The journey to government's digital transformation



A Deloitte Digital global survey



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Introduction

N the coming decade, several factors—an aging population, the rise of Millennials, budget shortfalls, and ballooning entitlement spending—could reshape the way government delivers services. But the introduction of new digital technologies is likely to be the most important factor of all. Indeed, govern-

ments from Toronto to Seoul are in the midst of a historic (and frequently wrenching) transformation as they abandon analog operating models in favor of digital systems.

Truly transforming government through the power of digital technologies will be a journey. We surveyed more than 1,200 government officials from Truly transforming government through the power of digital technologies will be a journey.

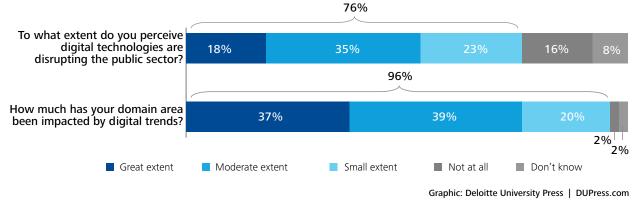
major impact on government: Three-fourths of the respondents told us that digital technologies are disrupting the public sector; nearly all (96 percent) characterized the impact on their domain as significant (figure 1).

Another key finding of the global survey that stands out is that governments are at very

different stages in this journey. While a small percentage are what we consider "maturing," the overwhelming majority are still in the early or developing stages of the digitaltransformation journey (sidebar). In fact, when asked about their organization's digital capabilities, only about 30 percent assessed their digital capabili-

over 70 countries on digital transformation and interviewed another 140 government leaders and outside experts.* Overwhelmingly, they reported that digital technologies are having a

ties as ahead of their public sector peers; nearly 70 percent said they lagged behind the private sector (figure 4).



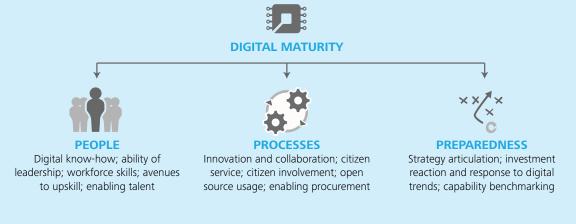
*More than half of the survey questions were sourced from the 2015 <u>MIT Sloan Management Review</u> and Deloitte digital business study. For more details, please refer to the appendix.

Figure 1. Impact of digital

DIGITAL MATURITY MODEL EXPLAINED

Digital maturity refers to the extent to which digital technologies have transformed an organization's processes, talent engagement, and citizen service models. We estimated the level of maturity based on responses to survey questions that broadly fell under three categories—people, processes, and preparedness (figure 2).

Figure 2. Maturity framework



Graphic: Deloitte University Press | DUPress.com

Based on our digital maturity estimation framework (described in the appendix), we classified respondent organizations into three categories: "early," "developing," and "maturing" (figure 3). The distribution of digital maturity among government agencies remains more or less similar across geographical regions.¹ We have been careful to refer to governments as "digitally maturing" rather than "digitally mature" because we are still at the early stages of the journey to digital transformation and no governments have yet to reach the end state.

Figure 3. Global digital maturity distribution

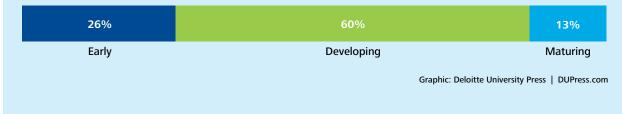
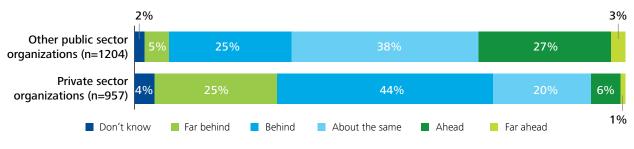


Figure 4. How do you think your organization's digital capabilities compare to:



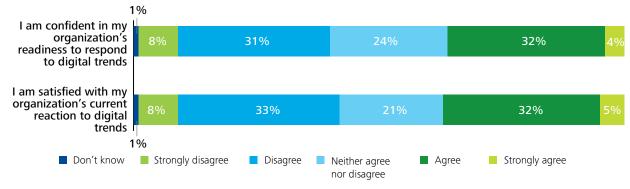


Figure 5. Response to digital trends

Graphic: Deloitte University Press | DUPress.com

Moreover, respondents reported low overall satisfaction with their organization's current reaction to digital trends and confidence in its readiness to respond to digital trends (figure 5). Even in the countries with the highest percentage of satisfied respondents— New Zealand, Ireland, and Belgium—only about half the respondents said their organization's response to digital trends could be considered satisfactory.

Another interesting finding concerns what's actually driving digital transformation in government. Cost and budget pressures and citizen demands are far and away the two primary drivers, accounting for 75 percent of responses, whereas government directives drive only 14 percent of agencies. These results, however, differ vastly across countries. At one end is the United Kingdom, where cost and budget pressures drive 56 percent of public sector organizations; at the other end is Canada, where 64 percent of government bodies cite citizen demands as the primary driver of digital transformation.

In the sections that follow, we explore findings related to the characteristics of public sector organizations at the forefront of using digital technologies to transform the way they function. We then look at the primary barriers to digital transformation. Finally, we lay out a set of strategies that government leaders can employ to successfully navigate the digital transformation journey.

Characteristics of a digitally maturing government

HAT separates digital leaders from the V rest is a clear digital strategy combined with a culture and leadership poised to drive the transformation. This should not be surprising given that the history of technological advancement is strewn with examples of organizations focusing on technologies without investing in organizational capabilities that ensure their impact. Governments have been particularly prone to this trap. Case in point: Early efforts to put computers in schools failed to result in performance improvements because they weren't accompanied by fundamental changes in teaching methods that suited the technology. The failed implementation of enterprise resources in many governments is another classic example of expectations falling short due to a failure to change processes or build cultures that fostered change.

FACTORS THAT INFLUENCE DIGITAL TRANSFORMATION

In addition to the survey, we conducted more than 140 interviews with public sector leaders involved in digital transformation. From the interviews emerged five factors shaping digital transformation: **strategy**, **leadership**, **workforce skills**, **digital culture**, and **user focus** (table 1). We examined how organizations at each level of maturity behave with respect to these five factors.

Digitally maturing organizations have a clear strategy aimed at fundamental transformation

An organization's digital maturity is influenced, to a great degree, by its digital strategy.

	Early	Developing	Maturing
Strategy	Aimed at cost reduction	Aimed at improving customer experience and decision making	Aimed at fundamental transformation of processes
Leadership	Lacks awareness and skills	Digitally aware	Digitally sophisticated
Workforce development	Insufficient investment	Moderate investment	Adequate investment
User focus	Absent	Gaining traction	"Central" to digital transformation
Culture	Risk averse; disintegrated	Risk tolerant; accommodates innovation and collaboration	Risk receptive; fosters innovation and collaboration

Table 1. Characteristics of a digitally maturing organization

Among respondents from government agencies at the early stages of maturity, only 14 percent say that their organizations have a clear and coherent digital strategy (figure 6). In case of more digitally mature organizations, the number grows sixfold, to 86 percent.

"Lack of strategy" is the leading barrier impeding early-stage organizations from taking full advantage of digital trends. However, it does not appear among the top five barriers for digitally maturing agencies (table 2). As early-stage organizations mature, lack of strategy falls away and barriers become much more about portfolio management, funding, and handling cyber security.

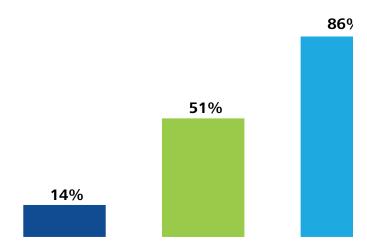
Maturing organizations have a digital strategy aimed at fundamental transformation

The potential impact of a digital strategy is largely determined by its intent and reach. Rajendra Kumar, joint secretary at India's Department of Electronics and Information Technology, says about the agency's key initiative: "The goal of the Digital India strategy is to transform the governance of the entire country through digital interventions. The idea is that every domain of government should be able to deploy and use digital technologies in a manner that can increase the service-level standards, improve interactions with citizens, and raise efficiency."²

In contrast to such ambitions, our research found that digital strategies at early-stage

Figure 6. Strategy by maturity

Organization has a clear and coherent digital strategy (% a



organizations have more of an operational focus, such as increasing efficiency. Only about a third cite transforming their business model as an objective.

Digital technologies play a role in helping maturing organizations achieve strategic goals. Nearly 81 percent of respondents say that their agency's digital strategies drive transformation of business processes. "Transformation means more than fixing websites. It goes deeper than that, right into the organizations behind the websites," explains Mike Bracken, former chief digital and chief data officer for the UK government. "There's a logic to it: Digital service design means designing the whole service, not just the digital bits. If you're redesigning a service, you need to think about the organization that runs it."³

Early	Developing	Maturing		
Lack of overall strategy	Too many competing priorities	Too many competing priorities		
Lack of understanding	Insufficient funding	Insufficient funding		
Lack of entrepreneurial spirit, willingness to take risks	Security concerns	Security concerns		
Too many competing priorities	Lack of organizational agility	Insufficient technical skills		
Lack of organizational agility	Lack of an overall stratetgy	Lack of organizational agility		

Table 2. Top barriers by maturity

Table 3. Objectives of strategy by maturity

	Early	Developing	Maturing
Increase efficiency	64 percent	88 percent	95 percent
Improve customer/citizen experience and engagement, and transparency	55 percent	89 percent	94 percent
Create or access valuable information or insights for innovation	33 percent	68 percent	85 percent
Create or access valuable information or insights to improve decision making	42 percent	76 percent	83 percent
Fundamentally transform our organization processes and/ or organization model	34 percent	66 percent	81 percent

The importance that organizations place on using digital technology to improve innovation and decision making also varies by digital maturity level. Approximately 40 percent of respondents from early-stage agencies say that their digital strategy aims to boost innovation and improve decision making. In digitally maturing organizations, the number more than doubles to 85 percent (table 3).

It is surprising to note that across domains, defense has the lowest percentage of respondents (46 percent) who list "fundamentally transforming their organization processes or models" as a goal for their digital strategies.

Similarly, public sector executives increasingly expect HR functions to adapt and embrace digital solutions to tackle workforcemanagement challenges. But only 40 percent of respondents from the HR function report fundamental transformation of processes as a strategic objective. Furthermore, less than 30 percent cite innovation as an objective of their digital strategy. These ratios are the lowest across all functions surveyed—a real concern, considering the difficulties governments currently face in acquiring needed digital skills for their workforce.

Digitally savvy leadership is a game changer

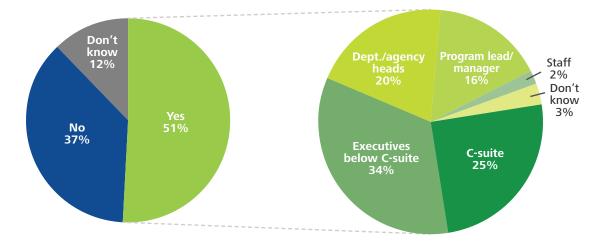
The exponential changes that drive digital transformation challenge the established models of leadership and governance. Before the ascent of digital technologies, new projects could be assessed through exhaustive analysis, investment decisions could be based on cost-benefit guidance, and the end destination of most plans was a fixed point. In the new digital era, leaders are required to make decisions more quickly in the face of a constant evolution in the art of the possible. In this challenging environment, just 38 percent of survey respondents believe their leadership has sufficient skills for digitally transforming public services.

For public sector agencies across the globe, the hierarchies and governance structures are often more pronounced than in the private sector. More than half of the respondents say a single person or group leads their organization's digital agenda. Nearly 80 percent of these leaders are heads of various departments or agencies in governments, C-suite equivalents, or executives just below the C-suite level (figure 7).

Figure 7. Digital agenda is led from the top

Does any single person or group have the responsibility to oversee/manage your organization's digital strategy?

What is the highest level/rank of individuals whose job it is to oversee/manage your organization's digital strategy?



Graphic: Deloitte University Press | DUPress.com

Employees in digitally maturing organizations are more confident in their leaders' ability to navigate the digital game. More than 85 percent of respondents from these agencies say their leaders have sufficient skills to lead the digital strategy; nearly 96 percent say their leaders understand digital trends and technologies. By contrast, only a small fraction of respondents from early-stage organizations have the same level of confidence: Just 4 percent think their leaders possess sufficient skills, and 7 percent say their leaders possess sufficient understanding of digital technologies (table 4). This was a recurring theme in our interviews with government executives: Organizations at higher levels of maturity invariably have leaders with the skills and understanding to navigate the digital transformation process.

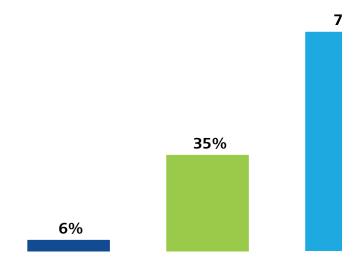
More than 70 percent of respondents from the information, communication, and technology (ICT) domain, and more than 65 percent from the finance and revenue department, say their leadership has sufficient skills to lead their organization's digital strategy. Compare this with the defense domain, where more than half the respondents express little confidence in their leadership's understanding of digital trends and technologies. An overwhelming majority of respondents from the health care (89 percent), environmental (88 percent), economic development (86 percent), and law and justice (85 percent) departments also identify leadership as a challenging area with regard to the agency's digital transition.

Table 4. Leadership	capabilities	by maturity
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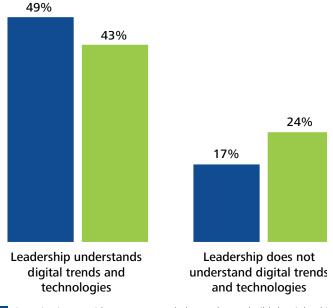
	Early	Developing	Maturing
Confident about leadership's understanding of digital trends and emerging technologies	7 percent	60 percent	96 percent
Leadership has sufficient skills to lead organization's digital strategy	4 percent	42 percent	86 percent

Figure 8. Investment in workforce

Organization provides resources or opportunities to obta right skills to take advantage of digital trends (% agree)







Organization provides resources to help employees build the right ski

Employees have sufficient skills to execute digital strategy

Digitally maturing organizations build skills to realize their digital strategy

Maturing digital organizations invest in bridging skill gaps. More than 77 percent of these respondents report that their agency provides the resources or opportunities to build the necessary skills to benefit from digital trends. Among less mature organizations, the number drops to just 6 percent (figure 8).

The presence or absence of a digitally savvy leadership plays a big role in whether the organization takes steps to upskill its workforce. Leaders who understand digital trends and technologies are almost three times more likely to provide organizational support to their workforce to help them build digital skills, compared to those who lack that understanding. Further, 43 percent of respondents who say their leaders understand digital trends and technologies believe that their agency's employees have sufficient skills to execute the digital strategy. Among organizations that lack confidence in their leaders' understanding of digital trends, this figure falls to just 24 percent (figure 9).

Early-stage organizations lack an understanding of digital trends

When asked what is impeding their organization from taking advantage of digital trends, nearly a third of early-stage leaders point to "lack of understanding." Less digitally mature agencies, in particular, lag when it comes to the ability to conceptualize how digital technologies can impact the business. Nearly 51 percent of respondents from these organizations rank this among the top three skills that need bolstering.

Digitally maturing organizations have greater user focus

A variety of factors may guide a public sector organization's digital transformation journey, but it's clear that citizen needs become more prominent as an agency moves up the maturity curve. Indeed, maturing organizations are nearly twice as likely as early-stage organizations to be driven by customers/citizens' demand for digital transformation (figure 10).

A laser focus on using digital technologies to improve the citizen experience helps maturing organizations improve service delivery. Respondents from all maturing organizations almost unanimously report that digital technologies and capabilities enable their employees to work better with customers or citizens; in early-stage agencies, only a little over half the respondents say so. Additionally, 94 percent of maturing organizations have a digital strategy aimed at improving customer/citizen experience and engagement, compared to only 55 percent of early-stage organizations. This clearly separates the leaders from the laggards; agencies moving ahead on the maturity curve have the "citizen" at front and center in their digital strategy. Not surprisingly, maturing agencies also say overwhelmingly that digital trends are improving their citizen/customer service quality (figure 11).

Digitally maturing organizations challenge cultural norms

Digitally maturing government organizations are characterized by a culture that favors digital transformation: They nurture innovation, foster collaborative work environments, and maintain a positive attitude toward risktaking. And innovation and collaboration are not always a product of digital technologiesthey can also be fostered through digitally friendly project-management methods such as Agile. Gavin Till, CIO of the Christchurch City Council (New Zealand), explains, "Our collaboration is really more through adopting the Agile Scrum methodology, which requires a lot more interactions and collaboration as you go along and develop services. We haven't utilized any technology to help collaboration, it comes from the virtue of Agile Scrum methodology."4

Taking risk is becoming a cultural norm for digitally maturing organizations

Digitally maturing public sector organizations are more adept at taking risks—more

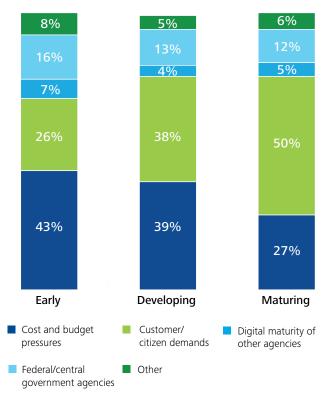
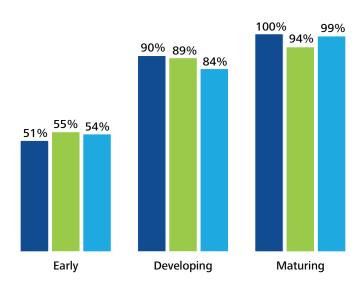


Figure 10. Drivers of digital transformation by maturity

Graphic: Deloitte University Press | DUPress.com

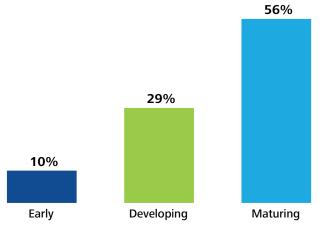
Figure 11. Digital and customer/citizen service



- Digital technologies and capabilities enable employees at my organization to work better with customers/citizens
- Improving customer/citizen engagement/experience and transparency is an objective of organization's digital strategy
- Digital trends are improving customer/citizen service quality

Figure 12. Attitude to risk by maturity

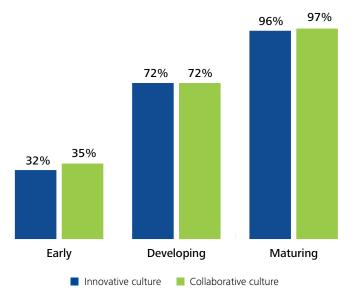
Has the transition to digital altered the organization's attitude to risk to make it more willing to experiment and adopt an agile, "fail fast, fail quickly" approach? (% yes)



Graphic: Deloitte University Press | DUPress.com

Figure 13. Culture and digital trends

Digital trends are improving my organization's innovative culture/collaborative culture (% agree)



Graphic: Deloitte University Press | DUPress.com

willing to experiment with agile, "fail fast, fail quickly" approaches. They are five times more likely than early-stage agencies to alter their attitude toward risk taking (figure 12).

Also, early-stage organizations cite a "lack of entrepreneurial spirit" and "willingness to take risks" among the most important barriers to taking advantage of digital trends.

Innovation and collaboration thrive in digitally maturing organizations

Digitally maturing agencies are better positioned to achieve the benefits of collaboration. Nearly all (98 percent) maturing organizations say that digital technologies and capabilities facilitate employees working better with each other.

Maturing agencies do see a big shift in their innovative and collaborative culture due to digital trends: They are nearly three times as likely as early-stage organizations to report an improvement in their innovative and collaborative culture owing to digital trends (figure 13). A senior public sector IT executive from Australia believes that digital transformation is about attitude and user experience rather than the tools involved. As he says, "In digital transformation, there's a lot more about business processes and user experiences and attitudes and things like that than there is around the tools involved. All the tools in the world won't make you do these if you're not thinking in that mindset."5

We analyzed the performance of the primary domains of the public sector across these five factors
influencing maturity. The results are summarized below:

	Strategy	Leade	ership	Workforce		User focus		Digital culture			
Domains	Clear & coher- ent digital strategy	Leadership's understand- ing of digital trends	Leadership's skills to lead digital strategy	Investment in workforce skills	Workforce skills to ex- ecute digital strategy	Customer/citi- zen demands as driver of digital trans- formation	Objective of strategy to improve customer/ citizen experience & engagement, and transparency	Co-creation of digital services	More willing to experiment and adopt an agile, fail fast, fail quickly approach to risk	Digital improving innovative culture	Digital improving collaborative culture
Central agency	•	•	•	•	•	•	•	•	•	•	•
Defense	•	•	•	•	•	•	•	•	•	•	•
Economic development	•	•	•	•	•	•	•	•	•	•	•
Education	•	•	•	•	•	•	•	•	•	•	•
Energy	•	•	•	•	•	•	•	•	•	•	•
Environment	•	•	•	•	•	•	•	•	•	•	•
Finance & revenue	•	•	•	•	•	•	•	•	•	•	•
Health care	•	•	•	•	•	•	•	•	•	•	•
Higher education	•	•	•	•	•	•	•	•	•	•	•
ICT	•	•	•	•	•	•	•	•	•	•	•
International affairs	•	•	•	•	•	•	•	•	•	•	•
Law and justice	•	•	•	•	•	•	•	•	•	•	•
Social services	•	•	•	•	•	•	•	•	•	•	•
Transportation	•	•	•	•	•	•	•	•	•	•	•
	Above average Below average co					NOTE: Classifications in the table are based on the ratio of respondents who answered corresponding questions positively. Ratios higher than global average were classified as "above average" and those lower than global average were classified as "below average."					

While our survey did not capture primary data on why some domains perform better than others, we've made some inferences based upon our experiences working with and within the public sector:

Digital culture is weaker in the defense, energy, and law and justice sectors. These are all sectors that focus on critical public services where there is low tolerance for error, and where small operational errors can have damaging long-term impact. Our survey found that they are less willing to experiment and slower to innovate and collaborate using digital technologies, which could be because they have fostered risk-averse cultures that make innovation and experimentation harder to achieve.

Workforce digital maturity is weak in some of the sectors that deliver professional services, particularly higher education, health care, and social services. These are sectors where frontline service delivery relies on trained professionals using their judgment and operating with a level of independence. Our survey found that they are slower to invest in workforce skills to execute digital strategy, which could be because these sectors traditionally place a high value on professional judgment, subject-matter knowledge, and interpersonal skills rather than organizational, digital, or transformation skills.

Levels of user focus are higher across sectors where the public service itself is about delivering knowledge services to citizens/customers—in particular, information technology, education, and higher education. This is hardly surprising—these users are most likely to have evolving and changing demands, making user-centricity a critical capability of organizations in these sectors.

Barriers and challenges to digital transformation

OUR survey asked respondents to identify the main barriers to digital transformation. The results show two barriers standing out, with nearly 40 percent of respondents citing them as the most significant: insufficient funding and too many competing priorities (figure 14).

Many public bodies struggle to fund core citizen services, let alone investments in digital initiatives—even though digital transformation is widely recognized as a route to substantial cost savings. While 82 percent of organizations perceive digital technologies as an opportunity, only 44 percent managed to increase investment in those initiatives over the last fiscal year (figure 15). Leaders trying to drive change always face competing priorities—in particular, many struggle to find a balance between transformation and "keeping the lights on." Public bodies that successfully navigate their goals tend to have coherent, realistic strategies and wellunderstood business cases.

Apart from inadequate funding and too many competing priorities, maturing organizations report security as a major barrier. For early-stage agencies, the absence of an overall strategy—coupled with a lack of understanding of digital trends—is a key barrier.

We asked survey respondents to rank the areas of digital transition that they deemed the most challenging to manage. Overall,

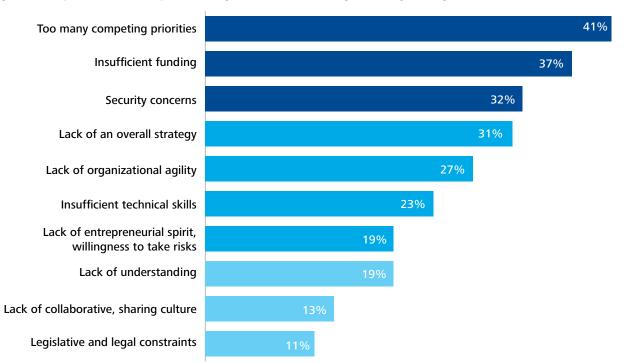
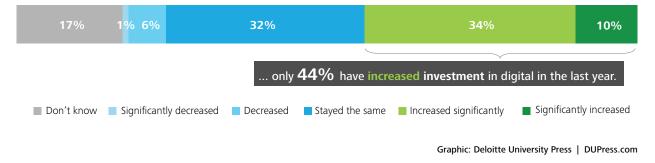


Figure 14. Top barriers that impede the organization from taking advantage of digital trends

Figure 15. Opportunity versus investment

My organization views digital technologies as an opportunity. **82%** see digital as an opportunity. Yet ... **3% 4% 9% 46% 36% 1%** Don't know Strongly disagree Disagree Neither disagree nor disagree Agree Strongly agree

How has your organization's investment in digital initiatives changed this fiscal year compared to last fiscal year?



Workforce/skills 7% 8% 28% 43% 19% Culture 34% 25% 27% Leadership 15% 32% 19% 30% Procurement 17% 7% 15% 30% 31% Highly challenging Don't know Not challenging Somewhat challenging Challenging

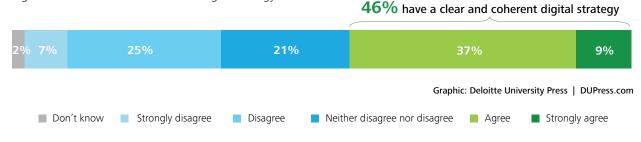
Figure 16. Degree of challenge posed (by area)

Graphic: Deloitte University Press | DUPress.com

workforce skills are the most challenging dimension of digital change. While culture comes second, responses are weighted toward culture being a particularly difficult area of change (figure 16). So while 34 percent of respondents say that changing culture toward digital transformation was challenging, 27 percent of those characterize it as *highly* challenging. In other words, respondents recognize the level of change needed to ensure a digitally savvy workforce, but they understand that changing culture is a uniquely difficult task.

Figure 17. Presence of a clear and coherent digital strategy

Organization has a clear and coherent digital strategy



Most government organizations lack the strategy to achieve digital transformation

Our survey of public sector leaders finds that:

- Only 46 percent of public sector agencies have a clear and coherent digital strategy (figure 17).
- 71 percent of organizations with a clear and coherent digital strategy report that digital trends are improving their agency's ability to respond to opportunities and threats, against just 45 percent of organizations without a digital strategy.

While strategy forms the bedrock of the transformation process, leaders may not even realize its significance or importance. More than half of those surveyed say their organizations lack a clear digital strategy.

Our survey results point to an interesting link between an organization's digital maturity and the presence of a clear digital strategy. The survey shows that agencies with a clear and coherent strategy are more digitally mature, better equipped to respond to opportunities and threats, and have a culture that fosters innovation and collaboration. By contrast, only 14 percent of early-stage respondents say their organization has a clear and coherent digital strategy.

Organizations in the information, communication, and technology (ICT) domain and higher-education domains understand the importance of laying out a clear strategic plan. Nearly 70 percent of these agencies report having a digital strategy, and a majority also cite "fundamental transformation of organization processes and models" as a strategic objective. Only one in three environmental public agencies, on the other hand, report having a clear and coherent digital strategy.

Geographically, the Nordic countries (as a whole) have the highest percentage of government agencies (57 percent) with a digital strategy. These countries, along with public bodies in the United Kingdom and New Zealand, focus more than other countries on fundamentally transforming organizational processes and operational models.

The lack of digital workforce skills represents a major obstacle to transformation

Our survey of public sector leaders finds that:

- 90 percent of organizations say that workforce issues are a challenging area to manage in their agency's digital transformation.
- Only 34 percent say their organization has sufficient skills to execute its digital strategy.
- Only 33 percent say their organization provides the right resources or opportunities to obtain the digital skills they need.

Our survey suggests that the public sector needs to ramp up the digital skills of both employees who deliver digital transformation and those who lead it. Some 90 percent describe workforce skills as a challenge; only about a third told us they had sufficient skills to execute their digital strategy.

Recruiting people with the necessary skills or training current employees can, of course, address skills gaps. But only 33 percent of our survey's respondents think their organization provides resources or opportunities to obtain the right skills. Moreover, when it comes to recruiting digital talent, only 34 percent of agencies report involving executives other than those from the human resources department. It is critical that people who are at the front and center of digital transformation work closely with recruitment teams to acquire the right kind of digital talent.

18F, the United States' digital services agency, gives its project teams the autonomy to hire digital talent. Co-founder Greg Godbout says, "18F has the final say on the projects it works on, and 18F has the final say on everyone who gets hired into its team. Those decisions are made by a combination of the leadership group of 18F, and particularly in the hiring, the teams themselves do all the hiring. They do all the interviews and all of that process."

The workforce lacks certain necessary digital-age skills

A tech-savvy workforce is integral to any organization's digital transformation strategy. This isn't limited to technical skills—it includes skills such as business acumen, willingness to work collaboratively, and an entrepreneurial streak (figure 18). Respondents identify agility, entrepreneurial spirit, and technological literacy as the three skills most lacking in relation to digital transformation.

Agencies lack key elements of a "digital mindset"—customer focus, open functionality, and agile development

Our survey of public sector leaders finds that:

- More than 85 percent of organizations cite culture as a challenging aspect of managing the transition to digital.
- While over a third (37 percent) say citizen demand was one of the primary drivers of digital transformation, only 13 percent report high citizen involvement in the co-creation of digital services.
- Only 23 percent report using open-source technology to a moderate or great extent.
- Only 28 percent of government agencies report that digital technologies are altering their attitude toward risk, making them more willing to experiment with agile, iterative approaches.

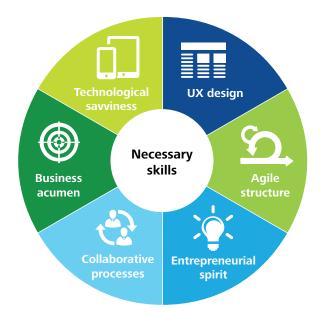
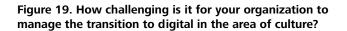
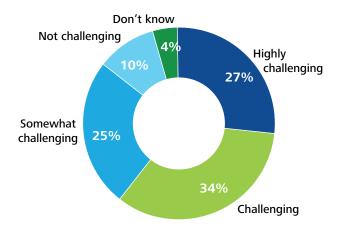


Figure 18. Skills necessary for digital transformation





Graphic: Deloitte University Press | DUPress.com

Digital transformation is about more than just technology implementation—it requires seeing old problems and old processes with new eyes. A digital mindset is different from how most organizations, especially in the public sector, approach the world. It's a different way of thinking about stakeholders, a different way of launching products and services, and a different way of working.

There is no agreed-upon definition of what constitutes a digital mindset, but several characteristics tend to be common to the organizations that "get" digital: open functionality, co-creation, a laser focus on users and customers, and an agile way of working. Our findings suggest "To that these characteristics have yet to become ingrained in most government agencies. deve

Managing "culture" is a challenge for organizations undergoing digital transformation

Existing cultural norms often challenge efforts to embed the tenets of digital—user focus, open functionality, and agile development—within government agencies. Most public sector organizations grapple with the cultural issues of digital transformation: More than 85 percent of agencies cite culture as a challenging aspect of managing the transition to digital (figure 19).

Organizations across domains and functions face cultural barriers in their digital transition (figure 20).

Health care (95 percent), finance and revenue (90 percent), international affairs (89 percent), transportation (88 percent), education (87 percent), and law and justice (87 percent) all cite the cultural issues involved in digital transformation as particularly challenging.

Customers are front of mind for public leaders, but they are rarely at the heart of service design

Government agencies cite citizen demands and cost and budget pressures as the two most prominent drivers of digital transformation. More than one-third of respondents say that citizen demands are among the primary drivers of digital transformation (figure 21). Also, in line with citizen demands, 82 percent of government agencies aim to improve customer experience through digital transformation.

But this goal doesn't necessarily translate into government organizations working closely with citizens to create a user-centric digital

"To achieve digital transformation, we need to make the overall process of developing services more open than it is now. Users need to be involved from the beginning and throughout the journey. The journey should outline what we want to achieve with users at each point of development. We need to embrace the overall idea of doing more agile development than we are used to."

> Janne Viskari, director, Population Register Centre, Finland

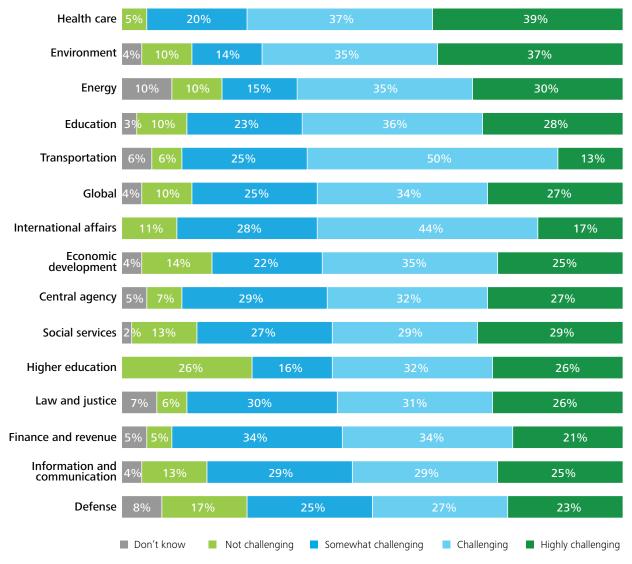


Figure 20. How challenging is it for your organization to manage the transition to digital in the area of culture? (by domain)

Graphic: Deloitte University Press | DUPress.com

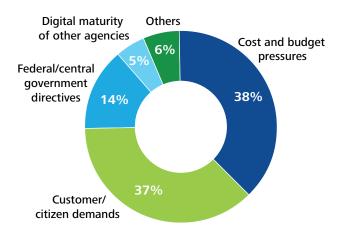
experience. The level of involvement of citizens in co-creating digital services is quite low, with just 13 percent of agencies reporting high citizen involvement in the process (figure 22).

Even among frontline service-delivery respondents engaged in interaction with citizens as part of their daily jobs, involving citizens in co-creation is uncommon: Less than 10 percent of these respondents report high citizen involvement in the co-creation of digital services. Similarly, law and justice and health care agencies frequently interact with citizens but have among the lowest percentage of respondents being driven by customer/citizen demands; they also lag in engaging citizens in co-creation of digital services.

Government agencies tend to focus on securing internal buy-in rather than on delivering to customer needs. A public sector official from Australia told us, "Historically, [government] organizations have arranged those things to be most efficient for them in the workforce. They have thought about things in the context of saving money and making things more efficient—even in terms

Figure 21. Primary drivers of digital transformation

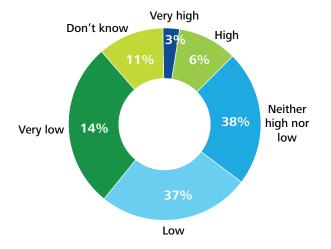
What is the biggest driver of digital transformation?



Graphic: Deloitte University Press | DUPress.com

Figure 22. Involvement of citizens in the co-creation of digital services

What is the level of involvement of customers/citizens in co-creating digital services for your organization?



Graphic: Deloitte University Press | DUPress.com

of securing things in the context of an internal focus to make things better, rather than a customer focus. And the big change I think, in digital is the customer focus."⁶

Even for agencies that say citizen demand is the primary driver of digital transformation, the share significantly engaging with customers and users to co-create digital services remains quite low, at 16 percent. About one in five government agencies in Belgium and New Zealand engage citizens in co-creating digital services to a significant level. Canada stands out, with the highest percentage of respondents citing citizen demands as the primary driver of digital transformation. That government also boasts the highest percentage of respondents saying that their digital strategy is aimed at improving citizen engagement and experience. But when it comes to engaging citizens in co-creation, Canada has the lowest ratio of public sector organizations actually doing so.

The use of open-source tools is still limited

To deliver digital services, most government organizations use open-source technology sparingly—only 23 percent report using open-source technology to a moderate or great extent (figure 23).

This is an area, however, with significant regional differences: 37 percent of Nordic organizations report using open-source technology to deliver digital services; in Canada, only 4 percent report its use.

The digital transition is not yet altering risk aversion in government

Only 28 percent of government agencies report that the digital transition is altering their attitude toward risk, making them more willing to experiment with agile, iterative approaches (figure 24). These organizations' digital maturity plays a key role in determining their attitude toward risk. Maturing organizations have a greater tolerance of risks: They are five times more likely to experiment with agile and iterative development processes than early-stage agencies. More than 31 percent of respondents from less digitally mature organizations view their organization's risk-averseness as a major limitation. In maturing entities, only 11 percent echo that sentiment. Only the ICT domain reports achieving some success in terms of bringing about a change in attitude toward risk; about half of ICT organizations have adopted an agile, "fail fast, fail quickly" approach to risk.

Among countries that participated in the survey, only in New Zealand do more than half of respondents say the transition to digital is positively impacting their attitude toward risk. Surprisingly, given American business culture's emphasis on risk-taking, only 18 percent of US government agencies say that digital is altering their organization's attitude toward risk, among the lowest percentage of any major country.

Procurement processes need to get in step with digital transformation

Our survey of public sector leaders finds that:

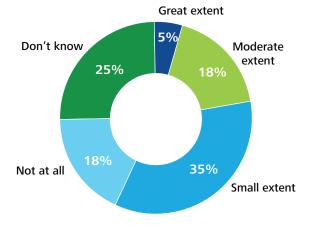
- 76 percent say that procurement needs to change to accommodate digital transformation, especially to allow for agile development and less restrictive terms and conditions.
- Respondents identify regulations, lack of flexibility, and lack of procurement skill sets as the most significant obstacles to digital-friendly procurement.
- 73 percent of organizations use both in-house and contracted resources to deliver services, but only 27 percent say they are satisfied with their vendor community.

Procurement processes are muzzled by regulations and lack of flexibility

To deliver digital transformation, public sector organizations need to access a robust and innovative technology marketplace, but our survey suggests that procurement's

Figure 23. Use of open source

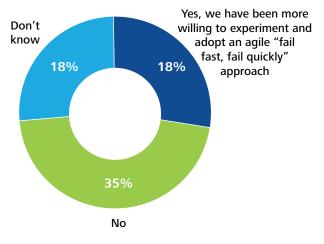
To what extent does your organization use open source technology to deliver digitally transformed services?



Graphic: Deloitte University Press | DUPress.com

Figure 24. Risk aversion

Is the transition to digital altering the organization's attitude toward risk?



Graphic: Deloitte University Press | DUPress.com

capabilities fall well short of what's necessary to make that happen.

Seventy-six percent of respondents insist that procurement needs to change significantly or very significantly to accommodate digital transformation. When asked to rank the most significant obstacles to better procurement practices, they predominantly cite rules and regulations, lack of flexibility, and a lack of procurement skillsets (figure 25). Agencies may

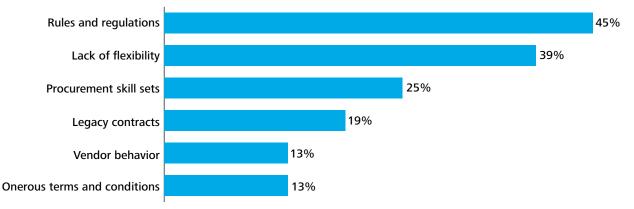
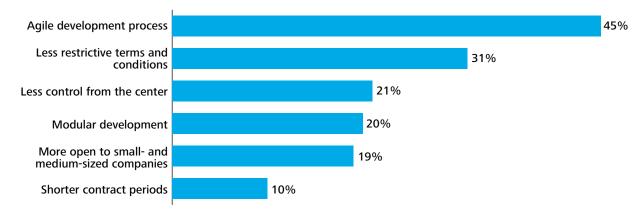


Figure 25. What are the most significant obstacles to better procurement practices in the digital age?

Note: Figures represent the percentage of respondents that chose each option as one of the top two obstacles.

Graphic: Deloitte University Press | DUPress.com

Figure 26. In what ways does procurement need to change to enable digital transformation?



Note: Figures represent the percentage of respondents that chose each option as one of their top two choices.

Graphic: Deloitte University Press | DUPress.com

not necessarily need an in-house development team, but it is critical that they have procurement specialists who can effectively monitor work done by vendors. "We can outsource development of services, including maintenance and upgrades," says Antonio Samaritani, general manager of the ICT directorate at Lombardy regional administration in Italy. "For that to happen, we need to put competent people who have in-depth knowledge of procurement in the right places."⁷

Asked to specify in what ways procurement needs to change, respondents primarily seek support for agile development and relaxation of control from the center (figure 26).

Satisfaction with technology vendors is low

While respondents see current procurement rules as hampering digital transformation, vendors' ability is also a factor. A significant 73 percent of organizations use both in-house and contracted resources to deliver services, but only 27 percent claim satisfaction with their vendor community.

Our research shows widespread recognition that procurement and commercial strategies need to change fundamentally to accommodate digital transformation. Public sector approaches to procurement are rightly designed to make sure that public money is spent effectively, but our survey respondents express frustration with both their agency's commercial flexibility and their vendors' responses.

This frustration is seen across regions, countries, and government sectors. Organizations in the domains of law and justice (86 percent), international affairs (83 percent), health care (82 percent), and education (82 percent) find procurement issues particularly challenging. More than three-fourths of respondents from the higher-education domain are dissatisfied with their vendor community.

Forty percent of respondents from the HR function outsource the development of their digital services (the highest percentage across functions). But not one of these respondents claimed to be satisfied with the vendor community. More than 80 percent of respondents from the strategy and transformation and policy-development functions are also dissatisfied with their digital service vendors.

Accelerating digital transformation

Key questions public leaders need to consider

THE lessons drawn from our research suggest that to help accelerate their digital transformation, government leaders need to consider questions in five major areas. Though hardly exhaustive, this is a solid starting point for government leaders to begin (or continue) their digital transformation journey.

No. 1: Strategy

Do we have a clear and coherent digital strategy that addresses the key elements of digital transformation?

The importance of a clear strategy is undeniable. Government organizations can

benefit from a roadmap that addresses the key elements of digital transformation: culture, leadership, workforce, and procurement. But the strategy must be accompanied by a mechanism to track and measure progress against the digital goals.

Success strategies

Offer a vision for the future. Devising a clear and coherent digital strategy is the first step toward successful digital transformation. Articulate the attributes of a digital-age organization—agency-wide governance focused on the customer, processes that tap into the potential of data, and a passionate and aspirational

US DEPARTMENT OF THE TREASURY'S DIGITAL STRATEGY

The US Treasury Department's digital efforts provide a model of an effective strategy. The department has a detailed plan of action for each milestone mentioned in the White House's Digital Government Strategy, along with a process to monitor and track progress.

The strategy articulates some of the basic tenets of digital transformation: openness by default, consumer feedback, citizen engagement, and a governance structure designed to develop and deliver digital services to citizens. The strategy also emphasizes the need to upgrade and adopt new technologies and instill transparency, both within and outside the department.

Importantly, Treasury has placed the citizen at the heart of its digital strategy. Apart from formalizing feedback processes through online satisfaction surveys, the department regularly publicizes its implementation milestones and open-data initiatives, through traditional and social media. Citizen engagement is further enhanced through regular focus groups and competitions such as MyMoneyAppUp, inviting citizens to develop next-generation mobile apps that could help Americans shape their financial future.

Treasury has also built a governance structure to monitor the progress of digital initiatives through the formation of the Digital Government and Innovation at Treasury (DiGIT) Working Group, and a technology review board oversees investments in technology. The department has implemented tools to collect and analyze website metrics and use data more effectively, along with tracking its own progress on the digital transformation roadmap.

workforce—and clearly communicate that vision to the workforce.

Provide a detailed plan for addressing the key elements of digital transformation. Build a roadmap for digital transformation that covers elements such as culture, leadership, workforce, and procurement. For instance, detail how to engage stakeholders and secure their backing to implement the strategy or describe how procurement processes could be reformed for the digital delivery of services.

Build organizational capabilities. Prepare for digital transformation by addressing digital skills gaps and investing in resources and technologies to help build a culture and capabilities supporting the digital transition.

Attack barriers. Identify the processes, legislation, and cultural elements that could hinder digital transformation, and devise strategies to move past each of these barriers.

No. 2: User focus

How can citizens and service users be part of our digital transformation?

A key tenet of digital delivery is to start with the user. Yet our survey suggests that many government organizations are failing to engage citizens in service design and lack user-centered design skills in their workforce. Exploring inherently user-centric agile development methodologies is also critical.

Success strategies

Make the user the focal point. To effectively drive a digital transformation agenda, governments need to be user-focused. Crowdsourcing ideas through competitions, hackathons, user-centered design, and co-creation are some of the ways to engage users and develop user-centric digital services.

Put human-centered design into the heart of service transformation dialogue. Changeresistant cultures typically have established business processes and long-serving staff members who are convinced they know what is best for customers. Often only genuine user insights can create a persuasive case for change; this means doing primary ethnographic research, asking users to comment on service options, and building a transformation method that reacts to feedback quickly and continually. Even the most change-resistant cultures find it hard to disregard hard evidence from the voice of customers and service users.

Create customer engagement plans. Such plans lay out the process of acquiring and engaging users; the three phases include "attract," "engage," and "extend."

Get started with agile development. Public sector leaders can start, through workshops and training, by familiarizing themselves with the concept of agile, and then look for opportunities to use it on smaller projects and scale accordingly.

SINGAPORE: PROVIDING A PLATFORM FOR CO-CREATION

By providing access to more than 3,000 government datasets, the government of Singapore has co-created more than 110 apps with its citizens. Examples include StreetSine, a co-brokering platform for real estate agents, and myENV, a mobile app by NEA EXPAND that provides real-time information on Singapore's weather. To facilitate co-creation, the government plans to progressively add more datasets and to explore other platforms. "The emergence of new infocom technologies calls for fundamental rethinking and transformational shifts in the way we look at e-government," says Teo Chee Hean, Singapore's deputy prime minister. "Governments must take on the roles of a facilitator and enabler—to collaborate with the public, private, and people sectors in creating new solutions, new businesses, and new wealth."⁸

No. 3: Culture

What have we done to strengthen our organization's innovative and collaborative culture?

Our research suggests that as organizations mature digitally, they learn to increasingly employ digital trends and technologies to reinforce a culture of innovation and collaboration. Even designating space and time for groups to collaboratively work on solutions, ideas, and challenges could go a long way toward building a culture of innovation.

Success strategies

Change the working environment to stimulate collaboration and "shock" the system. Changing the working environment could include layout and style adjustments, such as moving to openplan offices or bringing together disparate teams to foster collaboration. It could also include improving day-to-day technologies by reducing restrictions on computer desktops, introducing tablet or mobile options, or shifting to better telephone, conferencing, and collaboration technologies. Such changes to the work environment send a strong signal that a culture needs to be updated. They harness goodwill, improve productivity, and fuel digital-economy drivers such as collaboration and flexibility.

"We must work in new ways. We must have a more mobile police. This means that there will be more work at-site—investigation can be done then and there if the police are equipped with tools in their units and do not have to travel back to the police station."

Cato Rindal, CIO of the National Police Directorate, Norway

Increase focus on change management. Frontline service-delivery functions report the highest percentage of respondents who find the cultural transition to digital particularly

IPAD TO THE RESCUE: TRANSPORT FOR LONDON (TFL) MOBILE PROGRAM FOSTERS COLLABORATION WITHIN TEAMS

On a busy afternoon in central London, TfL's Northern Line operators found an issue on the railway network—and it was at the worst possible place: inside a tunnel, with no way of reversing the trains. The traditional safety protocol would have required a civil engineer to visit the location and fix the problem; that would mean rescheduling all the other trains or even closing the line for the day.

But TfL's new mobile program, which equips line employees with iPads and other mobile devices and has Wi-Fi points throughout the rail network, came to the rescue. Line operators, upon examination, determined the issue was manageable. They quickly took photos with an iPad, marked them up, and sent them to the engineering unit. After reviewing the photos, the engineers decided to move ahead with a temporary fix to the network, allowing the trains to run through, at a slightly slower pace.

This illustrates how sometimes even the simplest of digital technologies can enable collaboration within teams. But more importantly, such investments can also act as agents of change in an organization. The mobile program focuses on how—not whether—technology can help TfL employees do their jobs better. Alistair Montgomery, a TfL system solution manager, adds, "It shows the power of the technology when you allow mobile to be used in a way that makes sense in the work environment."⁹

challenging. Frontline agencies also have some of the fewest respondents reporting a change in risk attitudes. This suggests that governments need to increase their focus on change management and training and the use of digital tools to give frontline workers more flexibility and discretion to do their jobs.

Appoint agitators to key posts. Many governments have appointed new transformation directors, and the trend of appointing chief digital officers in departments and agencies continues. Such appointments stimulate culture change by allowing influential people to agitate and challenge the status quo. Though these posts do not necessarily require outsiders, they do need to be well designed to shake up the system.

Such appointments must go arm-in-arm with governance change to create authority to deliver results. Done well, they become role models and lightning rods for new skills and fresh ways of thinking.

No. 4: Workforce skills

Have we looked at our talent pool and planned where our skills will come from?

Our survey identifies workforce and skills as the most challenging area for digital evolution. Many government agencies lack the skills to take full advantage of digital transformation. Digital strategists need to develop a plan that pinpoints what workforce capabilities they need and how they are going to secure them.

We're talking here of not simply equipping existing workers with new awareness, but of genuinely new skills, including user research and analysis, technology skills, agile and iterative project management, user experience skills, financial modelling for digital business models, and commercial skills for a digital supply chain. With relatively constrained public sector pay, public bodies often have trouble attracting the talent they need. The solution is a blend of investment, external support, and innovative approaches.

Success strategies

Hiring the right talent may require looking at new sources of recruitment. Attracting talent from the private sector requires offering something beyond compensation and benefits, and creating a workplace that helps this workforce thrive.

Explore unconventional ways to bridge skill gaps. Agencies can attract top talent for niche skillsets through recruitment tactics such as creating internship and fellowship programs, experimenting with competitions, crowdsourcing, and hiring for short-term assignment-based teams.

Invest in upskilling. One of the first steps to getting the workforce digital ready is to identify skill gaps and invest in upskilling staff. Whether an organization facilitates upskilling through in-house training centers or external workshops, it's important to develop a feedback mechanism and iterate training requirements, curriculum, and delivery methods to find the ones that work best. Agencies can also look for opportunities to partner with the private sector and create peer-to-peer learning communities for employees.

In-house academies and training programmes. Almost all public bodies already have large pools of skilled people, and welldesigned in-house training programs have a big impact on culture and levels of buy-in. Our research identifies organizations in which visible investment in workforce skills sent a signal that changed attitudes and overcame inertia.

Create a value proposition for the next generation of talent. Millennials and younger employees value opportunities to make a positive impact through their work. One way to attract younger talent is to design a workforce strategy that specifically highlights and communicates the impact that the work of the agency staff has on the lives of citizens. Offering employees the flexibility to work creatively can go a long way in building your talent pool. Don't leave recruitment to HR staff. You'll never get the team you need unless you get personally engaged in recruiting; to find the right people, you have to hunt for them. When recruiting for digital roles, look at attributes beyond hard skills: Factors such as motivation, cultural fit, and working style can be a litmus test to differentiate individuals who are right for your team.

Accessing skills in the wider community through open data, transparency, and cocreation. Leading-edge governments recognize that their mission does not end at the boundary of their organization. By tapping into citizens' skills, businesses and local communities can not only achieve more but can drive wider public-service outcomes for civic participation and democratic engagement. Often this starts with a change in attitude: Organizations that once would have done everything themselves now put raw data into the public domain and allow others to apply their skills to improve services. Open data from school inspections, crime records, train times, and other sources have all been used by third parties to create apps, analysis, and more—without the government organization itself needing the skills to build or maintain such services.

No. 5: Procurement

Are our organization's existing procurement processes suitable to procure digital solutions?

Our survey shows the big changes government organizations want in the procurement process: agile development, less restrictive

SCALING UP DIGITAL SKILLS

The Department for Work and Pensions (DWP) Digital Academy is a lively space that feels more like a modern startup than a government department. Rainbows of colored Post-it® notes cover the walls as students brainstorm ideas and learn the secrets of creating an exceptional user experience. They sift through mountains of LEGO blocks, building models, and prototyping. The goal: to learn how to work in an agile way. Starting from the basics of "What is digital?" or "What is the Internet?" or "How to create a Web page?", cohorts of civil servants work their way to understanding and practicing complex aspects of digital technologies and service delivery over the course of six weeks.

Along with technical expertise, what academy graduates take with them is large doses of the digital culture—for instance, working collaboratively in a flat, multidisciplinary team and putting the customer at the heart of their work.

The digital academies were launched by Kevin Cunnington, director-general for business transformation; they are designed to train and upskill staff and get the organization digital-ready, one cohort at a time. Employees from different pockets of DWP spend six weeks at one of the academy locations for training in the four pillars of digital: user-centric design, agile development, digital government services, and digital tools. They learn wireframing, paper prototyping, agility, design thinking, coding, and more, and at the end of six weeks, they are shipped off to their external placements to work on actual projects.

Six weeks of training does not mean academy graduates can immediately deliver digital programs. "You won't be able to drop in and lead," explains Rick Stock, the academy's former program director, in an interview with him and Cunnington. In what they call the "plumber's mate" model, academy graduates know enough to contribute to a team but not enough to lead a project or work independently. This is the most appropriate intervention for the DWP workforce and sits well alongside recruitment and targeted use of contractors and suppliers to build a skill-base fit for the future.

"This year we trained up, let's say, about 1,000 people. Next year's target is 9,000," Cunnington tells us. By any measure, however, six weeks is a long time for productive employees to be pulled away from their daily jobs. He admits that navigating this hasn't always been easy, but "you have to determine what's important, and provide the executive support to get on with it."¹⁰

terms and conditions, and a more decentralized procurement model. Any proposed procurement reform should consider these issues.

Public sector approaches to procurement are designed to make sure that public money is spent effectively. This must continue, of course, but our research indicates that the risks of poor public spending are different in the digital age than before.

The root cause is the rising pace of change itself. Historically, change was slower, based on assumptions that established ways of working would remain stable. The procurement practice across the public sector was to deliver services as cheaply as possible to the prescribed model. This favored long-term supplier contracts and low unit costs; it also had the effect of fossilizing business models at the point in the process when the organization invests in IT, selects suppliers, and establishes processes.

In the digital age, nothing could be less desirable. This is an age of exponential change, where five-year-old business models are swiftly rendered obsolete by smartphones, big data, connected sensors, and next year's innovations. Public procurement must change to reward innovation and flexibility.

Our survey respondents are overwhelmingly frustrated with both their organization's lack of commercial flexibility and their vendors' responses. Governments need commercial strategies to free themselves from lock-in and to move to lower-cost options for all kinds of services—whether digital or analog.

Success strategies

Simplify the procurement process. Make procurement simple, aiming to attract vendors with the best solutions, not just those familiar with the bid qualification process. Employ strategies to reduce vendor selection time and allow for shorter contract periods.

Use a modular approach. Rather than trying to find ways to make large digital transformation projects run faster, procurement innovators focus on small batches of requirements. Target smaller problems aimed at reducing cycle times at each step through software development in small modules.

Break large contracts into smaller parts. The rationale for large contracts has always been that they deliver economies of scale, secure the commitment of trusted suppliers, and allow the client to transfer the risk of complex technical tasks such as integration and service management. In the digital age, these justifications are increasingly diluted. The rapidly falling cost of technology means that savings from economies of scale are lower than those that would be achieved by tracking falling prices. Large suppliers may offer deep relationships but don't always give access to cutting-edge innovation. And the risk of owning technical work in-house is falling as digital skills increase and technologies mature.

Shift to open standards for data and interfaces. Levels of rigidity and lock-in to existing suppliers increase dramatically when a public body cannot easily extract its data or share data between different services or IT systems. In extreme cases, organizations barely have access to their own data without going through their suppliers and paying a premium for any non-standard requests. Making open data standards and open interfaces a high priority for procurement can reduce these risks. Organizations that do this are better able to improve public services by using the best innovations-for example, adding mobile solutions to existing services without being forced to pay over-the-odds or giving first rights of refusal to one supplier.

Retain flexibility and agility. "Bakeoff"-style approaches that involve short-term sprints and teams from multiple contractors can provide more flexibility and agility to government agencies. By keeping deliverables smaller, agencies can keep their options open and change priorities on the fly.

Promote collaboration. Allow room for collaboration among vendors. Open up the procurement interfaces, and APIs for

the government's procurement platforms, so that vendors can integrate their services more seamlessly.

Develop procurement talent. Create processes and frameworks that guide procurement

officers toward agile-based contracts. Invest in building a skill-balanced group that specializes in vendor selection and procurement lifecycle management.

THE BUYERS CLUB OF THE US DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

The HHS Buyers Club is an internal community where HHS procurement and development managers can collaborate on new approaches to procurement.

A big part of the problem in procurement of government IT services is the "blind marriage" at the heart of most government contracts, as well as the inherent lack of communication between those procuring, developing, and using technology. To address that problem, the HHS Buyers Club plays three major roles, providing a space for members to:

- Test innovative procurement methodologies for IT service acquisitions and share the results in use cases for others to benefit
- Develop newer, easier, and more effective acquisition models and processes
- Engage all key stakeholders with effective, mutually beneficial education and outreach

In one instance, a group at HHS needed a new web content management system. Typically, the agency would procure this software in just one stage, requesting proposals that could be as long as 30 pages; this places a huge burden on contractors, as well as on the agency itself. Instead, the HHS Buyers Club team used what's called a two-stage down-select approach. "In the first stage, all we ask for is an eight-page concept paper and cost proposal," says Mark Naggar, who manages the HHS Buyers Club. "After selecting five vendors to go on to the second stage, we gave each a \$10,000 purchase order, and asked for a revised cost proposal, a 20-page performance work statement, and a prototype."

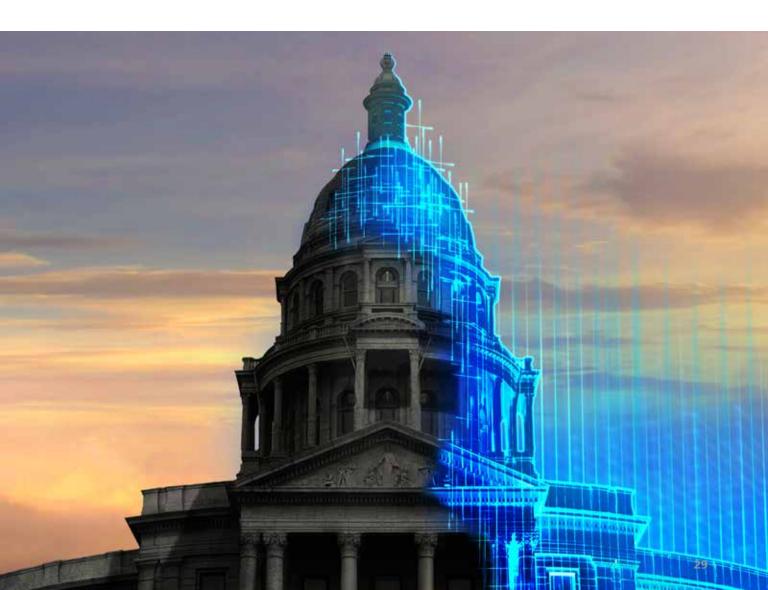
One of the greatest benefits has been effectively taking the element of blind marriage out of the procurement process. "Instead of requesting proposals that are purely text-based, we now require contractors to provide a minimum viable prototype, so we can actually assess their IT software development capabilities," Naggar says. "It's like show-and-tell, as opposed to just tell," he explained.¹¹

Conclusion

GOVERNMENT'S digital era is progressing at a relentless pace. Our research takes a snapshot of the public sector's digital evolution and gives pointers as to how the most ambitious public bodies can accelerate their rate of progress.

Our research suggests a wide spectrum of digital maturity in public sector agencies across the world, but with a common set of issues and a shared series of barriers that are hampering change: culture, procurement, workforce, leadership, and strategy that are out of step or ill-prepared for a technologically advanced, citizen-centric era.

Successful public bodies will be more flexible, adapting to the one constant of the new digital age: change itself. They will re-imagine their services and continually innovate the way they engage with customers. Continued digital evolution may see some public bodies struggle as the environment changes around them; others will take advantage of all that digital transformation can offer—and thrive.



Appendix

Digital maturity estimation framework

W^E adopted a holistic approach to estimate an organization's digital maturity based on 20 questions from our survey. These questions were grouped into three broad categories: people, processes, and preparedness areas we identified as important determinants of an organization's digital maturity.

Each question was mapped to a Likert scale of 1–5, in which 1 reflects the least and 5 the highest score on the maturity scale. We calculated each respondent's digital maturity as the average score of all questions. The maturity level cut-off scores used in the analysis were: early (0-3), developing (3.01-4), and maturing (4.01-5).

Factors that influence digital maturity

In addition to the survey, we conducted more than 130 interviews with public sector leaders and outside experts around the world involved in digital transformation. Through these interviews and research emerged five key factors that influence digital transformation in public sector organizations:

- Strategy
- Leadership
- Workforce skills
- User focus
- Digital culture

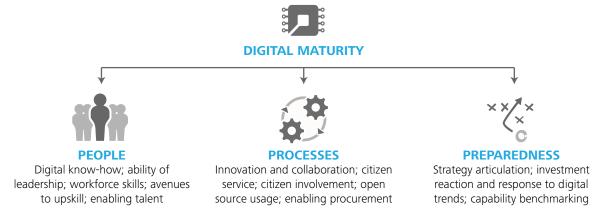
Using the results from our maturity framework, we examined how public sector organizations at each level of maturity operate with respect to each of these factors.

About the survey

Digital defined

In our study, digital refers to the combination of five modern technology components that are coalescing to change the way we work, shop, communicate, and get around.

Figure 27. Maturity framework



- **Social:** Allowing people to communicate electronically on social platforms in real time
- **Mobility:** Connecting with people wherever they are
- Analytics: Using data to do sophisticated analysis across program and policy areas
- **Cloud:** Changing how people leverage and pay for technology
- Cyber security: Providing for secure communication and data storage

In the digital era, tech-savvy organizations no longer view these five components as discrete solutions that address specific needs. Rather, they harness their combined power to target and build intimacy with customers and citizens, manage the workforce, reduce cost, and automate processes.

Respondent profile

Between January and March 2015, Deloitte conducted the Global Digital Transformation 2015 survey, covering more than 1,200 officials working in various government agencies, departments, and public sector bodies. Respondents included heads of departments, agencies, CIOs, CTOs, and CFOs across domains at all levels of government. The following figures present a snapshot of respondent demographics.

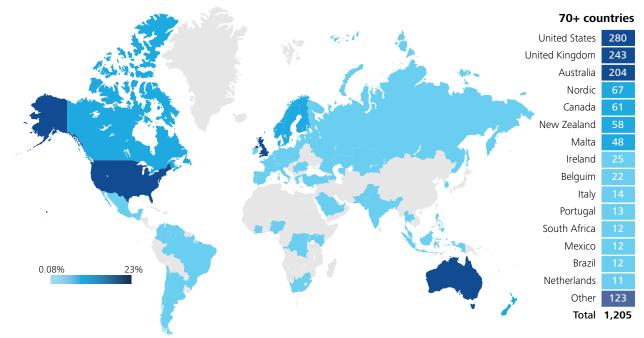


Figure 28. Global response map

Figure 29. Organization type

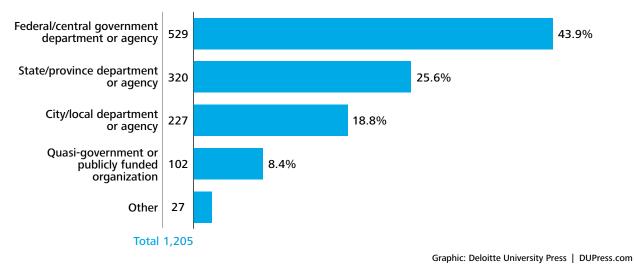


Figure 30. Organization domain

Central agency	210	21.94%
Social services	119	12.43%
Law and justice	84	8.78%
Health care	82	8.57%
Economic development	72	7.52%
Finance and revenue	61	6.37%
Transportation	52	5.43%
Environment	49	5.12%
Defense	48	5.02%
Education	39	4.08%
Information and communication technology	24	2.51%
Energy	20	2.09%
Higher education	19	1.99%
International affairs	18	1.88%
Other	60	6.27%
Total	957	
		Graphic: Delaitte University Press DUPress com

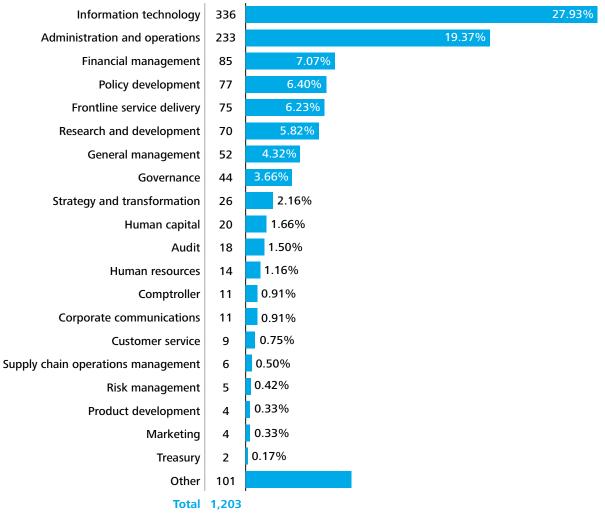


Figure 31. Respondent function

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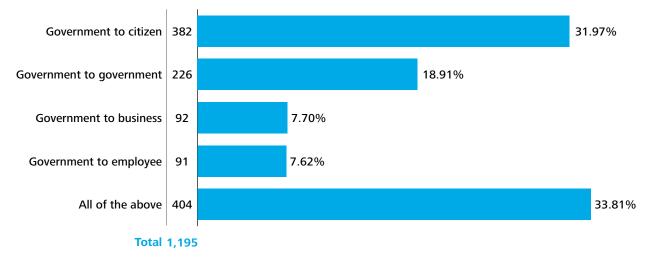


Figure 32. Type of work done by respondent's unit

Survey questions and data

- About 60 percent of the survey questions were sourced from the 2015 *MIT Sloan Management Review* and Deloitte digital business study. The remaining questions were framed and added to the survey to assess specific public sector areas such as procurement, co-creation, and use of open-source technology.
- The survey garnered a total of 1,205 responses globally. About 21 percent (248 responses) were from the 2015 *MIT Sloan Management Review* and Deloitte digital business study. The rest of the responses were from a global public sector survey deployed between January and March 2015.
- To learn more about the 2015 MIT Sloan Management Review and Deloitte digital business study, please refer to the report Strategy, not technology, drives digital transformation.¹³

Endnotes

- 1. Please note that maturity discussions are limited to individual public sector organizations. Significant variances in sample sizes across countries, regions, functions, and domains prevented us from extending the maturity analysis to these groups.
- 2. Interview with Rajendra Kumar, joint secretary, Ministry of Department of Electronics and Information Technology, India, interview, March 26, 2015.
- Interview with Mike Bracken, "Revealing the hidden side of transformation," GDS blog, December 17, 2014, https://gds.blog.gov. uk/2014/12/17/revealing-the-hidden-side-oftransformation, accessed September 12, 2015.
- 4. Interview with Gavin Till, CIO Christchurch, New Zealand, interview, April 2015.
- 5. Interview with a senior Australian government official, March 10, 2015.
- 6. Ibid.

- 7. Interview with Antonio Samaritani, general manager, ICT directorate, Lombardy regional administration, Italy, interview, March 2015.
- Government of Singapore, "Masterplan 2011–2015: Collaborative government," http://www.egov.gov.sg/c/document_library/ get_file?uuid=4f9e71be-fe35-432a-9901-ab3279b92342&groupId=10157, accessed September 18, 2015.
- 9. Interview with Alastair Montgomery, Transport for London, July 2015.
- 10. Interview with Rick Stock and Kevin Cunnington, UK DWP, March 2015.
- 11. Interview with Mark Naggar, HHS Buyers Club, June 2015.
- 12. Gerald C. Kane, Doug Palmer, Anh Nguyen Phillips, David Kiron, and Natasha Buckley, Strategy, not technology, drives digital transformation: Becoming a digitally mature enterprise, MIT Sloan Business Review and Deloitte, July 14, 2015, http://sloanreview.mit.edu/projects/ strategy-drives-digital-transformation/.

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