

The  
Economist

INTELLIGENCE  
UNIT

# BENCHMARKING COMPETENCIES FOR DIGITAL PERFORMANCE

An EIU study of digital-competency hurdles and solutions



Commissioned by:

riverbed®

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## About this report

*Benchmarking competencies for digital performance* is an Economist Intelligence Unit report, commissioned by Riverbed Technology.

This report draws on an Economist Intelligence Unit survey, conducted in January-February 2019, of 512 senior business and government leaders in North America, Europe, the Middle East and Africa, and Asia-Pacific. The survey aimed to assess the behaviours, skills and abilities that help organisations improve their digital performance and, ultimately, achieve their objectives.

We focused on nine digital competencies:

- analytics using customer and/or operational data from digital systems;
- ability to manage and measure the user and/or employee digital experience;
- digital product and service innovation;
- digital talent recruitment, retention and management;
- IT infrastructure modernisation/transformation;
- automation of business processes with digital technology;
- digital development techniques (eg, Agile, design thinking);
- organisation-wide digital transformation strategy; and
- workplace transformation with digital technologies.

We also conducted interviews with the following individuals and thank them for their time and insights:

- **Patricia Conolly**, MD, executive vice-president and chief information officer, The Permanente Federation
- **Sunil Gupta**, professor of business administration, Harvard Business School
- **Shawn Fitzgerald**, research director, Insights, worldwide digital transformation strategies, IDC
- **John Jendrezak**, general manager, Core Services Engineering and Operations, Microsoft
- **Laura Young-Shehata**, executive vice-president and interim chief information officer, CommonSpirit Health

Finally, accompanying this report is a digital competency assessment tool, which enables users to benchmark their organisation's competencies against all survey respondents. The tool can be accessed at <https://digitalcompetency.economist.com/>.

## Key findings

A majority of organisations that we surveyed say digital competencies are strategically significant. However, many respondents remain dissatisfied with their digital-competency progress and say that's why they struggle to achieve key performance goals. High-performing organisations drive stronger business performance and user experience. However, when compared with others, they also see an even greater need for continual improvement of their competencies. They also take unique approaches to developing their competencies, understanding that excelling as a digital business is an ongoing journey.

The most important takeaways of our research are:

### **Digital competencies are vital to achieving positive organisational outcomes.**

Eight in ten respondents say their organisation's digital competencies are either very or extremely important to achieving outcomes that include revenue growth, service quality, mission delivery, profit growth/cost reduction and customer satisfaction. This is relatively consistent across all industry segments.

### **Although all digital competencies are important, five stand out.**

The competency most frequently cited by survey respondents for meeting goals is data analytics—using customer and/or operational data from digital systems to measure performance, adoption and the quality of new digital services. Rounding out the top five competencies are workplace transformation, product and service innovation, digital experience management and IT infrastructure modernisation.

### **Many organisations have digital-competency gaps.**

More than half of respondents are unsatisfied with their organisations' progress on developing digital competencies. In addition, nearly two-thirds of all respondents also say their digital-competency gaps have negatively affected the user experience.

### **High-performing organisations continually strive to improve their competencies.**

Eight in ten high performers believe they're ahead of their peers in all digital competencies, compared with less than two-thirds of others. But high performers also understand that digital transformation and improving digital competencies are an ongoing journey, not a destination. For this reason, 57% of high performers on average want to improve across all digital competencies, compared with 46% of others.

### **The IT department plays a leading role in developing digital competencies, but poor communication with other parts of their organisation remains a stumbling block.**

More than half of respondents say their IT departments have a leadership role in developing their organisation's digital competencies, and IT transformation is the most frequently cited digital competency for achieving goals among high performers. However, more work is needed: nearly two-thirds of all survey respondents say poor communication between IT and other departments limits their progress on developing digital competencies.

**Organisations are going through profound changes in their digital transformations, and that's proving to be a major challenge to developing the right competencies.**

Complexity of change was the most frequently cited challenge in our survey when it comes to developing digital competencies, along with legal or security concerns, and rigid systems, networks and infrastructure. But experience brings confidence. Of those with digital strategies in place for three years or more, nearly three-quarters feel confident about their ability to overcome these challenges, considerably more than those with less experience.

**High-performing organisations have a wider variety of approaches to developing their competencies than other companies.**

High-performing organisations are more likely than others to adopt many concurrent approaches, such as Agile development techniques, appointing a chief digital officer (CDO), establishing a digital competency centre and hiring new executives. Any organisation looking to get ahead of the competition or just keep up with the relentless pace of change may want to consider these approaches too.

## Chapter 1: Why digital competencies matter

Digital transformation has gone from novelty to norm, becoming “the single biggest business shift since the industrial revolution,” according to Shawn Fitzgerald, Insights research director for worldwide digital transformation strategies at IDC. Indeed, as Microsoft’s CEO, Satya Nadella, recently observed, every organisation in every industry is becoming a digital organisation.

Digital transformation offers huge potential, but with it come obstacles. “Every company is worried about how digital technologies transform their business,” says Sunil Gupta, professor of business administration at Harvard Business School. “No one wants to become the next Kodak or BlackBerry.”

When every organisation is using digital technologies to get ahead, what sets them apart? This report contends that competencies are now a critical differentiator, and developing the right behaviours, skills and abilities can help organisations improve digital performance and, ultimately, achieve such strategic objectives as stronger revenue and profits, improved customer satisfaction and faster time to market.

### More than a nice-to-have

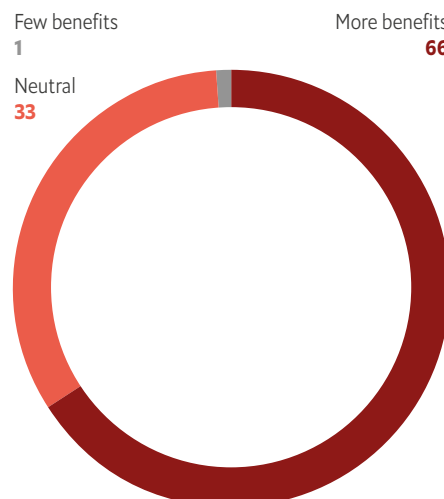
Chief among our findings: digital competencies have become vital to achieving positive outcomes. Eight in ten respondents say that digital competencies are either very or extremely important to achieving their organisational goals, such as revenue growth, service quality, mission delivery, profit growth/cost reduction, user experience and customer satisfaction. The emphasis on digital competencies is found relatively consistently across the eight industries covered in our research. It is especially pronounced in the retail, media and technology industries,

where a majority of respondents described digital competencies in the strongest way, as extremely important for growth.

Digital competencies have become much more than nice-to-haves; they directly impact business outcomes. While two-thirds (66%) of organisations say their digital strategies have delivered measurable benefits, not all industries are equally satisfied. Among retailers, for example, about three-quarters (74%) say they’ve enjoyed more benefits from their digital strategies, compared with slightly more than half (56%) of respondents in healthcare. Advances in consumer technologies and services that we all find in our daily lives, such as voice-activated assistants, chatbots and recommendation engines, are probably the results of the top competencies among retailers: data analytics and product innovation.

### To what extent have your digital strategies produced measurable business benefits?

% respondents



Source: The Economist Intelligence Unit



**Every company is worried about how digital technologies transform their business...No one wants to become the next Kodak or BlackBerry.**

*Sunil Gupta, professor of business administration, Harvard Business School.*



**Eight in ten respondents say that digital competencies are either very or extremely important to achieving their organisational goals**

In some cases, while digital strategies may not deliver immediate business results, they can nonetheless transform entire industries. In healthcare, for example, electronic medical record (EMR) systems increasingly function as digital hubs, providing clinicians with a centralised file containing detailed information on every patient. That's the case at Kaiser Permanente, a US healthcare system serving more than 12m members. It works to ensure that all clinical applications, whether developed in-house or from third parties, must be able to connect to a central EMR. "When our clinicians—be they doctors, nurses, therapists or anyone else—go to the EMR, that's the source of truth," says Patricia Conolly, who is an MD and executive vice-president of IT and chief information officer (CIO) at The Permanente Federation, the national leadership and consulting organisation for the eight Permanente Medical Groups that are part of Kaiser Permanente. "They don't have to worry about missing important information."

Which digital competencies are most important today in helping organisations achieve their business goals? The competency most frequently cited by survey respondents for meeting organisational goals is data analytics. Rounding out the top five competencies are workplace transformation, product and service innovation, digital experience management, and IT infrastructure modernisation.

When respondents are asked to look three years into the future, their top five digital competencies shift. Respondents anticipate the following will be the most important:

organisation-wide digital transformation strategies; business-process automation; talent management; Agile and other digital development techniques; and workplace transformation. Nonetheless, there were some differences among industries. For example, more than half (55%) of respondents in media/entertainment/publishing expect analytics to become more important in the next three years, compared with only about a third (35%) of those in industrials/energy/materials.

One way of interpreting the shifting priorities is that competencies such as data analytics, workplace transformation and innovation are the foundations for other competencies that accompany more fundamental changes to organisations.

That's not to say every organisation should be developing the same competencies to achieve their objectives at the same time. It would be beneficial to know how differently high-performing organisations may be approaching their competencies. For this study, we isolated a group of organisations, representing 18% of all respondents, that we call high performers. They're defined as respondents who say:

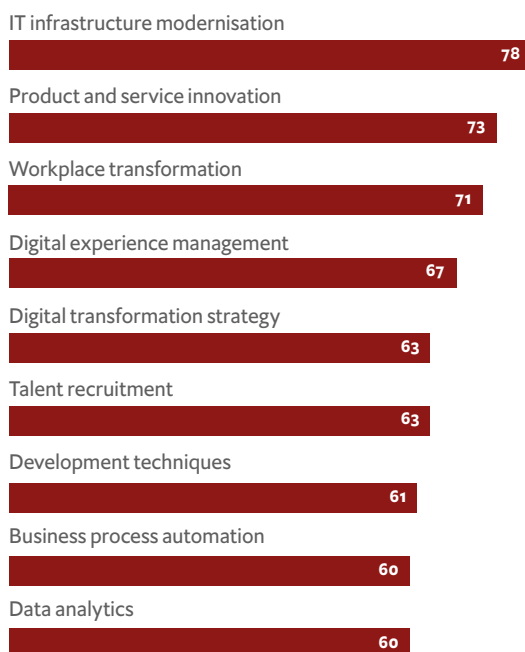
- they've received measurable benefits from digital strategies;
- they're confident about their ability to overcome digital competency challenges; and
- their organisations either grew 2018 revenue by at least 6% (private sector) or over-delivered on performance targets (public sector).

## High performers

Unlike other respondents, high performers say their top digital competency for achieving goals is modernisation and transformation of IT infrastructure, cited by nearly 78%. That is much higher than the 56% of the remaining group of respondents. In addition, high performers actually place less emphasis on data analytics (eighth place) compared with other respondents (first place), perhaps because they already leverage analytics on a regular basis.

### Digital competencies that high performers say are important for achieving objectives

% of high performers



Source: The Economist Intelligence Unit. Respondents could select all that apply

The lesson here is not that data analytics is less important if organisations aim to be high performing. On the contrary, it's the foundation. But as organisations gain experience with data analytics, they can leverage this capability to continually identify other areas in need of course-correction. In this way, data analytics become part of the standard operating procedure.

High performers also have more experience on their side. Among them, more than three-quarters (78%) have had digital strategies in place for more than three years. Among other organisations, less than two-thirds (59%) have had digital strategies that long. For high performers, ensuring their organisation's IT infrastructure can support their digital needs was clearly a priority, and they see the need to continually advance this competency.

The next sections of this report will explore how high performers compare themselves with peers and their continual approach to improving competencies. We will also identify different approaches that high performers are taking to further develop their competencies.

**High performers say their top digital competency for achieving goals is modernisation and transformation of IT infrastructure, cited by nearly 78%.**



## Chapter 2: Mind the competency gaps

For many organisations, despite knowing that digital transformation is absolutely necessary, progress has not been fast enough. About a third (34%) of organisations report only neutral or no measurable benefits from their digital strategies, a disappointing figure. More than half (54%) say they're unsatisfied with their organisations' progress on developing digital competencies. Even more (57%) say their organisation struggles to achieve important goals because it lacks key digital competencies.

Similarly, nearly two-thirds (65%) of respondents say their digital-competency gaps have negatively affected the user experience, raising issues with employee productivity and/or customer satisfaction. This may explain why nearly half (48%) of respondents indicated they need to significantly improve digital experience management, the competency most relevant to monitoring application, network, infrastructure and device performance to measure and improve user experience.

What's needed to improve digital competencies can differ, depending on how long an organisation has had its digital strategy in place. For example, early adopters, those with digital strategies in place for more than three years, are more likely than others to place a priority on

systems management capabilities. Respondents for whom their digital strategies have been in place for fewer than three years say they are more likely to rely on data integration and IT employees with more digital technology experience to improve digital competencies. IT respondents agree, but they also view upgrading IT infrastructure and business applications as essential to moving ahead.

Differences among industries exist, too. For example, half (50%) of technology and telecom respondents believe improved systems-management capabilities would help improve their organisations' digital capabilities, compared with only a quarter (25%) of respondents in media/entertainment/publishing.

There were few differences among respondents in different geographic regions when it came to the top digital competencies that are helping their organisations achieve objectives. However, differences surfaced in areas to focus on for improvement. For example, 58% of North American respondents say their organisations need to improve workplace transformation, compared with 43% of respondents in Asia-Pacific. Similarly, 52% of North American respondents see a need for improving their use of Agile and other development techniques, but only 41% in Asia-Pacific feel the same way.

**Nearly two-thirds (65%) of respondents say their digital-competency gaps have negatively affected the user experience.**

### Progress on developing digital competencies has not been fast enough

% of respondents

■ Agree ■ Neither agree nor disagree ■ Disagree

Digital competency gaps have negatively impacted user experience



I am unsatisfied with my organisation's progress on developing digital competencies



Source: The Economist Intelligence Unit. Data may not add up to 100% due to rounding

## High performing, high minded

Most respondents describe their organisations as ahead of peers when it comes to progress on digital competencies. Across all nine competencies, nearly two-thirds (63%) of respondents described their organisation as ahead of others. Only about one in four consider themselves at the same level of digital-competency progress as their industry peers. And no more than one in ten respondents believes they're inferior.

High performers, as would be expected, more frequently say their organisations are ahead of the competition. Eight in ten (81%) say their progress is running ahead of peers.

High performers are also more than twice as likely to say they're significantly ahead of rivals in three digital competencies: IT infrastructure modernisation, automation of business processes and development approaches such as Agile.

While high performers see their own organisations as far ahead of the pack, they're not complacent. In fact, more than others, they understand that both digital transformation and improving digital competencies require continual focus. That's why 57% of high performers see a need to improve across all digital competencies, compared with 46% of others. In some areas, the differences are even greater. For example, 61% of high performers feel their organisation needs to improve its digital product and service innovation, compared with 46% of others.

At healthcare provider CommonSpirit Health, workplace transformation and giving

employees better digital tools are important areas of improvement. CommonSpirit operates more than 700 healthcare sites and 142 hospitals in the US. While CommonSpirit's patients benefit from advanced technologies that include digital therapeutics, data-driven precision medicine and centralised EMRs, there was also a need to create a digital platform to help its employees work better and smarter. "In their personal lives, our employees can do online banking, send text messages to their children and stay in touch with friends on social media," explains Laura Young-Shehata, executive vice-president and CommonSpirit's interim CIO. "But when they came to work, their digital experience wasn't as engaging."

To reach employees where they access the information the most, Ms Young-Shehata created a multidisciplinary task force. The team is developing a personalised mobile app that enables employees to use their smartphones for communicating with managers, punching time cards, submitting trouble tickets to tech support, sending personalised messages to other employees and departments, and more. "We want to make sure we're creating digital experiences that are relevant to our employees," commented Ms Young-Shehata.

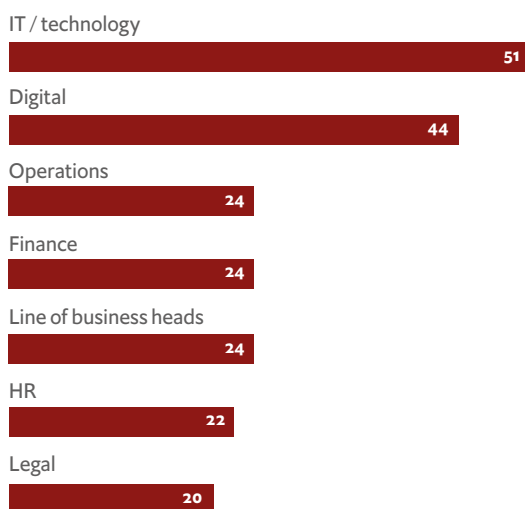
So identifying competencies that need improvement isn't necessarily a sign of a lagging organisation. Instead, it can be the mark of a high performer. But once areas of improvement are targeted, whose job is it to actually develop them? Someone or some department surely should have responsibility over such an important function. The next section explores that topic.

## Chapter 3: Rising expectations for IT leaders

When it comes to developing digital competencies, survey respondents say the IT department and, more specifically, the CIO has the lion's share of responsibility. When asked who is mandated with developing and delivering their organisation's digital competencies, twice as many respondents cited the CIO as the CEO. Similarly, about half (51%) of respondents say their IT departments already play a leadership role in developing their organisation's digital competencies. That's twice as many as those who say digital competency development is led by their line-of-business heads.

### Which departments have a leadership role in developing digital competencies

% of respondents



Source: The Economist Intelligence Unit.

Here, too, differences exist among industries. For example, IT plays a leadership role in developing digital competencies for 60% of technology and telecom respondents, compared with only 43% of those in financial services. Similarly, CIOs lead the development and delivery of digital competencies at 42% of professional-services firms, but for only 23% of those in healthcare. These differences point to variations in the role that IT plays, the levels of digital competence among non-IT staff, and, more broadly, the differing progress that industries have made in undergoing digital transformation.

Placing the responsibility for developing digital competencies on the IT function makes sense, since that's where technological expertise is typically concentrated. In our survey, IT respondents say the top three ways for their organisation to improve competencies are: improved data integration capabilities; IT team members with more digital technology experience; and upgraded IT infrastructure and business applications.

To be clear, organisations should not automatically place the CIO in charge of developing digital competencies. There can be advantages, for example, to having the CEO take ultimate responsibility. Respondents from organisations where the CEO takes the lead on developing digital competencies more frequently say they are confident about overcoming development obstacles than

organisations where the CIO has the main responsibility (82% vs 64%). Mr Gupta of Harvard Business School says that leading the development of digital competencies should be shared among all pertinent departments. “IT can help,” he says, “but since the competencies help drive the business, the particular functions need to be responsible and identify the competencies they need.”

In either case, the IT group must communicate and share its knowledge throughout their organisations. The critical question is whether IT departments are prepared to take on this new role. Traditionally, IT departments have focused on process and operations rather than cross-functional leadership of digital efforts. To make this shift, many IT groups will need greater visibility into their own performance against organisational goals, as well as new key performance indicators that measure customer satisfaction. Doing so will be essential to what John Jendrezak, general manager of Core Services, Engineering and Operations at Microsoft, calls “making the transition from order-taker and execution arm to a trusted partner of the business.”

However, the research suggests that only a minority may actually be ready for assuming this leadership role. More than two-thirds (68%) of respondents say their IT departments, instead of leading digital competency in other departments, limit themselves to technology implementation and management. That leaves a lot of room for improvement.

Another approach has IT departments playing a more collaborative role, functioning as a peer among equal partners. The Permanente Medical Groups, for example, have embedded cross-functional teams to introduce and implement new technologies and digital

features. The teams include IT professionals as well as nursing leaders, business managers and others. “Partnerships are how we’ve delivered care for more than 70 years,” says Dr Conolly. “By applying that thinking to technology, we’re really leveraging an ongoing model.”

### Failure to communicate

Even if IT teams are collaborating with others, how well can they disseminate knowledge that helps their organisation develop the right competencies? The survey results suggest this is another area in need of attention. Nearly two-thirds (63%) of respondents say poor communication between IT and other departments limits their organisations’ digital competencies. This gap in communication and knowledge-sharing may also help explain why nearly as many (61%) say their non-IT leaders do not understand the technical complexity of digital systems.

### Poor communication between IT and other departments limits digital competencies

% of respondents



Source: The Economist Intelligence Unit.

**More than two-thirds (68%) of respondents say their IT departments, instead of leading digital competency in other departments, limit themselves to technology implementation and management.**

While no one expects non-IT leaders to be able to, say, code software or design a network, these executives do need to understand the business benefits, challenges and impact of today's digital technology. With this in mind, IT leaders can help play a key role by educating, communicating, ensuring adoption and sharing digital performance data across their organisation.

IT and non-IT functions have very different perspectives on their own knowledge and capabilities. IT professionals actually overestimate the level of digital competencies in non-IT functions. For example, 58% of IT respondents describe their organisation's non-IT staff as advanced at using data analytics, while only 46% of non-IT respondents rate themselves that high. Similar gaps were reported by the IT and non-IT respondents, respectively, for digital experience management (61% vs 45%), product/service innovation (61% vs 46%) and enterprise-wide digital transformation (62% vs 47%).

Conversely, non-IT respondents generally have a lower estimation of their IT department's competencies than IT professionals do themselves. For example,

while nearly three-quarters (72%) of IT respondents rate their organisations' IT leaders as advanced in digital-transformation strategies, only about half (54%) of non-IT respondents agree. A similar gap occurs in their respective assessments of workplace transformation; 71% of IT respondents rate their own understanding as advanced, while only 54% of non-IT respondents agree. A similar trend exists regarding IT infrastructure modernisation (71% IT vs 64% non-IT), digital experience management (71% IT vs 66% non-IT), and the use of data analytics (72% IT vs 63% non-IT).

While these gaps reflect communication challenges between functions, they also raise questions about how much collaboration is really taking place, how organisations measure their own competencies and, ultimately, whose responsibility is it to ensure an organisation's digital competencies are driving performance. "IT definitely owns figuring out what the right technology approach ought to be," says Mr Fitzgerald of IDC. "But full realisation of digital competency, to be successful, is a multi-discipline, multi-departmental and multi-functional effort."

**IT professionals actually overestimate the level of digital competencies in non-IT functions.**

## Chapter 4: The challenge of complexity

Developing digital competencies isn't easy. Neither is implementing an organisational digital strategy. Both can require profound changes, including changing an organisation's entire culture—how work gets done, projects are led, decisions are made and even how funding is assigned. "Once people got into digital transformation, they found that it's a lot harder than expected," contends Mr Fitzgerald. "It's not just about implementing new hardware or software. It's foundational and pervasive."

The top challenge to developing digital competencies is the complexity of change itself, cited by 43% of respondents. That's twice as many as those who cited the challenge of lacking enough support from executives and organisational leaders. In fact, complexity is the most frequently cited challenge for seven of the eight sectors covered in the study, as well as for high performers. Other top challenges include legal or security concerns (37%); rigid systems, networks and infrastructure (32%); lack of digital understanding, talent and skills (30%); and insufficient funding (29%).

### Most significant challenges to developing digital competencies

% of respondents



Source: The Economist Intelligence Unit.  
 Respondents were allowed to choose all that apply



**Once people got into digital transformation, they found that it's a lot harder than expected... It's foundational and pervasive.**

*Shawn Fitzgerald, research director, Insights, worldwide digital transformation strategies, IDC*

## A measure of confidence

The complexity of change isn't going away anytime soon. However, some organisations feel more confident than others about their ability to overcome this and other challenges. More than half (52%) of high performers say they are extremely confident about overcoming challenges, compared with 22% of others. Conversely, not even one high performer says they are not confident or only somewhat confident, compared with 41% of other respondents.

Again, the additional years of experience enjoyed by high performers probably accounts for their superior levels of confidence. Among respondents with digital strategies in place for three or more years, nearly three-quarters (72%) say they're confident about their ability to overcome challenges. That's considerably more than the 60% of organisations with digital experience spanning fewer than three years.

Along the same lines, 45% of the early adopters say they're confident their organisations deliver an exceptional digital experience to customers, compared with less than a third (31%) of late adopters. Some industries are more confident, too. For example, 84% of media/entertainment/publishing respondents believe their organisation leads its peers in managing the digital experience, compared with only 48% in professional services. Meanwhile, differences are evident between the private and the public sectors, with 60% of private-sector respondents describing their IT modernisation/transformation as advanced, compared with only 45% in the public sector.

While years of experience clearly make a difference, how does that help those organisations struggling to develop their competencies? The next section will take a closer look at how organisations are developing their digital competencies—and what high performers do differently.

## How confident are you that your organisation can overcome challenges to developing digital competencies

% of respondents

■ Entirely confident ■ Very confident ■ Somewhat confident ■ Not very confident ■ Not at all confident

High performers



Other respondents



Source: The Economist Intelligence Unit.

## Chapter 5: Developing digital competencies for the future

Given the challenges of keeping up with technology's rapid pace of change, organisations need effective ways to develop their digital competencies.

To do this, organisations are using a wide range of approaches. The two top approaches are IT transformation and employee training, cited by 51% and 50% of respondents respectively. The importance of overhauling the IT department to meet the needs of the digital economy is a recurring theme of this report.

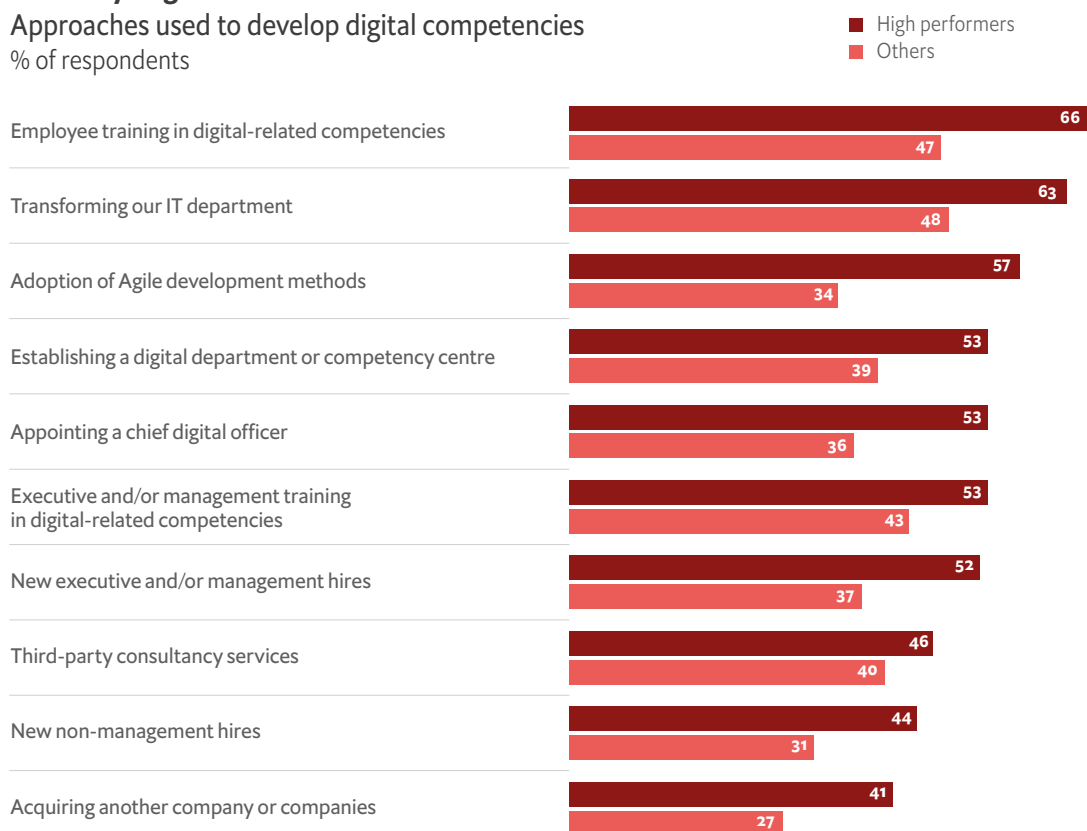
For high performers, IT teams play a leading role in developing and delivering the right competencies. In addition, IT transformation itself is in fact their top competency for achieving performance goals.

Besides employee training, other popular approaches to developing digital competencies include management training, adoption of Agile development methods, the creation of digital competency centres, getting help from third-party consultants, and even acquiring other companies.

### How do you get better?

#### Approaches used to develop digital competencies

% of respondents



Source: The Economist Intelligence Unit.



In the area of Agile development techniques, DevOps is an approach that combines development and operations to create benefits that include shorter development cycles and faster fixes and patches. At Microsoft, DevOps also means that the developer of an internal software program is also expected to support it, creating a greater sense of accountability and making it easier to solve problems. “DevOps is a sea change,” says Mr Jendrezak. “In part, because it puts a lot of responsibility onto the software engineer to build a system that’s robust.”

## What high performers do differently

Which are the most effective approaches to developing digital competencies? To answer this, we looked at areas in which high performers are particularly focused. In this regard, five development approaches stand out: adopting Agile development techniques, training employees, appointing a CDO, establishing a digital department or competency centre, and hiring new executives.

More than half (53%) of high performers say their organisations have appointed CDOs, compared with a third (36%) of other respondents. A CDO is generally responsible for delivering technology-enabled products and services; they are the executive who leads their organisation’s digital agenda. By contrast, a CIO focuses more on designing, developing and implementing the IT systems that run an organisation’s business processes.

The CDO role is relatively new, but it has spread quickly in organisations keen on either digitising specific segments of their operations or completely transforming. Nearly one in five global companies have a CDO, and 60% of them have been appointed since 2015,

according to a report from Strategy&. The role is likely to continue evolving, too. As the digital ambitions of organisations grow, CDOs may get involved with upgrading legacy IT architecture, making investment decisions and improving governance and compliance systems.

Another tactic, establishing a digital department or competency centre, has been used by more than half (53%) of high performers, compared with only 39% of everyone else. Digital competency centres are also more commonly found among public-sector organisations (49%) than among those in the private sector (40%), perhaps reflecting awareness within the public sector that it lags in IT modernisation/transformation. A digital competency centre of excellence is a team of subject-matter experts that helps the organisation improve its digital competencies and focus on digital transformation. Such centres, by centralising an organisation’s digital efforts, can deliver greater digital speed, efficiency and effectiveness. A centre of excellence can also act as an information and digital-tools hub for an organisation’s employees, suppliers, partners and even customers.

These centres can also provide leadership and act as role models, for example, by incorporating Agile approaches or experimenting with new and emerging technologies, such as machine learning or serverless cloud computing. Finally, by recruiting members from different organisational disciplines—not only IT, but also HR, marketing, lines of business and elsewhere—a digital competency centre can help institutionalise a multi-function approach to digital competencies. Given the way nearly every organisation is quickly becoming digital, that’s vital.

■ **More than half (53%) of high performers say their organisations have appointed CDOs, compared with a third (36%) of other respondents.**

■ **Establishing a digital department or competency centre has been used by more than half (53%) of high performers.**

## The way forward

Google Trends, a method of tracking popular search terms, shows that global interest in digital transformation took off five years ago and hasn't looked back since. Over that time, for some, it's already become a hackneyed phrase. However, for nearly every organisation, digital transformation is the daily reality for which there are no alternatives. To distinguish their organisations, many business and government leaders are developing digital competencies.

This report has shown the strategic importance of developing digital competencies, such as data analytics, digital experience management, and product and service innovation. It's also shown the importance of modernising and transforming IT to support organisational objectives. Digital competencies matter to the bottom line—as well as to so much more. Many executives, despite knowing the importance of digital competencies, say a lack of these skills prevents their organisations from achieving strategic goals. While IT departments are generally recognised as storehouses of technological know-how, when they fall short on communication and collaboration, that can limit how well digital knowledge is spread throughout their organisations.

High performers give us hope, though. They've figured out how to benefit from their digital strategies, remain confident about overcoming challenges, and show real results in their organisations in terms of business performance and the end-user experience. The key differences between high performers and other respondents draw four important lessons for all organisations to consider:

### **When it comes to digital competencies, there are no limits on improvement.**

High performers know how far ahead of their peers they are, yet they still feel a greater-than-average need to improve their digital competencies. They understand that both digital transformation and developing digital competencies are perpetual processes.

**IT plays a pivotal role.** High performers understand that extraordinary digital performance requires IT transformation and modernisation of legacy systems to support digital strategies and improve digital experience. They also know that greater communication and collaboration between the IT function—where digital competencies are naturally common—and the rest of the organisation (where those competencies may still be scarce) will be increasingly important, too.

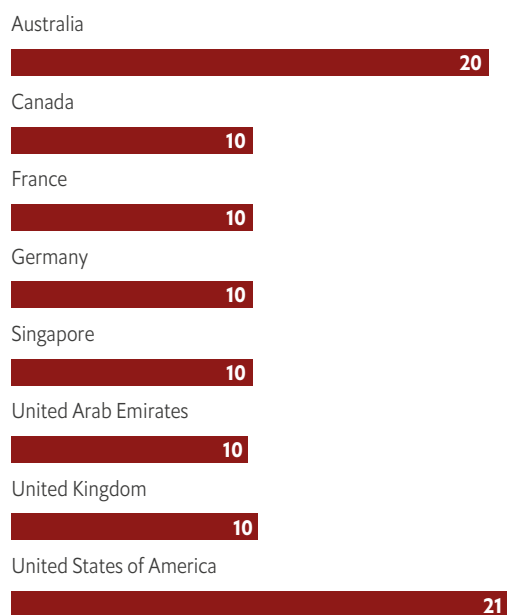
**Now's the time.** High performers tend to be more experienced at pursuing digital strategies than other respondents, and that experience seems to give them higher levels of confidence. The sooner an organisation develops its digital competencies, the sooner it can deliver exceptional digital experiences to its customers, employees, partners and others in the value chain.

**Let there be variety.** Most organisations focus on transforming their IT departments and employee training to improve their digital competencies. While those are undoubtedly important, high performers also stay ahead with other approaches, including appointing CDOs and establishing digital competency centres.

## Appendix: Survey results

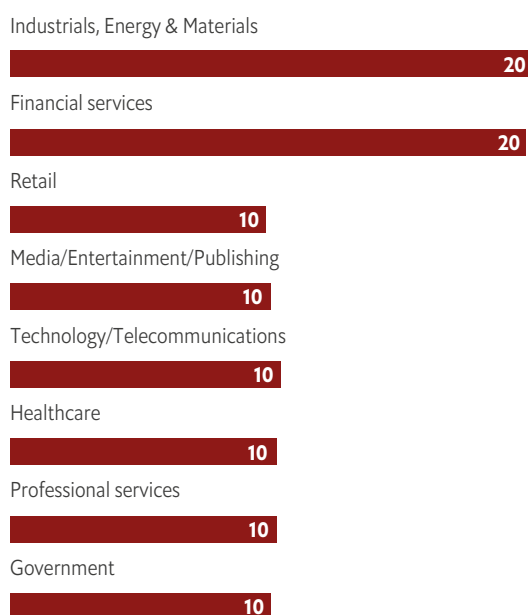
### Q1. In which country are you personally located?

Select one. % respondents



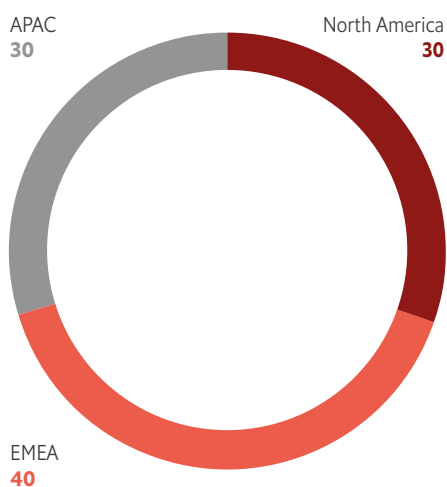
### Q2. What is your organisation's primary industry? [INDUSTRY]

Select one. % respondents



### Q1. In which country are you personally located? [REGION]

Select one. % respondents



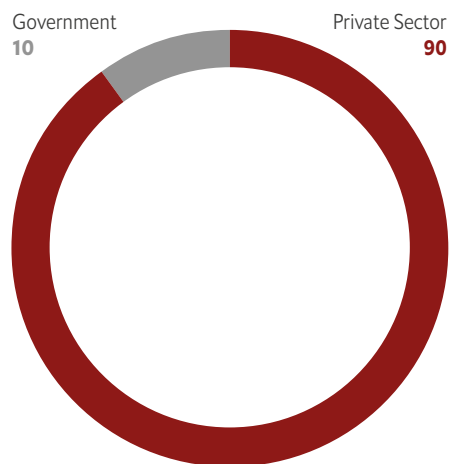
## Q2. What is your organisation's primary industry?

Select one. % respondents



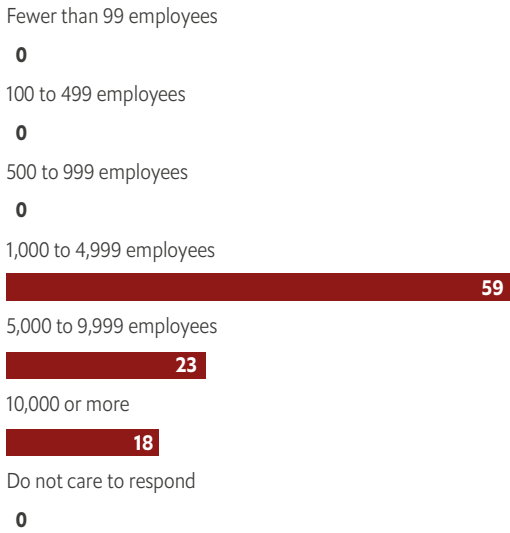
## Q2. What is your organisation's primary industry? [SECTOR]

Select one. % respondents



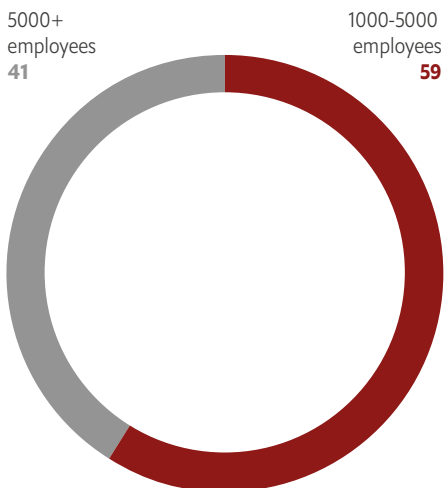
**Q3. How many employees work for your organisation globally?**

Select one. % respondents



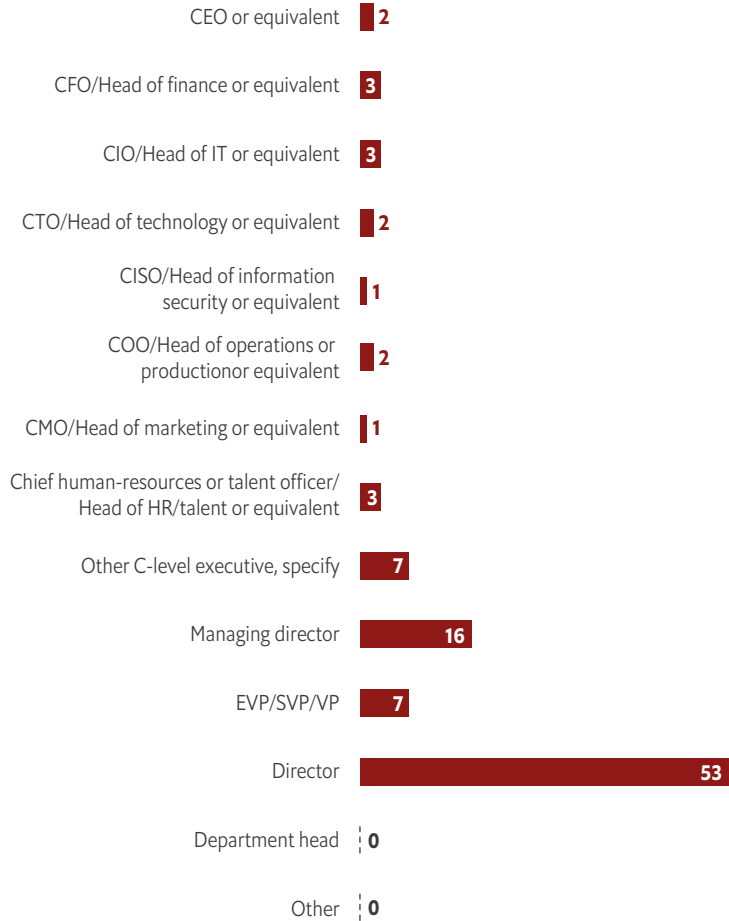
**Q3. How many employees work for your organisation globally? [COMPANY SIZE]**

Select one. % respondents



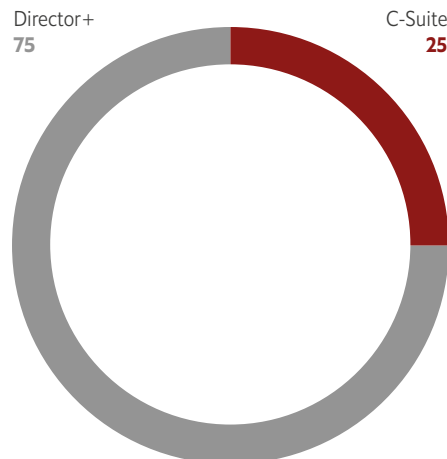
**Q4. Which of the following best describes your title?**

Select one. % respondents



**Q4. Which of the following best describes your title? [SENIORITY]**

Select one. % respondents



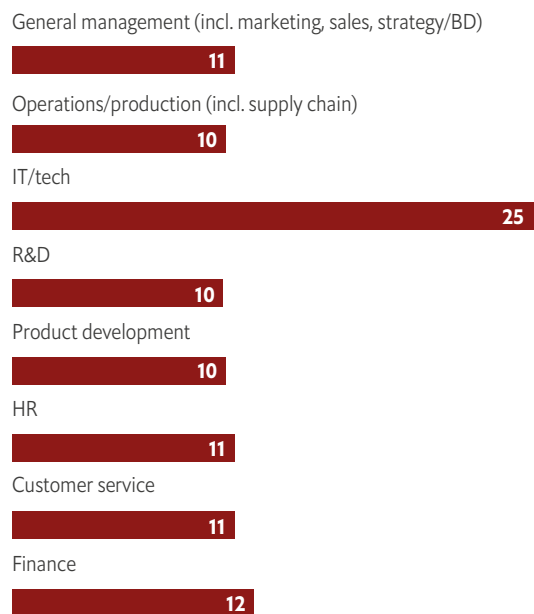
#### Q4/Q5. What is your main functional role? [FUNCTION]

Select one. % respondents



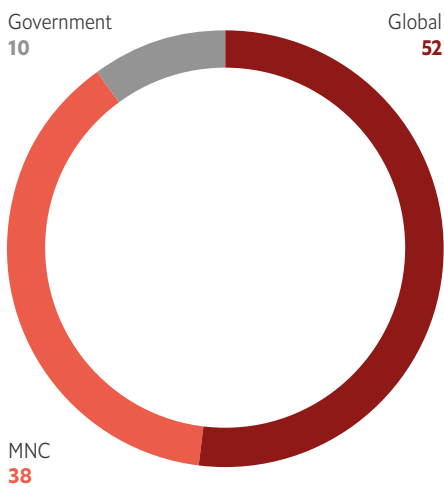
#### Q4/Q5. What is your main functional role? [FUNCTION]

Select one. % respondents



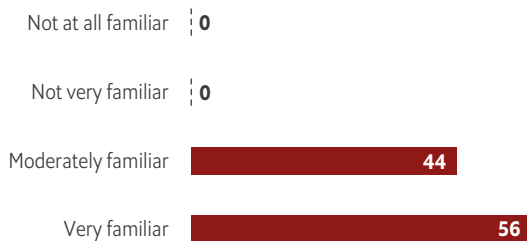
**Q6. Which of the following best describes your business's operational footprint?**

Select one. % respondents



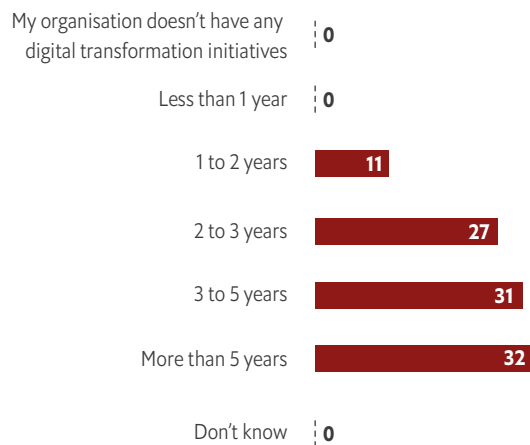
**Q7. To what degree are you familiar with your organisation's overall digital strategy initiatives?**

Select one. % respondents



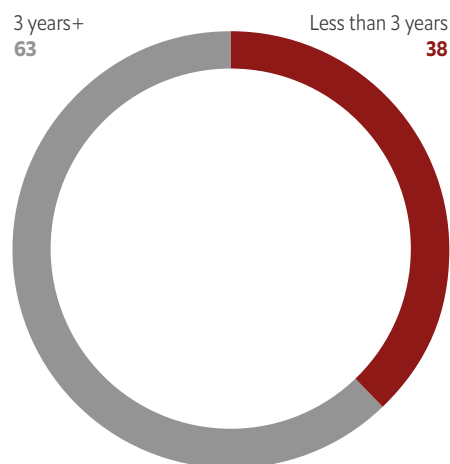
**Q8. How long have your organisation's digital strategies been in place?**

Select one. % respondents



**Q8. How long have your organisation's digital strategies been in place? [DIGITAL STRATEGY]**

Select one. % respondents

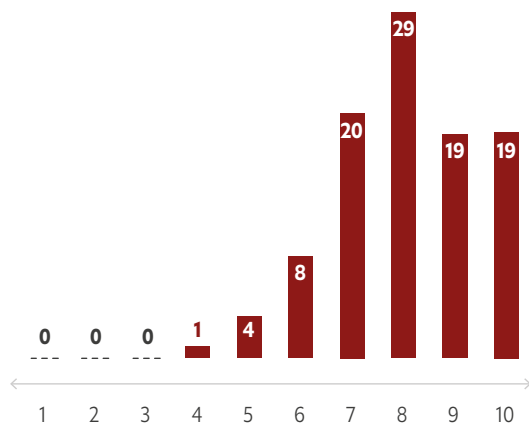


Data does not add up to 100% due to rounding

**Q9. To what extent have your digital strategies produced measurable business benefits (eg, revenue growth, operational efficiency, customer satisfaction, employee productivity)?**

Answer on a scale of 1 to 10, where 1=no measurable benefit so far and 10=significant benefit.

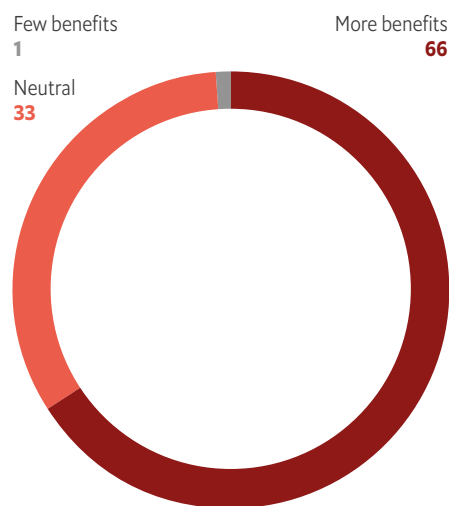
% respondents



**Q9. To what extent have your digital strategies produced measurable business benefits (eg, revenue growth, operational efficiency, customer satisfaction, employee productivity)? [Q9HID]**

Answer on a scale of 1 to 10, where 1=no measurable benefit so far and 10=significant benefit.

% respondents





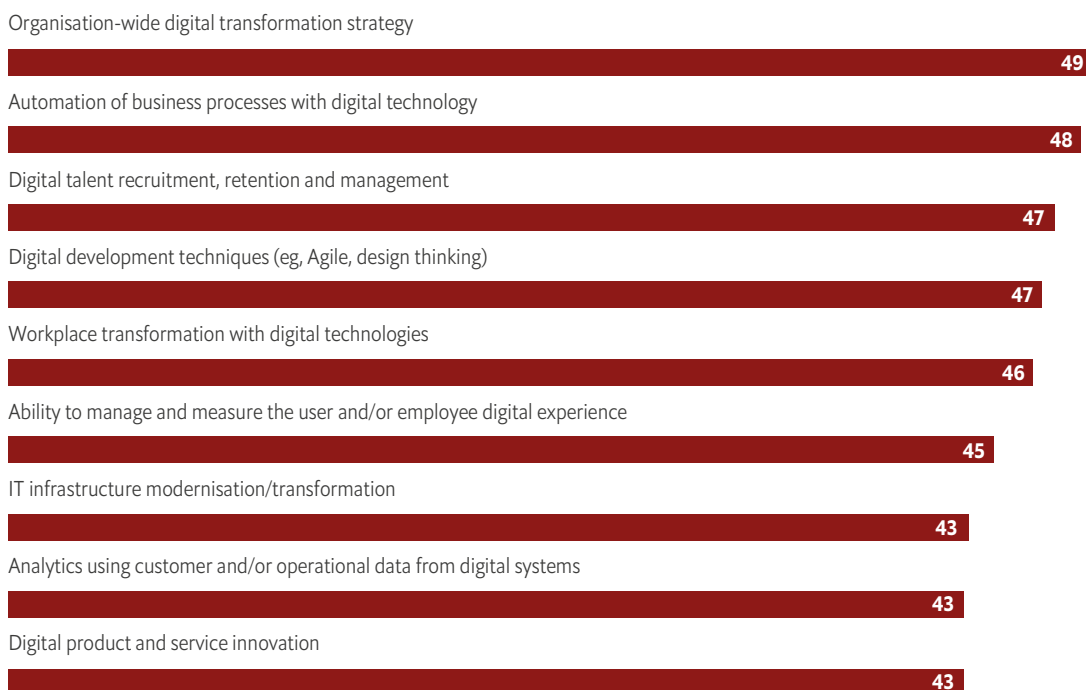
**Q10. Which of the following digital competencies are important in helping your organisation achieve its objectives today?**

Select all that apply. % respondents



**Q11. Which of the following digital competencies do you expect to grow in importance in the next three years?**

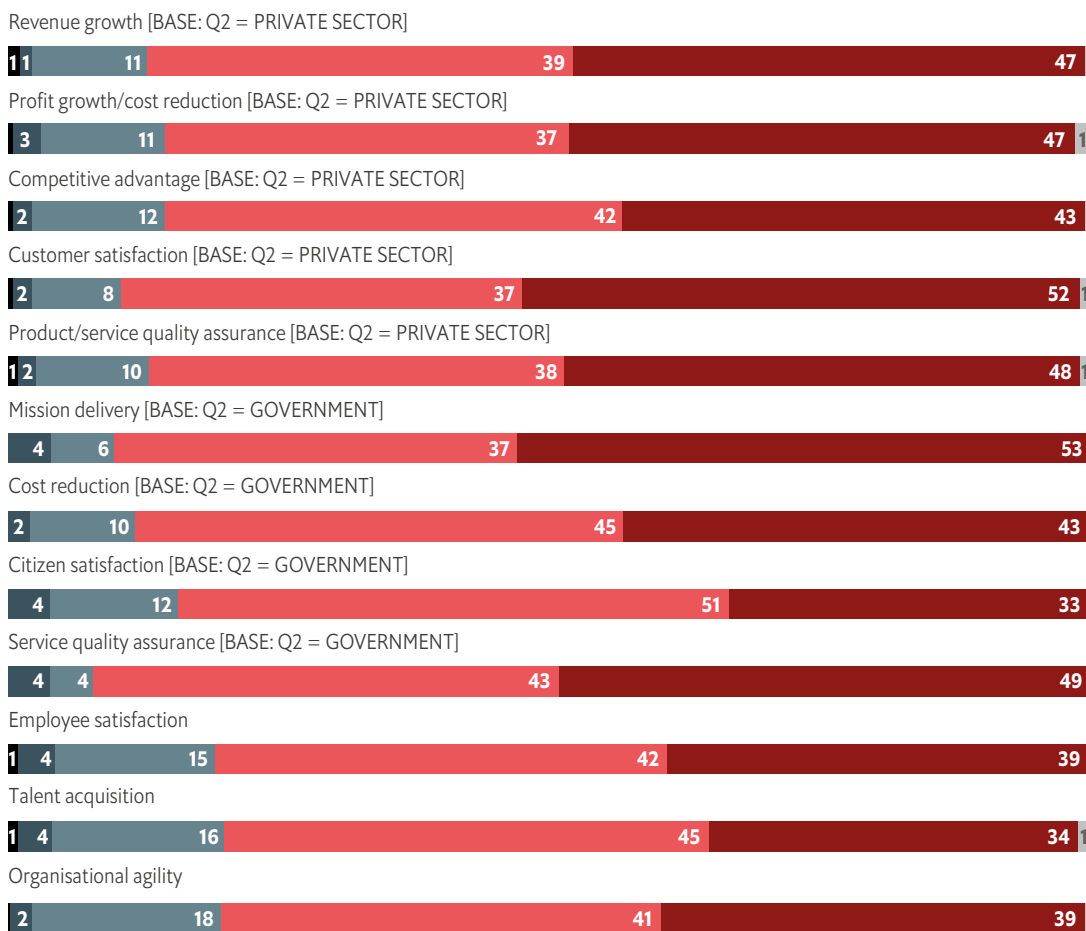
Select all that apply. % respondents



**Q12. How important are having these digital competencies to achieving the following objectives at your organisation?**

Select one in each row. % respondents

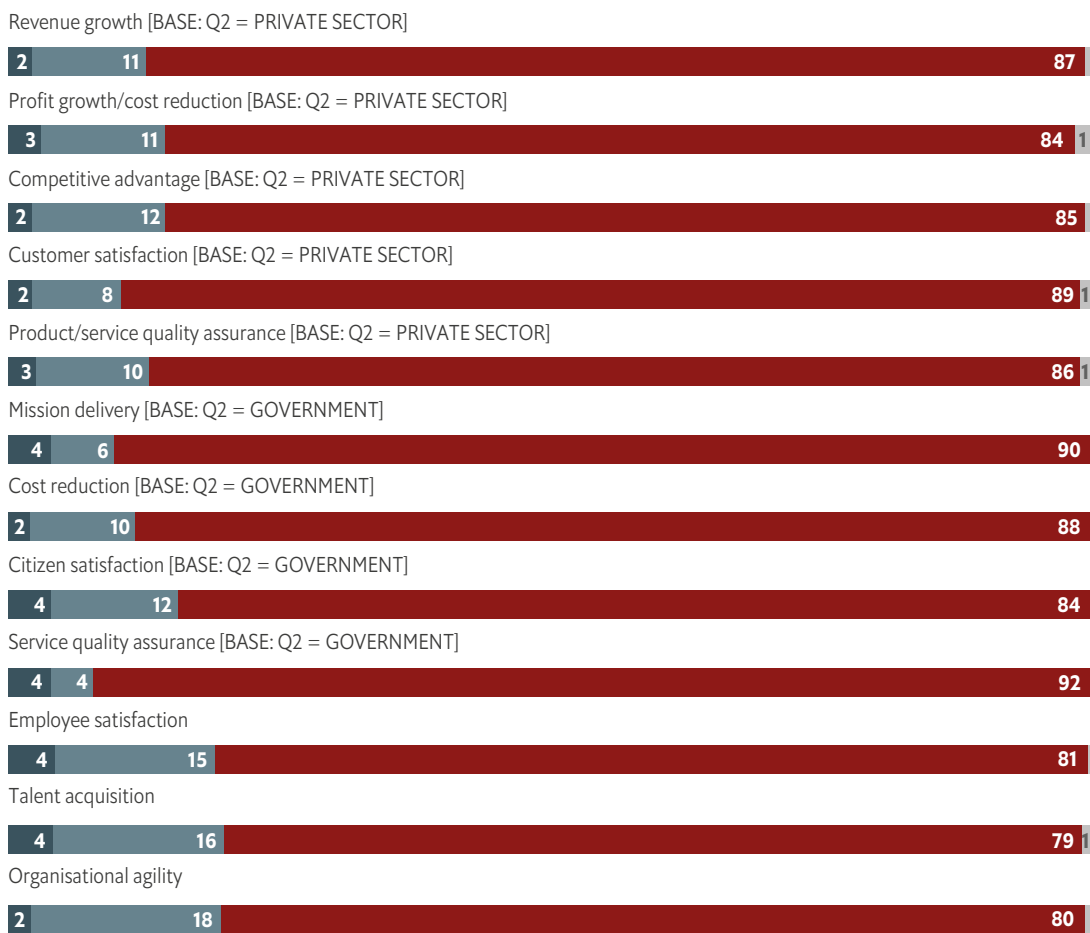
■ Not at all important ■ Not very important ■ Somewhat important ■ Very important ■ Extremely important ■ Don't know



**Q12. How important are having these digital competencies to achieving the following objectives at your organisation? [Q12HID]**

Select one in each row. % respondents

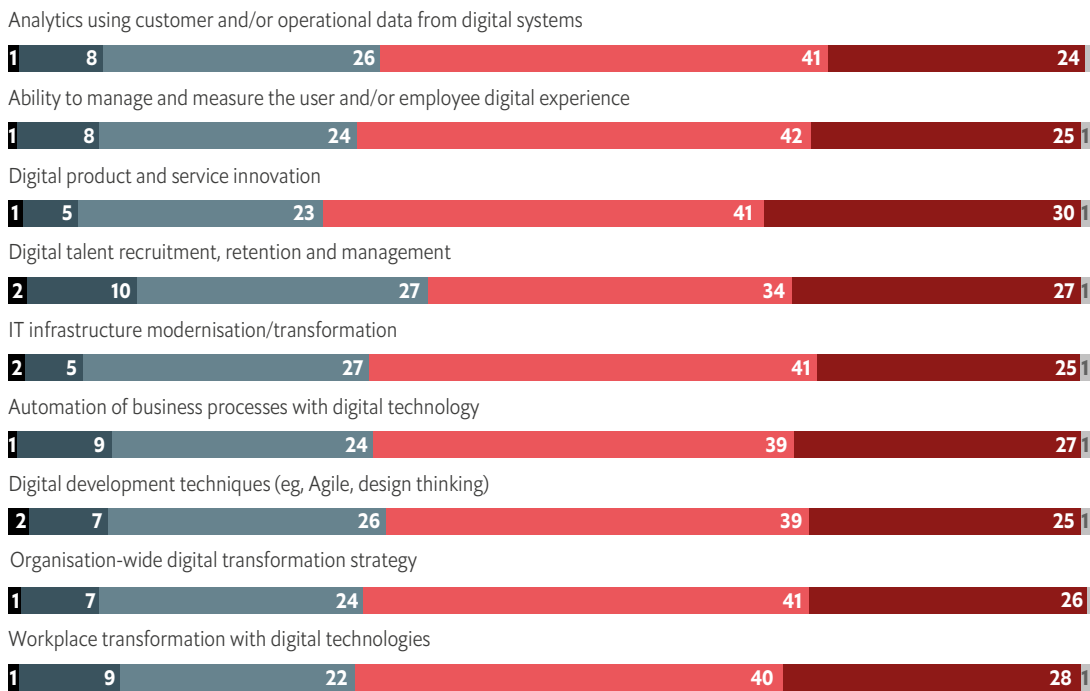
■ Less important ■ Somewhat important ■ More important ■ Don't know



**Q13. How would you rate your organisation's progress compared with peers on its digital competencies?**

Select one in each row. % respondents

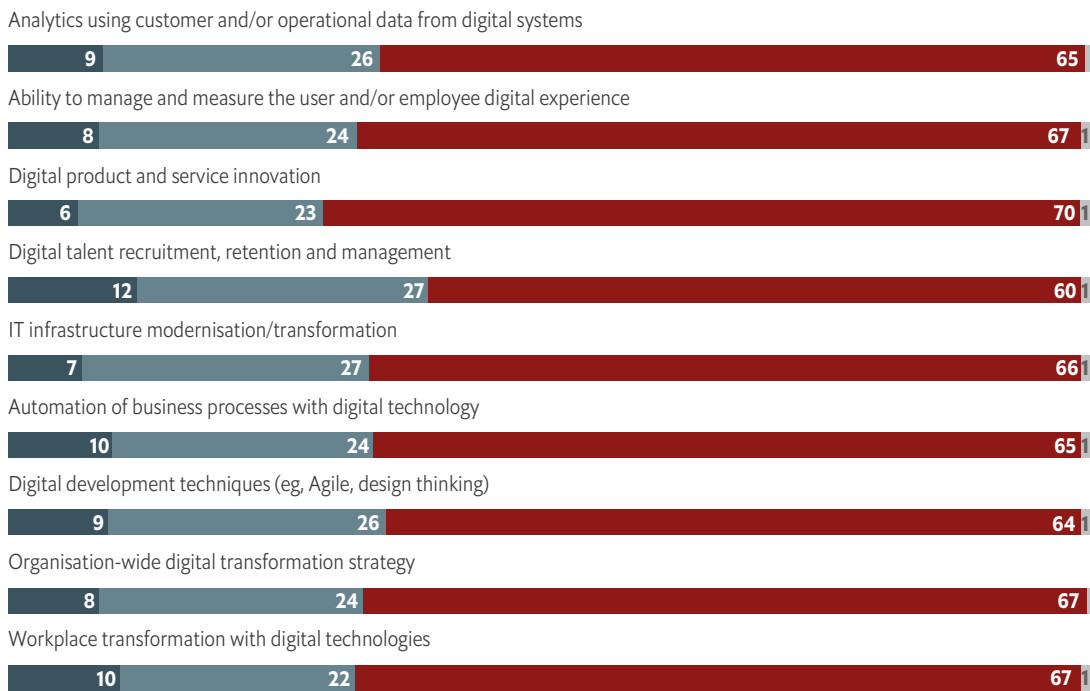
■ Significantly behind ■ Somewhat behind ■ Same ■ Somewhat ahead ■ Significantly ahead ■ N/A



**Q13. How would you rate your organisation's progress compared with peers on its digital competencies? [Q13HID]**

Select one in each row. % respondents

■ Behind ■ Same ■ Ahead ■ N/A



**Q14. To what extent do you feel that your organisation needs to improve the following digital competencies?**

Select one in each row. Answer on a scale of 1 to 10, where 1=no improvement needed and 10=significant improvement needed. % respondents

1 2 3 4 5 6 7 8 9 10 N/A

Analytics using customer and/or operational data from digital systems



Ability to manage and measure the user and/or employee digital experience



Digital product and service innovation



Digital talent recruitment, retention and management



IT infrastructure modernisation/transformation



Automation of business processes with digital technology



Digital development techniques (eg, Agile, design thinking)



Organisation-wide digital transformation strategy



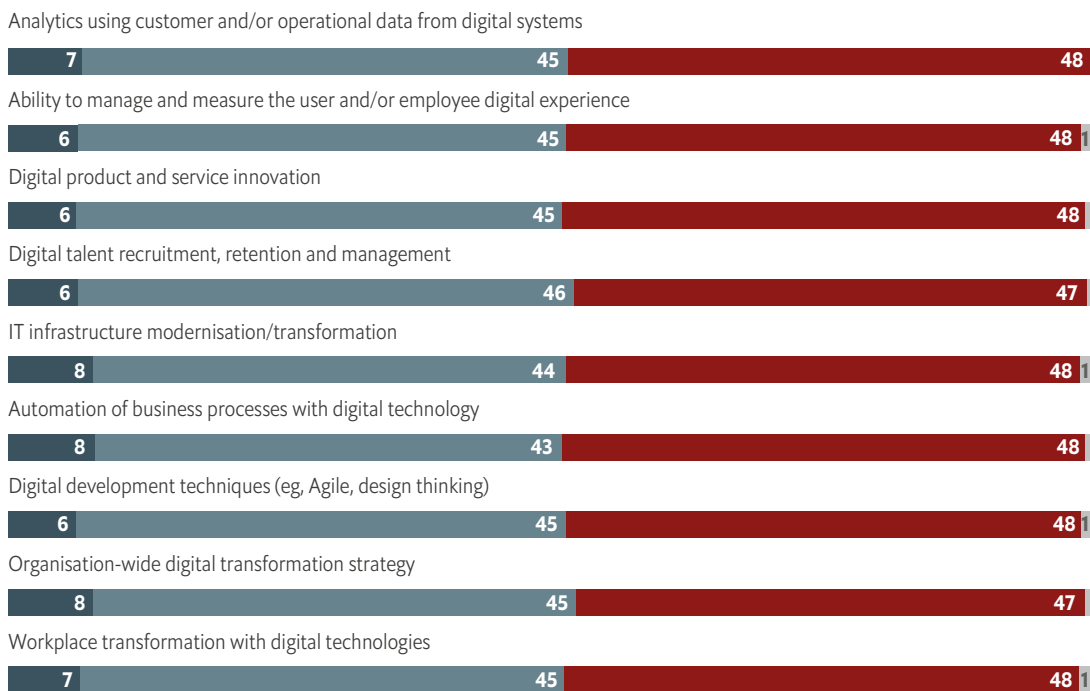
Workplace transformation with digital technologies



**Q14. To what extent do you feel that your organisation needs to improve the following digital competencies?**

Select one in each row. % respondents

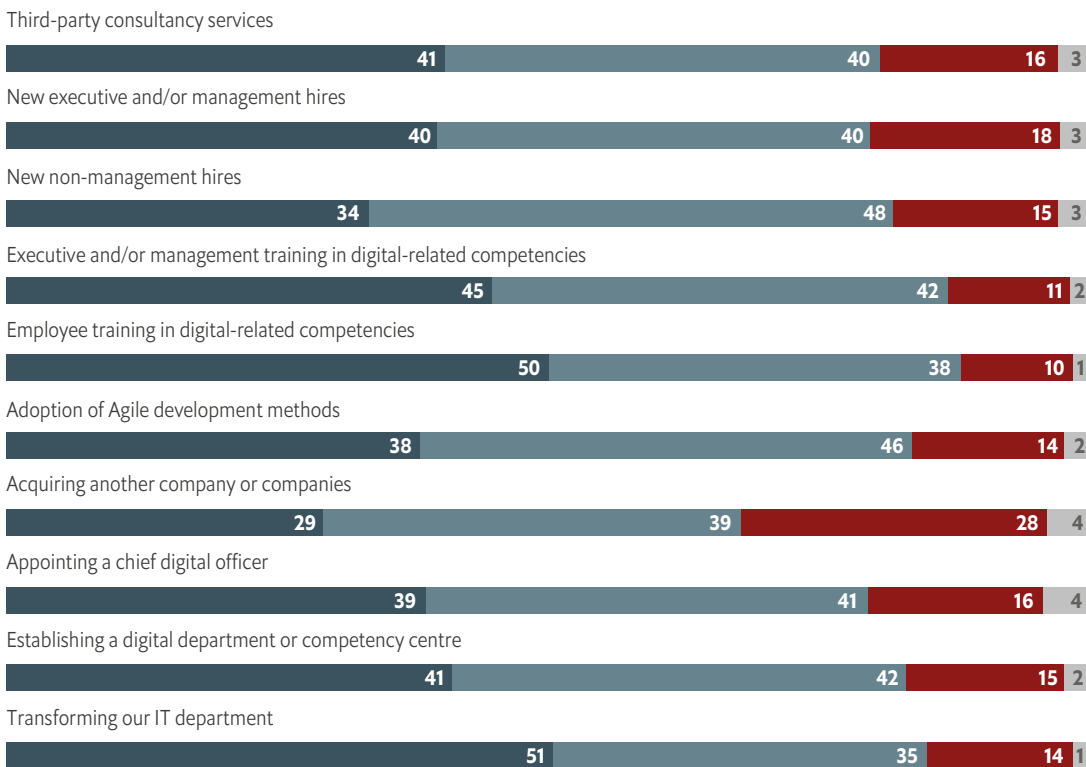
■ No improvement needed ■ Neutral ■ Improvement needed ■ N/A



**Q15. Which of the following are the primary ways your organisation has developed or plans to develop its digital competencies?**

Select one in each row. % respondents

■ Has used ■ Plans to use ■ No plans to use ■ Don't know

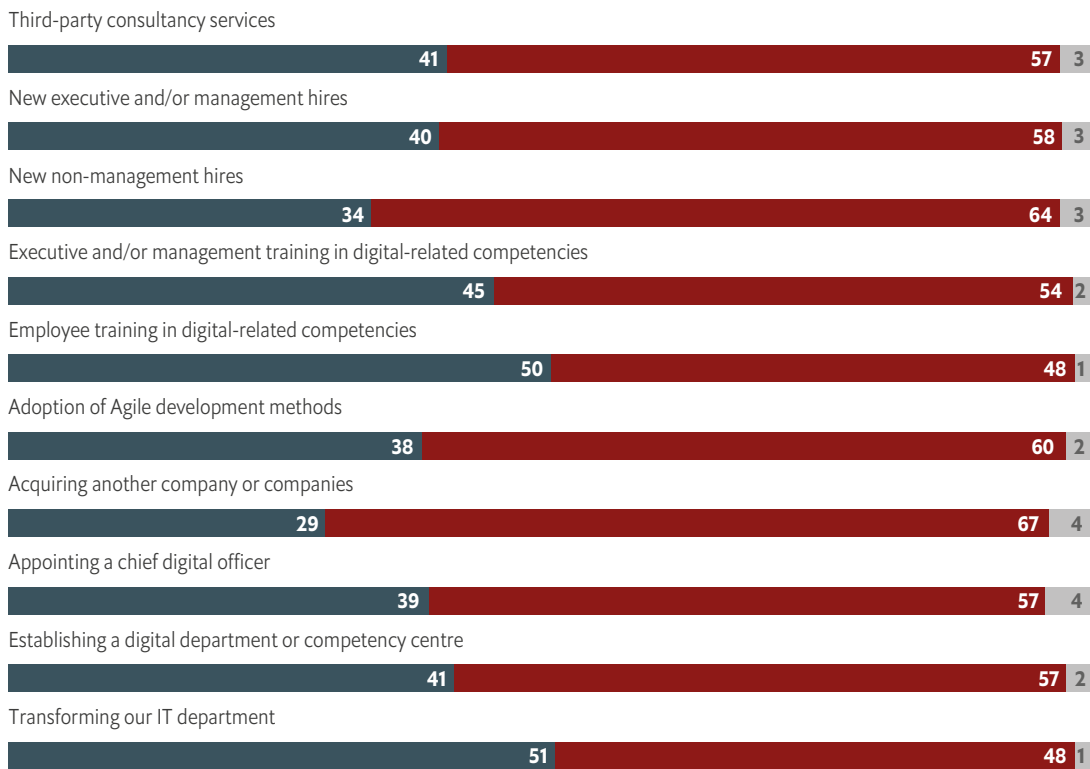




**Q15. Which of the following are the primary ways your organisation has developed or plans to develop its digital competencies? [Q15HID]**

Select one in each row. % respondents

■ Has used ■ Has not used ■ Don't know



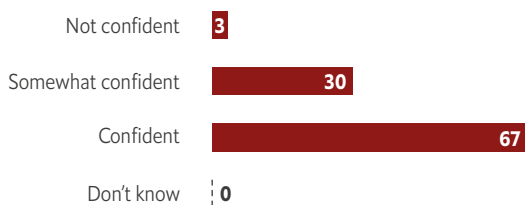
**Q16. Which of the following are the most significant challenges to developing digital competencies in your organisation?**

Select all that apply. % respondents



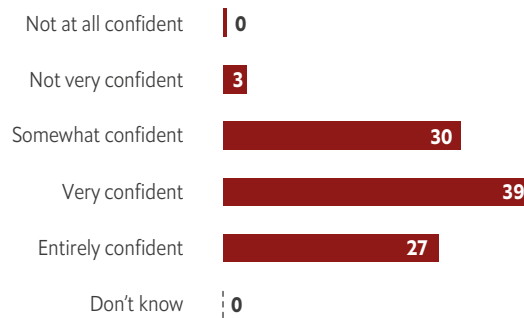
**Q17. How confident are you that your organisation can overcome these challenges? [Q17HID1]**

Select one. % respondents



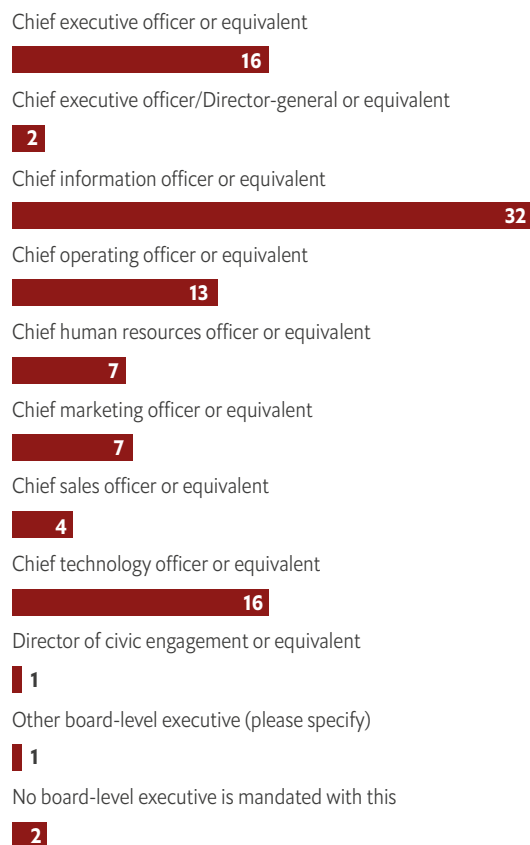
**Q17. How confident are you that your organisation can overcome these challenges?**

Select one. % respondents



**Q18. Which board-level executive is mandated with developing and delivering the digital competencies your organisation needs overall?**

Select one. % respondents



**Q19. How would you describe the skills and understanding of non-IT leaders in your organisation in the following digital competencies?**

Select one in each row. Answer on a scale of 1 to 10, where 1=very early stage/developing and 10=very advanced. % respondents

■ 1 ■ 2 ■ 3 ■ 4 ■ 5 ■ 6 ■ 7 ■ 8 ■ 9 ■ 10 ■ N/A

Analytics using customer and/or operational data from digital systems



Ability to manage and measure the user and/or employee digital experience



Digital product and service innovation



Digital talent recruitment, retention and management



IT infrastructure modernisation/ transformation



Automation of business processes with digital technology



Digital development techniques (eg, Agile, design thinking)



Organisation-wide digital transformation strategy



Workplace transformation with digital technologies



**Q19. How would you describe the skills and understanding of non-IT leaders in your organisation in the following digital competencies? [Q19HID]**

Select one in each row. % respondents

■ Early stage/developing ■ Neutral ■ Advanced ■ N/A

Analytics using customer and/or operational data from digital systems



Ability to manage and measure the user and/or employee digital experience



Digital product and service innovation



Digital talent recruitment, retention and management



IT infrastructure modernisation/ transformation



Automation of business processes with digital technology



Digital development techniques (eg, Agile, design thinking)



Organisation-wide digital transformation strategy



Workplace transformation with digital technologies



**Q20. How would you describe the skills and understanding of IT leaders in your organisation in the following digital competencies?**

Select one in each row. Answer on a scale of 1 to 10, where 1=very early stage/developing and 10=very advanced. % respondents

■ 1 ■ 2 ■ 3 ■ 4 ■ 5 ■ 6 ■ 7 ■ 8 ■ 9 ■ 10 ■ N/A

Analytics using customer and/or operational data from digital systems



Ability to manage and measure the user and/or employee digital experience



Digital product and service innovation



Digital talent recruitment, retention and management



IT infrastructure modernisation/transformation



Automation of business processes with digital technology



Digital development techniques (eg, Agile, design thinking)



Organisation-wide digital transformation strategy



Workplace transformation with digital technologies



**Q20. How would you describe the skills and understanding of IT leaders in your organisation in the following digital competencies? [Q20HID]**

Select one in each row. % respondents

■ Early stage/developing ■ Neutral ■ Advanced ■ N/A

Analytics using customer and/or operational data from digital systems



Ability to manage and measure the user and/or employee digital experience



Digital product and service innovation



Digital talent recruitment, retention and management



IT infrastructure modernisation/transformation



Automation of business processes with digital technology



Digital development techniques (eg, Agile, design thinking)



Organisation-wide digital transformation strategy



Workplace transformation with digital technologies



### Q21. What role do the following departments play in developing the digital competencies of your organisation?

Select one in each row. % respondents

Not involved at all
  Limited support
  Significant support
  Shared responsibility
  Leadership role
  Don't know

Marketing [BASE: Q2 = PRIVATE SECTOR]



Sales [BASE: Q2 = PRIVATE SECTOR]



Customer service [BASE: Q2 = PRIVATE SECTOR]



Line of business heads [BASE: Q2 = PRIVATE SECTOR]



Policy [BASE: Q2 = GOVERNMENT]



Citizen service/engagement [BASE: Q2 = GOVERNMENT]



Finance



IT /technology



Operations



Legal



HR



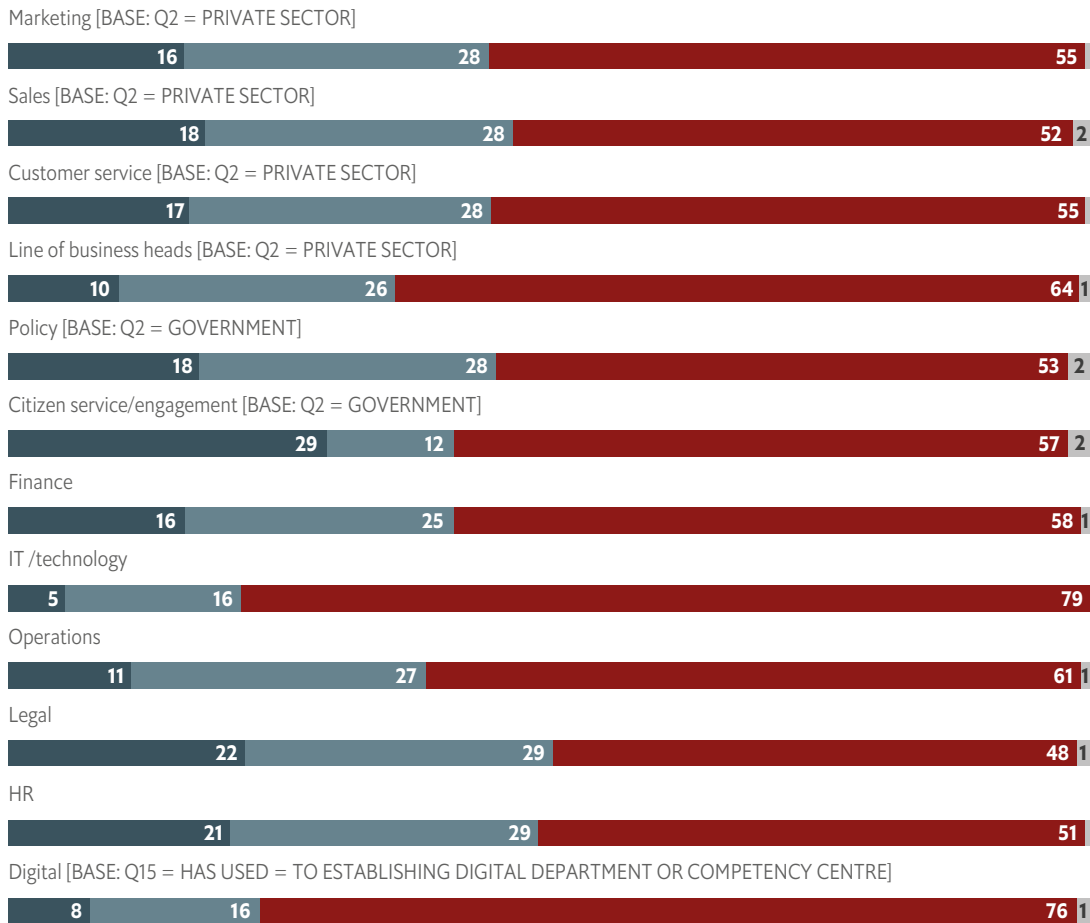
Digital [BASE: Q15 = HAS USED = TO ESTABLISHING DIGITAL DEPARTMENT OR COMPETENCY CENTRE]



**Q21. What role do the following departments play in developing the digital competencies of your organisation? [Q21HID]**

Select one in each row. % respondents

■ Less involved ■ Support ■ More involved ■ Don't know

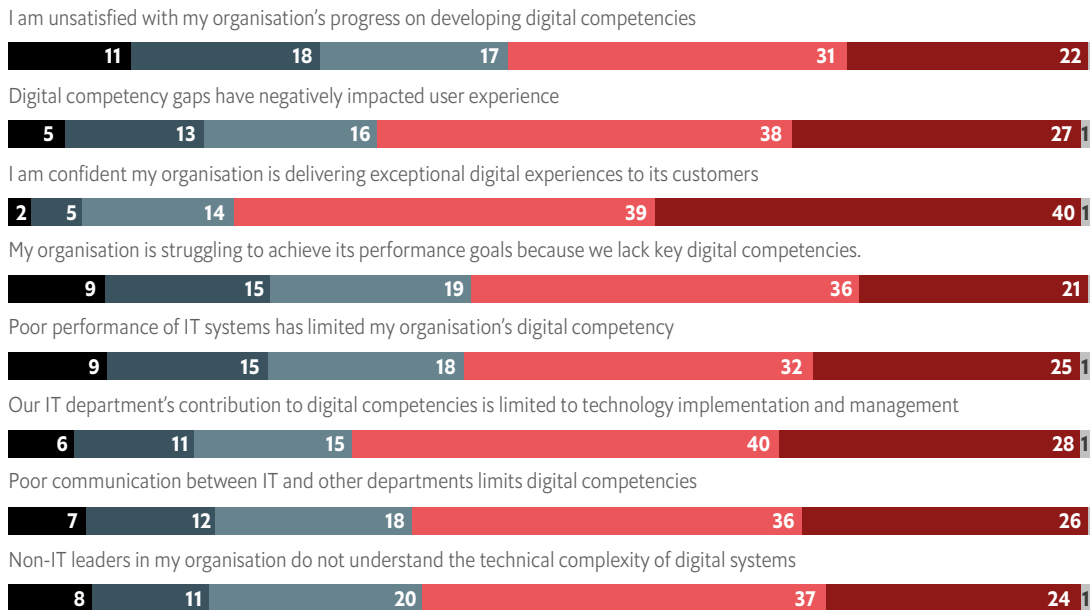




**Q22. To what extent do you agree or disagree with the following statements?**

Select one in each row. % respondents

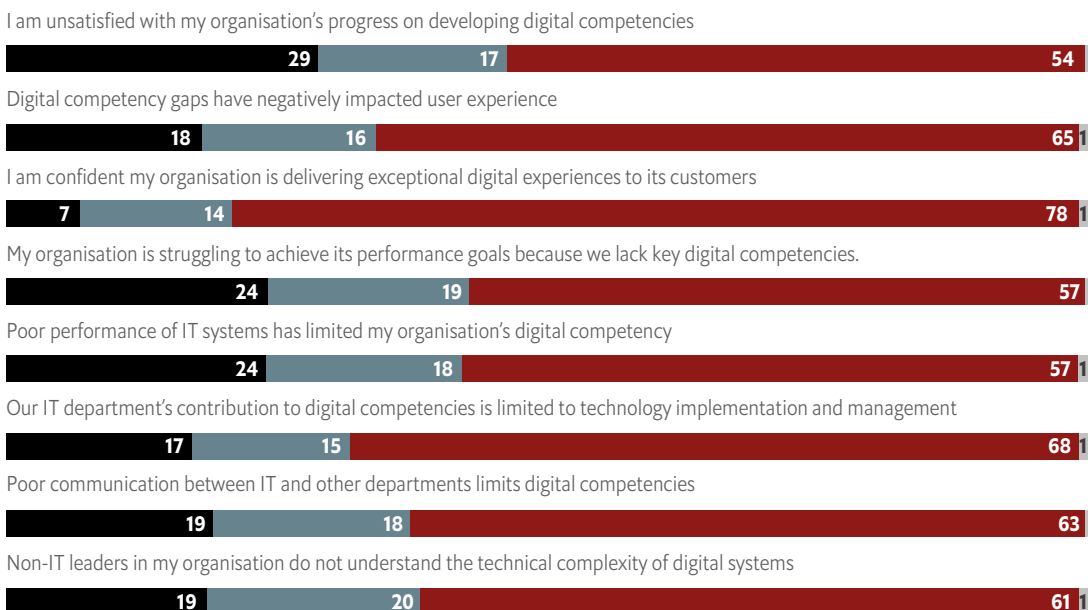
Strongly disagree  
  Somewhat disagree  
  Neither agree nor disagree  
  Somewhat agree  
  Strongly agree  
  Don't know



**Q22. To what extent do you agree or disagree with the following statements? [Q22HID]**

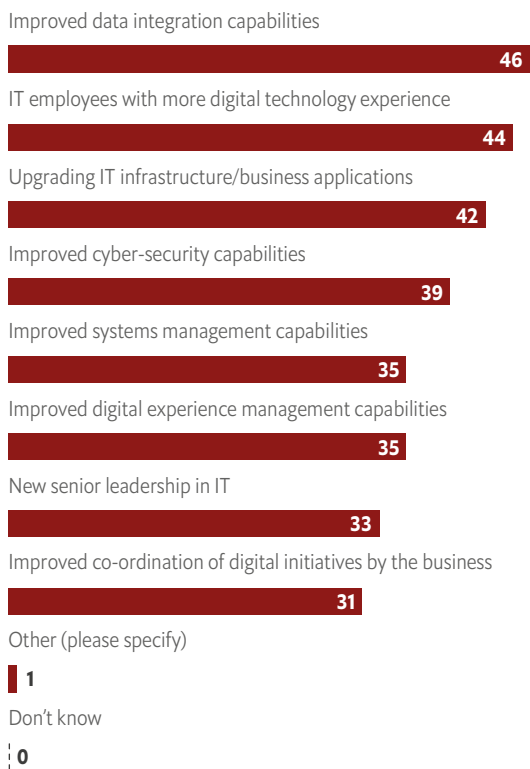
Select one in each row. % respondents

Disagree  
  Neither  
  Agree  
  Don't know



**Q23. Which of the following would most help you to improve the digital competencies of your organisation?**

Select all that apply. % respondents



**Q24. Which of the following best describes your company's primary customer base?**

Select one. % respondents



**Q25. What is your company's actual or expected annual revenue growth for the following years?**

Select one for each. % respondents

■ Negative
■ Flat
■ 0.1 to less than 2
■ 2 to less than 4
■ 4 to less than 6
■ 6 to less than 8
■ 8 to less than 10
■ 10 or more
■ Don't know

Year ending 2018



Year ending 2019



**Q25. What is your company's actual or expected annual revenue growth for the following years? [Q25HID]**

Select one for each. % respondents

■ Negative + Flat
■ Less than 6
■ 6 or more
■ Don't know

Year ending 2018



Year ending 2019



**Q26. How well did or will your organisation deliver against its performance targets for the following years?**

Select one for each. % respondents

■ Significantly underdeliver
■ Somewhat underdeliver
■ Roughly meet our objectives
■ Somewhat overdeliver
■ Significantly overdeliver
■ Don't know

Year ending 2018



Year ending 2019



**Q26. How well did or will your organisation deliver against its performance targets for the following years? [Q26HID]**

Select one for each. % respondents

■ Under deliver
■ Roughly meet
■ Over deliver
■ Don't know

Year ending 2018



Year ending 2019



## About the sponsor

Riverbed<sup>®</sup>, The Digital Performance Company<sup>™</sup>, enables organizations to measure, manage and enhance digital experiences so they can deliver richer and more powerful human experiences — for customers, employees, partners, patients and citizens. Riverbed's Digital Performance Platform includes a combination of Digital Experience Management and Next-Generation Infrastructure solutions that maximize digital performance, provide superior user experiences, deliver new levels of operational agility and accelerate business outcomes. Learn more at [riverbed.com](https://riverbed.com)

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