Designing and delivering public services in the digital age

OECD

BETTER POLICIES FOR BETTER LIVES

going digital

This Toolkit note was written by Benjamin Welby and Ethel Hui Yan Tan, under the strategic guidance of Barbara-Chiara Ubaldi. It was reviewed by the OECD Working Party of Senior Digital Government Officials (E-Leaders) and the Public Governance Committee (PGC), and it was approved and declassified by the PGC on 3 January 2022. The note was prepared for publication by the OECD Secretariat.

This Toolkit note is a contribution to the OECD Going Digital project, which aims to provide policy makers with the tools they need to help their economies and societies thrive in an increasingly digital and data-driven world.

For more information, visit *www.oecd.org/going-digital*.

#GoingDigital

Table of Contents

Figures

Boxes

Designing and delivering public services in the digital age

Providing public services that deliver on the potential of digital technology and data presents a challenge for many governments. Yet, "being digital" is not optional, but a core condition, for governments seeking to provide services that are user-driven, inclusive, resilient, innovative and trustworthy. Achieving digital government maturity requires holistic, comprehensive transformation from within and throughout the machinery of government. It involves reshaping organisations' culture, capability (including talent, skills and resources), and governance to support user-centred approaches, agility, integration and cohesion to design and deliver quality public services that meet the needs of citizens and businesses. This Going Digital Toolkit presents action-oriented principles to guide policy makers and public servants when designing and delivering public services fit for the digital age. The Annex contains a selection of practices by a variety of countries for each principle.

A basic tenet of the democratic social contract is the duty of governments to promote the common good, enhance public trust and secure people's fundamental rights and well-being. One way governments fulfil this role is through the responsive provision of public goods equitably, inclusively and sustainably. Public services remain the principal interface for citizens' and businesses' interactions with the public sector and experience of public governance. The COVID-19 pandemic has highlighted how important it is for governments to be able to rely on digital tools to innovate and ensure the continuity of public services in times of crises (G20/OECD, 2021[1]).

The "e-government" era (OECD, 2003[2]; OECD, 2005[3]) saw governments move online and automate internal processes in the belief that greater administrative efficiency would follow from reducing the reliance on paper and the availability of in-person access to public services. Despite some improvements, these technology-led interventions often resulted in a digital-by-default approach that limited the availability of services to online channels only. The inadvertent consequences of this were new forms of exclusion for those lacking Internet access or the necessary skills as well as those needing face-to-face support.

Moreover, the rush to digitise left public sectors facing internal skills shortages and over-reliant on external suppliers. Outsourcing resulted in contracts that limited the capacity to continuously improve, saw services experience embarrassing failures, and through the loss of public sector control over data and intellectual property, created "vendor lock-in" regardless of supplier performance. As a result, electronic pubic services were in many cases not responsive to the needs and preferences of users, had lower-than-expected levels of uptake and compared poorly to private sector experiences.

Where "e-government" emphasised transferring analogue and paper activity to the Internet, the concept of "digital government" proposes a paradigm shift focused on re-engineering and re-designing processes and interactions through digital-era working practices, smarter use of data, and the appropriate use of technology (Box 1) (OECD, 2019[4]; Ubaldi et al., 2019[5]; OECD, 2020[6]; OECD, 2021[7]). This transformation necessitates moving from top-down assumed solutions to empowered service teams with the resources they need to work closely with citizens, businesses and other stakeholders to better understand and meet their needs (OECD, 2020[8]).

Digital government practices ensure public services are designed and delivered in such a way that the benefits of digital transformation are available to and accessible by all, including those who rely on face-to-face interactions. That means looking inwards to address the context and governance (including administrative structures, culture, capability and processes) and outwards, to focus on the needs of users throughout their experience of a public service – whether some, or all, of that service is delivered via mail, telephone, in-person or through a digital device (OECD, 2020[8]); (OECD, 2021[7]).

**Box 1. Towards digital government maturity**

The OECD Recommendation of the Council on Digital Government Strategies (2014)

The *Recommendation of the Council on Digital Government Strategies* (OECD, 2014[9]) underscores the paradigm shift from e-government to digital government required to realise the digital transformation of the public sector. According to the Recommendation, digital government is understood as "the use of digital technologies, as an integrated part of governments' modernisation strategies, to create public value". This Recommendation is the basis for OECD Digital Government Reviews, which provide analysis and policy recommendations to help improve digital government maturity around the world.

The OECD Digital Government Policy Framework

Digital government maturity is measured by the OECD Digital Government Index (Figure 1) (OECD, 2020[10]) against the six dimensions of the OECD Digital Government Policy Framework (OECD, 2020[6]):

1. **Digital by design**: establishing clear leadership, paired with effective co-ordination and enforcement mechanisms so that "digital" is not only a technical topic, but a transformational element for rethinking and re-engineering public processes, simplifying procedures, and creating new channels of communication and engagement with public stakeholders.

2. **Data-driven public sector**: recognising data as a strategic asset and establishing the governance to generate public value through planning, delivering and monitoring public policies and services while adopting rules and ethical principles for trustworthy and safe access, sharing and re-use.

3. **Government as a Platform**: an ecosystem of guidelines, tools, data, standards and common components that equip teams to focus on user needs in public service design and delivery.

4. **Open by default**: making government data and policy making (including algorithms) available for the public, within the limits of legislation and in balance with the national and public interest.

5. **User-driven**: awarding a central role to people' needs and convenience in the shaping of processes, services and policies; and by adopting inclusive mechanisms for this to happen.

6. **Proactiveness**: the ability to anticipate people's needs and respond rapidly, so that users do not have to engage with cumbersome processes associated with service delivery and data.

Figure 1. The OECD Digital Government Index, 2019
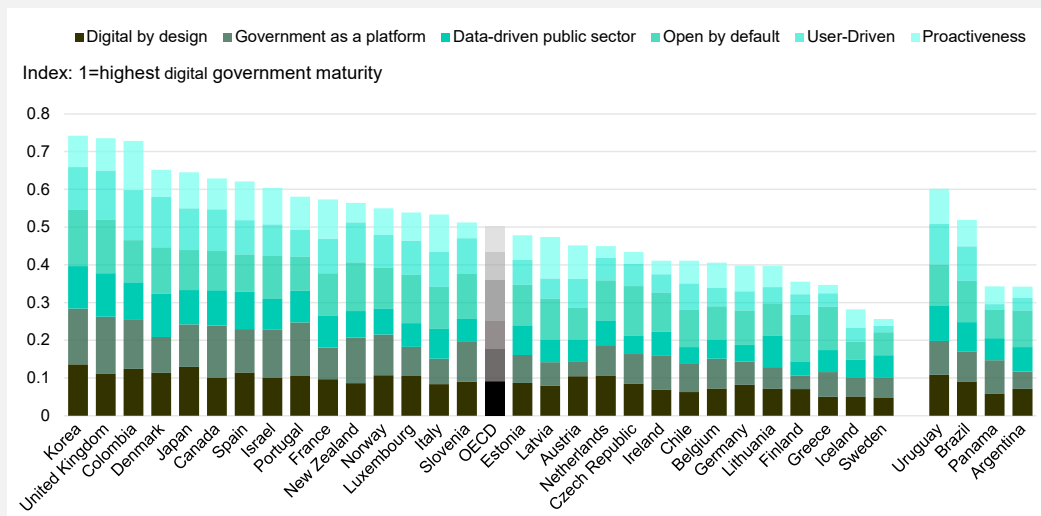
Note: Data are not available for Australia, Hungary, Mexico, Poland, the Slovak Republic, Switzerland, Turkey and the United States. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: (OECD, 2020[10]).

Strengthening practices across the six dimensions of the OECD Digital Government Policy Framework helps to increase the readiness and capacity of governments to design and deliver public services that better respond to the needs of users. Attaining higher levels of maturity across the six dimensions eventually creates a digitally enabled state that, by ensuring efficient access to data, goods and public services, is resilient, responsive and trustworthy in the face of disruptions. This competence in digital government offers the potential to offer an integrated and coherent user experience of government across channels and among public sector organisations. Unlocking that potential relies on the strategic use of digital tools and data as enablers to rethink, redesign and simplify services on the basis of user needs.

This Going Digital Toolkit note explores two priorities for governments to consider when designing and delivering public services in the digital age: 1) establish a culture of meeting user needs, and 2) equip teams with the resources to succeed. The note concludes by calling on governments to ensure institutional alignment and agility in the governance of digital government.

Establish a culture of meeting user needs

The first priority for improving the quality of public services is to establish a culture focused on meeting user needs across the entirety of the public sector.

Secure political, administrative and societal leadership

The *Recommendation of the Council on Digital Government Strategies* emphasises the importance of leadership and political commitment for successful digital government strategies (OECD, 2014[9]). This is a critical element in achieving a user-driven and proactive model of public service design and delivery.

It is vital that the highest levels of governments, whether elected representatives or their appointees, recognise the value of putting digital, data and technology at the heart of a public administration's future. As demonstrated by the examples of **Norway** and **Japan** (see Annex), having a supportive leadership helps to sustain a government's ambition to apply digital, data and technology in transforming how they function to meet the needs and expectations of citizens and businesses. As the operational status quo may need to be challenged, those responsible for digital government may need the authority and mandate to oversee spending decisions, assess the quality of public services, and counter any proliferation of service channels or duplicated efforts resulting from siloed organisational approaches.

While political leadership sets the political direction and high-level vision, responsibility for implementation belongs to the civil service. Administrative and operational leadership needs to play a co-ordinating role, working closely with administrative leaders across the public sector to embed the importance of designing and delivering high-quality public services in the day-to-day work of the civil service (OECD, 2021[7]). To fulfil this leadership role, senior officials need to develop sufficient skills and capabilities not just to manage digital government projects but to understand and realise its wide-ranging potential too (OECD, 2020[8]; OECD, 2021[11]).

Finally, voices from civil society, academia and the private sector may contribute to shaping the strategic discussion and decisions on public transformation through their leadership, participation and collaboration. Drawing on external perspectives, including the experience of other countries, can help to ensure a rounded view of the issues. Governments should take an active role in supporting these voices and building an ecosystem that allows these stakeholders to add value to the policy making and service design and delivery processes[1].

---

[1] The OECD supports the development of public communication and media systems for countries in the Middle East and North Africa region, see Annex.

Champion diverse, multi-disciplinary teams that work across organisational boundaries

The process for implementing public policy and services has often started with policy teams developing an approach before handing off to a procurement process that specifies deliverables and contracts an external supplier, who, in turn, provides the "finished" service to a fourth team to operate. Policy decisions are thus isolated from delivery realities, while the operational experience is contained within a further, separate silo. Such disconnected, uncoordinated approaches may fail to meet policy objectives, or the needs of the public, and might ultimately affect trust in government. More crucially, separation between these individual teams can undermine a shared understanding of the overarching purpose behind the policy or service.

The digital government approach recognises the importance of bringing professionals together from all backgrounds (whether policy, law, procurement, service design, user research, product management, engineering, and operations) throughout the service lifecycle to ensure a common vision and co-ordinated development process. This means bridging policy areas and levels of government to overcome the legacies of siloed-thinking to produce fast, secure and seamless services that respond to citizens' and businesses' real lives and activities (see the examples of **Turkey** and **Argentina** in the Annex).

While it can be helpful to identify particular professions as being "digital" or "non-digital", the OECD Framework for Digital Talent and Skills in the Public Sector (OECD, 2021[11]) argues that it is important for all public servants to have a grounding in digital government user skills in order to contribute effectively to digital transformation efforts. The five digital government user skills identified by the OECD as providing a baseline for all public servants, regardless of their professional role, are:

- Recognising the potential of digital transformation;
- Understanding users and their needs;
- Collaborating for iterative delivery;
- Trustworthy use of data and technology; and
- Data-driven government.

Finally, in addition to bringing multiple professional perspectives together, ensuring diversity of background and experience is crucial in helping to foster a public sector culture oriented towards meeting users' needs. The composition of the teams that design and deliver public services should reflect different segments of the population. Together, these diverse, multi-disciplinary teams that embrace the culture of working inclusively across the public sector are better placed to understand the needs of all kinds of users.

Understand and respond to whole problems across government

The opportunity to transform a public service usually comes from doing something novel in response to a newly identified policy intent, a better understood societal need, or revisiting the existing approach to a long-standing problem. For transformation to occur, however, efforts need to address the whole problem rather than only discrete elements of it.

Therefore, to design public services that fully respond to the needs of users, it is critical to map and understand the existing landscape of public service provision; the interactions, information and data flows among public sector organisations; and the experience of the public. In **Finland**, this model underpins the use of artificial intelligence (AI) in bringing multiple services together (see Annex). Responding to the insights uncovered through this process may then require a fundamental redesign of the service, or minor tweaks in order to improve outcomes.

Such a systemic approach helps establish an understanding of needs as they manifest in reality rather than being informed by desk-based assumptions. This is important because if users do not immediately understand a service, or see it as useful or trustworthy, they may become confused, make mistakes in their submission, or decide not to use it. When that happens, it requires greater effort, both by the government to resolve any issues, and by the citizen to address the initial need.

Establishing a government-wide culture of user research and user experience can help ensure a shared understanding of how government interventions are contributing to, or detracting from, the desired policy outcome. An important foundation for this is cross-government collaboration that can be supported by communities of practitioners, such as that exemplified by **"One Team Government"** (see Annex).

Design the end-to-end public service experience, for users and staff

Investing in the design process, conceptualising user journeys from beginning to end, and providing support throughout is the bedrock of good service design. However, more often than not, existing user journeys are fragmented, hard to trace across different parts of government and unforgiving of attempts to move between online and offline interactions.

The most effective experiences address a whole problem, taking someone through the process of solving their need from start to finish. Understanding the interplay among different channels and organisations from the initiation of the exchange to its conclusion can also support digital transformation. Users should not need to have internal knowledge of government structures or be taken on journeys that involve separate websites, call centres or service delivery locations. Internally, public servants should also be supported by

effective digital tools and technology rather than needing to re-enter data into separate systems or print out submissions and work with paper.

Public services should be simple to navigate, easy to complete, and use data to anticipate and proactively address needs without requiring unnecessary effort on the part of users. Regardless of how the government is configured internally, service design should ensure the transition between physical, offline and digital elements to give users access at any point in the process of meeting their need, according to their most convenient channel, as demonstrated in the example of **Panama**'s justice system (see Annex). Ultimately, a service should be understood:

- from when someone first attempts to solve a problem, through to its resolution (end-to-end);

- on a continuum from user experience to the processes for back-office staff (external to internal); and

- across any and all of the channels involved (omnichannel).

Involve the public as early and as often as possible

The *Recommendation of the Council on Digital Government Strategies* identifies the need to encourage engagement and participation of public, private and civil society stakeholders in policy making and public service design and delivery (OECD, 2014[9]). That is complemented by the *Recommendation of the Council on Open Government* that calls on governments to move towards a "culture of governance that promotes the principles of transparency, integrity, accountability and stakeholder participation in support of democracy and inclusive growth" (OECD, 2017[12]).

To design services that fully respond to someone's needs, it is crucial to understand the whole problem the person faces. Therefore, those working on designing and delivering public services need to identify and work with the potential users of a service. The traditional toolkit for governments for involving the public consists of consultations, pilots and feedback sessions that are independent of one another and are often reactive or *ad hoc* rather than an ongoing dialogue. Digitally transformed public services need to involve the public as early and as often as possible in creative ways that are genuine efforts to engage (see example of **Australia** in the Annex). This allows the design and delivery process to proactively incorporate their views, needs and aspirations from the outset and throughout.

Digital government approaches change the way in which public services are designed and implemented: they create opportunities for citizen-driven activity and civic participation in terms of expressing needs, sharing views, collaborating with peers and providing feedback for improvement. Public service teams that provide opportunities for citizens and businesses to work

with them can more easily embrace innovation, experiment and continuously iterate to increase the public value they produce. Having a deep understanding of user needs and an openness to citizen involvement in the design and delivery process helps policy and service teams consider opportunities to apply technology and take advantage of new developments as they arrive, with the underlying aim of better satisfying the final user.

### *Adopt an agile delivery methodology*

Traditionally, turning a policy idea into a public service would take a "waterfall" approach – a sequence of separate activities that must be completed one by one. Requirements would be identified in a distinct phase before any work is undertaken to try and manage uncertainty through upfront planning. There is then no interaction with the solution or opportunity to feed back until the final product is delivered. Earlier stages are not revisited, meaning there is only one chance to get each part of the project right. Should any change need to be made, high costs are often involved, especially if they require revisiting fundamental decisions.

In contrast, adopting an agile methodology (see example of the **United Kingdom** in the Annex) involves embracing uncertainty, building resilience and expecting to continuously learn and improve approaches, with the main priority being to add value for users (Figure 2). By starting small with phases designed to build understanding through exploration, teams can research, prototype, test and learn about the needs of their users before committing to building a real service. This can allow them to fail quickly and correct course in response to what they find. A service only goes live when enough feedback has been gathered to demonstrate that needs are met and the service works.

Fundamental to this alternative approach is ongoing research and engagement to ensure a continued understanding of the user's experience in a cyclical model of delivery. This allows policy and services to reflect an understanding of needs, based on research conducted with users, taking into account diverse samples of the population and insights from societal data. Having knowledge of the issues at stake can allow for policy development to be guided by the needs of the public rather than the top-down solutions devised in government offices.

When policy development takes place in close proximity to the design and delivery of a service, research findings and experimental, hypothesis-led interventions can be incorporated into the service itself and tested quickly. An agile, research-led approach emphasises a continual response to learning from the experience of users and applying those insights to improve outcomes.

Figure 2. An agile approach to the interaction between government and the public during policy making, service delivery and ongoing operations
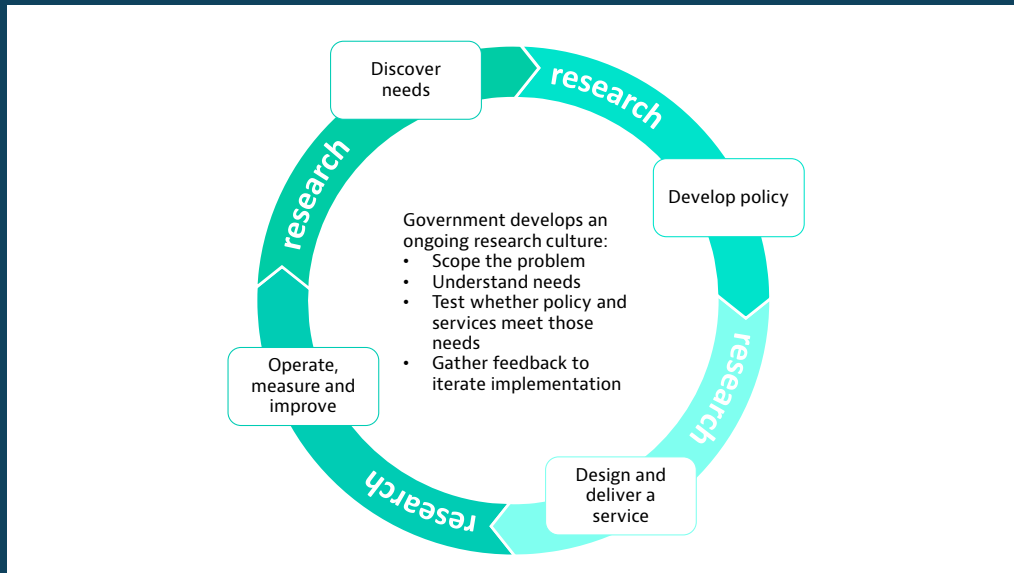
Source: (OECD, 2020[8]).

Equip teams with the resources to succeed

The second priority in designing and delivering public services in the digital age is investing in the practical resources that set teams up for success. Countries may have thousands of individual public services and it would be slow, expensive and inefficient to redesign and rethink each of those from scratch. Therefore, creating a "Government as a Platform" ecosystem of enablers is fundamental for helping all those designing and delivering public services to meet the needs of their users at scale and pace, while ensuring quality and trust. This is particularly useful for supporting smaller public sector organisations operating with limited resources and for identifying opportunities for collaboration.

Provide guidance and share good practices

Curated by the centre but developed by distributed communities of practice, materials such as style guides for content, service manuals and other documentation offer wisdom and insight into the practice of digital government that can help teams deliver high-quality public services.

It is important to recognise the important role that content and language play in the ability of the public to understand and therefore effectively access and use any public services. One way of supporting accessibility and use is to develop style and content guides (see example of the **United States** in the Annex). Such guides create consistency and set standards in terms of written

and verbal communication, whether that is found in letters received through the post, forms completed as part of a transaction, emails triggered by a particular step, conversations with call centres and chatbots or the webpages arrived at from searching the Internet.

To help historically separate professions to work better together and embrace new skills such as those for user research and agile delivery, several countries have developed reference materials to help establish a user-driven service design culture. In addition, to support common technical components (such as those for notifications, payments or digital identity), countries have developed centralised references for architectural decisions and the documentation of application programming interfaces (APIs).

Develop governance processes that define and support quality public service design

Because governments consist of hundreds of organisations delivering hundreds of public services, it is impossible for one organisation to directly manage the design and delivery of them all. It is, therefore, essential to adopt a clear and shared definition of quality with respect to public services, embed this definition across government, and develop a credible approach to assurance. Clear decision-making and co-ordination responsibilities for the digital government agenda as well as transparent governance over spending and delivery are crucial for the successful design and delivery of public services.

The *Recommendation of the Council on Digital Government Strategies* recognises business cases as a fundamental tool and an integral part of sustaining digital government efforts (OECD, 2014[9]). It is important for these processes to align with service design thinking and simplify access to initial seed funding for research and prototyping activities. Beyond supporting experimentation, teams need to have confidence in ongoing financing to continuously iterate a service and, if necessary, pivot from an original proposal having better understood the problem they are addressing. A business case methodology can shape the upfront behaviour of teams and help formulate sound value propositions to unlock the funding they need. Examples can be found in **New Zealand** (see Annex) and in the Business Case Playbook, prepared by the OECD E-Leaders, which helps practitioners develop better business cases to support investment decisions for the digital transformation of government (Australian Government's Digital Transformation Agency, 2022[13]).

A second governance process to support public service design are "spending controls." Some OECD member countries have introduced a budgetary threshold above which spending on digital technologies and data comes under greater scrutiny (see example of the **United Kingdom** in the Annex). Such "spending controls" can encourage collective and effective ways of working,

the re-use of common components to avoid duplication, and collaboration on cross-government public services.

Public procurement is another government tool that plays an important role in the design and delivery of public services in the digital age. The Digital Buying Guide, prepared by the OECD E-Leaders, explores how governments can change their engagement with suppliers, shift the focus from spending to outcomes, and challenge all actors involved with designing and delivering public services to respond to the needs of users (UK Government Digital Service, 2022[14]). Rethinking procurement activity can help the public sector buy products and services in a fair, open and effective way as well as mitigating the risks of incumbent suppliers with inflexible contracts stifling government's ability to respond to citizens with agility.

Although governance processes can shape the upfront behaviour of suppliers and teams, additional steps are needed to ensure that delivered outcomes align with overarching service design and delivery strategies. Common methodologies and agreed standards allow delivery partners, whether public servants or suppliers, to work towards a shared ambition and according to agreed expectations. One response to this has been for countries to establish assurance mechanisms that involve an assessment of delivery against the criteria of a "service standard" (see example of **Germany** in the Annex).

Separately, technical standards for cross-government architecture and the infrastructure of tools and systems such as APIs and data registers (see example of **Norway** and **Colombia** in the Annex) can also help bring consistency to the quality of public services. Although not necessarily visible as part of the user's experience, standards around technology can ensure that some of the most important enabling ideas, such as interoperability, are prioritised at an architectural level.

Standards can be mandated by an executive branch of government, such as the office of the prime minister, president or equivalent (OECD, 2019[15]) or set out as a voluntary aspiration. In both cases, the long-term sustainability of these methodologies and standards relies on cross-government consensus in determining quality, consolidating guidance, identifying best practices and designing easier procurement mechanisms. For the purposes of scrutiny, quality control and the ongoing release of funds, appropriate assurance mechanisms can encourage adherence to these standards. Service teams can be assessed on their work at specific milestones relating to phases of delivery or levels of adoption. An alternative is to have continuous dialogue between a team responsible for judging quality and the team delivering the service so that assurance happens in parallel to the development of a service.

Make digital inclusion a priority

In pursuit of the expected benefits from moving in-person interactions online, it should not be forgotten that internet access is not ubiquitous, that many people lack the necessary digital skills to use it effectively and that online interactions are not always suitable for responding to the needs of the public. Maximising the benefits of digital government and data approaches requires a wider focus on connectivity, digital literacy, and accessibility to ensure that digital divides are reduced and not exacerbated (G20/OECD, 2018[16]).

A foundational enabler, and constraint, of digital transformation in the public sector is the level of connectivity. Understanding the digital infrastructure of a country and its population allows for an evidence-based approach to balancing face-to-face provision and digital access for public services. Additionally, it helps to understand the needs for an effective policy response to securing high-speed and reliable Internet access at a community level (OECD, 2021[17]). One policy response could be to make Internet access a fundamental right (see example of **Mexico** in the Annex).

Strategic efforts to increase digital literacy, including the use of physical service locations to offer training to the public, remain important. At the same time, new opportunities to improve access can come from voice assistants and other AI-powered digital tools that make access possible for users who may be unable to read content on paper or online, or need other forms of support (G20/OECD, 2021[1]). While these solutions are built by technology companies, their utility depends on how the public sector has designed the underlying content and technical architecture.

A commitment to the underlying accessibility of public services is not an optional extra. Tackling barriers to usage among all those with physical or cognitive access needs is critical for the mission of the public sector to serve society as a whole. Reflecting these needs in the built environment is well understood, and telephone-based public services have used relay technology to help those with hearing impairments. However, too often these needs are overlooked in the context of the online experience. The **European Union**'s Web Accessibility Directive (Directive (EU) 2016/2102) (see Annex) has been an important intervention to set a new baseline for expectations on accessibility amongst EU Member States.

Commit to an omnichannel strategy

The evolution from analogue to digital government has left a large footprint. The processes, data flows and channels for delivering public services follow from strategies developed by different organisations at different times. Moreover, public services can be provided by central, regional or local governments and involve crossing nuanced organisational boundaries that may not be clear to the citizens or businesses trying to access services from

"government". The result of this patchwork are user journeys that might involve switching among phone calls, face-to-face exchanges or online transactions. Although citizens might be able to access public services via this "multi-channel" approach, the websites, call centres, self-service kiosks or physical locations often behave as separate silos and interactions begun online often cannot be completed in person and vice versa.

By contrast, a clear omnichannel strategy is therefore vital for addressing the confusion and competition between multiple entry points into government services. The omnichannel model of public service provision ensures that no matter the channel someone chooses, they will always be able to seamlessly access a consistent, joined-up and high-quality service (see examples of **Chile** and **Portugal** in the Annex). The clarity of this strategy and the leadership to support it is vital for ensuring service teams can concentrate on meeting the needs of their users, not developing new channels of their own.

Several countries have consolidated all government websites into a single domain, which simplifies access for users. Such an approach not only simplifies access but simplifies the entire landscape of service provision including the consolidation of user journeys and a better understanding of data flows within the public sector. These ambitions rely on government leaders cutting through organisational silos, fostering horizontal integration and disrupting historic policy domain specific practices. Otherwise, it will prove very hard to ensure a consistent and seamless experience for the public.

Invest for the long-term in common components and tools

Common components and tools that countries have developed include hosting and infrastructure, digital identity, notifications, payments and design systems. These "building blocks" for public services are sometimes supported by "low code" solutions that enable public servants to be guided through the process of building services that re-use these components and maintain levels of quality without requiring deep technical expertise. These technological enablers should be seen as a means of supporting service teams to meet the needs of citizens rather than as an end in themselves.

Their value is particularly important for those teams and areas of government responding to the "long tail" of public services: processes that may consist of only a handful of paper-based transactions a week. Unlikely to be high profile, they will probably not attract the resource to develop a transformed approach to the service and will stay "under the radar". Individually insignificant, taken as a whole they account for significant quantities of public services that could benefit from transformation. Making it possible for those parts of government that would otherwise never imagine transforming the experience of their users is a critical driver for providing common components and tools.

Through access to common components and tools, service teams can deliver not only at pace and scale but with a level of quality and consistency of user experience that builds public trust and helps public sector organisations work towards greater coherence in their activities (see examples of tools and systems created by the **United Kingdom** and **Italy** in the Annex).

Long-term investment is important to ensure these resources are sustainable, reliable and viable. This investment should not be limited to the technology itself but also cover the capacity to support adoption. This may include engagement with service teams, actively showcasing what is available throughout the public sector, supporting the product teams to address barriers to adoption and helping to quantify the benefit of using common components and tools instead of developing local solutions.

Establish data-driven public sector approaches

Transformed public services are hard to achieve without a strategic approach to the role of data as an asset in the public sector. *The Path to Becoming a Data-Driven Public Sector* provides a framework for identifying and responding to the opportunities and challenges for a holistic, coherent, effective and trustworthy use of data (OECD, 2019[4]).

The starting point for unlocking the value of data-driven approaches in the public sector is data governance. At a strategic level, leadership for the data agenda with a vision for its value in supporting digital transformation, is essential, along with mechanisms to ensure policy coherence and co-ordination. At a tactical level, it is imperative that questions of implementation capacity and regulation around privacy, security, or access are addressed to ensure that data flows steadily within the government, across sectors and borders when needed, and always under the conditions to support trust. Finally, at an operational level, it is critical that data infrastructure and data architecture simplify the means by which services can access the needed data and be assured of data quality (see examples of **Denmark**, **France** and **Sweden** in the Annex).

With those foundations in place, it becomes possible to develop proactive, data-driven services. Instead of simply replacing analogue processes, the more sophisticated use of data in services allows for them to be reimagined and for value to be brought both to providers (i.e. public sector organisations) and users. Service teams benefit from data resources being made available through data interoperability platforms, base data registries and API catalogues. While for citizens, the "once only" principle ensures they do not need to provide government with information that has previously been shared.

Creating a data-driven culture not also changes how teams use data, it changes their understanding of performance. The ability for services to improve continuously in response to feedback and data about usage is a tremendous

opportunity to ensure that the needs of users continue to be prioritised and met. Furthermore, wherever data are used throughout the public service delivery lifecycle, it is imperative that questions of trust are considered within the design of the service. The *OECD Good Practice Principles for Data Ethics in the Public Sector* support the ethical use of data in digital government projects, products, and services (OECD, 2021[18]). Exploring the implications of ethics, transparency, privacy and consent, and security is critical to ensure that public services build the confidence of their users and do not jeopardise their trust.

Source the talent and skills for a digitally-enabled state

The digital government and service design model represents a paradigm shift that can challenge government in terms of having the necessary talent and skills at its disposal. A strategic approach to the talent and skills needed for a digital government involves creating an encouraging and enabling environment, defining the necessary skills, and taking steps to source a suitable workforce throughout the whole of government (OECD, 2021[11]) (see example of the **United Kingdom** and **Canada** in the Annex).

Building on what was discussed under the section "Champion diverse, multi-disciplinary teams that work across organisational boundaries", taking a service design approach to the delivery of services may require the reshaping of existing roles required to meet the needs of citizens. The OECD Framework for Digital Talent and Skills in the Public Sector (OECD, 2021[11]) argues that all public servants should be equipped with a baseline of digital government user skills, regardless of their role. As staff in conventional "non-digital" professional roles are exposed to the design and delivery of policies and services in the digital age, they may wish to progress beyond that baseline and develop their skills further in order to contribute more actively to the digital transformation.

This internal enthusiasm can be an important source for the talent and skills required by a digitally-enabled State. However, others may not share this interest and could see any change in role, or new training requirement, as confirming their fears that the digital agenda is a threat to established jobs. Where there is the elimination of manual tasks by removing an analogue process or introducing a proactive exchange of information, public sector employers have an opportunity to work with professional unions in constructive ways such as including those who are affected in retraining schemes as part of the new digital and service design-led culture in government.

Some of the skills gap will need to be addressed through recruitment and could involve redesigning job families, rewriting job descriptions, and revisiting employment packages. As different "digital" professions become more established in the public sector and the capability of different organisations grows, it will become possible to rotate staff among organisations according to

a flexible "consultancy" model. As these individuals work on projects, their presence can double as a coaching role, investing in the skills of the colleagues with whom they are working.

One of the challenges with questions of talent and skills is how to scale these abilities throughout government at the pace that is needed to make this paradigm shift a reality. This makes it essential to work with government's technical supplier ecosystem to explore ways of bringing in specialist roles. This may require special procurement frameworks or working with human resource colleagues to find flexibility in securing the necessary short-term capabilities with which to start developing the service design agenda.

Ensure ongoing institutional alignment and agility in the governance of digital government

Placing a priority on the governance of digital government and actively designing the associated structures and lines of responsibility is critical to reaching a level of digital maturity that fully reflects the six dimensions of a digital government presented earlier in this note. The OECD E-Leaders Framework on the Governance of Digital Government provides an analytical framework and recognises the combined importance of contextual factors, institutional models and policy levers in this process (OECD, 2021[7]). Governments that are more digitally mature have the tools, talent and foundational elements to establish a culture and build the capacity for proactively seeking to discover and meet user needs (see examples of **Estonia**, **Korea**, **Spain** and the **United Kingdom** in the Annex).

Governance needs to be agile and led by user needs

Creating institutional alignment is an important starting point for changing the culture of government but there must be a recognition that approaches to governance need to be agile (e.g. iterative and experimental), problem-driven and led by user needs themselves. Measures that are needed at the start of efforts to transform service design and delivery will be different to the model that can best support more mature organisations after cultural change has been effected. As such, the responsibility and mandate of the structures and activities to support digital government should be periodically revisited, and renewed, to reflect the state of progress. This mandate needs to allow for both relaxing, or enforcing, standards, behaviours and activities as necessary.

Multi-disciplinary governance is as important as multi-disciplinary delivery

As well as being led by user needs, approaches to governance can benefit from reflecting the same multi-disciplinary character as that expected of service

teams. Having a leadership team that reflects different professional skill sets and backgrounds and which is drawn from a variety of policy areas, will help to establish the digital government agenda as one that cuts across professions and policy sectors to enable the pursuit of being a digitally-enabled state as a common ambition rather than solely the goal of explicitly "digital" professionals. Engendering this common aim will support a focus on achieving the deployment and use of key enablers (such as data infrastructure, design systems and digital identity solutions) across policy areas to provide a consistent and high-quality user experience in all service areas rather than prioritising the achievement of excellence in a specific sector or organisation.

Senior government leaders would benefit from belonging to communities of practice

Building common purpose between different professions across government can also be helped by developing communities of practice amongst senior government leaders. As well as regularly convening existing digital leaders to challenge and inspire one another through their experiences, new recruits into positions of senior leadership should initially spend time working from the centre to build an understanding of the strategic purpose of the wider digital government agenda and a rapport with those responsible for its objectives. This can help to bring otherwise disparate siloes in government closer together and reduce the potential for friction.

Digital government should be a priority across political cycles

The final element of ensuring long-term stability for efforts to establish a culture of meeting user needs and equipping teams with the resources to succeed is iterating the governance frameworks for digital government to become as apolitical as possible. In being vital to establishing digitally-enabled states with public sectors fit for the 21st century, the opportunities of digital technologies and data should be considered politically neutral. Where they are associated with a particular politician or administration there is a vulnerability to the continuity and consistency of efforts following an election. The ambition for digital government should, therefore, be treated as a core, non-partisan function of a country's infrastructure like power grids or roads. This implies securing sufficient financial resources to have ongoing budgetary confidence to maintain existing solutions but also sufficient resources to ensure that the overall governance continues to identify new problems to solve, needs to meet and teams to support.

Annex. A selection of practices on public service design and delivery

Securing political, administrative and societal leadership

Norway's Leadership in the Digitalisation Memorandum

Responsible entities: Agency for Public Management and e-Government (Difi); Brønnøysund Register Centre and the Directorate for Financial Management (DFØ)

Description: Norway's Digitalisation Memorandum is a mandate from the political and organisational leadership comprising a compilation of orders and recommendations on the digitalisation of the public sector. It specifies that the government should communicate with users through digital public services that are safe, comprehensive, user friendly, and universally designed such that the user experience with the public sector is coherent and efficient. These services will be regularly analysed along with a regular review of the regulatory framework and legislation. Digitalisation should aim to increase value creation, innovation and productivity.

Read More:
https://www.regjeringen.no/no/dokumenter/digitaliseringsrundskrivet/id268336 52/.

Japan's Digital Agency

Responsible entities: Prime Minister; Digital Minister

Description: Japan's Digital Agency was established on 1 September 2021, with the mission to promote the digitalisation of public administrative procedures, the standardisation, interoperability and co-ordination of data systems, and the provision of more user-friendly public services. Legal, regulatory and operational siloes have been the key challenge in the digitalisation of the public sector. The Digital Agency is a major economic policy priority for the Prime Minister, who personally headed the initiative as Head and Chief Minister of the Digital Agency and appointed the Digital Minister to lead the Digital Agency's operations along with its Chief Officer.

Read More: https://www.digital.go.jp/en/; https://asia.nikkei.com/Politics/Japan-launches-agency-to-undo-digital-defeat-5-things-to-know; https://www.globalgovernmentforum.com/japan-launches-digital-agency/.

Citizen's Voice in Morocco, Tunisia, Lebanon and Jordan

Responsible entities: Ministries and administrations in charge of media and communications in the respective countries

Description: The Citizen's Voice is a regional project undertaken by the OECD since 2016 that aims to promote strategic public communication in media ecosystems. The overarching goal is to contribute to improved policy making and public services in line with open government principles (i.e. transparency, integrity, accountability, stakeholder participation). The project involves capacity building activities with the governments of Morocco, Tunisia, Lebanon and Jordan based on the analysis and recommendations produced by the OECD on areas such as how the media and civil society organisations can shape the public policy agenda, give space to discuss policy options, allow interest groups to indicate choices and debate openly, and foster the monitoring of policy implementation and their effects.

Read more: *https://www.oecd.org/mena/governance/citizens-voice.htm*.

Championing diverse, multi-disciplinary teams that work across organisational boundaries

Turkey's Extensive Collaboration Delivering Digital Turkey

Responsible entity: Digital Transformation Office of the Presidency of the Republic of Turkey (CBDDO)

Description: With Digital Turkey, the CBDDO has created a digital ecosystem in the public sector with layered architecture that enables collaboration among the central and local authorities and with the private sector to deliver integrated and quality public services. The Digital Portal hosts 5 773 services provided by 797 institutions and registries that meet the needs of citizens across their life events in health, education, social security, justice, trade and customs, and tax and revenue. As of 1 April 2021, 75% of the population uses the Digital Turkey Portal, i.e. 54.3 million users.

Read More: *https://cbddo.gov.tr/en/project/project/dijital-turkiye-v1.0/.*

Argentina's Service Transformation for Disability Certification

Responsible entities: National Agency for Disability (ANDIS); My Argentina (MiArgentina)

Description: In Argentina's effort to improve the burdensome, complex and non-digital process of obtaining the disability certification (Certificado Único de Discapacidad, CUD) and the International Symbol of Access (ISA), the ANDIS and MiArgentina created a multi-disciplinary team of software engineers, designers, psychologists, political scientists, anthropologists and sociologists to

carry out user research, interviews with stakeholders. The result was the design of an online service that could be done in one step with a support "wizard that guides users, instead of a physical meeting in four steps, and the digitalisation of the ISA that is accessible through MiArgentina.

Read More: *https://oecd-opsi.org/innovations/certificado-unico-de-discapacidad-cud-redesign-of-the-granting-service-of-the-unique-certificate-of-disability/; https://www.argentina.gob.ar/noticias/el-simbolo-internacional-de-acceso-ahora-es-digital.*

Understanding and responding to whole problems across government

Finland's National AuroraAI Programme

Responsible entity: Ministry of Finance

Description: The AuroraAI programme aims to implement an operations model based on people's needs, such that AI can help citizens and businesses use public and private services in a timely and ethically sustainable way. Within the AuroraAI network, the activities of relevant organisations (both public sector and non-governmental) are organised to support people's life events or businesses' events, facilitating seamless, effective and smoothly functioning service paths. The system learns what combinations of services are most popular with a particular user at a point in time, and will prioritise and promote the combination to people with similar characteristics. This is only possible with information exchange and interoperability among different services and platforms, and a digital identity.

Read More: *https://vm.fi/en/auroraai-en.*

The One Team Government Initiative

Responsible entity: One Team Government (OneTeamGov)

Description: OneTeamGov is a global community of policy makers and innovators that came together organically on a mission to enable radical public sector reform by improving public services and processes through a set of principles which include "work in the open and positively", "take practical action", "experiment and iterate", "be diverse and inclusive", "care deeply about citizens", "work across borders" and "embrace technology". The approach taken involves bringing public servants together to exchange on shared problems and common goals. Following the first event in 2017, these principles have been adopted by other governments around the world.

Read More: *https://www.oneteamgov.uk/; https://medium.com/oneteamgov/the-2019-oneteamgov-global-report-2fa952dfb37d.*

Designing the end-to-end service experience, for users and staff

Panama's End-to-End Service Delivery in the Justice System

Responsible entity: National Authority for Government Innovation (AIG)

Description: In 2012, AIG launched a six-year project with the aim of providing an end-to-end experience of the justice system across several branches of government. This transformation involved disaggregating the existing complex process to understand the needs of the service providers and users. This made it possible for the government to effectively address individual elements related to the physical infrastructure and interactions among the relevant stakeholders from the back-office to the front public-facing office. By 2018, the judicial system effectively reduced the time involved in the Accusatory Penal System (SPA) by 96% and there was no longer any paper involved. Having such a transformative approach to end-to-end service design and delivery entails prioritising the user experience from start to completion, and provides an aspirational model for the rest of Panama's public sector and other countries to follow.

Read More: *https://www.oecd.org/gov/digital-government/digital-government-review-panama-2019-key-findings.pdf; https://www.oecd.org/gov/digital-government/digital-government-review-of-panama-615a4180-en.htm.*

Involving the public as early and as often as possible

Australia's Public Engagement on Employment Services

Responsible entity: Department of Education, Skills and Employment (DESE)

Description: In 2018, the government of Australia created an independent Expert Advisory Panel to produce recommendations on how employment services can best assist job seekers and employers in the future to cope with digitalisation and changes in the labour market. The whole process involved extensive consultations with a wide range of stakeholders (i.e. more than 560 people attended 23 roundtables and community forums), user-centred design research (i.e. involving more than 550 people), 450 submissions from stakeholders, deliberation and a public discussion paper by the Expert Advisory Panel.

Read More: *https://www.employment.gov.au/newsroom/expert-advisory-panel-report-i-want-work-employment-services-2020; https://www.employment.gov.au/consultation-inform-new-employment-services.*

Adopting an agile delivery methodology

The United Kingdom's Service Assessments, Standard and Manual

Responsible entity: Government Digital Service (GDS)

Description: The United Kingdom's GDS has a mandated 14-point Service Standard to facilitate a cohesive and co-ordinated approach to service design and delivery, including principles and approaches around understanding user needs, problem-solving, omnichannel, simplicity, inclusiveness, agility, openness and reliability. This approach is intended to enable agile delivery in the sense of quickly and regularly release new or improved services through user-driven iterations. In order to support the adoption of and compliance with the Service Standard, GDS has also published guidelines for service assessments and a comprehensive Service Manual that covers team management, user research, design and delivery to measuring success.

Read More: *https://www.gov.uk/service-manual; https://www.gov.uk/service-manual/service-standard*.

Providing guidance and sharing good practices

The United States' 18F Guide to Developing User-Centred Content

Responsible entity: General Services Administration (GSA)

Description: 18F is an office within the GSA of the United States that works with the federal, state and local governments to deliver projects that fulfils the objectives within the budget and using leading technology practices. The 18F Content Guide is produced by the GSA's Technology and Transformation Services and aims to guide governments on the coherent development of government content supporting service delivery. Principles include "start with user needs", "do the hard work to make it simple", "write for everyone", "build trust" and "start small and iterate".

Read More: *https://content-guide.18f.gov/our-approach/content-principles/.*

Developing governance processes that define and support quality public service design

New Zealand's Better Business Cases Methodology

Responsible entity: The Treasury

Description: New Zealand's Better Business Cases is a methodology to enable smart investment decisions for public value. It involves the use of a business case to demonstrate that a proposed investment is strategically aligned, represents value for money and is achievable. It aims to allow decision-makers to analyse objectively with consistent information, make smart investment decisions for public value, and reduce the costs and time for developing business cases. It is designed on internationally recognised best practice standards on five core questions: "what is the compelling case for change?", "does the preferred option optimise value for money?", "is the proposed deal commercially viable?", "is the investment proposal affordable?", "how can the proposal be delivered successfully?".

Read More: *https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/better-business-cases-bbc; https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/better-business-cases-bbc/better-business-cases-2019-2020-refresh.*

The United Kingdom's Spend Controls

Responsible entities: Cabinet Office; Government Digital Service (GDS)

Description: In 2018, the United Kingdom's Cabinet Office came out with a formalised spend controls process to help central government organisations optimise spending. The policy provides guidance on following a standardised process in creating and maintaining pipelines in digital government projects, for instance, to receive approval to spend money. This requires the public sector organisations to list all commercial and digital technology spend activity, plan resourcing and capability requirements and improve transparency for the management team. In effect, it encourages more awareness and understanding of the financial management of digital government projects within the organisation and across the public sector – giving way for more cross-government collaboration and policy cohesion.

Read More: *https://www.gov.uk/government/publications/cabinet-office-controls-version-5/cabinet-office-controls-policy-version-5; https://www.gov.uk/guidance/set-up-a-commercial-or-digital-and-technology-spend-controls-pipeline*.

Germany's Digital Service Standards

Responsible entity: Federal Government

Description: The German Federal Government's "Digital Administration 2020" is a programme for administrative modernisation adopted on 27 September 2014 by the Federal Cabinet. It is designed to support the Digital Agenda 2014-2017 and the creation of a seamless public services for citizens and businesses in a digital Germany, according to the Coalition Agreement of the CDU/CSU and SPD political parties. The programme entailed the establishment of binding standards for the digitisation of the whole federal administration, which are based on the regulatory framework of the e-Government Act that entered into force on 1 August 2013. The standards cover shared technical infrastructures and bundling of information technology at federal level, such as the De-Mail gateway, the eID service and e-payment platform; electronic records; accessibility of open government data; and geo-referencing solutions.

Read More: *https://www.bundesregierung.de/breg-de/aktuelles/digitalisierung-der-verwaltung-voranbringen-436460*.

Norway's National Architecture Principles for Public Sector Digitalisation

Responsible entity: Norwegian Digitalisation Agency (DigDir)

Description: The DigDir produced seven principles for its public sector digital architecture in the annual Digitalisation Memorandum to ensure that architecture decisions and digital solutions result in the best outcome for citizens, businesses and society, in line with the general objectives for the government's digitalisation efforts. The architecture principles include an adherence to a user-centric approach, sharing and re-use of data and solutions, and instilling confidence in service provision. Accompanied by authoritative guidance publications, these principles are mandatory for the central government and recommended for the local government. As part of the governance, this policy instrument also aims to increase interoperability and adaptability across enterprises and sectors.

Read More: *https://www.digdir.no/media/608/download.*

Colombia's IT Architecture Knowledge Base

Responsible entity: Ministry of Information and Communication Technologies (MinTIC)

Description: Colombia's IT Architecture Knowledge Base serves as an important register of strategic guidelines of the Reference Framework by domain, standards of technical specifications, step-by-step guidance for procedures, best practices, legal norms like laws, decrees and regulations, and a management model to align delivery – which are based on the Reference Framework, the main strategy, architecture and framework to implement the digital government and IT architecture of the country.

Read More: *https://mintic.gov.co/arquitecturati/630/w3-propertyvalue-8061.html.*

Making digital inclusion a priority

Mexico's Enshrinement of Internet Access as a Fundamental Right

Responsible entities: Government of Mexico; Secretariat of Communications and Transport (SCT); Government of the State of Nuevo León

Description: Mexico established access to the Internet as a fundamental right in Article 6 of the 1917 Constitution of Mexico. México Conectado was created by the Government of Mexico during the presidential term of Enrique Peña Nieto as a connectivity policy to deliver on the full connectivity of the population to the Internet and promote social inclusion. Internet access was supplied through 100 000 connection points to public spaces including schools,

libraries, hospitals, libraries, community centres and government offices at the federal, state and municipal level. 710 000 tablets were also delivered to schools across the country to support digital literacy. Over the past five years, broadband connection increased from approximately 20% to 55% of the population.

Read More:
www.gob.mx/cms/uploads/attachment/file/422705/Informe_Final_E-009.pdf.

The European Union's Web Accessibility Directive

Responsible entities: European Commission; European Parliament; Council of the European Union

Description: The Web Accessibility Directive (Directive (EU) 2016/2102) has been in force since 22 December 2016 as an instrument designed to secure better access to public services through websites and mobile apps for people with disabilities. It is part of the European Commission's ongoing efforts to build an inclusive and equal European Union in a digital age. The Directive requires the websites and mobile apps of public sector organisations to meet specific technical accessibility standards, have an accessibility statement, a feedback mechanism for users to flag problems or request information that is published in a non-accessible format, and regular monitoring and reporting of public sector websites and mobile apps by EU Member States.

Read More: *https://digital-strategy.ec.europa.eu/en/policies/web-accessibility*; *https://eur-lex.europa.eu/eli/dir/2016/2102/oj.*

Committing to an omnichannel strategy

Chile's ChileAtiende Three-Fold Ecosystem

Responsible entities: Chile's Presidency; Digital Government Division (DGD); Budget Office; Social Security Institute (IPS)

Description: Chile's ChileAtiende is an ecosystem that includes a website, a call centre and face-to-face locations with self-service kiosks. It involves the whole public sector and its partners in a three-fold service design and delivery: multi-service (i.e. aggregating 274 public services from 28 institutions), multi-channel (i.e. face-to-face, telephone, website, social media, self-service kiosks) and multi-layer (i.e. according to the depth of integration for a given institution). The conceptualisation of ChileAtiende is also made inclusive with the provision of sign language, special spaces for breastfeeding mothers. The staff are also well-trained to be user-centred in understanding their needs and supporting them.

Read More: *https://www.chileatiende.gob.cl/; https://www.oecd.org/chile/digital-government-in-chile-improving-public-service-design-and-delivery-b94582e8-en.htm*.

Portugal's Citizens Shops and Citizen Spots Approach

Responsible entity: Administrative Modernisation Agency (AMA)

Description: Portugal's Citizen Shop is a one-stop-shop for public and private sector organisations to facilitate the public and private services delivery and the relationship among citizens, businesses and the public administration. The Citizen Shop also serves as a channel for the government to share resources, infrastructure and platforms, thereby increasing the efficiency and reducing the cost for government processes. This network of services is built on top of a network of physical counters, Citizen Spots, which comprises a single helpdesk with a trained mediator.

Read More: *https://www.ama.gov.pt/web/english/citizen-shop; https://www.ama.gov.pt/web/english/citizen-spot.*

Investing for the long-term in common components and tools

The United Kingdom's Service Toolkit

Responsible entity: Government Digital Service (GDS)

Description: The United Kingdom has in place a service toolkit for public sector organisations to efficiently and effectively design and deliver public services that meets government standards, namely the 14-point Service Standard. This toolkit comprises 1) standards (Service Standard, the Service Manual, the Technology Code of Practice, Open Standards, technical and data standards for APIs); 2) guidance (spend controls, agile delivery, design and style); 3) performance dashboard and 4) the Digital Marketplace to purchase technologies. These resources collectively form a "Government as a Platform" ecosystem of support for the public servants involved in the service design and delivery process. GOV.UK services are also available to teams to create and operate public services in notifications (GOV.UK Notify), payments (GOV.UK Pay), digital identity (GOV.UK Verify), cloud hosting (GOV.UK Platform as a Service) and data registers (GOV.UK Registers).

Read More: *https://www.gov.uk/service-toolkit.*

Italy's pagoPA and SPID Systems

Responsible entities: Agency for Digital Italy (AgID); PagoPA S.p.A.

Description: pagoPA is a platform for citizens to make digital payments to the public administration in a fast, easy, secure, transparent and intuitive way with accredited payment service providers and for payments to be processed. Citizens can choose between different electronic payment methods. The pagoPA system ensures standardisation across the bodies and payment service provides such as banks and post offices that adopt the system. pagoPA aims to encourage the development of a digital payment ecosystem that places citizens at the centre and simplifies the relationship between the state and citizens and businesses. Complementary to this payment system is SPID, which is a public digital identity system that allows citizens to access the online services of public administrations with a single, secure and protected digital identity.

Read More:
https://web.archive.org/web/20190402152301/https:/www.agid.gov.it/en/plat forms/pa-payment-system; https://innovazione.gov.it/progetti/pagamenti-digitali-pagopa/; https://www.agid.gov.it/en/platforms/spid.

Establishing data-driven public sector approaches

Denmark's Common Public-Sector Digital Architecture

Responsible entity: Danish Agency for Digitisation

Description: Following up on Denmark's Digital Strategy 2016-2020, the Agency for Digitisation produced a common framework on public sector digital architecture in order to establish standardised architectural principles and guidelines that would enable an easy and safe exchange of data among various public sector organisations towards coherent, efficient and transparent services that meet the needs of its users. The eight principles and 22 architectural rules were developed based on agreement among local, regional and central governments. These principles cover elements of governance, innovation, privacy and collaboration.

Read More: _https://arkitektur.digst.dk/node/529;_
_https://arkitektur.digst.dk/sites/default/files/white_paper_on_a_common_publi_
_c-sector_digital_architecture_pdfa.pdf_.

France's OpenFisca with Nine Other Countries

Responsible entities: Institute of Public Policy (IPP); Etalab; Agricultural Social Mutuality (MSA); beta.gouv.fr; Institute of Public Economics (IDEP); France Strategy

Description: OpenFisca is an open source platform for users to turn legislation into computer code to improve understanding and accessibility to law. It enables users to then share and re-use these codes to create value and develop better public services from them. The platform now hosts the data about the tax and benefit systems of France and nine other countries such as Australia, Italy, New Zealand, Tunisia and Uruguay. Users can calculate their rights, benefits and eligibility based on their individual situation. Conversely, users can also evaluate the impact of income tax policy on their household or calculate the costs and benefits of a tax reform.

Read More: _https://openfisca.org/en/index.html_; _https://fr.openfisca.org/._

Sweden's Public Registries as a Reliable Data Source for Research

Responsible entities: Swedish Research Council (VR); Swedish National Data Service (SND)

Description: Sweden has a tradition of national population-based registries that are compiled by public sector organisations or created for research purposes. Given that Sweden also uses unique personal identity numbers, it is possible to link data from various registers to a specific individual. The VR aims to improve the accessibility and facilitate the use of register data for research.

For this purpose, Registerforskning.se was created to host all the available public registers such the national public authority registers, national quality registers, research-generated data and related biobanks. The Register Utiliser Tool (RUT) was also developed to function on metadata of the public registers and exclude micro personal data.

Read More: *https://www.registerforskning.se/en/registers-in-sweden/; https://snd.gu.se/en/data-management/register-based-research.*

Sourcing the talent and skills for a digitally-enabled state

The United Kingdom's Digital, Data and Technology Profession

Responsible entity: Central Digital and Data Office (CDDO)

Description: The United Kingdom's Digital, Data and Technology Profession is a team in the CDDO as part of the Cabinet Office that focuses on helping the government attract, develop and retain the people and skills needed to support government digital transformation. Its strategy aims to ensure a co-ordinated and holistic approach across all departments by maximising, sharing and building on existing best practice from the public and private sector. Priorities cover workforce planning through analytics, job roles consistency through a common capability framework, pay and reward consistency, training and development for digital, data and technology professions, and a diverse and Inclusive culture.

Read More: *https://www.gov.uk/government/organisations/digital-data-and-technology-profession.*

Canada's Free Agents Programme

Responsible entity: Government of Canada

Description: Canada's Free Agents Programme was launched in 2016 as a new model for workforce and talent mobility with public servants taking charge of their career. It offers public servants the freedom (called "Free Agents") to select work that matches their skills and interests, determine their own career paths, undertake projects where understanding and applying innovation processes are encouraged, receive ongoing learning and professional development opportunities, and network with other Free Agents. Free Agents are screened for attributes that are beneficial for solving problems and skills that are in demand. It also supports managers looking to rapidly and easily acquire top talent with emerging and core skills in order to support their short-term project needs.

Read More: *https://ca.linkedin.com/company/freeagents-agentslibres; https://wiki.gccollab.ca/Canada%27s_Free_Agents/FAQ.*

Ensuring ongoing institutional alignment and agility in the governance of digital government

Estonia's No-Legacy Principle of e-Governance

Responsible entity: Government of Estonia

Description: Estonia has seen a remarkable digital transformation of its government, economy and society over the past 20 years following its independence from the Soviet Union in 1991 – greatly due to an approach that is rooted in a no-legacy culture. It allowed the country to modernise its infrastructure and processes without being held back by legacy systems. This no legacy approach is now embedded as one of the principles of Estonian e-governance, towards continuous legal change and organic improvement of the technology and law.

Read More: *https://e-estonia.com/whats-behind-estonias-digital-success/; https://e-estonia.com/wp-content/uploads/eas-eestonia-vihik-a5-180404-view.pdf.*

Korea's Digital New Deal

Responsible entity: Ministry of Economy and Finance (MOEF)

Description: With new challenges from the COVID-19 pandemic, the Korean government launched an ambitious and comprehensive national development strategy, the Korean New Deal, to support the country's recovery and lead global action in tackling structural changes for the digital and green economy. Under the Korean New Deal, the Digital New Deal aims to strengthen the digital

and data-driven capacity of the country in information and communication technologies (ICT). This includes a plan to establish a smart government that utilises 5G and AI, is advanced in cyber security, and uses people-related data to innovate and secure proactive and contactless operations and services by 2025.

Read More:
https://english.moef.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4948.

Spain's e-Government Legal Framework

Responsible entity: Government of Spain

Description: Spain has a highly decentralised system of two autonomous cities and 17 autonomous regions, based on the 1978 Constitution. Local governments have self-government rights on local affairs. The Law 39/2015 on Common Administrative Procedure of Public Administrations and the Law 40/2015 on the Legal Regime of the Public Sector enabled the reform towards an electronic, interconnected, streamlined, transparent government with a clear and simple administrative structure. The central, regional and local public administrations need to ensure compatibility and interoperability of their systems and enablers, and co-operation among public administrations to provide clear information.

Read More:
https://administracionelectronica.gob.es/pae_Home/en/pae_Estrategias/pae_Leyes-39-y-40-2015/las-tic-en-leyes-39-y-40.html?idioma=en;
https://www.hacienda.gob.es/en-GB/Areas%20Tematicas/Administracion%20Electronica/Paginas/default.aspx.

The United Kingdom's Local Digital Declaration

Responsible entities: Ministry of Housing, Communities and Local Government (MHCLG); Government Digital Service (GDS)

Description: The Local Digital Declaration is the United Kingdom's response to align its central and local governments to align and converge on good digital practices. This ensures the design and delivery of high-quality services that meets the needs and challenges of each varying local context. The Local Digital Declaration elaborates on guiding principles regardless of their size, location or political governance of local authorities – addressing legacy IT contracts, isolated procurement practices and siloed digital projects. It is the first collective agreement between the central and local governments.

Read More: *https://localdigital.gov.uk/declaration/.*

References

Australian Government's Digital Transformation Agency (2022), *Business case playbook*, *https://businesscaseplaybook.service.gov.au/*.　　　　[13]

G20/OECD (2021), *G20 Compendium on the use of digital tools for public service continuity*, *https://assets.innovazione.gov.it/1628073696-g20detfoecdcompendiumdigitaltools.pdf*.　　　　[1]

G20/OECD (2018), *Bridging the Digital Gender Divide*, *https://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf*.　　　　[16]

OECD (2021), *Good Practice Principles for Data Ethics in the Public Sector*, *https://www.oecd.org/gov/digital-government/good-practice-principles-for-data-ethics-in-the-public-sector.pdf* (accessed on 7 April 2021).　　　　[18]

OECD (2021), *Recommendation of the Council on Broadband Connectivity [OECD/LEGAL/0322]*, *https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0322*.　　　　[17]

OECD (2021), *The E-Leaders Handbook on the Governance of Digital Government*, OECD Publishing, Paris, *https://doi.org/10.1787/ac7f2531-en*.　　　　[7]

OECD (2021), "The OECD Framework for digital talent and skills in the public sector", *OECD Working Papers on Public Governance*, No. 45, OECD Publishing, Paris, *https://dx.doi.org/10.1787/4e7c3f58-en*.　　　　[11]

OECD (2020), *Digital Government in Chile – Improving Public Service Design and Delivery*, OECD Digital Government Studies, OECD Publishing, Paris, *https://dx.doi.org/10.1787/b94582e8-en*.　　　　[8]

OECD (2020), *Digital Government Index: 2019 results*, OECD Public Governance Policy Papers, *https://dx.doi.org/10.1787/4de9f5bb-en*.　　　　[10]

OECD (2020), "The OECD Digital Government Policy Framework: Six dimensions of a Digital Government", *OECD Public Governance Policy Papers*, No. 02, OECD Publishing, Paris, *https://dx.doi.org/10.1787/f64fed2a-en*.　　　　[6]

OECD (2019), *Government at a Glance 2019*, OECD Publishing, Paris, *https://doi.org/10.1787/8ccf5c38-en*.　　　　[15]

OECD (2019), *The Path to Becoming a Data-Driven Public Sector*, OECD Digital Government Studies, OECD Publishing, Paris, *https://dx.doi.org/10.1787/059814a7-en*. [4]

OECD (2017), *Recommendation of the Council on Open Government [OECD/LEGAL/0438]*, *https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0438*. [12]

OECD (2014), *Recommendation of the Council on Digital Government Strategies [OECD/LEGAL/0406]*, *https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0406*. [9]

OECD (2005), *e-Government for Better Government*, OECD e-Government Studies, OECD Publishing, Paris, *https://dx.doi.org/10.1787/9789264018341-en*. [3]

OECD (2003), *The e-Government Imperative*, OECD e-Government Studies, OECD Publishing, Paris, *https://dx.doi.org/10.1787/9789264101197-en*. [2]

Ubaldi, B. et al. (2019), "State of the art in the use of emerging technologies in the public sector", *OECD Working Papers on Public Governance*, No. 31, OECD Publishing, Paris, *https://doi.org/10.1787/932780bc-en*. [5]

UK Government Digital Service (2022), *Digital Buying Guide: How to apply the best standards in digital buying for the public sector*, *https://www.digitalbuyingguide.org/en/about/*. [14]