5 Improving the design and delivery of public services in Digital Thailand

Chapter 5 assesses the efforts taken by the government of Thailand to enable an inclusive, omnichannel and user-driven design and delivery of public services in a digital Thailand, in line with the OECD Digital Government Policy Framework. It looks at the necessary governance and the availability of key enablers and tools such as the National Digital Identity (NDID), data standards and integrated service portals to assess the country's digital maturity in public service design, delivery and access.

Introduction

Designing, delivering and enabling access to public services through digital tools and channels are at the forefront of the digital government agendas in most OECD countries. In the early e-government era, the gradual adoption of the Internet allowed for the transition from fully analogue government-citizen relationships to the deployment of government websites where governments made available information on governmental activities as well as formalities and services users could access whenever needed without time and location boundaries.

This also supported the case for greater public sector transparency as citizens could now use Internet-based communication platforms to request public sector information that was not necessarily publicly available or released by governments in a proactive fashion. However, this also led to the proliferation of government websites, with a resulting fragmentation of information and user experience that in some cases meant finding conflicting information about the same topic in different places.[1]

As the population's access to Internet connectivity increased, web-based channels offered a more efficient alternative to other traditional communication means such as the telephone, traditional post services and even direct physical interaction. These electronic channels reduced government costs, which, as a result, drove greater government enthusiasm to shift away from telephone, post and face-to-face provision, therefore placing efficiency at the core of the business case for e-government efforts in terms of service delivery channels rather than the prompt being a response to changing societal habits. Yet, the possibility of using these electronic mechanisms was – and still is – preconditioned by citizens' access to the Internet, either home-based, mobile-based[2] or thorough public Internet hotspots resulting from government efforts to promote digital inclusion.

As e-government matured and increased digitisation resulted in moving from paper-based public administrations to web-based versions of previously analogue processes and greater use and exchange of electronic documents. For this purpose, governments developed a variety of technical solutions to not simply replicate existing administrative processes but to simplify cumbersome processes either internally within the public sector or in the interaction between users and public sector organisations. This placed administrative simplification at the core of the e-government era. In some countries, governments went further and developed registers (e.g. population, addresses, business registers) to facilitate the exchange of information within the public sector, and tools and protocols for citizens' authentication and electronic identification.

The fast-paced arrival of the digital transformation era has also challenged the capacity of governments to adapt to a new context where citizens and businesses have replaced the use of personal computers with smartphones and citizens shift from mere information consumers to data producers, therefore leading to exponential information and data generation.

In the digital era, governments' technology-led interventions to meet top-down assumptions of citizen needs are no longer sufficient to fulfil citizens' increasing expectations. Transforming how the public sector works is now at the core of digitalisation efforts. In this context, the capacity of governments to design and deliver public services that focus on citizen demands taking a multi-faceted approach. This approach is not driven by the adoption of technology but focuses on overhauling and revamping how the public sector works so that governments can be prepared to cope with emerging or unexpected policy challenges at the local, national and global levels whenever needed.

The COVID-19 pandemic has tested governments' readiness to act with agility and responsiveness, including their capacity to use digital solutions to deliver new services in response to emergency and subsequent new needs. Now, more than ever, digital technologies and data have emerged as valuable tools to support economic and social stability and public trust in governments. As highlighted in the provisions of the OECD *Recommendation of the Council on Digital Government Strategies* (2014[1]), technology is one of several elements that help government become more agile and resilient, and increase

public trust through responsive services and policies (OECD, 2014[1]). Building a digitally-enabled state is no longer an option for politicians and policy makers but an obligation and precondition to secure the continuity of public services and government operations in either a stable scenario or the midst of a challenging context.

This chapter discusses the journey, key achievements of and challenges faced by the Thai government in transforming service design and delivery in the country. The analysis presented in this chapter follows the OECD Digital Government Policy Framework (OECD, 2020[2]) (Figure 5.1), as presented in Chapter 1. For this purpose, whenever needed, the analysis applies the dimensions of a digital government to public services' design and delivery (Figure 5.2).

### Figure 5.1. The OECD Digital Government Policy Framework
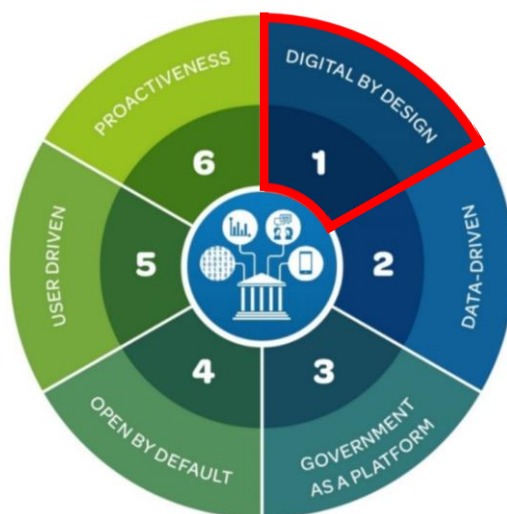
Source: OECD (2020[2]), "The OECD Digital Government Policy Framework: Six dimensions of a Digital Government", https://doi.org/10.1787/f64fed2a-en.

The governance for a paperless government and services

In 2018, the Digital Government Development Agency (DGA) administered a survey across the public sector to identify gaps in terms of digital capacities, practices and technological/data infrastructures, which indicated that, in practice, most government agencies still rely on paper-based procedures in their interactions with citizens (DGA, 2018[3]). This underlines how despite the numerous legal and policy instruments in place addressing digital government, as presented in Chapter 3, the work towards the digital transformation of the Thai public sector is, at the very least, challenging in terms of implementation.

Thailand's tradition of using legal instruments as a lever for digital transformation is reflected in how the country drew upon these mechanisms to build a paperless government. In 2019, the Office of the Public Sector Development Commission (OPDC) revised the Royal Decree on Criteria and Procedures for Good Governance, B.E. 2562 (2019), as a means of improving the governance for service delivery. Specifically, Section 6 of the Royal Decree requires that the provision of services and co-ordination among government agencies must be done through a central digital platform for data exchange, the Government Data Exchange Centre (GDX) – and Section 10 appoints the DGA as the body in charge of developing the GDX. For this purpose, the decree sets a two-year transitional window (subject to an extension to be requested from the OPDC) so that the heads of public agencies can move towards the full use of this platform for public service delivery and collaborative purposes (Thai Government, 2019[4]).

Figure 5.2. Public services and the OECD Six Dimensions of a Digital Government
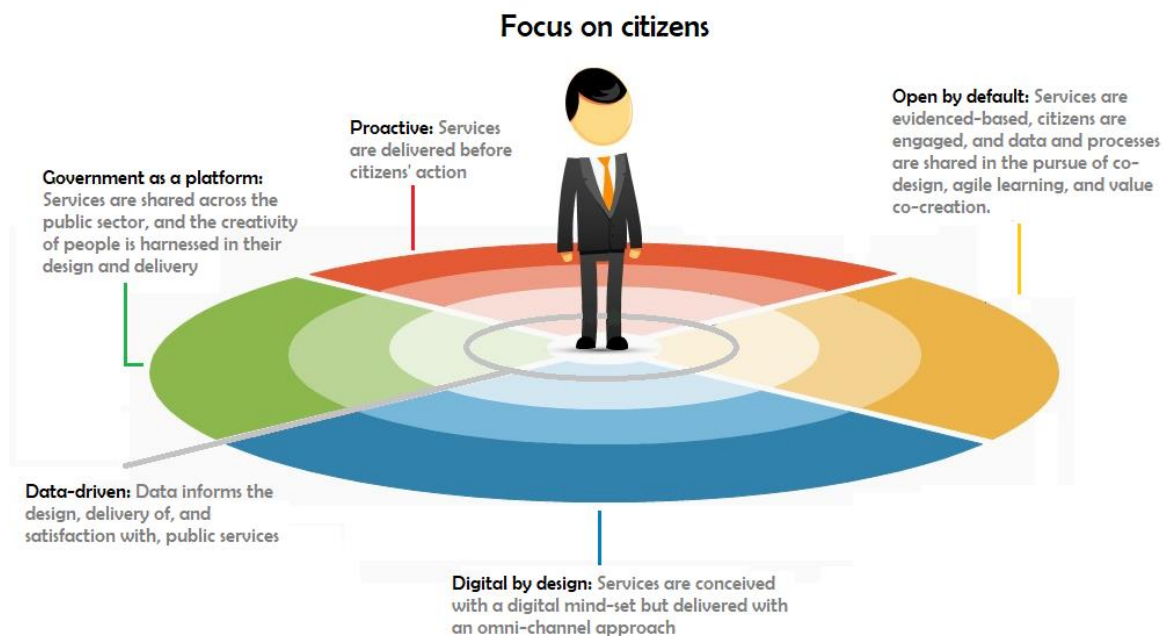
Source: OECD (2018[5]), *Digital Government Review of Colombia: Towards a Citizen-Driven Public Sector*, https://doi.org/10.1787/978926429 1867-en (accessed on 24 June 2019).

Decree 2562 adds to the extensive list of legal and regulatory instruments for digital government and digitalisation (e.g. the Acts on Electronic Transactions, Cyber Security and Data Protection) developed by the Thai government as presented in Chapter 3. Among those instruments, the Licensing Facilitation Act, B.E. 2558 (2015), aims at boosting Thailand's competitiveness and investors' confidence in doing business. It gives government agencies a more active role to facilitate the licensing process with citizens and businesses, also making it easier, faster and cheaper.

Also in 2019, the Thai cabinet office passed a resolution to further promote the development of a paperless government at the recommendation of the OPDC. Information provided by the Thai government to the OECD indicates that the cabinet resolution is focused on four major pillars:

- All official documents are required to be produced in electronic form.
- All government agencies are encouraged to implement e-services and go paperless by 2020.
- The OPDC, the DGA, the Electronic Transactions Development Agency (ETDA) and the Ministry of Digital Economy and Society (MDES) co-ordinate all major activities and decisions. These include: i) supporting government agencies in establishing the needed systems for electronic documentation and connectivity; ii) enhancing data governance around the management of big data and data linkage; and iii) ensuring the application of cyber security measures as a high priority for any further development.
- The OPDC and ETDA are assigned to act as co-ordinator and key actors in building awareness of all government agencies and offering the Thai government guidelines on how digital government and e-services can be initiated and developed to improve the business environment and people's lives – an area in which the Thai government seeks to improve.

As discussed in Chapter 2, the OPDC, DGA, ETDA and MDES play a fundamental role in taking Thailand to the next level in terms of its digital transformation, including in building a digital government.

Key enablers for digital services

Sharing services and building scalable digital solutions are preconditions for greater government integration and to foster higher digital maturity consistently across the public sector. In this sense, the development of common tools for the design and delivery of public services enables "governments as platforms" and helps to create a "joined up, effective experience of government for citizens when interacting with the state" (OECD, 2020[2]). By developing shared tools for public sector organisations to use and apply in the delivery of services to citizens and businesses, governments can reduce the proliferation of disconnected digital government practices. This fragmentation, in the long run, can lead to new legacy infrastructure challenges undermining the possibility of moving towards a digital state that places operational, legal, technical and organisational cohesion at the core of its digital transformation.

The DGA is the main provider of infrastructure and the required technical support to build a paperless e-government. It promotes information sharing within the public sector; and secures the delivery of public services, information and data to citizens and businesses through government platforms, among others (Box 5.1). The activities of the DGA respond to the specific goals of the 20-Year Digital Economy and Society Development Plan (2017-2036) or Digital Thailand and the underlying Digital Government Development Plan, as presented in Chapter 2. For this purpose, the DGA has developed different technical solutions and platforms in its pursuit to improve government-to-government (G2G) services (DGA, 2018[3]), including:

- The **Government Information Network (GIN)**, as an integrated network for information sharing within the public sector.
- A **Government Cloud Service (G-Cloud),** offering a secured government-owned tool for data storage and the hosting of cloud-based services and digital solutions.
- The **e-Saraban Platform**, as the secured solution for document exchange within the public sector.
- Internal communication tools for public officials such as **MailGoThai**, a government email system which can be also used to log in to government platforms such as the **Government Data Exchange Platform** (GDX) and other tools for internal chat (**G-Chat**) and secured video conferencing (**GIN Conference**).

Box 5.1. Thailand's Digital Government Development Agency (DGA): Key objectives

1. Reinforce, administrate and provide digital technology infrastructure services and service systems or fundamental applications engaging with digital government.

2. Implement standards, models, measures, principles and approaches in the form of digital technology as well as the transaction process in order to bridge information and work systems among government agencies legitimately and concordantly.

3. Promote and endorse the integration and exchange of information among government agencies, the disclosure of government information through digital technology and appoint as an exchange centre of government's digital information records in order to facilitate services to people and government agencies' transactions.

4. Enhance and ratify government agencies to provide digital services to concerned parties.

5. Reinforce a one-stop government digital service which people can access conveniently, promptly and securely.

6. Advocate and promote government agencies in terms of project management and administration of digital technology as well as endorse, sponsor and impart academic services and training in order to optimise government officers' digital competencies.

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7. Study, research, experiment, endorse and sponsor academic works, research and innovations to enhance digital government development.

8. Promote governmental transactions that are accountable for the annual budget allocation framework involving digital government as well as fortify the monitoring and evaluation of digital government's transactions and plans.

9. Proceed with other matters with regard to digital government developments as per the law and the cabinet's orders.

Source: DGA (2018[3]), *Transform Government to the Digital Age: Annual Report 2018*, Digital Government Development Agency.

Digital identification and authentication

The ability for an individual to prove that they are who they claim to be is a vital component of everyday life. Having a valid means of identification is a prerequisite for participating in many aspects of society and particularly interactions with the government. Historically, societies have relied on physical proof of identity and handwritten signatures as a security guarantee. Over time, countries have explored how digital identity can facilitate the necessary assurance without someone being physically present. Nevertheless, there is no single approach countries can use, with the OECD defining seven possible models for issuing, managing and using digital identity (Box 5.2) (OECD, 2019[6]).

### Box 5.2. The OECD seven models for issuing, managing and using digital identity (DI)

National approaches to DI may be developed by the public sector (often from scratch) or based on the re-use of existing solutions already provided by a country's private sector. The relationship between private and public sources and the application of identity is important in shaping the effective use of any DI.

The following 7 theoretical models were developed by the OECD for exploring the relationship between public and private sector DI solutions and their re-use in accessing services.

- In Model 1 ("Sector specific DI"), private and public entities remain separate with private DI used in private sector services and public DI used for government services. This model is seen in Uruguay.

- Model 2 ("Sector specific DI with re-usable public DI") has a clear separation between private and public DI but enables the re-use of public DI to access certain private sector services. This model is seen in New Zealand, Portugal and Spain.

- Model 3 ("Sector specific DI with re-usable private DI") is not evidenced in the OECD countries selected for comparison.

- In Model 4 ("Private DI"), users can access both private sector and government services using a single, re-usable DI, provided and managed by the private sector. This model is found in Norway.

- India and Italy demonstrate Model 5 ("Public DI"), where a single, re-usable DI provided and managed by the public sector is available to access both private sector and government services.

- Users in Austria, Denmark and the United Kingdom can access both private sector and government services via Model 6 ("Shared DI"), with a single, re-usable DI where responsibility for its issuance and management is shared between government and the private sector.

- Model 7 ("Interoperable DI") allows for the creation of identity by both private sector and public sector entities but with interoperability that allows for its re-use to access services of any type. This model is found in Canada, Estonia and Korea where the National Public Key Infrastructure (NPKI) is the only digital certification for citizen authentication and can be used for both government services and private sector services such as banking. The NPKI is managed by KISA, an affiliate agency of the Ministry of the Interior and Safety, and issued by preauthorised financial entities. It is therefore regarded as public DI.

Figure 5.3 Models for issuing, managing and using Digital Identity
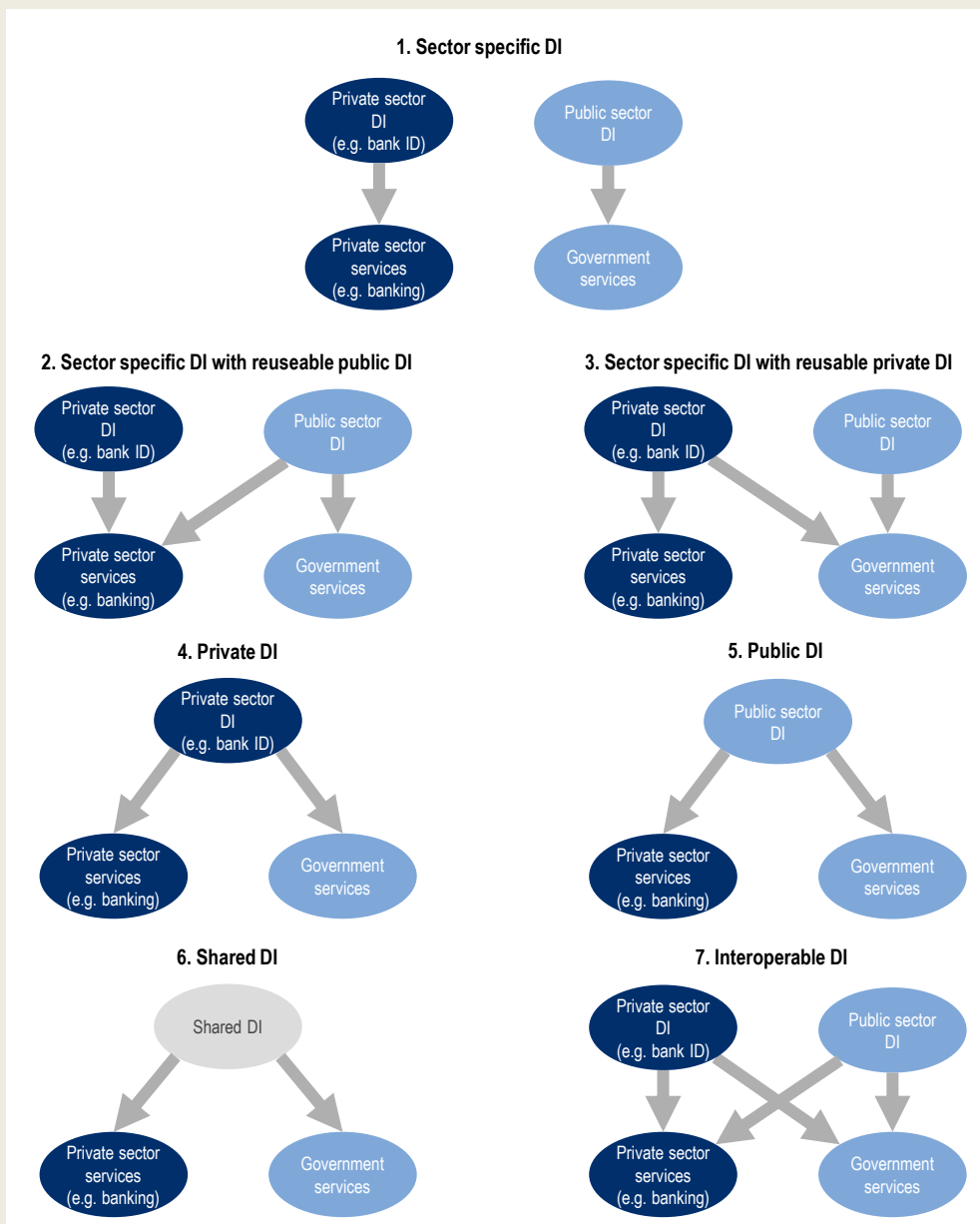
Note: Based on the information provided by Austria, Canada, Denmark, Estonia, India, Italy, Korea, New Zealand, Norway, Portugal, Spain, United Kingdom (UK) and Uruguay in response to OECD (n.d.[7]).
Source: OECD (2019[6]), *Digital Government in Chile – Digital Identity*, https://doi.org/10.1787/9ecba35e-en.

To deliver effective digital identity requires addressing: the foundations in terms of identity infrastructure, policy and leadership; the design of the identity service; the policy levers to encourage adoption; and provisions for transparency around data, performance and impact. Three different approaches for digital identity are presently taking place in Thailand.

First, the basis for identity in Thailand is the longstanding National Identification Card (ID Card) that was first introduced in 1943 and is issued, for free, to all Thai nationals from the age of seven. This card provides the physical identity infrastructure and is managed by the Department of Provincial Administration (DOPA), within the Ministry of the Interior (MOI). In 2005, DOPA launched a new version of the Thai national ID card, known as the first smart card. As the fifth generation ID card, it integrates a chip containing relevant public and private citizens' information. The public information is printed on the card and comprises information collected from four public sector organisations: the National Health Security Office (NHSO) on the citizen's medical treatment rights; the War Veterans Organisation of Thailand (WVO) on war veteran's background and achievements; the Territorial Defense Command on reserve personnel's records; and the Office of Agricultural Economics on farmer's identification and registration. The private information includes personal data and confidential personal information that is encrypted in the smart chip and accessible via a pin code or fingerprint.

This smart card was designed to double up the memory of a typical automated teller machine (ATM) card and a driving licence. To access the information within the card, public and private sector organisations are required to have a smart card reader and must be authorised through a memorandum of understanding with DOPA. Nevertheless, the ID card and its associated systems provide an opportunity on which to build efforts to move ahead with government ambitions to enhance the use of the ID card. With the government's commitment to reduce the use of paper (i.e. paperless policy) and embrace "no-copy policy", the government, therefore, needs to take a strategic approach to create a reliable system of digital identity authentication, including the establishment of the right legal and regulatory frameworks for the use of the ID card as a valid digital document. The government must also invest in tools necessary for enhancing public services both in terms of technicality and infrastructure (Box 5.3).

Box 5.3. The National Digital Driver's License and Digital Identity System: Integrating public service delivery

In Argentina, citizens can access a digital version of their driver's licence through the Mi Argentina mobile application. The digital driver's licence has the same legal validity as the hard copy equivalent. It allows for improved controls and reduces the possibility of fraud.

Launched in February 2019 by the Government Secretariat of Modernisation and the Ministry of Transport, and approved by the National Road Safety Agency, the licence is at no additional cost and is automatically generated if the citizen already has a valid driver's licence.

The National Digital Driver's License marks a turning point in the ecosystem of digital services in Argentina and a crucial step in the way the country is moving towards a digital, closer and agile state. The National Digital Driver's Licence is the first public service that uses the Digital Identity System (SID).

The SID platform is a joint development of the National Population Register (RENAPER) and the Government Secretariat of Modernisation to provide remote validation of a citizen's identity using the biometric data captured for every citizen at the time of enrolment in RENAPER (fingerprints and face photography).

The SID service can be used by private or public sector entities, for different purposes, such as for remote onboarding of new clients or products. These formalities used to require the physical presence of the citizens, with long waiting lines. Currently, 27 entities are using this solution at least in one of the

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different available modalities, providing service to almost 150 000 people per month. The SID platform is a fundamental piece in the digital maturity curve of services in Argentina. Besides providing citizens with a more agile experience, it also increases the offer of public and private digital services.

Second, the DGA has taken steps to standardise digital authentication for accessing services with the Single Sign-On system, based on the OpenID Standard, as a one-time login system that allows users to access online formalities and services from different government agencies. The Single Sign-On is designed such that users only need to log in once to access multiple government systems without re-login. Users either access the services aggregated on egov.go.th or via a single login on openid.egov.go.th. While the use of this tool by public bodies and users is not mandatory, by October 2020, nine public sector organisations have agreed to integrate the digital authentication system into their services: the OPDC, the Thai Bankers' Association, the Government Financial Institutions Association (GFA), the National Digital ID Co., Ltd., the Revenue Department, the Department of Business Development, the Department of Lands, the NHSO and the Student Loan Fund.

Third, the ETDA sets the authentication standards and guidelines for digital ID and digital signature for businesses and supports public sector organisations in adopting these tools in order to prepare, improve and transform the digital economy. For this purpose, the ETDA has issued a set of guidelines and standards for the use of digital identification, electronic communication and digital signature tools adopters should comply with when deploying these solutions to their services.[3] Security is ensured to be in line with international standards. It allows different levels of assurance utilising single-factor authentication (i.e. password, SMS one-time password, one-time password device, crypto software, crypto device), multi-factor authentication (the former including biometric) and multi-factor authentication with a cryptographic key.
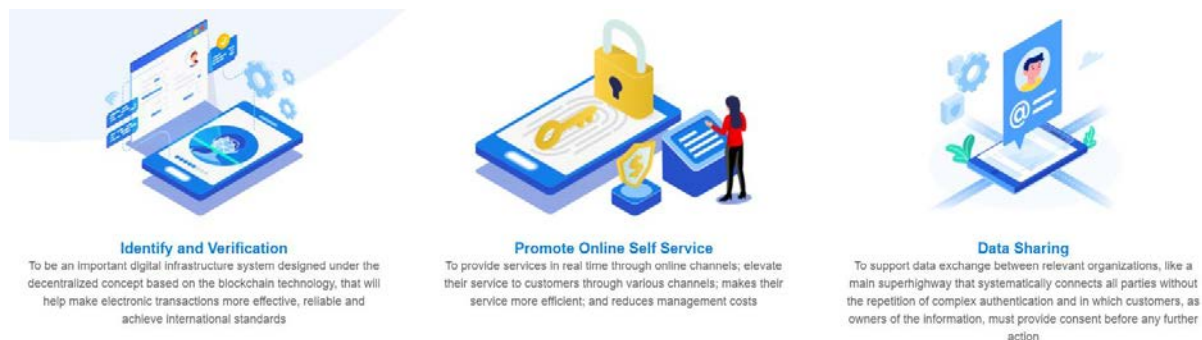
The aforementioned activities of the ETDA are framed in the context of the National Digital ID (NDID) project launched in 2017 by the Ministry of Finance (MoF) and the MDES. The NDID is a collaborative effort between the public and private sectors to simplify citizens' and businesses' day-to-day activities, with a strong focus on preventing and reducing fraud and promoting a safer environment for electronic transactions (Figure 5.4). Subsequently, a group of private companies created the National Digital ID Co., Ltd. (NDID Co., Ltd.) to connect the relying party, the identity provider and authoritative sources. NDID Co., Ltd. shareholders comprise public and private banks (i.e. Stock Exchange of Thailand, Government Savings Bank, Thailand Post, insurance companies, fund management firms, mutual funds, financial technology (fintech) companies). None of the governing board members are a government agency. This initial phase involving the banks will involve the provision of services using the digital identity for opening bank accounts and applying for credit online. The scope will then expand to cover various other public services across sectors including opening investment accounts and insurance policies online or conducting doctor's appointments online. For this purpose, the NDID Co., Ltd. relies on the use of application programming interfaces (APIs) and other technologies such as blockchain for decentralised, secured and federated data exchange. Data sharing functions come under the principle of "privacy by design", therefore citizens' consent is needed before any data are shared among different organisations, without the intervention of the NDID Co., Ltd. Broadly, the ETDA is leading the process of sandboxing and testing digital ID solutions to build their efficiency and align them with data governance according to the Amendment to the Electronic Transactions Act No. 4, B.E. 2562 (2019), on Digital Identification formerly known as the (draft) Digital ID Act.

In the future, the intention is to embed biometric identification functionalities into these tools (such as face recognition) and to develop a cross-border digital ID based on the NDID (e.g. following the interoperability approach promoted by European Union eIDAS Regulations). The goal to have interoperable, mutually

recognised, secure, reliable and user-friendly e-identification and authorisation schemes are addressed in the Association of Southeast Asian Nations (ASEAN) Community Vision 2025 (n.d.[9]) under the section for e-commerce. The intention is to strengthen co-operation in the facilitation of cross-border e-commerce transactions towards regional economic integration.

In February 2020, the Bank of Thailand launched a pilot initiative to deploy the NDID Co., Ltd. under a regulatory sandbox in collaboration with six private banks in Thailand.[4] This approach is not new and mirrors the approach taken in other countries like Sweden where digital identity solutions are provided not only by the central government but also by other actors such as banks. At the start, the MoF and MDES played key roles in the National Digital Identity Committee (NDID Committee), along with experts from relevant sectors to oversee the initial establishment of the NDID Co., Ltd.

Figure 5.4. National Digital ID (NDID): Main objectives

Identify and Verification
To be an important digital infrastructure system designed under the decentralized concept based on the blockchain technology, that will help make electronic transactions more effective, reliable and achieve international standards

Promote Online Self Service
To provide services in real time through online channels; elevate their service to customers through various channels; makes their service more efficient; and reduces management costs

Data Sharing
To support data exchange between relevant organizations, like a main superhighway that systematically connects all parties without the repetition of complex authentication and in which customers, as owners of the information, must provide consent before any further action

Source: Screenshot from NDID (n.d.[10]), *Digital Identity for All*, https://www.ndid.co.th/ (accessed on 8 May 2020).

During the OECD peer review mission to Bangkok, peers expressed their support for the MDES' and ETDA's focus on building a safe ecosystem for digital identity to secure e-payments and e-commerce. Nevertheless, there is a need for increasing the understanding and sustaining the support provided to these initiatives at the policy-making level, so that a sufficient budget for its implementation is secured in the medium and long terms.

Moreover, co-ordination between the ETDA and DGA will remain key in relation to the development and/or application of joint digital ID solutions. The ETDA is working with the DGA and other government agencies to explore and co-create the most practical digital ID solution. Presently, the DGA is expanding its Single Sign-On System to integrate with the NDID as well as with D.Dopa, a digital ID system piloted by DOPA. This enables the use of private digital ID in the government sector (via the NDID), allowing citizens to use any secured digital ID to access public services in the future. The expanded service shall be available within 2021.

The evidence presented in the previous paragraphs indicates that, to date, Thailand is following a path towards an electronic identification (eID) approach where user choice will play a key role when deciding which digital identity tool to use. Other eID solutions are already in place, such as those of the Ministry of Commerce and the Tax Agency. In either scenario, securing the deployment of coherent solutions or a common infrastructure for eID from the start will play a key role in reducing the risk for legacy challenges in the long term.

For instance, in Norway, citizens can use up to five different eID tools with different levels of security to access digital services (including BankID and government-owned solutions). However, as a means to secure integration, the former Agency for Public Management and eGovernment (Difi) developed the ID-porten tool to provide citizens with a co-ordinated/common login solution to public services and reduce the burden that different eID systems impose on them (OECD, 2017[11]).

Also, beyond the development and deployment – or not – of whole-of-government digital identity solutions, challenges would remain in terms of the adoption of these tools by citizens and businesses. From a public sector service perspective, this would require making sure that current or future digital services and the underlying digital infrastructure are up to the innovation and technological development level required by tools such as the NDID. Additionally, Thailand also lacks other tools such as citizens' mailboxes and folders, which could help in streamlining communication with citizens and also reinforcing transparency and integrity in terms of how and which public agencies in Thailand access, share and use citizens' private data. This would help in further building citizens' trust in Thai public agencies and the Thai government as a whole.

Data as the foundation for digital services

Adopting and applying data-driven approaches for policy and services design and delivery is one of six dimensions of digital government maturity as presented in the OECD Digital Government Policy Framework (OECD, 2020[2]). Delivering user-friendly services to citizens and businesses requires emphasising the foundational value of data, including the importance of streamlining data sharing practices within the public sector. As discussed in Chapter 6, applying data for enhanced public service delivery calls for the implementation of the right data governance arrangements (e.g. stewardship, reduction of regulatory barriers, data security, interoperability and tools for machine-to-machine data exchange and federation), so that data siloes are broken down and data flows are simplified, controlled and secured whenever needed.

The mapping, discoverability of and government-to-government (G2G) accessibility to essential datasets, such as data registers, is fundamental in reducing the burden on citizens of a fragmented public sector that functions in line with its own bureaucratic structures rather than adapting or evolving to better respond to the needs and life journeys of citizens.

A focus meant to reinforce the strategic use of data for public services in Thailand is still under development and faces significant challenges from legacy overheads with some key public bodies managing data registers on the basis of paper records.

For instance, during the OECD mission to Bangkok, the Department of Business Development (DBD) (a body under the Ministry of Commerce [MoC] in charge of managing the business register in the country) explained that business registration takes place either on paper or on line. Information provided by the Thai government indicates that paper-based registration takes up 96% of the share while online takes only 4%. This results in an additional administrative effort to include that data in the business register. However, the DBD is making improvements in streamlining business processes and data sharing to abide by the once-only principle (currently citizens can use their business registration number for tax procedures as well). Before the introduction of this simplification measure, citizens had to follow different processes to get a tax ID number and a business registration ID number.

Another example is that of the civil register administered by DOPA, which includes name, family, birth and death registers and other details in the national ID card. This database is managed electronically and citizens that request a change in civil registration must submit paper documents in person to the relevant government authorities for verification purposes. The digital part of the civil register is enabled by linking all registered data through 13 digits on the ID card. Other government agencies that want to link these data for work missions, policy purposes or public service usage, have to submit a letter of intention and data governance plan to the MOI for authorisation.

In terms of data infrastructure, the DGA is piloting different projects as a means to promote greater data exchange within the public sector and connect available data registers and relevant data sources. These projects include an API system that presently, at the time of publishing this review, provides access to data

registers from various government agencies including the DBD, DOPA, the Revenue Department (RD), the Office of the Board of Investment and the Cooperative Promotion Department (DGA, 2018[3]).

Other examples include the GDX[5] platform, which responds to the DGA's mandate to develop a tool for information and data exchange for the public sector as stated in the Royal Decree on Criteria and Procedures for Good Governance, B.E. 2562 (2019). The platform has been in operation since 2016 and, at the time of publishing this review, allows more than 150 government departments to connect and exchange more than 39 million records of data.

Opportunities are vast. As detailed above, the application of specific technologies and tools such as APIs or the cloud can help in reducing data fragmentation and building resilient and scalable data infrastructures. However, moving towards greater data integration also requires making sure that the right data is available for access and sharing, and those data should be generated with a focus on their re-use either inside or outside the public sector.

First, it would be necessary to focus on the value of data. This implies identifying those key data sets of high priority, based on the value of those data to digitalise internal and external services. For instance, in Argentina, the central government followed a Data-as-a-Service (DaaS) approach where specific datasets were prioritised for standardisation and interoperability given their relevance for public services (Box 5.4). In addition, the transition from paper-based to digital data registers and the development of tools such as high-value data catalogues will remain key to enable the exchange of core data within the public sectors through common interoperability and data infrastructures.

Second, this would require also making sure that standards are available so that data holders can adopt them (e.g. those agencies producing specific datasets). These data governance tools might include hard-law instruments such as regulations or mechanisms such as recommendations, data standards and guidelines for data generation and co-ordination across agencies.

Third, the DGA's clear role and mandate in relation to digital and data standards will play a key role in ensuring that the DGA has the ability to enforce the application of those standards across the government. This would help maintain consistency in digital delivery across government as well as establish best practices and standards for technology. Neither the DGA nor the ETDA has regulatory or enforcement powers, which raises again the challenge of the governance instruments at the disposal of these agencies to enforce the alignment with data standards and the use of common components in a coherent fashion across the public sector (e.g. the budget allocation process as discussed in Chapter 3).

Box 5.4. Argentina: The Data as a Service (DaaS) approach

In Argentina, the so-called DaaS approach emerged as an informal policy initiative of the National Direction of Public Data and Public Information (DPDI) within the Secretariat of Government Administration at the Cabinet Office.

At the first stage, the purpose of the DaaS approach was to ensure the implementation of Presidential Decree 117/2016, which established the normative and policy underpinnings for an open data by default approach to public sector information. After setting up the basic technological and operational infrastructure for open data, by mid-2017, it was clear that the easy mile of the open data implementation efforts was well on track. Yet additional efforts had to be made in order to secure the DPDI's DaaS vision towards the development of data infrastructure, focused on users' needs and geared towards data re-use scenarios, including for those users within the public sector.

In terms of open data, the DaaS approach aimed at bulk data releases, facilitating data publishing and data consumption through the development of a suite of APIs (web services) based on 100% open data, designed in the open and to be easily deployed by third-party organisations.

For internal data users, the DaaS approach and the development of the Data Interoperability Platform for the public sector (INTEROPER.AR) responded to the need for improving and bringing order in public sector data management and sharing practices. The goal was to focus first on technical matters that could be later scaled up to enable better service delivery and public value co-creation.

For this purpose, the DPDI developed the *Guide for the Identification and Use of Inter-operable [data] Entities* to move towards greater data interoperability and exchange within the public sector. The guide is an ongoing effort to ensure both public and private sector organisations can follow simple methods to generate, share and/or consume good-quality government data, therefore putting the DaaS vision in practice. The guide provides guidance on how to create simple identifiers for data that are produced by different public sector organisations but that at the same time are regularly shared among them (e.g. country > country_id). Consistent and increasing efforts have been underway since 2017 to make sure the core DaaS reference framework for public sector data is available through APIs.

Source: Text adapted from OECD (2019[8]), *Digital Government Review of Argentina: Accelerating the Digitalisation of the Public Sector*, https://doi.org/10.1787/354732cc-en.

Service design: End-to-end services that focus on users

In terms of digital government, Thailand's government and its leading agencies are in the midst of a transitional period where legacy e-government aspects and the eagerness to move fast collide and create tension and resistance to change from different government bodies. Thai agencies comply with government regulations but fail to understand that delivering on governments' digitalisation and digital government goals would require self-acknowledging that things should be done differently from the start.

For instance, the Licensing Facilitation Act, B.E. 2558 (2015), has a big focus on administrative simplification and on building a paperless government. For this purpose, this law mandates public agencies to review their own processes every five years or to identify better alternatives, methods and channels to streamline service delivery. Moreover, the act authorises the OPDC to make recommendations to the cabinet office aiming at developing or improving the public service delivery process. It provides the basis to ensure consistency in the information collected and shared across the public sector, including the quality of forms and documentation, standardised processes and guidance on interactions such as the timeliness of government responses to businesses.

However, during the OECD mission to Bangkok, public officials expressed that, in practice, the Licensing Facilitation Act, B.E. 2558 (2015), is more of a mapping exercise that identifies the availability of services rather than identifying service overlaps or opportunities to redesign underlying processes as a priority for greater service consolidation. Nevertheless, such a mapping could provide a valuable springboard for understanding the service landscape and supporting the move towards more streamlined processes within the government and the development of integrated end-to-end services that focus on citizens (see Box 5.5 for Chile's example of creating a National Register of Services).

Box 5.5. Chile: The National Register of Services

The need for a more strategic understanding of the services landscape in Chile benefits from the recent development of the National Register of Services (*Registro Nacional de Trámites*). This catalogue can help in developing a strategic approach to the migration, rationalisation or consolidation of those services that share similar characteristics. In the past, the Digital Government Division (DGD) within the Chilean Ministry General Secretariat of the Presidency (*Ministerio Secretaría General de la Presidencia*,

MINSEGPRES) has attempted to maintain a limited record for only a fraction of the services. Keeping it up to date has proven highly challenging while different definitions of services, transactions and processes throughout the public sector, in addition to the law introducing its own definitions, mean no two "services" are alike.

Consolidating the catalogue or register of services paves the way for the possibility for the simplification and rationalisation of government by bringing together the various parts involved in administering the end-to-end experience of a user. A citizen may find themselves needing to complete one transaction with "Department A" before having to tackle a further interaction with "Department B" and possibly then returning to "Department A".

An index of services, therefore, provides a tool with which to understand and map user journeys. It is positive that the Digital Transformation of the State Law (MINSEGPRES, 2019[12]) and its related regulatory framework mandate public agencies to register all their services in this catalogue. However, further efforts and institutional capacities are needed to ensure the strategic use of these catalogues in the rationalisation of services and the overall expansion strategy of multi-channel service delivery programmes for public services (such as *ChileAtiende* in Chile or *GovChannel* in Thailand).

Source: OECD (2020[13]), *Digital Government in Chile – Improving Public Service Design and Delivery*, https://doi.org/10.1787/b94582e8-en.

As discussed in Chapter 3, public officials indicated that there is a significant regulatory burden while regulators are failing to take real action to decrease it, leading to strenuous formalities and below-optimal services provided to citizens and start-ups. This top-down approach is a legacy challenge in itself as decisions on what services should be prioritised for improvement are left to those agencies who own them, ignoring the insights and needs of the final users.

Results from the OECD mission to Bangkok indicate that any formal principle or guidance for service owners (e.g. government agencies providing services to citizens) in relation to assessing, embedding and taking into consideration the opinions of users in an iterative fashion (e.g. when kicking-off new projects or assessing ongoing delivery) are simply not available. Developing these soft governance instruments will play a key role in building a culture within the public sector that makes open, user-driven and agile approaches the priority when designing and delivering digital services (Box 5.6). Such an approach is a precondition for the efficient application of user-driven and open-by-default methods to service design and delivery and, consequently, to digital government maturity, as highlighted in the OECD Digital Government Policy Framework (2020[2]).

Also, current initiatives focus on the interoperability of data systems within government but there is little indication that there were any overall standards set for technology in government, even though government agencies mentioned service interoperability and integration as key policy priorities during the OECD mission to Bangkok. This is surprising given the DGA's strong focus on technology and data (e.g. development of platforms and technical tools).

During the OECD mission to Bangkok, it came clear that following a single technology-centred approach might not be the best way to design and deliver services in government. Rather, the Thai government should focus on developing technology and service standards that are able to cope with fast-paced technological development (e.g. as technology moves quickly, having a single integrated system can become expensive to maintain and quickly obsolete).

Box 5.6. OECD proposed general principles for digital service delivery

Under the auspices of the OECD Working Party of Senior Digital Government Officials (E-Leaders), OECD member countries have been considering what constitutes best practice in this area for several years. At the 2017 meeting in Lisbon, Portugal, the Thematic Group on Digital Service Delivery presented a set of general principles that both member countries and other governments could follow. These principles emerged from the experiences of member countries in implementing their digital agendas.

- **User-driven** – Optimise the service around how users can, want or need to use it, including cultural aspects, rather than forcing the users to change their behaviour to accommodate the service.
- **Security- and privacy-focused** – Uphold the principles of user security and privacy to every digital service offered.
- **Open standards** – Freely adopted, implemented and extended standards.
- **Agile methods** – Build your service using agile, iterative and user-centred methods.
- **Government as a Platform** – Build modular, API-enabled data, content, transaction services and business rules for re-use across government and 3rd party service providers.
- **Accessibility** – Support social inclusion for people with disabilities as well as others, such as older people, people in rural areas and people in developing countries.
- **Consistent and responsive design** – Build the service with responsive design methods using common design patterns within a style guide.
- **Participatory process updating** – Design a platform to take into account civic participation in the services updates.
- **Performance measurements** – Measure performance such as digital take-up, user satisfaction, digital service completion rate and cost per transaction for a better decision-making process.
- **Encourage use** – Promote the use of digital services across a range of channels, including emerging opportunities such as social media.

Source: OECD (2020[13]), *Digital Government in Chile – Improving Public Service Design and Delivery*, https://doi.org/10.1787/b94582e8-en.

Thailand can benefit from adopting a Technology Code of Practice and Service Standards, or a similar approach, as done by countries like the UK (Box 5.7). This can become an important policy lever to promote service design approaches that focus on users and that makes interoperability, scalability and agility a priority (e.g. by using open source and open standards) rather than on the development of rigid systems that could lead to new monolithic legacy structures for digital services in the near future. This can also allow the Thai government to be more flexible in what technology it can use and upgrade when it is useful to do so.

Box 5.7. The UK's Service Standards and Technology Code of Practice

The UK's Service Standard and Technology Code of Practice are unique and efficient frameworks that foster collaboration and standardisation across the public sector. They ensure cross-government conformity and unity in-service performance and the utilisation of digital technologies. These resources

mandate government teams to undertake specified tasks when engaging in the design of public services or the application of technology in their operations.

The **Service Standard** is a service manual that guides public sector officials in designing and operating public services covering the following 14 aspects:

1. Understand users and their needs.
2. Solve a whole problem for users.
3. Provide a joined-up experience across all channels.
4. Make the service simple to use.
5. Make sure everyone can use the service.
6. Have a multidisciplinary team.
7. Use agile ways of working.
8. Iterate and improve frequently.
9. Create a secure service that protects users' privacy.
10. Define what success looks like and publish performance data.
11. Choose the right tools and technology.
12. Make new source code open.
13. Use and contribute to open standards, common components and patterns.
14. Operate a reliable service.

The **Technology Code of Practice** (TCP) is a cross-government agreed standard with criteria to streamline and standardise technology designing, building and buying processes in the public sector. The TCP is expected to be applied to all technology projects and programmes to ensure that the technology: i) meets user needs based on user research; ii) is easier to share across government; iii) is easy to maintain; iv) scales for future use; v) is less dependent on single third-party suppliers; and vi) provides better value for money. The TCP also contain case studies and guidance to digitalise the legacy e-infrastructure and manage the whole lifecycle of the technology.

During the COVID-19 pandemic, these policy tools enabled local governments in the UK to respond swiftly and effectively to their local constituents in delivering the necessary services digitally.

Source: GOV.UK (2020[14]), *Service Standard*, https://www.gov.uk/service-manual/service-standard; GOV.UK (2019[15]), *The Technology Code of Practice*, https://www.gov.uk/government/publications/technology-code-of-practice/technology-code-of-practice.

In line with the above, although focusing on the design stage of digital services is not currently a priority, it might be in Thailand's interest to start creating such a paradigm shift to public services provision across the public sector starting with small pilot projects, built by multidisciplinary teams. This would allow agencies, led by the DGA, to experiment with service design, based on data and user research before having to commit to a national roll-out of digital services. One key aspect in this regard, previously discussed in Chapter 4, is also related to the lack of capacity within the public sector to build services and other tools such as (open) software, which has led to most government projects being outsourced to third parties, often in a fragmented fashion in terms of both procurement and standards. By starting "small" with a focus on scalability, the DGA could help in building a greater understanding of the frameworks for digital services, their connection with budgetary innovation (e.g. such as spend controls in the UK and information and communication technology/digital commissioning as discussed in Chapter 4) and the application of service and data standards needed to deliver full digital transformation.

The DGA could also start by building a better understanding of the capability gaps that should be addressed to meet user expectations for digital services and build a more mature digital government where

service owners (agencies) are able to cope with digital transformation challenges on their own. This could help inform the work of the Office of the Civil Service Commission (OCSC), which has been key to move towards a whole-of-government digital leadership and capability, including for design of user-driven services (Box 5.8).

Yet, in addition to building these skills, the DGA, OPDC and OCSC should also place building communities of practice within government as a priority, so that these partnerships promote knowledge exchange on user-driven services in a more agile fashion rather than waiting for formal plans indicating the need to "go big" and deliver digital services at scale.

Results from the interviews held with government officials during the OECD mission to Bangkok indicate that there are no communities of practice within the public sector, resulting from the extremely vertical and top-down governance model coming from the ministerial level. By promoting informal networks of practice, the DGA and OCSC could crowdsource collective knowledge and build further the much-needed relevant standards and design components for digital services with a focus on understanding and responding to user needs. These initiatives would greatly contribute to the much-needed paradigm shift mentioned earlier.

Box 5.8. 18F Methods in the United States: A focus on human-centred design

The 18F Methods is a collection of research and design practices provided by the government of the United States to build a greater understanding of the problem to be solved for targeted users. There are lists of methodological tools for different stages of the design process:

- **Discover**: cognitive walkthrough, contextual inquiry, design studio, dot voting, five whys, heuristic evaluation, hopes and fears, KJ method, lean coffee, stakeholder and user interviews.
- **Decide**: affinity mapping, comparative analysis, content audit, design hypothesis, design principles, interface audit, journey mapping, mental modelling, personas, site mapping, storyboarding, style tiles, task flow analysis, user scenarios.
- **Make**: design patterns library, prototyping, wireframing.
- **Validate**: card sorting, multivariate testing, usability testing, visual preference testing.
- **Fundamentals**: incentives, privacy, recruiting.

The 18F Methods are being used by partners and clients within the federal government and by state-level agencies, start-ups and businesses in order to create shared vocabulary across designers in the public sector and allow designers to do quick, low-cost user research and testing in line with regulations. With this guidance, the process of design to practice is made efficient and streamlined.

Source: 18F Methods (2015[16]), *A Collection of Tools to Bring Human-centered Design into Your Project*, https://methods.18f.gov/ (accessed on 21 July 2021).

Delivery and access to public services: Inclusive and digital by design

Digital by design, as one of the six dimensions of the OECD Digital Government Policy Framework, implies fully "embedding digital technologies in policy making and service design processes from the outset, and mobilising existing and emerging technologies and data to rethink and re-engineer business processes and internal operations" (OECD, 2020[2]). A digital by design government also follows "an omnichannel approach to enable a more inclusive digital transformation, allowing online and mobile services to co-exist with face-to-face or over-the-phone service delivery, ensuring that underlying processes are digitally

coherent and integrated. This implies digitally assisted delivery of public services across all channels, in order to secure the same level of quality regardless of the chosen means of access" (OECD, 2020[2]).

In Thailand, the DGA provides one-stop and digital services following a multichannel approach through physical kiosks, mobile and web-based channels.

The DGA has deployed a system of Government Smart Kiosks (GSKs) across the Thai territory to address the digital divide for those citizens without access to the Internet or the required connected devices such as personal computers and smartphones (Figure 5.5). The GSKs offer the possibility for citizens to: access basic and useful information; register, apply or transact for some services such as identification verification, document delivery, data entry or issues reporting; and payment. These kiosks are available in 119 locations, including hospitals, government complexes and service points, one-stop service centres, shopping malls, provincial halls, bus terminals and schools. Twenty-one services are available on the GSK including civil registration (by DOPA), water usage and bill payment (by the Metropolitan Waterworks Authority), doctor's appointment booking (by hospitals), credit information (by the National Credit Bureau), service monitoring system (by the DGA), central identity authentication for citizens (by the DGA), medical check-up information in public hospitals (by the MPH), healthcare rights information (by the NHSO), pension account information (by the Government Pension Fund), traffic fines information (by the Royal Thai Police), social security eligibility and pension fund information (by the Social Security Office), medical rights eligibility check (by hospitals), complaint tracking system (by the Ministry of Justice and Office of the Ombudsman) and student loan system (by the Student Loan Fund). The GSKs have a strong focus on access to information, namely information on citizens' financial situation, civil registers and public sector health systems. The DGA has recently developed and released a mobile application Thang Rut (Path to Government) that allows citizens to access public services, including those previously available on GSKs via this application. The Thang Rut application uses biometric and artificial intelligence.

Adding to the accessibility focus of the GSKs, the MDES is deploying connectivity infrastructure across the national territory. For instance, the MDES is working on improving digital inclusion through the Village Broadband Internet Project "Smart Thailand". This is due to the fact that 90.1% of the population surveyed use the Internet via mobile devices and 65.6% do so through home-based Internet, according to the 2019 "Survey of the use of information technology and communication in households" conducted by the National Statistical Office (2019[17]). In early January 2021, the MDES deployed 20 000 free Wi-Fi hotspots in public areas as the first phase of the Smart Thailand scheme. An additional 20 000 hotspots to provide coverage of 88% of districts in all 77 provinces will be rolled out as part of the programme's second phase.

In addition, the government of Thailand launched Village Broadband Internet (Net Pracharat) as a way to bridge the rural-urban digital divide and increase Internet accessibility. The project involved strengthening the national broadband network by expanding the high-speed Internet network to reach every village in the country such that people living in remote areas will be able to access high-speed Internet like those in the cities. In December 2017, the MDES and Telephone of Thailand Public Co., Ltd. (TOT) completed the installation of a fibre optic network to 24 700 target rural villages in the country and an additional 9.8 million users had high-speed Internet access nationwide at no cost. This was a key initiative that truly ensured no one would be left behind and enabled everyone to be able to access public services. Spill-over effects include the creation of job opportunities, generation of income, fostering education, advancement of public healthcare services, supporting agriculture and boosting online trading.

Figure 5.5. Thailand: Government Smart Kiosks

Network across the Thai territory
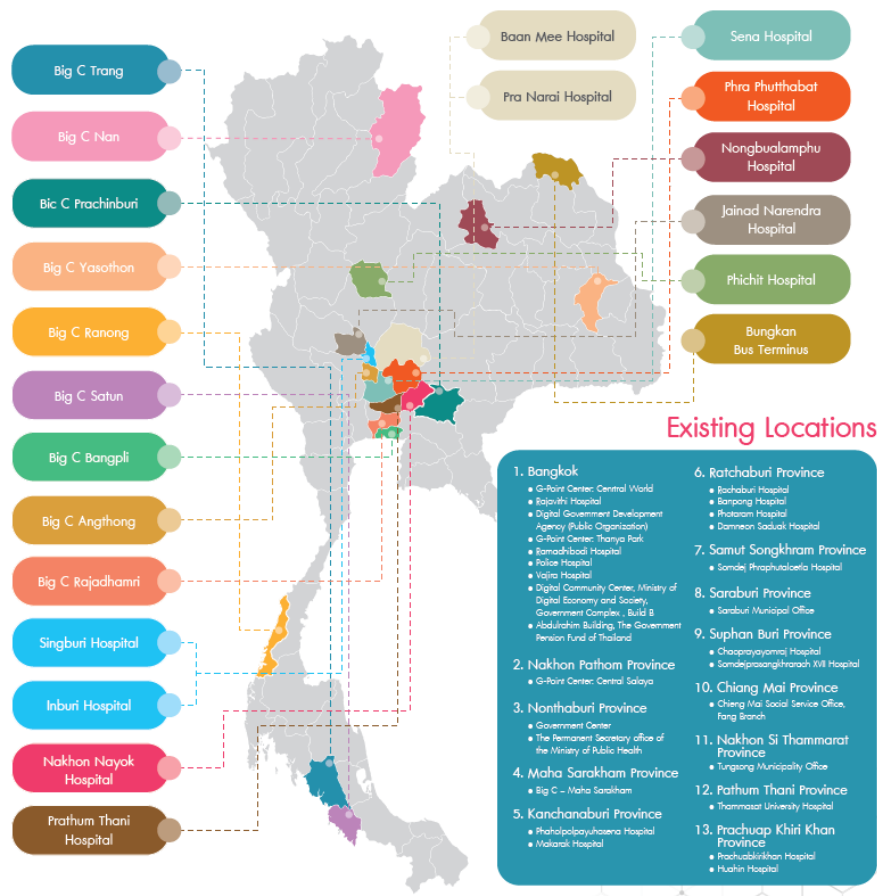
Source: DGA (2018[3]), *Transform Government to the Digital Age: Annual Report 2018*, Digital Government Development Agency.

On the front of digital skills, the Digital Economy Promotion Agency (DEPA) developed capacity-building training for students, workers and labourers in some industries, senior citizens and disadvantaged groups to ensure that these groups are sufficiently equipped with digital literacy to thrive in the country's digital ecosystems. The MDES and DEPA co-trained over 500 public and private executives, over 3 000 public big data specialists and 60 000 from the digital workforce. One hundred schools were established to be Coding School Champions and, to date, 17 000 students and 4 000 educational personnel have benefitted from them. Overall, more than 3 million students and citizens have been able to improve their digital literacy through online platforms created by the MDES and DEPA.

In relation to web-based access, in 2015, the DGA launched govchannel.go.th as a gateway providing a single window for citizens to access government information, open data, statistics, formalities and services, and relevant mobile applications (more extensive than GSKs for services). This central website is embedded with links and connects with e-servers from partner public sector organisations. Yet, the GovChannel follows a more e-government approach where the platform works more as an alternative "search engine" to browse among the different available government websites (e.g. services are not integrated into one single platform and are hosted in separate websites, therefore accessible through different government domains). There are approximately 2 574 government websites from 454 government agencies, and no fewer than 299 online applications that are administered by public sector organisations.

All of these websites and online applications are owned, administered, updated and monitored independently.

The next steps would consider the underlying assimilation of the different sparse website platforms providing access to such topics in view of simplifying access to public sector information, data, formalities and services. However, this will require facing the potential organisational resistance of those agencies that own the specific available domains available for access through GovChannel, and that of line ministries and other bodies administering their own government websites. Yet, the case and rationale for this reform should not be merely understood from a look-and-feel or a technical angle, but from the intricate user journey resulting from multiple available government websites.

This would also require securing a consolidated and consistent user experience through the different channels (omnichannel) rather than simply offering online access points (multichannel) for scattered and often fragmented government websites, services and applications. For instance, both the GovChannel and Government Applications Centre (GAC) function as catalogues of websites and applications rather than single platforms for greater public services integration and consolidation.

References

18F Methods (2015), *A Collection of Tools to Bring Human-centered Design into Your Project*, https://methods.18f.gov/ (accessed on 21 July 2020). [16]

ASEAN (n.d.), *ASEAN Community Vision 2025*, Association of Southeast Asian Nations, https://www.asean.org/wp-content/uploads/images/2015/November/aec-page/ASEAN-Community-Vision-2025.pdf. [9]

DGA (2018), *Transform Government to the Digital Age: Annual Report 2018*, Digital Government Development Agency. [3]

GOV.UK (2020), *Service Standard*, UK Government, https://www.gov.uk/service-manual/service-standard. [14]

GOV.UK (2019), *The Technology Code of Practice*, UK Government, https://www.gov.uk/government/publications/technology-code-of-practice/technology-code-of-practice. [15]

MINSEGPRES (2019), *Ley 21.180 de Transformación Digital del Estado*, Ministerio Secretaría General de la Presidencia, https://www.leychile.cl/Navegar?idNorma=1138479 (accessed on 12 December 2019). [12]

National Statistical Office (2019), "Survey of the use of information technology and communication in households". [17]

NDID (n.d.), *Digital Identity for All*, National Digital ID, https://www.ndid.co.th/ (accessed on 8 May 2020). [10]

OECD (2020), *Digital Government in Chile – Improving Public Service Design and Delivery*, OECD Digital Government Studies, OECD Publishing, Paris, https://doi.org/10.1787/b94582e8-en. [13]

OECD (2020), "The OECD Digital Government Policy Framework: Six dimensions of a Digital Government", *OECD Public Governance Policy Papers*, No. 02, OECD Publishing, Paris, https://doi.org/10.1787/f64fed2a-en. [2]

OECD (2019), *Digital Government in Chile – Digital Identity*, OECD Digital Government Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9ecba35e-en. [6]

OECD (2019), *Digital Government Review of Argentina: Accelerating the Digitalisation of the Public Sector*, OECD Digital Government Studies, OECD Publishing, Paris, https://doi.org/10.1787/354732cc-en. [8]

OECD (2018), *Digital Government Review of Colombia: Towards a Citizen-Driven Public Sector*, OECD Digital Government Studies, OECD Publishing, Paris, https://doi.org/10.1787/9789264291867-en (accessed on 24 June 2019). [5]

OECD (2017), *Digital Government Review of Norway: Boosting the Digital Transformation of the Public Sector*, OECD Digital Government Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264279742-en. [11]

OECD (2014), *Recommendation of the Council on Digital Government Strategies*, OECD, Paris, http://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf. [1]

OECD (2005), *e-Government for Better Government*, OECD e-Government Studies, OECD Publishing, Paris, https://doi.org/10.1787/9789264018341-en. [18]

OECD (n.d.), "Survey on benchmarking digital identity solutions", Unpublished, OECD, Paris. [7]

OECD/ITU (2011), *M-Government: Mobile Technologies for Responsive Governments and Connected Societies*, OECD Publishing, Paris, https://doi.org/10.1787/9789264118706-en. [19]

Thai Government (2019), *Translation of the Royal Decree on Good Governance No. 2 by Pakorn Nilprapunt*, http://lawdrafter.blogspot.com/2019/05/translation-of-royal-decree-on-good.html. [4]

Notes

[1] See for instance OECD (2005[18]) and (2020[13]).

[2] See for instance: OECD/ITU (2011[19]).

[3] For more information, see https://standard.etda.or.th/.

[4] For more information, see https://www.ndid.co.th/news/4.html.

[5] For more information, see https://gdx.dga.or.th/.

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