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GovTech for Georgia

A Whole of Government Approach as a Key Foundation for the Digital Economy in Georgia

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GovTech:

A Whole of Government Approach as a Key Foundation for the Digital Economy in Georgia

Key Messages:

- In the context of the digital transformation worldwide and the move towards a digital economy, GovTech creates the enabling environment to deliver better, faster, and more agile services to citizens and the private sector.
- Georgia's Government Program and its Digital Strategy envision the country's digital transformation and GovTech development, including the digitalization of public platforms and offer user-oriented digital services.
- Georgia has achieved significant GovTech results, particularly in the development of center-of-government digital platforms and systems) e.g. Public Financial Management Systems, Procurement, Human Resource Management and in strengthening both physical and digital services through a multi-channel service delivery approach.
- These achievements can be leveraged, seizing important opportunities to propel a quality jump forward by: (i) developing and implementing a whole-of-government GovTech approach; (ii) strengthening GovTech foundations focusing on digital ID and digital documents; (iii) modernizing core digital platforms and services, starting with tax administration; and (iv) developing and adopting disruptive technologies for GovTech for the public administration, such as the use of artificial intelligence for the tax administration.

This note presents main findings of the GovTech Snapshot Assessment for Georgia, forming part of a larger World Bank global engagement on GovTech and Advisory Services and Analytics (ASA) in the South Caucasus on Transforming Government Services through Digital Innovations.¹ The objective of the note is to conduct an initial GovTech stock-taking, using the GovTech conceptual framework within the broader Digital Economy context. Starting with a first analytical phase in 2021 and to be continued through a second phase of implementation support in 2022, the assessment focuses on key thematic areas in line with client interest to help identify entry-points and reform options. It applies a simplified and customized version of the Digital Government Readiness Assessment Methodology (DGRA), assessing key thematic dimensions and developing a menu of reform options in line with client priorities.²

¹ This note has been prepared by a team led by Kathrin A. Plangemann, Lead Public Sector Governance Specialist and Task-Manager, and Constantin Rusu, Sr. Public Sector Governance Specialist and co-Task-Manager, with contributions by Irakli Gvenetadze and Magali Junowicz. It includes comments received by peer reviewers Cem Dener, David Santos Ruano. Valuable feedback was received from stakeholders in Georgia which is gratefully acknowledged.

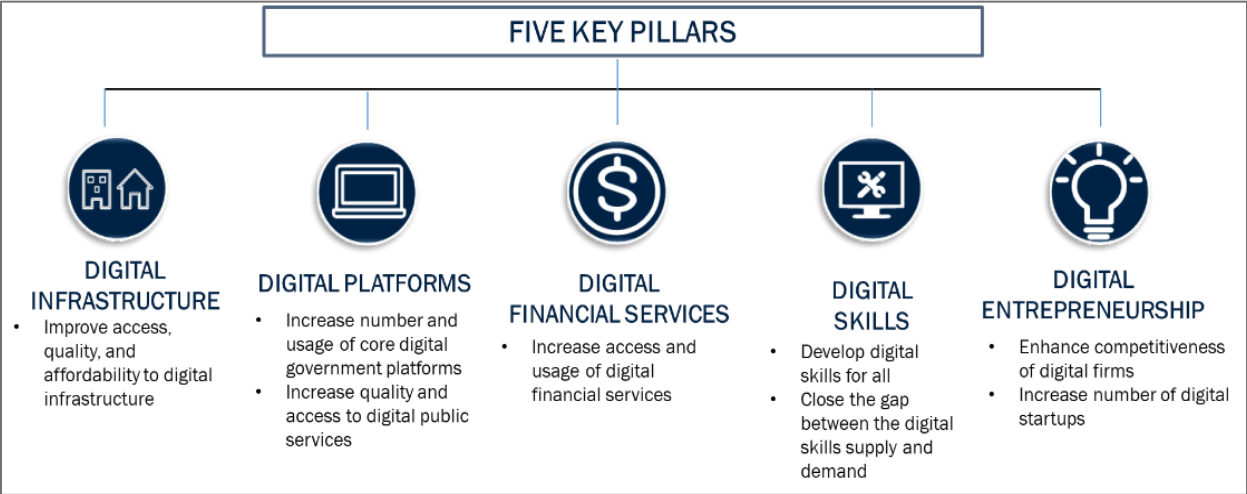
² Rather than a full-fledged assessment, this analysis has been carried out in an agile mode as a 'snapshot assessment' considering a multi-country approach, client priorities, budget, timing and the nature of the virtual dialogue within COVID 19 times.

The note is structured in four sections. The first section presents the GovTech and Digital Economy conceptual framework. Section two includes key findings of the snapshot assessment for all nine dimensions of the DGRA. Section three propose potential reform opportunities based on entry-points identified in the assessment and customized to client priorities. These are presented below as a proposed preliminary menu of reform options and as a basis for further discussion with Georgian counterparts. Finally, Section 4 presents different engagement options to deepen collaboration between the Government of Georgia and the World Bank on GovTech.

I. Georgia GovTech Stocktaking: GovTech Essential to Realizing the Potential of the Digital Economy

The digital economy is expected to reach 25 percent of global GDP by 2030. A strong digital economy can help achieve inclusive growth, foster competitiveness and enhance resilience to shocks.³ GovTech is a crucial foundation of the strong digital economy, as depicted in Figure 1, leveraging government systems, tools, capacities and incentives to deliver services to citizens and the private sector. Empowered by digital infrastructure, endowed with digital skills, and safeguarded against cybersecurity and data privacy risks, it can help strengthen government performance, digital entrepreneurship, and digital financial services, including FinTech.

Figure 1: The Digital Economy – Conceptual Framework



GovTech is a whole-of -government approach to public sector modernization. With its digital platforms pillar and broader conceptual framework, GovTech is foundational for the digital economy, leveraging technologies to achieve national priorities and improve public services while contributing to increased efficiency,

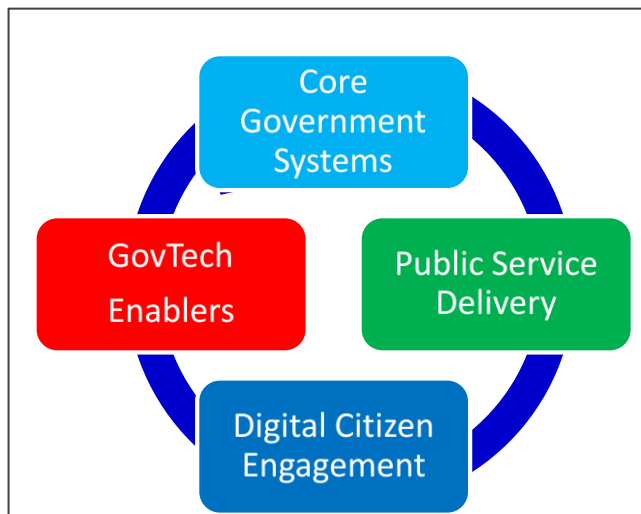
³ The World Bank. “GovTech - Putting People First” GovTech Launch Report and Short-Term Action Plan. 2021 <http://documents.worldbank.org/curated/en/213131609824669955/GovTech-Launch-Report-and-Short-Term-Action-Plan>. These foundations are identified as the key pillars of the World Bank’s Digital Economy Framework underpinning the Digital Economy for Africa (DE4A) initiative.

effectiveness, transparency, and accountability.⁴ Leading to a new way of thinking, organizing, and working in the public sector, it boosts government performance by enhancing service delivery outcomes, both access and quality. COVID 19 pandemic has further accelerated the need for GovTech reforms to support government business continuity, promote alternative, faster and more efficient service delivery, allow for significant opportunities to generate fiscal savings and create resilience to future shocks.

The World Bank GovTech agenda, supported by the GovTech Global Partnership (GTGP),⁵ defines four focal areas that constitute the GovTech foundational blocks. As shown in Figure 2, these are (i) core government systems, (ii) public service delivery, (iii) citizens engagement and (iv) GovTech enablers which are defined as cross-cutting drivers of the digital transformation agenda. The four GovTech areas are thus linked to all five pillars of the digital economy framework shown in Box 1.⁶

In its GovTech Maturity Index (GTMI), the World Bank assesses the level of development in these four areas.⁷ The Index places Georgia in group “B” defined as “countries with significant focus on GovTech”. The 2020 UN e-Government Development Index ranked Georgia as 65 out of 93 economies. While Georgia maintains a strong global and regional position, its ranking has been deteriorating in the last years mostly because other countries are improving.⁸

Figure 2: The virtuous GovTech cycle



Source: GovTech Maturity Index

⁴ The World Bank. “GovTech-Putting People First” 2021.

⁵ The World Bank GovTech Agenda. <https://www.worldbank.org/en/programs/govtech>. World Bank “The-New-Frontier-in-Digital-Government-Transformation” (2020)

⁶ The Digital Economy is based on five key pillars, including platforms and infrastructure but also analog foundations such as regulations that create a vibrant business climate and let firms leverage digital technologies to compete and innovate; skills that allow workers, entrepreneurs, and public servants to seize opportunities in the digital world; and accountable institutions that use the internet to empower citizens. World Development Report 2016 The Digital Divide, The World Bank.

⁷ The World Bank “GovTech Maturity Index: The State of Digital Government Transformation”, May 2021

⁸ Georgia ranked 60 in 2018, 61 in 2016, and 56 in 2014, but the value of the indicator steadily improved from 0.6 in 2014 to 0.71 in 2020.

Box 1: Key Concepts and Conceptual Framework

The Digital Economy encompasses the adoption of digital technology in all sectors as a driver of economic growth, innovation and other means of transforming the economy. It is based on five key pillars: digital infrastructure, digital platforms, digital financial services, digital skills and digital entrepreneurship. These foundations are identified as the key pillars of the World Bank's Digital Economy Approach which provides the overall context for this analysis.

GovTech is a crucial foundation of the strong digital economy leveraging government systems, tools, capacities and incentives to deliver services to citizens and the private sector. GTGP defines four focal areas that constitute the GovTech foundational blocks. These are (i) core government systems, (ii) public service delivery, (iii) citizens engagement and (iv) GovTech enablers, which are defined as cross-cutting drivers of the digital transformation agenda. The GovTech concept serves as the underlying conceptual framework for the analysis conducted in this note.

The DRGA (Digital Government Readiness Assessment) is a methodology developed by the World Bank to measure the progress and challenges of countries in different dimensions of digital government. Having been applied in many countries across the world, it provides granular insights into the state of government's readiness for digital government reforms and can be used to identify entry-points for further reforms and customized to client needs. This analysis uses the DRGA methodology. In May 2021, the publication of the GTMI (GovTech Maturity Index) paved the way for benchmarking countries and identify opportunities and lessons to be drawn for countries seeking to deliver GovTech solutions. It measures the presence of several cross-cutting enablers relevant to advancing GovTech, building on a composite index based on 49 key indicators with data on 198 economies. This assessment tool could inform future GovTech assessments.

Countries around the world are undertaking innovative GovTech reforms. For example, Estonia (e-Estonia), Singapore (GovTech Singapore) and the United Kingdom (Government Digital Service) are considered to be among the strong performers in the GovTech whole-of-government approach, having transformed their model of service delivery. (See Box 2)⁹

⁹ For further information on the featured cases and other additional cases see: The World Bank "GovTech Maturity Index: The State of Digital Government Transformation", May 2021; European Union "Exploring Digital Government transformation in the EU" 2019; UN Department of Economic and Social Affairs. "UN E-Government Survey 2018" United Nations; The World Bank "GovTech Agenda: The-New-Frontier-in-Digital-Government-Transformation" (2020)

Box 2: GovTech Innovations in Numbers

1. Core Digital Government Systems

- The **Finnish Tax Administration (FTA)** reduced the tax gap reaching a 5-7% gap, and increased tax compliance by **automating nearly 80%** of its operations.
- In the **United States**, government agencies saved between US\$ 500,000 and US\$ 10 million per year - depending on size by implementing **government cloud collaborative solutions**.
- In **Chile**, the use of **e-procurement** saved \$8 billion, being used by 850 public bodies, with 2 million orders, 101k suppliers (90% micro and small enterprises).
- In **Singapore**, the Land Authority saved \$11.5 million in user application costs for 70 government agencies through geospatial data sharing and **GeoSpace's Application Programming Interface** and web services.
- In the **UK**, the **North Tyneside Council** expects to reduce costs by £56 million over the next few years using **RPA (Robotic Process Automation)** for finance, and human resources.
- Also, in the **UK**, the adoption of **disease surveillance systems based on machine learning algorithms** led to more than 90% reduction in outbreaks of norovirus in hospitals in Hampshire.
- In **Brazil**, the Observatory of Public Spending has implemented **data mining tools** that allow officials to audit around US\$5 trillion of public spending. In 2015 alone the unit raised red flags in more than 7,500 cases, amounting to contracts worth US\$104 million

2. Digital Service Delivery

- The **Estonian government** estimates that **X-Road** – a solution making all government services available in one spot – saves 1,400 years of working time annually.
- **Moldova** significantly reduced costs for payment processing from 22 million MDL annually to 4 million MDL by allowing users/citizens to **pay for services with legally allowed payment tools** including bank card, online banking, e-money and cash.
- **The UK**, one of the top digital government reformers, saved more than £4 billion by bringing 780 **user-centered services online**. This resulted in more than a billion transactions per year.
- In **Spain, Barcelona** saved €75 million of municipal funds **by integrating smart water, lighting and parking management through IoT** (Internet of Things)
- In **Portugal** the introduction of a **one-stop-shop for business** registration led to a 17% increase in new firm registrations and seven new jobs per 100,000 inhabitants.
- **Mauritius** increased tax collection by 12 percent in the year following implementation of **mobile money payment facilities**.
- In the **US**, introduction of **'Risk Terrain Modelling' method** in many cities has helped to reduce gun crimes by 35% in Newark, vehicle theft by 33% in Colorado Springs and contributed to a more than 40% reduction in robberies in Glendale, Arizona.
- In **Ukraine** tax evasion decreased from 29% to 16.9% after the implementation of an **Electronic VAT Administration System**, and ultimately to 0,9% after the **Electronic Control System of Economic Transactions** was introduced

3. Citizen Engagement

- The **UK Parliament** launched its **electronic petition platform in 2010**. Almost 50,000 petitions have been signed by more than 60,000 British citizens.
- In **Kenya** an **integrated solution for the submission and handling of complaints** resulted in ten times more complaints and an increase in resolution rates from 46 to 94 percent.
- In **Colombia**, **implementation of the Online Government Strategy** led to greater citizens satisfaction with digital services and digital citizen engagement

4. GovTech enablers

- In **Austria**, the **public sector digital skills and innovation website- GovLab Austria-** provides training on innovation and a platform to exchange ideas with other innovators in the administration.
- In **Switzerland**, the **Swiss Digital Initiative (SDI)** was launched to strengthen trust in digital technologies and in the actors involved in ongoing digital transformation. One of its initiatives, the **Swiss Digital Days 2020**, attracted 80,000 visitors from 100+ partners in the first fully-hybrid Swiss-wide event.

II. Georgia GovTech Stocktaking: Progress Made and Opportunities

Georgia has undergone significant transformations over the past 25 years which have permeated across sectors. The country has a strong record of implementing private-sector led, export-oriented reforms combined with efficiency-enhancing public sector reforms resulting in solid economic growth averaging 5 percent per annum from 2005 to 2019, together with rapid poverty decline to 19.5 percent in 2019, nearly half the 2007 rate.¹⁰ This transformation paved the way for the digital economy across the five pillars, with a focus on improving public service delivery and management through GovTech. The Government integrated digital initiatives in its service delivery to citizens and to support innovation and the use of technology across the economy, expanding internet access and building digital skills.¹¹ Reflecting the strong impact of government reforms in promoting private sector led growth, the 2020 Doing Business index ranks Georgia 7th in the ease of doing business, compared with a 2004 ranking of 112th.¹² Further improvements in the business climate can be leveraged by deepening GovTech reforms in key areas such as the modernization of core digital platforms and services to businesses and the development and adoption of disruptive technologies for GovTech for the public administration, for example the use of artificial intelligence in the tax administration.

This report presents an initial stock-taking of progress in Georgia, building on its global digital economy and GovTech work, in order to help inform the design of the new digital strategy and accelerate the implementation of the digital economy in Georgia. The assessment is based on the Digital Government Readiness Assessment (DGRA) methodology, an analytical tool designed to assess digital government transformation readiness.¹³ It covers nine core foundations essential to build open and agile digital government services: (i) Leadership & Governance, (ii) User-Centered Design, (iii) Public Administration and Change Management, (iv) Capabilities, Culture and Skills, (v) Technology Infrastructure, (vi) Data Infrastructure, Strategies, and Governance, (vii) Cybersecurity, Privacy and Resilience, (viii) Legislation and Regulation and (ix) Digital Ecosystem. This section presents the initial findings of the on-going stock-taking for each of the nine dimensions. The initial diagnostic findings have benefitted from client feedback and validation and laid the foundation for global knowledge exchanges. Its menu of reform options responds to the Country Partnership Strategy (2019-2022) objectives by enhancing public sectors delivery, improving macro-fiscal balance and mitigate risks.

¹⁰ The Georgian economy fell into recession in 2020, contracting by 6.2 percent due to Covid 19 lockdown measures; 4 percent growth is currently expected for 2021. The World Bank. <https://www.worldbank.org/en/country/georgia/overview#3>

¹¹ Government of Georgia, Freedom, Rapid Development & Welfare. Government Program 2016-2020. http://gov.ge/files/41_61087_816118_GoG_Platform_LKF_19_05_2017.pdf

¹² Doing Business Report for 2004 and 2020 available at <https://www.doingbusiness.org/en/reports>

¹³ The World Bank, "Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams" 2020. The framework of the DGRA methodology is based on a comprehensive set of 67 questions and explores nine non-sequenced core foundations that build open and agile digital government infrastructure and operations. The DGRA toolkit has been applied in a number of countries (Myanmar, Vietnam, Lebanon, Kyrgyzstan, Uzbekistan, Senegal, etc.) and informed government decision making and implementation.

1. Leadership & Governance

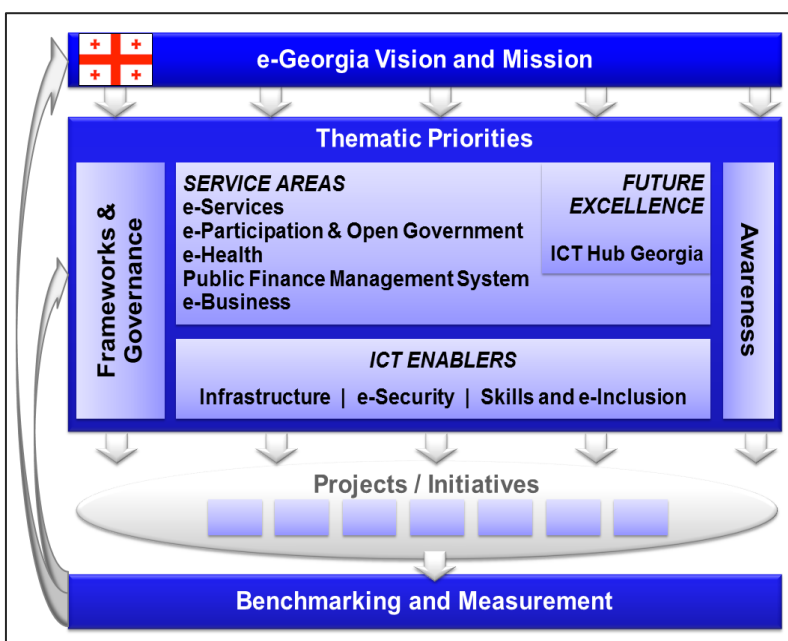
Digital government transformation comes with the need for adjustments including legal, institutional, technological and cultural changes. Consequently, high-level political commitment, a strong vision and the appropriate institutional architecture are all critical for conducting key GovTech reforms. This section assesses strategies and organizational structures for effective GovTech implementation.¹⁴

Key Findings: Achievements and Opportunities

During the last 20 years, Georgia has gone through an important digital transformation through GovTech development. In 2014, the Government adopted “Georgia 2020”¹⁵ a socio-economic development strategy, which sets inclusive economic development as the main government objective. The strategy states that *“improving access to public services as well as reducing the potential amount of time spent during administrative procedures is important for the effective functioning of businesses. To that end, Government will improve services rendered by state institutions, which also implies development of electronic services and expansion of e-governance system”*.

Georgia’s “Government Program 2021-2024, Toward Building a European State” is the overall national strategy for the next four years. It states that *“...The reform focuses primarily on enhancing the effectiveness of public governance and making the outcomes tangible for every citizen.”* As part of the strategy the Government seeks to digitalize public institutions’ internal processes for greater effectiveness. It also seeks to further upgrade and enhance remote services for ensuring greater availability and effectiveness while offering citizens and businesses simplified, user-oriented and quality electronic state services in line with international standards for personal data.¹⁶

Figure 3. Digital Georgia Strategy



Source: A Digital Georgia. E-Georgia Strategy and action Plan (2014 2018)

¹⁴ The World Bank, “Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams” 2020.

¹⁵ Social-economic Development Strategy of Georgia, “GEORGIA 2020”, 2014. Available in https://policy.asiapacificenergy.org/sites/default/files/Georgia%202020_ENG.pdf

¹⁶ “Georgia Government Program 2021-2024, Toward Building a European State”. This is in line with the second pillar of the Country Partnership Framework 2019-2022 for Georgia which aims at enhancing public service delivery and the third pillar aiming at improving macro-fiscal balance and the Systematic Country Diagnostic which highlights the need to complete the transition toward a world-class public administration. “Georgia - Country Partnership Framework for the Period FY19-FY22” (English). Washington, D.C., World Bank Group”, <http://documents.worldbank.org/curated/en/588751525364587100/Georgia-Country-partnership-framework-for-the-period-FY19-FY22>; and “Georgia - Systematic Country Diagnostic: from Reformer to Performer”

“A Digital Georgia: e-Georgia Strategy and Action Plan 2014-2018” establishes the vision for the e-Georgia strategy. The strategy envisages that *“Georgia will become a more efficient and effective public sector offering integrated, secure and high-quality digital services. Improved usage and participation enable ICT-driven sustainable economic growth.”* The vision was translated into six mission statements and eleven thematic priorities for the e-Georgia strategy. As shown in Figure 3, the thematic priorities are grouped into Service Areas, Future Excellence and ICT Enablers as well as horizontal measures such as Enabling Frameworks and Governance and Awareness. A new digital strategy (2021-2024) is currently being developed and is expected to be finalized next September. It is based on three focus areas: (i) front-end service delivery, (ii) back-end service production, and (iii) enabling capacities and capabilities.¹⁷

The Digital Strategy has been led and coordinated by the Public Administration Reform Inter-Agency Coordinating Council under the Administration of Government of Georgia’s Policy Analysis Department established to coordinate and monitor implementation of the Public Administration Reform (PAR). In 2020, the Legal Entity of Public Law (LEPL) Digital Governance Agency (DGA) of the Ministry of Justice was created to lead the development of Digital Georgia. Its creation resulted from the merger of two institutions within the Ministry of Justice, (i) the Data Exchange Agency responsible for coordinating the development of the GovTech strategy, implementation of data exchange infrastructure, citizen portal, information and cyber security in public sector, and critical infrastructure and (ii) Smartlogic, the Ministry of Justice’s IT department which also provided services for several MDAs. The new institution, DGA, incorporated the functions of both the Data Exchange Agency and Smartlogic.

The Government of Georgia approved the "National Strategy of Georgia for the Development of Broadband Networks for 2020-2025"¹⁸ and the Action Plan for its implementation. The strategy was prepared by the Ministry of Economy and Sustainable Development, in accordance with the goals of the EU Gigabit Community Strategy, and its target indicators for 2025 include the coverage of 4G-connection in 99% of the territory of Georgia; the piloting 5G service in at least three municipalities and access to high-speed (100 Mbps +) broadband for all households.

As part of the Action Plan a draft long-term National Strategy for the Development of the Digital Economy and the Information Society and the plan for its implementation is being developed. The Digital Governance Strategy elaborated by DGA will be part of the broader Digital Economy and the Information Society strategy. The strategy will contribute to the development of electronic services in the public and private sectors, increase digital literacy, accelerate the formation of an information society, increase export of high-tech goods and foster research and innovation as well as increase Georgia’s competitiveness in the global digital economy.

(English). Washington, D.C. : World Bank Group”, <http://documents.worldbank.org/curated/en/496731525097717444/Georgia-Systematic-Country-Diagnostic-from-reformer-to-performer>.

¹⁷ Information provided by DGA government officials.

¹⁸ Resolution No. 60 of the Government of Georgia dated January 10, 2020.

Reform Options

The timing of the preparation of the new digital strategy could not be better for the development of a whole-of-government GovTech approach, with a strong vision, institutional architecture, coordination mechanisms and a delivery structure, considering the current institutional set-up, progress made and the acceleration of digital reform needs due to COVID 19. This calls for the public sector to work together across administrative boundaries to achieve an integrated response to designing and implementing GovTech solutions delivering faster, better, and more inclusive services to citizens and the private sector to enhance public sector efficiency, effectiveness, accountability, and transparency.

2. User-Centered Design

A user-centered design, with the focus on user's needs, is a fundamental principle of GovTech. This section reviews the extent to which user perspectives are incorporated into the design and implementation of digital services.¹⁹

Key Findings: Achievements and Opportunities

As part of the Service Delivery pillar of the “Public Administration Reform (PAR) Roadmap 2020”, Georgia has made significant progress in the development of both physical and digital services. The rapid GovTech transformation through digital tools and modern approaches has made public services in Georgia more transparent, accessible, and user-friendly for citizens and businesses. Government made a strategic decision to divide business processes between front office systems designed for citizens and private sector, and back-office systems for civil servants. Such an approach required special software systems to be developed for front- and back-office functions and allowed for the development of a multi-channel approach. For example, today a citizen can conduct the digital registry of the purchase and sale of immovable property in commercial banks.

Georgia has a wide and integrated network of physical service delivery channels comprised of 22 Public Service Halls, 61 Community Centers and 71 Express Community Centers allowing citizens, particularly those residing in villages and other remote places- to receive up to 800 services in a single location. Public Service Halls are one-stop-shops, with three main service areas:

- **Self-Service Area**: Automatic systems for self-service. Users can independently obtain various services, such as obtaining biometric photos for passports, withdrawing cash from ATMs, and making remote payments, etc.
- **Prompt Service Area**: Users can get all services whose duration on average does not exceed five minutes. These include passports, identity cards, legalized documents, and real estate or business certificates.
- **Prolonged Service Area**: Users can access services that take more than five minutes, including ID and passport applications, submission of documents for property or business registration, etc.

Classifying services this way minimizes long queues and waiting time and makes the flow of people more organized. Sequenced customer flow is regulated by an integrated electronic queue management system. The informative navigation banners simplify orientation and movement inside the building. This network

¹⁹ The World Bank. “Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams” 2020.

of physical service delivery offices is regarded as highly efficient and user-friendly which is why it is the most chosen by citizens and businesses for the provision of services. The average wait and service time in Public Halls is seven minutes. There is also on-site personal support in case assistance is needed (as opposed to doing it online which might take the same time only if the user is familiarized with digital services, log-in, passwords, digital signatures, etc.). The wide network ensures easy access throughout the country. The services in highest demand in the physical service delivery locations are the delivery of electronic identity cards, passports, property registrations, birth registrations, and the youth registration card. The Public Service Hall conducts annual surveys to track users' satisfaction which have resulted in overall positive assessments that improve year after year.

A unified digital services portal (My.gov.ge) launched in 2012 features 700 fully transactional digital services designed for both citizens and businesses. They range from registering a new business and requesting a certificate of ownership for a property or business registration to sending an official correspondence to a government institution (the latter being the most used service). Services are also available offline, as mandated by Georgian legislation. Through the portal, citizens can apply for a service, pay for the service, and receive an official electronic document signed with a digital signature. Some services were developed as a response to the COVID 19 pandemic, to serve both citizens and businesses. This includes an e-platform for businesses to obtain permission to operate as COVID safe space, once respective inspection is completed (through <https://labour.moh.gov.ge>). Citizens would have access to the platform to know if the business they visit is safe. Recently an e-platform to register for COVID 19 vaccination was created (<https://booking.moh.gov.ge>) and ensures a smooth vaccination process. Over 200,000 individual users and 1,500 business users have registered in the portal. Approximately 2,000 users access the portal daily, for transactional services, compared to 20,000 people served daily in the Public Halls. While usage of digital services is still low, it has been increasing --by 30 to 40 percent last year.²⁰

Greater use of the portal is constrained in part because Georgia has a highly efficient network of physical service delivery channels reducing the need to switch to digital services. Other constraints include access limitations due to insufficient dissemination and awareness of digital services, a digital culture in development and suboptimal digital services design with limited user-friendliness. Despite the strong supply of digital services, demand for their use is low, with less than 10% of Georgian citizens using governmental digital services and less than 2% using the digital signature.²¹

Access is challenging as fixed broadband networks are less common outside the cities. 90 percent of urban households subscribe to fixed broadband as compared to only a third of rural households. Only a quarter of rural households subscribe to optical fiber cable-based Internet services, compared to 57 percent of households nationally.²² While mobile broadband networks cover most of the population, the quality of service varies due to the limited network capacity. Hence rural areas are often not well served in terms of connection speeds or reliability. This reduces the ability of people and businesses in rural areas to benefit from the full range of information and services available online. Access also is difficult for people with

²⁰ Source: Digital Development Agency

²¹ Data provided by DGA public servants.

²² Connections including Digital Subscriber Line, fiber optic and Wi-Fi based connections. World Bank analysis based on Communications Commission data, March 2020. Included in the World Bank Project Appraisal Document for Log-In Georgia Investment Project Financing, August 2020. The project aims at increasing access to affordable broadband internet and to promote its use by individuals and enterprises in selected rural settlements.

disabilities, as most digital services are not adapted to their special needs. DGA plans to develop a mobile version of the portal to address some of the above-mentioned challenges.

Integration of portal services is not mandatory for line Ministries, Departments and Agencies (MDAs), which presents a challenge for portal development and consolidation. In addition to the unified portal, several MDAs are developing their own digital channels for digital services such as the taxpayer portal and a system for electronic declaration (used by more than 97% of taxpayers) and the public procurement portal (which serves 100% of governmental tenders).²³ While some MDAs have developed customer feedback mechanisms (e.g., My.Gov.ge, the Revenue Services and Procurement Portal), these are implemented independently by every public institution and could benefit from greater alignment.

Reform Options

While there have been important achievements in the strengthening of digital services, accessibility and uptake are important challenges. This calls for strengthening user-centered design by developing more and better digital services with focus on user experience, user research and design for end-to-end customer journey and by incorporating user feedback and participation on digital services design and testing including through CivicTech tools. A centralized customer relationship management channel for the Georgian public sector that receives, systematizes and oversees customer feedback and comments about existing services could foster uptake and promote a greater user-focus. Creating incentives might also help reduce the relative cost of digital services vis-à-vis off-line services or making it mandatory to file for some services online, such as tax services.

3. Public Administration and Change Management

Whereas previous phases of e-government have been based on existing business processes, GovTech looks to transform public administration reforms so that they are optimized for digital delivery.²⁴ Digital government initiatives are also about re-engineering back-office processes to digitize the entire workflow and to automate routine processing. The digital transformation of core government systems can be considered the backbone of digital government since it enables executive and administrative functions of public administration. Their key functions of collecting, processing, and managing records and data enable upstream functions such as public financial management, civil service management and central and local governance functions. This section reviews the public administration reforms and change management strategies developed to conceptualize and implement such reforms.²⁵

Key Findings: Achievements and Opportunities

In 2015 the Government of Georgia approved “Georgia’s Public Administration Reform (PAR) Roadmap 2020”²⁶ which, defined “Digital Georgia” as one of the PAR strategy components for Public Service Delivery. A “Public Financial Management Reform Strategy (PFMRS) 2018-2021” has been designed and is being

²³ Revenue Services (<https://eservices.rs.ge>); State Procurement Agency (procurement.gov.ge)

²⁴ The World Bank, “Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams”, 2020.

²⁵ The World Bank. “GovTech-Putting People First”, 2021

²⁶ “Georgia’s Public Administration Reform (PAR) Roadmap 2020”. Available in:

<https://matsne.gov.ge/ka/document/view/2953552?publication=0>. The PAR is based on six reform principles: (i) Policy Development and Coordination; (ii) Civil Service and Human Resource Management; (iii) Accountability; (iv) Public Service Delivery; (v) Public Finance Management; and (vi) Local Self-government.

implemented throughout the public sector under the leadership of the Ministry of Finance (MoF).²⁷ Electronic PFM systems (e-PFMS) are in place and fully operational for budgeting, treasury, and other related areas. These include Treasury – e-State Treasury Electronic Service System, e-Budget - electronic budget management system, e-DMS - Government Debt and Investment Project Management System, TAX – tax and customs administration system, and e-Public Procurement System and e-HRMS - Electronic Human Resource Management System.

Among key digital platforms for internal efficiency is a fully functioning electronic Human Resource Management System, e-HRMS, designed to plan, manage and monitor human resource management in the public service. An online digital learning platform for civil servants that will serve as a ‘one-stop-shop’ access point for training courses is in development. A government-wide Monitoring & Evaluation (M&E) platform for policy-makers is expected to be launched in 2021 and will help track the delivery and performance of overall public services including digital services. Other platform for external efficiency include an e-health system, which allows users to identify whether the citizen is insured privately and if not, what services should be provided as part of state universal healthcare system given income level of the citizen (tracked through the tax filing system); a digital social assistance services, which allows users to identify/verify vulnerable citizens and track their profiles making sure all payments are well targeted and made on time; and an education management information system through which both teachers and students as well as service delivery are tracked and information exchange is facilitated.

Notwithstanding these crosscutting systems, digital systems are still being developed and managed by individual MDAs with separate budgets and variable quality. This leads to cost inefficiencies and suboptimal user experiences. Interoperability among systems is supported by the Data Exchange Infrastructure (DEI). Intra- and inter MDA processes need enhanced design, coordination and integration. For example, the public sector currently has five different document management systems developed by five different government IT offices, three different HR systems and three different cloud infrastructures.

While formal coordination and cooperation mechanisms might exist, for it to de facto occur public servants need to understand and realize the value of cooperation across the core focus areas of individual MDAs and avoid perceiving GovTech as a threat to their job security understanding it is a way to enhance the quality of their work. Change management contributes to foster the cultural change, address resistance to change and engage civil servants in the reform process, highlighting the greater value of a coordinated and whole-of-government approach to GovTech. Change management also includes knowledge-sharing events including initiatives such as the Georgian IT Innovation Events during which different MDAs exchange GovTech innovations with experts from neighboring countries to engage public servants and enhance the understanding and ownership of GovTech reforms.

Reform Options

The legal and regulatory framework for GovTech needs strengthening, especially to develop enforcement mechanisms to enhance compliance and establish a whole-of-government approach throughout the public administration at all levels and across institutions, includes the development and strengthening of key reform initiatives e.g., GovTech institutional set up, interoperability framework and enterprise architecture.

²⁷ Georgia: Public Financial Management Reform Strategy (PFMRS) 2018-2021, <https://mof.ge/images/File/strategia/2020/PFMRs%202018-2021%20ENG.pdf>

A single unified approach to system architecture, user interface and functionality, standards for data systems integrations and exchange could be developed.

There also is a need to acquire an e-Public Investment Management System as well as strengthen the e-Treasury system by acquiring a financial statement consolidation module.

Developing and implementing a change management strategy is needed to involve all MDAs across sectors in the digitalization process, strengthening government capacity and willingness to migrate to new ways of working under the whole-of-government GovTech approach. Some potential instruments include stakeholders' engagement and consultations, strategic communications and risk management.

4. Capabilities, Culture and Skills

To maximize the impact of GovTech, Governments focus on hiring highly-skilled individuals with technical and administrative capabilities as well as training individuals for digital skills. They also seek to create a culture of innovation and creativity across the administration while re-orienting back-office administrative and technological functions optimal for digital delivery. This section identifies progress made and opportunities for human capital readiness to support an innovative GovTech culture.²⁸

Key Findings: Achievements and Opportunities

The digital skills mix varies across MDAs. Building on a varying supply of digital skills learning in schools and academic institutions, broader digital skills have been developed. Digital literacy has become a condition for entry into the public service but greater basic and advanced digital specialist and user skills are needed in both public and private sectors.²⁹ As GovTech implementation is mainly carried out internally by the different MDAs, testing and innovating at the level of an individual MDA before further scaling up across government, this gradual in-house approach is useful for the subsequent development of digital systems. Many projects are carried out through the close cooperation and joint efforts of public entities such as My.gov.ge, the Public Service Halls and the Integrated Document Management System. Yet, the quality of collaboration always depends on skill levels, the level of political support and the capacity and willingness of public servants to cooperate.

The availability of specialized IT skills in the public sector strongly depends on existing incentives both monetary and non-monetary. During the early reform periods of design and development of many of the crosscutting and innovative systems in the early 2000s, the public sector offered a dynamic and challenging environment that attracted young professionals at early levels of career development. This was complemented by competitive salaries relative to those paid by the private sector. More recently, a slower reform implementation pace combined with fewer incentives has not been sufficiently attractive for IT professionals to choose the public sector as a career option. Salaries for IT professionals in the private sector are currently two to three times higher than in the public sector. As in most governments throughout the world, the public sector in Georgia suffers a digital skills brain drain as high-skilled talents are attracted

²⁸ The World Bank, "Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams", 2020.

²⁹ Basic digital skills and digital literacy skills mix dare present not only among public sector employees but for the whole population, especially between urban and rural areas. Over 90 percent of the population aged 6 and older uses mobile phones (96 percent in urban areas and 89 in rural areas); 84% of households have internet access (over 90% in urban areas and 75% in rural areas); 62 percent of households have computer access (76% for urban versus 42% for rural). Source: National Statistics Office. Data for 2020. <https://www.geostat.ge/>

by high compensation provided by the private sector and the ability to create and innovate in more flexible environments.

Reform Options

Opportunities to strengthen government digital capabilities, culture and skills come from closer collaboration with the private sector, a clear, well-established career development path of government staff with digital government business and technical qualifications, upskilling and in-sourcing of digital skills and a strong incentives framework for digital government staff.

5. Technology Infrastructure

Rather than investing in application-specific facilities, leaders in digital government look to use increasingly standardized technology infrastructure components including public infrastructure. Use of cloud computing is seen as a strategic tool to achieve the flexible and fast deployment and elastic continuing capacity needed to meet GovTech goals as well as a form of data center consolidation or server efficiency. This section assesses existing technology infrastructure standards, designs and implementation processes.³⁰

Key Findings: Achievements and Opportunities

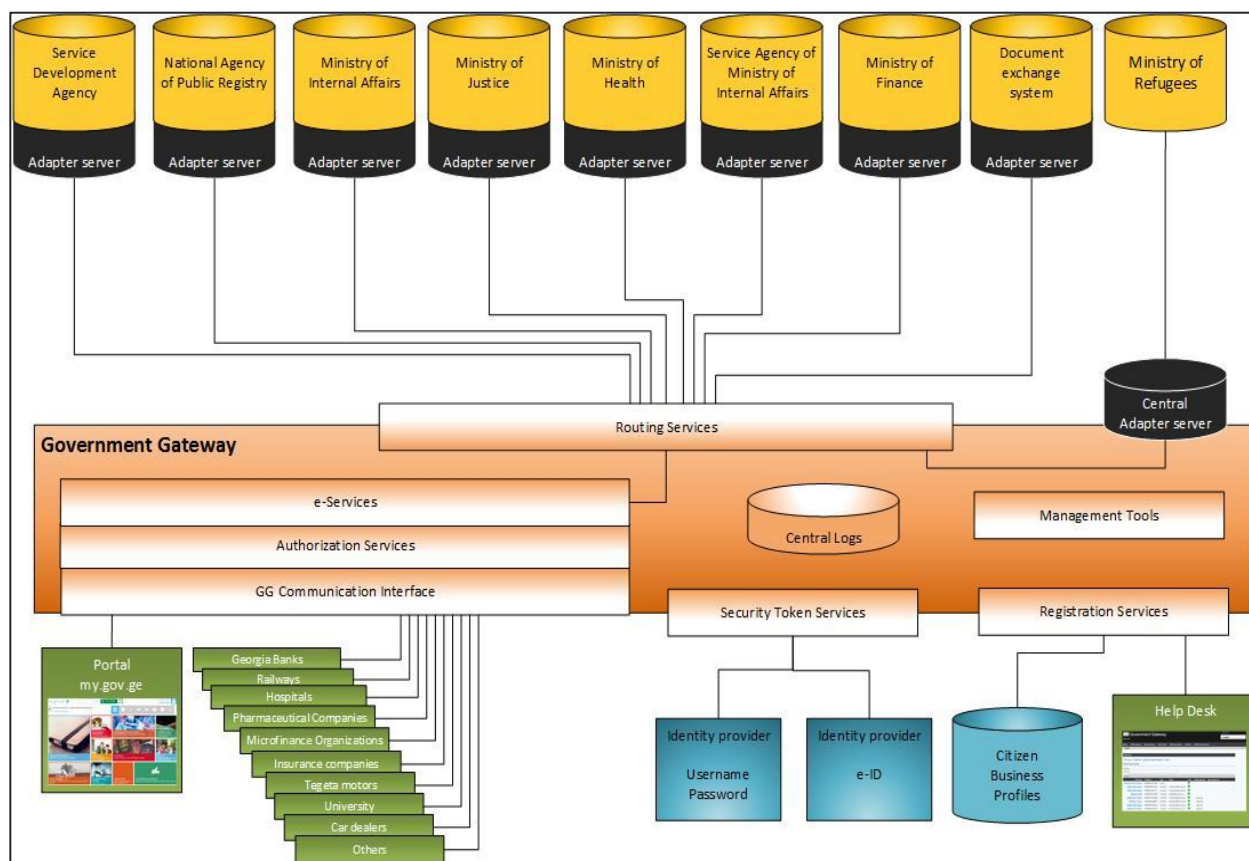
The Government designed and deployed a data exchange infrastructure that provides secure information exchange between organizations. The Georgian Government Gateway (3G),³¹ as shown in Figure 4, is an interoperability platform implemented by the DGA and operational since 2011. The platform is supporting data sharing across public sector MDAs and with the private sector. This includes the verification of citizens' identity, property, business registry, tax liability, car ownership, etc. While an interoperability framework was developed in 2017 by the Data Exchange Agency (which merged into DGA) it has not been officially adopted by the Government until now, but framework adoption by Government remains one of the cornerstones of the new digital strategy. Currently, 350 services are integrated into the 3G infrastructure serving 300 organizations (278 private sector institutions and 22 government MDAs). Last year the number of transactions amounted to more than 111 million. Governmental Cloud Infrastructure is implemented in parallel by three different governmental agencies: the DGA, the National Agency of Public Registry of the Ministry of Justice (responsible for business, land and immovable property registration), and the Financial Analytical Agency of the Ministry of Finance. They also provide cloud infrastructure services to other public and private sector institutions on a commercial basis (through services can also be provided free of charge on specific circumstances). For example, DGA is serving more than ten governmental organizations by providing IT support for IaaS (Infrastructure as a Service) and SaaS (Software as a Service).

³⁰ The World Bank, "Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams", 2020.

³¹ Law of Georgia on the Legal Entity under Public Law called the "Digital Governance Agency

""<https://matsne.gov.ge/en/document/view/4893222?publication=0>

Figure 4: Georgia Interoperability Platform – Data Exchange Infrastructure



Government also uses an array of technical infrastructure systems for its digital platforms such as the Document Management System (DMS) and Human Resource Management Systems (HRMS). The use of DMS and HRMS is mandatory for the whole public sector. The digital signature infrastructure (Certificate Authority, e-ID Card) was created in 2011. Following the introduction of relevant amendments to the digital signature legislation in 2018, the use of digital signatures in the public sector also became mandatory for civil servants. The digital signature practically eliminates manipulation associated with official document flows substantially reducing the possibility of corruption and increasing public confidence in the public sector. The document management system is integrated in the data exchange infrastructure. The system digitally exchanges signed electronic documents across government MDAs. HRMS systems are also integrated and the accumulated information is used in budget preparation.

Reform Options

Shared infrastructure across government can be challenging. Multiple public sector digital platforms at different levels call for an integrated approach, including single standard for the creation of state digital systems. The storage of government may need greater alignment as each MDA operates its own mini-database which is often a rack in the server room with limited use of cloud computing and no cloud policy.

This leads to extensive risks including non-compliance with the rules of information and technological security, unauthorized access, loss of data and cyber-security risks.

6. Data Infrastructure, Strategies, and Governance

GovTech relies to a great extent on data-driven activities. The ability to collect, store, analyze and share data is critical to improve evidence-based policymaking, coordination and service delivery. This section assesses the public sector's ability to collect, store, analyze and share data using emerging technologies where feasible.³²

Key Findings: Achievements and Opportunities

In Georgia, several important data registers are in place and are being used across government. Existing state registers (including civil, property, business, land, real estate, motor vehicles, administrative fines, civil acts, seizure and pledge, social subsidies, tax and customs, etc.) are all available in digital format. While permanent upgrading efforts are underway, these are independently undertaken by each MDA with their own resources and according to their own plans. Data sharing is actively done both within the public sector and with the private sector, mostly the financial sector. In such cases data sharing agreements are regulated by bilateral contracts and executed through the data exchange infrastructure, provided that data sharing is permitted by law. Data exchanges include mechanisms that aim at protecting against the violation of personal data (as per the Personal Data Protection Law).³³

Government is also starting to develop performance M&E systems and tools to track implementation and impact. A Government-wide performance M&E platform for policymakers will be launched in 2021 as well as a tool to monitor implementation of the UN Sustainable Development Goals Strategy.³⁴ A dashboard with the country's main economic and social indicators could also be developed to inform the Prime Minister and other high-level officials.

Some MDAs use business intelligence solutions for data analytics systems such as the use of blockchain technology by the Public Registry for property registration. There is a growing interest in the use of innovative technologies such as Artificial Intelligence (AI), Machine Learning or Big Data building on existing experiences. For example, the Revenue Service is particularly interested in exploring the possibility of incorporating AI tools for tax and customs administration leveraging best practices and lessons learned from international experience.

The "Unified State Registry of Information Law" (2011) mandates the provision of information by MDAs about existing information registers, related business processes, and information systems. This law is not fully implemented. At this stage only 20 registries have been made, amounting to approximately 2-3% of the total number of all information registers in the state) and the information provided is not updated.

Georgia is an active member of the Open Government Partnership (OGP). According to the decree issued by the Government of Georgia as part of the implementation of national OGP commitments, public institutions are obliged to publish open data on the specially designed portal data.gov.ge which is operated

³³ Personal Data Protection Law - <https://matsne.gov.ge/en/document/view/1561437?publication=9>

³⁴ <https://sdg.gov.ge/intro>.

by DGA. Yet, implementation is uneven across MDAs. The portal has only published 173 datasets from different MDAs which could also be further updated to enhance their use.

Reform Options

A data governance and management strategy need to be elaborated, including enhanced data-sharing mechanisms, open data and data-driven innovation. The Special State Committee was entrusted to create the Integrated Spatial Data Infrastructure and further progress could be made to move forward with implementation.

The growing interest in the use of innovative technologies constitute a great opportunity. The Revenue Service could be supported to incorporate AI tools for tax and customs administration, leveraging best practices and lessons learned from international experience.

7. Cybersecurity, Privacy and Resilience

Security and government business continuity management are vital elements of GovTech. A specific protocol, scenarios to ensure security and identify risks from undefined cyberthreats, disasters, etc. need to be prepared. This section analyzes measures to ensure security, privacy, authenticity, integrity and resilience of digital public sector infrastructure, platforms and services.³⁵

Key Findings: Achievements and Opportunities

The Government has developed a series of cybersecurity strategies from 2013 onwards and is currently developing its Third Cybersecurity Strategy. The proposed strategy includes activities and action plans for 2021-2023. The cybersecurity strategy is underpinned by the following organizational structure:

- The Office of the National Security Council of Georgia supervises the development of cybersecurity and coordinates relevant processes between organizations;
- The LEPL Operative-Technical Service of the State Security Service is responsible for handling classified information;
- The LEPL Cybersecurity Bureau of the Ministry of Defense is responsible for safeguarding military information assets and maintaining high standards of cybersecurity; and
- The LEPL Digital Governance Agency of the Ministry of Justice is responsible for improving information and cybersecurity levels at Subjects of Critical Information Systems and at public sector MDAs.

The Information Security Law (2012)³⁶ defines a Critical Information Subjects List. MDAs included in the list (40 approximately)³⁷ are obliged to implement a set of minimum information security requirements based on the ISO 27001 standard. Yet, these requirements have been fully implemented only by two MDAs³⁸ and

³⁵ The World Bank, “Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams” 2020.

³⁶ Law of Georgia on Information Security. <https://matsne.gov.ge/en/document/view/1679424?publication=3>

³⁷ Including the Ministry of Finance, Ministry of Justice, Administration of Government, Administration of President, Parliament, National Bank of Georgia, Georgian Railway, Georgian State Electro system, etc.

³⁸ The National Bank of Georgia is certified by ISO27001 and LEPL State Service Development Agency – as CA authority implemented information security requirements and other CA related security requirements.

partially by five. The legislation provides for the inclusion of private sector institutions in the list, which is yet to be done.

DGA has established a Computer Emergency Response Team (CERT)³⁹ which coordinates the activities of information infrastructure organizations in the field of cyber security, informs the country about cyber security threats and provides methodological assistance. Institutions included in the Critical Information Subjects List are required to provide information on cyber incidents to the CERT.GOV.GE, but this needs to be done more regularly. The CERT and the Information Security division of DGA have developed various trainings or certification courses which aim at training relevant technical staff members on cybersecurity for critical information systems.

Reform Options

Cybersecurity needs upgrading, including strengthening the enforcement mechanism for the implementation of the "Law on Information Security", organizational capacity-strengthening for CERT, improved inter-agency coordination and training and awareness campaigns to improve understanding and mitigate risks associated with Cyber Hygiene.⁴⁰

8. Legislation and Regulation

GovTech needs a sound legal and regulatory environment that provides new laws for data privacy, consumer protection, digital signature, digital identification, cybersecurity mitigation, etc. This section assesses the legal and regulatory framework for digital government and its implementation.⁴¹

Key Findings: Achievements and Opportunities

Georgia has a very comprehensive legal framework including:

- The Personal Data Protection Law (2011),⁴² for which the implementation is coordinated by the State Inspector's Office, an independent institution.
- The Law on Electronic Document and Digital Signature (2008) was updated in 2017 with a new title "Electronic Document and Electronic Trusted Services". The legislation does not cover electronic identification services. However, according to current practice, every citizen has an electronic identity card which includes both a certificate of identification and a certificate of digital signature.
- The Unified State Registry of Information (2010)⁴³ aims to define public sector registries, related business processes and information systems. Implementation of this law needs to be further enforced and centralized registration and updating of relevant information needs to be strengthened.
- The Criminal Code is aligned with the agreements made by the Budapest Convention on Cybercrime – to which Georgia became a member in 2011.

³⁹ Cert.gov.ge

⁴⁰ Cyber hygiene refers to fundamental cybersecurity best practices that an organization's security practitioners and users can undertake such as password changes, back up data, limit users, hardware and software update, and manage new installs

⁴¹ The World Bank, "Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams", 2020.

⁴² Personal Data Protection Law - <https://matsne.gov.ge/en/document/view/1561437?publication=9>

⁴³ Unified State Registry of Information. <https://matsne.gov.ge/en/document/view/1338521?publication=0>

- The General Administrative Code is the main regulatory document for public institutions in Georgia defining the rules for requesting and issuing public information.
- The OPG annual action plans include the publication of open data.
- The Law on Public-Private Partnership (2018)⁴⁴ determines the legal basis for public-private partnerships including the rules and procedures related to the development and implementation of public-private partnership projects for digital projects, especially large investments on digital infrastructure and digital financial services.

Reform Options

While most laws are largely enforced, it is necessary to strengthen some enforcement mechanisms for the implementation of the “Unified State Registry of Information”, “Information Security Law”, and “Open Data Decree”. To foster GovTech development and interoperability, it would be beneficial to introduce the principle “Once Only”⁴⁵ and adapt the interoperability framework.

⁴⁴ <https://matsne.gov.ge/en/document/view/4193442?publication=0>

⁴⁵ The Once-Only principle is an e-government concept that aims to ensure that citizens, institutions and companies only have to provide certain standard information to the authorities and administrations once.

9. Digital Ecosystem

GovTech can strengthen voice and accountability and engender collective action as it dissolves the barrier between the government and the public and connects each other in unprecedented ways. Open participation and discussion among citizens, the private sector, civil society and academia in the digital ecosystem will boost innovation, education, and entrepreneurship and also contribute to the development of a modern digital economy. This section analyzes the institutional framework in the public and private sector to promote digital government.⁴⁶

Key Findings: Achievements and Opportunities

To foster the digital ecosystem, the Government has developed several initiatives targeting the private sector and the civil society. The Georgia Innovation and Technology Agency (GITA)⁴⁷ was established under the Ministry of Economy and Sustainable Development to coordinate the process of creating and developing an innovative ecosystem in Georgia. GITA is developing innovation hubs and startup accelerator programs across the country, including Techparks and Innovation Centers (providing technological, educational, and professional resources), Factory Labs (high-tech workshop equipped with tools which offers customers digital fabrication) and I-Labs (innovation laboratories).

The banking sector, one of the leading sectors in Georgia in terms of IT service development, is playing a major role in the digital ecosystem. The National Bank of Georgia and Bank Association are implementing the “Open Banking” project. The goal of the project is to stimulate the development of FinTech solutions including the development of digital currency. Georgia has a flourishing FinTech sector, and some companies are pushing the innovation frontier. The TBC Bank, for example, is a technology-driven bank, which has recently launched the first fully digital banking service in Georgia called “Space”. Space has been revolutionary for the FinTech industry of Georgia. This new bank is completely digital and exists only as a mobile app. Thanks to this application customers are provided with a full range of retail banking services such as loans, payment cards, and saving products facilitated also by data sharing with government MDAs. Space is completely changing the way Georgians access their financial services and has also challenged the whole Caucasus banking sector.

There have been some initiatives that serve as good examples to further deepen citizens and private sector engagement such as the successful engagement of an NGO -the Institute for Development of Freedom of Information- in the development of an online petition system and in the Open Government Portal. The ICT Business Council of Georgia has organized big international conferences such as the Georgian IT Innovation Event⁴⁸ which, have served as a fertile ground to generate ownership and engagement and promote change.

Reform Options

High-level digital partnerships between the public sector, private sector and civil society including academia and media could be further developed to attract new solutions and tools for public sector innovation. Specific actions could include research on implementation, joint development of technological solutions

⁴⁶ The World Bank, “Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams” 2020.

⁴⁷ GITA -<https://gita.gov.ge/eng>

⁴⁸ <https://www.ideal-ist.eu/spotlight/spotlight-national-events-giti-2019-georgia>

for the public sector, engagement activities to foster use of the open data portal and outsourcing of infrastructural or software development projects.

The following table summarizes main findings and achievements for each of the nine DGRA dimensions, along with a set of reform opportunities and entry points to deepen engagement, in line with the Country Partnership Strategy (2019-2022) objectives by enhancing public sectors delivery, improving macro-fiscal balance and mitigating risks.

Table 1: Georgia DGRA Reforms Summary Table

DGRA dimension	Main findings and achievements	Opportunities and entry-points
1. Leadership and Governance	<ul style="list-style-type: none"> Government Program and Digital Georgia strategic underpinnings of GovTech transformation Updated E-governance strategy 2021-2023 is in preparation New DGA was formed 	<ul style="list-style-type: none"> Whole-of-government GovTech approach, including: <ul style="list-style-type: none"> Conceptual framework and strategy Roadmap and time-bound action plan Capacity strengthening for MDAs
2. User-Centered design	<ul style="list-style-type: none"> Multi-channel Approach: Physical and Digital Service Delivery (My.gov.ge) Front and back-office systems and services MDAs developing their own digital channels for e-services. (e.g. the taxpayer portal) 	<ul style="list-style-type: none"> More user-centered digital services Focus on user feedback and participation including CivicTech tools Incentives to reduce the relative cost of digital services vis-à-vis off-line services
3. Public Administration Reforms and Change Management	<ul style="list-style-type: none"> Digital Georgia as a key component of the PAR Strategy Electronic PFM systems fully operational for budgeting, treasury and other related areas Fully functioning electronic Human Resource Management System, e-HRMS 	<ul style="list-style-type: none"> Single unified approach to system architecture and user interface e-Public Investment Management System Change management strategy
4. Capabilities, Culture and Skills	<ul style="list-style-type: none"> Basic digital literacy across government but greater digital specialists needed In house Implementation of digital systems, The digital skills mix varies across MDAs Availability of specialized IT skills strongly depends on existing incentives 	<ul style="list-style-type: none"> Greater cooperation across public sector to promote joint developments Greater collaboration with private sector to reduce a brain drain Career development path including a strong incentives framework for IT staff
5. Technology Infrastructure	<ul style="list-style-type: none"> Georgia Government Gateway (3G): Interoperability platform for data sharing; G-cloud infrastructure; Document Management System and HRMS; Digital signature infrastructure; 	<ul style="list-style-type: none"> Single standard for state digital systems and storage of government data Risks management strategy (non-compliance, unauthorized access, loss of data and cyber-security risks)
6. Data Infrastructure, Strategy and Governance	<ul style="list-style-type: none"> Many state registers available in digital format Unified State Registry of Information since 2011, yet not fully implemented Data sharing with the commercial sector regulated by bilateral contracts Open data portal data.gov.ge 	<ul style="list-style-type: none"> Data governance and management strategy (enhanced data-sharing mechanisms, open data and data-driven innovation) Integrated Spatial Data Infrastructure Use innovative technologies such as AI (e.g. Revenue Service)
7. Cybersecurity Privacy and Resilience	<ul style="list-style-type: none"> Law on Information Security Third Cybersecurity strategy is being developed. Cybersecurity Emergency Response Team CERT is operating under DGA 	<ul style="list-style-type: none"> Enforcement mechanism for the Law on Information Security Greater organizational capacity for CERT Strengthened Inter-agency coordination/cooperation on cybersecurity

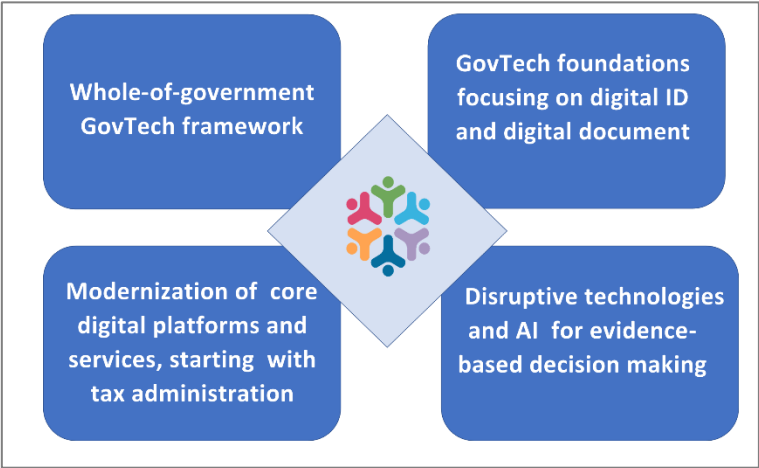
DGRA dimension	Main findings and achievements	Opportunities and entry-points
8.Legislation and Regulation	<ul style="list-style-type: none"> • Very comprehensive legal framework aligned with EU regulations • Laws are largely enforced (except for the Unified State Registry of Information, Information and cybersecurity regulations, Interoperability Framework and Open data Governmental Decree) 	<ul style="list-style-type: none"> • Training and awareness on cybersecurity • Improved enforcement of some laws • Introduce the principle "Once Only" strengthening interoperability • Law on Electronic Documents and Electronic Trust Services on electronic identification services
9.Digital Ecosystem	<ul style="list-style-type: none"> • GITA created to stimulate innovation and digital transformation • Innovation hubs and startup accelerator programs across the country • "Open Banking" and digital currency project 	<ul style="list-style-type: none"> • High-level digital partnership across public and private stakeholders • Align academic value propositions to digital public and private sector needs • Strengthen PPP including those engaged in e-commerce and GovTech

III. Making GovTech Reforms Happen in Georgia

The findings of the desk-review unveil a series of potential reform opportunities for client consideration as summarized in Table 2. They are presented below as a proposed preliminary menu of reform options and as a basis for discussion with Georgian counterparts. The proposed reform options are based on this initial stock-taking and informed by common features of countries that have successfully implemented whole-of-government GovTech approaches and strategies. They have benefited from feedback and validation by clients in Georgia and will need to be customized, prioritized and operationalized further in line with the reform pathways and collaboration options.⁴⁹

Reform options are structured around four main components aimed at strengthening Georgia’s whole-of-government approach to GovTech, a key foundation for the country’s digital economy. Key components are: (i) Whole-of-government GovTech framework; (ii) GovTech Foundations, focusing on digital ID and digital document; (iii) Modernization of core digital platforms and services, starting with tax administration; and (iv) Disruptive technologies and AI for evidence-based decision making. Key

Figure 5: Proposed reform options



⁴⁹ This section builds on the client dialogue held through individual and focus group interviews and workshops.. Most of the experiences referred to in this section are presented in more detail in the World Bank’s “GovTech Maturity Index: The State of Digital Government Transformation”, May 2021.

activities are presented for each component, based on the findings of the desk review and stakeholder feedback.

1. Whole-of-Government GovTech Framework. The Digital Georgia Strategy (2014-2018) has catalyzed the development of the institutional architecture, digital systems and digital infrastructure that constitute the core foundation of GovTech. The preparation of the new digital strategy and the acceleration of digital need due to COVID 19 are well timed for the development of a whole-of-government GovTech approach leveraging progress and seizing new opportunities. Common features of countries that have successfully adopted a whole-of-government approach to GovTech include national strategies with shared GovTech outcomes, dedicated organizational structures close to the center-of-government, a GovTech reform champion and conducive legal and policy frameworks.⁵⁰ Experiences from ‘good practice’ GovTech Singapore,⁵¹ responsible for the implementation of Singapore national digital government strategies and services, or Austria’s Digital Strategy,⁵² which includes various initiatives to promote the whole-of-government approach, can serve as inspiration to develop a customized, tailor-made whole-of-government Gov-Tech approach framework, strategy and roadmap for Georgia based on principles such as “Once-Only”, “Digitally by Default”, and “Mobile by Default”.⁵³ Key actions for Georgia could include:

- Comprehensive, equitable, user-centric, whole-of-government conceptual GovTech framework and strategy, including institutional architecture and coordination and delivery mechanisms including performance M&E arrangements;
- Roadmap and action plan for GovTech implementation aligned with the digital economy reforms, linked to progress and performance metrics to help prioritize reforms and enhance focus on results; Institutional capacity-strengthening for GovTech implementation; and
- Data governance framework and policy to enhance the use of data for evidence-based decision-making.

2. GovTech Foundations: Digital ID and Digital Document: Georgia has developed legal framework and the technical infrastructure to support the implementation of such foundational GovTech elements as digital identification and digital documents. Such platforms as Document Management System and Human Resource Management Systems as well as the digital signature infrastructure are broadly used across government. Mobile ID and Digital Preservation Infrastructure for “Digitally Born” could be developed and implemented to support digital services rapid development. In Australia the government is working on a new Digital Identity⁵⁴ to provide Australian people and businesses with a single, secure way to access government and other services online. The Digital Identity system includes everything from the policy and

⁵⁰ The World Bank, “Conceptualizing a Whole-of-Government Approach To Gov-Tech”, April 2021

⁵¹ GovTech Singapore. <https://www.tech.gov.sg/>

⁵² Digital Strategy for Austria. <https://www.bmdw.gv.at/en/Topics/Digitalisation/Strategy/Digital-Strategy-for-Austria.html>

⁵³ The Digital by Default principle envisages that governments make active use of the possibilities provided by information technologies and each newly designed public service is offered in digital format in parallel with its physical analog, thus increasing the variety of service provision channels while leaving the selection of the channel up to the user. Moreover, the principle also obliges governments to gradually transform their existing services into electronic format to increase customer choice, attend to specialized needs of users and reduce costs of public service delivery (including in terms of user time). The same logic applies to the Mobile by Default principle.

processes governing the system to the technology and systems that allow it to work. A secure Mobile Digital Identity replaces the need for multiple logins across a range of government services. Key activities include:

- Implement solutions for citizen identification and digital signature based on mobile devices;
- Complement the existing legislation on digital identification and authorization of citizens and introduce more user-friendly solutions for these purposes; and
- Introduce a long-term preservation solution for digitally signed and digitally borne documents.

3. Modernization of Digital platforms and Digital Services starting with Tax Administration. Georgia has in place most of core systems such as for tax and customs administration, financial management, human resource management, property administration, etc. However, key systems need to be modernized and further automated. For example, a recent TADAT (Tax Administration Diagnostic Assessment Tool) in Georgia pointed to the need to upgrade the existing Tax Administration information system, by using an integrated tax management approach and further digitizing tax administration as an entry point to further digital platforms reforms. One of the key challenges is to further enhance uptake by making digital services more accessible and user-friendly and incorporating user views and feedback into digital services design and implementation. Singapore, for example, has a one-stop-shop government portal (Gov.sg) that provides access to specialized portals for digital services, open data, e-participation and public procurement. The Government has also created digital platforms for citizens to report issues with government services. Possible actions in Georgia to modernize core digital systems and digital services include:

- Support Georgia Revenue Service to upgrade existing tax and customs systems and DGA's digital service delivery channel My.gov.ge as an entry-point to further digital platforms reforms;
- Review existing digital services and user research to make them more user-centric including through the development of an incentive framework;
- Develop feedback mechanisms and bringing existing services to a next level (fully-transactional, proactive and mobile by default) and implementation of life events;
- Introduce a "Only Once" principle in public administration to avoid asking citizens for the same information twice; and
- Enhancing cybersecurity and improving Government information systems operational management quality to enhance trust and usability of digital services.

4. Disruptive Technologies and Artificial Intelligence for Evidence-based Decision-making: There is growing interest from Digital Governance Agency and other public sector MDAs in the use of innovative technologies such as Artificial Intelligence (AI), Machine Learning or Big Data for public administration. For example, the Revenue Service is exploring the possibility of incorporating AI tools for tax and customs administration leveraging best practices and lessons learned from international experience. Korea, for example, has developed a rich set of plans - e-Government 2020 Action Plan, Intelligent Government Basic Plan and Digital Government Innovation Promotion Plan- that specify the strategy for transition to intelligent information technologies such as AI, big data analytics, cloud, open platforms, Internet of Things

and online to offline. The country has plans for big data, machine learning and blockchain with pilot projects underway together with a national 5G strategy.⁵⁵ Possible actions for Georgia include:

- Assess, design and adoption of disruptive technologies customized for public sector needs; starting with the application of AI by Revenue Service which has expressed interest and deepening the use of AI for digital services; and
- Piloting and implementation of solutions based on AI, Big Data, Blockchain in other sectors to enhance data analytics and transactions' reliability for evidence-based decision-making and -implementation.⁵⁶

IV. How Can the World Bank Help Spur GovTech Reforms in Georgia?

Georgia ongoing development of the new digital strategy provides perfect timing for the development of a whole-of-government GovTech approach. The World Bank has a vast global GovTech experience and would welcome the opportunity to deepen the collaboration with Georgia on GovTech. Global World Bank GovTech expertise has helped achieve strong results in many different countries and contexts, assisting governments throughout the policy cycle in prioritizing, designing, implementing, monitoring, and evaluating GovTech projects in a wide range of areas.

Support could be provided throughout the GovTech cycle in line with the World Bank GovTech approach through different reform options, collaboration modalities and engagement strategies:

- Conducting key diagnostics such as digital economy assessment, digital platforms and digital services needs assessments, and specific public sector management system and tools assessments to identify entry points for further reforms. These diagnostics serve as valuable sources of first-hand information to develop strategies, roadmaps, and action plans, that allow for smart prioritization and sequencing of reforms, complementing the activities being undertaken through the ongoing Log-In Project being financed by the World Bank;⁵⁷
- Providing strategic policy advice to ensure an enabling regulatory and legal environment for a thriving GovTech ecosystem including advice on new laws, regulations and policies as well as guidance on institutional architecture, organizational frameworks and procedures;
- Technical assistance to build and strengthen digital services and digital systems for whole-of-government or specific MDAs (such as e-tax, e-procurement, customs, budgeting, public investment management, human resources management information systems, performance monitoring and evaluation systems, etc.). These can be linked with other tools for performance management and monitoring and evaluation, including KPIs, dashboards, and project management that allow for continuous tracking of GovTech reforms design and implementation thereby generating valuable decision-making information;

⁵⁵ 5G is the 5th generation mobile network. It is a new global wireless standard following 1G, 2G, 3G, and 4G networks.

⁵⁶ For example, an AI tool can be used to detect “unusual” or “anomalous” transactions.

⁵⁷ Log-In Georgian Investing Project Financing (P169698), August 2020.

- Implementation support for interoperable platforms for service delivery, facilitating data exchange and simplifying business processes;
- Implementation support for data governance -including availability, usability, consistency, integrity and security- to strengthen data quality throughout the complete lifecycle of the data, improving decision-making and enhancing efficiency and effectiveness;
- Capacity-strengthening and global knowledge-exchanges tailor-made to country needs, such as peer-to-peer learning opportunities with other countries leading GovTech reforms, study-tours, workshops and webinars and customized cutting-edge hands-on training courses for political and technical audiences help bring in innovation and enhance talent and sustainability;
- Change management for whole-of-government GovTech approach to ensure that government has the appropriate institutional architecture, collaboration venues, openness to new ideas, and ownership of reforms and has the capacity to migrate to new ways of working. Change management contributes to foster change, address potential resistance to change and engage civil servants in the reform process. Some potential instruments include stakeholders' engagement, strategic communications and risk management.⁵⁸

In conclusion, initial findings from the World Bank's DGRA diagnostic provide valuable insights to inform the preparation of the national strategy and the development of reform options to address challenges, seize opportunities and advance Georgia's development of a whole-of-government GovTech approach. The analysis shows that Georgia is ready to undertake the next level of critical GovTech reforms. The World Bank is ready to fully assist this reform effort to bring Georgia to the next level of GovTech, delivering results for government, citizens and the private sector.

⁵⁸ Leah April, Caroline Sian Hughes, Sokbunthoeun So, Erwin Ariadharna. "Change management that Works: Making Impacts in Challenging Environments" World Bank Policy Research Working Paper 2017. <http://documents.worldbank.org/curated/en/965071512568885187/Change-management-that-works-making-impacts-in-challenging-environments>.