IT LEADERSHIP FOR THE NEXT PHASE OF DIGITAL TRANSFORMATION

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EXECUTIVE SUMMARY

Digital transformation is the new strategic imperative—no longer just a handy source of competitive differentiation but a must-do for every company, in every industry, and across every geography.

The challenges involved, however, are testing leadership teams to their limits: how can they best wrap digital services around existing products and services, launch new ones that capture customers’ hearts and wallets, and find innovative ways to interact digitally, both internally and externally? And how can they achieve their goals against a backdrop of stretched budgets and competing priorities?

In the eye of the storm sit the chief information officer (CIO) and the IT team. As digital technology becomes embedded in almost every aspect of doing business, IT is increasingly called upon to advise the C-suite on the feasibility of new approaches and to deliver new applications and services, while continuing to perform the day-to-day tasks that keep existing systems up and running.

This report explores both the challenges and the opportunities facing IT in an era of digital transformation. Written by The Economist Intelligence Unit (EIU) and sponsored by SAP, it is based on a survey of more than 800 business and IT leaders across Europe, North America, Latin America and Asia-Pacific, along with desk research and interviews with C-level executives at major international organisations.

The key findings are as follows:

- **Digital transformation lacks strategic co-ordination.** Digital transformation is firmly on the agenda for the majority of companies, and they are busy with a variety of digital initiatives. They are investing in a range of technologies and pursuing a wide array of objectives, most commonly improving products and services and boosting the customer experience. But only a minority of organisations have devised and implemented a digital transformation strategy to direct these initiatives. Those that have done so are substantially more likely to see their digital initiatives as being effective (93%) than those that have not (63%).

- **The way in which digital transformation is implemented varies considerably between firms—and even between departments.** The CIO is the most likely executive to take ownership of digital transformation (37%), but CEOs (20%) and chief operating officers (15%) are also likely owners—and 16% say that digital transformation is not owned by one individual member of the C-suite. Meanwhile, 29% report that digital initiatives are led by individual business units, 24% say they are led by a dedicated digital unit, and 22% say they are led by IT. Interestingly, respondents from IT are more likely to believe their digital initiatives are centrally co-ordinated than those in other functions, revealing a distinct lack of “joined-up thinking” on the matter.
Both IT and non-IT executives believe that the IT department should take a more active role in digital transformation. Executives both inside and outside the IT function consistently report that IT should ideally play a more active role in key capabilities that support digital transformation than is currently the case. The biggest discrepancy concerns innovation—just 7% of executives say that IT leads their organisation’s attempts to identify opportunities to innovate, while 35% believe that it should. The fact that IT executives agree shows that it is not for want of ambition that they do not currently lead these capabilities. Instead, the data suggest that they are constrained by the obligations of their current role.

Digital transformation is a test of the IT department’s ability to collaborate. Digital products and processes require input from multiple departments. As a result, digital transformation is a test of an organisation’s ability to work across departmental lines. The majority of executives of all stripes agree that collaboration between IT and non-IT management will provide the greatest opportunity for success in digital business initiatives. “Everyone has to succeed together,” as one digital executive puts it.

IT departments are evolving for the era of digital transformation, but there is much more to be done. IT departments have begun to adapt their working practices to meet the needs of digital transformation—and their peers in other functions are noticing. Almost half (45%) of non-IT executives say the IT department has changed the way it works “completely” or “significantly” to support digital transformation, while 40% report “limited” changes. However, IT executives themselves report limited adoption of key methodologies associated with digital delivery, such as Agile software development (17%) or DevOps (15%). These new ways of working are by no means easy to adopt, but this implies a degree of inertia that few companies can afford.
ABOUT THIS REPORT

Digitising IT is a report by The Economist Intelligence Unit (EIU), sponsored by SAP, which investigates the role of the IT department in digital transformation. It is based on a multinational survey of 812 senior executives, 49% of whom are IT executives. The remainder are drawn from a range of business departments, including sales, marketing, HR and finance. Respondents are located in Europe (34%), the US (12%), Asia-Pacific (33%) and Latin America (20%) and represent companies in financial services, retail, consumer products, public sector/government, healthcare, technology, and energy and natural resources.

The EIU would like to thank the following interviewees for their time and insight:

Klas Bendrik, SVP and chief information officer, Volvo Cars
Geraldine Calpin, chief marketing officer, Hilton Worldwide
Jessica Federer, head of digital development, Bayer
Daniel Hartert, chief information officer, Bayer
Sahal Laher, chief information officer, Brooks Brothers
Anthony Roberts, chief information officer, Walgreens Boots Alliance
David Rogers, Faculty of Executive Education, Columbia Business School
George Westerman, principal research scientist, MIT Sloan Initiative on the Digital Economy

The report was written by Jessica Twentyman and edited by Pete Swabey.
1. INTRODUCTION: THE DIGITAL GOLD RUSH

Just a few years ago, in the early days of digital transformation, many established companies only resorted to launching new digital services in direct response to threats, real or perceived, from start-ups that threatened to topple their business models with new, digitally enabled ways of doing business.

They were not wrong to be concerned. These companies recognised early on that organisations which failed to disrupt would quickly get disrupted themselves. Salutary lessons on the dangers of inertia quickly emerged as once-powerful organisations fell by the wayside—think of bookstore chain Borders, video-shop chain Blockbuster and photographic giant Kodak.

Today, digital transformation is the “new normal”. Almost every company has to a greater or lesser extent embarked on a digital transformation journey of its own, according to a survey of over 800 business and IT leaders across Europe, North America, Latin America and Asia-Pacific, conducted by The Economist Intelligence Unit (EIU) and sponsored by SAP.

Most organisations, the survey shows, have implemented a wide array of multifaceted digital initiatives in the last three years: six out of ten (60%) have promoted digital collaboration among employees, and almost as many (58%) have launched new customer-facing digital channels via mobile applications and web portals. A further 57% have established a digital centre of excellence, and half have prioritised digital marketing over traditional forms (see chart 1).

This has been accompanied by significant technology investment. Almost four out of five respondent organisations (79%) have invested in mobile technology as part of their digital initiatives, while large numbers have also invested in social media (67%), the Internet of Things (58%), big data analytics (57%) and cloud computing (52%). Only a very small minority (3%) of respondents say that their organisation has introduced no digital initiatives at all.

Organisations are pursuing a number of objectives through their digital initiatives. The most popular of these include improving products and services using digital technology and improving the way the organisation uses real-time data and information, each cited by 39% of respondents. Organisations are also looking to improve the experience they offer to customers and partners (36%), transform their operating model (31%) and improve the way in which employees work and collaborate using digital tools (30%).

In many cases, what is missing is strategic co-ordination of all this digital activity. Barely more than one in five respondents (21%) say they have defined and implemented
an organisation-wide strategy for digital transformation. A further 21% say they have defined such a strategy but not yet implemented it.

The remainder have opted for a variety of less centralised approaches. Almost one in four (23%) report that individual departments within their organisation have defined and/or implemented their own digital transformation strategies, and 22% claim that, despite having a large number of digital initiatives in play across their organisation, no single, enterprise-wide strategy exists.

There is some variance by industry: for example, 27% of companies in the technology sector have devised and implemented a cross-organisational strategy, no doubt reflecting the high awareness of digital disruption in those industries, while just 9% of public-sector organisations make the same claim.

Unsurprisingly, the survey indicates that organisations whose digital transformation efforts are directed by an organisation-wide strategy are more effective: 93% of respondents from companies that have implemented an organisation-wide digital transformation strategy describe their digital initiatives as highly effective, compared with 63% of those that have not. In terms of the effectiveness of their digital initiatives, respondents working in the high-tech (38%), retail (32%) and energy (28%) sectors are most inclined to say their efforts so far have been highly effective.


Chart 1: Digital collaboration is among the most common initiatives taken by organisations in the last three years

Which of the following initiatives has your organisation undertaken in the last three years? Tick all that apply.

(% of respondents)

- Promoted digital collaboration among employees: 60%
- Launched new products or services made possible by digital technology: 59%
- Launched new customer-facing digital channels, e.g. mobile apps, portals: 58%
- Established a digital centre of excellence: 57%
- Prioritised digital marketing over traditional forms: 50%
- Applied digital technology to improve internal operations: 45%
- Appointed a chief digital officer: 37%

Source: The Economist Intelligence Unit.
“While a lot of companies are doing digital, very few are doing it well yet,” he explains. “The ones that are doing it well, we find, focus much more on transformation than they do on technology. And driving transformation requires someone to lead it. For all the talk of ‘bottom-up innovation’, the companies I call ‘digital masters’ take a top-down approach, without exception.” For Mr Westerman, it does not necessarily matter which job title leads digital transformation. “To my mind, the title is much less important than the role itself.”

But whether or not the CIO leads digital transformation, the IT department’s participation in digital transformation initiatives is crucial to their success, Mr Westerman says. “Digital masters always find ways to work more closely with their IT organisation, so while IT doesn’t always lead digital, it’s always part of the conversation in any company driving digital transformation successfully.”

It is troubling, then, that many executives—in both IT and other functions—believe that IT is not playing as active a role in digital transformation as it should.
2. **IT’S IDEAL ROLE**

The survey reveals a great variety in the way in which companies lead and manage their digital initiatives. The CIO is the most likely executive to take primary ownership of digital transformation, with 37% of respondents attributing ownership to the IT chief. In second place comes the CEO, cited by one-fifth of respondents, and the chief operations officer, cited by 13%. However, 16% say that their organisation’s digital initiatives are not owned by a single C-suite executive.

Respondents who report that their organisation’s digital initiatives are owned by a chief digital officer or equivalent are the most successful, although not by much: 79% rate their digital initiatives as effective, compared with 75% of those whose digital initiatives are owned by the CEO and 74% where the CIO takes ownership.

Beyond executive ownership, the way in which digital initiatives are managed also varies considerably. In almost three out of ten cases (29%) digital initiatives are led by individual departments separately, with support from the IT department. Almost one-quarter of respondents say they are led by a dedicated digital team or department with specialist skills, while 22% say they are led by the IT department. Once again, respondents from the retail and high-tech sectors emerge as the most digitally focused, with 30% and 28% respectively reporting that digital initiatives are led by a specialised team.

Again, dedicated digital leadership is associated with success: 91% of respondents whose digital initiatives are led by a dedicated digital team describe their initiatives as successful, compared with 75% of those where the IT department takes the lead.

Interestingly, there are considerable differences of opinion between IT leaders and their peers in other functions on how digital initiatives are currently being managed. For example, only 14% of marketing executives say their firm has an organisation-wide digital transformation strategy, compared with 26% of their IT counterparts. Conversely, 30% of marketing respondents report that individual departments have their own digital transformation strategies, compared with 23% of IT executives.

This may suggest that IT is privy to a degree of co-ordination between digital initiatives that other departments fail to see. Or it may mean that departments such as marketing see the true diversity of digital projects within the organisation, some of which may not be on IT’s radar.

Either way, it all points to a worrying lack of “joined-up thinking” that could undermine digital transformation efforts in the future. Equally concerning, from a CIO’s perspective, is the conservative role that respondents ascribe to the IT function.

Despite the fact that nearly three-quarters (73%) of respondents describe digital transformation as either their company’s highest priority or a “relatively high” one, IT departments are mostly focused on fulfilling a legacy role such as managing
relationships with outsourced IT providers (cited by 32% of respondents), maintaining and integrating legacy IT systems (27%), or operating as a service provider to the business (26%).

Only 14% of respondents say that IT leads technology innovation within the company. Notably, IT executives are even less likely to say that it does (11%) than non-IT respondents (16%).

This need not be the case. Klas Bendrik, CIO at automobile manufacturer Volvo Cars, who sits on the company’s executive management team and reports directly to CEO Hakan Samuelsson, sees digital innovation as a core responsibility for his department. “As IT-related capabilities become more an everyday part of every interaction we have with connected drivers and connected cars, it’s only natural that IT should take an active leadership role,” he argues.

“Digitalisation is on everyone’s agenda, certainly, but IT has special skills to bring to the conversation. The traditional relationship of IT being an internal supplier to the business still exists, yes, but a new role is emerging rapidly, and that’s as a leader in wider conversations in the business about how we, as an organisation, combine the digital technologies available and the innovative ideas that we have to drive customer and product innovation.

“It’s a role I’m happy to take: we in IT must be helping the business to explore what’s possible,” he adds.

What is clear from the survey is that executives in other departments would be happy to see their colleagues from IT take a more active role in digital initiatives—and perhaps even lead them. When asked to compare their IT department’s current role in digital transformation with their ideal role, non-IT executives consistently reveal a desire for greater IT participation.

For example, only 6% of non-IT executives say the IT team takes a leadership role today in identifying opportunities to innovate, but 35% believe that ideally it should. Similarly, only 10% say IT leads their company’s efforts to improve organisational agility, but 35% believe it should (see charts 2 and 3).

This is not for want of ambition on the part of IT. When asked the same questions, IT executives have very similar views regarding their department’s current and ideal contribution to digital initiatives. And there is little question that an innovation-focused IT department is of value: 87% of respondents who report that their IT function is more focused on innovation than efficiency say their digital initiatives are effective, compared with 60% of those who say their IT department is more focused on efficiency.

The fact remains, however, that the modern CIO is already thinly stretched at many companies. “The CIO today has to be everything—from chief police officer in some cases to chief efficiency officer in others, as well as being a digital evangelist,”
What role does your organisation’s IT department currently play in the following organisational capabilities? (% who respond ‘leadership role’)

<table>
<thead>
<tr>
<th>Capability</th>
<th>Non-IT Executives</th>
<th>IT Executives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding and responding quickly to customer needs</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>Selecting, implementing and integrating digital technology</td>
<td>14%</td>
<td>17%</td>
</tr>
<tr>
<td>Managing business model change</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Improving our organisational agility</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Identifying opportunities to innovate</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Ensuring that employees have the right skills and mindset to use digital technology</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Enabling real-time business</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: The Economist Intelligence Unit.

In an ideal world, what role do you think your IT department should play in the following organisational capabilities? (% who respond ‘leadership role’)

<table>
<thead>
<tr>
<th>Capability</th>
<th>Non-IT Executives</th>
<th>IT Executives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding and responding quickly to customer needs</td>
<td>46%</td>
<td>42%</td>
</tr>
<tr>
<td>Selecting, implementing and integrating digital technology</td>
<td>36%</td>
<td>40%</td>
</tr>
<tr>
<td>Managing business model change</td>
<td>27%</td>
<td>30%</td>
</tr>
<tr>
<td>Improving our organisational agility</td>
<td>36%</td>
<td>43%</td>
</tr>
<tr>
<td>Identifying opportunities to innovate</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Ensuring that employees have the right skills and mindset to use digital technology</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Enabling real-time business</td>
<td>33%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: The Economist Intelligence Unit.
comments Anthony Roberts, CIO of Walgreens Boots Alliance, the world’s largest retail pharmacy chain.

“The CIO has an exceptionally broad role to play and has to be able to view that role through many lenses. No CIO can afford to focus only on digital and the digital consumer, because we need to be paying at least as much attention to how the organisation manages its data and keeps its promises regarding the information it holds on its customers.”

In fact, when asked about the contribution IT currently makes to the organisation’s digital strategy, maintaining information security comes out on top, cited by 62% of respondents. This is closely followed by data integration (58%), promoting digital culture (53%) and digital technology selection (51%).

The key question, then, is how IT can make the contribution to digital transformation that almost everyone wishes it would.
3 WHAT DOES IT NEED?

If the IT function is going to take the more active leadership role that business clearly wants it to play, executive teams need to think about how IT is resourced and how it operates in preparation for the next phase of digital transformation.

Right now, while respondents generally view improvements to the IT department as a necessity, few regard these as being particularly urgent. Nearly half (47%) say they are happy with their IT department’s current contribution to digital initiatives, while almost as many (45%) describe themselves as “indifferent”. At the same time, less than 1% say that no improvements at all are required.

Perhaps unsurprisingly, IT executives are more likely than not to be happy with their function’s performance (51% versus 43%), although, at the other end of the spectrum, they are equally likely to say they are as frustrated as their non-IT counterparts (7% respectively). Respondents from the public sector are least likely to be happy with their IT department’s current contribution to digital transformation (38%).

What would make the difference? IT and non-IT executives are remarkably in line on what changes would help the IT function make the ideal contribution to digital transformation (see chart 4). Collaboration is chief among these: 47% of IT executives,
and 40% of those from other functions, say that improving collaboration between IT and other departments would most help IT make the ideal contribution.

For Jessica Federer, head of digital development at Germany-based multinational pharmaceutical company Bayer, cross-functional collaboration is the crucial ingredient for digital success.

The company’s Digital Council consists of some ten people, she explains. She sits on this council, as does Bayer CIO Daniel Hartert, along with business executives from the company’s pharmaceutical, consumer care and crop-science divisions, Bayer’s head of data privacy and various regional representatives.

“Everyone has to succeed together,” Ms Federer says. “If you look at the digital revolution, what’s so special about it isn’t how people use Twitter or the latest mobile phones, but how it enables new types of engagement. That’s something that affects everything we do as a company, across every line of business.

“But it would be impossible to support these new types of engagement without a strong CIO who serves as a partner to the rest of the business,” she continues. “Much of the heavy lifting in this transformation process, after all, is done by IT.”

It is a view shared by Geraldine Calpin, chief marketing officer at international hotel chain Hilton Worldwide. She works extremely closely with the company’s CIO Bill Murphy, she explains. “Bill and I make decisions jointly. A lot of the digital innovations we’re looking to introduce require significant capital, because we’re delivering to around 4,000 hotels across over 100 countries. So I’ll work with Bill on building the business case for new ideas, along with our partners in finance, for presentation to the company’s executive committee.

“What I believe I need—and get—from Bill and his team are firstly, to challenge business concepts a little; secondly, to provide the technical feasibility and strategy elements around business objectives; and thirdly, to develop a plan for delivery that he and his team can realistically deliver on.”

The next most common prescription for improving IT’s contribution to digital transformation is to devise and implement a transformation strategy, as identified by 44% of IT executives and 42% of those from other functions. Taken together, these findings suggest that a concerted effort to collaborate on a digital transformation strategy may be the single most important action that organisations can take to align their IT departments with business needs and achieve better outcomes from their digital investments.
4. THE JOURNEY AHEAD

The evolution of the IT department to meet the needs of digital transformation is well under way, the survey reveals, and is being noticed outside the IT function. The vast majority of non-IT executives (86%) believe that their IT department has made at least some changes to the way in which it has worked over the past three years in order to support digital initiatives. Almost half (45%) say the IT department has changed the way it works “completely” or “significantly”, while 40% report “limited” changes.

Still, IT executives recognise that there is more work to be done and report that they have already taken several steps to support their organisation’s digital ambitions further. More than one-quarter (28%) have created digital teams within their own departments, while more than one in five (21%) have recruited employees with digital skills and experience into their teams (see chart 5).

At the same time, fewer than one in five (18%) have so far adopted new platforms or applications to support digital technology, or embraced Agile software development (17%) or DevOps (15%).

Those who have yet to adopt new working practices such as these are missing some important opportunities to achieve the greater speed and agility that executives elsewhere in the business increasingly expect, according to Sahal Laher, CIO at US-based clothing retailer Brooks Brothers.

He is a great believer, he says, in a style of IT management that analysts at IT market research company Gartner term “bimodal IT”—the practice of managing two separate

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**Chart 5: Limited adoption of Agile software development and DevOps suggests a degree of inertia in adapting the IT operating model**

<table>
<thead>
<tr>
<th>Which of the following measures, if any, have you undertaken to support your organisation’s digital initiatives?</th>
<th>(% of IT executives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Created digital teams within the IT department</td>
<td>28%</td>
</tr>
<tr>
<td>Hired employees with digital skills and experience into the IT department</td>
<td>21%</td>
</tr>
<tr>
<td>Adopted new platforms/applications in order to support digital technology</td>
<td>18%</td>
</tr>
<tr>
<td>Adopted Agile software development</td>
<td>17%</td>
</tr>
<tr>
<td>Adapted DevOps</td>
<td>15%</td>
</tr>
<tr>
<td>None of the above</td>
<td>1%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: The Economist Intelligence Unit.
but coherent modes of IT delivery: one focused on stability (keeping legacy systems moving forward) and the other on agility (developing and releasing new applications and services). “I think bimodal IT really is the way forward for all organisations that want to stay on top of their game and succeed in this era of high and constantly evolving customer expectations,” Mr Laher says.

“If, as a CIO, you continue to operate in the way that you always have, which is spending the majority of resources on ‘keeping the lights on’ and delivering projects over long, drawn-out timelines, with one big release every year or even every six months, your organisation is going to fall behind.”

For that reason, he argues, while a sequential “waterfall” approach to delivering IT projects may work for the slower mode in bimodal IT, the faster mode simply must adopt Agile approaches to software development and project delivery.

At Bayer, however, Mr Hartert is unconvinced by the concept. “Take digital farming, for example, an area that we’re really active in. When you want to build a solution that creates real value for farmers, you have to be very innovative. You have to build stuff that no-one’s ever built before, and for that you need to have an integrated team of IT and business people who have the freedom to experiment and test out pilots.

“But if you then figure out that a particular solution they’ve created has real potential, and you want to put it into production, then you’re talking about processing and storing huge amounts of data on behalf of a customer base that will expect it to be available 24/7, 365 days a year. It makes more sense to me to have people involved from the very start of an idea who understand the IT infrastructure that will be needed and how it should be managed.”

This suggests a more DevOps approach, in which developers (the dev in DevOps) and IT operations staff (the ops) work closely together, often in small groups which focus on specific, project-oriented goals. Together, team members share their skills and experiences to overcome the bottlenecks that frequently delay software releases, when a new application or service becomes subject to a series of elaborate hand-offs between the two camps.

These new methodologies, which have emerged from web environments to allow for the greatest agility in digital development, are by no means quick or easy to adopt. But the limited adoption among respondents suggests a degree of inertia that few companies have the time to indulge in, given the mounting pressure to digitise.
5. CONCLUSION

It is clear that despite a lack of clarity over leadership, and in the absence in most cases of a company-wide digital transformation strategy, companies are already seeing promising results. But there is no room for complacency—and certainly not on the part of the CIO.

In the CIO’s favour, executives tend to perceive their IT department as being reasonably balanced across key organisational trade-offs, with less than 15% characterising IT as being at the extreme end of either innovation or efficiency; integration or isolation; fast movement or slow movement; business-mindedness or technology orientation; partnership or service provision; and eagerness or reluctance to participate in digital initiatives.

But it is clear that they want more from that function, and in order to take more of a leadership role in the next phase of digital transformation, CIOs will need to take closer note of what executive teams are telling them about their needs and goals and, in many cases, embrace a more proactive role in helping digital ambitions to flourish and take wing.

Some will need to change their approaches entirely, says David Rogers, a faculty member at Columbia Business School in New York and author of The Digital Transformation Playbook: Rethink Your Business for the Digital Age.

“Digital transformation puts a tremendous pressure on the role of the CIO to change, and I think many of them are still hashing this out, figuring out where this movement takes them,” he says. “But it’s clear that any separation between IT and the strategic goals of growth and revenue isn’t sustainable. Businesses need technology leaders who can help define how technology might be used to define the strategy for the business and uncover big opportunities.”

There’s absolutely no reason why “born-digital” start-up companies should have to supplant established ones, he says. Nor should new entrants be the only “engines of innovation”. But at a time when many of the constraints of the pre-digital era have vanished, established companies will need to think more like those start-ups if they want to get ahead—and stay there.
APPENDIX

Which of the following best describes your organisation’s digital initiatives? It has...?
(% of respondents)

- Defined and implemented an organisation-wide digital transformation strategy: 21
- Defined but not yet implemented an organisation-wide digital transformation strategy: 21
- Individual departments have defined and/or implemented their own digital transformation strategies: 23
- There are a large number of digital initiatives across the organisation, but no digital transformation strategy: 22
- There are a limited number of digital initiatives across the organisation: 10
- We have no digital initiatives: 0
- Don’t know: 0

Which of the following initiatives has your organisation undertaken in the last three years?
Select all that apply.
(% of respondents)

- Promoted digital collaboration among employees: 60
- Prioritised digital marketing over traditional forms: 50
- Launched new customer-facing digital channels, e.g. mobile apps, portals: 58
- Established a digital centre of excellence: 57
- Appointed a chief digital officer: 37
- Launched new products or services made possible by digital technology: 59
- Applied digital technology to improve internal operations: 45
- Other (please specify): 0

Which of the following technologies has your organisation invested in as part of its digital initiatives in the past year? Select all that apply.
(% of respondents)

- Mobile technology: 79
- Social media: 67
- Big data analytics: 57
- Cloud computing: 52
- Internet of things: 58
- Other (please specify): 0
- None of the above: 0
- Don’t know: 0
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Which of the following are the primary objectives of your organisation’s digital initiatives?
Select up to two.
(% of respondents)

- Improving the way our employees work and collaborate using digital tools: 30
- Improving the way our organisation uses data and information: 39
- Improving the experience we offer customers and partners: 36
- Improving our products and services using digital technology: 39
- Transforming our business model: 22
- Transforming our operating model: 31
- Don’t know: 0

How do your organisation’s digital initiatives rank compared to its other strategic objectives?
(% of respondents)

- Highest strategic priority: 28
- Relatively high strategic priority: 45
- Relatively low strategic priority: 24
- Not a strategic priority: 3
- Don’t know: 0

Which C-level executive in your organisation takes primary ownership of its digital initiatives?
(% of respondents)

- The CEO: 20
- The chief marketing officer or equivalent: 5
- The chief operations officer or equivalent: 13
- The chief information officer or equivalent: 37
- The chief strategy officer or equivalent: 2
- The chief digital officer or equivalent: 7
- Other (please specify): 5
- Our digital initiatives are not led by a single C-level executive: 16
- We do not have any digital initiatives: 0
- Don’t know: 0
Which of the following best describes the way in which digital initiatives are managed in your organisation? They are mostly…

(\% of respondents)

- Led by a dedicated digital team/department with specialist skills: 24
- Led by the IT department: 22
- Led by individual departments separately, with support from a dedicated digital team: 17
- Led by individual departments separately, with support from the IT department: 8
- Led by individual departments separately, with support from one or more external suppliers: 29
- Led by individual departments separately, without additional support: 1

How would you describe the effectiveness of your organisation’s digital initiatives in the past three years? (\% of respondents)

- Highly effective: 25
- Somewhat effective: 45
- Neither effective or ineffective: 19
- Somewhat ineffective: 10
- Highly ineffective: 1
- Don’t know: 0

Which of the following capabilities are most important to the success of your organisation’s current digital initiatives? Please select up to two. (\% of respondents)

- Identifying new business opportunities to innovate using digital technology: 28
- Improving our organisational agility: 38
- Understanding and responding quickly to customer needs: 34
- Selecting, implementing and integrating digital technology: 31
- Ensuring that employees have the right skills and mindset to use digital technology: 28
- Enabling real-time business: 20
- Managing business model change: 20
- None of the above: 1
- Don’t know: 0
Which of the following best describes the primary role of the IT department in your organisation? (% of respondents)

<table>
<thead>
<tr>
<th>Role</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining and integrating legacy IT systems</td>
<td>27</td>
</tr>
<tr>
<td>Managing relationships with outsourced IT providers</td>
<td>32</td>
</tr>
<tr>
<td>Operating as a service provider to the business</td>
<td>26</td>
</tr>
<tr>
<td>Leading technology innovation within the company</td>
<td>14</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0</td>
</tr>
</tbody>
</table>

What role does your organisation’s IT department currently play in the following organisational capabilities? Select one for each. (% of respondents)

<table>
<thead>
<tr>
<th>Capability</th>
<th>Leadership Role</th>
<th>Active but Supporting Role</th>
<th>Passive Supporting Role</th>
<th>No Role at All</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying opportunities to innovate</td>
<td>7</td>
<td>35</td>
<td>46</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Improving our organisational agility</td>
<td>11</td>
<td>58</td>
<td>26</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Understanding and responding quickly to customer needs</td>
<td>15</td>
<td>51</td>
<td>30</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Selecting, implementing and integrating digital technology</td>
<td>13</td>
<td>45</td>
<td>38</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ensuring that employees have the right skills and mindset to use digital technology</td>
<td>13</td>
<td>34</td>
<td>42</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Enabling real-time business</td>
<td>10</td>
<td>34</td>
<td>42</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Managing business model change</td>
<td>7</td>
<td>35</td>
<td>38</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

In an ideal world, what role do you think your IT department should play in the following organisational capabilities? Select one for each. (% of respondents)

<table>
<thead>
<tr>
<th>Capability</th>
<th>Leadership Role</th>
<th>Active but Supporting Role</th>
<th>Passive Supporting Role</th>
<th>No Role at All</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying opportunities to innovate</td>
<td>35</td>
<td>30</td>
<td>29</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Improving our organisational agility</td>
<td>39</td>
<td>44</td>
<td>13</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Understanding and responding quickly to customer needs</td>
<td>38</td>
<td>42</td>
<td>17</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Selecting, implementing and integrating digital technology</td>
<td>15</td>
<td>43</td>
<td>19</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ensuring that employees have the right skills and mindset to use digital technology</td>
<td>15</td>
<td>43</td>
<td>19</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Enabling real-time business</td>
<td>28</td>
<td>31</td>
<td>31</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Managing business model change</td>
<td>28</td>
<td>26</td>
<td>30</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>
Which of the following does the IT department at your organisation currently contribute to its digital initiatives? Select all that apply. (% of respondents)

- Maintaining information security: 62%
- Using data analysis to inform decisions: 49%
- Data integration: 58%
- Digital technology selection: 51%
- Digital skills training: 43%
- Digital strategy leadership: 40%
- Change management relating to digital technology: 46%
- Promoting digital culture: 53%
- Don’t know: 1%

Which of the following would the IT department at your organisation ideally contribute to its digital initiatives? Select all that apply. (% of respondents)

- Maintaining information security: 67%
- Using data analysis to inform decisions: 60%
- Data integration: 63%
- Digital technology selection: 54%
- Digital skills training: 48%
- Digital strategy leadership: 45%
- Change management relating to digital technology: 51%
- Promoting digital culture: 57%
- Don’t know: 1%
Which of the following would most help the IT department make the ideal contribution to your company’s digital initiatives? Select up to two. (% of respondents)

- Hiring more digitally savvy employees within the IT department: 32%
- Increasing the IT budget: 28%
- Improving collaboration between IT and other departments: 43%
- Outsourcing legacy IT infrastructure: 24%
- Appointing a CIO/IT director with more digital experience: 22%
- Devising and implementing a digital transformation strategy: 43%
- Other (please specify): 0%
- No improvements are required: 1%
- Don’t know: 1%

Which of the following best describes your feelings about the contribution your organisation’s IT department currently makes to digital initiatives? (% of respondents)

- I am frustrated: 7%
- I am indifferent: 45%
- I am happy: 47%
- Don’t know: 1%

Please rate your organisation’s current IT department according to the following criteria: (% of respondents)

- Focused on innovation
- Integrated with the business
- Business-minded
- Business partner
- Fast moving
- Eager to participate in digital initiatives
- Focused on efficiency
- Operates as a silo
- Technology-minded
- Service provider
- Slow moving
- Reluctant to participate in digital initiatives
To what extent do you believe your organisation’s IT department has changed the way it works in response in order to support digital initiatives in the past three years? (% of respondents)

- It has completely changed the way it operates
  - 10
- It has significantly changed the way it operates
  - 36
- It has made limited changes to the way it operates
  - 40
- It has made no changes to the way it operates
  - 13
- Don’t know
  - 0

Which of the following measures, if any, have you undertaken to support your organisation’s digital initiatives? (% of respondents)

- Adopted Agile software development
  - 17
- Adopted DevOps
  - 15
- Created digital teams within the IT department
  - 28
- Hired employees with digital skills and experience into the IT department
  - 21
- Adopted new platforms/applications in order to support digital technology
  - 18
- Other (please specify)
  - 0
- None of the above
  - 1

To what extent do you agree or disagree with each of the following statements? Select one for each statement. (% of respondents)

- Collaboration between IT and non-IT management will provide the greatest opportunity for success in digital business initiatives
  - Strongly disagree 9 26 43 19
- The IT department is the natural leader of digital initiatives
  - Strongly disagree 6 23 26 28 16
- IT needs to increase its focus on innovation in order to drive our digital initiatives
  - 13 36 29 17
- Enabling real-time business should be one of the IT department’s highest priorities
  - Strongly disagree 5 23 35 23 15
- The historical requirement for the IT department to operate as a service provider prevents it from leading digital initiatives
  - Strongly disagree 3 10 41 24 9
In which of the following geographies are you located?

<table>
<thead>
<tr>
<th>Geography</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe (both Eastern and Western)</td>
<td>21%</td>
</tr>
<tr>
<td>Latin America</td>
<td>20%</td>
</tr>
<tr>
<td>Asia-Pacific (excluding China)</td>
<td>21%</td>
</tr>
<tr>
<td>Germany</td>
<td>12%</td>
</tr>
<tr>
<td>China</td>
<td>13%</td>
</tr>
<tr>
<td>US</td>
<td>12%</td>
</tr>
</tbody>
</table>

What are your organisation’s global annual revenues? If public sector/government, please reply with respect to your organisation’s annual budget.

<table>
<thead>
<tr>
<th>Revenue Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$250 million - $500 million</td>
<td>25%</td>
</tr>
<tr>
<td>$500 million - $1 billion</td>
<td>25%</td>
</tr>
<tr>
<td>$1 billion – 10 billion</td>
<td>25%</td>
</tr>
<tr>
<td>Over $10 billion</td>
<td>25%</td>
</tr>
</tbody>
</table>

Which of the following is closest to your job seniority?

<table>
<thead>
<tr>
<th>Seniority</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-level</td>
<td>49%</td>
</tr>
<tr>
<td>SVP/VP/Director</td>
<td>50%</td>
</tr>
</tbody>
</table>
What is your primary industry?
(\% of respondents)

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>49</td>
</tr>
<tr>
<td>Customer service</td>
<td>1</td>
</tr>
<tr>
<td>Finance</td>
<td>9</td>
</tr>
<tr>
<td>General management</td>
<td>4</td>
</tr>
<tr>
<td>Human resources</td>
<td>8</td>
</tr>
<tr>
<td>Research and information</td>
<td>2</td>
</tr>
<tr>
<td>Legal</td>
<td>1</td>
</tr>
<tr>
<td>Marketing</td>
<td>9</td>
</tr>
<tr>
<td>Operations and production</td>
<td>9</td>
</tr>
<tr>
<td>Procurement</td>
<td>1</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>1</td>
</tr>
<tr>
<td>Sales</td>
<td>2</td>
</tr>
<tr>
<td>Strategy &amp; business development</td>
<td>4</td>
</tr>
</tbody>
</table>

What is your primary industry?
(\% of respondents)

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial services (including banking, insurance)</td>
<td>13</td>
</tr>
<tr>
<td>Retail</td>
<td>13</td>
</tr>
<tr>
<td>Consumer products</td>
<td>13</td>
</tr>
<tr>
<td>Public sector/government</td>
<td>13</td>
</tr>
<tr>
<td>Healthcare</td>
<td>12</td>
</tr>
<tr>
<td>High Tech/Technology/Software</td>
<td>12</td>
</tr>
<tr>
<td>Energy &amp; natural resources (including electric, gas, water utility companies)</td>
<td>13</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>13</td>
</tr>
</tbody>
</table>
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