



INFORMATION TECHNOLOGY SERVICES

**Digital Business: It's
time for CIOs to lead or
get out of the way**



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Executive summary

Digital technologies are rapidly changing the way that companies create and deliver value to their customers. Over the past five years, digital disruptors have all but destroyed some businesses and this pace of disruption is accelerating.

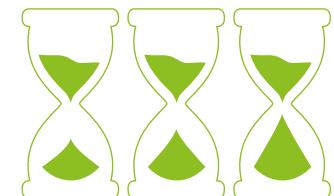
Many organizations are either experiencing or expect to experience some form of significant digital disruption within two years, but at the same time few appear really prepared for it and lack an enterprise-wide strategy that fully reflects how digital will change their business.

KPMG research has revealed four pillars for digital success including a clear vision and strategy that incorporates digital, an impassioned and committed CEO to drive execution of the strategy across and down the entire organization, an innovative and nimble culture willing to take the right risks and move at a much faster pace, and a digitally proficient workforce.

The speed and scope of digital disruption will continue to increase, forcing businesses to respond with or without their IT function. This leaves many CIOs a narrowing window of time to seize the opportunity to redefine their role and change the way that technology drives value throughout their organizations. However, it will not be without first overcoming some big hurdles.

CIOs can take some immediate pragmatic steps to actively facilitate the development of a digital vision and strategy, prepare the IT function to be a valued partner with the business, and help navigate a successful transition to digital. The alternative is to keep minding IT as usual, while the business goes elsewhere gaining short-term solutions but also creating digital silos, adding to technical debt and missing opportunities for leverage across the entire enterprise.

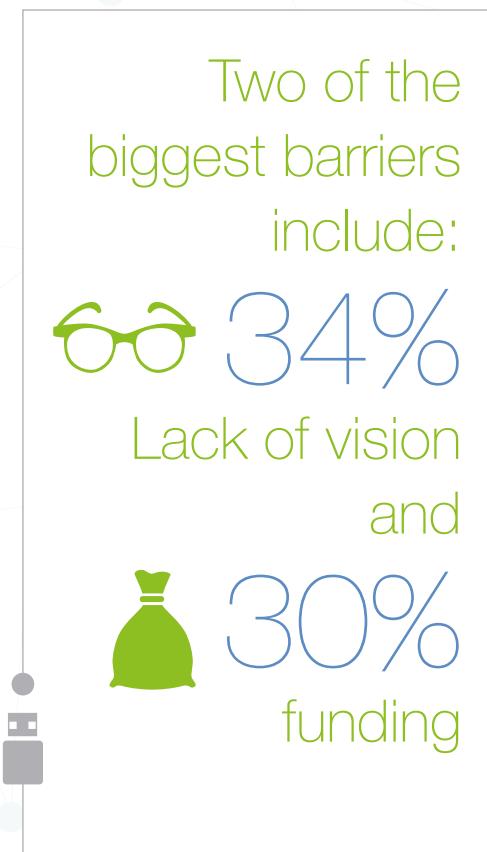
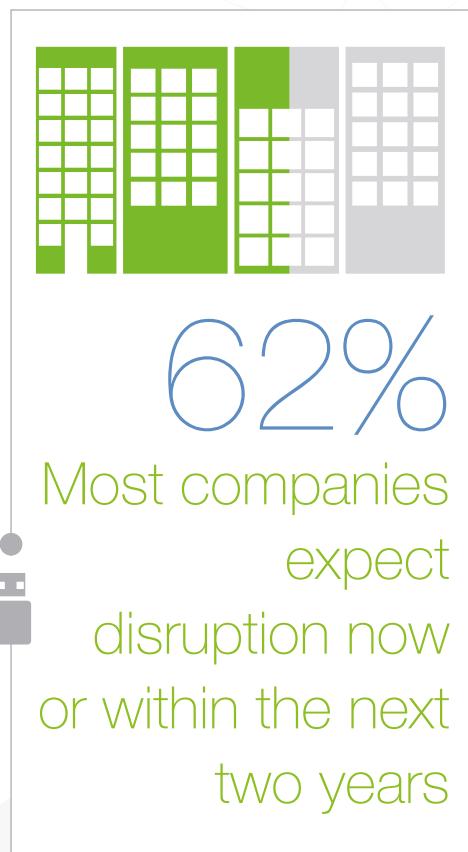
CIOs are uniquely positioned to play an important role but time is running out.



Source: Harvey Nash/KPMG CIO Survey 2015



Key findings





Introduction: the great opportunity

A survey of
almost **4,000**
technology
leaders across
more than **30**
countries



Several years ago, digital disruption was something happening to someone else, to a few companies in select industries. Today, everyone is talking about digital disruption and it is fast becoming a reality for most companies across most industries. While not all industries are affected in the same way or at the same time, few if any, are immune. Many organizations are clearly anxious to 'get ahead of the curve' on digital, but the reality is that there is no instruction book on how to deliver a successful digital transformation, at least not yet.

In the past, CIOs would expect business executives to collaborate with IT to develop the technology-enabled innovations they require to support new business models, automate internal processes, deliver new products and services, and become more customer-centric. But expectations have changed. The stakes are much higher because digital business is typically about putting the external customers at the center of everything and driving growth, not just internally-focused cost reduction. Furthermore, the pace of change is measured in days and weeks not months and certainly not years. Business as usual IT with its long, methodical development cycles will not work. Moreover, if IT cannot deliver, the business will go elsewhere, and in fact, some already have.

CIOs must take charge now

CIOs are in a unique position to drive their organization's approach to digital by virtue of having a cross-enterprise perspective into the core business processes and capabilities. Additionally, the CIO understands the implications of integrating new digital solutions with the existing legacy infrastructure, data models and applications. But to make digital happen, CIOs must act now before the window of opportunity closes as the 'front office' stakeholders lose patience.

In early 2015, KPMG International in association with Harvey Nash – a global professional recruitment consultancy – surveyed almost 4,000 technology leaders across more than 30 countries to learn more about the current state of IT including the impact of digital disruption.

This paper combines the findings of that survey with practical insights and actionable advice from KPMG's global network of CIO Advisory professionals. We hope that our views and insights help IT leaders and executives to chart a new path towards digital business.

To learn more about the ideas and concepts raised in this report – or to discuss your organization's unique digital challenges and opportunities – please contact your local member firm or any of the professionals listed at the end of this report.

Digital business disrupts IT

Digital technologies are rapidly changing the way that companies create and deliver value to their customers. For example, over the past five years digital disruptors have all but destroyed the DVD rental business, as well as changing the way that books and music are bought and consumed. Currently television and satellite providers are feeling the revenue and profit impact, as people increasingly “cut the cord” and stream their TV over the internet. And let’s not forget what is happening today in the taxi and lodging industries.

Respondents to the Nash/KPMG CIO Survey 2015 conducted in association with KPMG, said most organizations are either experiencing or expect to experience some form of significant digital disruption within two years, but at the same time, few are really prepared for it and lack an enterprise-wide strategy (see figure 1a and b). Many IT organizations are struggling to respond with innovative digital solutions the business demands. In fact, “business as usual” IT is ill-equipped for digital disruption. Attributes like highly disciplined development methodologies, long cycle times, a siloed organizational structure, and a risk avoidance culture become handicaps in the digital world.

As a result, many CIOs and IT increasingly face being sidelined by business units. While there was a time when the organizations were at the mercy of the IT function for all of its technology-enabled solutions, now businesses increasingly are discovering

new, innovative technologies and becoming progressively aware of their potential. At the same time, business-users are becoming more technology-savvy and are finding themselves capable of sourcing and provisioning their own solutions, encroaching into a domain that was once exclusively controlled by the IT function.

Marketing, in particular, is already taking a lead role in driving the digital strategy in some organizations. In fact, survey respondents – the majority of which were technology leaders – were more than twice as likely to say that the Chief Marketing Officer was leading the digital strategy versus the CIO, suggesting that CMOs are shaping the strategy while CIOs appear to be largely left to build the infrastructure and tools to support that strategy (see figure 2).

Figure 1a:
When do you think your business will feel properly impacted by digital disruption?

Majority of companies will experience disruption within two years

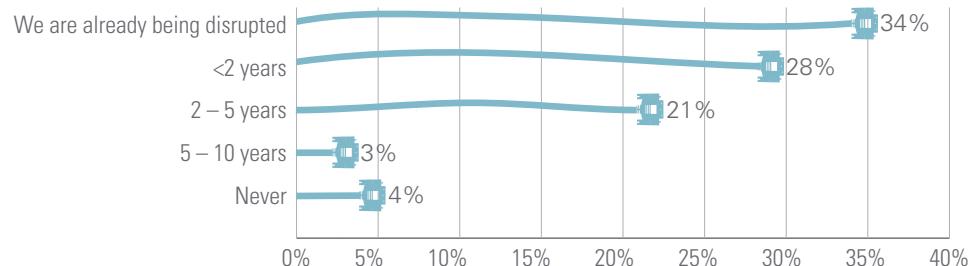
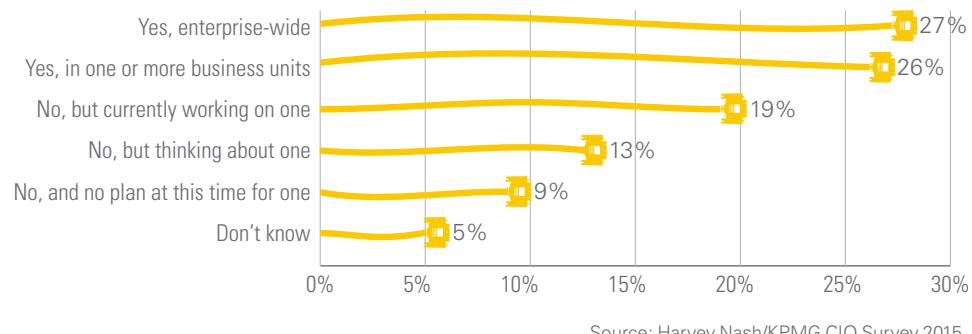


Figure 1b:
Do you have a formalized digital business strategy which is actively being pursued?

Only one quarter of companies with enterprise wide digital strategy



Source: Harvey Nash/KPMG CIO Survey 2015



But there is a danger in this approach. Digital is much more than a bunch of pretty "apps" and a social media presence. Digital business is about digitizing the end-to-end processes that represent the organization's value chain. A mobile app that lets customers order online anywhere they get cell service may be a competitive advantage, but if it isn't integrated with the back-end core transaction systems like order processing, inventory management, invoicing, fulfilment, etc, it could actually lead to more harm than good. Customer service reps without access to all of the systems can't be of much help to a customer looking for order status.

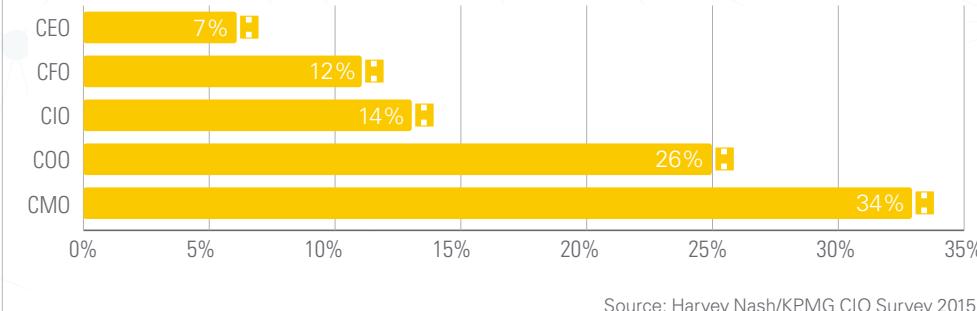
The four pillars for digital success

KPMG's research and early work with member firm clients has identified common attributes of successful digital businesses. These four pillars for digital success include:

1. *A clear digital strategy.* The digital strategy needs to articulate how to truly support the business and enable it to achieve its strategic goals. Only 27% of businesses [report having] a formalized enterprise-wide digital strategy let alone a vision. One of the biggest challenges faced in response to digital disruption is a lack of vision and strategy.

Figure 2:
Who leads the shaping and/or executing of the digital strategy?

No CDO in place: it is the CMO who is most often relied upon to lead digital business strategy



2. *An impassioned and committed CEO.* Central to the success of digital is ensuring that ownership of the strategy is both championed and understood at the highest level. Too often ownership is split between multiple parties with fragmented relationships which can hinder the embedding of digital change within the organization.
3. *An innovative and flexible culture.* Change is now a constant: old fixed mind-sets will not do. Adopting an agile approach and putting innovation front and center is critical. Governance and operating models need to evolve to embrace other functions, specifically marketing; enabling CIOs to manage new areas of digital demand effectively.
4. *A digitally-proficient workforce.* Digital is a separate skill set from old IT; savvy CIOs will be bringing in the right talent as quickly as they can. A combination of up-skilling existing teams and bringing in talent from new areas that are not traditionally IT will be required to ensure success.

Expectations have changed

There has always been an expectation gap between an IT organization and its stakeholders. For years, major projects came in way behind schedule, over budget, and short of required capabilities, if not outright failures. Now, the consumerization of IT, the tech-savviness of the millennial generation, and a growing everything as a service (XaaS) ecosystem have only widened the gap in expectations of business stakeholders in

terms of IT. They expect to be able to bring technology from home and use it at work and that enterprise applications will have the same ease of use as their consumer apps. Furthermore, they expect new digital solutions in days or weeks, not months or years and they don't expect to pay very much.

What about customers? They have similarly high expectations. Customers want to engage with social media, use their mobile devices to shop or bank online, and they want to be able to do it 24/7. Digital is forcing many IT organizations out of their comfort zone of developing primarily internal, back-office applications focused on systems of record to one developing customer-facing products focused on systems of engagement and experience. This focus on external products requires IT to become more like a software engineering organization and some CIOs have acknowledged this by acquiring small software companies as a way to access the skills and culture quickly to be successful.

Underpinning this is the need to become much more agile and flexible. Time to value has become the most important metric. Rather than the traditional method of teasing out requirements, writing specifications, and then coding, testing, and debugging, more agile processes are followed to collaboratively develop the minimum amount of capability required and then rapidly iterate updates to incrementally add additional capability and value.

Embrace risk to drive innovation

IT organizations tend to be risk averse but digital is all about innovation which requires an informed balance between risk, opportunity and value. Risk itself is neither good nor bad. Rather, the impact of that uncertainty or risk on business outcomes should drive decisions; this is especially true for digital. For example, a company may face two choices: 1) take on significant risk in developing and launching a new mobile product, or 2) avoid the risk and do nothing. If it chooses to proceed and the product is a success, new revenues and profits will result. However, if the product fails, the entire investment will be written off and depressed profits result. On the other hand, if it chooses to do nothing, then it might cede an opportunity to a competitor leading to decreased market share and a long-term decline in revenue and profitability. Risk clearly lurks in both choices.

Embracing mobile technologies can't really be done without taking on some level of risk and the rapidly emerging internet of things (IoT) presents another potential exposure but they are fundamental building blocks of digital business and can't be ignored. Digital requires organizations to understand their risk tolerance and develop new approaches to managing risk.

IT and its business stakeholders must decide how much risk they are willing to accept and what actions they will take if the level of risk becomes uncomfortable. With such a framework, risk-related decisions can be made against an established and communicated framework and set of standards, as opposed to avoiding it.

Overcome history and culture

Many CIOs recognize that they face significant challenges preparing their organizations to take advantage of digital. Many of these challenges rest within the IT function itself – outdated IT operating models, inflexible legacy infrastructure, growing IT skills gaps and a general lack of agility all hamper the business' ability to fully harness the benefits of digital.

Key organizational issues also exist, often largely outside of the direct influence of the IT function. Cultural issues – such as a lack of vision, poor understanding of the value of digital and cultural resistance – top the list of challenges organizations face when responding to digital disruption. Almost one-in-six say that they lack support either from business leaders or from the C-Suite (see figure 3).

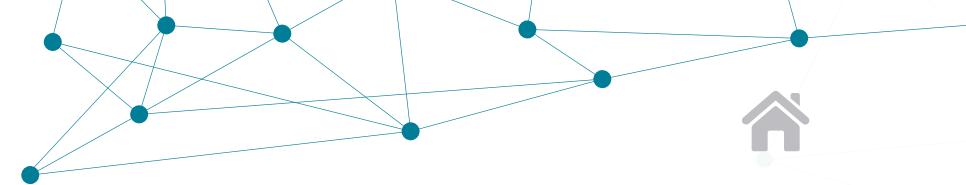
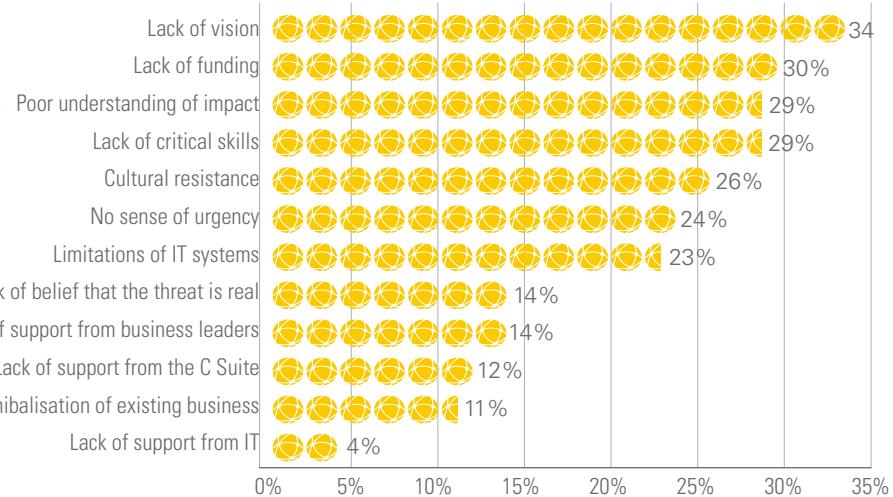


Figure 3:
What are the biggest challenges you face in responding to digital disruption?

Challenges to successful digital strategy more weighted to culture than IT capability



Source: Harvey Nash/KPMG CIO Survey 2015



Only 27% of businesses surveyed have a formalized enterprise-wide digital strategy



Six steps for CIOs to take now

Faced with the spectre of sudden and dramatic digital disruption, some CIOs have already started to take steps to pivot their IT organizations and estates to prepare for the transformation that is required. In doing so, they are creating stronger relationships, greater agility and better capabilities to help their organizations achieve their business objectives.

The number **one** challenge responding to digital disruption is a lack of vision

Not all CIOs have a seat at the top table, and not all CIOs currently have the influence or strategic approach to drive broader organizational change outside of the IT function. But there are certain steps that many of the more forward-looking CIOs are already taking today to prepare their organizations for digital disruption tomorrow.

KPMG member firms also believe that – in this time of change and disruption – CIOs and IT leaders must start taking the initiative to help their organizations make sense of the challenge ahead. Indeed, with new disruptive technologies, products, services and business models being introduced almost daily, now is the time for CIOs to take charge of their organization's response to this disruption in order to secure long-term business success and enhance the value of the IT function.

Following are the six steps that CIOs should take now to lead their organizations into this new era of digital business.



1 Actively promote development of the digital vision and strategy

The number one challenge to responding to digital disruption is a lack of vision. Given the relative newness of it, coupled with its deep dependence on a host of emerging technologies, it is perfectly understandable why senior business executives and boards of directors are having trouble charting a vision for how their business needs to change in order to succeed in this new digital world. Furthermore, unless the business is currently being disrupted it is easy to see why they might not have a sense of urgency that they need to act now.

CIOs can use their existing relationships to educate the senior leadership team and board about the value of digital, the opportunities and threats, and the ways in which other digital leaders are leveraging it to increase their competitive differentiation. For example, one client has set up a reverse mentorship program to pair younger tech savvy millennials with senior executives to help them get comfortable with new technologies like social media.

Another client schedules "road trips" for senior executives to visit digital leaders and get hands-on exposure to digital capabilities. After a period of time then CIOs can start the visioning and strategy development by asking two simple questions: "What are we trying to achieve as an organization and how can digital help us to achieve it?"

Ultimately, those that are able to stay focused on their business, their customers and their people will enjoy a positive and decisive impact from their technology investments and efforts. To optimize the value from their investments, KPMG believes organizations need to develop a digital business strategy at the enterprise level with sub-strategies that account for varying needs across business units, geographies, functional areas and for different classes of employees, customers and business partners.





Invest in digital skills & capabilities

Responding to digital disruption will require the IT function to develop innovative approaches, identify and implement new technologies, and master new skills and capabilities. This will also require new talent and partnerships.

Yet many of these new skills are in short supply and this will only get worse as more organizations undertake digital business initiatives. More than a third of respondents say they lack the big data and analytics skills they need; almost a quarter lack the mobile skills required; and more than one-in-ten say they lack social media skills.

More importantly, however, our survey also shows that, beyond technical skills, IT leaders are also fighting to capture and retain the skills and capabilities necessary to improve alignment to the business. More than a third say they lack project management skills to execute their digital strategy; 30 percent say they are looking for business analysts; and around a quarter say they are missing skills related to change management and IT strategy.

KPMG member firms' experience suggests that building the right skills and capabilities – either through recruitment or through development – can take time.

In the meantime, IT headcount may need to increase as new talent is slowly brought in to augment the older skills that, for most organizations, will still be required to maintain the legacy systems and architecture of the business. Not surprisingly, therefore, almost half of all respondents now say they expect headcount to increase over the next year while just 19 percent say it will decrease.

Strong technical and project management skills are no longer enough to sustain an IT organization. New skills and capabilities are now required, including expertise in emerging technologies such as analytics, mobile apps and social media as well as non-technical skills such as vendor management, account management and product management.

However, many of these new skills are not found in current IT organizations and CIOs will therefore need to focus on acquiring the right talent, either by developing internal resources or by recruiting from outside of the organization. Some CIOs have gone as far as acquiring small software vendors specifically for their digital talent, culture, and product development orientation.

2



Architect for digital

3



Most of the attention around digital focuses on the new capabilities, typically around mobile and "apps" to engage customers. However, digital goes well beyond these innovations and requires the digitization of end-to-end processes and integration. It's no surprise that many of the digital leaders today are relatively new companies that started digital. Established companies have legacy infrastructure that tends to be complex, rigid, time consuming, as well as costly to provision, maintain and integrate with new initiatives. Often this becomes a barrier to the speed and agility required to execute a digital agenda.

Many CIOs must make a concerted effort to simplify their legacy systems and infrastructure in order to be able to leverage new digital capabilities to their maximum value. This will require investment and time but is fundamental to a real digital business. Architecting core IT for digital provides two key benefits.

First, the rapid development and availability of public, private, and hybrid cloud environments represents an alternative for hosting both new solutions as well as migrating existing applications. This enables IT to provision infrastructure on demand quickly, which can significantly reduce the need for capital funding, and lowers the overall cost. Secondly, a simplified legacy environment makes it much easier and faster to integrate new digital capabilities.



4. Adopt flexible and agile sourcing

Today's CIOs and their IT organizations are at a crossroads where staying the course will most likely lead to marginalization as their business stakeholders turn elsewhere for technology solutions. The other road requires IT transformation to deliver the speed and agility their business users are demanding. Nevertheless this transformation requires IT to adopt new operating models, one where IT shifts its emphasis from building solutions to one that brokers solutions.

Rather than building everything internally IT brings buyers, i.e. customers and stakeholders, together with sellers, i.e. service providers to solve a business problem. IT brings its knowledge of the market, technologies, and vendors together with its deep understanding of its stakeholders' needs to help the business select the right solution and to also pro-actively bring IT-enabled innovation opportunities to their attention.

This approach is based on the increasing commoditization of technology and enables IT to leverage the growing ecosystem of cloud-based services. With less time spent on long custom development projects, CIOs can spend more time on strategy and innovation efforts, and because IT works with all of the functions, business units, and geographies it can identify opportunities where services can be leveraged across business units or geographies, help share best practices, and work to standardize and optimize business processes. Best of all, it significantly reduces the time to value.

5. Adapt the culture to embrace collaboration, innovation and speed

Organizations must adapt their culture to think digital for everything including their internal processes. The digital space is a multi-device, multi-mode, omni-channel world where quality is measured not by schedules, budgets, and defects but by user experience including both external customers as well as employees. A "one size fits all" strategy is no longer an option.

Customers expect to be able to do business 24/7 wherever they happen to be with whatever device they are currently using whether it's a PC, a smartphone, or a kiosk outside the supermarket. Likewise, for employees work is becoming defined as something that you do, rather than a place you go. The "office" is now more likely a coffee shop, an unused bedroom, an airplane seat, or even a poolside cabana.

This anytime, anywhere, any device environment coupled with an ever-increasing pace of change requires organizations to innovate quickly and iteratively build new capabilities on the fly. Not every initiative will be successful, but these failures should be treated as valuable learning experiences.

Collaboration must also become embedded in the culture. Digital capabilities are not built by long, serial projects but by cross-functional teams that work together collaboratively to develop solutions and then incrementally add capabilities through rapid iterations.

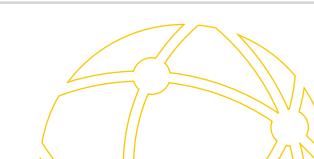


6. Evolve IT governance for digital

Digital disruption is driving innovation in business models, optimizing internal processes, unleashing new products and services, and radically changing how organizations engage with customers. Often IT organizations are expected to step up their game and innovate to enable the business to be competitive. However, all too often, governance becomes a barrier to innovation because it is designed to minimize or even eliminate risk, whereas innovation requires managing risk. CIOs must work with business leadership to define a governance framework that effectively manages and mitigates risk to embrace and encourage innovation.

Governance also controls funding. Organizations must be careful not to fund digital initiatives at the expense of investments in core IT. As discussed previously, digital is only successful if it is integrated into the systems or record, the so called legacy systems. Governance forums are an opportunity for the CIO to educate other stakeholders on the importance of a balanced approach.

Leading organizations implement digital governance that actively monitors the evolving technology ecosystem, adapts accordingly and approaches risk in a holistic and balanced way. They also take a disciplined approach to architecture and standards to ensure a consistent and measured approach to the adoption and introduction of new digital technologies.



Assess your organization's digital business aptitude (DBA)

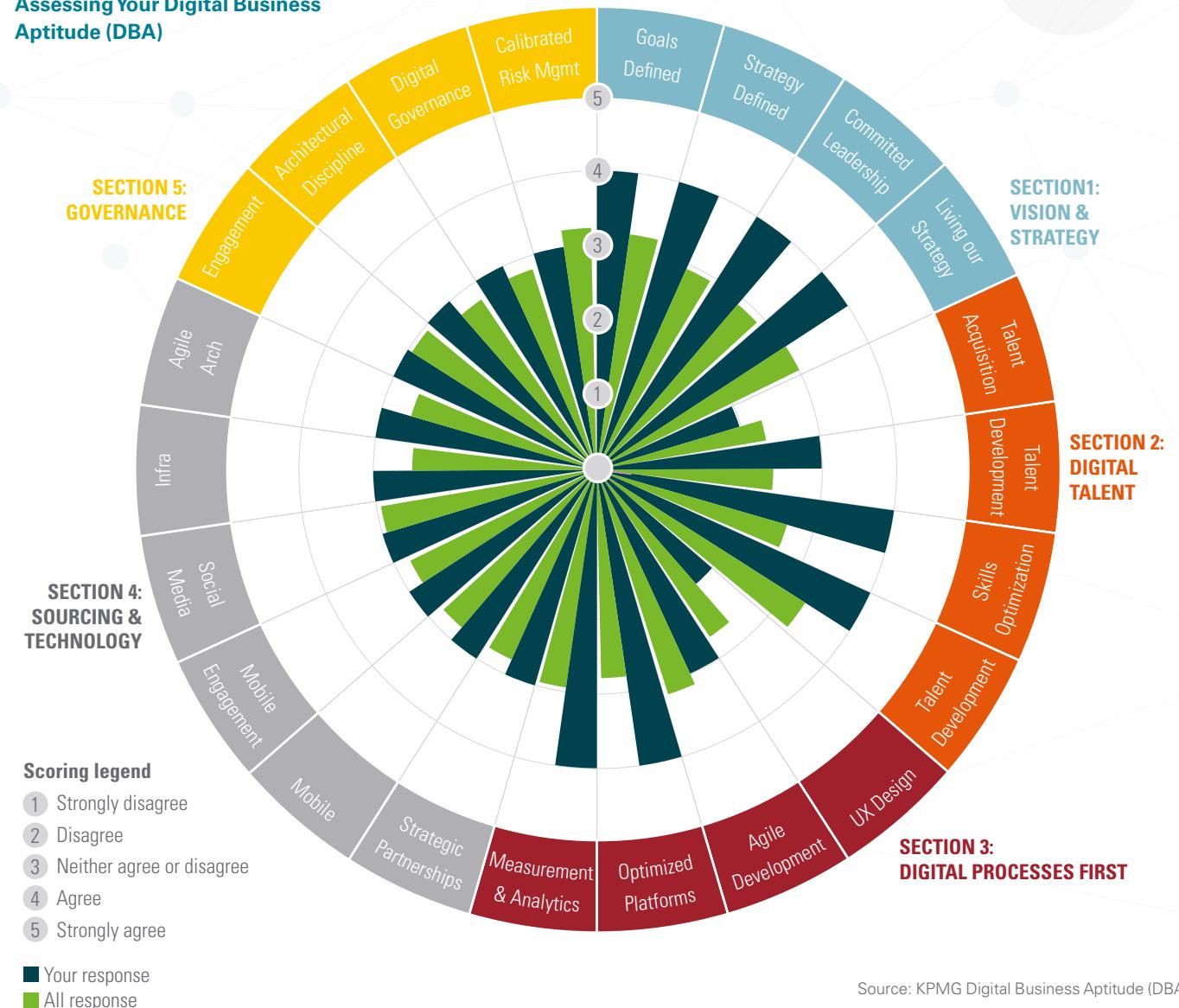
There is, alas, no instruction manual for creating a market-beating digital strategy. No two organizations are alike which means there are no 'templates' to follow or best practices to emulate. However, there are remarkable similarities between organizations that are making a success of it. Based on member firm experience and our data, KPMG has developed a self-diagnostic tool that organizations can use to assess their readiness for digital transformation. This digital business aptitude (DBA) can be used to obtain a diagnosis of how well positioned it is to successfully navigate digital transformation and identify gaps that need to be closed (see figure 4).

The DBA asks questions about five domains including:

- Strategy – Is our business strategy embedded with digital DNA?
- Talent – Do we have a critical mass of digital talent?
- Processes – Do we focus on driving digital processes over non-digital?
- Sourcing & Infrastructure – Is our sourcing and infrastructure flexible and agile?
- Digital Governance – Is our governance fit for purpose in the digital era?

These questions – and others – can provide IT leaders with a practical, real-world indicator of digital maturity; some may choose to continuously measure these capabilities to highlight the priorities for change as a business prepares itself for digital evolution. As you execute your five step agenda you can use the DBA assessment at various times to check your progress towards digital leadership. To find out more visit www.kpmg.com/us/dba.

**Figure 4:
Assessing Your Digital Business Aptitude (DBA)**



Source: KPMG Digital Business Aptitude (DBA)



How KPMG can help

KPMG recognizes that today's CIOs face an increasing number of demands and complex tasks. KPMG member firms can help you become the strategic technology partner that your business requires. We offer an experienced viewpoint and independent advice, and our Management Consulting – Technology practice brings experience, lessons learned, tools, and accelerators to help enable the business of the IT organization. Member firm professionals work closely with IT executives to provide candid assessments and recommendations as well as valuable support to help in the change process. If your organization is struggling to innovate, take advantage of new technologies, deliver value faster, or be more agile, KPMG can help.

About the survey

The Harvey Nash/KPMG CIO Survey 2015, in association with KPMG, collected data between 6th January and 19th April 2015 and represents the views of 3,691 technology leaders from more than 30 countries, with a combined IT spend of over US\$200bn.

About this report

This report on Digital Disruption and the CIO was developed by KPMG's Global CIO Advisory practice. The report draws on the experience and insights of KPMG's global network of CIO advisors who provide context and insight to support the data from the Harvey Nash/KPMG CIO Survey 2015.

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