



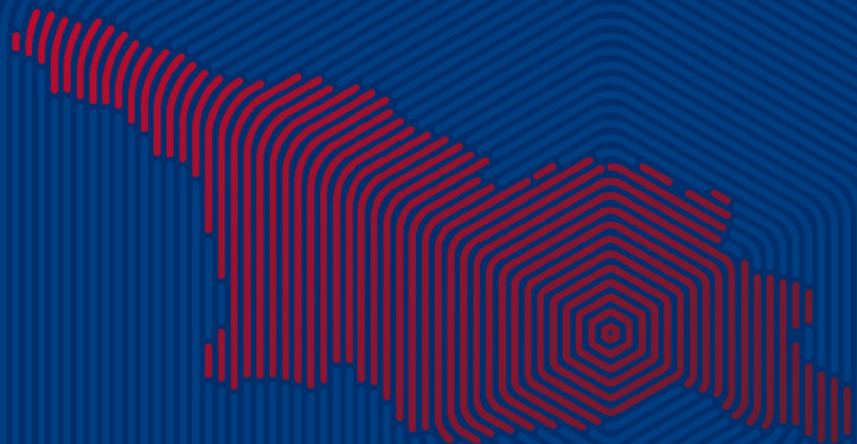
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DIGITAL ECOSYSTEM COUNTRY ASSESSMENT (DECA)

Georgia

OCTOBER 2023



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ACRONYMS

ACH	Automated Clearing House	FabLabs	Fabrication Laboratories
AI	Artificial Intelligence	FATF	Financial Action Task Force
API	Application Programming Interface	FTTH/B	Fiber-to-the-Home/Building
BDS	Business Development Services	GBV	Gender-Based Violence
BI	Business Intelligence	GCCI	Georgia Chamber of Commerce and Industry
BoG	Bank of Georgia	GDD	Gender Digital Divide
BTU	Business and Technology University	GDP	Gross Domestic Product
CBTA	Competency-Based Training and Assessment	GENIE	Georgian National Innovation Ecosystem
CDCS	USAID Country Development Cooperation Strategy	GISA	Georgian Information Security Association
CEC	Central Elections Commission	GITA	Georgia's Innovation and Technology Agency
CEPPS	Consortium on Elections and Political Processes	GNCC	Georgian National Communications Commission
CIB	Coordinated Inauthentic Behavior	GNI	Gross National Income
CII	Critical Information Infrastructure	GoG	Government of Georgia
CoE	Council of Europe	GPB	Georgian Public Broadcaster
CRPD	Convention on the Rights of Persons with Disabilities	HDM	Harmonized Digital Market
CSB	The Cyber Security Bureau	ICANN	The Internet Corporation for Assigned Names and Numbers
CSO	Civil Society Organization	ICs	Innovation Centers
DDoS	Distributed Denial-of-Service	ICT	Information and Communications Technology
DECA	Digital Ecosystem Country Assessment	IDFI	Institute for Development of Freedom of Information
DEMD	Digital Economy and Market Development	IDNs	internationalized Domain Names
DFS	Digital Financial Services	IFES	International Foundation for Electoral Systems
DGA	Digital Governance Agency	IGF	Georgia Internet Governance Forum
DLP	Data Loss Prevention	ILabs	Innovation Laboratories
DNS	Domain Name System	IP	Internet Protocol
DO	Development Objective	IRs	Intermediate Results
DSL	Digital Subscriber Line	ISACA	Information Systems Audit and Control Association
DVG	Digitally Vulnerable Group	ISFED	International Society for Fair Elections and Democracy
EaP	Eastern Partnership Countries	ISOC	Internet Society
EBRD	European Bank for Reconstruction and Development	ISP	Internet Service Provider
EG	Enterprise Georgia	ISSSG	Insurance State Supervision Service of Georgia
EMIS	Education Management and Information System	IT	Information Technology
EPPS	Elections and Political Processes Support	ITA	Information Technology Agency
ESP	USAID Economic Security Program		

ITAG	Information Technology Association of Georgia	PPP	Public-Private Partnership
ITU	International Telecommunications Union	PSD2	Payment Services Directive 2
IXP	Internet Exchange Point	PSDA	Public Service Development Agency
IXP.GE	Internet Exchange Association of Georgia	PSP	Payment Service Provider
KIU	Kutaisi International University	QoS	Quality of Service
KPIs	Key Performance Indicators	R&D	Research and Development
LEPL	Legal Entity of Public Law	RS	Revenue Service
MDF	Media Development Foundation	SaaS	Software as a Service
MFI	Microfinance Institution	SBU	Sensitive But Unclassified
MIA	Ministry of Internal Affairs	SDGs	Sustainable Development Goals
ML/FT	Money Laundering and Financing of Terrorism	SDSU	San Diego State University
MNO	Mobile Network Operator	SEEDIG	South Eastern European Dialogue on Internet Governance
MoES	Ministry of Education and Science	SLA	Service-Level Agreement
MoESD	Ministry of Economy and Sustainable Development of Georgia	SMEs	Small and Medium Enterprises
MoF	Ministry of Finance	STEM	Science, Technology, Engineering, and Mathematics
MoU	Memorandum of Understanding	TA	Technical Assistance
MSDA	Municipal Services Development Agency	TFGBV	Technology-Facilitated Gender-Based Violence
MSMEs	Micro, Small and Medium Enterprises	TVWS	TV White Space
MVNOs	Mobile Virtual Network Operators	UNCTAD	United Nations Conference on Trade and Development
MVP	Minimum Viable Product	UNDP	United Nations Development Programme
NAPR	National Agency of Public Registry	USAID	United States Agency for International Development
NBG	National Bank of Georgia	UTRAMS	Unified Technical Request and Mission Support
NBDS	National Broadband Development Strategy and Its Implementation Action Plan 2020–2025	VAT	Value-Added Tax
NCSA	National Cyber Security Association	VC	Venture Capital
NGO	Nongovernmental Organization	VET	Vocational Education and Training
NSC	National Security Council	VK	Vkontakte
OSGF	Open Society Georgia Foundation	W3C	World Wide Web Consortium
OTA	Operative-Technical Agency	WCAG	Web Content Accessibility Guideline
PDPS	Personal Data Protection Service	YC	Y Combinator
PMCG	Policy and Management Consulting Group		
PoPs	Points of Presence		

EXECUTIVE SUMMARY



BACKGROUND

The U.S. Agency for International Development's (USAID's) [Digital Strategy](#) was launched in April 2020 to achieve and sustain open, secure, and inclusive digital ecosystems that contribute to broad-based, measurable development and humanitarian assistance outcomes through the responsible use of digital technology. A flagship initiative of the Digital Strategy, the Digital Ecosystem Country Assessment (DECA) informs the development, design, and implementation of USAID's strategies, projects, and activities. The DECA looks at three pillars of a nation's digital ecosystem: 1) Digital Infrastructure and Adoption; 2) Digital Society, Rights, and Governance; and 3) Digital Economy.

DECA findings and recommendations are mapped to USAID/Georgia's Results Framework. The [USAID/Georgia 2020–2025 Country Development Cooperation Strategy \(CDCS\)](#) outlines USAID's priorities, including supporting Georgia in the effort to advance Euro-Atlantic integration and strengthening resilience to malign influence. This includes addressing challenges primarily in Government Capacity, Inclusive Development, and Open and Accountable Governance. USAID/Georgia will consider the 13 recommendations in this report in current and future programs.

USAID/Georgia Development Objectives (DOs)

1. Resilience to External Malign Influence Strengthened
2. Fragile Democratic Gains Consolidated through Enhanced Citizen Responsive Governance
3. Inclusive High-Value Employment Opportunities Provided through Increased Economic Growth

KEY FINDINGS

The Georgian digital ecosystem has a solid foundation, with relatively well-established physical and regulatory infrastructure, government commitment to the development of digital government services, multiple providers of digital connectivity, and a range of digital financial services (DFS). However, access to quality digital tools, skills, and services is not equal across the country; gaps in policy and regulation create uncertainty and limit investment; and cybersecurity threats continue to undermine confidence in digital tools and services.

Connectivity infrastructure in Georgia is well-developed, but gaps still exist in urban-rural connectivity. Significant progress has been made in connectivity infrastructure over the last few years, with 4G coverage reaching 98 percent of the population in 2021 and the government prioritizing the planned testing and expansion of 5G networks. The availability of telecommunications networks and development of fiber-optic connectivity can enable innovation in telecommunications service provision, while simultaneously boosting other digital services (e.g., e-government, e-commerce, online learning, and e-banking). Broadband internet has become an important foundation for socioeconomic development in Georgia's growing digital economy, bolstering competitiveness across many areas, including education, health, entertainment, and general information society development. With its Universal Internetization program and Log-in Georgia Project, the Government of Georgia (GoG) strives to eliminate last-mile connectivity challenges and to bridge the geographic digital divide in the remaining white zones¹ of underserved rural areas.

¹ In the field of telecommunications, an area which is not served by a given network—specifically a mobile telephone network or by the Internet. ([French Senate](#))

Georgia is poised to be a regional digital and information hub, expanding connectivity to Europe and thus strengthening the connectivity and cyber-resilience of the region. Georgia's aspiration to become an information and communications technology (ICT) hub and the digital corridor from Europe to Asia is the key strategic priority of the National Broadband Development Strategy of Georgia and Its Implementation Action Plan 2020–2025 (NBDS), as well as the Government Program for 2021–2024, Towards Building a European State. Sharing a border with Europe via the Black Sea, Georgia is well-positioned to strengthen submarine cable connectivity to Europe, which can positively impact Georgia and neighboring Central Asian countries, reducing the reliance on Russian connections and improving cyber-resilience for the region.

Digital government stakeholders are uncoordinated, and a cycle of underinvestment and a lack of awareness among the public has resulted in underutilization of digital services. This has resulted in frustration among government and civil society stakeholders, who desire greater leadership and political will for digitalization. At the same time, interagency and donor coordination is lacking on digital issues, partly resulting in ineffective implementation of digital-related strategies and a lack of interoperability between government systems. Existing digital government services suffer from a lack of uptake, which is likely due to a combination of low digital literacy, limited awareness by citizens, limited user-centric design, and limited utility outside of agent-facilitated transactions in public service halls.

Civil society organizations (CSOs) and independent online media outlets need continued support—financial, political, and operational. Georgia's information ecosystem is notoriously polarized, with disinformation being spread both by malign foreign actors and by domestic actors. Civil society plays an essential role in flagging false or misleading content on social media but is generally understaffed and underfunded and struggles to keep up with disinformation spread through coordinated inauthentic behavior (CIB). Independent, online media outlets receive much of their support from donors like USAID yet still struggle to modernize and lack commercial viability.

The ICT workforce is talented, but there is a growing skills gap as graduates enter the workforce without the necessary skills demanded by the ICT sector. Local universities struggle to produce graduates who meet the needs of the private and public sectors, particularly in the ICT field. University ICT curricula often lag industry trends, and universities have trouble attracting qualified personnel. Many companies report that local graduates lack necessary skills and require additional onboarding and training. Informal training from private companies and donor or government programs is sometimes preferred to formal education programs because it focuses on providing the most in-demand ICT skills in the marketplace.

Digital financial services are a driver for innovation and fintech, but Georgia's concentrated market restricts competition. Georgia's two largest banks, which also control related nonbank financial businesses through subsidiaries, dominate the financial sector, limiting competition. Their presence in various market segments gives them the ability to steer customers to their own product bundles, making it difficult for smaller fintechs to compete for market share. There are concerns that growing market concentration may undermine incentives for future innovation.

There is untapped potential in tech startups, as innovative and technology-driven startups have difficulty accessing financing. Startups are important drivers of the Georgian economy but face challenges in accessing credit due to banks' reliance on traditional physical collateral requirements. While some startups can access financing at the early prototyping stage, they often lack financing to scale their innovations, discouraging potential entrepreneurs and investors. Georgia's Innovation and Technology Agency (GITA) is promoting entrepreneurship, but only well-connected fintechs can secure partnerships or funding from banks. However, efforts to implement new regulations, including the crowdfunding law,² may improve access to financing for startups.

² This law has not yet been named at the time of this report's publication.

The e-commerce penetration rate in Georgia is low and compounded by poor inventory management, lack of modern handling solutions, low customer confidence in e-commerce platforms, and immature consumer financial literacy skills. The COVID-19 pandemic accelerated the growth of e-commerce in Georgia, causing a shift toward online consumption of products, services such as education and banking, and entertainment. However, this growth has been uneven and is limited by several factors, including costly and unreliable last-mile logistics, poor inventory management resulting in unfulfilled orders, and cybersecurity concerns. Although Georgia e-commerce performance is relatively good for its income level and compared to its regional peers, the share of online shoppers in the country is still low, with only 14.8 percent of the population having shopped online in 2020.ⁱ

Georgia's digital ecosystem faces significant challenges but also shows great opportunity for digital economic growth and for improving both national and regional digital connectivity. Through coordinated support and strategic interventions, Georgia can become a major digital hub in the region.

RECOMMENDATIONS

The report makes 13 recommendations for how USAID/Georgia can work with and support the country's digital ecosystem. These recommendations cover topics across the three DECA pillars and include suggestions to enable USAID/Georgia to build on the success of existing work. They also offer detailed guidance for designing and carrying out new activities and partnerships. The seven identified priority recommendations are critical for trust building, skills development, and competition to capitalize on Georgia's unique position as a regional hub and to drive the country's digital transformation and ecosystem. DECA recommendations are detailed in [Section 3](#) of the report and are listed below with priority recommendations bolded:

1. Enhance dialogue and all-inclusive governance model in telecommunications sector.
2. Develop enabling regulatory framework for digital infrastructure expansion.
3. Support empowerment with digital skills and literacy growth.
- 4. Strengthen cyber-resilience of critical infrastructure.**
- 5. Contribute to Georgia's transformation into a regional digital hub.**
- 6. Improve coordination and accountability on Government of Georgia digital transformation.**
- 7. Double down on media literacy, digital citizenship, and disinformation mitigation.**
8. Enhance support for the modernization of online, independent media outlets.
- 9. Leverage success in freedom online to promote regional leadership and increase attractiveness of the Georgian market.**
- 10. Increase competition in the digital financial services market.**
11. Target support toward fintech development and quality startups and innovations.
12. Improve e-commerce customer experience.
- 13. Support digital skills development and ICT workforce development.**

REPORT ROADMAP

SECTION 1

Provides background on the DECA framework and goals. It includes a summary of USAID/Georgia's priorities, connecting them with digital interventions and solutions.

SECTION 2

Presents the key findings about Georgia's digital ecosystem. This section is organized into three subsections by DECA pillar: Digital Infrastructure and Adoption; Digital Society, Rights, and Governance; and Digital Economy. The following cross-cutting topics are covered: Inclusion, Cybersecurity, Emerging Technologies, and Geopolitical Positioning.

SECTION 3

Provides recommendations on how USAID/Georgia can leverage and support the digital ecosystem to achieve improved development outcomes.

SECTION 1:

ABOUT THIS ASSESSMENT



The Digital Ecosystem Country Assessment (DECA) is part of United States Agency for International Development's (USAID's) holistic approach to helping achieve the [Sustainable Development Goals \(SDGs\)](#) and examines three broad areas to understand the opportunities and challenges in a country's digital ecosystem:

As part of the Digital Strategy implementation, the DECA examines three broad areas to understand the opportunities and challenges in a country's digital ecosystem:

1. Digital Infrastructure and Adoption
2. Digital Society, Rights, and Governance
3. Digital Economy

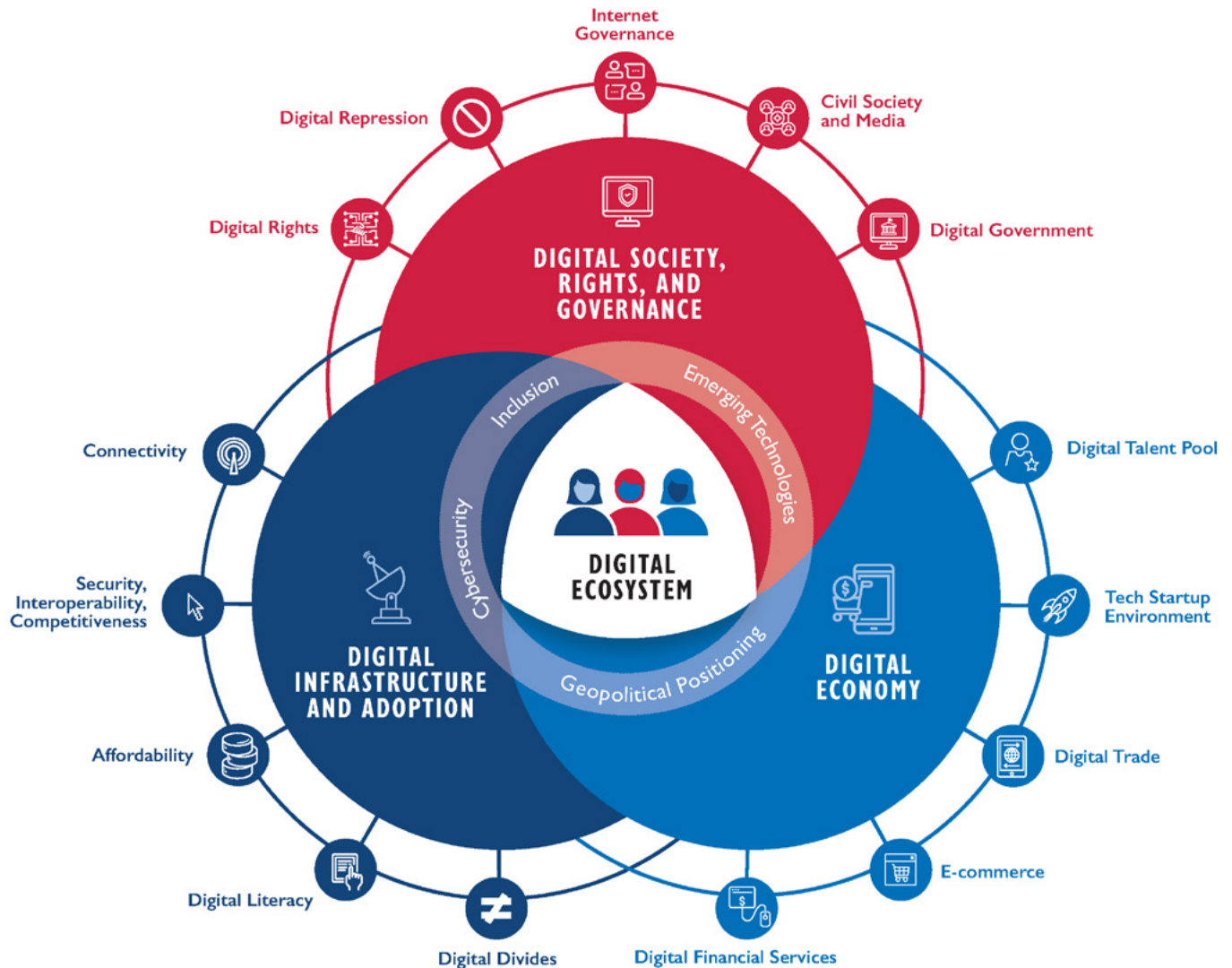
The DECA aims to inform how USAID/Georgia can understand, work with, and strengthen the country's digital ecosystem. It does not evaluate existing programs but rather assesses Georgia's digital ecosystem, identifies how USAID/Georgia's current or future programming can build upon or strengthen that ecosystem, and contains applications for the Government of Georgia (GoG).

The findings and recommendations from this DECA are aligned to [USAID/Georgia's 2020–2025 Country Development Cooperation Strategy \(CDCS\) and Results Framework](#).

The Georgia DECA took place between October 2022 and April 2023. It included desk research, consultations with USAID/Georgia, and three weeks of in-country interviews in Tbilisi, Georgia, followed by three weeks of virtual interviews and focus group discussions. The research project involved a total of 70 interviews with 60 different stakeholders from civil society, academia, the private and public sectors, international development organizations, and USAID/Georgia technical offices.

Rather than act as an authoritative source on the country's digital ecosystem, the DECA is intended to be a rapid assessment of opportunities and challenges tailored to USAID's programmatic priorities, thus it may not cover all of USAID/Georgia's programs and projects in depth.

Figure 1. USAID's Digital Ecosystem Framework



THE DECA: A HOW-TO GUIDE FOR USAID/GEORGIA

How can I use this report to support my work?

The DECA is intended to inform how USAID/Georgia programming can leverage and strengthen the country's digital ecosystem. To maximize utility and impact, this section outlines how DECA findings and resulting recommendations can directly support USAID/Georgia's development objectives (DOs) as seen in the CDCS.

The DECA does not evaluate existing programs but rather assesses Georgia's digital ecosystem and identifies how USAID/Georgia's current and future programming can leverage or strengthen that ecosystem. Additionally, the DECA can support the GoG, international organizations, business communities, and civil society organizations (CSOs) to identify the main challenges and priorities for the digital transformation of Georgia.

How can I use this guide?

1. DECA findings and recommendations are mapped to the USAID/Georgia's CDCS Results Framework.
2. Identify the priority development objective(s) and intermediate results (IRs) that relate to your work; not all sub-IRs are included—only those with clear linkages to the DECA.
3. Read the “DECA Linkage” column to understand how supporting or leveraging the digital ecosystem can help achieve the given sub-IR.
4. Review the indicated finding section(s) to improve your technical and contextual understanding.
5. Review the indicated recommendation(s) for ideas about how to integrate it into current and future programming.
 - [Table 1](#) provides a high-level overview of each sub-IR linkage to its DECA recommendation(s).
 - Recommendations may align with multiple sub-IRs. Planning and implementation should be coordinated across technical teams because activities that leverage and support the digital ecosystem are often cross-cutting.
 - Recommendations can be addressed in current programming (e.g., during work planning) if within scope, or via a modification.
 - Recommendations that apply to future programming can be considered and incorporated into future program designs.

Table 1. IR mapping of DECA recommendations

Find detailed recommendation descriptions in [Section 3](#).

Intermediate Result (IR)	DECA Linkage/Findings	Recommendation	Pillar
DO 1: Resilience to External Malign Influence Strengthened			
IR 1.2: Economic Exposure to Malign Influence Reduced	Georgia's strategic priority to become a digital hub in the region (Europe-to-Asia digital corridor) will boost digital connectivity, digital ecosystem development, market attractiveness for large international vendors, and Georgia's influence on the digital agenda of the region.	#5: Contribute to Georgia's transformation into a regional digital hub.	Pillar 1
IR 1.3: Vulnerable Key Infrastructure is Cyber-Hardened	Cybersecurity and resilience toward malign influence are critical for the national security and economic well-being of society and industries. Lack of robust cybersecurity practices creates vulnerabilities, diminishing user trust and slowing digital adoption and digital economy development.	#4: Strengthen cyber-resilience of critical infrastructure.	Pillar 1
	Interagency and donor coordination is lacking on digital issues, partly resulting in ineffective implementation of digital-related strategies. Jurisdiction over critical information infrastructure (CII) ³ is split across multiple government agencies. Cybersecurity capacity throughout the government is lacking due to low salaries and high turnover.	#6: Improve coordination and accountability on Government of Georgia digital transformation.	Pillar 2
IR 1.4: Impact of Targeted Disinformation Mitigated	Existing programs in the media space are well-respected, yet few think they are sufficient. Online media outlets and nongovernmental organizations (NGOs) need support—financial, political, and operational.	#7: Double down on media literacy, digital citizenship, and disinformation mitigation.	Pillar 2

³ Critical Information Infrastructures are the public and private entities whose uninterrupted operations of their information systems are essential to the defense and/or economic security of the state, and the maintenance of state authority and/or public life. CIIs are divided into three categories: 1) public bodies, including Ministries and Parliament; 2) major internet service providers; and 3) private sector entities such as commercial banks, insurance companies, seaports, sea, air and land transportation, and energy sector entities ([The USAID Securing Georgia's Energy Future Program](#)).

DO 2: Fragile Democratic Gains Consolidated through Enhanced Citizen Responsive Governance

IR 2.1: Civic Participation Catalyzed	Top-down approach to regulations and enforcement mechanisms undermines inclusiveness and participatory governance in the telecommunications sector. Nonparticipatory governance regimes make the market unattractive to investors, increasing fears, insecurity, and mistrust between existing internet service providers (ISPs) due to unpredictable decisions and imposed enforcement regimes.	#1: Enhance dialogue and all-inclusive governance model in telecommunications sector.	Pillar 1
	Digital economy development lags due to lack of digital skills and as a result of visible digital divides, which dampen demand for broadband services and uptake of e-resources. The government and private sector do not coordinate strategies for digital skills development, leading to ad hoc, sporadic, and irregular interventions.	#3: Support empowerment with digital skills and literacy growth.	Pillar 1
	While digital government foundations are strong, services are not utilized to their fullest due to underinvestment in digital participation platforms and lack of awareness among the public. CSOs struggle to modernize, gain public trust, and sustain themselves. Disinformation online is more common, and mitigation programs are not sufficient.	#7: Double down on media literacy, digital citizenship, and disinformation mitigation.	Pillar 2
IR 2.2: Accountability and Accessibility of Governance Institutions Increased	Interagency and donor coordination is lacking on digital issues, partly resulting in ineffective implementation of digital-related strategies. While digital government foundations are strong, services are underutilized.	#6: Improve coordination and accountability on Government of Georgia digital transformation.	Pillar 2
	Capitalizing on and cementing Georgia's strong regional status as a bastion for internet freedom can position Georgia as a leader in internet governance regionally and bolster its position for future EU membership.	#9 Leverage success in freedom online to promote regional leadership and increase attractiveness of the Georgian market.	Pillar 2

DO 3: Inclusive High-Value Employment Opportunities Provided through Increased Economic Growth

IR 3.1: Last Gaps in Euro-Atlantic–Oriented Economic Reforms Addressed	Lack of supporting regulatory and policy instruments undermine ISPs' interest and willingness to expand infrastructure. Uncertainty about the cost of navigating the unpredictable telecommunications bureaucracies compromises the stability and sustainability of investments, making the market less attractive.	#2: Develop enabling regulatory framework for digital infrastructure expansion.	Pillar 1
	The concentrated market in the banking sector might adversely affect competition within this segment of the economy.	#10: Increase competition in the digital financial services (DFS) market.	Pillar 3
IR 3.2: Competitiveness of Key Sectors Increased	One of the key criteria for Georgia's EU membership is "a free, professional, pluralistic, and independent media environment." Yet online, independent media outlets have a difficult time competing with TV and social media in Georgia. They are struggling to diversify funding and content.	#8: Enhance support for the modernization of online, independent media outlets.	Pillar 2
	The Georgian startup ecosystem has untapped potential to support impactful innovations in fintech. Limitations stem from inadequate financing options and lack of coordinated support from involved stakeholders.	#11: Target support toward fintech development and quality startups and innovations.	Pillar 3
	Uptake of e-commerce is slow. Despite growth, the e-commerce market remains small, with cash-on-delivery options still in frequent use. Stock management and logistics are ineffective. Trust issues (e.g., related to e-commerce service providers, digital payment systems, and cybersecurity) are persistent.	#12: Improve e-commerce customer experience.	Pillar 3
	University graduates' information and communications technology (ICT) skills do not match market needs. Graduates have outdated skills, requiring employers to provide long onboarding and training. University ICT programs are not aligned to employer needs. Recognition of informal education is limited.	#13: Support digital skills development and ICT workforce development.	Pillar 3

SECTION 2: DECA FINDINGS



2.1. PILLAR 1: DIGITAL INFRASTRUCTURE AND ADOPTION

Digital infrastructure and adoption refers to the resources that make digital systems possible and how individuals and organizations access and use these resources. Digital infrastructure includes geographic network coverage, network performance, internet bandwidth, and spectrum allocation, as well as telecommunications market dynamics around security, interoperability, and competitiveness. This pillar also examines behavioral, social, and physical barriers and opportunities for equitable adoption (digital divides, affordability, and digital literacy)—who uses or does not use digital technologies and why.

DIGITAL INFRASTRUCTURE AND ADOPTION

KEY TAKEAWAYS

- **Takeaway 1:** Connectivity infrastructure in Georgia is well-developed and is gradually expanding to remaining white zones⁴, but gaps still exist in urban-rural connectivity and in connecting the last mile.
- **Takeaway 2:** The lack of affordable and quality broadband internet service puts rural areas at a competitive disadvantage in comparison to urban settlements.
- **Takeaway 3:** The Georgian government lacks a coordinated and consistent delivery of digital literacy programming.
- **Takeaway 4:** Georgia is well-positioned to be a regional ICT hub as it expands cable connectivity options from Europe, thus strengthening overall connectivity and cyber-resilience of the region.
- **Takeaway 5:** Cybersecurity, including the supply chain of trusted ICT equipment and related services, is one of the main challenges for the telecommunications sector.

RELEVANT RECOMMENDATIONS

- **Recommendation 1:** Enhance dialogue and all-inclusive governance model in telecommunications sector.
- **Recommendation 2:** Develop enabling regulatory framework for digital infrastructure expansion.
- **Recommendation 3:** Support empowerment with digital skills and literacy growth.
- **Recommendation 4:** Strengthen the cyber-resilience of critical infrastructure.
- **Recommendation 5:** Contribute to Georgia's transformation into a regional digital hub.

REGULATORY CONTEXT FOR DIGITAL TRANSFORMATION



KEY TERMS | BOX 1. Digital Rights, Universal Internetization Program, and Digital Transformation

Digital rights: All rights that human beings enjoy offline apply to the online sphere, as well. Moreover, as defined by the Georgian Constitution, access to the internet and free use of the internet is a human right.

Universal Internetization program: The program was launched in 2016 with the aim to cover Georgia with fiber-optic infrastructure connectivity. It is cofinanced by the Georgian government, World Bank, and other donors.

Digital transformation: Large-scale, organization-level, profound change in multiple work processes and in organizational culture brought about by leveraging digital technology.

⁴ See footnote 1.

The telecommunications sector has a well-developed institutional-regulatory framework

Clearly delineated responsibilities between the government policymaking body (the Ministry of Economy and Sustainable Development of Georgia [MoESD]) and the telecommunications regulatory authority (Georgian National Communications Commission [GNCC]) ensure good governance in the ICT sector. The MoESD has the authority to develop and implement state policy on telecommunications, as well as to promote digital development; the GNCC has a mandate to regulate the electronic communications, broadcasting, frequencies, and numbering. As a result, the telecommunications industry is developing steadily, and citizens have access to high-quality telecommunications services that can increase their participation in the country's socioeconomic life.ⁱⁱ

The MoESD's Communications, Information, and Modern Technologies Department elaborates and implements state policy on electronic communications, information technologies, and postal services. Moreover, the department is charged with developing nationwide strategies, state policies, action plans, programs for e-government, electronic communications, information technologies, postal services, and scientific and technological innovations.

The regulatory authority for broadcasting and electronic communications, GNCC, launched in 2000. The GNCC is independent while carrying out its duties, as are its members and staff. The legal guarantees of the regulator's independence are defined in the Constitution. The GNCC is accountable to the President, the government, and the Parliament and submits its annual report to all three branches of the government. The GNCC is not subject to any state authority and is financed entirely by regulatory fees levied on electronic communications and broadcasting firms.

In 2015, the nongovernmental, noncommercial legal entity N(N)LE Open Netⁱⁱⁱ was established under the MoESD and was tasked with development of broadband infrastructure in Georgia. The main mission of Open Net is to implement the Universal Internetization program to create a unified, neutral fiber-optic infrastructure, with equal opportunities for access to quality internet for residents of Georgia. Open Net provides any telecommunications operator with open access services to its broadband infrastructure, with free, unrestricted, and nondiscriminatory conditions. Open Net's services include the use of dark fiber infrastructure⁵ and data transport between two different points of presence (PoPs). Moreover, Open Net is responsible for infrastructure maintenance and for service restoration in cases of damage and outage.

Other state and municipal authorities that have direct and indirect supervisory or regulatory influence on telecommunications market operators include the Digital Governance Agency (DGA) and other legal entities under the Ministry of Justice of Georgia, municipal authorities, and more.

The telecommunications sector regulatory system is aligned with the EU regulatory framework^{iv}

Internet access and free use of the internet are digital rights defined by the Constitution of Georgia which, at the same time, constitutes a declaration of the positive obligation of the state to guarantee the execution of these rights. The Law on Electronic Communications is the main legal pillar for the regulation of the telecommunications sector in the country. Enacted in 2005, the law was amended numerous times between 2010 and 2020 to become compatible with EU legal and regulatory frameworks.

GNCC and MoESD have analyzed the legislation, regulations, and practices for the adoption of the EU's Universal Service Directive. Defining the scope of universal services based on market research, selecting a universal service provider, defining the types of universal services for people with disabilities, and providing services, as well as determining the sources of funding for universal services, are under scrutiny and in discussion. European experts have given a positive assessment of amendments to the Law on Electronic Communications regarding universal services.^v

Lack of supporting regulatory and policy instruments undermine ISPs' interest and willingness to expand infrastructure. The unpredictability of required resources to cope with bureaucracies causes considerable challenges that lead to financial losses and compromise the stability, sustainability, and attractiveness of the telecommunications market.^{vi}

⁵ Dark fiber is fiber-optic infrastructure that is not yet "lit" or put into use by a service provider. A dark fiber lease requires the customer rather than the service provider to maintain and operate the equipment required to "light" the fiber and use it for Internet access and communications.

In 2020, the GNCC prepared the draft law on Sharing Telecommunications Infrastructure and Physical Infrastructure Used for Telecommunications Purposes, in accordance with EU Directive 2014/61/EU (Broadband Cost-Reduction Directive). The draft law, based on the principles of competition, open access, equality, nondiscrimination, efficiency, transparency, and technological neutrality, was initiated by the Georgian Parliament. It is still in the Parliament hearing stage, and there is significant demand for its adoption. If adopted, the law will enable infrastructure sharing and regulation of issues related to accessing the existing physical infrastructure, coordination of public construction, sharing internal building infrastructure, protection of confidential information, dispute review, administrative responsibility, and a unified information/data sharing platform.^{vii}

Although Georgian telecommunication market regulation in key fields is aligned with EU telecommunication rules, Georgia needs further work to adopt the legislation in draft mode and keep the speed with new EU telecom codes and legal amendments: especially relevant is to continue shaping of rules regarding access of telecom networks within publicly owned premises, infrastructure sharing between operators, and market access of virtual operators.
—GNCC

It is promising that after a few years of review and delayed parliamentary hearings, the draft law will tackle common pain points of ISPs concerning ambiguities associated with infrastructure access, in addition to access to public and privately owned premises, procedural gaps regarding construction processes, cumbersome procedures for obtaining certificates, etc.

Digital transformation of the telecommunications sector and broadband development are strategic priorities for the Government of Georgia

National Broadband Development Strategy of Georgia and Its Implementation Action Plan 2020–2025 (NBDS) was adopted by the GoG in 2020. Targets of NBDS are in line with the EU's Gigabit Society objectives for 2025. The NBDS identifies three key pillars as strategic priorities:

1. Increase competitive pressure in the telecommunications market.
2. Attract investment.
3. Build digital skills and demand.

NBDS key performance indicators (KPIs) for 2025 are:

- 4G covers 99 percent of Georgia; pilots for 5G service are in three municipalities.
- All institutional entities have access to 1 Gbps connectivity.
- All households have access to networks for high-speed (100 Mbps+) broadband.

Moreover, Georgia's strategic framework for development of the telecommunications infrastructure and digital government entails other strategic policy documents, such as the State Program on Broadband Infrastructure Development, the Strategy for Supporting 5G Development in Georgia, the Harmonized Digital Market (HDM) EU4Digital Eastern Partnership Countries (EaP) Broadband Infrastructure Development Strategy, and the Government Program for 2021–2024, Towards Building a European State. Taken together, these efforts clearly demonstrate the government's priority to expand connectivity across the country.

COMPETITIVENESS OF THE TELECOMMUNICATIONS SECTOR



KEY TERMS | BOX 2. Competitiveness, Internet Exchange Point (IXP), and Mobile Virtual Network Operator (MVNO)

Competitiveness: Refers to an ISP's ability to balance the price of its products and services with the quality to provide customers with the optimal experience.

IXP: A physical location where multiple networks converge to route information between them directly rather than depending on private connections or requiring data to take a circuitous route to a farther away point to be exchanged.

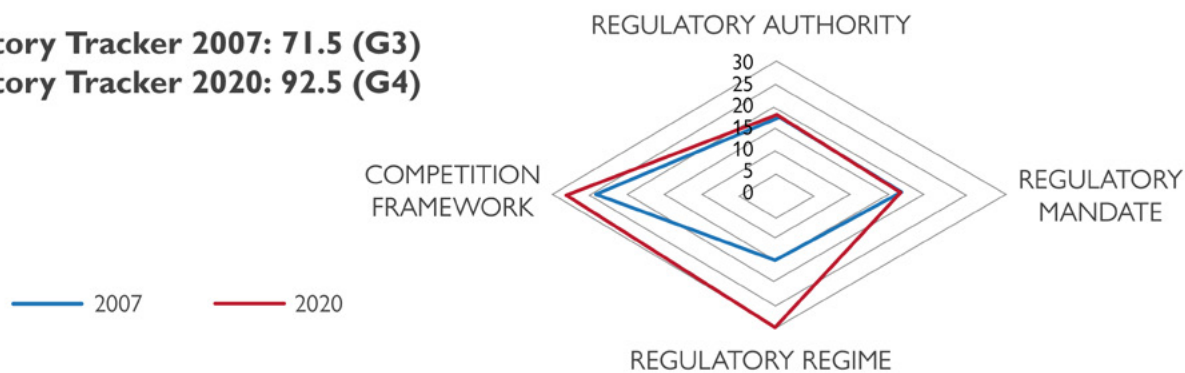
MVNO: A mobile service provider that does not have its own network or infrastructure and provides mobile services through the existing network of another operator.

Regulators are taking steps to enhance the competitiveness of the telecommunications sector

According to the International Telecommunications Union (ITU) Measuring Information Society Report 2018, Georgia's authorities are making progress in their efforts to liberalize the telecommunications market and to make it open and competitive. The ITU ICT Regulatory Tracker scores Georgia highly, with 92.5 points from an overall regulatory standpoint, ranking the country 27th among all the other assessed countries. In two out of the four pillars assessed for the ICT sector—Regulatory Regime and Competition Framework—Georgia scores the maximum points.

Figure 2. ITU ICT Regulatory Tracker

ICT regulatory Tracker 2007: 71.5 (G3)
ICT regulatory Tracker 2020: 92.5 (G4)



Source: ITU^{viii}

One of the strategic directions of the five-year NBDS is more competitiveness in the telecommunications sector. Georgia's aspiration is to stimulate competition, attract new investment, and provide small and medium ISPs with a better enabling framework for operation.

Encouraging market competitiveness has long been on the radar of the regulatory body. There are multiple regulatory and legal instruments that GNCC initiated on the advice of Western experts in line with EU legal acquis and best available practices within the last few years. In 2018, the GNCC adopted a new regulation that obliges large ISPs operating fiber-optic networks to allow small and medium ISPs to access their infrastructure, enabling the smaller companies to offer services at reduced cost. Representatives of these small and medium ISPs say that the new regulation may be transformative in the long run and will encourage competition in the telecommunications market.

Controversial amendments to the Law on Electronic Communications in 2020, which allowed GNCC to appoint a special manager to a telecommunications company to enforce the regulator's decisions, created new concerns about market competitiveness.

According to the new amendments, a GNCC-appointed special manager is authorized to:

- Appoint and dismiss company directors and members of its supervisory board.
- File a lawsuit in court against the contracts or deals made up to a year before appointment and demand their annulment.
- Suspend or restrict the company's right to distribute profits, dividends, and bonuses or to increase salaries.
- Perform other functions of the company's governing body except for selling its assets or shares.

GNCC exercised this right to appoint a special manager in the case of Caucasus Online, a leading internet and international transit services provider in Georgia. GNCC's reason for the appointment was the failure of Caucasus Online to inform the regulator prior to a change in ownership of the company and its subsequent failure to pay penalty fines in 2020. GNCC fully reversed the company's acquisition and subsequent changes. There is an ongoing arbitration dispute between Georgia and the investor in the International Court of Arbitration. There are also concerns that the actions of GNCC and the ongoing dispute may discourage further investment in the telecommunications sector.

Following the adoption of the EU Broadband Cost-Reduction Directive⁶ into the Georgian legal system, electronic communications network operators will be able to use existing physical infrastructure to develop broadband networks under nondiscriminatory and competitive conditions. This adoption would stimulate competition, reduce the cost of network development, and encourage telecommunications operators to offer higher quality services at relatively low prices—all of which will ultimately enable achievement of strategic goals set out in the 2020–2025 NBDS and the development of the country's digital economy.

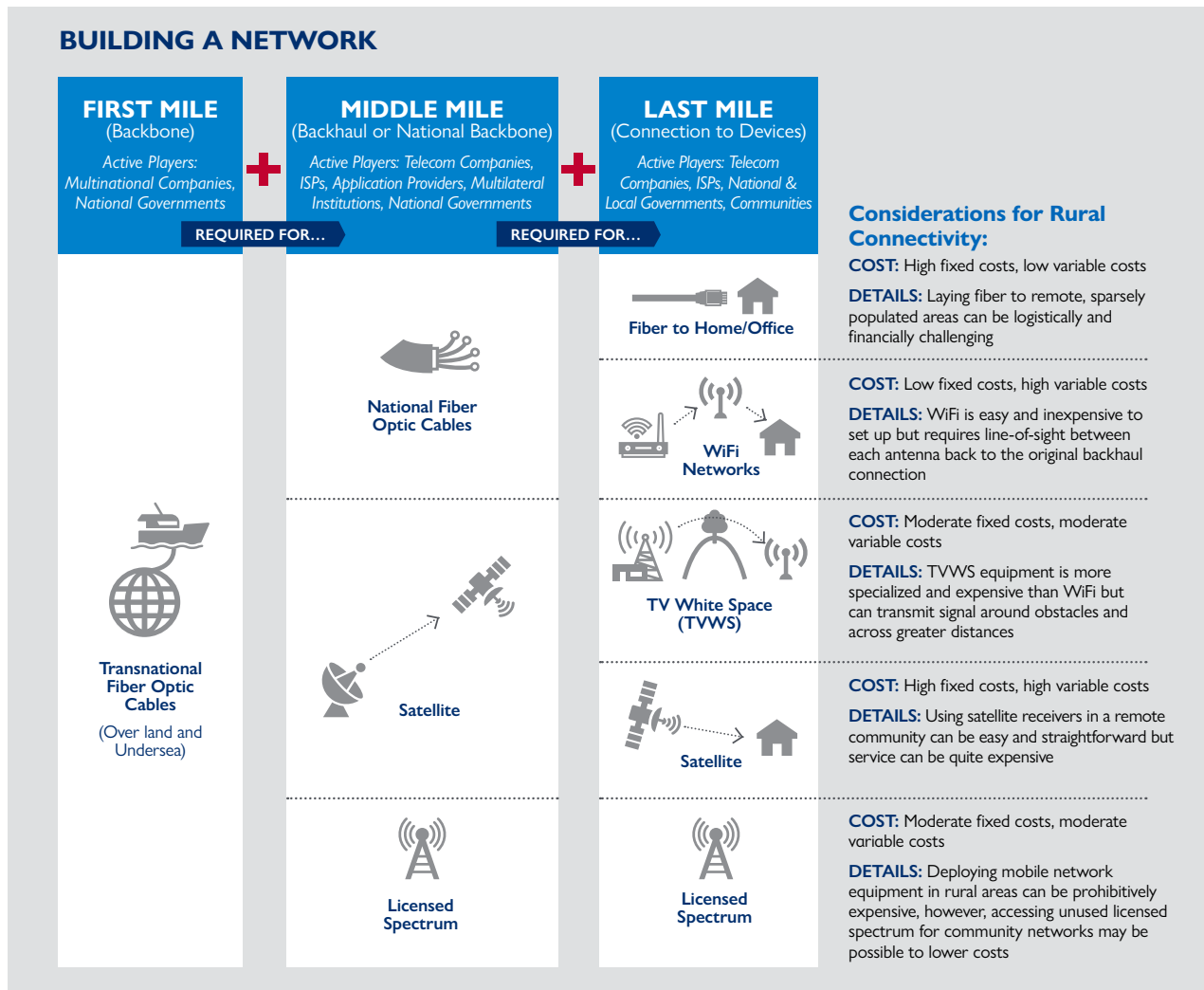
Along with physical infrastructure sharing policies and regulations, in recent years, the GNCC has made numerous efforts to increase the access of mobile virtual network operators (MVNOs) to increase market liberalization, expand the choice of mobile services for consumers, and improve service availability and affordability.^x

In 2021, mobile network operators (MNOs) MagtiCom, Silknet, and Veon Georgia publicly stated their readiness to provide MVNOs with unrestrained access to their own networks. In particular, the companies stated that they are ready to negotiate and provide access under mutually beneficial, commercially acceptable terms. Silknet and Eclectic signed an MVNO access agreement as a precedent for the practical operation of a MVNO.

Along with the MVNO initiative and opening of the mobile internet market, Georgia's next step for increased competitiveness is last-mile connectivity with the creation of a unified, neutral fiber-optic network offered by Open Net for all operators. Open Net capacity will be especially attractive for SME operators.^x

⁶ European Directive 2014/61/EU on measures to reduce the cost of deploying high-speed electronic communications networks.

Figure 3. Building a network



Source: DECA Toolkit^{xi}

Internet exchange points (IXPs) are crucially important to strengthen Georgia’s SME sector

All the interviewed stakeholders from the public and private sectors emphasized the importance of having IXPs in Georgia for the development of local content, competitiveness of the market, data security, and efficiency. IXPs can be a tool for small and medium operators to challenge the transit monopoly of big market players. IXPs should be a neutral, self-regulating framework to be a suitable, mutually beneficial solution for any player in the telecommunications market.

However, IXPs do not seem to be a priority—there is no consolidated policy to encourage telecommunication operators towards adoption.

—Association of Small and Medium Telecom Operators

There are some examples of IXP initiatives already available on the market. Western Georgia Internet Exchange Point is an important initiative of NGO Internet Exchange Association of Georgia (IXP.GE), which was founded with the support and coordination of the Telecommunications Operators Association of Georgia. The project is very important for the development of quality of service (QoS), lower wholesale prices, and increased connectivity, security, and sustainability of the Georgian internet. The Internet Society (ISOC) international organization is a main supporter of and donor to the project. The Telecommunications Operators Association of Georgia coordinates the project.

Western Georgia IXP will be fully neutral and will deliver peering and internet protocol (IP) transit exchange between ISPs and a connection to the local content for every interested party. Every member is equal and has one voting voice. Membership is open, and decisions are made by majority vote. Every member would pay a monthly fee per 1GB/10GB/100GB of internet used. The proposed geographical location is in the center of Western Georgia, near Kutaisi. IXP.GE currently has 18 members and up to 160,000 subscribers. MagtiCom and Silknet are considering joining.^{xii}

Georgia’s telecommunications sector is dominated by big players, despite low barriers to entry

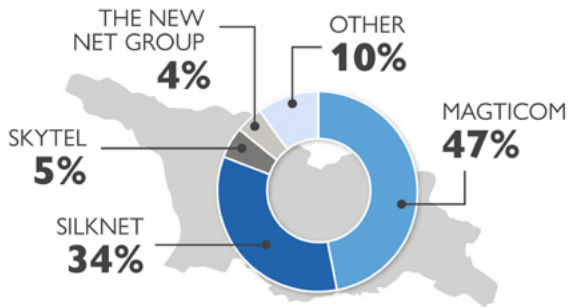
In 2021, there were 289 entities operating in the electronic communications sector in Georgia. This high number of operators indicates low barriers to entry. Although this is true, small and medium enterprises (SMEs) still struggle to find their niche and prosper.

In recent years, two major consolidations took place in the Georgian telecommunications market, resulting in the establishment of two large players with dominant market positions: MagtiCom’s acquisition of Caucasus Online and Silknet’s acquisition of Geocell. As a result of these consolidations, these companies now hold significant market share and respective market power in both mobile and fixed internet.

Figure 4. Revenue distribution by ISP

Distribution of Revenue by Company

It should be noted that in 2021, 90 percent of the fixed internet retail services market was generated by four service providers: more than 81 percent of these accounted to MagtiCom and Silknet, while the remaining 10 percent were distributed by 152 small and medium-sized companies. MagtiCom has 47 percent of the market share in terms of revenue, Silknet has 34 percent, Skytel has 5 percent, and The New Net group has 4 percent.



Source: GNCC 2021 report^{xiii}

Major market shareholders in 2021 (in terms of number of customers) included MagtiCom at 42 percent, Silknet at 33 percent, and Veon Georgia at 25 percent. Both the wholesale and retail segments of fixed internet are characterized by high market concentration. According to an outsourced study conducted by GNCC in 2019, the fixed broadband internet service segment is characterized by high structural barriers due to the prohibitive investment costs of market entry and the lengthy process of network development.^{xiv}

In addition to legal and regulatory tools to stimulate market competitiveness, available financial incentives, investment sources, and venture capital (VC) opportunities that benefit new entrants, ISPs need further scrutiny and analysis by GNCC. To further develop the telecommunications market, SMEs need to enhance their capacity and financial resources.^{xv}

Although Georgia has made considerable steps in market liberalization adoption of EU-compatible legal and regulatory frameworks, there is still much to be done to make the law-making process more open, inclusive, and accountable.^{xvi}

Interviews with large and small ISPs revealed a communications gap between the private sector telecommunications companies and the government’s top-down enforcement approach. ISPs have no advocacy groups with which to share their concerns, including those about capricious regulatory changes. There is no actionable public-private dialogue mechanism in the telecommunications market.

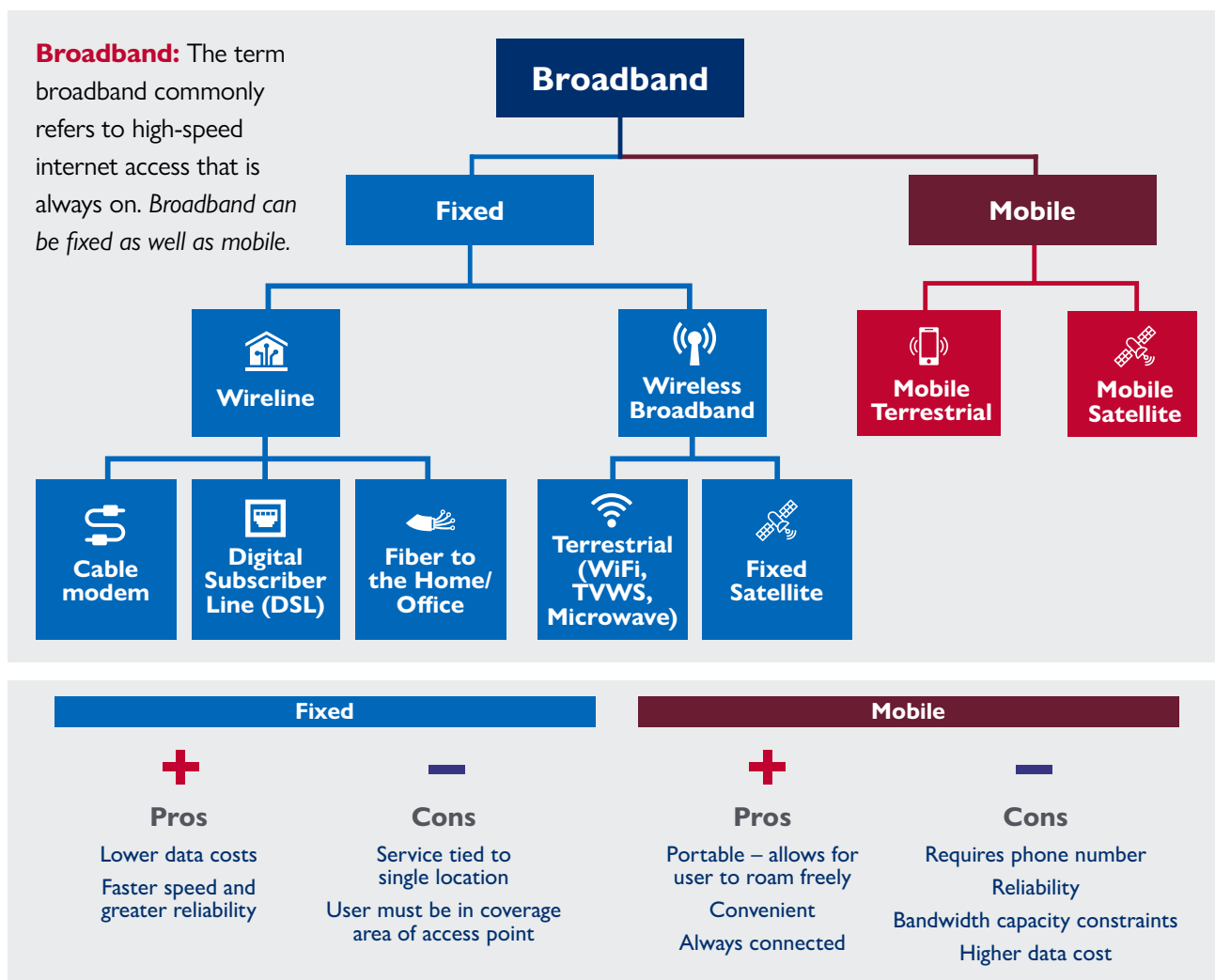
CONNECTIVITY INFRASTRUCTURE GROWTH IN GEORGIA

Georgian connectivity infrastructure has made dramatic improvements

In Georgia, significant progress has been made in connectivity infrastructure over the past few years. During the last two decades, Georgia leapt from one of the least connected countries in the world to the regional champion in internet access and connectivity. Georgia’s history of internet connectivity dates back to the 1990s. The country received its first digital subscriber line (DSL) connection in 2002, but by 2010, only 27 percent of Georgians were internet users. It was a revolutionary triumph when 86.1 percent of households and 76.4 percent of individuals had access and were using the internet by 2021,⁷ and 96 percent of the population had access to 4G coverage.

As of 2020, Georgia is the regional leader and is ahead of most of the EU in terms of fiber-optic cable penetration—currently the most common form of connection in the country and the preferred connectivity solution worldwide. Georgia’s biggest achievement is the substitution of Soviet copper channels for optical infrastructure development. Now connection to end users in cities and large settlements is done through modern optical channels. ISPs made big investments in fiber-optic network expansion throughout Georgia, placing Georgia in an advantageous position.^{xvii}

Figure 5. Digital connectivity

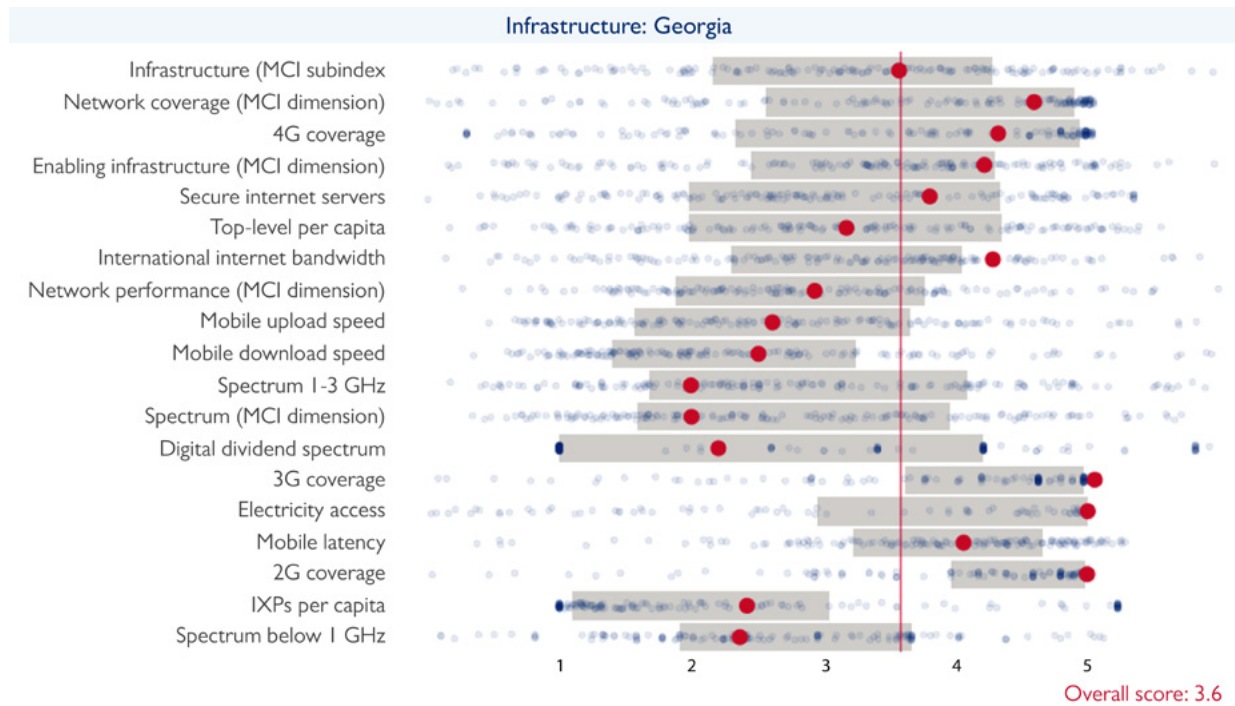


Source: DECA Toolkit^{xviii}

⁷ This increase was caused by the overall economic growth of the country, the implementation of the “Georgia Governmental Network” project, the launch of a new internet provider on the market, the introduction of a state program that provided first-graders with computers, the introduction of new electronic services for business in tax and customs, and more.

While Georgia has made tremendous improvement in its telecommunications market and internet connectivity infrastructure development, maintaining a moderate global standing alongside its worldwide peers, as shown in figure 6, more improvements are necessary to catch up with the European regional averages.

Figure 6. Georgia Telecommunications Infrastructure Index Source: GSMA Mobile Connectivity Index

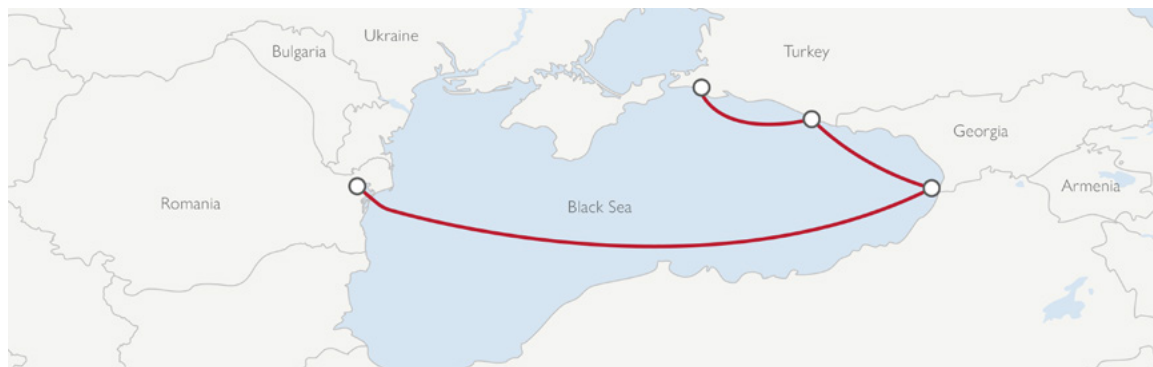


Source: GSMA Mobile Connectivity Index^{xix}

Georgia is a central connection point for global internet resources

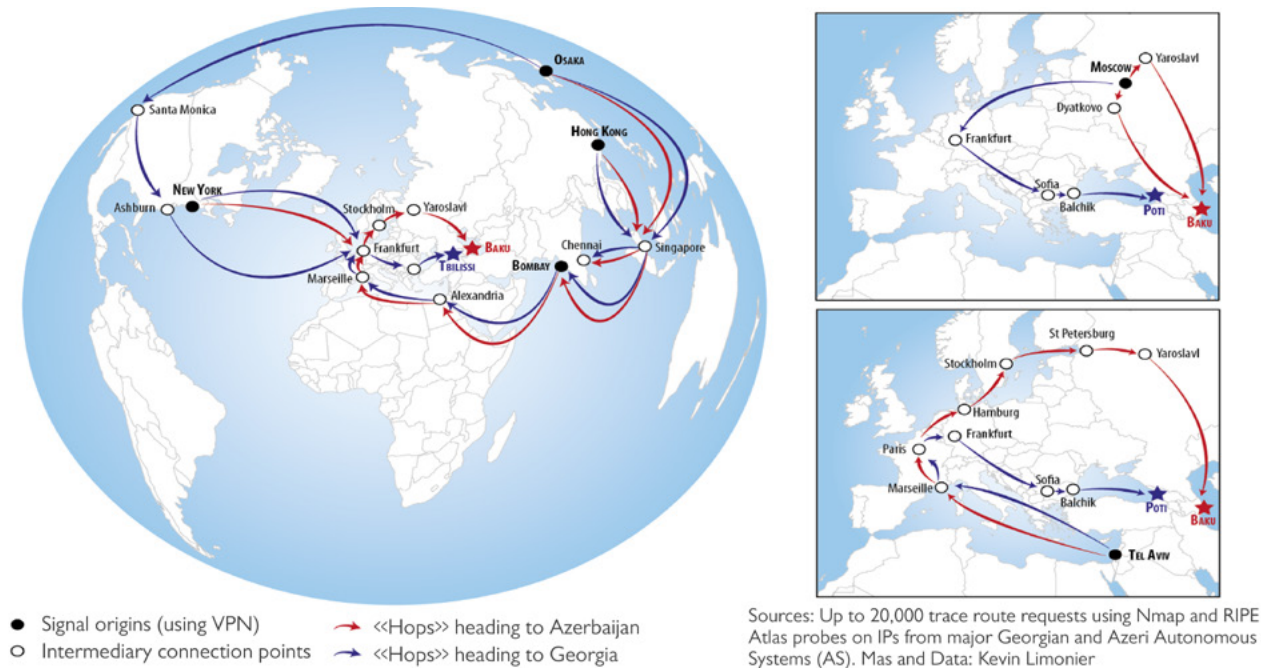
Georgia’s backbone internet infrastructure is owned and operated by several commercial companies. GNCC does not regulate the process of global internet purchase and its transit to other counties by ISPs. Currently, Georgia’s global connections are mostly land routes through Turkey or submarine cables through the Black Sea (figure 7).

Figure 7. Georgia submarine cable map



Source: Kevin Limonier^{xx}

Figure 8. Data transit to Georgia^{xxi}



Georgia connects to the World Wide Web mainly through three major telecommunications data cables:^{xxii}

1. Black Sea Submarine Cable Caucasus Cable System was established in 2008 and is 1,200 km long. Owned by Magticom (formerly Caucasus Online), the cable connects Poti with the Bulgarian cities Balchik and Varna.
2. The Georgia-Russia Optical Fiber Submarine Cable System, which has been in service since 1999, connects Georgian seaport Poti with the Russian cities of Sochi and Novorossiysk. This cable is less influential and important because of the low number of users of the system.
3. Tertiary routes of fiber networks run through the Turkish land border that connects Georgian operators to different European cities, mainly Frankfurt and Paris. The biggest portion (80–90 percent) of international internet resources come to Georgia through Turkey.

All of these channels are also used by Azerbaijan and Armenia. A plan for a new cable between Romania and Georgia was put forward in 2018, and major updates for the launch of the project together with the energy cable system are expected in the coming years.

Tbilisi is also a regional hub, with data cables connecting to Baku, as part of the Trans-Asia-Europe Optical Fiber Cable Network. Several cables connect Tbilisi with Yerevan—two of them operated by ArmenTel (a VimpelCom subsidiary) and one by Fibernet and GNC-Alfa.

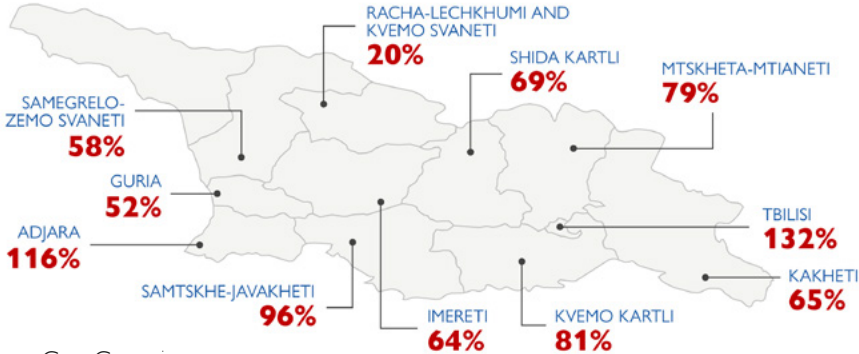
Domestic connectivity infrastructure is expanding to bridge the urban rural divide

In general, the positive policy environment and growing economy have boosted investment in internet connectivity infrastructure in Georgia, paving the way for accelerated digital access and developing opportunities for citizens and businesses. With nearly 20 fiber-to-the-home/building (FTTH/B) subscriptions per 100 inhabitants, Georgia is a regional leader and close to the level of EU country leaders. Broadband internet has acted as an important foundation for socioeconomic development in Georgia's growing digital economy and an important building block for bolstering competitiveness across many areas, including education, health, entertainment, and information society⁸ development. ^{xxiii}

⁸ A society where the usage, creation, distribution, manipulation, and integration of information is a significant activity.

To ensure that all regions of the country have reliable connectivity, Georgia’s NBDS for 2020–2025 aims to make 100Mbps+ broadband available and affordable throughout the country by 2025. The strategy mandates that schools, highways, and public facilities must be provided with internet access at a download speed of 1 Gbps by 2025. The strategy includes fiber-optic cables as an essential element of the future infrastructure to meet growing demands for bandwidth.

Figure 9. The penetration of fixed broadband internet in Tbilisi and regions



Source: ComCom^{xxiv}

As connectivity has increased, so has internet traffic, growing at an average annual rate of 43 percent from 2017 to the end of 2021. In 2021, mobile internet traffic grew at record speed. Mobile service subscribers consumed about 65 percent more mobile internet, compared to the previous year. This growth was due to an increase in the number of mobile internet users, an increase in the number of next-generation internet-enabled phones, development of the 4G network, and increased demand for internet services caused by the pandemic^{xxv}

Broadband networks in Georgia are mainly deployed in urban areas, whereas citizens in rural areas have limited or no solutions for internet connectivity. As of 2021, 96 percent of internet subscribers in the five largest cities of Georgia—Tbilisi, Kutaisi, Batumi, Rustavi, and Poti—were connected via fiber-optic networks. Fixed broadband internet service is available in all cities and towns, and the broadband penetration rate in cities remains fairly stable, growing just 2 percent from 2020 to 2021. Additionally, broadband service is now available in 69 percent of Georgia’s 3,385 villages, and the penetration rate in boroughs and villages has seen annual growth rates jump sharply over the last five years—from 11 to 40 percent in villages and from 39 to 106 percent in boroughs.

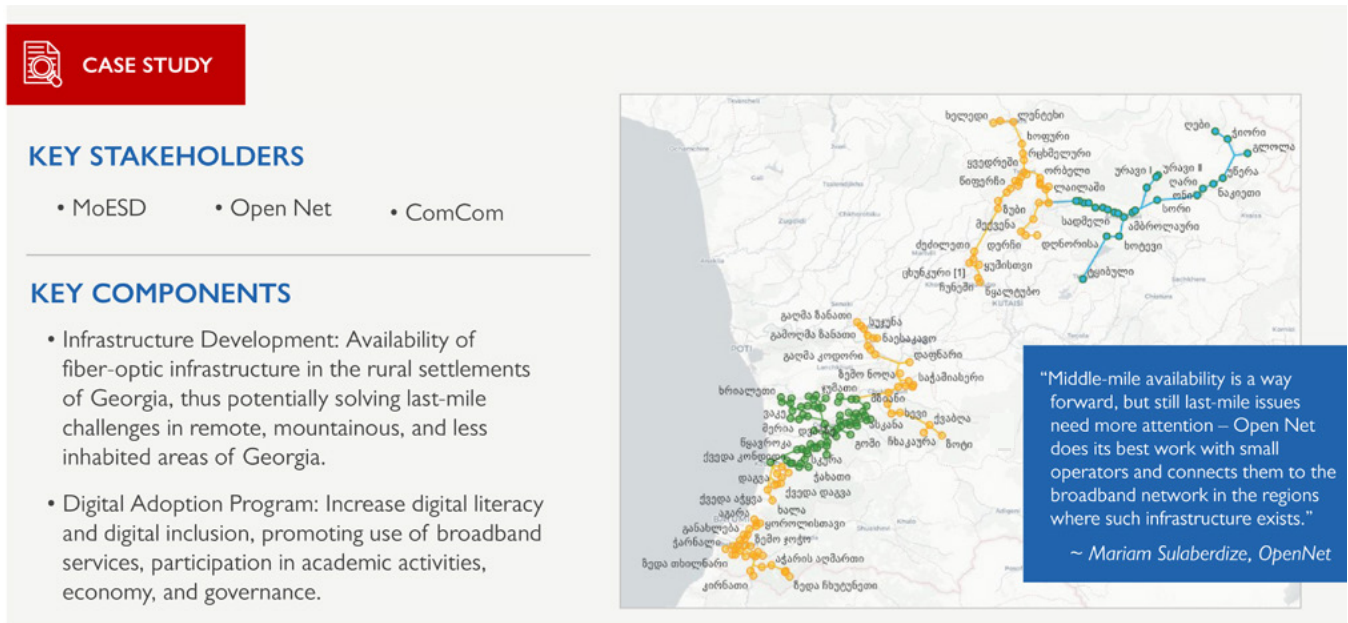
Figure 10. The availability of fixed broadband internet services in settlements



Source: ComCom^{xxvi}

Broadband development in Georgian rural areas is quite difficult due to terrain, frequency of natural disasters, seasonality of work, and lack of qualified construction companies and workers. Notwithstanding these challenges, the government has set a goal to make high-speed broadband infrastructure available for 1,000 rural settlements. To tackle rural-urban divide and last-mile challenges existing in rural areas, the Georgian government launched the Universal Internetization program and the Log-in Georgia Project.

Figure 11. Broadband infrastructure in the most unreachable parts of Georgia



Source: Open Net^{xxvii}

Box 1. Log-in Georgia^{xxviii}



To support the implementation of the state program and the National Broadband Development Strategy for 2020–2025, the **Log-in Georgia** project was launched in 2020 with the financial support of the World Bank and the European Investment Bank. The project aims to increase access to high-speed broadband connectivity for populations in rural areas, promote the use of select digitally enabled services (including digital public services) among connected populations, and improve the affordability of broadband services across the country. As part of the pilot project, 140 km of broadband infrastructure has been developed in the Ozurgeti Municipality by Open Net, with the support of the Communications Commission, enabling each family to have access to a 100 Mbps internet connection and public and private organizations to 1 Gbps internet. In 2021, the construction of fiber-optic infrastructure was completed, resulting in up to 29,000 residents of the Ozurgeti region gaining access to high-speed, broadband internet. After the completion of the project in 2025, there should be no white zones in Georgia.

In remote, rural areas where less than 200 inhabitants settle, internet connectivity is ensured through community internet projects, implemented by the government, together with private sector representatives, and supported by the donor community.

Box 2. Community internet projects

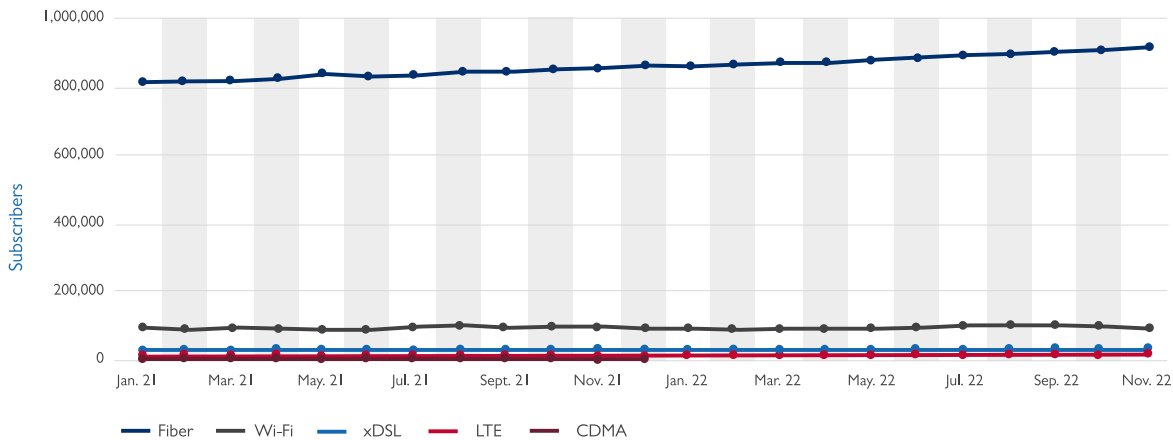
The Government of Georgia continues to support the deployment of community networks in less-densely populated areas (fewer than 200 people) that are out of scope of the Log-in Georgia project. In 2017, two ravines and 24 villages were covered by the community internet network in mountainous Tusheti. In 2020, up to 100 villages (496 families, 1,291 permanent residents) were covered by the community internet network in Pshav-Khevsureti and the Gudamakari valley. The next community internet network project is planned to be launched in the mountainous region of the Autonomous Republic of Adjara.

Internet traffic is growing

Internet uptake accelerated during the COVID-19 pandemic, due to online learning and remote work. By 2021, 76.4 percent of Georgians used the internet—and 66 percent used it daily.^{xxix} Georgian ISPs played a critical role in ensuring the uninterrupted connection and sustainability of services and undertook important initiatives to support consumers with various measures, including the availability of specific service offers (e.g., e-healthcare, e-education). Georgia performs

moderately in terms of affordability of mobile phone costs and percentage of internet users in comparison with nearby countries (Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine, in addition to the neighboring countries outside of the Eastern Partnership—Russia and Turkey).

Figure 12. Internet subscribers by technology

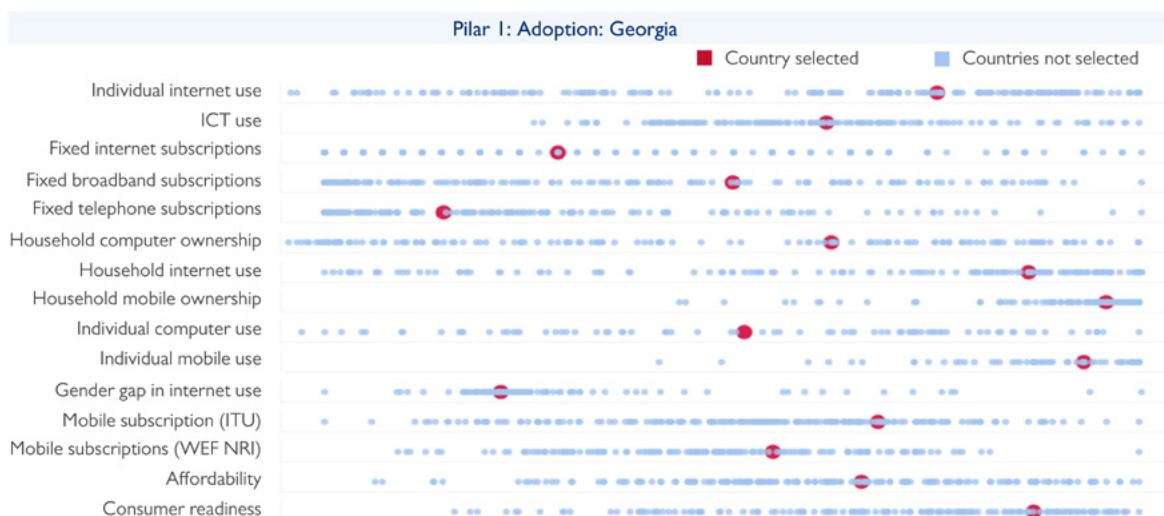


Source: ComCom^{xxx}

The number of mobile internet users is increasing. From 2017 to the end of 2021, the average annual growth rate of mobile internet users was 9.5 percent. In 2021, the increase was 15 percent. By the end of 2021, the penetration rate of the mobile services market in Georgia was the highest it had been in the five years, amounting to 160 percent, which translates to 5.55 million mobile subscribers. The penetration of mobile internet users in relation to the population of Georgia is also increasing and amounted to 109 percent. The increase is attributed to the development of supply of new e-telecommunications services and to increased digital skills and uptake of digital products.^{xxxii}

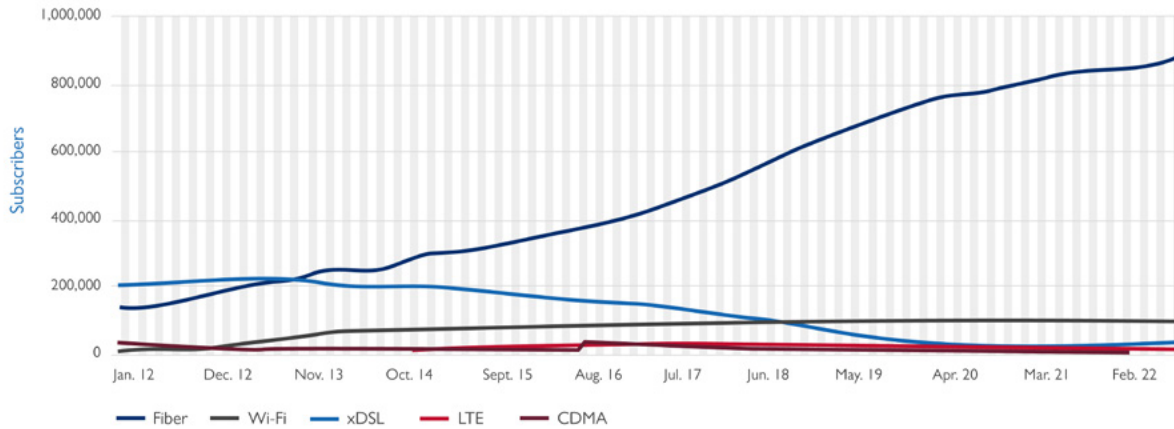
The volume of mobile internet traffic is also growing quickly. In 2021, the average monthly consumption of mobile internet was 9.5 GB, which is 107 percent higher than that of the previous year. Mobile service subscribers consumed about 65 percent (around 311 petabytes) more mobile internet as compared to the previous year. Social media use and video calls are the top two use cases, making up 90 percent of internet traffic. However, statistics on seeking information (relating to health, goods and services, and job vacancies) and e-mail correspondence were above 40 percent of use cases.^{xxxii}

Figure 13. Adoption in Georgia



Sources: GSMA Mobile Connectivity Index^{xxxiii}

Figure 14. Internet connections by type over the last ten years in Georgia



Source: ComCom^{xxxiv}

Mobile network operators have not made 5G rollout a priority, despite incentives from the telecom regulator

The Government of Georgia is exploring options to attract investments for the development of 5G infrastructure and services. Introduction of innovative technologies, use of cloud computing, and the development of a new generation of internet services (5G) are all part of a strategic initiative for Georgia.^{xxxv} According to the strategic action plan, by 2025, 5G services should be tested and piloted in at least three municipalities of Georgia. To accelerate the process of introducing 5G technology and related digital services, GNCC discounted the license fee (up to 80 percent) for the use of the radio frequency spectrum and has published a consultation document presenting its vision to the public regarding the license auctioning. The 5G strategic document includes detailed information about the terms and conditions of the auction, including frequencies available for 5G services, initial fees, bid lots, initial service setups, coverage, and other obligations.

In 2021, Georgia joined the Clean Network initiative by signing a memorandum of understanding (MoU) with the United States. There has not yet been any official communication regarding the practical implementation of the MoU; therefore, ISPs do not have clear information about the form and scope of the ban imposed on the use of technologies from these countries (for example, telecommunications equipment from Chinese suppliers) in the 5G launch process. The issue is that the more cost-effective solution is to upgrade the existing 4G infrastructure to 5G. However, the existing 4G infrastructure is built mainly on technologies supplied by China. If a completely new infrastructure (not based on the existing 4G infrastructure) must be created, based on the principles stated in the Clean Network initiative, the investment cost could make the project prohibitively expensive.

Supply chain has never been considered as a regulatory topic. There is [a] dependance on Chinese hardware [and] network infrastructure in Georgia. Georgian legislation is silent in this regard. The investment climate is never assessed. No screening of threats [is] done in advance [to inform decision-making].

—Expert

Box 3. Lack of proven business case for ISPs' investment in 5G infrastructure

The Georgian telecommunications sector seems to be skeptical about the Georgian economy's readiness for 5G, because:

- The market is not digitally mature for 5G services. There is no visible demand, and it is not expected to be generated in the next three to five years.
- Although good optical infrastructure and nonstop electricity supply are supporting tools, access to infrastructure needs to be developed.
- The government has not made a business case—e.g., subsidized 5G license, starting small and scaling up 5G coverage for ISPs to build their capacity.
- Society has a negative perception about the harmfulness of the 5G networks, which could be combatted with a government communications campaign.

In both cases—a stand-alone or non-stand-alone model of a 5G launch—ISPs will need huge capital investments and, if there is no clear business case, the cost burden will fall to the end users, with more expensive services from telecommunications operators.

Georgia is well-positioned to serve as the Europe-to-Asia digital hub

According to the World Bank, connectivity demand from the South Caucasus countries is projected to continue growing over 30 percent until 2028. By sharing a border with Europe via the Black Sea, Georgia is well-positioned to pursue opportunities to develop connectivity corridors and serve as a conduit between Europe and Asia. Improved data connectivity with Europe (via submarine cable) and development of a Europe-to-Asia digital corridor is a strategic priority under the NBDS and the Government Program for 2021–2024, Towards Building a European State.^{xxxvi} Building up the local data-hosting capacity (large international vendors' data centers) will be a key building block for this.

Box 4. Energy and digital connections from Europe to the Caucasus



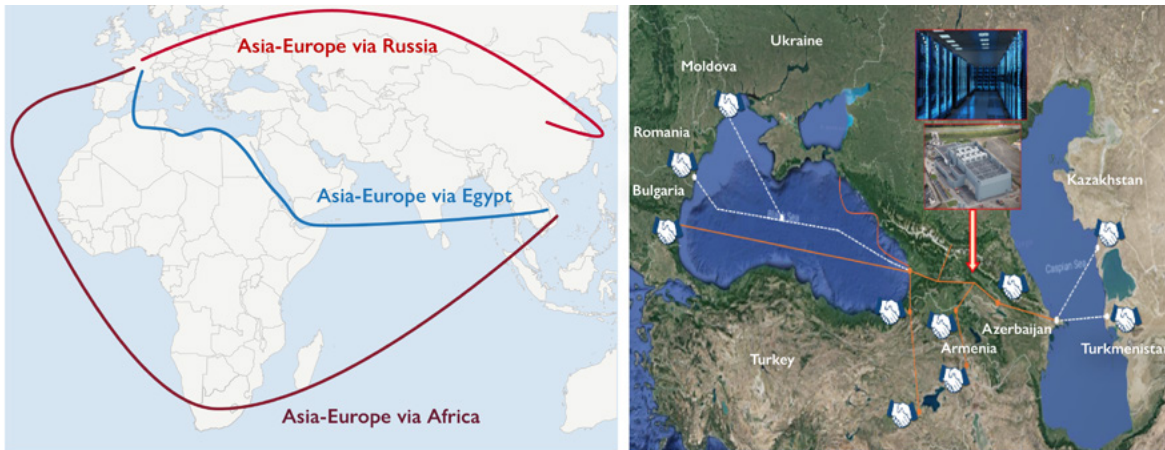
CASE STUDY

To support regional energy market development, there is an ongoing feasibility study outlining the Black Sea energy connectivity project (Georgia–Romania) that aims to connect the South Caucasus region directly to Southeastern Europe by means of a 1,195 km cable (1,100 km submarine cable and 95 km land cable) across the Black Sea. The submarine cable will also be equipped with a fiber-optic cable that will provide high-quality internet connection between Romania and Georgia. This project will be an important initiative for diversification of both energy supply and global internet connectivity. Additionally, it will increase the resilience of Georgia's energy and internet infrastructure.

(The war in Ukraine has impacted global internet access from Central Asia and China to Europe through Russia. Geopolitics notwithstanding, the Central Asia and South Caucasus region could be potential connections between Europe and China through the Caspian Sea, Azerbaijan, and Georgia. Georgia is well-placed geopolitically not only to become a digital hub for the South Caucasus and neighboring countries but also to serve as a gateway between the EU and Asia. Existing ICT infrastructure, broadband development, ease of doing business and the general investment climate, and enabling legal and regulatory regimes give Georgia comparative advantages and offer prospects for further digitally enabled economic growth.

Establishing Georgia as an internet hub could have positive long-term economic impacts and increase market attractiveness for large international vendors targeting the region. Internet traffic in the South Caucasus region is currently at a very low volume but is gradually increasing. Having Central Asian and Chinese traffic transit through Georgia would give the region more than enough scale to be attractive for data colocation for hyperscalers, such as Google or Amazon.

Figure 15. Submarine and terrestrial fiber connectivity from Asia to Europe



Source: Georgia IT Innovation Conference^{xxxvii}

CYBERSECURITY



KEY TERMS | BOX 3. Critical Infrastructure, Cybersecurity, Distributed Denial-of-Service (DDoS), Ransomware

Critical infrastructure: Companies and agencies whose information systems' disruption would be a critical issue for the economy, security, society, and country, in general.

Cybersecurity: The activity or process, ability or capability, or state whereby information and communications systems that support or affect development outcomes—and the information contained therein—are protected from or defended against damage, unauthorized use or modification, or exploitation.

DDoS: A distributed denial-of-service attack is a type of attack aiming to make the system nonoperational—unavailable to users—by sending more requests from different IPs than the server can handle. DDoS is a severe threat, as it can fully isolate a company or user from the internet.

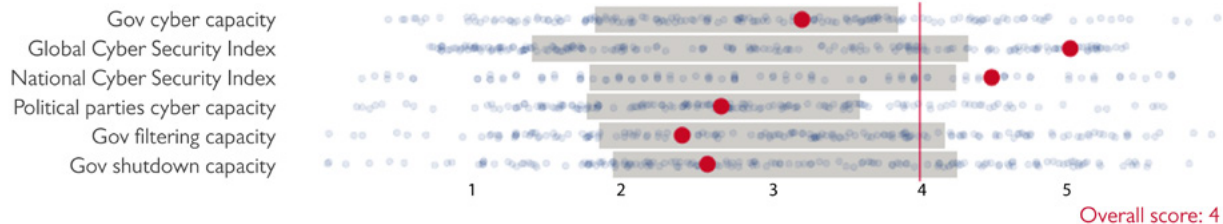
Ransomware: A type of malware that encrypts valuable data for a criminal to demand money in exchange for decryption.

Lack of a cybersecurity framework is a threat to Georgia's critical infrastructure

Cybersecurity is a critical enabler for development of Georgia's digital ecosystem. Digital transformation in the telecommunications sector creates concerns regarding security and the resilience of systems. The telecommunications industry's critical infrastructure is an obvious target for malign cyberthreats.

To address vulnerabilities, Georgia recently introduced cybersecurity regulations to the telecommunications operators sector. The 2021 amendment to the Law on Information Security, which took effect in 2022, designated eight large and medium ISPs^{xxxviii} as critical information system subjects, subject to new information security and cybersecurity regulations. Under the amendment, the Operative –Technical Agency (OTA) became the main coordinator, supervisor, and regulator for telecoms and public sector digital infrastructure. ISPs and telecoms designated as critical infrastructure are required to implement information security management systems and are subject to financial penalties and enforcement mechanisms by the amended law.

Figure 16. Cybersecurity in Georgia



Sources: National Cyber Security Index, International Telecommunications Union, Varieties of Democracy^{xxxix}

ISPs generally implement a combination of organizational, technical, and procedural tools and technology for cyber protection. The majority have established information security policies and follow industry standards and practices.⁹ During interviews, the two main ISPs (MagtiCom and Silknet) highlighted their use of cybersecurity tools, such as data loss prevention (DLP), email security tools, network instruction systems, monitoring tools, firewalls, penetration testing, and vulnerability detection mechanisms.

I'm concerned about those cyberattacks that I am not aware of. I fear that one day I will wake up and all the sensitive and confidential data of my company and customers will be compromised.

—Representative from one of the largest ISPs in Georgia

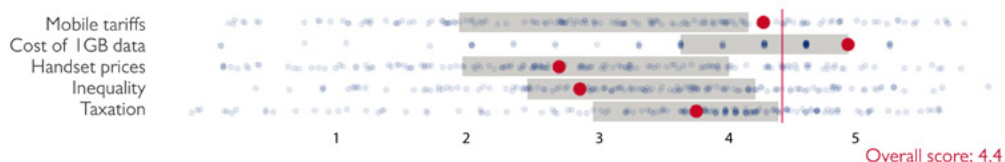
The most common cybercrimes that ISPs face are distributed denial-of-service (DDoS) attacks, machine compromise, and malware (phishing, ransomware, etc.). DDoS attacks can damage a company's standard operating performance and even cause nationwide disruption. Malware, ransomware, and phishing attacks are common and can have both financial and reputational impacts. Some large ISPs have dedicated security staff that monitor network traffic and are available immediately to mitigate DDoS attacks, but small and medium ISPs cannot devote the same level of resources to incorporating cybersecurity protections into their business processes. Key challenges to improving cybersecurity cited by ISPs include budget, capacity, limited knowledge and expertise of personnel, and lack of managerial support. To mitigate the impact of attacks, law enforcement agencies, ISPs, and cybersecurity authorities have increased efforts to cooperate during cybercrime case investigations.^{xl}

DIGITAL DIVIDES

Perceptions of internet affordability vary by geography and customer

At a national level, the average cost of internet access in Georgia is quite affordable and not considered to be a major barrier for e-inclusion. The benchmark for affordability, set by the Broadband Commission for Sustainable Development, is that prices should be less than 2 percent of monthly gross national income (GNI) per capita.^{xli} ITU ICT Price Trends data show that a monthly entry-level, 5GB fixed broadband plan in Georgia costs 2.84 percent of GNI per capita, while a monthly 2GB mobile broadband plan costs 0.85 percent of GNI per capita.^{xlii}

Figure 17. Affordability in Georgia

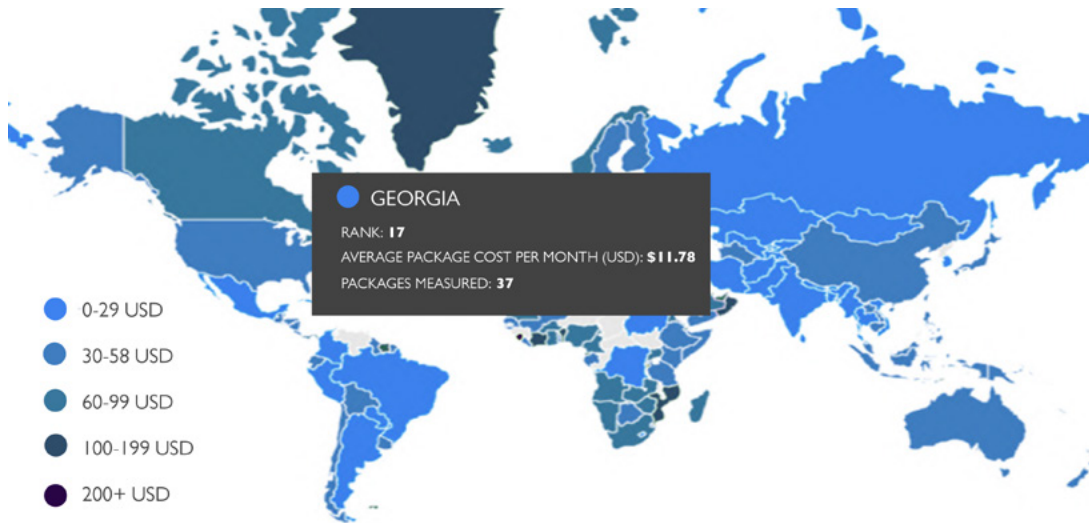


Sources: Alliance for Affordable Internet, GSMA Mobile Connectivity Index^{xliii}

⁹ For example: ISO 27000 series of standards, respective control mechanisms, asset classification, access controls, data processing standards, risk-based approaches, and governance frameworks.

According to a cable.co.uk study of broadband pricing in 220 countries (Global broadband pricing league table 2022, Figure 18), Georgia ranks 17th globally and is positioned well within the EaP region after Ukraine, Belarus, and Moldova.^{xliv} In general, EaP countries offer the cheapest broadband services in the world.^{xlv}

Figure 18. Global broadband pricing league table 2022

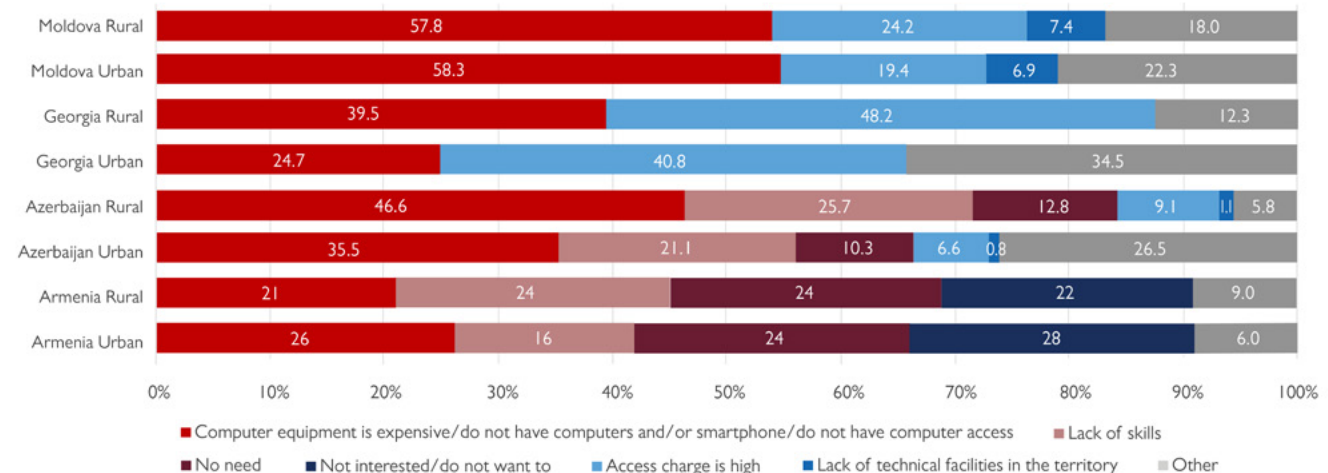


Source: Cable.co.uk^{xlvi}

The urban-rural affordability gap was revealed in interviews and focus group discussions. According to World Bank and EU analyses and based on national countrywide reports, Georgia’s rural population faces greater financial constraints purchasing computer equipment than those living in urban locations.^{xlvii} Interview participants also highlighted the difficulties of paying monthly internet fees because of the low salaries and incomes in the regions.

Another disparity exists between the internet tariff packages offered to corporate clients, which are considerably higher than household tariffs. Internet costs for corporate clients are more expensive because of the wide range of service-level agreements (SLAs) they demand and the bandwidth they use. However, SMEs perceive these prices as expensive because prices are not differentiated based on the size of the business—whether a single entrepreneur, a small, family-run SME, or a large corporation. Only 5.8 percent of small businesses are inclined to purchase internet packages with more than 1 Gbit/s, while twice as many medium and large corporations use 1 Gbit/s packages.^{xlviii}

Figure 19. Reasons for not being connected to the internet



Source: World Bank Group^{xlix}

As a result of the new regulations adopted by GNCC in 2021 for end-user protection, service providers cannot require customers to purchase their equipment, thus giving customers greater freedom of choice. The regulation also requires providers to offer detailed service tariff information and prevents providers from activating new service packages without subscriber consent.ⁱ

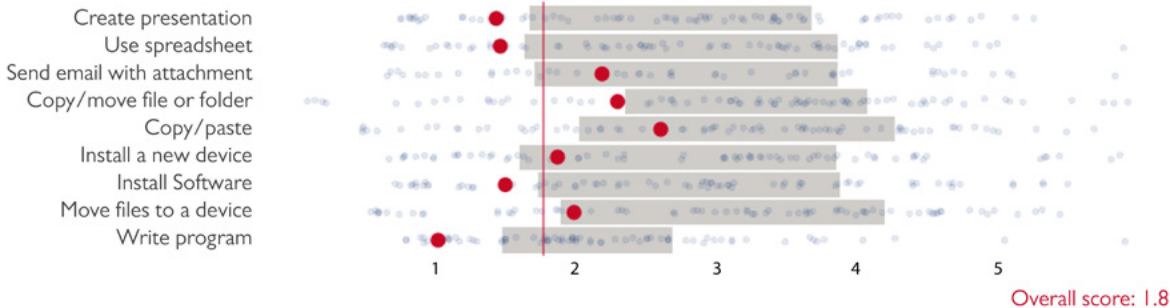
Rural interview participants also expressed greater dissatisfaction with the speed of internet connections than with the affordability, regardless of service provider or package. Consumers in rural areas do not have the opportunity to negotiate with internet providers regarding the quality of service, and they struggle to prove that technical problems stem from network instability. Focus group participants emphasized that the issue of poor internet quality is not limited to individual consumers but also affects schools across Georgia.

To address issues of connection speed and quality, there is an innovative online monitoring tool called sheamotsme.ge.ⁱⁱ It allows consumers and the GNCC to measure the quality and speed of fixed internet, to observe whether companies are fulfilling their service contract obligations. If poor-quality or low-speed service is observed, a subscriber can file a complaint with the GNCC to resolve the issue. Although this quality-control service exists and is widely publicized, the focus group interviews revealed that it is not a workable and effective solution as it requires tech skills and is not user-friendly.

Digital literacy remains a critical issue but lacks a cohesive national strategy

In Georgia, the general population’s interest in developing basic digital skills and a more comprehensive digital mindset are seen as promising digital transformation signs. However, statistics clearly demonstrate that Georgia suffers from low digital literacy. According to ITU, in 2021, only 36 percent of Georgians had basic ICT skills, and just 1 percent were classified as having advanced skills in ICT.ⁱⁱⁱ This skills deficit is considered to be a key barrier to digital development in the country.ⁱⁱⁱⁱ

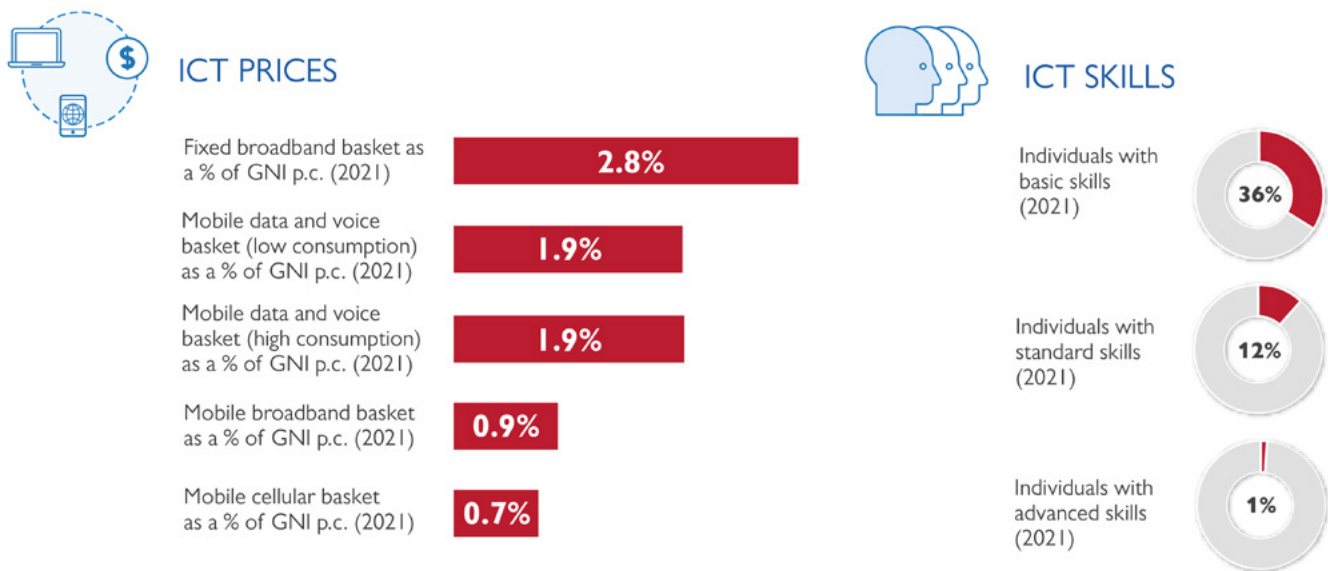
Figure 20. Digital literacy in Georgia



Source: UNESCO SDG4 indicators^{iv}

Considering the low level of digital skills, increasing digital awareness and capacity to navigate digital systems safely and securely has been the Government of Georgia’s strategic priority over the last two decades (2000–2020). This has been introduced either as a goal or as an objective and component-level initiative in multiple national policy and strategic documents. The very first explicit declaration of digital-skills development was in the Digital Georgia: E-Georgia Strategy and Action Plan 2014–2018, which stated that ICT-driven sustainable economic growth is achievable only with encouragement and involvement of skilled civil society and private sector involvement in innovation and with the development of e-services in an open and transparent environment.

Figure 21. ICT Enablers and Barriers



Source: ITU^{lv}

The NBDS explicitly names Development of Digital Skills and Demand as a strategic priority for the country. People with disabilities, youth, and the elderly are considered the most important and vulnerable target groups that need more digital inclusion and development of e-skills^{lvii}. For these groups of people, there are no specially adapted internet platforms or special training programs for computer skills or cyber hygiene.

MoESD is currently developing a long-term national strategy and implementation plan for digital transformation. Key priorities of the draft strategy include Digital Government Platforms, Digital Financial Services, Digital Business/Entrepreneurship, Digital Skills, Digital Infrastructure, Digital Innovations, and Legal/Regulatory Aspects.

All three iterations of the National Cybersecurity Strategy (2013–2015, 2017–2019, and 2021–2024) explicitly cover cyber awareness topics and consider it a “cultural turning point” for achieving fundamental changes in information society and for greater resistance against cyberthreats.

Building digital competence and capability and raising digital awareness is a clear aspiration of the strategic digital development framework and will support the digital transformation of the country. Although numerous sections of strategic action plans cover parts and pieces of cyber and digital skills and awareness issues, there is no single document that assembles the whole-of-nation approach to digital skills development and awareness.

Multiple public and private organizations provide digital literacy and inclusion trainings, but they lack coordination

Digital awareness–raising activities in Georgia are implemented by numerous state authorities (DGA, MoESD, GNCC, Ministry of Education and Science [MoES], State Inspector Service, Ministry of Internal Affairs [MIA], Public Service Development Agency [PSDA]), private sector representatives (companies, CSOs, NGOs, tech vendors), donor organizations, and more. Skill development programs, courses, seminars, and online resources are available in Georgia for targeted groups from public, private, academic, and civil society, but no coordination or limited scaling efforts have been conducted.

The MoES acknowledges the need for enhancing cybersecurity education in schools and at the university level, especially considering the pandemic-driven shift to digital materials and online teaching and learning. In 2018, Georgia made profound changes in the education program by introducing digital education to all public schools in the country. ICT studies are now introduced in the very first grade of elementary school and continue to be taught until the sixth grade. By the end of 2023, the Ministry plans to draft a textbook, *Cybersecurity for Teenagers*, covering ICT, digital citizenship, behavior in cyberspace, and other key cybersecurity topics.

The National Centre for Teacher Professional Development under the Ministry of Education and Science works on the development of teachers' digital skills and utilizes a train-the-trainer concept dedicated to the teachers so that they can teach their students, especially with textbook content. The Teachers' Digital Skill Development Initiative aims to strengthen school teachers' skills and to modernize and create a student-centered learning environment, with particular focus on the usage of digital education learning platforms. These endeavors cover national and regional representatives and are widespread in different parts of Georgia.^{lvii}

The Georgian National Communications Commission is in charge of building national capacity in digital skills, media, and cyber literacy. GNCC, with the support of the Council of Europe (CoE), enables improved media literacy for adolescents, parents, and teachers through the [Media Literacy Platform](#). GNCC has also conducted trainings on verifying facts and detecting fake information for up to 200 students from six universities and up to 1,000 high school students from 50 schools in Tbilisi and the regions.^{lviii} As part of the Digital Adoption Program, GNCC conducts analysis and identifies digital training needs and delivers digital trainings to the selected rural population in Georgia.^{lix} The organization has provided additional trainings for adolescents, covering social media and cyberbullying.^{lx} In 2020, GNCC began a collaboration with the Business and Technology University (BTU) to provide instruction on digital literacy and cyber ethics. Since 2020, more than 1,200 students from Tbilisi, Batumi, and Samtskhe-Javakheti state universities, as well as from the BTU, have already participated in media literacy projects.^{lxi}

Management support and leadership drive are key enablers for rolling out nationwide digital skills programs.^{lxii} However, Georgia lacks a national skills development campaign coordinated between authorities (e.g., Digital Governance Agency, MoES, GNCC, Personal Data Protection Service [PDPS], Ministry of Interior) and stakeholders (NGOs, civil sector, think tanks, donor community).^{lxiii} The irregular and ad hoc character of digital skills development programs are mostly due to the lack of consistent funding in both the public and private sectors of Georgia. This stems from gaps in political commitments, ownership issues, lack of cooperation, and lack of coordinated partnerships.

Digital divides persist in many dimensions of society

Despite the Georgian government's efforts to eliminate existing digital divides, gaps persist in several dimensions.^{lxiv} Digital gaps are mostly associated with lack of access to infrastructure and service, lack of skills and awareness, economic factors, and social conditions.^{lxv}

The urban-rural divide is the most obvious. Almost 93 percent of households in urban areas have internet connection, compared with 82.4 percent of households in rural areas. Moreover, back in 2018, approximately 83 percent of urban households benefited from fixed broadband connections, while in rural areas the figure drops to 52 percent.^{lxvi} Considerable disparities exist in possession of computers (70.7 percent and 46.1 percent, respectively) and mobile phones (92 percent and 82 percent, respectively) between the urban and rural population.^{lxvii}

There is also a significant age-related digital divide. In terms of internet usage, within the last three months, people aged 60 years and older had the lowest rate of internet usage (42.9 percent), in comparison with the 15–29-year-old population, who had a 98.7 percent rate of internet use. The majority of the over-60 population (55 percent) had never accessed the internet in their lifetime.^{lxviii}

Digital skills are [a] big challenge, especially with youngsters, elderly, people [with disabilities], [and] minorities [who] are the most marginalized ones.
—, ISOC

Although the price of internet is generally perceived to be affordable, possession of computer technologies, installation of internet, and monthly payments could be a significant challenge for low-income and socially vulnerable families. As demonstrated by the case study, Use of internet and digital skills in the Ozurgeti area, conducted by GNCC for the Log-in Georgia project, respondents named lack of technology equipment and the inability to pay for internet as the reasons for not having access to the internet, among others (lack of interest, lack of skills).^{ix}

Georgia's gender digital divide (GDD) is not immediately obvious. When it comes to possession of computers and mobile phones, access to the internet, and usage of social media and other e-services, there is no digital gender gap. As reflected in GeoStat data from 2021, women are actually more likely to use a computer on a daily basis (81 percent of women versus 74 percent of men) and access the internet daily (93 percent versus 90 percent) (figure 22). The ITU Gender ICT statistics of 2021 corroborate this data, finding that women and men report almost the same percentage of internet usage (76.1 female, 76.8 male).^{ix}

Figure 22. Internet user data demographics

DISTRIBUTION OF POPULATION AGED 15 AND OLDER
BY FREQUENCY OF COMPUTER USE, JULY 2021 (SDG 4.4.1)

TOTAL NUMBER IN TEN THOUSANDS

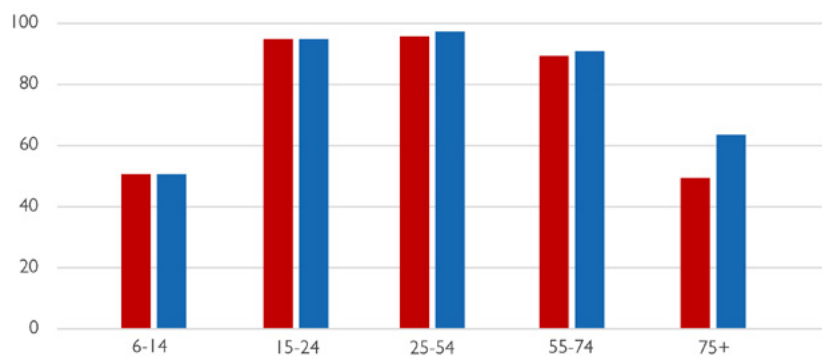
	PERCENT		GENDER DISTRIBUTION	
	WOMEN	MEN	WOMEN	MEN
EVERY DAY OR ALMOST EVERY DAY	81	74	54	46
AT LEAST ONCE A WEEK (BUT NOT EVERY DAY)	11	17	42	58
LESS THAN ONE WEEK	7	9	46	54
TOTAL PERCENT	100	100		
NUMBER	813	764		

DISTRIBUTION OF POPULATION AGED 15 AND OLDER
BY PURPOSE OF INTERNET USE, JULY 2021

	WOMEN	MEN
PARTICIPATING IN SOCIAL NETWORKS	96.2%	94.3%
READING ONLINE NEWS SITES/ NEWSPAPERS/NEWS MAGAZINES	55.2%	53.4%
SENDING AND RECEIVING EMAILS	45.9%	47.3%
TELEPHONING OR MAKING VIDEO CALLS OVER THE INTERNET	96.2%	93.1%
SEEKING HEALTH RELATED INFORMATION	61.8%	38%
FINDING INFORMATION ABOUT GOODS OR SERVICES	39.7%	37.2%
LOOKING FOR A JOB OR SUBMITTING A JOB APPLICATION	12.7%	11.8%
BANKING VIA THE INTERNET	38.4%	34.2%

Source: GeoStat^{ix}

SHARE OF POPULATION AGED 6 AND OLDER THAT OWNS A MOBILE PHONE, JULY 2021 (SDG 5.B.1)



DISTRIBUTION OF POPULATION AGED 15 AND OLDER BY FREQUENCY OF COMPUTER USE, JULY 2021 (SDG 17.8.1)

TOTAL NUMBER IN TEN THOUSANDS

	PERCENT		GENDER DISTRIBUTION	
	WOMEN	MEN	WOMEN	MEN
EVERY DAY OR ALMOST EVERY DAY	93	90	54	46
AT LEAST ONCE A WEEK (BUT NOT EVERY DAY)	6	8	46	54
LESS THAN ONE WEEK	1	1	44	56
TOTAL PERCENT	100	100		
NUMBER	1,238	1,083		

Similarly, data on women’s mobile connectivity do not demonstrate a significant gender digital divide. The GSMA Mobile Connectivity Index’s Gender Equality sub-index scores Georgia at 91.6 percent, which is much higher than the world average and just behind several developed EU countries. Georgia is at 73.1 percent for closing the Gender Gap, preceded only by Moldova at 78 percent and Belarus at 75 percent, for EaP countries^{lxxii}

Although there does not appear to be a significant GDD in terms of access and usage of digital tools, one aspect of the digital divide that does exist in Georgia is that women face more barriers than men in the digital economy.^{lxxiii} There is also a large imbalance in terms of females’ presence in science, technology, engineering, and mathematics (STEM) educational programs and digitally enabled economic activities. Women’s underrepresentation in the STEM disciplines and companies that develop and manage digital technologies also results in many technologies that are biased toward men’s needs and interests. Closing this GDD requires the development of more gender-responsive technologies that are designed to meet women’s and girls’ unique needs and interests.

As digital technologies are increasingly embedded into daily life—for health, financial, and legal services—those that cater to men may limit or prevent women’s access to essential information and services. Digital technologies access is also a common prerequisite for benefiting from new educational and economic opportunities. Over time, the development of technologies that are not gender-inclusive could compound economic inequalities between women and men. The GDD also shapes women’s ability to participate in public affairs—digital technologies are vital tools for learning about and participating in local and global public affairs. Women’s exclusion from online and digital platforms stifles their voices and participation in public affairs, furthering preexisting political inequalities between women and men.

The gender digital divide is also larger in rural areas and in communities with greater disadvantages relating to poverty,

lower education levels, and lack of employment. Traditional biases against women's engagement in STEM sectors can amplify vulnerability and disproportionately affect women. In Georgia, ICT fields of study and work are traditionally male-dominated. With these gender-based stereotypes, female participants are discouraged from pursuing technological fields. Girls are inclined to choose professions in the humanities, while boys represent the vast majority of students in engineering and ICT specializations. Georgian females are underrepresented in STEM fields. The percentage of female graduates (38.68) in STEM considerably lags behind that of males (61.32). According to GeoStat, in 2020, the ratio of female-to-male graduates of public and private vocational education institutions in ICT programs was 3:10 (three women to ten men). Moreover, only 12 percent of Georgian women were employed in the most in-demand professions in the labor market—IT and science and technology—compared to 30 percent internationally.

Box 5. Empowerment programs for women in ICT



CASE STUDY

There is a rapidly growing number of international donor-supported women's organizations, NGOs, and academic programs in ICT with ongoing women's empowerment initiatives that are well-placed to work with the industry and the public sector to build a women-inclusive digital transformation strategy for the country. Many of these initiatives have already proved transformational, demonstrating positive societal impact for the development of education, training, and awareness activities.

Additionally, UN Women, Google's Women Techmakers program, FabLab, and some Georgian universities provide ICT trainings for women aged 18–35 years, taught by IT instructors, to increase women's participation in the ICT industry.

500 Women in Tech is a large-scale retraining project in Georgia coordinated by the BTU, with the support of UN Women and the Government of Norway. The initiative aims to strengthen the role of women and their involvement in the field of technology.

There are some existing interlinkages between industries and higher education institutions for women in ICT programs. The BTU maintains close ties and cooperation with local technology companies. The wide range of private sector representatives (Georgia's Innovation and Technology Agency [GITA], TBC, EPAM, Exadel, Exactpro, GeoSTQB, Noxtton, b2c, Phubber, Sambrella, Sweeft Digital, Travel Guide, Total Courage – Georgia, Concept Digital, UPWAY, etc.) demonstrates a vivid readiness and willingness to be part of women's training programs through training delivery as well as by internship and employment of the beneficiaries at different stages of the project implementation.

Box 6. UN Women: Women of Georgia in technology



CASE STUDY

In 2019, with the support of the Norwegian Ministry of Foreign Affairs, in partnership with the Innovative Education Foundation, GeoLab, and Universities of Batumi, Kutaisi, and Tbilisi, UN Women launched a free web programming and social media marketing training program and internship for women in western Georgia.

The program supported 124 registered women participants to study ICT fields and to find employment in modern professions, and it empowered them economically. After intensive training, participants started internships in various private companies, NGOs, and public services. Graduates signed new employment contracts, others improved their positions, and most importantly, the monthly salaries of 42 percent of participants increased by an average of US\$152 (400 GEL). The women participants involved in the program set an amazing precedent for solidarity and became goodwill ambassadors for spreading digital knowledge among women in the regions.

Additional efforts are needed to ensure digital inclusion of people with disabilities and of linguistic minorities

In 2014, Georgia ratified the Convention on the Rights of Persons with Disabilities (CRPD)^{lxv} and, in 2021, its Optional Protocol.^{lxv} Thus, Georgia committed to ensure equal access of persons with disabilities to the physical environment, transportation, information, and communications, including information and communications technologies and systems (Article 9 - Accessibility).

There is a lack of evidence and research data around levels of digital access and inclusion of people with disabilities in Georgia. Even the correct statistics about the number of people living with disabilities, along with the categories of disabilities, are not clearly defined and registered.^{lxxvi}

According to research study on digitally vulnerable groups (DVGs) in Georgia,^{lxxvii} the most digitally vulnerable group is that of individuals with special needs who have challenges in accessing and using technology and public and private e-services. People with disabilities struggle to benefit from available ICT products, access e-information, and use digital communication channels and portals. Very few public e-service portals are compliant with the World Wide Web Consortium's (W3C's) Web Content Accessibility Guidelines (WCAG)^{lxxviii} standard for web accessibility.

There are positive signs of digital inclusion initiatives under the Log-in Georgia project. Its second component, Digital Adoption Program, aims to identify digital needs and promote the use of the internet and digital services by women, ethnic and social minorities, and people with disabilities in the selected geographic areas.^{lxxix} There is currently no publicly available information about the results of these capacity building programs and their impact on digital inclusion for DVGs.

Another digitally marginalized group is those with language barriers, such as Azerbaijani- and Armenian-speaking ethnic minorities in Georgia. As all the service delivery portals and information sites are either monolingual or provide content in Geo-Eng versions, it is hard for this group to benefit from existing digital tools. Moreover, there is a lack of e-skills training for local minorities in their native languages.^{lxxx} There is a further need to define and impose mandatory accessibility requirements for ICT products, digital services, public websites, and other essential services for the benefit of people with disabilities.

2.2. PILLAR 2: DIGITAL SOCIETY, RIGHTS, AND GOVERNANCE

Digital Society, Rights, and Governance focuses on how digital technology intersects with the government, civil society, and the media. This pillar is divided into several sub-pillars: Internet Freedom; Civil Society and Media; and Digital Government. Internet Freedom explores factors that enable or constrain the exercise of human rights and fundamental freedoms online. This includes individual rights to freedom of speech, privacy, and free assembly—and the abuse of these rights through digital repression. Civil Society and Media identifies key institutions and how they report on, advocate around, and influence online freedoms. Digital Government looks at the government’s efforts to manage internal information technology (IT) processes and systems, deliver citizen- and business-facing e-services, and engage with the public through digital channels.

DIGITAL SOCIETY, RIGHTS, AND GOVERNANCE	
<p>KEY TAKEAWAYS</p> <ul style="list-style-type: none"> • Takeaway 1: Digital government’s foundations are strong, but key stakeholders are uncoordinated and a cycle of underinvestment and a lack of awareness has resulted in limited use of digital government services. • Takeaway 2: Civil society organizations struggle to respond to propaganda from outside and inside the country. • Takeaway 3: Electronic voting is on the horizon, and support is needed across multiple fronts to ensure it is successful. • Takeaway 4: Georgia can capitalize on a strong and expanding system of internet governance to position itself as a regional leader. 	<p>RELEVANT RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Recommendation 6: Improve coordination and accountability on Government of Georgia digital transformation. • Recommendation 7: Double down on media literacy, digital citizenship, and disinformation mitigation. • Recommendation 8: Enhance support for the modernization of online, independent media outlets. • Recommendation 9: Leverage success in freedom online to promote regional leadership and increase attractiveness of the Georgian market.

DIGITAL GOVERNMENT



KEY TERMS | BOX 4. Digital Government

Digital government refers to the use of digital technologies as an integrated part of government modernization strategies to create public value. Successfully navigating digital transformation requires more than adopting new applications; it requires a shift in processes and attitude toward agile and collaborative decision-making.

Digital government is built around three core functions: deliver, manage, and engage. The performance of digital government services depends on foundational elements, such as change management, human capacity, legislation, policy, regulation, and infrastructure. Investment in these core components and foundational elements can help government bodies become more coordinated, efficient, resilient, proactive, and accountable.

[Recent research funded by the World Bank](#) outlines the overall ecosystem of digital government in Georgia. This work is a useful companion to the DECA for those interested in delving deeper into the history and existing structure of digital government.

Source: *USAID Digital Government Model*

Digital government’s foundations are strong, but key stakeholders are uncoordinated

One repeating theme throughout multiple interviews was the lack of coordination between government agencies on digital issues. DGA, the MoESD, Information Technology Agency (ITA), and a representative from the Administration of the Government of Georgia each mentioned that lack of coordination was a barrier to effective digitalization.

This lack of coordination takes multiple forms. The mildest instance includes a lack of visibility, duplication of efforts, and limited ability to scale across the government. On the other end of the spectrum is outright competition between agencies to own particular issues.^{lxxxix}

One example of this lack of coordination is the upcoming release of two new strategies: the Digital Governance Strategy (created by DGA) and the National Strategy for the Development of the Digital Economy and the Information Society (created by the MoESD). Though both strategies are nearly complete, one interviewee in the Administration stated that “it was news for us that there wasn’t proper coordination between those two agencies.”^{lxxxix}

Another interviewee with expertise in cybersecurity attributed a number of cyber weaknesses to a lack of coordination. Georgia does not have a single government entity specialized in national strategic cybersecurity threat analysis or a body that has the power to supervise both public and private digital service providers on cybersecurity best practices. Instead, there are several national bodies responsible for different aspects of cybersecurity in Georgia. While there is a system for categorizing CII into different categories for assigning oversight to different agencies, this interviewee viewed the categorization method as woefully inadequate. In other words, the split of responsibilities among OTA, DGA, and the National Security Council (NSC) is not especially organized or logical. With greater coordination, this process could be revamped to better align with the strengths of agencies and therefore facilitate more effective oversight of CIIs.

Lack of coordination manifests a number of other issues. As ITA mentioned, a lack of coordination and fragmented systems means that its work is principally to “put out fires”—fixing problems that crop up with duplicative or non-interoperable systems—rather than to work proactively to build truly effective systems.

Importantly, however, this lack of coordination may be changing with a new resolution to stand up a Digital Governance Commission.^{lxxxix} Formed in early 2023, this is an interagency-coordinating body on digital issues. DGA, the Ministry of Economy and Sustainable Development, and other agencies and Ministries are participating in the Commission, as is the Administration of the Government of Georgia. Its first meeting was held in February 2023, at which time it set out the main roles of a Secretariat and further defined the role of the body’s various working groups. One interviewee was especially optimistic about this^{lxxxix} because Deputy Ministers will be involved in a decision-making capacity (potentially signaling more leadership support for digital issues in the government writ large).

Georgia has open data on paper but not in practice

Georgia has been a member of the Open Government Partnership since 2011.^{lxxxix} A previous Action Plan (Digital Georgia: E-Georgia Strategy and Action Plan 2014–2018) addressed key priorities, such as e-services, e-participation and open government, e-health, and public financial management systems, among other topics.^{lxxxix} The most recent Action Plan (2018–2019) outlines five commitments: improved public services for all; innovative platform of citizen engagement; increasing access to public services through introduction of a unified system of authentication; innovative platform of economic governance; and activation of an electronic portal for meeting the requirements of the Environmental Assessment Code.^{lxxxix} A new Action Plan is currently under development, and it addresses many of the same issues as previous iterations (in part because many of the actions in previous iterations were not achieved in full).^{lxxxix} In a promising development, Georgia joined the Technology for Democracy cohort under the Summit for Democracy.^{lxxxix, xc}

There are still many steps that must be taken to become a truly open government. For example, while the Georgian government does have an online open data portal, the portal only hosts 174 datasets as of March 2023.^{xc} By comparison, DataLab—an open data platform hosted by Institute for Development of Freedom of Information, a government

watchdog—contains 1,452 datasets from 189 public institutions.^{xcii}

On paper, Georgia’s freedom of information policies and legislation are relatively well-established.^{xciii} For example, the right to access government information has been a part of the Administrative Code of Georgia since 1999.^{xciv} In practice, however, these policies and legislation are not routinely adhered to or enforced.

Some public agencies have been significantly less responsive to requests for information than others in recent years, while the judiciary has not proven to be an effective means of challenging their refusals to provide information.
 — Transparency International^{xcv}

Moreover, according to the Institute for Development of Freedom of Information’s (IDFI’s) most recent analysis, the quality of access to public information in the country notably declined in 2022: “The rate of responses (58 percent) from public institutions in 2022 is the lowest observed since 2010.”^{xcvi} According to IDFI, the Administration of the Government of Georgia—the main coordinating agency of the executive agencies—has been “violating the requirements of the Georgian legislation [on accessibility of public information] for years.”

IDFI plays an important watchdog and research role in Georgia’s digital ecosystem, publishing work on datagovernance,^{xcvii} ^{xcviii, xcix, c} digital literacy,^{ci} digital vulnerabilities,^{cii, ciii} and disinformation.^{civ} IDFI also supports Georgia’s Open Data Lab, which allows users to query and analyze data from public institutions.^{cv}

One interviewee noted that the government as a whole should have an improved process for making data publicly available: “Everything is closed unless someone says it should be open.”^{cvi}

Interviewees note a lack of political will for digitalization and the difficulty of retaining staff

Many interviewees mentioned that political will and progress on digitalization have stalled in recent years, a sentiment that is reflected in the United Nations E-Government Survey data.^{cvi} This lack of political will has resulted in a difficulty retaining qualified staff in technical positions. Because there are few champions for digitalization in leadership positions throughout the government, motivation and the potential for recognition for these employees is low.

In addition, as Georgia’s private sector has grown, salaries in public sector IT positions cannot keep pace. This is especially true after the entrance of international companies and increased demand from the private sector for IT professionals; in the “food chain” of IT specialist employers, the government sits on the lowest level.^{cviii} This may be especially true for cybersecurity professionals. Though the government has approved several National Cybersecurity Strategies, including the most recent (2021–2024),^{cxix} multiple interviewees mention retaining qualified cybersecurity staff as a barrier.

Figure 23. Georgia’s rank on the UN E-Government Survey

YEAR	RANK										
	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
E-GOVERNMENT	60	65	60	61	56	72	100	90	83	94	99
E-PARTICIPATION	72	80	87	76	49	66	127	135	129	123	123

Source: Data from the UN E-Government Knowledge Base^{cx}

Box 7. Emerging technologies: Blockchain

Georgia instituted blockchain-enabled land registries in 2016, when Georgia’s National Agency of Public Registry signed an agreement with blockchain company Bitfury. Some have argued that typical anti-corruption measures and institution building set the stage for successful implementation of the blockchain land registry system. For example, the U4 Anti-Corruption Resource Centre stated in October 2022 that “blockchain has too often received all the credit for this success. In reality it has had much more to do with the long-term process of building a trusted legal framework, local inclusion in establishing land rights, the development of a digital public registry, digital and precise maps, a modernized and simplified registration process, and a self-financing, responsible agency. Most important[ly], there was a political will and international support to drive the change.”

According to an interview with a member of the Digital Transformation Council under the MoESD, “The blockchain element was more artificial than functional...the only real benefit of this was the positive signal that the Government of Georgia is ready to implement such innovative initiatives.”

The individuals who created this blockchain system did not accept the DECA research team’s requests for information or interviews.

Machine learning

The USAID Economic Governance Program—working with Deloitte—is adapting the Deloitte [RegExplorer](#) tool, which uses machine learning to help government agencies and other stakeholders understand and analyze regulations more quickly and in greater depth. The program is currently creating a Georgian-language version of RegExplorer to supplement the English-language dataset.^{cx1}

A cycle of underinvestment—and lack of awareness—has resulted in limited use of digital government services

In 2012, my.gov.ge was launched by the Digital Governance Agency (formerly known as the Data Exchange Agency). This is the primary digital portal by which citizens can access government services. The site hosts approximately 700 e-services (e.g., land registry, address registration, business registration, utility payments).^{cxii} In 2020, usage of services on my.gov.ge increased by 40 percent, with the number of daily visits exceeding 30,000.^{cxiii} Still, as of July 2021, more people were using Georgia’s 22 physical Public Service Halls to interact with the government, compared to my.gov.ge. Demand for digital services in general remains low,^{cxiv} at least in part because the Public Service Halls are quite effective.^{cxv}

Friction is another reason that online services are underutilized; many services require an e-signature, which in turn requires an ID card, an ID reader, and a pin code. And while many services are available online, not all useful services are.

Lack of awareness may also play a role. Multiple interviewees noted that the public and government officials at the regional level are often unaware of the digital services available online. Corroborating this, a 2021 survey conducted in Ozurgeti found that—regardless of age, gender, socioeconomic status, or disability status—lack of “knowledge of useful applications” was in the top three reasons why individuals do not use the internet.^{cxvi} Assuming the same logic extends to e-services provided by the government, it may be true that citizens do not access services online because they are largely unaware.

Georgia faces similar issues in e-participation. E-participation represents the governments capacity to involve citizens in decision-making processes using technology. The UN’s E-Participation Index is composed of three factors: 1) E-Information, which includes accessibility of government information; 2) E-Consultation, which measures the extent to which citizens have the ability to engage in the public policy-making process; and 3) E-Decision-Making, which measures the extent to which the government takes into account public comment in decision-making. In the most recent UN assessment, Georgia’s scores on the latter two categories were relatively low compared to its regional peers. On e-participation as a whole, Georgia outpaced Latvia and trailed ten other countries in the region.

In 2017, Georgia launched ichange.gov.ge, which is an e-participation portal that allows citizens to submit petitions to the government. However, The German Marshall Fund states that most people are not aware of these petition tools, which is why they are underutilized. At the same time, while electronic public opinion surveys have been used in Akhaltsikhe and

Kutaisi, citizen engagement remains low due to lack of awareness, lack of digital skills, or little trust in local authorities.^{cxvii} According to a number of interviewees, this platform had issues from the beginning: the number of signatures required to advance a petition was 10,000, far too many for Georgia’s small population (the threshold was later decreased to 5,000). Moreover, there was no widespread awareness campaign about the platform. These issues, coupled with a slightly burdensome registration procedure (authentication over email), resulted in a severely limited uptake. Since its inception, only three petitions have received the required number of signatures to trigger a review by the government.^{cxviii}

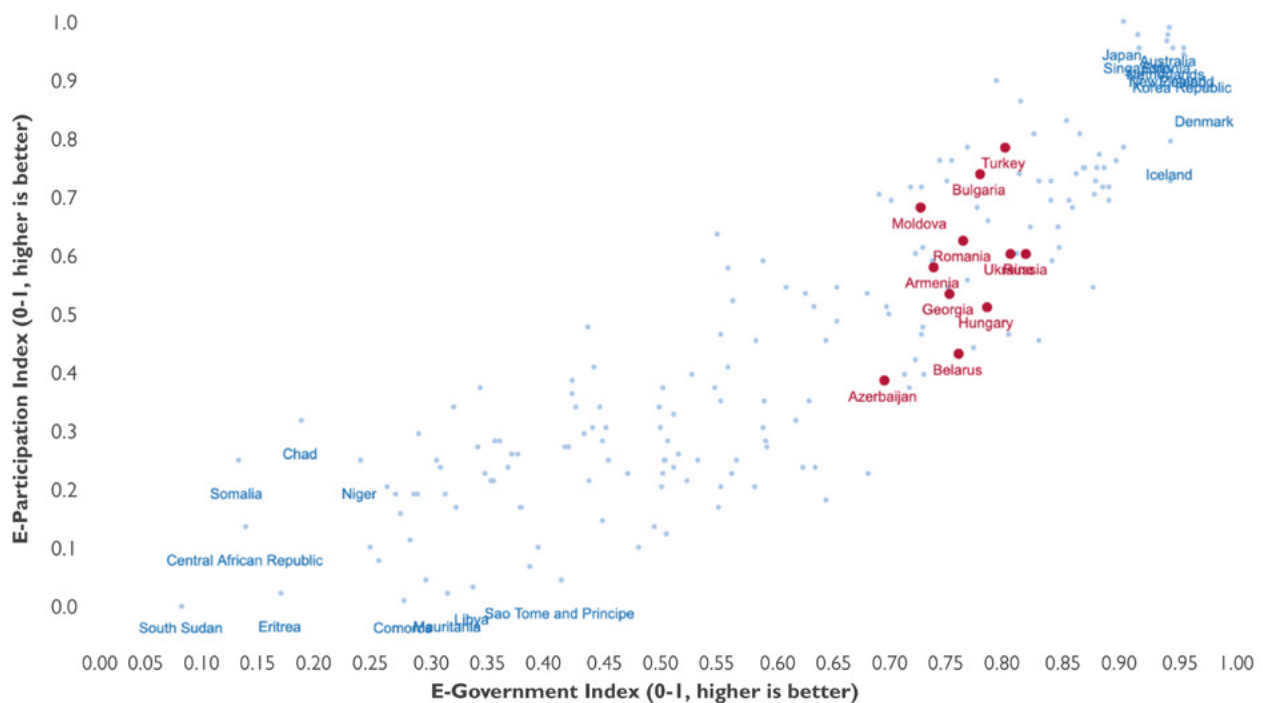
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As one interviewee from the Municipal Services Development Agency (MSDA) mentioned, improving uptake of these services through greater public awareness might then also provide justification for further government investment in them. Simultaneously, improving the services themselves may attract users. At a time when the government is building new Public Service Halls,^{cxix} these investments may be better targeted toward capitalizing on existing digital services and improving others. For example, the Revenue Service (RS) in Georgia is closing physical locations and investing in additional e-services.^{cxx}

Yet, in doing so, it is essential to ensure that these services are designed with the user, a key goal of the Principles for Digital Development^{cxxi}—just as with the physical Public Service Halls. According to Lado Nafetvaridze, a professor of political sciences in Georgia, a lack of user-centrism in the design of digital tools is not an exception with the Georgian government; rather, digital services are frequently designed without a thorough understanding or examination of end users’ needs.^{cxii}

Georgia’s use of online services to engage and inform its citizens in policy, decision-making, and service delivery—as well as its use of ICT to increase efficiency, effectiveness, transparency, and accountability in the public sector—is similar or slightly lower than its regional peers.^{cxiii}

Figure 24. UN E-Government Regional Index



Source: DECA Dashboard^{cxxiv}

The Government of Georgia tends not to outsource IT needs to the private sector

Two interviewees independently suggested that the government tends not to outsource IT needs to the private sector.^{cxxv, cxxvi} There were several stated reasons for this. The first is a sense that it is less expensive to build systems in-house compared to contracting with a private firm. Yet the costs of this focus on prudence are borne in other ways—overworked employees who may not have the direct expertise to build systems in the first place.

Second, to outsource effectively, there must be a robust private sector that is capable of competing and completing the work well. One interviewee mentioned that Georgia does not have this ecosystem—firms are not used to working with the government and would prefer to work with other private sector actors instead.^{cxxvii}

The third stated reason is that the government does not have the ability to outsource effectively. Though certainly not unique to the Georgian government, one interviewee mentioned that companies that win contracts tend to check the boxes of the contract and then, once that particular contract is over, the IT systems become obsolete immediately. If new features are needed, that either requires a new contract or in-house expertise. In other words, upkeep costs for IT systems are not factored in, leading to partial solutions that do not prove to be sustainable.

One of the key priorities of the Digital Transformation Council under the MoESD is to identify functions that the government is currently providing and to determine whether outsourcing these functions to IT companies would provide a benefit to the digital ecosystem overall (by more quickly meeting the government's needs and by enhancing the private sector through the government-funded projects).^{cxxviii}

Mobile ID presents a great opportunity to streamline digital services in Georgia, but the path to implementation is unclear

Because of the friction associated with authenticating oneself to access e-services (using an ID card, a reader, and a pin number), there was agreement among multiple interviewees that widespread mobile ID would be a positive development.

PSDA—Georgia's only "trusted service provider" certified by DGA—is planning to move forward with a mobile ID system by 2024. It has not yet decided whether the ID system will be based on SIM card registration or registration through a mobile application.^{cxxix} There are consequences for each choice—new generations of smartphones may have integrated SIM cards, meaning an app-based mobile ID would be the ideal choice. Yet not everyone has a smartphone that can accommodate an app-based system. While PSDA is concerned about excluding individuals from the system, it also wants to do what is going to be most useful in the future without wasting resources. PSDA will also need to determine appropriate data protection processes once it has decided on a particular mobile ID method. As of today, it is in discussion with other Ministries, the National Bank of Georgia, and others on various mobile ID prototypes. PSDA is aiming to complete a prototype in 2023.

At the same time, an interviewee at DGA believed that private sector incentives should be put in place for a qualified firm to become a trusted service provider and to then create a mobile ID system procured by the government.^{cxxx} According to this interviewee, the reason that PSDA is the only trusted service provider is that Georgia is a small market and there are few financial incentives for the private sector to serve the Georgian government's IT needs.

Donor coordination on digital is lacking

Interviews with other donors in the country revealed that a lack of donor coordination, specifically on digital issues, is resulting in overlapping work and frustration from individuals in the Georgian government, but this is not unique to Georgia. The World Bank, USAID, the CoE, the EU Delegation to Georgia, and the European Bank for Reconstruction and Development (EBRD) are often working to resolve similar issues. One interviewee mentioned that this results in strategy fatigue, with many drafted strategies on digitalization—funded and supported by donors—but with minimal follow-through, due to little political will.^{cxxxi}

For example, the EU Delegation to Georgia works on a host of overlapping issues with USAID—reducing the digital divide between urban and rural areas, digital skills, women’s empowerment in the ICT sector, digitalization of SMEs, and cross-cutting policy coordination on digitalization. The EBRD, as another example, is supporting IT training for youth across five regions of Georgia and then working to connect them to employment.^{cxxxii}

Electronic voting is all but certain, but effective implementation may not be

Following tests of electronic voting (e-voting) systems in the Krtsanisi region, Batumi, and 117 precincts during 2023 by-elections, the Central Elections Commission (CEC) plans to implement e-voting nationwide by 2024 based on the decision of Parliament of Georgia, covering at least 70 percent of the Georgian population^{cxxxiii} (though accounts about this percentage differ. There are plans to merge certain precincts and thus coverage will be 90%).^{cxxxiv}

The CEC has received praise for its transparency from elections watchdog International Society for Fair Elections and Democracy (ISFED). For example, in recent years the CEC has made public all the data used in election monitoring (e.g., polling station data, election monitoring data, and protocols). ISFED attributes this to Georgia’s priorities as part of the Open Government Partnership, civil society activism, and a genuine interest on the part of CEC staff for working in a transparent way.^{cxxxv}

To this point, CEC openly stated to the DECA research team that it has not yet completed its risk assessment for e-voting, nor has it completed its plan for a parallel audit system to check the e-voting system during the election itself. CEC also recognizes that knowledge and awareness campaigns are required for implementation of e-voting to be successful. Assistance to CEC in risk assessment and scenario planning for e-voting and wide-scale knowledge and awareness campaigns is planned through the USAID Elections and Political Processes Support (EPPS) activity, implemented by the Consortium on Elections and Political Processes (CEPPS). The CEC is in the process of developing a memorandum of understanding and a code of conduct with media and NGOs prior to the election to make their standards for e-voting transparent, share ideas, and solicit input about e-voting. CEPPS will also work with civil society groups to build their capacity in monitoring elections with e-voting.

Still, opinions diverge on whether necessary steps are being taken to ensure e-voting is a success. According to the International Foundation on Electoral Systems (IFES), there has not been a comprehensive pilot of this technology, there is not a culture of public trust in it, and there are numerous ways that e-voting can go wrong if implementation is rushed. The 2023 by-election pilot should have served as a basis for a larger-scale pilot, because opposition parties boycotted the by-elections, resulting in single party participation and low voter turnout. According to IFES, poor implementation will result in decreased trust in elections at a pivotal time in the country’s path toward democracy.^{cxxxvi}

IFES looks to Kyrgyzstan as an example of a country that accomplished the rollout of e-voting effectively and transparently. It took the country years and several election cycles to roll out electronic voting. Authorities conducted careful assessments of public opinion, and as a result there is widespread acceptance and understanding of e-voting. A national strategy on how to approach the issue was developed, and digitalization of electoral systems was accomplished carefully. Even still, Kyrgyzstan’s recent elections were not without controversy.^{cxxxvii, cxxxviii}

With respect to cybersecurity, one interviewee outside of government noted that CEC’s cyber capacity is inadequate—a point on which CEC largely agreed, due to lack of trained personnel—and that more hands-on training is needed (e.g., hands-on cybersecurity exercises and red-teaming, rather than a “check-the-box” training).

As is explored further in the next section (Civil Society and Media), there are concerns among CSOs regarding the claims made on e-voting and whether journalists will be capable of covering e-voting or permitted to do so.

The real problems are not ones that electronic voting will solve. The real problems are information manipulation before elections.

—ISFED

I have been transported by the police out of the electoral office before—it's a question of whether the press will be allowed to cover the elections.

—Journalist

CIVIL SOCIETY AND MEDIA



KEY TERMS | BOX 5. Malinformation, Misinformation, Disinformation

Malinformation is the deliberate publication of private information for personal or private interest, as well as the deliberate manipulation of genuine content. Note that this information is based on reality but is used and disseminated to cause harm.

Misinformation is information that is false but not intended to cause harm. For example, individuals who do not know a piece of information is false may spread it on social media in an attempt to be helpful.

Disinformation is false information that is deliberately created or disseminated with the express purpose to cause harm. Producers of disinformation typically have political, financial, psychological, or social motivations.

Source: [USAID Disinformation Primer](#)

Civil society organizations struggle to respond to propaganda from outside—and inside—the country

While Georgia's civil society sector has made slow but steady progress on a number of metrics since 2008, the greatest difficulty to sustainability is access to adequate financing.^{cxxxix, cxli, cxlii}

At the same time, trust in CSOs is generally low among the public writ large, in part due to coordinated efforts to discredit and delegitimize independent CSOs.^{cxliii} The recently withdrawn “agents of foreign influence” bill^{cxliiii} is the most recent example.

The Government's goal is to crowd out CSOs from the media space.

—Anonymous CSO

Georgia's information ecosystem is notoriously polarized. Online disinformation from Facebook groups, media outlets, and websites originating from Russia is common; in the last several years, disinformation has focused on the pandemic, vaccines, linkages between 5G and COVID-19,^{cxliv, cxlv} and the Armenian and Azerbaijani conflict.^{cxlvi} News Front (formerly known as Crimean Front) is a Russian outlet that publishes pro-Russian content in Georgian. In March 2020, News Front suggested that a laboratory operated by the United States in Georgia was connected to the creation of COVID-19.^{cxlvii} To combat this, USAID supports the Georgian government with programming on disinformation through the five-year Georgia Information Integrity Program.^{cxlviii}

Interviews with several organizations that focus on the media environment made it clear that disinformation from outside the country is far from the only concern. The Media Development Foundation (MDF), ISFED, and IDFI all clarified that political parties in Georgia have become adept at spreading propaganda. This includes, for example, creating purportedly independent Facebook groups to spread pro-party content. (Facebook has confirmed this and has taken down many accounts, groups, or pages in the past several years.) According to the Atlantic Council, “In a majority of cases, the pages attempted to camouflage themselves as online news outlets.”^{cxlix}

Civil society organizations are generally understaffed, overworked, underfunded, and need more time and resources to better understand the proven strategies for combating disinformation online, especially in a changing social media landscape and as networks of disinformation increase in complexity.^{cl}

ISFED stated that it is mainly documenting coordinated inauthentic behavior (CIB) and disinformation on social media, rather than evaluating the effectiveness of interventions to prevent it (such as “pre-bunking” information online). ISFED mentioned that it is hoping to complete (before the 2024 election) a research project on how social media influences potential voters;

however, funding to do this work is not guaranteed.^{cl}

Importantly, Facebook relies on civil society actors in Georgia to flag disinformation on the platform. According to Zinc Network, the regional policy lead for Facebook stated that CSOs have some of the “best coordinated inauthentic behavior research we’ve seen.”^{clii}

MDF noted that its partnership with Facebook has been instrumental in scaling its social media monitoring work. Specifically, the organization identifies disinformation in the Georgian language on Facebook, and then Facebook responds by lowering that information in the news feed. Facebook also provides tools and resources to help find disinformation, including machine learning systems that can flag images and text similar to those already identified by MDF.

However, MDF noted that the machine learning tools from Facebook are generally ineffective in the Georgian language; they tend to be more effective in Russian and English,^{cliii} likely due to the smaller corpus of digitalized language data available in Georgian.

Yet while Facebook is the largest social media platform in Georgia, it is not the only source of disinformation. TikTok—though a marginal player now in terms of Georgian users—poses issues of its own. Because the platform is not premised on networking like Facebook is, it can be harder to identify CIB. And it is possible, according to ISFED, that actors taken down on Facebook will reemerge on TikTok.^{cliiiv}

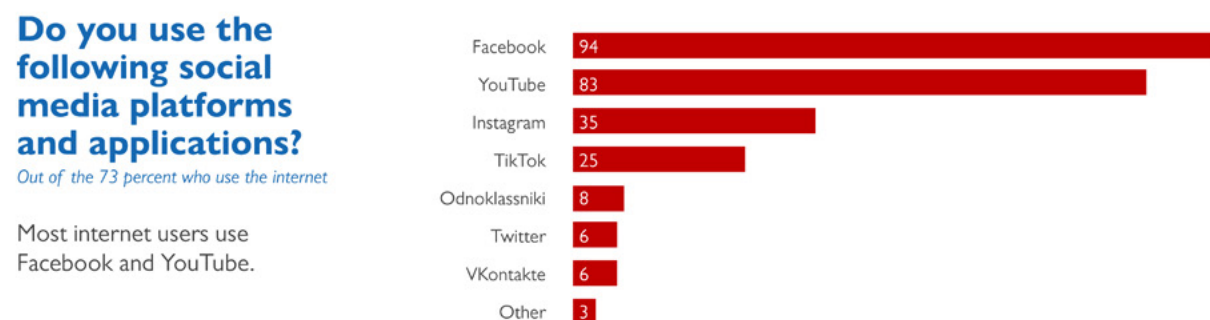
USAID continues to fund work on this topic. The USAID Georgia Information Integrity Program, for example, conducted a Counter-Disinformation Innovation Competition, which encouraged Georgia’s tech sector to solve challenges that counter-disinformation researchers face. This resulted in the development of three tools to identify disinformation. These tools are currently being used by 12 CSOs, some of which have reported that the tools are reducing their investigation time by up to 60 percent.^{clv}

As another example, the USAID Civic Education Program developed a package of simulation games that were adapted for online and offline use. The games were translated into Armenian and Azerbaijani. Online meetings were organized for teachers on the use of these games in civics teaching. The Program conducted a workshop for teachers about the most popular learning platforms for civic education, including Canvas, Cisco GPS, Global Citizen, and others.^{clvi}

Still, there was general agreement among interviewees for the DECA that these efforts—though laudable—were not comprehensive enough, considering the scale of the problem. While disinformation in general was noted as a key issue in Georgian politics, there are a number of specific subjects under this umbrella that deserve further study. For example, though not mentioned in DECA interviews, a conference among civil society actors in Tbilisi in December 2022 focused on gender-based disinformation,^{clvii} which, along with gender-based stereotypes, is thought to be one of the reasons that women are underrepresented in the Georgian government.^{clviii, clix}

This chart shows survey data from the Caucasus Research Resource Centers illustrating the primacy of Facebook in the Georgian social media landscape.

Figure 25. Social media platform usage



Source: Caucasus Research Resource Center^{clx}

Figure 26. Georgia’s information ecosystem



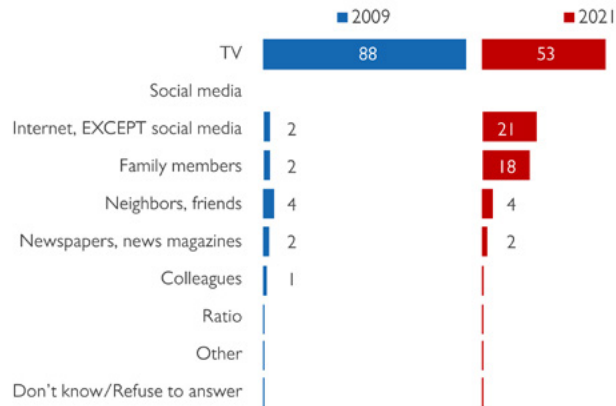
Source: DECA Dashboard^{clxi}

Figure 27 shows the changing information landscape in Georgia. While a majority of people still get their news from television, social and online media are gaining traction.

Figure 27. Information source for Georgia’s current events

What are your main sources of information for receiving news about Georgia’s current events?

While slightly over half of Georgians (53 percent) name television as their main source of information, for almost 40 percent it is the internet and social media where they get information about current events and politics.



Source: Caucasus Research Resource Center^{clxii}

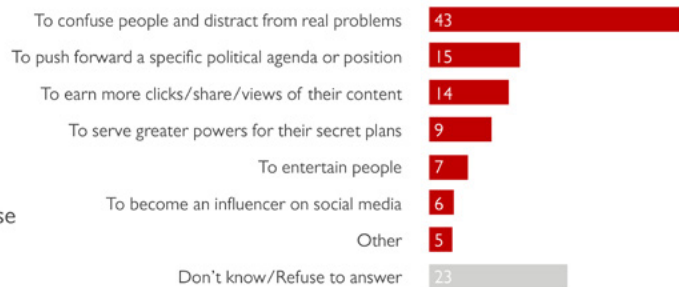
Internet users tend to understand the incentives for publishing misinformation and disinformation.^{clxiii} However, internet users are more likely to skew toward the young and urban populations; older Georgians are much more likely to get their news from TV, as they tend to choose TV stations that align with their personal values and political views, and they tend to trust what they see on TV.^{clxiv}

Figure 28. Publishing false information

In your opinion, why do some people or organizations publish misleading/false news/disinformation?

Out of the 73 percent who use the internet

A Plurality (43 percent) of internet users believe that false information is spread to distract people from real problems.



Source: Caucasus Research Resource Center^{clxv}

Online media needs support—financial, political, and operational

Despite the support from USAID and other donors, it is clear that the online media environment needs additional support. The Media Development Foundation and journalists themselves emphasized how difficult it is to operate as an independent media organization in Georgia. Lack of funding, qualified personnel, cooperation from the government, and resources all hinder their ability to produce content that can compete with television and pro-party media outlets.

Among a focus group of journalists and other staff from online media outlets, there was unanimous agreement that financial sustainability was a recurring issue for their organizations. Most were dependent on donor organizations for funding, in large part because they do not run advertisements or have a specifically commercial angle. One journalist mentioned that because civic engagement and media literacy tend to be low outside of major cities, it is difficult to convince readers to donate to their outlet.

We write about corruption and nepotism and budget problems...but it's difficult when a society doesn't react to these issues anymore.

—Journalist

Small, independent media outlets also struggle to extract information from the government. Ministries or local municipalities do not often respond to phone calls, or requests for information take many months to return.^{clxvi} This lack of access to public information is problematic not just because it means important stories go unwritten, but also because it increases the risks of inaccurate reporting.^{clxvii} For journalists, it is either difficult to publish or there is an incentive to publish without confirming information, merely because there is nothing to check against. According to one journalist, this is exactly what the government wants—an easy way to discredit independent media as a whole.

Open Society Georgia Foundation (OSGF) helped establish and supports the Media Advocacy Coalition, a group of 16 NGOs that monitor the media environment, issuing policy recommendations and statements and advocating for free, independent media and access to information (e.g., through legal frameworks they could propose, or advocacy to Parliament—which is typically met with little success).

This is a problem of accountability; the government doesn't feel accountable to the media and to the public.

—Journalist

Social media is a blessing and a curse for online media outlets. The journalists who were interviewed use social media to amplify their work—when they have funding to do so—yet at least one journalist was also nervous about their reliance on platforms like Facebook. This journalist mentioned that they need to be more intentional about diversifying their distribution channels: “a short video on Facebook, a photo on Instagram, a different method for each platform.”^{clxviii}

Something like 70–75 percent visit our news site through social media outlets, mainly Facebook...We're afraid of being so dependent on Facebook...the algorithm could change at any time—it has before, we've seen engagement decrease all [of a] sudden.

—Journalist

We do everything that's possible to increase our viewership, including on social media. But our resources are low, so [creating] video and reels is difficult.

—Journalist

OSGF and USAID's Media Program are working to help online journalists with this diversification,^{clxix} and to test new business innovation models. This can take multiple forms. For example, online media outlets might produce more light content (e.g., book reviews, sports, lifestyle stories) to subsidize their investigative journalism. Yet OSGF acknowledges that because the

Georgian market is so small, there may not be a large enough audience for this strategy to be effective at driving readership.

Journalists are rightly focused on journalism. OSGF noted that business acumen, cybersecurity expertise, and other skills which are necessary to run an online media outlet are not always present. OSGF has explored the idea of finding business professionals to support online media outlets but has not had great success finding organizations that could do this or were willing to.

For outlets operating in rural regions, there are still more challenges. Internet access is not always available in mountainous regions, and it can be difficult to find qualified staff in these areas.

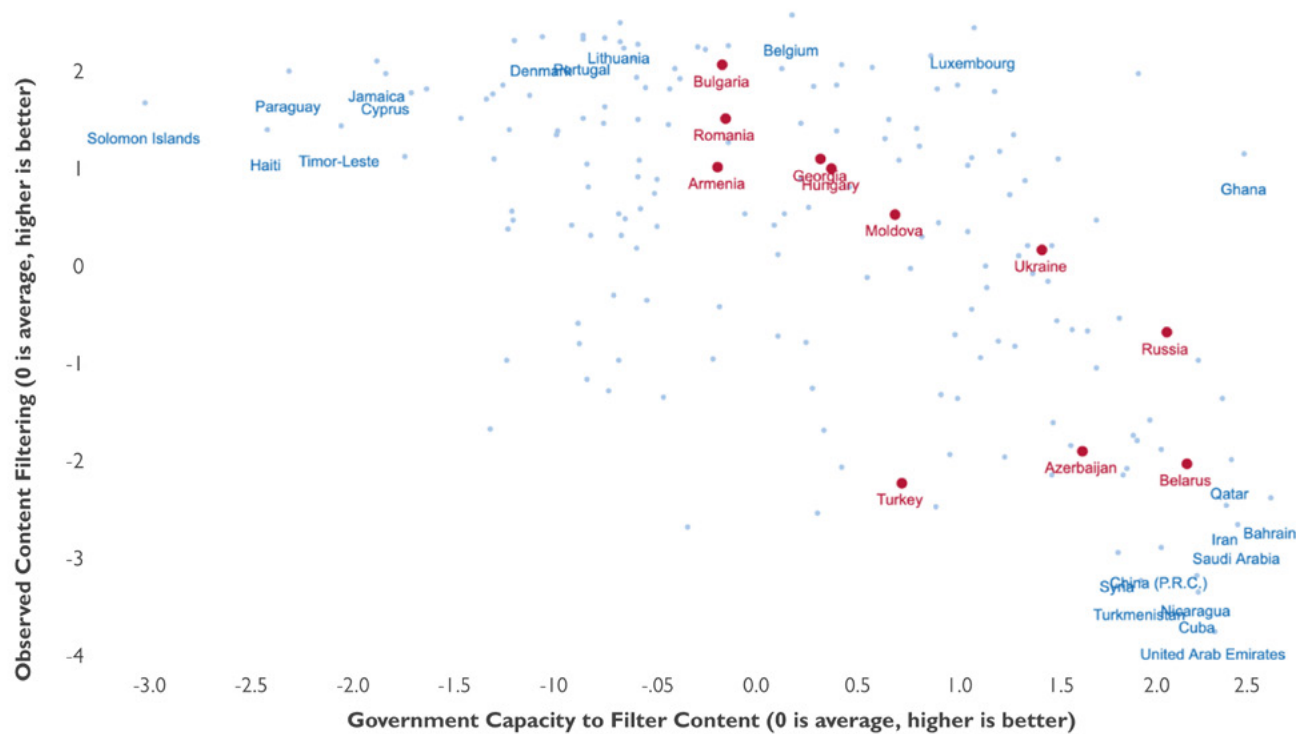
And those outlets serving ethnic minority populations face a different set of issues. One journalist who serves primarily Azeri and Armenian populations noted that there is not much study of the media landscape among these populations in Georgia.^{cbxx, cbxxi} However, according to this journalist, it seems that these populations receive most of their information in Russian-on-Russian social media platforms (e.g., VKontakte [VK]) or through Russian-speaking television channels. According to IREX, the Georgian Public Broadcaster (GPB) “has been criticized for failing to produce content that reflects the diversity of Georgian society, as it is legally required to do.”^{cbxxii}

We are niche in that we work with ethnic minorities in their languages. And there aren't many alternatives for them to receive information...we're the only choice for them sometimes.”
—Journalist

For outlets operating in rural regions, there are still more challenges. Internet access is not always available in mountainous regions, and it can be difficult to find qualified staff in these areas.

The Georgian government rarely filters content online, though its capacity to do so is above average.

Figure 29. Content filtering



These harms facing journalists also expand beyond them to other populations and groups and are connected to the larger issue of technology-facilitated gender-based violence (TFGBV). TFGBV is “any action by one or more people that harms others based on their sexual or gender identity or by enforcing harmful gender norms” and “is carried out using the internet and/or mobile technology.” Perpetrators of TFGBV use a variety of technology-based tactics to enact harm. Some of these are unique to digital contexts, including doxing, gendertrolling, hacking, cybergrooming, using fake accounts, and image-based abuse. Forms of gender-based violence (GBV) that are not unique to digital contexts (such as harassment, stalking, and exploitation) may also be facilitated by these and other technology-based tactics. Global evidence suggests that violence against women and girls in digital contexts may be increasing, as technologies and digital tools become more integrated into our private and public lives. Certain groups of women and girls are also at greater risk of TFGBV, including minority and racialized groups of women, migrant women, women with disabilities, younger women, sexual minorities, and women in public life (such as journalists and politicians).

Most TFGBV in Georgia is targeted toward women in politics and public life.^{clxxxiv}

United Nations Development Programme (UNDP) Georgia also has programming for the empowerment of women in bridging the gender digital divide, particularly in light of the COVID-19 pandemic. With a focus on women and vulnerable groups, UNDP Georgia promotes outreach of digital public services and development of online job-coaching platforms.

Media literacy remains a hugely important priority

There is no shortage of media literacy work in Georgia. There are numerous opportunities and successes worth noting: USAID’s Civic Education Program aims to embed digital citizenship curricula into 650 public schools and to then advocate that these curricula be adopted in the remaining schools throughout Georgia.^{clxxxv} The Ministry of Education and Science hosts trainings for teachers on disinformation and cyberbullying,^{clxxxvi} and there have been recent research and needs assessments conducted on media literacy throughout the country.^{clxxxvii}

Still, interviewees were in agreement that the existing work is not enough. One interviewee working on media literacy programs in Georgia noted that, relative to older adults, young people just seem to “get it” when it comes to media literacy. That is, even if they do not have systematic training, they tend to be able to separate fact from fiction online better than older adults.^{clxxxviii} In turn, while existing media training programs are important, they must also be expanded to include a wider variety of people—not just students but also medical workers, journalists, public servants, and teachers.^{clxxxix}

To that point, while the MoES does have an existing training for teachers—training that covers disinformation—there does not appear to be a clear evaluation plan for this training.^{clxxx} The MoES also has 24 coaches for ICT, though these coaches tend to work with ICT teachers rather than working with the broader scope of teachers who should be trained on digital citizenship.^{clxxxi}

USAID recently published a primer on [Civic Education in the Digital Age](#) and a corresponding [Civic Engagement Assessment Tool](#), both of which would be useful resources to inform USAID/Georgia’s ongoing civic education programming.

While teachers do need to answer questions about digital citizenship to pass their qualifications exams, there was agreement among two interviewees that teacher quality in Georgia was lacking with respect to their knowledge and use of modern digital technologies. This, in turn, translates to their ability to teach about digital citizenship and media literacy. These interviewees noted that because teachers are an important voting bloc, there is little incentive for the government to mandate greater digital proficiency among the profession.

INTERNET GOVERNANCE

Georgia’s Internet Governance Forum is strong and expanding

Georgia is a relative bastion of internet freedom in the region. Women and men tend to have equal and widespread access to the internet, and there are similar levels of internet usage across ages 6–50. (Georgians older than 51 are less likely to use the internet regularly.)^{clxxxii} The Georgian government does not often restrict access to online content, and there is little to no government censorship or manipulation of content online; journalists do not often self-censor.^{clxxxiii}

Still, there are concerns. According to a number of independent civil society organizations and the U.S. State Department, the Government of Georgia has monitored journalists and members of the political opposition.^{clxxxiv, clxxxv} Freedom House describes that, in 2021, leaked files allegedly belonging to the State Security Service describe digital surveillance against clergy, activists, and diplomats (including phone communications, business transactions, and alleged drug use).^{clxxxvi}

In September 2022, the U.S. Embassy in Georgia publicly criticized the Parliament of Georgia for overriding a presidential veto^{clxxxvii} and enacting “wiretapping legislation that expands the government’s ability to monitor its citizens.”^{clxxxviii} The Council of Europe’s Venice Commission issued a similar opinion, expressing concerns about the “quality of the law-making process, the proposed list of crimes eligible for covert investigation, the duration of covert investigation measures, notifications about such measures, and the systems of judicial control and institutional oversight.”^{clxxxix}

In this context, it is a notable bright spot that Georgia’s Internet Governance Forum (IGF), a convening organization that brings together various stakeholders to discuss internet policy,^{cx} is a strong and expanding organization. Holding annual meetings since 2015, the Programming Committee consists of representatives from ISOC Georgia, GNCC, MoESD, the BTU, IDFI, the State Inspector’s office of Georgia, and the InfoSEC Association of Georgia.^{cxci}

The Georgia IGF also recently established a Youth IGF, with the goal of encouraging youth to engage in decision-making around internet freedom, cybersecurity, and other ICT topics. The Youth IGF held its inaugural meeting on November 19–20, 2022, and included representatives from higher education institutions, the Georgian government, Parliament, PDPS, and the private sector.^{cxcii}

Georgia is also connected through its IGF to the South Eastern European Dialogue on Internet Governance (SEEDIG)—a regional forum for cooperation on internet policy that is recognized by the UN-led IGF.^{cxiii} SEEDIG does not appear to have held a meeting in 2022, though Georgia’s strong IGF culture may be able to serve as a catalyst for ensuring that SEEDIG remains active.

Internet shutdowns are virtually nonexistent, and the government’s capacity to shut down the internet is limited.

remains active.

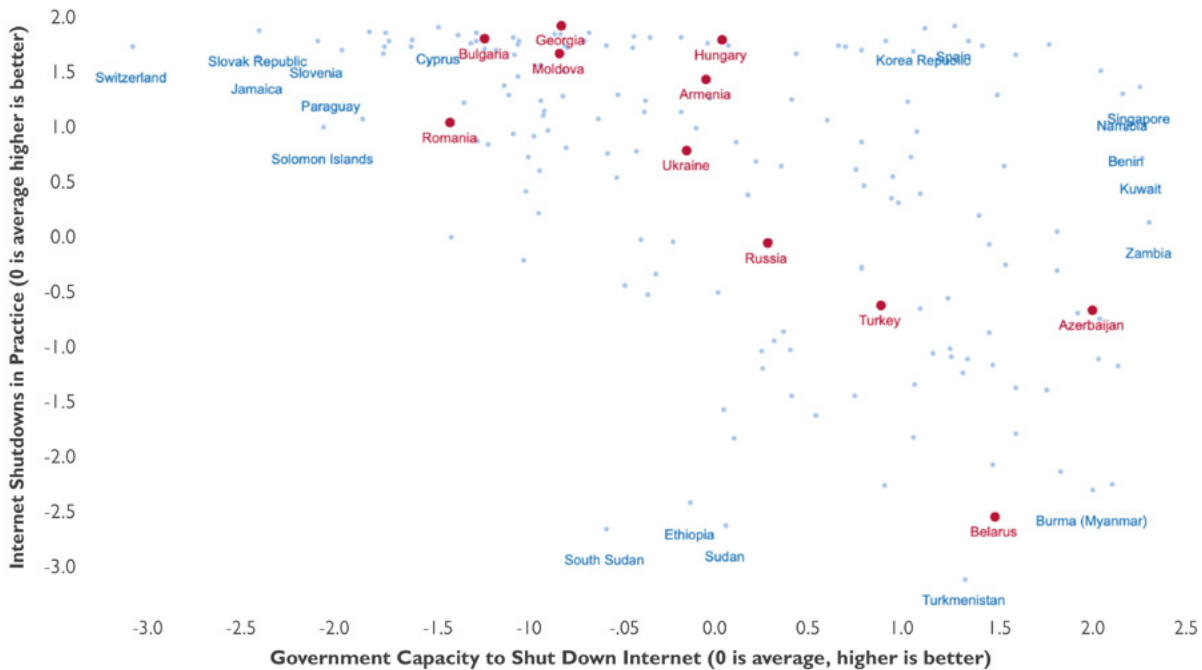


Figure 30. Internet shutdowns

Source: Varieties of Democracy Project 2021^{cxiv}

Cooperation between the Internet Corporation for Assigned Names and Numbers (ICANN) and the Georgian National Communications Commission

In 2020, ICANN and the GNCC signed an MOU with several explicit areas of possible cooperation, all in service of further promoting the multi-stakeholder model of internet governance. These notional activities include supporting “the development of the Domain Name System (DNS) ecosystem and promoting the use of internationalized domain names (IDNs) in Georgia” and raising “awareness and understanding of the importance of the security, stability and resiliency of the DNS.”^{cxv} While ICANN and GNCC co-hosted a workshop in 2022 related to internet measurement tools,^{cxvi} it is not clear whether other actions listed in the MOU have come to fruition.

2.3. PILLAR 3: DIGITAL ECONOMY

Digital Economy explores the role that digital technology plays in increasing economic opportunity and efficiency, trade and competitiveness, and global economic integration. Areas of inquiry include digital financial services (credit or debit cards, payment apps, mobile money, and digital savings and loan products), financial inclusion, regulation of digital finance, digital trade, e-commerce, and the financial technology (fintech) enabling environment. This pillar also assesses strengths and weaknesses in the local digital talent pool and the tech startup environment; a healthy digital economy requires a supply of ICT skills that matches the demand and an ecosystem that promotes technological innovation.

DIGITAL ECONOMY

KEY TAKEAWAYS

- **Takeaway 1:** Provision of digital financial services (DFS) is dominated by a few established banks, limiting opportunities for innovation.
- **Takeaway 2:** Access to finance is a major issue for fintechs and startups.
- **Takeaway 3:** E-commerce is characterized by slow uptake caused by trust issues, especially in rural areas, and bad user experience linked to poor logistics.
- **Takeaway 4:** Digital talent is in demand, yet there is an ICT skills mismatch between recent graduates and job requirements.

RELEVANT RECOMMENDATIONS

- **Recommendation 10:** Increase competition in the digital financial services market.
- **Recommendation 11:** Target support toward fintech development and quality startups and innovations.
- **Recommendation 12:** Improve e-commerce customer experience.
- **Recommendation 13:** Support digital skills development and ICT workforce development.

DIGITAL FINANCIAL SERVICES



KEY TERMS | BOX 6. Digital Financial Services, Interoperability, and E-Money

Digital financial services refers to financial services that rely on digital technologies for their delivery and use by consumers. DFS encompasses a broad range of financial products and services, including payments, remittances, savings, credit, insurance, and investments, which are delivered using a mobile phone or other digital technology.

DFS has a significant potential to lower costs and increase financial inclusion, while enabling major productivity gains. Characterized by low marginal costs and greater transparency, DFS can respond to both the supply-side barriers to access to financial services, such as high operating costs, and to the demand-side barriers, including volatile and small incomes for the poor, lack of ID, trust and formality, and geographical barriers.

Interoperability refers to a characteristic of a product or system to work with other products or systems.

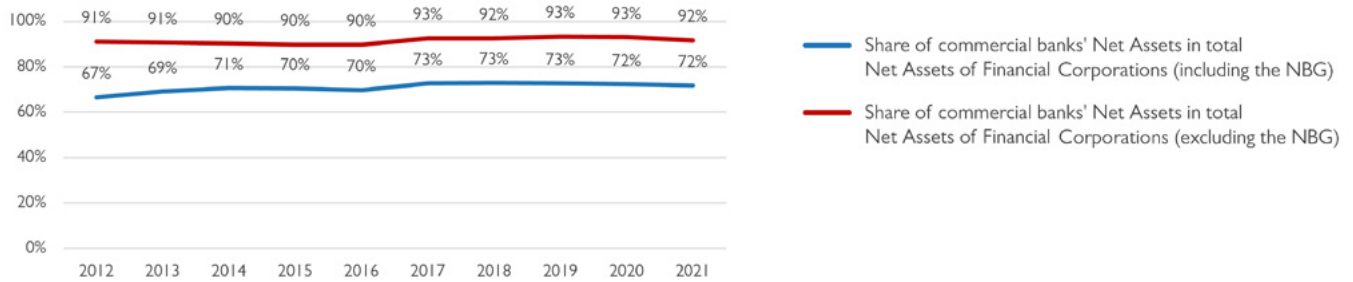
E-money (or electronic money) is a digital alternative to cash. It lets users make cashless payments with prepaid money stored on a card, phone, or over the internet.

Market concentration in the banking sector creates competition concerns

The financial sector in Georgia is small, bank-centric, and concentrated. Of the 14 commercial banks, the two largest represent over 70 percent of total bank assets.^{cxvii} The scale of Georgia's banking sector is equal to or better than its regional income group peers, but the nonbank financial sector lags its peers and is comparatively much smaller than the banking sector. Over the past decade, the share of commercial banks' assets in the total assets of financial corporations has remained consistently high, hovering around 90 percent.

Figure 31. Banks and financial corporations' net assets

SHARE OF COMMERCIAL BANKS' NET ASSETS IN TOTAL NET ASSETS OF FINANCIAL CORPORATIONS



Source: National Bank of Georgia

The two dominant banks have a competitive advantage in DFS due to their access to large amounts of existing customer data as well as their ability to more easily finance innovative fintech solutions that require large investments. This limits customer choice and availability of various products, including access to bank branches across Georgia and digitalization of products. However, the two dominant banks do compete fiercely for clients, making them very responsive to customer needs. This also makes it difficult for other financial service providers, which have limited capabilities, to compete with them. Although 13 commercial banks do report some level of foreign ownership, no well-known Western banks are present in Georgia.¹⁰

DFS is helping improve financial inclusion, but progress is hindered by underdeveloped transaction infrastructure and security concerns

Financial inclusion is a priority for Georgia, and the growth of fintech and rapid innovations in the financial services industry can play an important role in expanding inclusion. Georgians have made significant strides in increasing account ownership from 40 percent to 70 percent between 2014 and 2021, as measured by the World Bank Global Findex, but continue to lag their EU peers. Account ownership is weakest among the poorest 40 percent of the population (where only 62 percent own an account) and rural populations (64 percent account ownership). Increasing account usage also remains a challenge.

To overcome the geographic barrier to financial inclusion, banks began using mobile banks (vehicles) to cost-effectively provide basic payment and banking services. Additionally, payment kiosks have quickly become an integral part of the payments landscape in Georgia and are often the only option in rural areas.^{cxcviii} Although kiosks have expanded access to payment services, they perpetuate usage of cash, as most kiosk transactions are in cash.^{cxcix}

Georgia has made significant progress in increasing the proportion of adults making or receiving digital payments, from 24 percent in 2014 to 62 percent in 2021, but it continues to lag peer countries, like Ukraine (81 percent) and North Macedonia (74 percent).^{cc} Payment cards are by far the most used instrument for merchant payments. To support expanded use of digital financial tools, financial institutions are making major investments. This includes large banks' efforts to digitalize their offerings, e-money providers expanding their reach, and the ongoing adoption of payment innovations. For example, independent operators of loyalty and reward programs offer payment services through a network of merchants where customers can accumulate reward and loyalty points to be redeemed for purchases. Banks have also invested significantly in upgrading the payment cards and acceptance infrastructure to contactless—Georgia has the highest penetration of contactless cards globally. Building on the contactless infrastructure, new tokenization-based payment services, like Apple Pay and Google Pay, have been launched in Georgia.

Despite the availability and awareness of digital payments, the limited ownership of transaction accounts in rural areas, coupled with underdeveloped payment infrastructure and concerns over the security of digital transactions, acts as a barrier to the widespread adoption of digital payments. Many people who have an account or card still do not use digital payments, as illustrated by the fact that only 28 percent of Georgia's population made utility bill payments via an account, according to

¹⁰ HSBC Bank and Societe Generale were operating in Georgia but have since left the market.

the 2021 Global Findex report. The older population in particular prefers cash and has very low trust in the banking system due to its experience of losing banked savings after the collapse of the Soviet Union. Additionally, not all retail shops have terminals for digital payments and many still prefer cash due to high fees charged by the banks for each digital transaction.

The uptake of alternative cost-effective payment and transfer systems is also limited by the lack of comprehensive real-time payment settlement services in Georgia. Most retail payments are made by card, and e-money providers must issue prepaid cards to enable merchant payments. Person-to-person transfers are also largely processed as interbank credit transfers through the Automated Clearing House (ACH) or as credit transfers using the card infrastructure. None of these are in real time, and payments made over the weekend are only reflected on the next business day.

Georgia's regulatory environment creates a solid foundation for digitalization of financial services but requires additional policy development

The financial services sector is one of the most mature sectors in Georgia. The legal framework established by the central bank, National Bank of Georgia (NBG),^{ccii} establishes an enabling environment for open banking. Currently, NBG is working with the EU to close the gap between the EU and Georgian legislative frameworks regarding banking and payment services. This will also pave the way for a more open payments and banking environment in Georgia. A more open environment would allow for greater access to and integration of nonbank third parties and for interchange of financial data between institutions to deliver more flexible payment and financial services, including by fintechs. These changes could have a significant impact on many types of transactions, such as remittances, which account for 14.2 percent of gross domestic product (GDP).^{ccii} Currently, local remittance companies are hindered from transferring funds directly into e-money products or other digital means.

Driven partly by the desire to align with the EU's Payment Services Directive 2 (PSD2), commercial banks and NBG are supporting and preparing for the introduction of faster payments, open APIs, and QR codes—changes which could significantly disrupt the financial sector, promoting greater competition and innovation. Many commercial banks have enhanced their internal systems to support APIs, and a few are granting some startups access on a limited bilateral basis; however, these collaborations are still limited. Insurance companies are also exploring APIs for sharing product information. Additionally, in 2022, the NBG issued its first digital banking license to Paysera Bank, which is currently operating under a temporary test regime, providing clients with services like fast money transfers through the Single Euro Payment Area (SEPA) instant system.^{cciii} To mitigate customers' security concerns regarding increasingly digital services, the NBG has led efforts to create a comprehensive framework for managing cybersecurity risks in commercial banks.

The current lack of unified customer authentication infrastructure is also limiting the growth and inclusivity of digital financial services. Banks consider digitalization a strategic priority and aim to have about 95 percent of their transactions through digital channels, minimizing the need for face-to-face interactions for common tasks, like opening an account. They anticipate this digitalization will reduce operational costs and improve the customer experience. Enabling digital onboarding could also support the growth of smaller or nonbank financial institutions, which typically have fewer physical branches. However, the current lack of unified customer authentication infrastructure means new customers must be physically present to open a bank account or acquire an insurance policy. The existing legal framework has established an interoperability infrastructure that allows the commercial sector to access citizen and business data. Banks, insurance companies, and fintechs are therefore demanding the revision of rules pertaining to onboarding to support new authentication technologies, including digital ID, which would allow customer consent-based exchange of data between and among banks and fintechs.^{cciv}

E-money is widely used in Georgia for bill payments and for funding gambling accounts. Nonbank entities and banks can offer e-money services. However, e-money is a regulated activity requiring a payment service provider (PSP) license from the NBG, making microfinance institutions (MFIs) ineligible, which limits its availability.

The regulations surrounding electronic money for business entities also hinder the effective use of e-money by micro, small, and medium-sized enterprises (MSMEs).^{ccv} Currently, banks and PSPs have the authority to establish e-money accounts for MSMEs. However, the accounts can only be used for receiving payments, and all received payments must be transferred back to a legal entity's account within 15 days. While this restriction may not be problematic for e-money issued by banks, it presents significant challenges for nonbank PSPs. This requirement forces nonbank PSPs to rely on partnerships with banks

for transferring funds back to a bank account.^{ccvi} Additionally, it prevents nonbank PSPs from supporting other payment requirements of MSMEs.

Lack of crypto regulation increases risks for the financial sector

Although there is no comprehensive information on the use of blockchain and cryptocurrencies worldwide, anecdotal evidence suggests that the South Caucasus is more active than many other parts of the world in cryptocurrency-related activities. There is no regulation of crypto assets in Georgia, and according to authorities, the exchange of crypto assets for fiat currencies is exempt from value-added tax (VAT). Some sources state that in 2017 Georgia was ranked second in mining activity, after China.^{ccvii} Several crypto exchanges and custodial wallets are active in Georgia.

The presence of crypto assets activity in Georgia poses immediate risks in terms of consumer protection and the potential for money laundering and financing of terrorism (ML/FT). The Financial Action Task Force (FATF) acknowledges the serious and pressing threat of criminal and terrorist exploitation of virtual assets.^{ccviii} There are indications that certain crypto exchanges in Georgia may offer their services to customers outside the country, which further amplifies the risks associated with ML/FT. While NBG has implemented measures to mitigate the spillover risks from crypto assets to the financial sector, it has not eliminated the possibility of a bank conglomerate being exposed to crypto exchange risk.^{ccix}

E-COMMERCE

E-commerce growth is driven by young urban consumers

The COVID-19 crisis accelerated the shift toward online consumption in Georgia, a change that persists in the post-COVID-19 period. According to the United Nations Conference on Trade and Development (UNCTAD) Business-to-Consumer (B2C) E-commerce Index, Georgia’s e-commerce development has accelerated in recent years and Georgia performs well in comparison to its income and regional peers. In 2018,^{ccx} Georgia ranked 46th of 151 countries, improving from 70th place in the previous year. However, in 2020,^{ccxi} Georgia took 51st place. The growth in e-commerce is also driving an increase in digital payments. The total value of digital payment transactions is projected to reach US\$1.3 billion in 2023, with digital commerce comprising 70 percent of digital payments (US\$907 million in 2023)^{ccxii}

The share of online shoppers in Georgia is still far below levels found in developed countries. According to the latest UNCTAD research, only about a fifth of Georgians shop online.^{ccxiii} E-commerce adoption also varies by geography, age, and gender. There is a noticeable gap in e-commerce uptake between rural and urban areas, with only half the number of individuals in rural regions engaging in e-commerce activities. Women are more likely to engage in daily e-commerce usage, compared to men, while young individuals, aged 15–29, demonstrate twice the e-commerce engagement compared to other age groups. Notably, 18–44 year olds account for over 75 percent of traffic to e-commerce retailers.

Figure 32. Share of population, by geography, using the internet for buying/ordering goods or services (%)

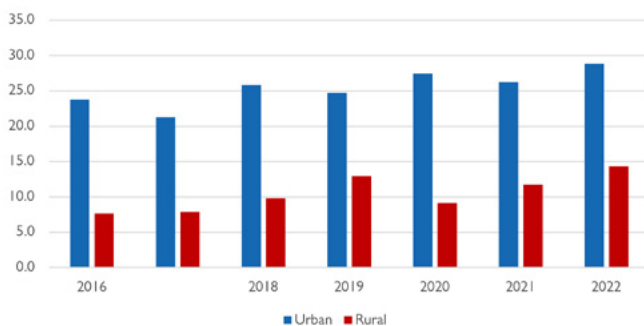


Figure 33. Share of the population, by age, using the internet for buying/ordering goods or services (%)

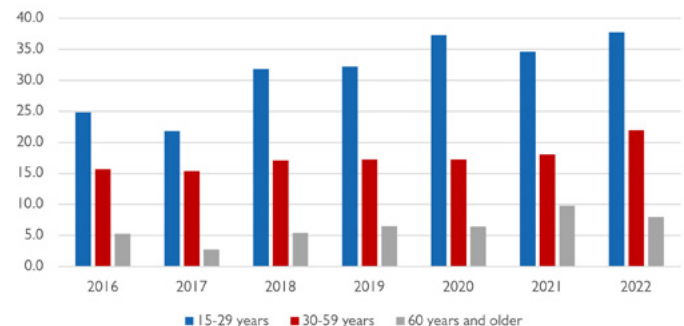


Figure 34. Share of population, by gender, using the internet for buying/ordering goods or services (%)

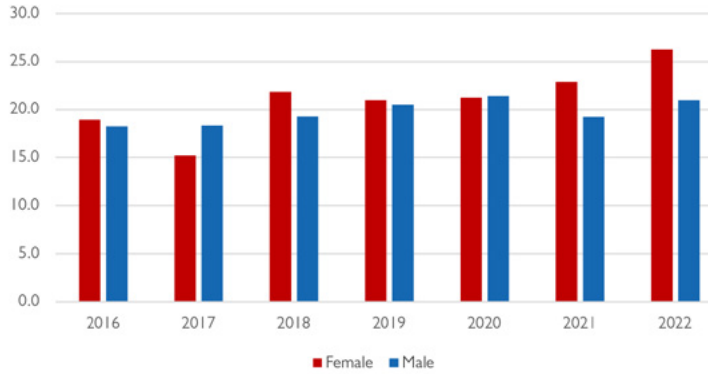


Figure 35. Percent of population using the internet for buying/ordering goods or services

	2016	2017	2018	2019	2020	2021	2022
Total	18.6	16.7	20.6	20.8	21.3	21.2	23.8
Female	18.9	15.2	21.8	21.0	21.2	22.9	26.3
Male	18.2	18.3	19.3	20.5	21.4	19.2	21.0
15-29 years	24.8	21.8	31.8	32.2	37.3	34.6	37.7
30-59 years	15.7	15.3	17.1	17.3	17.2	18.0	22.0
60 years and older	5.3	2.7	5.4	6.5	6.5	9.8	8.0
Urban	23.8	21.3	25.8	24.7	27.4	26.3	28.8
Rural	7.6	7.8	9.8	12.9	9.1	11.7	14.3

Source: National Statistics Office of Georgia

Local e-commerce vendors are informal and provide inconsistent customer service

E-commerce adoption among local businesses, regardless of size, has been inconsistent. In 2020, only 1.9 percent of enterprises utilized e-commerce marketplaces, such as MyMarket.ge, Wishlist.ge, Vendoo.ge, My.ge, Procurement.gov.ge, Booking.com, hotels.com, eBay, Amazon, Amazon Business, Alibaba, and others, for trading goods or services. This implies that approximately 96 percent of businesses did not participate in e-sales.^{ccxiv}

In Georgia, most e-commerce shops do not have mobile applications, despite the prevalent use of mobile internet. The main reason cited is the high cost associated with developing mobile apps. As a result, many small-sized businesses and individual entrepreneurs are leveraging social commerce (informal e-commerce through social networks) to market their products. Sales through Facebook and Instagram pages often provide variable customer experiences. These informal social commerce shops usually lack return policies, and customers may experience issues with delivery or inaccurate inventory. In extreme cases, the accounts might be fake. Social commerce shops also typically lack integrated payment systems and instead rely on prepayment through bank accounts or cash on delivery, making it difficult to accurately tax. As a result, authorities refer to social commerce as a “black hole” within the Georgian taxation system.^{ccxv}

During the pandemic, donors provided support and training to businesses for the development of e-commerce shops and applications, but the number of such programs has dramatically decreased in last two years.^{ccxvi} However, Georgian e-commerce sellers still need support in professionalizing their operations to improve the customer experience. Small e-commerce shop owners rarely use stock management software, resulting in a poor buying experience. Items purchased might not match the descriptions online, or product descriptions are completely missing. Frequently, items that are out of stock are presented as in stock on internet sites, due to improper management of online store inventory. All of these issues make e-commerce unreliable and undermine consumer trust.

Expensive and unreliable logistics remain a barrier to e-commerce growth

The growth of domestic e-commerce is hindered by logistics, which are often costly and less reliable than those of international e-commerce providers. Over the past decade, following the liberalization of the postal sector, the last-mile segment of the transportation and logistics industry exploded with new options, a trend which accelerated during the COVID-19 pandemic. However, companies still face some of the highest logistics costs in the region, and the Georgian Post remains unreliable and inefficient. To avoid dependence on unreliable delivery providers, bigger e-commerce companies have invested in their own delivery systems. Local e-commerce shops, like Etsy, Amazon, or eBay, which sell on international platforms, also face a competitive disadvantage due to costly international deliveries.

Popular local e-commerce marketplaces include mymarket.ge, be.ge, extra.ge, onoff.ge, and liloshop.ge. Most local marketplaces do not sell cross-border, apart from a few websites (mostly in the apparel sector). To sell cross-border, Georgian businesses use parcel forwarding services (e.g., Boxette) and global logistics services (e.g., DHL and FedEx). The national postal operator's Georgian Product to the World platform supports local businesses selling cross-border by allowing them to integrate via application programming interface (API) to streamline delivery, export documents, and implement tracking abroad.^{ccxvii} The MoESD is also reportedly reforming the postal sector with the aim to improve the quality of logistics services in Georgia.^{ccxviii}

Cross-border e-commerce appears to be the main competitor to local e-commerce shops.^{ccxix} Spending in this sector totaled US\$175 million (459 million GEL) in Georgia in 2020, having grown at an average annual rate of 40.3 percent over 2018–20.^{ccxx} The largest foreign online platforms include Amazon, eBay, Taobao, and AliExpress, representing two-thirds of total cross-border purchases, but they face increasing competition from small market players in apparel, accessory, beauty, and cosmetic retail sectors. International online retailers attract customers with their low prices, large product variety, and superior user experience, offsetting the disadvantages of their long delivery time and additional shipping charges.^{ccxxi}

Georgian consumers often purchase goods from foreign retailers online, which can combine speed of delivery with competitive pricing and affordable costs of carriage. International delivery solutions, like USA2GEORGIA, Gzavnili, and others, offer reliable delivery from overseas using innovative digital solutions, including distance customs clearance, repackaging (to decrease the parcel shipment price), and timely delivery. The primary issue with international shopping is the complicated returns process.

The Revenue Service of the Ministry of Finance (MoF) is also working on EU-aligned customs reforms, to smooth trade facilitation. These include the Convention on the Simplification of Formalities in Trade in Goods and the Convention on a Common Transit Procedure, both of which will be implemented through legislation.^{ccxxii} However, the international conventions still require paper-based waybills and documents, in many cases, which hinder the full digitalization of the process.^{ccxxiii}

Efforts to improve customer trust in e-commerce through regulation have been controversial

An amendment to the Law on Protection of Consumer Rights required all e-commerce providers to offer a 14-day return period for any online products. E-commerce store owners believe that the regulation increases business risks and discourages retailers from engaging in digital sales. The new Law on e-Commerce will regulate the rights and obligations of intermediary service providers in the e-commerce process and will protect consumers by making information services more transparent and standardized. The draft is in the Parliament of Georgia for formal adoption.

The growth in international e-commerce imports is also raising concerns about the impact of Georgia's low de minimis threshold (the minimum value of goods below which no duties or taxes are collected) on domestic VAT revenue and domestic retailers. The current de minimis threshold is about US\$114 (300 GEL).^{ccxxiv} Domestic retailers believe the VAT exemption provides an unfair advantage to foreign competitors selling to Georgians on e-commerce platforms because they are not subject to the same VAT. Georgian authorities are currently assessing the potential impact of abolishing or lowering the de minimis, including comparing the potential increase in administrative costs from enforcement to the increased revenues of collecting VAT on all imports, as well as the impact on customers and retailers.



KEY TERMS | BOX 7. Angel Investors, Balance Sheet Lending, Crowdfunding, Regulatory Sandbox, and Venture Capitalists

Angel investors (or angels) are individuals who offer promising startup companies funding in exchange for a piece of the business, usually in the form of equity or convertible debt. Angels usually invest in businesses at an early stage when other investors are not prepared to back them.

Balance sheet lending, also referred to as portfolio lending, involves a monetary loan in which the original lender retains the debt throughout the life cycle of the loan. It's common for lenders to sell debt at a reduced price. This is typically offered by smaller financial institutions.

Crowdfunding is the practice of funding a project or venture by raising money from a large number of people who each contribute a relatively small amount. Equity crowdfunding refers to funding through sale of a stake in the business to several investors in return for investment. Debt-based crowdfunding is when investors provide funding with the promise to receive their money back plus additional interest.

Regulatory sandbox is a framework put in place by the regulator. It lets financial entities experiment with innovative products, services, and business models in a controlled environment with targeted regulatory and supervisory policies. A sandbox can be seen as a signal to innovators in the financial sector that regulators are willing to engage.

Venture capitalists are private equity investors that invest in startups with high growth potential. They typically invest in companies at a later stage, after the startup has shown some initial traction and has proven that there is demand for the product or service.

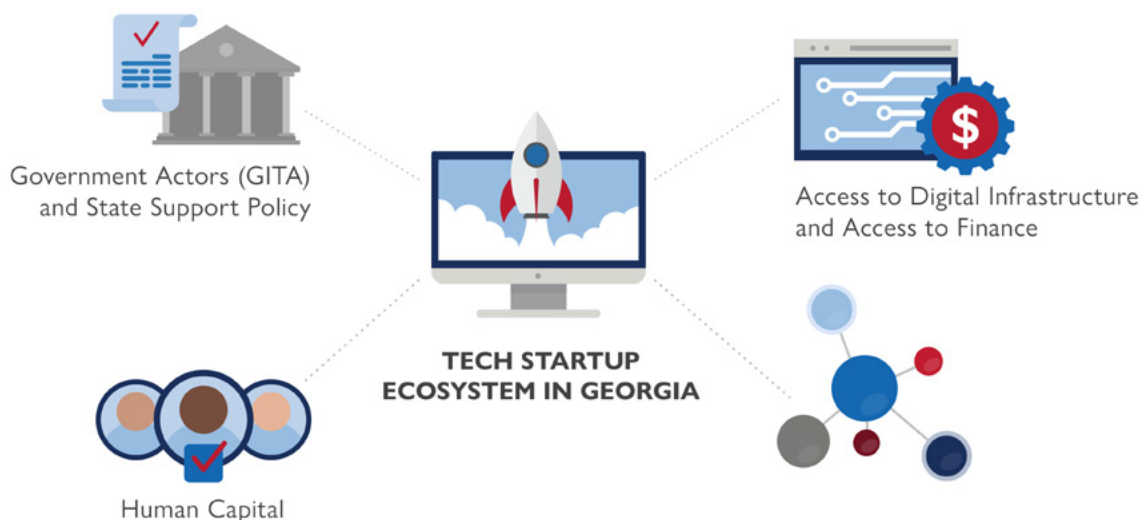
FINTECH AND INNOVATION ENABLING ENVIRONMENT

Georgia's innovation ecosystem is limited, despite government support

The Government of Georgia regards ICT sector development as one of the cornerstones of Georgia's social and economic development, and it is emphasized in various legal and policy documents, including the EU-Georgia Association Agreement. However, Georgian firms are slow to innovate, and the Global Innovation Index Report, which ranks innovation capabilities, placed Georgia 74 out of 132 economies in 2022, behind Turkey (37), Moldova (56), and Ukraine (57).^{ccxxv}

In recent years, Georgia's technology sector has welcomed a growing number of smaller firms. As of January 2023, there were 5,485 active organizations registered as technology companies, the vast majority (4,906) of which were small organizations.^{ccxxvi} The quality of startups is influenced by the size of the ecosystem in which they operate. Startups require access to various programs, gatherings, accelerators, and incubators to enhance their quality over time, but currently this ecosystem is limited in Georgia.^{ccxxvii}

Figure 36. Georgia's tech startup ecosystem



The high-tech industry in Georgia lacks substantial private sector investment, but it has received the support of several government programs. This includes four high-tech parks that are operated by GITA and were created with state funds.¹¹ The government has also supported additional technology investments, including tech parks^{ccxxviii} in Tbilisi and Zugdidi, Fabrication Laboratories (FabLabs) in vocational education institutions, eight FabLabs in other places across Georgia, three Innovation Laboratories (Ilabs), and two Innovation Centers (ICs) in the regions. The goal of these investments is to facilitate innovation and technology ecosystem development, which is still a work in progress.^{ccxxix}

Box 8. Techno parks



CASE STUDY

Techno parks and innovation centers established under the Innovation Infrastructure component of the Georgian National Innovation Ecosystem (GENIE) project are almost the only providers of innovation and technology skills development services throughout Georgia, delivering unique technologies for the implementation of startup initiatives and supporting existing businesses in their creativity, innovativeness, and effectiveness. There are techno parks in Batumi, Ozurgeti, Zugdidi, Rukhi (closed in 2021), Kaspi, Tbilisi, Akhmeta, Telavi, and Gurjaani. Techno parks and innovation centers support the development of business networks, teamwork, and joint stimulation of innovative and creative ideas, resulting in collaborative or complementary activities or initiatives.

Courses offered by techno parks and innovation centers support the capacity building of beneficiaries in ICT (Python, JavaScript, Corel), LEGO Robotics, 3D modeling, business-plan writing, digital marketing, e-commerce, graphic design, social media, Photoshop, advertising, and targeting buyers.

GITA also has a nascent initiative underway to foster entrepreneurship, particularly in the fintech sector, which is already demonstrating promising outcomes. GITA’s support includes entrepreneur promotion, education, and training, along with initial seed funding. Its goal is to foster ecosystem development and innovative firm creation. Despite GITA’s initiatives, Georgia lacks a well-equipped ecosystem that can provide funding and expertise to fintechs at different stages of their life cycles to accelerate growth.

Figure 37. GITA-funded startups

STARTUPS FUNDED BY GITA’S PROGRAMS: 2015–2021

PROGRAM		TOTAL STARTUPS FUNDED
PROTOTYPE GRANTS	MAXIMUM AMOUNT GEL15,000	156
STARTUP GRANTS	MAXIMUM AMOUNT GEL15,000	111
GRANTS FOR INNOVATIONS	MAXIMUM AMOUNT GEL15,000	15
TOTAL		282

Source: GITA

The innovation ecosystem in Georgia is in its early stages, lacking incentives for research and development (R&D) institutions to focus on commercialization. Consequently, according to official statistics, only 7 percent of firms have introduced new or significantly improved goods or services. Georgian startups may struggle to succeed because they do not create original or significantly improved products and services. If their original idea does not work, they avoid changing strategies. Instead, these startups copy the ideas of international projects and focus on creating projects with a smaller innovative component that already has competitors, often limiting their growth potential.^{ccxxx}

Figure 38. Startup incubator and accelerator programs in Georgia

STARTUP INCUBATOR AND ACCELERATOR PROGRAMS IN GEORGIA

PROGRAM	SCOPE OF SUPPORT	PARTNER/ IMPLEMENTING PARTY
BTU PRE-ACCELERATOR	TRAINING, MENTORSHIP, DEMO DAY	BTU, GITA
REDBERRY STARTUP STUDIO	TRAINING, EQUITY FINANCING, BUSINESS INVOLVEMENT, MARKETING, MENTORSHIP	REDBERRY, GEORGIA CAPITAL (HOLDING)
IMPACT HUB PRE-ACCELERATOR	TRAINING, MENTORSHIP, DEMO DAY, PRACTICAL TASKS	IMPACT HUB, EFSE, NETHERLANDS EMBASSY
500 STARTUPS	TRAINING, EQUITY FINANCING, MENTOR, PRACTICAL TRAINING	BOG, GITA
UNIVERSITY OF GEORGIA STARTUP FACTORY	TRAINING, MENTORS, DEMO DAY	UNIVERSITY OF GEORGIA
STARTUP DRIVE	TRAINING, MENTORS, DEMO DAY	FUTURE LAB, TOYOTA GEORGIA
GREENCUBATOR	TRAINING, MENTORS, DEMO DAY	CENN, STARTUP BURO

¹¹ MoESD financing through GITA.

When comparing R&D investments, Georgia lags significantly behind its peers, regardless of the measurement unit used.¹² And the World Bank estimates that R&D expenditure is insufficient, at only 0.3 percent of GDP.^{ccxxxi} R&D is also not prioritized by the government or academia in Georgia. There is a single state fund, Shota Rustaveli National Science Foundation of Georgia,^{ccxxxi} with limited financial capabilities dedicated to R&D.

Strong intellectual property protection and clear regulations are key factors to streamlining the innovation process and gaining commercial benefits from R&D products and services. Georgian IP protection regulations are considered fully compliant with international requirements and standards, but the demand side seems to be stagnating. Patent applications—an indicator of innovation activity—received by the Georgian National Intellectual Property Center, had been decreasing for six consecutive years until flattening in 2016.

Georgia also lacks a strong educational framework designed to support the startup ecosystem, and students show little motivation to pass their business incubation programs. There is no university startup community and no unified approach to designing educational programs for the development of startup skills, and there is a lack of personnel responsible for startup education. Representatives of educational establishments^{ccxxxi} also emphasize that there is not enough cooperation between universities for experience exchanges.

Box 9. Selected tech startup initiatives



CASE STUDIES

Theneo. This is a platform for creating straightforward and clear API documentation. The software as a service (SaaS) platform offers developers, teams, and projects the ability to create documentation at a fraction of the cost. Users, teams, organizations of all sizes, or individual developers can easily create and

maintain high-quality API documentation. Theneo won a Pitch contest at the world's largest technology event, Web Summit 2022, in Lisbon, among 2,300 startups representing hundreds of countries worldwide.

Pulsar AI. This is a business-to-business AI solutions provider that delivers bespoke solutions in natural language processing, virtual agents, and image recognition. It is best known for developing chatbots, virtual assistants, and similar products for businesses. In early 2019, the Ti-Bot—the first Georgian-speaking chatbot developed by the company for TBC Bank—was named as the best Alternative Payments Project at the Payments Awards Ceremony organized by FStech and Retail Systems in London. As of November 2019, the company had received investments totaling US\$1.2 million from various Silicon Valley investors.

Optio.Ai. This is an analytical product that uses artificial intelligence (AI) and data analytics in a variety of products, including chatbots (which provide information about bank products and services, filing applications for services, and currency rates), applications for analyzing customer spending, categorizing and analyzing retail banking transactions, and natural language processing. Optio.Ai's current investors include GITA, StartupYard (a seed accelerator), Techstars Berlin, and Star Power Partners Europe. As of 2019, the company had attracted an investment of US\$218,000 (€200,000).

500 Startups Accelerator Program. This program, implemented under the GENIE project within its Business Innovation Support subcomponent, has exceeded initial expectations. Participating startups raised US\$5.2 million, as of October 2021, and had a collective total valuation of US\$106 million. The 500 Startups Accelerator Program also fostered entrepreneurial skills among participants and generated success stories to inspire future startup founders in Georgia. All 30 founders who participated in the program have been integrated into the global investor network with lifetime access. Moreover, the program has provided an opportunity for four startups to engage in networking in Silicon Valley and has also contributed to the creation of local investor networks. The accelerator program has been renewed by GITA for four more years after the completion of the GENIE project, again in partnership with 500 Startups and Bank of Georgia (BoG).

Incumbent banks dominate fintech innovation, limiting growth opportunities for smaller fintechs

Investments in digital innovations, such as fintech, are heavily concentrated in Georgia's banking sector. The incumbent commercial banks have taken the lead in driving most fintech initiatives, either incorporating internally developed fintech solutions into their operations or establishing partnerships with fintech companies to leverage innovative technologies. Smaller independent fintech providers often find it difficult to compete against the major banks, and fintechs not associated with the leading banks tend to focus on the international market, due to the limited size of the domestic market and the

¹² Georgia often compares itself to Eastern Europe and South Caucasus countries.

competitive advantage of the incumbent banks. Following the banking sector, the gambling business has also shown a growing adoption of innovative technologies.

Another area where the smaller fintech providers feel competitive pressure is in nonbanking-related businesses. Although it is now prohibited for commercial banks to own nonbanking-related business, the bigger banks have found a loophole in the regulation and operate side businesses through holding companies or through various forms of affiliation. Companies affiliated with the large commercial banks include insurance companies, the biggest e-commerce companies, construction companies, and educational institutions. This extends the competition between banks and fintechs beyond DFS, often giving banks a competitive advantage with an established customer base. The presence of the larger banks in various market segments, like banking, insurance, nonbank lending, e-money, and kiosks^{ccxxxiv} through subsidiaries, gives them the ability to steer their customers to their own product bundles, like loans and credit insurance from the bank's subsidiaries.^{ccxxxv}

Although the legal framework enables the use of regulatory sandboxes, awareness of the existing regulatory sandbox format among fintech companies is relatively low. Instead, it is the larger incumbent banks that have mostly taken advantage of the sandbox to support development of innovative products.

Box 10. Fintech startups Payze and Space Bank



CASE STUDIES

Payze. This fintech startup helps businesses in mostly post-Soviet countries accept payments from around the world through a single integration mechanism. Payze became the first Georgian startup to get into the Y Combinator (YC) global acceleration program. It has been serving various international merchants, and

in 2022 it expanded its operations in Uzbekistan, acquiring a special license from Uzbekistan's central bank. Payze was one of two finalists of the second batch of the 500 Startups Accelerator Program and has received both a Startup Matching Grant and an Innovation Matching Grant from GITA. Payze plans to expand into Kazakhstan and Turkey and to cover all post-Soviet countries in the longer term.

Space Bank. This is a digital bank service offered by TBC Bank. It operates under the license of TBC Bank but is structured as an independent service with its own IT platform and processes. The IT infrastructure is entirely in the cloud, and all processes are automated. The service offerings include all the traditional banking products, like loans, money remittance services, debit cards, a mobile banking app, fund management, and utility payments. Applications for loans are online and can be approved instantly. The approval rate for loans is around 25 percent. The banking app includes a feature that allows customers to transact and move funds between the payment cards of customers, including cards issued by other Georgian banks. TBC Bank sees this service as a low-cost approach to expand internationally.

Startups and fintechs face challenges accessing financing

Innovative technology-driven startups in Georgia encounter challenges when seeking financing, as a result of various factors, including a lack of collateral, a limited financial track record, and the perception of high risk associated with early-stage ventures. While they can access funding during the early stages of prototyping and product development, these startups face significant hurdles after product launch but before generating sufficient revenue to reach breakeven or profitability. Additionally, the difficulties that startups face in establishing their market presence and securing follow-on funding may deter potential early-stage investors.

Although there are no disaggregated statistics on access to finance specifically for startups, it remains one of the major challenges for MSMEs in general.^{ccxxxvi} Approximately 25 percent of MSMEs in Georgia face credit constraints, resulting in a formal finance gap of 68 percent, which is 8 percentage points higher than the Europe and Central Asia average. The main obstacles preventing Georgian SMEs from obtaining bank loans are the high collateral requirements (up to 220 percent of the loan value) and elevated interest rates (around 16 percent). Most startups and SMEs operate with and use movable assets, such as equipment, inventory, and receivables, but their use as collateral remains limited.

Table 2. Differences between startups and MSMEs

	STARTUP	MSME
RATE OF GROWTH	Scales quickly; often loses money before reaching a profitable scale	Growth is not always the goal; provides stable employment for proprietors
SIZE	Grows exponentially to be able to compete globally	Any size that is sustainable
FUNDING	VC or angel investors—ideally, investors that can take risks and absorb losses	Usually banks, personal finance, or other forms of funding

A number of government programs have sought to address the lack of finance for new enterprises, including Startup Georgia, Enterprise Georgia (EG) FabLabs, business incubators, and a recently proposed equity crowdfunding platform for GITA-vetted startups that was met with resistance from NBG. There have also been bank loan programs specifically designed for startups, such as TBC Startuper, Bank of Georgia Female Start Upper, and Procredit Bank InnovFin.^{ccxxxvii} Although these initiatives have improved the situation to some extent, it is important to note that access to international credit instruments for startups in Georgia has only become available relatively recently.^{ccxxxviii} Local startups attribute the limited access to finance to their limited connections and links to international markets. The Georgian ecosystem also suffers from confusion regarding the segmentation of startup financing opportunities. It is unclear which stage of startups are being funded—whether it is the startup idea, minimum viable product (MVP), or traction stage. The lack of segmentation leads to crowding out of existing angel investor networks and VC funds that are also in the early stages of development.^{ccxxxix}

There are only a few local venture capitalists operating in Georgia. A private bank–managed accelerator (Bank of Georgia’s 500 Startups and TBC Bank)^{ccxi} has supported a dozen fintech companies and already had several successful exits.^{ccxli} In the past year, angel investors have also initiated activities in Georgia, with the establishment of the Georgian Angel Investor Network, Axel, by the startup bureau and Kedari Ventures. Their partner angel investor networks from Estonia, Latvia, and Lithuania are actively involved in strengthening the angel investor culture in Georgia, with the objective of attracting investors and creating new investment opportunities for local businesses.^{ccxlii} Foreign venture capitalists have not invested in Georgia because local startups lack the strong business models, solid track record of achievements, significant market potential, and extensive network of connections that these investors require.

Currently, there is no specific legal framework for equity or debt-based crowdfunding in Georgia. The United States Agency for International Development (USAID) and GITA have supported the drafting of a crowdfunding law with the belief that it could provide alternative access to financing for digital startups and other MSMEs, resulting in a significant positive economic impact.^{ccxlili} However, the NBG is concerned that the risks of allowing crowdfunding outweigh the potential positive impact it can have in easing access to finance in Georgia, and the draft law has not been through the public consultation process with the NBG.^{ccxliv} Some stakeholders are concerned that the NBG’s opinion is being influenced by commercial banks, which prefer to limit competition and oppose the crowdfunding law. These stakeholders believe that if the regulation of capital markets is separated from the regulatory scope of NBG, the crowdfunding law might progress further.

DIGITAL WORKFORCE

Public and private initiatives seek to develop informal training programs to bridge the ICT skills gap

Georgian firms are increasingly investing in digital technologies for internal processes or customer interactions, but many firms face a shortage of STEM professionals, such as engineers and scientists, to help implement these investments. According to the IT Skills Gap Analysis conducted by GIZ in 2021,^{ccxlv} 15 surveyed IT companies identified the following IT skills as the most in-demand in the Georgian market: cloud technologies (47 percent), cybersecurity (40 percent), network safety (27 percent), business process automation (20 percent), and business intelligence (BI) and data analytics (13 percent). Knowledge of data visualization and Linux were also selected as high-demand skills by the survey companies.

Traditional programs offered by universities are often viewed as inadequate and not aligned with the needs of employers and the market. Leading companies prefer informal and self-education pathways, as they are deemed more effective. However, rural areas continue to face a shortage of educational programs in this field. GITA is making efforts to address this issue by establishing tech parks and education labs. However, many stakeholders believe that GITA's initiatives alone may have limited impact on the overall ecosystem. STEM programs are being promoted by the government, and projects like the existing San Diego State University (SDSU) campus in Tbilisi and the Kutaisi Technological University project could play significant roles in introducing higher quality standards.

Public sector and donor initiatives to support the building of ICT skills are growing. Both MoESD and GITA implement digital skills initiatives with the mandate to facilitate cooperation between the science and business communities to support the commercialization of R&D and innovative startups. The internationally certified Training Program for 3,000 IT Specialists is implemented by GITA and executed with the support of the World Bank under the GENIE project.^{ccxlvii} The USAID Economic Security Program (ESP) has helped to build digital capacity in several sectors, including partnering with the BTU and the private sector to develop apprenticeship and training programs to build local capacity in the film and tech industry.^{ccxlviii} The online training and networking platform Bitcamp was created in 2020 and offers in-demand skills training for self-education for web and technology developers. It currently has over 41,000 members on Facebook.

Box 11. USAID skills development programs



CASE STUDIES

The USAID Industry-led Skills Development Program. The five-year initiative partners with the private sector to build industry-relevant capacity and contributes to high-value employment opportunities and increased economic competitiveness in Georgia. The program engages employers to support skills development in sectors with high growth potential and creates direct linkages between training programs and employment opportunities.

SkillWill Academy. USAID's Economic Security Program facilitated the development of SkillWill Academy, which was founded by the same team as Sweeft Digital. SkillWill provides a tailored syllabus that allows people with no previous experience to build the skills to become junior developers in six to eight months.

The private sector has also developed its own programs to address the skills gap. A number of industry associations contribute to public-private partnerships on skills and workforce development by creating partnerships with universities, education providers, policymakers, and the private sector. One such partnership, ICT Cluster, together with the Information Technology Association of Georgia (ITAG) and Georgia Skills Agency, created the ICT Sector Skills Organization Initiative Group to further ensure market-driven ICT educational program development. TBC Bank also runs an IT Academy that offers free education (short courses) to select candidates, which can lead to employment opportunities with the bank. The training programs are designed to address the needs of TBC and its affiliates, and the academic personnel are the ICT staff of TBC Bank.^{ccxlvi}

Controversial tax preferences have both positive and negative impacts on the ICT workforce

In 2020, the Georgian government introduced several new tax benefits for export-oriented ICT enterprises, both domestic and foreign, essentially making them eligible for “international company” status. The benefits include decreased income tax from 20 percent to 5 percent, decreased profit tax from 15 percent to 5 percent, and an exemption from property tax. As a result of this initiative, several international ICT companies (EPAM, Exadel, DataArt, Lineate, and others) have entered the Georgian market.

The entry of international ICT companies like EPAM into the market has contributed to an improvement in the quality of skills in ICT professionals.^{ccxlix} These international companies also offer various courses of different durations and skill levels, whether they are free or fee-based, short-term, long-term, or self-paced. As a result, the requirement for a formal education certificate or diploma from ICT organizations and other employers has decreased.^{cc}

However, local ICT companies believe that the new tax rules discriminate against local firms which serve the Georgian

market, making it difficult to compete against larger international firms that benefit from lower taxes.^{ccli} Local ICT companies and ICT training and educational institutions also struggle to compete in the labor market and see high employee turnover due to international companies attracting most of the qualified professionals and offering increasingly competitive salaries. In response, the government has implemented a regulatory and tax framework to encourage local ICT companies to expand into foreign markets.

Formal ICT education programs continue to see strong enrollment, although many do not provide the skills demanded by employers

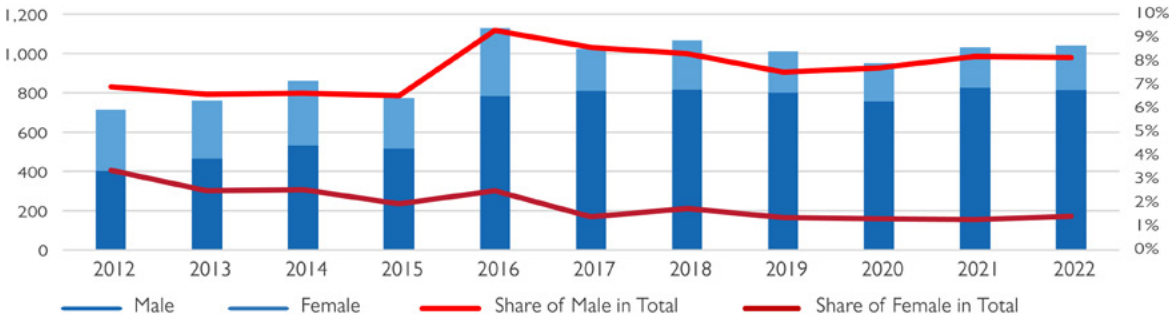
Georgia’s universities often struggle to produce ICT graduates who possess the skills and capabilities demanded by both private and public sector employers. Most ICT companies and organizations that require ICT professionals have indicated that local graduates lack essential skills and need additional onboarding training.^{cclii}

Twenty-two of the 53 public and private universities of Georgia offer ICT degree programs at all levels.^{ccliii} Due to the increasing demand for ICT professions, two new private, technology-focused universities were recently established—the BTU, which opened in 2017, and Kutaisi International University (KIU), which opened in 2020. KIU is the second university offering international accreditation ICT programs, after the SDSU campus, which began operations in Georgia in 2015.

According to the statistics, the number of ICT-related graduates from tertiary institutions increased from 2012 to 2016 and has remained steady since then. In 2022, more than 7,000 students enrolled in ICT-related programs, out of which over 90 percent are bachelor’s degree students.^{ccliv}

Figure 39. ICT/IT graduates in Georgia

NUMBER OF ICT/IT GRADUATES IN HIGHER EDUCATION AND THE SHARE IN TOTAL, DISAGGREGATED BY GENDER



Although overall enrollment in vocational education and training (VET) programs has fallen by 27 percent since 2017 (due to the introduction of longer-term competency-based training and assessment [CBTA] programs), this has not been the trend for ICT-focused programs.^{cclv} Aside from a brief decline in graduates during the pandemic, the demand for ICT-focused vocational programs has increased since 2019, with a record number of active students in 2022.^{cclvi}

While the supply of ICT program graduates has increased, the data on employment are unclear. Although GeoStat data indicate a decline in the number of individuals employed in the ICT sector since 2019, these data only count employees of ICT companies and do not account for ICT professionals working in other ICT-intensive sectors, such as finance or the gambling industry.

Several programs seek to address women’s underrepresentation in the ICT workforce

As of 2023, according to UN Women, only 12 percent of Georgian women are employed in ICT, and women constitute only 15 percent of the graduates of ICT programs.^{cclvii} In 2021, Georgia participated in the Generation Equality Forum and committed to policies and programs promoting women’s growth in technology and innovation to achieve gender equality. Educational institutions and the private sector have also initiated programs to increase women’s participation in ICT. Started in 2021, the 500 Women in Tech project, which is funded by international donors and coordinated by the BTU, with the participation of local and international company partners, provides retraining for women on technology development and design topics.

SECTION 3:

RECOMMENDATIONS FOR USAID/GEORGIA



USAID can support and strengthen Georgia's digital ecosystem in many ways, improving competitiveness of key services, increasing inclusion, and building resilience to malign foreign influence and cyber threats. This section outlines recommendations, for specific actions and partnerships to improve the digital ecosystem in Georgia. The list is organized by DECA pillar. USAID/Georgia is strongly encouraged to leverage networks and progress made by existing projects and programs in-country when possible.

Table 3 below summarizes each recommendation as follows:

What? Lists the recommendation

Why? Provides the motivation or intended impact of the recommendation

How? Summarizes the approach that USAID/Georgia can use to implement the recommendation

The detailed recommendations section that follows provides further explanation of how USAID/Georgia can implement each recommendation, including:

- Relevant context, recommended partners, and ways to build on existing programming.
- Available resources, implementation mechanisms, and funding sources.
- Important considerations, including unknowns and potential challenges.
- Key opportunities to draw upon and align with the Principles for Digital Development and the SDGs.

When acting on any of these recommendations, information on best practices in digital development program design can also be helpful. [The Principles for Digital Development](#) and the USAID [Digital Investment Tool](#) are great sources. The section below provides background and guidance on how to use these resources. For guidance or technical support on any of these recommendations, please contact digitaldevelopment@usaid.gov or request assistance through [Unified Technical Request and Mission Support \(UTRAMS\)](#).

Table 3. Summary of DECA recommendations for USAID/Georgia

What?	Why?	How?	
Pillar 1: Digital Infrastructure and Adoption			
1	Enhance dialogue and all-inclusive governance model in telecommunications sector.	Top-down approach to regulations and enforcement mechanisms undermines inclusiveness and participatory governance in the telecommunications sector. Non-participatory governance regimes make the market unattractive to investors, increasing fears, insecurity, and mistrust between existing ISPs' due to unpredictable decisions and imposed enforcement regimes.	Strengthen cooperation between the GNCC and telecommunications sector stakeholders for the development of more inclusive, comprehensive state policies, enforceable strategies, and aligned public-private initiatives for more resilient digital infrastructure.
2	Develop enabling regulatory framework for digital infrastructure expansion.	The lack of supporting regulatory and policy instruments undermines ISPs' interest and willingness to expand infrastructure. Uncertainty about the cost of navigating the unpredictable telecommunications bureaucracies compromises the stability and sustainability of investments, making the market less attractive.	Enable technical assistance (TA) and implementation support on the approximation or adoption of EU-appropriate standards and policies in the telecommunications legal and regulatory regime. Prioritize enactment and implementation of the draft law, On Sharing of Telecommunications Infrastructure and Physical Infrastructure Used for Telecommunications Purposes, that will enable infrastructure sharing between operators and market access of virtual operators.
3	Support empowerment with digital skills and literacy growth.	Digital economy development lags due to visible digital divides and lack of digital skills, which dampens demand for broadband services and uptake of e-resources. The government and private sector do not coordinate strategies for digital skills development, leading to ad hoc, sporadic, and irregular interventions.	Develop digital skills and cyber awareness within communities to increase demand for more comprehensive broadband services and uptake of available e-resources. In regions, target training to vulnerable or poor populations and raise awareness of affordable public and commercial e-services. Increase awareness of the importance of cyber hygiene when using online platforms, to mitigate vulnerabilities and improve trust in digital resources.
4	Strengthen the cyber-resilience of critical infrastructure.	Cybersecurity and resilience toward malign influence are critical for the national security and economic well-being of society and industries. Lack of robust cybersecurity practices creates vulnerabilities, diminishing user trust and slowing digital adoption and digital economy development.	Support the public sector critical infrastructure, including SMEs, IT, and cybersecurity companies, to develop cybersecurity capacities, policies, and standards. Support incubation or acceleration programs that target the development of local cybersecurity providers.
5	Contribute to Georgia's transformation into a regional digital hub.	Considering internal digital transformation achievements and external geopolitical factors, Georgia's aspiration and strategic priority to become a digital hub in the region (Europe-to-Asia digital corridor) will directly boost digital connectivity, digital ecosystem development, market attractiveness for large international vendors, and Georgia's influence on the digital agenda of the region.	Support Georgian stakeholders in conceptualization of the regional digital hub development process and elaboration of goals and milestones, making the process inclusive and participatory. Promote the strategic initiative and advocate the concept to external partners and internal stakeholders: e.g., contribute to negotiations for direct connectivity to Europe through submarine cable and development of local data hosting capacities.

Pillar 2: Digital Society, Rights and Governance

6	Improve coordination and accountability on Government of Georgia digital transformation.	Interagency and donor coordination is lacking on digital issues, partly resulting in ineffective implementation of digital-related strategies. While digital government foundations are strong, services are underutilized.	Commission a study on ICT professional turnover in public service. Fund an inventory of ICT projects, and coordinate among donors. Support implementation of upcoming digital strategies from GoG. Provide TA to the new interagency coordinating body on digital issues. Advocate for formation of a Digital Transformation Ministry or ICT Ministry.
7	Double down on media literacy, digital citizenship, and disinformation mitigation.	Existing programs in the media space are well-respected, yet few think they are sufficient. CSOs struggle to modernize, gain public trust, and sustain themselves. At the same time, disinformation online is more and more common, and CSOs struggle to maintain anything other than a reactive position.	Further support existing disinformation and media literacy trainings. Fund CSOs to conduct proactive research on disinformation and content moderation. Engage with CEC on public awareness campaigns for e-voting. Improve the Georgian language corpus available for machine learning content moderation tools.
8	Enhance support for the modernization of online, independent media outlets.	One of the key criteria for Georgia's EU membership is "a free, professional, pluralistic, and independent media environment." Yet online, independent media outlets have a difficult time competing with TV and social media in Georgia. They are struggling to diversify funding and content.	Provide TA to online, independent media outlets to cover e-voting systems. Support media outlets with additional adjacent services, such as modernization, business strategies, and marketing strategies.
9	Leverage success in freedom online to promote regional leadership and increase attractiveness of the Georgian market.	Capitalizing on and cementing Georgia's strong regional status as a bastion for internet freedom can position Georgia as a leader in internet governance regionally and bolster its position for future EU membership.	Support the Internet Society chapter and the Internet Governance Forum with grant funding, TA, and intersessional programming. Support the implementation of listed activities under the 2020 ICANN/GNCC memorandum of understanding (MOU). Leverage Georgia's strength in internet governance to establish the country as a leader regionally.

Pillar 3: Digital Economy

10	Increase competition in the digital financial services market.	There is a concentrated DFS market and no data exchange practices within the financial sector. Statutory impediments stem from sectoral regulations that benefit certain market actors. Greater competition can increase inclusivity, with new DFS providers reaching low-income people who are currently excluded or poorly served by the financial sector, particularly in rural areas.	Facilitate dialogue between state stakeholders and further promote capital market development, such as by promoting the crowdfunding law. Conduct analysis on regulatory practices and options regarding the capital markets and commercial banks, and identify ways to increase the competition in the DFS market.
11	Target support toward fintech development and quality startups and innovations.	The Georgian startup ecosystem has untapped potential to support impactful innovations in fintech. Limitations stem from inadequate financing options and lack of coordinated support from involved stakeholders.	Continue close collaboration with GITA to support a startup ecosystem that supports fintechs in bringing innovative digital financial service offerings. Support research and data collection on market demand and supply, innovations uptake by public and private sector, etc., to inform and incentivize research and development (R&D) in financial technologies at various levels. Redefine the frameworks for access to finance by working with key public and private stakeholders, such as the NBS, GITA, fintech and ICT sector representatives, and the startup community.

12	Improve e-commerce customer experience.	Uptake of e-commerce is slow. Despite growth, the e-commerce market remains small, with cash-on-delivery options still in frequent use. Stock management and logistics are ineffective. Trust issues (e.g., related to e-commerce service providers, digital payment systems, and cybersecurity) are persistent.	Continue to support current and potential e-commerce providers through ongoing initiatives focusing on supporting SME onboarding to digital marketplaces, increasing literacy, and providing support in stock management options. Support promotion of e-commerce shops to the public through information campaigns (e.g., raising awareness, building trust). Assist government in assessing the impact of the recently adopted e-commerce law.
13	Support digital skills development and ICT workforce development.	University graduates' ICT skills do not match market needs. Graduates have outdated skills, requiring employers to provide long onboarding and training. University ICT programs are not aligned to employer needs. Recognition of informal education is limited.	Support public-private partnerships (PPPs) between universities and the ICT sector. Act as an intermediary between the private sector and academia to align the needs of employer organizations with skills provision. Support specialized private education and training providers, with a focus in regions to create tailored programs responding to market demand.

DETAILED RECOMMENDATIONS

PILLAR 1: DIGITAL INFRASTRUCTURE AND ADOPTION

1. Enhance dialogue and all-inclusive governance model in Telecommunications Sector.

The main players in the telecommunications market unanimously state that one of the core problems in the development of the sector is the transparency of the decision-making process. The gap in communication between the telecommunications market players and the top-down approach to regulations and enforcement mechanisms undermine inclusiveness and participatory governance in the telecommunications sector. USAID activities could include the following:

- Facilitate dialogue, and encourage collaboration and information-sharing between the government, regulatory body, field experts, and the telecommunications industry, via platforms such as public-private partnerships (PPPs), industry forums, and working groups, to address common challenges and foster innovative collaborative solutions in the telecommunications field. Through mediation and technical support, encourage stakeholders' participation, input, and consultation in the policy and regulatory framework and development process. The final result could be the institutionalization of a public-private platform that represents the interests of all players in the telecommunications sector.
- Support Georgian counterparts to establish a close relationship with regional, European, and international telecommunications operators' associations. This would help them to gain insights and information on regional and international best practices. It would also provide opportunities for government officials and regulators to learn from international experiences in telecommunications market development and the policy elaboration process. Additionally, it would facilitate knowledge exchange between Georgia and other countries that have successfully implemented all-inclusive governance models in the telecommunications sector.
- Provide trainings, technical assistance (TA), and capacity building programs to transfer knowledge and skills in policy development, regulatory practices, digital technologies, and governance best practices. Make these trainings and programs available to government officials, regulatory authorities, and telecommunications sector representatives.

2. Develop enabling regulatory framework for digital infrastructure expansion.

To enhance the attractiveness of the Georgian telecommunications market and address the current challenges inhibiting infrastructure development, it is crucial to establish a more transparent regulatory environment based on international best practices and to provide incentives for new investments. USAID can significantly support the process through the following interventions:

- Support the Government of Georgia by offering capacity building and TA programs focused on telecommunications laws and regulations. These programs should include workshops, subject-level trainings, and opportunities for information exchange with international and local experts in the field. The aim is to assist the government in developing and implementing clear and predictable telecommunications laws and regulations aligned with EU standards and policies. This will ensure that all market players have a clear understanding of the rules and will foster a transparent and conducive environment for the telecommunications sector in Georgia.
- It is particularly important to provide support in terms of stimulating discussions on outstanding topics for the enactment and implementation of the draft law on Sharing Telecommunications Infrastructure and Physical Infrastructure Used for Telecommunications Purposes. As this law aims to facilitate infrastructure sharing between operators and to enable market access for virtual operators and is long awaited by all stakeholders, it is crucially important that the final draft is predictable and clear for all market players, meets the expectations of all sides, and is in conformity with international best practices. USAID can assist the Government of Georgia by offering technical expertise, legal advice, and capacity building programs to ensure the smooth enactment and implementation of this law.

- Empower small businesses to navigate and capitalize on the opportunities provided by the regulatory regime. Support development of a small business assistance package to address the last-mile problem in rural areas. The package may include providing technical advice to small and medium telecom operators, sharing information, knowledge transfer, technical support, fostering partnerships, enhancing cooperation, developing an effective network architecture, elaborating billing models, and providing a minimum investment package for infrastructure deployment. Collaborate with financial institutions to develop tailored financing mechanisms, e.g., grants or loans specifically designed to support small businesses for providing last-mile connectivity and expanding their market presence. The project can work closely with the GoG, MoESD, N(N)LE Open Net, and the Association of Small and Medium Telecom Operators and can make a tangible contribution to developing the last-mile connectivity solutions.

3. Support empowerment with digital skills and literacy growth.

Lack of digital skills and the presence of visible digital divides are significant contributors to the lagging digital economy. The digital divide is especially acute between urban and rural areas. Radical change requires a coordinated effort, including collaboration between government policymakers and other stakeholders across private and academic sectors. USAID's interventions could include the following:

- Provide technical support to GoG (MoESD, DGA, MoES) to conduct an assessment of the digital skills and literacy growth of the whole country across different target groups of information society to identify the existing gaps, challenges, and opportunities to effectively tailor future interventions.
- Support the GoG (MoESD, DGA) through workshops, regular meetings, and stakeholder engagement events to elaborate a coordinated comprehensive state policy for the development of information society digital skills and literacy. To develop an effective policy, it is necessary to create a profile of the required skills for a member of the information society. The main direction of this policy should be to provide knowledge to a large mass of the population on the following core skills: computer technology, the use of internet resources, the use of local and national e-government services, e-commerce, DFS, personal data protection and cyber hygiene, use of digital document, and digital signature.
- In partnership with local training centers, educational institutions, community members, and NGOs, support development of special e-educational programs for vulnerable groups, such as the elderly and disabled, and develop programs for youth online safety.
- Provide the National Centre for Teacher Professional Development with training programs and resources for teachers and educators, with particular emphasis on the regions, to enhance their digital literacy skills and thus reduce the digital literacy gap there.
- Support GoG in organizing a coalition of interested institutions to develop a digital society and reduce the digital divide. Encourage partnerships with the private sector, including technology companies, startups, and industry representatives, fostering their contributions of resources, expertise, and mentorship programs to support digital skills training initiatives and create employment opportunities. Mobilize human and financial resources from both public and private sources, promote mentorship programs, and facilitate job creation and entrepreneurship in the digital sector.

4. Strengthen cyber-resilience of critical infrastructure.

Cybersecurity and the resilience of the telecommunications sector is one of the main components of the country's national cybersecurity, but without a comprehensive strengthening of cybersecurity, Georgia will not be able to withstand the daily growing cyberthreats from unfriendly countries. In 2021, Georgia developed the third national cybersecurity strategy, which centers around a whole-of-government approach. The main challenge to date for the implementation of this strategy is a lack of effective coordination between government and commercial organizations, a lack of professional staff, and insufficient financial resources. USAID can actively participate in the implementation of this strategy through the implementation of the following activities:

- Support Georgian counterparts in establishing close and trusted partnerships with international cyber vendors and peers to reduce dependence on threat actors, particularly from Russia, and mitigate their influence on the Georgian telecom market. This can be achieved by facilitating engagements and collaborations with reputable Euro-Atlantic suppliers of ICT products and services. USAID can support GoG to improve the overall business environment in Georgia, including regulatory reforms, elaboration of investment incentives, simplification of procedures, and reduction of bureaucratic barriers to enhance Georgia's favorability as a place for Euro-Atlantic businesses to operate. Regulatory support could be provided in the form of workshops, capacity building, and technical expertise in the telecom sector. Moreover, USAID can facilitate partnership development between Georgian counterparts and international vendors.
- Stimulate regular collaboration and information sharing among cyber authorities, operators, associations, and cybersecurity organizations, with the aim to facilitate and enhance the collective security posture of the industry. With TA, trainings, best practices, and industry information sharing, promote the "cybersecurity by design" approach among telecom sector players. Encourage regular security assessments and information security compliance checks, with a focus on supply chain management and foreign vendors. Provide tools and recommendations for security controls, strong authentication methods, and encryption protocols.
- In partnership with the DGA, support could be provided for the development and implementation of cybersecurity capacity building courses targeting employees of small and medium telecom operators, with a specific focus on those in rural areas which have limited access to available courses and information. These capacity building courses should aim to enhance the cybersecurity knowledge and skills of employees, empowering them to effectively identify and mitigate cyberthreats. By offering tailored training programs, USAID can contribute to strengthening the overall cybersecurity posture of small and medium telecom operators who are not on the radar of cybersecurity authorities but whose cybersecurity is important for the telecom market.
- Facilitate the usage and regular adherence to existing partnerships and information sharing platforms between the government, telecom operators (including SMEs), and cybersecurity industry to effectively share cyberthreat intelligence in a timely manner, develop collaborations on collective incident response, and jointly address emerging cyberthreats. Encourage the exchange of best practices and lessons learned to strengthen overall cyber-resilience.
- Support incubators or accelerator programs that target ICT and cybersecurity startups to foster innovation and expansion of service offerings in the local market.
- Support the Georgian Information Security Professionals community to establish a Georgian Information Systems Audit and Control Association (ISACA) charter. This will enable the Georgian Information Security Community to have more convenient access to international trainings, seminars, workshops, updated best practices, and standards in the field.

5. Contribute to Georgia's transformation into a regional digital hub.

The current geopolitical situation emphasizes the clear need for Transcaucasian and Central Asian countries to develop stable digital communication channels, independent from the influence of the Russian Federation. Given Georgia's favorable geographic proximity, it has a unique opportunity to act as a regional hub for ICT services, particularly in the Europe-to-Asia digital corridor. USAID supportive interventions could include the following:

- Support to MoESD and the GNCC in elaborating a comprehensive concept document to translate GoG's strategic inspiration into an actionable roadmap for positioning Georgia as a regional digital hub with clear vision, specific goals, measurable indicators, inclusivity, and a participatory approach.
- Promote the strategic initiative, and advocate the concept to external partners and internal stakeholders.
- Support an assessment of the Georgian socioeconomic environment to determine how to optimize investment attractiveness for international telecommunications operators and ICT vendors. This should include a mapping of the investment ecosystem to identify and match potential investors and interested stakeholders.
- Use diplomatic channels to support high-level dialogues, foster alliances, and enable other direct and indirect mechanisms (symposiums, international fairs, and conferences) to promote Georgia as a regional hub.

PILLAR 2: DIGITAL SOCIETY, RIGHTS, AND GOVERNANCE

6. Improve coordination and accountability on Government of Georgia digital transformation.

Interagency and donor coordination is lacking on digital issues, partly resulting in ineffective implementation of digital-related strategies. While digital government foundations are strong, services are underutilized.¹³ USAID can support in the following ways:

- Commission a study on ICT professional turnover in public service; use concrete findings as justification for improved government retention policies.
- Fund an inventory of ICT projects (government- and donor-funded). Hold quarterly meetings among donors to discuss progress and learnings on digital programs.
- Support implementation of the upcoming Digital Governance Strategy and the National Strategy for the Development of the Digital Economy and the Information Society (MoESD).
- Provide TA for implementation of the upcoming Open Government Partnership Action Plan, which will cover similar themes as previous Action Plans.
- Provide TA to the new interagency coordinating body on digital; raise its visibility within the government and among donors to ensure that it remains active.

7. Double down on media literacy, digital citizenship, and disinformation mitigation.

Existing programs in the media space are well-respected, yet few think they're sufficient. CSOs struggle to modernize, gain public trust, and sustain themselves. At the same time, disinformation online is more and more common, and CSOs struggle to maintain anything other than a reactive position. USAID activities to mitigate disinformation could include the following:

- Support, expand, and evaluate at scale the existing trainings on disinformation and media literacy (e.g., those operated by Ministry of Education and Science, PH International, and the Council of Europe's programming).
- Support CSOs to conduct proactive research on “pre-bunking” disinformation, especially around elections and electronic voting.
- Support CSOs working on content moderation and flagging, especially for propaganda produced by Georgia's political parties. Support these organizations to research the disinformation on newer social media platforms (e.g. TikTok).
- Support the CEC—and hold the organization accountable—for public awareness campaigns and input from civil society about electronic voting.
- Through USAID's Information Integrity Program—or future iterations of this program—work with Georgian civil society organizations and social media companies to improve the Georgian language corpus available for machine learning content moderation tools.

8. Enhance support for the modernization of online, independent media outlets.

One of the key criteria for Georgia's EU membership is “a free, professional, pluralistic, and independent media environment.” Yet online, independent media outlets struggle to compete with TV and social media in Georgia. At the same time, they have a difficult time diversifying funding and content. USAID activities to support independent media could include the following:

- Through training, TA, and political advocacy, support online, independent media outlets to effectively cover Parliamentary elections in 2024 (especially with the introduction of electronic voting systems).
- Fund and provide TA to small, online media outlets with adjacent services (e.g., cybersecurity protections, grant

¹³ USAID's Digital Societies and Government Team in the Technology Division (as well as others throughout the Division) can provide technical assistance on many digital government issues.

writing, requests for information from the government, business development, and marketing strategies).

- Support online media outlets to modernize for the digital age, including helping them produce high-quality, “sticky” content for social media. Also support them in the creation of human-interest stories that can in turn increase readership and subsidize their investigative journalism.

9. Leverage success in freedom online to promote regional leadership and increase attractiveness of the Georgian market.

Georgia is a relative bastion of internet freedom in the region. Capitalizing on and cementing this strength can position Georgia as a leader in internet governance regionally and bolster its position for future EU membership. USAID activities to promote regional leadership could include the following:

- Support the ISOC chapter with grant funding and technical assistance on grant writing for other funding opportunities.
- Support the implementation of listed activities under the 2020 ICANN/GNCC memorandum of understanding. Raise the visibility of this memorandum inside and outside of government to increase pressure on GNCC to implement.
- Coordinate with the CoE, GNCC, and the MoESD to support the IGF and the Youth Internet Governance Forum with intersessional programming, rather than merely annual meetings.
- Leverage the success of IGF and Youth IGF to position Georgia as a leader in the South Eastern European Dialogue on Internet Governance.

PILLAR 3: DIGITAL ECONOMY

10. Increase competition in the DFS market.

Competition in the DFS market serves customers by promoting innovation and efficiencies, which leads to lower prices, more choice, better quality services, and improved products. At a national level, competition can curb excessive concentration of economic power and can potentially reduce operational risks from service outages. USAID activities to support DFS market competition could include the following:

- Support government stakeholders in responsibly advancing financial inclusion and promoting competition by working with the NBG, Insurance State Supervision Service of Georgia (ISSSG), and Ministry of Finance to engage with industry and demonstrate a positive policy orientation to innovation and fintech development in Georgia. This would also support the NBG in addressing remaining gaps in digital onboarding. USAID should explore ways, such as gathering international best practices, to support the NBG on existing projects, including establishing an instant payments infrastructure and offering open APIs to the market. USAID can help technically assess and suitably address e-money providers’ access to payments infrastructure to promote interoperability. This can be performed through commissioning research or providing technical assistance.
- Facilitate public-private dialogue to stimulate industry engagement and to communicate a positive policy orientation. Support can include assistance to smaller fintechs in navigating the regulatory framework and assisting them to create a discussion platform with the regulator, as they lack opportunity for engaging with NBG to discuss pathways for launching their innovative products and services, applying regulatory sandboxes, etc.
- Analyze regulatory practices and options regarding capital markets and commercial banks, and identify ways to increase the competition in the DFS market. This could include exploring options such as separate regulators for capital markets and commercial banks, the impact of crowdfunding law, and balance sheet lending options.
- Collaborate with the NBG to develop a policy on access to payment services. This will require thorough study to avoid adding further risks to Georgia’s existing payment systems.
- Encourage uptake of digital payment services, and increase awareness of data protection and cybersecurity through information campaigns. USAID can expand its support of financial literacy in partnership with other public or private stakeholders (e.g., NBG, commercial banks, e-commerce shops, Revenue Service), covering digital financial services,

digital literacy, and QR-code–enabled merchants, to accelerate wider acceptance of digital payments.

- Support analysis of possible negative consequences of concentrated market power (from the two large banks dominating DFS), and assist the NBG to collaborate closely with the Competition Commission. This collaboration could involve reviewing existing policy frameworks and regulations, as well as assessing market dynamics.
- Work with the Fintech Association of Georgia to monitor emerging problems, support innovation, and contribute to competition in the market. USAID can work together with the NBG to develop data sharing policies from big banks to smaller fintechs, which can be very valuable information for the smaller fintech companies.

11. Target support toward fintech development and quality startups and innovations.

Adoption and use of ICT can foster productivity and inclusive growth through digital innovation. In Georgia, there is a need for increased support for innovation in all directions, including financial technology innovations for smaller companies and awakening innovative capabilities for startups. USAID activities to support fintech innovation could include the following:

- Advocate for startups, fintechs, and SMEs by working with GITA, NBG, and Enterprise Georgia to address key financial inclusion problems. The support can be twofold, targeting policy and business development services (BDS). First, support is needed at the policy level to redefine the policies and regulations related to crowdfunding, collateral regulations, other forms of lending, angel investors, and VC. Additionally, the startup ecosystem needs targeted BDS support to build financial literacy, enable startups to present objective valuations before investors, increase innovation elements in startups, and explore ways to raise capital. USAID programs should support mentorship and networking opportunities, especially between fintechs and local financial institutions, including commercial banks, local and foreign startups, incubators, accelerators, etc.
- In collaboration with the MoF and NBG, MoESD, GITA, and other state stakeholders, USAID can help develop supportive frameworks for innovation. New regulatory approaches, such as sandboxes, can be considered to support the testing of new technologies and business models. Modernization of the legal environment is critical to position fintechs to contribute to financial inclusion and to provide the legal clarity to help raise capital for growth.
- Promote understanding of cryptocurrency risks and its regulation by working with the NBG and the private sector to identify risks and find timely solutions for customer protection.
- USAID should support R&D by creating programs for early-stage financing, helping popularization of STEM, especially for women, and partnering between public and private stakeholders. To support R&D efforts, USAID can implement several initiatives, including establishing a grant program that provides financial support to researchers, scientists, and engineers in the early stages of their projects. This funding would promote the development of local research institutions and would facilitate partnerships on a global scale. USAID can focus on promoting STEM education, particularly for women. This could involve creating targeted programs that provide scholarships, mentorship opportunities, and capacity building initiatives to encourage more women to pursue STEM fields. USAID can facilitate collaboration between higher education institutions, private sector entities, government bodies, and civil society organizations. By fostering collaboration, USAID can strengthen the pipeline of local researchers, policymakers, and development practitioners, equipping them with the necessary skills to effectively utilize research findings and to create sustainable development impact.
- USAID/Georgia can support programs that provide early-stage financing options and help develop market capacity for private VC funds and angel investing. Potential partnering should include international and local youth and women's associations and academia to engage more young people and women in startup activities.
- USAID can contribute to the development of a framework and methodology for collecting, sorting, verifying, and keeping relevant economic, social, business, policy, regulatory, and other data and information collected from public sources at the national and sector levels to address the data gaps that hinder assessment of innovation and timely decision-making by relevant stakeholders.

12. Improve e-commerce customer experience.

COVID-19 lockdowns encouraged many to purchase online for the first time and increased the frequency of online purchases, while forcing Georgian companies to expand their online offerings. Yet there are still untapped benefits of e-commerce to explore. Potential USAID activities to support e-commerce growth include:

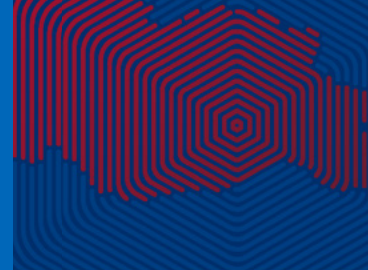
- Improve trust in e-commerce by raising awareness and implementing public-private information campaigns highlighting updates in the legal framework that favor customers and the soon-to-be-adopted e-commerce law. Public campaigns can also help SMEs, especially those outside the major cities, to get accurate messaging regarding emerging legislative changes. For those businesses still refraining from selling online, introductory courses and trainings about operating an online store and logistics services can be offered to encourage them to explore the potential of e-commerce trading. USAID should continue to provide support for SMEs to adopt e-commerce options since the uptake of e-commerce is still at an early development stage. Support can include trainings in stock management, operation of e-commerce stores, content placement, and selling products abroad, which is gaining more importance in Georgia.
- Closely monitor the implementation of the e-commerce–related legislative changes. USAID can support the process and work with the government to directly engage stakeholders, including the Competition Agency, and e-commerce associations and to assess the benefits and problems caused by the recent amendments.
- Support improvements in shipping and logistics by engaging with MoESD and promoting dialogue with the logistics sector regarding the intended reforms to the postal sector and creation of a separate regulator for postal services.
- Support freight-forwarding agents and local shipping companies in identifying solutions to improve user experience. This can include encouragement of logistics companies to upgrade their facilities, transportation assets, and ICT infrastructure and systems, through assistance and access to long-term financing with low interest rates.
- Support the creation of a fair playing field for local e-commerce stores by helping the government evaluate the amount of tax revenue lost due to the current low-value consignment exemption from VAT, as well as the potential revenue gain from reducing or eliminating this exemption. It may be beneficial to incorporate a tax module into information trainings for these providers. This would help to increase awareness of the potential risks and benefits associated with paying taxes, such as accessing new business opportunities, and could ultimately contribute to a more effective tax system.
- Develop incentive programs to support the uptake of digital payments in e-commerce. Work with e-commerce and digital payment platforms to create incentive schemes for customers to try digital payments, such as cash back when the payment is made through digital means. Any coordinated educational and awareness campaigns should emphasize cash back and other benefits and conveniences as a result of digital payments. USAID Georgia can work with the NBG and directly with the banks and other payment service providers to lower rates, create incentives for online purchases, and stimulate competition by creating new digital payment solutions.

13. Support digital skills development and ICT workforce development.

The Georgian market has great demand for ICT specialists, ranging from software development to more advanced areas, such as AI and data analytics. With the ICT tax incentives and migration trends affecting the local ICT talent pool, the mismatch between ICT skills demanded by the private sector and those provided by the education system will continue to grow, absent intervention. Women are still underrepresented in the sector, as well. USAID/Georgia can work with relevant stakeholders to support development of advanced digital skills frameworks and respective programs. Such work could include:

- Support collaboration between ICT companies and education institutions. These collaborations allow ICT companies to inform curriculum development and digital competency frameworks, ensuring that graduates are trained in the key topics and have the skills that are in highest demand by the private sector. Collaborations could include guest lecturing by industry experts, in addition to internship programs for students to gain relevant skills and experience. Collaboration could also include R&D projects in higher education centers.

- Work with the Ministry of Education and Science of Georgia to change the current policy process of updating curricula, because it takes approximately one year and because time-consuming bureaucracy adversely affects the urgent need to change at pace with the rapidly evolving ICT sector.
- Support the development of professional technical educational centers in the ICT sector. USAID should take action to facilitate the development of the ecosystem by advocating for and supporting a more flexible system of accreditation for centers, as well as the liberalization of mandatory requirements for lecturers. Furthermore, USAID should work with relevant stakeholders to streamline the process for accrediting training programs. This can be achieved by engaging with accreditation bodies, education institutions, and government agencies to address regulatory barriers and to promote innovative approaches to accreditation. USAID should provide technical assistance, expertise, and resources to support the implementation of streamlined accreditation processes that encourage innovation and meet the evolving needs of the ecosystem. Collaborating with local partners, USAID should also help develop guidelines and best practices for accrediting training programs, ensuring alignment with industry standards and effective preparation for individuals entering the sector.
- Work with the Ministry of Education and Science, GeoStat, and private organizations, especially ICT companies, to identify needed skills according to the market, which professions and skills are in shortage, and where excess professionals can be found. The timely gathering and analysis of data would inform proactive evidence-based decisions and would address the mismatch between the education system and the needs of the labor market.
- Support international partnerships to improve the quality of staff at universities through exchange programs and other educational programs for the university staff. Another option is incentivizing pro bono lectures from successful professionals within the ICT industry. These could be routine lectures or podcasts.



A. METHODOLOGY

The Georgia DECA included three components:

- 1. United States Agency for International Development (USAID)/Georgia engagement:** USAID/Georgia designated a Mission Digital Ecosystem Country Assessment (DECA) Team from the USAID/Georgia program office. The Mission DECA Team helped identify stakeholders; reviewed relevant documents during planning, interviews, and the analysis and report-writing stages; and attended selected interviews during the interview phase.

The Mission DECA Team also helped organize the introduction and post-interview presentations with USAID/Georgia on the first and last days of the in-country research. These meetings were important to socialize the DECA purpose and preliminary findings across various USAID/Georgia technical offices.

This engagement was important not only for ensuring an appropriate mix of interviewees but also for building the Research Team's understanding of USAID/Georgia's priorities.

- 2. Desk research:** The desk research used a standardized template organized around three pillars (Digital Infrastructure and Adoption; Digital Society, Rights, and Governance; and Digital Economy). It included three components: 1) review of USAID/Georgia's Country Development Cooperation Strategy (CDCS), funding allocations, and digitally relevant programming; 2) quantitative analysis of open-source data and indices to produce regional comparisons (e.g., GSMA, World Economic Forum, International Telecommunications Union); and 3) internet research guided by high-level questions under each pillar about the state of Georgia's digital ecosystem.

The Research Team shared the desk research with the Mission DECA Team before interviews and used it to inform the interview guide questionnaires.

- 3. Interviews:** The Research Team collaborated with USAID/Georgia to compile a list of target stakeholders across civil society, academia, international organizations, the private and public sectors, and within USAID/Georgia. The Research Team and USAID/Georgia networks secured initial interviews. Additional interviewees were added throughout the research process through referrals from completed interviews.

During the interview phase, the Research Team conducted anywhere from 5 to 15 interviews per week. Most interviews were attended by at least two team members, with a lead interviewer and a notetaker. Each interviewee was asked a general set of questions that developed before the interview phase, tailored to interviewees, and based on learnings from previous interviews.

To ensure a diverse mix of interviewees, the Research Team evaluated the list of scheduled interviews and conducted additional outreach in an attempt to fill identified gaps. The figures below and Appendix B show the 70 interviews by sector and region (informed by 85 female interviewees, and 102 male interviewees).¹⁴

Figure 40. Organization interviews

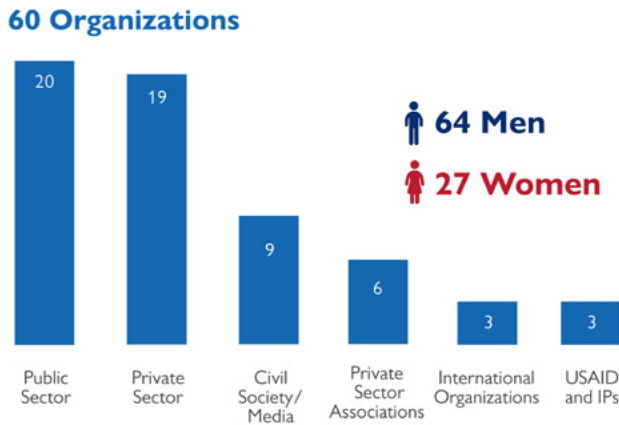
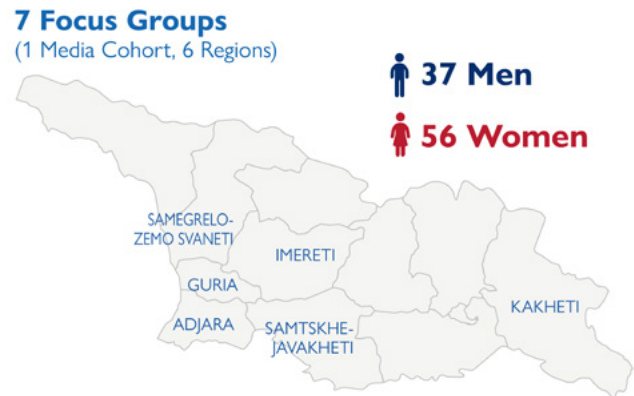


Figure 41. Focus Group interviews



Analysis

The Research Team conducted the bulk of the preliminary analysis during the interview phase in December 2022 and January 2023. The team conducted periodic debriefs around preliminary findings and recommendations. Midway through the interviews, the team identified primary themes based on these initial findings. Upon completing the interview phase, the team convened to revisit these themes, confirmed their validity against interview notes, and proceeded to organize the findings around the three pillars outlined in this report (Digital Infrastructure and Adoption; Digital Society, Rights, and Governance; and Digital Economy).

Limitations

Research Team members were limited, to an extent, by their technical expertise. They were chosen to provide coverage of key technical areas identified in a preliminary review, particularly around emerging technologies, the sociotechnical implications of technology, digital government, connectivity, cybercrime, and the digital economy. This may introduce some bias—weighting the specializations of team members more heavily in some areas compared to others.

Many interviewees were selected through USAID/Georgia and Research Team networks, which may have excluded stakeholders who are less comfortable engaging with U.S. government representatives. Most interviews took place in Tbilisi, Georgia; as a result, information is limited to Tbilisi-based interviewees’ knowledge and work across the country. Rather than rigorous qualitative methods (e.g., thematic coding), analysis of interview notes depended on Research Team members triangulating findings and attempting to balance thematic gaps by consulting technical experts and seeking additional interviewees.

Research Team

The Research Team was composed of digital development generalists and specialists with technical expertise in emerging technologies, the sociotechnical implications of technology, digital government, connectivity, cybercrime, and the digital economy. Team members who were technical experts attended most interviews that were relevant to their expertise.

¹⁴ The three expert interviews seen in Appendix B are not included in the figures.

B. KEY INFORMANT INTERVIEWS

Sector experts	
1.	Telecommunications expert
2.	Telecommunications expert
3.	ICT expert
Public sector (national and local)	
4.	Personal Data Protection Service (PDPS)
5.	Digital Governance Agency (DGA)
6.	National Centre for Teacher Professional Development
7.	Georgian National Communications Commission (GNCC)
8.	Education Management and Information System (EMIS)
9.	Ministry of Economy and Sustainable Development (MoESD)
10.	National Bank of Georgia (NBG)
11.	Information Technology Agency (ITA)
12.	Municipal Services Development Agency (MSDA)
13.	Iv. Javakishvili, Tbilisi State University
14.	Open Net
15.	Georgia's Innovation and Technology Agency (GITA)
16.	Public Service Development Agency (PSDA)
17.	Government of Georgia (GoG)
18.	Enterprise Georgia (EG)
19.	Spark
20.	Central Elections Commission of Georgia (CEC)
21.	Ministry of Finance of Georgia (MoF)
22.	National Intellectual Property Center of Georgia – Sakpatenti
23.	Revenue Service (RS)
Donors, international nongovernmental organizations (NGOs), international development organizations	
24.	Internet Society Georgia Chapter (ISOC)
25.	European Bank for Reconstruction and Development (EBRD)
26.	EU Delegation to Georgia
Civil society/media	
27.	IREX
28.	Open Society Georgia Foundation (OSGF)
29.	Research and Development Centre for Electronic Communication
30.	Zinc Network
31.	International Foundation for Electoral Systems (IFES)
32.	Institute for Development of Freedom of Information (IDFI)
33.	PH International
34.	International Society for Fair Elections and Democracy (ISFED)
35.	Media Development Foundation (MDF)

Private sector	
36.	Innovative Education Foundation
37.	Sweeft Digital
38.	ICT Cluster
39.	SOLVIT
40.	AzerTelecom
41.	EPAM
42.	Pulsar AI
43.	Webiz
44.	Leavingstone
45.	Orient Logic LLC
46.	Silknet
47.	Skytel
48.	MagtiCom
49.	TBC
50.	UGT
51.	Digital Area
52.	Lineate
53.	Bank of Georgia (BoG)
54.	TBC IT Academy
Private sector associations	
55.	Small and Medium Telecom Operators' Association of Georgia
56.	National Cybersecurity Association (NCSA)
57.	Fintech Association of Georgia
58.	Georgian Information Security Association (GISA)
59.	E-commerce Association of Georgia
60.	Georgia Chamber of Commerce and Industry (GCCCI)
USAID implementing partners	
61.	USAID Economic Security Program
62.	USAID Local Governance Program
63.	USAID Economic Governance Program
Regional focus groups	
64.	Media Cohort
65.	Adjara
66.	Guria
67.	Imereti
68.	Kakheti
69.	Samegrelo-Zemo Svaneti
70.	Samtskhe-Javakheti

C. KEY STAKEHOLDERS

Key Stakeholders	Roles and Responsibilities
Digital Governance Agency (DGA)	The Legal Entity of Public Law (LEPL) DGA aims to support and development of digital governance, provide a one-stop shop for delivering digital services to citizens and businesses, and ensure information security and cybersecurity. In 2020, DGA was created to lead the development of Digital Governance in Georgia. Its creation resulted from the merger of two institutions within the Ministry: 1) the Data Exchange Agency, which was responsible for coordinating the development of the GovTech in Georgia, implementation of data exchange infrastructure, citizen portals, ICT and cybersecurity in the public sector; and critical infrastructure; and 2) Smartlogic, the Ministry of Justice's IT department. The new institution, DGA, incorporated the functions of both the Data Exchange Agency (such as the data exchange platform, called the Georgian Government Gateway) and Smartlogic. ^{cdlviii} The DGA is responsible for cyber issues among private sector critical information infrastructure (CII) entities.
Digital Governance Commission	Formed in early 2023, the Digital Governance Commission is responsible for coordinating the Georgian interagency on the development and implementation of various digital-related initiatives. The Commission is composed of members at the deputy minister level, as well as working groups focused on a range of topics.
The National Security Council (NSC)	The NSC is the Ministerial-level authority responsible for cybersecurity governance. The council coordinates national responses to cyber incidents that threaten state or public interests. The NSC has broad authority to decide how the government should detect, identify, evaluate, and predict threats to the information space; ensure protection of critical information systems; neutralize threats; improve cybersecurity capacity of agencies; develop institutional and international cooperation on cybersecurity; bolster the security of electronic government systems; and raise public awareness about cyber issues.
Operative-Technical Agency (OTA)	The OTA is responsible for carrying out covert investigative activities and electronic surveillance measures. The OTA's scope of operation covers public sector (CII), as well as internet service providers (ISPs).
Cyber Security Bureau (CSB)	The CSB, under the Ministry of Defense of Georgia, has a mandate to develop cybersecurity systems and to minimize the consequences of cyberattacks against the defense sector.
Cybercrime Division within the Central Criminal Police Department	The Cybercrime Division—underneath the Ministry of Internal Affairs—is responsible for cybercrime law enforcement. It is tasked with detecting and preventing illegal activities online and is the primary entity responsible for carrying out the Council of Europe (CoE) Convention on Cybercrime. ^{cdlix}
Municipal Services Development Agency (MSDA)	The MSDA provides services and technical assistance (TA) to municipal governments throughout Georgia, with the aim of improving local governments' effectiveness. MSDA has 17 digital government modules available for municipal governments.
National Agency of Public Registry (NAPR)	The NAPR's goals are to maintain a unified registry of registries, including real estate, mortgage registration, union registry, property registry, business registry, and many others.
Personal Data Protection Service (PDPS)	PDPS is an independent state authority that monitors personal data processing and conducts oversight of covert investigative actions involving personal data.
Georgian National Communications Commission (GNCC)	The GNCC was formed in 2000 and is an independent regulatory authority that regulates TV broadcasting, radio broadcasting, fixed and mobile telephone, and internet services in Georgia. GNCC also engages in media literacy work throughout the country.
Public Service Development Agency (PSDA)	The PSDA is responsible for facilitating the development of new public services, maintaining civil registries, increasing efficiency of existing public services, and issuing citizenship and identity documents, among other tasks.
Information Technology Agency (ITA)	The ITA aims to streamline the development and reform of digital government solutions in health, labor, and social services.
Central Elections Commission (CEC)	The CEC organizes the elections of the President, Parliament, and municipal and mayoral elections. The CEC is also responsible for ensuring that all elections are administered in alignment with Georgian legislation.
Ministry of Economy and Sustainable Development (MoESD)	The MoESD is a Ministry of the Government of Georgia and is in charge of regulating economic activity in the country. The Ministry oversees the development of country's digital economy and connectivity on a policy level, having worked on the Broadband Infrastructure Development Strategy and Implementation Plan for Georgia and working on Digital Georgia, a national strategy of the development of the information and communications technology (ICT) sector.

Institute for Development of Freedom of Information (IDFI)	The IDFI is a Georgian nongovernmental organization founded in 2009 by two historians/researchers, Levan Avalishvili and Giorgi Kldiashvili. IDFI is a hybrid watchdog/think tank organization, combining monitoring and analytical skills with evidence-based advocacy, strategic litigation, awareness raising, and consulting activities. The organization has hosted conferences on digital transformation in Georgia.
National Cyber Security Association (NCSA)	The NCSA is a Georgian nonprofit organization implementing activities to strengthen cybersecurity and to raise cybersecurity awareness in Georgia. NCSA and IDFI began working together in 2022 to build greater public awareness about cybersecurity.
Media Rights	Founded in 2021 by Natia Kapanadze, Ekaterine Basilaia, and Khatia Kurashvili, the goal of Media Rights is to promote a free media environment through research, advocacy, and training.
Georgian Democracy Initiative	The Georgian Democracy Initiative is an independent, nongovernmental, nonprofit organization dedicated to research, analysis, and education to advance democratic development, protect human rights, and support rule of law.
International Society for Fair Elections and Democracy (ISFED)	The ISFED is an independent nonprofit NGO that monitors elections and related political processes. ISFED has published research on social media monitoring leading up to elections.
Civil Rights Defenders	Civil Rights Defenders opened a regional office in Tbilisi in 2022, and it aims to partner with local human rights organizations to work on democracy reforms, LGBTI+ rights, women's issues, and media rights.
Media Development Foundation (MDF)	The MDF is an independent, nongovernmental organization aiming to promote fundamental human rights and freedoms, as well as an open, inclusive, and pluralistic society. The organization works on the professional and institutional development of media, media accountability, and self-regulation mechanisms.
International Foundation for Electoral Systems (IFES)	The IFES supports Georgia to develop democratic elections and political processes, principally through advocacy, convenings, direct engagement with the CEC, and trainings.
Open Society Georgia Foundation (OSGF)	Founded in 1994 as part of the Open Society Foundation's global network, the OSGF funds projects to improve the media landscape and civil rights activist community in Georgia. Its main priorities are judiciary reform, health policy, EU integration, self-governance, media freedom, minority integration, equality, and social justice issues.
Silknet	Silknet is one of the two the leading telecommunications operators in Georgia.
MagtiCom	MagtiCom is one of the two the leading telecommunications operators in Georgia.
Small and Medium Telecom Operators Association of Georgia	The main goals of this association are to support the development process of the Georgian telecommunications sector, promote competition in the telecommunications sector, and help to reduce the systemic and nonsystemic barriers to entry into the Georgian telecommunications market.
Open Net	Open Net is implementing the Log-in Georgia project, which consists of two components and includes the construction of high-quality broadband infrastructure, along with the promotion of the digital service usage and increase of public awareness in this direction. In parallel with the construction of the infrastructure, Open Net will operate the network created under both the pilot project and the Log-in Georgia project, where every ISP will have open access services with free, unrestricted, and nondiscriminatory conditions.
National Bank of Georgia (NBG)	The NBG is the central bank of Georgia. Its status is defined by the Constitution of Georgia. The main objective of NBG is to ensure price stability. It exercises supervision over the financial sector for the purposes of facilitating financial stability and transparency of the financial system, as well as for protecting the rights of the sector's consumers and investors.
Georgia's Innovation and Technology Agency (GITA)	GITA's goal is to create an effective system in Georgia whereby innovation and technology can be developed, as well as to promote the commercialization of innovative knowledge to incorporate the latest technologies into all economic sectors and to create the necessary platform for innovative development.
TBC	TBC is one of the two leading commercial banks in Georgia.
EPAM	EPAM is one of the largest international IT companies operating in Georgia. It was also one of the first of such companies to enter the Georgian market.
Sweeft Digital	A Georgian IT company, Sweeft Digital was acquired in 2021 by international IT company Making Science.
Pulsar AI	Pulsar AI is a Georgian startup which developed conversational artificial intelligence (AI) for auto dealers that helps schedule appointments with no human involvement. The company was acquired by the U.S.-based company Impel, the global leader in digital automotive merchandising software and data. Pulsar AI was the first Georgian startup with a successful international exit.

Digital Transformation Council	The Digital Transformation Council is a multi-sectoral body to inform the MoESD about digital transformation across the country.
ICT Cluster	The Georgian ICT Cluster, established in 2018, is a collaborative platform for ICT industry stakeholders that supports the establishment of business linkages locally and internationally to increase the competitiveness of the Georgian ICT industry and to ultimately contribute to the economic development of the country.
Fintech Association	The Georgian Fintech Association is the first nonprofit organization created to protect the interests of fintech companies in Georgia.
E-Commerce Association of Georgia	The E-Commerce Association of Georgia was founded in 2018, uniting the players related to e-commerce business. Its key goal is to research opportunities for the development of e-commerce business and to increase the importance of its share in the country's economy.

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