



EY

Building a better
working world

Will Governments
return to the past or
nurture a digital future?



The better the question. The better the answer. The better the world works.

A hand is pointing at a colorful line graph on a tablet screen. The graph features multiple lines in shades of purple, green, and blue, set against a dark background. The word "Contents" is overlaid on the image in a white, sans-serif font, enclosed in a thin white rectangular border.

Contents

Executive summary



The response by many governments to the COVID-19 pandemic has demonstrated a previously untapped ability to innovate and deliver at speed when the urgency and political support is present.

Public sector organizations, which for years had lagged behind the private sector in exploiting new technologies, had an abrupt awakening as they found themselves having to control the spread of COVID-19, shift their employees to remote working, find alternative ways to deliver services, and administer large-scale financial support to keep citizens and businesses afloat.

Many organizations rose to the challenge, drawing on a wide range of technologies, from mobile apps to drones and artificial intelligence (AI), to serve their societies. The vital importance of digital transformation has been writ large, as has the pivotal role of an effective, inclusive and accountable government.

Embedding these new technologies, operating models, behaviors and mindsets as standard practice will lead to a step change in digital maturity and better outcomes for citizens in future. But securing long-term benefits will require concerted action from three different groups: the center of government; individual agencies, departments and local government; and the wider societal ecosystem.

The center of government must create the enabling environment for a thriving digital economy: for example, by building high-speed, reliable and robust infrastructure, and by enacting new legislation that will safeguard citizens' rights and protect against risks.

Individual agencies, departments and local governments must become more agile and user-centric by focusing on designing better citizen experiences and building flexible IT architecture to facilitate data sharing and analytics. And they must ensure their staff

have the digital skills and mindset to adapt to new working practices and embrace a more experimental culture.

The knowledge and resources of the wider ecosystem, including start-ups, small and medium-sized enterprises (SMEs), entrepreneurs, academia, civil society and citizens themselves, must be harnessed in order to find innovative digital solutions to public policy challenges. Since budgets will be even more constrained post-pandemic, these partnerships will be essential to help finance a government's capacity for service improvement.

We cannot take it for granted that new ways of working will naturally continue after the crisis has passed; rather, they will need deliberate nurturing and investment. Governments must find the energy and determination to sustain change beyond the extraordinary circumstances that the pandemic has created and ensure their hard-won progress doesn't go to waste.

Introduction

The COVID-19 pandemic has proved to be the biggest global disruptor to people's lives since the end of World War II. In the space of just a few months, the crisis altered our expectations and behaviors, catalyzing changes in the way we work, play, shop and interact.

The impact on governments has been profound. Very few were well prepared to deal with the challenges created by this kind of an emergency. During a decade of austerity, most governments failed to invest in preparing for global shocks, which they regarded as low-probability, high-impact occurrences. And many were slow to embrace the kind of data and technology that is ubiquitous in the private sector, despite the fact that these technologies had enormous potential to transform a government's ways of working, the services it delivers to citizens, and its ability to predict and manage crises. Some commentators were even beginning to question the relevance of the public sector in the 21st century.

The COVID-19 crisis served as a wake-up call to governments that had placed too much focus on daily operational needs at the expense of digital transformation. With populations relying heavily on public services, those governments suddenly had to play a far more pervasive role in everyday life – both to protect health and to support individuals and businesses facing financial difficulties. Technology has been central to their responses. Many governments developed and implemented new digital solutions and service delivery models that were previously seen as too challenging, sometimes in a matter of days.

The result was a dramatic acceleration in digital service delivery and interactions with citizens across many areas of government, from health care and social services to education, justice, taxation and political decision-making. Under extreme pressure, many public departments or agencies demonstrated an extraordinary ability to innovate, to be flexible and agile in deploying

technology, and to adopt new operating models. They seized the opportunity to stress test new digital solutions, many of which draw on "human augmentation" technologies such as AI, machine learning, robotics, blockchain, virtual reality and the internet of things (IoT).

This sudden acceleration has led to many long-term benefits for governments and citizens, beyond the immediate crisis response:

- ▶ Government leaders have gained a deeper understanding of the role digital technologies can play in improving service delivery and ways of working. The political will is now there to push forward rapid organizational transformation.
- ▶ Organizational silos are being broken down, and some services fundamentally reformed, now that the interdependency of needs and services has become apparent.

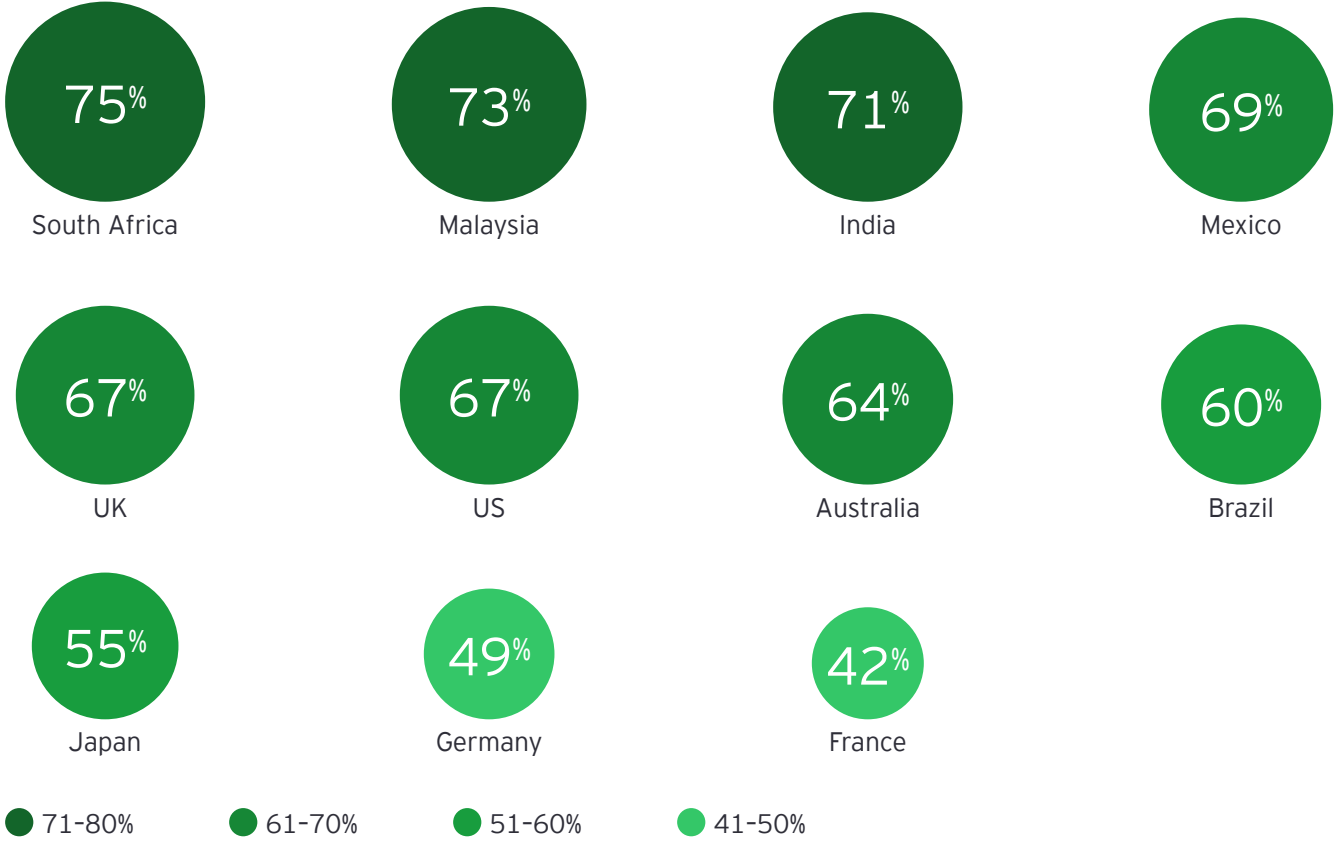
- ▶ New operating models are emerging, many of which harness the power of digital tools to enable remote working, increase efficiency and improve the citizen experience.
- ▶ Governments have a more experimental "can-do" attitude and are able to make rapid, evidence-based policy decisions through better use of data and analytics.
- ▶ Collaborations are springing up between the private, public and voluntary sectors, and with citizens, to tackle deep-seated problems and develop imaginative solutions.

Not all agencies have taken the chance to change and, for most, challenges undeniably remain. Many agencies are still late in transforming their operating model to focus on citizen value and exploit new digital technologies. And for those who have moved forward, inclusive digital transformation may still be an issue: for example, for some of the

most vulnerable groups in society and those living in remote areas may still have limited access to technologies. But governments and societies now seem to be on an unstoppable path toward even greater digital adoption. The EY Connected Citizen survey¹ reveals that the majority of people anticipate making more use of technology in their daily lives than if the pandemic had not happened (Figure 1).



Figure 1. Percentage of citizens who think the COVID-19 pandemic will lead to greater use of technology in their daily lives in the future than if the pandemic had never happened



¹ Ipsos MORI conducted online interviews with 12,100 participants across 12 countries globally between July and September 2020. Quotas were set by age, gender, region and working status in order to achieve a representative sample in each country. Data has been weighted to account for any shortfall in quotas. Additional weights by education have also been applied.

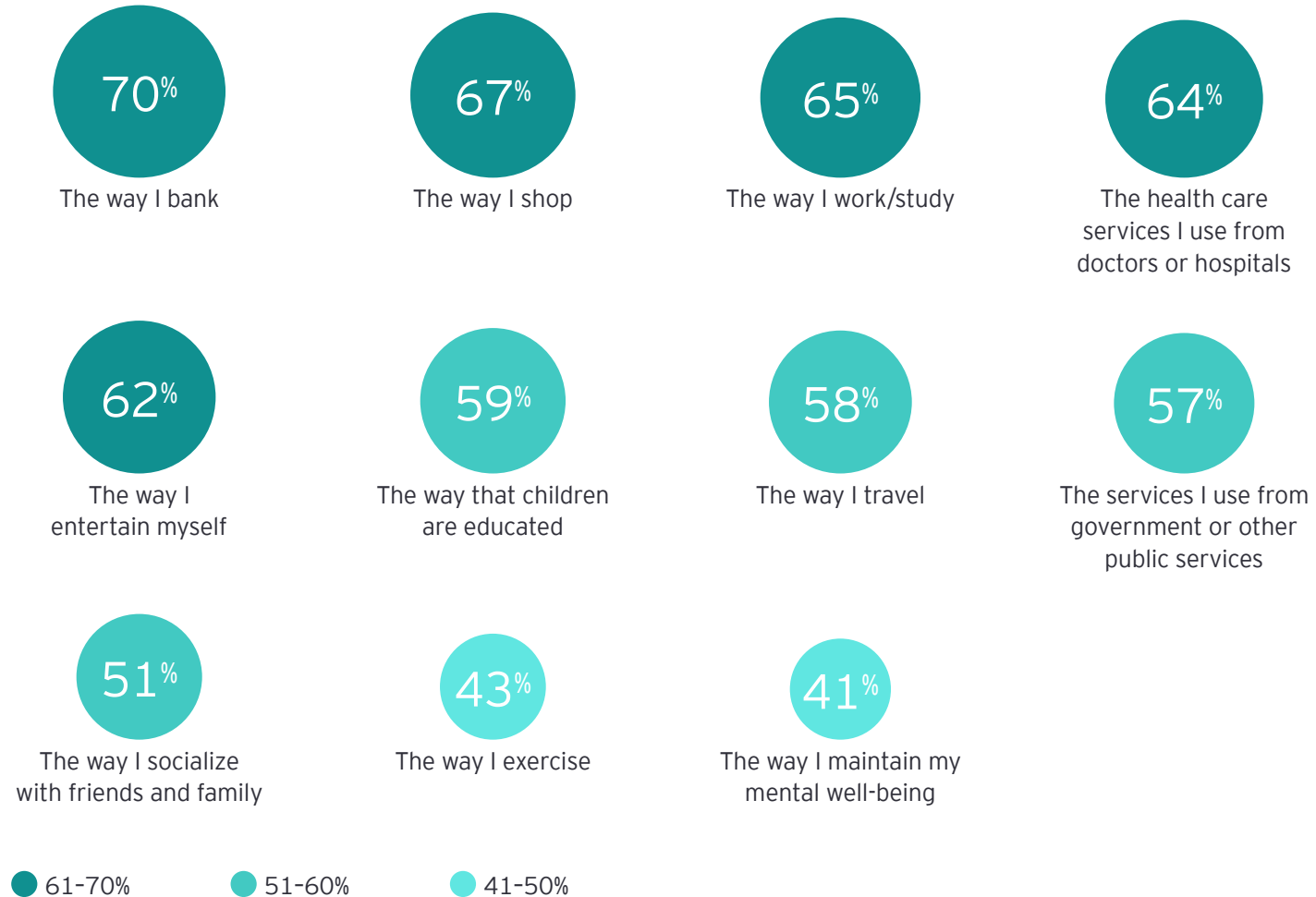
Source: EY Connected Citizen Survey 2020, EYGM Limited 2020.

And they expect this technology to improve many aspects of their lives (Figure 2). These citizens will become ever more demanding of digital public services, which currently lag behind other sectors, such as online banking and retail, in improving the customer experience.

How health and human service organizations have harnessed digital technology in their crisis response

In September 2020, the UK market research firm YouGov conducted a survey of health and human service providers in six countries on behalf of Imperial College London and the EY organization. The survey revealed that almost two-thirds of respondents have increased their use of digital and data solutions in response to COVID-19, with a doubling in the deployment of specific tools such as video consultations and patient portals. The majority of respondents reported that these solutions have increased the productivity of staff, improved access to care, and delivered better outcomes for patients and service users.

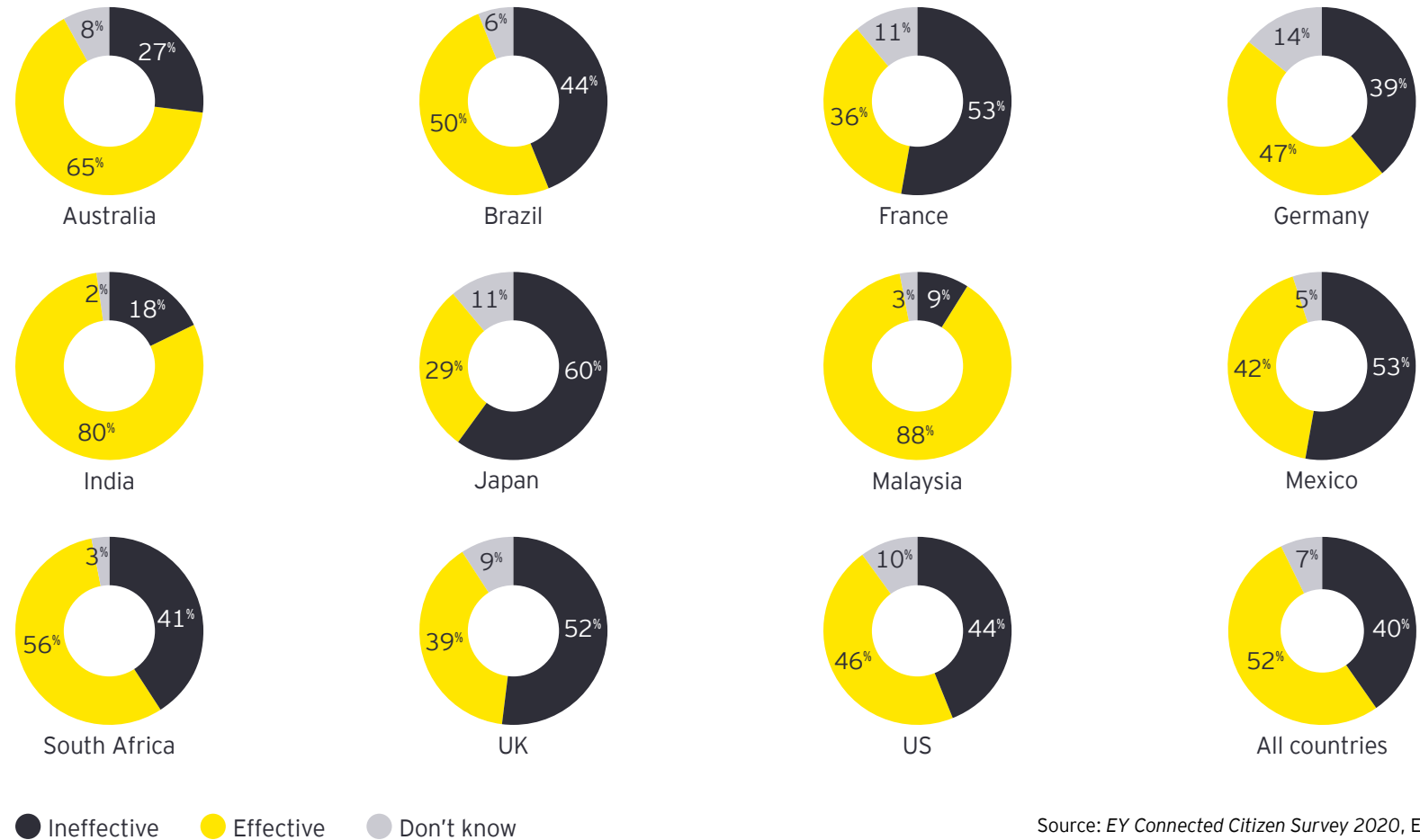
Figure 2. Percentage of citizens who think technology will change, for the better, the way they conduct different tasks



Source: EY Connected Citizen Survey 2020, EYGM Limited 2020.

The recent crisis will not see whole governments leap to higher levels of digital maturity overnight. Indeed, public perceptions of their government's effectiveness in using digital technology during the pandemic varies from country to country (Figure 3). But the crisis has at least demonstrated what is possible when the will is there. It is vital that governments do not slip back into their old ways once the immediate crisis has passed and, instead, concentrate on embedding new practices and ensuring that all their citizens have equal access to services.

Figure 3. How effective or ineffective do you think the government and public services have been in using digital technology to respond to the COVID-19 pandemic?



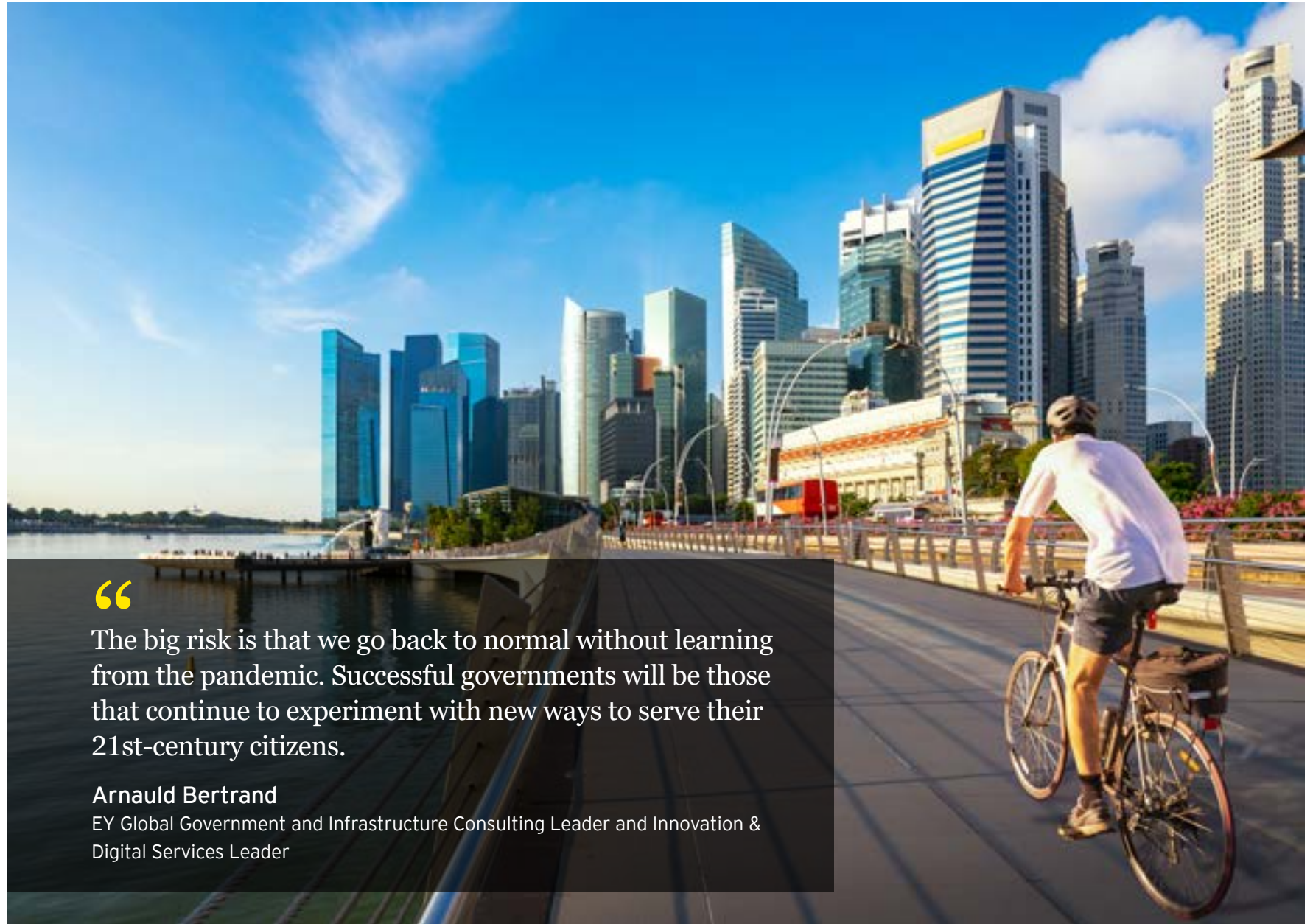
Source: EY Connected Citizen Survey 2020, EYGM Limited 2020².

² Ipsos MORI conducted online interviews with 12,100 participants across 12 countries globally between July 2020 and September 2020. Quotas were set by age, gender, region and working status in order to achieve a representative sample in each country. Data has been weighted to account for any shortfall in quotas. Additional weights by education have also been applied.

In this paper, we explore how governments can maintain the momentum for change, highlighting examples of those that are leading the charge. We can offer recommendations on how to capture the wider benefits that digital transformation can bring to people and society over the long term by harnessing the efforts of three different groups that have a critical role to play:

- ▶ The center of government, in developing the infrastructure and enabling conditions for digital transformation at a national level
- ▶ Individual departments, agencies and local governments, in driving transformation within their own organizations, from senior leaders to frontline employees, and through collaboration with other agencies
- ▶ The wider societal ecosystem, including start-ups, SMEs, academic institutions, civil society and citizens themselves, in helping governments find and deliver innovative solutions to public policy challenges

The combined power of these groups coming together will achieve not simply government transformation but rather a wider societal transformation that delivers better outcomes for all.



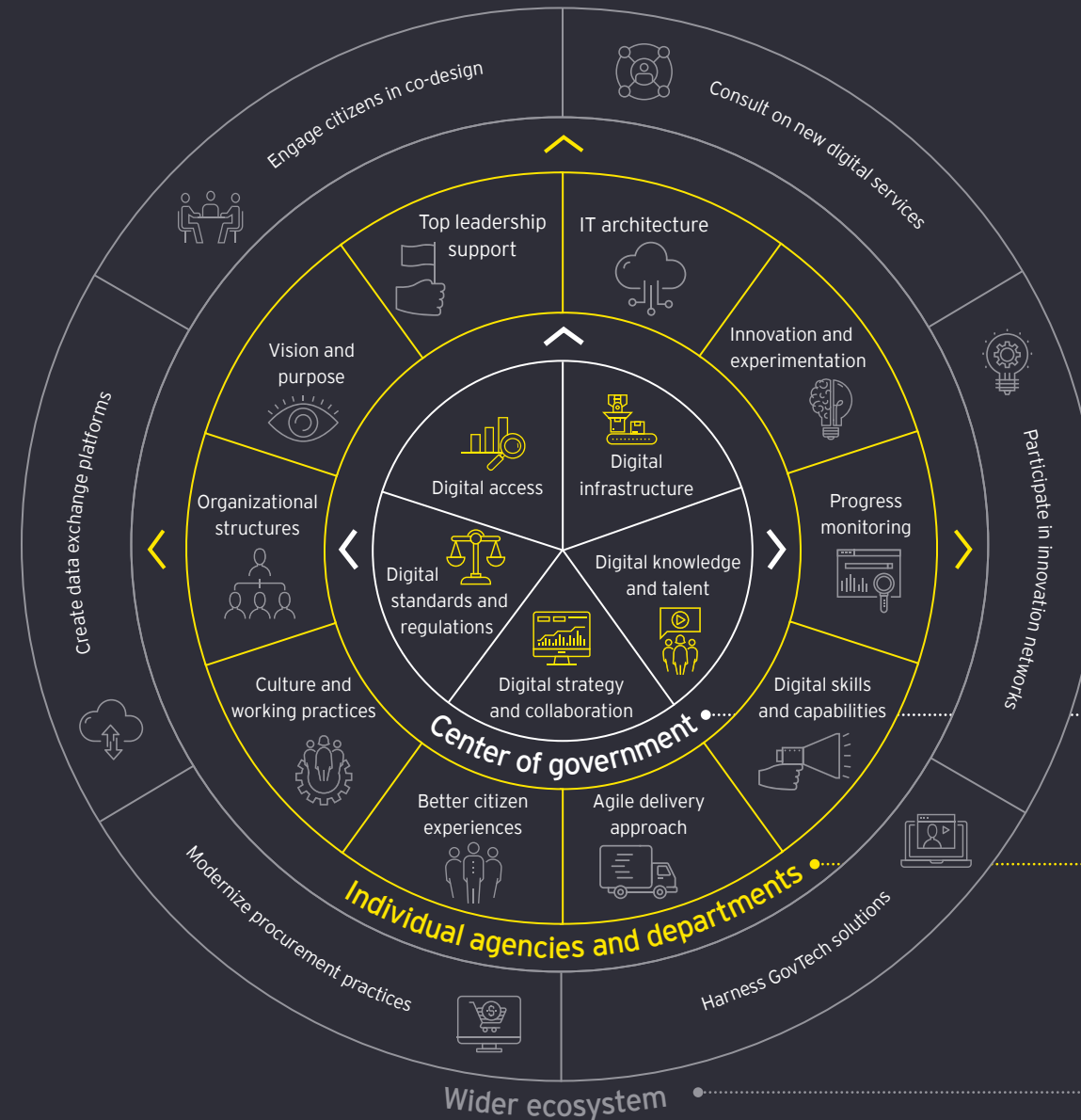
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The big risk is that we go back to normal without learning from the pandemic. Successful governments will be those that continue to experiment with new ways to serve their 21st-century citizens.

Arnauld Bertrand

EY Global Government and Infrastructure Consulting Leader and Innovation & Digital Services Leader

From government transformation ...
to societal transformation



The center of government creates the enabling conditions ...

... for individual agencies to drive transformation ...

... while harnessing the knowledge and resources of the wider ecosystem

A person wearing a red hoodie is shown in profile, looking upwards against a blue sky. A vertical red stripe runs down the right side of the image. The text is overlaid on the right side of the image.

Part 1

The role of the center of government

The center of government must create the enabling environment for a thriving digital economy – the right infrastructure, policies, regulations, technology platforms, etc. – while also supporting individual government departments with their own transformation efforts.



The center of government has four core roles to play:

1. Creating digital infrastructure and fostering inclusion

To promote the development of the digital state, governments will look to invest in and regulate for the creation of high-speed, reliable and robust digital infrastructure. Advanced telecom networks – including enhanced 4G and 5G mobile networks – and data centers are the foundation of the digital economy. 5G networks provide the connectivity that will transform the lives of billions of citizens and are already available in nearly [400 cities across 34 countries](#). By 2026, 5G is expected to cover [60 percent of the world's population](#).

Given the high development costs, government agencies are increasingly teaming up with private partners to put this infrastructure in place. The COVID-19 pandemic has heightened the need for this investment. In the short term, it has sharply increased demand for high-speed, resilient telecom networks to provide the connectivity for remote working and learning, e-commerce and service delivery, with [some](#)

[operators experiencing as much as a 60% increase in internet traffic](#). In the long term, digital infrastructure will play a critical role in a country's economic recovery and success in building resilience to future shocks.

Saudi Arabia was better prepared for the crisis than many, having invested significantly in its digital infrastructure, including mobile broadband and 5G networks, as part of its [Vision 2030 strategy](#). The country adopted a number of measures to help maintain continuity of business and government services through the pandemic, including increased mobile internet speeds and data capacity. Its online government portal maintained reliable access to over 900 services, despite the massive surge in internet traffic.

Digital networks must support the universal provision of digital services by addressing often stark urban-rural and economic divides. [While the number of internet users worldwide is growing every year, half the globe is still not connected](#). The use is disproportionately greater in high-income areas than in low- and middle-income areas (82% penetration in Europe versus 28% in Africa).

The urban-rural divide has intensified during the COVID-19 outbreak, with a massive shift in broadband usage toward suburban and rural areas, where people are now working, and children learning, from their homes. Even within high-income countries, some groups, such as those in low-income neighborhoods or remote regions, have poorer access to broadband signals and smart phones. And the closure of cafés, restaurants and libraries during lockdown hampered those who rely on free or low-cost public Wi-Fi to perform basic online tasks related to schooling, employment, housing and benefits. The impact on many citizens' lives is significant: for example, [less than a quarter of students in low-income countries had access to remote learning during the lockdown](#).

Improving connectivity is therefore an important priority for governments as they seek to ensure equality of opportunity. In Israel, the Government allocated resources to buy computers for deprived children and established a fund to extend [fiber-optic technology](#) to all parts of the country. The UK Government agreed with telecom companies to lift data caps on broadband plans, waive or defer unpaid broadband bills during the crisis, and offer

lower-cost mobile and landline packages to keep more [people connected](#).

Other governments have sought to broaden access to public Wi-Fi: for example, [some US districts have equipped buses with solar-powered routers and parked them in underserved neighborhoods](#). In India, as more people work and study online due to COVID-19, [the Kerala Government is to provide extra 5G bandwidth, with free access across the state](#).

Even as improvements are made to digital infrastructure and digital literacy, further steps may be needed to ensure citizens everywhere have access to the same quality of public services. Governments will need to provide omnichannel access through both online and offline services (offline channels may include mobile units, community centers and call centers that operate in conjunction with online channels). For example, in October 2020, the French Government launched a network of 856 one-stop branches in mainland France and overseas territories under the brand France Services, allowing citizens to call in to their local branch to get expert support in accessing a range of public services. [More will be opened in due course](#).

Improving digital literacy is another important priority as governments seek to develop citizens' skills and confidence in interacting with digital services. The Scottish Government, for example, launched Connecting Scotland as part of its COVID-19 response, [providing internet access, training and support, and a laptop or tablet to 9,000 people who were not already online and considered at high clinical risk](#).

2. Driving whole-of-government transformation and collaboration

Many of today's front-runners in digital government embarked on their transformation journeys because their leaders linked the changes to an urgent national reform agenda, sustainable development plans or the need for fundamental structural change.

Most central governments have now developed a national digital strategy, often aligned with their national development strategy. These strategies help to ensure that individual departments invest in government-wide outcomes and promote interdepartmental and government-wide collaboration, rather than siloed solutions. The most digitally advanced countries also emphasize e-participation;

Estonia's transformation to a digital state

Estonia's transformation started with a group of reform-minded government leaders on a mission to improve the lives of its citizens. Its advanced digital infrastructure and culture meant that all government functions could operate as normal online when the COVID-19 crisis hit. e-Cabinet meetings had been running since the early 2000s, so government business could continue as normal. All educational materials were digitized by 2020, so there was a seamless shift to teaching and learning online. Patient health records are also digitized, and doctors have access to these, so

were able to identify those most at risk from COVID-19. Automated registries automatically share information across departments, enabling people to apply for and receive social security benefits digitally. Marten Kaevats, Digital Adviser, Estonian Government, said: "We have been preparing for this kind of a crisis for the last 25 years. Estonia did not need to radically change anything, as our infrastructure and processes had been digitized for a while. Estonia was one of the few countries in the world whose government functions could remain entirely intact."

Malta's AI transformation

The Government of Malta introduced a pioneering national AI strategy with the help of EY. The strategy positions Malta as the Ultimate AI Launchpad for local and foreign companies to develop, prototype, test and then scale AI solutions. The program will create use cases and prototypes for AI to be incorporated across each area of government and the public administration. Six pilot projects have been initiated spanning intelligent traffic

management, healthcare, education, customer service, tourism and energy management. The program will also identify private sector industries that can benefit from new technologies and explore policies to stimulate AI investment and adoption, strengthening the education system to attract AI researchers and equip all higher education students with AI skills, as well as creating a national certification framework for ethical and trustworthy AI.



digital inclusion; digital-first, digital-by-default and digital-by-design principles; and the “tell us once” data principle. Increasingly, they are developing specific strategies focused on new technologies, such as AI, blockchain and data analytics.

Many countries have created a central digital service or transformation agency, often led by a chief information officer (CIO) or chief digital officer (CDO), to spearhead their digital agenda and implementation efforts across the whole of the government. These entities coordinate strategy, promote cross-agency collaboration and support digital capability building. In some cases, they send teams into different departments to help with the change process and spread innovative ways of working.

Often, these central government digital units have no mandate over other organizations (such as individual government departments, public service agencies or local governments), which can impede the implementation of the national strategy. Strong direction and support from political leaders are needed. But many

central digital units avoid top-down approaches and rely instead on collaborative working. Some units secure buy-in by involving other organizations in the design of the strategy or by creating a network of champions to help implement the strategy. In Spain, for example, Red.es, the agency responsible for driving the national digital agenda, launched its Connected Schools program to bring super-fast broadband to schools. It was designed and implemented with the involvement of various departments, including the ministries of education and science, [as well as the regional governments that manage most education services](#). Similarly, in New Zealand, the Digital Government Partnership comprises around 60 agency chief executives and senior directors who oversee the development of digital policies, tools and major projects.

As we move more rapidly to a connected world, the center of government must consider how to address the evolving cybersecurity threats that are transforming the risk environment. At a time when we increasingly rely on digital infrastructure for the sharing and storage of

data and the delivery of public services, attacks by state and non-state actors have heightened the vulnerability of those same assets. The pandemic has also raised cybersecurity risks, including email phishing attempts by impersonating governmental public health authorities, and malware websites mimicking official COVID-19-related communications.

This threat has not gone unnoticed by governments around the world. In 2018, for example, the US Federal Government published the National Cyber Strategy and created the Cybersecurity and Infrastructure Security Agency, responsible for coordinating cybersecurity across the country. As many governments are realizing, trust in infrastructure, both physical and digital, is critical to nationhood, and steps must be taken to secure it. It is impossible for governments to prevent every attack; rather, the focus should be on prioritizing the risks relating to key assets and taking action accordingly. Governments need to embed cybersecurity from the beginning and at every stage: strategy, design and operations. They should also collaborate



with other stakeholders, including the private sector, to develop a robust cybersecurity policy framework and a secure ecosystem.

3. Facilitating seamless digital access to services

The center of government plays a crucial role in breaking down silos and achieving interoperability of different systems, databases and registers to provide one-stop access to public services. Common IT platforms can be slotted into the services of any agency, offering a range of applications, such as identity management, payments, messaging and notifications. Denmark, for example, has created a central digital infrastructure that all agencies and municipalities can use. It has several platforms, including NemLog-in (a single sign-on solution), borger.dk (a one-stop portal for citizens to access public services), virk.dk (a business portal), NemKonto (for collecting payments) and Digital Post (for secure email).

Many other governments have been introducing digital payment systems, working with banks or telecom companies to manage fulfillment of requests through e-payments. These have

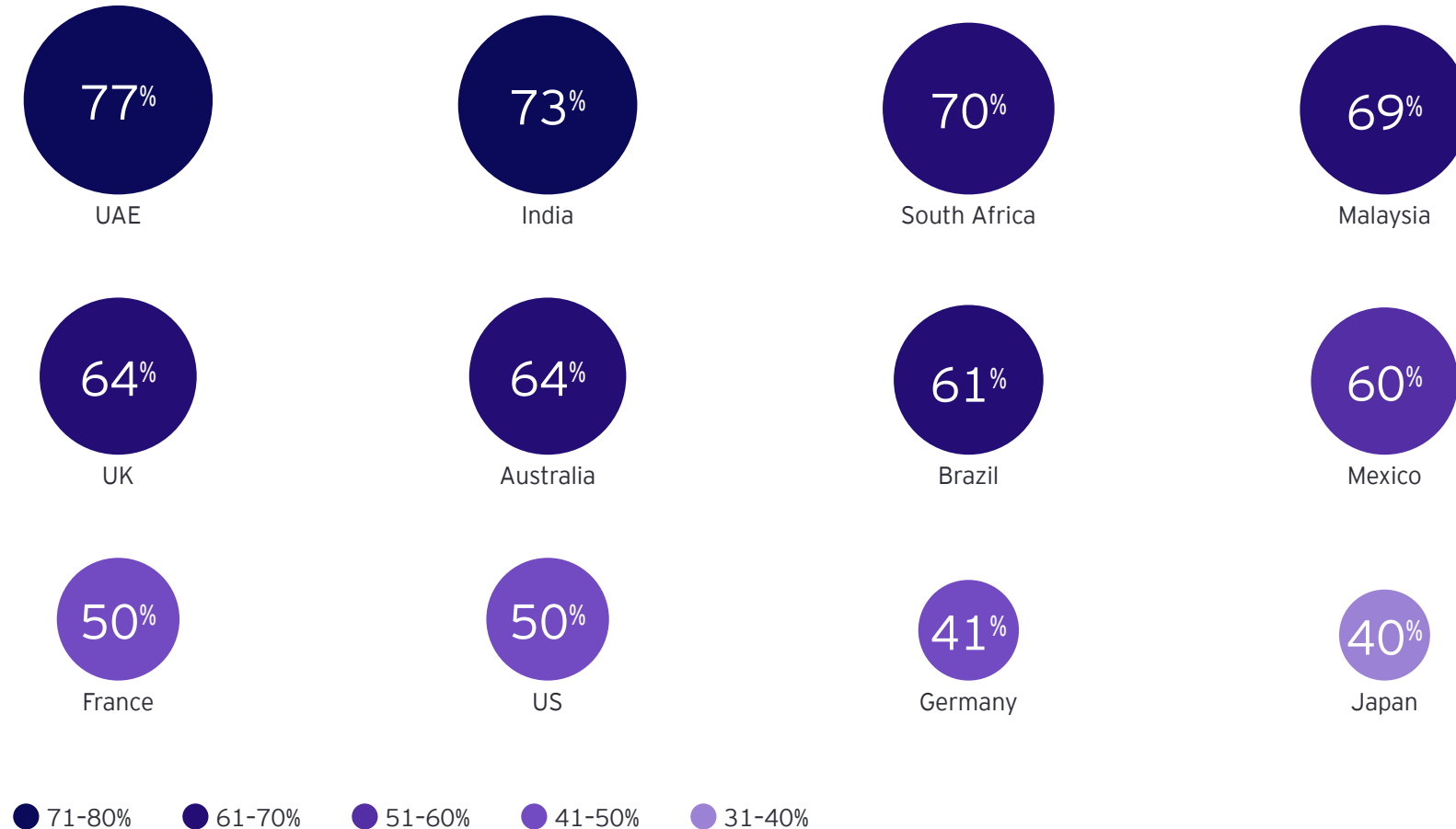
been essential during the COVID-19 crisis as governments have endeavored to get billions of dollars of financial support into the hands of struggling individuals and small businesses. In Pakistan, the Government launched the Ehsaas Emergency Cash Program within just 10 days of lockdown. [Citizens were able to apply for emergency cash transfers \(made available to 12 million households\) directly from their mobile phones.](#) And the Canada Revenue Agency was able to process over 3.5 million unemployment benefit applications in the first week after the launch of the Canada Emergency Response Benefit program. [The whole application and approval processes were digitized, and applicants were able to receive the benefits directly into their bank accounts.](#)

Governments must also create the means for citizens to access services through secure digital user identification and authentication systems. All the leading e-government countries have created such systems, [underpinned by a legal and regulatory framework that establishes rules, standards and guidelines.](#) Many countries recorded an increase in the use of digital IDs and digital signatures during the pandemic, due to spikes in applications for unemployment

and other benefits. Different countries deploy different credentials to authenticate individuals, including a unique ID number (India), a mobile ID (the UAE, Finland and Estonia), an e-ID card (Spain and Portugal) and a digital identity certificate that enables parties to sign legal documents electronically (Denmark). The sophistication of ID systems is constantly evolving as new technologies, regulations and standards come into play. The Government of Singapore, for example, has launched a facial verification system that confirms citizens' identities in seconds, with access via dedicated public booths or on personal mobiles, tablets and computers.

As national digital ID systems are rolled out, it is essential for governments to communicate clearly with citizens about benefits, and to address any concerns around privacy and security. The EY Connected Citizen survey shows that the majority of citizens in many of the countries surveyed are comfortable with having a single digital ID, but more could be done to gain people's buy-in in France, Germany, the US and Japan.

Figure 4. How comfortable are you with having a single digital ID for every time you use a government service, that includes your details and the history of government service use?



Source: EY Connected Citizen Survey 2020, EYGM Limited 2020.

4. Setting and enforcing policies, regulations and standards

As new technologies start to permeate all aspects of people's lives, governments have a core responsibility to safeguard citizens' basic rights, ensure fairness and protect against risks.

The center of government must set and enforce appropriate laws, regulations, policies, guidelines and standards that allow innovation to flourish, while managing potential risks in the deployment and application of technologies. Such frameworks are critical to enabling digital identity management and authentication, simplifying transactions, governing access to data, facilitating data sharing, and protecting data privacy and security. For example, re-engineering back-office business processes to provide personalized services online may call for an electronic signature policy, as well as new regulations on how agencies handle private data provided by individuals as part of those transactions.

Interoperability standards are critical for enabling the seamless exchange of data across different systems. The Australian Government

How regulatory reform enabled transformation in Biscay

In Spain, Biscay's provincial government set up the BiscayTIK portal as a shared online platform for 108 municipalities to deliver their services online. The project raised a myriad of complex legal issues that required new regulations: for example, to permit certain types of services to be transacted online or determine when and how to use an electronic signature. Laws relating to areas such as privacy, transparency, public contracting and accounting had to be written or amended. The resulting platform delivers services online to more than 1.2 million citizens.

passed legislation in 2018 on data governance, making it mandatory for all government agencies to use open standards. Meanwhile, Ireland's Data Sharing and Governance Act 2019 lays out guidelines and policies governing the format, management, retention and security of data. Some governments have established interoperability standards for specific platforms, such as payment systems. In Kenya, for instance, the National Payment System Act requires all service providers to use systems that can work with other domestic and international payment systems.

Governments are also instituting legal and policy frameworks that give people a level of active control over their data and the right to know what is being done with it. In Estonia, the right to the protection of personal data and the right to public information have been written into the constitution. [Estonians can choose how to share information with government bodies and see exactly which public servants are using their data and for what purpose, through citizens' data dashboards.](#)

The regulatory environment must also build trust in rapidly evolving new technologies. The New Zealand Government, for example,

has developed an "algorithm charter" to protect against AI discrimination and biases. It requires agencies to publish information about how data is collected and stored, and use tools and processes to ensure that privacy, ethics and human rights considerations are integrated as part of algorithm development and procurement; [it also includes a pledge to explain how significant decisions are informed by algorithms.](#) Organizations that embrace these good practices in ethical design and governance will be well equipped to mitigate risks, safeguard against harmful outcomes and, most importantly, build the trust that is needed to maximize the potential benefits of data.

While developers of AI cannot predict exactly how these tools will learn and evolve, regulators need to consider questions such as who is liable in the case of an accident involving an autonomous vehicle, and how medical negligence laws will apply to wrong clinical diagnoses made using AI. Smart and agile regulatory practices will be needed to address such issues. Government regulators will need to be educated about the potential of emerging technologies and the possible trade-offs, using foresight methods to identify possible futures. They will need to build their own technical

expertise, rather than relying on stakeholders with outside interests. And there will need to be a move away from individual regulatory action toward a more collaborative, coordinated and systematic approach: for example, working with businesses to adopt ethical standards in the design of AI systems.

Governments must include public engagement in their regulation-setting activities, given the ethical issues surrounding the use of algorithms in political decision-making and targeting of services. Building partnerships with international regulators to achieve common standards could also be a useful strategy.

Furthermore, governments must be ready to adapt regulation, when needed, to take account of changing circumstances. In response to COVID-19, there has been a total revamping of regulations in health testing, education certifications and data privacy. The need for greater testing and monitoring of the population for signs of disease transmission was used to justify greater surveillance powers for many governments as they rolled out test-and-trace systems. In the US, Congress changed provisions to allow the use of telemedicine services for all Medicare beneficiaries. And as public

sector employees rapidly shifted to remote working during the pandemic, governments adapted regulations to accommodate new working arrangements: for example, the Indian Government developed a draft framework and a new set of standard operating procedures to ensure seamless functioning as [public employees worked from home](#).

5. Securing the right knowledge and talent

Central governments have an important role in promoting knowledge-sharing across government departments, both nationally and internationally. The Digital Nations (formerly D9 group of nations) – the UK, Estonia, South Korea, Israel, New Zealand, Canada, Uruguay, Mexico and Portugal – meets regularly to disseminate best practice and develop solutions to common stumbling blocks. Estonia is planning to establish a Global Digital Society Fund to export its e-governance solutions on a global scale. And the UK's Government Digital Service and Singapore's GovTech Agency have signed an agreement to strengthen collaboration between the agencies to improve the design and delivery of digital government services.

High-performing governments recognize the need to develop their workforce's digital skills and capabilities in order to capitalize on the potential of technological advances. In the UK, the Topol Review explored how new technologies are likely to change the roles and functions of National Health Service workers over the next two decades, and [what the implications are for their education, training and development](#).

New digital training academies and centers of excellence are helping to build specialist technical skills (such as software development and systems architecture), as well as the skills that support transformation (such as data science, systems design, digital marketing, agile methodologies and user experience research). Sometimes, this is done in partnership with universities and private businesses.

Exchange programs between the public and private sector present another way to build government capability. Allowing people to move more fluidly between organizations and projects gives governments the benefit of development and capacity while helping to accelerate the necessary cultural shift. In Australia, Data61,

part of Australia's national science agency, is helping create an ecosystem of data talent, through placements of public sector employees in the private sector. In the US, the Presidential Innovation Fellows program pairs innovators in government with their counterparts from the private sector, nonprofits and academia.

In future, every public servant will need a baseline level of digital literacy. The UK's Digital Academy has trained 10,000 civil servants in digital skills since it was formed in 2014. And the Nepalese Government launched the Data Literacy Program, which aims to drive stronger data-driven decision-making across the workforce. Its 100-hour, customizable training course supports both technical skills-building and a culture of data use among Nepalese civil servants. Programs such as these help to raise the status of digital and data literacy in government.

The public sector faces challenges in attracting and retaining staff with the right skills, given that it must compete with the private sector for the best talent. A lack of funding means public sector organizations are unable to offer the large salaries that private organizations can. Some governments are responding proactively

by ramping up their recruitment and talent management capabilities: for example, developing forecasting capacities to predict what skills might be needed in the future. Staff management practices must also change – both to help digital professionals adapt to working in the unique environment of public services and to enable effective remote working.

As governments build a more dynamic environment, they will attract younger workers in search of purposeful roles, where they can make a difference to society. Public sector organizations need to promote this, and place greater emphasis on finding candidates who are the right cultural fit and share the organization's vision and values.

Recruiting inspirational, highly regarded leaders will help to attract the best talent, as will the creation of a strong, centrally led digital profession that provides a clear route for progression. This means developing a defined career path for new roles: for example, [the Australian Public Service is establishing digital and data professions to build capability and support career development](#).



Part 2

The role of individual government departments, agencies and local governments

While central government policy-makers create the national digital strategy and provide the right enabling environment, it falls to individual government departments, agencies and local government to make the necessary changes on the ground. The road map for digital transformation can be built around the following 10 actions:

1. Align digital plans with overall vision and purpose

Transformation starts with a consideration of the organization's core purpose and a vision of desired outcomes. The vision should incorporate a shared sense of what the desirable future looks like, in clear and measurable terms, and to which all stakeholders, including suppliers and partners, are committed. The organization must then assess the role that digital technologies can play in making this vision a reality. Regular scanning of technology developments will be vital to the planning process.

Some governments have started by analyzing their biggest challenges, which enables them to identify and prioritize projects for early digitalization. COVID-19 has focused minds on specific urgent issues and led to a much more rapid adoption of digital solutions. Many governments have swiftly reprioritized and accelerated their portfolio of digital projects by assessing the direct or indirect contribution of each to addressing COVID-19 challenges, such as moving staff to remote working, providing financial support to individuals and businesses,

understanding the needs of citizens in real time, and launching digital portals or virtual care platforms to reduce the need for physical visits to offices.

Once project priorities have been decided, a digital strategy and implementation plan is needed. This should be fully aligned with the organization's overall strategy, purpose and vision. It should define the roles and organizational structure required to develop and scale the use of technology; assess, monitor and facilitate mitigation of any risks relating to technology and data (including issues surrounding data integrity, security and privacy protection, and ethical and legal ramifications of using new technologies); and establish a mechanism to continually evaluate progress and measure benefits.

The strategy must permeate the entire organization to remove organizational siloes and hierarchies, and facilitate both interdepartmental and external collaboration. Implementation plans should be shared with different stakeholder groups so they understand how the changes will affect them and what part they are expected to play.

2. Gain support from senior leaders

The most successful digital transformation programs are led or supported by senior internal sponsors and, sometimes, political leaders, who give the implementation team a strong mandate for change, as well as visible support. Senior leaders who understand and are passionate about the potential of digital transformation can elevate its importance across the organization. They need to be strong and charismatic individuals who understand the transformational benefits, and possess the vision and acumen needed to lead the transition. They must also have the commitment, credibility, influence and capacity to mobilize change across the organization.

Indeed, effective leaders are essential at all levels in order to empower others and involve the whole organization in the transformation effort. Dedicated executives, such as a chief data or analytics officer, or chief data scientist, may be appointed to lead specific initiatives and show how these can solve operational challenges.

Creating a digital strategy for the UNDP

The United Nations Development Programme (UNDP) works to improve the lives of the world's poorest people. EY teams helped the organization develop and implement a customized digital strategy, enabling it to transform on a global scale. As a result, the UNDP created the new role of chief digital officer, remodeled its go-to-market approach and set up innovation labs in 60 countries. It is now more agile and efficient, and has strengthened its reputation as the world's most impactful development partner.



In a world where change is constant and the external environment is rapidly evolving, a new set of leadership capabilities are emerging. Leaders, from senior executives to frontline managers, need creativity, curiosity and adaptability to pilot their organizations through continuing change.

3. Create appropriate organizational and governance structures

Public sector bodies' existing organizational structures may not be equipped to drive digital transformation. Individual departments or teams may lack the expertise, space, freedom or flexibility to explore different ways of doing things, as well as the latitude to learn by trial and error.

To overcome the limitations of existing organizational structures, government bodies should be prepared to create new entities specifically designed for the task in hand. These entities may drive the entire digital transformation process, or they may be responsible for particular elements: for example, in Russia, the Federal Taxation Service (FTS) took a novel step when building an online

delivery platform for taxpayers. It formed an outsourcing company that could provide it with IT and R&D services, and specialists, without having to go through slow and cumbersome internal recruitment processes or source services from external suppliers. This arrangement gave it greater control over the work undertaken and assigned full ownership of any new tools to the FTS.

In some cases, these dedicated entities operate as a centralized unit, with staff working on specific projects across the wider organization. Others have adopted a decentralized approach, with staff integrated into, or co-located with, specific departments. In both models, staff work with stakeholders to identify process, system or policy duplication, and develop solutions that simplify tasks or create new value.

Governance frameworks must seek to break down functional siloes so that all relevant parts of the organization operate in harmony throughout the journey. The most effective programs involve senior stakeholders from across the organization – including strategy, operations, IT, finance, HR, procurement and communications – who can provide

program direction, oversight and shared accountability. There needs to be clarity on where responsibilities lie for digitally enabled services, together with avenues for redress (including by citizens) when things go wrong.

The COVID-19 pandemic has shown the importance of adaptable governance frameworks and decision-making processes. In some cases, emergency arrangements have been put in place to ensure rapid responses: for example, by adapting existing structures or creating new temporary structures tasked solely with crisis management. These have proved crucial for implementing rapid digital solutions and maintaining continuity of service delivery.

4. Design better citizen experiences

Successful government digital transformation projects adopt the private sector's customer-centric approach to designing and delivering services. They deploy design thinking, customer experience labs and data analytics to deepen their understanding of citizens' needs, attitudes and behaviors. They then use this insight to build services around real user needs, rather than around traditional government



structures. By mapping the end-to-end citizen journey, they can develop digital solutions that make each touchpoint better, faster and more efficient. Optimizing the journey requires the identification of every technology, process and capability needed to digitize the entire chain of activities, and eliminating any redundant processes along the way. In the most progressive organizations, there is a continuous cycle of understanding and adapting to citizens' needs: users generate data, which is fed back to refine and iterate again.

In some cases, creating a single end-to-end citizen experience also requires coordination across multiple departments, which must work in unison to deliver a seamless experience. Agencies recognize and authenticate citizens based on their digital ID, and integrated platforms collate and analyze data from multiple sources to provide a complete view of the citizen. The result: the citizen is served effectively at every point of contact.

Increasingly, citizens want governments to proactively provide relevant services and information without them having to request

the service or fill out multiple forms. In this model, services are offered to citizens when they reach key milestones, such as getting married, entering the workforce or retiring. One example is Singapore's LifeSG mobile app, which provides a one-stop suite of more than 40 services from different government agencies. These include registering the birth of a child and topping up pensions. A personalized dashboard makes recommendations based on user profiles (e.g., active aging for the elderly). The app also includes upcoming medical and school appointments, as well as reminders for users to complete important applications, such as [primary school registrations](#).

In future, governments will move toward more proactive, and even predictive, service delivery, where they are able to trigger a timely service or intervention – in some cases, preventing problems before they arise. This step requires that government departments collect and share information about citizens without citizens' active involvement.

Helping those most at risk from COVID-19

EY partnered with Xantura to support Barking and Dagenham Council in collating and analyzing data to help identify which of its residents were most at risk from COVID-19. EY teams developed an interactive dashboard that integrates data drawn from five core service areas (housing, schools, revenues and benefits, adults' services and children's services) in order to pinpoint the most vulnerable individuals. In-built case management functionality then enables cases to be assigned to teams and interventions to be tracked.



5. Adapt culture and working practices

Digital transformation doesn't depend on technology alone. It requires a change of culture, behavior, incentives and performance management across the organization. Progressive governments are tackling this through various measures, from formal change management programs to the creation of teams or centers of excellence that help to disseminate digital initiatives.

Change leaders must work hard to gain employee buy-in by communicating the case for change and the anticipated benefits for staff. This engagement needs to start early and continue throughout the implementation process across all stakeholder groups. The change plan should communicate the vision and identify and tackle any barriers that may hinder progress. For example, it can instill a sense of ownership and responsibility among frontline workers by actively involving them in planning the change, designing solutions and guiding implementation.

Sufficient time and space are needed to allow people to adapt to new digital ways of working, including new processes and workflows. Digital users who lack in-depth knowledge should be trained to make effective use of these technologies in their day-to-day work. The speedy adoption of unfamiliar digital tools and processes in response to COVID-19 (for example, to accommodate remote working and service delivery) has shown that culture and working practices can adapt rapidly when required. Almost overnight, staff have had to gain a level of comfort with digital tools that previously seemed years away. The Philippines' Civil Service Commission conducted an employee survey that found that, despite the upheaval caused by the rapid move to alternative working arrangements, government staff had been more productive during lockdown than previously. Improvements were most marked in agencies that had a good communication system in place, that were collaborative by nature, and [whose managers offered high levels of trust and support](#).

Facilitating a rapid shift to remote working in Australia

The Australian Government launched an AU\$130b stimulus package to protect jobs and help businesses stay afloat during the pandemic. Two of its agencies, Services Australia and the Australian Taxation Office, were tasked with administering the aid, but were overwhelmed with demand while also having to shift their staff to remote working. EY facilitated a rapid transition and helped to successfully onboard 12,000 additional staff. Under the new model, information sharing and collaboration have actually improved.

6. Build a flexible IT infrastructure

If digital transformation is to succeed, a flexible IT infrastructure is needed, based on a service-oriented architecture that enables interoperability and information sharing. This approach is more cost-effective and allows systems to be reconfigured to meet evolving requirements.

Many organizations are attempting to integrate disparate IT infrastructure into a single system that will be shared between different processes and, potentially, with other bodies. This will provide a single view of the citizens that, in turn, will help organizations to better meet their needs, particularly when complex problems require the coordinated efforts of multiple agencies and, sometimes, private or nonprofit sector partners. However, managing this information exchange across numerous legacy systems is not always an easy task. Application programming interfaces (APIs), software intermediaries that allow two applications to talk to each other, can provide a possible solution.

During the pandemic, APIs have played a vital role in public sector responses. For example, they can easily and securely unlock contact-tracing data and integrate it with other applications and data sources, providing leaders with access to complete and accurate information in real time. As demand for social services and financial assistance increases, APIs can play a key role in helping to integrate eligibility systems, streamline and automate approval processes, and extract the necessary data to give applicants and case managers a complete view of what benefits and services are available. [By incorporating newer technologies such as chatbots, APIs help citizens to self-serve, getting faster resolution for queries and gaining timely access to all the benefits they are entitled to.](#)

The COVID-19 pandemic has also accelerated adoption of cloud technologies. Many government departments had previously been reluctant to use cloud technology due to security concerns. But it has played a critical role in enabling the rapid transition to remote working and scaling up government services

to meet surging demand. Rather than having to buy and maintain their own expensive data centers and servers, government organizations can quickly access resources on demand, helping drive down costs and speed up innovation. During the pandemic, cloud technology has helped governments provide urgent services, from crisis hotlines to remote learning: for example, [an Italian municipality in Lombardy was able to build a cloud-based center in less than a week to route COVID-19-related calls to its staff.](#) Meanwhile, the US state of Arkansas quickly ramped up its pandemic unemployment assistance program via a cloud deployment and used cloud to support employees' [return to work.](#)

7. Adopt an agile approach to delivery

Many government organizations are adopting new approaches to improve project delivery and ultimately realize value faster. A key element of this is agile development. Agile approaches divide a multiyear complex program into shorter iterations, enabling organizations to see their

vision evolve swiftly into a tangible product and providing the chance to make adjustments along the way. Multidisciplinary teams work together to manage any risk or uncertainty.

Launching new solutions by piloting in one particular area can also help test the concept of a new digital program. A successful pilot generates buy-in from executives as well as from the staff who will implement the program. Once a pilot has been completed, the results indicate the likely return on investment and the benefits of rolling out the solution more widely.

Agile development is more important than ever as governments manage their COVID-19 responses. In normal times, digital projects can take months, if not years, to come to fruition. During the pandemic, the timeframe has been dramatically compressed. Some organizations reported that solutions were started from scratch on a Monday and pushed to production by Friday of the same week, without any significant disruption to workload. Many organizations have gained speed and agility they would have thought impossible before the pandemic.



In many cases, the move to implement or scale technologies was supported by the speeding up of internal decision-making processes and collaboration. The UK's Government Digital Service teamed up with the Government Security Group and the National Cyber Security Centre to issue guidelines for secure video collaboration, [helping to facilitate the first ever virtual Cabinet meeting](#). And in the province of Alberta, Canada, the Innovation and Digital Solutions team within Alberta Health Services came up with a rapid solution to stop the nonemergency health care information service being overwhelmed with phone calls at the outset of the pandemic. In just two days, they interviewed health professionals, built a prototype self-assessment tool and conducted user testing. [On the third day, they launched the province's COVID-19 self-assessment tool, which had 300,000 hits in the first 24 hours, rising to more than 3 million](#). The code for the tool was later shared on GitHub, and the tool has since been adopted by other health care organizations.

8. Build specialist digital skills and capabilities

Individual government departments and agencies must invest in dedicated teams of skilled digital and technology professionals who can help define needs and deliver on the digital transformation strategy. This is one of the most challenging areas for governments, as many of these capabilities – including data scientists, cloud architects, user-centered designers and cybersecurity experts – are in short supply in the public sector. A greater emphasis on workforce planning, training and capability building, and recruitment programs to attract top talent, is essential to help organizations adapt to future requirements.

While technical specialists are vital, change at scale is not possible without major shifts across the whole organization. In order to optimize digital value, all employees need to strengthen their digital literacy and cultivate new attributes: for example, a willingness to collaborate and an appetite for continuous learning.

As in other areas, COVID-19 has been a catalyst for rapid upskilling. For example, frontline workers have been trained in remote working and collaboration tools, and have had to adapt to new service delivery approaches, such as virtual consultations for case workers. The pandemic has also changed the dynamics of client needs, requiring care workers to acquire new skills and adjust the support they offer. More progressive agencies have proactively analyzed future workforce requirements and risks (due to infection rates among the workforce and expected demand for services) and developed a range of contingency and capability building plans.

9. Encourage innovation and experimentation

Governments need to encourage an innovation-oriented and entrepreneurial culture that permits experimentation and risk-taking. Staff throughout the organization should be empowered to challenge the status quo, suggest new ideas and have the time and space to experiment. In Canada, for example, in 2015,

the Prime Minister instructed all ministers to ensure employees devote a fixed percentage of their time to trialing new approaches and measuring the impact. This learning-by-doing approach and experimentation works have successfully matched experts with departmental teams wishing to innovate.

Agencies also need to instill in employees the motivation to identify ways to deliver better outcomes for citizens. Incentives such as reward and recognition programs are useful in creating that nudge. The Singapore Government has a Transformation Office with an Innovation Lab that runs training sessions and “makeathons,” which lets public servants collaborate with citizens to identify challenges and user test potential solutions. The Government also holds the Public Sector Transformation Awards, an annual innovation competition designed to create a culture of recognition and celebration around public sector innovation.

Some agencies cultivate an experimental culture through new structures, such as incubators and accelerators, and the use of

internal hackathons or skunkworks – where small, loosely structured groups work on radical new projects. They may begin by launching a minimum viable product (MVP) – a bare-bones version of their product or service – and deploy practices such as prototyping, piloting and carrying out phased introductions of new services. They are willing to embrace trial and error, flexible enough to change direction when things go awry, and prepared to tolerate uncertainty rather than nailing down every aspect of the project in advance.

Obstacles that previously prevented organizations from innovating rarely related to the technology itself; instead, they were tied to bureaucracy and a reluctance to disrupt existing ways of working. The COVID-19 crisis has created a unique opportunity for digital professionals to apply creative thinking beyond the realms of comfort for most governments. It has helped to shift the balance of risk and reward, enabling digital innovators to get rapid traction on potential new solutions and to pursue these without fear of failure.

10. Monitor and evaluate progress

It is important for organizations to continually monitor and evaluate the impact of their digital programs. Public sector leaders should set realistic milestones and timelines for the transformation program and develop tangible performance measures to demonstrate both short- and long-term results. To increase buy-in and momentum, the successful results of early transformation efforts should be widely communicated.

Gathering performance data on a regular basis provides insights that can influence further planning and decision-making, helping organizations to determine whether they are moving in the right direction. For instance, organizations can invest in experience measurement tools to leverage usage statistics and monitor citizen satisfaction, often in real time. This helps create a continuous loop to drive improvements in response to user feedback.



It is equally important to share feedback with citizens to let users know their voices are being heard and to build trust in digital government. The latest UN E-Government Survey shows that 124 of the 193 Member States have a “leave feedback” function in their national portals, while 125 Member States allow people to file a complaint about service delivery.

Research carried out by the EY organization and INSEAD shows that those governments that are most successful at digital transformation don’t assume there is an end point on the horizon. Instead, they view transformation as a continual process during which new ideas and possibilities evolve. In the UAE, for example, a new e-claims health portal proved so effective at supporting the governance efforts of the health authority in Abu Dhabi, and in managing health care data generally, that its remit was expanded to support wider objectives. It is now an integral component in the Abu Dhabi Healthcare Strategic Plan, providing a core data source to support evidence-based policy-making.

A dark, atmospheric photograph of two hikers standing on a snowy mountain ridge at night. The hiker on the left is wearing a yellow jacket and the one on the right is wearing a green jacket. Both are holding flashlights that cast a bright beam of light onto the snow in front of them. The background shows dark, jagged mountain peaks under a starry night sky.

Part 3

The role of the wider ecosystem

In an age of digital disruption and convergence, governments that act alone are no longer able to deliver the social and economic outcomes that citizens expect. The most progressive governments are proactive in harnessing the knowledge and resources of the wider ecosystem, including start-ups, SMEs, entrepreneurs, academia, civil society and citizens themselves, to source innovative digital solutions to public policy challenges. Their innovation agenda actively seeks out collaborations with third parties. Since the public purse will be even more constrained post-pandemic, these partnerships will be vital to help finance government's capacity for service improvement.

1. Consult with stakeholders on new service design

In some cases, the launch of new government digital products and services relies on the participation or contribution of partners, end users or other external stakeholders. The EY/INSEAD research revealed that successful digital transformation teams carry out genuine consultations to get the engagement of other stakeholders that may be vital to the viability of the digital program. In Italy, for example, the online platform pagoPA was created to enable citizens to make payments to any public entity in their country. The implementation team had to persuade a large and diverse group of federal, regional and municipal entities to modify their individual accounting and IT systems to interface with the new platform. Through open dialogue, the team was able to address a range of technical and security issues, develop tailored solutions and win over payment providers by showing that they would gain access to the large portion of payments previously conducted through post offices.

Meanwhile, in the UAE, a project to introduce an online e-claims platform by the Health Authority of Abu Dhabi (HAAD) also excelled at collaborating with external partners. HAAD invited into its fold external stakeholders, such as public hospitals and insurers, that shared its interest in fixing the country's health insurance system, so that they could contribute to the design of the platform. This collective approach facilitated the rapid identification of the systemic issues that had led to a two-year backlog in the processing of paper-based claims. The new platform quickly cleared the backlog and now handles more than 25 million claims annually.

2. Participate in innovation networks

Governments can foster innovation by building or participating in networks that bring together businesses, entrepreneurs, start-ups, finance companies, academics and civil society organizations. Through effective collaboration, they can co-develop solutions to strengthen competitiveness, improve economic outcomes and raise living standards. This symbiotic

relationship benefits the private and third sectors through public funding, tax credits, R&D investments and policies that make it easier to operate, while at the same time giving governments access to new technologies, digital talent and innovative cross-sector solutions.

In Ontario, Canada, the Communitech hub brings together 1,400 players, from start-ups and global brands to government agencies, academic institutions, tech incubators and accelerators. In 2017, the Ontario Digital Service Lab was launched within the hub to work on user research for the Government. Its aim is to make it easier for citizens to access services online, including health cards, drivers' licenses and student loans.

Meanwhile, the Israeli Government supports the development of a thriving innovation ecosystem through various programs operated by the Israel Innovation Authority, an independent publicly funded agency. It provides a variety of practical tools and funding platforms aimed at a diverse range of actors – from entrepreneurs to academic institutions and global corporations.

One of its units is the Societal Challenges Division, [which focuses on improving the effectiveness and quality of public services through technological innovation.](#)

Similarly, Singapore hosts an ecosystem of start-ups and large corporations that are working together to find solutions to the most pressing global challenges. For example, its Startup SG Network, an initiative of Enterprise Singapore, connects a growing community of start-ups, investors, accelerators and incubators. [The Government supports this push for innovation, adopting a “sandbox” approach that allows innovators, universities and companies to trial new products, while offering a cushion against potential failures.](#)

3. Adopt new business models and GovTech solutions

Governments are increasingly looking to harness emerging and disruptive technology solutions developed by various players – notably start-ups and scale-ups, but also medium-sized and large enterprises,

universities, nonprofits, social enterprises and citizens themselves – to improve the efficiency and effectiveness of public services.

The fast-growing “GovTech” (or “CivTech”) market provides opportunities for creative new digital solutions across the entire public sector value chain, from policy-making through to service delivery. The Scottish Government, for example, has set up an accelerator program, CivTech®, to match technology innovators with public sector organizations that are looking to create digital solutions to civic challenges. With four successful rounds delivered, CivTech 5.0 launched in June 2020, with a focus on COVID-19-related challenges.

Unique collaboration builds contact-tracing platform

EY was at the heart of a unique humanitarian effort to reduce the spread of COVID-19 through the development and launch of a mobile digital contact-tracing platform. The collaboration was led by MIT and supported by Harvard, Mayo Clinic and public health agencies. The platform has two strands: first, for individuals, Safe Paths matches GPS trails on mobile devices with the anonymized location history of infected people, allowing individuals to check if they have been exposed to COVID-19. Second, for public health officials and governments, Safe Places supports contact-tracing efforts and draws on an individual’s collective data to provide insight on the spread of COVID-19, identify hot spots and activate mitigation plans. A nonprofit entity has been founded to bring the platform to countries across the world. Inputs by the EY organization, which included cybersecurity and AI, was provided pro bono.

New partnerships are an effective way for governments to meet people’s needs and soften the impact of the pandemic. For example, many have partnered with health tech suppliers on a range of health care projects, including track-and-trace apps; analytics to predict critical care capacity, equipment and staffing needs; and telehealth consultations. And EdTech providers have also come forward with solutions – in many cases, offering them for free – to help education establishments that were forced to move to remote learning.

Government agencies are also partnering or contracting with third parties to harness new technology-enabled business models. These alternative delivery models open up opportunities for other organizations to assume a role in the public sector value chain, by providing both the innovation required to transform existing services and the cost savings to make it viable.

During the pandemic, a broader range of organizations have stepped forward to offer support to governments. Some agencies and local governments have publicized the challenges they are facing, asking for help and offering rewards for the best solutions. Others have developed digital “match-making” platforms and tools that are able to efficiently connect supply and demand: for example, by putting vulnerable people in touch with sources of community support. In London, Camden Council is developing a digital platform, Beacon, that will provide a single view of all COVID-19- related needs. This will enable the council and its local partners to quickly coordinate and respond to requests for food and medical supplies.

EY app manages surges in demand for financial support in the US

Providing financial relief to citizens and local businesses has been at the center of most government’s response strategies. In multiple Florida counties, officials turned to EY for help with the efficient disbursement of public funds. The EY app provided an intuitive and secure user interface, together with safeguards for personal data and a toll-free number connected to a call center staffed by EY professionals. The counties were able to manage surges in demand, thanks to prompt application processing and real-time reporting.

Governments should look to build on this momentum by adopting this kind of approach in the long term. This would be a positive shift, helping local governments engage with a broader range of suppliers in future. Given the specialist expertise and solutions that exist outside of the public sector, governments should hold on to services where they have a core capability or responsibility, while opening up other services to new providers, if they can deliver them more effectively and efficiently.

4. Modernize procurement practices

The acceleration in the uptake of GovTech solutions will require changes to the established way governments procure technology and services. One option is to create a single, user-centric “digital marketplace” to simplify access to public tenders. Another is to adopt new procurement practices (e.g., common standards for subcontracting) to help departments find more innovative solutions to support their transformation efforts.

These cross-government digital procurement frameworks offer several benefits. They diversify the digital supplier base by reducing reliance on larger contractors and extending access to a wider range of companies. They enable governments to negotiate better contract terms and improve value for money by incentivizing competition. And they foster more innovative solutions from nontraditional suppliers, including SMEs and start-ups. For SMEs, e-procurement reduces barriers to entry and creates attractive, new opportunities for companies not previously engaged in government contract work. It also plays an important role in reducing corruption and improving transparency and accountability.

In the UK, for example, the Government Digital Service has created an online platform allowing public sector bodies to access the skills and services they need, while providing digital innovators with an opportunity to develop their ideas in a way that directly benefits the Government. The Government’s procurement

agency, the Crown Commercial Service, has also introduced Spark, a technology innovation marketplace that allows buyers to purchase innovative new technologies through a dynamic purchasing system (DPS). This opens up the marketplace to an unlimited number of suppliers and has an inbuilt matrix to help customers and suppliers match capabilities to needs.

Other countries are following suit. In Australia, the South Australian Government’s new Go2Gov program invites start-ups and early stage businesses to pitch novel solutions to public sector challenges, [with scope to extend service delivery beyond the program and become an ongoing provider to state government agencies](#). And the New South Wales Government recently established an ICT/Digital Sovereign Procurement Taskforce charged with making it easier for local tech companies to get access to government contracts. [It will create appropriate policies to ensure procurement dollars end up where they can have the most impact.](#)

5. Build data exchange platforms

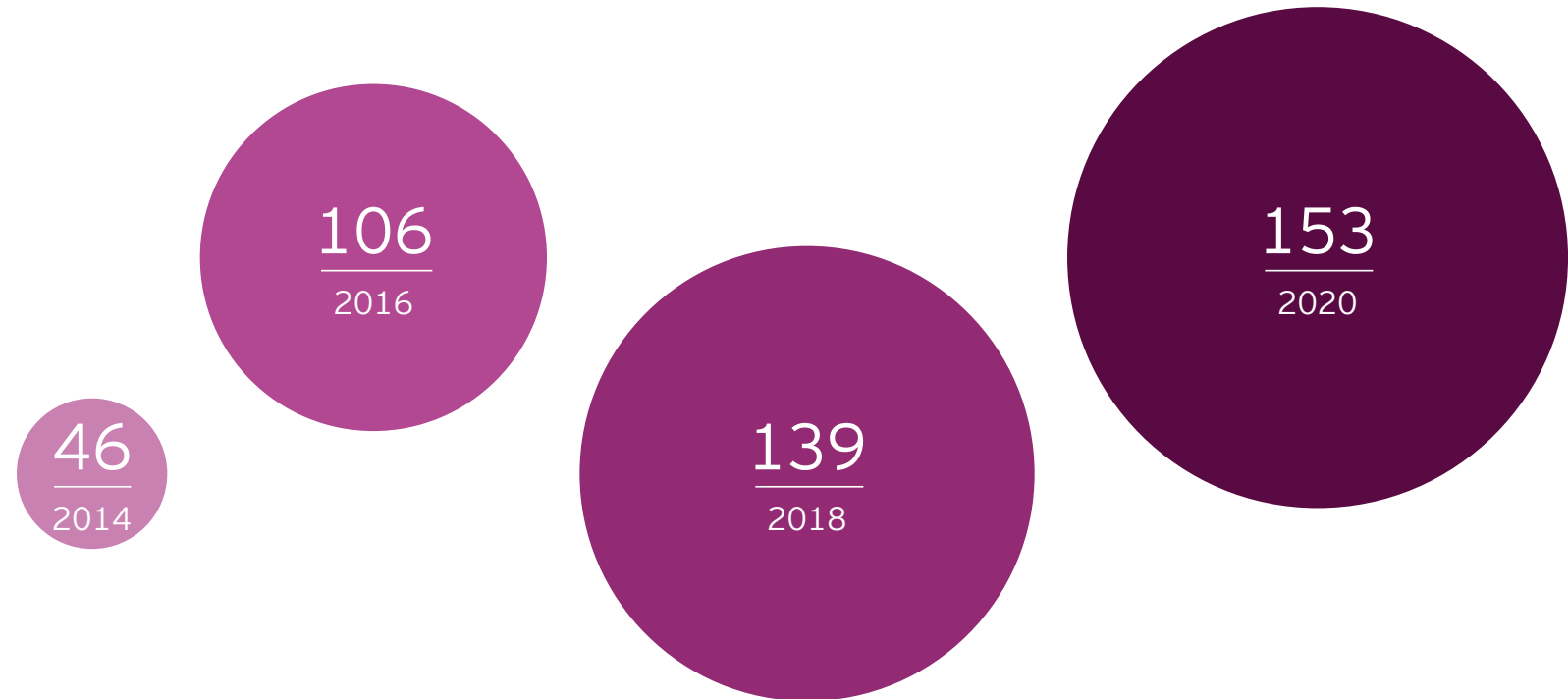
Most governments and public authorities across the world have launched open data initiatives and set up data exchange platforms. The focus is on making data widely available to third parties, including citizens, to help develop solutions to complex problems, and to create greater transparency and accountability. It is also helping to improve service delivery across a range of areas, such as education, health, environment, social protection and finance. Open data can be considered as such when information is released in a machine-readable format, there are no legal barriers to access, and the information is free of charge and available in widespread type or open standard files.

Data exchange platforms bring together vast quantities of this information from numerous sources, including censuses and surveys, government departments and other resources such as those compiled by academia, civil society and the private sector. People and

organizations outside of government, including businesses, nonprofits and civil society organizations, can download, analyze and combine this data with other information to create public value.

The UN E-Government Survey shows that the number of countries with open government data (OGD) portals has grown consistently over the last few years, from just 46 in 2014 (24%) to 153 in 2020 (80%). Mexico, for example, has a National Open Data Policy and has set up datos.gob.mx as its central open data portal, populating it with data from both central and local public sector institutions. [This has powered projects such as Retos Públicos and Red México Abierto, which aid public and private sector collaborations.](#)

Figure 5. Number of countries that have instituted open government data portals or catalogues in 2014, 2016, 2018 and 2020



Source: *EY Connected Citizen Survey 2020*, EYGM Limited 2020.



Cities are also forming their own data hubs to address municipal challenges and spur economic growth and sustainable urbanization. For example, the city of Sydney's data hub grants access to multiple datasets in areas such as environment, planning, transport, sustainability and the economy, as well as historical data. [Potential applications include research-based mapping, dashboards, location-based applications and predictive analytics.](#)

6. Engage citizens in co-production

Governments have traditionally been slow to engage citizens and stakeholders in the development of new services, in contrast to private sector companies. But citizens have a major role to play as a source of fresh ideas to reinvigorate the public sector.

Several governments have created digital platforms for public consultation on government policies and budget priorities, giving citizens more of a say in the day-to-day decisions that affect their lives. The most adventurous governments actively engage citizens in the ongoing co-production of policies and services. [The UAE Government, for example, has managed to increase digital government usage](#)

[by inviting people to participate in the design of public services, providing incentives such as gamification options and 24/7 customer support.](#)

Other countries are experimenting with various instruments to capture citizen input. [More than 180 policy labs have been set up globally to incubate ideas and provide a testing bed for policies in areas as diverse as education, health and justice.](#) These policy labs are also leading the way in launching open challenges and hackathons to discover solutions to increase the efficiency, coordination and delivery of social services. Indeed, government-organized hackathons are proving an effective way to engage people in finding fresh solutions to the economic, social and technological challenges posed by COVID-19. As the pandemic progressed, this type of virtual event quickly gained popularity around the world as public officials came together with software developers, civil society and social entrepreneurs to devise solutions.

Governments have also sought to harness the skills and knowledge of citizens and local communities to ease some of the burden and help build resilience during the pandemic. In

#EUvsVirus

EY teams played a central role in helping the European Commission to host #EUvsVirus, the world's largest-ever hackathon. The event, held over one weekend, brought together more than 20,000 innovators from civil society, the private sector and governments to identify ideas to help societies recover from the COVID-19 outbreak. These ideas included new ways to connect vulnerable groups with volunteers, and tools to encourage behavioral changes to maintain social distancing.



the US, a volunteer-led initiative, U.S. Digital Response, recruited more than 5,000 pro bono technology specialists from across the country to partner with state and local governments to tackle the challenges created by COVID-19. This included supporting unemployment insurance systems, meeting the shortage of hospital staff and helping the homebound to get meals.

Digital technology has also played a key role in bringing governments and volunteers together on a common platform and managing their activities. The State Government of Karnataka, in India, launched a control center to coordinate the work done by more than 30,000 volunteers and provide a real-time display of assigned and pending tasks. Meanwhile, in France, the Government's start-up incubator beta.gouv.fr and the Ministry of National Education developed

a platform where organizations and citizens can register for a variety of tasks, such as assisting with the distribution of necessities and providing child care for health care workers.

Post-COVID-19, volunteering might be here to stay, with new models of participation and collaboration with government agencies. Since volunteers generally have a deep understanding of grassroots needs and challenges, governments could engage with them to build sustainable solutions. Local councils could also embrace the opportunity to experiment with digitally enabled innovations to aid local democratic processes. For example, Iceland's Better Reykjavík and Paris's Madame la maire, j'ai une idée initiatives enable citizens to influence local decision-making and budget allocations.

Conclusion

For some years now, governments have been under pressure to catch up with digital advances in the private sector and rethink their approach to public engagement, policy-making and service delivery. This pressure reached new heights in 2020 as citizens turned to governments to protect their lives and livelihoods during the pandemic.

COVID-19 has rewritten all the rules and enabled the public sector to prove just how nimble it can be when the situation demands. In the months and years to come, as we reflect on the digital response to the pandemic, few leaders in the public or private sector are likely to argue that going back to “business as usual” is a viable option. Although COVID-19 has had a devastating impact on lives and livelihoods, it

has also acted as a positive disruptive force for long-term transformation. Organizations and individuals alike have burst out of their long-established professional practices to embrace new digital solutions that previously seemed too difficult or daunting. It’s now clear that the rewards are tremendous for government organizations that can effectively plan and manage the transformation journey, ignite a vibrant conversation with the public about the benefits that an advanced economy brings to the nation as a whole, and tap into the potential of the ecosystem around them.

Nevertheless, we cannot take it for granted that new ways of working will naturally continue after the crisis has passed; rather, they will need deliberate nurturing and investment.

Governments must find the energy and determination to sustain change beyond the extraordinary circumstances that the pandemic has created and ensure their hard-won progress doesn’t go to waste. We must all remember this is just the start of a real, holistic and effective digital transformation, not the end. Governments can and must seize this moment to absorb the lessons learned, determine how operational models can be remade to provide citizens with the services they want and need in the future, and improve resilience to the next inevitable global shock – whatever form that may take.

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