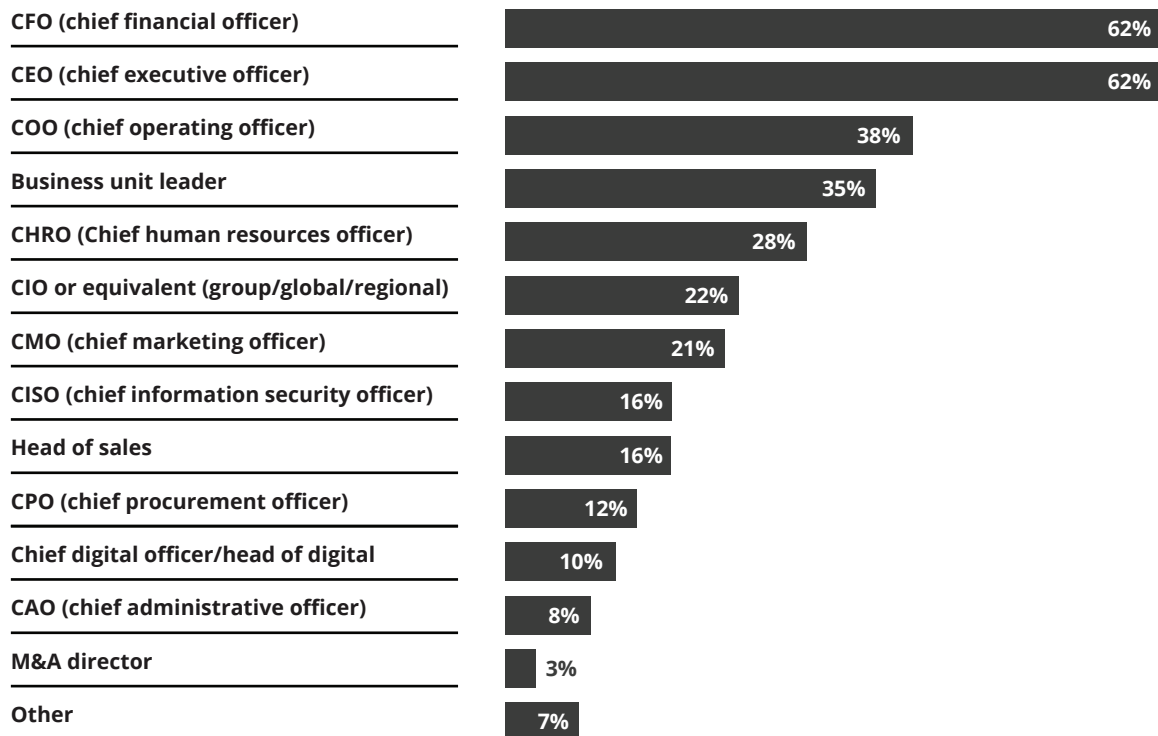
Source: Deloitte 2016–2017 CIO survey.

Question 11. Who do you report to?



N=1,162

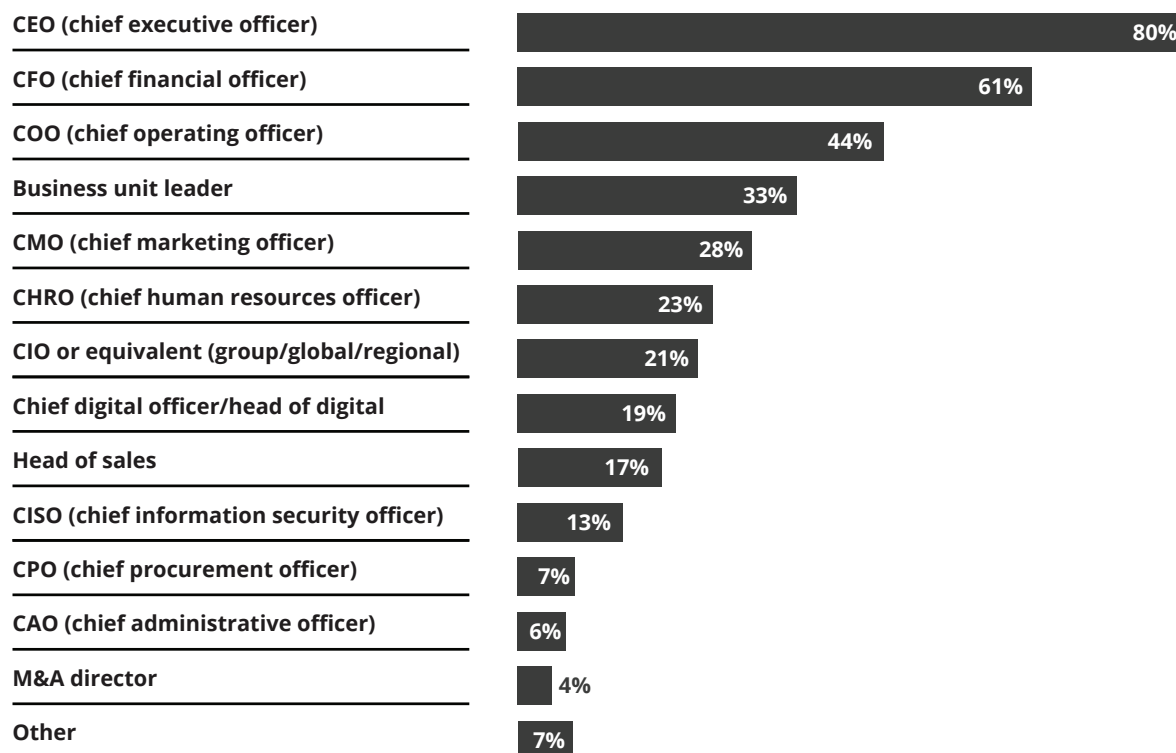
Question 12. Which relationships do you consider the strongest? (Select up to five)



N=1,152

Source: Deloitte 2016–2017 CIO survey.

Question 13. Which relationships will be the most important for you to succeed in the next two years? (Select up to five)



N=1,150

ORGANIZATIONAL CAPABILITIES, AND ENVIRONMENT

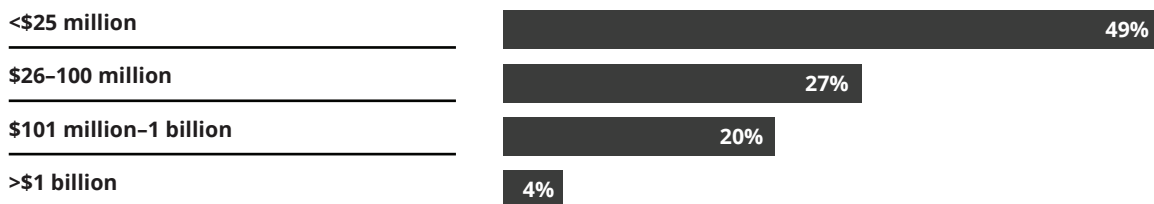
Question 14. What percentage of your IT workforce consists of full-time employees?



N=1,110

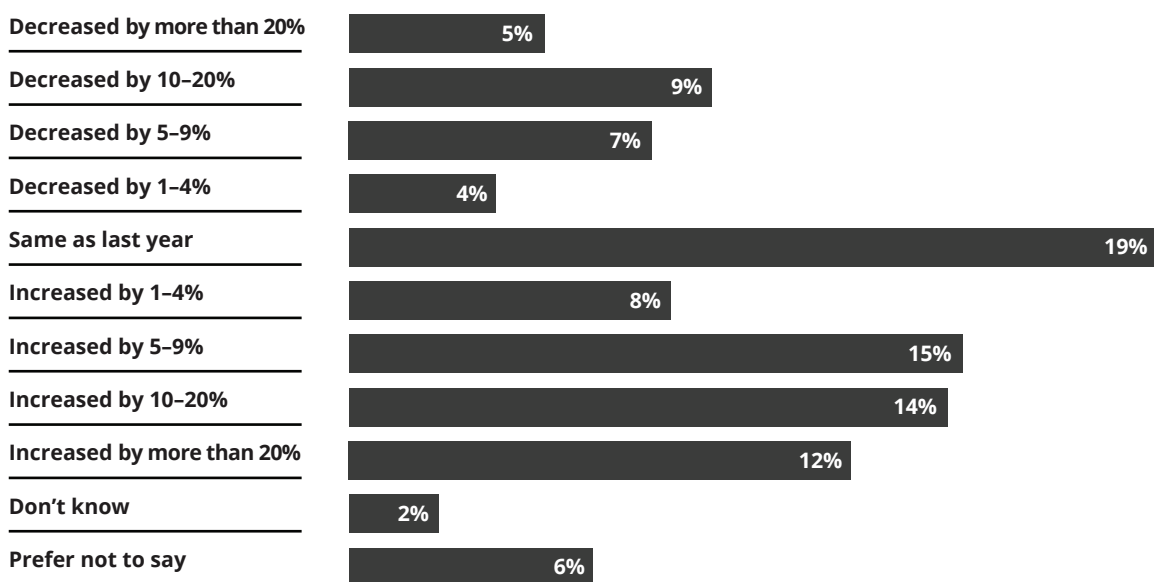
Source: Deloitte 2016–2017 CIO survey.

Question 15. What is your organization's worldwide IT budget for the current financial year?



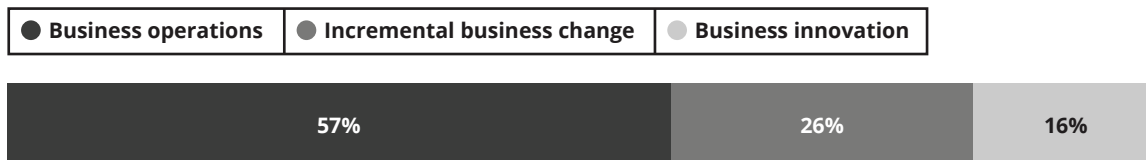
N=883

Question 16. How has your IT budget changed since the last financial year?



N=1,133

Question 17. How is your overall IT budget allocated currently?



N=1,081

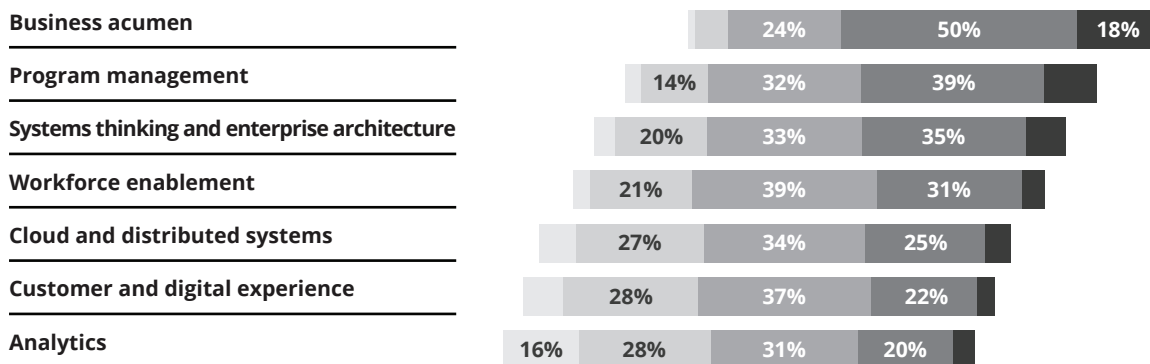
Source: Deloitte 2016-2017 CIO survey.

Question 18. What percentage of the technology budget do you control?



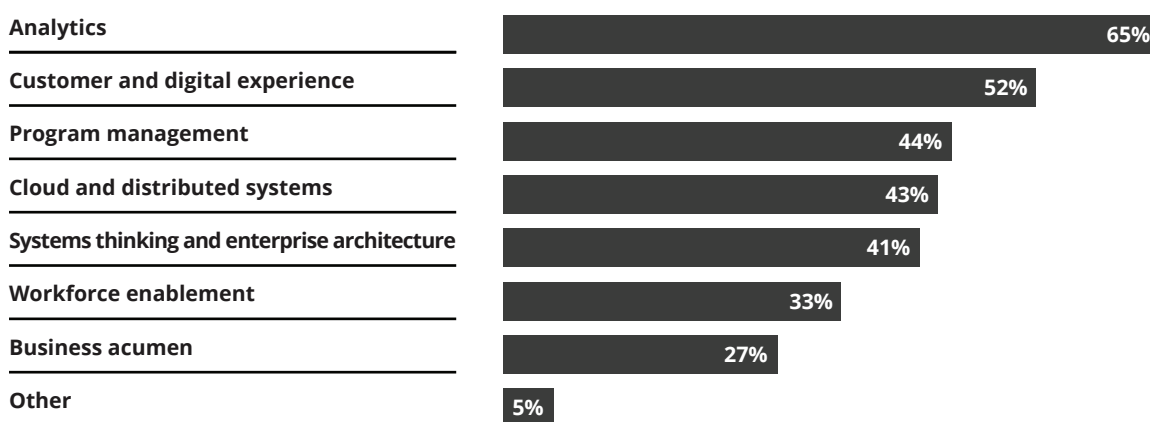
N=1,081

Question 19. How would you rate your IT organization's current skills in the following areas?



N=1,130

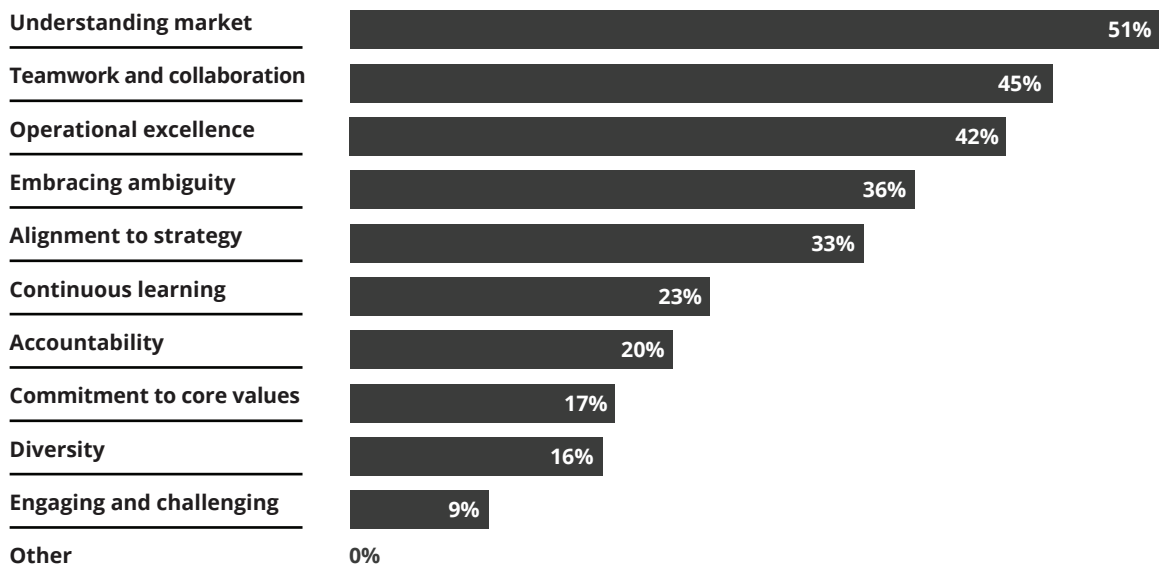
Question 20. What skills are you going to hire for in the next two years?



N=1,125

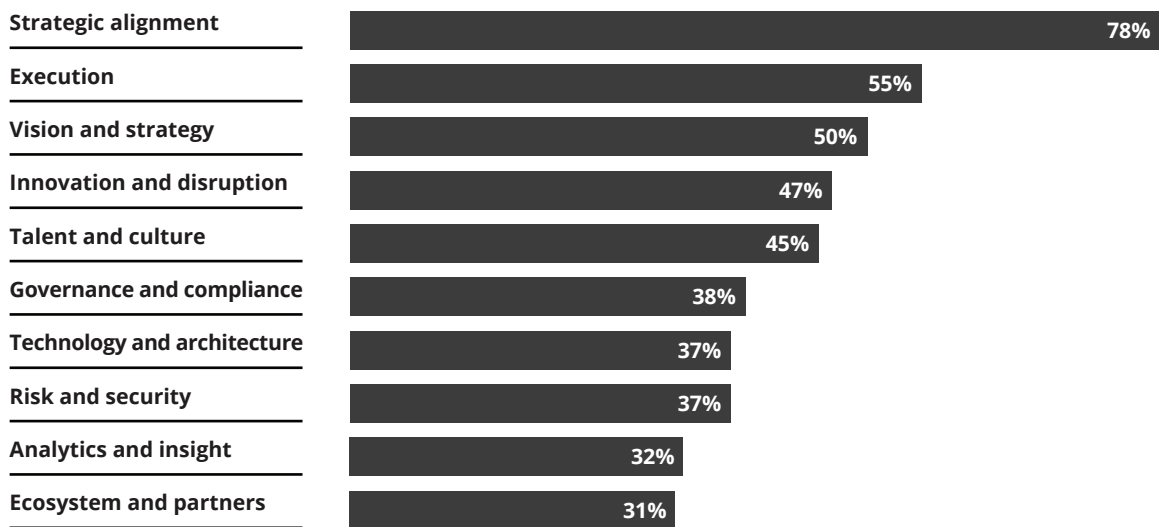
Source: Deloitte 2016–2017 CIO survey.

Question 21. Which of the following attributes describe the culture you need in your IT organization to meet the needs of your business?



N=1,064

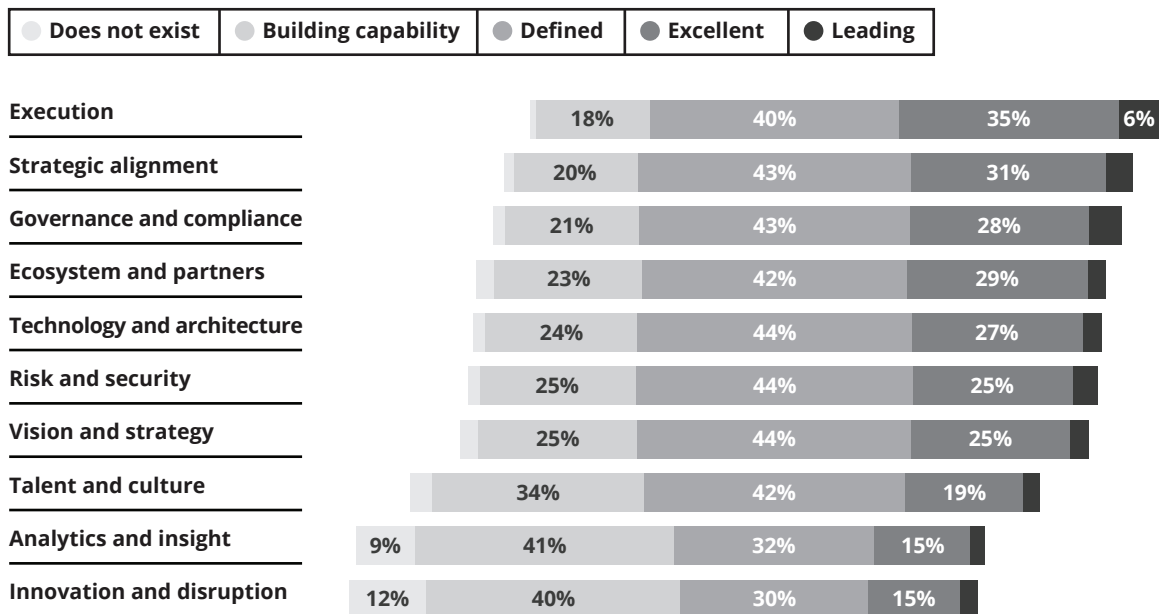
Question 22. Which of the following organizational capabilities are essential to your success? (Select up to five)



N=1,123

Source: Deloitte 2016–2017 CIO survey.

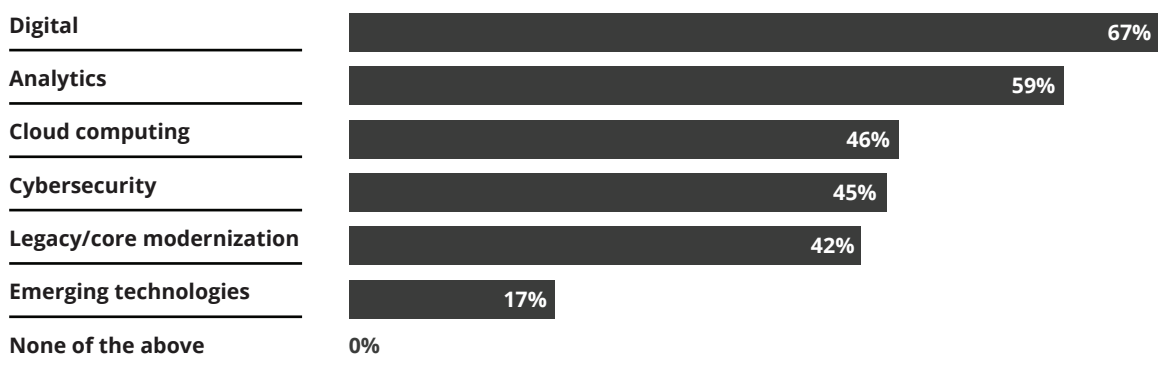
Question 23. How would you evaluate your IT organization’s current capability across the following areas?



N=1,097

TECHNOLOGIES AND EMERGING SOLUTIONS

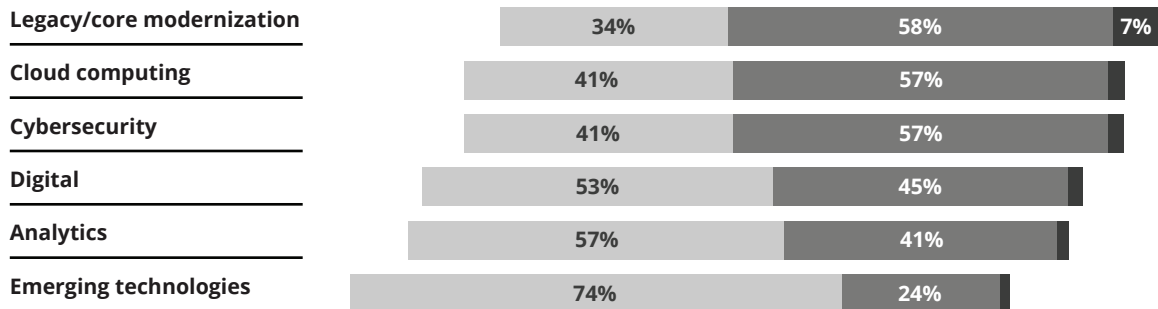
Question 24. Which of the following technology areas will have the most impact on your business in the next two years? (Select up to three)



N=1,098

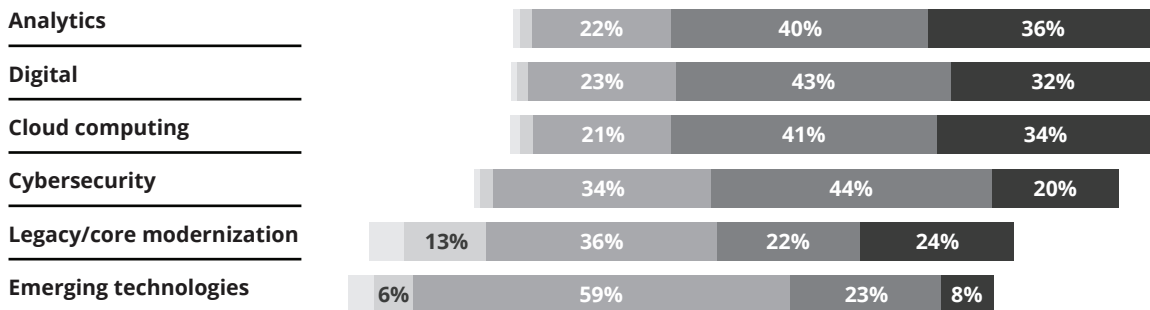
Source: Deloitte 2016–2017 CIO survey.

Question 25. How would you evaluate your current level of investment for the following tech areas?



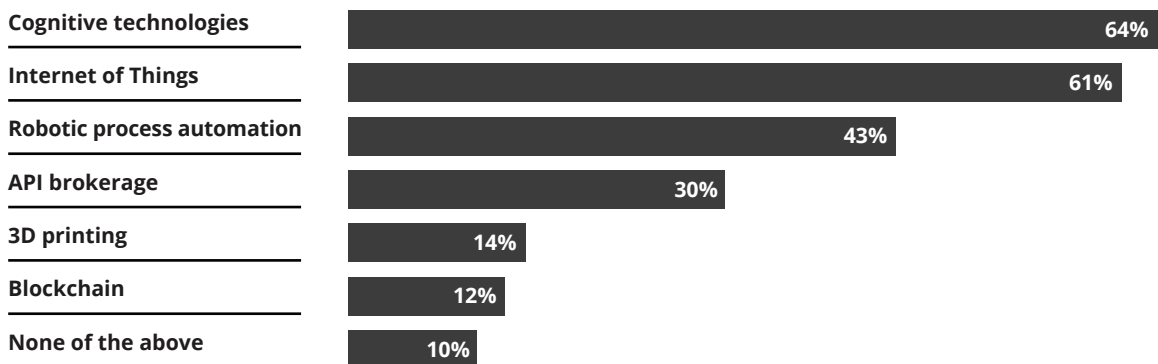
N=1,098

Question 26. How will your technology spend change in the next two years for the following technologies?



N=1,098

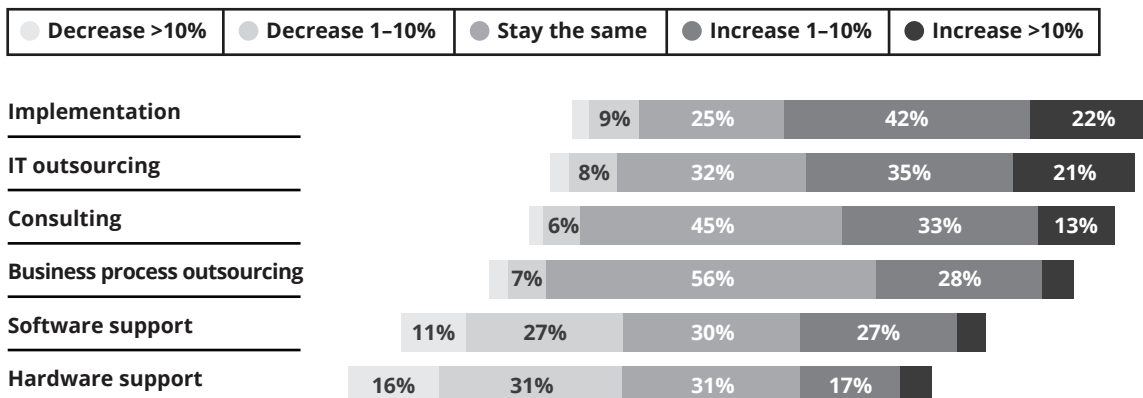
Which emerging technologies will you invest in significantly in the next two years?



N=188

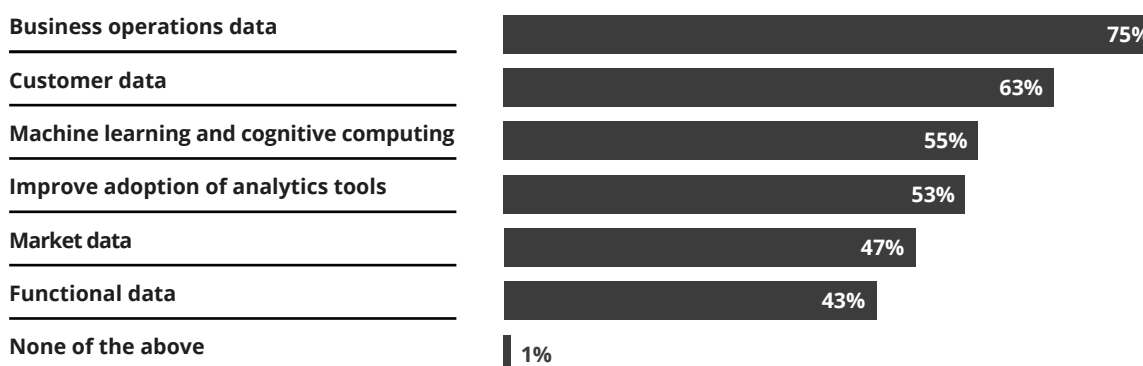
Source: Deloitte 2016-2017 CIO survey.

How will your cloud computing strategy affect your spending in the following areas over the next two years?



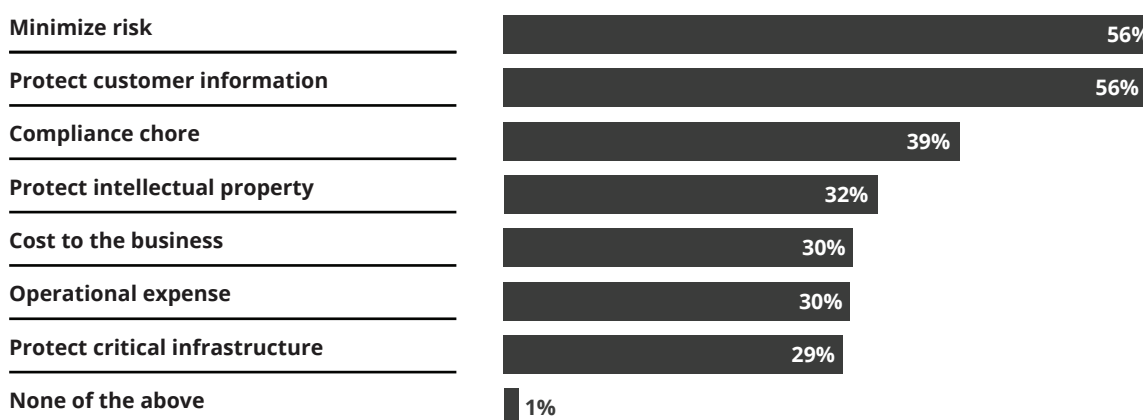
N=500

Which areas of analytics will you invest in significantly in the next two years?



N=651

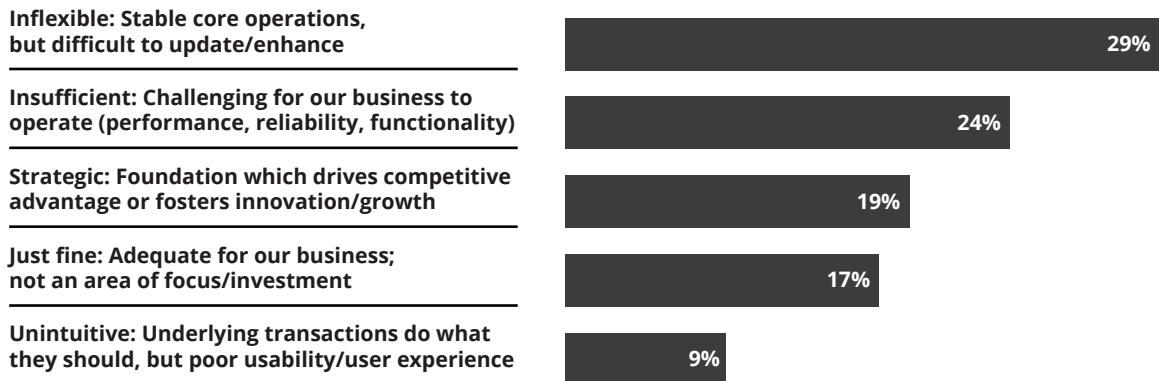
How does the organization generally view security/privacy investments?



N=491

Source: Deloitte 2016–2017 CIO survey.

Which most accurately describes the core systems driving your business processes?



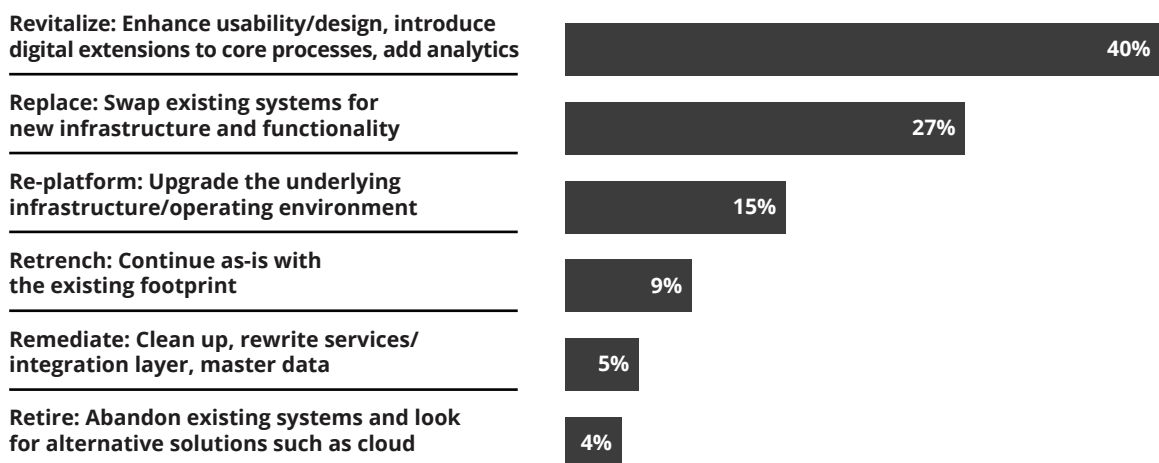
N=466

What is the scope of your digital activities?



N=738

Question 27. What is your organization's strategic direction for your core business applications?



N=1,041

Source: Deloitte 2016–2017 CIO survey.

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As we dove into our survey findings and engaged with CIOs, we were often reminded that creating a legacy is a “team sport.” While we focused on the steps that a leader takes, we realize they are shaped by those who came before and are inspired to pave the way for those who are yet to come. Likewise, we celebrate the ability we all have to navigate between roles as we strive to leave a lasting legacy in our personal and professional lives. Thank you to all involved in this project for your individual and collective willingness to explore and transform as you build a legacy of your own.

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