OECD Digital Government Studies

Digital Government Review of Türkiye

TOWARDS A DIGITALLY-ENABLED GOVERNMENT

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Foreword

In light of the transformational impact of digital technologies and data, governments must take steps to ensure that the services they design and provide are inclusively focused on the needs of the public and accessible to all. OECD Digital Government Reviews support governments in assessing their capability against the analytical frameworks developed to guide digital maturity.

The *OECD Recommendation of the Council on Digital Government Strategies* provides the basis for OECD member countries to shape their strategic approach to this agenda. In light of its provisions, and with the aim of consolidating digital transformation efforts, the Government of Türkiye established the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) directly under the Presidency of the Republic of Türkiye. Establishing a focal point for the digital transformation of the government provides an important foundation for the ongoing progress towards being a digitally-mature government.

In response to the challenges and opportunities identified for achieving an ever more ambitious approach to the digital transformation of the public sector in Türkiye, the Government of Türkiye requested the OECD to carry out this Digital Government Review of Türkiye focusing on six areas:

- Strengthening governance to deliver digital government.
- Establishing institutional capacity to implement digital government.
- Embedding digital skills and capability in the public sector.
- Creating user-driven value in proactive public service design and delivery.
- Cementing building blocks and shared services for improved capabilities.
- Moving towards a data-driven public sector.

Conducted at the request of the Turkish government, with the strong engagement of the DTO, and peers from Estonia, Korea and Sweden, this Digital Government Review applies the analytical tools used to support the *OECD Digital Government Policy Framework*. The review evaluates the ongoing efforts undertaken by Türkiye to advance its digital government maturity and achieve the digital transformation of the public sector.

Through a survey (completed by over 100 public sector organisations) and interviews (conducted with over 40 different participating institutions) the OECD Review team has assessed the current status of digital transformation. The report provides recommendations that can support Turkish efforts to deliver better policies for better lives enabled by a transformed approach to service design and delivery that builds trust through reinforcing the competencies and behaviours of government.

The OECD stands ready to continue supporting digital government policies in Türkiye with the implementation of the recommendations elaborated through this *Digital Government Review.*

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Chapters 2 and 3 were written by Seong Ju Park, Chapter 4 and Chapter 7 were written by Lucia Chauvet, and Chapters 5 and 6 were written by Benjamin Welby, Digital Government Policy Analysts in the Open and Innovative Government Division. All chapters benefitted from the strategic orientation and revisions of Barbara-Chiara Ubaldi. Benjamin Welby served as the lead co-ordinator of the review.

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Finally, the OECD Secretariat would like to express its thanks to the entire team at the DTO for the support and close collaboration throughout the whole review process.

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Abbreviations and acronyms

AGESIC	Agency for e-Government and Information Society
AI	Artificial intelligence
AKS	*Adres Kayıt Sistemi*, Address Registration System
AMA	Administrative Modernisation Agency
ANCT	National Agency for the Cohesion of Territories
API	Application Processing Interface
ASDEP	*Aile Sosyal Destek Programı*, Family Social Support Program
BİLGEM	*Bilişim ve Bilgi Güvenliği İleri Teknolojiler Araştırma Merkezi*, TÜBİTAK Informatics and Information Security Research Center
BKMYBS	*Bütünleşik Kamu Mali Yönetim Bilgi Sistemi*, Integrated Public Financial Management Information System
BTK	*Bilgi Teknolojileri ve İletişim Kurumu*, Information and Communication Technologies Authority
BVAS	*Birleşik Veri Aktarım Sistemi*, Unified Data Transfer System
ÇAY-KUR	*Çay İşletmeleri Genel Müdürlüğü*, General Directorate of Tea Enterprises
CDDO	Chief Digital and Data Office
CİMER	*Cumhurbaşkanlığı İletişim Merkezi*, The Presidency's Communication Centre
CIO	Chief Information Officer
CKAN	Comprehensive Knowledge Archive Network
CMMI	Capability Maturity Model Integration
CoG	Centre of Government
CSPS	Canada School of Public Service
CSV	Comma Separated Values
DASK	*Doğal Afet Sigortaları Kurumu*, Turkish Natural Catastrophe Insurance Pool
DDaT	Digital, Data and Technology
DDPS	Data-Driven Public Sector
DETSİS	*Devlet Teşkilatı Merkezi Kayıt Sistemi*, Government Organisation Central Records System
DGI	Digital Government Index
DGPF	Digital Government Policy Framework
DIGCOMP	European Digital Competence Framework 2.0
DINSIC	*Direction interministérielle du numérique et du système d'information et de communication de l'État*, Interministerial Directorate of Digital and State Information and Communication System
DINUM	*Direction interministérielle du numérique*, Interministerial Digital Directorate
DMO	*Devlet Malzeme Ofisi*, Directorate General of State Supply Office
DSA	Data Standards Authority
DTA	Digital Transformation Agency
DTO	*Dijital Dönüşüm Ofisi*, Digital Transformation Office
EASD	Enhanced Access to, and Sharing of, Data
EBA	*Eğitim Bilgi Ağı*, Education Information Network

EC	European Commission
EGDI	E-Government Development Index
eID	Electronic identification
EKAP	*Elektronik Kamu Alımları Platformu*, Electronic Public Procurement Platform
EKİP	*Entegre Kurumsal İşlem Platformu*, Integrated Corporate Operation Platform
EPI	E-Participation Index
ETAP	*Etkileşimli Tahta Arayüzü Projesi*, 0028Interactive Board Interface Project
EU	European Union
EUR	Euro
EVDS	*Elektronik Veri Dağıtım Sistemi*, Electronic Data Delivery System
FASTER	Fusion Analytics for Public Transport Emergency Response
FATİH	*Fırsatları Arttırma ve Teknolojiyi İyileştirme Hareketi Projesi*, Movement of Enhancing Opportunities and Improving Technology
GaaP	Government as a Platform
GDS	Government Digital Service
GIS	Geographic Information System
HCI	Human Capital Index
HDI	Human Development Index
HES	*Hayat Eve Sığar*, Life Fits Into Home
HEYS	*Hizmet Envanteri Yönetim Sistemi*, Service Inventory Management System
HRM	Human Resources Management
IaaS	Infrastructure as a Service
ICT	Information and Communication Technology
I-DESI	International Digital Economy and Society Index
IMM	*İstanbul Büyükşehir Belediyesi*, Istanbul Metropolitan Municipality
INSPIRE	Infrastructure for Spatial Information in Europe
İSKİ	*İstanbul Su ve Kanalizasyon İdaresi*, Istanbul Water and Sewerage Administration
İŞKUR	*Türkiye İş Kurumu*, General Directorate of Turkish Employment Agency
ISO	International Organisation of Standardisation
İYEM	*İmza Yetkilileri Modülü*, Authorised Signatory Module
KAMİS	*Kamu İnternet Siteleri Rehberi*, Public Web Site Guidelines
KaYa	*Kamu Yatırımları Bilgi Sistemi*, Public Investment Information System
KAYSİS	*Elektronik Kamu Bilgi Yönetim Sistemi*, Electronic Public Information Management System
KEP	*Kayıtlı Elektronik Posta*, Registered Electronic Mail
KMS	*Kamu Mevzuatı Sistemi*, Public Legislation System
KOSGEB	*Küçük ve Orta Ölçekli İşletmeleri Geliştirme ve Destekleme İdaresi Başkanlığı*, Small and Medium Enterprises Development and Support Administration
KPS	*Kimlik Paylaşım Sistemi*, Identity Sharing System
KVKK	*Kişisel Verilerin Korunması Kanunu*, Personal Data Protection Law
MEBBİS	*Millî Eğitim Bakanlığı Bilişim Sistemleri*, National Education Information System
MERNİS	*Merkezi Nüfus İdaresi Sistemi*, Central Population Management System
MHRS	*Merkezi Hekim Randevu Sistemi*, Central Physician Appointment System
MPA	Ministry of the Public Administration
MTP	Medium Term Programme
NVI	*Nüfus ve Vatandaşlık İşleri Genel Müdürlüğü*, General Directorate for Population and Citizenship Affairs
ÖBA	*Öğretmen Bilişim Ağı*, Teacher Information Network
OGD	Open Government Data

ONS	Office for National Statistics
OPSI	*Odprti podatki Slovenije*, Open Data of Slovenia
OSI	Online Services Index
PaaS	Platform as a Service
PERDİS	*Performans Değerleme ve İzleme Sistemi*, Performance Evaluation and Monitoring System
PRINCE2	Projects IN Controlled Environments
PTT	*Posta ve Telgraf Teşkilatı*, National Post and Telegraph Directorate of Türkiye
RESTful	Representational State Transfer
SEÇSİS	*Seçim Bilgi Sistemi*, Election Information System
SEGBİS	*Ses ve Görüntü Bilişim Sistemi*, Audio and Visual Information System
SGK	*Sosyal Güvenlik Kurumu*, Social Security Institution
SME	Small and medium-sized enterprise
SSB	*Savunma Sanayii Başkanlığı*, Defence Industry Agency
TII	Telecommunication Infrastructure Index
TKGM	*Tapu ve Kadastro Genel Müdürlüğü*, Land Registry and Cadastre
TQM	Total Quality Management
TR-CERT	*Ulusal Siber Olaylara Müdahale Merkezi*, Computer Emergency Response Team of Türkiye
TRT	*Türkiye Radyo Televizyon Kurumu*, Turkish Radio and Television Corporation
TRY	Turkish Lira
TÜBİTAK	*Türkiye Bilimsel ve Teknolojik Araştırma Kurumu*, Scientific and Technological Research Council of Türkiye
TUCBS	*Türkiye Ulusal Coğrafi Bilgi Sistemi*, Turkish National Geographic Information System
TÜİK	*Türkiye İstatistik Kurumu*, Turkish Statistical Institute
ULAKNET	*Türkiye Ulusal Araştırma ve Eğitim Ağı*, Turkish National Research and Education Network
UN	United Nations
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
USD	United States Dollar
USOM	*Ulusal Siber Olaylara Müdahale Merkezi*, Computer Emergency Response Team of Türkiye
UYAP	*Ulusal Yargı Ağı Bilişim Sistemi*, National Judicial Network Information System
VERA	*Türkiye Sayıştay Veri Analiz Sistemi*, Data Analysis System
VERBİS	*Veri Sorumluları Sicil Bilgi Sistemi*, Data Controllers Registry Information System
YÖK	*Yükseköğretim Kurulu*, Council of Higher Education
YÖKSANLAB	*Yükseköğretim Kurulu Sanal Laboratuvarı*, Council of Higher Education Virtual Laboratories
YÖKSİS	*Yükseköğretim Kurulu Bilgi Sistemi*, Higher Education Information System
YSK	*Yüksek Seçim Kurulu*, Supreme Election Council
YTB	*Yurtdışı Türkler ve Akraba Topluluklar Başkanlığı*, Presidency for Turks Abroad and Related Communities

Executive summary

The Republic of Türkiye recognises that using digital technology and data to help the public sector become more responsive, resilient and proactive contributes to national competitiveness and economic growth. The introduction of a presidential system in 2018 placed greater importance on this objective and the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) of the Presidency of Republic of Türkiye was created to provide a strong foundation for transitioning from e-government to digital government.

Robust governance is crucial for embedding digital transformation throughout the public sector and the DTO enjoys strong support from the highest leadership of the country as well as the respect of organisations throughout the country. The new national digital government strategy will provide an opportunity to build more effective institutional capacity by setting out an ambitious vision, defining priorities, and establishing clear responsibilities for achieving comprehensive change.

Leadership for digital government needs to be distributed throughout the public administration. While Türkiye benefits from existing digital capabilities and established technical practices, the public sector workforce as a whole needs ongoing investment in order to maintain its 21st century skills. It is also critical for managers to foster operational environments that enable continuous learning and provide flexibility to attract digital talents and encourage them to reach their full potential.

The digital age presents both opportunities and challenges for how the design and delivery of public services can contribute to building trust and reinforcing democracy. In Türkiye, the recognition of technology and data as enablers for better understanding users and responding to their needs, is reflected in the activities of a number of public sector organisations. These inspirational pockets of good practice can be a model for developing a user-driven, inclusive and proactive culture across the whole of government for meeting the needs of all users, be they from the administration or the public at large.

The government of Türkiye has successfully established a range of building blocks and technical solutions for digital transformation. These include *türkiye.gov.tr*, the e-Government Gateway, providing a focal point for services that work seamlessly across organisational boundaries as well as a digital identity solution that is increasingly ubiquitous. The wider ecosystem of enablers for supporting public service design and delivery would benefit from consolidating guidance, providing clear standards about assessing quality and adopting an omni-channel perspective to ensure that digital transformation efforts do not contribute to digital exclusion.

Finally, the Government of Türkiye has a strong understanding of data as a strategic asset and the importance of ensuring its security. The country now needs to augment its existing data governance approaches with clear leadership to set out a vision, develop a comprehensive strategy, and co-ordinate different stakeholders. Such leadership would help establish the necessary data infrastructure and practices for the use of data by the Turkish public sector to positively contribute towards public trust.

Key policy recommendations

Strengthening governance to deliver digital government

- Maintain a strong political will and make the best of the centralised administrative model to drive the digital government agenda further.
- Leverage the broader digital transformation of the Turkish economy to foster the effectiveness of governing digital government.
- Empower the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) as the organisation-in-charge of driving the digital government agenda across the public sector.
- Strengthen the co-ordination and co-operation mechanism to engage all relevant stakeholders across government.

Establishing institutional capacity to implement digital government

- Support the development and implementation of a dedicated digital government strategy in order to transform ambitious plans into concrete actions at the whole-of-government level.
- Strengthen the use of common policy levers including business cases, project management, procurement of ICT/digital projects and financial management tools to facilitate steering and co-ordination of digital investments across the public sector by the DTO.
- Improve the legal and regulatory framework to anchor digital transformation efforts and support the transition from e-government to digital government.

Embedding digital skills and capability in the public sector

- Create a work environment in the public sector that includes better communications, a flatter organisational structure to promote faster and better decision-making, more collaboration opportunities, a learning culture and more flexible working policies.
- Ensure that public servants at all levels – including in leadership positions – develop the adequate digital literacy and confidence to lead a successful digital transformation.
- Set up a recruitment strategy to attract the necessary digital talents and offer a transparent reward system, professional growth and mobility opportunities, while building a work environment to accommodate these changes.

Creating user-driven value in proactive public service design and delivery

- Recognise the political, organisational, technical and societal context within which public service design and delivery takes place and use those insights to shape a tailored response to the needs and priorities of individual organisations to achieve transformation.
- Embrace the opportunities of digital transformation to create a more proactive and user-driven culture within the Turkish public sector.

Cementing building blocks and shared services for improved capabilities

- Revise the governance processes for funding and assuring the quality of public service design and delivery.
- Clearly define an inclusive approach to providing access to public services that accounts for the relationship between analogue and digital experiences and seeks to minimise digital divides, recognise accessibility needs and champion digital inclusion.

- Encourage the use of shared building blocks and common resources as part of the curated Government as a Platform ecosystem.

Moving towards a data-driven public sector

- Define and strengthen the leadership and vision for establishing a data-driven public sector in Türkiye.
- Support institutions in applying data to generate value by establishing communities of practice, investing in training and resources, defining standards for data sharing and incentivising data application.
- Commit to the trustworthy management and use of data in the public sector by promoting the role of ethics, transparency, privacy and security.

1 Assessment and recommendations

Contextual factors and institutional models for digital government in Türkiye

Overall political and administrative culture

Türkiye is a presidential and constitutional republic with a population of approximately 84.7 million (TÜİK, 2021[1]). With a long history of strong traditional administrative practices and culture, Türkiye has a centralised power structure with expanded executive power. Although shared between three branches, the executive retains the greatest power in terms of influence and authority. The public administration is organised in a two-tier structure, central and local government. At the central level, the president delegates the executive power to the Presidential Cabinet. The administrative de-centralisation divides Türkiye into 81 provinces, which are composed of metropolitan municipalities, municipalities and villages.

The longevity in leadership has provided continued political support throughout the digitisation, digitalisation and now digital transformation agenda of the government since the early 2000s. The country's public sector modernisation effort put e-government (the use by the governments of information and communication technologies (ICT) as a tool to achieve better government) at the core to increase efficiency and effectiveness of its large public sector (OECD, 2014[2]).

In general, the current Turkish political and administrative culture supports the public sector digital transformation. With a centralised administrative structure providing strong political support as highlighted above, Türkiye has an opportunity to develop and implement the next digital government strategy in a coherent and sustainable manner. Nevertheless, some long standing practices in the culture of the civil service, including the legal framework for managing civil servants dating from 1965, might represent an important barrier in driving administrative and cultural changes in the public sector. Türkiye's large geographical size might also present some challenges in driving equally inclusive digital transformation across the entire public sector.

Socio-economic factors and digitalisation context

Türkiye's economy is considered well advanced and resilient, yet the current economic outlook is more uncertain than usual. With a strong response to the COVID-19 pandemic, Türkiye was able to rebound quickly from the crisis and return to growth (EC, 2021[3]). In 2021, Türkiye's economy grew 11%, making it one of the fastest among G20 countries. However, its monetary stimulus led to deterioration of the country's macro-financial conditions. Over the period from January 2021 to June 2022, the Turkish Lira (TRY), relative to the US Dollar (USD), has depreciated 56.5%.[1] The country's inflation rate raised to 61.1% in the first quarter of this year, directly affecting households and industry (World Bank, 2022[4]).

The country's overall performance on the United Nations Human Development Index (HDI) shows consistent improvement in the human development over the last two decades; however, inequality hinders further development. The inequality-adjusted HDI value dropped to 0.683, putting the country far below the group average of 0.800 (UNDP, 2020[5]). This insight also aligns with main findings of the OECD Economic Policy Reforms 2021: Going for Growth (OECD, 2021[6]).

The past decade has seen some progress in terms of the access to, and use of, communications infrastructure, services and data in Türkiye. Nevertheless, limited access to Internet connectivity and insufficient digital skills across society remain an impediment to wider adoption of digital technologies. Despite these challenges, Türkiye has been able to increase the provision of digital public services to citizens and businesses.

Overall, as socio-economic factors in Türkiye improve and stabilise, these can help to support the foundations for the governance of digital government. For example, investment in the digital transformation agenda would be a recognition of the wider impact of digital transformation on the long-term economic and social development goals of the country. From a technological context point of view Türkiye has achieved significant progress in recent years but a number of challenges remain in providing a solid basis for transformation into a mature digital government. For instance, Türkiye could further invest in addressing limited connectivity and digital skills across society, especially for businesses as well as promoting government-specific innovations to improve public service design and delivery in collaboration with the private sector.

Macro-structure and leading public sector organisation

In Türkiye, the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) has a mandate to lead and co-ordinate the digital government agenda across the public sector. During its transition from the parliamentary to the presidential system, Türkiye consolidated its fragmented digital transformation efforts under one roof. With the Presidential Decree No. 1, in 2018, the DTO attained strong support from the highest power and necessary legal basis (Presidency of the Republic of Türkiye, 2018[7]). Under the leadership of the president of the DTO who also serves as the government Chief Digital Officer, the DTO co-ordinates all matters related to digital services, digital public administration, cybersecurity, critical infrastructures, big data and AI.

Since its inception, the DTO has taken important steps towards creating an environment for achieving progress in digital transformation of the Turkish public sector with the most visible achievement being the integration of fragmented services on *türkiye.gov.tr*, the *central e-Government Gateway*. Despite its short history, its position within the Presidency gives the DTO the adequate level of political support and the ability to set a strategic vision and plan covering all policy sectors, the whole public sector and levels of government.

As the organisation-in-charge on the digital government agenda in the Turkish government, the DTO holds decision-making, co-ordination and advisory roles and responsibilities. However, the Review identified areas where the organisation would benefit from having greater capacity in terms of its size, or greater influence over particular issues and behaviours elsewhere in the public sector. The DTO is in process of developing a new and overarching digital government strategy, and this provides a crucial opportunity for the organisation to clarify the governance needed to support its implementation and therefore reinforce the role of the DTO position as the organisation-in-charge to ensure a whole-of-government understanding and commitment to transition the government's approach from e-government to digital government.

Co-ordination and co-operation

In Türkiye, the DTO organises the "Mitigation of Bureaucracy and Digital Türkiye Meeting" chaired by the vice president. The meeting brings together high-level representatives from government institutions to minimise bureaucracy and red tape, and encourage collaboration and alignment on digital government priorities and initiatives. At the meeting, relevant stakeholders discuss common challenges and decide on possible solutions. This mechanism also involves the highest leadership in monitoring progress against the decisions made at the meetings.

Overall, Türkiye, through the "Mitigation of Bureaucracy and Digital Türkiye Meeting", has a solid foundation to build stronger and more effective co-ordination and co-operation across the public sector. It would be worthwhile for the government to consider taking a few actionable steps to cement the processes that can ensure the coherence and sustainability of the digital transformation agenda across the public sector.

Proposals for action

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 2 of this review, the Government of Türkiye could consider implementing the following policy recommendations:

1. **Maintain a strong political will and make the best of the centralised administrative model to drive the digital government agenda**. The following priorities can be considered:
   a. Capitalise on the strong political support and centralised administrative model of the country to develop an ambitious and comprehensive national digital government strategy in co-ordination with all relevant stakeholders from the public and private sector.
   b. Continue monitoring and assessing contextual factors such as neutrality of the civil service to meet European standards and requirements and benchmark good practices from OECD peers.
2. **Leverage the broader digital transformation of the Turkish economy to foster the effectiveness of governing digital government**. The following priorities can be considered:
   a. Strategically allocating budget to specific digital transformation efforts that can result in more economic and social outcomes.
   b. Continue enhancing connectivity and digital skills to create a more inclusive society.
   c. Promote government-specific innovations in collaboration with the private sector to improve public sector's internal processes and public services.
3. **Empower the Digital Transformation Office (Dijital Dönüşüm Ofisi, DTO) as the organisation-in-charge of driving the digital government agenda across the public sector.** The following actions can be considered:
   a. Cement the DTO's mandate for its decision-making, co-ordinating and advisory roles and responsibilities by specifying them in the forthcoming digital government strategy.
   b. Earn trust and confidence from the public sector and different levels of government through creating an inclusive ecosystem.
4. **Strengthen the co-ordination and co-operation mechanism to engage all relevant stakeholders across government.** The following actions can be considered:
   a. Formalise the "Mitigation of Bureaucracy and Digital Türkiye Meeting" defining a clear mandate, a list of required representatives and the frequency of the meetings.
   b. Form working groups of practitioners from different public sector institutions on key priority areas under the "Mitigation of Bureaucracy and Digital Türkiye Meeting" to facilitate a bottom up collaborative and co-operative culture.
   c. Establish a co-ordination body that can organise a regular Chief Digital Officers' meeting with local representatives (Chief Digital Officers or equivalents) headed by the government Chief Digital Officer to ensure alignment, coherence and sustainability across the country.

Policy levers to lead the digital transformation of Türkiye

Strategy and plan

In Türkiye, the digital transformation agenda has been included in National Development Plans and thematic strategies for many years. However, in 2016 the government developed its first comprehensive *National e-Government Strategy and Action plan* (Ministry of Transport, Maritime Affairs and Communications, 2016[8]). The strategy provided a holistic approach to the structuring of e-government with the shared vision to improve the quality of life for the society through an efficient e-government. After the completion of the first standalone strategy, the government of Türkiye continued its efforts in accordance with the *Eleventh Development Plan* (2019-2023) (Presidency of Strategy and Budget, 2019[9]). The holistic and multi-dimensional policy document aims to increase national competitiveness and efficiency across the public sector (EC, 2021[10]).

Although this strategic document includes objectives and goals related to the digital transformation, they are scoped around e-government applications in public services, not digital transformation of the public sector. The strategy document itself is also missing a whole-of-government vision, clear objectives, as well

as clear responsibilities and roles of key relevant stakeholders to ensure successful digital transformation of the Turkish public sector with some of these elements handled in other documents.

At the institutional level, the right leadership can also empower organisations to be proactive in establishing a clear vision, in line with shared overarching strategic priorities for the whole government. However, the current absence of such institutional leadership seems to hinder progress towards higher digital maturity for many organisations in the Turkish public sector.

A pressing challenge appears to be the absence of a dedicated digital government strategy with a broad vision and a comprehensive action plan to facilitate the transformation from e-government to digital government. The Turkish government has taken actions to address this obstacle. The Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO), that is responsible for the country's digital roadmap, is currently preparing a new national digital government strategy that will benefit from the policy recommendations of this review.

Management tools and financial mechanisms

Currently, the Turkish government lacks full availability of standardised policy levers at the central government level and the general awareness of the existing policy levers across the public sector. The DTO is working to develop a standardised business case model (OECD, 2021[11]). In the case of a standardised model for data, digital and ICT project management, there is the *Public Information and Communication Technologies (ICT) Project Preparation Guide*, first published in 2017 and revised in 2021 (Ministry of Development, 2017[12]; Presidency of Strategy and Budget, 2021[13]). The guideline aims to support all public institutions including local governments with the preparation of investments on ICT projects. It supports cost-benefit analysis, the establishment of interoperable e-government systems and the timely completion of projects. Although it is mandatory to use the guideline, and its usage is embedded through certain processes, the fact-finding interviews found that institutions did not identify its relevance or their practice in using and applying the ideas contained within the Guide. In addition, there is not a central strategy dedicated to public procurement of ICT goods and services. Procurement law and the Public ICT Project Preparation Guide are not fully sufficient for governing fast-changing, complex ICT/digital procurement. Therefore, further clarity can be given to the relevant actors on the co-ordination mechanism and process specifically for ICT/digital procurement.

Furthermore, financial management mechanisms can be further institutionalised with clarity and transparency to better forecast digital investment and strategically allocate them with a holistic point-of-view. In Türkiye, the Ministry of Treasury and Finance (*Hazine ve Maliye Bakanlığı*), together with the Presidency of Strategy and Budget, prepares an annual Medium Term Programme (MTP). The MTP is the main budgetary policy document for setting objectives and priorities and complements the Presidential Annual Programme in determining the budget allocation for each organisation. All public sector organisations must comply fully with the objectives and priorities stated in the MTP when preparing their budgets and making policy decisions. Although the DTO is the leading public sector organisation mandated to develop Türkiye's digital roadmap, the DTO does not play an active role in shaping the MTP nor holds formal decision-making power over the budgeting for digital projects at the government central level.

Regulations and standards

In Türkiye, there are a number of specific legislations and regulations that support different aspects of the digital transformation of the public sector. Most notably, two presidential decrees (No.1 and No.48) cover the governance clarifying the responsibilities and role of relevant government bodies. In addition, a series of legal and regulatory documents seem to provide legal basis in areas such as interoperability, key enablers (access to public information, electronic identification (eID) and trust services, security, interconnection of base registries, e-procurement), and emerging technologies (EC, 2021[10]). The

regulatory frameworks in Türkiye can be further updated and aligned to cover all digital government areas. There seems to be a general expectation and demand across the public sector to be able to count on an updated legal and regulatory framework to reflect concrete mandates for each institution, facilitate the use of new technologies and mitigate risks in order to adequately equip the public sector for the constantly transforming environment. The same can be said regarding common approaches or standards on services, data, quality or performance. Despite the institutional competencies and effectiveness detected through this peer review process, the lack of a complete set of common policy enablers limits the administration to be effective as a whole and a coherent and sustainable transformation of the public sector.

Proposals for action

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 3 of this review, the Government of Türkiye could consider implementing the following policy recommendations:

5. **Support the development and implementation of a dedicated digital government strategy in order to transform ambitious plans** into **concrete actions at the whole-of-government level.** The following priorities can be considered:
   a. Accompany the new digital government strategy with a long-term investment plan and a detailed action plan, identifying specific goals, responsible bodies, timeline for achievement and key performance indicators.
   b. Secure the coherency, inclusiveness and sustainability of the strategy by engaging all relevant stakeholders from the public, private and civil society in its design and implementation. The Digital Türkiye meeting will serve as a great starting point to secure high-level buy-in from the relevant actors.
   c. Ensure that the new strategy represents the entire public sector and remains relevant by addressing sectoral priorities identified by institutions.
   d. Provide standardised guidelines, or a template to support the development of digital government strategies at the institutional level, and offer capacity building on the digital leadership.
6. **Strengthen the use of common policy levers including business cases, project management, procurement of ICT/digital projects and financial management tools to facilitate steering and co-ordination of digital investments across the public sector by the Digital Transformation Office.** The following priorities can be considered:
   a. Develop a centralised business case and agile project management models as the basis for strategic and coherent digital investments, and make its use mandatory across the entire public sector.
   b. Consider updating the current procurement law to better reflect the complexity of ICT/digital procurement; develop a dedicated ICT/digital procurement strategy and process jointly with relevant stakeholders including the private and civil society in alignment with the digital government strategy.
   c. Institutionalise financial measures and mechanisms to better forecast digital investments and allow strategic allocation of budget in a transparent manner.
   d. Consider empowering the DTO to co-fund key priority projects that are cross-sectoral to ensure timely and efficient implementation of such projects.
   e. Raise awareness on the existence of these policy tools to gain support for their adoption across the public sector through inter-ministerial co-ordination, communication campaigns and regular training exercises.
7. **Improve the legal and regulatory framework to anchor digital transformation efforts and support the transition from e-government to digital government.** The following actions can be considered:
   a. Identify areas for further improvements of the legal and regulatory framework to tackle newly emerging issues (such as digital investment, procurement of ICT/digital technologies) and make necessary adjustment to the mechanism accordingly.
   b. Consider consolidating a number of existing legislations to streamline and build a more comprehensive legal and regulatory framework.
   c. Engage relevant stakeholders from the public, private and civil society in updating the current legal and regulatory framework to promote inclusiveness, transparency and joint ownership.
   d. Take the opportunity of establishing the new digital government strategy to develop common approaches or standards on services, data management or digital performance for the public sector.
   e. Consider organising a series of workshops with relevant institutions to identify priority areas and possible solutions to common challenges.

Digital talent and skills for a transformational public sector

Digital enabling environment

In Türkiye, the Digital Transformation Office has been mandated to lead the digital transformation of the public sector through fostering co-operation with private sector organisations, universities and non-governmental organisations. Impressive efforts such as the e-Government Gateway and the Distance Learning Gate demonstrated the importance of digital skills for public servants. However, this priority does not seem to be perceived the same way across institutions. Results from the survey supporting this review demonstrated a lack of prioritisation of digital talent and skills in the Digital Transformation Office's (*Dijital Dönüşüm Ofisi*, DTO) digital transformation strategy and revealed that some public servants had little awareness of the benefits of having a workforce equipped with digital government skills. In addition to this, the top-down organisational structure could slow-down decision-making, prevent collaboration and limit communications between institutions.

Although the Distance Learning Gate's initiative is encouraging, the lack of structures such as a Digital Academy makes creating a safe learning environment, where talents experiment, build digital skills and facilitate the development of a digital culture, more challenging. This was confirmed by many as they reported that their organisations did not nurture an experimental culture and that such safe learning space is missing. Regarding ways of working, Türkiye has made significant changes over the pandemic. The government has given IT infrastructure a priority, invested in adequate tools and technologies, as well as incorporated flexible workplace regulations and policies. However, the government lacks the motivation to retain and extend regulations and policies promoting a flexible environment for the public sector after the crisis. Given the evolving needs of society, it would be crucial to cultivate a flexible and agile work environment.

Digital government skills

To lead a successful digital government, it is fundamental that all public servants are not only equipped with basic 21st century skills, but also trained with digital government user skills. Indeed, the OECD peer review team observed that public servants in Türkiye have impressive e-government skills but do not have digital government users' skills, which are the foundational skills for all staff to take part in a digital government journey.

There is neither co-ordination between institutions nor initiatives in place to foster multidisciplinary environment in the public sector, nor encouragement of composition of teams with digital government socio-emotional and digital government professional skills. Similarly, the survey disclosed that political leaders and senior officials are not targeted for training, which affects the perception of the workforce on the abilities leaders may have to successfully head a digital transformation.

Sustainability of a digital workforce in the public sector

Although Türkiye has a young and tech-savvy population, the public sector struggles to attract and retain top talent due to the private sector's higher financial rewards and more attractive career plans. Many of the stakeholders consulted as part of this peer review expressed the need to improve the attractiveness of the public sector as a workplace and offer retention mechanisms that keep public servants motivated. The Human Resources Office (*İnsan Kaynakları Ofisi*) is supporting public sector institutions in addressing this challenge by organising National Talent Fairs and National Internship Programs, as well as providing resources such as the Career Planning Course, and Career Gate. These initiatives aim to create a culture that supports the development, employment, and engagement of young talents, ultimately increasing the public sector's attractiveness as an employer.

In terms of development and allocation of skills, the Distance Learning Gate has introduced formal training, while informal training programmes are emerging. Based on interviews and the Digital Government Survey of Türkiye, some institutions rely on the support of their contractors and lack skills transfer measures to ensure independence from third party services and promote in-house production. Furthermore, the public sector talent management system of the Government of Türkiye does not appear to offer job mobility opportunities between sectors to enhance learning, given the rigidity of the current organisational structure. This may also explain the fear of losing talents to more attractive career paths benefits, job flexibility, and learning opportunities in the private sector.

There appear to be few mentoring and feedback loop programmes in place, which are important features of a successful public sector talent management system. Such activities not only promote a life-long learning culture through experience sharing with senior staff and encouraging agile ways of working with a constant intention of improving. This gap loops back into the challenge of creating a sustainable work environment that allows digital talents to unleash their potential and improve public services.

Proposals for action

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 4 of this review, the Government of Türkiye should consider implementing the following policy recommendations:

8. **Create a work environment in the public sector that includes better communications, a flatter organisational structure to promote faster and better decision-making, more collaboration opportunities, a learning culture and more flexible working policies.** The following measures could be considered:
    a. Ensure that priorities, benefits and the vision of digital transformation, as well as the role of institutions, are well-communicated across organisations.
    b. Develop a dedicated digital talent and skills strategy for civil servants that emphasises their role in the digital transformation.
    c. Foster a more horizontal organisational structure:
        i. Offer greater flexibility to improve the decision-making process, making it more agile and thus capable to enable more adequate responses to meet the changing needs and expectations of citizens and businesses.
        ii. Identify and provide clear job descriptions and job families to reflect an approach that is more user-centric, iterative and collaborative.
    d. Prioritise the creation of a safe learning space where public servants could test, experiment and fail without judgement to reinforce such culture and to foster digital experimentation, the application of new digital skills and the creation of a solid life-long learning mindset.
    e. Consider maintaining and building on the regulations and policies established during the COVID-19 pandemic in terms of hours, places and methodologies in order both encourage staff to establish new behaviours and to increase motivation, job satisfaction, productivity and trust.
9. **Ensure that public servants at all levels – including in leadership positions – develop the adequate digital literacy and confidence to lead a successful digital transformation.** The following should be prioritised for this purpose:
    a. Ensure that the digital public sector workforce is equipped with 21st century skills to design, use and access digital devices.
    b. Provide all public servants with a grounding in the digital government user skills at all levels of all institutions.
    c. Incentivise the formation of multidisciplinary teams to reflect multiple disciplines and varied socio-emotional skills.
    d. Encourage the continuous development of digital government professional skills to develop in-house digital expertise, promote a learning culture and offer professional growth opportunities.
    e. Invest in digital government leadership skills to equip leaders with the mindset and behaviours that they need to support a digitally matured workplace.
10. **Set up a recruitment strategy to attract the necessary digital talents and offer a transparent reward system, professional growth and mobility opportunities, while building a work environment to accommodate these changes.** The following actions could be considered:
    a. Secure a cross-government job application platform as well as a recruitment team that is responsible for promoting the benefits of working in the public sector, establishing clear job profiles and descriptions, and presenting the public sector as a merit-based employer through recruitment campaigns, job fairs or school visits.
    b. Enhance the value-oriented work opportunities in the public sector, give more flexibility in choosing areas of work and introduce professional and personal growth packages to keep motivation of digital talents high.
    c. Encourage and empower digital talents to expand their practices of informal training to foster a continuous learning culture, while investing in formal training.
    d. Consider funding teams instead of projects to offer more opportunities for job mobility and encourage teams to move to not only broaden perspectives, gain skills and experiences but also work on projects that interest them.
    e. Incentivise the establishment of regular feedback loops and mentoring plans to monitor digital talents' performance and guide them in their personal and professional development.
    f. Ensure that measures taken to improve the public sector management system is supported by a work environment that enables digital talents to unleash and develop their skills to serve digital transformation.

Creating user-driven value in proactive public service design and delivery

The context for public service design and delivery in Türkiye

The context for public service design and delivery is shaped by the character of representative and organisational politics, the legacy of historic technology and organisational practices, and the social, economic, and geographic nature of the population.

The Turkish public sector includes government ministries, state agencies and municipal administrations as well as state-owned companies and utility providers. This means there is great variety in terms of capacity, resources, and leadership for digital transformation and this translates into an inconsistent user experience depending on the sectors or organisations involved with meeting a need as well as the extent to which interoperability has been achieved.

The "Mitigation of Bureaucracy and Digital Türkiye Meeting" is a valuable opportunity for co-ordinating, prioritising, and identifying the challenges and opportunities for digital transformation across the country. By operating as a network connecting different organisations, this gathering provides the basis for setting a clear agenda and avoiding duplication of effort or spend. This may require the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) to help organisations that have had the freedom to focus on their own needs, to instead engage with and work in collaboration and co-operation with others. This is particularly valuable for helping to ensure that the transformation needs of smaller and less capable areas of the public sector are met.

The breadth of capability in the Turkish public sector is an important contextual factor. There is visibly strong capability and capacity where there has been investment in technology and data to pursue sectoral and organisational ambitions over many years. Often these organisations are accountable for operating public services that are critical to the daily functioning of Turkish society. As the DTO considers the potential for collaborative models that involve sharing resources or developing common components, these organisations need the confidence that any change to their organisationally-focused operating models will maintain security, resilience and suitability.

This is evident in the operation of the e-Government Gateway. While the Review found the e-Government Gateway to be one of the core tools for supporting digital transformation in Türkiye there are notable exceptions to the organisations that have migrated including services associated with taxation and land registration amongst others. In these areas there is a more complicated ecosystem of organisation specific activity that is not yet as well embedded into the central platform as in other domains.

One of the most concerning legacy gaps from a technical point view was the lack of strategic vision at the organisational level for the benefits of moving away from organisation specific, on-premise data centres administered and managed by in-house teams. The barriers to migrating to the cloud were varied but predominately referenced national security concerns as requiring them to maintain direct management and control of their servers. These concerns are understood by the DTO and have been included in the ongoing work to develop a new cloud strategy for the country that will maintain security and reliability and reduce the overheads and barriers caused by inflexible and costly infrastructure.

Although there is a desire to take existing systems and use a micro-services architecture to transform them into a more cloud-friendly model, the need for long-term commitment, funding and support has been identified as a constraint. This is also true in terms of data exchange, interoperability, and integration. Clear overall leadership for a data-driven public sector that can advocate for smoother and more frictionless data sharing has yet to be established. A further legacy constraint is that of legislation. It is important that those making policy and law are mindful of public service design and delivery considerations and the opportunities afforded by digital technologies and data so that legislation and policies are enablers to transformation, not a blocker.

Türkiye hosts the world's largest refugee population which results in the public sector needing to be efficient and effective in terms of providing public services and making the necessary allowances to these people. However, it was unusual for organisations to have understood the digital inclusion needs of any of their users and greater attention is needed to ensure access to the Internet, recognise the importance of accessibility needs or equip people with the necessary skills.

A further societal factor informing the context for digital transformation of the public sector in Türkiye has been uncertainty in terms of purchasing power of US Dollar (USD) or Euro (EUR) denominated services due to fluctuations in the value of the Turkish Lira (TRY). This has resulted in giving greater focus to achieving national solutions in the fields of technology and data. There is, however, an inevitable lag in terms of the Turkish public sector being able to consume these products and services as these industries cannot be replicated overnight.

The transformation of public services relies on involving the public and engaging non-government actors in society more broadly. Although a majority of organisations involve the private sector in responding to the needs of their users, only around a quarter of organisations involve academic or civil society actors. The health of the civic space in a country is an important contributor to achieving genuine user-centred and user-driven outcomes and greater efforts are needed to ensure that the civic space in Türkiye can thrive.

The philosophy of public service design and delivery

Underpinning any efforts for countries to improve the design and delivery of their public services is the internal culture and philosophy of public servants and government bureaucracy. Creating a transformation that sees the whole of government focusing on the needs of users requires commitment and vision from leaders as well as exhibiting behaviours and practices associated with user-centred design.

The political environment has been conducive to creating a shared conceptual understanding of good quality public service design and delivery and the DTO provides an important focal point. Nevertheless, translating vision into practical implementation will rely on the quality and leadership of those within different organisations. Despite the frequency with which user-oriented services are mentioned in national strategic documents, the country does not yet have a formal strategy concerning the design, delivery and evaluation of government services and there is no expectation for organisations to produce their own digital strategies in line with this vision. Leaders themselves currently see the urgency of eliminating bureaucracy in terms of cost reduction or technology deployment rather than a desire to be user-driven and respond to needs. Nevertheless, the Review team was impressed by the leadership of the Justice and Health sectors where the primary inspiration came through as being the transformative impact of user-centred digital government on service design and delivery.

The leadership for public service design and delivery does not only come from the top of an organisational hierarchy but is reflected in the behaviours of those in lowlier roles who extol the virtues of digital technology and data and invest their time in persuading their peers and superiors. An impressive example of this came from the Ministry of Labour and Social Security (*Çalışma ve Sosyal Güvenlik Bakanlığı*) where persistently communicating the benefits of service design and delivery over several years secured support and turned blockers into champions and a demonstrable increase in the speed and quality with which they now develop new services.

Co-operation and collaboration are an essential part of a culture that champions public service design and delivery, and achieves an integrated, user-centred approach. The e-Government Gateway embodies this idea by hosting "orchestrated" services where user research is the basis for identifying and designing services that solve a whole problem, such as "My Working Life". These services rely on the depth of information catalogued within the Electronic Public Information Management System (*Elektronik Kamu Bilgi Yönetim Sistemi*, KAYSİS). KAYSİS is an impressive achievement with the potential to offer further

insight in resolving whole problems and delivering end-to-end user journeys that seamlessly and proactively move between in-person and digital channels according to an individual's preference and needs.

An important contributor to achieving the ambitions of digital government as defined through the OECD Digital Government Policy Framework is to establish and embed the practice of user research within government (OECD, 2020[14]). However, the review showed that engagement in the policy-making and public service design and delivery processes was among the least developed elements of digital government in Türkiye. Despite many organisations describing the right approaches, only a small proportion were able to demonstrate these were being put into practice in terms of up-front user research, co-design sessions or other forms of participatory design. Indeed, less than half the organisations involved in this Review actively involve end users or civil society. On the occasions where things are made public, engagement does not tend to include mechanisms for collective engagement or two-way dialogue. It would be powerful to include a standing item on the agenda of the "Mitigation of Bureaucracy and Digital Türkiye Meeting" for user researchers to directly present their latest insights.

It remains important for teams in government to continue collaboration between policy, delivery and operations in order to understand how well the e-Government Gateway responds to the needs of their users on an ongoing basis. In this respect there is value in the role of "service professionals" who take ownership of the end-to-end user experience and wield the political, administrative, and financial authority to champion multi-disciplinary teams and bring the necessary actors around the table to address a whole problem, guided by user research. The Public ICT Project Preparation Guide has the potential to be an important lever for encouraging cross-government ways of working by increasing the emphasis on such roles and requiring that user needs, user research, and the participation of users, inform project proposals.

Multi-disciplinary teams are an important foundation for enabling work across organisational and professional boundaries. This model is also essential in supporting research findings and experimental, hypothesis-led interventions to be incorporated into the service itself and tested quickly to understand whether they help to achieve either the policy intent or improved outcomes for the users of a service. However, the Review did not find evidence that agile delivery methodologies form part of the culture of service design and delivery in Türkiye. The most actively enthusiastic organisation to talk about working in an agile fashion was one of the public enterprises, highlighting the importance of forging relationships across the entirety of the Turkish public sector, including state-owned enterprises and utility companies.

Türkiye's response to the COVID-19 pandemic highlighted the strength of the underlying cultural foundations that had been built up over many years in the health, justice and education sectors. These approaches recognised the importance of developing solutions that responded to the needs of users in particular sectors but also across those organisational and sectoral boundaries, including between municipal and central government. These experiences and achievements can provide the inspiration and basis for creating and embedding a culture and philosophy of being proactively user-driven in attitudes and behaviour more widely and throughout the Turkish public sector.

Proposals for action

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 5 of this review, the Government of Türkiye should consider implementing the following policy recommendations:

11. **Recognise the political, organisational, technical and societal context within which public services are designed and delivered and use those insights to shape a tailored response to the needs and priorities of individual organisations to achieve transformation.** The following measures could be considered**:**
    a. Identify the public service design and delivery maturity of different sectors and organisations by ensuring organisational digital strategies include an explicit focus on public service design and delivery in terms of their context, philosophy and enablers for service design and delivery.
    b. As different organisations have different capabilities and needs in terms of contributing to, or benefitting from, work on public service design and delivery, direct the most capable actors in the Turkish public sector to collaborate and identify ways to meet the transformational needs of less capable areas of the public sector.
    c. Establish and regularly convene a whole of Turkish public sector network that combines digital government leaders and practitioners to create a common narrative and purpose for transforming public service design and delivery.

12. **Embrace the opportunities of digital transformation to create a more proactive and user-driven culture within the Turkish public sector.** The following should be prioritised for this purpose**:**
    a. Develop a public service design model suited to the context of Türkiye's public sector that draws on the best parts of existing approaches while being enhanced with insights from around the world, including the OECD Good Practice Principles for Public Service Design and Delivery in the Digital Age.
    b. Assign individuals the role of "service professional" and provide them with the political, administrative, and financial authority to champion multi-disciplinary teams and bring the necessary actors around the table to address a whole problem, guided by user research.
    c. Draw on the data contained within KAYSİS to proactively identify the relevant actors for designing solutions across organisational boundaries and solving problems with an end-to-end approach.
    d. Consider the service design and delivery opportunities for transforming the user experience of public servants by revisiting internal processes within the Turkish public sector, such as for example, seeking and securing access to funding, or sharing and accessing data.
    e. Provide all public servants with a grounding in the digital government user skills that cover 'The potential of digital transformation', 'Understanding users and their needs' and 'Collaborating for iterative delivery'.
    f. Advocate for the development of an Open Government Action Plan for Türkiye that protects and enhances the civic space and sets out the expectation for an inclusive, two- way dialogue between government and both civil society and the general public.

Cementing building blocks and shared services for improved capabilities

The OECD peer review team assessed Türkiye's Government as a Platform ecosystem and the shared guidance, resources and technical components that can enable a more mature digital government. Creating the right enabling environment that sets teams up for success is critical to the ambitions for digital transformation. These foundations rely on committed leaders who champion a long-term vision and secure both sustainable funding and talented people to create and iterate these resources over time.

The Turkish public sector numbers several hundred different organisations at all levels of government and many different sectors. Across these myriad organisations there is a variety of skills and capability as well as financial and technical resources. While organisations with greater autonomy and long-standing access to funds and talent may have developed a self-sufficient approach, those at the other end of the spectrum are eager to adopt and deploy common resources that can help them to meet the needs of their users.

One important route to improving capabilities is agreeing a shared definition and understanding of quality and the expectations for the standards which public services need to meet. There have been efforts in Türkiye to create standardised guidelines for thinking about interoperability and the design of websites but these have not enjoyed widespread adoption. Indeed, the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) indicates that the centre is not providing standardised models for various of the elements which could contribute to successful digital transformation. Nevertheless, there were indications that organisations would welcome standardised tools that help deliver on ambitions for transformation. A useful starting point could be to bring existing guidance and good practices together in a central location to help reinforce centrally mandated ideas and highlight the resources developed by sectoral and organisational colleagues.

As mentioned earlier, the Public ICT Project Preparation Guide is intended to ensure projects are consistent with current national plans and strategies. Because this resource provides the basis for securing funding, there is the potential to develop this process to incorporate expectations on quality and include different prompts for teams to adopt more of a user-centred design approach to their work.

Drawing on the OECD Good Practice Principles for Service Design and Delivery in the Digital Age, Türkiye might consider complementing the Guide with a 'Service Standard' that can be tailored to the needs of the Turkish public sector, reinforce national strategies and reflect best practices from around the world (OECD, 2022[15]). The popularity of Total Quality Management (TQM) and International Organisation for Standardisation (ISO) standards within the Turkish public sector shows that there would be an appetite for such a model that would offer a domestic benchmark to set alongside these international approaches. The Turkish Service Standard would need to be complemented by an assurance process to assess

performance as well as providing informal support to teams as they work towards improving their approach to public service design and delivery.

As well as providing materials that shape behaviours, Government as a Platform ecosystems contribute to establishing a mentality of understanding and responding to the needs of users on an end-to-end basis not only among the public but also for those civil servants involved with delivering a service. This necessarily means establishing an omni-channel strategy that can seamlessly meet needs between websites and other digital or analogue channels. The emphasis in Türkiye is on the digital channel and *türkiye.gov.tr*, the e-Government Gateway for meeting user needs and integrating services from across the public sector as well as academia and the private sector. In this way, the e-Government Gateway has enabled the DTO to co-ordinate different elements of Turkish society and replace many paper or in-person interactions. By increasing usage, cost effectiveness and security it provides the basis for the digital aspect of a clear and effective channel strategy in the country.

However, alongside the e-Government Gateway, public sector organisations continue to operate their own websites, services and mobile apps. Many organisations also identified the importance of institutional or sectoral approaches to face-to-face and telephone-based interactions in addition to their websites. This introduces a challenge to achieving an omni-channel approach as well as greater overhead in terms of co-ordination and challenges in terms of solving whole problems and designing end-to-end services as well as the approach to security, standards and quality. An explicit omni-channel strategy would help Türkiye to map the landscape of service channels and identify opportunities for creating a more integrated and coherent approach for the benefit of users.

The omni-channel approach does already exist in Türkiye, particularly at the municipal level where interactions with the public are often more wide-ranging and frequent than found in the context of central government. The review team heard about several examples of in-person service locations functioning as administrative outlets for different government departments and agencies. Prior to the COVID-19 pandemic, these physical services were a highly appreciated part of the infrastructure for the public sector, as citizens knew that they could be helped in-person with minimal friction or cost. One organisation reported that up to 70% of contacts could be transferred online but that the nature of their services meant that in-person interactions could not be removed entirely.

The peer review process unveiled a widespread complacency about the challenges and needs for digital inclusion in Türkiye. Although there were some encouraging signs, the more prevalent attitude was found to be somewhat dismissive of digital inclusion on the basis that Türkiye is a young society with a digitally literate population. Although wider Turkish society is increasingly digital, there is a significant risk from public sector actors to contribute to digital divides through assuming a ‘digital by default’ approach that overlooks vulnerable users who may face barriers to using online services. It could be valuable for Türkiye to consider developing a more coherent and cross-cutting strategy for digital inclusion.

The final area assessed in terms of the Government as a Platform approach are the technical building blocks that exist within Türkiye. It was encouraging to see the extent to which technical solutions have been developed for the public sector as a whole, whether that was through the DTO in the case of the e-Government Gateway, digital identity and KAYSİS, or as a stand-alone resource provided by other actors in the Turkish public sector, such as the Geographic Information System (GIS) relied on by many actors including mining and petroleum, energy, highways, railways, as well as within local government.

The team also saw this approach being taken to respond to the needs of individual sectors whether education, health, justice, municipal government, or taxation. These established practices and their associated common components and resources came to the fore in facilitating Turkish society to continue despite the policy measures needed to contain the spread of COVID-19. As Türkiye builds on these technical achievements, there is an opportunity to further establish the service design and delivery culture to really unlock their potential. Nevertheless, it is crucial to ensure that the benefits of these activities are

considered in light of the needs for the public sector as a whole and not create duplication owing to any siloed focus on organisational or sectoral needs.

One of the most concerning gaps identified in the technical ecosystem is around the maturity of cloud hosting. Many organisations are operating their own, organisational, private cloud solutions or maintaining on-premise hosting administered and managed internally. The DTO is focused on this challenge and developing a new cloud strategy for the country which can emphasise the value of taking a corporate, public sector wide approach to this opportunity.

One of the challenges which presents itself is ensuring that teams across the public sector are aware of the resources that have been made available to them. This review found limited evidence of the use of open-source software or the reusable components maintained by different teams within the Turkish public sector. It could be helpful for the DTO to adopt more of a product-mindset to the Government as a Platform ecosystem and develop a 'service toolkit' that offers a single central resource through which teams can access the materials, tools, standards and guidance that will help to transform public services in Türkiye.

Proposals for action

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 6 of this review, the Government of Türkiye should consider implementing the following policy recommendations:

13. **Revise the governance processes for funding and assuring the quality of public service design and delivery.** The following should be considered:
    a. Consider how the Public Information and Communication Technologies (ICT) Project Preparation Guide can be updated or improved to champion user research and multi-disciplinary ways of working.
    b. Revise the Public Information and Communication Technologies (ICT) Project Preparation Guide in line with a service design approach to the process to support teams in preparing better quality submissions.
    c. Develop a Public Service Standard for Türkiye to establish a clear and shared definition of "good" that helps to embed an ambitious culture and philosophy for public service design and delivery.
    d. Introduce an assessment process to consider the quality of newly developed services against the Public Service Standard.
    e. Ensure that suppliers of Public Purpose Technology/GovTech are expected to operate in line with the service standard and assessment process.
14. **Clearly define an inclusive approach to providing access to public services that accounts for the relationship between analogue and digital experiences and seeks to minimise digital divides, recognise accessibility needs and champion digital inclusion**. To achieve this the following should be priorities:
    a. Develop an omni-channel service strategy that:
        i. Recognises the need for organisations at different levels of government and from different sectors to work together.
        ii. Builds on the mapping of existing channels for service delivery and is clear about the future intention for their interaction with the e-Government Gateway.
        iii. Takes a cross-government approach (including municipal governments) to be in a position to close and merge channels if necessary.
    b. Require public sector institutions to develop digital inclusion plans.
    c. Identify opportunities for existing service networks and resources to be used to increase the digital literacy of Turkish citizens in a coherent and structured way.
15. **Encourage the use of shared building blocks and common resources as part of the curated Government as a Platform ecosystem.** The following measures are proposed**:**
    a. Establish a focal point for sharing materials, tools, standards and guidance that will meet the practical needs of teams across government to design and deliver public services in the digital age.
    b. Establish cross-government communities of user-centred practice and work with them to develop guides and materials to support service design and delivery.
    c. Continue to identify opportunities for economies of scale and economies of scope in terms of common components. For example, investigate whether there is an opportunity to consolidate work on video conferencing technology as it appears to be under development in several organisations.
    d. Develop an infrastructure strategy for the country that provides leadership and direction for the use of cloud hosting that will maintain security and reliability and reduce the overheads and barriers caused by inflexible and costly infrastructure.

Moving towards a data-driven public sector

Data Governance

As governments recognise the opportunities and challenges associated with data, it is crucial to establish data governance models that enable governments to generate public value through the application of data in a trusted and ethical way.

The Government of Türkiye does not have a public sector data strategy. Moreover, the review found that there are neither the organisational structures nor culture to embed the principles and opportunities for data-driven approaches in the Turkish public sector. It is encouraging to hear that there are plans to appoint a Chief Data Officer, or at a minimum establish a body with responsibility for data in the central government, but this is not yet in place. Consequently, there is internal confusion about ownership and accountability for the data agenda which translates into missed opportunities for developing training and cultivating a data-driven mindset within the public sector.

Beyond the opportunities to create greater strategic direction for data in Türkiye the country has some valuable foundations in terms of legislation, guidelines and standards. The Personal Data Protection Law No. 6698 provides an important baseline for the treatment of personal data (Republic of Türkiye, 2016[16]). While legislation is an essential step in building public trust, the review found that there was an appetite within the Turkish public sector for greater support in terms of guidelines and standards to help teams understand their policy responsibilities and unlock the latent potential of data. These were identified as being particularly valuable in the context of carrying out data collection, data sharing and data interoperability. As part of developing the action plan to support any new dedicated strategy for data, the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) might wish to explore providing guidelines and standards to help embed a data-driven culture.

One of the most effective routes to data sharing in Türkiye is handled through *türkiye.gov.tr*, the e-Government Gateway. Platforms for data exchange have been developed in the past to serve the needs of different organisations or groups of users. However, they largely reflect a scattered and fragmented strategy concerning the handling, processing and storage of data within the Turkish public sector. A minority of institutions are actively sharing data, and even for those who do, many are using time-consuming approaches involving official letters and manual file transfers rather than machine to machine interfaces. Moreover, some organisations demonstrated a reluctance to share data due to concerns about data security and the perception that it was safer to keep data for themselves. While digital security is important, it is essential that public servants are given the necessary training to be able to judge the appropriate situations in which to have caution and when to encourage greater sharing and collaboration to fully realise the value of data.

There is high awareness of the need to develop the infrastructure to support data in Türkiye in order to connect government and allow for better sharing and access to data in order to enable greater collaboration. There have been initiatives to establish base registries but only a third of organisations are actively maintaining a data inventory or data catalogue. Part of creating a strategic approach to the governance of data means being able to understand and identify the sources and flows of data and so taking steps to improve the cataloguing and indexing of data in the Turkish public sector would be an important step in helping to reduce duplication and improve the quality of data and opportunities for enhancing the analysis and application of data.

In Türkiye, government policy and related activities regarding Open Government Data are covered by Action 67 of the *2015-2018 Information Society Strategy and Action Plan* and E4.2.1 of the *2016-2019 National e-Government Strategy and Action Plan* (Ministry of Development, 2015[17]; Ministry of Transport, Maritime Affairs and Communications, 2016[8]). The DTO has responsibility for developing a National Open Data Strategy and National Open Data Portal. These efforts are ongoing and when ready to launch would

benefit from communication efforts encouraging greater recognition of the value of Open Government Data and its use throughout the Turkish public sector to help underline and reinforce their priority.

Application of data in the public sector

Across the Turkish public sector data is being used for anticipating and planning, delivering services, and monitoring and evaluating government activity. However, the prevalence of a deep understanding and appreciation for the value which data can provide in generating public value is not as widespread as might be hoped.

The review found that in the use of data as a predictive tool for anticipating and planning what might happen in the future organisations were doing so when considering the design and delivery of public services, attempting to forecast and predict future developments and using forecasts to support financial management and budgeting. The efforts of organisations in this area are however constrained by the challenges around data sharing and the narrower focus on institutions themselves rather than considering what might be possible should data be pooled together to enable these efforts for the public sector as a whole.

A majority of organisations are using data on a more real-time basis to better meet the needs of the public whether in responding better to emergencies, engaging with the public or in helping to free up public servant capacity to focus on other priorities. However, in practice, there are limitations on the effectiveness with which organisations can respond to these needs due to gaps in the skills available and a limited priority having been given to develop a baseline for developing the data skills of all public servants to be capable in using data to improve services whether in terms of understanding statistics or using data as a means of prioritising delivery.

Finally, data can be valuable in evaluating and monitoring the activity of government. The review found organisations in Türkiye are taking steps to track operational performance, ensure accountability, evaluate policy interventions and demonstrate return on investment. While there is a nascent culture of drawing insights from performance data to help inform decision making and identify opportunities for improvement, the underlying culture of the Turkish public sector and the challenges associated with data sharing were again in evidence with performance data not always being shared with other institutions or the public. There would be value for the Turkish public sector to develop greater transparency and openness in publishing data about the effectiveness of government services and policies as a route to enhancing public trust and reinforcing democracy.

Data for trust

Indeed, public trust is one of the most valuable by-products of achieving a mature approach to the use of data in the public sector. There is a high awareness that data can play an important role among the public institutions of Türkiye and many encouraging initiatives in the way that different organisations, sectors and the country as a whole are thinking about the opportunities and challenges. However, when government uses data it is essential that it does so in ways that protect and reinforce public trust, and that means taking the appropriate care in handling data and considering the challenge of having a trustworthy use of data in a holistic and comprehensive way.

Most Turkish public sector organisations recognised the importance of strengthening public trust in how the government handles data, as this is essential for a country to run high quality services and ensure citizens' well-being (OECD, 2019[18]; Welby, 2019[19]). A majority of institutions have been inspired in their initiatives around the ethical use and management of data by the Personal Data Protection Law No. 6698 (Republic of Türkiye, 2016[16]). However, the ethical use of data is not limited to personal data. A set of guidelines helping to inform public servants about the right behaviours and approaches for achieving the

ethical treatment of data, such as the OECD Good Practice Principles for Data Ethics in the Public Sector could be highly beneficial to the Turkish government (OECD, 2021[20]).

The Personal Data Protection Law No. 6698 covers privacy and consent around the use of personal data in Türkiye. While its provisions are powerful and reflect a well considered understanding of the issues that need to be addressed, there is a gap between the law and its practice, with many institutions failing to offer any mechanisms for users to manage their data permissions and existing consents, including revoking or seeing any historic record. One of the ways in which transparency of data is being considered is the Data Controllers Registry Information System (*Veri Sorumluları Sicil Bilgi Sistemi*, VERBİS) where information such as the identity of the data controller, the purpose for which the personal data will be processed, and the explanations and categorisation related to the group(s) of people subject to the data are made publicly available. As the aim is to ensure transparency and accountability, individuals can have access to the catalogue of information about the categories of data that the data controllers keep about them. This is a valuable first step towards providing more transparency and accountability for citizens about the use of data but remains limited in terms of equipping the public with practical tools for consent. As the DTO considers how it might revise existing laws and regulation to simplify data access and sharing, it will be important to maintain a focus on establishing tools that not only help to increase the visibility of data flows, but which also equip the public with the ability to manage their consents. Alongside these efforts it will be helpful to develop privacy impact assessment tools and enhancing the mechanisms by which compliance with data protection laws are monitored.

A further area to consider is how public servants are equipped to navigate the tensions between unlocking the potential value of data and maintaining the trust of the public. Digital security is fundamentally important for building public trust but so too is the responsiveness and reliability of public services. As such, Turkish public servants would benefit from training and the resources that help them to balance the imperative to protect privacy and maintain public trust with the opportunity to use and share data in ways which generate public value and better serve citizen's needs.

Proposals for action

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 7 of this review, the Government of Türkiye should consider implementing the following policy recommendations:

16. **Define and strengthen the leadership and vision for establishing a data-driven public sector in Türkiye.** The following measures could be considered:
    a. Establish the role of 'Chief Data Officer' or designate a specific body with the authority to oversee the strategic management of data.
    b. Formulate a dedicated strategy for government data in Türkiye and support its implementation through clear and actionable guidelines and standards.
    c. Support strategic efforts around the use of open data in Türkiye by:
        i. Developing guidelines and, if necessary, legislation to support publication of Open Government Data and its quality.
        ii. Continuing to develop the central open government data portal and encouraging institutions to increase their usage of it.
        iii. Championing the transparency, accuracy and accountability that open data can bring.
    d. Invest in establishing comprehensive base registries providing a single source for particular datasets and support organisations to prepare data catalogues in order to increase interoperability and the sharing of data as well as the adoption of the Once-Only-Principle and the quality of data.
    e. Apply AI and machine learning to metadata collection and semantic inference of data catalogues to maximise value from automation and minimise manual effort.
    f. Support the data agenda by preparing a communication strategy across the public sector to help create a shared vision and understanding for the implementation of the strategy.

17. **Support institutions in applying data to generate value by establishing communities of practice, investing in training and resources, defining standards for data sharing and incentivising data application.** The following measures should be considered:
    a. Establish cross-government communities of practice for data professionals to share good practices, identify common challenges and develop shared solutions.
    b. Provide all public servants with a grounding in the digital government user skills that cover the 'Trustworthy use of data and technology' and 'Data-driven government'.
    c. Invest in the resources and infrastructure that would equip public sector organisations to forecast and predict how they might respond to disasters or emergencies.
    d. Develop a standardised model and common technological approach for sharing data within government.
    e. Establish an annual prize acknowledging and rewarding successful applications of data to generate public value and highlighting innovative practices over the use of data for anticipation and planning, delivery, or evaluation and monitoring.
18. **Commit to the trustworthy management and use of data in the public sector by promoting the role of ethics, transparency, privacy and security.** The following measures should be considered:
    a. Develop guidance detailing the right behaviours and approaches to achieve ethical practices in the management of data that allow for the self-regulation of digital practices.
    b. Devise privacy impact assessment tools that help service teams fulfil their obligations.
    c. Enhance the mechanisms by which compliance with data protection laws are monitored.
    d. Develop the systems and tools that will ensure the secure transfer of data and empower citizens with the capacity to manage the permissions and consents associated with their data in a trustworthy fashion.

Box 1.1. Reflections on digital transformation from public servants in Türkiye

The above Assessments and Recommendations reflect the OECD peer review assessment of digital government maturity in Türkiye. The overall conclusion being that the country has many strong foundations for achieving increased digital maturity in the future.

The greatest asset in supporting these efforts are public servants and the peer team enjoyed hearing the wisdom of practitioners from across the Turkish public sector. The quotes which follow may only capture the attitude and practice of individuals or organisations but they reflect an aspirational culture of transformed service design and delivery that will deliver great value to the people of Türkiye.

> *"Long-standing commitment and visionary leadership are essential for achieving digital transformation, especially in achieving a strategic and consistent transformation within a sector."*
>
> *"Digital transformation is not just something that happens online but as much to do with the personal relationships you cultivate along the way."*
>
> *"Make your default one of collaboration and co-operation."*
>
> *"If you are responsible for the digital transformation of a sector, then the strategic focus needs to reflect the importance of building bridges between different organisations."*
>
> *"Build strong relationships with suppliers so that even if work is outsourced, the organisation can maintain a strong connection with understanding how the needs of users are being met."*
>
> *"Digital transformation results in ongoing responsibilities to maintain and improve a service. It is not possible to launch something and walk away."*
>
> *"Quality, not quantity, of services is what matters. It is better to take the time to achieve integration with other organisations that helps to solve a whole problem rather than rushing to migrate a single transaction online that would leave a user stranded."*
>
> *"Service design improves the lives of citizens. When a service can be completed in moments, not minutes, it gives people back time for life, not for admin."*

"Reducing paper-based overheads and improving the satisfaction of the public helps improve the health and well-being of public servants too. We're less stressed and can invest our energy into meeting the needs of those who most need our help."

"Data foundations, whether in terms of infrastructure, quality or standards are not optional."

"It is really rewarding to solve hard challenges with good design."

"Doing the hard work to make your own data available for others to reuse can bring unexpected dividends and benefits."

"Digital approaches can be transformational for increasing security, reducing fraud and protecting the most vulnerable. Increasing our organisational reputation can create trust from the public and build internal enthusiasm for digital transformation."

"Don't limit the scope of digital technology and data to the web, look for its potential to transform the ordinary, everyday operations of your organisation regardless of the channel involved."

"Be open to opportunities to explore and experiment with novel ideas like artificial intelligence or well-established but unfamiliar ideas like open-source code."

Source: Quotes taken from the interviews and survey carried out to support the OECD Digital Government Review of Türkiye.

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Note

[1] Data from the Federal Reserve Bank of St. Louis (FRED), *National Currency to US Dollar Exchange Rate: Average of Daily Rates for Türkiye*; monthly based from 01 June 2021 (7.3972 USD/TRY) to 01 June 2022 (16.99244 USD/TRY).

2 Contextual factors and institutional models

In line with Pillar 2 of the OECD Recommendation on Digital Government Strategies, Chapter 2 analyses the governance of digital government in the Republic of Türkiye with a focus on the contextual factors and institutional models that underpin the digital transformation of its public sector. The first section reviews the overall political and administrative culture in place. The second section looks at the socio-economic factors and technological context of the country. The third section analyses the macro-structure and the leading organisation in the Turkish public sector. The last section focuses on the existing co-ordination and compliance arrangements and mechanisms to ensure the coherence and sustainability of the public sector digital transformation.

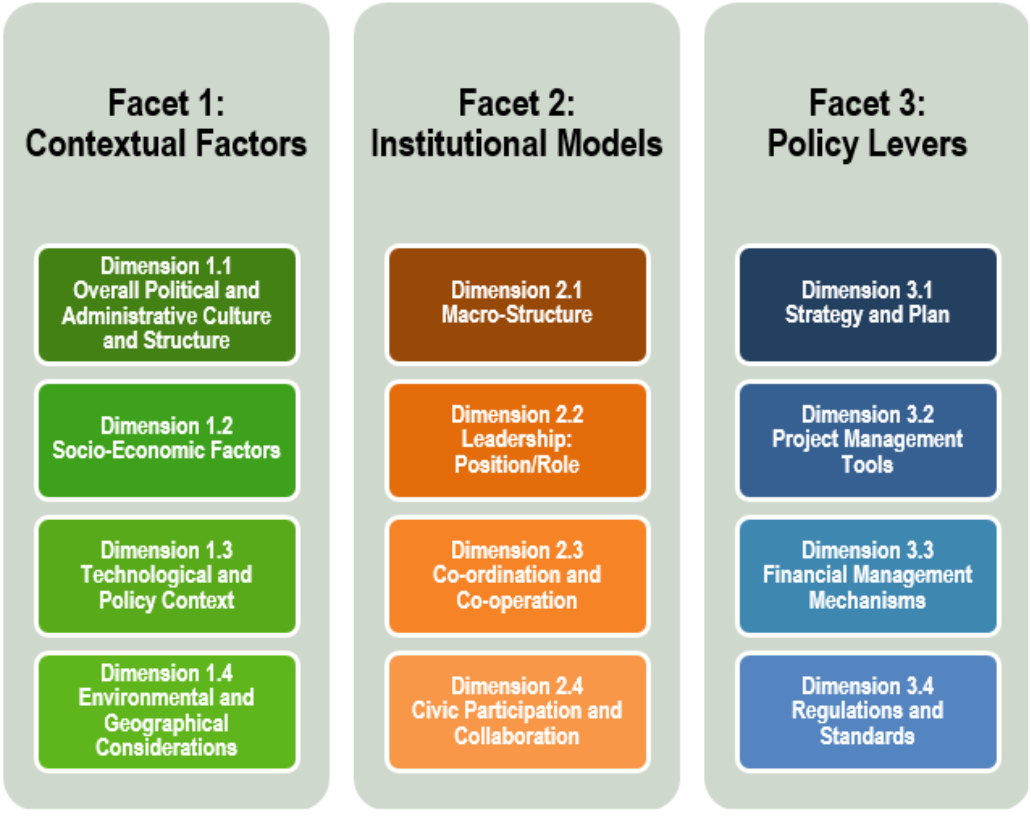
Introduction

In today's geopolitical context, unforeseeable risks challenge governments to demonstrate their resilience, responsiveness and agility more than ever. The COVID-19 pandemic accelerated the digital transformation of the public sector at record speed and revealed how far the strategic use of digital technologies and data can be an asset in responding to these challenges. Governments have placed digitalisation at the core of their national agenda to further transformation efforts. It is imperative that governments continue to make sustained progress in the public sector digital transformation.

The complexity of digital transformation requires robust governance to drive change across the public sector. Such governance enables governments to envision and lead coherent and sustainable digital transformation across the public sector, establishing a collaborative and inclusive digital ecosystem. The results of the OECD Digital Government Index 2019 (OECD, 2020[1]) show that solid governance is critical for digital government maturity. Effective governance frameworks ensure the necessary cultural shift from thinking in silos to a strategic systems-thinking approach and builds the institutional foundations for the design and delivery of citizen-driven policy and services.

Grounded in the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[2]), the *E-Leaders Handbook on the Governance of Digital Government* (OECD, 2021[3]) presents a framework (see Figure 2.1) that supports governments to strengthen their digital governance. The framework provides guiding policy questions, drawn from the insights, knowledge and best practices of OECD member and non-member countries, which support policymakers to develop and implement digital government strategies towards being a mature, digitally enabled state.

Figure 2.1. The OECD Framework on the Governance of Digital Government



Source: OECD (2021[3]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en.

The *OECD Framework on the Governance of Digital Government* presents three critical governance facets (applied to the Turkish context and analysed in Chapter 2 and 3):

- *Contextual Factors* which define country-specific characteristics – political, administrative, socio-economic, technological, policy and geographical – to be considered when designing policies to ensure a human-centred, inclusive and sustainable digital transformation of the public sector.
- *Institutional Models* that present different institutional set-ups, approaches, arrangements and mechanisms within the public sector and digital ecosystem which direct the design and implementation of digital government policies in a sustainable manner.
- *Policy Levers* which support governments to ensure a sound and coherent digital transformation of the public sector.

This chapter will analyse the governance of Türkiye's digital government in four main sections, according to the first two facets of the Governance Framework – *Facet 1: Contextual Factors* and *Facet 2: Institutional Models* (see Figures 2.2 and 2.3). The first section assesses the overall political and administrative culture in place including sub-dimensions on the country's power structure, political continuity, stability and support for the digital transformation agenda. The second section discusses socio-economic factors and technological context of the country such as the levels of digitalisation across the population and the overall maturity of digital government. The third section analyses macro-structure and the leading organisation in the Turkish public sector. The last section focuses on the existing co-ordination and compliance mechanisms to ensure the coherence and sustainability in the public sector digital transformation.

Figure 2.2. The OECD Framework on the Governance of Digital Government - Contextual Factors

Source: OECD (2021[3]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en.

Figure 2.3. The OECD Framework on the Governance of Digital Government - Institutional Models

Source: OECD (2021[3]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en.

Overall political and administrative culture

A country's political and administrative culture greatly influences the governance of digital government. It is important for governments to understand these distinctive characteristics when designing a governance framework that best suits their national circumstances. They present different opportunities and challenges for governments in establishing and implementing national strategies on digital government.

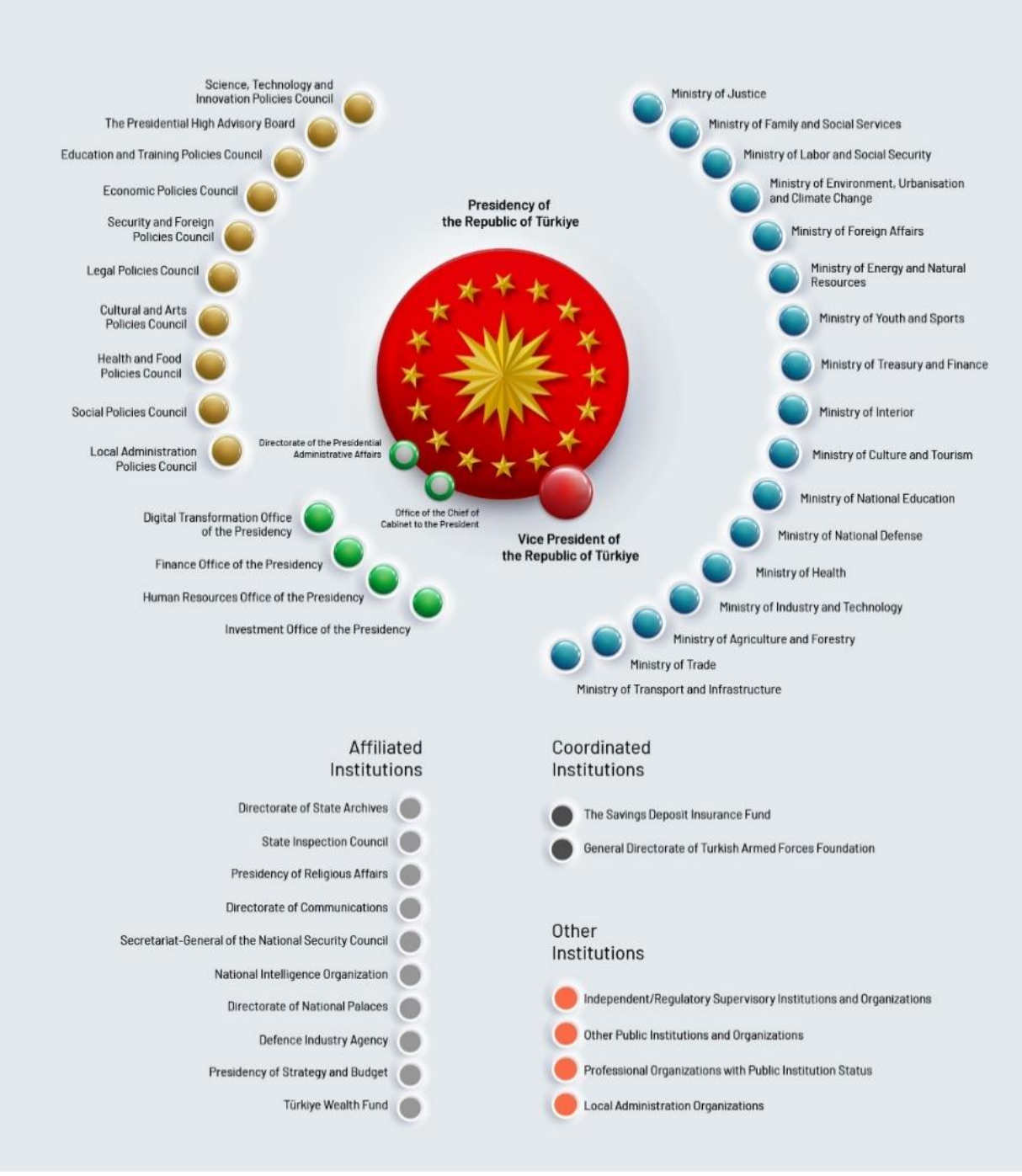
Türkiye is a presidential and constitutional republic with a population of approximately 84.7 million (TÜİK, 2021[4]). In 2018, Türkiye changed its long-standing parliamentary system to a presidential system. The president holds the executive power while the legislative and judicial powers are vested in the Grand National Assembly of Türkiye, and independent and impartial courts respectively. Most of the key institutions and regulatory authorities are affiliated directly with the executive power (see Figure 2.4) (EC, 2021[5]).

With a long history of strong traditional administrative practices and culture, Türkiye has a centralised power structure with expanded executive power. The public administration is organised in a two-tier structure, central and local government. At the central level, the president delegates the executive power to the Presidential Cabinet, which consists of the Vice President and Ministers. The 17 line ministries devise their own policies which the president validates. In addition, under the Presidency, four offices report directly to the president on finance, HR, digital transformation and investment. The administrative de-concentration divides Türkiye into 81 provinces, which are composed of metropolitan municipalities, municipalities and villages with mayors and headmen determined by local elections. Governors of provinces, appointed by central government, function as the highest representative and steer public services at provincial level. Leadership at the local level is administered closely by the centre (EC, 2021[5]).

The longevity in leadership over the period of last 20 years has provided continued political support throughout the digitisation and now digital transformation agenda since the early 2000s. The country's modernisation effort put e-government at the core of increasing efficiency and effectiveness of its large public sector. In 2008, under the leadership of the prime minister, the government launched *türkiye.gov.tr*, the e-Government Gateway. Türkiye continued to promote e-government by including specific objectives and policies in national development plans to provide user-oriented services. In 2016, the government

developed its first standalone national e-government strategy, the *2016-2019 National e-Government Strategy and Action Plan* (Ministry of Transport, Maritime Affairs and Communications, 2016[6]). The next chapter will cover the strategy and action plan extensively as a key policy lever.

Figure 2.4. Organisation of the Presidency of Türkiye



Note: Accurate as of December 2022.
Source: Government of Türkiye (2022[7]), *The Government Organization Central Records System*, https://detsis.gov.tr/ (accessed on 22 November 2022).

In general, Türkiye's current political and administrative culture supports public sector digital transformation. The centralised power structure provides long-standing and high-level political support and offers Türkiye the opportunity to develop and implement the next digital government strategy in a coherent and sustainable manner. However, the Review noted that in the public sector more widely, there are elements of civil service culture and bureaucratic principles that may prove to be a barrier for achieving the desired change. For instance, one of the critical contributors to achieving digital transformation is the public sector workforce (which will be discussed in detail in Chapter 4). However, public service management and government human resources management in Türkiye is governed by the Civil Servants' Act of 1965, which despite several amendments, may benefit from being reformed in light of the needs for a future-fit workforce and the provisions of the OECD Recommendations on Public Service Leadership and Capability and Public Integrity (OECD, 2019[8]; 2017[9]). Indeed, while one of the strengths of the Civil Servants' Act is its long-standing legal basis for merit-based recruitment and preserving the neutrality of the civil service against potential politicisation, the review team observed concerns about how these are being conducted in practice, which are echoed by several documentary sources (EC, 2022[10]; OECD, 2019[11]). Furthermore, Türkiye's large geographical size might also present some challenges in driving equally inclusive digital transformation across the entire public sector. As such it is recommended to be mindful of the overall political and administrative culture of the country and its potential impacts on the governance needed to support digital transformation.

Socio-economic factors and technological context

Understanding the socio-economic and technological context is equally important when governing digital transformation of the public sector to contribute to further economic and social development. The governance needs to take into consideration the overall economic climate, the level of digital maturity of the society, its demographic characteristics as well as the country's past, current and prospective technological developments.

Türkiye's economy is considered well advanced and resilient, yet the economic outlook is more uncertain than usual. With a strong response to the COVID-19 pandemic, it was able to rebound quickly from the crisis and return to growth (EC, 2021[5]). In 2021, Türkiye's economy grew 11%, making it one of the fastest among G20 countries. However, its monetary stimulus led to deterioration of the country's macro-financial conditions. Over the period from January 2021 to June 2022, the Turkish Lira (TRY), relative to the US Dollar (USD), has depreciated 56.5%.[1] The country's inflation rate raised to 61.1% in the first quarter of this year, directly affecting households and industry (World Bank, 2022[12]).

The country's performance in the United Nations Human Development Index (HDI) shows consistent improvement over the last two decades; however, inequality hinders further development. Between 1990 and 2019, Türkiye's HDI value increased from 0.583 to 0.820, putting the country in the very high human development category with an increase of 40.7 percent. While Türkiye is below the 0.898 average of the very high human development group, it is above the average of 0.791 for countries in Europe and Central Asia. Nonetheless, levels of inequality affect the human development score significantly. The inequality-adjusted HDI value shows a significant drop to 0.683, putting the country far below the group average of 0.800 (see Table 2.1) (UNDP, 2020[13]).

This insight also aligned with main findings of the OECD Economic Policy Reforms 2021: Going for Growth (OECD, 2021[14]). The report identifies that the country needs to overcome structural challenges that include low levels of participation in the labour force from women, weak skills, and rigid employment rules hampering more inclusive and sustainable economic policy. Inequality in human development can prevent vulnerable groups from performing well in a digital society and benefitting from digital transformation, thereby widening the digital divide.

Table 2.1. Türkiye's inequality-adjusted HDI for 2019 relative to selected countries and groups

	IHDI value	Overall loss compared to HDI value (%)	Human inequality coefficient (%)	Inequality in life expectancy at birth (%)	Inequality in education (%)	Inequality in income (%)
Türkiye	**0.683**	**16.7**	**16.5**	**9.0**	**16.5**	**24.1**
Azerbaijan	0.684	9.5	9.4	13.9	5.3	8.9
Serbia	0.705	12.5	12.1	4.9	7.5	24.0
Europe and Central Asia	0.697	11.9	11.7	9.7	8.2	17.2
Very high HDI	0.800	10.9	10.7	5.2	6.4	20.4

Source: UNDP (2020[15]), "The next frontier: Human development and the Anthropocene – Briefing note for countries on the 2020 Human Development Report – Türkiye", https://www.undp.org/sites/g/files/zskgke326/files/migration/tr/UNDP-TR-BRIEFING-NOTE-TURKEY-EN.pdf.

With a population of 84.7 million, Türkiye is the 17th most populous country in the world (3rd most within the OECD) and the 37th largest country in the world by territorial landmass (6th largest within the OECD) but has a population density comparable to much smaller countries such as Austria, Cuba and Sierra Leone (TÜİK, 2021[4]). The population is relatively young, with 22.4% falling in the 0–14 age bracket. These figures underline the perception in Türkiye of the society being relatively youthful and therefore more comfortable with the use of digital services. Indeed, several organisations identified that the country's young population was the biggest factor in providing an incentive for digital transformation. Nevertheless, in the last fifteen years the proportion of the population over 65 has increased from 7.1% to 9.7% pointing to a need to avoid overlooking the needs of all parts of society.

In Türkiye, access to and use of communications infrastructures, services and data have progressed over the past decade. Nevertheless, limited access and use, and insufficient digital skills across society remains an impediment to wider adoption and use of digital technologies. According to the OECD Going Digital Toolkit, while 92% (OECD average at 89%) of households have broadband connection, and at least a 4G mobile network covers 96.7% (OECD average at 98%) of the population, the country performs far below the OECD average in certain indicators. In particular, only 55.5% (OECD average at 76.8%) of businesses have broadband at 30 Mbps or more. Türkiye also lags behind in the indicator that measures the share of adults' who are proficient at problem solving in technology-rich environments being 7.8% (OECD average at 30.6%) (see Table 2.2).

Table 2.2. Going Digital indicators - Türkiye

Indicators	Türkiye	OECD average
Fixed broadband subscriptions per 100 inhabitants	21.6	34.4
M2M (machine-to-machine) SIM cards per 100 inhabitants	8.8	31
Mobile broadband subscriptions per 100 inhabitants	83.2	124.5
Share of households with broadband connections	92	89
Share of businesses with broadband contracted speed of 30 Mbps or more	55.5	76.8
Share of the population covered by at least a 4G mobile network	96.7	98
Share of adults proficient at problem solving in technology-rich environments	7.8	30.6

Source: OECD (2022[16]), *OECD Going Digital Toolkit – Türkiye (database)*, https://goingdigital.oecd.org/countries/tur.

The 2021 OECD Economic Survey of Türkiye also supports this data, and underlines that insufficient digital skills and limited access to fast broadband creates barriers for the Turkish firms to adopt the most advanced digital technologies (OECD, 2021[17]). The Survey found that while the COVID-19 pandemic accelerated the use of digital technologies a digital divide between large and small size firms and overall socio-economic groups remains a challenge. In the International Digital Economy and Society Index (I-DESI) 2020, Türkiye underperformed in five dimensions: Connectivity, Human Capital, Use of Internet Services, Integration of Digital technology and Digital Public Services among 45 countries (27 European Union (EU) member states and 18 non-EU countries) (see Table 2.3). It was lagging behind, especially, in the Connectivity and Human Capital (Digital Skills) dimensions compared to its European and international peers (EC, 2020[18]).

Table 2.3. International Digital Economy and Society Index (I-DESI) 2020: Türkiye's performance

	Connectivity	Human capital (digital skills)	Use of internet services	Integration of digital technology	Digital public services
Avg. of 27 EU countries	62	42	47	41	56
Avg. of 18 non-EU countries	59	43	52	46	60
Türkiye	**43**	**23**	**37**	**24**	**45**

Source: EC (2020[18]), *International Digital Economy and Society Index 2020*, https://doi.org/10.2759/757411.

Nevertheless, Türkiye has maintained steady progress in providing digital services to the citizens. In accordance with the 2016-2019 National e-Government Strategy and Action Plan and the Eleventh Development Plan (2019-2023), Türkiye has integrated an increasing number of services into the e-Government Gateway (discussed in more detail in Chapters 5 and 6) (Ministry of Transport, Maritime Affairs and Communications, 2016[6]; Presidency of Strategy and Budget, 2019[19]). The I-DESI 2020 shows the impact of these efforts with Türkiye advancing in the Digital Public Services Dimension from a normalised score of 27 in 2017 to 45 in the following year (EC, 2020[18]). The eGovernment Benchmark 2022 of the European Commission also supports Türkiye's progress in the provision of online services to its citizens (EC, 2022[20]) (see Table 2.4). In addition, in the UN e-Government Survey 2022, Türkiye ranked 48th among 193 countries, landing in the "Very high" group with the overall highest performance being in the Online Service Index (UN, 2022[21]) (see Table 2.5).

Table 2.4. eGovernment Benchmark 2022: Türkiye's performance

	User centricity	Transparency	Key enablers	Cross-border services
EU 27+ average	88.3 (88.3)	59.5 (64.3)	68.7 (65.2)	54.5 (54.8)
Türkiye	**93** **(92)**	**62** **(56)**	**79** **(71)**	**54** **(44)**

Note: Numbers in brackets indicate scores from the eGovernment Benchmark 2021.
Source: EC (2021[22]), *eGovernment Benchmark 2021 - Country Factsheets*, https://ec.europa.eu/newsroom/dae/redirection/document/80569; EC (2022[20]), *The eGovernment Benchmark 2022*, https://doi.org/10.2759/721646.

Table 2.5. UN E-Government Survey 2022: Türkiye's performance

	Rank	E-Government Development Index (EGDI) Group	EGDI	Telecommunication Infrastructure Index (TII)	Online Services Index (OSI)	Human Capital Index (HCI)	E-Participation Index (EPI)
Türkiye	48	Very High	0.7983	0.6626	0.86	0.8722	0.7841

Source: UN (2022[21]), *E-Government Survey 2022: The Future of Digital Government*, https://desapublications.un.org/sites/default/files/publications/2022-09/Web%20version%20E-Government%202022.pdf.

Furthermore, in the World Bank GovTech Maturity Index 2022, Türkiye is classified in the "GovTech Leaders" group along with its OECD peers (World Bank, 2022[23]). The OECD's upcoming edition of the Digital Government Index will show how Türkiye has progressed towards digital government maturity among the OECD economies.

The socio-economic context in Türkiye provides a robust foundation for the governance of digital government. It would enable the government of Türkiye to invest in allocating the necessary financial, human and operational resources to support the digital transformation agenda based on long-term economic and social development goals of the country. Meanwhile, the government can also strategically allocate budget to specific digital transformation efforts to yield more economic and social outcomes. In regards to the technological context, although Türkiye has made good progress, there remain challenges in transforming into a mature digital government. These include enhancing connectivity and digital skills across society, especially for businesses, to help achieve embed a digital mindset into governance and business processes. Türkiye can benefit from promoting government-specific innovations to improve the public sector's internal processes and public service design and delivery in collaboration with the private sector. In addition to the government's support mechanisms and incentives focusing on the digital transformation of businesses, particularly SMEs, MSMEs and entrepreneurs, there are also opportunities with respect to the work being carried out by the government to consider the increased role of public cloud computing in Türkiye where private sector investment could be encouraged to support both the public sector and wider economy of the country.

Macro-structure and leading public sector organisation

A sustainable digital transformation across the public sector derives from a clear, effective institutional model. This lays the ground for governments to adopt a holistic, coherent and co-ordinated approach to digital transformation. The formal and informal institutional arrangements enable governments to set a strategic vision, provide the necessary leadership and secure co-ordination and collaboration across the digital government ecosystem. They also provide concrete ground for governments to clarify and systematise institutional and personal leadership (e.g. Chief Information Officer, Chief Data Officer) (OECD, 2021[3]).

In order to take digital government to its full maturity, it is imperative to have an "organisation-in-charge" to lead and co-ordinate the digital transformation agenda with precise roles and responsibilities agreed and recognised across the public sector. Taking into consideration the different contextual factors, especially, the country's political and institutional culture, this leading organisation needs to be strategically positioned within the government and have sufficient financial and human resources. It needs to be empowered to secure necessary political support, incorporate the strategy into a more comprehensive national reform agenda, and gain legitimacy within the public sector (OECD, 2021[3]).

The organisation-in-charge should embody decision-making, co-ordination and advisory responsibilities. In fact, it needs to make key decisions and be accountable for them across the government; co-ordinate with other public sector organisations and secure the alignment of the development of digital government projects with the national digital government strategy; and finally provide guidance and advice to other public sector organisations on the development, implementation and monitoring of digital government strategies (OECD, 2021[3]).

The *OECD Digital Government Index (DGI) 2019* revealed that all 33 participating countries designated an organisation to lead and co-ordinate decisions on digital government at the central level of government. Nevertheless, approaches to the institutional structure varies from country to country. Some position this leading organisation under the Centre of Government (CoG) (e.g. Chile, France and the United Kingdom) whereas others in a line ministry (e.g. Estonia, Greece and Luxembourg) or under a co-ordinating ministry such as finance or public administration (e.g. Denmark, Korea, Portugal and Sweden) (see Box 2.1).

Box 2.1. Digital Government leadership – Examples from United Kingdom and Portugal

The Central Digital and Data Office and Government Digital Service of the United Kingdom

The Central Digital and Data Office (CDDO) and the Government Digital Service (GDS) of the United Kingdom lead the digital government agenda at the centre of government and part of the Cabinet Office. The CDDO leads government's Digital, Data and Technology (DDaT) Function and set the strategic direction for government on digital, data and technology. It also administers standards such as the Government Service Standard, the Technology Code of Practice and the Cabinet Office Spend Controls for Digital and Technology. The GDS works across the whole government to assist departments transform its public services. GDS has built and maintained several cross-Government as a Platform tools such as GOV.UK, GOV.UK Verify, GOV.UK Pay, GOV.UK Notify and the Digital Marketplace.

The Administrative Modernisation Agency of Portugal

Portugal's digital transformation agency, the Administrative Modernisation Agency (AMA), was created in 2007 and sits within the Presidency of the Council of Ministers. It exercises the powers of the Ministry of State Modernisation and Public Administration in modernisation, administrative simplification and digital government, and is under the supervision of the Secretary of State for Innovation and Administrative Modernisation. The agency has a top role in the development, promotion and support of the public administration in several technological fields and is in continuous contact with focal points at institutions relevant for the implementation of digital government projects. It is responsible for the approval of ICT and digital projects over EUR 10,000 and chairs the Council for ICT in the public administration.

Source: UK Central Digital and Data Office, (2023[24]), *About Us*, https://www.gov.uk/government/organisations/central-digital-and-data-office/about; OECD (2021[3]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en.

Digital Transformation Office in Türkiye

In Türkiye, the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO), one of four offices directly reporting to the President, has a mandate to lead and co-ordinate the digital government agenda across the public sector (see Box 2.2). During its transition from the parliamentary to the presidential system, Türkiye consolidated its fragmented digital transformation efforts under one roof. In accordance with the Presidential Decree No. 1, the DTO was established in 2018 with strong support from the highest power

and necessary legal basis (Presidency of the Republic of Türkiye, 2018[25]) (see Box 2.2). In 2019, Presidential Decree No. 48 strengthened its roles and responsibilities by assigning the e-government tasks, previously performed by the Ministry of Transport and Infrastructure (Presidency of the Republic of Türkiye, 2019[26]).

Box 2.2. Mandate of the Digital Transformation Office of Türkiye

The aim of the office is to co-ordinate all actions in Türkiye's digital transformation, which includes holistic transformation in terms of people, business processes and technology in order to increase economic and social welfare through the use and development of digital technologies.

Source: OECD (2021[27]), "Digital Government Survey of Türkiye Lead/Co-ordinating Government Organisation Version", Unpublished, OECD, Paris.

Box 2.3. Legal foundation for the Digital Transformation Office of Türkiye

Presidential Decree 1 – Chapter Two Digital Transformation Office

Article 527 - Duties of the Digital Transformation Office

1. The duties of the Digital Transformation Office are as follows:
   a. Leading the digital transformation of the public sector in compliance with the goals, policies and strategies determined by the President, mediating the delivery of Digital Türkiye (e-government) services, enhancing inter-institutional co-operation and providing co-ordination in these fields.

      (1) Pursuant to Article 6 of the Presidential Decree No. 48 published in the Official Gazette no. 30928 dated October 24, 2019, chapter no. "Chapter One" and the chapter title "Establishment and Definitions" have been added to this Decree following the title "Presidential Offices" of Section Seven.

      (2) Pursuant to Article 9 of the Presidential Decree No. 48 published in the Official Gazette no. 30928 dated October 24, 2019, chapter no. "Chapter Two" and the chapter title "Digital Transformation Office" have been added to this Decree following Article 526.
   b. Preparing a road map for digital transformation in the public sector.
   c. For the aim of creating an ecosystem for digital transformation; enhancing co-operation among the public sector, private sector, universities and non-governmental organizations, and promoting their participation in the design and presentation of digital public services.
   d. Providing opinion to the Strategy and Budget Directorate with regard to investment project proposals prepared by public institutions and organizations in matters related to its field of duties, and following up and directing where necessary the developments on the projects put into practice.
   e. Developing projects for improving information security and cyber security.
   f. Developing strategies for effective use of big data and advanced analysis solutions in the public sector, leading respective implementations and providing co-ordination.
   g. Leading artificial intelligence applications in the public sector with regard to prioritized project areas, and providing co-ordination.

h. Developing projects for improving local and national digital technologies by enhancing their use in the public sector and for building awareness in this regard.
i. Identifying a strategy for the procurement of digital technology products and services by public institutions and organizations in a cost-effective manner.
j. Providing support where necessary to projects and implementations related to its field of duties.
k. Co-ordinating the definition and sharing in an electronic medium of central, rural and foreign organizational units of those institutions and organizations involved within the state organization.
l. Proposing policies and strategies in matters related to its field of duties.
m. Performing other duties assigned by the President.

Article 527/A – Chief Digital Officer

1. The Director of the Digital Transformation Office is the Chief Digital Officer.

Note: The text is official translation provided by the Digital Transformation Office (https://cbddo.gov.tr/en/presidential-decree-no-1).
Source: Presidency of the Republic of Türkiye (2018[25]), *Presidential Decree No. 1*, https://www.mevzuat.gov.tr/MevzuatMetin/19.5.1.pdf.

The DTO has the mandate to establish a digital transformation roadmap for the Turkish public sector. It co-ordinates all matters related to e-government, digital public administration, cybersecurity, critical infrastructures, big data, artificial intelligence (AI) and implementation of emergent technologies. Under the leadership of the president of the DTO who also serves as the government Chief Digital Officer, the following nine sub-departments are responsible to plan and implement relevant activities within their scope of work (Digital Transformation Office, 2022[28]):

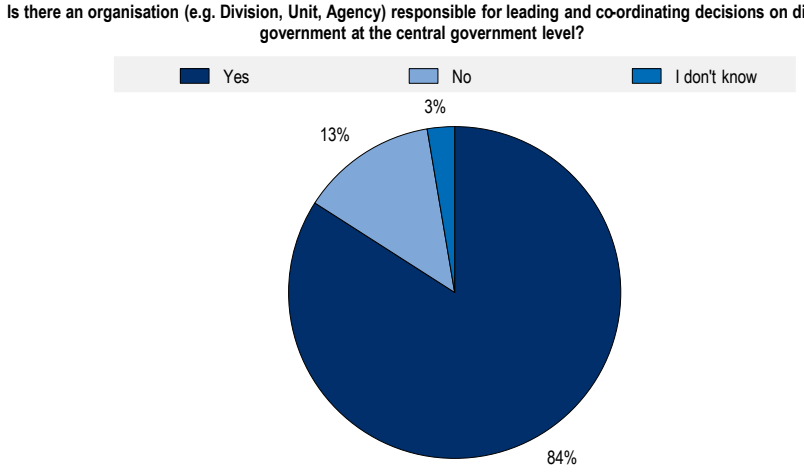
- Department of Big Data and AI
- Information Technologies Department
- Department of Digital Expertise, Monitoring and Assessment
- Department of Digital Transformation Co-ordination
- Department of Digital Technologies, Procurement and Resource Management
- Department of Cyber Security
- Department of International Relations
- Administrative Services Department
- Department of Legal Consultancy.

Since its inception, the DTO has advanced several areas with the most visible achievement being the integration of fragmented services on *türkiye.gov.tr*, the *e-Government Gateway*. These efforts have largely focused on migrating transactions and integrating them according to a user-centred, life events-based approach under the "Digital Türkiye Version 1.1". The DTO has also published the National AI Strategy with the Ministry of Industry and Technology (*Sanayi ve Teknoloji Bakanlığı*) and is working on strategies for public cloud and data.

Despite its short history, the position of the DTO within the Presidency provides an adequate level of political support and ensures the ability to set a strategic vision and plan covering all policy sectors, the whole public sector and levels of government. During the review process, the OECD review team found that the leadership of the DTO is well recognised across the public sector. The survey conducted to support this review indicated 84% of participating institutions were aware of the existence of the leading organisation (see Figure 2.5) and the vast majority recognise the DTO's leadership. During the fact-finding

mission, a majority of interviewees recognised the strong presence of the DTO as the organisation-in-charge and indicated that they interact with the office on regular basis.

Figure 2.5. Recognition of an "Organisation-in-charge" of digital government in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[29]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q1.3.1.

As the organisation-in-charge, the DTO holds decision-making, co-ordination and advisory roles and responsibilities, yet at limited capacity. During the fact-finding interviews, several institutions indicated that the DTO decides on provision of services through the e-Government Gateway. However, any other major decisions related to digital initiatives still need an approval from the president.

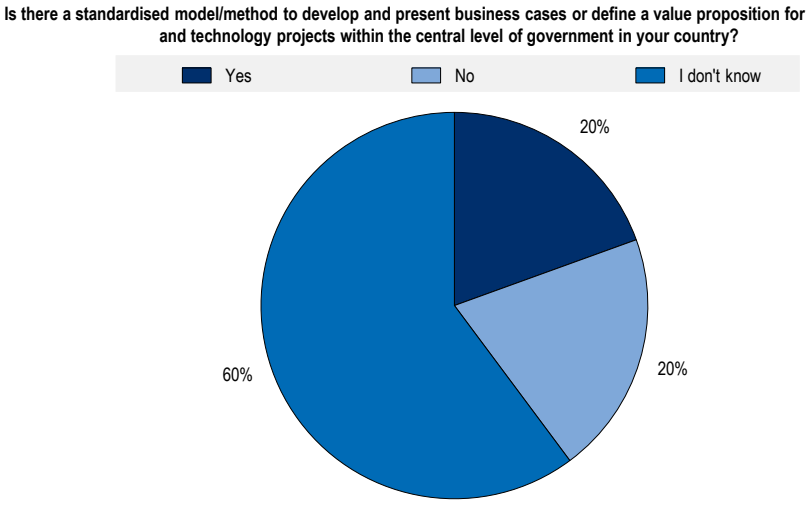
The OECD peer review team also found an insufficiently coherent approach towards establishing digital initiatives and turning strategic goals into action to lead the public sector towards a sustainable and holistic digital transformation. The survey and fact-finding interviews identified the lack of a standardised model/method and guidelines for public institutions to ensure coherent planning and implementation of digital government projects and initiatives. For instance, as seen in Figure 2.6, the survey run in the context of this review revealed that when asked about the availability or use of a standardised model/method to develop and present business cases or define a value proposition for data, digital and technology projects within the central level of government, the majority answered either "No" (20%, 23/113) or "I don't know" (60%, 68/113). Even though 22 institutions answered "Yes" they generally indicated the use of various methods obtained from different sources.

The same can be said for the DTO's co-ordination responsibilities. Although there is high-level visibility and recognition of the DTO across the public sector, its role as the leading organisation can improve through greater engagement with relevant stakeholders. The survey results highlighted that, during the COVID-19 pandemic, many institutions wished for more co-ordinated leadership from the DTO. Respondents also identified central leadership and inter-institutional co-ordination as areas of governance to be prioritised in preparation for any future crisis (see Figure 2.7). The survey also revealed that in relation to the governance of digital government, further efforts need to be invested to minimise bureaucracy, and to be more agile, innovative and collaborative (OECD, 2021[29]).

Overall, Türkiye has an influential organisation-in-charge to lead the digital transformation agenda across the public sector. It is, currently, supported by the highest leadership and with legal basis at the centre of the government. The DTO is in process of developing a new, overarching digital government strategy, which is a crucial opportunity for the organisation to reinforce the governance of digital government and its

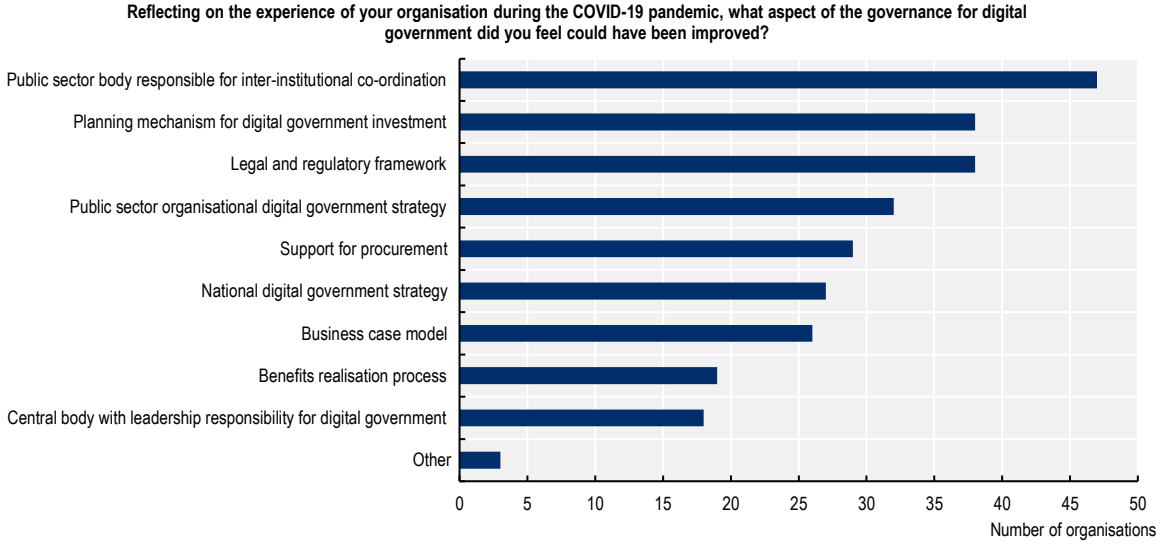
position as the organisation-in-charge to ensure a whole-of-government understanding and commitment for transitioning the government from e-government to digital government.

Figure 2.6. Use of a standardised model/methods to develop and present business cases



Note: Based on the responses of 113 institutions.
Source: OECD (2021[29]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q1.5.3.

Figure 2.7. Aspects of the governance for digital government to improve



Note: Based on the responses of 113 institutions.
Source: OECD (2021[29]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q1.8.2.

Nevertheless, there are challenges to overcome in building robust governance of digital government in Türkiye. As a newly established department based on a presidential decree, the DTO can benefit from strengthening its legitimacy and sustainability. The DTO's mandate can be further developed to cement its decision-making, co-ordinating and advisory roles and responsibilities in practice. In addition, it needs to create a more open and inclusive ecosystem for the various stakeholders from the public sector and at different levels of government to earn their trust and confidence.

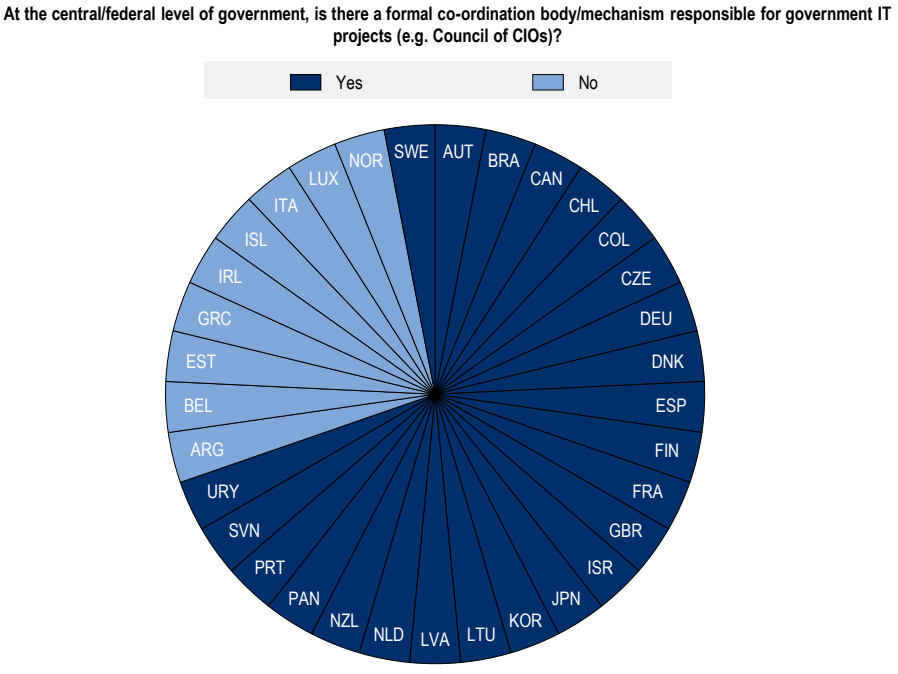
Co-ordination and co-operation

Co-ordination and co-operation ensure coherency, consistency and effectiveness in public sector digital transformation. Effective institutional co-ordination allows governments to take a holistic approach to digital transformation with a sustainable impact on the society rather than fostering siloed institution-based thinking. All relevant stakeholders need to work together towards mutually set and agreed objectives and action plans to enjoy the full benefits of digital transformation. A co-operative and collaborative culture across the public sector can secure coherent policy design, development, implementation and monitoring. It can prevent possible policy gaps and foster an inclusive policy ecosystem. It can also help flourishing innovative practices in the public sector through exchanges of knowledge, experience and lessons learned.

Building upon diverse experiences and practices of OECD members and partner countries in line with the second pillar of *the OECD Recommendation of the Council on Digital Government Strategies*, the *OECD Framework on the governance of digital government* defines co-ordination and co-operation as a key dimension (OECD, 2014[2]; 2021[3]). It further looks into *High-Level Co-ordination,* and *Organisational and Technical Co-operation*. The former underlines institutional co-ordination at a high political and administrative level while the latter focuses on co-operation at more technical level.

The *OECD DGI 2019* highlights the importance of embedding a digital government co-ordination unit into the institutional models to ensure the leadership, co-ordination, necessary resources and legitimacy to interpret policies into actionable and concrete public services (OECD, 2020[1]). In the DGI 2019, most of the top performing countries were amongst the almost 70% indicating that they have a formal co-ordinating body/mechanism responsible for government IT projects (e.g. Council of Chief Information Officers, CIOs) (see Figure 2.8).

Figure 2.8. Existence of a public sector organisation leading and co-ordinating digital government in OECD countries



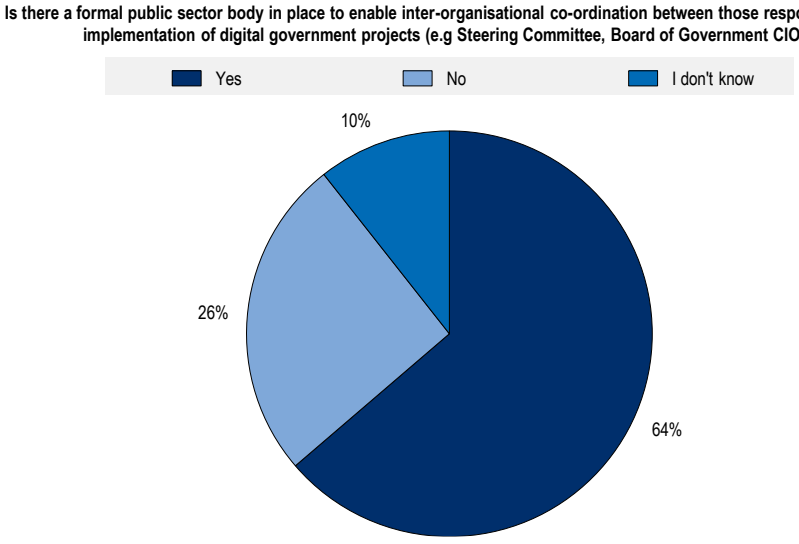
Note: The OECD countries that did not take part in the Digital Government Index are: Australia, Hungary, Mexico, Poland, Slovakia, Switzerland, Türkiye and the United States. A total of 29 OECD countries and 19 European Union countries participated in the Digital Government Index.
Source: OECD (2020[1]), "Digital Government Index: 2019 results", https://doi.org/10.1787/4de9f5bb-en, Q. 59.

In Türkiye, the DTO organises the “Mitigation of Bureaucracy and Digital Türkiye Meeting” chaired by Vice President and attended by high-level representatives such as Vice Ministers or General Directors. The meeting was designed to minimise bureaucracy and red tape, and encourage collaboration and alignment on digital government priorities and initiatives. At the meeting, relevant stakeholders discuss common challenges and decide on possible solutions. The mechanism also involves the highest leadership in monitoring of progress against the decisions made at the meetings.

Among the majority of public sector stakeholders, the “Mitigation of Bureaucracy and Digital Türkiye Meeting” holds high legitimacy. Figure 2.9 shows that of the 113 public institutions that took part in the survey to support this review, 64% (72/113) acknowledged the existence of this inter-organisation co-ordination mechanism. This important co-ordinating role was further highlighted during several interviews conducted by the OECD peer review team.

Although the “Mitigation of Bureaucracy and Digital Türkiye meeting” seems to enable co-ordination among different stakeholders, a number of challenges remain for stronger and positive alignment, collaboration and co-ordination. First, greater effort could be made to raise awareness of this body across the public sector and secure a wider participation. Figure 2.9 indicates that 36% (41/113) of the institutions are not aware of the co-ordinating mechanism. In addition, only 27 organisations identified that they actually participate in the meeting.[2] While it is important to find the necessary balance to cover a sample of public sector organisations it may be beneficial to have some core organisations with a permanent presence and a periodically rotating membership for others.

Figure 2.9. Existence of inter-organisational co-ordination for digital government projects



Note: Based on the responses of 113 institutions
Source: OECD (2021[29]), “Digital Government Survey of Türkiye, Public Sector Organisations Version”, Unpublished, OECD, Paris, Q. 1.3.5.

The seniority of representation during the “Mitigation of Bureaucracy and Digital Türkiye meeting” is valuable in creating binding expectations of delivery and implementation. However, the OECD peer review team apprehended that dynamics tend to be top-down with little evidence of two-way interaction discussions and could benefit from taking a more interactive and inclusive approach as well as including the insights of practitioners with a stronger grounding in the practicalities of digital transformation.

A co-operative and collaborative culture can further benefit from organisational and technical co-operation. During the interviews, many stakeholders highlighted the need for inter-organisational collaboration and communication at a technical level to enable practitioners and technical stakeholders to co-ordinate among

themselves and promote institutional learning. The general lack of sharing data, information and good practices among organisations creates barriers in building trust, and ensuring coherent and sustainable implementation of digital initiatives. For instance, the majority of interviewees expressed their wish for a more integrated system and data pool; however, underlying mistrust among organisations is an impediment to advancing this process.

Overall, Türkiye, through the "Mitigation of Bureaucracy and Digital Türkiye Meeting", has a solid foundation to build stronger and more effective co-ordination and co-operation. It would be worthwhile for the government to consider taking a few actionable steps to cement the processes that can ensure the coherence and sustainability of the digital transformation agenda across the public sector.

Formalising the "Mitigation of Bureaucracy and Digital Türkiye Meeting" can help it increase visibility and legitimacy. A clear mandate, list of participating representative and the frequency of the meeting will ensure regularity, continuity as well as wider participation. A monthly or quarterly meeting will allow regular monitoring and assessing of project implementation, contributing to turning high-level policies into concrete actions. In addition, forming working groups on key priority areas under the "Mitigation of Bureaucracy and Digital Türkiye Meeting" will provide a peer learning space where practitioners can exchange knowledge, experiences and good practices. This would spur innovative solutions to common issues through a bottom-up approach. This practice can also empower practitioners and public officials to take bigger ownership of policies and services. In the case of Slovenia for example, the Governmental Council of Informatics Development in Public Administration is a central mechanism for co-ordination across the public sector. The Council has a threefold structure that fosters co-operation and collaboration among stakeholders of different levels of mandates and political seniority (see Box 2.4).

Box 2.4. Slovenia's Co-ordination Mechanism

Governmental Council of Informatics Development in Public Administration

The Governmental Council of Informatics Development in Public Administration, led by the Ministry of the Public Administration (MPA) and composed of secretaries of state of the most relevant ministries and other public institutions, is the government highest decision-making authority responsible for the digital government policy. The Council has a threefold structure that, with different levels of mandates and political seniority of the stakeholders involved, allows an important distribution of co-ordination responsibilities across the different sectors of government. Provided that the distinction of roles is clear, the existence of co-ordination at minister, secretary of state and director general levels is also an important mechanism to maintain the involvement, ownership and responsibility of different stakeholders and improve policy coherence and sustainability.

Strategic Council

Led by the Minister of Public Administration, the council is responsible for co-ordination and control of deployment of digital technologies in the public sector, review and approval of the strategic orientations, confirmation of action plans and other operational documents, and validation of projects of line ministries above a certain threshold.

Co-ordination Working Group

Led by the Secretary of State of the Ministry of Public Administration, this group is responsible for the preparation of proposals and action plans and for the co-ordination as well as compliance of digital government measures in line ministries and other public sector organisations.

Operational Working Group

Led by the director of the Directorate of Informatics, the Operational Working Group is responsible for the implementation of activities, the preparation and implementation of operational documents, and work reports based on action plans. It provides its consent to line ministries and government services for all projects and activities that result in the acquisition, maintenance, or development of IT equipment and solutions.

Source: OECD (2021[30]), *Digital Government Review of Slovenia: Leading the Digital Transformation of the Public Sector*, https://doi.org/10.1787/954b0e74-en.

During the review process, the OECD review team found limited evidence of co-ordination and collaboration with local government and gaps in opportunities. In addition to ad hoc co-ordination on local governments' integration to the e-Government Gateway, the Turkish government can further benefit from structured co-ordination and collaboration. Considering the administrative and geographical features of the country, the government can also consider organising a regular co-ordination meeting with digital leaders (e.g. Chief Digital Officer or equivalent). As the president of the DTO takes a role as the national Chief Digital Officer, it would be beneficial to co-ordinate meetings with local governments on a regular basis in co-operation with the Ministry of Environment, Urbanization and Climate Change who is in charge of overseeing the activities of the provinces. The regular meeting would help Türkiye steer more coherent digital transformation efforts evenly also at the local government level. The meeting will present opportunities to identify needs for local governments as well as to promote collaboration among them. In case of Korea, the *Framework Act on Intelligent Informatization* includes the establishment of a co-ordination council composed of the heads of central administrative bodies, and local governments (see Box 2.5).

Box 2.5. Korea's Consultative Council of Intelligent Informatization Officers

Framework Act on Intelligent Informatization

Article 9 (Consultative Council of Intelligent Informatization Officers)

1. The heads of central administrative agencies and the heads of local governments (referring to the Special Metropolitan City Mayor, Metropolitan City Mayors, Special Self-Governing City Mayors, Do Governors, Special Self-Governing Province Governor) shall establish and operate the Consultative Council of Intelligent Informatization Officers (hereafter in this Article referred to as the "Consultative Council") comprised of the Minister of Science and ICT, the Minister of the Interior and Safety and intelligent informatization officers for such purposes as efficiently promoting policy measures for the intelligent information society and intelligent informatization projects, exchanging necessary information, and consulting on relevant policy measures.
2. The Consultative Council shall be co-chaired by the Minister of Science and ICT and the Minister of the Interior and Safety.
3. Matters necessary concerning consultation and operation of the Consultative Council shall be prescribed by Presidential Decree.

Source: Government of the Republic of Korea (2020[31]), *Framework Act on Intelligent Informatization*, https://elaw.klri.re.kr/kor_service/lawView.do?hseq=54720&lang=ENG.

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[1] Data from the Federal Reserve Bank of St. Louis (FRED), *National Currency to US Dollar Exchange Rate: Average of Daily Rates for Türkiye*; monthly based from 1 June 2021 (7.3972 USD/TRY) to 1 June 2022 (16.99244 USD/TRY).

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3 Policy levers to lead the digital transformation

In line with Pillar 3 of the OECD Recommendation of the Council on Digital Government Strategies, Chapter 3 analyses necessary policy levers to bring Türkiye's e-government closer to a matured digital government. The first section focuses on its digital government strategy and its relevance across the public sector. The second section deep dives into management tools, including business cases and agile project management, and financial mechanisms. The chapter finishes by reviewing legal and regulatory frameworks in place in Türkiye.

Introduction

Chapter 2 focused on the contextual factors and institutional models that underpin the digital transformation of Türkiye's public sector. The institutional arrangements and leadership to co-ordinate are essential to a whole-of-government and coherent approach to digital government. Policy levers allow governments to turn strategy to implementation and delivery, enabling system-wide change to better meet the needs of citizens and businesses, and create value across the public sector.

Drawing on Pillar 3 of the OECD Recommendation of the Council on Digital Government Strategies (OECD, 2014[1]), the E-Leaders Handbook on the Governance of Digital Government (OECD, 2021[2]) identifies policy levers, soft or hard policy instruments, as tools to support governments' digital transformation agenda (see Figure 3.1). It entails clear methods for value proposition (e.g. Business cases), management and monitoring of the implementation, assessment-based procurement of digital technologies and proper regulatory framework. These tools lay firm foundations for critical enablers for digital government and data.

Figure 3.1. The OECD Framework on the Governance of Digital Government – Policy levers

Source: OECD (2021[2]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en.

This chapter will examine four dimensions: strategy and plan, management tools and financial mechanisms, and regulations and standards. The first section focuses on its digital government strategy and its relevance across the public sector. The second section deep dives into management tools, including business cases and agile project management, and financial mechanisms. The chapter finishes by reviewing legal and regulatory frameworks in place in Türkiye.

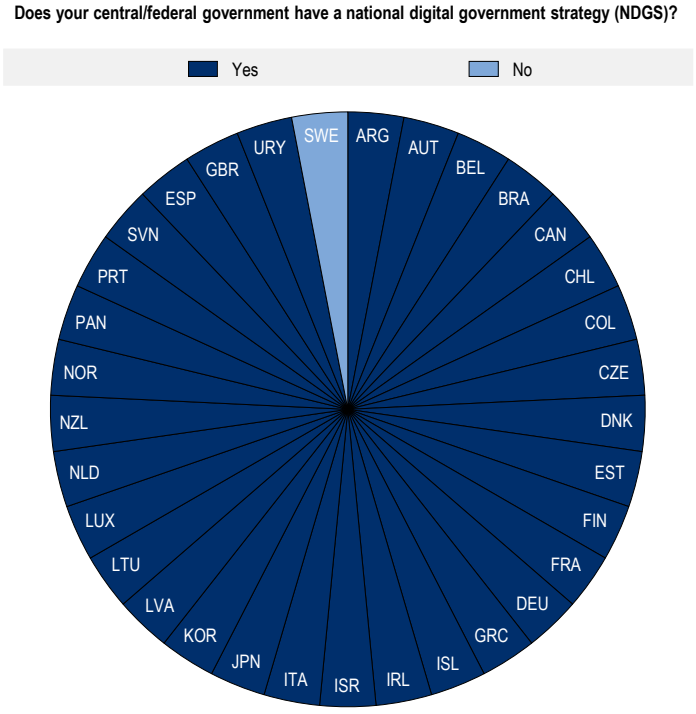
Strategy and plan

A digital government strategy is indispensable to achieve digital government maturity with coherency and sustainability at the whole-of-government level. The strategy should set a strategic vision, objectives and priorities, accompanied with the structure and detailed action plans for implementation and monitoring. It should also align with broader national agenda or policy priorities (e.g. administrative reform, sustainable

development, climate change and environment, education, science and technology) as well as reflecting sectoral needs and priorities.

Almost all OECD member countries that participated in the OECD Digital Government Index 2019 have a digital government strategy in place with policy objectives for public sector digital transformation (see Figure 3.2). Depending on the government, these strategies might have different names or be presented in various formats. Some governments choose to have it as a standalone document, while some embed it in a broader national agenda. A key takeaway is that OECD countries recognise the importance of having a strategy to guide governments towards digital government maturity.

Figure 3.2. Existence of a national digital government strategy in OECD countries



Note: The OECD countries that did not take part in the Digital Government Index are: Australia, Hungary, Mexico, Poland, Slovakia, Switzerland, Türkiye and the United States. A total of 29 OECD countries and 19 European Union countries participated in the Digital Government Index.
Source: OECD (2020[3]), "Digital Government Index: 2019 results", https://doi.org/10.1787/4de9f5bb-en, Q.1.

Türkiye has a long-standing history of centrally organised strategies concerning digital transformation.[1] Prior to the publication of the most recent digital government strategy in 2016 there has been a consistent narrative of encouraging a 'citizen-oriented service transformation' (State Planning Organisation, 2006[4]), 'designed according to the needs of users' and which is understood 'from the design to the implementation' (Republic of Türkiye, 2014[5]). These ideas have formed the basis for the *2016-2019 National e-Government Strategy and Action Plan* (Ministry of Transport, Maritime Affairs and Communications, 2016[6]) and the subsequent *Eleventh Development Plan (2019-2023)* (Presidency of Strategy and Budget, 2019[7]). The National e-Government Strategy, which concluded in 2019, provided a holistic approach to the structuring of e-government (see Box 3.1).

Box 3.1. Türkiye's *2016-2019 National e-Government Strategy and Action Plan*

Four strategic aims to achieve the vision of an e-government Ecosystem

- Strategic aim 1: ensuring the efficiency and sustainability of the e-government ecosystem.
- Strategic aim 2: implementing common systems for infrastructure and administrative services.
- Strategic aim 3: realising an e-transformation in public services.
- Strategic aim 4: enhancing usage, participation and transparency.

Progress made in the framework of the 2016–2019 e-Government Action Plan:

- The institutions carried out the process and method transformation studies to provide all services as e-government services.
- The Electronic Document Management System is used in all central institutions.
- The Centralised Legal Persons Information System (MERSIS) was integrated into the e-Government Gateway.
- Data dictionary studies were started.
- Services such as job search, and employment, unemployment and retirement applications are now provided via the e-Government Gateway.
- The certificate of inheritance can now be obtained from the e-Government Gateway.
- Many service steps for vehicle acquisition and registration are now available on the e-Government Gateway. Efforts are being pursued to provide services in an integrated manner (more info at page 14).
- Applications for the Consumer Arbitration Committee can now be made via the e-Government Gateway.
- A social media guide for public institutions was prepared and published in 2019.

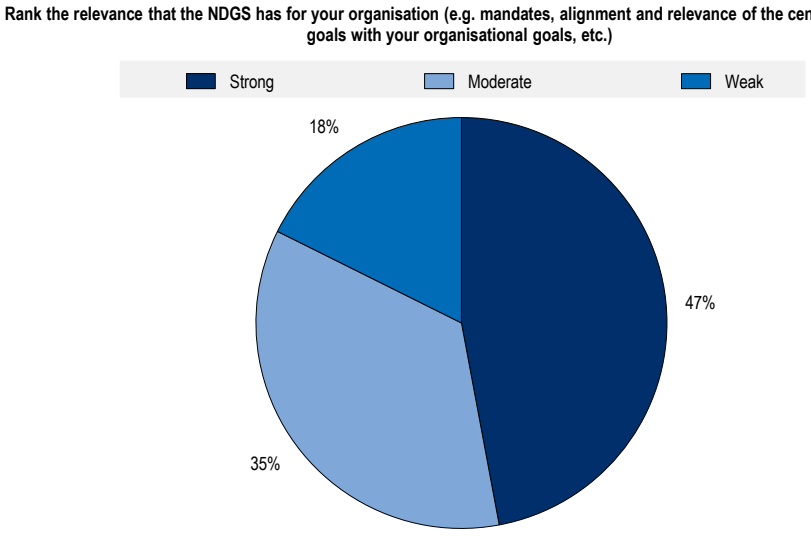
Source: EC (2021[8]), *Digital Public Administration Factsheet 2021 - Turkey*, https://joinup.ec.europa.eu/sites/default/files/inline-files/DPA_Factsheets_2021_Turkey_vFinal.pdf.

Following the change in organisational structure Türkiye published its Eleventh Development Plan which set out an ambition for 'user-oriented service delivery and effective public administration'. It aims to improve service delivery channels with channel diversity and prioritise the needs of disadvantaged groups (Presidency of Strategy and Budget, 2019[7]). In line with the development plan, and building upon the *2016-2019 National e-Government Strategy and Action Plan*, priority actions in the digital government agenda were set and implemented. The holistic and multi-dimensional national policy document aims to increase competitiveness and efficiency across the public sector (EC, 2021[8]). The implementation of these actions is monitored based on a separately established annual plan, supported by the Presidential Plan & Program Monitoring & Evaluation System. Although the plan includes certain objectives and goals related to digital transformation, they are scoped around e-government applications in public services, not digital transformation of the public sector. It is missing the whole-of-government vision and objectives, as well as clear responsibilities and roles of key relevant stakeholders to ensure successful digital transformation of the Turkish public sector with some of these elements handled in other documents.

The central digital government strategy was perceived relatively well across the public sector. When questioned about the relevance of the national digital government strategy (*2016-2019 National e-Government Strategy and Action Plan*), 47% of respondents rated the relevance of the national strategic approach to digital government policy to their organisation as being strong (see Figure 3.3). Nevertheless,

there are opportunities for improvement in future strategies to better reflect sectoral needs and priorities. Among those respondents that rated the relevance moderate or weak, some indicated that the strategy did not include their sectoral priorities at all; and others were excluded entirely from the creation process, as they do not provide e-government services to the citizens directly.

Figure 3.3. Relevance of national digital government strategy to Türkiye public sector institutions



Note: Based on the responses of 85 institutions excluding 28 who didn't answer.
Source: OECD (2021[9]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q1.1.2.

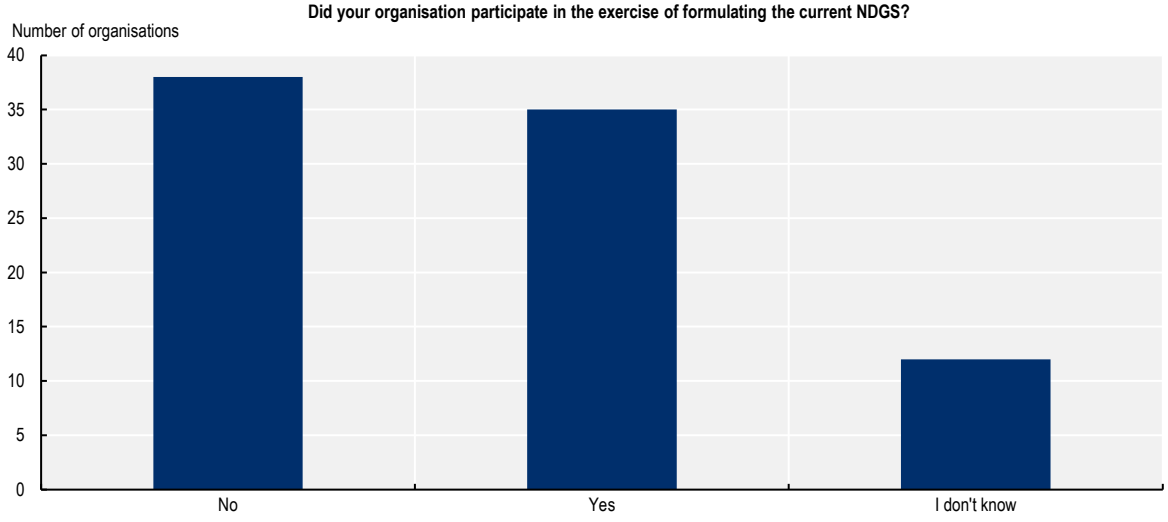
Despite the fact-finding mission surfacing very little criticism of the central leadership and a general attitude of support and compliance with directions and priorities given by the Digital Transformation Office (*Dijital Dönüşüm Ofisi,* DTO), the survey results indicate not only the need of a more participatory process, but also institutional memory to ensure continuity. Only 31% (35 out of 113) of institutions participated in the formulation of the *2016-2019 National e-Government Strategy and Action Plan* (see Figure 3.4). The other 69% did not acknowledge their involvement in any formal procedure when questioned.

Despite little evidence of having in place a formal procedure to include relevant stakeholders, the former strategy was developed with the participation of stakeholders at every stage. It included face to face interviews with over 2 000 citizens, a survey of almost 500 local government units, questionnaires completed by 72 central government units and 64 universities as well as an internet survey of almost 1 000 private sector representatives. It is to be hoped that the new strategy will build on these previous efforts by responding to the feedback gathered during the Review that indicated the benefit of investing more time with organisations on a sectoral basis as well as incorporating the municipal perspective.

The absence of a digital government strategy setting a broader strategic vision and defining a comprehensive action plan to facilitate the transformation from e-government to digital government appears to be a pressing challenge from a governance perspective. The Turkish government has taken action to address this obstacle. The DTO is responsible for the country's digital roadmap and currently preparing a new national digital government strategy for which the recommendations of this review will provide a supportive input. The DTO has an excellent opportunity to set out an ambitious vision and clear priorities that respond to specific institutional needs in order to achieve this transition fully. For instance, this review process provided multiple opportunities for public institutions to voice their concerns and priorities. One hundred and thirteen public institutions responded to the Digital Government Survey, many of whom also participated in the fact-finding interviews. In May 2022, the DTO and the OECD review team

organised two full-day workshops in Ankara focusing on Service Design and Delivery and the Data-Driven Public Sector with representatives from around 50 public institutions. During the workshops, participants identified common challenges and obstacles and prioritised them.

Figure 3.4. Participation of the public sector institutions in the formulation of the National Digital Government Strategy (NDGS)



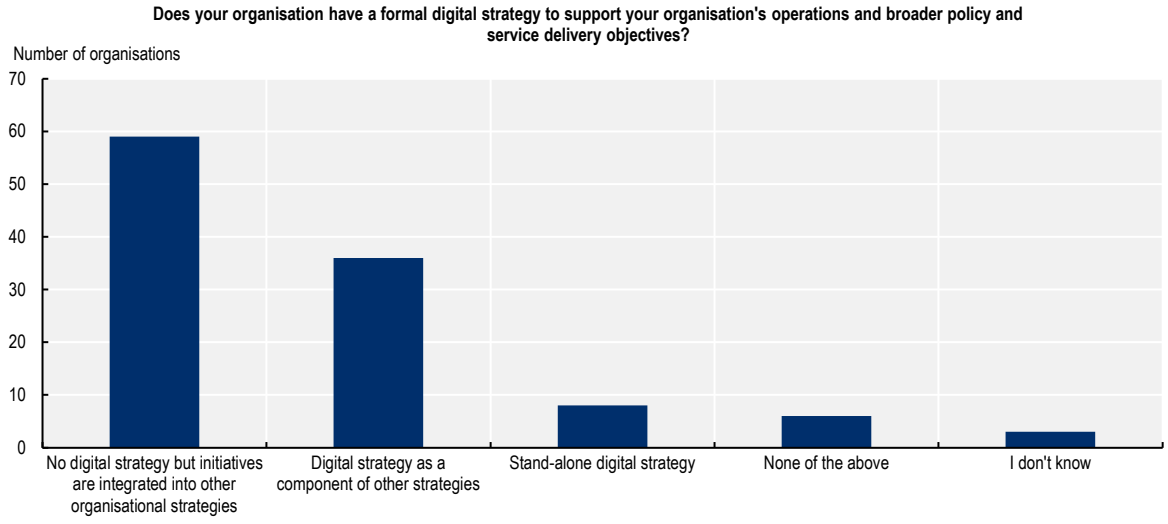
Note: Based on the responses of 85 institutions excluding 28 who didn't answer.
Source: OECD (2021[9]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q1.1.5.

The forthcoming strategy needs to align with the National Development Plan, other sectoral and thematic strategies such as the National Artificial Intelligence Strategy 2021-2025 to ensure coherence and support from the wider public sector (Ministry of Industry and Technology/Digital Transformation Office, 2021[10]). Furthermore, an accompanying long-term investment plan and detailed action plan will ensure continuity, effectiveness and efficiency in the implementation of such a strategy. The detailed action plan outlining responsible bodies, the timeline for the expected results and key performance indicators will also strengthen implementation efforts and impact. Most importantly, all relevant stakeholders need to be included in this process so that their vision and needs feed into the national strategy. The "Mitigation of Bureaucracy and Digital Türkiye Meeting" can be used to bring all necessary public institutions together not only at the formulation stage, but also through regular co-ordination after the development of the strategy. This will ensure monitoring of the implementation and progress made through the strategy.

Digital leadership at the institutional level

The right leadership at the institutional level can also empower organisations to be proactive in establishing a clear vision at the institutional level, in line with shared overarching strategic priorities for the whole government. Although there is felt to be a clear vision from the Presidency, this clarity has not translated into organisational strategies. Figure 3.5 shows that only 7% of organisations (8/112) have a stand-alone digital strategy and 32% (36/112) have a digital strategy integrated as a component of other strategies. However, 53% of organisations (59/112) have no digital strategy with their digital initiatives being integrated into operational planning. This means 61% (69/112) organisations do not formally have an organisational digital government strategy. The absence of such institutional leadership seems to hinder progress towards digital maturity for many organisations in the Turkish public sector.

Figure 3.5. The presence of formal digital strategies to support organisational policy and service objectives



Note: Based on the responses of 112 institutions.
Source: OECD (2021[9]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 1.2.1.

Nevertheless, the OECD review team identified high levels of digitisation and e-government practice across the public sector. Many of the interviewed organisations clearly understand the importance of digital transformation and has necessary human resources and capacity to adopt new technologies and techniques. A strategic vision and institutional priorities will help institutions transform the underlying human resource management, working methods, culture and mindset, bringing the Turkish public sector closer to digital government maturity, and shifting from digitisation to digitalisation. It is recommended for the DTO to develop a standardised template for institutional strategies to help co-ordinate and support their alignment with the national digital government strategy and other institutions. Furthermore, strengthening digital leadership in each institution through capacity building, and the adoption of common job profiles, will allow institutions to reach their fullest potential in accelerating the public sector digital transformation.

Management tools and financial mechanisms

Governments can optimise efficiency and eliminate duplication of efforts and expenditures through coherent investment in digital technologies and the use of common management tools across the public sector. The *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]) highlights the importance of clear business cases, agile project management, and strategic procurement of digital technologies. These policy levers facilitate policy implementation aligned with the digital government strategy and sustainability of digital initiatives.

The *OECD Digital Government Index 2019* highlighted that top performing OECD countries have developed standardised policy levers across public sector organisations. These allowed them to implement digital projects in a coherent and cohesive manner (Table 3.1). This review has found that these policy levers are missing or in need of further development in Türkiye.

Strategic and coherent investment can further ensure sustainable digital transformation. Among other policy levers, a standardised business case methodology can help the government articulate the value proposition of digital projects, and investments more broadly, and enable the use of ICT and emerging

technologies in a cohesive and transparent manner across the public sector. Then, agile project management and commissioning can bring economic and social outcomes efficiently together with private sector stakeholders.

Table 3.1. Use of standardised policy levers at the central/federal government level

	Business cases	ICT procurement	ICT project management
Belgium	□	■	■
Canada	■	■	■
Chile	■	■	□
Colombia	□	■	■
Czech Republic	■	■	□
Denmark	■	■	■
Estonia	■	□	□
Finland	□	□	□
France	■	■	■
Germany	□	■	■
Greece	□	□	■
Iceland	□	□	■
Ireland	□	■	■
Israel	■	■	■
Italy	□	■	□
Japan	■	■	■
Korea	■	■	■
Latvia	□	□	□
Lithuania	□	■	□
Luxembourg	■	□	■
Netherlands	□	■	■
New Zealand	■	■	■
Norway	■	■	■
Portugal	■	■	■
Slovenia	■	■	■
Spain	■	■	■
Sweden	■	■	□
United Kingdom	■	■	■
OECD Total			
Yes ■	17	22	20
No □	11	6	8

Note: Data are not available for Australia, Hungary, Mexico, Poland, the Slovak Republic, Switzerland, Türkiye and the United States.
Source: OECD (2020[3]), "Digital Government Index: 2019 results", https://doi.org/10.1787/4de9f5bb-en.

As a general approach, it would be highly recommended for the Turkish government to standardise and strengthen the levers mentioned above through, but not limited to, bench learning from good practices of international peers and capacity-building activities among the Turkish public sector institutions. This would

also contribute to reinforcing co-ordination and compliance. The following sub-sections touch upon each lever, across the different sectors and levels of government.

Business cases

A business case can help governments optimise the benefits of their investments in digital transformation. A business case is a mechanism used to justify and argue for a project or initiative. It captures the purpose, cost, benefits, risks and intent of a proposed investment. A business case helps government to better plan, execute and monitor digital government financing and investments to create public value and mitigate risks. The 9th principle of the *OECD Recommendation of the Council on Digital Government Strategies* clearly states that governments should develop clear business cases to sustain the funding and focused implementation of digital technologies projects (OECD, 2014[1]). In line with the Recommendation, the *OECD Working Group of Senior Digital Government Officials* (E-Leaders) developed a Business Case Playbook through a thematic group of several OECD member and non-member countries. The playbook introduces ten principles (called Plays) (see Box 3.2) that governments can apply to their business case model building on different governments' experience (Digital Transformation Agency, 2020[11]).

Box 3.2. The OECD Business Case Playbook

The OECD Business Case Playbook, developed with the OECD E-Leaders Thematic Group on Business Cases under the leadership of Australia's Digital Transformation Agency (DTA), covers the following three groups of principles: 1) **governance** (establish a common language; make mandatory rules and guidelines; enforce the usage of the business case; ensure value of the business case); 2) **costs** (ensure a clear scope of the business case; identify potential risks and their consequences; include uncertainties or bandwidths in the economic estimations); and 3) **benefits** (be specific, measurable, achievable, relevant and time-bound; distinguish between financial and non-financial benefits; distinguish between societal, public sectorial and institutional benefits).

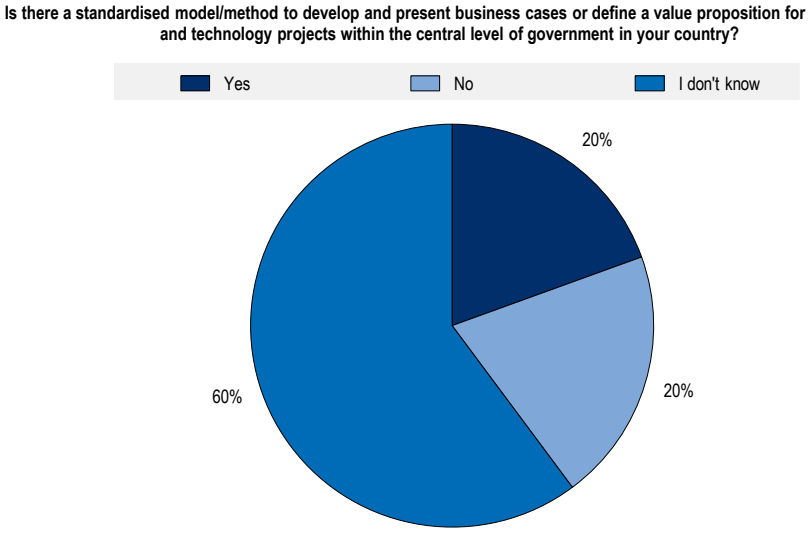
10 Principles (plays) of the Playbook

- **Discovery**
  1. Understand the problem.
  2. Explore options.
  3. Engage stakeholders early and often.
- **Foundations**
  4. Scope the preliminary work.
  5. Establish your team.
  6. Engage your sponsors.
- **Test**
  7. Define options.
  8. Select your preferred solution.
- **Iterate**
  9. Draft the business case.
  10. Review and refresh.

Note: The OECD Business Case Playbook was last modified in 2020.
Source: Digital Transformation Agency (2020[11]), *Business Case Playbook*, https://www.dta.gov.au/resources/OECD-Business-Case-Playbook.

Currently, the Turkish government lacks a standardised business case model at the central government level and general understanding of it across the public sector. The survey showed that when asked about the use of a standardised model/method, an overall majority indicated no or that they are not aware (20% and 60%) (see Figure 3.6). Even among institutions that answered "yes" they indicated using various methods from different sources.

Figure 3.6. Use of a standardised business case in the Turkish public sector



Note: Based on the responses of 113 institutions.
Source: OECD (2021[9]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 1.5.3.

The DTO is working on the development of a standardised model with basic categories (OECD, 2021[12]). A business case can be different forms with different structure depending on the country specific characteristics or even the size and nature of certain projects. Nevertheless, it should clearly describing the problem the project is trying to address, consider diverse ways to solve it and recommend the most suitable solution. It is also highly recommended for the DTO to engage key stakeholders in the process of designing the business model/methodology. Higher and active engagement will help promoting shared ownership, distributing benefits and better understanding the users' needs.

According to the *OECD Digital Government Index 2019* (OECD, 2020[3]), 18 out of 33 responding governments indicated that they made the use of business cases mandatory for all ICT projects or those that meet certain criteria (see Figure 3.7). For example, in the case of Denmark, business case models are mandatory for ICT projects especially those exceeding the budget of EUR 1.35 million (European euros) to ensure project success (see Box 3.3). The governments involved different stakeholder groups in defining business case models: 1) public sector organisations, 2) public servants, 3) academia, 4) private sector organisations, 5) civil society organisations and 6) citizens.

In addition to further developing the centralised model associated with the *Public Information and Communication Technologies (ICT) Project Preparation Guide*[2] (Ministry of Development, 2017[13]; Presidency of Strategy and Budget, 2021[14]), the government would benefit from raising the awareness and understanding of the value of applying a common business case methodology and practice across the public sector through inter-ministerial co-ordination, communication campaign and regular training exercises for financing and investing project managers. It would be feasible to achieve high adoption rate from the public sector once relevant stakeholders understand that a standardised business case

methodology can help the government articulate the value proposition of digital projects, and enable the use of ICT and emerging technologies in a cohesive and transparent manner.

Figure 3.7. Mandatory use of business cases for ICT projects in the responding countries

Note: Based on the responses of 19 countries that use business cases.
Source: OECD (2020[3]), "Digital Government Index: 2019 results", https://doi.org/10.1787/4de9f5bb-en, Q. 75a.

Box 3.3. Mandatory use of business case models in Denmark

Denmark's joint-governance IT project and programme and business case models are mandatory to ensure project success especially for those with more than EUR 1.35 million budget. It is intended to justify if the IT project is a good investment, based on a calculation of the overall financial and non-financial consequences of a potential investment in an IT project or programme. It involves an analysis and statement of change desires and the approach taken to achieve it.

Source: OECD (2021[2]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en.

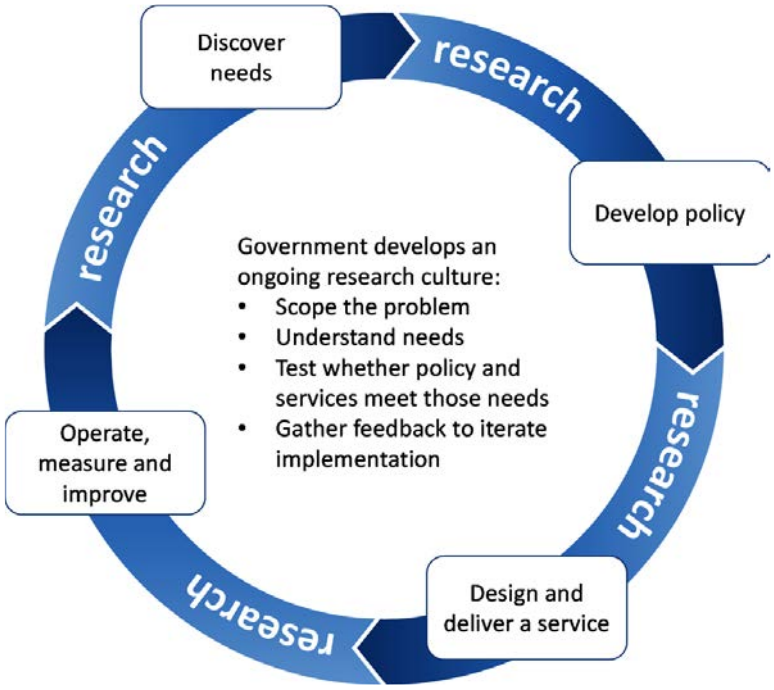
Agile Project Management

The 10th principle of the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]) underlines that project management approaches are crucial in achieving digital government maturity. Project management tools reinforce institutional capacities to manage, monitor and ensure consistency in project implementation. Then added agility in project management allows governments to quickly seized opportunities, mitigate risks, and make necessary changes.

Agile project management enables efficient and effective design and implementation of digital government projects including services. The traditional "waterfall" approach sets our requirements in the initial stage and tries to manage possible future risks through planning. Until the delivery of final product, there is no opportunity to assess, intervene and feed back in the product. On the other hand, agile project management bases on a continuous cycle of diagnosis, feedback and iteration (see Figure 3.8). Through ongoing research and experiments, governments can apply insights from user experience and adjust the course of the project quickly for optimal outcomes (Welby and Hui Yan Tan, 2022[15]). Adopting a

standardised agile project management approach can help governments forecast capacities across the public sector and enhance accountability and transparency in digital government implementation. The results of the *OECD Digital Government Index 2019* (OECD, 2020[3]) show that governments put great emphasis on applying a standardised model for project management. Twenty-two out of 33 participating countries have a standardised model (see Box 3.4).

Figure 3.8. An Agile approach to the interaction between government and the public during policymaking, service delivery and ongoing operations



Source: OECD (2020[16]), "The conceptual framework", https://doi.org/10.1787/d4498e23-en.

Box 3.4. Good practices of the OECD member countries

The UK's Digital, Data and Technology Functional Standard (DDaT Functional Standard)

The United Kingdom's Digital, Data and Technology functional standard sets out how all digital, data and technology work and activities should be conducted across government, ensuring:

- The public is provided with appropriate digital services.
- Those leading government organisations can provide strategic direction and governance that enable operational excellence.
- Those working in government organisations can use and implement tools and infrastructure to meet their objectives.

The standard contains 7 main elements:

1. The purpose and scope of the standard.
2. Principles, covering the fundamental tenets of digital, data and technology including aligning with government policy, and meeting clearly identified user needs, delivery teams comprising multiple disciplinary teams, meeting security and privacy requirements and using open standard.
3. A definition of digital data and technology.
4. Governance which sets out governance structures and mechanisms for government, departments, teams, projects and programmes.
5. Delivering digital services and technology which outlines the stages of agile delivery, including design, implementation, maintenance and sets out in more detail how digital and technology interoperate.
6. Managing live services and technology which explains how you should look at the full life cycle of a services and/or technology, including iteration, transition and decommissioning.
7. People and skills which covers both DDaT professions and non-specialist staff.

Denmark

Denmark's Agency of Digitalisation has a cross-governmental ICT project management model to harmonise the management of the ICT projects across the public sector from conceptualisation to realisation of benefits. This model provides a standardised way of managing ICT projects across the government. Based on the Projects IN Controlled Environments (PRINCE2) methodology, the Danish model provides guidelines for how to organise and manage ICT projects and delivers concrete templates for all generic products in the process. The Ministry of Finance has created a unit to establish good practice on digital government projects that covers mandatory and recommended elements. The model has enabled the establishment of a specific governance structure, for example, requiring approvals of well-developed business cases, as well as ongoing approvals (so called "stop-go" decisions) each time a project passes from one phase to the next.

Source: Welby, B. and E. Hui Yan Tan (2022[15]), "Designing and delivering public services in the digital age", https://doi.org/10.1787/e056ef99-en; OECD (2021[2]), *The E-Leaders Handbook on the Governance of Digital Government*, https://doi.org/10.1787/ac7f2531-en; UK Central Digital and Data Office (2020[17]), *Government Functional Standard: GovS 005: Digital, Data and Technology*.

The Turkish government does not have a standardised model for digital and ICT project management at the central government level (OECD, 2021[12]). However, the Public ICT Projects Preparation Guide aims to support all public institutions including local governments with the preparation of ICT investment projects. The guideline hopes to deliver cost-benefit analysis, timely completion of projects and establishing an interoperable e-government structure. The guideline also has a set of policies and principles that institutions need to follow in order to be included in the investment programme. It has four enclosed documents: assessment templates, sub-guideline for the templates, checklist, and sub-guideline specific to investment type.

In the survey, the majority of the institutions indicated that they follow the central guidelines/standards, while one-fifth responded that they follow institutional guidelines/standards for project management and delivery of government services (see Figure 3.9). Nevertheless during the fact-finding interviews, institutions did not identify the relevance of this guideline mentioned above or their practice of using such guideline.

Figure 3.9. Guidelines/standards on the project management and delivery of government services in Türkiye

Note: Based on the responses of 111 institutions.
Source: OECD (2021[9]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 3.9.2.

The design of the new digital government strategy provides an important opportunity to update the guideline towards a standardised agile project management model, which can better promote the aligned, participatory and accessible development of digital government projects and services across the public sector. It would be important to involve all relevant stakeholders in the process and especially the institutions that have been applying their own project management approaches to create shared ownership of the standardised model.

Procurement of ICT/Digital Technologies

Governments with a robust procurement strategy can manage ICT/digital investments with more agility based on their digital government policy objectives. Public procurement practices should be efficient and effective in prioritising investments and resources for key policy areas such as digitalisation. Traditional public procurement follows a sequence of needs assessment, market research, tender process, payment, contract management and then the delivery of goods and services (OECD, 2015[18]). With regards to the procurement of ICT/digital technologies, governments need to take specific approaches to achieve valuable and quality acquisitions in a timely manner.

The 11th principle of the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]) underlines the need for the procurement of digital technologies based on an assessment of "existing assets including digital skills, job profiles, technologies, contracts, inter-agency agreements to increase efficiency, support innovation, and best sustain objectives stated in the overall public sector modernisation agenda. Procurement and contracting rules should be updated, as appropriate, to make them compatible with modern ways of developing and deploying digital technology". In line with the Recommendation, OECD member countries have started to consider more innovative and flexible approaches to procure ICT/digital technologies and services (OECD, 2022[19]).

The OECD Working Party of Senior Digital Government Officials (E-Leaders) worked on the development of the ICT Commissioning Playbook, building on experiences of OECD member and partner countries. The Playbook explains how governments can take an agile procurement approach. It provides eleven actions

such as better understanding user needs, ensuring procurement transparency, and sharing and reusing components and good practices of others (see Box 3.5).

Box 3.5. The ICT Commissioning Playbook

The ICT Commissioning Playbook is focusing on ICT procurement reform and its role in the wider digital transformation of the public sector in countries around the world. Its goal is to show how traditional procurement can evolve towards agile procurement. The Playbook sets out how to address the main issues faced by governments and explores what works and what does not work, sharing real life examples. The Playbook provides a set of actionable guidelines (known as plays) that countries can follow to move towards more agile approaches for ICT procurements.

Eleven plays are:

8. Set the context.
9. Start by understanding user needs.
10. Design procurements and contracts that meet users' needs.
11. Be agile, iterative and incremental.
12. Work as a multidisciplinary team from the beginning.
13. Make things open.
14. Build trusting and collaborative relationships, internally and external.
15. Share what you have with others and reuse what others have.
16. Move away from specifying to regulating.
17. Public procurement for public good.
18. Operate.

The plays outline ways to overcome common problems, alongside case studies that demonstrate challenges and successes. The Playbook was developed for procurement professionals in the public sector and is based on the experiences of the UK, with contributions from Australia, Canada, Chile, Finland, Mexico, New Zealand, Portugal, Uruguay and the United States.

Source: OECD (2022[19]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, https://doi.org/10.1787/b0a5d50f-en.

In the case of Türkiye, there is not a central strategy dedicated to public procurement of ICT goods and services; however, the Public Procurement Law No. 4734 covers ICT procurement (Government of the Republic of Türkiye, 2002[20]). In addition, on the survey question about a formal central guideline for the public procurement of ICT/digital goods and services, the DTO indicated that the Public ICT Projects Preparation Guide serves as such a document (OECD, 2021[12]). Nevertheless, the procurement law and the abovementioned guideline leave much to be desired to sufficiently govern fast-changing, complex ICT/digital procurement. Further clarity can be given to the relevant actors on the co-ordination mechanism and process specifically for ICT/digital procurement.

Similar to the assessment on two previous policy levers, Türkiye can greatly benefit from taking a number of actions. Establishing the appropriate governance framework for ICT/digital procurement best suited for its national circumstances can bring accountability, transparency and trust from public institutions. Updating the current procurement law to better reflect changes could enable the government to incorporate new and emerging technologies across the public sector strategically, safely and effectively. Last, a

dedicated ICT/digital procurement strategy and process jointly developed with relevant stakeholders including the private sector and civil society will enable a procurement practice based on government-wide comprehensive priorities and user needs.

Financial measures and mechanisms

Financial management mechanisms provide governments with another set of policy tools for implementation of the digital government strategy and action plan. Governments can leverage institutional frameworks for allocation of digital investment to align and ensure implementation of digital projects across the public sector and consistently with the main overall strategic objectives of the government. It is crucial for the organisation-in-charge to take an active role in setting national budget priorities to guarantee the coherent and sustainable digital transformation across different sectors.

Governments can make use of policy tools such as budget threshold and co-funding to plan and operationalise digital investments. A budget threshold can help to manage internal processes, ensuring that major digital projects above a certain financial value are aligned with the digital government strategy and creating a transparent and clear process across the public sector. Co-funding mechanisms led by the leading organisation can support coherent and efficient policy implementation and assure the dissemination of standards and key enablers across the public sector. The mechanisms can support digital government projects that are aligned to the national digital priorities in different sectors and levels of governments. During the review process, the institutions also highlighted possible opportunities that the mechanisms can bring in securing financial and human resources in the Turkish public sector.

In Türkiye, the Ministry of Treasury and Finance (*Hazine ve Maliye Bakanlığı*) annually prepares the Medium Term Programme (MTP) each year together with the Presidency of Strategy and Budget. The MTP, a main budgetary policy document, sets the objectives and priorities. Based on this document along with the yearly Presidential Annual Programme, the annual budget is allocated to each organisation. All public sector organisations need to fully comply with the objectives and priorities stated in the MTP when preparing their budgets and making policy decisions (Ministry of Treasury and Finance, 2022[21]). This process is supported by the Public Investment Information System (*Kamu Yatırımları Bilgi Sistemi*, KaYa). Although the DTO is the leading public sector organisation mandated to develop Türkiye's digital roadmap, the DTO does not play an active role in shaping the MTP or hold formal decision-making power over the budgeting for digital projects at the central level. In the case of Portugal, the Administrative Modernisation Agency (AMA) has the approval power for ICT and digital projects with a budget of EUR 10 000 or more. The AMA tries to ensure the best value for money by reviewing compliance with guidelines and the non-duplication of efforts (OECD, 2021[2]).

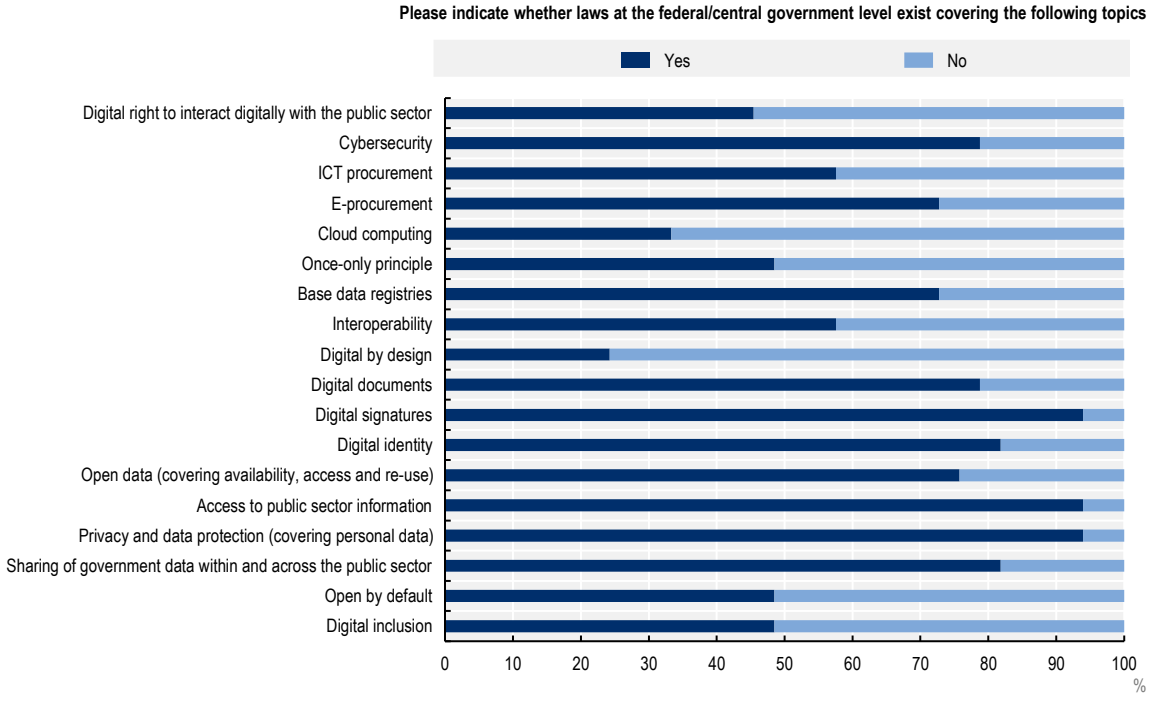
In general, Türkiye needs to institutionalise financial measures and mechanisms to better forecast digital investment and strategically allocate them with a holistic point-of-view. The budgetary process, implemented by the Ministry of Treasury and Finance and supported by the ministry’s Integrated Public Financial Management Information System of Türkiye, can use more clarity and transparency. Moreover, Türkiye seems to be missing budget threshold and co-funding mechanism for digital projects. The government can consider devising a formal financial management mechanism along with an investment plan to support the implementation of the forthcoming national digital government strategy in co-ordination with relevant stakeholders including the Ministry of Treasury and Finance. Such investment plan could help the government to prioritise projects, estimate the spending and execute accordingly. Additionally, it would be worthwhile to consider a funding model that can empower the DTO to co-fund or delegate funds to key priority projects that are cross-sectoral to ensure timely and efficient implementation of such projects.

Regulations and standards

The legal and regulatory framework underpins governance arrangements, mechanisms, policy actions and measures for digital government. These binding and non-binding tools guide the planning, implementation and monitoring of digital government strategies. The importance of the legal and regulatory framework is highlighted in the 12th principle of the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]). It calls for "general and sector-specific legal and regulatory frameworks [that] allow digital opportunities to be seized by reviewing them as appropriate; and including assessment of the implications of new legislations on governments' digital needs as part of the regulatory impact assessment process". In today's fast-changing digital age, governments need to have in place the legal and regulatory framework that harnesses digital opportunities and addresses potential risks while circumventing bureaucratic resistance to digital transformation.

The *OECD Digital Government Index 2019* paints a good overview of the existing legal and regulatory framework for digital government in the OECD member and partner countries (OECD, 2020[3]). Most of the participating countries have legislation on key enablers such as digital signatures (93%), digital identity (82%), digital documents (79%), and open government data (76%). On the other hand, legislation on emerging areas like cloud computing or digital by design are still not commonly in place (see Figure 3.10).

Figure 3.10. Overview of the existing legal and regulatory framework for digital government in the OECD member and partner countries



Note: The OECD countries that did not take part in the Digital Government Index are: Australia, Hungary, Mexico, Poland, the Slovak Republic, Switzerland, Türkiye and the United States. A total of 29 OECD countries and 19 European Union countries participated in the Digital Government Index. Information on data for Israel is available at http://dx.doi.org/10.1787/888932315602.
Source: OECD (2020[3]), "Digital Government Index: 2019 results", https://doi.org/10.1787/4de9f5bb-en, Q. 92.

In Türkiye, several specific pieces of legislation and regulation support various aspects of digital transformation of the public sector at different capacities. Most notably, two presidential decrees (No.1 and No.48) cover the governance responsibilities and role of relevant government bodies (Presidency of the Republic of Türkiye, 2018[22]; Presidency of the Republic of Türkiye, 2019[23]). In addition, a series of legal and regulatory documents (see Box 3.6) provide legal basis in areas such as interoperability, key enablers (access to public information, electronic identification (eID) and trust services, security, interconnection of base registries, e-procurement), and emerging technologies (EC, 2021[8]). However, the regulatory frameworks in Türkiye can be further updated and aligned to cover all digital government areas comprehensively. The survey to support this review indicated that 96% of organisations (108/113) believe there to be potential for improving the legal and regulatory framework.[3] The rationales included the necessity to update or adjust the current legal and regulatory framework to reflect a concrete mandate for each institution, facilitate the use of new technologies and risk mitigation; and to equip the public sector adequately for a constantly transforming environment. The government has started strengthening the legal and regulatory framework in certain areas. For instance, the recent amendment to the Public Procurement Law would provide a stronger legal foundation for digitalisation of procurement process.

Box 3.6. Key Digital Public Administration Legislation of Türkiye

1. Specific legislation on digital public administration
   - eGovernment Legislation
   - Regulation on the Procedures and Principles Regarding the Execution of e-Government Services.
2. Interoperability
   - Circular No. 2009/4 on Interoperability Principles in Public Information Systems.
3. Key enablers
4. Access to public information
   - Freedom of Information Legislation: Right to Information Act (Law No. 4982)
   - Regulation on Principles and Procedures Regarding the Implementation of the Right to Information Law.
5. Electronic identification (eID) and Trust Services
   - Regulation on the Turkish National Identity Card
   - Regulation on Remote Identification Methods to be Used by Banks and Establishment of Contractual Relationship in Electronic Environment
   - By-Law on the Procedures and Principles Pertaining to the Implementation of the Electronic Signature Law
   - Regulation on Electronic Identity Verification System for Republic of Türkiye Identity Card
   - Law No. 5070 on Electronic Signatures
   - Law No. 5809 on Electronic Communications
   - Regulation Regarding Electronic Notification.
6. Security aspects
   - Law No. 6698 on Personal Data Protection Law
   - Law No. 5809 on Electronic Communications
   - Presidential Circular on Information Security Measures 2019/12

- By-Law on Network and Information Security in the Electronic Communications Sector
- Sector-specific Regulations for Cyber Security in Critical Infrastructure Sectors
- Adaptation of Information Security and Cyber Security Standards.

7. Interconnection of base registries
   - Regulation regarding the Principles of Implementation of the Integrated Public Financial Management Information System
   - Regulation regarding the Data Sharing of the Land Registry and Cadastre (*Tapu ve Kadastro Genel Müdürlüğü*, TKGM)
   - By-Law on the Procedures for the Provision of Public Services
   - By-Law on the Identity Registry System Sharing.
8. eProcurement
   - Regulation on Electronic Procurement Implementation
   - Public Procurement Law No. 4734
   - By-Law on Competency of Contractors for Government IT Projects.
9. Emerging technologies
   - By-Law on the Internet of Things Security.

Source: EC (2021[8]), *Digital Public Administration Factsheet 2021 - Turkey*, https://joinup.ec.europa.eu/sites/default/files/inline-files/DPA_Factsheets_2021_Turkey_vFinal.pdf; Presidency of the Republic of Türkiye (2022[24]), *Regulatory Information System*, https://www.mevzuat.gov.tr/ (accessed on 12 June 2022).

The Turkish government can consider consolidating several existing legislations to streamline and make the legal and regulatory framework more comprehensive in covering all areas of digital government. In addition, it can also conduct mapping exercises to identify areas that can be included, updated or further advanced within the framework, so that the framework does not hinder the transformation efforts of the country. This process should include all relevant users to ensure that the framework reflects users' needs.

A similar recommendation can be applied to strengthening common approaches or standards for services, data, quality or performance (as will be discussed further in Chapters 5, 6 and 7). Despite the institutional competencies and effectiveness detected during the fact-finding mission and two-day workshop, the lack of common enablers limits the effectiveness of the administration in terms of achieving a coherent and sustainable transformation of the public sector as a whole. Building a broad consensus and appetite to see the further development of such policy levers among institutions, the government can identify priority areas for standardisation in the forthcoming strategy along with a detailed action plan. The DTO can take into consideration challenges and solutions identified and prioritised by the public sector institutions that participate in the workshops in the process.

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[2] The Guide was developed by the Ministry of Development in 2017 (Ministry of Development, 2017[13]). Since the dissolution of the ministry, the Presidency of Strategy and Budget has taken up the responsibility for enforcing the guideline and published a revised version in 2021 (Presidency of Strategy and Budget, 2021[14]).

[3] OECD (2021[9]), Question 1.4.1: “Considering all of the laws, regulation, policies, and other guidance that exist related to digital government in your country, do you think that there is potential to improve the legal and regulatory framework on digital government?”.

4 Digital talent for a transformational public sector

This chapter is structured around the three pillars of the OECD Framework for Digital Government Talent and Skills necessary to conduct digital transformation. It will first explore the policy efforts implemented or considered by the government of Türkiye's digital strategy in terms of how the public sector is attempting to establish a digital-enabling work environment, acquiring digital skills and implementing activities to maintain a digital workforce. Based on this analysis, this chapter will then suggest actions that can be taken to help secure the presence of the needed digital talent and skills to contribute to their digital transformation journey.

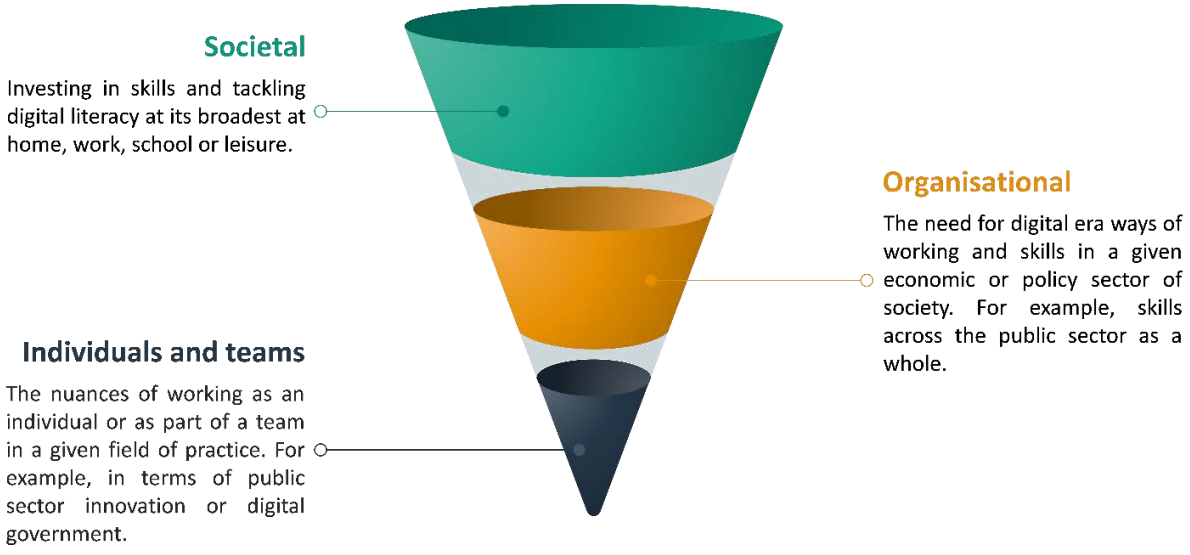
Introduction

In light of the digital transformation of society, the way people communicate, work, learn and interact with each other has drastically changed. This digital era urges governments to equip the public sector talents with the necessary digital skills that enable them to navigate, lead and implement digital government strategies. To do this, across OECD member and non-member countries, governments are increasingly modifying their work environment, introducing digital user skills and offering attractive retention plans to preserve their talents and engage in a successful digital transformation journey.

In addition to this, the COVID-19 pandemic has accelerated the interest of governments in the shift from e-government to digital government across OECD member and non-member countries. As many governments were forced to adapt to new ways of working as well as operating remotely overnight, it is crucial that the public sector workforce is well-prepared and qualified to thrive in a digital work environment. Therefore, there is a pressing need to prioritise cross-cutting policy actions to build further capacities and target shortages to address change and maintain high quality of services. According to the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]), digital government transformation relies on various building blocks to foster the necessary collaboration and co-ordination across governmental entities. One of them is the need for public sectors to be equipped, not only with the right technology but also with the right working environment, the right skills and the right talents to unlock the potential of digital technologies and data to better meet citizen needs and build public trust.

Since data and digital technologies play an increasingly significant role in our daily interactions, they have created a consequent need for wider and deeper understanding as appropriate to different contexts. This includes skills at the societal, organisational, and individual and team levels (OECD, 2021[2]). Skills at a societal level refers to digital literacy and the ability to use digital tools in our daily life; skills at organisational level relates to sector specific needs, and skills at the level of individuals and teams applies to the competencies needed to fulfil day-to-day roles in a particular job or field of expertise (Figure 4.1).

Figure 4.1. From societal, to organisational, to individual and team skills



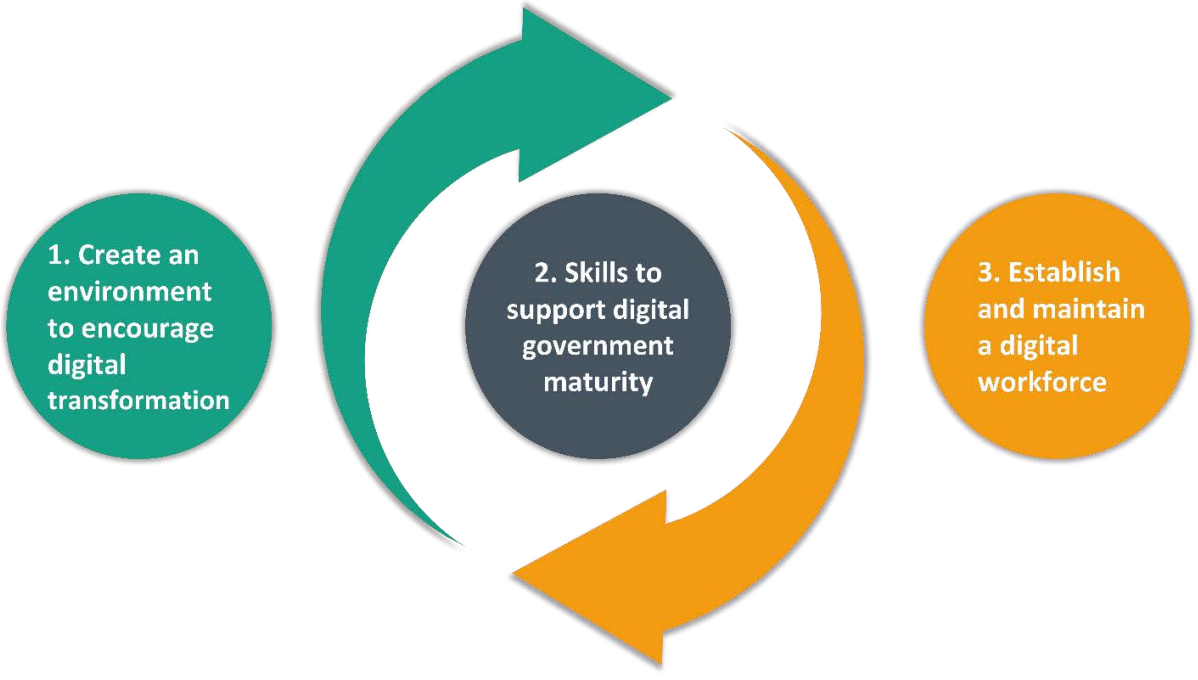
Source: OECD (2021[2]), "The OECD Framework for Digital Talent and Skills in the Public Sector", https://doi.org/10.1787/4e7c3f58-en.

The OECD Framework for Digital Talent and Skills in the Public Sector (Figure 4.2) aims to support governments in developing a public sector workforce that can respond to the wider challenge of achieving digital government maturity (OECD, 2021[2]). The framework is composed of three pillars:

- The first pillar addresses the environment of public servants working on digital government and establishes the right circumstances to unleash the digital workforce's potential to conduct a successful digital transformation. This focus not only highlights how governments should appraise their leadership, organisational structures, learning culture and ways of working but also shows how conducive the workplace environment is for a digital workforce from a leadership, organisational and cultural point of view.
- The second pillar dives into the necessary skills for a digital government. This part locates the skills for a digital government in the broader context of 21st century skills before looking at four additional areas of skills required for a digital government: user skills, socio-emotional skills, professional skills and leadership skills. It identifies the areas in an organisation's model of skills and competency that need developing to support greater maturity of digital government.
- The third pillar considers the specific actions and enabling activities required to build and maintain a workforce that encompasses the skills for a digital government. Recruitment methods, career planning, workplace mentoring, training and the role of the public sector need to be redesigned. This creates opportunities to improve approaches to particular areas and ensure that the workforce is, and remains, sufficiently digital.

Although the heart of this framework are digital skills, they can only flourish and benefit organisations if there is a well-established relationship between a working environment that provides the right conditions for public servants to train, develop and apply digital skills and the organisational systems that maintain a digital workforce (OECD, 2021[2]).

Figure 4.2. The OECD Framework for Digital Talent and Skills in the Public Sector



Source: OECD (2021[2]), "The OECD Framework for Digital Talent and Skills in the Public Sector", https://doi.org/10.1787/4e7c3f58-en.

Since the government of Türkiye has high aspirations for successfully transforming from an e-government to a digital government, a simple upskilling of its workforce is no longer sufficient given the rapid evolution of technologies. Developing digital capability needs to go hand in hand with a work environment that provides digital talents with professional growth and encourages them to take the initiative, learn, and experiment. Equipping the public sector workforce in these areas will not only help to ensure the development of services that use technology effectively but in creating a user-centric culture, ensure that the quality of the outcomes from these services strengthens trust in government from citizens.

Based on the OECD Digital Government Talent and Skills Framework in the public sector, this chapter will explore the policy efforts implemented or considered by the government of Türkiye's digital strategy in terms of how the public sector is attempting to establish a digital-enabling work environment, acquiring digital skills and implementing activities to maintain a digital workforce. Based on this analysis, the Review will suggest actions that can be taken to help secure the presence of the needed digital talent and skills to contribute to their digital transformation journey.

Building a digital environment in the Turkish public sector

Creating the necessary conditions that encourage the development of public sector digital talent and skills to move towards a digital government capable of responding to citizens' evolving needs and expectations, is a challenge shared by many OECD countries. For this to happen, several elements are necessary including strong support from leaders, collaboration across entities, development of a digital culture, and flexible ways of working. If done well, the transition to a digital workplace will empower, encourage and inspire public servants to lead an internal cultural change that nurtures relationships with citizens and delivers better public services (OECD, 2021[2]).

Clear leadership vision

The preceding chapters have underlined the importance of government digital strategies backed by the leadership to set a vision for the digital transformation of the country in general. A critical element of this vision is inspiring the public sector workforce with a user-driven mindset and supporting them to develop the necessary skills to increase the level of digital government maturity.

In Türkiye, the Digital Transformation Office (*Dijital Dönüşüm Ofisi,* DTO) has been given a mandate, through Presidential Decree No. 1, of leading the digital transformation of the public sector and contributing to the digital transformation of the country by fostering co-operation with private sector organisations, universities and non-governmental organisations (Presidency of the Republic of Türkiye, 2018[3]). In line with the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]), the experience of several OECD member and non-member countries shows that a clear vision articulated by strong leadership is highly important in promoting a change of working environment and establishing a work culture focused on digital practices.

During the mission to Türkiye and drawing on the survey carried out to support this review, the team identified a critical gap in the strategy underpinning the development of digital talent and skills and as a general reflection a shortage of initiatives to build a digitally-enabling environment. The Eleventh Development Plan (Presidency of Strategy and Budget, 2019[4]) contains a recognition of the importance of human resources and training, while the Human Resources Office (*İnsan Kaynakları Ofisi*), one of four offices directly reporting to the President, has carried out concerted efforts to deliver various tools and initiatives to improve and enhance the capacity of public sector institutions (with a selection of initiatives in Box 4.1).

Box 4.1. Selected initiatives of the Human Resources Office (*İnsan Kaynakları Ofisi*)

Career Gate (*Kariyer Kapısı*)

Career Gate (*Kariyer Kapısı*) is the online platform used for applying to public sector jobs in Türkiye. The platform is integrated with the e-Government Gateway to access reliable data from central databases and make the application process faster and easier. Applicants can transfer their personal information, university graduation details, civil service examination results and other relevant information to their applications.

During the application process, candidate information is verified to ensure that only eligible candidates can apply. If an applicant fails to pass a particular phase, they receive an explanation through the platform. This transparency increases accountability in the recruitment process.

Once applications are submitted, the Career Gate (*Kariyer Kapısı*) also facilitates the assessment and placement stages through the same platform. This streamlines the recruitment process and makes it more efficient.

National Internship Programme

In order to support the transition between university and public sector employment, the National Internship Programme has been established. Through the Programme, university students are able to access internship opportunities through a digital platform that facilitates a transparent and traceable application and evaluation process. All processes, from application to placement, are conducted through the Career Gate.

Young talents are linked with public sector employers through talent pools that focus on particular fields, such as artificial intelligence. After expressing their preferences, the applicants are then matched with those institutions who have expressed a need.

In evaluating applications Competency Scores that reflect life-long performance are used rather than the immediate result of an exam. Employers send their offers based on scores without knowing the identity or gender of the students. This helps to reduce gender biases and ensure merit-based recruitment.

In 2022, more than 289 000 students applied to the Programme, and almost two out of three students that applied to the Programme received at least one internship offer and more than 100 000 students accepted the offers and started their internships.

National Talent Fairs

The Human Resources Office (*İnsan Kaynakları Ofisi*) also organises National Talent Fairs held in 11 regions of Türkiye. These career fairs give the opportunity across the country for people to discover the opportunities associated with a career in the public sector.

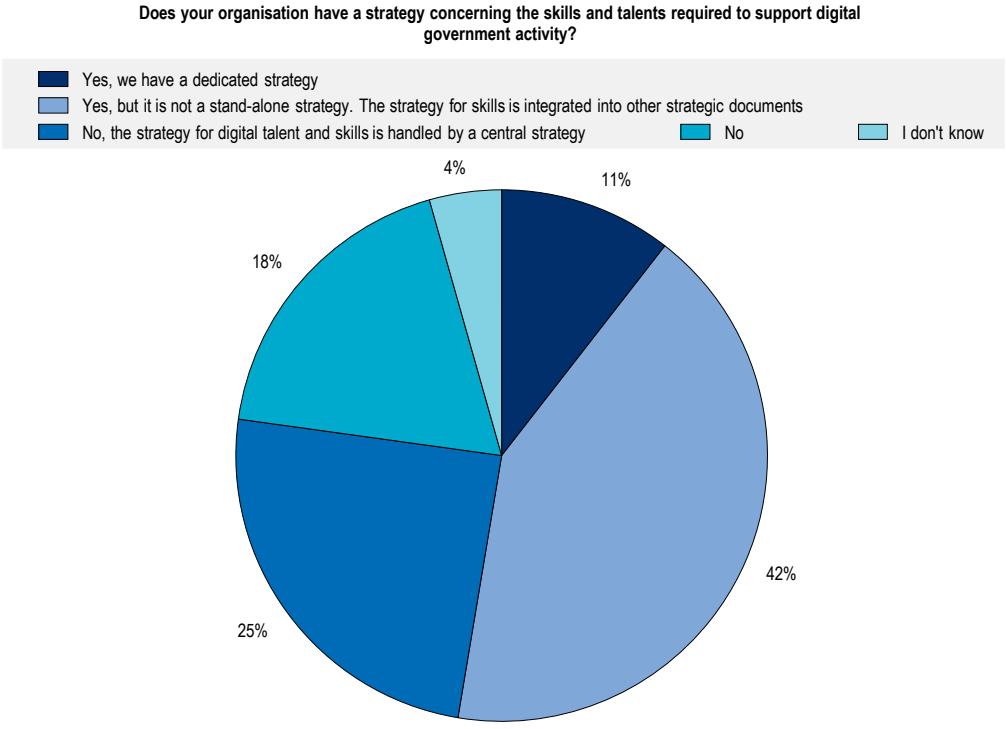
Talent TV (YTNK TV)

Talent TV (YTNK TV) is a training platform providing free support to young talents in their career development. As of August 2022, the platform has been viewed 17 million times and contains more than 100 different training packages, including the 14-week Career Planning Course designed for first-year university students to help them consider a range of career opportunities available in the public sector and elsewhere. The platform helps to increase awareness about potential professional paths and introduce early-career professions to different training programmes and qualifications.

Source: Information supplied by the Human Resources Office (*İnsan Kaynakları Ofisi*).

However, there is no dedicated strategic plan regarding digital talent and skills in the public sector to guide the practice across the public sector as a whole. Figure 4.3 shows that even though there is no dedicated strategy 25% of organisations believe the centre has developed one. Although just over half of the organisations recognise their organisational responsibility for digital talent and skills, only 11% of respondents (12/113) have a dedicated strategy with 42% of organisations (48/113) integrating their work on talent and skills into other strategic documents. This mixed strategic awareness in terms of public sector digital talent and skills suggests that this critical foundation for the digital transformation agenda needs further focus in Türkiye. This emphasises the importance for the Human Resources Office (*İnsan Kaynakları Ofisi*) to take the lead in establishing a clear and dedicated talent and skills strategy at the centre to support all organisations in pursuing a common direction and developing the strategies they need to be effective in achieving digital maturity among their workforces.

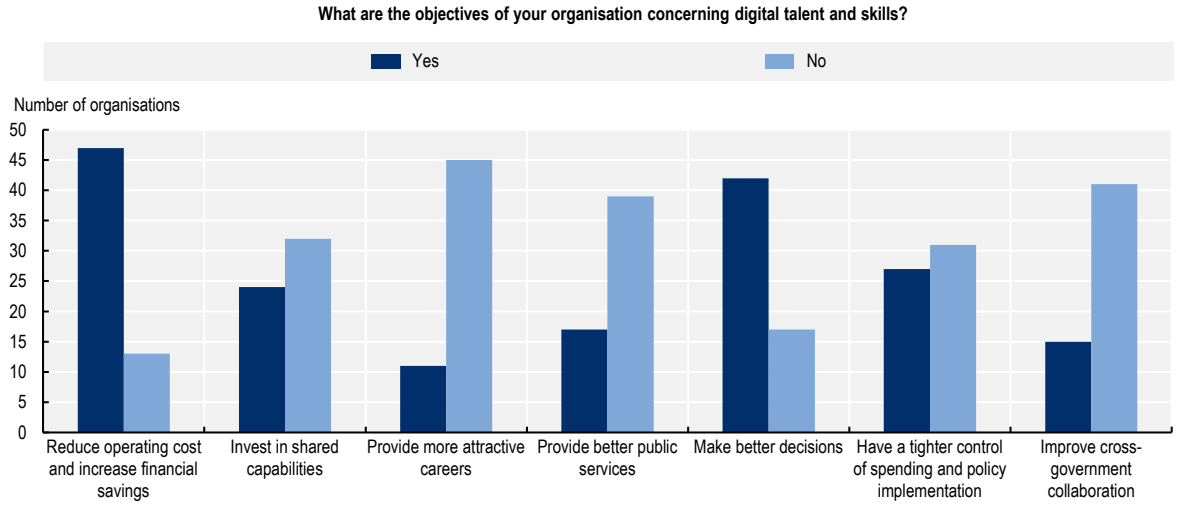
Figure 4.3. Talent and skills strategy awareness at an organisational level to support digital government transformation in Türkiye



Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q2.11.

Among the 60 organisations that have developed their own organisational approaches to digital talent and skills, there was broad consensus about the objectives for doing so. As Figure 4.4 shows, a significant proportion of organisations identified reducing operating costs and increasing financial savings (78%, 47/60), and making better decisions (70%, 42/60), as the objectives for developing digital talent and skills. A much smaller number of organisations are currently looking to the development of digital talent and skills as a route to providing better public services, improving cross-government collaboration, or providing more attractive careers.

Figure 4.4. Objectives of setting a digital talent and skills strategy



Note: Based on 60 participants.
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Organisational structure

The digital transformation of society represents the latest revolution to which government must adapt. Responding to change inevitably means considering the design of organisational structures. Effecting the changes needed to deliver quality and user-centric services as part of a seamless digital transformation include establishing more horizontal and flatter hierarchies that distribute and decentralise decision making as well as designing job families, roles and their associated job descriptions with a focus on meeting user needs rather than implementing technology (OECD, 2021[2]).

Although *türkiye.gov.tr*, the e-Government Gateway, (further discussed in Chapters 5 and 6) is a great opportunity to work with public institutions across Türkiye, the review team noted that collaboration between entities is constrained by the rigidity of the organisational structure of the Turkish public sector. There was sense that organisations receive top-down decisions and implement strategies under the co-ordination of the DTO without collaborating in their formulation. As discussed in Chapter 2, although it is common to witness layered government systems among countries, the Turkish Presidential system is particularly centralised and provides a hierarchical structure to the organisation of government, characterised by leaders making decisions and several organisational layers removed from operational practice. This may limit the feeling of ownership among public servants, as well as creating a more organisationally focused perspective and overlooking opportunities for collaboration and communication among different institutions.

An alternative approach would be to consider how organisational structures could be created with fewer layers and decision making responsibility distributed more evenly across teams. This is not with a view of pushing the responsibility for more things onto fewer people but to ensure that through a multi-disciplinary approach the delegation of responsibilities can be handled effectively and consistently. Minimising hierarchy-related pressures can make leaders more accessible and encourage public servants to own their work, as well as fostering more interaction and collaboration between individuals from different teams. As a concrete example, Australia looked at their centralised model and conducted the **Australian** Public Service Review (Box 4.2), which identified a more horizontal organisational structure as a mechanism to allow better and faster decision making by bringing together the right experts. In light of the rapid pace of

digital transformation of government, public institutions need to move and adapt fast to meet society's needs.

Box 4.2. The Australian Public Service Review

In May 2018 the Australian Government commissioned a review to ensure the Australian Public Service (APS) was fit for purpose. The process engaged with more than 11 000 individuals and organisations and over 400 consultations to conclude that service-wide transformation was needed to achieve better outcomes. This was not say that the APS was broken but that the status quo was insufficient to prepare for the changes and challenges anticipated in the next decade. Recommendation 32 was to:

> *Streamline management and adopt best-practice ways of working to reduce hierarchy, improve decision-making, and bring the right APS expertise and resources.*

The implementation guidance called for management structures to have no more organisational layers than necessary in order to allow for decision-making at the lowest practical level with spans of control reflecting the type of work being managed, structures providing flexibility to respond to changes, and jobs classified according to work level.

Source: Commonwealth Government of Australia (2019[6]), *Our Public Service, Our Future. Independent Review of the Australian Public Service*, https://pmc.gov.au/sites/default/files/publications/independent-review-aps.pdf.

As well as establishing a flatter organisational structure and developing mechanisms to distribute decision making it is important to consider the nature of the roles that people perform and invest in creating more user-centric, iterative and collaborative job families and job descriptions. To design and deliver services in the digital age, it is necessary to revise existing roles and capabilities that align with the technology focus of earlier ideas around e-government and ensure that they incorporate the opportunities from focusing on needs of users. To illustrate this, the **United Kingdom**'s Digital, Data and Technology (DDaT) Profession Capability Framework has formally recognised a series of job families needed to effectively lead digital, data and technology projects and improve consistency in both job roles and the definition of the associated skills, with the example of Service Designer discussed in Box 4.3.

Box 4.3. United Kingdom DDaT Profession Capability Framework: Service designer

The Capability Framework describes the service designer profession, including:

- introduction to the role and communicating what it involves and the skills it requires.
- a description of the career path, and associated skills, from associate to head of profession.

Example of Associate service designer job description:

As a trainee in an entry-level position, working under supervision, you will need design aptitude, potential and an understanding of the role. Skills needed for this role level:

- **Agile working**. You can show an awareness of Agile methodology and the ways to apply the principles in practice. You can take an open-minded approach. You can explain why iteration is important. You can iterate quickly. (Skill level: awareness).

- **Communicating between the technical and non-technical**. You can show an awareness of the need to translate technical concepts into non-technical language. You can understand what communication is required with internal and external stakeholders. (Skill level: awareness).
- **Community collaboration**. You can understand the work of others and the importance of team dynamics, collaboration and feedback. (Skill level: awareness).
- **Digital perspective**. You can demonstrate an awareness of design, technology and data principles. You can demonstrate engagement with trends in design and can et relevant priorities. You can understand the Internet and the range of available technology choices. (Skill level: awareness).
- **Evidence- and context-based design**. You can show an awareness of the value of evidence-based design and that design is a process. (Skill level: awareness).
- **Leadership and guidance**. You can show commitment to agreed good practice for the team, teaching new starters and challenging substandard work by peers. You can recommend decisions and describe the reasoning behind them. You can identify and articulate technical disputes between direct peers and local stakeholders. You can show an understanding of the importance of team dynamics, collaboration and feedback. (Skill level: awareness).
- **Managing decisions and risks**. You can identify technical disputes and describe them in ways that are relevant both to direct peers and to local stakeholders. You can work collaboratively while recommending decisions and the reasoning behind them. (Skill level: awareness).
- **Prototyping**. You know about prototyping and can explain why and when to use it. You can understand how to work in an open and collaborative environment (by pair working, for example). (Skill level: awareness).
- **Prototyping in code**. You can demonstrate a basic knowledge of how the Internet works. You can use tools and change text. You can edit existing code and reuse it. (Skill level: awareness).
- **Strategic thinking**. You can explain the strategic context of your work and why it is important. You can support strategic planning in an administrative capacity. (Skill level: awareness).
- **User focus**. You can identify and engage with users or stakeholders to collate user needs evidence. You can understand and define research that fits user needs. You can use quantitative and qualitative data about users to turn user focus into outcomes. (Skill level: working).

Source: UK Central Digital and Data Office (2020[7]), *Service Designer*, https://www.gov.uk/guidance/service-designer.

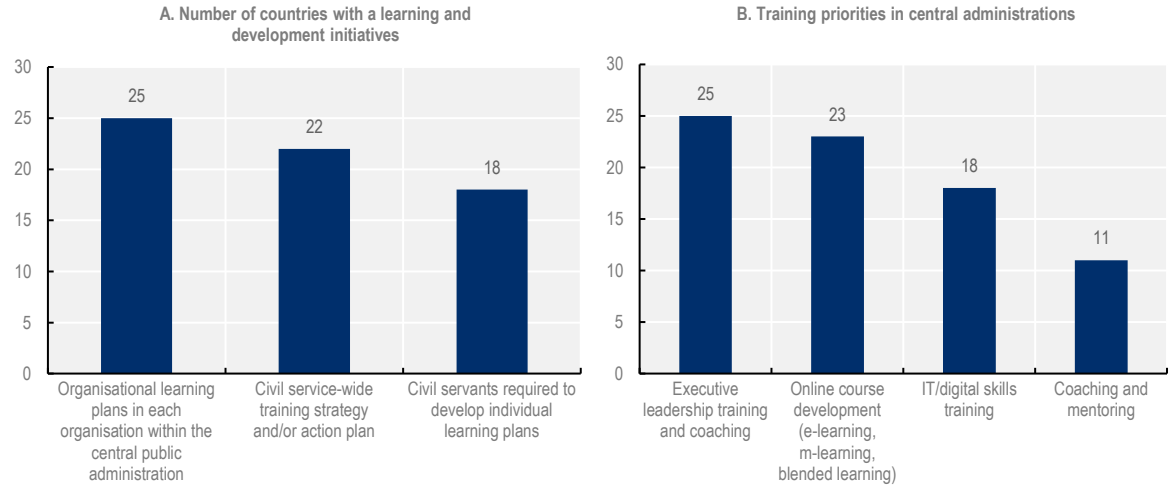
Learning culture

It is equally fundamental for a digital-enabling work environment to acknowledge that learning happens at all levels of the organisation as this generates opportunities for public servants to increase experimentations towards building trustworthy digital services in safe space. Leaders who are able to set a solid learning culture, support a life-long learning mindset and recognise the value of learning through testing, iterating and failing will pave the way for innovation in the public sector (OECD, 2021[2]).

As stated in the OECD *Recommendation on Public Service Leadership and Capability* (OECD, 2019[8]), governments should create a learning culture and environment that supports public servants in their skills development. According to the OECD Survey on Strategic Human Resource Management, many OECD countries seemed to value learning and development initiatives. In 25 countries out of 36 (70%) organisational learning plans are in place in each organisation within the central public administration (Figure 4.5) (OECD, 2019[9]). Such a strategic move from leaders recognises the importance of investing

in the skills of public servants to thrive and provides a model to emulate in terms of emphasising digital skills.

Figure 4.5. Learning and development initiatives and training priorities in public administrations, 2019



Note: The figure shows data for the total respondents of 36 OECD countries.
Source: OECD (2019[9]), "OECD Survey on Strategic Human Resource Management".

The work environment within an organisation not only sets the strategic direction but helps to ensure the conditions under which strategies can be put into practice. The COVID-19 pandemic reflects a moment of crisis during which the need for a greater digital competence among the public sector workforce came to the fore. Throughout the survey supporting this review and the fact-finding interviews, many organisations noted that the Distance Learning Gate (*Uzaktan Eğitim Kapısı*) (see Box 4.4) had been an important initiative to provide online training and resources to help the workforce navigate the sudden change to digital. However, the OECD team noticed that there is a lack of a formal training and learning structure dedicated specifically to digital skills such as the approaches evident in the experiences of **Canada**, **Italy**, **Slovenia** and the **United Kingdom** to build a learning culture discussed in Box 4.5.

Box 4.4. The Distance Learning Gate (*Uzaktan Eğitim Kapısı*)

Under the co-ordination of the Human Resources Office (*İnsan Kaynakları Ofisi*), the Distance Learning Gate (*Uzaktan Eğitim Kapısı*) prepare newly hired public employees and employees in general for the public sector. The portal contains training contents to increase their awareness of the requirement of digital transformation in public service and enhance their digital skills.

The Distance Learning Gate (*Uzaktan Eğitim Kapısı*) is the training platform of Türkiye and is used by over 1 500 public institutions and organisations. The platform provides access to 30 000 different training materials for all public employees regardless of their title, role, institution, or age. In that sense, all public employees, from newly hired employees to employees who are about to retire, can benefit from the platform freely.

Also, various training activities are carried out to develop digital literacy and 21st-century skills in Distance Learning Gate (*Uzaktan Eğitim Kapısı*) for different target groups. Therefore, employees who want to improve their skills in several fields and refresh their knowledge, even if they do not work in the relevant field, can participate in available training content and benefit from these training activities. In that sense, employees can arrange their learning plans without being dependent on the training assignment of their institutions.

Source: Presidency of the Republic of Türkiye (2021[10]), *The Distance Learning Gate*, https://www.cbiko.gov.tr/cms-uploads/2021/11/distance-learning-gate.pdf.

Box 4.5. Building learning cultures within governments

Canada's Digital Academy

The Canada School of Public Service (CSPS) Digital Academy was created in 2018 with the objective to teach Canada's federal public servants the digital skills, approaches, and mindset needed to transform public services in today's digital age.

As part of its activities, the Academy brings together partners from different spheres, including government, academia and the private sector, with the focus on collaboration and the sharing of knowledge and experience. The Academy offers both general and more specialised learning opportunities, in the classroom and online, for public servants at all levels.

Source: Government of Canada (2020[11]), *Digital Academy*, https://www.csps-efpc.gc.ca/About_us/Business_lines/digitalacademy-eng.aspx.

Italy's Digital Skills for the Public Administration

"Digital Skills for the Public Administration" is an initiative promoted by the Department of Public Administration within the National Operational Programme "Governance and Institutional Capacity 2014-2020". It aims to equip all public employees with common digital skills, by implementing a structured gap detection in digital skills and targeted and effective training.

Considering the role played in supporting the digital transition of the Public Administration, the Department of Public Administration, aims to:

- Establish a common base for technological and innovation knowledge and skills among public employees.
- Strengthen the institutional capacity for an efficient Public Administration through training on digital skills, delivered mainly in e-learning mode and customised based on a structured and homogeneous survey of the actual training needs.
- Develop digital knowledge of public employees to implement the principles of digital citizenship, eGovernment initiatives and open government.
- Promote the mapping of skills in administrations at different government levels, also in order to promote more effective HR management policies.

The initiative is based on three main components:

1. The syllabus, that describes the set of knowledge and skills, organised by thematic areas and proficiency levels, which characterise the minimum set of digital skills that each public employee should have in order to be able to work easily in an increasingly digital Public Administration.

2. The web platform, that provides tools for skills verification tests and assessment of post-training learning based on the syllabus, as well as for the selection of the most appropriate training modules to meet the knowledge requirements identified; the platform also supports administrations in planning, managing and monitoring effective skills development paths in line with their organizational needs.
3. The catalogue, that collects training modules on the competences areas described in the syllabus, aimed at filling the digital skills shortcomings detected during the self-test phase.

Source: Provided by the Working Party of Senior Digital Government Officials (E-Leaders) Thematic Group on Digital Talent and Skills.

Slovenian "Innovation Training in Public Administration"

In Slovenia, the Ministry of Public Administration runs "Innovation Training in Public Administration". This training aims to change the approach to workflow, problem solving and designing better solutions through effective communication. The programme is actively changing the administrative culture to implement higher quality state functions and digital services. The programme is performed in person and remotely.

Objectives of implementing the programme are:

- Raising awareness of the importance of gaining new skills and knowledge in terms of alternative ways of work to enable a more agile and efficient response to the demands of the environment.
- To acquire competence for creative tackling of challenges and designing solutions using different methods and approaches focusing on the user.
- To acquire competence in different ways of communicating (more effective presentation of ideas, results, etc.) and in managing group communication processes.

Source: Slovenia Ministry of Public Administration (2020[12]), *Inovativen.si*, https://www.gov.si/zbirke/projekti-in-programi/inovativnost-v-javni-upravi-inovativen-si/.

United Kingdom's Government Digital Service Academy

The GDS Academy aimed to give public sector professionals the necessary skills, awareness and knowledge to build the best possible public services. Originally founded by the Department for Work and Pensions in 2014, it transferred to GDS in 2017 before being closed in 2022. During its existence, over 10 000 public servants were trained, including 1 000 from local authorities. The Academy was also a model for foreign governments.

Source: Provided by the Working Party of Senior Digital Government Officials (E-Leaders) Thematic Group on Digital Talent and Skills.

Very few institutions in Türkiye spoke of a digital culture within their workforces or of the opportunity for public servants to experiment, learn and grow on their own. In other words, the current practice may reduce the workforce's capability to innovate, learn and develop the sense of empowerment. Since experimentation gets people to work in an agile way and take more risks, it not only empowers digital talents and increases job satisfaction, but also enables higher productivity as they test, acquire knowledge and adapt fast to meet the constant change of citizens' needs. Further initiatives from leaders across the different public sector institutions would set the right vision and working conditions for the digital transformation. This would create a work environment that encourages talents to build digital skills and facilitates the development of a digital culture.

To cultivate a learning culture within the Turkish public sector, which is a cornerstone for digital transformation, the government may consider creating a work environment that fosters digital experimentation allowing its digital workforce to test, iterate and fail, while feeling empowered to experiment without judgement. This could be done by increasing the diversity of education and live training held through the Distance Learning Gate (*Uzaktan Eğitim Kapısı*) (see Box 4.4) to encourage higher participation from the workforce. Leaders could also support its digital talents in the application of new digital skills by offering a safe space to learn and incentivising managers to help the change of mindset by putting the human in the centre of the strategy.

Ways of working

Ways of working are fundamental to digital government maturity with the COVID-19 pandemic demonstrating the need to quickly be able to respond to a crisis and operate in a new environment where digital became the enforced default for citizens and staff alike. Therefore, the ways institutions operate are a key determinant for its digital maturity: the more flexible and agile an organisation is, the more digitally matured it is.

The *OECD Government at a Glance 2021* shows that, in the first wave of the COVID-19 pandemic, most OECD members and non-members had existing tools and policies to enable remote working: 91% (31 out of 34) of countries reported using existing communication channels to keep staff informed, 65% (22 out of 34) had the IT infrastructure in place to enable remote working and 58% (20 out of 34) had previously established remote working regulations and policies (OECD, 2021[13]). However, 68% (23 out of 34) of countries had to upgrade their video conferencing and other communication tools to shift from occasional to full-time remote working and 24% (8 out of 34) changed recruitment and staffing regulations and policies to meet demand and allow internal mobility. Responding to the COVID-19 pandemic demanded a more flexible and agile working environment and acted as a catalyst for identifying areas of improvement and developing an effective response (OECD, 2021[13]).

In Türkiye, both the necessary IT infrastructure and communications channels to keep staff informed were well established ahead of the pandemic, enabling the country to move and adapt quickly in the face of the crisis (OECD, 2021[13]). Nevertheless, like many other countries, Türkiye invested in their video conferencing and other communication tools to better enable the sustained period of teleworking as well as enhancing existing platforms such as those to support the justice system where the full process can now take place virtually, including for judges (OECD, 2021[13]). As the pandemic progressed, the initial regulation of remote working, rotating work and administrative leave was addressed by Presidential Circular No. 2020/4 before the Remote Working Regulation enshrined these principles in law in March 2021 (Nadworny, 2021[14]). However, the OECD peer review team still observed a shortage of initiatives towards building flexibility into the working environment during the fact-finding mission. Some organisations reported the lack of flexibility in terms of working remotely and expressed their wish to work in a hybrid environment. The country has introduced regulations and can rely on the necessary technological foundations but there is a gap in terms of organisational culture in applying these ideas in practice. Better communications of these principles that aim to make the Turkish public sector more flexible could benefit the government in improving its workplace.

Although investing in adequate tools and technologies is important, establishing flexible working policies and workspace is equally essential. Türkiye could create a more flexible workplace by focusing on communicating and implementing the regulations and policies established during the COVID-19 pandemic. These measures would reflect the agile and user-centred working methodologies where digital talents are empowered to choose where to work from, when and how they want to work, which increase motivation, job satisfaction, productivity and trust. To name a few countries, **Ireland**, **Spain** and **Uruguay** have accelerated the implementation of flexible working policies once the pandemic hit. They have kept remote working practices, as well as the use of online collaborative tools and platforms available for the public

servants. They also made the most out of online trainings to enable public organisations to quickly adopt this new way of working. Consequently, these countries have established a more flexible workplace, where a digital workforce can apply new digital skills, and work in a place and at a time that fit them best (OECD, 2021[2]).

To build a suitable workplace that welcomes digital transformation, the Government of Türkiye could ensure that its leadership not only communicates a strong vision and champions the benefits of a digital government, but also adopts a horizontal organisation structure to allow faster and better decision-making. Additionally, establishing a learning culture that encourages testing, learning and failing, with more flexible working policies could enable the digital talents to own their work and innovate to constantly provide high quality public services.

Equipping digital talents with digital skills in the public sector

The evolving nature of work in the public sector makes it crucial to identify, train and equip public servants with the right mindset, digital skills and tools to lead a successful digital transformation. Aligned with the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]), many OECD member and non-member countries demonstrated a willingness to achieve further digital maturity also by prioritising institutional capacities into building a digitally skilled workforce. In 2021, the *Government at a Glance* publication found that 26 out of 37 OECD (70%) countries have developed online on-boarding and training tools to train staff quickly in a remote environment, which is an increase from 61% in 2019 (OECD, 2021[13]; 2019[15]).

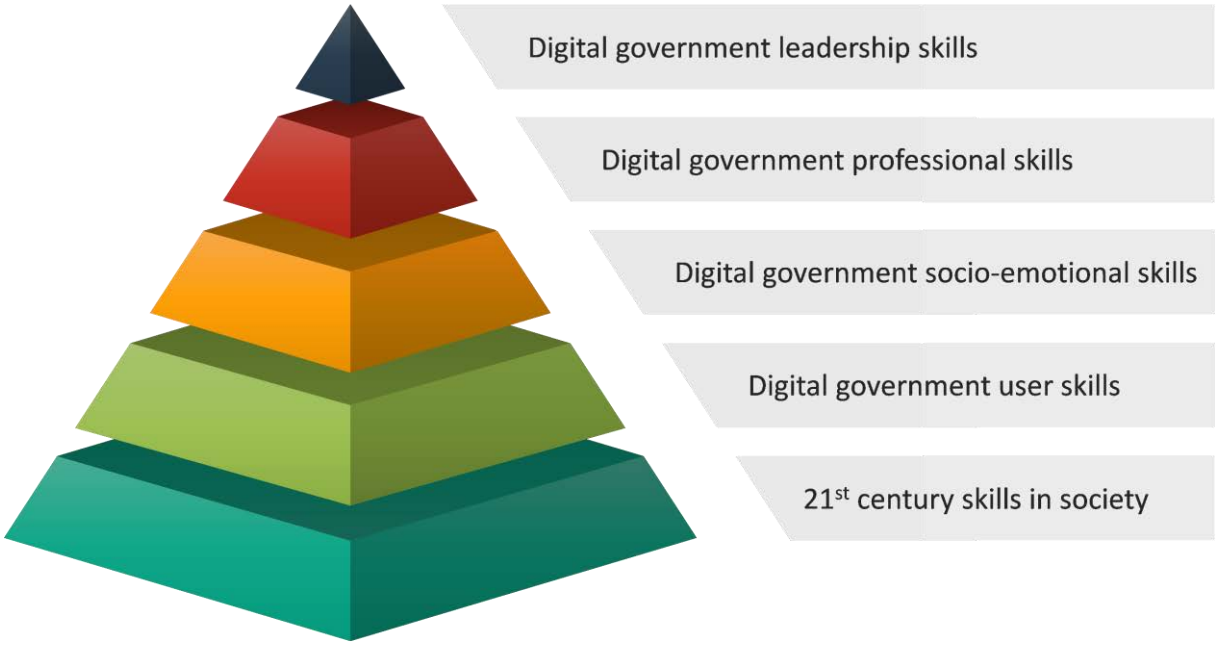
In Türkiye, the Human Resources Office (*İnsan Kaynakları Ofisi*), provides some general training and information to all newly hired public servants through the Distance Learning Gate (*Uzaktan Eğitim Kapısı*) to ensure that they start their jobs with foundational digital skills (see Box 4.4). In responding to the needs of their users, some institutions have access to capable in-house teams, while others are more reliant on the team at Türksat responsible for the e-Government Gateway. Where in-house training schemes have been developed with a focus on specific skills, such as software development, organisations can draw on impressive in-house capability to deliver technical solutions and operating in line with national strategies. Elsewhere, Türksat provides the specific capabilities as an outsourced provider, overseen by the DTO, to ensure the operation of the e-Government Gateway. The Türksat team develops new services according to needs and objectives set by the DTO. Every December, the team receives training focusing on responding to the evolving needs of society.

Based on the fact finding mission and the survey conducted to support this review, the public sector of Türkiye is confident in its level of access to the necessary human resources, skills and capacity to achieve its digital government ambitions. Nevertheless, as reflected in the other chapters of this review, there are areas for improvement and so, as efforts to develop in-house and national training schemes continue, it would be valuable to reflect the needs in the areas covered by the OECD Framework for Digital Government Talent and Skills in the Public Sector and shown in Figure 4.6. Skills to support digital government maturity (OECD, 2021[2]).

21st century skills in Türkiye

Society as a whole must be capable and equipped with the necessary digital, cognitive and socio-emotional skills to thrive in the digital age. This is core for all to have basic confidence in using digital tools and technologies. All efforts to establish a digitally enabled state rely on this grounding. Therefore, the 21st century skills (see Box 4.6) expected of public servants should be consistent with the minimum expectations of equipping all members of society to benefit fully from the digital age (OECD, 2021[2]).

Figure 4.6. Skills to support digital government maturity



Source: OECD (2021[2]), "The OECD Framework for digital talent and skills in the public sector", https://doi.org/10.1787/4e7c3f58-en.

Box 4.6. The definition of 21st century skills

Skills-related policies that successfully equip people with a broad mix of skills will ensure the technological revolution improves the lives of all. It is particularly important to ensure that the promise of digital transformation does not widen existing inequalities or create new ones as some jobs disappear and some skills become outmoded (OECD, 2019[16]). Therefore, addressing the skills gap in society is critical to avoid exacerbating, or creating, inequality in terms of access to the benefits of digital transformation whether through socio-economic, demographic, generational, geographic, educational or infrastructural challenges.

The ambition must be for two things to be achieved. Firstly, that over time society as a whole becomes more capable and equipped with the necessary breadth of skills to thrive in the digital age. Secondly, that alongside a recognition of the need to upskill to a particular benchmark there would be efforts to encourage a continuous, and life-long approach to these skills which ensures society remains equipped on an ongoing basis. As benefits are seen in terms of the digital economy, benefits will also flow into the public sector as its own workforce demonstrates their own foundational digital skills.

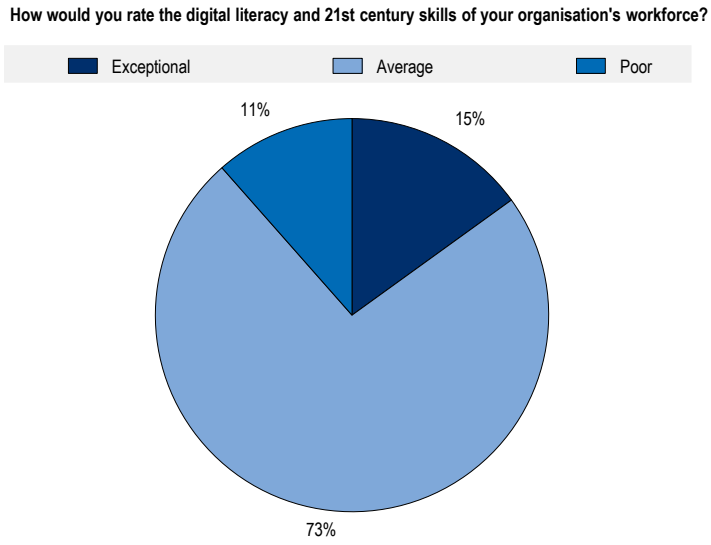
At its most basic, the notion of digital user skills indicates an ability to use Internet connected devices. The baseline for what constitutes 'an ability to use' is fluid and it is therefore important to avoid overly simplistic framings and instead reflecting changing habits, purposes and needs. Nevertheless, it is important to find a definition that points towards realistically deriving benefits from digital technologies. One model for understanding and defining digital literacy and digital skills in society is the European Digital Competence Framework 2.0 (DigComp) which looks at five areas of digital competencies (EC, n.d.[17]).

For example in Slovenia, the Administration Academy at the Ministry of Public Administration launched a new "Digital literacy training programme for public servants" in 2019. This programme follows the DigComp Framework for Citizens with 21 competences in five areas. The objective of the training programme is to enable civil servants to use information and communication technologies in a creative, safe and critical way. This follows from the 2018 launch of a "Data management" programme which consists of different modules tailored for different focus groups such as managers, analysts and IT experts with varying degrees of knowledge. The objective of the training is to foster data literacy and use of modern technologies for better decision making. Both programmes could be performed either in person or remotely.

Source: OECD (2021[2]), "The OECD Framework for digital talent and skills in the public sector", https://doi.org/10.1787/4e7c3f58-en; OECD (2019[16]), *OECD Skills Outlook 2019: Thriving in a Digital World*, https://doi.org/10.1787/df80bc12-en; EC (n.d.[17]), *The Digital Competence Framework 2.0*, https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework (accessed on 16 December 2020).

From the survey conducted to support this review, the OECD observed that a significant majority of organisations considered the digital literacy and 21st century skills to be at least average with Figure 4.7. Public servants' Digital literacy and 21st century skills in Türkiye showing that 73% (82/112) of organisations rate theirs as average and 15% (17/112) as exceptional. In addition, a majority identified the use of in-service training and workshops to maximise the digital awareness of their workforce. Some institutions then separately work with international organisations such as the World Bank, or local stakeholders such as Türksat in the integration of technology and the subsequent development of the services they provide. However, there were concerns about the levels of digital literacy and 21st century skills at the level of municipal and sub-national government.

Figure 4.7. Public servants' Digital literacy and 21st century skills in Türkiye



Note: Based on 112 participants.
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

To ensure high levels of inclusion, it is commonly recognised that tools and services need to be designed in ways that work for all members of society, this includes those who may have accessibility needs as well as those with lower levels of competency and skill. Inclusively designed public services respond to these needs and help the public to access them smoothly in line with any assistive technologies or suitable support without requiring special training. The same consideration should be given for the needs of the public sector workforce, in both urban and rural areas. This means not only considering the design of services on an end to end basis, to include the internal user experience (as discussed in Chapter 5) but to ensure public servants are getting the necessary equipping in the requisite skills or support to thrive in the 21st century at home, and at work.

Digital government user skills

Digital government user skills are the baseline skills that all public servants need to have to support digital government maturity, such as the awareness of the potential for digital, data and technology. During the mission to Türkiye, the OECD peer review team noted a lack of training in digital government user skills for all public servants. In spite of the fact that many institutions highlighted their effective public sector workforce and showed an impressive in-house capability to build services, their skills are tailored to e-government services instead of digital government services. This means that it needs a focus on digital government user skills, which are five core skills that all public servants must have to be effective in supporting a digitally enabled state regardless of their role or tier of government (OECD, 2021[2]):

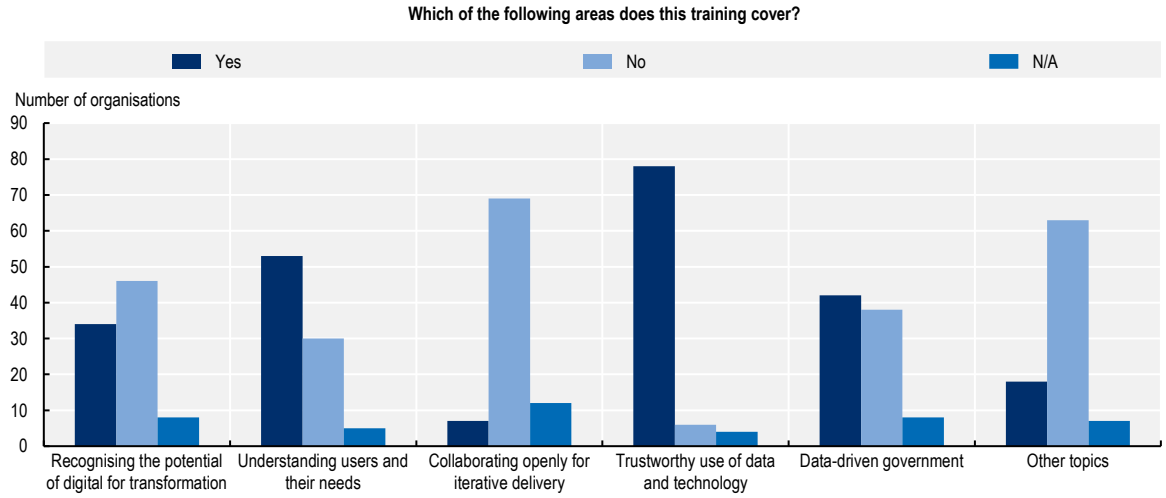
- Recognising the potential of digital for transformation.
- Understanding users and their needs.
- Collaborating openly for iterative delivery.
- Trustworthy use of data and technology.
- Data-driven government.

The results of the survey supporting this review, shown in Figure 4.8. Digital Government User Skills Trainings in Türkiye, show that in almost 90% (78 out of 88) of public sector organisations receiving trainings to conduct digital government activity, public servants in Türkiye receive training on “Trustworthy use of data and technology”, 60% (53 out of 88) on “Understanding users and their needs”, 48% (42 out of 88) on “Data-driven government”, 39% (34 out of 88) on “Recognising the potential of digital for transformation” and 8% (7 out of 88) on “Collaborating openly for iterative delivery”. The progress in some of these areas is encouraging but needs to be reinforced with more homogenous trainings in all five areas, particularly as part of the initial on boarding for new members of the workforce as these represent an additional layer to the expected baseline of digital literacy in general. To achieve digital transformation, governments need a workforce capable of grasping the opportunities that digital, data and technology offer and using them to improve government operations. Having this mindset in place, not only among digital government teams or ICT professions but across all organisations, is crucial to help re-think and re-design services in a way that meets citizens’ expectations. This is why ensuring that public servants are fully equipped with the five core areas of digital government users’ skills, as soon as they join the public sector, would highly benefit the Government of Türkiye.

Digital government socio-emotional skills

Successfully embedding a shift in the culture of government requires teams to be established that reflect a diversity of socio-emotional skills and their associated behaviours (OECD, 2021[2]). Unlike the digital government user skills discussed above, there should be no expectation for every public servant to become an expert in every socio-emotional skill. The focus should instead be on ensuring a balance of vision, analysis, diplomacy, agility and protection in the teams that work on designing and delivering government services.

Figure 4.8. Digital Government User Skills Trainings in Türkiye



Note: Based on 88 participants.
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

The value of having a mix of visionary, analytical, diplomatic, exploratory and protective talents helps teams to work together to identify coherent and holistic solutions. As this can help to generate a broad base for ideas and facilitate learning with and from each other, this is an essential ingredient in bringing together different professions within multi-disciplinary teams and is increasingly seen as a foundation for digital government success (OECD, 2021[2]). However, the OECD team noticed that there were a lack of initiatives to stimulate innovation and foster environments that would allow for creating these blended teams within public institutions in Türkiye. Critically, many participants shared that they did not have a model of working with multi-disciplinary teams in the public sector.

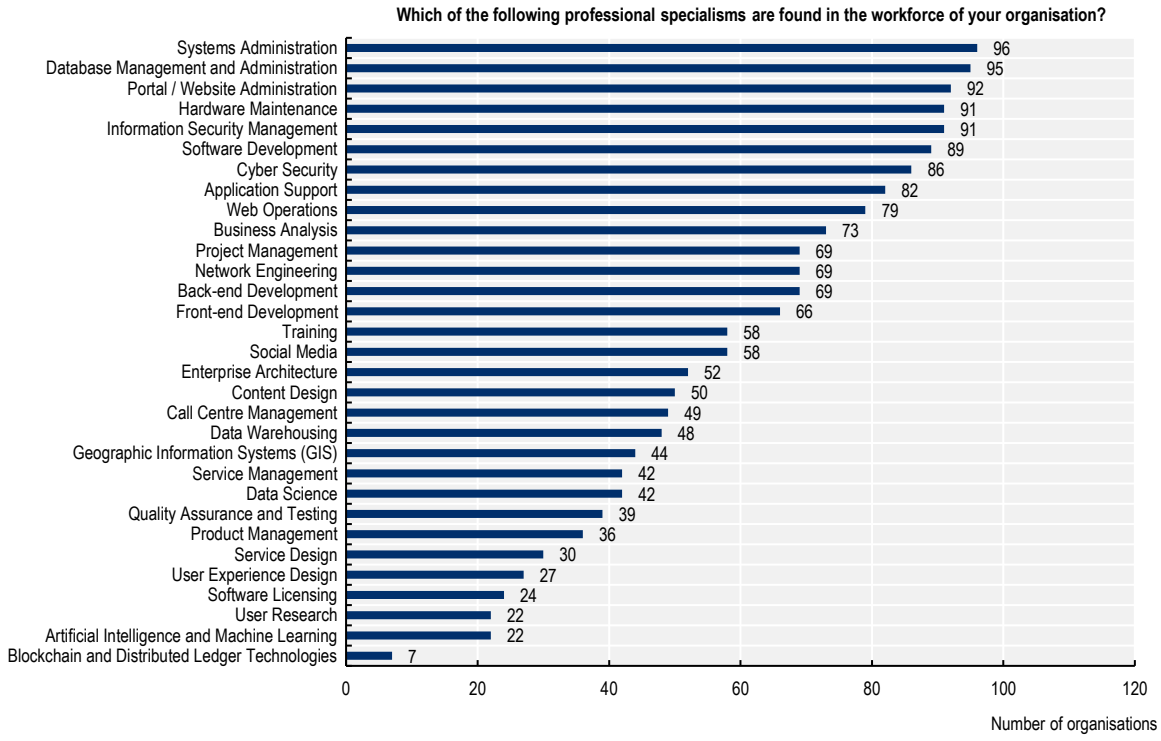
The different digital government socio-emotional skills are not expected to be reflected by every individual public servant but a healthy team is able to balance these perspectives to ensure diverse skills, expertise and personal backgrounds. Expanding efforts to encourage greater variety in the composition of teams and reflecting multiple disciplines and socio-emotional skills can not only support greater mobility of staff, but help staff to continuously learn from one another and contribute to different topics. This can help to increase motivation and job satisfaction among the workforce.

Digital government professional skills

One of the most important enablers for helping to achieve digital government maturity is establishing multi-disciplinary teams that bring together different professional backgrounds. This blend needs to reflect traditional disciplines alongside digital specialists. These include policy, legal and subject matter experts, commissioning and procurement, human resources, operations and customer services, and sociologists and psychologists. Digital professionals cover the disciplines of user-centred design, product, delivery, service ownership and data as well as digital era technology roles. This blend of skills is necessary to achieve the ambitions governments have for proactive and user-centred public services in the digital age. In terms of bridging the gap between digital professionals and those in more traditional roles, the *Digital Government Index* highlighted that training targeting public professionals remains relatively low among OECD members and non-members countries. In terms of this group, 28% of the responding countries offer training in data analytics, 30% in artificial intelligence, and 25% in usability and accessibility (OECD, 2020[18]). For successful digital government, training is needed not only for digital professionals but for those in adjacent roles who make a valuable contribution to digital transformation within a country.

The survey supporting this review reveals that at least 80% of organisations are equipped with IT skills such as systems administration (85% or 96 out of 113), database management (84% or 95 out of 113), website administration (81% or 92 out of 113), hardware maintenance (80% or 91 out of 113) and information security management skills (80% or 91 out of 113). Although these figures are encouraging, the digital professional roles are more rare among organisations and are located at the bottom of Figure 4.9, for example data science (37% or 42 out of 113), service design (26% or 30 out 113) and distributed ledger technologies (such as Blockchain) (6% or 7 out of 113). These roles are crucial in the public sector to better understand users and best design and deliver services that could best meet their needs. Therefore, a focus on creating job positions, hiring digital experts and encouraging the workforce to upskill in these areas would be highly beneficial to the Turkish public sector in the long-run.

Figure 4.9. Professional specialists available in the workforce of the public sector

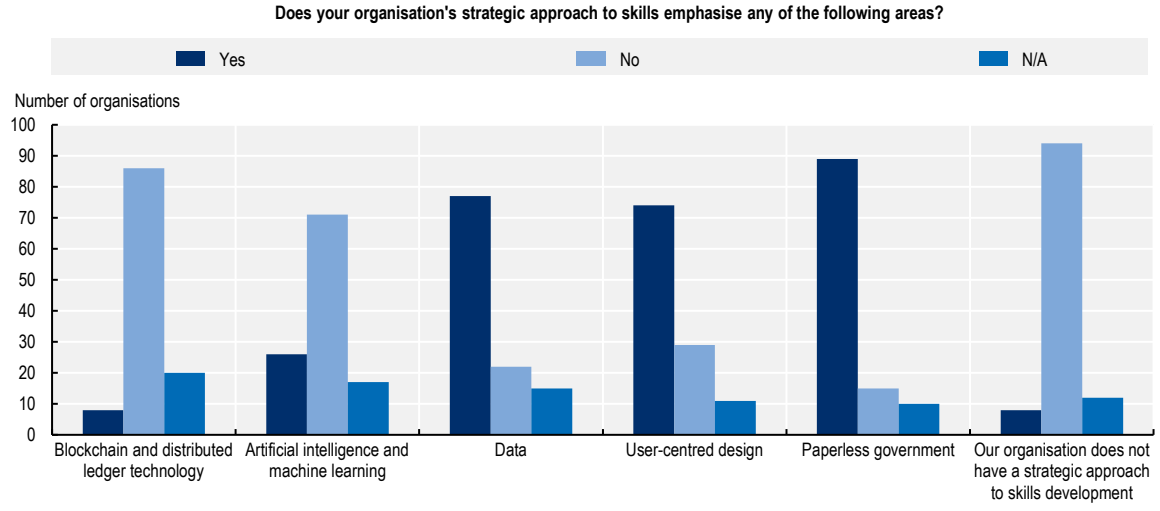


Note: Based on 113 participants.
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Figure 4.10 shows that the survey conducted to support this review found an emphasis on paperless government (78% or 89 out 113 participants). A large majority of organisations shared that, as part of the scope of the paperless state project, institutions organised trainings and activities for an efficient and effective use of the Electronic Document Management System (*Elektronik Belge Yönetim Sistemi*, EBYS), which has led the number of requested documents to drop by 70% on average. Many organisations are also focusing on data (68% or 77 out of 113) and user centred-design (65% or 74 out of 113) but only a small number are taking a strategic approach to skills in areas such as artificial intelligence and machine learning (22% or 25 out of 113), or distributed ledger technology (such as Blockchain) (6% or 7 out of 113). This shows that Türkiye overall has a good understanding of skills approaches in the public sector to produce quality services, however deeper knowledge and higher investment in emerging technologies such as artificial intelligence and distributed ledgers (such as Blockchain) could level up the design and delivery of services in a more accurate and safer manner.

Having the right mix of digital professional skills in the Turkish public sector is vital for its digital transformation. To achieve this, the government could consider creating an environment that encourages upskilling and learning by offering training in digital areas part of a professional development plan. It could also focus on recruiting digital talents with expertise in emerging technologies and creating new positions to accelerate the digital transformation journey. The National Artificial Intelligence Strategy 2021-2025 includes measures in recruiting and training individuals with artificial intelligence skills in the public administration (Ministry of Industry and Technology/Digital Transformation Office, 2021[19]). One example of such an initiative is the creation of a young talent pool for artificial intelligence as part of the National Internship Programme (see Box 4.1), which gives public sector employers access to these skills, and provides talented students with an opportunity to establish themselves in a public sector career.

Figure 4.10. Strategic approach to skills in the Turkish public sector



Note: Based on 113 participants.
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Digital government leadership skills

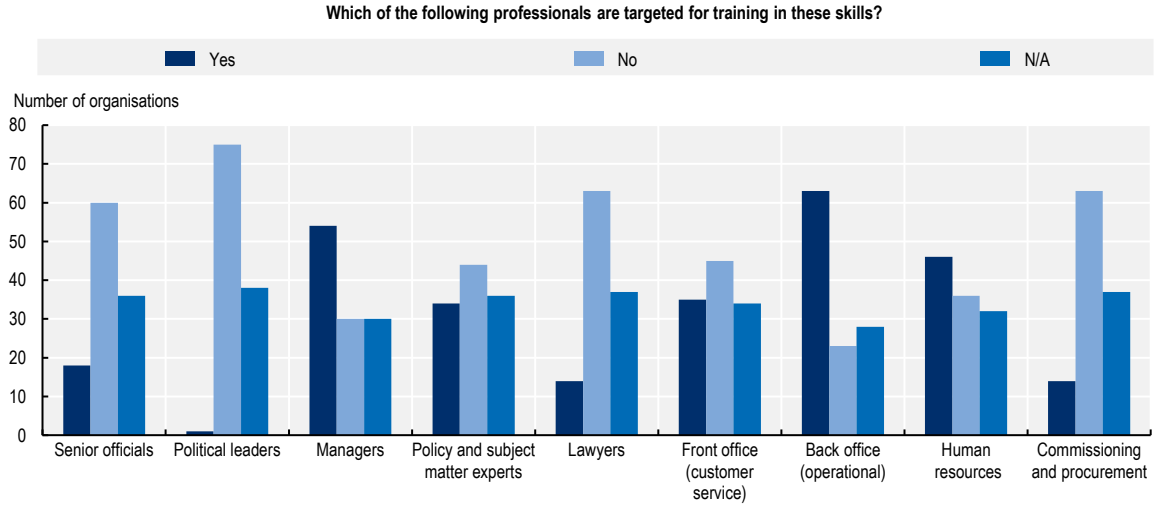
As demonstrated in the previous section, building a work environment that is ready for the digital transformation relies on leadership. The digital government leadership skills are key as leaders need to show that the application of digital, data and technology is not optional and apply digital government user skills to shape and encourage digital change.

The OECD team observed through the Digital Government Survey of Türkiye that only 1% of political leaders (1 out of 113) and 16% of senior officials (18 out of 113) received trainings (Figure 4.11). These results are critical as digital government leadership trainings inform leaders about general quality of leadership, how to exercise digital government user skills and actively shape an environment that encourages digital transformation. Therefore, low engagement of political leaders and senior officials may damage trust, as the workforce may question the reliability and accountability of their leadership in their digital strategy. By acting as role models and championing the benefits of digital government, they would inspire the workforce to do the same.

To improve this, Türkiye could formalise providing the digital government user skills training to all public servants and have leaders join the training along with other staff, in addition to targeting them with specific trainings. Strengthening the digital government leadership's skills implies targeting in building their capacities to model and demonstrate the five digital government user skills, and to embed digital government practice in the mindset of public sector leaders as they look to create the right environment and build a digital workforce (OECD, 2021[2]).

This would not only strengthen trust within the organisation and make leaders seem more approachable and open to change, but also increase their motivation and nurture curiosity. **Estonia** has designed a programme called the Newton Program, to develop participants' leadership, innovation and technology skills to prepare the next generation of senior leaders. Similarly, **France**'s Digital Directorate (DINSIC)[1] established a coaching programme for senior leaders to overcome the limits of existing trainings for senior leaders that appeared to be short and superficial (Gerson, 2020[20]).

Figure 4.11. Professionals in the public sector receiving trainings in Türkiye



Note: Based on 113 participants.
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

The role of leaders is vital in ensuring that each of these five areas is considered in supporting the environment for government transformation. Not only in their behaviour but in the support they provide to ensure training is made available for public servants to build their confidence in both 21st century and digital government user skills. Türkiye would also benefit from recognising the importance of both socio-emotional and professional skills in the composition of the teams created to tackle public policy problems in the digital age. These measures would not only promote a digital culture across all levels of the government, but also equip public servants with up-to-date digital skills to design and deliver quality services that meet users' needs given the rapid evolution of digital tools and technologies.

Maintaining digital talents in the public sector

After establishing working conditions and identifying the necessary skills to advance the digital transformation, maintaining a competent digital workforce is the third pillar of the *OECD Framework for Digital Talent and Skills in the Public Sector* (OECD, 2021[2]). Governments need to apply the practical steps necessary to develop, retain and recruit a workforce to advance digital government maturity.

Recruitment methods, career planning, workplace mentoring, training and the role of the public sector need to be redesigned. This creates opportunities to improve approaches to particular areas and ensure that the workforce is, and remains, sufficiently digital

Attracting talents

OECD Government at a Glance 2021 underlined the importance for governments to attract and recruit a digital workforce to keep pace with the evolution of society and address service design and delivery challenges, as well as the necessity for government to understand candidates' motivations to apply for the public sector, match market wages and run promotion campaigns through multiple channels (OECD, 2021[13]). In line with the OECD Recommendation on Public Service Leadership and Capability, it is equally essential that governments "recruit, select and promote candidates through transparent, open and merit-based processes" (OECD, 2019[8]).

As the digital transformation is led by a digital workforce, there is a need to start by attracting the right talents to take part in this journey. Türkiye is well positioned in this respect when compared to the experience of the 38 countries measured by the *Survey on the Composition of the Workforce in Central/Federal Governments* (OECD, 2021[13]). Israel, Türkiye and Hungary are the only countries with over 30% of their public sector workforce aged between 18 and 34, compared to an average that is below 20%. Moreover, only three countries have a smaller proportion of public sector workers aged 55 years and over (OECD, 2021[13]). The youthfulness of Türkiye's public sector is an important foundation for digital transformation. One possible factor in this is the focus given by the Human Resources Office (*İnsan Kaynakları Ofisi*) to making the Turkish public sector an attractive place for younger workers (examples of which are discussed in Box 4.1).

However, there is an ongoing need to continue investing in activities to accommodate and welcome young talents into the public sector. The COVID-19 pandemic may have forced administrations to embrace new technologies and adjust to the needs of working remotely with a new, more flexible, culture. However, without a clear and solid recruitment and retention strategy, the public sector is likely to lose potential talents to the private sector.

Under the leadership of the Human Resources Office (*İnsan Kaynakları Ofisi*), the "Career Gate" (*Kariyer Kapısı*) service integrates with the e-Government Gateway and supports recruitment of various types (see Box 4.1) (Presidency of the Republic of Türkiye, 2022[21]). This is not the only route into public employment as there is a separate recruitment platform managed by the General Directorate of Turkish Employment Agency (*Türkiye İş Kurumu*, İŞKUR), which includes jobs of registered Public Institutions or Private Sector Companies.

Developing separate platforms that speak to different needs can be valuable where those audiences would not overlap. However, there are potential pitfalls in operating multiple approaches, not least in introducing greater overheads for applicants who may focus their efforts in one location and miss out on the roles advertised elsewhere. The platforms themselves help to mitigate these risks by allowing candidates to be kept informed, rapidly, of suitable jobs or updates to their applications. During the Review process the OECD team has noted the lack of a formal narrative, supported by a co-ordinated and dedicated strategic plan for talent and skills in the public sector. The existence and operations of the Human Resources Office (*İnsan Kaynakları Ofisi*) is however a clear indication of practical steps being taken to deliver tools, initiatives and co-ordination in the talent management and human resource efforts of the Turkish public sector from the centre, and as a whole. Although it is positive that the majority of organisations felt that there were no issues in terms of human resources and capacity, it is crucial to set up a strategy to address the full breadth of challenges involved with achieving a digitally matured workforce, including attracting the right candidates to increase governments' digital maturity.

The power of effectively branding the public sector as an appealing place to work can increase the quality of applications and draw attention from the best candidates, an approach supported by tools such as the Career Gate (*Kariyer Kapısı*), which has the potential to become a singular focal point for recruitment. To increase the success of these approaches, institutions could establish their own dedicated recruitment teams and proactive recruitment strategies to take advantage of events like the National Talent Fairs (see Box 4.1) and conduct outreach with schools and through social media. They might also consider creating partnership programmes with universities and encouraging under-represented groups to apply through communication campaigns. One advantage of all organisations using Career Gate (*Kariyer Kapısı*), as a single platform would be to achieve economies of scale and scope in these activities with communicating the work and the worth of the public sector being able to reach a wider audience and increase the talent pool considering a career in the public sector. Besides this, public institutions also need to acknowledge that the recruitment process must evolve to capture talents' interest and help them unleash their digital skills.

Similarly, ensuring diversity and gender equality of teams is equally important and there are important efforts evident in some of the initiatives that have already been discussed in this chapter (see Box 4.1). One inspirational example of how a country has achieved a greater gender balance is that of **Estonia,** discussed in Box 4.7

Box 4.7. Estonia's nudging methods to increase the share of women in ICT professions

In 2019 Estonia started an 18-month research project led by the Ministry of Social Affairs concentrating on developing and piloting nudge methods to increase the share of women among ICT sector students and employees. The project is co-funded by the Ministry of Social Affairs and the Estonian Research Council. The following actions are a part of the study:

1. Compiling the current state of play based on existing studies and analysis (including educational choices of girls and women, dropping out of education in the ICT sector, progress in the job market, etc), mapping the possible reasons for the low number of women in the ICT sector. A qualitative study within main stakeholder groups will be carried out.
2. Presenting proposals for nudging methods with the goal of increasing the number of women in ICT, including in management. These methods need to be piloted for at least 9 months.
3. After the pilot phase carrying out an analysis of the implementation of nudging methods as the basis for a final report and recommendations about future use of nudging methods.

Source: Provided by the Working Party of Senior Digital Government Officials (E-Leaders) Thematic Group on Digital Talent and Skills.

Retaining talents

A government with an older workforce has the benefit of the wisdom and experience that comes with age but can struggle to appeal to the next generation of talents. In contrast, a youthful government workforce, such as that found in Türkiye, can be attractive to young talents but will need to be aware of the needs of existing, older, staff to ensure they retain the experience they provide (OECD, 2021[13]). Once the talents are in, governments need to do their best to retain them as high turnover can be not only costly, but also affect productivity (Felps et al., 2009[22]). During the fact-finding mission, some of the interviewed public institutions expressed the fear of staff leaving the public sector in favour of better salary and benefit offers from the private sector. The Turkish government has put in efforts to become more attractive through the "contractual IT personnel" programme since 2008, which by-law allows institutions to hire digital talents

and offer them extra financial benefits to increase its competitiveness against the private sector, however such programme lacks operational effectiveness in terms of administrative structure.

Since talents that join the public sector are not usually attracted by financial rewards but are rather purpose-driven and value a healthy work-life balance, organisations could focus on what the workforce wants and provide them with a well-designed, fair, trusted and attractive reward system (Gallup, 2016[23]). Along with that, a focus on clear career perspective, job growth, profession and personal development would also help retain the workforce as these measures would offer them the opportunity to try a large variety of work and take up different challenges, given the multi-disciplinary aspect of digital governments (further discussed in the chapter), without having hierarchical promotions.

For instance, in **Uruguay,** the National Agency for e-Government and Information Society (AGESIC) encourages the retention of its staff in several ways including creating a flexible working environment, providing attractive training in tools and vanguard technologies and offering staff the opportunity to professional challenges of working on projects with national impact. This collectively creates a powerful reason for employees to stay with the organisation (OECD, 2021[2]). In the **United Kingdom**, while the Digital, Data and Technology (DDaT) Professional Capability Framework allows for different pay structures for different roles it is underpinned by a clear, transparent and standardised way of compensating talents. The DDaT Pay Approach aims to provide simple, effective, and consistent guidance on pay to work with existing flexibilities in an organisation's pay structure to attract, recruit and retain these specialist skills (UK Central Digital and Data Office, 2017[24]). Both country examples demonstrate that such structures help to maintain trust and fairness within the public sector.

Developing and maintaining skills

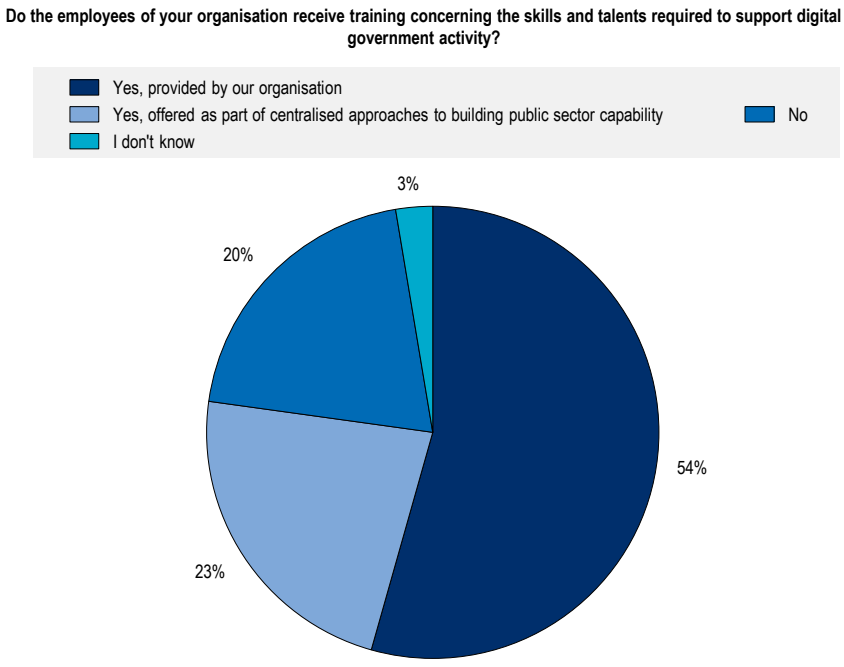
After setting a retention system for talents, it is fundamental to look at how to develop and maintain skills within the public sector as skills can be easily forgotten or lost if not applied, as well as taken away if knowledge is not well-managed within. The OECD team noticed great efforts in organising formal trainings to empower digital talents to own their work and increase skills within the public sector to reduce dependency on external third parties. A couple of effective examples of moving this training online were observed in the Distance Learning Gate (*Uzaktan Eğitim Kapısı*) (see Box 4.4) and the BTK Academy. The BTK Academy is an initiative of the Information and Communication Technologies Authority (*Bilgi Teknolojileri ve İletişim Kurumu*, BTK) and provides training for both public and private sector employees in ICT including innovative technologies like artificial intelligence and distributed ledgers (such as Blockchain).

As shown in Figure 4.12, a majority of public sector institutions in Türkiye have in-house teams that initiate their own training schemes (54%). However, 23% of organisations outsource their needs and are therefore reliant on either private sector suppliers or the teams at Türksat and the Scientific and Technological Research Council of Türkiye (*Türkiye Bilimsel ve Teknolojik Araştırma Kurumu*, TÜBİTAK). The presence of third-party contractors can be an important opportunity to develop in-house capacity but throughout the review process there has not been any evidence of practices to encourage the transfer of skills from those outsourced providers to internal talents. This absence results in organisations remaining reliant on an external delivery ecosystem. To maximise alignment, institutions without internal capacity need to ensure that both the contracting bodies and their suppliers align with national strategic plans for training, including around the five core digital government user skills discussed earlier and supportive to public servants contributing to establishing a digitally enabled state regardless of their role or tier of government. Given that external and private sector suppliers can be important partners for governments in developing their capacity to deliver on their ambitions for digital transformation, formally identifying the transfer of skill to government is a common practice among several countries, such as **Colombia, Spain** and **Uruguay**.

Informal support such as communities of practice, networking opportunities and mentoring can be another helpful practice for developing the skills of data, digital and technology practitioners. Informal approaches

rely on creating a safe environment where talents not only develop and maintain their skills organically, but also share good and bad experiences, collaborate and learn together. Such initiatives are crucial as they aim at strengthening the digital skills of the workforce and enable them to maintain, reuse and exchange the knowledge they have acquired through formal trainings. However, as indicated in Figure 4.13, only 20% of organisations in Türkiye are investigating these approaches. The Human Resources Office (*İnsan Kaynakları Ofisi*) is one organisation that is doing so, with the intention to convene a community of practice for human resource professionals from across the public sector. Lessons from these efforts could be used to create similar communities of data, digital and technology practitioners. While these would be valuable within institutions, there is value in creating cross-government networks to create the widest possible sharing of experience and wisdom.

Figure 4.12. Trainings to support digital government activity



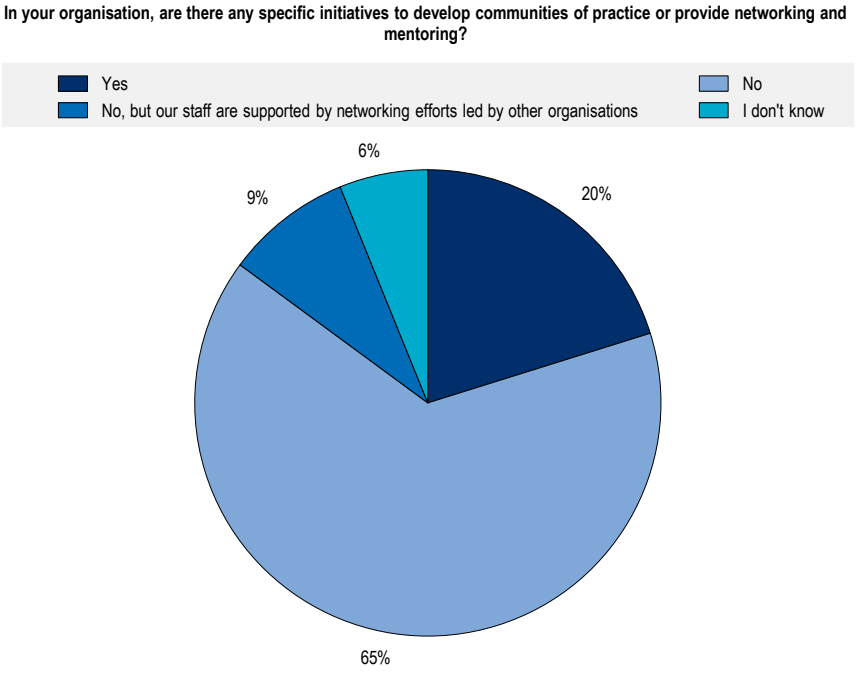
Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

As part of personal growth, mentoring programmes can also be important in pairing junior staff with a more senior colleague to create opportunities for transfer of skills, experience and knowledge. By formalising such practice, this would not only reinforce the learning culture of the organisation and strengthen the sense of belonging but also generate in-house training and cultivate loyalty, which would create greater workforce sustainability.

To develop and maintain skills within the Turkish public sector, a few measures could be considered. Türkiye could encourage further development of existing communities of practice to include more institutions. They could also enlarge their informal trainings and hold retrospective meetings where teams share what went well, what did not and what could be improved, or schedule "show and tell" where people share what they have learned. In order to fulfil these ambitions it will be important to find ways to build a dialogue between those focused on digital transformation and those focused on human resources. The OECD review team found that those most heavily involved in digital transformation did not necessarily have a deep awareness of all the activity taking place to improve and enhance the quality of the workforce.

As such, this highlights the importance of a common narrative and shared strategy which recognises the fundamental importance to digital transformation of a digitally mature workforce.

Figure 4.13. Initiatives to develop and maintain digital skills in the Turkish public sector



Source: OECD (2021[5]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

As an example, the **United Kingdom's** Department of Health and Social Care held their first Digital Show and Tell to showcase recent digital projects and explain how they run them (Stansfield, 2015[25]). These practices make talents feel empowered, owners of their work and create an in-house production culture, which would in the long run reduce outsourcing activities and dependence on external suppliers. The government could also consider requiring third party contractors to complete training on digital government user skills to ensure they have a consistent baseline of skills with public servants. Additionally, contractual clauses can be used to ensure the transfer of specific skills from suppliers to public servants. In the **United Kingdom**, this process is supported by Technology Code of Practice (as discussed in Box 4.8), which set expectations for working with suppliers around the quality of outcomes, encourage skills transfer to public servants and retain access to data without losing ownership of intellectual property. Similarly, formalising mentoring programmes between a junior and a more senior staff could not only contribute to the retention of knowledge in-house, but also invest in public servants' personal growth.

Box 4.8. The United Kingdom's Technology Code of Practice

The Technology Code of Practice was first published in 2016 by the UK Government Digital Service and since 2021 has been the responsibility of the UK Central Digital and Data Office. The Code of Practice provides a set of criteria to help governments design, build and buy technology. It recommends that public servants consider each of its 13 points and take steps to align with those that are mandatory and follow as many of the others as are practical. Organisations are encouraged to align their organisational technology and business strategies with the Code of Practice.

The Technology Code of Practice forms part of the UK's Digital, Data and Technology Functional Standard (DDaT Functional Standard) discussed in Chapter 3 and helps introduce or update technology so that it:

- meets user needs, based on research with your users
- is easier to share across government
- is easy to maintain
- scales for future use
- is less dependent on single third-party suppliers
- provides better value for money.

Source: UK Government Digital Service (2016[26]), *Technology Code of Practice*, https://www.gov.uk/government/publications/technology-code-of-practice; UK Central Digital and Data Office (2021[27]), *The Technology Code of Practice*, https://www.gov.uk/guidance/the-technology-code-of-practice.

Allocating talents and skills

Part of building a digital workforce is to be able to organisations to access the right people for the right roles and manage the allocation of individuals in terms of their work. One approach to doing this can be found in encouraging job mobility for employees to exercise their autonomy in terms of empowering them to identify and select the work that interests them, such as **Canada**'s Free Agents programme discussed in Box 4.9. A further opportunity comes through the use of multi-disciplinary teams that work across organisational boundaries to solve whole problems which will give staff the opportunity to work with a varied set of colleagues in terms of their organisational and professional backgrounds (OECD, 2021[2]).

Box 4.9. Canada's Free Agents programme

Canada's Free Agents programme was launched in 2016 as a new model for workforce mobilization. It offers public servants the freedom to select work that matches their skills and interests and allows them to make a contribution that they find meaningful. It also supports managers looking to rapidly and easily acquire top talent with emerging and core skills to support their short-term project needs. Free Agents are screened for attributes that are beneficial for solving problems and skills that are in demand.

Source: Provided by the Working Party of Senior Digital Government Officials (E-Leaders) Thematic Group on Digital Talent and Skills.

However, as discussed previously, a minority of organisations work with multi-disciplinary teams and provide job mobility opportunities. While there is a confidence in Türkiye about the status of public sector human resource planning and an optimism rooted in the country's young, tech-savvy population there are opportunities to integrate multi-disciplinary ways of work and greater job mobility to offer interesting career evolution plans within the public sector, enable the generation of broader ideas and facilitate learning with and from one other. In other words, governments, which are able to establish a multi-disciplinary team culture and offer job mobility could motivate and empower their digital workforce.

Another aspect that Türkiye may consider is to fund teams instead of projects, this would allow the workforce to concentrate on their career development as it would invest in the growth of public servants and their engagement in the long run to develop great services. This would also provide more visibility in terms of human resources, skills and positions available instead of relying on contractors and give

incentives to digital talents to move from one team to another to not only broaden perspectives, gain skills and experiences, which could be one of the rewards of good professional performances.

Regular feedback loops are equally important to guide the digital workforce in their career journey, help them develop necessary skills and look for new challenges. Based on available information, Türkiye did not seem to have regular feedback loop in place that traces the performance of digital talents and sets their objectives. This practice is necessary as it enables managers to verify whether the digital talents feel well-supported and satisfied in their job, discuss reachable objectives together and receive feedback on their performance. In **Slovenia**, it is a legal requirement for feedback to be provided. The Civil Service Act demands supervisors to evaluate the work, professional qualifications, and careers of public employees with a minimum of one meeting a year with each individual staff in order to discuss their professional development plan (Republic of Slovenia, 2002[28]).

Reforming the environment

Given the competitiveness of the job market, the Government of Türkiye may consider positioning itself as an attractive employer and provide clear job descriptions and profiles. This would give a defined picture of what working in government looks like as well as the career options and development available. Improving the reward system and career growth opportunities, along with providing job mobility and multi-disciplinary teams' structure are also important aspects that enables higher job satisfaction and productivity while serving society. Besides this, investing in their existing formal and informal trainings to create a solid in-house production culture, and developing the feedback and mentoring plans could make the Turkish public sector more attractive to digital talents.

The activities described in this final section are important drivers for creating and maintaining a digital workforce, but they are not sufficient by themselves. They will be most successful if paired with an organisational environment that encourages digital transformation and leadership that reflects a digital mindset. The Government of Türkiye can help to achieve this by taking steps to value staff wellbeing, promote flexible working, encourage a culture of learning, and offer clear career paths and opportunities for personal development. This would then promote the public sector as a transparent, human centric and agile environment and help attract the best candidates to make it a digital government.

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Note

[1] France's Digital Directorate "Direction interministérielle du numérique et du système d'information et de communication de l'État" (DINSIC) changed into "Direction interministérielle du numérique" (DINUM) in October 2019.

5 Creating user-driven value in proactive public service design and delivery

This chapter analyses and assesses the approach to user-driven and proactive service design and delivery in Türkiye using pillars 1 and 2 of the OECD's Framework for Service Design and Delivery. The first section of the chapter considers the context of representative and organisational politics, the legacy of channels, technology and infrastructure, and societal and geographic factors. The second section considers the philosophy for service design and delivery through leadership and establishing multi-disciplinary teams that work across organisational boundaries as well as the behaviours associated with understanding whole problems, designing end-to-end experiences, involving the public and delivering in an agile way. Finally, the chapter concludes by considering how service design and delivery practices supported the government response to the COVID-19 pandemic.

Introduction

The COVID-19 pandemic removed any lingering doubt that digital technology and data are foundational to life in the twenty first century. Pre-pandemic, citizens and businesses had high expectations about moving seamlessly between analogue and digital environments but lockdowns and fully remote working turned digital into the default overnight and cemented the need for digital-era public services as a priority for governments. Well-designed services can improve the efficiency of public agencies, the well-being of citizens and their satisfaction with government, as well as the success of policy. For the government of the Republic of Türkiye, the ambition is to be increasingly user-driven, seamless, inclusive and proactive with a focus on meeting people's needs in the context where they are.

Digital government helps to translate these ambitions into practice. By re-engineering and re-designing services to reflect digital-era working practices, the smarter use of data and the appropriate deployment of technology, governments can be paperless, go mobile, and experiment with artificial intelligence and other emerging technologies. A crisis like the COVID-19 pandemic demonstrated the benefits of having the right service design culture and enablers in place: in responding to new and emerging needs under pressure, they could do so with clearly understood and simple to use services that meet user needs without increasing their burden, or that of the responsible public sector organisation.

In order for digital government efforts to help ensure digital technologies and data benefit the whole of society, including those relying on in-person experiences, it is essential to consider the entire service design and delivery process. This means building collaborative relationships with the public to understand their needs as well as focusing on the internal culture, processes and resources of government. The OECD Framework for Public Service Design and Delivery identifies three areas as the basis for analysing public service design and delivery (OECD, 2020[1]):

1. The context in terms of representative and organisational politics, the legacy of channels, technology and infrastructure, and societal and geographic factors.
2. The service design and delivery philosophy in terms of leadership, combining disciplines to work across organisational boundaries, understanding whole problems, designing end-to-end service experiences, involving the public, and delivering in an agile way.
3. The availability of an ecosystem of enabling resources and tools that support the quality of experience and outcomes for all users as well as the speed with which service teams are able to respond to the needs of their users in transforming the service landscape.

This chapter presents the existing context for service design and delivery in Türkiye and then discusses the culture and philosophy observed in consideration of this issue. Chapter 6 assesses the third pillar, the enabling resources to support service design and delivery.

Context for service design and delivery

The ability for a country to use the design and delivery of public services to create user-driven value is influenced by the context in which these activities take place, specifically in the areas shown in Figure 5.1.

Establishing a philosophy of service design and resourcing the necessary enablers is influenced in several ways. These include representative and organisational politics and the role of leadership in securing long-term strategic planning, financial investment and the mandate to remove obstacles.

Further influence comes from past public service interventions. The associated processes, data flows and channels can create a confusing landscape of multiple user journeys. The legacy of physical infrastructure, data, technology, channels, brands and supplier contracts all influence the speed and capability of a public sector in pursuing its ambitions for transforming public services.

Figure 5.1. The OECD Framework for Public Service Design and Delivery: Context

Source: OECD (2020[1]), *Digital Government in Chile – Improving Public Service Design and Delivery*, https://dx.doi.org/10.1787/b94582e8-en.

Finally, shaping the context for citizens as they access services are questions of society and geography that may mean digital inclusion, accessibility and literacy need to be prioritised in terms of how services are designed and delivered.

Representative and organisational politics

The OECD measures digital government maturity using the Digital Government Policy Framework (OECD, 2020[2]; 2020[3]). The most mature approaches reflect a culture where government is user-driven and open by default, built on strong digital-by-design, government as a platform and data-driven foundations with the resulting public services being proactive and inclusive. These ideas should arguably be politically neutral, but their success does rely on political stability and ongoing organisational commitment. Thus, the first area informing the context for creating user-driven value in proactive public service design and delivery is representative and organisational politics.

As discussed in Chapter 2, Türkiye has a long-standing history of centrally organised strategies concerning digital transformation with an ambition for creating user-driven value in proactive public service design and delivery that has continued through the transition to the Presidential model and the oversight of the Digital Transformation Office (*Dijital Dönüşüm Ofisi,* DTO). As a result, Türkiye's overarching narrative has created a context within which there is a generally perceived sense of urgency to eliminate bureaucracy and to avoid putting burdens onto citizens. From the President down, there is a shared recognition of the importance of good quality service design and delivery as part of the national approach to citizen rights. As with every government, the challenges of the COVID-19 pandemic highlighted the importance of digital technology and data as an essential tool for maintaining normality and cementing their priority for all political leaders (OECD, 2020[4]).

There is no doubting the importance of the political environment in setting the agenda and shaping the opportunities to deliver on a digital transformation of the public sector. The Presidential model in Türkiye concentrates power at the centre and provides a mechanism for disseminating the wishes and interests of the political establishment throughout public sector institutions. Nevertheless, there is a difference between broadcasting a message and seeing it translate into practical implementation. Bridging this gap relies on the quality and leadership of those within different organisations. The governance for digital government in Türkiye is discussed more fully in Chapters 2 and 3 while Chapter 4 discusses the importance of leadership to establish the right environment and to model the necessary behaviours for a successful digital transformation.

This is important in Türkiye where the DTO is now the focal point for digital transformation but builds on the previous work of other organisations who retain influence over elements of the digital landscape. For example, in terms of national cyber security (discussed in Chapter 7), different responsibilities are held by the DTO, the Ministry of Industry and Technology (*Sanayi ve Teknoloji Bakanlığı*), Ministry of Transport and Infrastructure (*Ulaştırma ve Altyapı Bakanlığı*), Information and Communication Technologies Authority (*Bilgi ve İletişim Teknolojileri Kurumu*) and the Presidential Security and Foreign Policy Board (*Cumhurbaşkanlığı Güvenlik ve Dış Politikalar Kurulu*). This makes it essential for the working dynamics between different organisations to work in a consistent and coherent fashion. Indeed, during the fact-finding mission to support the Review, more than one organisation expressed their recognition that creating user-driven value in proactive public service design and delivery necessitates co-operation between different institutions. In this respect, the "Mitigation of Bureaucracy and Digital Türkiye Meeting" (discussed in Chapter 2) is vital in co-ordinating, prioritising and identifying the challenges and opportunities for digital transformation in Türkiye.

Indeed, distributing organisational responsibility for the detail of digital transformation can help its success. Chapter 4 discusses not only the importance of individual leaders in shaping their organisations to deliver a transformative approach to service design and delivery but also how important for embedding a culture of service design and delivery are the opportunities for all politicians and public servants to develop digital government skills (OECD, 2021[5]). In Türkiye, the leadership or vision to realise this potential is not yet in place in every organisation. As a result, the imperative for transformation is not motivated by advocacy for users and their needs. It is instead framed in terms of an urgency to eliminate bureaucracy with technology as the answer for increasing speed and reducing cost. The result is a focus on meeting specific targets and not embedding a sustainable and self-perpetuating change in the way in which organisations think about the role of digital technology and data to underpin transformation.

A further challenge in achieving full-scale digital transformation of the design and delivery of public services is the variety of organisations reflected in the Turkish public sector. Alongside the central government entities and Ministries, the country also counts state-owned companies and utility companies as elements within the public sector. The presence of these entities introduces a different experience in terms of responding to the needs of users as paying consumers and consequently having a responsibility to design services that support the commercial side of their operations.

Furthermore, many of the day-to-day interactions between citizens or businesses and government services are in the context of municipal government. In 2019, the Ministry of Environment, Urbanisation and Climate Change (*Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*) published the 2020-2023 National Smart Cities Strategy and Action Plan (Ministry of Environment and Urbanisation, 2019[6]). The Action Plan contains commitments to responding to the service design and delivery needs of municipal governments through the expected creation of a service catalogue and improvement to service channels. While the DTO is responsible for co-ordinating digital transformation at the local level, the more active oversight and contribution falls to either the Ministry of the Interior (*İçişleri Bakanlığı*) or the Ministry of Environment, Urbanisation and Climate Change (*Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*). Externally to central government, the Union of Municipalities of Türkiye supports the use and dissemination of information technologies.

A final factor in the political context shaping the service design and delivery agenda is the relationship of Türkiye with the European Union (EU). Although the negotiations for full membership of the EU are currently stalled, the process has informed and influenced digital transformation in Türkiye whether in terms of guiding the development of domestic data protection legislation or enhancing the cross-border interoperability of services, data and technologies such as digital identity.

Legacy of channels, technology and infrastructure

The second area of activity that shapes the context for the design and delivery of public services is the legacy of channels, technology and infrastructure. As discussed earlier, digital transformation in Türkiye has a significant heritage. There are areas of the public sector that have embraced initially an e-government model and then latterly a digitally transformed understanding to the design and delivery of public goods and services.

Since its creation in 2018, the DTO has had a wider ranging and holistic responsibility for digital government than previous organisational structures. Given that the organisation had only been in place for a little more than a year before the COVID-19 pandemic broke out, this relatively new structure will take time to bed in. As a result, there are existing strategic activities that concern the infrastructure, technology and channels that are being used for the design and delivery of services across Türkiye.

Perhaps the biggest challenge from a legacy point of view is not technological but operational in the history of organisations in the Turkish public sector. Some organisations, often associated with core functions of the state, were established during the Ottoman Empire and this long-standing organisational heritage often means they have been working to establish their digital and technology functions as well as the necessary associated skills over many years. However, such history can sometimes be a barrier to innovation or collaboration. For example, one of the interviewed organisations reflecting this history spoke of their capacity to work in an Agile way but had given little thought to the opportunities for contributing to the Open Government Data agenda despite their domain being well suited to this.

These well-established organisations are also aware of the significant time, money and energy that has been invested to establish their services and channels. For example, the General Directorate of Land Registry and Cadastre (*Tapu ve Kadastro Genel Müdürlüğü*, TKGM) and the Revenue Administration (*Gelir İdaresi Başkanlığı*) spoke proudly about all that they had done and are doing to achieve the digital transformation of their organisations as their priority. These services are critical to the daily functioning of Turkish society and so any change to their organisationally-focused operating model in pursuit of a more collaborative model involved shared resources or common components must be able to demonstrate its security, resilience and suitability.

Türkiye is pursuing a model of emphasising a single, centralised access point into services through the e-Government Gateway (which will be discussed in more detail in Chapter 6). The strategy is for the e-Government Gateway to continue to co-exist alongside organisation-specific channels and infrastructure. Maintaining this twin structure makes it critical to understand the short, medium, and long-term implications of the interplay between the e-Government Gateway and the channels of those organisations who administer services and provide information both online and in person.

Sat behind these public facing channels is one of the most important foundations for digital government: web infrastructure. The quality of that web infrastructure informs how well digital public services can handle greater than expected throughput without breaking. Of the 113 public institutions that took part in the survey to support this review, 102 felt that they had access to sufficient data storage capacity and IT hardware, software and network services.[1] While these localised models for data storage and IT infrastructure are understood to meet the needs of their organisations, the OECD peer review team was concerned to find a lack of strategic vision at the organisational level for the benefits of moving to cloud hosting models compared to organisation specific, on premise data centres. It is hoped that this gap will be addressed by the strategy and action plan being prepared by the DTO to encourage greater use of cloud services among public institutions which is expected in autumn 2022. It is important that any shift to a cloud model provides confidence in maintaining security and reliability while working to reduce the existing overheads currently associated with interoperability, reuse and sharing. A cloud-based model for hosting could also allow for a more effective use of Web Operations talent, an often in-demand skillset, as there are currently 78 organisations with teams ranging from one person to as many as 55 individuals.[2]

Part of the reason for this is the extent to which organisations are operating legacy technologies where the capacity for integration or the scope for iteration are constrained, if not impossible. Several organisations reflected that while they were pleased to rely on their existing technology stacks, they were monolithic in their architecture and not suited to moving quickly in pursuit of transformative solutions. The peer review team heard of a desire to refactor several systems to implement cloud-friendly micro service architectures but where the need for long-term commitment, funding and support to do so was a constraint.

Alongside the constraints of legacy technology in terms of flexibility for developing new services are the processes and procedures that exist around the collection, storage and sharing of data. Examples of Türkiye's infrastructure for data sharing, including the Public Application Center (*Kamu Uygulama Merkezi*), which supports the e-Government Gateway, are discussed in more detail in Chapter 7. Across the Turkish public sector, there are multiple technology platforms for data exchange serving the needs of different groups of users. Some of these, such as the Electronic Data Delivery System (*Elektronik Veri Dağıtım Sistemi*, EVDS) for data relating to the banking sector, are well regarded in meeting the needs of that sector. However, they reflect a scattered and fragmented strategy concerning the handling, processing and storage of data within the Turkish public sector. The legacy of these data efforts is not consistent with the vision for user-centred services and delivering on some of the wider national strategies, such as that associated with artificial intelligence (Ministry of Industry and Technology/Digital Transformation Office, 2021[7]).

Some of the organisations interviewed during the fact-finding mission to support the Review highlighted existing legislation as a further barrier to digital transformation and effective service design and delivery. Where the need for an in-person appointment, or a particular paper-based process, is set down in law there is a need for that to be revisited for transformation to happen. Several OECD countries have been exploring the "Rules as Code" model allowing for a more fluid relationship between the design of services and its associated legislation (Mohun and Roberts, 2020[8]).

Society and geography

The final area that shapes the capacity of countries to meet the needs of their users through the design and delivery of public services is the societal structure and geography of a country. This is reflected in the contextual factors for the governance of digital government discussed in Chapter 2.

When governments design public services, they need to acknowledge the needs of society as a whole and not only respond to the needs of easily served users. There was in general mixed recognition of challenges around access to the internet or digital skills. Some of the organisations interviewed during the fact-finding mission were quite blasé about the digital skills of their users but others drew attention to their work to increase digital proficiency. These included the Small and Medium Enterprises Development and Support Administration (*Küçük ve Orta Ölçekli İşletmeleri Geliştirme ve Destekleme İdaresi Başkanlığı*, KOSGEB), which exists to increase the role and efficiency of small and medium-sized enterprises (SMEs). As part of the "Digital Türkiye Roadmap" they have a particular focus on the digital transformation of SMEs.

The impact of the COVID-19 pandemic had also brought some of these challenges to the fore. The Ministry of Education, whose Education Information Network (*Eğitim Bilgi Ağı*, EBA) platform will be discussed in more depth in Chapter 6, provided the basis for ongoing education. However, in order to maintain the continuity of provision, the challenges of digital inclusion needed to be addressed in order to ensure no one was left behind in terms of the affordability or availability of Internet access or suitable devices.

One of the factors contributing to a greater focus on developing solutions within Türkiye is the challenge facing the country in terms of purchasing power. As discussed in Chapter 2, since 2018 the Turkish economy has seen a significant reduction in the value of the Turkish Lira (TRY) alongside high inflation and rising borrowing costs. Where some country governments are comfortable in using the services of international providers of digital services, the fact that many of them operate in US Dollar (USD) or

Euro (EUR) introduces financial challenges. As such, there is a greater push towards achieving national solutions in the fields of technology and data. However, these industries cannot be replicated overnight.

This ambition to grow the technology sector in the Turkish economy is the focus of the National Technology Move, which follows from the experience of the Turkish defence sector where strong national planning and co-ordination increased domestic product usage from 20% to 68% (Ministry of Industry and Technology, 2019[9]). It is recognised that achieving this ambition will be a long-term pursuit, as evidenced in the reflections of interviewees from the Ministry of Treasury and Finance (*Hazine ve Maliye Bakanlığı*) who described the 1 Million Employment project as equipping people with the basis to pursue a career in the technology industry, rather than necessarily immediately getting them into work.

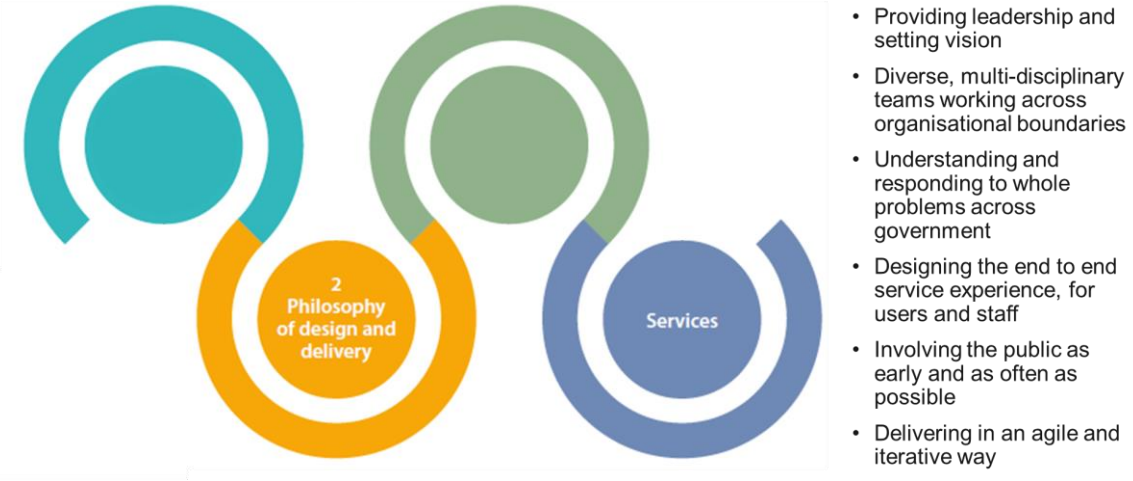
A further important aspect of society and geography is the relationship between the public sector and other sectors. Non-government actors can play an important role in helping to understand the needs of society and increase the vitality and health of democracy. The survey to support this review indicated that although 59% (65/111) of service providing organisations involve the private sector, only around a quarter of these organisations are likely to involve academic (28%, 31/111) or civil society (24%, 27/111) actors.[3] Türkiye has been observed to have room to improve the level of engagement with the civic space in general with the Right to Information Index placing Türkiye 26th in terms of OECD members and 97th out of 136 countries overall (Global Right to Information Rating, 2021[10]). Moreover, the current assessment of CIVICUS judges Türkiye's civic space as one of the 49 countries in the world that is "Repressed" (CIVICUS, 2021[11]).

Finally, Türkiye hosts the world's largest refugee population. The UNHCR estimates that there are 4 million refugees and asylum seekers in Türkiye with 3.65 million from Syria alone (UNHCR, 2021[12]). This population accounts for the majority of the 5.5 million foreigners living in the country whose needs for access to public services of all types is another factor in the context for service design and delivery in Türkiye whether in terms of language support or geographically concentrated areas of heightened demand among others.

Philosophy of service design and delivery

The second aspect of analysing and therefore understanding how to better meet those needs is the philosophical approach to service design and delivery and the extent to which it reflects the six ideas shown in Figure 5.2.

Figure 5.2. The OECD Framework for Public Service Design and Delivery: Philosophy



Source: OECD (2020[1]), *Digital Government in Chile – Improving Public Service Design and Delivery*, https://dx.doi.org/10.1787/b94582e8-en.

The philosophy and culture of service design and delivery helps to create a sustainable environment in which inclusive digital transformation and good services flourish by default. The most effective experiences are those that are simple to complete, and re-use data to anticipate and proactively address processes that might previously have involved further interactions. A necessary precondition is that their design reflects the needs of all those in society, including vulnerable groups who may have accessibility needs or a preference for being supported in a face to face setting. Doing this requires working across organisational boundaries with diverse, multi-disciplinary teams to understand whole problems and design the end to end experience for users and staff, which means involving both those groups throughout the process. Finally, as discussed earlier in Chapter 3 (and visualised in Figure 3.7), agile approaches help to embrace continuous learning and iterative improvement in order to keep adding value to the service being developed over time.

Providing leadership and setting vision

The *Recommendation of the Council on Digital Government Strategies* (OECD, 2014[13]) calls on governments to secure leadership and political commitment to the overall strategy and this remains true in the specific case of service design and delivery. In order to embed a user-driven philosophy throughout the public sector is it important to have consistent messaging from leaders, whether they are elected following a vote, appointed to serve or recruited into a role, that services will use digital technology and data to be proactive and user-driven (OECD, 2020[1]; 2021[5]; 2020[3]).

As discussed in Chapter 2, Türkiye has had consistent political leadership since 2003 which has supported continuity in terms of a user-centred narrative and which has culminated in the DTO being established as an office of the Presidency and therefore benefitting from greater authority in its responsibility for the digital transformation of services. This commitment can be seen in the Eleventh Development Plan and is expected to form a core part of the new strategy that is currently under preparation (Presidency of Strategy and Budget, 2019[14]).

The DTO is also responsible for strategies in other 'digital' areas including artificial intelligence, distributed ledger technologies (Blockchain), information security, cybersecurity and cloud computing. Developing a mature approach in these areas can help provide a strong foundation for public service design and delivery. However, although these topics have a focus among the higher-level political tiers, the organisations interviewed and surveyed as part of this review, tended to view these discussions as part of a national technology narrative rather than being relevant to the needs of their organisations. Although some projects are experimenting with novel technologies, the priority for organisations was on ensuring solid technical foundations to support the core needs for digital transformation. In some cases, organisations were interested but found staffing constraints in terms of in-house technical capabilities with these technologies, and consequently requiring external support with, for example, machine learning.

Chapter 3 (and Figure 3.5) highlighted that there is a lack of organisational digital government strategies and this potentially reflects a gap in terms of translating central vision into operational practice. Nevertheless, the peer review team was impressed by the leadership displayed within certain sectors such as Justice and Health where there was not only a clear awareness of opportunities for paperless operation and administrative efficiency but also for the transformative impact of digital government inspired service design and delivery. Furthermore, at the Ministry of Environment, Urbanisation and Climate Change (*Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*), ongoing strategic activities include the active review of all the services they offer to identify the priorities for transformation. Similarly, the Ministry of Interior (*İçişleri Bakanlığı*) is considering economies of scope to identify opportunities to combine disparate transactions into a single service. The hallmark of these discussions was that these organisations are not just solving the immediate problem, they are continuously looking for ways to improve the overall quality of the services they provide.

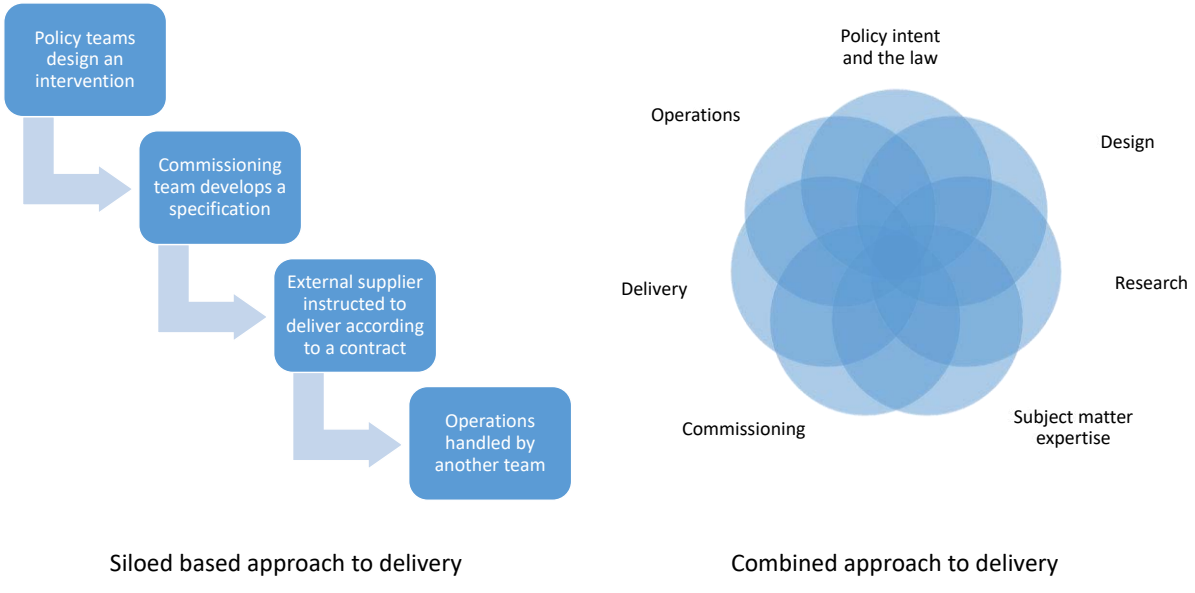
The challenges of leadership are amplified in the local government context where there are reduced budgets and access to fewer technical resources or skilled employees. One response to this is building partnerships with other municipalities or organisations elsewhere in the public sector. However, such efforts are still dependent on the leadership within their organisation, particularly among senior or middle managers. One of the municipal administrations reported that several directors continue to request paper versions of digital documents while another shared that getting approval to migrate a 20-year-old desktop application to a cloud solution had taken three years and required the eventual input of the Mayor.

One of the most powerful demonstrations of leadership is not necessarily from the top of an organisational hierarchy but the evangelists who extol the virtues of digital technology and data and invest their time in persuading their peers and superiors. The Ministry of Labour and Social Security (Çalışma ve Sosyal Güvenlik Bakanlığı) shared an impressive story of how demonstrating the merits and benefits of service design and delivery could secure support and turn blockers into champions. Their experience was not easy and it took several years to build the momentum but the benefits of having done so are now being felt in the speed with which they are developing new services.

Diverse, multi-disciplinary teams working across organisational boundaries

One of the biggest challenges in achieving the transformation of public service design and delivery is maintaining the ownership of the service from its inception to its ongoing iteration. As can be seen in Figure 5.3 there is a traditional paradigm for delivery on the left. Here the delivery process starts with 1) policy teams developing an approach before handing it to 2) the commissioning team that specifies deliverables for 3) an external supplier who, in turn, provides the "finished" service to 4) a fourth team to operate it. Policy decisions taken in this way are isolated from lessons learnt in the context of delivery and are completely unaware of operational realities. This creates silos and disconnection in the ownership of the problem and the quality of the eventual outcome. On the right, is the alternative – the idea that you could bring together a multi-disciplinary team contributing a multi-faceted understanding of the problem and helping to support well-designed public services.

Figure 5.3. Two paradigms of delivering policies and services



Siloed based approach to delivery

Combined approach to delivery

Source: OECD (2020[1]), *Digital Government in Chile – Improving Public Service Design and Delivery*, https://dx.doi.org/10.1787/b94582e8-en.

There was widespread recognition across the Turkish public sector that co-operation is essential in responding to the needs of the public. A notable example of cross-cutting collaboration in action is the work of the Ministry of Interior (*İçişleri Bakanlığı*) and the Ministry of Health (*Sağlık Bakanlığı*) in developing an integrated model for birth notification across 231 public health institutions. A further example came from Gaziantep where the municipal government had first developed a piece of software to support people with Alzheimer's disease and then established a non-profit organisation to enhance and share this solution with other municipalities.

Türkiye's e-Government Gateway is an impressive achievement that creates a consistent experience for citizens in accessing the transactions it hosts and enables the Turkish public sector to operate across organisational boundaries. There was universal approval for the e-Government Gateway and the level of support provided by Türksat to institutions of all sizes and operational models in migrating to the e-Government Gateway. However, there are risks that changing the responsibility for understanding the user need and then delivering to meet it by handing over to an outsourced provider can lead to a loss of collaboration between policy, delivery and operations. Since the establishment of the DTO, Türksat has come under its oversight, which has increased accountability and moved decision making into the DTO, which may help to mitigate these risks.

The need to maintain a continuous thread in advocating for the needs of users highlights the importance of disciplines such as product management, user research and service design within all organisations. However, as discussed in more detail in Chapter 4, the DTO reports that multi-disciplinary teams are not promoted within the Turkish public sector.[4] There are some exceptions, perhaps most notably within the Ministry of Health (*Sağlık Bakanlığı*) where service design, user experience and user research are identified as being a priority. As an organisation with such a broad remit, there is an understanding of the need to provide any type of service required by a citizen that may require different sources of information. As a result, they employ different actors from different fields to take a multi-disciplinary approach to meeting the needs of their users.

While some of the established guidance and narratives within Türkiye are supportive of transformed service design and delivery, other elements are less so. One of those is found in the Public Information and Communication Technologies (ICT) Project Preparation Guide (Ministry of Development, 2017[15]; Presidency of Strategy and Budget, 2021[16]) which encourages organisations to compartmentalise their projects into separate investment types that create a distinction between research projects, system development or improvement, data generation or update, IT infrastructure or capacity building. These are then subsequently broken down into further work packages according to the focus of the project. There is a risk with this approach of reinforcing the left hand model of Figure 5.3 if these investment types or work packages are managed by discrete teams separately and independently focusing in isolation on a particular speciality or technical challenge rather than addressing problems in ways that bring different skills together to understand how different elements contribute to meeting the underlying need across professional or organisational boundaries. The OECD Framework for Digital Talent and Skills in the Public Sector proposes that governments recognise "service professionals" whose role is to take ownership of the end-to-end user experience and wield the political, administrative and financial authority to bring the necessary actors around the table to address a whole problem (OECD, 2021[5]).

Understanding and responding to whole problems across government

To transform a service, governments need to avoid focusing on discrete, individual interactions in isolation from understanding a whole problem. In order to meet the need of a user in full it is critical to map and understand their experience as well as the flow of information and data between different parts of the public sector (see the example from Finland in Box 5.1). The practice of service design may take this insight to identify a minor change and dramatically improve an outcome or obtain the evidence to justify a fundamental redesign of the service.

Box 5.1. Finland's National AuroraAI Programme

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

Source: Welby, B. and E. Hui Yan Tan (2022[17]), "Designing and delivering public services in the digital age", https://doi.org/10.1787/e056ef99-en.

The *2016-2019 National e-Government Strategy and Action Plan* recognised that the current experience of services often lacked integration, favouring a process-oriented rather than user-centred approach (Ministry of Transport, Maritime Affairs and Communications, 2016[18]). User research helps to avoid these disconnected outcomes and move away from well-meaning but flawed assumptions about the way in which a particular problem might manifest in reality. Making a commitment to understanding the perspective in relation to a given experience helps to ensure an awareness of how different interventions contribute to, or detract from, the desired outcome for both the user and service provider, especially between organisations and different transactional elements that should be considered as part of the same overall experience.

The e-Government Gateway will be discussed more fully in Chapter 6 but underpinning its creation is the idea of allowing services that might otherwise be provided by different institutions through different channels to be available through a single location. Its value is clearly visible in orchestrated services such as "My Working Life" and "My Vehicles" which compile the data from multiple organisations into a single view. Users can see the relevant information about these aspects of their life in one place without having to retrieve information from multiple locations. These are exemplar models of how Türkiye hopes to transform more of the user experience. One of the vital elements of the efforts to understand whole problems in Türkiye is the Electronic Public Information Management System (*Elektronik Kamu Bilgi Yönetim Sistemi*, KAYSİS) which will also be discussed more fully in Chapter 6. The DTO and its oversight of the e-Government Gateway are clearly important focal points for co-ordinating the activity of multiple organisations in terms of the service design for online public services.

The e-Government Gateway and KAYSİS are identifying opportunities to bring together disparate sources of information and provide solutions that are valued by users. In addition, there have been sector-specific efforts to address whole problems. For example, when foreign visitors to Türkiye seek a work permit, efforts have been made to reduce the documents required for those applications with most of the service available online. This is the result of working with other ministries and doing the research to understand the experience of someone crossing the border. The Small and Medium Enterprises Development and Support Administration (*Küçük ve Orta Ölçekli İşletmeleri Geliştirme ve Destekleme İdaresi Başkanlığı*, KOSGEB) has reduced bureaucracy by making data sharing protocols with 23 institutions and organizations that mean businesses are not required to provide data that they have already shared.

A very impressive example of solving a whole problem is that found within the Ministry of Family and Social Services (*Aile ve Sosyal Hizmetler Bakanlığı*). Historically, applications for social assistance programmes were entirely paper based and different programmes involved their own processes, with people needing to produce information from up to 17 different organisations. A 2005 decree established one-stop-shops

that would task a public servant with collating these documents but this still took up to 15 days for the information to be collected from different organisations. Further improvements have followed and eventually resulted in the Integrated Social Assistance Information System (*Bütünleşik Sosyal Yardım Bilgi Sistemi*) bringing together data from 28 institutions and simplifying the full user journey.

One of the best indications that an organisation has thought about how it can contribute to solving whole problems is the frequency with which other organisations mention its systems. In Türkiye, the most mentioned organisation is the Ministry of Health (*Sağlık Bakanlığı*) with its services being integrated across the public sector and it was impressive to note the importance placed on taking a systematic approach designed around building bridges among different organisations. The Ministry of Health (*Sağlık Bakanlığı*) has had a co-ordinating and stewarding role that organises the sector and brokers the necessary relationships. The fruit of this approach could be seen during the COVID-19 pandemic as the underlying foundations built up over many years came to the fore. In addition to Health, the Justice and Education sectors have similarly developed impressive platforms, which will be discussed in more detail in Chapter 6. These approaches recognise the importance of developing solutions that respond to the needs of users in particular sectors but also across those organisational and sectoral boundaries, including between municipal and central government.

Many organisations in Türkiye report that they hold certifications from the International Organisation for Standardisation (ISO) covering Customer Satisfaction Management (ISO 10002:2018), Information Security Management (ISO/IEC 27001:2017), Information Technology Service Management (ISO/IEC 20000-1:2018) and Quality Assurance (ISO 9001:2015). The most common of these is the certification for information security management. These international standards are a common framework for delivering within an IT Service Management framework and help to assure organisations and their clients that service requirements will be fulfilled.

However, the fact-finding mission found that ISO certifications are not translating into a high priority being given to user research and the proactive pursuit of understanding the needs of users. This is further supported by the survey to support this review identifying that only 22 organisations employ user researchers.[5] Of the 142 people identified with this specialism, 70 are employed by the Ministry of Health (*Sağlık Bakanlığı*) meaning that there is on average three user researchers per the remaining 21 organisations.[6] This means that 91 organisations in the Turkish public sector are unaware of the benefits and value that user researchers can offer.

The Public ICT Project Preparation Guide could be a powerful tool in helping to close this gap in the philosophy of service design and delivery in Türkiye (Ministry of Development, 2017[15]; Presidency of Strategy and Budget, 2021[16]). In its current form, this template for spending on ICT related research projects, system development, data, infrastructure or capacity building projects focuses on the needs and involvement of stakeholders to justify spend. Although certain project teams may use their knowledge of their users and their needs to inform their submissions, the template currently places the emphasis on internal requirements rather than encouraging teams to be clear about how they are addressing a well understood whole problem. It could be helpful to revisit the focus of this document to support teams working on all types of ICT related projects to broaden their perspective so that user needs and user research inform their project proposals.

The “Mitigation of Bureaucracy and Digital Türkiye Meeting” (discussed in Chapter 2) is potentially valuable for helping to co-ordinate, prioritise and identify whole problems that can be addressed. This monthly meeting benefits from high-level representation with the DTO setting the agenda and monitoring subsequent progress. In order to help further cement a culture and philosophy of service design and delivery it may be powerful to include a standing item on the agenda for user research from a service to be presented to the participants.

Designing 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 foundational to good service design. However, the evolution of public services delivered by different organisations can ultimately lead to fragmented user journeys. The interplay between different channels may also be unforgiving of attempts to move between the online and offline and make things difficult behind the scenes for public servants. The OECD Framework for Service Design and Delivery proposes that transformed public services should be approached in a channel-agnostic fashion and understood as follows (OECD, 2020[1]):

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

In Türkiye, as with everywhere else in the world, the COVID-19 pandemic has accelerated the transition from providing services in-person to functioning on a remote basis. However, the need to offer an experience that reflects the needs and preferences of the public across a variety of channels has not diminished. While there are clear advantages to moving services online for both public services and their users it is important to consider the role of providing access to services in-person or via a telephone call as part of an omnichannel strategy (analysed in Chapter 6). Efforts to introduce “digital by default” approaches that completely remove offline access should be resisted as they fail to respond to the needs of particular parts of society and may exacerbate digital divides. The successful establishment of the e-Government Gateway over time has brought considerable benefits, but it needs to be complemented by a clear strategic understanding of the country’s entire channel landscape.

Indeed, some organisations will always be responsible for services that involve a physical, in-person experience. It was encouraging to see that the Presidency for Turks Abroad and Related Communities (*Yurtdışı Türkler ve Akraba Topluluklar Başkanlığı*, YTB) was approaching the challenge of providing services that involve borders with a recognition that design is the mechanism by which they will achieve fast, effective and efficient services to all. The Ministry of Interior (*İçişleri Bakanlığı*) also shared how they have developed solutions that record the birth of a child while the family is still in the medical establishment and that this proactively triggers the automatic distribution of the child’s identity cards to their home address.

The flexibility to allow users to access a service according to their convenience is one of the reasons why it is important to consider the mobile availability of services, whether through the appropriate development of apps or at a minimum in ensuring that web content is responsively designed to adapt to the device being used. This is a relevant consideration not only for the needs of the public but for public servants in many organisations such as those operating in the agricultural and forestry sectors. Often those who conduct fieldwork are not seen as a priority for transformation and while it may be quicker to respond to the urgent web-based front-end needs of the public this model of prioritisation may come at the detriment to the overall quality and reliability of the services an organisation provides.

While the simple appeal of going paperless may sound immediately transformative, the benefits will not be realised if the online experience perpetuates any of the flaws of the existing solutions. Instead, a design thinking approach is essential for creating end-to-end experiences that simplify the overall system by avoiding unnecessary steps, reusing data or deploying innovative applications of technology to create value for users. There can be significant benefits to designing out errors and improving outcomes. The Presidency of the Turkish Court of Accounts (*Sayıştay Başkanlığı*), for example, reported that after four years of operating their new software they had seen errors fall by 40%, allowing for data to be submitted on time, every time. The existence of KAYSİS (discussed in more detail in Chapter 6) is an exemplary model of a service catalogue to help understand all the parts of a journey involved in a service

and for identifying opportunities to design a more consolidated approach but faces challenges in being kept up to date and accurate.

In considering the experience of over 100 public sector organisations as part of this Review, there is a wide spectrum of understanding and application of these ideas. For example, there is a consistent and sector-wide focus on using surveys to capture post-implementation feedback, which many organisations saw as the route to understanding the needs and experience of uses. Very few organisations described a culture of seeking up front user research and conducting co-design sessions or other forms of participatory design as part of developing services. Indeed, one organisation considered themselves a model of user-centred design despite there being no expectation of designing a service in light of user needs and their experience in the description of a process where engineers analyse colleague requests before working with Türksat to develop prototype interfaces.

Despite the frequency with which user-oriented services are mentioned in national strategic documents and a majority of public sector institutions reported emphasising user-centred design in their approach to skills, the country does not yet have a formal strategy concerning the design, delivery and evaluation of government services. It is important to recognise that efforts to establish such a framework are under way. Such a document or methodology, that builds on the most relevant elements of existing ISO certified practices and expands it to embrace the opportunities and needs of public service design and delivery in the digital age to reflect the Turkish context for service design and delivery could help to create a systematic model for public sector organisations to follow.

Involving the public as early and as often as possible

The *Recommendation of the Council on Digital Government Strategies* sets the expectations for governments to encourage the engagement and participation of public, private and civil society stakeholders in policy making and public service design and delivery (OECD, 2014[13]). A second OECD Recommendation of the Council on Open Government compliments this and 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[19]).

These ideas are enshrined in the OECD Digital Government Policy Framework through the twin dimensions of "Open by default" and "User-driven" (OECD, 2020[3]). These practices work together to ensure that governments find ways to be increasingly participatory and therefore responsive to the needs of their citizens, leading to greater benefits to well-being and trust in government beyond just resolving a particular need at a particular time (Welby, 2019[20]).

In order to understand whole problems and achieve an end-to-end solution for citizens and staff, it is imperative to involve the users of a service. Public services designed and delivered for the digital age need to involve the public as early and as often as possible in creative ways that reflect a genuine effort to engage. 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 (OECD, 2020[1]; 2022[21]).

Equally, it is vital that providers of government services look for opportunities to be transparent about their procurement and commissioning activities, to be open about the decision-making involved in administering a service including the nature of any algorithms and to generate value through publishing Open Government Data. In terms of measuring "Open by default", Türkiye has not participated in either the Digital Government Index or the Open, Useful and Reusable Data Index and so there are not comparative benchmarks available for the Turkish experience. However, the Digital Government Review process would identify the opportunity for significant improvement.

The DTO has a participatory and inclusive model to follow in terms of developing the new digital government strategy and this Review process has sought the input of over 100 public sector institutions. However, there is limited evidence of a proactive, openness by default centred on collaboration, especially with citizens, academia and civil society. One exception to this is the work of the Ministry of Family and Social Services (*Aile ve Sosyal Hizmetler Bakanlığı*) whose Civil Society Vision Document and Action Plan (2022-2023) was created through five workshops and a series of activities involving more than 200 non-governmental organisations as active stakeholders with follow up interviews and questionnaires offered to those unable to attend (Ministry of Family and Social Services, 2022[22]). The Ministry plans to establish a 'Social Incubation Center' with four modules designed to encourage and support the active participation of stakeholders throughout the activity of the organisation.

The leadership rhetoric surrounding the benefits of taking an "open by default" approach is well defined under the 4th Strategic Objective for the *2016-2019 National e-Government Strategy and Action Plan* (Ministry of Transport, Maritime Affairs and Communications, 2016[18]). Under the heading "Increasing Use, Participation and Transparency" the expectation was set out to involve stakeholders in all process, to see services shaped by the feedback of users throughout its lifecycle, and for Open Government Data (OGD) to increase transparency and accountability, generating economic value and make services more effective. Furthermore, objective 3.4 of the *National Artificial Intelligence Strategy (2021-2025)* emphasises the importance of open data sharing (Ministry of Industry and Technology/Digital Transformation Office, 2021[7]).

However, these ambitions have not yet translated into a widespread enthusiasm for exploring greater transparency and participation (as will be discussed in more detail in Chapter 7). There are well-maintained and supported resources for obtaining certain statistical information but gaps remain in several areas of the OGD agenda. The DTO is addressing some of these with work in progress on data management procedures, regulations and guidance, as well as establishing a dedicated OGD portal.

In terms of co-operation and collaboration there are clear signs of strengths in terms of inter-agency dynamics which could be used as the basis for encouraging open exchanges between citizens and government where there is room for improvement. The Presidency's Communication Centre (*Cumhurbaşkanlığı İletişim Merkezi*, CİMER) is valuable in facilitating interaction with government in offering a vital route for the public to raise their concerns and seek resolution for complaints about government. However, this allows for a one to one dialogue and not a collective engagement of all those sharing similar concerns. Nevertheless, CİMER sets a new and important benchmark in terms of the expectation within the Turkish administration of developing a greater participatory and transparent mindset in pursuit of strengthening the relationship between government and citizens. A further example comes from the context of developing new legislation. When legislation is proposed documents are prepared and published openly online as HTML and it is updated in real time as it makes its way through the legislative process. While making this open is beneficial it is not supported by any wider activities to encourage the participation of the public and invite feedback from civil society. Indeed, only 15% (17/111) of the service providing public sector institutions that completed the survey to support this review, reported using public consultation websites.[7] This contrasts with the general trend found by *Government at a Glance 2021* of 27 countries making efforts to develop a "one-stop shop" for citizens to learn about past, current and future opportunities for participation as, for example in Slovenia (see Box 5.2) (OECD, 2021[23]).

As has been noted earlier in this chapter, Türkiye ranks 97th out of 136 countries in the Right to Information Index (26th in terms of OECD members) and the current assessment of Türkiye's civic space by CIVICUS is "Repressed" (Global Right to Information Rating, 2021[10]; CIVICUS, 2021[11]). However, there are some positive elements within the right to information legislation, Law No: 4982 (Republic of Türkiye, 2003[24]). There is a solid foundation in terms of its underlying provision and the scope for request. However, little effort is put into the user experience of this activity making quite a lot of the overhead fall on the requester without much in the way of support. Moreover, and this further highlights the need to consider how to create a culture that is "Open by default", the legislation is lacking in terms of efforts surrounding training or

promotion, that will embed these ideas into the way in which public sector organisations consider requests for information. There is a close relationship between the way in which public sector organisations consider requests for information, the opportunities offered by open government data and a participatory model of service design and delivery. In order to fulfil the ambition set out in the OECD Digital Government Policy Framework of being 'Open by default', a strategic approach is needed that understands the spectrum of open, participatory digital government efforts from inclusive approaches to service design, through publishing open government data and to the way in which requests for access to information are handled. These are all part of the same continuum.

Box 5.2. Participatory platforms for engaging citizens in Slovenia

Stop Bureaucracy

Since 2005, Stop Bureaucracy (stopbirokraciji.gov.si) has been a single point of access for all stakeholders to share ideas for improving legislation or services in the business environment. Since its inception Stop Bureaucracy has saved EUR 350 million which reflects a 25% reduction in the identified levels of administrative burden in Slovenia.

I Propose

I Propose (predlagam.vladi.si) is a single point through which to communicate and send opinions, ideas, remarks or complaints about government services.

Open Data of Slovenia (*Odprti podatki Slovenije*, OPSI) and hackathons

Slovenia's open government data portal was launched in 2016. It is the single national website for the publication of open data for the entire public sector, replacing a number of separate locations where data was published. The team behind the site is proactive in communicating with citizens and companies and organising events such as hackathons in order to unlock the value and encourage greater engagement with open government data in Slovenia and beyond.

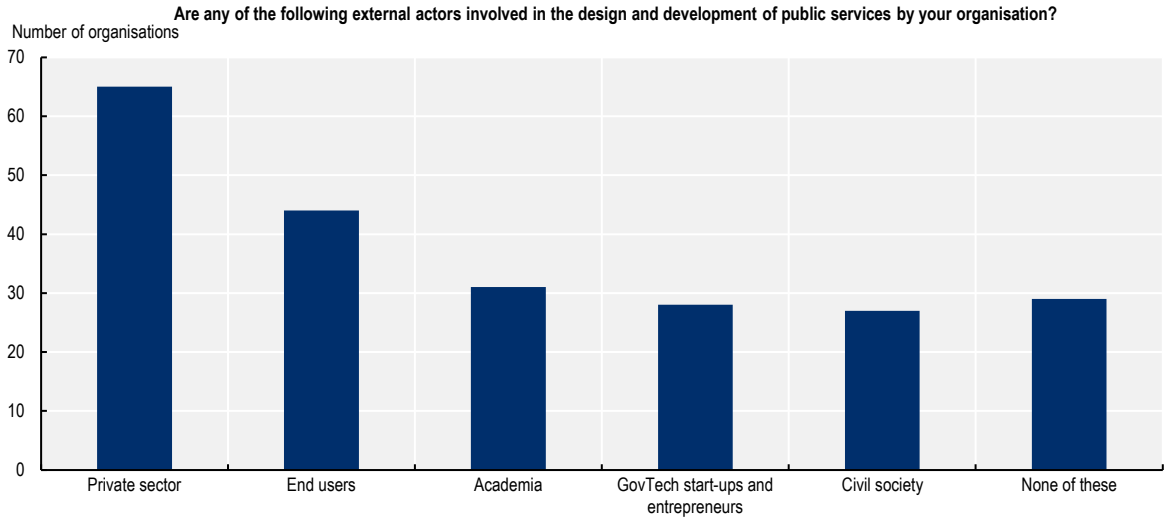
e-Democracy

eUprava, Slovenia's single government domain for services, houses the e-Democracy sub-site which provides a public route for providing feedback on proposed legislation, expressing satisfaction with government services, and contacting elected representatives.

Source: OECD (2021[25]), *Digital Government Review of Slovenia: Leading the Digital Transformation of the Public Sector*, https://doi.org/10.1787/954b0e74-en.

While there is evidence of post-implementation feedback being used by a variety of organisations to help improve services the majority of communication is one-way and cannot be said to reflect a "User-driven" mindset. The survey to support this review found that amount service providing organisations, 69% (76/111) of organisations follow guidelines or standards relating to the engagement of users in the design process of government services.[8] However, only 31% of all the surveyed organisations (35/113) are using data to develop a deeper and more rounded understanding of the needs of citizens and engage citizens as co-creators of value.[9] Furthermore, Figure 5.4 shows that of the 111 public service providing organisations that were surveyed, one in four (28%, 29/111) engage no external users in the design and development of their services and less than half, 40% (44/111) involve end users. There was more consensus around involving the private sector with business interests being recognised by 59% (65/111).

Figure 5.4. Involvement of external actors in the design and development of public services by organisations in Türkiye



Note: Based on the responses of 111 institutions.
Source: OECD (2021[26]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 3.8.2.

Therefore, when it comes to finding ways to involve the public as early and as often as possible, the OECD identified three categories into which the service providing organisations in Türkiye fit. Firstly, a small proportion of organisations are operating consistently in line with the ambitions of service design and delivery in terms of their practice and their culture. Secondly, around a quarter of organisations are not engaging users at all. Finally, there is a large group of organisations that can describe the right approaches but did not offer any examples to evidence that the theory was being put into practice.

In some cases, there are organisations who have fully embraced the opportunity provided by the e-Government Gateway to migrate their services. However, in doing so they have introduced an abstraction layer between themselves as the custodians of their users' needs, and the e-Government Gateway team responsible for the experience of users accessing the service. A similar concern was voiced by the Revenue Administration (*Gelir İdaresi Başkanlığı*) in terms of the relationship between their organisational website and the e-Government Gateway around the risk of outsourcing work without a consistent link between user and need. The OECD Framework for Digital Talent and Skills in the Public Sector identifies the "service professional" approach as possibly suitable here, where someone takes ownership of the end-to-end user experience and ensures that the user, and their needs, are well understood by all those working to meet a particular need regardless of their organisational affiliation (OECD, 2021[5]).

In other cases, organisations demonstrate a complacency about claiming to be 'user-centred' but where internal prioritisation processes do not actually engage their end users. The Ministry of Youth and Sports gave a very compelling description of their Capability Maturity Model Integration (CMMI), which sees multi-disciplinary teams developing projects based on an initial analysis of the experience of personnel within the organisation. However, while the organisation considered the approach to be highly successful, its description was missing the experience of external users and gave the impression of reinforcing siloes between analysis, databases, design, software and testing. Merging the boundaries between these discrete silos and creating a multi-disciplinary team as well as amplifying the user voice may help to make these services genuinely user-centred and user-driven.

Nonetheless, there are important signs of good practice from across the public sector. At the local level, the Municipality of Çankırı has a dedicated department whose focus is specifically on identifying the needs of their communities and are constantly engaging in dialogue with several citizen assemblies focusing on the needs of children, youth, elderly, and other groups. The outcomes from these assemblies feed into the planning and implementation for the council. Within the General Directorate of Istanbul Electricity, Tramway and Tunnel Operations (*İstanbul Elektrik Tramvay ve Tünel İşletmeleri Genel Müdürlüğü*) the feedback from passengers is regarded as one of the most crucial tools on which to base a service design approach that champions the usability, comfort and security of the end user. In justice, the team behind the National Judicial Network Information System (*Ulusal Yargı Ağı Bilişim Sistemi*, UYAP) have been aware of the need to understand the different types of users involved in the justice process whether courts and judges, lawyers, mediators, or citizens. Finally, the Ministry of Health (*Sağlık Bakanlığı*) is consistently demonstrating the aptitude and practices to create user-driven value and this can be seen in their "What is wrong with me?" (NeyimVar) service. In health, patients are understood to be the primary focus and so everything about the way in which these organisations operate hinges on understanding their experience. The fact-finding interviews with the institutions revealed that in the past up to 6% of patients chose the wrong kind of appointment and so "What is wrong with me?" (NeyimVar) helps users to triage their need and identify the correct medical practitioner. The only way to develop a service that can overcome that challenge is to work extensively with users to design the content and the user journeys to achieve the best outcome for both user and public sector organisations.

Delivering in an agile and iterative way

The final aspect of the philosophy for service design and delivery in the digital age is to adopt practices that allow for delivering in an agile and iterative way. In the outsourcing models of delivery that characterised the e-government era, the preference for systems integrators and governments was to take a "waterfall approach" (referenced earlier in Figure 5.3). Requirements would be identified before undertaking any work that meant that in order to limit uncertainty there were limited opportunities to interact with the emerging solution and make revisions until the final product was delivered. This approach locked down delivery and meant there was only one chance to get each part of the project correct. Should any changes be needed then high costs could be involved, particularly if those changes involved revisiting any core decisions.

The digital government era of service design and delivery is motivated by the role technology and data can play to deliver value to users in order to meet their needs. As such, many governments are favouring delivery methodologies that allow iterative improvements to be made over short periods. An agile approach to service design and delivery encourages teams to start small with limited scope to understand the needs of their users through researching, prototyping, testing and learning. As they go through this cycle, they can reduce the level of uncertainty and ensure that the work they prioritise is adding the greatest value.

As discussed earlier in this chapter, multi-disciplinary teams are an important foundation for enabling work across organisational and professional boundaries. This model is also essential in supporting research findings and experimental, hypothesis-led interventions to be incorporated into the service itself and tested quickly to understand whether they help to achieve either the policy intent, or improve outcomes for the users of a service.

The Republic of Türkiye has an interest in understanding how delivering in an agile and iterative way might allow for the use of prototyping and testing techniques, encourage feedback loops and underpin an iterative culture of service design and delivery. However, more than any other ambition for the service design and delivery agenda, these ideas were hard to discern in the observed cultures and activities of the organisations that participated in the Digital Government Review.

Only one of the organisations that responded to the survey to support this review, the Turkish Natural Catastrophe Insurance Pool (*Doğal Afet Sigortaları Kurumu*, DASK), was explicit about the way in which agile was used to respond to the needs of the organisation while several others mentioned their familiarity with delivering in an agile and iterative way. For example, those organisations reliant on the e-Municipality platform reflected that the service would continually improve with new functionality available every few months and the Turkish Statistical Institute (*Türkiye İstatistik Kurumu*, TÜİK) reflected on their long-standing commitment to agile because of the speed with which it allows them to deliver value to their users. In other organisations, a gradual transition is taking place. The Revenue Administration (*Gelir İdaresi Başkanlığı*) has responsibility for over 80 applications, many of which need regular updates and make it critical for the governance of deployment to function effectively. They are exploring how to increase the proportion of teams working to deliver in an agile fashion.

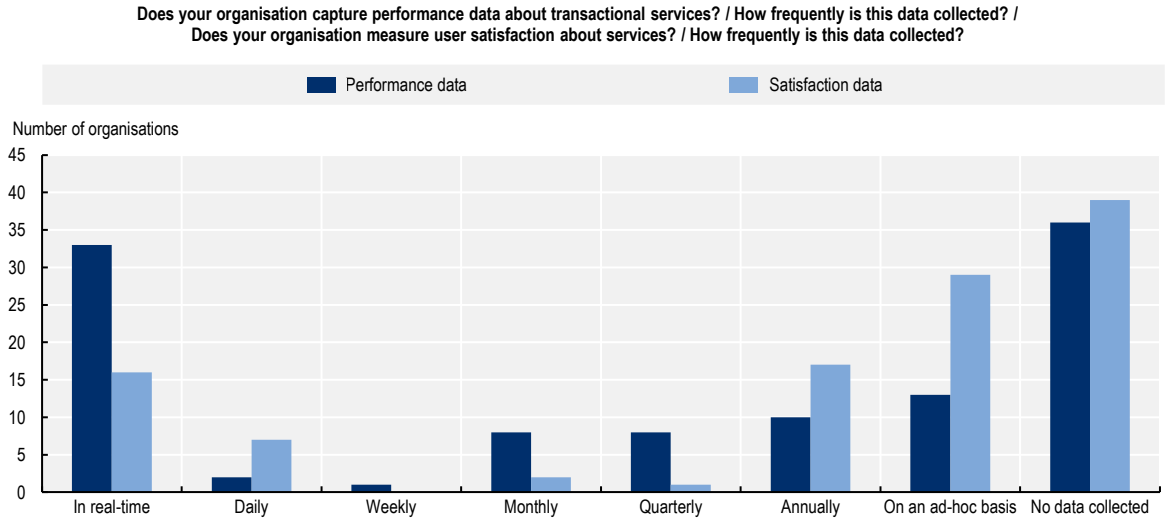
The most actively enthusiastic organisation to talk about working in an agile fashion was one of the public enterprises, the Turkish Radio and Television Corporation (*Türkiye Radyo Televizyon Kurumu,* TRT). They are working with an external supplier to replace their internal software. Observing that embracing agile is a question of organisational culture, they found that this was actually more challenging for the supplier. However, working together with a shared commitment to getting something concrete into the hands of their users quickly has paid dividends for not only the Turkish Radio and Television Corporation but the supplier too. A further encouraging experience came from the Istanbul Electricity, Tramway and Tunnel General Directorate (*İstanbul Elektrik Tramvay ve Tünel İşletmeleri Genel Müdürlüğü*) and their iteration of the MOBIETT application into a 'Public Transport Assistant' combining route planning, timetables, nearby stops, reloading points for the Istanbulkart as well as future plans for car parking, bike rental and the ability for passengers to rate their drivers.

Although the survey and interviews carried out to support this review did not find extensive evidence of the Turkish public sector embracing agile delivery methodologies in terms of a culture of software engineering, one of the most mature aspects of the service design and delivery experience in Türkiye is around feedback loops, with performance data and feedback being recognised as a critical contributor to improving services.

A majority of organisations in Türkiye are using performance and satisfaction data to improve the user experience whether in terms of the speed with which pages load, the time it takes to process a paper-based request or the language associated with a particular transaction. Moreover, institutions are expected to carry out the studies into the user experience and associated processes before services are migrated to the e-Government Gateway. While this is broadly encouraging and underlines the ownership of users' needs by the responsible organisation at the outset, the OECD found organisations considering that they had dispensed with their responsibility in migrating to the e-Government Gateway. As has been discussed, any outsourcing involved in providing a service introduces the potential to lose the connection between user, their needs and the organisations responsible for the service itself.

Other uses of performance and satisfaction data include the identification of unmet needs, the catalyst for bridging organisational siloes to discuss a common challenge, improving the quality of data, business planning, management reporting to senior officials and in some cases revising legislation. Of the 111 service providing organisations surveyed, 68% (75/111) collect data on the performance of their services and 65% (72/111) collect data on satisfaction with services.[10] As Figure 5.5 shows, there is a mix in how frequently they do so and a contrast between performance and satisfaction. A significant minority of organisations are not collecting either performance or satisfaction data at all, 40% (44/111) of service providing organisations collect performance data at least monthly, compared to 23% (25/111) who do so for satisfaction. Indeed, it is much more likely for organisations to take a longer-term or even ad-hoc view in measuring satisfaction with 64% (46/72) of the organisations that collect satisfaction data doing so with no structure or once a year compared to 41% (31/75) of those collecting performance data.

Figure 5.5. Frequency with which organisations collect performance and satisfaction data in Türkiye



Note: Based on the responses of 111 institutions.
Source: OECD (2021[26]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 3.11.2, 3.11.4, 3.12.1 and 3.12.3.

How Türkiye's efforts to combat COVID-19 benefitted from service design and delivery

The COVID-19 pandemic has presented governments with the most challenging of situations many have faced in a long time. The availability of digital technologies and data offered many opportunities to meet new and emerging needs but also presented challenges in governance, decision making and effectiveness. As part of the survey to support this review, public sector institutions were asked to reflect on how service design and delivery had helped in having a user-driven and proactive mindset in fighting the pandemic.

The Ministry of Family and Social Affairs (*Aile ve Sosyal Hizmetler Bakanlığı*) faced a significant challenge in the initial outbreak of the pandemic. With responsibility for social assistance, the organisation faced unprecedented demand but did not have an existing digital service to draw on. When the pandemic prevented normal operations from taking place, the service had to be quickly migrated to a digital channel. The Ministry created a pandemic-specific application that was lighter touch but could handle the increased demand in the short-term. Alongside this approach, the digital transformation of the standard procedure was developed covering the more detailed and comprehensive route.

With the pandemic causing widespread disruption and requiring many more individuals to seek support from state benefits such as social assistance there was a renewed awareness of the challenges facing the more marginalised in society in general terms but also specifically in terms of their digital literacy. Any transition that makes digital the default has the potential to leave people behind and this was a particular risk during a time where ordinary, face-to-face services were no longer available.

Possibly the most important resource for ensuring the continuity of government during the pandemic was the e-Government Gateway. As organisations saw that they needed to move quickly and develop new policies to meet the needs of society existing, organisation specific channels and infrastructure could not cope with the demand. This saw many organisations migrating to the e-Government Gateway in a matter of weeks and days. Indeed, some services launched in only 24 hours.

For some organisations, the pandemic unblocked challenges that they had been struggling to address for many years. In one public enterprise, a 20-year-old piece of software had been a barrier to transforming the operations of the organisation, preventing its customers from obtaining a digital contract and requiring home visits to secure a signature. The pandemic prevented home visits and forced this long-standing issue to be resolved not only through their own website but via the e-Government Gateway too. Now, should this wish to, their customers can meet all their needs online.

The most impacted area of service provision by COVID-19 was of course the health sector. Türkiye was fortunate that the health sector, as a whole, had been working towards its coherent digital transformation for many years. As such, when the pandemic broke out they drew on digital capacities that were already in place to develop Türkiye's contact tracing application in 30 days. Strong connections to the other ministries helped to navigate more complex interoperability and integration based on the existing networks and the knowledge of how to deliver the greatest impacts. While the Ministry of Health (*Sağlık Bakanlığı*) took the lead in providing a technical solution,[11] the challenge of addressing the whole problem in making it viable and usable required good partnerships across organisational boundaries. For example, the Turkish model for restricting movement was to require railway passengers to have a contact tracing code, but such an approach could not be enforced without the Ministry of Interior (*İçişleri Bakanlığı*) or the railway providers. Years of developing strong, collaborative relationships meant that when the crisis hit, those networks were resilient and capable of helping to achieve the necessary transformative impacts.

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Notes

[1] OECD (2021[26]), Questions 4.6.1: "Within your organisation is there sufficient data storage capacity?" and 4.6.2: "Within your organisation is there sufficient IT infrastructure (hardware, software, networks, services)?".

[2] OECD (2021[26]), Question 2.2.2: "How many full-time equivalent roles does your organisation employ to work in the following areas?".

[3] OECD (2021[26]), Question 3.8.2: "Are any of the following external actors involved in the design and development of public services by your organisation?".

[4] OECD (2021[27]), Question 2.2.4: "Do ministries/administrations promote the use of multidisciplinary teams (involving for example designers, engineers, subject matter experts, content specialists, policy makers, and procurement professionals) for delivering digital, data and technology projects?".

[5] OECD (2021[26]), Question 2.2.1: "Which of the following professional specialisms are found in the workforce of your organisation?".

[6] OECD (2021[26]), Question 2.2.2: "How many full-time equivalent roles does your organisation employ to work in the following areas?".

[7] OECD (2021[26]), Question 3.8.3: "Which of the following methods do you use to engage these external stakeholders?".

[8] OECD (2021[26]), Question 3.8.1: "Does your organisation follow guidelines/standards relating to the engagement of users in the design process of government services?".

[9] OECD (2021[26]), Questions 4.12.1: "Does your organisation use data to anticipate and plan government interventions (for example, in designing policy, anticipating change, forecasting needs and imagining the future)?" and 4.12.2: "In which of the following areas does this take place? [To develop a deeper and more rounded understanding of the needs of citizens and engage citizens as co-creators of value]".

[10] OECD (2021[26]), Questions 3.11.2: "Does your organisation capture performance data about transactional services?" and 3.12.1: "Does your organisation measure user satisfaction about services?".

[11] That technical solution, the Life Fits Into Home (*Hayat Eve Sığar*, HES) app will be discussed in more detail in Chapter 5.

6 Cementing building blocks and shared services for improved capabilities

This chapter analyses and assesses the approach to cementing building blocks and shared services for improved capabilities using pillar 3 of the OECD's Framework for Service Design and Delivery. The chapter considers the availability of enabling resources and tools that help service teams to respond to the needs of their users at scale, and with pace, while retaining quality and trust. These include guidance and good practice, governance processes, the omni-channel strategy, working on digital inclusion, investing in common components and briefly considering both public sector skills and data although these are the focus of Chapters 4 and 7. The chapter concludes with considering how these building blocks supported Türkiye through the COVID-19 pandemic

Introduction

The politics, structures and organisations behind the design and delivery of public services are complex and historic. Countries have thousands of services supporting citizens, businesses and visitors to go about their daily lives. In Türkiye, the institutions that completed the survey in support of the Review indicated the total number of services they provide to citizens, businesses and other public sector actors was almost 21 000.[1] A high proportion of these are concentrated in just a few organisations with 79% (81/102) of organisations providing fewer than 50 services.

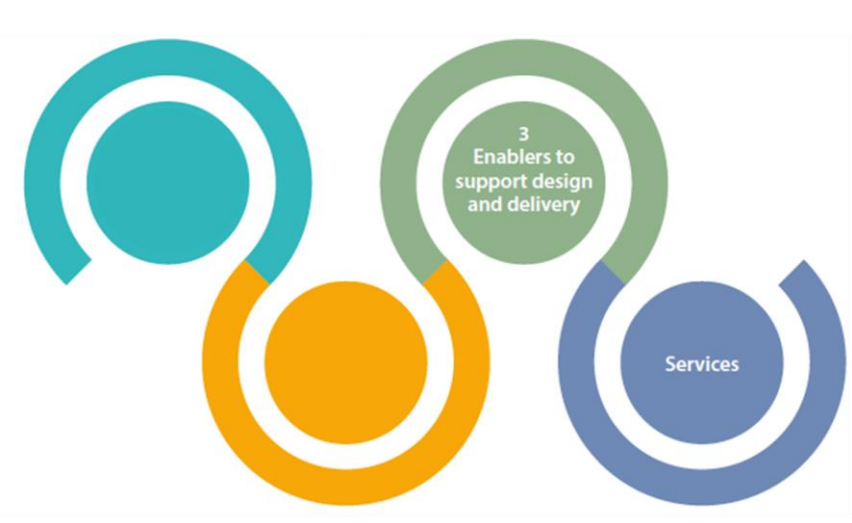
Services are administered by different organisations with varying governance, accountability to democratic structures or quality. As the ambition for digital transformation is improvement across the public sector, this makes it essential to find ways to design and deliver high quality services at scale and with pace as opposed to slow, expensive and inefficient piecemeal approaches. Consequently, the OECD advocates for "Government as a Platform", presented in the OECD Digital Government Policy Framework (2020[1]) as offering the opportunity for:

- An ecosystem that supports service teams to meet needs.
- A market place for public services.
- Rethinking the relationship between citizens and state.

These opportunities are not mutually exclusive but are sequential in reflecting an iterative approach to digital transformation and the ambition for open government. As discussed in Chapter 5, there are some limitations in the current state of "Open by default" practices in Türkiye that do not reflect the ideas of reimagining democracy captured by the most mature level of "Government as a Platform" thinking. However, there is much to be commended in how Türkiye is already creating an ecosystem to support service teams to meet needs, and the potential to develop this as a market place for public services.

One of the misconceptions about "Government as a Platform" is that the focus is solely on questions of technology. Such a focus is in line with a culture of e-government and not digital government because it engages less with the value of creating the enabling environment which will better meet citizen needs. Seven different areas (see Figure 6.1) have been identified as helping to effect changes to culture and philosophy while scaling the capacity to design and deliver public services that meet user needs.

Figure 6.1. The OECD Framework for Public Service Design and Delivery: Enablers



Source: OECD (2020[2]), *Digital Government in Chile – Improving Public Service Design and Delivery*, https://dx.doi.org/10.1787/b94582e8-en.

"Government as a Platform" ecosystems are the critical foundations that support and equip service design and delivery teams to meet the needs of their users. Building such foundations is not glamourous, it is not quick and because the returns are not immediate, it is harder to get the financial or political backing to do it. Bringing these vital enablers of a digital state to fruition therefore needs committed leadership to champion a long-term vision and secure the necessary resources to create and iterate them over time. Around the world, "Government as a Platform" ecosystems showed their worth in ensuring that countries could respond to the challenges presented by COVID-19. Where governments could draw on these resources they were a powerful demonstration of long-term digital government leadership and associated strategies to secure transformation (Welby, 2019[3]).

As with Türkiye's long-standing narrative around user-oriented and end-to-end service design and delivery there has been a visible commitment to thinking about developing a "Government as a Platform" ecosystem of building blocks and enabling resources for several years. The *2016-2019 National e-Government Strategy and Action Plan* established an objective to implement common systems in response to several challenges (Ministry of Transport, Maritime Affairs and Communications, 2016[4]). These challenges included the recognition that a lack of common approaches was responsible for inconsistency in the quality of services received by the public as well as leading to increased costs from duplication and the lack of standardisation. Moreover, it was understood that too often institutions were operating in isolation from one another without identifying mutual solutions and holistic processes.

This chapter will consider the situation in Türkiye as it concerns best practices and guidelines; governance, spending and assurance in the context of service design and delivery; the channel strategy; the common components and tools; and digital inclusion. While the topics of data and talent and skills will be touched on briefly in terms of their role to enable the transformation of services, their full discussion can be found in Chapter 4 for digital talent and skills, and Chapter 7 for data.

Providing guidance and sharing good practice

As discussed in Chapter 4, there is considerable talent employed in-house within the Turkish public sector. The first area to explore how distributed knowledge and insight can be brought together into commonly agreed understandings of "what good looks like" in terms of designing and delivering quality public services. Materials can include style guides for content, documentation for APIs or more comprehensive Service Manuals, such as the UK example discussed in Box 6.1, detailing everything involved in the digital transformation process. These efforts provide a twin focus in helping to disseminate useful guidance throughout the public sector and in so doing create a consensus view of quality that allows for greater comparability from one organisation to another.

The Digital Transformation Office (*Dijital Dönüşüm Ofisi,* DTO) is responsible for co-ordination with ministries and developing shared resources. Currently, the DTO response to the survey indicated that they are not providing centrally standardised formal models relating to project management, change management or the application of agile methodologies in data, digital and technology projects.[2]

Efforts to create this guidance predate the creation of the DTO with the Interoperability Essentials Guide (*Birlikte Çalışabilirlik Esasları Rehberi*) first published in 2009 and most recently updated in 2012 (Ministry of Development, 2012[5]). Additionally, the Public Web Site Guidelines (*Kamu İnternet Siteleri Rehberi*, KAMİS) were first created by the Scientific and Technological Research Council of Türkiye (Türkiye *Bilimsel ve Teknolojik Araştırma Kurumu*, TÜBİTAK) in 2006 and updated in 2018 which provide detailed explanations and examples related to accessibility and usability. The guidelines take TS EN ISO 9241-15, WCAG 2.1 and ISO/IEC 40500:2012 as a reference, Similarly ISO Standards, including those concerning Web User Interface or Web Content have been recognised in different organisations. However, these efforts have not enjoyed widespread adoption due to a lack of overall guidance or any mechanism for

continuing to develop and iterate their application in the context of Türkiye in consultation with other parts of the public sector.

Box 6.1. The United Kingdom's Service Manual

The United Kingdom has a mandated 14-point Service Standard[3] 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 and accessibility, agility, openness and reliability. The Service Standard underpins a common approach to agile delivery and embeds a culture of regularly releasing new or improved services through user-driven iterations.

Alignment with the Service Standard is supported through the guidance contained within the Service Manual[4] covering team management, user research, service design and delivery and measuring impact.

The content for the Service Manual is produced by members of the different communities of practice responsible for these areas of activity as a collaborative and cross-government exercise. Additional guidance is also developed by dedicated central teams covering areas such as the guidance on making sure technology, infrastructure and systems are accessible and inclusive for all users.[5]

Source: Welby, B. and E. Hui Yan Tan (2022[6]), "Designing and delivering public services in the digital age", https://doi.org/10.1787/e056ef99-en.

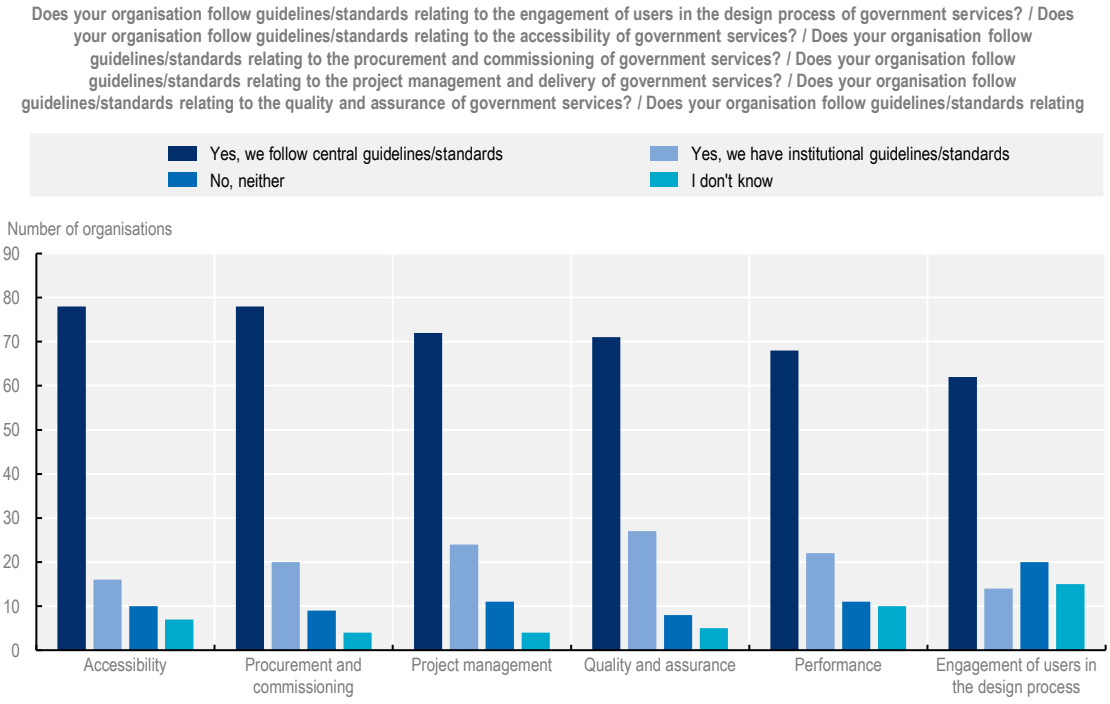
Nevertheless, the OECD team observed a broad consensus during the Review that the DTO is seen as being effective in understanding and identifying common needs and that it responds well in terms of ensuring the viability and success of projects. Should the DTO decide to develop formal models in the areas that are currently lacking, Box 6.2 suggests there would be enthusiastic adoption with many organisations believing that centrally developed guidelines and standards do exist to cover several important topics. However, only 23% (26/111) of service providing organisations considered that access to shared guidance and documentation was an enabler in their service design and delivery efforts.[6] This was the lowest proportion for any of the enablers identified in this question and perhaps reflects that Türkiye does not offer an obvious focal point for these materials such as **Colombia**'s Arquitectura TI, **Slovenia**'s National Interoperability Framework, or the **United Kingdom**'s Service Toolkit.[7]

Arguably the most important piece of shared guidance is the Public Information and Communication Technology (ICT) Project Preparation Guide (Ministry of Development, 2017[7]; Presidency of Strategy and Budget, 2021[8]). The guide has several objectives including identifying and avoiding potential duplication of projects and ensuring that project proposals follow current national strategies and their associated action plans. This document guides organisations through the processes for securing funding and ongoing reporting through a collection of templates, guides, checklists and sub-guides depending on the nature of the investment application being made. Currently the guide and its associated documents are all separate PDFs and there could be merit in applying service design thinking to the internal operational culture and approach to this process of securing funding.

There is scope for a central collection of guidance and good practices to collect not only central government guidelines but to amplify the work of sectoral teams who are producing materials that would benefit their colleagues elsewhere in the public sector. For example, the Public Procurement Authority (*Kamu İhale Kurumu*) is actively producing guidelines and support materials for helping people (albeit with a greater focus on the functionality of the Electronic Public Procurement Platform (*Elektronik Kamu Alımları Platformu*, EKAP) than on procurement to support digital transformation).

A further opportunity to develop guidance and shared good practices is in the area of personal data protection. The Turkish public sector has a very high awareness and focus on the Personal Data Protection Law (*Kişisel Verilerin Korunması Kanunu*, KVKK) No. 6698 (Republic of Türkiye, 2016[9]). Organisations need to understand a myriad of manuals and content in order to operate in a proper way. There could be an opportunity to present this material in a more user friendly and digestible format. In addition, several organisations indicated that there was an opportunity to reach a common approach to the use and language of disclaimers, clarification and consent texts that could be centrally tested and iterated in response to user research.

Figure 6.2. Guidelines recognised by Turkish public sector institutions



Note: Based on the responses of 111 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 3.8.1, 3.8.4, 3.9.1, 3.9.2, 3.10.1 and 3.11.1.

Good practices do not only come from a single organisation or sector, which makes it important to create communities of practice, reflecting the multi-disciplinary model discussed in Chapters 4 and 5, where practitioners can collectively develop a shared understanding and approach to leading the conversation forward in their specific professional domain. One area that may lend itself well to establishing such a cross-government community of practice is content design. One of the most important tools in fighting the COVID-19 pandemic has been the importance of clear, concise and reliable information to ensure government messaging is well understood, services are obviously signposted, and demand on the channels needed by the most vulnerable is reduced. Content design as a discipline should not be neglected. Preparing good content is an active exercise, informed by data and evidence, to communicate clearly. The language of information and transactions shapes how easily users find services, and whether or not they can successfully answer their problems when they do.

Governance processes that define and support quality public service design

It is always preferable to encourage people with the right tools and skills to be autonomous, and so guidance and good practices can be a valuable enabler in organisations where the service design and delivery culture discussed in Chapter 5 is well established. However, as organisations work towards that change in mindset it may be helpful for central co-ordinating actors, such as the DTO, to play a more directive role in establishing rules, and other control or audit mechanisms that encourage a particular set of outcomes. Chapters 2 and 3 discussed the governance model and policy levers that exist for digital government in Türkiye overall and there are particular ways in which these elements can be building blocks for achieving a user-driven and proactive approach to service design.

As discussed in Chapter 3, the OECD *Recommendation of the Council on Digital Government* Strategies recognises that business cases are critical for achieving sustainable digital government (OECD, 2014[11]). As countries consider their approach to digital government investments, it is important that funding is available to achieve services that can be iterative, agile and able to focus on meeting whole problems that cut across organisational boundaries.

In theory, Türkiye has a governance process to approve and then track the procurement and execution of digital projects of any value and particularly those above a budget of TRY 30 million (Turkish lira) (Ministry of Development, 2017[7]; Presidency of Strategy and Budget, 2021[8]). This figure was revised in 2021 from the previous threshold of 10 million which removes a potentially significant number of digital projects from closer scrutiny. The Public ICT Project Preparation Guide (discussed in Chapter 3) has a clear aim in ensuring that project proposals are consistent with current national plans and associated strategies. It provides a range of resources consisting of templates, guides, checklists and sub-guides depending on the nature of the investment application being made. However, despite the general acknowledgement of the DTO's role and mandate in leading digital government, only 19% of surveyed organisations (22/113) registered an awareness of this guide and its standardised model for data, digital and technology projects.[8]

Despite reportedly low levels of awareness for the Public ICT Project Preparation Guide, it represents an important effort in governing a wide range of operational challenges for digital, data and technology projects. However, the organising principle is to present projects in terms of investment type (such as technology, infrastructure, data or capacity building) and emphasises the needs of stakeholders and technology as the focus rather than being a mechanism to encourage the consideration of user needs and responses to user research. Responding to a well-understood need and addressing 'whole problems' (as discussed in Chapter 5) requires a multi-disciplinary, crosscutting approach that considers different categories of activity (whether software, hardware, organisational structure, data, infrastructure or capacity building). The guide reflects the existing operational reality in Türkiye but if investment types are considered in isolation and discrete teams work independently on different work packages this may embed siloes and reinforce unhelpful structures rather than helping to achieve the overall ambition of equipping organisations to respond comprehensively to the needs of their users.

One of the other characteristics of the governance for service design and delivery in Türkiye is the prominence of Total Quality Management (TQM) and International Organisation for Standardisation (ISO) standards. Many of Türkiye's public sector institutions have established processes and models for understanding service design and responding to these international benchmarks that involve external accreditation. These activities are not mandated across the public sector and respond to agreed international and corporate approaches without necessarily considering what might reinforce the strategic approaches set out in Türkiye's National Digital Government Strategies or reflecting emerging best practices from public sector actors around the world. As such, there is a high proportion of organisations that are evaluating the performance of their services and considering how they might be improved but few of them are doing so according to a shared definition and understanding of 'good' in the context of the public sector. Türkiye may find it valuable to adopt a 'Service Standard' detailing its expectations for how services are produced that draw on the Good Practice Principles developed by the OECD (see Box 6.2)

and which would then require an assurance process where teams have their progress assessed against the Standard.

Box 6.2. The OECD Good Practice Principles for Public Service Design and Delivery in the Digital Age

The OECD Good Practice Principles, consisting of three fundamentals, nine principles and 68 sub-principles, provide the basis for using digital technologies and data to improve the design and delivery of public services, in every administrative environment or level of government.

They were developed through the ongoing collaboration of the OECD Working Party of Senior Digital Government Officials (E-Leaders) Thematic Group on Service Design and Delivery and the OECD Secretariat.

They represent a composite built from service standard approaches identified from around the world.

Build accessible, ethical and equitable public services that prioritise user needs, rather than government needs

1. Understand users and their needs (plus five sub-principles).
2. Make the design and delivery of public services a participatory and inclusive process (plus eight sub-principles).
3. Ensure consistent, seamless and high-quality public services (plus ten sub-principles).

Deliver with impact, at scale and with pace

1. Create conditions that help teams to design and deliver high quality public services (plus eight sub-principles).
2. Develop a consistent delivery methodology for public services (plus eight sub-principles).
3. Curate an ecosystem of enabling tools, practices and resources (plus nine sub-principles).

Be accountable and transparent in the design and delivery of public services to reinforce and strengthen public trust

1. Be open and transparent in the design and delivery of public services (plus five sub-principles).
2. Ensure the trustworthy and ethical use of digital tools and data (plus eight sub-principles).
3. Establish an enabling environment for a culture and practice of public service design and delivery (plus seven sub-principles).

Source: OECD (2022[12]), "OECD Good Practice Principles for Public Service Design and Delivery in the Digital Age", https://doi.org/10.1787/2ade500b-en.

Commitment to an omnichannel strategy

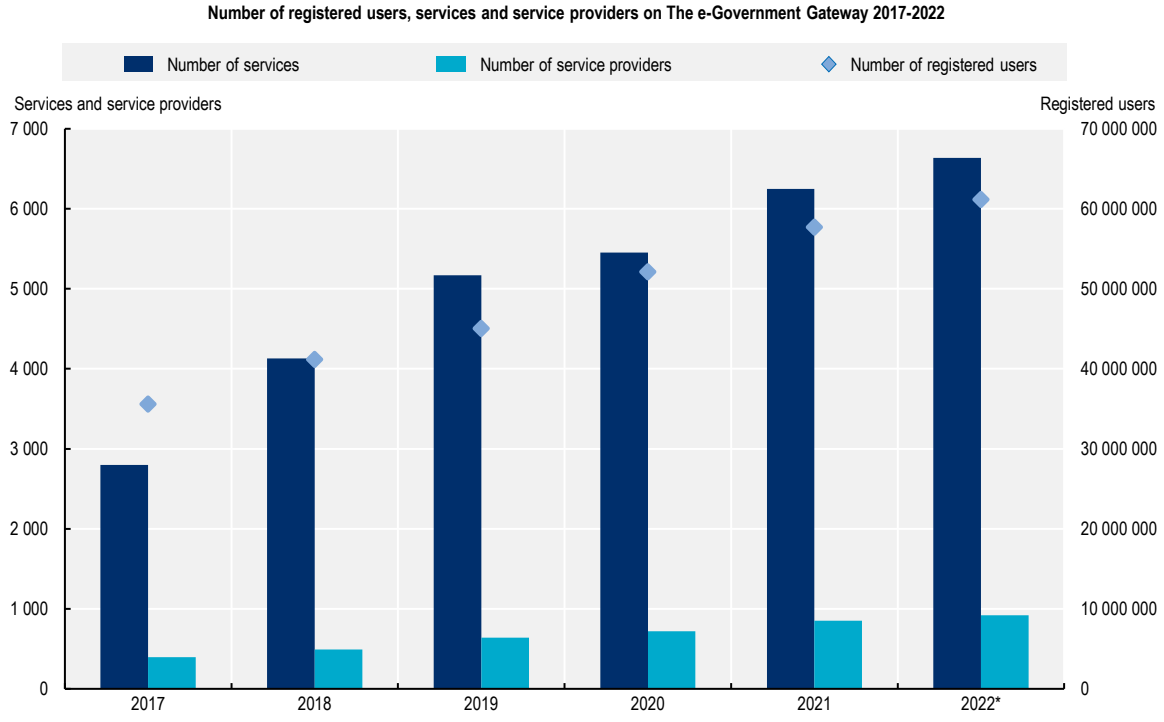
The most tangible moment of experiencing the relationship between a citizen or business and the state is the channel through which government services are delivered and consumed. The origins of transactional government services are in paper and face-to-face exchanges, which over time have given way to telephone based and digital channels. Although the needs have not changed the evolution of the service

experience to meet them has not happened evenly with people needing to navigate paper-based, physically in-person, telephone or digital elements to see their 'whole problem' addressed.

Although the COVID-19 pandemic demonstrated that fully remote approaches to providing services are essential, the pre-pandemic reasons why digital by default approaches should be avoided remain. As such, it is vital to establish a clear omni-channel strategy (with the necessary mandate) to account for and understand the interplay between different channels in order to enable public service teams to respond most effectively to the needs of their users. Such a strategy forms an important part of a Government as a Platform ecosystem as it facilitates and depends on establishing tools to support services that bring the physical, offline and digital elements of a service together, ensuring the same experience for all users, in all contexts, through all channels.

The strategy in Türkiye places the emphasis on the digital channel. The Eleventh Development Plan stated the priority of transferring services to the e-Government Gateway to increase usage, cost effectiveness and security (Presidency of Strategy and Budget, 2019[13]). The e-Government Gateway is the most important mechanism for integrating the online experience for citizens, ensuring co-ordination between different elements of government and replacing paper and many in-person interactions. In 2017, the e-Government Gateway had 35m registered users and worked with 400 organisations to provide 3 000 services; 5 years later, the website helps 920 organisations provide over 6 600 services to 61m registered users.[9]

Figure 6.3. The e-Government Gateway 2017-2022



* 2022 reflects data through to 9 November 2022.
Source: Data provided by the DTO and available on the homepage of https://www.turkiye.gov.tr.

However, alongside the e-Government Gateway, each public sector organisation continues to operate their own web presence, branding, data and services. Distinct mobile apps and institutional or sectoral approaches to websites, face-to-face and telephone-based interactions are recognised as important elements of the channel mix by a number of organisations.[10] Indeed, the later section of this chapter

focusing on sector-specific components highlights teams and software solutions apparently operating in parallel. The strategy for the e-Government Gateway to co-exist alongside organisational and sectoral approaches is not the same as limiting the number of government websites and creating a unified user experience as pursued by fellow OECD members such as **Brazil**, **Greece**, **Ireland**, **Slovenia** and the **United Kingdom**.[11] Moreover, the e-Government Gateway is not complemented with a strategically aligned in-person counterpart such as the experiences of Service Canada in **Canada**, ChileAtiende in **Chile**, KEPS in **Greece** or Citizen Shops and Citizen Spots in **Portugal**. This highlights the importance of developing a clear omni-channel strategy that understands and plans for the full landscape of service provision in terms of how different channels should or could work together effectively whether or not they remain as independent as they are today.

From the digital point of view there is momentum behind migrating to the e-Government Gateway with many organisations, including commercial enterprises, detailing how the majority of the services they provide are already available, or in the process of being migrated. However, some organisations are caught between maintaining their own digital infrastructure and a full migration to the e-Government Gateway. Being in a position of maintaining organisation-specific infrastructure alongside operating in the context of the e-Government Gateway introduces obvious challenges in terms of ongoing maintenance, security considerations and the relevance of long-term investment. This is particularly true for the organisations with the desire to move more quickly, but which are facing organisational constraints in terms of funding, access to skills, or having the leadership and vision to pursue full migration. Furthermore, service providers whose activities are critical to the functioning of Turkish society, such as the Revenue Administration (*Gelir İdaresi Başkanlığı*) or the Land Registry and Cadastre (*Tapu ve Kadastro Genel Müdürlüğü*, TKGM), stated a willingness to migrate while holding the position that they could only do so partially because of what would be involved in achieving a full consolidation.

Because some organisations are operating dual infrastructure, they are able to compare and contrast their experience and provide feedback to the DTO and Türksat on the operation of the e-Government Gateway. One organisation reflected that if their motivation was about their own autonomy and moving at their preferred pace then they would favour their own independence. However, they had a clear appreciation for the shared vision and corporate benefits of using the e-Government Gateway, particularly in its contribution to creating a more integrated public sector.

Nevertheless, the residual multiplicity of digital channels means that the starting point for the strategic conversation around the online experience of service design and delivery in Türkiye is one of divergence and autonomy rather than federated collaboration. From the perspective of service providing institutions surveyed for this Review, their own websites remain the primary focus with 96% of organisations (107/111) indicating that at least some of their transactions were handled through this channel (in contrast to 71% (79/111) doing so through the e-Government Gateway).[12] As a result, this introduces a greater overhead in terms of co-ordination and challenges in terms of solving whole problems and designing end-to-end services as well as the approach to security, standards and quality.

Overall, the 110 service providing organisations that provided figures for annual transactions as part of the survey gave a cumulative total of 379 billion for 2020-21. Of this total, the Social Security Institution (*Sosyal Güvenlik Kurumu*, SGK), accounts for 300 billion.[13] This organisation overwhelms the analysis of the channel split across the country as a whole and so it is more helpful to consider the range of channels being used without this outlier. When considering the distribution and weighting of the 79 billion transactions reported for 2020-21 by the remaining 109 organisations then organisational websites continue to be the primary destination for users, handling 21.5 billion (27%) while the e-Government Gateway takes responsibility for 13.8 billion (17%).[14] The third most popular channel are the mobile applications developed by individual organisations.

Online interactions represent the majority of all transactional activity between citizens, businesses and the state with 47% of the activity involving these 109 organisations coming through websites and a further 13% coming from mobile apps. However, this leaves a significant minority of interactions that are not available online. Indeed, the SGK handled 35% of its reported 300 billion transactions for 2020-21 in person in its own offices (20%) or in shared centres (15%). A further 20% of those contacts were handled by telephone, evenly split between their own service and a shared helpline. Among the remaining 109 organisations, telephone and in-person channels account for over 25 billion transactions in total. In 2020-21, face-to-face provision accounted for 14.6 billion transactions (18% of the total, comprising 11% in standalone organisation specific offices and 8% through shared centres) and telephone provision reflected 10.8 billion transactions (14% of the total, comprising 11% in shared centres and 3% through standalone channels).

The review team heard about several examples of in-person service locations functioning as administrative outlets for different government departments and agencies. Prior to the COVID-19 pandemic, these physical services were a highly appreciated part of the infrastructure for the public sector, as citizens knew that they could be helped in-person with minimal friction and no cost. One of the most prominent networks is that provided by the General Directorate of Population and Citizenship Affairs across 973 district centres and 81 provincial centres through which they manage the issuing and renewal of passports, driving licences and digital identity. Within the Land Registry and Cadastre (*Tapu ve Kadastro Genel Müdürlüğü*, TKGM) there are 974 land registry offices, 81 cadastre offices in each province and 24 regional directorates. All of these offices and directorates are supported by a dedicated call centre. While there is the suggestion that 70% of citizen contacts could be transferred to a digital environment there remains a need for real signatures to take place in these offices.

The omni-channel approach does already exist in Türkiye, particularly at the municipal level where interactions with the public are often more wide-ranging and frequent than found in the context of central government. In general local government services are offered online but there will always be physical channels, which means that these organisations are already thinking in terms of an omni-channel approach. The municipal governments were quite insistent that their focus is ensuring access to services and that convenience means different things to different people. The Gaziantep Metropolitan Municipality has established the Communication Co-ordination Centre to collect feedback through all available channels and help deliver better services to their community by being able to understand their needs and demands.

Türkiye is achieving a good level of digital adoption and while there are ambitions to see this level increase, efforts to introduce a “digital-by-default” approach that removes offline access can exacerbate digital divides and fail to respond to the needs of particular sections of society (as discussed in the section on digital inclusion). Moreover, not every service, or its individual elements, is suitable for digital transformation. During the review, the team heard about several different constraints on fully migrating online, which included:

- Paper-based or in-person processes are set out in legislation.
- The complexity and expense of redesigning the service is not a priority compared to easier and cheaper options.
- The nature of the service itself will require human interactions such as those which take place at borders or in the context of physical goods.
- The need for public servants to engage with the built or natural environment under field conditions.
- Making sure that the public is not excluded through removing any offline channel.

It is therefore important to recognise that non-digital channels must always be recognised in the context of the service design and delivery experience. This presents two problems. First ensuring that users can find, access and understand the different elements that might be involved as part of a service. Second, that no matter the channel someone chooses, they should always be able to access a consistent, joined-up and high-quality service (OECD, 2020[2]; 2022[12]). A clear omni-channel strategy is needed to ensure that all offline and in-person experiences should benefit from digital technology and data as an enabler for making these experiences as seamless and as effective as possible.

Combatting the digital divide through digital inclusion

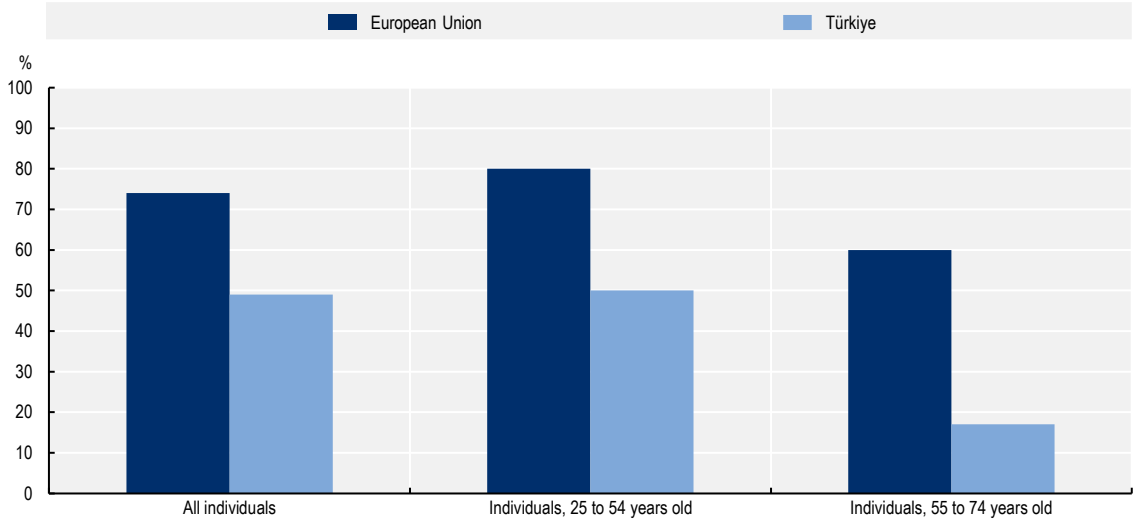
For digital transformation to be equitable and successful, it must make sure that participation in the life of society is not constrained by access to the internet. While the previous section has discussed the importance of ensuring that all service channels operate in concert, one of the enablers for improving the capability of a country to meet the needs of its society in the digital age is digital inclusion. The coverage, speed, reliability and affordability of the Internet as well as access to devices, the right assistive technologies or the necessary skills will all determine whether any increased focus on the Internet may exacerbate social inequalities. Digital government efforts should never make the digital divide worse and, with a mandate to consider the full role of digital in Turkish society, the DTO is well positioned to build strong links between the agendas of digital government, digital infrastructure and the digital economy.

The experience of the COVID-19 pandemic throughout the world brought greater prominence to the use of digital technologies and data in the design and delivery of public services. It would therefore be easy to conclude that the Internet has become ubiquitous for all. However, in some cases the impact of the pandemic may well have made things harder for those lacking the necessary skills or requiring additional, in-person support.

As noted in the previous section, 58% of interactions with government are carried out online, which supports the idea that there is a high level of digital sophistication in Türkiye. However, that still leaves a sizeable proportion of services being accessed through non-digital means. As has been discussed there are various reasons for this including the preference, requirements or capability of users. Chapter 2 considers the socio-economic factors in the Türkiye, including in terms of digital literacy. The offline experience cannot be overlooked in Türkiye as Figure 6.4 demonstrates that people in Türkiye are less likely to choose the Internet to fulfil a need than they are in the European Union with only 49% of the population purchasing something online in 2021 compared to 74% within the EU27. There is also a marked generational element within Türkiye with 17% of Turkish individuals aged 55 to 74 purchasing something online in 2021 compared to 50% of those aged 25 to 54. This underlines the importance of ensuring an omni-channel strategy that accounts for the full breadth of service experiences in Türkiye.

A further important area of consideration in understanding the digital inclusion landscape in Türkiye concerns the country's foreign-born population. While there are those who have chosen to migrate to Türkiye and make a new life for themselves out of choice, Türkiye is home to one of the world's largest refugee and asylum seeker populations, people whose presence in Türkiye is largely as the result of the conflict in Syria. While measures have been taken to ensure access to public health, education and social services, this segment of Turkish society may well experience exacerbated challenges in terms of access and affordability as well as the potential for language or cultural barriers that need to be considered in developing public services and responding to their needs.

Figure 6.4. Percentage of individuals who purchased something online in 2021 in Türkiye and the European Union



Source: Eurostat (2021[14]), *Internet Purchases by Individuals (2020 Onwards)*, https://ec.europa.eu/eurostat/databrowser/view/ISOC_EC_IB20__custom_2962106/default/table?lang=en (accessed on 22 June 2022).

According to the DTO, the priority given to digital inclusion in terms of national strategies is somewhat low[15] and the peer review team assessed that there is complacency on this topic. Although Türkiye has been a signatory to the United Nations Convention on the Rights of Persons with Disabilities since 2009 and revisions were made to the Law on Disabled Persons in 2014, there may be a need to revise or strengthen the provisions and any supporting activity to ensure accessibility for more vulnerable users (OHCHR, 2006[15]; Republic of Türkiye, 2014[16]). One organisation reported that when a service is made available online all other channels are closed. When asked to consider their responsibility for digital inclusion, 28% (32/113) of organisations indicated that they had initiatives in this area but when asked to elaborate many simply indicated the digital inclusion was the same as having services available online.[16] While there were some exceptions (see Box 6.3), such a response indicates a collective lack of understanding and awareness of the challenges of digital inclusion within the Turkish public sector. It could be valuable for Türkiye to consider developing a more coherent, cross-cutting and comprehensive strategy for digital inclusion that includes connectivity, accessibility, affordability and capability with the example of France's approach discussed in Box 6.4.

Box 6.3. Initiatives to support digital inclusion in Türkiye

The Republic of Türkiye's Industry and Technology Strategy 2023 considers 'Human Capital' as one of five critical areas in order to build digital skills and competencies throughout the workforce (Ministry of Industry and Technology, 2019[17]). To support the increase of digital activity, the Ministry of Industry and Technology (*Sanayi ve Teknoloji Bakanlığı*) offers training targeted at industrialists as well as activities to support women, youth, children, SMEs, start-ups and entrepreneurs.

The Ministry of Labour and Social Security (*Çalışma ve Sosyal Güvenlik Bakanlığı*) is working to remove barriers to employment for young people through the National Youth Employment Strategy 2021-2023. The strategy includes a focus on "Jobs of the Future" (*Geleceğin Meslekleri*) which hopes to increase knowledge and skills amongst young people to ensure their participation in the current and future labour

market. The General Directorate of Population and Citizenship Affairs (*Nüfus ve Vatandaşlık İşleri Genel Müdürlüğü*) is responsible for issuing passports, driving licences and digital identities. To support those with access needs a mobile service can visit users in their homes.

The Ministry of Youth and Sports (*Gençlik ve Spor Bakanlığı*) provides public access to Wi-Fi and training through youth centres and in dormitory education centres to help develop the digital competencies of young people.

The Ministry of Agriculture and Forestry (*Tarım ve Orman Bakanlığı*) carries out initiatives to support the digital transformation of farming and the capabilities of farmers.

The Ministry of Transport and Infrastructure (*Ulaştırma ve Altyapı Bakanlığı*) partners with non-governmental organisations to carry out training in the use and application of digital services for those who work on the sea or are involved in carrying goods on land.

Source: Compiled from information supplied during the interviews and surveys conducted as part of Ministry of Industry and Technology (2019[17]), *2019-2023 Sanayi ve Teknoloji Stratejisi*, Sanayi ve Teknoloji Bakanlığı, Republic of Türkiye.

Box 6.4. France's National Plan for Digital inclusion

The French National Plan for Digital Inclusion (*Plan national pour un numérique inclusif*) was launched in September 2018 as a strategic action by the French State Secretary for Digital, part of the French National Agency for the Cohesion of Territories (ANCT).

Its aim is to support the digital transformation of businesses as well as the development of a safe and human-centric digital society in France. Objectives and priorities relate to the provision of support and training to 1,5 million people in topics relevant to digital technology and 21st century competences and combatting the digital divide. Another strong focus of the plan is achieving digital inclusion for at least one third of the French population over the next 10 years. According to the estimates of the Agency, this translates to equipping a total of 4,5 million French citizens with basic digital skills.

Actions under the French National Plan for Digital Inclusion are launched within the framework of the 2030 targets put forward by the European Commission's Digital Decade, which aims to see 80% of European citizens develop basic digital skills in the next decade. The national plan also operates within the context of the four pillars of the European Digital Skills and Jobs Coalition: digital skills for citizens, for the labour force, in education, and advanced skills for professionals in the ICT sector. Actions and upskilling initiatives target the following societal groups:

Digital skills for all citizens

- Training and reskilling people to develop basic digital skills and promote the use of digital technology for everyone.
- Support citizens and improve existing digital infrastructures.
- Strengthen capacity-building of all citizens and enable their participation in the digital society.
- Support people in difficulty, jobseekers and the unemployed, as well as disadvantaged societal groups, left behind digital innovation processes.
- Promote the use of the online public service PIX, which offers a self-assessment tool for evaluating one's digital competence.
- Creating and promoting the use of digital passes and credentials on national level.

Digital skills for the labour force

- Supporting the labour force through consistent investment in upskilling initiatives on digital skills.
- Promoting the need for businesses to invest in digital skills training so they can capitalise on economic spin-offs.
- Build digital resilience with a special focus on providing support to public sector employees and capacity-building for professionals engaged in the care sector.
- Coordinating and streamlining between local actors, stakeholders, and communities.
- Other initiatives and actions launched within the French Strategic Plan aim to modernise existing education and vocational education and training systems and help institutions and students understand the type of skills required in the future, as well as training initiatives and projects which aim to support the development of advanced digital skills for professionals in the ICT sector and other digital experts.

Source: Digital Skills & Jobs Platform (2021[18]), *France - National Plan for Digital Inclusion*, https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/france-national-plan-digital-inclusion.

Long-term investment in common components and tools

The Eleventh Development Plan calls for the development of basic information systems, common infrastructure, services and standards (Presidency of Strategy and Budget, 2019[13]). Common components and tools are an important building block in helping the teams responsible for designing and delivering public services focus on the unique problems facing their users rather than devoting effort to challenges others have already addressed. Investing in a 'design system' for the Turkish public sector can not only reduce the overhead for developing new services but build greater public trust as a result of having a consistent look and feel for government services. Similarly, ensuring that the underlying architecture of websites is consistent, and content and data are published with semantic properties, can enable syndication and re-use (whether manually, or due to its machine readability). A sound and resilient technical infrastructure as the foundation for digital government efforts is an essential enabler to being in a position to reduce duplication, minimise overheads and unlock the potential to experiment with emerging technologies.

A Government as a Platform approach to common components and tools has a particular attraction for Türkiye in a context where several interviewees highlighted the uncertainty of procuring software or infrastructure solutions from non-Turkish Lira denominated suppliers due to exchange rate fluctuations. Encouraging open source and Türkiye-developed solutions have been identified as a strategic aim as part of the Eleventh Development Plan and the National Technology Move while the DTO is carrying out a circular study to consider what commercial software could be replaced by open source alternatives (Presidency of Strategy and Budget, 2019[13]; Ministry of Industry and Technology, 2019[17]).

The value of central teams addressing common problems is an opportunity for exploring collaboration between government institutions within a country, or across borders. The use of open-source code and open standards can mean the investment made by one country can provide teams in other countries with either a complete solution or the ability to reduce the development time involved in creating their own solutions.

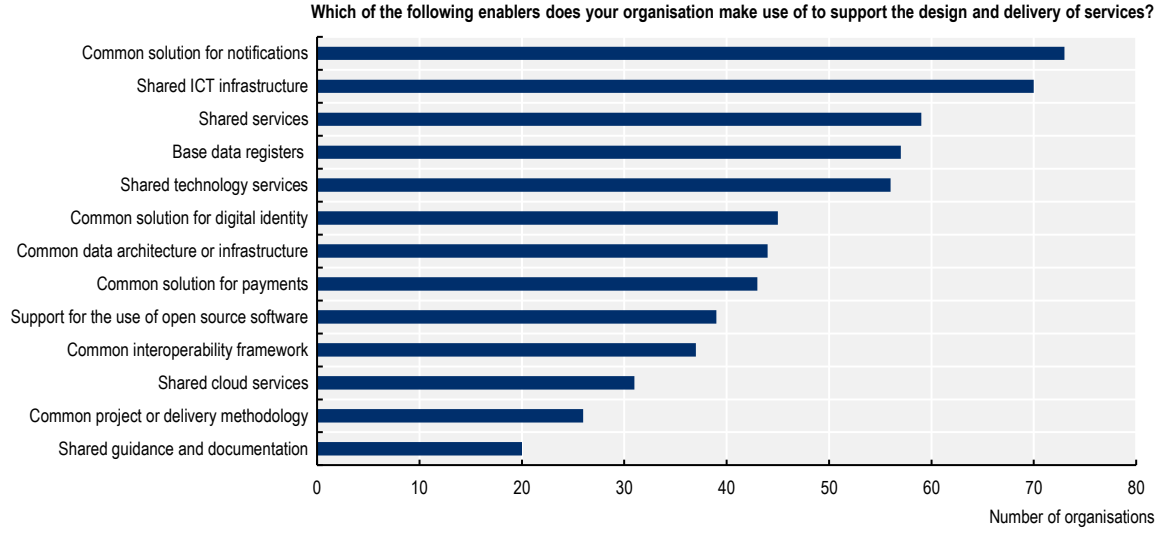
The investment involved in developing these resources needs to be recognised as a long-term commitment and accompanied with the ambition for teams at every level and in every sector of government to choose to adopt these elements with minimal central intervention. This aim relies on adopting the same philosophy to the design and delivery of common components as to public-facing services.

Having a product mindset to the provision of these common components means that adoption reflects the quality of the user experience and the ease with which these elements can be introduced rather than through an enforced or mandated adoption. In this way, it is necessary to spend time addressing impediments to adoption such as by revising legal arrangements, offering low-tech options, providing good documentation or removing any cost overheads. To this end, the idea of a 'service toolkit' as a single destination allowing for service teams to browse all the available components and tools could be a valuable development to explore.

The COVID-19 pandemic has further underlined the importance of having readily available and scalable solutions with shared data infrastructure, shared cloud and technology services, and common technical solutions being most frequently prioritised as a result.[17] Figure 6.5 indicates that Türkiye has a mixed experience in terms of the enablers that are on offer. Overall, only four organisations reported that they used none of the enablers, and six reported using all 13. The average number of enablers reported as being in use was five. In terms of the frequency with which individual enablers were reported, two in three organisations (66%, 73/111) report using a common solution for notifications with shared data centre infrastructure having a similar response rate. There is then a cluster of technologies including base data registers, common platforms, digital identity, common data architecture and payments, where adoption was reported by around 50% of the organisations. For shared cloud services, common interoperability framework, and support for the use of open source software, one in three organisations reported their use but only 13 organisations identified themselves as using all three.

The following section will discuss the different common components and tools that were identified during the Review. These include the e-Government Gateway, KAYSİS, the country's trust and identity services, web infrastructure and hosting, geographic information systems (GIS), e-Municipality, notifications, paperless government, payments infrastructure and several sector-specific components.

Figure 6.5. Enablers used to support the design and delivery of services



Note: Based on the responses of 111 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 3.7.1.

Accounting and financial management

The financial management systems underpinning the public sector are well suited to considerations of common components due to their ubiquitous nature. As discussed earlier in Chapter 3, Türkiye has developed the Integrated Public Financial Management Information System (*Bütünleşik Kamu Mali Yönetim Bilgi Sistemi*, BKMYBS). This project has developed a common technical architecture for integrating those central systems which are used for executing financial transactions across the public sector.

BKMYBS has made it possible to introduce common functionality into central government institutions that replaces localised solutions and more siloed approaches. Two examples of this are the Government Accounting Information System and the Expenditure Management System which are both built according to a microservice architecture using open source code by the Ministry of Treasury and Finance (*Hazine ve Maliye Bakanlığı*). They enable the centralised, digital management of all public accounting and expenditure management. The accounting system includes modules covering functionality including e-Invoice, e-Guarantee, e-Payment, e-Collection, and e-Documentation.

Appointment booking

An omni-channel approach to services involves enabling citizens to book appointments in a variety of channels. This is particularly important where in-person interactions are essential, such as in the context of medical. The Central Physician Appointment System (*Merkezi Hekim Randevu Sistemi*, MHRS) provides appointment booking for particular physicians or in selected hospitals as well as integrated with the e-Nabız platform (discussed later in this section). In-person meetings are also an important tool for the General Directorate of Population and Citizenship Affairs (*Nüfus ve Vatandaşlık İşleri Genel Müdürlüğü*). Their internal solution for booking appointments sees on average 300 000 appointments made every day.

There is not currently a commonly available component for handling appointment booking shared among other organisations but this existing tool could provide the basis for exploring either an open source project to be reused elsewhere, or the basis for developing a common component for all.

e-Government Gateway

The e-Government Gateway is the focus for the efforts to provide digital public services in Türkiye. There is a clear and well-understood strategy for the e-Government Gateway to act as the organising platform for the digital user experience.

In 2018, Presidential Decree No.1, gave the DTO responsibility for establishing and managing the e-Government Gateway (Presidency of the Republic of Türkiye, 2018[19]). The DTO subsequently authorised the Türksat Company, a public enterprise, to develop and operate the e-Government Gateway. Started in 2008, the e-Government Gateway originally offered 22 services from a handful of public institutions. Over the subsequent years the platform has grown and matured to now host over 6 600 services provided by 920 institutions. As the site has become more established its presence in the public consciousness has risen and there are now over 61m registered users and daily traffic of 9.4 million visits.[18] In this way the consistency of user experience within the services offered by the e-Government Gateway provides a model for considering the most valuable approach to developing a ‘design system’ for the Turkish public sector.

The team behind the e-Government Gateway work to ISO standards for both accessibility and user experience that means the site is not just focusing on the quantity of transactions made available but their quality too.

The e-Government Gateway is a critical common component for the work of service teams across government wishing to migrate their transactions and develop integrated services that solve 'whole problems'. The creation of the e-Government Gateway has created the opportunity for organisations to share data without having to rely solely on mutually secure VPN connections. Although it has not replaced the widespread reliance on integrating via VPN, one of the benefits of the e-Government is its role in handling data sharing and integration between organisations through the Public Application Center, a management platform for simplifying data sharing between institutions. Data sharing in Türkiye is discussed in more detail in Chapter 7.

However, there are some reported challenges in the model. In some cases, there has been internal resistance to exchanging organisationally managed and controlled solutions for the e-Government Gateway. The peer review team was told of one case where the process to secure internal approval took over four times as long as it subsequently took to complete the migration of the first service. A more frequent challenge is that caused by an organisation handing over their responsibility for a service to Türksat for delivery and management. Various institutions identified a role in specifying requirements that Türksat then turns into code. As such, there is not a shared and mutual process for user research to feed into the design and iteration of the service as a partnership between Türksat and the responsible organisation. Therefore, more than one organisation identified that the way in which the e-Government Gateway enforces a structure over data and the user journey does not necessarily reflect either user or organisational needs and can result in poor outcomes as a result.

Electoral systems

One of the most critical aspects of a well-functioning democracy is the electoral process. There is no consensus about the relative strengths and weaknesses of online approaches to the ultimate act of democracy in terms of casting a vote at the ballot box. However, in the context of the entire electoral process there are clear opportunities for digital government approaches to reimagine the role of technology and data in reducing the overheads and ensuring the trustworthiness of the process.

In Türkiye, the Election Information System (*Seçim Bilgi Sistemi*, SEÇSİS) ensures that the activities of provincial and district election boards during an election cycle are supported by a transparent, secure, impartial, and fast software platform.

SEÇSİS operates through its own private and encrypted network, that also meets the infrastructural needs for several other web services, and offers the following goals:

- To eliminate duplication in the electoral roll by maintaining a single, correct, up-to-date, and consistent database of every Turkish citizen, both at home and abroad, with voting eligibility verified by ID number.
- Providing a transparent, secure, cost-effective, easily auditable, and streamlined electronic environment in which to conduct election tasks and processes.
- Ensuring the rapid and secure transmission of election results from polling places to the Supreme Election Council (*Yüksek Seçim Kurulu*, YSK).
- Publishing election results in real-time and thereby allowing the public and political parties the same level of access.

The underlying foundations for SEÇSİS are provided by several systems operated by the General Directorate for Population and Citizenship Affairs (*Nüfus ve Vatandaşlık İşleri Genel Müdürlüğü*, NVI) under the Ministry of Interior (*İçişleri Bakanlığı*). Since 2008, the Central Population Management System (*Merkezi Nüfus İdaresi Sistemi*, MERNİS), the Identity Sharing System (*Kimlik Paylaşım Sistemi*, KPS), and the Address Registration System (*Adres Kayıt Sistemi*, AKS) have been integrated with datasets held elsewhere in government to ensure the integrity of the electoral roll.[19]

Geographic Information Systems (GIS)

The Turkish National GIS (*Türkiye Ulusal Coğrafi Bilgi Sistemi*, TUCBS) is another well-established common component launched in 2011. The creation of this infrastructure to support geographic information was included in the Information Society Strategy and Action Plan (2006-2010) as a responsibility for the General Directorate of Land Registry and Cadastre (*Tapu ve Kadastro Genel Müdürlüğü*, TKGM) (State Planning Organisation, 2006[20]). Today TUCBS is under the responsibility of the General Directorate of Geographic Information Systems (*Coğrafi Bilgi Sistemleri Genel Müdürlüğü*). TUCBS is a response to the need for a national platform for GIS as well as complying with the INSPIRE (Infrastructure for Spatial Information in Europe) European Union Directive to ensure that spatial data infrastructure is compatible and usable within the country and across borders (EU, 2007[21]).

Although Türkiye does not yet have a singular open government data portal, TUCBS provides a focal point for accessing the geographical data and metadata produced by the public sector with the platform recognised as being particularly valuable for organisations from the energy and mining sectors. There are currently some challenges in terms of the quality and standardisation of the data it holds but in making address and land data available, TUCBS has helped to develop underlying services that would otherwise not be possible.

Recent developments have included a focus on features that help citizens with mapping rather than remaining as an internal tool for government officials as well as continuing efforts to support the sharing of geographic data among public institutions by developing the underlying technological infrastructure of this common infrastructure.

Hosting and network infrastructure

Web infrastructure plays a significant role in enabling the design and delivery of government services in the digital age. The lack of reliable, flexible, and secure infrastructure will undermine efforts at user-driven, agile and iterative service design. Infrastructure needs can be particularly acute for small organisations where the overhead of developing modern infrastructure is prohibitive in terms of upfront investment and ongoing operational overheads.

The Turkish public sector has a well-established and mature approach to hosting services that relies on organisation specific data centres and in-house skills and capability to maintain on-premises solutions. There are also several examples of providing network connectivity between different parts of the Turkish public sector, including the Turkish National Research and Education Network (*Türkiye Ulusal Araştırma ve Eğitim Ağı*, ULAKNET), National Academic Network (*Ulusal Akademik Ağ*) which provides Internet and network connections to universities, military and police academies, libraries, research and development organizations and some governmental organizations. While this has served the country well, 41% of organisations (46/111) recognised the need to prioritise shared cloud infrastructure.[20] Greater strategic use of a cloud-based model for hosting could allow for the more effective use of web operations talent, an often in-demand skillset, as there are currently 78 organisations employing these capabilities with teams ranging from one to as many as 55 people.[21]

One example of a well-established and multi-purpose cloud suite was developed by the TÜBİTAK Informatics and Information Security Research Center (*Bilişim ve Bilgi Güvenliği İleri Teknolojiler Araştırma Merkezi*, BİLGEM)'s Cloud Computing and Big Data Research Laboratory (B3LAB) in 2016. The Safir suite comprises several different cloud-based resources including Infrastructure as a Service (IaaS) through Safir Cloud Infrastructure (Safir Bulut), as a cloud platform forked from OpenStack in 2016. Additionally, Safir Depo, provides a suite of tools for secure file storage, sharing and collaboration.[22] Safir Depo enables public sector employees to work on documents, pictures, audio, and images in a secure environment that can be accessed from desktop computers as well as mobile devices. Finally, Safir Zeka (Safir Intelligence)

offers “Machine Learning as a Service” enabling access to machine learning libraries for software developers.

Nevertheless, in wider Turkish society, the use of cloud services is lagging when compared to other OECD member economies. Data from the Going Digital toolkit indicates that only 11% of businesses in Türkiye purchase cloud services in comparison to the average OECD figure of 45%.[23] One of the possible obstacles that incentivise the ongoing commitment to in-house hosting is the financial uncertainty associated with using USD-denominated services provided outside Türkiye, including software and infrastructure as a service. As will be discussed in Chapter 7, a further element concerns the legislative requirement for keeping data within national boundaries (data sovereignty) that necessarily limits the suitability of certain providers of cloud infrastructure. In this context, the government of Türkiye may wish to commit to developing a government-wide Platform-as-a-Service model relying on internal capability and locally supplied web infrastructure to meet as many needs as possible, with USD-denominated and non-Turkish cloud services reserved for any particular, exceptional, needs.

The COVID-19 pandemic had helped to emphasise the value of cloud-based solutions in certain organisations, particularly amongst those institutions that had been using a cloud model for some time. Nevertheless, there was extensive evidence of a resistance to migrating to the cloud with numerous organisations referencing their own data centres in preference to infrastructure as a service solutions and expressing uncertainty about whether cloud solutions could be secure enough for government. While there will always need to be exceptions, for example within the armed forces, the prevailing sentiment was that each organisation was a ‘special case’ warranting its own exception and therefore unsuitable for a common approach.

The Presidency of the Republic of Türkiye Directorate of State Archives (*Cumhurbaşkanlığı Devlet Arşivleri Başkanlığı*) felt that cloud migration could be possible but that it would need a decision by central government to require this change to take place before it would be considered. This echoed the sentiment from several organisations, including the Revenue Administration (*Gelir İdaresi Başkanlığı*), who were broadly supportive of a common cloud hosting solution but that they would not consider it in the short-term and until they had confidence in any solution. In order to migrate societally critical services a clear roadmap and solution would need to be developed that built the confidence of the affected parties.

The current policy overseen by the DTO is to direct public sector institutions to use the cloud. In recognition that on-site hosting is often more expensive and introduces ongoing overheads it has been a priority for organisations to migrate with the DTO publishing materials to support these efforts. However, progress has so far been slow. A new cloud strategy is under development that will use legislation to shift the balance in favour of cloud provision. Rather than government developing its own cloud-hosting infrastructure, the ambition is to procure these services from the private sector and contribute towards a national commitment to developing the cloud hosting industry in Türkiye. As the Going Digital data suggests, there is an as-yet untapped market amongst the private sector which should offer a good justification for private sector investment and to increase the range of available options.

Identity and trust services

In the digital age, it is crucial to empower individuals with the tools to prove they are who they say they are and equip them with the control and visibility over the use, and re-use, their data. This means that identity and trust services are an essential common component whose value came to fore during the COVID-19 pandemic in supporting the imperative to shift towards digital daily life. Nevertheless, in order to be successful in realising the potential of digital identity, several challenges must be addressed including different technologies and levels of identity assurance, fragmented user journeys, legacy solutions, portability of identity across borders or with devices, and the importance of trust.

In Türkiye the first efforts to convert analogue processes, including those concerning identity, to a digital format date from the 1980s when the focus was on transferring the information held on paper documents to the electronic environment. In 2000, these electronic records were used to assign each citizen a unique identity number, reflected on their traditional identity card. Foreign residents were able to do the same with their Foreign Identity Number from 2007. Subsequently the process for converting paper documents sped up, supported by a network of offices at district and village level.

In 2005, the first efforts for bringing together the Identity Sharing System (*Kimlik Paylaşım Sistemi*, KPS) and Central Population Administration System (*Merkezi Nüfus İdaresi Sistemi,* MERNIS) were initiated to share information between different organisations via a secure network. This information exchange was handled through individual 'protocols' agreed between individual organisations rather than reflective of a common route for data exchange (as discussed further in Chapter 7). This laid the groundwork for the improvements offered by the e-Government Gateway, which, from 2014 onwards, has offered an integration for services to be able to access population and citizenship data.

In 2017, the country started to roll out an electronic ID associated with their identity card. Currently there is no mandate for people to hold this electronic ID and as of September 2022 around 18.5m people continue to hold the old version. Nevertheless, this places adoption at 79% of Turkish citizens, in part because it simplifies the ability for individuals to access services in person and online.

Türkiye's identity documentation incorporate biometrics details including a photograph (for all those over 15 years of age) and fingerprints and can be used as a travel document instead of a passport. In order to obtain the identity card citizens need to book an appointment at one of the 973 district centres or 81 provincial centres operated by the General Directorate of Population and Citizenship Affairs and pay the relevant fee. These appointments can also be used to obtain a passport and driving licence.

The use of digital identity is enabling services to be transformed. All procedures on the e-Government Gateway can begin with the Turkish ID number and many private sector organisations use an individual's identity number within their transactions. The health sector makes use of the ID number with one noteworthy integration allowing identity documentation to be issued to newborn babies. Moreover, since 2021, it has been possible for municipalities to confirm marriages and send the certificate in a timely fashion with less risk of error.

Some organisations highlighted that there was more to be done in developing the use of digital identity to support greater transformation of the services they could provide. The Ministry of Environment, Urbanisation and Climate Change (*Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*) indicated that although they had been able to migrate transactions to the Internet, the requirement to use e-signatures, as set out in legislation, was a barrier to the scope and scale of adoption.

Türkiye's digital identity solution is not used universally with several of the institutions surveyed for this Review highlighting a range of alternative ways they used to authenticate their users that were largely dependent on their own infrastructure. The overhead of maintaining separate systems for authenticating users within an organisation rather than using a common component is significant due to the security considerations involved. This also leaves users with additional sets of credentials, which is not a desirable model. This indicates there are more opportunities to explore retiring legacy identity infrastructure.

Currently the Turkish digital identity solution does not support cross-border operations either in respect of foreign governments providing integrations for Turkish citizens resident abroad to access services, or for the Turkish government to recognise the digital identity solutions provided by other governments to their citizens. Nevertheless, in order to meet the needs of the significant foreign-born population residing or seeking refuge in Türkiye, authenticated access to public services, including those provided through the e-Government Gateway, is facilitated through a solution developed around the Foreign Identity Number.

KAYSİS

As discussed in the previous chapter, the challenge of solving 'whole problems' on an end to end basis requires the mapping of government organisations, data flows and the steps involved in individual transactions. The KAYSİS platform (summarised in Box 6.5) is a powerful common component for capturing these insights and mapping the service landscape in Türkiye. There is great potential to use the information it holds to redesign and rationalise the user experience of government across multiple sectors.

In particular, the Service Inventory Management System (*Hizmet Envanteri Yönetim Sistemi*, HEYS), one of the main applications of KAYSİS, is used as the basis for integrating services into the e-Government Gateway. As future work is carried out to further develop the catalogues of data and services it will be important for the DTO to consider the relationship between HEYS and the National Data Dictionary (discussed further in Chapter 7).

However, it remains a challenge for the data in KAYSİS to be kept up to date because it relies on organisations maintaining the information manually. As future functionality is developed it will be important to explore ways to synchronise the breadth of public sector activity with this central catalogue as well as finding ways to ensure consistent approaches are adopted by all institutions, such as through the Service Standard or assurance processes discussed earlier, to preserve KAYSİS as an effective reference underpinning the transformation of public services. Furthermore, the Public Legislation System (*Kamu Mevzuatı Sistemi*, KMS) provides a possibility for KAYSİS to be used as the basis for a more participatory approach to the development of legislation by being opened up for dialogue and discussion with the public in providing their feedback and input to legislation throughout the process of developing new legislation.

Box 6.5. Electronic Public Information Management System (KAYSİS)

KAYSİS is an information management system documenting the entirety of the activity of the Turkish public administration. Its goals are to:

- Standardise the identification of government institutions and activities.
- Linking activities of public institutions to their legal bases in terms of articles/paragraphs/subparagraphs and identifying legislation that is no longer implemented in practice.
- Identify bureaucratic processes.
- Plan Digital Türkiye activities.
- Record the historical evolution of the government organization in the digital environment.
- Share official correspondence data, contact data, available services and implemented legislation.

In capturing the organisational structure of public institutions and organisations over time, detailing the services they provide, the documents involved and the legal basis in them, KAYSİS has the potential to allow the identification of redundant services and opportunities to address whole problems that previously were handled by different siloed organisations.

KAYSİS consists of four sub-modules:

- The Government Organisation Central Records System (*Devlet Teşkilatı Merkezi Kayıt Sistemi*, DETSİS), which identifies all central, rural and foreign public organisations, are listed according their hierarchical structure. The DETSİS architecture includes their contact information, legislation relevant to the institution, the services rendered by the institution, and the documents used in service delivery.

- Service Inventory Management System (HEYS) details the services rendered by public institutions and organizations.
- Authorised Signatory Module (*İmza Yetkilileri Modülü*, İYEM) is a system that details the managers and their contact details for each of the organisations defined in DETSİS.
- Public Legislation System (*Kamu Mevzuatı Sistemi*, KMS) is a database of all primary legislation from the Official Gazette as well as secondary legislation that has no obligation of being published. KMS contains bylaws, directives, circulars, communiques, rulings, main statutes, general specifications, and other texts on regulatory procedures.

Source: Digital Transformation Office (n.d.[22]), *Electronic Public Information Management System (KAYSİS)*, https://cbddo.gov.tr/en/kaysis/4545/kaysis.

Municipal government

The e-Municipality platform is a project operated by the Ministry of Interior (*İçişleri Bakanlığı*) and the Ministry of Environment, Urbanisation and Climate Change (*Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*) designed to equip municipalities at no cost with a standardised tool and a shared infrastructure for providing access to online local government services online. The e-Municipality platform was first proposed by the Ministry of Interior (*İçişleri Bakanlığı*) in 2014 before being approved in 2017. The first modules, for electronic document management and license information, were made available later that year. The use of the system is now compulsory for municipalities by law (Republic of Türkiye, 2018[23]).

The e-Municipality platform consists of 67 different modules, some of which are provided by the Ministry of Interior (*İçişleri Bakanlığı*) and others by the Ministry of Environment, Urbanisation and Climate Change (*Çevre, Şehircilik ve İklim Değişikliği Bakanlığı*). These include geographical data, recruitment, marriages and identity sharing as well as the ability to take payments and send notifications, amongst others. Separately the platform integrates with the e-Government Gateway and systems relating to land ownership, population management and digital identity. It is designed with the intention of providing fast, secure and uninterrupted access to municipal services as well as enabling the development of mobile applications to further increase convenience for users. The e-Municipality platform reduces the overheads that they would need to invest in order to provide such services for themselves as it helps to avoid individual organisations investing in discrete software licenses, system hardware or integration.

Despite the provision of this central platform, there remains a mixed experience in terms of experience between different municipalities with a patchwork of service availability. The e-Municipality platform can play a role in helping organisations to provide services they would not otherwise be able to offer.

Nevertheless, each municipality must carry out the necessary enabling work to integrate these solutions and to migrate away from any existing tools. The challenge of adopting the e-Municipality platform instead of existing solutions is a challenge felt particularly by the larger, metropolitan municipalities who have been investing in their own digital transformation for many years. The development of the e-Municipality platform has focused on the needs of the smallest local authorities with limited access to skills, technology and funding. However, the interviews indicated that this had resulted in approaches that did not provide sufficient complexity to meet the needs of the larger authorities. One metropolitan municipality expressed the need for greater user research to be carried out with a broader range of municipalities to ensure that the different needs of district and metropolitan municipal governments were well understood and that the platform could iterate accordingly.

Operating systems (Pardus)

The need to be able to deploy solutions that are not reliant on international suppliers has been one of the motivating factors in the focus given to open source software in Türkiye. Arguably the most foundational technical solution of all is the operating system used to run computers and servers. This is an area where proprietary solutions are common place. Although servers are often running on open source operating systems, the consumer facing market is heavily dominated by Microsoft and Apple operating systems, where pricing and support is based on their position in a global market, rather than being localised to the context for Türkiye.

In 2005, TÜBİTAK began development of Pardus, an operating system based on the open source software project Linux. The Pardus project demonstrates a strong commitment from the government to the adoption of an open source operating system and is in use within the Ministry of Justice (*Adalet Bakanlığı*), the Ministry of National Defence (*Millî Savunma Bakanlığı*), the Ministry of Industry and Technology (*Sanayi ve Teknoloji Bakanlığı*), the Ministry of Interior (*İçişleri Bakanlığı*), the Ministry of Health (*Sağlık Bakanlığı*), and the Presidency of Religious Affairs (*Diyanet İşleri Başkanlığı*).

In recent years, ongoing investment in open source software has resulted in developments of the Pardus operating system to help ensure its resilience and suitability within a corporate environment. These include tools and functionality for system administrators to handle digital security as well as identity and systems management.

The experience of Pardus highlights the ongoing challenge within the Turkish public sector to achieve a common ambition for developing tools that can meet the needs of all organisations. Although several large organisations are using Pardus, the Revenue Administration (*Gelir İdaresi Başkanlığı*), determined in 2013 that its needs were better served by customising the Pardus project. Between 2013 and 2018 the Revenue Administration (*Gelir İdaresi Başkanlığı*) developed its own version of Pardus called GIBUX and deployed it throughout the organisation. Well-funded and capable organisations like the Revenue Administration (*Gelir İdaresi Başkanlığı*) are fortunate to be able to devote the time, money and people to carrying out these customisations but there is an opportunity cost in focusing solely on their internal needs in parallel to the collective effort of their partners across the public sector where a deeper level of collaboration could have produced something beneficial for all organisations. Furthermore, the ongoing maintenance and operational overheads mean that the Revenue Administration (*Gelir İdaresi Başkanlığı*) has to necessarily take a bespoke approach to the system administration of the 37 300 desktop computers and 515 servers across 1 184 locations that run GIBUX.

Paperless government (notifications and electronic document management)

Historically, public services have been paper based. Whether through the original form to be submitted or in subsequent dialogue between government and the user the exchange of paper features very heavily. In the drive to modernise government the idea of ‘paperless’ government has featured prominently and inspired efforts to reduce paper-based interactions. In Türkiye, 79% of organisations (89/113), indicated that their strategic approach to skills emphasised taking paperless approaches.[24] This is a twin ambition – to reduce the use and reliance of paper for government to government activity but also to take a more transformational approach to the design of public services themselves through increased use of mobile and digital solutions, including those associated with authentication and verification of identity.

Several technical interventions have been made to support this agenda. The Registered Electronic Mail (*Kayıtlı Elektronik Posta*, KEP) service is a secure form of electronic mail for providing legal evidence, including the sending and delivery of electronic messages. In addition, the e-Correspondence (e-Yazışma) Project exists to ensure official correspondence within government is carried out in a secure electronic environment and may provide the basis for expansion into correspondence between government and businesses in the future. These tools are currently used on an optional basis so there is an opportunity to

explore how these tools can be developed in the future, including the extent to which they are made mandatory for use in the public sector as a whole.

Separately, Türkiye has organisation and sectoral specific approaches to managing documents electronically. The Istanbul Water and Sewerage Administration (*İstanbul Su ve Kanalizasyon İdaresi*, İSKİ) has developed its own internal electronic document management system, reflecting the needs for utility providers to issue bills and manage correspondence with customers that may not be suited to a common approach. In education and health, where the relationships within a ministry as well as among the multiple actors in the system reflect the need for a shared approach electronic document management systems had been implemented prior to the pandemic. Although electronic document management is one of the available modules for the e-Municipality platform, one of the municipal governments expressed concern about the functionality they would lose in migrating from their existing solution and called into question whether there was sufficient trust in this solution to achieve its broader aims.

A further route to achieving paperless government is to prevent correspondence being issued in the first place. However, there remains a need to keep users informed about the progress associated with their needs. Research conducted by the United Kingdom indicated that one of the biggest reasons for people calling government is associated with the anxiety of uncertainty about progress (Herlihy, 2015[24]; 2015[25]). The UK's response was to develop the GOV.UK Notify platform, whose codebase is now used by other governments to make it as easy as possible to be proactive in sending emails, text messages and physical letters about any step in the user journey. Making it easy for services to send simple notifications can be transformative, even without revisiting any other step in an existing process. Indeed, 66% of organisations (73/111) indicated that they benefit from such an approach, including all the municipal governments where the e-Municipality platform provides them with this functionality.[25]

For both document management and notifications there is a clearly expressed need. Organisational and sectoral solutions exist but there would be benefit in assessing whether there is scope to consolidate these solutions into a single tool for public sector institutions to use and to benefit from the associated economies of scale and scope.

Payments infrastructure

Payments is another area where countries are approaching a common challenge by offering centrally provided services to make it easy for citizens to pay government, such as pagoPA in **Italy**, PaySG in **Singapore** and GOV.UK Pay in the **United Kingdom** (Welby and Hui Yan Tan, 2022[6]). In Türkiye, work is underway to incorporate a common payments infrastructure into the e-Government Gateway which will make one of the benefits for migration the immediate access to this common component.

Sector-specific components

The public sector in Türkiye has well-established maturity in several sectors where common solutions exist to meet a particular set of needs for multiple organisations. The most notable examples observed during the peer review are platforms to support education, health, immigration, justice, procurement, social security and taxation.

Education

The education sector in Türkiye has been the subject of a concerted effort to develop various tools and resources that help to transform the experience for both teachers and students (of all ages). The primary way in which this has been done is through the Education Information Network (*Eğitim Bilişim Ağı*, EBA), which is operated by the Ministry of National Education (*Millî Eğitim Bakanlığı*) and provides the backbone to the education system in Türkiye. The network offers national integration of the education system and provides online access to course materials and teaching. This project was initiated in 2012 with the

expectation of rooting the education experience of every student in digital approaches. As such, EBA provided the basis for supporting a collaboration with the Turkish Radio and Television Corporation to switch to a fully remote form of education, supported by television content, in response to the COVID-19 pandemic.

The existence of EBA prior to the pandemic meant that students and teachers were familiar with its functionality and some of the risks associated with the digital divide were already understood. In order to respond to needs identified during the pandemic, 180 mobile units and over 15 000 support units were deployed to ensure access for as many people as possible. Additional measures included distributing more than 664 000 tablet devices and working with telecommunication providers to secure free or reduced cost data allowance for those who did not have internet access at home. Between March 2020 and June 2021, more than 14 million students and 1 million teachers were actively using EBA, resulting in over 300 million lesson hours of synchronous Virtual Classrooms, 18 000 hours of EBA TV being broadcast and 11 000 video lessons being prepared.

EBA provides several different features that have been developed in response to the needs of its users. The authentication system is now integrated with the e-Government Gateway through the Identity Sharing System (*Kimlik Paylaşım Sistemi*, KPS). Additionally, the use of QR codes added to textbooks could immediately connect users to the associated materials within EBA. Furthermore, EBA contains robust live meeting and video conferencing capabilities that have been used more widely within the Ministry of National Education (*Millî Eğitim Bakanlığı*).

Beyond these technical features, EBA's function as a platform for education extends into helping students in their decision making process and planning their educational careers. A smart guidance feature connects the preferences for university study with their current academic achievement level and identifies the subjects they need to study to achieve their ambitions.

Alongside EBA, there are several other initiatives and components to support education more broadly in Türkiye whether in terms of supporting teachers with their professional development or their resources in the classroom, targeting a particular subject matter, or focusing on the needs of universities.

In order to support the professional development of teachers, the Teacher Information Network (*Öğretmen Bilişim Ağı*, ÖBA) was developed and launched in January 2022. The ÖBA platform hosts Professional Development Communities and associated programmes, which include practical professional development studies and aim to support the development of schools by increasing co-operation between teachers. ÖBA has supported greater collaboration and knowledge exchange between educational establishments through its Teacher-Manager Mobility Programmes. Finally, ÖBA offers an infrastructure to support synchronous training with a "Library" containing extensive content to support teachers. To date, training sessions on ÖBA have been attended over 6 million times with more than 900 000 teachers successfully completing at least one training.

As well as investing in professional development for teachers, efforts have focused on the hardware available to them in the classroom. In 2013, TÜBİTAK and the Pardus community developed the Interactive Board Interface Project (*Etkileşimli Tahta Arayüzü Projesi*, ETAP) with over 100 000 boards operating in Turkish schools. By building on the national operating system and developing bespoke modules for use with these boards, the ETAP initiative has created an ecosystem of resources and knowledge for transforming the educational experience in the classroom. Meanwhile, the Movement of Enhancing Opportunities and Improving Technology (*Fırsatları Arttırma ve Teknolojiyi İyileştirme Hareketi Projesi*, FATİH) Project has provided over 500 000 interactive whiteboards, organised 1 750 information technology classes and distributed 550 3D printers in the last three years.

In addition to these practical tools for supporting efforts in the classroom, there have also been subject matter specific developments such as the Mathematics Digital Education Platform (*Matematik Dijital Eğitim Platformu*), offered by the Ministry of National Education (*Millî Eğitim Bakanlığı*) and launched in

August 2022 to support students with games, animations, videos and other interactive content to reinforce what has been learnt in the classroom. Another targeted is Koha. Developed in 2014, Koha is an open source library management system that is used by schools, academic institutions and government ministries including the Ministry of Culture and Tourism (*Kültür ve Turizm Bakanlığı*) and the Ministry of Agriculture and Forestry (*Tarım ve Orman Bakanlığı*).

Universities have also developed common components to support their work. One of the responses to the COVID-19 pandemic was YÖK Virtual Laboratories (*YÖK Sanal Laboratuvarı*, YÖKSANLAB). The Council of Higher Education (*Yükseköğretim Kurulu*, YÖK) worked with TÜBİTAK and the private sector to develop a remote solution for conducting physics and chemistry laboratory-based courses. The system was used by 38 universities in its first year and enabled 6 000 students to continue their studies despite not being able to physically attend university premises. Another national resource developed to support universities is the Higher Education Information System (*Yükseköğretim Kurulu Bilgi Sistemi*, YÖKSİS) which details the data related to university employees, students and alumni. YÖKSİS provides the basis for the creation of Higher Education Statistics for reporting purposes as well as offering access to graduation certificates and academic transcripts through integration with the e-Government Gateway.

Health

The digital transformation of healthcare in Türkiye was accelerated from 2014, partly in recognition of the need to be prepared for the outbreak of a pandemic. This foresight has been a successful component in Türkiye's handling of the COVID-19 pandemic with health systems being mentioned by multiple organisations indicating that not only is this activity a platform for the sector, but for the country as a whole.

Several components support the ongoing management of organisations across the health sector. These include the Integrated Corporate Operation Platform (*Entegre Kurumsal İşlem Platformu*, EKİP) that captures information about all personnel employed across the health sector, provides access to training, and offers meeting and networking functionality as well as features that allow physicians to collaborate in the diagnosis and care of their patients. The health sector also has an electronic document management system that records documents created by the central and provincial organisations of the Ministry of Health (*Sağlık Bakanlığı*) as well as affiliated and related organisations.

When it comes to the citizen experience of health, the most prominent element is e-Nabız. This is used by both citizens and health professionals to access health data from individual institutions. By bringing together records from all providers of healthcare, e-Nabız offers a single platform for the management of health information. The data it contains can be managed and shared, by the citizen and is secured behind the Identity Sharing System (*Kimlik Paylaşım Sistemi*, KPS). Other patient focused tools include the Health Tourism Portal for people travelling to Türkiye for healthcare as well as, crucially, the Life Fits Into Home (*Hayat Eve Sığar*, HES) app discussed in Box 6.6.

Box 6.6. Responding to COVID-19 with the Life Fits Into Home (*Hayat Eve Sığar*, HES) app

The Ministry of Health (*Sağlık Bakanlığı*) took the lead on designing and developing the Life Fits Into Home app as the basis for Türkiye's contact tracing as well as providing visibility of the health situation for family members.

The HES app was then developed into the mechanism for capturing proof of vaccination and, through the HES code, became deeply integrated throughout Turkish daily life.

The HES code, demonstrating whether someone had COVID-19 or the state of their vaccination, was used by utility companies to manage appointments, in the education sector to determine whether exams

needed to be sat in quarantine, and in public transport to disable travel cards for people with symptoms amongst others.

While the capability to develop such integrated and proactive services is to be applauded, it is important that such mechanisms are accompanied with suitable checks and balances to safeguard trust in government and the civil rights and freedoms of the public.

Immigration

As has been highlighted before, Türkiye has a large foreign-born population, with one of the largest refugee populations in the world. This situation means that the country has needed to develop solutions that can support the varied and complicated policies and processes that support migration flows into, and out of, the country. The solution, implemented in 2015, is GöçNet.

GöçNet provides a central and web-based software architecture that operates in all the offices of the Ministry of Interior, Directorate of Migration Management (*İçişleri Bakanlığı Göç İdaresi Başkanlığı*). It provides digital processes to support border activities such as visas and residence permits as well as deportation and administrative detention. Having all this information in one system means that applications can be processed more quickly and with greater accuracy. Over time, further functions have been added to include the ability to carry out registration in areas without internet access (which later synchronise when connected), integration with the call centre and connection to the passenger information systems of transport companies and carriers. GöçNet has also developed specific tools to help combat human trafficking and protect its victims.

A critical element of GöçNet is its ability to integrate data from across the public sector. Having immediate access to the data that informs decision making allows for a quicker and more accurate process. Data is exchanged with more than 30 public bodies including the General Directorate of Security (*İçişleri Bakanlığı Emniyet Genel Müdürlüğü*), the Ministry of Foreign Affairs (*Dışişleri Bakanlığı*), the Ministry of Labour and Social Security (*Çalışma ve Sosyal Güvenlik Bakanlığı*), and the Ministry of Health (*Sağlık Bakanlığı*) in addition to all other relevant institutions and organisations.

Finally, GöçNet is the foundation for the e-Residence (e-Ikamet) service which responds to the needs of foreign-born individuals who settle in Türkiye. e-Ikamet handles applications for residence permits as well as their ongoing management online. This has enabled a much quicker and less cumbersome process for foreigners as they no longer need to visit the Provincial Directorates of the Immigration Authority in person, Nevertheless, e-Ikamet appears to be a further example of a standalone service developed for particular sectoral needs that could be more closely integrated with the e-Government Gateway to help simplify the user experience for applicants.

Justice

As with both education and health, the preparation for creating a digital justice system began many years ago and came into its own during the COVID-19 pandemic. In Türkiye, the National Judicial Network Information System (*Ulusal Yargı Ağı Bilişim Sistemi*, UYAP), developed in-house within the Ministry of Justice, is the foundation for administrative, civil and criminal justice in the country and has been developed on a digital by design basis.

The initial development of UYAP began in 2002 with the objective of facilitating secure access to documents and the judgment process. In 2009 all courts were connected to the system and since then further developments have been made to turn UYAP into a virtual justice system for 81 million citizens and 130 000 lawyers in all aspects of the justice process, including fully virtual hearings for civil cases.

The critical functionality that makes virtual hearings possible is the Audio and Visual Information System (*Ses ve Görüntü Bilişim Sistemi*, SEGBİS). For criminal proceedings, SEGBİS allows convicts and detainees to link to courtrooms from their cells, allowing them to participate in hearings without incurring the costs of transportation, fuel, or staff time. There are now over 4 000 locations where SEGBİS makes it possible to carry out court activity without requiring in-person presence of those in detention.

Various administrative and judicial functions in the Turkish public sector continue to engage with the ongoing development and integration of the UYAP system. These include the Capital Markets Board (*Sermaye Piyasası Kurulu*), the Council of Judges and Prosecutors (*Hâkimler ve Savcılar Kurulu*) and the Court of Cassation (*Yargıtay Başkanlığı*) amongst others. Although these are all entities involved with judicial system in Türkiye their needs are not identical. This highlights the importance of adopting a user needs led approach discussed in Chapter 5 and applying those ideas to developing services and systems that reflect the purposes of public sector institutions and support the internal experience of public servants as well as the externally facing elements that are designed for members of the public.

The public certainly benefit from this considered approach and the way in which UYAP simplifies, accelerates and secures the judicial process through its integrations with multiple systems. These integrations include having the information about legal boundaries for land disputes, calculating interest rates for awards in civil cases and communicating with customs and borders to prevent someone leaving the country.

In addition to the modules relating to different court proceedings, UYAP provides a training environment for authorised users allowing them to receive technical or personal training through the UYAP Academy e-learning platform at any time and from any location. This acts as a resource to “train the trainer” for those providing training in vocational high schools and related departments of universities as well as direct support to those newly hired into judicial or legal roles.

Procurement

Türkiye also has long-standing and mature efforts in terms of public procurement that were first initiated in 2004 and then further developed through legislation in the following years with 2008 marking the original call for the creation of the Electronic Public Procurement Platform (*Elektronik Kamu Alımları Platformu*, EKAP). There have been subsequent amendments to procurement legislation that have further cemented the use of EKAP, including provisions made under an amendment to the Public Procurement Legislation that makes the use of e-procurement compulsory in all open and negotiated procedures (Republic of Türkiye, 2022[26]). As EKAP becomes more central to the procurement activity in the Turkish public sector, its associated regulations can be used to provide a lever for encouraging particular purchasing habits, for example in terms of cloud computing.

EKAP was launched in 2010 and the Public Procurement Authority (*Kamu İhale Kurumu*) has continued to improve it over time such that is now capable of conducting nearly all procurement activity from initial tender, through receipt of proposals and their evaluation, to the awarding of the contract itself as well as the capacity for the submission of complaints to the Public Procurement Authority by using e-signatures since July 2021. All public procurement activity has to be entered into EKAP and published in the public procurement bulletin with the result that, as of August 2022, almost 240 000 companies (economic operators) and a further 47 000 public administrations (contracting authorities) are registered, and there are almost 500 000 active users of the platform.

In another example of the importance of developing coherent strategies that help the public sector operate as a collective, the efforts of the Public Procurement Authority (*Kamu İhale Kurumu*) sit alongside the work of the Directorate General of State Supply Office (*Devlet Malzeme Ofisi*, DMO) who are working to respond to a different set of needs for their users in the procurement space. The DMO has created two online marketplaces (the e-Sales Portal and Healthcare Market) where government buyers are able to access catalogues containing the resources and materials they require from a single source and through the

approved framework agreements. With EKAP designated as the default route for capturing public procurement activity this makes it vital that there are integrations between EKAP and procurement platforms such as these in order to simplify the process for public servants and ensure the accountability and integrity of audit trails.

Social security, assistance and insurance

Another sector where digital technology and data are providing valuable solutions that work across organisations and meet user needs is that of welfare, in terms of social security, assistance and insurance. At the heart of the sector, providing support for the disabled, elderly, children, victims of domestic abuse, martyrs and veterans is the Family Information Service, operated by the Ministry of Family and Social Services (*Aile ve Sosyal Hizmetler Bakanlığı*) since 2015 and which consists of roughly 35 different modules responding to different social service needs. These include social and economic support, adoption, home care and identity cards for disabled people, violence against women and the Family Social Support Program (*Aile Sosyal Destek Programı*, ASDEP).

The Family Information service works alongside the Integrated Social Assistance Information System (*Bütünleşik Sosyal Yardım Bilgi Sistemi*) which electronically facilitates all the steps involved with managing the financial support provided to help with areas such as energy or family expenditure. The system was built by TÜBİTAK for the Ministry of Family and Social Services (*Aile ve Sosyal Hizmetler Bakanlığı*) in 2010. Since 2010, 116 million applications for social assistance have been processed, resulting in a total disbursement of 332.8 billion TRY (approximately 18.3 billion EUR) by the Ministry of Family and Social Services, General Directorate of Social Assistance (*Aile ve Sosyal Hizmetler Bakanlığı Sosyal Yardımlar Genel Müdürlüğü*).

The system manages the operations for the entire Ministry and contains social, economic and demographic data for nearly 58 million people (17.7 million households), integrates data from 28 public institutions and collects together 112 different web-based elements to handle the end-to-end process, including the application, identification of eligibility, disbursement of funds, and auditing. In addition to supporting the needs of Turkish citizens, the platform also offers support to foreigners living in Türkiye, including the significant refugee population displaced from Syria through the Emergency Social Safety Net and the Conditional Cash Transfer for Foreigners.

A further platform is managed by the Social Security Institution (*Sosyal Güvenlik Kurumu*, SGK) to address the social security, social insurance and pensions operations of public institutions, citizens, employers and health service providers.

The integrations between these different platforms are brought together through the e-Government Gateway in a way that indicates how the internal complexity and differing responsibilities of government organisations can be hidden from view to simplify the user experience. As has been seen in other sectors and in Türkiye in general, there is a need for a clear omni-channel strategy to ensure that different systems and routes to accessing services for users are clear and straightforward without the potential for any confusion created by having different systems operated by different organisations.

Taxation

The final area in which sector specific activity is taking place is tax management. The Revenue Administration (*Gelir İdaresi Başkanlığı*) is responsible for implementing state revenue policies and administering the taxation lifecycle and all its associated services.

The Revenue Administration (*Gelir İdaresi Başkanlığı*) has been at the forefront of the use of technology and data within the Turkish public sector having launched the Internet Tax Office in 1999 as a platform allowing tax professionals to conduct their business, or that of their clients with the government across a range of different tax activities. Complementing the Internet Tax Office is the Interactive Tax Office,

launched in 2018 and providing over 200 services directly to taxpayers without going to the tax office or requiring the involvement of a tax professional.

As has been noted above, the Revenue Administration (*Gelir İdaresi Başkanlığı*) has developed its own version of the Pardus operating system to support its activities and the services provided through physical tax offices, its website and mobile applications. These reflect over 80 applications that have been developed to enable users to conduct their business either in person or online whether in terms of completing applications, requesting information, issuing documents or making payments. The Revenue Administration (*Gelir İdaresi Başkanlığı*) shared with the OECD team that many of these systems have been developed in line with an Agile methodology in terms of delivery. Nevertheless, there is still an unrealised potential in developing multi-disciplinary teams that can work towards more a inclusive relationship with users by taking a more participatory and collaborative approach to understanding their needs and responding accordingly.

Some of the Revenue Administration's services are available through the e-Government Gateway but while the Revenue Administration (*Gelir İdaresi Başkanlığı*) co-ordinates with the DTO and contributes as part of the wider discussions, there is no formal commitment to fully migrate. Indeed, work has started on the Digital Tax Office project, which will enable access to all services offered by the Revenue Administration through a single platform. This is a further example of where there are opportunities to strategically consider the overall approach and how sector-specific solutions might contribute to wider outcomes and how common components or platforms could be developed to obviate the need for organisations and sectors to develop their own, bespoke, solutions.

Establish data-driven public sector approaches

Chapter 7 provides a detailed analysis of the data-driven public sector in Türkiye. Nevertheless, data is a critical component of the ecosystem to support the design and delivery of proactive, joined-up public services. The effective use of data can mean governments avoid maintaining multiple datasets, handling repeated requests for data and requiring citizens to supply their information multiple times. To realise the potential of data as an enabler for service teams it is necessary to consider how tools, platforms and resources can support greater access to and sharing of data, both within the public sector and via Open Government Data (discussed in Chapter 7).

Although there was little emphasis placed on Open Government Data, the Turkish Central Bank (*Türkiye Cumhuriyet Merkez Bankası*) demonstrated the use of the Electronic Data Delivery System (*Elektronik Veri Dağıtım Sistemi*, EVDS) to capture and surface statistical data produced within Türkiye. Beyond Open Government Data, there was a general awareness of the importance for developing a more mature approach to data in the context of designing and delivering public services. Data does flow within the Turkish public sector but not always in the directions where it is most required and certainly not without overhead for the parties wishing to exchange data. The review team noted that in general the challenges with the current model favour larger and more established organisations and that this means things are not as agile as they might be.

Several organisations identified that they felt it was more important to focus on the quality of data before rushing into developing services and finding that the underlying data was insufficient to support the ambition for transformation. The Turkish Court of Accounts (*Sayıştay Başkanlığı*) appears to have developed effective models and technology through the Unified Data Transfer System (*Birleşik Veri Aktarım Sistemi*, BVAS) to manage the collection of financial data and statements of almost 3 000 public administrations in line with standards defined in legislation (Republic of Türkiye, 2020[27]). The BVAS then relies on the Data Analysis System (*Türkiye Sayıştay Veri Analiz Sistemi*, VERA) for controlling the accuracy, integrity and compliance of the data.

Data sharing between institutions is generally carried out over mutually secure VPN connections between institutions, usually facilitated by the KamuNET network (discussed in more detail in Chapter 7) rather than through an interoperability platform. However, as has been noted, the e-Government Gateway plays not only an important co-ordinating role between different entities but also, through its integrations with the Public Application Center which enable data sharing among institutions that help to achieve the reuse of data among government organisations with citizen consent. These data lookups are enabled by digital identity and do not involve data being duplicated or replicated. However, this exchange continues to be carried out on a case-by-case basis rather than through a smoother and more frictionless model.

Although Türkiye has no practical tools that support citizens or businesses to gain visibility of the data held about them or the way in which organisations are using them, the Ministry of Health (*Sağlık Bakanlığı*) provides an interesting exemplar for how such tools could be developed. The e-Nabız platform gives direct control of user data to users. On this platform, users can manage and share their data as they wish and, if necessary, request the deletion of the relevant data. In addition, users can see from which IP addresses their data is accessed.

Source the talent and skills for a digitally-enabled state

The shift from e-government to digital government represents a paradigm shift that means government does not always have the necessary talent and skills at its disposal. The OECD Framework for digital talent and skills in the public sector identifies that addressing this challenge involves creating an encouraging environment, defining the necessary skills and taking steps to source a suitable workforce (OECD, 2021[28]). The full analysis of this topic in Türkiye is covered in Chapter 4 but it is necessary to recognise that talent and skills are a critical priority in supporting the development of services.

Many organisations in Türkiye indicated that they had sufficient in-house capabilities for delivering on their ambitions for digital government. Certainly, the existing model of recruitment and employment has contributed to some very effective interventions in transforming the user experience of government. However, there is a need to consider introducing more dedicated roles that can specifically focus on practices that advocate for the needs of users such as in product management, service design or user research.

The Eleventh Development Plan recognises the challenge of improving and strengthening the processes and human capability within public institutions (Presidency of Strategy and Budget, 2019[13]). However, in framing this as being a question of following technological trends and developments there is a risk of taking a technology-led approach rather than considering the holistic and multi-disciplinary approaches that are necessary to enable the transformation of public services.

Alongside efforts to revisit internal capabilities, it is also important to consider the role of procurement and the GovTech supplier ecosystem. In-house development to support public service design and delivery is not always the right model in normal circumstances but in a crisis when the demands of speed and scope may outstrip existing capacities it is even more important to be able to draw on external expertise. Therefore, an effective and trusted supplier base is an important long-term foundation as an enabler for service design and delivery. This supplier base needs to be operating in line with all the other elements discussed in Chapters 5 and 6 in terms of technical and commercial standards as well agreed quality standards and delivery methodologies.

How Türkiye's COVID-19 response benefitted from an enabling ecosystem of resources and tools

The challenges brought about by the COVID-19 pandemic presented opportunities for service teams to improve the way in which they responded to existing needs as well as requiring the development of new solutions to react to the crisis. Such a situation demonstrates the merit of having an ecosystem of enabling resources and tools that allow teams to maintain quality while still moving at pace. There were three areas where this ecosystem supported Türkiye's response: 1) in activity going online, 2) in the value derived from earlier investments, and 3) in facilitating new and specific responses to the pandemic.

Migrating analogue activities online

One way in which organisations responded to the pandemic in Türkiye was in prompting the migration of analogue transactions to the Internet. Organisations reported that they had improved their electronic document management system for receiving documents from citizens and enabled digital payments as well as enabling online appointment booking processes. Many organisations also took appointments for in-person support, training or meeting online. The day to day internal to government activity was also changed with organisations choosing to publish reports online rather than printing them or ensuring staff in other organisations could access systems and data that would previously have required the exchange of correspondence.

The impact of these changes was felt quite markedly within the General Directorate of Land Registry and Cadastre (*Tapu ve Kadastro Genel Müdürlüğü*, TKGM). This organisation had previously provided a two-stage process with a first part carried out online but which ultimately required a signature to be made in an office. During the pandemic, the TKGM began to accept e-signatures and directing everything that could be completed online through their digital services with the result that 70% of pre-pandemic citizen contact was no longer taking place.

A further way in which enabling resources and tools helped maintain the continuity of the public sector during the pandemic was in the day to day operations of public sector organisations. Several organisations highlighted how important it had been for them to have robust and resilient infrastructure, including Virtual Private Networking and good quality mobile devices, to be able for staff to switch their base of operation from their offices to their homes. The internal hardware and software requirements of public sector institutions also saw applications deployed to support people working from out of the office and remote access to existing systems enabled.

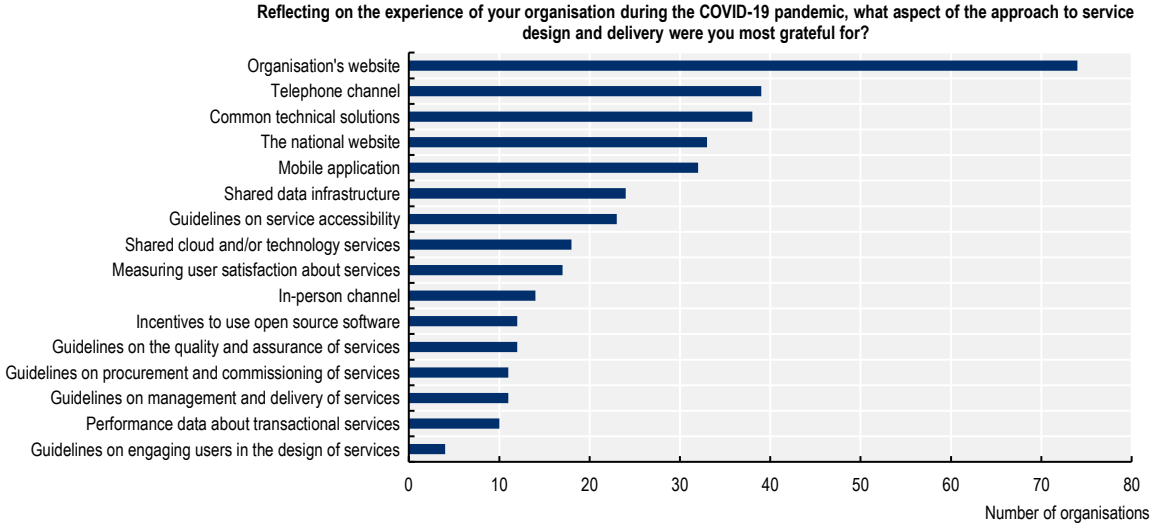
One of the essential developments during the COVID-19 pandemic was the use of video conferencing tooling to allow for remote meetings whether within government or with external parties. According to the Human Resources Office (*İnsan Kaynakları Ofisi*) the national video conferencing application, CAM, that can be accessed via internet browsers without installing any plug-ins and whose servers are located in Türkiye played a major role in facilitating business management and operation. Nevertheless, several sectors and organisations spoke about how they had developed their own video conferencing capability despite the existence of this common resource.

Finally, the other area to migrate online was all organisational activities associated with engagement, education, training and support. Most notably of course was the EBA platform supporting the transition of education throughout the country but there were also changes in training for the police, traffic, the movement of goods and intellectual property. In almost all cases, the ability to provide virtual training materials meant organisations not only continued to operate as normal but also increased their capacity to meet the needs of more people.

The success of existing tools

A second area in which the ecosystem of enabling resources and tools supported Türkiye's response to the COVID-19 pandemic was in terms of how pre-pandemic investment allowed for the continuity of practice in certain areas, or allowed for a seamless and scalable transition to a digital model of delivery. Figure 6.6 shows that service providing organisations found that by far the most valuable enabler during the COVID-19 pandemic was the existing website, followed by telephone based access to services, common technical solutions, the national website and mobile applications for accessing services.

Figure 6.6. The approaches to service design and delivery appreciated by public sector institutions during COVID-19



Note: Based on the responses of 111 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris, Q. 3.14.1.

A minority of organisations including the Turkish Competition Authority (*Rekabet Kurumu*), Turkish National Agency, Centre for EU Education and Youth Programmes (*Türkiye Ulusal Ajansı, Avrupa Birliği Eğitim ve Gençlik Programları Merkezi Başkanlığı*), and Public Procurement Authority (*Kamu İhale Kurumu*), reflected that they had to make no special effort during the pandemic due to earlier investments in digital transformation. In the case of procurement, the use of e-tenders rose from 30% to 60% of all tender activity because it was already possible to carry out the submission, evaluation and notification of offers in a digital form.

One award-winning success story of earlier investments had a meaningful impact during the pandemic, especially for potentially excluded groups such as the elderly, those living in remote locations or with physical accessibility needs. The Information and Communication Technologies Authority (*Bilgi Teknolojileri ve İletişim Kurumu*, BTK) is responsible for working with the various telecommunication providers to completely redesign the experience of contract termination.[26] Previously subscribers needed to visit a store or send a fax to cancel their contracts but through the use of the e-Government Gateway and integrations with Turkish banks or the Turkish digital identity solution, consumers are able to cancel their services from the ease of their personal devices and the comfort of their homes, which was transformative given the lockdown requirements on businesses and individuals at the height of the COVID-19 pandemic.

As discussed earlier in the chapter, the health, justice and education sectors have all spent many years developing digital platforms to support their activities. In the case of health, the challenges they overcame in 2020 and 2021 in terms of caring for people suffering from COVID-19 were unimaginable but because of previous investment, they could create more developed solutions and respond more effectively.

In terms of justice services, the infrastructure to support remote judicial activity through UYAP was already in place before the pandemic. In some respects, they turned the crisis into an opportunity in accelerating the development of certain features and increasing the number of video enabled locations from 1 400 to over 2 500 courts and over 2 000 courtrooms. The e-Trial System, which allows video and audio interviews to be conducted remotely enabled court hearings to take place without people needing to be in the same physical location, allowing for Civil Courts to continue functioning during the pandemic. While this technology was a huge enabler, the most important outcome from the pandemic period was potentially the shift of internal culture and habits for judges and other legal professionals in embracing remote working.

Within education, the EBA platform (discussed in more detail earlier in the chapter) formed the basis for continuity of existing practice as well as an opportunity to respond to the emerging needs created by the pandemic. The EBA platform was already well established prior to the pandemic and in use for remote learning. COVID-19 acted as a catalyst to turn what had been a relatively infrequently used novelty into an essential and ubiquitous feature.

Responding to the pandemic

Finally, the ecosystem of enabling resources and tools proved essential in enabling public institutions to react to the pandemic and develop new solutions to the newly identified needs brought about by the COVID-19 pandemic.

As would be expected, there were many reports of health related services. These included those services that were created to meet medical related needs of physical goods such as supporting the supply of vaccinations or ensuring access to masks and other personal protective equipment. As was noted above (see Box 6.6), the development of the Life Fits Into Home (*Hayat Eve Sığar*, HES) app was conducted within the Ministry of Health (*Sağlık Bakanlığı*) to support the needs of members of the public in terms of contact tracing and the COVID-19 status of themselves or their loved ones. In addition, internal tools were developed to support the needs of the contact tracing teams in collecting data from the field and following up with COVID-19 contact cases. Finally, the Ministry developed systems to support the management and distribution of vaccinations.

Open Government Data (OGD) does not play a prominent role in the digital government experience of Türkiye and is an area for future development. The COVID-19 pandemic has been a catalyst for publishing more data not only through the dedicated website for COVID-19 but also in seeing public transport companies monitoring the occupancy rate of vehicles and communicating that.

One of the standing activities for government is the issuing of licences for businesses and citizens to carry out particular activities. At the height of the COVID-19 pandemic many new licences and permits were required to support the implementation of new directives and measures to combat the virus. Within the Ministry of Interior (*İçişleri Bakanlığı*), the e-Application system facilitated over 20 million applications for permits that involved various integrations and collaborations with other organisations. For example, by working with the General Directorate of Tea Enterprises (*Çay İşletmeleri Genel Müdürlüğü*, ÇAY-KUR) it was possible to provide a new travel permit that was only available for tea producing citizens while an integration with five organisations was necessary to develop the “Work Exemption Permit”.

Other areas of government responded to the pandemic by suspending the processing of particular licences or extending the validity of existing authorisations. This was evident in the Ministry of Transport and Infrastructure (*Ulaştırma ve Altyapı Bakanlığı*) where regulations were altered to cover renewal periods, fines, capacity and the ability for foreign vehicles to cross borders.

Prioritising particular groups for support, such as how the Ankara Metropolitan Municipality suspended the unpaid debts process for those in certain vulnerable categories, demonstrates a flexibility to policy making to respond to the needs of society. This was also seen in the services developed to support those who found themselves unemployed and needing social assistance. The Small and Medium Enterprises Development and Support Administration (*Küçük ve Orta Ölçekli İşletmeleri Geliştirme ve Destekleme İdaresi Başkanlığı*, KOSGEB) developed a programme for micro and small enterprises that provided funding to continue their activities and maintain employment at their pre-pandemic levels.

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Notes

[1] OECD (2021[10]), Question 3.1.2: “How many transactional services are offered by your organisation”.

[2] OECD (2021[29]), Question 1.5.1: “Is there a standardised model for data, digital and information technology project management at the central government level?”, Question 1.5.3 “Does the central government have specific policies or initiatives for change management in digital government initiatives?” and Question 1.5.5 “Does the central government have specific guidelines or standards to apply agile methodologies in the implementation of these projects?”.

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[4] https://www.gov.uk/service-manual/.

[5] https://www.gov.uk/guidance/make-things-accessible.

[6] OECD (2021[10]), Question 3.7.1: “Which of the following enablers does your organisation make use of to support the design and delivery of services?”.

[7] Colombia: https://mintic.gov.co/arquitecturati/; Slovenia: https://nio.gov.si/nio/vstopna.nio; United Kingdom: https://www.gov.uk/service-toolkit.

[8] OECD (2021[10]), Question 1.5.3: “Is there a standardised model/method to develop and present business cases or define a value proposition for data, digital and technology projects within the central level of government in your country?”.

[9] Data correct as of 9th November 2022.

[10] OECD (2021[29]), Question 3.1.6: “Please indicate the relative importance of each of the following channels in delivering transactional services for the central government”.

[11] Brazil: www.gov.br; Greece: www.gov.gr; Ireland: www.gov.ie; Slovenia: www.gov.si; United Kingdom: www.gov.uk.

[12] OECD (2021[10]), Question 3.2.3: “What percentage of the annual transactions involving your organisation do you estimate to be served by each channel?”.

[13] OECD (2021[10]), Question 3.2.2: “Across all the services your organisation provides, what is the estimated total annual transaction volume?”.

[14] OECD (2021[10]), Question 3.2.3: “What percentage of the annual transactions involving your organisation do you estimate to be served by each channel?”.

[15] OECD (2021[29]), Question 2.3.1: “How would you score the level of priority given to digital inclusion in the national digital-related policies?”.

[16] OECD (2021[10]), Question 2.4.1: “Is your organisation responsible for any initiatives to promote digital inclusion amongst citizens and/or businesses?”, Question 2.4.2: “Please provide details of these initiatives”.

[17] OECD (2021[10]), Question 3.14.3: “Reflecting on the experience of your organisation during the COVID-19 pandemic, what aspect of the approach to service design and delivery are you now prioritising in preparation for future crises?”.

[18] Data correct as of 9th November 2022.

[19] These datasets include those relating to criminal records provided by the General Directorate of Criminal Records and Statistics (*Adli Sicil ve İstatistik Genel Müdürlüğü*) and the Ministry of Justice (*Adalet Bakanlığı*), health records from the Ministry of Health (*Sağlık Bakanlığı*), and the details of active armed forces personnel from the Ministry of National Defence Recruitment Department (*Millî Savunma Bakanlığı İşe Alım Dairesi Başkanlığı*).

[20] OECD (2021[10]), Question 3.14.2: “Reflecting on the experience of your organisation during the COVID-19 pandemic, what aspect of the approach to service design and delivery did you feel could have been improved?”.

[21] OECD (2021[10]), Question 2.2.2: “How many full-time equivalent roles does your organisation employ to work in the following areas?”.

[22] https://safirdepo.b3lab.org/.

[23] OECD Going Digital Toolkit, based on OECD ICT Access and Usage by Businesses Database, http://oe.cd/bus.

[24] OECD (2021[10]), Question 2.1.3: “Does your organisation's strategic approach to skills emphasise any of the following areas?”.

[25] OECD (2021[10]), Question 3.7.1: “Which of the following enablers does your organisation make use of to support the design and delivery of services?”.

[26] The Contract Termination project was recognised as a category prize winner by the 2022 World Summit on the Information Society.

7 Moving towards a data-driven public sector

This chapter will be structured around the three pillars of the Data-Driven Public Sector Framework. It will first explore the policy efforts implemented or considered by the government of Türkiye's digital strategy in terms of how Türkiye is approaching data governance, applying data to generate public value and recognising the contribution of data to public trust. Based on this analysis, this chapter will then suggest actions that can be taken to help secure a data-driven administration to contribute to their digital transformation journey.

Introduction

The COVID-19 crisis highlighted the critical significance of data not only in government preparedness but in the capacity to react quickly in the midst of a crisis and to subsequently prepare equitable recovery initiatives in the long-term. Facilitating data access, sharing, and reuse across the entire ecosystem has helped to foster co-ordinated decisions and collective activities to manage this pandemic. Nonetheless, some responses to the pandemic have seen governments appear to reduce efforts at greater transparency, disaggregating data to unprecedented levels without adopting a persuasive approach to balancing potential dangers with promised advantages. The demonstration of suitable data governance to ensure the ethical and trustworthy use of data has been particularly important in this time of crisis to help protect mutual trust between citizens and governments, which is a critical asset in tackling the pandemic.

As governments have come to recognise the fundamental importance of data to transformation, countries have increasingly adopted strategic approaches to maximise value while limiting potential risks, threats and harms associated to its management. Since governments produce, collect and use data, from personal data in base registries to non-personal data such as environmental data on an ongoing basis, adopting a data-driven public sector (DDPS) approach in the management, sharing and usage of data would not only bring significant value to the public sector, but benefit citizens and businesses as well.

OECD methodology and tools to support more data-driven governments

According to the 2014 OECD *Recommendation of the Council on Digital Government Strategies* (OECD, 2014[1]), successful digital government transformation relies on several building blocks to support collaboration and co-ordination among government entities. These include creating a data-driven culture in the public sector through frameworks to support the re-use of data and investing in the foundations to unlock the value of data in the delivery of a twenty-first century digital government (see Box 7.1).

Box 7.1. OECD Recommendation of the Council on Digital Government Strategies: Principle 3

The [OECD] Council […] on the proposal of the Public Governance Committee […] recommends that governments develop and implement digital government strategies which:

Create a data-driven culture in the public sector, by:

- Developing frameworks to enable, guide, and foster access to, use and re-use of, the increasing amount of evidence, statistics and data concerning operations, processes and results to (a) increase openness and transparency, and (b) incentivise public engagement in policymaking, public value creation, service design and delivery.
- Balancing the need to provide timely official data with the need to deliver trustworthy data, managing risks of data misuse related to the increased availability of data in open formats (i.e allowing use and re-use, and the possibility for non-governmental actors to re-use and supplement data with a view to maximising public economic and social value).

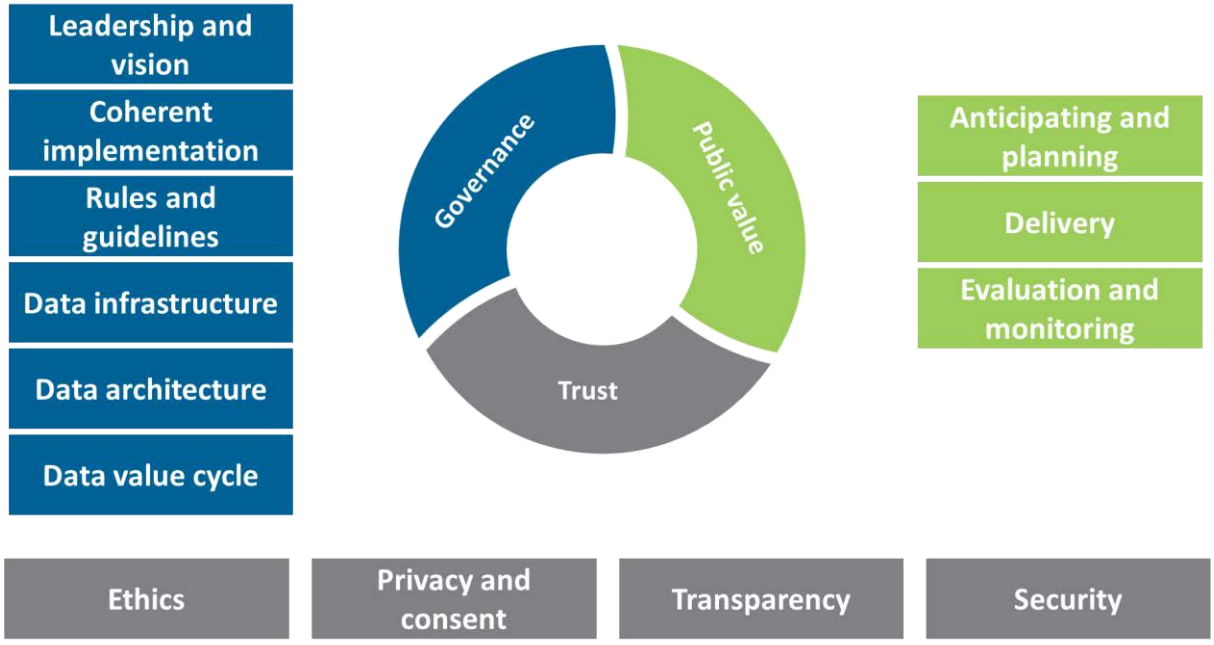
Source: Text from OECD (2014[1]), *Recommendation of the Council on Digital Government Strategies*, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0406.

As governments increasingly recognise not only the power and opportunities, but also the numerous challenges of data, it is fundamental to implement models of data governance that enable governments to handle data in an ethical manner and generate public value through its application. In this context, the OECD published *The Path to Becoming a Data Driven Public Sector* (DDPS) to help countries respond to

opportunities and challenges in adopting a whole of government approach to data (OECD, 2019[2]). Figure 7.1 summarises the different elements that contribute to a data-driven public sector:

- a comprehensive model for data governance,
- the application of data for public value, and
- the role of data in public trust

Figure 7.1. The Data Driven Public Sector Framework



Source: OECD (2019[2]), *The Path to Becoming a Data-Driven Public Sector*, https://doi.org/10.1787/059814a7-en.

The OECD Digital Government Policy Framework (DGPF) builds on this framework to recognise DDPS as one of the six dimensions contributing to the maturity of digital government efforts (OECD, 2020[3]). The DGPF provides the basis for measuring this maturity through the OECD Digital Government Index (OECD, 2020[4]). In the 2019 edition, notable efforts in terms of data could be identified but, overall, OECD member and non-member countries continued to struggle with the internal challenges of making strategic use of data and exploiting its potential with the OECD average being below 0.5, the lowest of all the dimensions measured by the index (OECD, 2020[4]).

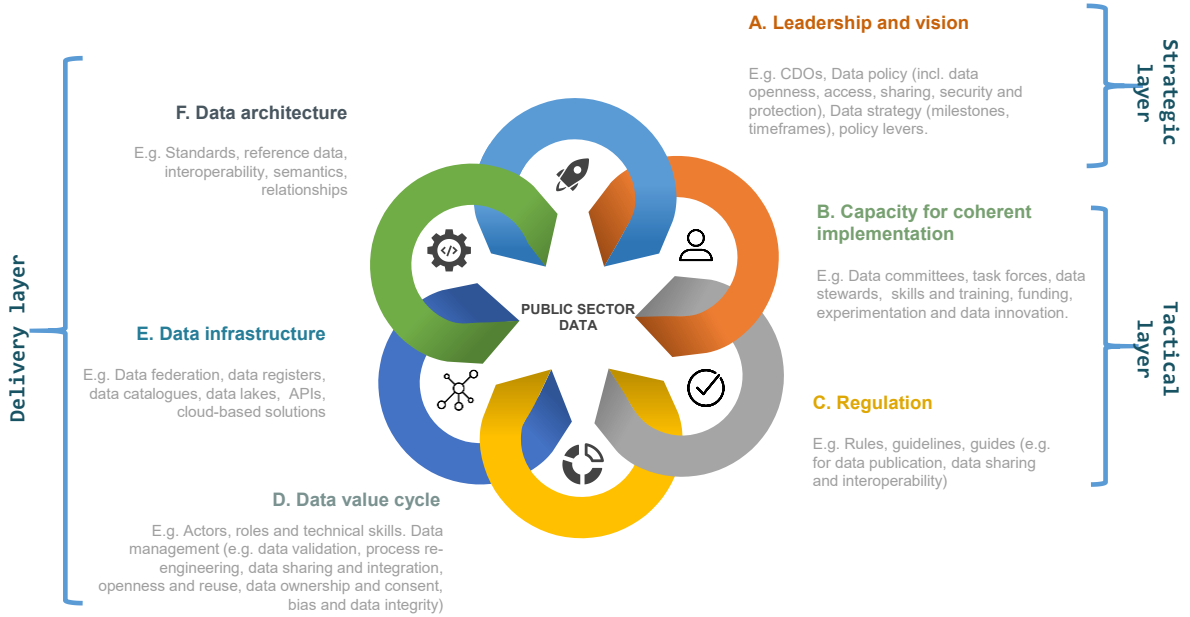
Open Government Data (OGD) provides further fertile ground for the transformative role of data. The publication of public sector datasets to stimulate innovation, provide opportunities for the economy at large and increase government accountability has made OGD an increasingly mainstream topic with the introduction of explicit legislation, dedicated strategies and incentives to increase its use (OECD, 2018[5]). Indeed, the OECD Open, Useful and Re-usable (OURdata) Index: 2019 shows that there has been clear progress across OECD countries, which is encouraging (OECD, 2020[6]). For example, it was found that in terms of data availability, 19 of the 32 OECD countries have made progress when compared to the previous edition, indicating a significant commitment among governments to pursue the adoption of a user-driven open government data agenda. However, challenges still remain and would benefit from both political support and an enabling environment (see Chapter 4) to sustain implementation efforts in the long term. In 2021, the OECD Council adopted the *Recommendation on Enhancing Access to and Sharing of Data (EASD),* which is the first internationally agreed upon set of principles for how governments can

maximise the cross-sectoral benefits of access to and sharing of different types of data while protecting individuals' and organisations' rights (OECD, 2021[7]). The adoption of the EASD Recommendation illustrates the growing importance of data in the eyes of countries, including within the public sector, and the call for a data-driven public sector. Based on the DDPS Framework, this chapter analyses how Türkiye is approaching data governance, applying data to generate public value and recognising the contribution of data to public trust.

Data governance in Türkiye

The OECD Framework for Data Governance in the Public Sector has three layers (Figure 7.2). At a strategic level, this reflects the importance of leadership for the data agenda and a vision for its value in supporting digital transformation. At a tactical level, it is imperative that questions of implementation capacity and regulation are addressed. This will ensure that data flows steadily within government, across sectors and borders when needed, and always under the conditions to support trust. In terms of delivery, it is critical that data infrastructure and data architecture are prioritised to simplify the means by which services can access quality data.

Figure 7.2. Data governance in the public sector



Source: OECD (2019[8]), *Digital Government Review of Argentina: Accelerating the Digitalisation of the Public Sector*, https://doi.org/10.1787/354732cc-en.

Strategic leadership and vision

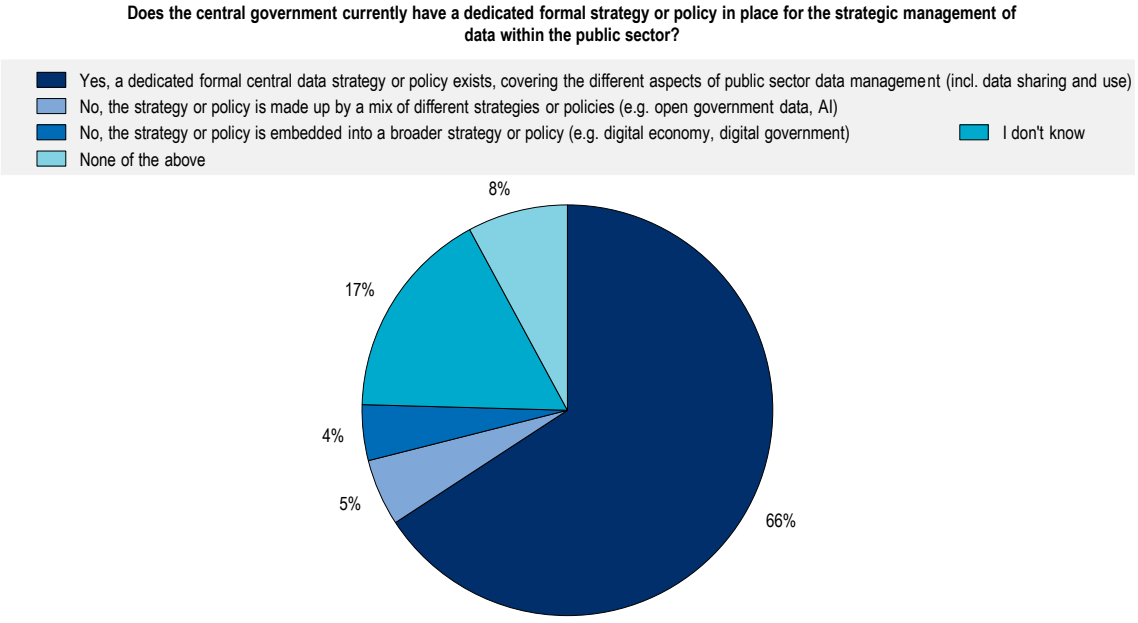
The first element in defining good data governance is the leadership and vision to ensure strategic direction and purpose for data throughout the public sector. This is often materialised by data strategies, and data-centric leadership roles.

Data from the Digital Government Index revealed that only 12% of the OECD member and non-member countries that responded to the survey confirmed the existence of a single dedicated data policy (or strategy) for the central or federal government, whereas 82% of the surveyed countries embed data as

part of broader related policies (e.g. digital government or open data) (OECD, 2020[4]). Overall therefore, a majority of countries are taking a strategic approach to data at least in some way. Nevertheless, for most countries, these strategic efforts were not supported by clear communication or guidance around strategic goals and expected actions, as well as recognising data as a policy priority (OECD, 2020[4]).

Although Türkiye does not currently have a dedicated formal data strategy, its importance has been recognised and embedded in related policy documents. Figure 7.3, shows that despite there not being a dedicated formal strategy, two thirds of the public sector institutions that contributed to the survey, believe that there is. These responses indicate the expectation for the Digital Transformation Office (*Dijital Dönüşüm Ofisi*, DTO) to provide leadership and may reflect the announcement made in the 2022 Presidential Annual Programme (Presidency Strategy and Budget Directorate, 2022[9]) of placing the responsibility on the DTO to develop a National Data Strategy and Action Plan. This is to be welcomed as while public sector organisations seem to be aware of some elements of a data policy they are confused about its level of formality or clarity.

Figure 7.3. Awareness of a dedicated formal strategy for strategic data management from the central government in the Turkish public sector



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

The prospect of Türkiye having a National Data Strategy and Action Plan is to be welcomed. Formally defining a national strategy dedicated to data will set the scene and help to establish the organisational culture and structure to encourage a data-driven public sector in Türkiye in line with commonly understood strategic goals such as greater data integration. Complementing the strategy with an action plan to disseminate these practices throughout government will require a comprehensive policy effort reflecting efforts to enable data stewardship and leadership, coherent action, policy co-ordination and steering, common data standards, and the development of scalable infrastructure for data sharing and access (OECD, 2019[2]).

As the DTO plans for the new strategy, there would be benefits for considering open and participatory processes that can not only integrate the inputs of actors from across the public sector but also seek input from external stakeholders to create a broad base of support for the policy and its ambitions. This would

help to establish the foundations for effective prioritisation, steering and consolidation of efforts as well as further extending a data-driven mindset. Some OECD countries have taken such an approach including the **United States'** Federal Data Strategy (see Box 7.2), the Government Data Agenda in the **Netherlands** and **Ireland**'s Public Service Data Strategy.

Box 7.2. The United States: Federal Data Strategy

In June 2019, the US government issued its Federal Data Strategy, which presents a ten-year vision to unlock the full potential of the country's federal data assets while safeguarding security, privacy and confidentiality. The data strategy centres on three core principles (ethical governance, conscious design and a learning culture). It adds to several existing initiatives, policies, executive orders and laws that over the past few decades have helped make the United States a front-runner in terms of strategic management and reuse of government data.

In order to capture the linkage between user needs and appropriate management of data resources, the data strategy covers 40 practices that guide agencies throughout their adoption of the strategy. To further ensure coherent implementation of the strategy in its early phase, federal agencies are required to adhere to annual government action plans that include prioritised steps, time frames and responsible entities. A draft version of the 2019-2020 Federal Data Strategy Action Plan covers 16 steps seen as critical to launch the first phase of the data strategy vision, including the development of data ethics

Source: Executive Office of the President (2019[11]), *Federal Data Strategy*, https://www.whitehouse.gov/wp-content/uploads/2019/06/M-19-18.pdf.

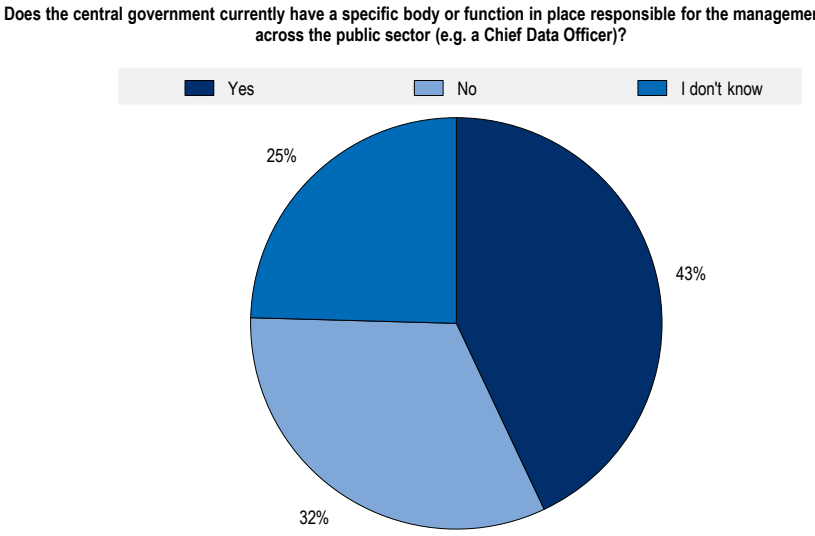
Strategic documents are important for developing a common narrative but their creation, and implementation, rely on those with leadership roles providing a mandate for such work. Political leadership can be helpful in placing data on the policy agenda but needs to be supported with administrative leaders championing a data-centric approach both across government and then within organisations too. Depending on the country, the function of a "Chief Data Office" (or Officer) can take various names such as "officers responsible for the provision of public data" or "data manager", and be part of different governmental organisations but consistently plays the role of implementing and steering policy design and implementation, ensuring the continuity and sustainability of the data agenda across political terms (OECD, 2019[2]). For example, in some countries the leadership is part of an existing administrative structure such as the Government Chief Data Steward in **New Zealand,** which is held by the Chief Executive of Statistics New Zealand. In others the person who heads up an agency such as the Agency for Digital Government in **Sweden** provides the leadership, while a third model is for this responsibility to be held by a management board as with the Information Management Board in **Finland**.

Figure 7.4 shows that 43% of public institutions (49/113) in Türkiye identified the DTO as the specific central government body in place with responsibility for data management across the public sector. There was also recognition of the National Data Dictionary project as the mechanism by which this responsibility is being enacted. The National Data Dictionary project aims to identify data ownership, duplicate and conflicting data, introduce standards and define the data used by public institutions and organisations to help co-operation and support better decision-making among institutions. However, with a majority of organisations (57%, 64/113) unaware of the DTO's responsibility for data management, there is an evident gap in the visibility and communication of the DTO's work with regards to data.

Overall, the OECD team found organisations to be aware of the benefits and associated challenges of data. Figure 7.5 shows that within organisational leadership, the survey found a majority of organisations to consider that their management and senior policy makers valued data and were sufficiently supportive

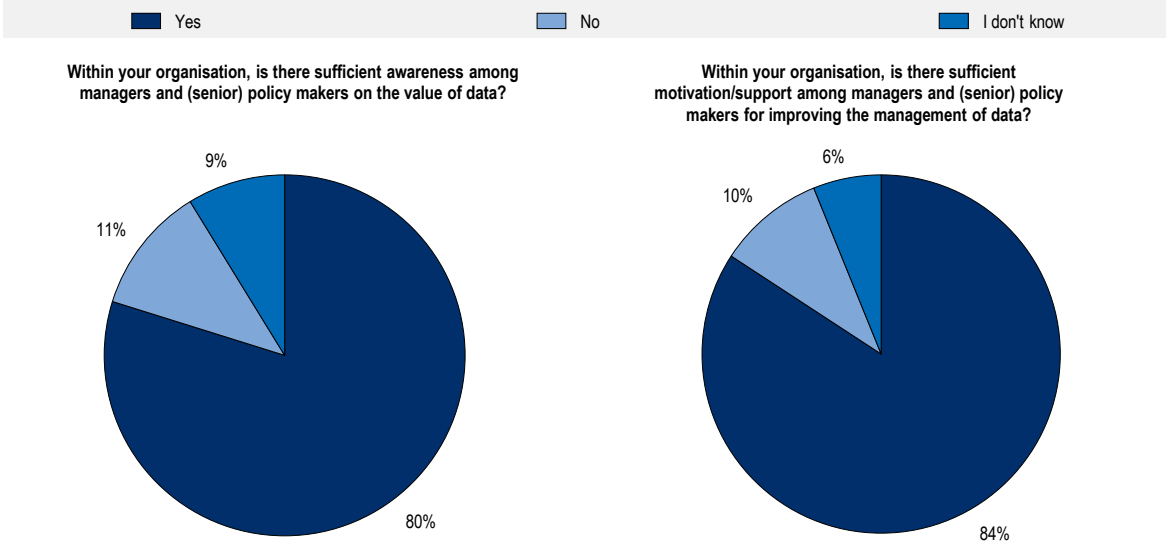
of improving its management. It is positive to see the amount of support, awareness and motivation in the Turkish public sector and the high priority that they give to the management of such important assets.

Figure 7.4. Level of awareness of a specific body in place responsible for data management in the public sector in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Figure 7.5. Level of awareness and motivation/support among managers and policy makers in relation to the value and importance of improving data management in the Turkish public sector



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Although there is awareness of the importance of data among public institutions in Türkiye, the specific role of a 'Chief Data Officer' either in an individual or organisational guise to oversee the strategic management of data could be powerful in helping to nurture a data-driven culture, establishing coherent data governance and enabling greater digital maturity in the public sector.

Tactical capacities for implementation and regulation

Governments need to enable the coherent implementation and steering of data-driven policies, strategies and initiatives across the government as a whole. This can be achieved in two complementary ways. One is the role of co-ordination bodies, committees, task forces and training to equip staff. The other are the use of regulatory materials to guide and support data management through rules, guidelines and standards.

Capacity for coherent implementation

The capacity for coherent implementation is fundamentally reliant on the skills and capabilities of public servants. As discussed more fully in Chapter 4, all public servants should be encouraged to develop their ability to understand the potential for applying data in their daily work. Equipping all public servants with the abilities to source data, carry out analysis and define actionable metrics for measuring success, outcomes or impact could contribute to significantly increase public value.

As discussed in the previous section (and seen in Figure 7.5), managers and policy makers are understood to value data. This emphasis is visible in the way that organisations consider data in the context of organisational skills. Data is emphasised as being part of the strategic approach to skills by 68% (77 out of 113) of respondents to the survey while 70% (78 out of 113) of organisations are providing training on the “Trustworthy use of data and technology”. However, only 37% (46 out of 113) of organisations offer training that focuses on the full concept of “Data-driven government” and 35% (40 out of 113) identified that technical capacities are a challenge.

To build and maintain good data governance, the government could consider not only appointing a team to champion a data-driven culture within organisations, but also formalising training in data-driven skills for all public servants no matter their level in the hierarchy. As will be discussed later in the chapter, a strategic approach to this area would be valuable to ensure the capacity of the workforce for coherent implementation of data strategies and a data-driven culture to flourish.

Rules, guidelines and standards

Data related legislation and regulations are instruments that help countries define, drive and ensure compliance with the rules and policies guiding data management, including data openness, protection and sharing. Rules and guidelines can also play a role in the definition and enforcement of common data standards towards greater data interoperability and streamlined data-sharing practices.

Türkiye’s Law on the Protection of Personal Data (KVKK No. 6698) was effective and published on the Official Gazette on April 7th, 2016 (Republic of Türkiye, 2016[12]). Its purpose is to “protect fundamental rights and freedoms of people, particularly the right to privacy, with respect to processing of personal data and to set forth obligations, principles and procedures which shall be binding upon natural or legal persons who process personal data”.

The Personal Data Protection Authority (*Kişisel Verileri Koruma Kurumu*, KVKK) was established as an independent regulatory body to oversee the enforcement of its provisions; which is composed of the Presidency and the Personal Data Protection Board. The Personal Data Protection Authority serves a mostly administrative and government-relations role, whereas the Board is the decision-making organ within the Authority (five members elected by the National Grand Assembly of Türkiye; and four directly appointed by Türkiye's President) (Personal Data Protection Authority, 2020[13]).

To support those who will be working with personal data, the Personal Data Protection Authority has developed various guidelines (see Box 7.3), some of which have also been issued in English to support non-Turkish entities. For example, the Data Security manual guides public sector organisations on the administrative and technical measures that need to be taken with regards to digital security and provides

examples of safe disclosure. Similarly, the Information and Communication Security Guide of the DTO also covers data security and personal data security issues (Digital Transformation Office, 2020[14]).

Box 7.3. Data Guidelines in Türkiye

Guidelines which have been published so far are as follows:

- Law on the Protection of Personal Data in 100 Questions (Personal Data Protection Authority, 2019[15])
- Implementation Guideline on the Law on the Protection of Personal Data (Personal Data Protection Authority, 2019[16])
- Personal Data Security Guidelines (Technical and Organisational Measures) (Personal Data Protection Authority, 2018[17])
- Guideline on Erasure, Destruction or Anonymisation of Personal Data (Personal Data Protection Authority, 2018[18])
- Frequently Asked Questions About the Law on the Protection of Personal Data (Personal Data Protection Authority, 2019[19])
- Right to Request Protection of Personal Data as a Constitutional Right (Personal Data Protection Authority, 2018[20])
- Data Controller and Data Processor (Personal Data Protection Authority, 2018[21])
- Data Controller's Registry (Personal Data Protection Authority, 2018[22])
- Methods for Seeking Rights of Data Subject (Personal Data Protection Authority, 2018[23])
- Rights and Obligations Under the Law (Personal Data Protection Authority, 2018[24])
- Processing Conditions of Personal Data (Personal Data Protection Authority, 2018[25])
- Key Principles Regarding to Processing of Personal Data (Personal Data Protection Authority, 2018[26])
- Explicit Consent (Personal Data Protection Authority, 2018[27])
- Basic Concepts in the Law No. 6698 (Personal Data Protection Authority, 2018[28])
- Terms in the Law No. 6698 (Personal Data Protection Authority, 2018[29])
- The Purpose and Scope of the Law No. 6698 on the Protection of Personal Data (Personal Data Protection Authority, 2018[30])
- International and National Regulations for the Protection of Personal Data (Personal Data Protection Authority, 2018[31])
- The Need for the Law on the Protection of Personal Data (Personal Data Protection Authority, 2018[32])
- Processing Conditions of Sensitive Personal Data (Personal Data Protection Authority, 2018[33])
- International Transfer of Personal Data (Personal Data Protection Authority, 2018[34])
- Structure and Duties of Personal Data Protection Board (Personal Data Protection Authority, 2018[35])
- Information and Communication Security Guide (Digital Transformation Office, 2020[14])
- Guidelines on Personal Data Processing Inventory Preparation (Personal Data Protection Authority, 2019[36])
- Recommendations on the Protection of Personal Data in the Field of artificial Intelligence (Personal Data Protection Authority, 2021[37])
- Guidelines on Matters to Be Considered in Processing Biometric Data (Personal Data Protection Authority, 2021[38])

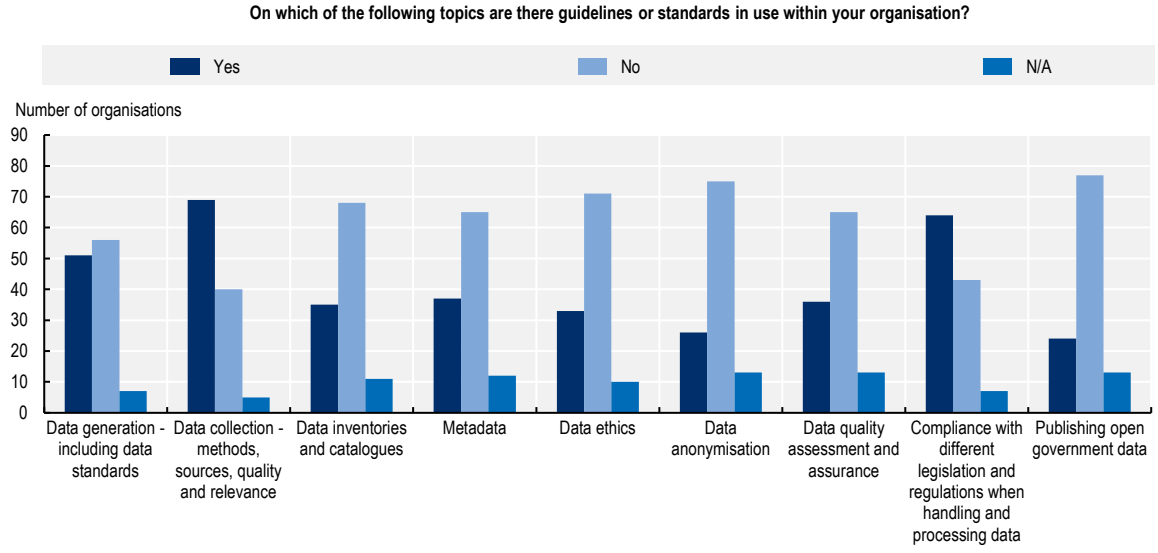
- Guidelines on Cookie Application (Personal Data Protection Authority, 2022[39])
- Banking Sector Good Practices Guidelines on the Protection of Personal Data (Personal Data Protection Authority, 2022[40])
- Matters to be Considered in terms of Protection of Children's Personal Data (Personal Data Protection Authority, 2020[41]).

Source: Personal Data Protection Authority (2020[13]), *Data Protection in Türkiye*, https://kvkk.gov.tr/SharedFolderServer/CMSFiles/5c02cb3c-7cc0-4fb0-b0a7-85cb90899df8.pdf.

Since the Personal Data Protection Authority's guidelines are generally specific to personal data, this explains why 51% (58/113) of the surveyed organisations feel that there is a lack of guidance and standards around the treatment of data (i.e.: data collection, data sharing and data interoperability) and 47% (53/113) consider there to be a lack of clarity in policy guidance in the governance and use of data. This demonstrates that there is a pressing need to develop clear and sufficient guidelines covering the use and the handling of non-personal data.

Figure 7.6 shows that the current areas where organisations most often have guidelines and standards are data collection (61%, 69 out of 113), compliance with legislation and regulation when handling and processing data (51%, 64 out of 113), and data generation (46%, 51 out of 113). As these areas tend to reflect the aspects of organisational activity most connected and affected by the KVKK there is an opportunity for the public sector as a whole to be provided with centrally curated guidelines and standards rather than leaving this to individual organisations. This would create a more homogenous, seamless and trustworthy data-driven public administration, and at the same time provide a common language to measure, evaluate and improve performance. The National Data Dictionary project could be the mechanism by which these standards are established for the public sector.

Figure 7.6. Areas where guidelines and standards are the most used



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

The use of standards concerning different types of data would be a good complement to the development of guidelines and allow for greater interoperability and data sharing practices. As an example of how countries are taking comprehensive steps to respond to this standards challenge, the **United Kingdom**'s National Data Strategy[1] is supported by the Data Standards Authority, which recognised that data standards are fundamental as they establish clear and common understanding of how the government must describe, record, store, manage and access data (GOV.UK, 2022[42]) (see Box 7.4). The Data Standards Authority has endorsed standards for beneficial ownership, the formatting of comma-separated values (CSV) files, the open document format and the UK's unique property reference number with several others currently under review.[2]

Box 7.4. The United Kingdom's Data Standards Authority

The government has recognised the need to improve data standards. The Data Standards Authority (DSA) was established in April 2020. It is led by the Cabinet Office in close partnership with the Office for National Statistics (ONS). The DSA leads cross-government work on data standards to support the sharing and interoperability of data in government.

There are complex fiscal, political, technological and operational challenges in government the DSA needs to balance to achieve a cultural shift.

Changing how government uses data is an opportunity for the DSA to strengthen existing processes, encourage the adoption of standards and build on existing standards. Responses to the National Data Strategy and the Civil Service Data Survey 2021 shows widespread support for a greater focus on data standards and an authority to lead government-wide adoption.

The DSA needs to make sure that proposed and implemented data standards fully meet user needs, and can meet future demands. The DSA does this by collaborating with experts from a wide range of organisations, including the public sector, private sector and academia.

Government uses data in many ways, so the DSA must make strategic decisions to prioritise which aspects to standardise. The DSA works closely with other related areas of work such as the Government Data Quality Hub, ONS Integrated Data Programme, the Digital Economy Act 2017's data sharing powers, open data and data ethics.

This strategy sets out the role, vision and priorities of the DSA. It includes the:

- main deliverables
- cross-government collaboration
- change management for prioritised standards
- material and cultural change.

These standards support departments and public bodies in improving outcomes for the public and efficiencies in how the government does business and provides services.

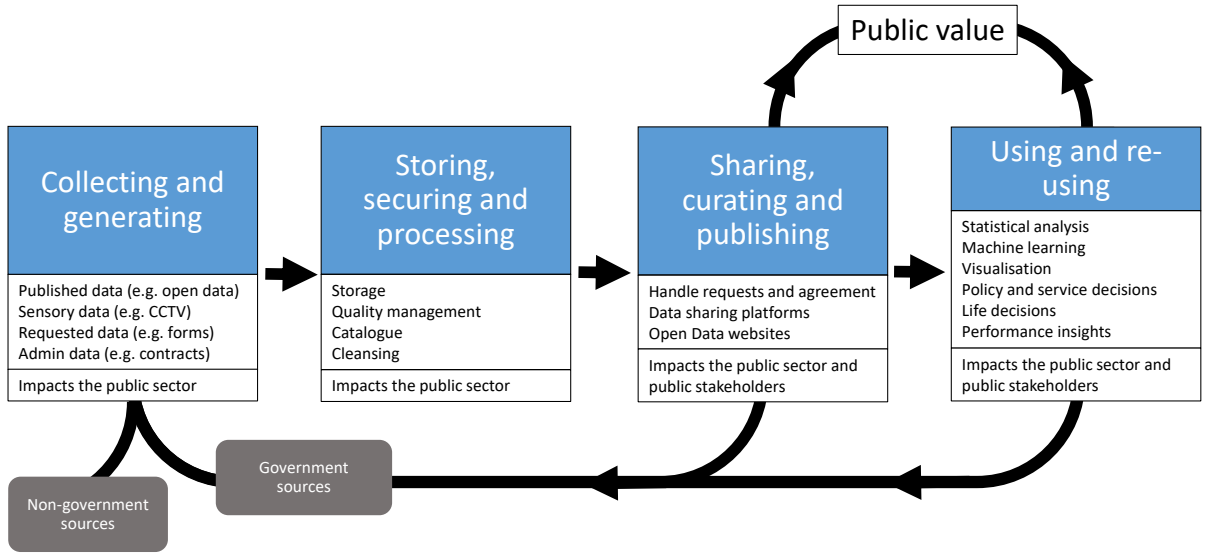
Source: GOV.UK (2022[42]), *Data Standards Authority Strategy 2020 to 2023*, https://www.gov.uk/guidance/data-standards-authority-strategy-2020-to-2023.

Data Value Cycle

The Data Value Cycle covers data management in government. As Figure 7.7 illustrates, it goes from the initial collection and generation of data, through its storing, securing and processing, on to the sharing, curating and publishing of that data and then finally into its use and re-use. The first two phases are about

how the public sector manages and looks after its responsibility to the data it generates, collects and holds and the final two stages address opportunities to generate new public value either through the improvement of policy and services or the opportunities generated by OGD (van Ooijen, Ubaldi and Welby, 2019[43]).

Figure 7.7. Government Data Value Cycle



Source: van Ooijen, C., B. Ubaldi and B. Welby (2019[43]), "A data-driven public sector: Enabling the strategic use of data for productive, inclusive and trustworthy governance", https://doi.org/10.1787/09ab162c-en.

Going from the first two phases where data is raw, isolated and unstructured to the last two phases where relationships between data are identified and then from understanding those relationships to taking actions, which feedbacks to the first phase, is the cycle that data goes through before creating value and impact Since data plays an important role and heavily impacts decision making, it is worth using the Government Data Value Cycle approach when thinking about data management to maximise the potential of data to create value and ensure governments have the most efficient infrastructure and architecture.

In Türkiye, collecting and generating data could be improved in terms of publishing OGD as well as requesting data, which will be addressed later in this chapter. As for storing, securing and processing data, the majority of public institutions reported no issues from a technical point of view.

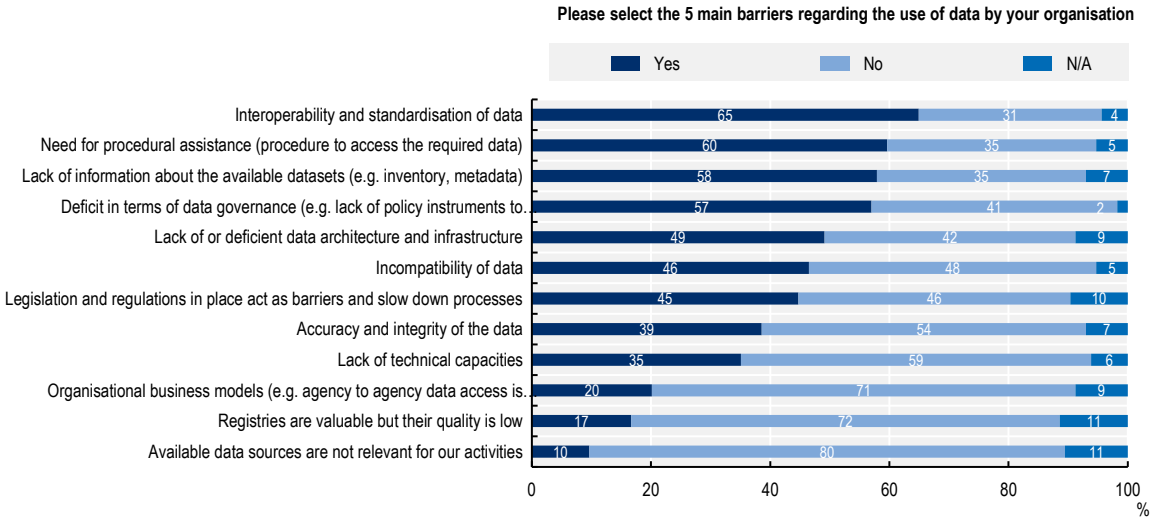
In terms of data sharing, the country has put several measures in place. Prime Ministry Circular No. 2016/28 on "Inclusion of Public Institutions and Organisations in KamuNet", created the expectation for institutions in Türkiye to share data using the KamuNet (Public Virtual Network) (Presidency of the Republic of Türkiye, 2016[44]). This secure virtual network, which is closed to the internet, is one of the critical ways in which the Turkish public sector mitigates digital security risks in the exchange of data among public institutions. KamuNet is complemented by the Public Application Centre (*Kamu Uygulama Merkezi*) platform, which functions as part of the e-Government Gateway suite of tools, and offers a space for public institutions to share data and provide services to other institutions, as well as accessing statistical information about their services (Public Applications Center, 2022[45]). These measures aim to enhance security and ensure the safe transmission of data in line with the necessary privacy safeguards (this aspect will be further discussed further down the chapter).

While KamuNet and the Public Application Centre are the strategic direction for encouraging effective data sharing, many organisations have already invested in their own approaches for serving their needs to provide, or receive data. One example of this is the Migration Registration System (GöçNet) established by the Law on Foreigners and International Protection No. 6458 (Ministry of Interior, 2013[46]). This migration system, discussed in more detail in Chapter 6, involves data being exchanged between more than 30 public institutions and helps to manage information regarding foreigners related to their entry, stay, exit, deportation etc (Official Statistics Website, n.d.[47]). It is valuable for institutions in Türkiye to have these systems for providing data exchange on a bilateral basis with other organisations but these models do not unlock the full value of the data they hold or process and ongoing efforts are needed to ensure data flows freely within the Turkish public sector.

Moreover, as discussed in Chapter 6, the preference for on-premises data storage and high security measures run the risk of creating siloes and reduces the ease with which data might be shared between organisations via cloud-based approaches. As Türkiye thinks about its future cloud hosting strategy and works with organisations to migrate them away from data centres, consideration needs to be given to efforts for simplifying the sharing of data between organisations, the cataloguing of what is available and its cleansing. Ensuring data sovereignty also needs to be a priority as the adoption of cloud computing could break down national boundaries more than ever before, thus it would be important to have strictly defined rules on the use of data.

Despite the existence of guidelines to foster interoperability and data standardisation, Figure 7.8 shows 65% (73/113) of institutions identified these two areas as the number one barrier to the use of data. Indeed, when the OECD and the DTO ran a capacity building workshop focusing on data in Ankara in May 2022, one of the most urgent needs was identified as that of a central vocabulary to ensure semantic interoperability. The National Data Dictionary project aims to achieve this in recognising that a central vocabulary can provide clear, unambiguous and non-redundant definitions with a hierarchical structure, which allows for homogeneous understanding, improves sharing of data within institutions and avoids duplication of projects (OECD, 2019[2]).

Figure 7.8. Main barriers to the use of data



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

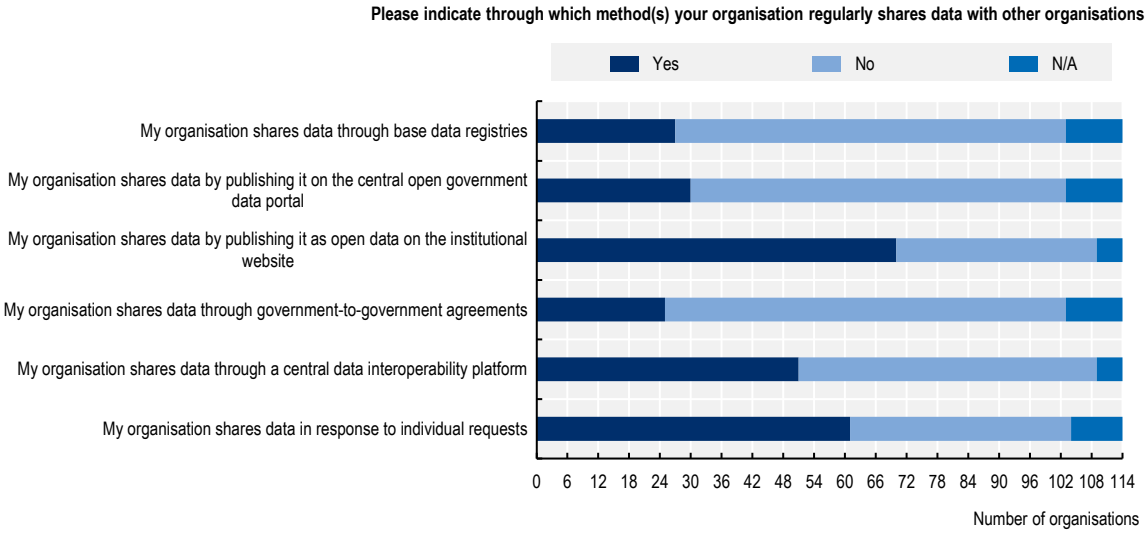
Data infrastructure and architecture

Data architecture

As discussed earlier, the e-Government Gateway acts as a mechanism by which data and information is exchanged between public sector organisations in order to provide services and for many organisations is the focal point for data interoperability. However, the OECD peer review team noted that, beyond the data exchange facilitated through the services available on the e-Government Gateway, there was little evidence of data exchange taking place and data staying within organisational or sectoral siloes. The lack of data architecture, and more precisely, of data standards seems to be the challenge, as shown in the previous figure. As each public institution is operating an independent web infrastructure through organisation-specific data centres and standards for data, sharing across government is harder and results in siloed approaches. The current situation sees each institution operate according to its own priorities, which does not foster an eco-system of data sharing and re-use. This creates challenges not only for improved service delivery but also in the use of data as a foundation for emerging technologies such as Artificial Intelligence, Machine Learning and the Internet of Things.

While there are efforts to standardise data through the National Data Dictionary and plans to establish a Public Data Space to support access of data and increase co-operation, many participants expressed an urgent need for a more joined up government in general, to better collaborate and enhance access to and sharing of data. Figure 7.9 illustrates the limitations of data sharing between institutions which are on average only happening in 39% of organisations. Participants indicated that the most frequently preferred ways of sharing data were through open data on an institutional website (61%) or in response to requests through emails or official letters (53%). These ways of sharing are often not automated and require a bureaucratic process (official letters) to enable sharing which neither promote nor reflect the practices of a successful digital government.

Figure 7.9. Methods used between organisations to share data

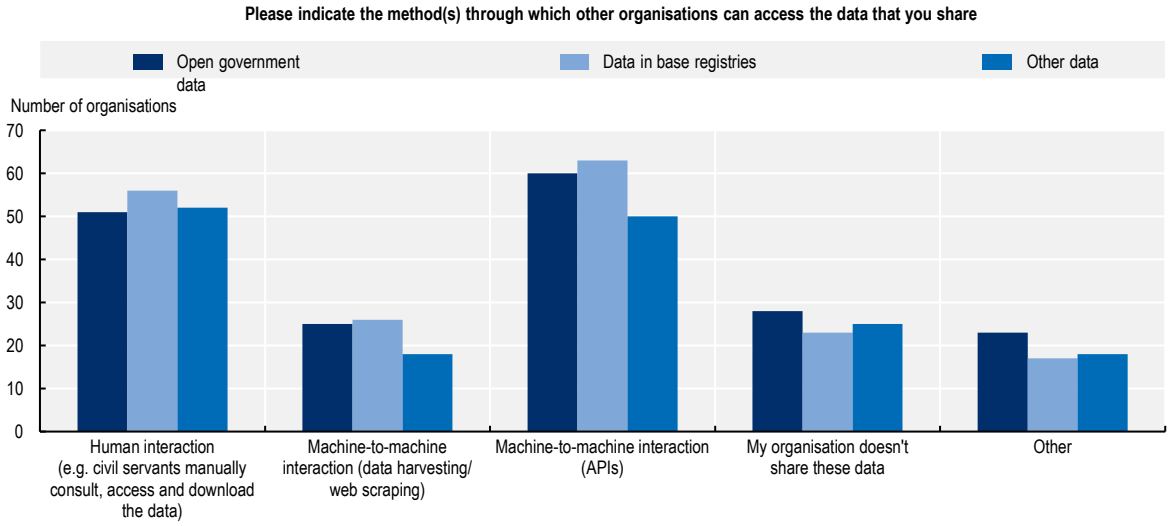


Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

However, there is certainly a mixed picture in the experience of public sector organisations in general. Figure 7.9 also shows 44% of organisations sharing data through a central data interoperability platform and in the detailed responses, several organisations recognised their use of web services to share data.

Additionally, Figure 7.10 indicates that while many institutions are still accessing most of their data manually through human interactions, the greatest number of responses are from those organisations who are using Application Processing Interfaces (APIs) to facilitate machine-to-machine interactions. Nevertheless, those figures represent less than half of the organisations that responded to the survey, indicating that further efforts need to be made in terms of facilitating data sharing across the public sector in Türkiye.

Figure 7.10. Methods from which organisations in Türkiye commonly access data



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

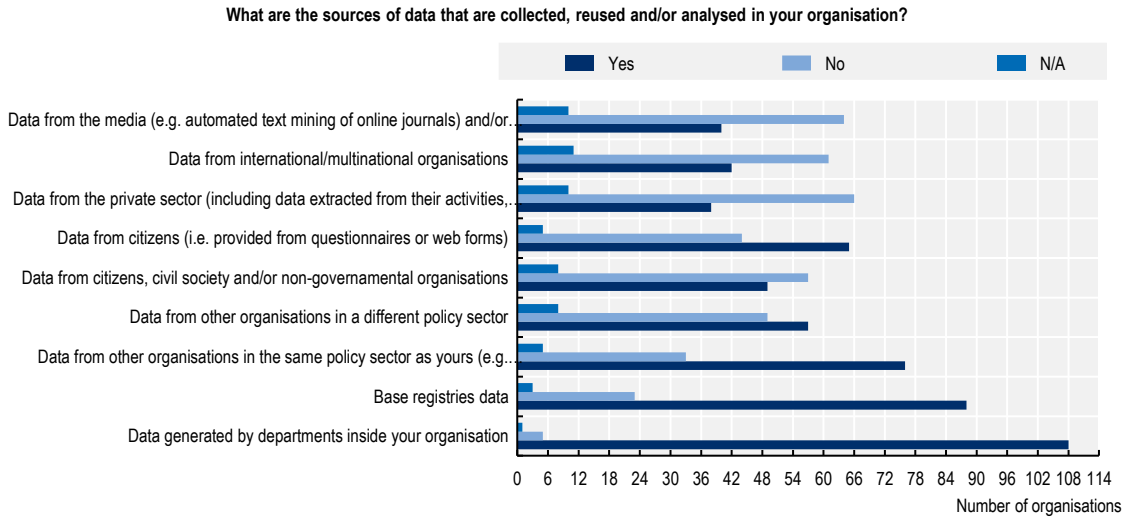
However, further insights from the survey reflected in Figure 7.11 show that aside from data being generated within organisations, the most common source of data collected, re-used and analysed by institutions come from base registries data. With 77% (88 out of 113) of organisations reportedly using base registries there are good opportunities for better accessibility and interoperability in pursuit of the Once-Only Principle, which implies that citizens and businesses would only need to insert their data once for all public institutions to take all necessary actions to access, exchange and reuse information while respecting the relevant data protection rules. This can ensure faster sharing of data, constant improvement of public services around users-needs and reduced administrative burden.

Despite the use of base registry data and signs of a positive attitude towards machine-to-machine data sharing, the review team observed that some organisations were reluctant to share data as it is "safer" to keep it for themselves. In the context of handling data with trust caution is necessary but over-caution can constrain the potential added-value of data. In order to mitigate the fear of sharing data for security reasons, the role of the Personal Data Protection Authority is crucial in establishing and communicating clear guidelines and support for staff to be confident in sharing data with other organisations. This would highly promote data-sharing culture, increase opportunities to collaborate and unleash the value of data.

Having a data-sharing mindset and culture within the public sector is an important part of digital government maturity. To establish such an environment, governments need to reinforce their national data-sharing guidelines in order to allow for the production of quality, standardised and interoperable government data, with an expectation that this data will be reused either internally by other government actors or externally as OGD. Data sharing mechanisms that enable cross-governmental flows of data can boost public sector intelligence. For example, **Argentina**'s Ministry of Justice has put in place a tool that accelerates data

access by allowing the sharing of personal data between registered users through a central common interoperability platform (INTEROPER.AR). This not only helps the Ministry to meet users' needs in a more timely fashion, but also reduces friction in finding, understanding, sharing and using data.

Figure 7.11. Most common sources of data collected, re-used and analysed by Turkish public institutions



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

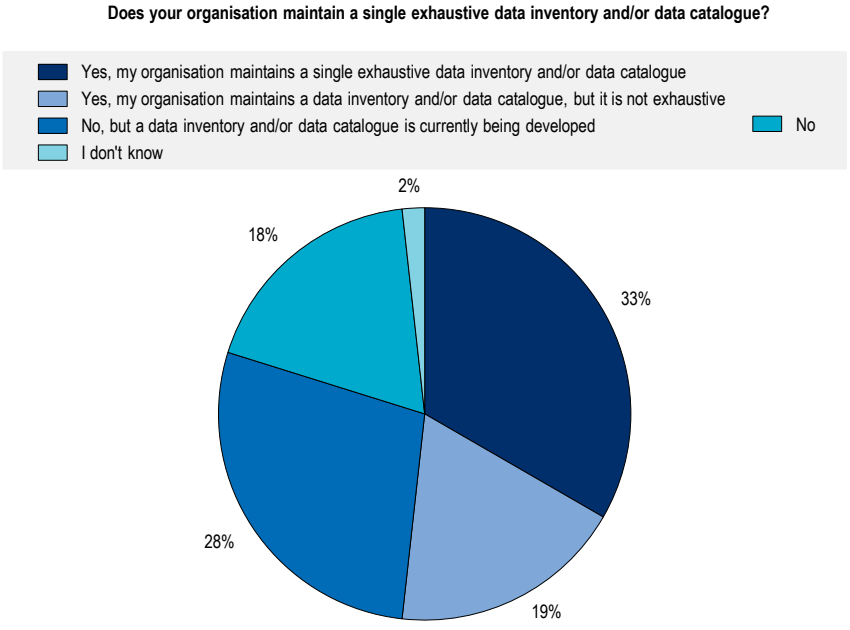
Data infrastructure

Data infrastructure describes the tools that facilitate data sharing, such as interoperable data platforms and APIs. As has been previously mentioned, the e-Government Gateway operates as a *de facto* interoperability platform for the Turkish public sector in the way it allows different organisations to develop associated services in light of the information contained within KAYSIS (discussed in Chapter 6). An important underlying enabler for more effective data infrastructure is a modern approach to web infrastructure in general but the OECD team found that organisations were often operating their own data centres and not enjoying the benefits of greater cloud migration. The DTO is working on a new Public Cloud Strategy and encouraging organisations to revisit their current hosting strategies and is planned to be published in September 2022.

To improve the data infrastructure of the Turkish public sector a National Artificial Intelligence Strategy has been put in place to cover measures to increase access to big data and usage of AI in public sector (Ministry of Industry and Technology/Digital Transformation Office, 2021[48]). A National AI Strategy Steering Committee was established in 2021 and its first meeting was held in January 2022. This committee defines several actions in the AI strategy that may directly affect data technical structure, public data skills and workforce and data governance and legislations. Other departments within the institutions are also starting to establish public institutions specific for AI and big data. For example, the Big Data and Artificial Intelligence Applications Branch Office was established under the General Directorate of computing within the Ministry of Justice (*Adalet Bakanlığı Bilgi İşlem Genel Müdürlüğü*); Data Mining & Analysis, Big Data and Reporting Unit and the Artificial Intelligence and Wearable Technologies Unit have been established within the Ministry of Health (*Sağlık Bakanlığı*); and the Process Management and Artificial Intelligence Applications Branch Office was established within the Ministry of National Defense (*Millî Savunma Bakanlığı*).

An effectively data-driven public sector ensures that service teams have the means to access the datasets they require with the provisions for that data to be shared and re-used. Countries can communicate the availability of data through data catalogues, which help users find the data they need, serve as an inventory of available data, and provide information to evaluate the relevance and quality of data for its intended use. As can be seen in Figure 7.12, the public sector in Türkiye has a mixed approach to data catalogues. Of the organisations that completed the survey, over half of the organisations have a data inventory and/or data catalogue of some sort with 33% (37 out of 113) of all organisations describing theirs as exhaustive. A further 28% (32 out of 113) are currently developing a catalogue. Data catalogues can help improve the speed and quality of data analysis as well as engaging those who need to perform data analysis by reducing some of the pain and friction involved in sourcing data (OECD, 2019[2]). However, in order to help reduce risks of error and improve data efficiency, data context and data analysis across government, the DTO needs to lead efforts to co-ordinate these catalogues to ensure a standardised approach to metadata management within the National Data Dictionary project in order to identify and describe an inventory of shareable data within organisations and across the public sector as a whole.

Figure 7.12. Maintenance of data inventory and/or data catalogue in public institutions in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Data infrastructure makes a vital contribution to enabling data flows within government, allowing for a whole-of-government approach to designing and delivering policies and services and fostering proactiveness in the public sector (OECD, 2020[4]). In order to increase interoperability and support transformation, base registries and data catalogues are important investments that simplify the sharing of data, help the adoption of the Once-Only-Principle, reduce duplicated sources of data and increase data quality. The government could also consider accelerating and promoting the use of AI and machine learning to help structure data, simplify metadata collection and conduct semantic inference to minimise manual effort. Creating more structure to the data infrastructure in Türkiye would also provide opportunities for greater automation and insights into the nature of data in the country. These measures can help to establish a data-driven culture, make data-sharing a natural process and increase collaboration between public institutions.

Open government data

Sharing data within the public sector is an important element of being a data-driven public sector. All the benefits in terms of maximising the impact of data use, facilitating collaboration, increasing efficiency of service design and shaping strategic decision-making are also applicable to OGD. Publishing OGD brings additional benefits in terms of reinforcing efforts to increase the transparency and accountability of government while offering non-governmental actors new opportunities to generate public value (OECD, 2018[5]). OGD can also be used to inform people about developments in their communities and provide the basis for communities to actively participate, engage and contribute to policy making.

According to the Open, Useful and Reusable Data (OURdata) Index, publishing OGD is an increasingly common practice (OECD, 2020[4]). The overall average scores across the three pillars of the Index among OECD countries increased from 0.54 in 2017 to 0.60 in 2019. This increase reflects a combination of greater general maturity of central OGD policies, stronger governance frameworks, high political willingness, and creating the right environments to enhance OGD reuse. Nevertheless, not all indicators are positive with the Index highlighting the challenge of policy sustainability and maturity, which can be explained by political inertia, change in institutional governance arrangements, or competing policy priorities affecting the implementation of open data initiatives. This suggests that governments expecting to extract value from the application of OGD need "enough political support, and an enabling environment to sustain implementation efforts in the long term" (OECD, 2020[4]).

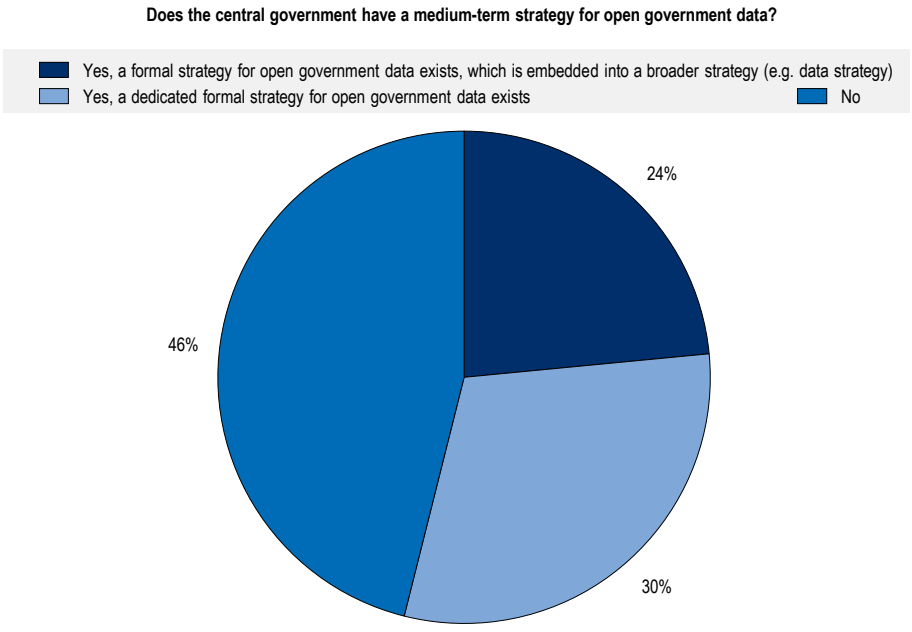
In Türkiye, government policy and related activities regarding open data are covered in the *2015-2018 Information Society Strategy and Action Plan* (Action 67), the *2016-2019 National e-Government Strategy and Action Plan* (E4.2.1) as well as in the *Eleventh Development Plan* (Ministry of Development, 2015[49]; Ministry of Transport, Maritime Affairs and Communications, 2016[50]; Presidency of Strategy and Budget, 2019[51]). Following the change to the Presidential model, discussed in Chapter 2, the DTO has taken on the responsibilities contained in these documents including the creation of the National Open Data Strategy and its associated legal frameworks as well as the implementation of the Open Data Portal Project.

Initiatives such as hackathons have been explored to encourage greater value to be created from OGD. In 2021, the Open Data and Technology Association and the Association of Municipalities of Türkiye (*Türkiye Belediyeler Birliği*) hosted an Open Data Summit with the emphasis on 'Open Data for the future of Türkiye'. The event was an opportunity to nurture the understanding of the benefits of open data and foster the adoption of open data policies in government, business and civil society, as it brought together experts in the field of open data in Türkiye (academicians, lawyers, public and private sector) (Open Data Day, 2022[52]). Despite these initiatives, communication and co-ordination between public institutions could be improved with Figure 7.13 showing that almost half of the surveyed institutions are unaware the medium-term strategy for OGD. This underlines observations elsewhere in this chapter about the need for much greater effort to communicate data-related activities throughout the public sector and among civil servants at all levels.

The generally nascent state of OGD in Türkiye is evidenced by the ongoing development of the OGD portal as well as related legislations. Nevertheless, there are some good examples of organisations motivated by the opportunities of OGD, particularly at the local level. For example, the Istanbul Metropolitan Municipality (*İstanbul Büyükşehir Belediyesi*, IMM) has created the IMM Open Data Portal (Istanbul Metropolitan Municipality, 2020[53]), the Küçükçekmece Municipality (*Küçükçekmece Belediyesi*) developed the Küçükçekmece Municipality Open Data Platform (Kucukcekmece Municipality, 2020[54]) and the Gaziantep Metropolitan Municipality (*Gaziantep Büyükşehir Belediyesi*) has focused on ensuring the quality of the datasets held in their open data platform which is based on the Comprehensive Knowledge Archive Network (CKAN) open source data management system and provides data in real time using Representational State Transfer (RESTful) APIs (Gaziantep Metropolitan Municipality, 2022[55]). Beyond local governments, the Supreme Election Council (*Yüksek Seçim Kurulu*, YSK) administers an Open Data Portal covering the full range of election results (President and Deputy General, Local Administrations,

General and Referendum) and the electorate, candidate and winning candidate profiles (Supreme Election Council, 2022[56]). In addition, detailed tables and databases concerning national statistics are made available through the Turkish Statistical Institute (*Türkiye İstatistik Kurumu*, TÜİK) website. Finally, the Turkish National Geographic Information System (*Türkiye Ulusal Coğrafi Bilgi Sistemi*, TUCBS), makes geographical metadata and data of services produced by public institutions and organisations available as OGD within certain parameters defined by law.

Figure 7.13. Awareness of open government strategy in the Turkish public sector

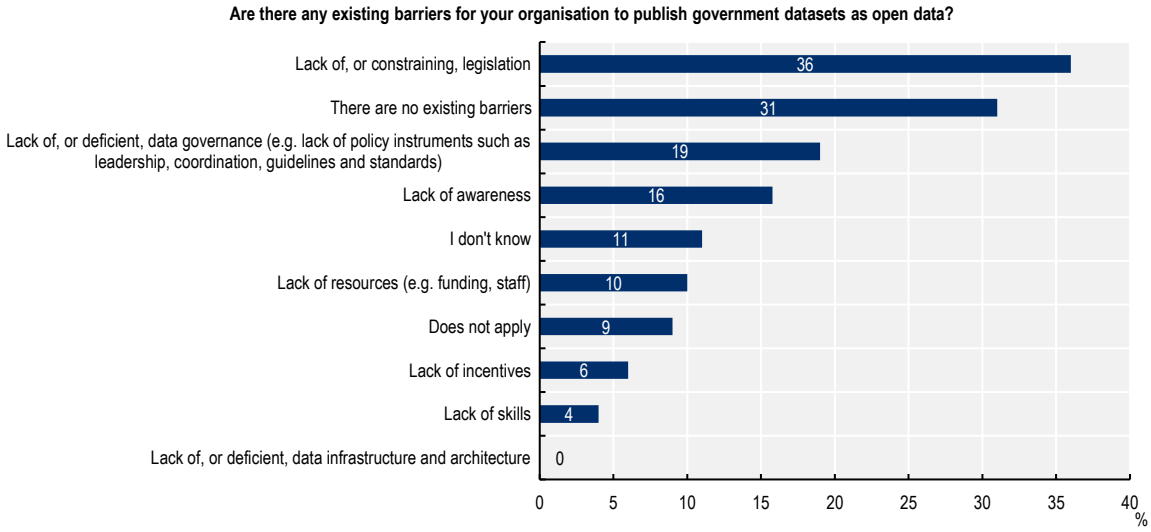


Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

As Figure 7.14 shows, 69% (78 out of 113) of organisations consider there to be barriers to publishing OGD. The most common, reported by 36% (41 out of 113) of organisations, is the lack of legislation supporting OGD and the constraints from other legislations and bodies, such as the Personal Data Protection Law, the Ethics Commission or the KVKK Commission. Determining the degree of confidentiality and publishing the data accordingly is the most challenging considering the provisions of Law No. 6698 on the Protection of Personal Data and the Regulation on the Deletion, Destruction or Anonymization of Personal Data, and the Presidential Information and Communication Security Measures Circular No. 2019/12 (Presidency of the Republic of Türkiye, 2019[57]; Republic of Türkiye, 2016[12]). OGD can be reused within the framework of certain protocols and APIs where there is nothing contained within the data that could endanger privacy, security or private life if shared. Public sector organisations are rightly concerned to ensure that their publication of OGD is compliant with all relevant legislation and does nothing to damage trust in government. However, there is a risk that the current approach focuses only on the risks and does not provide enough consideration of how they might be mitigated to generate public value.

In view of the above the government of Türkiye may consider reinforcing the communication of its OGD strategy by supporting open government data publication, launching a central OGD portal and encouraging institutions to use it and championing the transparency, accuracy and accountability that open data can bring to public sector innovation. These measures would underline the priority of OGD in the Turkish government.

Figure 7.14. Main barriers for ministries and administrations to publish open data

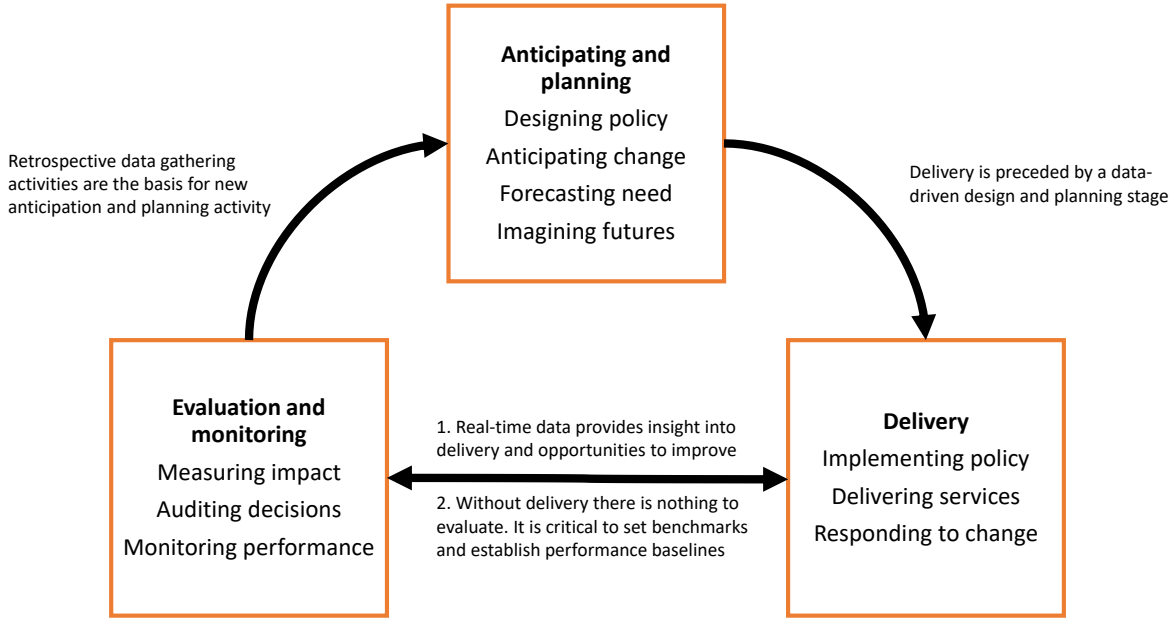


Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Applying data to unlock value

Coherent data governance is the foundation for unlocking the public value associated with the use and re-use of data. To best serve society, governments need to apply data in practical ways so that it generates public value in terms of anticipation and planning; delivery; and evaluation and monitoring as shown in Figure 7.15 (OECD, 2019[2]).

Figure 7.15. Where data-driven public sector approaches can generate public value

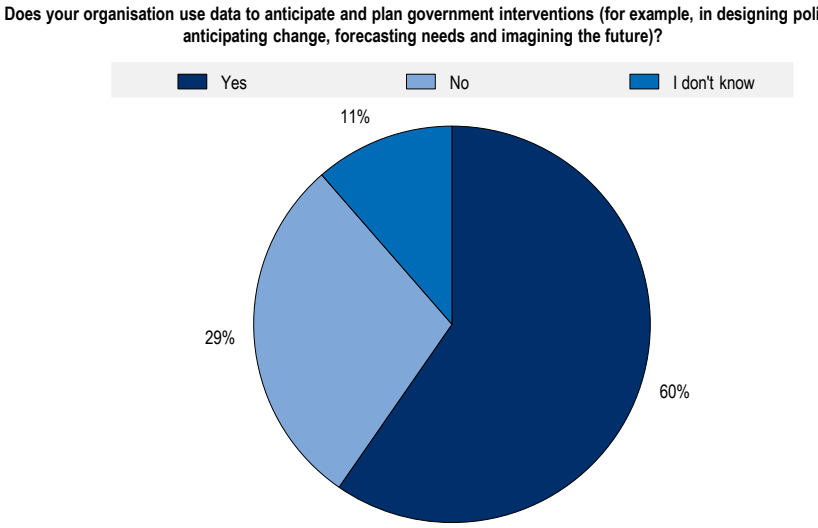


Source: OECD (2019[2]), *The Path to Becoming a Data-Driven Public Sector*, https://dx.doi.org/10.1787/059814a7-en.

Applying data for anticipation and planning

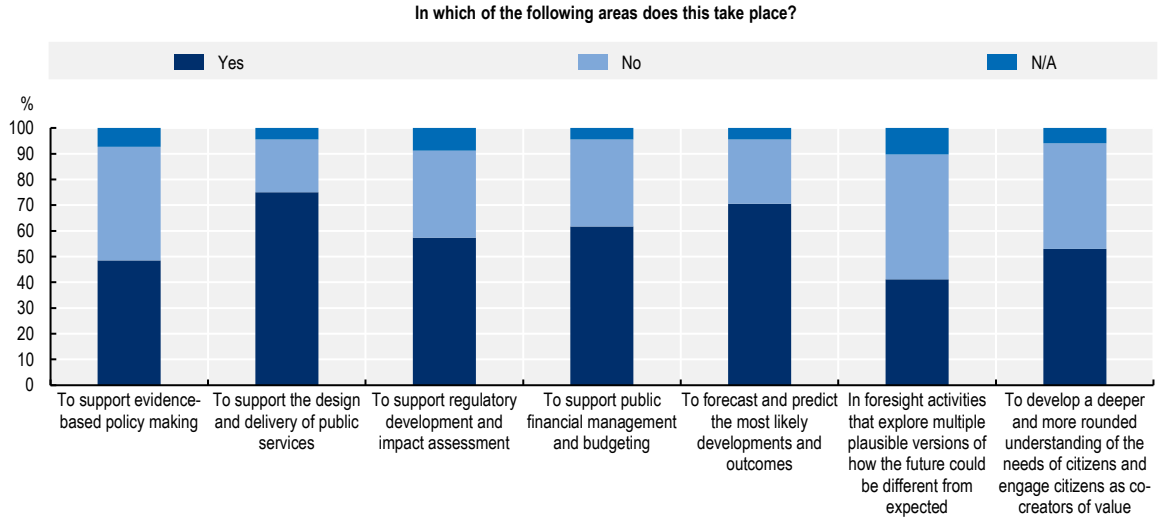
Data can be a valuable asset in helping governments to design policies, anticipate change, forecast needs and imagine multiple possible futures. Figure 7.16 indicates that in Türkiye, 60% of organisations are using data to plan for government interventions in areas such as opening training programs and units, staff planning, and the monitoring and evaluation of research activities. Figure 7.17 provides an overview of the ways in which those organisations are then using that data with the most common response being in the design of public services (75%) followed by forecasting and predicting the most likely developments and outcomes (71%), and supporting public financial management and budgeting (57%).

Figure 7.16. Organisations using data to anticipate and plan government interventions in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Figure 7.17. Use of data to anticipate and plan government interventions in Türkiye



Note: Based on the responses of 68 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Despite the lack of standards and guidelines in data usage, several experiences surfaced from the survey indicate data influences the anticipatory governance of Türkiye, suggesting that there might be an active data-driven policy community for the DTO to work with, and champion, in establishing a DDPS culture:

- The General Directorate of Health for Borders and Coasts of Türkiye (*Türkiye Hudut ve Sahiller Sağlık Genel Müdürlüğü*) collects and evaluates data in areas such as opening new service units, planning the purchase of vaccines and similar medical supplies, making new updates on service delivery, planning new training for personnel, updating legislation or preparing new legislation.
- The Ministry of Health (*Sağlık Bakanlığı*) analyses data in decision support systems and business intelligence platforms in order to develop effective policies and strategies, to carry out simulation and projection studies for large-scale events such as epidemics, to make efficient service planning in the field and to support service delivery. As a result of these analyses, data is transformed into information and then into policy.
- The Ministry of Treasury and Finance, Revenue Administration (*Hazine ve Maliye Bakanlığı, Gelir İdaresi Başkanlığı*), uses existing data to measure the impact of any proposed or forthcoming legislative changes related to the area they are responsible for. While preparing the Revenue Budget, projections are prepared using existing data.

These examples illustrate the willingness of the Turkish public sector to make better use of data and generate public value by anticipating and planning. However, the examples shared were all focused internally within single organisations. To encourage greater collaboration between institutions, the government could establish cross-government communities of data practice to share experiences, identify common challenges and develop shared solutions. This would enable organisations to learn from each other, avoid duplication of datasets, create long-term cross-governmental partnerships and work collectively to address whole problems (as discussed in Chapter 5). These practices could help to foster more accurate anticipation, more proactive decision-making and more effective policy planning, which could help better detect societal needs as they emerge and facilitate better predictions for future trends.

Applying data for delivery

Data and analytical tools can be used to rethink the opportunities for the design and delivery of public services in order to improve policy solutions, better engage with citizens as co-value creators and respond to the needs of citizens. As seen in Figure 7.18, 68% of organisations are using data to deliver government operations with Figure 7.19 showing that these organisations are most often finding that they do so in response to citizen needs (82%) or emergencies, crises and developing situations (68%).

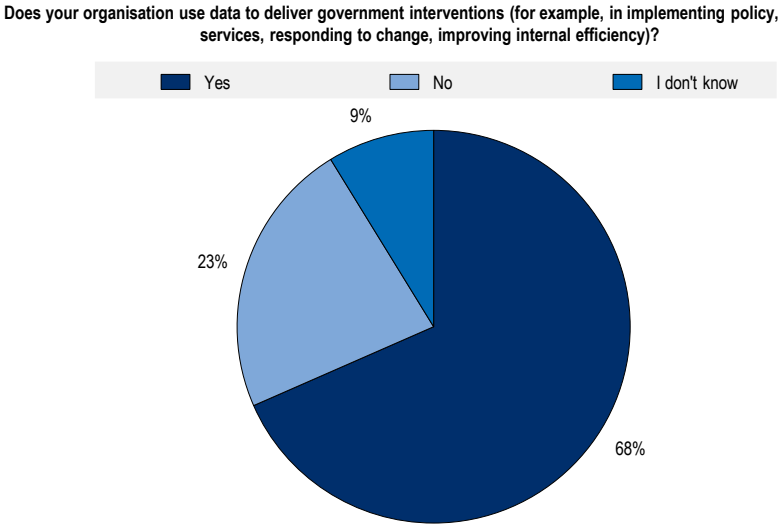
Several organisations provided further information about how data forms an important part of how they deliver effective services including:

- The Ministry of Labour and Social Security (*Çalışma ve Sosyal Güvenlik Bakanlığı*) uses the data it collects in processes such as providing new services, making changes and improvements in the services offered, and making arrangements regarding the personnel working in the service delivery.
- The Ministry of Culture and Tourism Directorate General of Foundations (*Kültür ve Turizm Bakanlığı Vakıflar Genel Müdürlüğü*) uses data to identify improvements that may be necessary for the effective provision of services for the management of property and charitable conditions of foundations.

More notable examples of how data is shaping the operational delivery was found in the Competition Authority (*Rekabet Kurumu*) where data determines the prioritisation of work and the assignment of relevant employees to the right jobs at the right time. Elsewhere, the Ministry of Transport and Infrastructure (*Ulaştırma ve Altyapı Bakanlığı*) uses data for transportation resource planning in disasters and emergencies, which emphasises the need to ensure data is timely and of good quality to make it easier

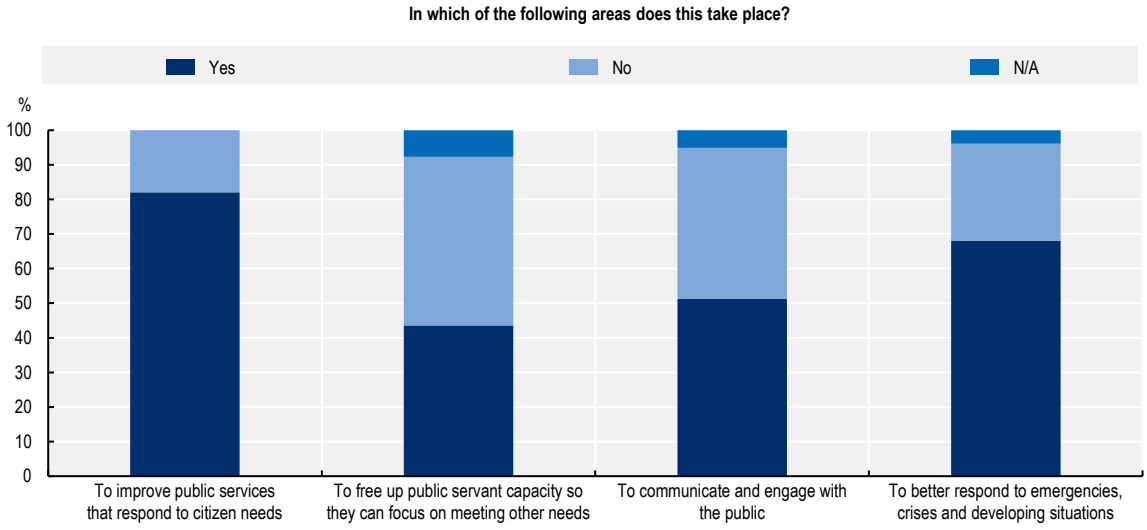
to react in emergency situations. Additionally, the Ministry of Health (*Sağlık Bakanlığı*) uses the e-Nabız Personal Health System to collect data from more than 28,000 health institutions and use the data to determine health strategies and making critical management decisions.

Figure 7.18. Organisations using data to deliver government interventions in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Figure 7.19. Use of data to deliver government interventions in Türkiye



Note: Based on the responses of 78 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Similarly, the Ministry of National Education (*Millî Eğitim Bakanlığı*) uses the National Education Information System (*Millî Eğitim Bakanlığı Bilişim Sistemleri,* MEBBİS) and e-School, which is a system that works in integration with more than 5 ministries, to exchange data. These data inform investment

needs according to the current and projected population by analysing the data in the system, the schools affiliated to the ministry, the investments, the number of teachers and students.

The fact that a majority of organisations in Türkiye are using data in the delivery of their operational activities underlines the high demand for data skills among the public sector workforce. Although some institutions show some good practices on how they collect and use data to inform delivery, there needs to be further efforts in identifying improvements, prioritising issues, assigning people to the right task, addressing statistical data and keeping data up-to-date. As discussed in Chapter 4 and earlier in this chapter, the government may wish to invest in data skills across the public sector. A further area for investment could be in cross-cutting resources that help to gather data, learn about citizens' habits and anticipate situations. For example, the Fusion Analytics for Public Transport Emergency Response (FASTER) initiative in **Singapore** collects anonymised location-based information from various sources and prepares them for analysis to help stakeholders identify commuting patterns. This means that when crowds are detected, additional means of transportations are deployed and users get notified so that they can best plan their journey. By modelling citizens transportation habits, this helps to improve transport planning, trigger early alerts for the surge in crowds and predict the impact of incidents such as transport delays and the number of commuters affected (Smart Nation and Digital Government Office, 2022[58]).

Applying data for evaluation and monitoring

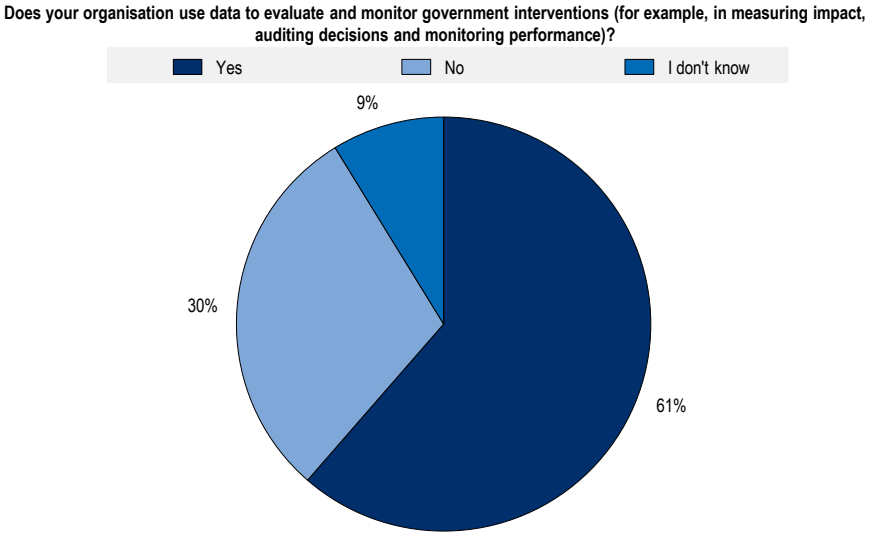
Data is vital for measuring impact, auditing decisions and monitoring performance. Assessing the performance of government and drawing insights from the data generated through the delivery of public services is essential in not only being able meet users' demands in real-time but to evaluate the impact and effectiveness of government in general. Figure 7.20 indicates that 61% of organisations are using data to evaluate and monitor government interventions. The survey used for this review reveal that some organisations such as the Ministry of Interior (*İçişleri Bakanlığı*) and the National Post and Telegraph Directorate of Türkiye (*Posta ve Telgraf Teşkilatı*, PTT), use the Performance Evaluation and Monitoring System (*Performans Değerleme ve İzleme Sistemi*, PERDİS), where the objectives of the activities (indicators) of the institutions are not evaluated by the institutions, but according to the arithmetic average of the past years and the orientation type (positive-negative) determined by the system. Some others rely on the performance data captured by the e-Government Gateway to measure the efficiency of their operations and for auditing activities. Figure 7.21 again provides an overview of the ways in which those organisations are then using that data with the most common response being to track operational performance (81%) followed by accountability through audit trails (66%).

Under the leadership of the Human Resources Office (İnsan Kaynakları Ofisi), there is also an increasing dissemination of People Analytics within the Turkish public sector to make the practices of human resources management (HRM) more transparent, data-based, efficient and accountable. One particular project, "HR Metrics Analysis", helps institutional HRM teams to measure their performance across 32 different metrics and provide the basis for comparison domestically and with international counterparts as part of the support it providers to data-driven HRM decision making.

As has been discussed through the review, Türkiye's e-Government Gateway is the focal point for access to public services in the country and it is an important source of data analysis for the evaluation and performance of services. The Digital Türkiye Performance System was developed by the DTO to evaluate the performance of certain services contained within the e-Government Gateway. The DTO and Türksat work together to evaluate the performance of services on the e-Government Gateway and share these insights with the relevant public institutions to improve the user experience. Other organisations reported that they use data for understanding the performance of their operational activities for the purposes of audit as well as developing the necessary statistics and reporting mechanisms for sharing within government.

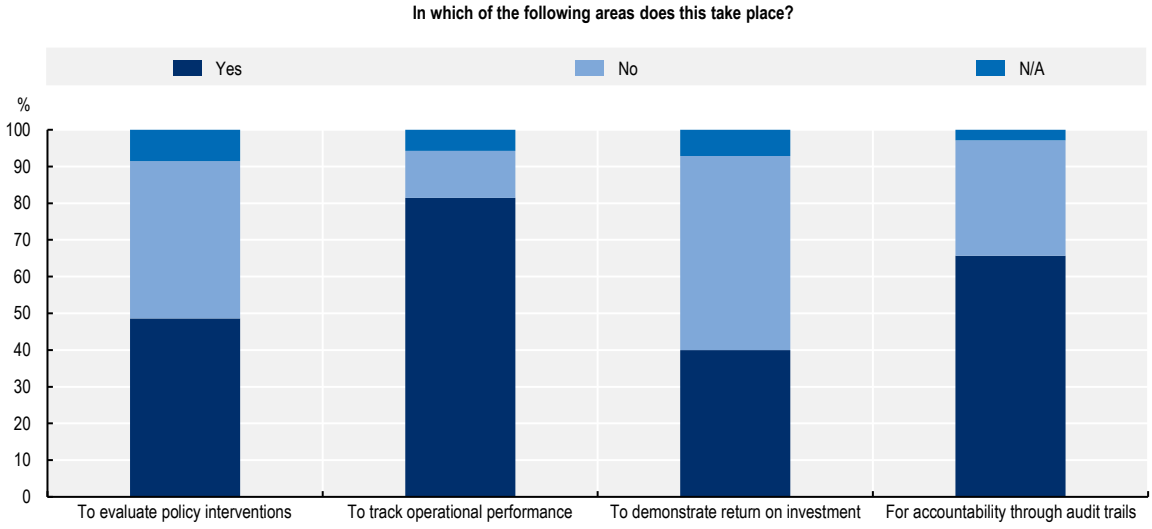
It is essential that all institutions share their evaluation and performance data widely in order to maximise its benefits throughout government. Sharing performance data, especially in public, is an important element of being data-driven as it communicates how taxpayers' money is being invested and demonstrates return on investment. For example, Statistics **Denmark** shares the performance data related to the country on a common platform, which presents information about the effectiveness of their strategy (2022[59]). A similar practice would enable the Turkish government to build and maintain public trust.

Figure 7.20. Organisations using data to evaluate and monitor government interventions in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Figure 7.21. Use of data to evaluate and monitor government interventions in Türkiye



Note: Based on the responses of 70 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Data for trust

Good data governance helps to lay the foundations for improving policy making and public services, and by extension, reinforcing public trust. However, the mis-handling of data can have a huge negative effect on trust. Therefore, demonstrating competence and taking steps to defend, maintain and restore citizens' trust and confidence is essential. This means putting measures in place to ensure ethics; transparency, privacy and consent; and security (OECD, 2019[2]).

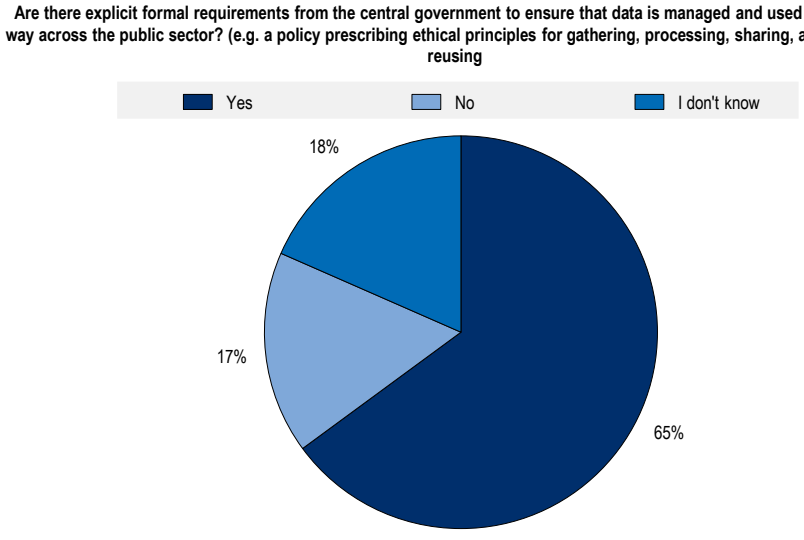
Ethics

The increasing use of, availability and access to personal as well as non-personal data raise a significant number of questions not only about their ethical use, collection, treatment and storage, but also about responsibility, accountability, fairness and the respect of human rights or current legislation in relation to the data. Efforts designed to establish a strong culture of ethical data use are essential to create the enabling conditions that maximise the impact of data-driven practices within public sectors (OECD, 2019[2]).

Given that availability, quality and relevance of data are not sufficient to ensure fairness and inclusiveness of policies and decisions, or to reinforce their legitimacy and public trust, it is important to have consistent alignment and adherence to shared ethical values and principles for the management and use of data across public sector institutions. According to the Digital Government Index, only 36% of the participating countries have dedicated initiatives to apply ethical principles to data-related initiatives (OECD, 2020[4]).

When asked about data ethics, most Turkish public organisations recognised the importance of strengthening public trust in how the government handles data, as an essential contribution to providing high quality services and ensuring citizens' well-being (OECD, 2019[2]; Welby, 2019[60]). Figure 7.22 identifies that 65% of organisations state the existence of explicit formal requirements to ensure the ethical use and management of data in the public sector with a large majority identifying the KVKK. However, it is fundamental to underline that the ethical use of data does not limit itself to personal data.

Figure 7.22. Formal requirements to ensure ethical use and management of data in Türkiye



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Establishing a set of soft guidelines on the management of personal and non-personal data could benefit governments as they allow self-regulation of digital practices, while still informing the right behaviours and approaches to achieve ethical practices. Given its non-prescriptive tone, ethical guidelines and frameworks aim at widening a common understanding and to work through ethical concerns. In 2021, the OECD published the Good Practice Principles for Data Ethics in the Public Sector (contained in Box 7.5) in order to guide public servants and support government's process into the ethical use of data.

Box 7.5. The OECD Good Practice Principles for Data Ethics in the Public Sector

The Good Practice Principles for Data Ethics in the Public Sector include ten high-level principles to support the ethical use of data in the design and delivery of public policies and services. They are:

1. Manage data with integrity.
2. Be aware of and observe relevant government-wide arrangements for trustworthy data access, sharing and use.
3. Incorporate data ethical considerations into governmental, organisational and public sector decision-making processes.
4. Monitor and retain control over data inputs, in particular those used to inform the development and training of AI systems, and adopt a risk-based approach to the automation of decisions.
5. Be specific about the purpose of data use, especially in the case of personal data.
6. Define boundaries for data access, sharing and use.
7. Be clear, inclusive and open.
8. Publish open data and source code.
9. Broaden individuals' and collectives' control over their data.
10. Be accountable and proactive in managing risks.

Source: OECD (2021[61]), *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.

Privacy and consent, and transparency

Privacy is a concept that applies to data subjects while confidentiality applies to data. Regarding consent, this is the concept of "informed consent", where the individual whose data is being collected is aware of the purpose of the data collection and agrees to give data about them to be used for specific purposes. In order to address issues relevant to privacy and consent, governments have often established data rights for businesses and citizens (OECD, 2019[2]).

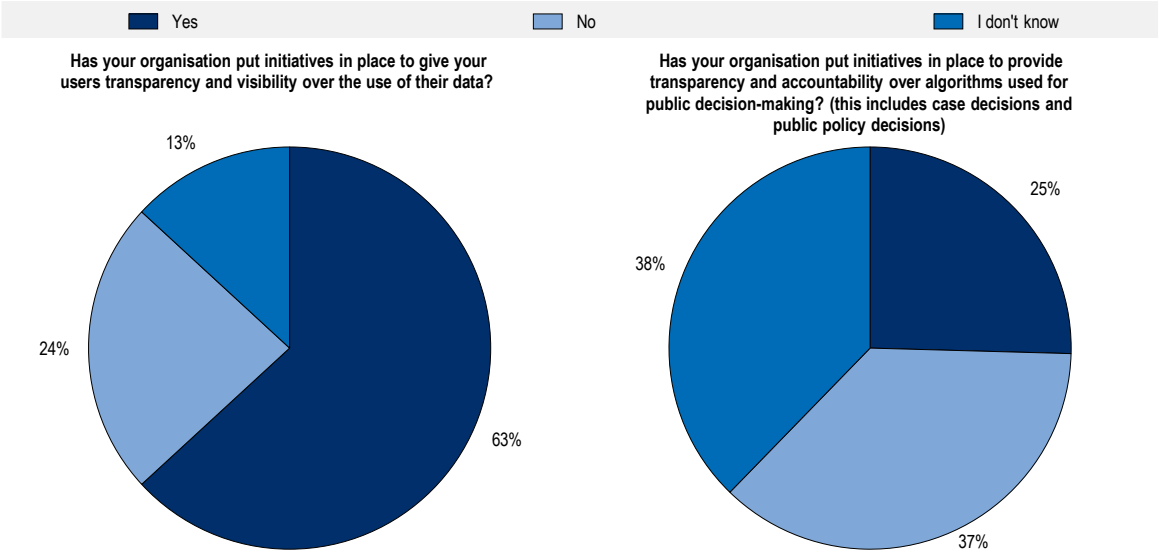
As for transparency, in the context of a data-driven public sector it relates to two things. One is the openness of government to share the data underpinning policy decisions and algorithms with the public. The other is how citizens can be given visibility of how their data is being used and to manage the associated consents without decisions being made about the sharing of their data without their knowledge.

Given Türkiye's application for the EU membership, there are ongoing efforts to harmonise the Personal Data Protection Law No. 6698 with the European Data Protection Regulation: the General Data Protection Regulation (GDPR). As an example, to match with the GDPR, the period of notification for data breaches has been accepted to be 72 hours throughout Board Decisions. This not only allows the country to increase its chances for the EU membership, but also enables Türkiye to facilitate data flow with EU countries.

One of the initiatives to increase the transparency around data in Türkiye comes from the Personal Data Protection Authority, which manages the Data Controllers Registry Information System (*Veri Sorumluları Sicil Bilgi Sistemi*, VERBİS) – a system on notification obligation – where information such as the identity of the data controller, the purpose for which the personal data will be processed, the explanations related to the group(s) of people subject to the data and the data categories of these people are processed and made publicly available to citizens. As the aim is to ensure transparency and accountability, individuals can have access to the catalogue of information about the categories of data that the data controllers keep about them.

VERBİS is an important initiative to help increase citizen visibility over the use of data but overall the review found a limited approach to proactively visible citizen consent mechanisms with the KVKK requiring any person who wishes to understand the processing of their personal data having to make a request to the data controller. The KVKK is extensive in covering privacy and consent matters in Türkiye but there is a gap between the law and its application from the point of view of a user (Personal Data Protection Authority, 2020[62]). The law is well-communicated within governmental institutions, but its application is rarely considered in terms of simplifying the process or empowering the users it is designed to serve. Figure 7.23 shows that 63% (71/113) of organisations claimed to have initiatives in place to give users' transparency and visibility over the use of their data in line with the provisions of the KVKK. However, the OECD review observed that many institutions are unaware of any mechanism for having visibility of an individual's data flow nor any way for users to provide or revoke their consent to the use or sharing of their data. As citizens are very likely to approach the breach of privacy and consent negatively, especially in terms of sensitive data, failure to consider privacy and/or consent can create tensions, challenges and undermine public trust.

Figure 7.23. Transparency of data perceived by the Turkish public sector



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

Privacy, consent and transparency are critical aspects of legitimacy and public trust that governments should consider to ensure a trustworthy data-driven public sector. Having laws and regulations that formally ensure privacy and data protection, as well as access to information, is not enough to guarantee the effectiveness of these rights. Mechanisms such as independent bodies to monitor and supervise the compliance of data protection laws and privacy impact assessment tools are examples of initiatives that

may ensure privacy protection in practice. In addition to this, the adoption of an ethical data framework could serve as a suitable instrument to ensure the ethical use of data across the public sector.

Additionally, it would be crucial to continue harmonising processes towards GDPR to ensure data exchange with the EU and act in co-operation with other institutions. An example of this would be **Japan**. Shortly after the GDPR entered into force, Japan and the European Union reached an agreement on reciprocal recognition of a sufficient level of personal data protection. Japan is the first country to receive an adequacy decision from the European Commission, ensuring not just a smooth data flow between Japan and the EU, but also making heavy data transfers, trade, and collaborations easier (Coos, 2022[63]).[3]

Security

Security refers to the measures taken to prevent unauthorised access or use of data. Notwithstanding the constraints discussed in the previous section that may come from an over cautious approach to digital security, it is encouraging to observe a high level of regard for digital security in Türkiye, enshrined through the KVKK for regulating personal data and consent. In order to support the implementation of this legislation, the Personal Data Protection Authority has developed a data security manual that guides public sector organisations on the administrative and technical measures that need to be taken with regards to digital security. Besides, the Defence Industry Agency (*Savunma Sanayii Başkanlığı*, SSB) established a platform with the participation of all relevant public institutions, organisations, private sector, and academic representatives, named Türkiye Cyber Security Cluster (*Türkiye Siber Güvenlik Kümelenmesi*) for the purpose of developing the country's cyber security ecosystem. The related activities are being carried out together with the DTO..

According to the Presidential decree No1, the DTO, Ministry of Industry and Technology (*Sanayi ve Teknoloji Bakanlığı*) and Security & Foreign Policy Board have been given different duties in the field of cyber security (Presidency of the Republic of Türkiye, 2018[64]). The Cyber Security Department of the DTO is responsible for carrying out activities related to the development of national cyber security strategies, its monitoring, development and dissemination. The Security and Foreign Policy Board is in charge of developing policy and strategy recommendations regarding cyber security. The Ministry of Industry and Technology has the duty of establishing policy recommendations, incentive mechanisms and strategies promoting R&D and increasing competencies of individuals and businesses in areas of emerging technologies in order to produce advanced technology products in-house and strengthen the cyber security ecosystem. Furthermore, the Electronic Communications Law (Law No. 5809) (Technology and Communication Authority, 2008[65]) creates a set of responsibilities for the Ministry of Transport and Infrastructure (*Ulaştırma ve Altyapı Bakanlığı*) and the Information and Communication Technologies Authority (*Bilgi Teknolojileri ve İletişim Kurumu*, BTK). Operational duties concerning national cyber security are carried out and managed by the BTK via the Computer Emergency Response Team of Türkiye (TR-CERT) (*Ulusal Siber Olaylara Müdahale Merkezi*, USOM).

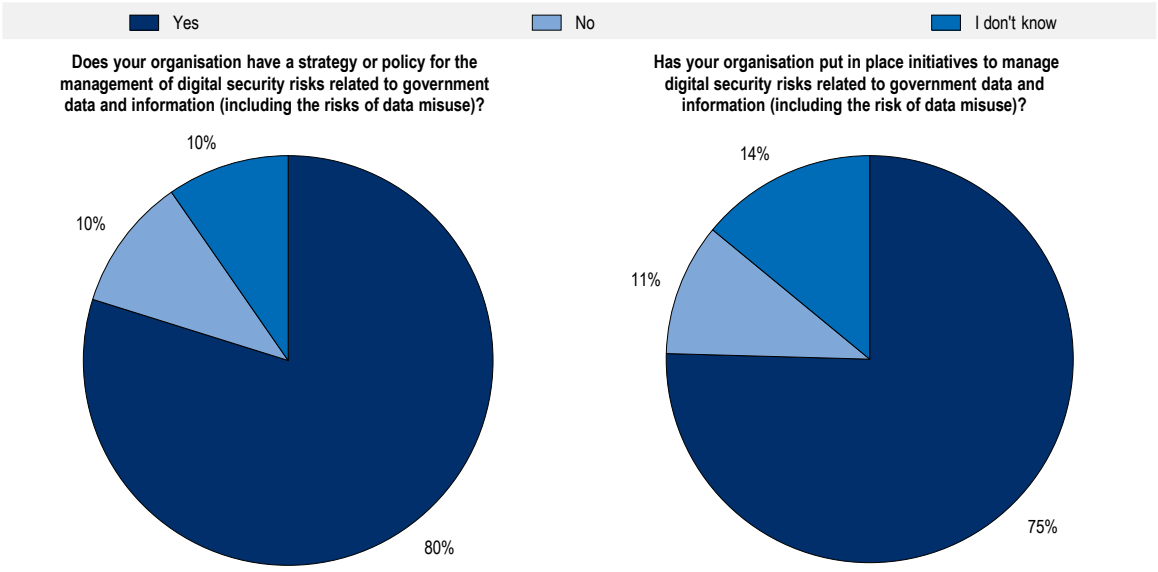
However, many participants fear that the emphasis on digital security and confidentiality may limit them to make the most out of data they hold. Moreover, some shared that they face security challenges when moving data to cloud services and that there are restricting data laws, which may reduce the potential value that data could generate and thus shape how organisations work with data.

Figure 7.24 shows that a large number of institutions in Türkiye have strategies and initiatives in place to manage data security. They often seem to either have their independent initiatives or strategies, or rely on the Information and Communication Security Guide. For example, the Ministry of Transport and Infrastructure, which has been given the duty for developing strategy and action plans on national cyber security by Law No. 5809 (Technology and Communication Authority, 2008[65]), has released the National Cyber Security Strategy for 2020-2023 (Ministry of Transportation and Infrastructure, 2020[66]), and it is expected that security-related studies will be carried out by the Institutions within the scope of this project;

whereas the Personal Data Protection Authority issues guides and contributed to the Information and Communication Security Guide published by the DTO.

The growing need for government intervention to prevent data misuse and to ensure citizens' right to control how their data are used can lead to a state of data overprotection which can have potentially negative implications in terms of public service delivery and evidence-based policy making. Although the Information and Communication Security Guide already covers some of these issues, the Turkish government could continue working on finding the right policy arrangements (and the deployment of the relevant data tools to support their implementation) to ensure the secured transfer of data and promote the delivery of value for citizens in a trustworthy fashion. They could also take inspiration from **Korea**, which in order to counteract the concerns of digital security, has developed a stand-alone policy that focuses on best practices for using and regulating data. The National Information Resources Service is in charge of overseeing all government servers and databases in compliance with this security policy.

Figure 7.24. Strategy and initiatives to manage digital security risks



Note: Based on the responses of 113 institutions.
Source: OECD (2021[10]), "Digital Government Survey of Türkiye, Public Sector Organisations Version", Unpublished, OECD, Paris.

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Notes

[1] See https://www.gov.uk/government/publications/uk-national-data-strategy.

[2] See https://alphagov.github.io/data-standards-authority/standards/.

[3] Japan's data protection law, the Act on the Protection of Personal Information (APPI), adopted as early as 2003, was one of the first data protection regulations in Asia. It received a major overhaul in September 2015 after a series of high-profile data breaches shook Japan, making it clear that APPI's requirements no longer met present-day needs. The amended APPI came into force on 30 May 2017, one year ahead of the EU General Data Protection Regulation (GDPR). The update brought with the establishment of the Personal Information Protection Commission (PPC), an independent agency that, among others, protects the rights and interests of individuals and promotes the proper and effective use of personal information. Thanks to the updated law, on 23 January 2019, Japan became the first country to earn an adequacy decision from the European Commission (EC) after the GDPR came into force. These decisions, which govern cross-border data transfers from the EU, reflect the adequacy of a third country's level of data protection compared to the EU's legislation.

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