COLLABORATIVE REGULATION CASE STUDY

REPUBLIC OF MOLDOVA

ITU Regional Initiative for Europe on Broadband Infrastructure, Broadcasting and Spectrum Management

Final Draft

ACKNOWLEDGMENTS

This report was developed by the Regulatory and Market Environment Division (RME) of the Telecommunication Development Sector, with the support of ITU Office for Europe, within the framework of the ITU Regional Initiative for Europe on broadband infrastructure, broadcasting and spectrum management. It was elaborated by ITU Expert, Ms Vaiva Maciule, with the support of Ms Youlia Lozanova, Senior ICT Analyst, Regulatory and Market Environment Division, BDT, and Mr Julian McNeill, Project Officer, ITU Office for Europe, and under the supervision and direction of Ms Sofie Maddens, Head of the Regulatory and Market Environment Division, BDT and Mr. Jaroslaw Ponder, Head of ITU Office for Europe.

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- Ministry of Economy and Infrastructure of Moldova;

- National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI), Moldova;

- National Service for the Radio Frequencies Management, Moldova;

- Foreign Investors Association, Moldova.

The paper was prepared as a contribution to the ITU Global Symposium for Regulators to be held on held on 22-25 June 2021.

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1. Introduction

Lesson from COVID-19: digitalization more important than ever

With its ups and downs, the Republic of Moldova has experienced an expansion of the economy by an average of 4.6 per cent annually over the past 20 years.[1] The global pandemic, however, has left a significant mark – the gross domestic product (GDP) decreased by 7.0 per cent in 2020 and affected most sectors of the economy.

According to a study by the International Telecommunication Union (ITU), the economic losses of the COVID-19 pandemic during 2020 affected some countries more than others. Countries with better broadband infrastructure and with broad use of ICTs among the population were able to mitigate part of the negative economic impact, allowing households, enterprises, and governments to continue their daily engagements during that time.[2]

Although Moldova's economy is forecasted to rebound in 2021 with an expected 3.8 per cent growth in GDP,[3] traces of the pandemic will remain well into the future. It is important, therefore, to consider the main lessons learnt from the pandemic. One clear lesson has emerged: inclusive connectivity is not an option, it is a necessity. The digital economy has become an enabler for traditional economic sectors in the Republic of Moldova, creating new markets and development opportunities. One less negative legacy of COVID-19 is the opportunity it has highlighted to drive forward with digital transformation[4] .

Digital transformation through collaborative regulation: the way forward

Digital transformation has emerged onto the policy agenda of a growing number of countries as a way to drive social development and economic prosperity.

Digitalization as a cross-cutting phenomena has both broad social and economic impact. It affects all sectors of an economy – from agriculture to industry and trade, from household consumption to public services – through its impacts on productivity, employment, skills, services being offered, and markets being reached. It changes the means of production, ways of delivery, consumption and lifestyle patterns, it changes social lives via new means of communication. Digital transformation and the change it has brought about, and continues to bring, has created the need for a different approach to regulation. As a result, a new regulatory paradigm has emerged that seeks to fast forward digital transformation for all – and that paradigm is embodied in the concept of *collaborative regulation*.

Collaborative regulation or 5th generation regulation (G5) is a broad notion that ITU has defined based on the concept of generations of ICT regulation (see Box 2). It marks a fundamental shift in the way regulation is executed, its holistic policy ground and the stakeholders that it brings together – from policy-makers,

[1] https://www.worldbank.org/en/country/moldova/overview#3

[2] ITU, The Economic Impact of Broadband and Digitization through the Covid-19 pandemic - Econometric Modelling, 2021

[3] World Bank keeps Moldova's 2021 GDP growth forecast at 3.8% (seenews.com)

[4] ITU, The Economic Impact of Broadband and Digitization through the Covid-19 pandemic - Econometric Modelling, 2021

single-sector and cross-sector regulators to market players of any size. It also shifts the regulatory focus on behaviours and impact on markets and development. G5 regulation forces the reconsideration of existing institutional frameworks and the harmonization of policy priorities and regulatory rules in recognition of the interplay between digital infrastructure, services and content across industries and national borders.

The objective of this case study is to analyse the current institutional and regulatory framework of the Republic of Moldova to understand how it reflects the principles and nature of collaborative regulation. The case study also highlights areas of strength and possible improvements as the Republic of Moldova journeys towards digital transformation and collaborative regulation, enabling it to seize opportunities and address challenges.

The analysis and results are based on publicly available information (reports, legal acts, studies) and information obtained during interviews with stakeholders from Moldova's public and private sector (see Box 1 on the methodology of the ITU Collaborative Regulation Case Studies). Gathering information from different perspectives has allowed us to spotlight strengths and opportunities for the country, while identifying areas for further consideration which could bring the Republic of Moldova into the group of G5 countries. These include a mixture of best practice collaborative regulation principles to enhance regulatory maturity, and collaborative regulation tools to improve digital market outcomes. While some of these are "quick wins" and can be achieved with relative ease, others will demand more reflection and time.

Box 1: Collaborative Regulation Case Studies: The methodology

To better understand the role and impact of collaboration and collaborative governance, ITU has launched a series of Collaborative Regulation Case Studies. They focus on regulatory and institutional frameworks and on collaborative governance in countries across different regions. The case studies detail diverse experiences and varied policy and regulatory patterns, and set out challenges, new ideas and lessons learnt by regulators as they journey towards G5 collaborative regulation. Each case study follows a similar methodology, is tailored to each region's needs and has been achieved through close cooperation by all parties involved. Each case study is built on two components:

A 50-question survey on fifth generation regulation that explores collaboration across government agencies and ministries, the scope and patterns for collaboration, the involvement of other stakeholders and legal tools, policy tools and processes; and

Multiple interviews with key national stakeholders – including representatives of the national regulatory authority, a relevant ministry, and a private sector player or consumer association. Interviews were flexible but structured to explore practical aspects of policy implementation and regulatory reform.

The case studies set out the current policy, regulatory and governance landscape in the country, with focus on current best practice and areas for future enhancement.

Section 2 of this study provides an overview of broadband market developments in the Republic of Moldova while Section 3 analyses Moldova's digital policies and strategies. Section 4 focuses on institutional framework and inter-agency collaboration and Section 5 briefly describes vertical collaboration (i.e. collaboration between public and private sectors). Section 6 charts out the steps ahead on Moldova's journey towards G5 regulation and digital transformation. Finally, a short conclusion sums up key results.

Box 2. Collaborative regulation

The ability to successfully collaborate is one of the key building blocks of a digital economy, and a key marker of a fifth generation (G5) regulator. *Collaborative regulation* or G5 regulation is the ITU "generations of regulation" framework for the maturity of modern ICT regulatory regimes. The framework is based on a view of 1) collaboration; 2) high-level principles; and 3) focus on digital development and 4) the digital economy policy agenda. According to the ITU:

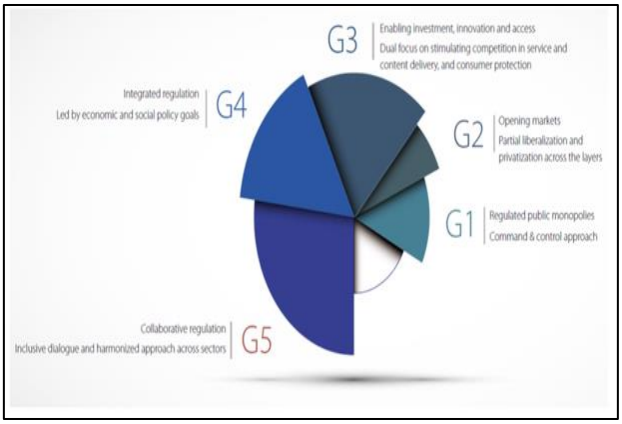


Figure 1. Generations of regulation

(1) Collaboration is the dominant element – the very watermark of G5 regulation. It measures the breadth and depth of cross-sector collaboration between the ICT regulator and her/his peers that play a role in the digital economy;

(2) As regulation shifts from rules to principles, the design of frameworks and what keeps them together have acquired special importance. While rules will and should not disappear soon, in some instances, principles are better suited for finding balanced, sound solutions, especially in complex areas;

(3) New consumer needs, business models and market dynamics call for retooling regulatory inventory and the development of coherent, outcome-oriented policy instruments to support digital development;

(4) Through disruption of markets and the rise of new technologies, building an inclusive digital economy is a top goal on national policy agendas. The success of their implementation will have a multiplier effect on the digital transformation of economies and their sustainability in the future.

RATIONALE FOR GENERATIONS OF REGULATION

Source: ITU.

	1. Regulatory authority	2. Regulatory mandate	3. Regulatory regime	4. Competition framework
G1	• Consolidated with policy-maker and/or industry	• Business as usual	• Doing as we have always done	• State-owned monopoly
G2	• Separate agency	• First wave of regulatory reform	• Doing more	• Liberalization
G3	• Separate agency, autonomous in decision-making	• Advanced liberalization of ICT sector	• Doing the right things	• Partial competition
G4	• Separate agency with enforcement power	• Adjacent issues become core mandate	• Doing the things right	• Full competition
G5	• Separate agency as part of a network of partner regulators	• **Active collaboration across the board**	• Doing things together	• Intra-modal competition

Source: ITU

2. Broadband market developments

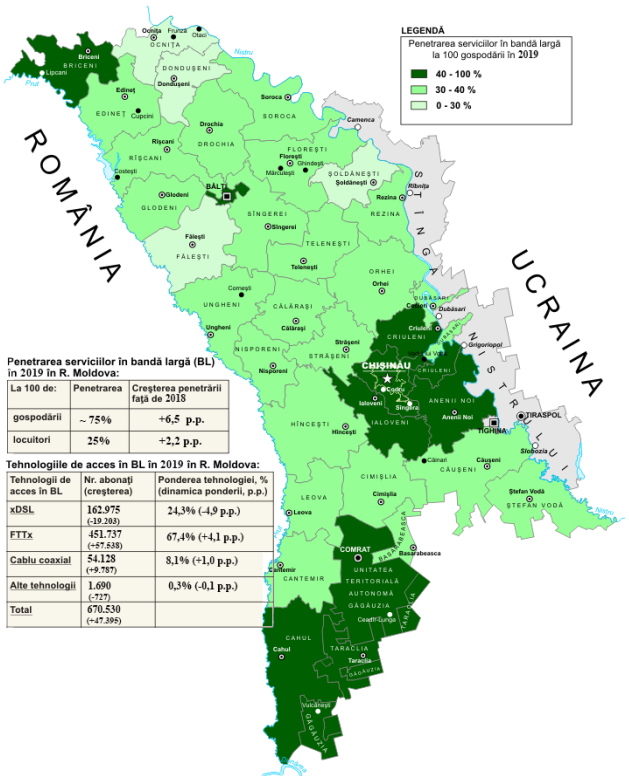
Communications service providers are at the heart of the digital economy, which strongly depends on the coverage, capacity, quality, and reliability of networks. Digital transformation can only be realized if high quality networks are available at affordable prices. It is therefore important to understand the status of broadband developments in the Republic of Moldova in terms of availability, affordability and quality.

Coverage and penetration. Mobile infrastructure is well-developed in the Republic of Moldova, with a high penetration rate and near universal mobile broadband coverage. According to the National Regulatory Agency for Electronic Communications and Information Technology (ANRCETI), the geographical coverage of mobile communications networks is about 100 per cent of Moldova's territory, with 4G networks reaching coverage of 97 per cent of the territory in the last few years.[5] Mobile broadband penetration, calculated as active mobile broadband subscriptions per 100 inhabitants, reached 89.8 per cent at the end of 2020, an increase from the same figure in 2019 standing at 88.8 per cent.[6] The mobile broadband market is shared by three providers: Orange Moldova enjoying 61.8 per cent, followed by Moldcell – 29.9 per cent and Moldtelecom – 8.3 per cent in 2020.[7]

Fixed broadband access is becoming increasingly accessible throughout the country as well, with intensive deployment of fibre networks (see Figure 2). The total number of fixed broadband subscribers demonstrated stable and continued growth over the period 2015-2020 (see Figure 3), reaching a penetration rate of over three-quarters of households or 27 per cent, if calculated per 100 inhabitants, in 2020.[8] According to data from ANRCETI, the number of fibre connections (FTTx) increased by 15.1 per cent in 2020, making up a share of 72.3 per cent of total subscriptions (followed by xDSL technology – 19 per cent, and coaxial cable – 8 per cent). Moldtelecom, a state-owned incumbent operator, enjoyed 61 per cent of the fixed broadband market.

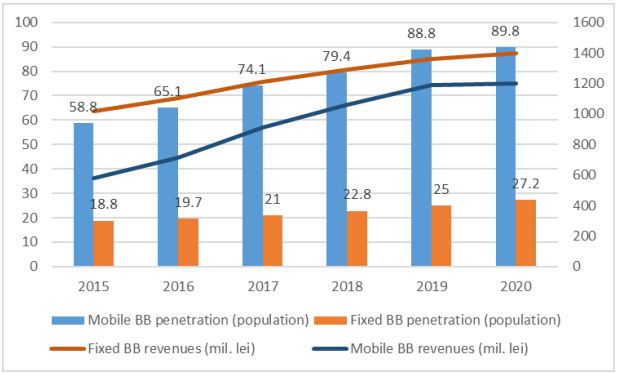
[5] https://anrceti.md/files/filefield/Anuar%20statistic_2020.pdf
[6] https://anrceti.md/files/filefield/Anuar%20statistic_2020.pdf
[7] https://anrceti.md/news_050421
[8] https://anrceti.md/news_090421

Figure 2. Geographical coverage of fixed broadband networks in Moldova, 2019



Source: ANRCETI

Figure 3. Revenues (mil. lei) and penetration rates (% of population) of fixed and mobile broadband, 2015-2020

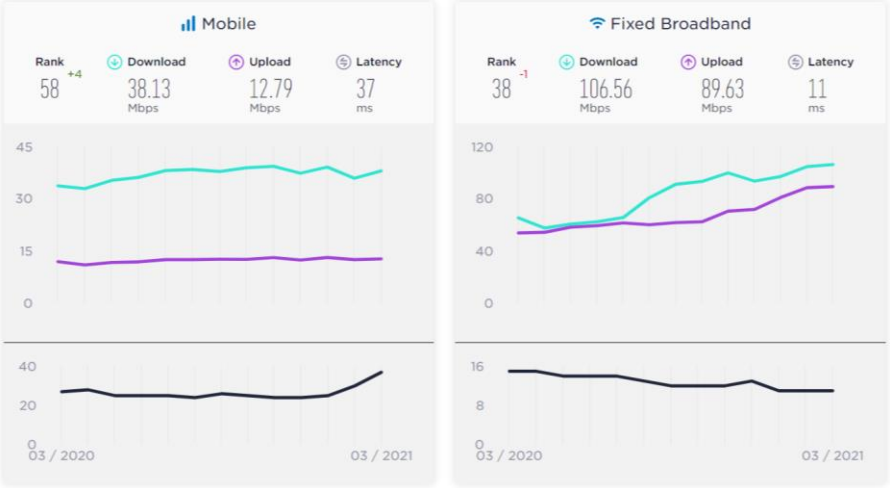


Source: ANRCETI

Average speed. According to Speedtest Global Index, which provides a monthly comparison of Internet speed data for a benchmark of 100 countries around the world, the Republic of Moldova is ranked 58th in terms of mobile broadband speed, with download speed of 38Mbps compared to the global average of 48Mbps, and ranked 38th in terms of fixed broadband speed, with download speed of 106Mbps – higher than the global average of 98Mbps.[9]

[9] https://www.speedtest.net/global-index

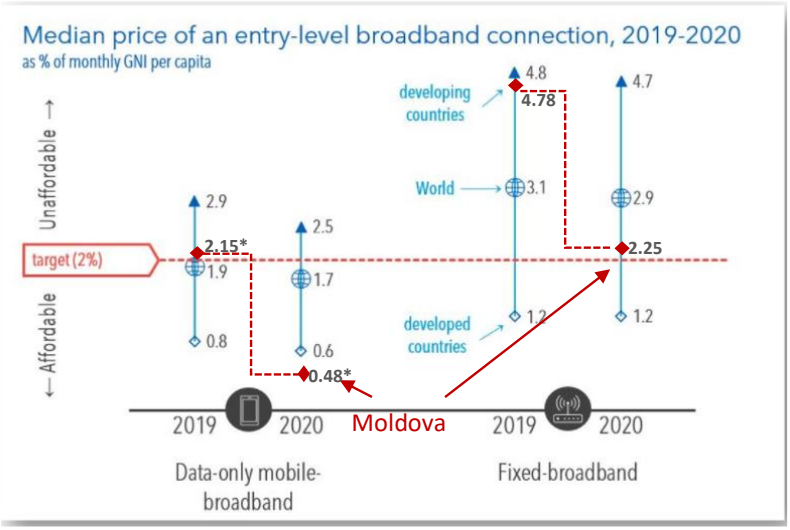
Figure 4. The Republic of Moldova's average speeds of mobile and fixed broadband, March 2021



Source: Speedtest Global Index

Affordability. According to data from ITU and the Alliance for Affordable Internet (A4AI), collected for the "The affordability of ICT services 2020,"[10] the Republic of Moldova experienced remarkable improvement in affordability of broadband access over the period of 2018-2020. Expressed as a percentage of median GNI per capita, prices for the data-only mobile-broadband basket have dropped drastically, moving significantly below the 2 per cent affordability target of the Broadband Commission for Sustainable Development. Despite having seen a large positive change in the past year, the fixed-broadband basket remains above the 2 per cent target.[11]

Figure 5. Median prices (as % of monthly GNI per capita) of broadband connections, 2018-2020



Note.* Data for Moldova is from 2018 as data for 2019 is not available.
Source: ITU and the Alliance for Affordable Internet (A4AI), 2020

International perspective. International indicators cover different aspects of a country's preparedness to participate in the digitalization race. Although various metrics have their own focus and take into

[10] https://www.itu.int/en/ITU-D/Statistics/Pages/ICTprices/default.aspx
[11] https://www.itu.int/en/mediacentre/Pages/pr02-2021-The-affordability-of-ICT-services-2020.aspx

consideration different quantitative and qualitative aspects, they still allow us to identify main strengths and weaknesses (as they come across in different metrics), and where a country stands in its digital transformation path. Moldova's position across eight international rankings is summarized in Table 1 and reveals the following:

- ICT adoption is the main strength of the Republic of Moldova and is usually highly ranked (demonstrating adequate availability, accessibility and use of ICTs in the country);
- Digitalization of public services and the engagement of citizens that they promote are on the right track;
- Some indicators that lower Moldova's position in comparison to other countries include: 1) insufficient innovation capacity and an immature innovation ecosystem; 2) lack of future orientation and flexibility in governmental decisions (this is usually understood as a government's ability to react quickly and accordingly to a changing situation); 3) mismatch of skills of current workforce; 4) lack of transparency; and 5) issues leading to a lack of trust in digital technologies (e.g. cybersecurity, data privacy and security).

Although the Republic of Moldova exhibits relatively strong core elements, some areas require further attention in view of maximizing the country's digital potential; collaborative regulation could have a key role to play in these efforts.

Table 1. Moldova's position in some international rankings

Index	Organization and year	Rank of Moldova	Strengths	Weaknesses
Global Competitiveness Index 4.0[12]	An annual assessment of the drivers of productivity and long-term economic growth. The pillars, which cover broad socio-economic elements, are: institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labour market, the financial system, market size, business dynamism and innovation capability.			
	WEF, 2019	86 of 141	ICT adoption (rank 48)	Transparency (rank 101) Future orientation of government (114) Skills of current workforce (109) Innovation capacity (130)
Europe 5G Readiness Index[13]	Evaluates European countries' readiness to deploy and adopt 5G networks. The Index comprises six factor categories with 35 criteria in total within those categories.			
	inCITES Consulting, 2020	36 of 39	Country's profile (e-Gov services, competition in network services) and demand (penetration of new fixed and mobile technologies as well as the use of the Internet)	Innovation landscape (R&D expenditure, growth on innovative companies, university-industry cooperation and etc.), insufficient technological preparation (number and maturity of 5G trails, 5G spectrum auction plans), insufficient legal framework's adaptivity to digital business models and mismatch of skills
	Reflects state of E-Government Development. It is a composite of three dimensions of e-government, namely: provision of online services, telecommunication connectivity and human capacity.			

[12] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[13] https://www.incites.eu/index.php/europe-5g-readiness-index#

E-Government Development Index[14]	UN, 2020	79 of 193	Online service index	Human capital index
E-Participation Index[15]	Focusing on the use of online services to facilitate provision of information by governments to citizens ("e-information sharing"), interaction with stakeholders ("e-consultation"), and engagement in decision-making processes ("e-decision making").			
	UN, 2020	55 of 193	Qualitative evaluation, no details available	
UNCTAD B2C E-commerce Index, 2020[16]	The UNCTAD B2C E-commerce Index measures an economy's preparedness to support online shopping. The index consists of four indicators that are highly related to online shopping and for which there is wide country coverage.			
	2020, UNCTAD	53 of 152	Individuals using the Internet (% of population) Postal Reliability Index	Account ownership at a financial institution or with a mobile-money-service provider (% of population age 15+) Secure Internet servers (per 1 million people)
Global Innovation Index[17]	Measures an economy's innovation performance.			
	2020 WIPO	59 of 131		
Global Cybersecurity Index[18]	Measures the commitment of countries to cybersecurity.			
	2018 ITU	53 of 175		
Corruption Perception Index[19]	Ranks 180 countries by their perceived levels of public sector corruption according to experts and the business community.			
	2020 Transparency International	115 of 180		

Source: ITU research

3. Overview of digital strategies and policies in the Republic of Moldova

This section summarizes existing digitalization or related strategies and policies, and provides an overview of the Government's priorities, strategic visons and guidelines.

National Development Strategy. The Republic of Moldova has recently developed a new National Development Strategy, "Moldova 2030,"[20] aligned with both the EU Association Agreement and the UN's 2030 Agenda for Sustainable Development. The Strategy groups objectives of national development into four basic pillars: 1) sustainable and inclusive economy; 2) strong human and social capital; 3) fair and efficient institutions; and 4) healthy environment. Although the Strategy does not have specific targets for digitalization or digital transformation, it acknowledges ICTs as a key enabler for Moldova's development and recognizes the necessity of an aligned sectorial strategy.[21]

The **"Roadmap for boosting the process of digitization of the Moldovan economy and the development of electronic commerce,"**[22] prepared by the Ministry of Economy and Infrastructure (MEI) in 2020, can be

[14] https://publicadministration.un.org/egovkb/en-us/Data-Center
[15] *ibid.*
[16] https://unctad.org/system/files/official-document/tn_unctad_ict4d17_en.pdf
[17] https://www.wipo.int/global_innovation_index/en/2020/
[18] https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf
[19] https://www.transparency.org/en/cpi/2020/index/nzl
[20] https://mei.gov.md/en/content/national-development-strategy-moldova-2030
[21] *ibid.*
[22] https://mei.gov.md/sites/default/files/foia_de_parcurs.pdf, https://mei.gov.md/ro/content/fost-prezentata-foaia-de-parcurs-pentru-impulsionarea-procesului-de-digitizare-economiei

viewed as a first step towards the elaboration of a national digital transformation strategy. In the context of the COVID-19 pandemic, MEI carried out an analysis of constraints and identified immediate measures to be taken in order to boost the process of digitization of the national economy and the development of e-commerce. The roadmap provides for 37 actions to be taken in the short term to tackle the largest identified issues (e.g. low engagement of SMEs in e-commerce, challenges in the remote interaction between government and business, or business and consumers, complexity in customs and tax procedures, etc.). The document mainly addresses the problem of e-commerce (as a part of digital economy) rather than digital economy as whole.

Strategy for IT industry and digital innovation ecosystem development (2018-2023)[23] and its Action Plan

Box 2. Moldova IT Park

In January 2018 the first IT Park opened for activity in the Republic of Moldova, set up as a government-created platform to stimulate investment and development of ICT businesses, research, development and digital innovation.

Moldova IT Park offers several advantages and incentives to its residents, including simplified interaction with public authorities, possibilities of attracting foreign specialists, etc. However, its most remarkable feature is a simplified tax model. Instead of paying different taxes (e.g. local, real estate, road, corporate income and other taxes), IT Park's residents pay a single tax of 7% applied to the company's turnover.

According to IT Park Moldova, the platform currently has 710 active residents, which employs over 12 000 specialists. Residents of the IT Park are expected to generate a revenue of 5.16 billion MDL in 2021.

Source: Moldova IT Park, Ministry of Economy and Infrastructure

aim at increasing the ICT industry's competitiveness at regional level and improving the climate for digital innovation. The document, developed by MEI together with external partners, demonstrates that the ICT sector is one of the priority economic sectors of the Republic of Moldova, and the Government sees its potential in contributing to the country's development. With this strategy, the Government aims to facilitate the emergence of dynamic ecosystems through close collaboration with entrepreneurs, investors, corporations and other stakeholders – demonstrating a mindset very much in line with a collaborative regulation approach.

The vision of the ICT sector is further set out in three strategic documents detailed below.

[23] https://mei.gov.md/ro/content/competitivitatea-industriei-it

The National Strategy for Information Society Development "**Digital Moldova 2020"** and its Action Plan were approved by the Government in 2013 to promote policies directed towards ensuring sustainable growth of the ICT sector.[24] The Strategy is structured around three pillars: 1) infrastructure and access; 2) digital content and electronic services; 3) capacities and usage, with formulated objectives for each. The Action Plan provides an extensive list of actions to be taken to reach these objectives, and identifies timelines and responsible institutions. The latest implementation evaluation report finds that 90 actions out of the 95 initially planned have been completed,[25] and the main objectives of the Strategy have been met. For activities that were not (fully) implemented, a lack of financial resources, together with a shortage of qualified human resources, and challenges in implementation (like delays and failures to act) were identified as barriers. However, monitoring and reporting of the outcomes of the actions can be improved to provide a more accurate picture of the impact of the Strategy. The report also notes that with a rapidly changing ICT environment, some actions lost their relevance or became obsolete. This provides a valuable lesson: while long lasting visions and long-term objectives are important, periodic review of actions, evaluation of their relevance and flexibility in modifying them are critical for successful implementation. It is considered best practice to have a long-term vision document accompanied with an action plan reviewed on an annual or biennial basis. Furthermore, the implementation report focuses on actions, but not on the indicators, reflecting the reach of the objectives (in terms of penetration, coverage, speed, usage).[26]

The overall objective of the **Broadband Network Development Programme 2018-2020**[27] is the development of broadband networks with greater data transfer capacity. More specifically, it aims at connecting all localities to broadband networks, including local administrations, by installing fiber optic points of presence and ensuring for subscribes in these localities connections with speed of at least 30 Mbps by 2020, and increasing broadband access penetration to 60 per cent of total households. According to the implementation report, the Programme is mostly implemented with some outstanding actions remaining. Similarly to previous strategic documents, information on results achieved in terms of determined objectives is not provided.

Radio Spectrum Management Programme for 2021-2025,[28] prepared and recently adopted by the Government, with the support of ITU, aims to ensure the necessary radio spectrum resources for the continued development of ICTs in the Republic of Moldova. The document sets out recomendations for

[24] https://eufordigital.eu/library/digital-moldova-2020-strategy/

[25] https://mei.gov.md/sites/default/files/raport_de_evaluare_moldova_digitala_2020.semnat.pdf

[26] The strategy has listed the following goals for 2020:

- All localities of the country shall have at least one point of access to broadband with a minimum speed of 30MB/s while at least 60% of households shall be connected to broadband Internet;
- At least 75% of citizens shall be Internet users;
- 100% of public services which may be provided electronically shall be available online;
- 100% of archives, civil status records, cultural and scientific heritage shall be digitized and available;
- At least 80% of citizens shall be satisfied with the quality of provided services;
- Public services shall be provided under the ID card, including electronic or through electronic or mobile identification;
- At least 70% of the population shall use electronic services;
- At least 60% of the population shall use digital signature;
- At least 20% of the population shall shop online;
- 100% of the population shall have access to digital terrestrial television.

[27] https://mei.gov.md/en/content/communications-and-access-infrastructure

[28] https://www.legis.md/cautare/getResults?doc_id=125169&lang=ro

spectrum allocations over the next five years. The second annex of this document determines reserve prices of spectrum in upcoming allocation procedures (auctions). While the document provides some clarity to market players on intended spectrum allocations, some issues remain unclear: 1) allocation dates are only provisional as the regulator is reponsible for the organization of licensing process; 2) license obligations yet to be determined by the regulator; and 3) methodology of reserve prices setting is somewhat opaque.

The Government held a public consultation session with operators as well as the National Agency for Public Health, the National Radio Frequency Management Service and the National Regulatory Authority to discuss the draft Programme, as well as the plans of mobile operators regarding 5G technologies, and the state of play regarding the protection of public health. A working group with all stakeholders is to be created to develop the regulatory framework for the implementation of 5G technology in the Republic of Moldova.[29] This implies that remaining uncertainties will need to be settled in a collaborative manner.

Other documents that support the development of digital transformation in the Republic of Moldova are the Strategic Program for Technological Modernization of Governance (Electronic Transformation), adopted in 2011 for the period until 2020;[30] National Strategy for Investment Attraction and Export Promotion 2016- 2020;[31] and the Cyber Security Programme 2016-2020.[32]

Building block: holistic and comprehensive digital transformation strategy needed

To summarize, various elements of digital transformation are addressed in national policies and strategies and a collaborative approach is being used by the Government in the preparation process of these documents (consultations, discussions, interactions with different stakeholders). The missing link, however, appears to be the absence of a holistic and comprehensive vision of the Government towards the digital transformation (in a form of single strategic document), that brings all different elements together, avoiding fragmentation and gaps in terms of content and timing. Furthermore, a better monitoring exercise is needed, not only for checking on the status of planned actions, but also for assessing their impact and for allowing their revaluation and modification, when necessary, to move closer to ultimate goals.

4. Institutional framework for ICT regulation

Institutional frameworks for ICT regulatory governance are usually determined by traditional areas of responsibilities of different governmental institutions. Even if such institutional designs are expected to largely continue in the digital environment,[33] they have to be able to accommodate digital developments, mainly through increased coordination among various sectoral agencies and government institutions. This section analyses the existing institutional framework in the Republic of Moldova (summarized in Figure 6) and reflects on its collaborative nature.

[29] MEI a consultat furnizorii de comunicații electronice mobile și instituțiile de sănătate publică privind implementarea tehnologiei 5G | Ministerul Economiei și Infrastructurii (gov.md)

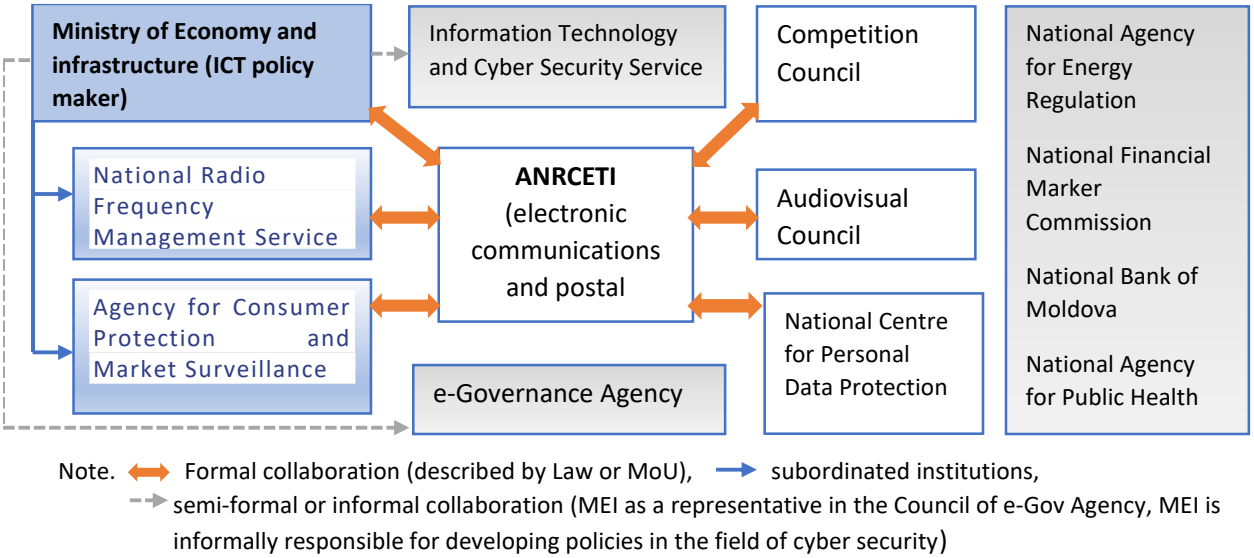
[30] https://www.egov.md/en/resources/guides-and-documents/strategic-program-governance-technological-modernization-e

[31] https://mei.gov.md/sites/default/files/snaipe_2016-2020_eng.pdf

[32] https://mei.gov.md/en/content/cyber-security

[33] https://digitalregulation.org/regulatory-governance-and-independence/

Figure 6. Institutional framework for ICT regulation in the Republic of Moldova



Source: ITU

The Ministry of Economy and Infrastructure (MEI) covers a wide range of economic sectors, including industry, tourism, transport, and energy, and is responsible for policy development in the fields of the digital economy, and information and communication technology. It also promotes policies of cybersecurity and Internet governance.[34] MEI coordinates the development of the National Table of Frequency Band and supervises the public institution National Service for Radio Frequency Management (SNMFR), which undertakes technical management of spectrum and certification of radio emitting devices.

The Ministry also oversees the work of the several related authorities, including:

- Energy Efficiency Agency
- Agency for Consumer Protection and Market Surveillance
- Agency for Technical Supervision
- National Auto Transport Agency
- Civil Aviation Authority

Outreach to other potential stakeholders of the digital economy is also realized through collaboration and involvement within other organizations of which MEI is a founder or collaborator. Examples include the Organization for the Development of Small and Medium Enterprises (ODIMM), the Consolidated Unit for Implementation and Monitoring of Energy Projects (UCIPE), or other specialized organizations for implementation of projects with international development partners.

[34] https://mei.gov.md/en/content/directorate-information-society-and-digital-economy-policies-and-regulations

MEI is represented at the Council of Public Institution "E-Governance Agency,"[35] responsible for the modernization and digitalization of public services. Since its establishment in 2010, the E-Governance Agency has successfully introduced a number of products that help citizens and businesses better interact with government institutions and support government institutions to provide better services,[36] including the Public Services Portal, a one-stop-shop for accessing information about public services provided by the Government (including e-licensing).

MEI is represented at the Council of Public Institution "Information Technology and Cyber Security Service", an important stakeholder in the field of cybersecurity. The Service not only administers, maintains and develops IT and communications infrastructure of public administration authorities, but is also responsible for the implementation of state policy in the field of cybersecurity. It also manages CERT-GOV-MD, the Governmental Computer Emergency Response Team of the Republic of Moldova, responsible for the protection of governmental and public administration networks.[37]

The responsibilities of MEI are broad enough to place the institution in a strong position to act as a facilitator of collaboration between many, if not all, stakeholders of the digital economy.

The National Agency for Regulation of Electronic Communications and Information Technology (ANRCETI) is the national regulatory authority that regulates activities in electronic communications, information technology and postal communication, ensures the implementation of sectors strategies, and supervises the compliance of electronic communications and postal service providers with the legislation governing these sectors.[38] ANRCETI also aims to protect the legitimate interests and rights of end users of electronic communications and postal services, to promote competition in these markets, ensure efficient use of limited resources, encourage efficient investment in infrastructure and innovation. ANRCETI is a legal entity with an autonomous budget and is operationally independent of electronic communications and postal communications providers.

In fulfilling its tasks, ANRCETI collaborates with relevant institutions, as described by national legislation. Collaboration takes formal form, where legal texts define agencies roles, responsibilities, jurisdictions for ongoing collaboration.

According to the Electronic Communications Law,[39] the ICT regulator cooperates with the sector Ministry, the Competition Council, the data protection authority and other public authorities in order to implement the provisions of national legislation. Collaboration between the ICT regulator and listed authorities takes place by ensuring the delimitation of functions and powers as provided by law.

ANRCETI collaborates on regular basis with the following institutions (summarized in Figure 6):

- **MEI**. Collaboration may be described as remarkably close and frequent (once a week), concerning a broad spectrum of questions. MEI involves ANRCETI in policy-making process

[35] Council attributions include decision-making and supervision of the Agency's activities, examination and approval of financial statements, credit contracting to sustain the Agency's activities, as well as the examination and approval of the Agency's annual budget, etc.

[36] Public Services in Moldova in COVID era_revised_final.pdf (un.org)

[37] National CERT, which would also cover other critical information infrastructure and serve as a national focus point for coordinating cybersecurity incident response to cyber attacks in the country is not yet present in Moldova.

[38] https://en.anrceti.md/informatie_sumara

[39] https://www.legis.md/cautare/getResults?doc_id=125279&lang=ro

mainly by sending draft laws and policy documents for comment and opinion. Regular meetings, exchange of views, or participation in joint working groups are other forms of collaboration.

- **National Service for Radio Frequency Management (SNMFR).** This authority, supervised by MEI and funded by market players, is responsible for technical spectrum management, spectrum monitoring and certification of electronic communications products. SNMFR provides technical assistance to the regulator necessary in performing its relevant duties.[40] The mandate of SNMFR is limited to technical assessments and calculations for spectrum allocations; the organization of allocation procedures as well as setting license obligations are responsibilities of ANRCETI. In short, authorities are engaged in formal direct collaboration for technical issues (like calculating spectrum amount for licenses or quality of service measurements), while policy-making, law drafting (like preparation of Radio Spectrum Management Programme for 2021-2025) is coordinated by MEI.
- **Competition Council.** In addition to formal collaboration,[41] the two authorities signed a cooperation agreement in 2014 that extends the area of collaboration.[42] According to the Electronic Communications Law, ANRCETI must inform the Competition Council about all decisions taken with regard to market analysis and SMP operators. The cooperation agreement foresees collaboration in ensuring efficient enforcement of competition law, preventing and discouraging anti-competitive practices aimed at distorting competition, day-by-day consultations on relevant issues arising in connection with enforcement of legislation, and further exchange of relevant information. According to existing practice, however, collaboration is mainly limited to the official provision of information on ex-ante regulation remedies. Cases of mergers and acquisitions are rare, as well as investigations on the anti-competitive behaviour of market players.
- **Audiovisual Council.** Generally, collaboration is formal, required by legislation, concerning licensing procedures.[43] However, difficulties surrounding analogue TV switch-off in the Republic

[40] Pursuant to Law 241/2007, Art. 9 (1) u), u^1), u^2), the ICT regulator shall regulate electronic communications by, inter alia :
u) monitoring and controlling the quality of electronic communications services, their compliance with the conditions of the general authorization or license; control of the observance of the conditions of the general authorization or license, of the provisions of the laws, of other normative acts and of the regulations regarding the activity in the field of electronic communications;
u^1) control of radio electronic facilities that produce electromagnetic waves and are intended for civil purposes;
u^2) control of the conformity of electronic communications equipment placed on the internal market and/or put into operation with the essential requirements established in the applicable technical regulations.

[41] In accordance with the provisions of Article 58 paragraph (3) of the Law on Electronic Communications No. 241/2007, (republished in the Official Gazette of the Republic of Moldova, 2017, No. 399-410, art. 679), (hereinafter Law 241/2007), (https://anrceti.md/fileupload/1?page=1), ANRCETI publishes and submits to the Competition Council, within 3 working days from the date of adoption, its decisions on identification and analysis of relevant electronic communications markets and designation of SMP providers, special obligations imposed on SMP providers.
As well, pursuant to art. 39 and 54 of the Competition Law No. 183 of 11.07.2012, as well as pursuant to the provisions of Law 169 of 20.07.2017 for the approval of the National Program in the field of competition and State aid for the years 2017-2020, at the request of the Competition Council, ANRCETI annually fills in the questionnaire on the approved regulations in the fields of its competence. This is done in order to determine the main performance indicators, which show the extent to which the regulations approved by ANRCETI favour competition.

[42] Acorduri de colaborare | ANRCETI

[43] According to the Code of Audiovisual Media Services of the Republic of Moldova, No. 174 from 08.11.2018, Art-s 25, 26, 27 (https://anrceti.md/fileupload/1), ANRCETI and the broadcasting authority exchange information with reference to issuance, extension and withdrawal of emission licenses and licenses for the use of radio frequencies and channels. With reference to

of Moldova (due by March 2020, but has not yet happened), has led to relatively intense direct and indirect (coordinated by MEI) collaboration between authorities. Mismatches in legal texts and differences in interpretations of existing legislation were additional factors that added to the challenge. This, according to representatives of ANRCETI, may have been easily avoided with timely alignment of legal acts, i.e. if all relevant parties had been involved in law drafting from the very initial phase. As a temporary solution, a common position paper was issued by the authorities for this particular case, however, amendments to the legislation still have to be introduced.

- **Agency for Consumer Protection and Market Surveillance.** This is a national consumer protection authority, supervised by MEI. As ANRCETI is entitled to consumer protection in the field of ICT and postal services, collaboration between the authorities is mainly limited to the exchange of information, readdressing cases received (ANRCETI takes several actions in consumer protection, including solving users' complaints). The main aim of the national consumer protection authority is to streamline the state's activity in consumer protection by monitoring the market, informing and educating consumers, strengthening decision-making capacity, and boosting the capacity of individual and associative consumer self-protection. ANRCETI also collaborates with organizations that represent the interests of users, and provides information regarding the activity of electronic communications providers to user protection organizations and users, except where the information is confidential.
- According to the Electronic Communications Law and Law on Personal Data Protection (2011), ANRCETI and the **National Centre for Personal Data Protection** (national data protection authority) cooperate to ensure the effective enforcement of data protection legislation. ANRCETI is also involved in the development of guidelines regarding processing of personal data in the electronic communications field.

In addition to the authorities listed above, and according to the Law on Electronic Communications, ANRCETI must notify the Intelligence Service, the General Inspectorate of Border Police, the Environmental Protection Inspectorate and local public administration authorities at the state border about applications for general authorization for activities of installation, operation, management, maintenance and/or liquidation of the electronic communications networks at the state border. This is to ensure that the applicant complies with the legislation provisions for the type of activity requested. Additionally, a cooperation agreement between ANRCETI and the Service for Prevention and Combatting Money Laundering signed in 2018 mainly provides for the exchange of information.

Authorities in the grey area of Figure 6 are the ones with whom ANRCETI has no collaborative relationship. These institutions may be identified as potential collaboration partners in the future on various topics such as digital inclusion, cybersecurity, or public health issues.

Building block: flexibility and proactive regulatory approach needed

In summarizing inter-agency collaboration in the Republic of Moldova, it is important to note that all public administrations rely exclusively on a legal, formally established collaboration framework. This, of course, provides a high degree of legal certainty, but at the same time does not allow for the flexibility

Art. 26 (21) b) Law 241/2007, when the requestor applies for issuance/extension of a license for the use of radio frequencies and channels, they are required to present the emission license, or the retransmission authorization, issued by the broadcasting authority.

often needed in the ICT regulatory environment, and leads towards a reactive, rather than proactive approach. As public authorities do not have the right to initiate law drafting processes (in the case of overlapping laws or when amendments in laws are required), they very much depend on lawmakers. With strict and rigid law-making requirements, it is also a very lengthy process.

5. Collaboration with the private sector

The concept of collaborative regulation covers not only inter-agency collaboration, but also other stakeholders, like academia, end-user associations, NGOs, and the private sector. The involvement of the private sector is particularly important as the country's economic development largely depends on the alignment and common vision between state administrations and the private sector.

Collaboration with the private sector is well embedded in the legal framework of the Republic of Moldova. A number of tools for engagement with private partners are in place:

- **Regulatory impact assessment (RIA)**, which contributes to public-private dialogue, is formally in place in the Republic of Moldova. According to the Law on Normative Acts (2017) and Government Decision no. 23/2019 on the approval of the Methodology for impact analysis in the process of substantiation of draft normative acts, the application of RIA for business-related legislation should be mandatory. According the Government Decision no. 23/2019[44], all business-related draft legislations accompanied by RIA are subject to the public consultation and to the expertise of the specialized the Working Group of the State Commission for the Regulation of Entrepreneurship. The above mentioned working group consists of 10 representatives of the public sector and 10 representatives of the business environment (by the representatives of business associations)[45]. The draft legislations and the impact analysis documents shall be refined following public and experts' opinions in order to eligible for the state registration of the normative acts and publication in the Official Monitor. This means, that the private sector has several possibilities to express their opinion on initiated legislation. [46]). This process could be ensured by high level of transparency (e.g. publishing not only final decisions of the working group, but also opinions of separate working group members, or making available records or online streaming of meetings). Finally, a systematic evaluation of the performance of such oversight bodies is also important. Such an evaluation process could contribute to the understanding of emerging problems and to the continuous learning of how to improve the practice of regulatory oversight.[47]
- Moldova has an established practice of **public consultations**. According to the Law on Transparency in the Decision-Making Process (2008), public consultations are mandatory for each legislative and regulatory act that has social, economic or environmental impacts. In practice, the private sector (especially the ones, that are not represented by any business association, as business associations play a significant role in the Working Group of the State Commission for the Regulation of Entrepreneurship, as discussed above) is only involved in the formal public

[44] https://www.legis.md/cautare/getResults?doc_id=119960&lang=ro#

[45] https://cancelaria.gov.md/ro/apc/activitatea-grupului-de-lucru-al-comisiei-de-stat-pentru-reglementarea-activitatii-de

[46] With minor exceptions, no one wants to be regulated or restricted

[47] https://www.oecd-ilibrary.org/sites/7a9638cb-en/1/2/2/index.html?itemId=/content/publication/7a9638cb-en&_csp_=619a2d489e8b70731fae862e094facd9&itemIGO=oecd&itemContentType=book

consultation campaigns on draft legal pieces, and mechanisms for initial informal consultation during their drafting are lacking, a situation that fails to incorporate market players' views in the core legal drafts. In effect, this leads to private sector players having a limited scope of influence on the direction of legal reforms and diminished confidence in the effectiveness of public-private dialogue. Indeed, international best practice is in favor of evidence-based discussions from the inception of the reform processes through to the adoption of new legislative pieces, rather than relying on one-off procedural opportunities to provide feedback without the requirement to also: 1) organize public hearings; or 2) justify the choice of legal instruments and specific measures. The current consultation model also fails to leverage the market and technology expertise of private sector players to inform policy direction and regulatory decisions.

6. Moldova's journey to G5 regulation and digital transformation: Future steps for consideration

Analysis of the institutional framework, policy formation and regulatory practices in the Republic of Moldova enables us to identify those main areas that could benefit from further refinement and retooling, in line with a collaborative regulatory approach. Seizing these opportunities would move Moldova forward in its efforts towards G5 regulation and help fast track its digital transformation. These areas may be grouped into two distinct categories: i) best practice principles of collaborative regulation targeted at improving regulatory maturity; and ii) best practice tools of collaborative regulation that can improve digital market outcomes.

Best practice collaborative regulation principles to improve regulatory maturity

Regulatory maturity embodies many dimensions. At the very core of this concept stands regulatory independence and accountability, transparency and predictability, followed by regulatory expertise, proactivity and future orientation.

a) Regulatory independence and regulatory accountability

As recognized in various international best practices such as the GSR Best Practice Guidelines[48] and the OECD Guidelines on the Corporate Governance of State-Owned Enterprises,[49] separate regulatory authorities need to have the ability to act with integrity and make objective, futureproof decisions while collaborating across sectors to foster digital transformation.

While national legislation in Moldova nominally provides for separation of policy functions, carried out by MEI, and regulatory functions, carried out by ANRCETI, the Republic of Moldova should consider further strengthening ANRCETI's independence if ANRCETI's is to play an enhanced role in good governance and in promoting a sound collaborative regulation across government agencies and with the private sector. Likewise, there is an opportunity to further strengthen regulatory accountability. On one hand, the accountability framework for the ICT regulator appears to be different from those applicable to other national regulatory authorities (see Table 2). On the other hand, MEI supervises at least two authorities that ANRCETI engages with on a regular basis: the National Service for Radio Frequency Management and the Agency for Consumer Protection and Market Surveillance. The three entities are thus all operating in

[48] GSR-19 Best Practice Guidelines "The gold standard for digital regulation."
[49] https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0337

close coordination with the sector Ministry. The participation of state-owned enterprises in ICT markets has further augmented the probability and the perception of regulatory capture. Even though the majority of state-owned enterprises in Moldova (including Moldtelecom, the incumbent operator, Poșta Moldovei, the national postal operator, Radiocomunicații, the national radio and TV broadcaster) are managed through the Public Property Agency, the usual requirements for transparency of governmental and regulatory decisions deserve due diligence. [50]

In particular, analysis of the national legal frameworks suggests that:

- **There is scope for strengthening regulatory independence.** The Board of ANRCETI is currently appointed by the Government. Shifting the appointment function to the Parliament would strengthen the independence and accountability of the regulator, putting it on the same level of accountability as that enjoyed by other national regulatory bodies. It is also important to ensure, that the participation of the private sector in the legislation making process is of consultative nature (as discussed in section 5). The ability to find a right balance between competing interest and putting the goals of the society as a whole first can go a long way towards improving institutional maturity and credibility.
- **There is scope for further strengthening regulatory accountability.** Having a range of governmental bodies deciding on the regulatory authority's structure and funding, in addition to the Head or the Board of the regulatory authority, is considered a safeguard against concentration of power and influence of government branches in regulatory decision-making. Particularly where financial resources, the appointment of the Head of the regulator and reporting requirements are concerned, it is important to have another branch of the government reviewing the regulator's decisions in line with established principles of separation of powers. Such legal arrangements are consistent with international best practices, and will protect the regulator from conflicts of interest and a perceived lack of accountability – while reinforcing regulated entities' sentiment of regulatory stability, predictability and transparency.

Table 2. Regulatory accountability factors among main regulatory authorities in Moldova

	Head/ Board appointed by	Budget and financial resources	Budget approved by	Annual report submitted to
ANRCETI	Government	Industry	Head/Board	Government and public
Competition Council	Parliament	State budget and Industry	Head/Board	Parliament
Audiovisual Council	Parliament	State budget and Industry	Parliament	Parliament
Data protection authority NCPDP	Parliament	State budget	Parliament	Parliament, President and Government, public
Energy regulator	Parliament	Industry	Parliament	Parliament

[50] As the World Bank report *Support to state owned enterprises (SOE) preliminary diagnostics and reform assessment* suggests, there are many areas of improvement in implementing Corporate Governance in Moldova's SOEs. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/762831499412473409/moldova-support-to-state-owned-enterprises-soe-preliminary-diagnostics-and-reform-assessment-phase-1

Financial regulator	Parliament	Industry	Parliament	President, Parliament and Government

Source: ITU research

b) Regulatory predictability

The predictability of regulatory frameworks is one of the mainstays of thriving digital markets. Policy uncertainty, on one hand, or an excessive regulatory burden on the other, leads to lower investments and economic growth. Therefore, regulatory predictability is especially important for market players aligning their business plans with regulatory requirements. Delays in providing certainty – on policy, legislation and regulations – reduce the ability of businesses to plan, comply with legal requirements and invest for the long term.

In order to step up its regulatory predictability, the analysis behind this case study finds that a two-pronged approach could help the Republic of Moldova reach this objective: putting in place an overarching strategy, and reviewing the action plan process of ANRCETI.

First, and as identified earlier, an overarching strategy focused on the development of the digital economy as a whole, with identified roles of all stakeholders for more coordinated efforts, is needed. As Digital Moldova 2020 recently expired and the National Development Strategy Moldova 2030 does not foresee objectives in the field of digitalization and digital transformation, there is a fragmentation of different elements (e.g. some documents foresee measures to support specific areas, like ICT market or e-commerce, but no further vision for industry, agriculture, health or other sectors' digitalization), with no holistic vision at the national level.

Second, increased regulatory predictability at the level of ANRCETI would send a positive signal for investment in new technologies, services and business models. Having a mid-term strategy or roadmap and action plan for the regulator as announced in ANRCETI's priorities for 2021[51] would go a long way to encouraging market players to roll out mid- and long-term market strategies. In addition, regular discussions with a wide range of market players would be particularly useful to identify regulatory or legal framework gaps, understand their challenges and find optimal solutions. For example:

- **Anticipated investments in 5G networks**: At the EU level regulators and policy-makers are involved in fervent discussions on how to balance the need for investment with expectations for coverage and speed, how to reduce the cost of infrastructure development, and how to mobilize finance to close market gaps.[52] From today's perspective, the private sector in the Republic of Moldova would benefit from more certainty with regard to 5G licensing (not only with regard to reserve prices, but also license obligations, possible state aid, other support possibilities, etc.)
- **Arrangements for the numbers' portability database (NPD) operator**: According to the conditions for implementing and carrying out numbers' portability, it is mandatory for all telephony services providers in the Republic of Moldova to pay a monthly fee per number.[53] The fee, which is considerably higher than similar arrangements in other countries with comparable

[51] Currently only priorities for 2021 are announced.
[52] https://www.consilium.europa.eu/media/44389/st08711-en20.pdf
[53] The requirement is to pay 0.0308 € / monthly fee per telephone number allocated to the provider based on the license, see https://fia.md/wp-content/uploads/2019/10/WHITE_BOOK_2019_ENG.pdf

market characteristics, is paid to a company who develops and manages a centralized database for carrying out numbers' portability. As the contract with the current NPD operator expires in 2023, a new public tender for a centralized database operator will be organized. As the above mentioned costs are considered to be a significant burden for operators, negatively influencing retail prices,[54] preparation for the tender becomes very important. International best practice implies that implementation of numbers' portability should not bear excessive costs for operators or end users.

- **Planned market reviews:** As the case study on ITU's Digital Regulation Platform[55] reveals, by the end of 2018 ANRCETI had successfully completed four cycles of its market analysis procedures and continues doing so. The case study illustrates the extensive work that is required if a regulatory authority is to undertake market analysis effectively. It also suggests that market analyses can be done in a timely manner and without requiring excessive regulatory resources, if the key decisions are taken in an objective and quantifiable manner from the beginning of the process. Therefore, discussions with the market players on this question may be beneficial in prioritizing market reviews and appropriately allocating regulatory resources.

All of these elements could find their place in a mid-term regulatory roadmap that would inform and encourage investment decisions and facilitate the engagement of the private sector in regulatory processes where required.

c) Proactivity

Analysis has shown that Moldovan authorities and policy-makers rely on formal collaboration mandated by law. Sticking exclusively to formalized channels of collaboration, however, impedes regulatory proactivity, an important feature of modern regulation. Collaborating as prescribed by law, authorities may come to a dead end, when any unexpected, new question comes on board and is not covered by the law or is overlapping in both organizations' mandates. It leads authorities to a reactive approach, where in order to solve a market problem, they have to sort out their boundaries of responsibilities and relationship first, as the case of analogue TV switch-off demonstrates. The law-making process is collaborative by design and involves many stakeholders; however, it has to go through several stages of preparation (e.g. RIA, public consultation, anti-corruption evaluation, evaluation of compatibility with EU legislation, Parliament discussions), and takes a year or more to be completed. It is worth noting that this kind of collaboration comes at the cost of time spent to make it possible.

Furthermore, national regulatory authorities (including ANRCETI) do not have the right to initiate legislative initiatives. All legislative initiatives and modifications to the legal framework have to be carried out through MEI or the Government. As discussed earlier, this situation does not remove the probability or perception of regulatory capture. On the contrary, the possibility for ANRCETI to work directly with the Parliament on legislative initiatives could help streamline the process of legal framework improvement in a timely and consistent manner. It is also important to ensure the participation of all relevant parties from the initial stages of legal drafting.

Finally, other ways of effective collaboration may be found by complementing existing formal collaboration mechanisms with more flexibility and space for action within the existing arrangements (e.g.

[54] *ibid.*

[55] https://digitalregulation.org/market-analysis-in-moldova/

creation of project based working groups or topic based workshops). Building a national regulatory community with greater levels of trust and collaboration could provide support to policy-makers and facilitate digital ecosystem development. The active engagement of private sector players remains critically important in this regard.

d) Collaborative governance

The ability to successfully collaborate is a key marker of a fifth generation (G5) regulator, and existing collaboration and consultation mechanisms in place do not always deliver the expected results. To remedy this, **stakeholder engagement vehicles –** such as public hearings, high-level roundtables and expert workshops, hackathons, etc. **–** could be considered as a step forward in more engaged collaboration. On one hand, such engagement could complement existing formal collaboration practices between authorities; on the other hand, it could improve the private sector's perception of the effectiveness of public-private dialogue.

By and large, the ease of infrastructure development could be a valuable indicator of collaborative regulation in a country. It accounts for the outcome of the collaboration between central and local authorities and infrastructure owners, collaboration between regulators and market players, and ultimately the collaboration between market players themselves. The case of the Republic of Moldova shows that tools for infrastructure sharing or co-deployment exist (e.g. Law on infrastructure sharing), but implementation struggles due to various reasons – local authorities and infrastructure owners engaging in polarized discussions rather than collaboration, enforcement mechanisms lacking efficiency and unproductive dispute resolution, and finally, unsatisfactory level of trust between government authorities and market players. Issues of transparency mentioned above also erode trust, which may become a barrier to realizing the benefits of collaborative regulation. Efforts to strengthen the collaborative culture among stakeholders and to elevate it to international standards would help resolve some of these issues.

e) Regulatory expertise and capacity building

Digital transformation is not only a technological effort. It is about changing mindsets as well, therefore, learning and training aspects to build capacity become crucial. Strengthening the capacity of regulators and policy-makers to understand, and be equipped to deal with, the challenges emerging from digitalization is an essential part of the journey towards transformation. . Regulatory expertise needs to be developed continuously to integrate new technologies, competencies and skills and allow for data and evidence-based decision-making.[56]

Best practice collaborative regulation tools to improve digital market outcomes

f) Future orientation of policy and regulatory frameworks

There are a number of regulatory tools designed to improve digital market outcomes. The following tools, which form the core of collaborative regulation best practice, could significantly increase Moldova's digital competitiveness at the regional and/or global level:

- **Pro-competition frameworks for digital transformation** should consider longer value chains, more diverse market players, services and devices, stakeholder partnerships and digital infrastructure

[56] https://www.itu.int/en/ITU-D/Conferences/GSR/2019/Documents/GSR19BestPracticeGuidelines_E.pdf

layers.[57] It should establish equal conditions for all market players at any point of the value-added chain to compete, create value for end users and complement social and economic growth. Improved transparency, the cornerstone of a well-functioning regulatory process, followed by the elimination of existing disproportionalities, could be the first steps forward in this journey. The "luxury tax,"[58] introduced in 2000 and paid by mobile operators could be a starting point in reassessing the equality of market conditions. Although similar "luxury taxes" exist elsewhere, it is important to understand its implications. It puts mobile communications providers in a disproportional position, if compared to other market players (fixed communications providers or Internet service providers), as they all are competing in the same market of broadband access. In the context of COVID-19, when high-quality connectivity became a necessity, but investment capabilities shrank, the removal of such taxes could be an important incentive for market players to invest in the development of high-quality networks.

- **Regulatory incentives to innovate** can create a positive market dynamic and improve market outcomes with less regulatory effort, while maximizing benefits to consumers.[59] The 2018 ITU report on the ICT-centric innovation ecosystem in Moldova[60] analysed Moldova's developments in this respect. The report identified the need for better coordination of different initiatives and institutional actions, and recommended the appointment of an official coordination body. The situation has not evolved much so far as substantial changes require time, effort, and political decisions. Initial steps towards the facilitation of innovation in ICTs could, nevertheless, be taken by the regulator. For example, providing non-binding regulatory advice to innovators[61] or supporting the experimentation and testing of innovations[62] can be a one such step, especially in the aftermath of digital market strain induced by the global pandemic. It is important to note here that while institutions play an important role in unlocking innovation potential for a country, their role should be one of enabler, and the private sector should be given latitude for new and innovative initiatives as well as safe experimentation space.

- **Robust and enforceable mechanisms for consumer protection in the digital age,** including a set of rules on data protection, privacy and data portability, as well as accessible mechanisms for consumer redress, are essential to support the digital transformation in economic sectors across the board and ensure consumers' interests are safeguarded.[63] With regard to creating a safe and trusted digital environment, the Government of Moldova has already taken important steps by implementing the Cyber Security Programme 2016-2020.[64] It is important to ensure the continuity of these actions, as well as transposing the EU Directive on security of network and information systems into national law

[57] https://www.itu.int/en/ITU-D/Conferences/GSR/2019/Documents/GSR19BestPracticeGuidelines_E.pdf
[58] According to art. 4 of the Law No. 827 of 18.02.2000 on the Republican Fund for Population Support, one of the sources of raising financial means for the Fund would be the monthly transfers made by legal entities, providing mobile telephony services, in the amount of 2.5% of the gross income from the sale of these services. This tax was, being considered a "tax on luxury goods".
[59] https://www.itu.int/en/ITU-D/Conferences/GSR/2019/Documents/GSR19BestPracticeGuidelines_E.pdf
[60] https://www.itu.int/myitu/-/media/Publications/2018-Publications/BDT-2018/ICT-centric-innovation-ecosystem-country-review--Republic-of-Moldova.pdf
[61] Help innovators or businesses navigate the regulatory system, ensure new products, services or business models align with existing regulations
[62] By reducing or temporary omitting regulatory of administration fees
[63] https://www.itu.int/en/ITU-D/Conferences/GSR/2019/Documents/GSR19BestPracticeGuidelines_E.pdf
[64] https://mei.gov.md/en/content/cyber-security

to harmonize policies with neighbouring European countries, and to not be disadvantaged in the international arena. Updating existing legislation on data privacy would also improve Moldova's positions significantly. A privacy legal framework has existed in the Republic of Moldova since 2007, however, requirements for personal data protection have significantly increased since then, forming a gap between Moldovan legislation and European Union standards, namely the General Data Protection Regulation.

g) Monitoring and evaluation framework and leadership over implementation

The Government of Moldova recognizes the importance of digitalization in both the private sector and public services, and has demonstrated its appreciation of the digital economy and its potential, as testified by several policies and strategies elaborated in the recent past (discussed in Section 3.) However, as discussed previously, the Republic of Moldova could benefit from having a single holistic,[65] comprehensive digitalization (digital transformation) strategy, with a detailed understanding of interdependencies and clear vision of desired outcomes. All elements being implemented in a systematic manner could lead to better market and consumer outcomes. A compelling vision formulated with the inclusion of all stakeholders has better chances of being implemented. Nevertheless, as international best practice suggests, often ensuring smooth and outcome-oriented implementation of existing strategies becomes even more important. It must be recognized that digital transformation is a continuous process and it is not about ticking the boxes in the implementation reports; it is about continual revision, adjustment and flexibility to adapt to a continually changing environment. Therefore, introducing an appropriate monitoring and evaluation framework gains extra value and may be considered by the Government. Finally, no strategy can be successful without strong leadership-driven implementation. [66] As international best practice suggests, a single body with strong coordination powers may be in a better position to drive the process. Such a coordination body, established at the level of Government and equipped with the necessary tools, could be a guarantee of successful implementation.

Conclusion

The research and analysis has established that Moldova's efforts towards a collaborative regulation framework and implementation could benefit from more agile and inclusive mechanisms for collaboration and a new approach to digital markets uplift. If we take infrastructure development as an indicator of an outcome-oriented collaborative approach, the case in the Republic of Moldova shows that multiple tools exist, but implementation could be greatly strengthened, such as in the case of infrastructure co-investment, co-deployment and sharing. This is a reminder that policies, laws and regulations are important, but not sufficient to deliver digital transformation. First, legal frameworks have to be accompanied by a holistic, whole-of-government approach to digitization and sustainable economic development as well as strong leadership in implementation. Second, the collaborative mindset should cut across all levels, sectors and institutions, and not only limited to the ICT sector. With current and upcoming challenges, like the digital switch-off, 5G licensing, and the transposition of European norms

[65] https://www.itu.int/en/ITU-D/Conferences/GSR/2019/Documents/GSR19BestPracticeGuidelines_E.pdf
[66] https://ict.md/wp-content/uploads/2020/07/Moldova-Rapid-ECommerce-Review.pdf

into national legislation, Moldovan authorities will have a range of opportunities to improve legislative mechanisms, institutional governance and collaborative regulation as they move ahead.