

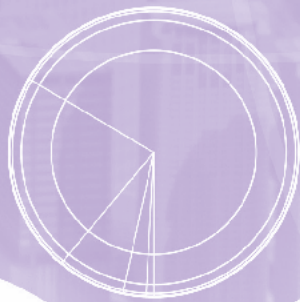


European Committee
of the Regions

Commission for
Citizenship, Governance,
Institutional and External Affairs

CIVEX

E-services for citizens at local and regional level in EaP countries



© European Union, 2023

Partial reproduction is permitted, provided that the source is explicitly mentioned.

More information on the European Union and the Committee of the Regions is available online at <http://www.europa.eu> and <http://www.cor.europa.eu> respectively.

QG-04-23-656-EN-N; ISBN: 978-92-895-2677-7; doi: 10.2863/23217

**This report was written by Agnieszka Kulesa, Delia Agostinelli,
Olga Aleszko-Lessels (CASE Research)**

**It does not represent the official views of the
European Committee of the Regions.**

Contents

- 1. INTRODUCTION..... 1**
- 2. POSSIBLE AND ACTUAL SCOPE OF E-SERVICES..... 3**
 - 2.1 INTRODUCTION. E-GOVERNMENT VS. E-SERVICES, TYPES OF E-SERVICES..... 3**
 - 2.2 KINDS OF E-SERVICES THAT THE AUTHORITIES IN EUROPE PROVIDE 6**
 - 2.3 INTERNET ACCESS, DIGITAL LITERACY, AND GOVERNMENT E-SERVICES IN EAP COUNTRIES (AN OVERVIEW) 7**
 - 2.4 INTERNET ACCESS, DIGITAL LITERACY, AND GOVERNMENT E-SERVICES IN SELECTED EU MEMBER STATES AND WESTERN BALKAN COUNTRIES (AN OVERVIEW) 12**
- 3. GEOGRAPHIC AREAS WHERE ADMINISTRATIVE AND INFORMATION E-SERVICES ARE PROVIDED IN EAP COUNTRIES 17**
 - 3.1 GEOGRAPHIC AREAS WHERE ADMINISTRATIVE AND INFORMATION E-SERVICES ARE PROVIDED IN ARMENIA, AZERBAIJAN, GEORGIA AND MOLDOVA .. 17**
 - 3.2 KINDS OF ADMINISTRATIVE AND INFORMATION E-SERVICES PROVIDED IN ARMENIA, AZERBAIJAN, GEORGIA AND MOLDOVA..... 18**
 - 3.3 KINDS OF ADMINISTRATIVE AND INFORMATION E-SERVICES PROVIDED IN POLAND, ESTONIA AND MONTENEGRO 23**
- 4. CONCLUSIONS AND RECOMMENDATIONS..... 29**
- 5. REFERENCES..... 35**

1. Introduction

This study was prepared as part of a project on *E-services for citizens at local and regional level in EaP countries* commissioned by the European Committee of the Regions (CoR) under the specific contract No CDR.17081 implementing multiple framework contract for studies in the field of external relations No CDR/2022/B3/1/1-CIVEX-RELEX.

The aim of the study was to provide basic facts and figures, background information, and a preliminary analysis on the electronic (digital) administrative and information services that the local and regional authorities in Eastern Partnership (EaP) countries provide to citizens, with a comparison to similar services provided in selected EU Member States and Western Balkan countries. In line with the agreement with the CoR, the study covers Armenia, Azerbaijan, Georgia and the Republic of Moldova on the side of the EaP states, and Poland and Estonia on the side of the EU, as well as Montenegro. Due to the Russian invasion of Ukraine that commenced on 24 February 2021, and the fact that Ukraine was in a state of war during the period of writing this study, only some specific, salient examples from this country are included herein.

The timeframe of the study is 2019–2022. In this context, the study also turns attention where possible to the temporal dimension of the provision of services, identifying where a particular kind of e-service was introduced, or significantly expanded or improved, following the outbreak of the COVID-19 pandemic.

The study is based on desk research and was informed by insights from interviews with practitioners possessing hands-on knowledge on providing e-services in Georgia and Moldova, as well as from information request forms delivered by stakeholders from Azerbaijan and Montenegro. Stakeholders from Armenia delivered a brief information note.¹

This study supports and provides input for the CORLEAP rapporteur’s work on the report “E-services for citizens – what good came out of the COVID pandemic?” to be adopted at the CORLEAP Annual meeting on 7 September 2023 in Batumi, Georgia.

¹ Interviews were conducted with representatives of the National Association of Local Authorities in Georgia (NALAG), the Public Development Agency in Georgia and the Congress of Local Authorities of Moldova (CALM); information in writing was delivered by the Congress of Local and Regional Authorities in Azerbaijan, the “Free Citizen” Civic Initiatives Support Center NGO in Armenia and the Union of Municipalities of Montenegro.

2. Possible and actual scope of e-services

2.1 Introduction. E-government vs. e-services, types of e-services

E-government is commonly conceptualised as “government’s use of Information and Communication Technologies (ICTs) combined with organisational change to improve the structures and operations of government”.² It would be hard, however, to point out one widely accepted definition of public e-services. Services of this kind, also referred to as electronic or digital public services, may in turn be defined as “public services provided or mediated through internet-based technology”.³ Due to their semantic proximity, in this study the terms “e-services”, “digital services” and “electronic services” are used interchangeably.

There is no standard classification of public e-services, and they are categorised in various ways by different researchers. They can be split by recipients (users) of public digital services, and classified into four main categories: government-to-citizen (G2C), government-to-business (G2B), government-to-government (G2G), and government-to-employee (G2E). The table below presents typical applications of e-government and e-service:

Table 1. Typical applications of e-government and e-service

Type of e-service	Typical applications	Phase of e-government
Providing access Making information accessible to citizens	Citizen access to general information Calendar of events Manual of policies and procedures Phone directories	Improved access (providing access to information concerning services and the democratic process)
Connecting to a service process Providing information and/or access to government ICT-based systems, information management solutions and true web-based services	Property information License renewal and payment Payment for parking tickets, court fines Registration for class and sports activities	Improved access Electronic integration of services (putting in place apps that would not only enable citizen participation through feedback, but would

² Twizeyimana & Andersson (2019).

³ Lindgren et al. (2019).

	<p>Online permits, business licenses, court documents</p> <p>Online auctions</p> <p>Electronic posting of commodities with purchase order and invoice transactions</p> <p>Sales tax collection</p> <p>Job postings, online application forms</p> <p>Self-service benefits administration</p>	also allow for G2C, G2B and G2G transactions)
<p>Raising awareness</p> <p>Providing information about the political process, services, and options that are available for the decision-making process</p>	<p>Government functions and services</p> <p>Citizen services</p> <p>Business services (information)</p> <p>Employee services</p> <p>Employee newsletter</p> <p>Legislative agenda and pending legislation</p>	<p>Improved internal communications (improved internal communications and introducing workflow management systems for increased process efficiency)</p> <p>Improved access</p>
<p>Facilitating consultation and/or communication</p> <p>Initiating and developing means of capacity building, exchanging prior experience, access to experts, and any other information/knowledge of mutual interest</p>	<p>Posting of requests for information and bid documents</p> <p>Distance learning resources</p> <p>Webcasting of city/county council meetings</p>	<p>Improved access</p> <p>Electronic integration of services</p> <p>Electronic democracy (introducing digital democracy – technological solutions that would enable participatory action and democratic process)</p>
<p>Active citizen involvement/participation</p> <p>Involving citizens in government decision-making, problem solving and election processes</p>	<p>Digital democracy</p> <p>Communications with council members</p>	<p>Electronic integration of services</p> <p>Electronic democracy</p>

Source: Asgarkhani (2005).

While mapping the use of different types of e-services and providing examples of their applications, this study focuses on the G2C type of government provision of e-services to citizens. In order to structure and simplify the analysis, e-services offered to citizens are divided into two main types:

Table 2. Types of G2C e-services and examples of their application

Type of G2C e-service	Examples of applications
Administrative services	License renewal and payment Payment for parking tickets, court fines Self-service benefits administration Registry of birth Marriage Death Voters' register Driving license
Information services	Citizen access to general information Calendar of events Manual of policies and procedures Phone directories Property information Legislative agenda and pending legislation Webcasting of city/county council meetings Communications with council members

Source: own elaboration.

In general, e-services can also be categorised depending on whether the technology helps to create a new e-service (technology-based e-services) or a digital service is enhanced by technology (technology-enabled services).⁴ Another classification divides e-services into three categories: e-services that are complementary to existing services and goods; e-services as virtual substitutes for classic existing services; and uniquely new core e-services that could not exist as offline services.⁵ All these categories and service types also relate to digital services provided by e-government.

Public e-services are accessible to citizens via electronic devices (e.g. computer, mobile devices, kiosk). The proliferation and degree of use of such services by governments and citizens depends on such factors as internet availability, existence of the proper e-infrastructure (tools, facilities and resources needed for advanced collaboration), and the ability to design, implement, use and manage e-government systems.

⁴ Brzustewicz & Escher (2016).

⁵ Brzustewicz & Escher (2016); Hofacker et al. (2007).

2.2 Kinds of e-services that the authorities in Europe provide

According to the UN's "E-Government Survey 2022. The Future of Digital Government", Europe remains the leader in e-government development.⁶ This region offers the highest average number of e-services (19) when compared to the other four regions (Asia, the Americas, Oceania, Africa); "more than two thirds of the countries in Europe offer at least 19 services online, half of the countries offer all 22 services, and one third of the countries offer 14–18 services".⁷ Two e-services are offered in all of Europe's countries: applying for a birth certificate, and filling in company/business tax returns online. The least offered e-services are applying for a visa (51%), and registering a motor vehicle (60%).

The number of e-services for individuals in vulnerable situations (e.g. people living in poverty, persons with disabilities, older people, immigrants, or women and youth) has increased in Europe since 2020. Immigrants and people living in poverty, however, appear to be less well served than other vulnerable populations in terms of e-government services provided.⁸

Since 2020, governments in Europe have been responding to challenges related to the COVID-19 pandemic. According to the aforementioned report, between 91% and 98% of European countries provide online information and platforms for distance learning and information and scheduling for telehealth services, COVID-19 vaccines and medical tests;⁹ 90% of the countries in Europe provide such services at the regional level.¹⁰ The main areas prioritised by governments in terms of e-services provision are health, education and social protection, with the sharpest increase in the number of e-services in the latter category.

According to the eGovernment Benchmark 2022, in Europe 84% of all services provided by central government organisations are available online, while 71% of regional services and only 60% of local services can be completed digitally.¹¹ As the eGovernment Benchmark 2022 states, central government service providers are more digitally mature than their local and regional counterparts.¹² Available studies suggest that the highest diffusion of public e-services at the local level in Europe¹³ is specific to medium-large cities, "highly endowed with well-educated

⁶ UN DESA (2022), p. 53.

⁷ UN DESA (2022), p. 57.

⁸ UN DESA (2022), p. 59.

⁹ UN DESA (2022), p. 61.

¹⁰ UN DESA (2022), p. 47.

¹¹ EC (2022b), p. 9.

¹² EC (2022b), p. 28.

¹³ EU-15.

human capital, and characterised by a lively industrial atmosphere favoured by a reasonable number and variety of production and service activities”.¹⁴

Concrete examples of e-services provided by the selected EU Members States – Poland and Estonia – are provided in section 3.3 of this study.

2.3 Internet access, digital literacy, and government e-services in EaP countries (an overview)

All four of the analysed EaP countries – Armenia, Azerbaijan, Georgia and Moldova – have established electronic platforms that connect citizens with existing electronic services provided by the authorities. Nevertheless, differences exist between the states in the level of advancement of the provision of e-services. The countries vary in terms of the number of e-services they provide to their citizens, which is discussed further in the study.

There are five points to consider when evaluating the e-services at the regional and local level in EaP countries:

1. Common challenges

All states face the challenge of turning existing e-services into a digital solution with a social impact. Their accessibility, user-friendly design, promotion and governmental guidelines all contribute to the successful implementation of e-services. Each country has its challenges in that regard. For example, in some countries (Armenia, Azerbaijan, and Moldova) the most popular device for accessing the internet among individuals is the mobile phone. That might become a challenge for accessing basic public services online if there is no adequate user-friendly mobile application. The government of Azerbaijan provides information e-services via mobile apps (mygov, e-social), however administrative e-services are not available by such means.

There is a good example in Ukraine, where 52% of the population have used either the Diia mobile application¹⁵ or its website. The number of users of the e-services provider Diia increased from 13% to 30% in 2021, and then to 52% in 2022.¹⁶ User-friendly design might be one of the key contributors to the fact that 79% of e-service users consider their experience with Diia quite or very positive.¹⁷

¹⁴ Cepparulo & Zanfei (2021).

¹⁵ Diia (acronym for Ukrainian “State and I”) is a mobile app, a web portal and a brand of e-governance in Ukraine, launched in 2020. It allows the citizens of Ukraine to use digital documents in their smartphones.

¹⁶ UNDP (2023).

¹⁷ UNDP (2023).

2. Surveys and statistics

Due to the scarcity of statistical information and surveys on the provision and use of e-services, it is difficult to assess the design and quality of the e-services provided. Moreover, there is a very large discrepancy in the results of statistics between countries, which necessitates that each country be considered separately, instead of taking the countries of the Eastern Partnership as one: in the case of Armenia, for example, a survey found that only 5% of citizens and businesses use e-services provided by government,¹⁸ while in the case of Ukraine the number of users reached 63%.¹⁹

3. Internet access, digital literacy, unequal access to e-services

In some cases, such as Moldova,²⁰ citizens are not yet fully encompassed by the potential of digitalisation, despite increased awareness-raising efforts. The reasons for this are manifold, and encompass internet access, digital literacy, promotion of e-services by the government and public institutions, and user-friendly design.

Access to the internet in EaP states is high. The total number of internet users in the EaP states is significant, at around 16 million, or 76% (of 21 m inhabitants). The internet penetration rate is quite similar : Armenia – 66.5%²¹ (1.9 m users), Azerbaijan – 81%²² (8.3 m users), Moldova – 76.1%²³ (3 m users), and Georgia – 72.5%²⁴ (2.88 m users). Even though the societies of the respective states have internet access, there is still a gap between socioeconomic groups, rural-urban populations, and age – creating a “digital divide” of unequal access to e-services. Very often the gap between rural and urban areas in terms of internet access can reach 15²⁵– 20%.²⁶ In addition to lower digital literacy outside the cities, this means e-services are less available for rural regions, and the physical presence of citizens is required. Another obstacle to receiving e-services is accessibility among older people and those in vulnerable groups. Despite the increased usage

¹⁸ World Bank (2022).

¹⁹ Case of Ukraine: UNDP (2023); UNDP (2022).

²⁰ UNDP (2021a).

²¹ See: Datareportal (2022a). One source states that 96% of the Armenian population have access to internet. At the same, the same report states that 8% of the Armenian population have never used the internet; Raja & Malumyan (2020).

²² See: Datareportal (2022b).

²³ See: Datareportal (2022d).

²⁴ See: Datareportal (2022c).

²⁵ Case of Georgia: UNDP (2021b).

²⁶ Case of Azerbaijan: a report released in March 2021 by the World Bank notes that there is a “20 percentage point gap between rural and urban households in fixed internet penetration”, which results from issues with infrastructure and digital literacy outside of the city; Freedom House (2022).

of electronic services by older people,²⁷ in some EaP states only half those over 65 use such services²⁸ or more of them require additional assistance.²⁹ In general, internet access is affordable, yet the issue of lower usage of e-services by people of low income does exist.

4. Impact of the COVID-19 pandemic

The COVID-19 pandemic has accelerated the implementation and expansion of e-services in some states of the EaP as a necessary solution for providing public services to citizens in times of lockdown. Also, the number of people using the e-services has increased. This intensity of this trend differs between the EaP states covered by the study: those that were already promoting digital solutions for the delivery of public services before the pandemic show a significant increase in the use of e-services (up to 40%) by their citizens, with the number of e-services almost doubling.³⁰

In the case of Georgia, the number of e-services has increased due to certain e-services becoming available to the general population whereas in the past they were only available to citizens living abroad (e.g. issuing a passport or ID).³¹

Where Ukraine is concerned, the number of users has increased due to the promotion of e-services via social networks, radio and TV (76% of the national survey respondents received information about the electronic government services or digital literacy through these means of communication; thanks to these materials, 44% of those respondents were encouraged to use e-services, and 35% improved their digital literacy).³² In the case of Moldova there were no noticeable changes in the development of e-services during or after the COVID-19 pandemic, except for several newly introduced e-services such as signing up for vaccination. Nevertheless, since 2022 the Government of Moldova has been paying more attention to and focusing on the development of e-services.³³ In Azerbaijan, the demand for electronic services increased considerably during lockdown, leading the government to increase public awareness of the use of electronic services, and developing and making e-services more accessible.³⁴ In

²⁷ Case of Ukraine: according to the National Survey, since 2020, the level of use of electronic services has increased the most among people in older age categories – by 52% among people aged 70 and over, and by 30% among 50–69-year-olds.

²⁸ Case of Armenia: although 83% of the overall population use the internet daily, only half of people older than 65 do so; Raja & Malumyan (2020).

²⁹ Case of Moldova: about 59% of people in Moldova only use digital public services with the help of somebody else, or they even ask another person to use public services on their behalf; UNDP (2020).

³⁰ Case of Georgia: UNDP (2021b).

³¹ Online interview with Tamta Khelaia, Expert in Public Service Delivery, Georgia, May 11, 2023.

³² Goda (2022).

³³ Online interview with Alexandru Osadci, CALM Coordinator of international relations, May 5, 2023.

³⁴ Information received from an official in Azerbaijan.

Armenia, the development of e-services hardly advanced at all during the pandemic.³⁵

5.Data privacy and personal information protection

For EaP states advanced in providing their citizens with e-services, such as Georgia³⁶ and Ukraine, the big challenge of the expansion in e-services is related to data privacy and personal information protection. Therefore, cyber-security is an important part of e-services' development.

In the case of Ukraine, cyberattacks against the Diia e-services mobile application (which also has a web version) have continued since the Russian invasion of 24 February 2022. For example it has been essential to prevent Russia from accessing the passport registry, which could be deliberately deleted and bring about irreparable consequences. The Diia mobile application is less vulnerable, and has much fewer risks since it does not save data; documents are withdrawn directly from the public registers, which have high levels of protection. There is constant work on increasing protection; for example, for six months before the invasion a program called "BugBounty" was launched, wherein security professionals from all over the world (except Russians and Iranians) tried to hack Diia, with no successful cases.³⁷

The performance gap between EaP states

There is a visible difference in the levels at which the countries of the Eastern Partnership provide their e-services. As the research has shown, there is no one factor that impacts the development of e-services. In Moldova, for example, both internet penetration and the populace's digital skills are slightly higher than in Georgia (digital skills: 57% and 44% respectively).³⁸ Nevertheless, the e-services in Georgia are more advanced. On the example of these two countries, a certain level of support for and obstacles to the development of e-services in EaP states can be shown:

In the case of Moldova, the development of e-services is low due to several factors:³⁹

Low digital skills among citizens. According to the World Bank, 57% of the population (in 2019)⁴⁰ possessed basic digital skills. The population of Moldova

³⁵ Information received from an official in Armenia.

³⁶ Ibidem.

³⁷ Goda (2022).

³⁸ World Bank (n.d.).

³⁹ Online interview with Alexandru Osadci, CALM Coordinator of international relations, 5 May 2023.

⁴⁰ World Bank (n.d.).

is getting older, with young people moving abroad. People over 40 have extremely poor digital literacy, especially in rural areas (home to 57% of the population⁴¹), where older adults make up the majority of the population.

Despite great internet coverage, people rarely use e-services and prefer the much better developed, accessible and cheaper regular public services. There are very well developed Public Service Agencies in unified centres that are located in the regions, which provide all services that citizens need; therefore, the demand for e-services is not very high.

E-services are described as user-unfriendly (they are difficult to understand even for people who possess good digital skills), costly (their cost is higher than the cost of regular public service), not user-oriented, and not addressing users' needs. Awareness among the population of the availability of e-services is also low.

The population of Moldova is rather poor and does not necessarily have the technology to use e-services: 60% of the population have a computer (with a significant difference between cities and rural areas, at 84% and 56% respectively), while 55% use a computer.⁴² Although smartphones are more affordable, they are used mostly by young people (92% have at least one smartphone), while only 12% of older adults have such a device.⁴³ In addition, people in rural areas in particular prefer to use them for calls and other online activities rather than for e-services.

Funds at the local levels of government are scarce, while there is also a history of mistrust in central government, which recently started to decrease.

The information e-services are available at all levels (national and local), but are not consolidated under “one roof”, and specific governmental websites need to be visited to find them. Therefore, especially at the local level, people prefer to contact public officials directly to receive all necessary information.

There is also a lack of interconnection between public institutions and levels of government – central and local – as well as access between their databases and digital information.

According to the Global Competitiveness Report 2016–2017, Moldova was ranked very poorly for governmental procurement of advanced technologies (in 136th place out of 138 countries).⁴⁴

⁴¹ Grecu & Dicusar (2021).

⁴² Melenchuk (2021).

⁴³ Ibidem.

⁴⁴ Grecu & Dicusar (2021).

The development of e-services has also been impacted by the situation in Moldova, where digitalisation of front-office processes has taken place, while the back-office has not been digitised.⁴⁵

In the case of Georgia, the low level of digital skills in the population (44% in 2019) has not prevented the development of e-services. The government motivates citizens to use e-services, for example the revenue service has been totally digitalised, leaving citizens with no option but to use it as an e-service. In general, the e-services are user-friendly and reflect the needs of the population, since every municipality has its own list of e-services relevant to it, in addition to e-services delegated by the central government. The awareness of e-service availability is high, as citizens receive information about the availability of e-services when visiting public administration bodies.⁴⁶ However, computer usage remains low in Georgia.⁴⁷

Within the framework of public administration reform, there is a unified strategy for the development of public services that was approved by the government in 2022, aiming to make public services easier and more accessible to citizens. In addition, internet access and free use of the internet have become rights guaranteed by the Constitution of Georgia.⁴⁸

2.4 Internet access, digital literacy, and government e-services in selected EU Member States and Western Balkan countries (an overview)

The state of play regarding governments' provision of digital public services across Europe can be described by applying the eGovernment Benchmark.⁴⁹ This tool compares 35 countries (EU27+) and evaluates online public services on four dimensions, with 14 underlying indicators and 48 related survey questions. The four dimensions can be described by the following key questions:

- User Centricity:⁵⁰ To what extent are services provided online? How mobile friendly are they? What online support and feedback mechanisms are in place?

⁴⁵ Ibidem.

⁴⁶ Online interview with Tamta Khelaia, Expert in Public Service Delivery, Georgia, 11 May, 2023.

⁴⁷ Melenchuk (2021).

⁴⁸ Online interview with Tamta Khelaia, Expert in Public Service Delivery, Georgia, 11 May, 2023.

⁴⁹ See: EC (2022b).

⁵⁰ According to the eGovernment Benchmark, user-centric design must meet each person's needs and relate to the extent to which information and services are available online, supported online, and compatible with mobile devices; EC (2022b), p. 10.

- **Transparency:** Are public administrations clear about how their services are delivered? Are they transparent about policy making and digital service design, as well as the way people's personal data is being processed?
- **Key Enablers:**⁵¹ What technological enablers support the delivery of eGovernment services?
- **Cross-Border Services:** How easily can citizens and entrepreneurs from abroad access and use the online services? What online support and feedback mechanisms are in place for cross-border users?

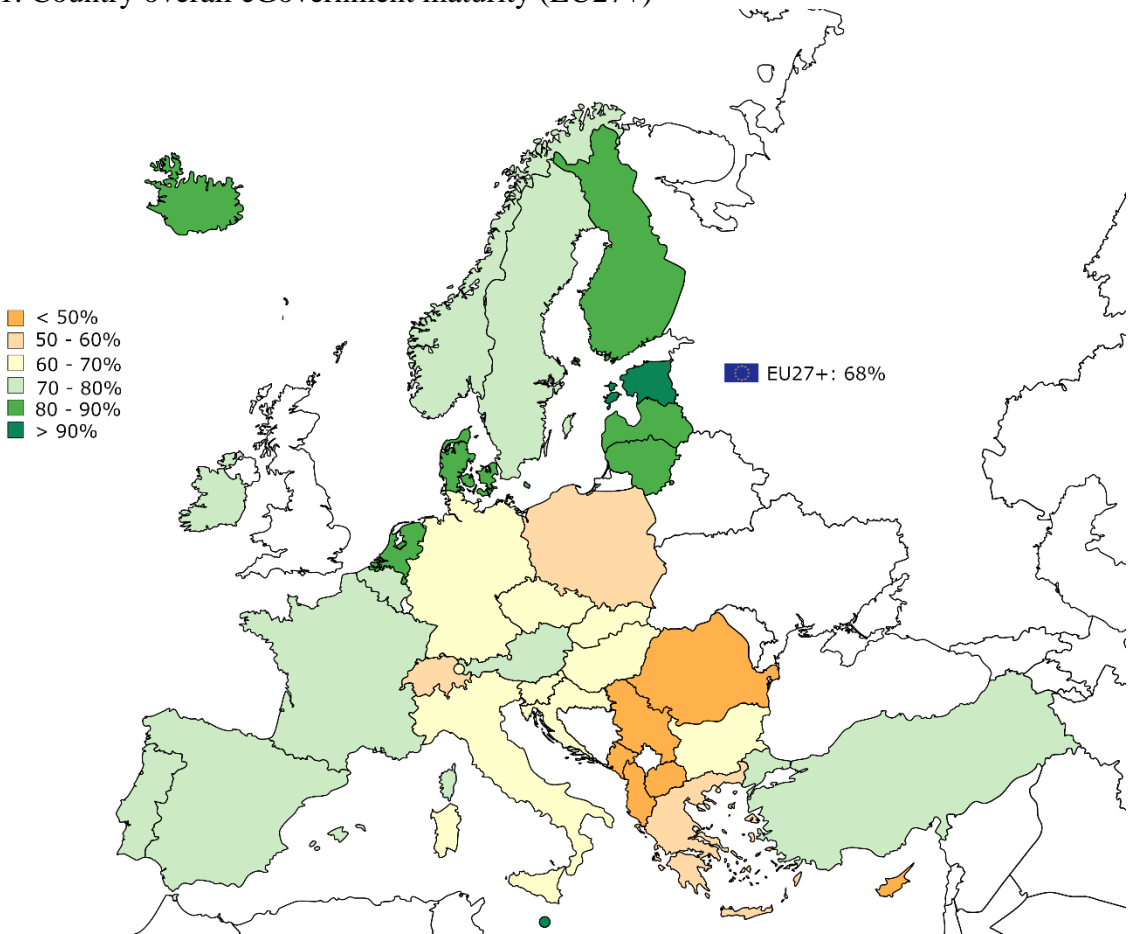
According to this approach, the European leaders are Malta (with a maturity score of 96%) and Estonia (90%), with their digital governments being the most user-centric, transparent, technologically enabled and open to users. Malta is followed by Luxembourg (87%), Iceland (86%), the Netherlands (85%), Finland (85%), Denmark (84%), Lithuania (83%), Latvia (80%), Norway (79%), Spain (79%) and Portugal (78%). The EU27+ overall performance averages 68%.

The COVID-19 pandemic, during which digital interaction had to become the norm, has accelerated the process that is bringing public services online. The EU Digital Decade's target is for all key public services for businesses and citizens to be fully online by 2030. Overall, Member States seek to modernise and improve public administration processes to make them more user-friendly (easy for a novice to learn how to use), citizen-oriented and interoperable. Some of them are allocating more than half of their digital budget for the digitalisation of public services (e.g. Malta, Lithuania, Finland and Croatia).⁵² The aim is to boost access to and the uptake of digital public services by individuals and businesses. Key reforms supported under the RRF include the integration of eID solutions in all government processes and implementation of the "Once Only Principle", that focuses on reducing the administrative burden for individuals and businesses by re-organising public sector internal processes.

⁵¹ According to the eGovernment Benchmark, Key Enablers relate to the extent to which digital tools such as electronic identification (eID), eDocuments etc., enable identification and communication between a user and a government service; EC (2022b), p. 10.

⁵² See: EC (2022a).

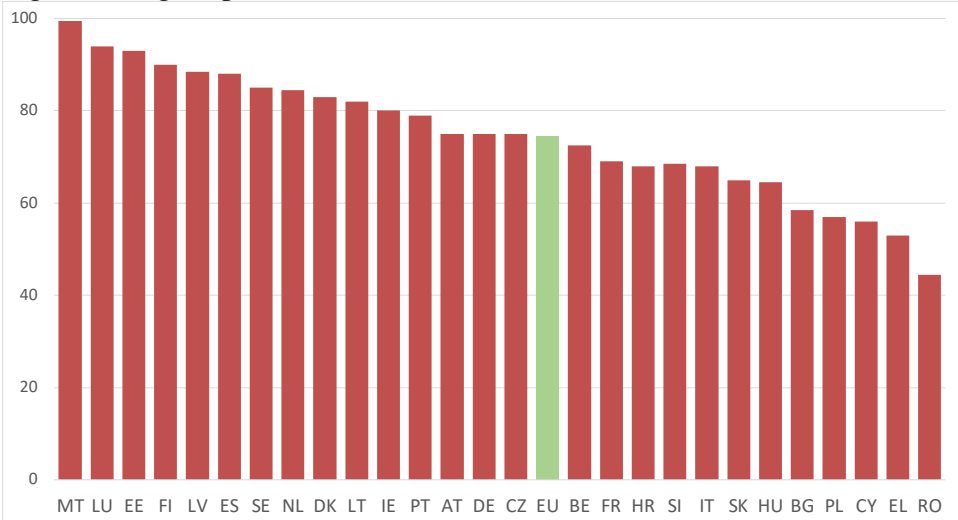
Figure 1. Country overall eGovernment maturity (EU27+)



Source: own elaboration based on EC (2022b).

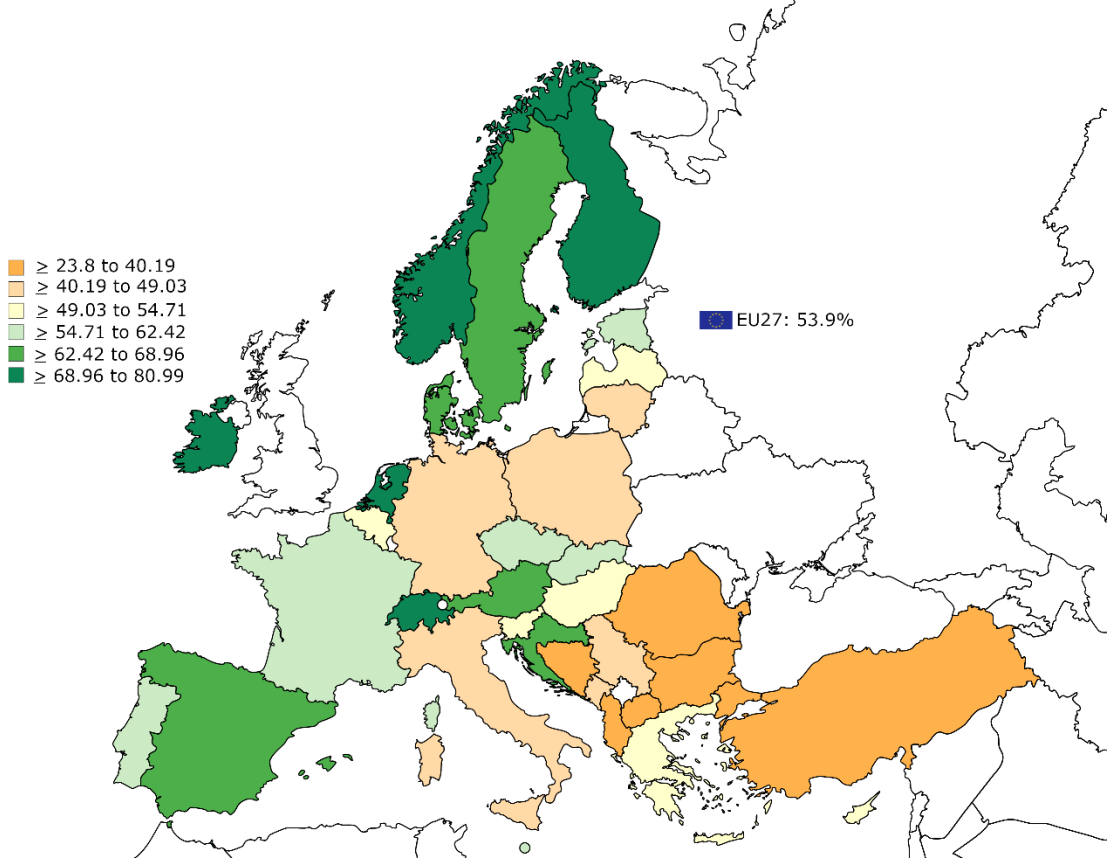
In regard to digital public services for citizens, Malta, Luxembourg and Estonia performed the best, scoring more than 90 points out of 100, as illustrated in the figure below.

Figure 2. Digital public services for citizens (score 0 to 100), 2021



Source: own elaboration based on EC (2022a).

Figure 3. Share of individuals having at least basic digital skills, 2021



Source: Eurostat (n.d.).

More information about the types of services provided in European countries is not easily accessible. Sources covering the state-of-play and a comparison of the digitalisation of European countries do not usually make a distinction between e-government and e-services.

In regard to the digital skills of the people in European countries (Figure 3), the leading countries are Finland (with 79.2% of individuals having at least basic digital skills in 2021), the Netherlands (78.9%), Norway (78.7%) and Switzerland (77.8%). The EU27 overall report an average of 53.9%. The countries selected for this study report a share similar to the EU27 average, with Poland at 42.9%, Estonia at 56.4% and Montenegro at 47.2%.

3. Geographic areas where administrative and information e-services are provided in EaP countries

3.1 Geographic areas where administrative and information e-services are provided in Armenia, Azerbaijan, Georgia and Moldova

The following table identifies the levels – national, regional or local – at which government e-services are provided to citizens in Armenia, Azerbaijan, Georgia and Moldova

Table 3. G2C e-services provided in Armenia, Azerbaijan, Georgia and Moldova at national, regional and local level

State/level at which e-services are provided	Armenia	Azerbaijan	Georgia	Moldova
National level (yes/no)	Yes (language: Armenian and English)	Yes (language: Azerbaijani and English)	Yes (language: Georgian; other languages depend on the agency providing e-services)	Yes (language: Romanian and Russian)
Regional level (yes/no, region names)	Yes (not specified)	Nakhchivan Autonomous Republic (developing stage)	No	No
Local level (yes/no, city names)	Yes (not specified)	Yes (E-services offered at the local level are formed based on the demands of people, e.g. Ganja (Nizami municipality))	Yes (Each municipality provides its specific e-services; central government delegates its e-services to every municipality)	Limited field for e-services development (Ongoing work on providing e-services by the central government to local authorities)

Source: own elaboration based on information provided by the stakeholders from Armenia, Azerbaijan, Georgia and Moldova.

Figure 4. The degree of decentralisation of G2C e-services in Armenia, Azerbaijan, Georgia and Moldova



Source: own elaboration basing on the information provided in Table 3.

3.2 Kinds of administrative and information e-services provided in Armenia, Azerbaijan, Georgia and Moldova

The following table identifies government e-services to citizens provided in EaP countries by kind and sub-kind.

Table 4. G2C e-services provided in Armenia, Azerbaijan, Georgia and Moldova by kind and sub-kind

State/administrative and information e-services provided	Administrative services (name of e-service & level at which it is provided)	Information services (name of e-service & level at which it is provided)
Armenia	<p>National Level*</p> <ul style="list-style-type: none"> - Certificate of family status and copies of certificates of the Civil Registry - Register business on-line - State Electronic Payment System - Electronic system of the Real Property Cadastre - Electronic Tax Filing System - E-signature - Applying for a license - Send a Letter to the Government - System of receiving notifications - System of receiving applications for qualification certificates and certificates from business entities - Intellectual property application 	<p>National Level</p> <ul style="list-style-type: none"> - Unified website for publication of drafts of legal acts - Judicial information system - Government Decrees - Prime Minister’s Decrees - Deputy Prime Ministers’ Decrees - Protocols – minutes - Government Session Agenda - Unified portal for online requests - National Gallery of Armenia’s Collection database - Written voting issues of the government - Follow up the Governmental expenditures - Single source procurement disclosure

Azerbaijan	<ul style="list-style-type: none"> - Entry visa - Electronic auction system of the compulsory enforcement service - Online system for submitting applications and obtaining permits for air transportation by domestic and foreign airlines 	<ul style="list-style-type: none"> - SNCO financing disclosure - Registers of public administration bodies - The outcomes of the supervisory activities realised by the Control Chamber of the Republic of Armenia - Online broadcast of procurement appeals board sessions - Business trip reports - Legal information system of the Republic of Armenia - Licensed persons' reports - Electronic service platform of the cadastre committee
	Administrative services	Information services
	<p><u>National Level</u></p> <ul style="list-style-type: none"> - Birth and death certificates - Registration of marriage - Online payment of debts and administrative expenses - Payment of duties and penalties - Inclusion of data for voters' list - Ordering e-signature certificates by citizens - Application for adoption - Application for changing surname, name and patronymic - Application for divorce - Online application to the Ministry of Justice - Acceptance of electronic customs declaration for customs clearance of goods and vehicle - Online applications to the Office of Ombudsman - Proof of employment - Online registration of insured person - Applying for change of pension and retirement type - Applying for targeted social assistance - Acquiring, restoration or revocation of citizenship - Registration of foreigners and stateless persons upon place of stay - Extension of temporary staying period of foreigners and stateless persons 	<p><u>National Level</u></p> <ul style="list-style-type: none"> - Citizen access to general information - Legislative agenda and pending legislation - Information on fines and penalty points imposed for violation of traffic rules - Search of addresses of constituencies and polling stations - Voter turnout - Social calculator for calculation of social benefits and pensions - Retirement calculator - Providing information to citizens on e-health card - Providing information on notary offices and operation of notarial actions

Georgia	<ul style="list-style-type: none"> - Issuance (extension) of permit for temporary/permanent residence of foreigners and stateless persons - Issuance/extension of work permit to foreigners and stateless persons to carry out paid labour activity 	
	Administrative services	Information services
	<p><u>National Level</u></p> <ul style="list-style-type: none"> - Birth and death certificates - Reissuance of a biometric passport - Reissuance of an electronic ID card - Parking fines - Online payments: utility bills, state tax, communication, internet, cable and digital TV, mobile operators, financial services and insurance, transport and logistics - Residence permit - Determination of Georgian citizenship - Exit from citizenship - Electronic apostille - Electronic registration of notarial acts - Change name/surname - Tax debt - Debtor's registry - Marriage contract - Car ownership - Correspondence with public services - Making appointments - Renewal of owner's immovable property statement - Social benefits and payments - Confirmation of authenticity of educational documents issued in Georgia - Registration/cancelation of economic activity <p><u>Local Level**</u></p> <ul style="list-style-type: none"> - MS Free meal – registration of beneficiaries; also used for day-to-day management of the service - MS Letters – online registration of statements, requests for licenses, permits, registration for 	<p><u>National Level</u></p> <ul style="list-style-type: none"> - All normative acts adopted by state agencies, as well as international agreements, decisions by the Constitutional Court, local self-government acts, and public statements - Search for applications of entrepreneurs/legal entities - National archive of Georgia <p><u>Local Level</u></p> <ul style="list-style-type: none"> - MS Infrastructure – module for monitoring of infrastructure projects - MS Maps – unified interactive geo-spatial map (parking zones, buildings, roads, cadastral data, infrastructure and business facilities) - MS Recreational Areas – registry for recreational areas, parks, squares (includes the features and description of the green area) - MS Calendar – unified calendar of social, cultural and administrative events (data can be segregated by municipality) - Pro-active publishing of municipal normative acts, municipal budget, Council session agenda and protocols. In 14% of municipalities there is a webcasting of municipal sessions (Ozurgeti, Batumi, Poti, Tskaltubo, Khoni, Tkibuli, Lanchlhuri and Sagkhere)

	<p>pre-school education, enrolment in municipal programs</p> <ul style="list-style-type: none"> - MS Help – part of the MS Letters module for crisis situations - MS Parking – online permits for parking; e-payment for parking tickets (provides detailed description of individual parking violation: photo and video footage, protocol, the amount of fine, etc) - MS Taxi – registry of Taxi service providers, licensing - MS Idea – online registration of initiatives, citizen participation tool 	
Moldova	Administrative services	
	<p style="text-align: center;"><u>National Level</u></p> <ul style="list-style-type: none"> - Certificate/duplicate/ extract of birth, marriage registration, death, divorce or change of surname (these e-services on Public Services Agency were announced on 23.03.2023)*** - Government Citizen Portal (obtaining official information of public interest and documented information about oneself, available in registers and information systems of public institutions) - Issuance of identity documents and registration of the population - e-Registry Office Services - Electronic ID - Basic personal data (not specified) - Data on issued documents - Registration data at the place of residence - Vehicle Data - Pre-registration for services provided by the Public Services Agency - Vehicle ownership certificate - Certificate of confirmation of possession of a driver's license - Order to replace old DL driver's license (1995) with new style driver's license - Certificate confirming the issuance of an identity card of a 	<p style="text-align: center;">Information services</p> <p style="text-align: center;"><u>National Level</u></p> <ul style="list-style-type: none"> - Although information on calendar of events, policies and procedures, and legislative agenda is available, it is not consolidated in one place and requires one to visit specific governmental websites**** <p style="text-align: center;"><u>Local Level</u></p> <p>There are some information e-services available, however citizens prefer direct contact with public officials</p>

	citizen of the Republic of Moldova - Certificate of confirmation of the issuance of identity documents or their absence (passport) - Certificate of belonging to the citizenship of the Republic of Moldova - Certificate of confirmation of registration at the place of residence - Certificate of permission to emigrate
--	---

* **Armenia:** obtaining birth, death, or marriage certificates is not yet available as an e-service.

** **Georgia:** central government delegates its e-services to the municipalities. In addition, each municipality has its own list of e-services relevant for it, e.g. an e-service (part physical and part electronic) whereby a citizen can request (in some areas) the removal of a wolf is not relevant for such municipalities as Tbilisi.

Note: All listed services are integrated at the municipal level in **Georgia**, and are available for residents, but their usage greatly depends on the digital skills of the residents and internet coverage (in some highland settlements internet coverage is still insufficient).

*** **Moldova:** “Vital status records ordered online can only be received in paper form. Documents can be picked up at the multifunctional center that you selected when placing an order, or you can order home delivery using the public MDelivery service”.⁵³

**** **Moldova:** government is currently attempting to consolidate all information e-services under “one roof”.

Addition. **Ukraine:** the mobile application Diia currently provides 92 e-services. It is also integrated with partners in other countries, such as mObywatel in Poland, on which Ukrainian documents can be accessed and used. The most popular e-services in Ukraine include the purchasing of governmental military bonds, “eSupport” (support for entrepreneurs and employees who lost their ability to work due to Russian occupation of Ukrainian territory) and e-services for immigrants from Ukraine. The mobile application Diia has 18.5 million users. Almost 22 million people use the portal in general.

Source: own elaboration based on: E-gov.am (n.d.); E-cadastre.am (n.d.); E-request.am (n.d.); My.gov.ge (n.d.); Legislative Herald of Georgia (n.d.); E-gov.az (n.d.); State Migration Service of Azerbaijan (n.d.); E-services.am (n.d.); Servicii.gov.md (n.d.).

⁵³ Vypritskikh (2023).

3.3 Kinds of administrative and information e-services provided in Poland, Estonia and Montenegro

The following table identifies government e-services to citizens provided in Poland, Estonia and Montenegro by kind and sub-kind

Table 5. Kinds of G2C e-services provided in Poland, Estonia and Montenegro

State/administrative and information services provided Poland	Administrative services (name of e-service & level at which it is provided)	Information services (name of e-service & level at which it is provided)
	<p><u>National Level</u></p> <ul style="list-style-type: none"> - Registry of birth - Birth, marriage and death certificates - Civil status records - Registration for permanent and temporary residence - Get an ID card for your child - Issuing and replacing a Polish identity document for a foreigner - Reporting the loss or damage of an ID card or a passport - Adding to the electoral roll - Signing up and removal from the electoral register - Assignment/change of PESEL number - Tax declaration - Property tax declaration - Issuing and extending work permits for foreigners in the territory of the Republic of Poland - Employee recruitment - Registration of an unemployed or job seeker - Report (partial/final) on the performance of a public task - Issuing a certificate for the unemployed to apply for a pre-retirement benefit - Deletion from the register of unemployed people - Conclusion of an internship agreement - Issuing a certificate of disability - Apply for social benefits - Granting the right to a special care allowance 	<p><u>National Level</u></p> <ul style="list-style-type: none"> - Information on the recruitment of candidates for employment for vacant positions - Information about the Works Council - Official Journal of Ministers' ordinances <p><u>Local Level**</u></p> <ul style="list-style-type: none"> - Information on local councils - Webcasting of local councils' meetings - City maps - Information on local taxes - An information portal in line with the requirements of the Public Information Office

- Electronic services for persons insured in the Social Insurance Institution (ZUS)
- Initiation of proceedings for out-of-court resolution of consumer disputes
- Submission of an offer for the implementation of a public task (public procurements)
- Driving license certificate
- Adding or deleting a vehicle's co-owner in the registration document
- Registration of railway vehicles
- Withdrawal of vehicles from the national register of railway vehicles
- Issuing a certificate of licenses, permits and qualification certificates for road transport
- Subsidy for a local government unit (voivodeship) for tasks related to remedying the effects of a natural disaster
- Updating land and building records
- Certificates of ownership of a farm for retirement and disability pensions
- Change of land classification
- Entry in the register of training organizers for candidates for mountain guides
- Entry in the register of tour operators and travel agents
- Granting subsidies for conservation, restoration and construction works on monuments entered in the register, located in the commune
- Notification of issue or extension of an airworthiness review (ARC) or permit to fly (PtF)

Local Level*

- Issuance of a fishing card
- Data update form
- Property tax (for individuals)
- Real estate tax (for legal entities)
- Agricultural and forest tax
- Tax on means of transport
- Waste declarations

	<ul style="list-style-type: none"> - License to sell alcoholic beverages - Building/demolition permit - Personalised Warsaw City Card - Warsaw nursery voucher - Electronic payments - Vehicle registration - Child ID - Permanent residency - Family allowances - Taxi licenses 				
Estonia	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="472 589 951 629" style="text-align: center;">Administrative services</th> <th data-bbox="951 589 1401 629" style="text-align: center;">Information services</th> </tr> </thead> <tbody> <tr> <td data-bbox="472 629 951 2031"> <p style="margin: 0;"><u>National Level</u></p> <ul style="list-style-type: none"> - Prescriptions - Health insurance - Medical care and treatment (including abroad) - Temporary incapacity for work - Receiving sickness benefit - Permanent incapacity for work - Allowances for temporary incapacity for work - Shared parental benefit - Family and children's allowances - Unemployment allowance and insurance benefit - Benefit for pensioners living alone - Compensation of damage for crime victims - Compensation for damage to health caused by occupational disease or occupational accident - Pensions and applying for pensions - Registration of marriage, cohabitation, birth and death - Registering a pregnancy and notifying the employer - Certificate of a family event and certificate of marital capacity - Extract from the population register - Applications for social assistance by the local government - Kindergarten application to local governments - Registration at the Employment Insurance Fund for unemployed person and person seeking work. - Recognition of professional qualification </td> <td data-bbox="951 629 1401 2031"> <p style="margin: 0;"><u>National Level</u></p> <ul style="list-style-type: none"> - Official information about the Republic of Estonia, including the full text of the constitution, institutions of the President, the Government and the Parliament, Legislature, Finances and State Budget, Foreign Relations and International Agreements, National Defence, Court etc - Poisoning Information Centre - Tax and Customs Board - Register of cultural monuments and the information system of museums </td> </tr> </tbody> </table>	Administrative services	Information services	<p style="margin: 0;"><u>National Level</u></p> <ul style="list-style-type: none"> - Prescriptions - Health insurance - Medical care and treatment (including abroad) - Temporary incapacity for work - Receiving sickness benefit - Permanent incapacity for work - Allowances for temporary incapacity for work - Shared parental benefit - Family and children's allowances - Unemployment allowance and insurance benefit - Benefit for pensioners living alone - Compensation of damage for crime victims - Compensation for damage to health caused by occupational disease or occupational accident - Pensions and applying for pensions - Registration of marriage, cohabitation, birth and death - Registering a pregnancy and notifying the employer - Certificate of a family event and certificate of marital capacity - Extract from the population register - Applications for social assistance by the local government - Kindergarten application to local governments - Registration at the Employment Insurance Fund for unemployed person and person seeking work. - Recognition of professional qualification 	<p style="margin: 0;"><u>National Level</u></p> <ul style="list-style-type: none"> - Official information about the Republic of Estonia, including the full text of the constitution, institutions of the President, the Government and the Parliament, Legislature, Finances and State Budget, Foreign Relations and International Agreements, National Defence, Court etc - Poisoning Information Centre - Tax and Customs Board - Register of cultural monuments and the information system of museums
	Administrative services	Information services			
<p style="margin: 0;"><u>National Level</u></p> <ul style="list-style-type: none"> - Prescriptions - Health insurance - Medical care and treatment (including abroad) - Temporary incapacity for work - Receiving sickness benefit - Permanent incapacity for work - Allowances for temporary incapacity for work - Shared parental benefit - Family and children's allowances - Unemployment allowance and insurance benefit - Benefit for pensioners living alone - Compensation of damage for crime victims - Compensation for damage to health caused by occupational disease or occupational accident - Pensions and applying for pensions - Registration of marriage, cohabitation, birth and death - Registering a pregnancy and notifying the employer - Certificate of a family event and certificate of marital capacity - Extract from the population register - Applications for social assistance by the local government - Kindergarten application to local governments - Registration at the Employment Insurance Fund for unemployed person and person seeking work. - Recognition of professional qualification 	<p style="margin: 0;"><u>National Level</u></p> <ul style="list-style-type: none"> - Official information about the Republic of Estonia, including the full text of the constitution, institutions of the President, the Government and the Parliament, Legislature, Finances and State Budget, Foreign Relations and International Agreements, National Defence, Court etc - Poisoning Information Centre - Tax and Customs Board - Register of cultural monuments and the information system of museums 				

- Applying for the determination of the degree of disability
- Application for social benefits for disabled persons
- Applying for a personal identity document
- Registration of residence and residence permit for foreign nationals
- Applying for Estonian citizenship
- Applying for a provisional driving licence
- Replacing a driving licence
- Applying to school
- Applying to school-starting benefit of children
- Admission to Estonian educational institution
- Submitting an income tax return
- e-Land Register
- Registering residence

Administrative services

Information services

National Level

- Verification of voter information, voters' register and request for change of address
- Request for issuing a birth certificate, certificate of Montenegrin citizenship and certificate of residence
- Registry of marriage and death
- Request for free access to information
- Review of data in the central register of payers and insured persons
- Annual declaration of personal income tax
- Report on calculated and paid income tax and contributions for mandatory social insurance
- Request for issuing a copy of documentation from the official records
- Request for issuing a certificate of facts from official records
- Request for user account in the eDMS information system
- Request for submission of data from criminal and misdemeanour records
- License renewal and payment
- Driving licence

National Level

- Overview of the registers of VAT payers and taxpayers
- Citizen access to general information
- Calendar of events
- Manual of policies and procedures
- Phone directories
- Property information
- Legislative agenda and pending legislation
- Web casting of city/county council meetings
- Communications with council members

- Payment for parking tickets, court fines
- Self-service benefits administration

Local level

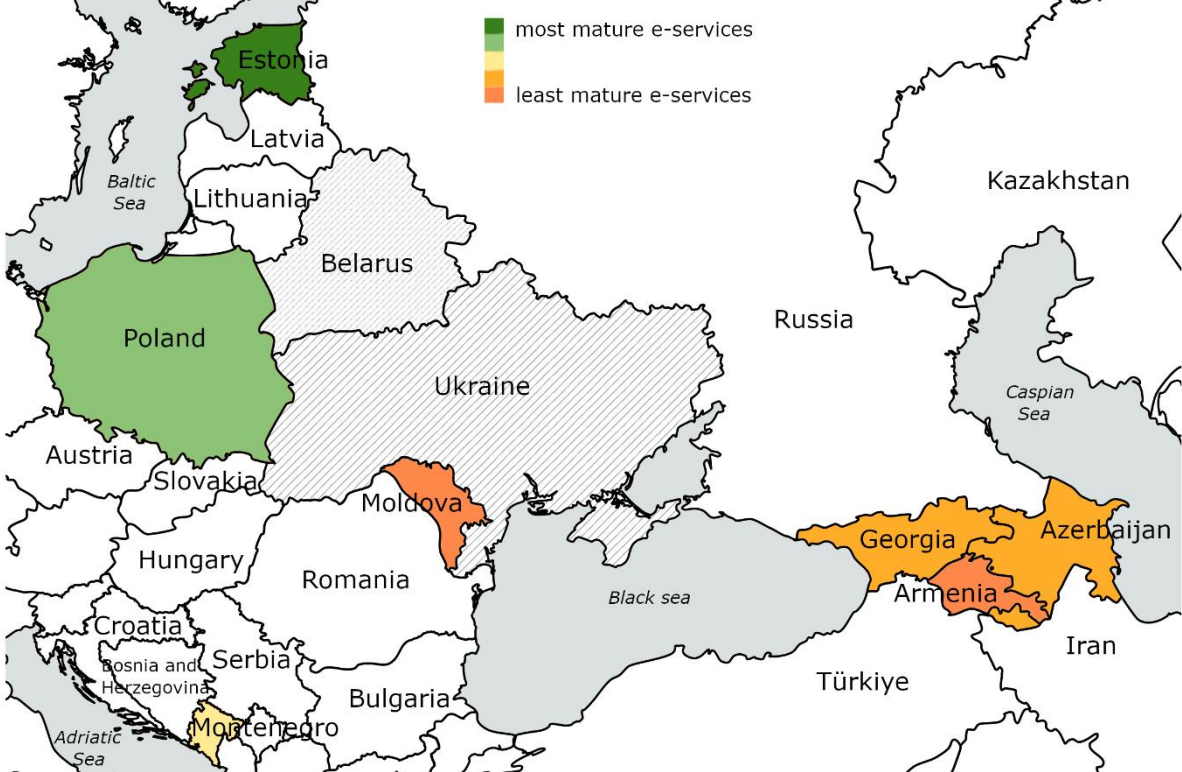
- 18 out of 25 Municipalities in Montenegro use LARIS software for management of local public revenues; this is interactive software open to all citizens
- Some municipalities have implemented System48 as an online platform for providing communal services
- Some municipalities have implemented a DMS System allowing citizens to track their inquiries and requests submitted to local government and public services providers
- Some municipalities have implemented a GIS system in spatial planning area available to public

* On the example of Warsaw; lists of administrative e-services provided by other municipalities in Poland may differ.

** Lists of information e-services provided by municipalities in Poland may differ.

Sources: own elaboration based on information provided by the stakeholders from Montenegro; ePUAP (n.d.), Moja Warszawa (n.d.), Eesti.ee (n.d.); GOV.ME (n.d.); Euprava.me (n.d.).

Figure 5. Level of maturity of e-services in the analysed countries



Source: own elaboration based on information provided in Tables 4 and 5; EC (2022b).

4. Conclusions and recommendations

Conclusions

- Europe is the leader in e-government development, offering the highest average number of e-services. Two services are available in all European countries: applying for a birth certificate, and filing business taxes online. The services offered the least are applying for a visa and registering a motor vehicle.
- Since 2020, governments in Europe have been responding to the COVID-19 pandemic by providing online information and platforms for distance learning, telehealth services, and COVID-19 vaccines and tests. Health, education, and social protection have seen the largest increase in e-services.
- According to the eGovernment Benchmark 2022, 84% of central government services in Europe are available online, as also are 71% of regional services and 60% of local services. The highest diffusion of public e-services at the local level is seen in medium-large cities. The European leaders in digital government are Malta, Estonia, Luxembourg, Iceland, the Netherlands, Finland, Denmark, Lithuania, Latvia, Norway, Spain, and Portugal.
- All the EaP countries analysed here – Armenia, Azerbaijan, Georgia and Moldova – have established electronic platforms to connect citizens with existing electronic services provided by the authorities, but how advanced the provision of e-services is varies between them.
- Common challenges that all analysed EaP states face include turning existing e-services into digital solutions with a social impact, and making their design more user-friendly. Surveys and statistics on the provision of e-services in these countries are scarce, making it difficult to assess the design and quality of the e-services provided.
- Internet access is high in EaP states, but there is a digital divide between socioeconomic groups, rural-urban populations, and different age groups.
- The COVID-19 pandemic has accelerated the implementation and expansion of e-services in EaP states. Data privacy and personal information protection is a challenge for countries that are more advanced in providing e-services, such as Georgia and Ukraine, and cyber-security is important for e-service development, especially in the light of the Russian invasion of Ukraine on 24

February 2022 and the related risk of e-services being hacked and citizens' information stolen.

- In general, e-services in EaP countries are underdeveloped due to a variety of factors, ranging from digital illiteracy among citizens to a lack of funds available to invest in advanced technologies. Poor digital skills, especially among those of 40 years and older, along with the prevalence of traditional public services, mean that there is little demand for e-services. Furthermore, e-services are not user-friendly, they are expensive, and are not user-oriented. Poor awareness of the availability of e-services, a shortage of the technology for using them, and mistrust in the central government all discourage the use of e-services. Moreover, governmental procurement of advanced technologies is comparatively low, and back-office processes have not been digitised.
- Differences between the analysed EaP states in their provision of e-services might be explained by the level of intensity of the above factors. In addition, the degree of decentralisation and division of powers, as well as the trust between the levels of governance, are important factors to understanding this discrepancy. Moreover, an important factor influencing the level of use of e-services is citizens' trust in government and local government.
- The most proliferative administrative services in Armenia, Azerbaijan, Georgia and Moldova include applying for a birth certificate (except for Armenia, where this service is still not available) and other certificates and proofs, electronic tax filing, and e-signature. Information services include draft legal acts, government (national and local) decrees, voter turnout, and citizen access to general information.
- Compared to the EaP countries analysed here, Poland and Estonia provide more e-services that relate to the social sphere, including applying for family and children's allowances, unemployment allowance and insurance benefit, applying for social assistance to the local government, kindergarten application to local government, and unemployment registration.

Recommendations

- In order to increase the utilisation of e-services, EaP states should improve digital literacy and digital skills among citizens, especially targeting those over 40 years old and those living in rural areas. The use of e-services should also be incentivised through making them more accessible (also in terms of internet coverage in a given country, and consolidating e-services under “one roof” to make them easier to find and use), user-friendly, and cost-effective. EaP states should also concentrate their efforts on building trust between citizens and central government.
- EaP states should also increase awareness of the availability of e-services by providing information on their use and benefits through various media outlets. In this context, EU experience at the local level, for example in promoting the <https://warszawa19115.pl/> platform in Warsaw, Poland, might be valuable to partners from EaP states.
- Due to the increase in the number of users of mobile devices globally, e-services should be offered through multiple channels (including through mobile phones and tablets). At the same time, EaP governments should increase access to the technologies necessary for using e-services, especially in rural areas.
- Whenever possible, the funds available for e-services at the local level should be increased, along with an increase in governmental procurement of advanced technologies and the digitalisation of back-office processes.
- In general, the trust between levels of governance must be respected in order to create a supportive environment for e-government services to thrive.
- There is room for European partners to exchange experience with their EaP counterparts in delivering e-services at regional and local levels. This applies in particular to kinds of e-services that are not yet delivered in EaP countries, such as applying for family and children’s allowances, unemployment allowance and insurance benefit, applying for social assistance to the local government, kindergarten application to local government, unemployment registration, and others.
- Quality of information provided via information e-services: information provided should be accurate and complete, and government at all levels should ensure adequate efforts and resources to this end.

- E-services design. Close cooperation between governments and technology solutions providers is needed in the designing of digital services. This is not only to ensure the accuracy and completeness of online information, but also to design the services carefully in order for users (citizens) to be able to use them without having to interact with desk service, and concerns such components as menu design, screen layout, and interaction methods, etc.
- In order to alleviate citizens' privacy and security concerns related to using e-services, governments can implement policies on the usage of information as well as security protection measures. E-service security is also one of the areas for sharing experience – not only from EU MS, but also Ukrainian experience with Diia.
- In light of the above, there is broad room for cooperation at CORLEAP, encompassing the following: 1) increasing usage of existing e-services (enhancing internet penetration, especially in rural and remote areas; increasing the basic digital skills of population); 2) e-service security; 3) improvement in the quality of information e-services (including improvement in e-services' design and means of provision, e.g. via mobile apps); 4) introducing new administrative e-services (e.g. introducing new e-services for social affairs at the local level). Such cooperation might take the form of exchanging experience and ideas, showcasing good practices, or organising study visits, etc. Last but not least, exchanging of experience might also encompass cooperation and trust building between different levels of government as well as between citizens and government in general.

Country-specific recommendations for improving G2C e-services:

- **Armenia.** Increasing internet penetration in the country is essential, especially in rural and remote areas, and among low-income citizens. It is important to enhance the core digital skills of the population (58.9% in 2019⁵⁴), with a special emphasis on older adults, vulnerable groups and people living in rural areas. To increase the popularity of e-services, it would be beneficial to increase the availability of public services in the form of e-services, e.g. by expanding the number of government agencies that deliver user-friendly e-services, which would preferably be accessible via mobile phone as a mobile application.

⁵⁴ Melenchuk (2021).

- **Azerbaijan.** It is important to enhance internet penetration in rural and remote areas, while also increasing the digital skills of the population (68% in 2019⁵⁵), in particular in rural communities. Raising awareness of the availability of e-services and improving mobile applications in order not only to provide essential information, but also to provide basic e-services, is crucial.
- **Moldova.** Increasing the basic digital skills of the population is paramount, especially among older adults, vulnerable groups and those living in rural areas. Increasing access to the internet in remote areas is essential. It is vital that user-friendly and cost-effective e-services targeting the needs of the population are developed and clustered under a “single roof” as an alternative to comprehensive public administration centres. Private sector experience in Moldova could be a great example to explore, since its performance in e-services is impressive compared to public e-services. The procurement of advanced technologies by the government and the digitalisation of both front-office and back-office would contribute greatly to the improvement of e-services. To increase the usage of e-services, especially among the poorer part of the population, it is important to have e-services available on mobile phones as applications. In addition, enhancing public awareness of the availability of existing e-services is critical. In order to develop e-services at the local level, it is important to allocate funds to local authorities for that purpose, and to improve engagement between central government and the local authorities.
- **Georgia.** Increasing the population’s basic digital skills, especially among older adults and vulnerable groups, is crucial. It is important to improve internet access in remote and particularly mountainous areas. To reach a larger number of users, it is important to have e-services available as applications on the mobile phone or tablet. The key issue with the expansion and development of e-services is cybersecurity, which should withstand any threats or leaks.

⁵⁵ World Bank (n.d.).

5. References

- Asgarkhani M. (2005). *The Effectiveness of e-Service in Local Government: A Case Study*, “The Electronic Journal of e-Government”, Volume 3, Issue 4, pp. 159–160.
- Brzustewicz P. & Escher I. (2016). *E-services: concept, specificity, and marketing elements to create their value*, “Marketing i Zarządzanie”, no 5 (46), p. 101.
- Cepparulo A. & Zanfei A. (2021). *The diffusion of public eServices in European cities*. Government Information Quarterly, Volume 38, Issue 2.
<https://www.sciencedirect.com/science/article/abs/pii/S0740624X20303403>.
- Datareportal (2022a). *Digital 2022: Armenia*.
<https://datareportal.com/reports/digital-2022-armenia>.
- Datareportal (2022b). *Digital 2022: Azerbaijan*.
<https://datareportal.com/reports/digital-2022-azerbaijan>.
- Datareportal (2022c). *Digital 2022: Georgia*.
<https://datareportal.com/reports/digital-2022-georgia>.
- Datareportal (2022d). *Digital 2022: Moldova*.
<https://datareportal.com/reports/digital-2022-moldova>.
- E-cadastre.am (n.d). *E-services platform of cadastre committee in Armenia*. Accessed on May 2023. <https://www.e-cadastre.am/en>.
- E-gov.am (n.d.). *Electronic government Republic of Armenia*. Accessed on May 2023. <https://www.e-gov.am/en/>.
- E-gov.az (n.d.). *List of all e-services in Azerbaijan*. Accessed on May 2023.
<https://www.e-gov.az/en/services>
- E-request.am (n.d.). *Unified portal for online requests in Armenia. e-Governance infrastructure implementation agency*. Accessed on May 2023.
https://www.ekeng.am/en/sec_sub/e-request.
- E-services.am (n.d.). *Portal of e-services of Moldova*. Accessed on May 2023.
<https://e-services.md>.
- EC (2022a). *Digital Economy and Society Index Report 2022 — Digital Public Services*. <https://digital-strategy.ec.europa.eu/en/policies/desi-digital-public-services>.

EC (2022b). *eGovernment Benchmark 2022. Synchronising Digital Governments*. European Commission Directorate-General for Communications Networks, Content and Technology, <https://prod.ucwe.capgemini.com/wp-content/uploads/2022/07/eGovernment-Benchmark-2022-1.-Insight-Report.pdf>.

Eesti.ee (n.d.). *Riigiportaal [State Portal of Estonia]*. Accessed on May 2023. <https://www.eesti.ee/en>.

ePUAP (n.d.). *Polish Electronic Platform of Public Administration Services (ePUAP)*. Accessed on May 2023. <https://epuap.gov.pl/wps/portal/strefa-klienta>.

Euprava.me (n.d.). *eGovernment Portal of Montenegro*. Accessed on May 2023. <https://www.euprava.me/en?alphabet=lat>

Eurostat (n.d.). *Share of individuals having at least basic digital skills, by sex [sdg_04_70]*. Accessed on May 2023. https://ec.europa.eu/eurostat/databrowser/view/sdg_04_70/default/table.

Freedom House (2022). *Freedom On The Net 2022 Azerbaijan*. <https://freedomhouse.org/country/azerbaijan/freedom-net/2022>.

Goda M. (2022). *We all have one plan - victory, - Mstislav Banik on the results of Diia and plans for 2023*. https://24tv.ua/tech/yak-2022-rotsi-zminilasya-diya-yaki-poslugi-budut-2023-intervyu_n2222448.

GOV.ME (n.d.). *Catalogue of eGovernment services in Montenegro*. Accessed on May 2023. https://www.gov.me/e-servisi?sort=published_at

Greco M. & Dicusar I. (2021). *Influence of the economic gap on the level of e-governance in the developing countries - Republic of Moldova*. DOI: 10.32575/ppb.2021.1.2. https://ibn.idsi.md/sites/default/files/imag_file/02-gercu-dicusar-16-29-web-ppb-2021-1.pdf.

Hofacker Ch.F., et al. (2007). *E-Services: a synthesis and research agenda*, “Journal of Value Chain Management”, 1 (1–2), pp. 13–44.

Legislative Herald of Georgia (n.d.). *Website of Legislative Herald of Georgia*. Accessed on May 2023. <https://www.matsne.gov.ge/>.

Lindgren I., et al. (2019). *Close encounters of the digital kind: A research agenda for the digitalization of public services*, “Government Information Quarterly”, Volume 36, Issue 3, pp. 427–436, <https://www.sciencedirect.com/science/article/pii/S0740624X1830385X>.

- Melenchuk A. (2021). *Inclusive Local Digital Participation in Georgia, Moldova, and Ukraine*. GMF Policy Paper.
<https://www.gmfus.org/sites/default/files/Melenchuk%20-%20Inclusive%20Local%20Digital%20Participation.pdf>.
- Moja Warszawa (n.d.). *Katalog usług [Catalogue of services in Warsaw]*. Accessed on May 2023. <https://moja.warszawa19115.pl/katalog-uslug>.
- My.gov.ge (n.d.). *United portal of e-services of Georgia*. Accessed on May 2023. <https://my.gov.ge/ka-ge/services/10>.
- Raja S. & Malumyan G. (2020). Internet use in Armenia: How do individuals and businesses use the internet to access opportunities?
<https://blogs.worldbank.org/europeandcentralasia/internet-use-armenia-how-do-individuals-and-businesses-use-internet-access>.
- Servicii.gov.md (n.d.). *Government Services Portal of Moldova*. Accessed on May 2023. <https://servicii.gov.md>.
- State Migration Service of Azerbaijan (n.d.). *Electronic services for migration in Azerbaijan*. Accessed on May 2023.
<https://eservice.migration.gov.az/?lang=en>
- Twizeyimana J. D. & Andersson A. (2019). *The public value of E-Government – A literature review*, “Government Information Quarterly”, Volume 36, Issue 2, pp. 167–178,
<https://www.sciencedirect.com/science/article/pii/S0740624X1730196X>.
- UN DESA (2022). *E-Government Survey 2022. The Future of Digital Government*. United Nations Department of Economic and Social Affairs (UN DESA). New York.
<https://desapublications.un.org/sites/default/files/publications/2022-09/Web%20version%20E-Government%202022.pdf>.
- UNDP (2020). *Digitalization of public services in Moldova in the COVID-19 Era*. United Nations Development Programme (UNDP).
https://moldova.un.org/sites/default/files/2020-09/Public%20Services%20in%20Moldova%20in%20COVID%20era_revised_final.pdf
- UNDP (2021a). *Digital Readiness Analysis Moldova*. United Nations Development Programme (UNDP).
https://www.undp.org/sites/g/files/zskgke326/files/migration/md/Raport_Digit-RA-MD-eng.pdf

UNDP (2021b). *Digital solutions transform Georgia's public sector*. United Nations Development Programme (UNDP).

<https://www.undp.org/georgia/stories/digital-solutions-transform-georgia%E2%80%99s-public-sector>.

UNDP (2022). *Findings of a survey of the adult population on digital services*. United Nations Development Programme (UNDP).

<https://www.undp.org/ukraine/publications/findings-survey-adult-population-digital-services>.

UNDP (2023). *Analytical report on the "Opinions and views of the Ukrainian population regarding state electronic services"*. United Nations Development Programme (UNDP). <https://www.undp.org/ukraine/publications/analytical-report-opinions-and-views-ukrainian-population-regarding-state-electronic-services>.

Vypritskikh A. (2023). *In Moldova, birth or marriage registration certificates can be ordered online*. <https://newsmaker.md/rus/novosti/v-moldove-svidetelstva-o-rozhdenii-ili-registratsii-braka-mozhno-zakazat-onlayn/>

World Bank (2022). *Armenia to Improve Public Sector Performance through Digital Solutions, with World Bank Support*.

<https://www.worldbank.org/en/news/press-release/2022/03/03/armenia-to-improve-public-sector-performance-through-digital-solutions-with-world-bank-support>.

World Bank (n.d.). *GCI 4.0: Digital skills among population*. Accessed on May 2023.

https://tcdata360.worldbank.org/indicators/h945a9708?country=ARM&indicator=41694&countries=AZE,GEO,MDA&viz=line_chart&years=2017,2019.



**European Committee
of the Regions**

Created in 1994, the European Committee of the Regions is the EU's political assembly of 329 regional and local representatives such as regional presidents or city-mayors from all 27 Member States, representing over 446 million Europeans.

Rue Belliard/Belliardstraat 101 | 1040 Bruxelles/Brussel | BELGIQUE/BELGIË | Tel. +32 22822211
www.cor.europa.eu | [@EU_CoR](https://twitter.com/EU_CoR) | [/european.committee.of.the.regions](https://facebook.com/european.committee.of.the.regions)
[/european-committee-of-the-regions](https://linkedin.com/company/european-committee-of-the-regions) | [@EU_regions_cities](https://instagram.com/EU_regions_cities)

EN

ISBN 978-92-895-2677-7
doi:10.2863/23217

QG-04-23-656-EN-N



Publications Office
of the European Union