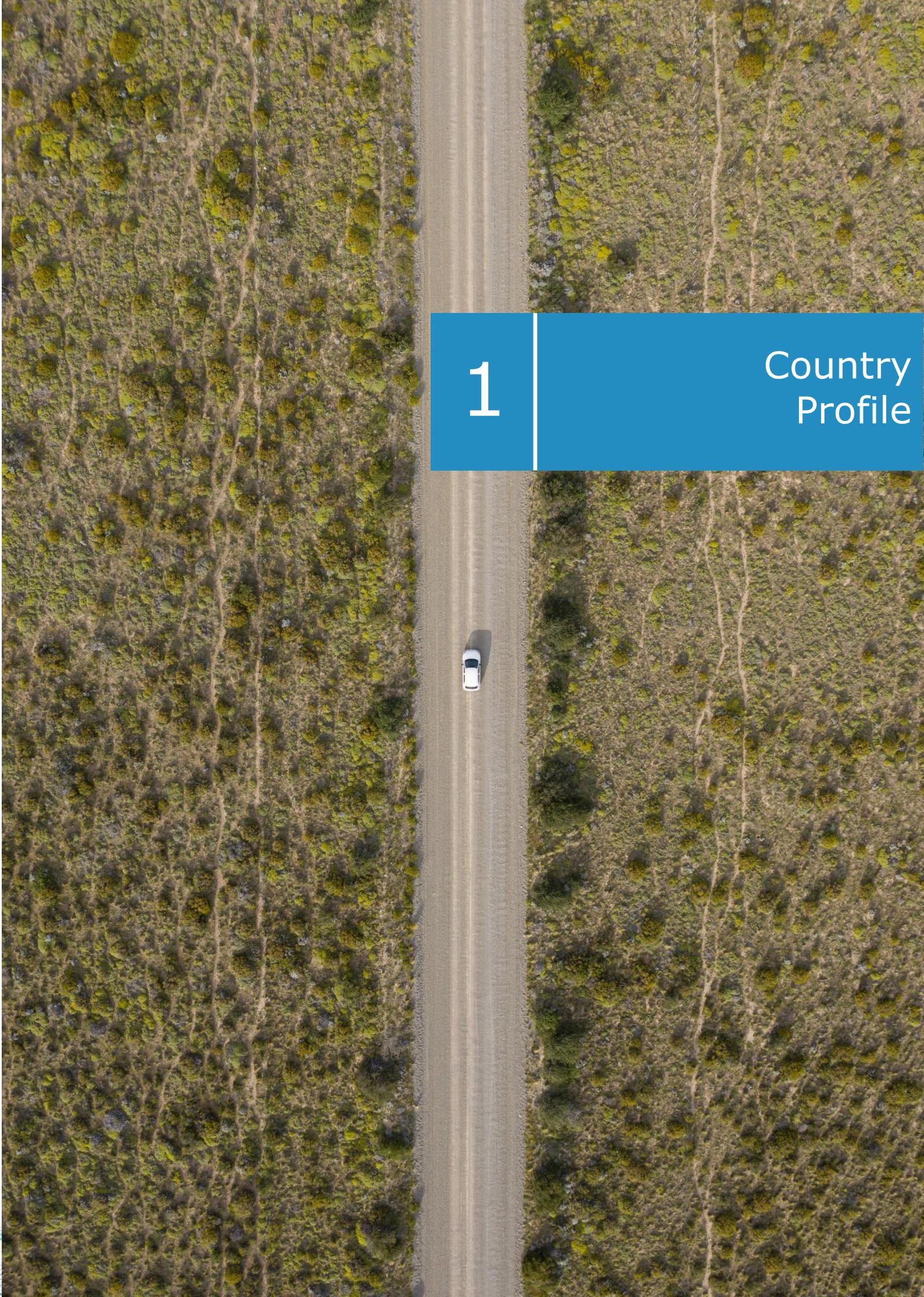


Digital Public Administration factsheet 2022 Slovakia



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1

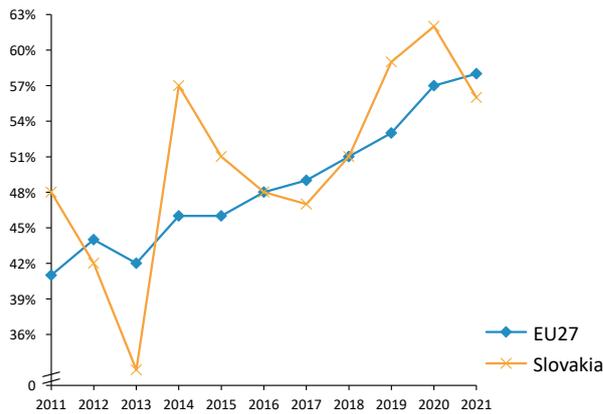
Country
Profile

1 Country Profile

1.1 Digital Public Administration Indicators

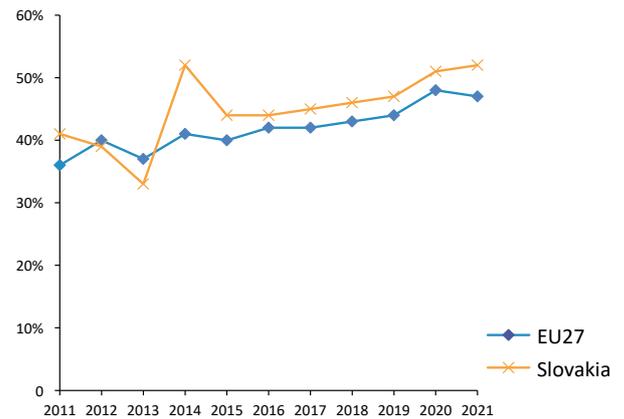
The following graphs present data for the latest Digital Public Administration Indicators for Slovakia compared to the EU average. Statistical indicators in this section reflect those of Eurostat at the time the factsheet is being prepared.

Percentage of individuals using the internet for interacting with public authorities in Slovakia



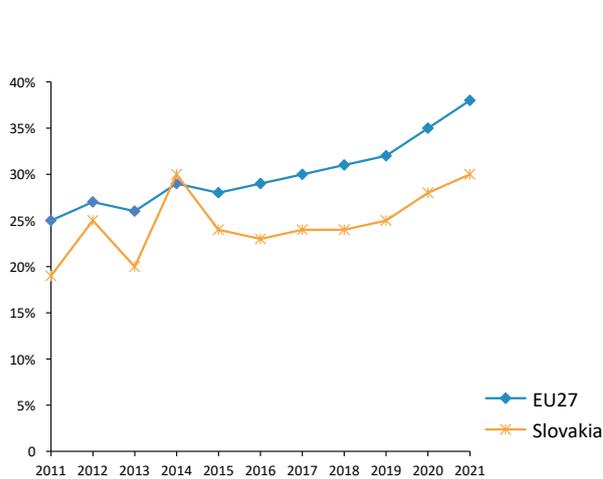
Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for obtaining information from public authorities in Slovakia



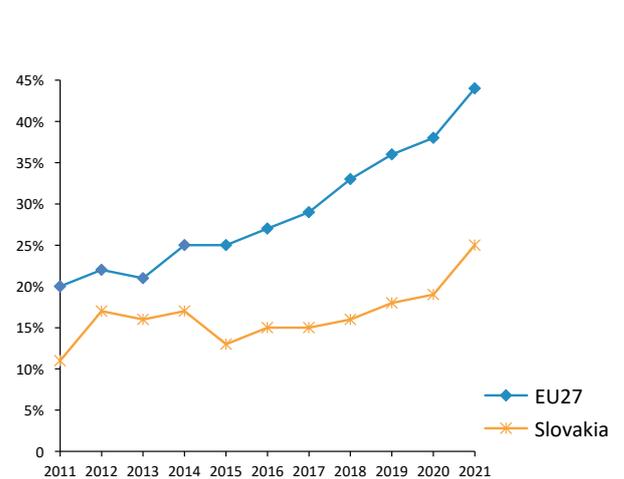
Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for downloading official forms from public authorities in Slovakia



Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for submitting completed forms to public authorities in Slovakia



Source: Eurostat Information Society Indicators

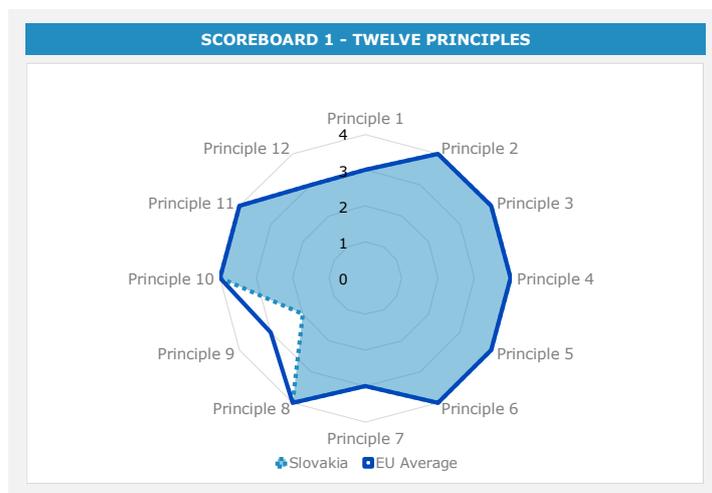
1.2 Interoperability State of Play

In 2017, the European Commission published the European Interoperability Framework (EIF) to give specific guidance on how to set up interoperable digital public services through a set of 47 recommendations. The picture below represents the three pillars of the EIF around which the EIF Monitoring Mechanism was built to evaluate the level of implementation of the EIF within the Member States. It is based on a set of 71 Key Performance Indicators (KPIs) clustered within the three main pillars of the EIF (Principles, Layers and Conceptual model), outlined below.



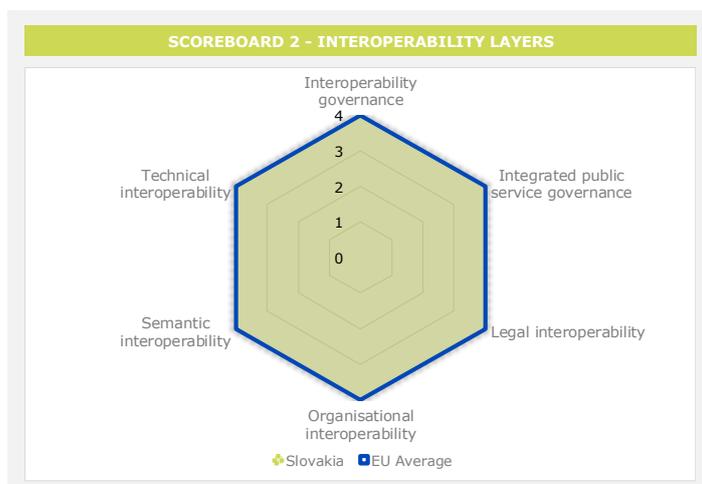
Source: European Interoperability Framework Monitoring Mechanism 2021

For each of the three pillars, a different scoreboard was created to breakdown the results into their main components (i.e. the 12 principles of interoperability, the interoperability layers and the components of the conceptual model). The thematic areas are evaluated on a scale from one to four, where one means a lower level of implementation and 4 means a higher level of implementation. The graphs below show the result of the second EIF Monitoring Mechanism data collection exercise for Slovakia in 2021.



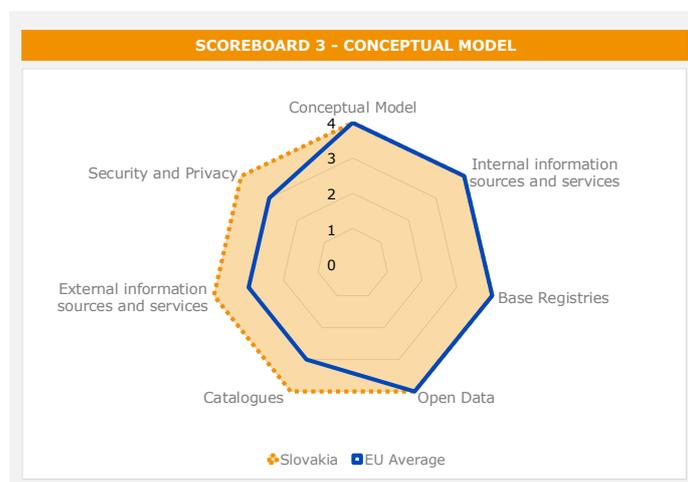
Source: European Interoperability Framework Monitoring Mechanism 2021

Slovakia’s results in Scoreboard 1 show an overall good implementation of the EIF principles. Slovakia meets the European average for most principles, except for Principle 1 (Subsidiarity and Proportionality), Principle 7 (Inclusion and Accessibility), Principle 9 (Multilingualism), and Principle 12 (Assessment of Effectiveness and Efficiency). The lower-middle performance on these principles indicates that Slovakian public administrations should ensure that national interoperability frameworks and interoperability strategies are aligned with the EIF and, if needed, tailor and extend them to address the national context and need (Recommendation 1). Moreover, it could improve their use of information systems and technical architectures that cater for multilingualism when establishing a European public service (Recommendation 16), and foster the way in which they evaluate the effectiveness and efficiency of different interoperability solutions and technological options considering user needs, proportionality and balance between costs and benefits (Recommendation 19).



Source: European Interoperability Framework Monitoring Mechanism 2021

The Slovakian results for the implementation of interoperability layers assessed for Scoreboard 2 shows a very good performance. Slovakia reaches a maximum score of 4, in line with the European average, for all interoperability layers. To maintain this high performance, an area of improvement linked to interoperability governance could be for Slovak public administrations to participate more actively in the standardisation work relevant to the needs of all national public administrations to ensure that their requirements are met (Recommendation 24), and to better perceive data and information as a public asset that should be appropriately generated, collected, managed, shared, protected and preserved (Recommendation 30).



Source: European Interoperability Framework Monitoring Mechanism 2021

Slovakia's scores assessing the Conceptual Model in Scoreboard 3 show an excellent performance in the implementation of all recommendations. A possible area of improvement concerns open source, where the country could enhance the way in which it publishes open data in machine-readable, non-proprietary formats. It could also ensure that open data is accompanied by high quality, machine-readable metadata in non-proprietary formats, including a description of their content, the way data is collected and its level of quality and the licence terms under which it is made available (Recommendation 42).

Additional information on Slovakia's results on the EIF Monitoring Mechanism is available online through [interactive dashboards](#).

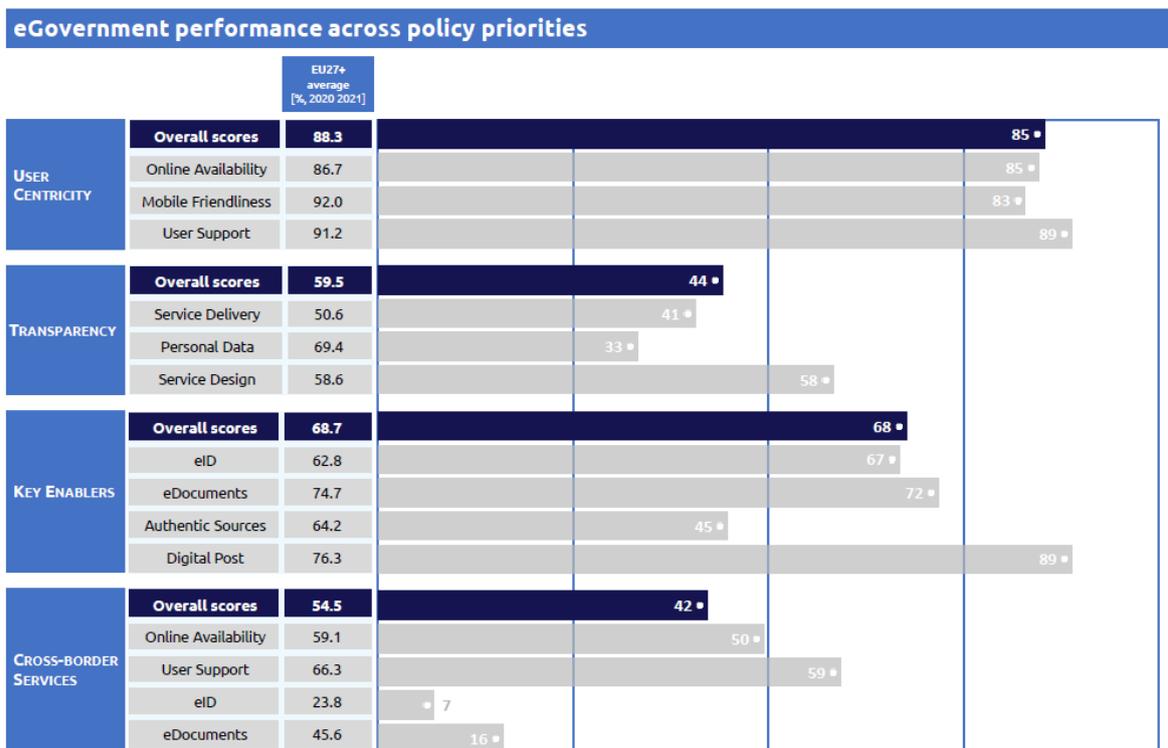
1.3 eGovernment State of Play

The graph below presents the main highlights of the latest eGovernment Benchmark Report, an assessment of eGovernment services in 36 countries: the 27 European Union Member States, as well as Iceland, Norway, Montenegro, the Republic of Serbia, Switzerland, Turkey, Albania and Macedonia (referred to as the EU27+).

The study evaluates online public services on four dimensions:

- **User centricity:** indicates the extent to which a service is provided online, its mobile friendliness and its usability (in terms of available online support and feedback mechanisms).
- **Transparency:** indicates the extent to which governments are transparent about (i) the process of service delivery, (ii) policy making and digital service design processes and (iii) the personal data processed in public services.
- **Cross-border services:** indicates the extent to which users of public services from another European country can use the online services.
- **Key enablers:** indicates the extent to which technical and organizational pre-conditions for eGovernment service provision are in place, such as electronic identification and authentic sources.

The 2022 report presents the biennial results, achieved over the past two years of measurement of all nine life events used to measure the above-mentioned key dimensions. More specifically, these life events are divided between seven 'Citizen life events' (Starting a small claim procedure, Moving, Owning a car, Health measured in 2021, and Career, Studying, Family life, measured in 2020) and two 'Business life events' (Regular Business Operations, measured in 2021, and Business start-up, measured in 2020).



Source: eGovernment Benchmark Report 2022 Country Factsheets



2

Digital Public Administration Highlights

Handwritten notes on a piece of paper, including a flowchart and a list of items:

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- [unclear]
- [unclear]

2 Digital Public Administration Highlights



Digital Public Administration Political Communications

The National Concept of Informatisation of Public Administration of the Slovak Republic 2030, also known as National eGovernment Concept, has been approved by the Slovak government in December 2021. The National eGovernment Concept will follow these strategic documents: the 2030 Vision and Strategy for Development of Slovakia, the 2030 Digital Transformation Strategy of Slovakia, the National Cybersecurity Strategy 2021–2025.

As one of the measures of the 2030 Strategy for the Digital Transformation of Slovakia, the Permanent Commission for Ethics and for the Regulation of Artificial Intelligence (AI) was set up in November 2020. The Permanent Commission for Ethics and for the Regulation of AI is an independent advisory body made of experts from various fields, who act in their own capacity.

In the course of 2020, experts prepared the National Broadband Plan, which was approved by the Government of the Slovak Republic on 17 March 2021. The vision of Slovakia is to ensure access to the telecommunication infrastructure that will be able to fulfil the quality and capacity requirements of networks in terms of the Gigabit Society for all citizens, entrepreneurs and public administration.



Digital Public Administration Legislation

As of 1 May 2019, a new Act No. 95/2019 on Information Technologies in Public Sector entered into force replacing former Act 275/2006 on information systems in public administration. The new Act brought a systemic change in the management of IT in the public sector. Respective public bodies charged with the IT management were given more responsibilities within the whole project cycle of IT implementation – planning, procurement, implementation, monitoring and evaluation.



Digital Public Administration Governance

The State-owned company Slovakia IT was established in September 2020. Its aim is to provide comprehensive IT services (e.g. simplification of processes of public services, development of stable information systems, improving the accessibility of services for citizens), innovation and cloud solutions for State-owned enterprises and institutions, development of mobile applications.



Digital Public Administration Infrastructure

The eGovernment cloud provides national authorities and institutions with cloud services (such as IaaS, PaaS, SaaS), which meet high standards of quality and safety, through a one-stop shop in the form of a service catalogue. The cloud solution will ensure effective sharing of ICT resources, improve access to data and facilitate the use of big data, as well as unify the environment and methodologies for information systems development and operation.

In the near future, Slovakia intends to create State, academic and business consortia in the triple helix model (Triple Helix Platforms), to support the development in such agendas as artificial intelligence or blockchain. Triple Helix platforms should also serve as basic contact points for directly managed projects from EU funds.



3

Digital Public
Administration
Political
Communications

3 Digital Public Administration Political Communications

3.1 Specific political communications on digital public administration

Berlin Declaration on Digital Society and Value-Based Digital Government

In December 2020, the Slovak government signed the Berlin Declaration on Digital Society and Value-Based Digital Government, thus re-affirming its commitment – together with other European Union (EU) Member States – to foster digital transformation in order to allow citizens and businesses to harness the benefits and opportunities offered by modern digital technologies. The Declaration aims to contribute to a value-based digital transformation by addressing and strengthening digital participation and digital inclusion in European societies.

2030 Strategy for the Digital Transformation of Slovakia

The 2030 Strategy for the Digital Transformation of Slovakia framed the government strategy in a way that defined national policies and particular priorities with regard to the ongoing digital transformation of the economy and society.

The strategy followed up on the priorities of the EU Digital Single Market. At the national level, it accelerated ongoing processes in terms of building the digital market and carrying out various measures that arose from the most recent cross-sectoral policies of the EU. The strategy also reflected the strategic materials and recommendations of international organisations (EU, OECD, UN, G7 and G20) that consider digital transformation to be the key to inclusive and sustainable growth. The strategy puts emphasis on new digital technologies such as artificial intelligence, Internet of Things, 5G technology, big data and analytical processing of data, blockchain or high-performance computers, which will eventually become a new engine of economic growth and competitiveness.

Several areas were identified regarding the necessity to multiply the potential of digital transformation:

- Economy;
- Society and education;
- Public services;
- Rural development; and
- Science, research and innovation.

The targets of the process are the citizens, whose everyday life should get simpler, and entrepreneurs, whose businesses should be supported by various incentives and whose bureaucratic burden should be eliminated.

The strategy was followed by the 2019–2022 Action Plan for the Digital Transformation of Slovakia, which defines particular measures in several priority areas:

- Improvement of education and fostering digital skills and employment for the modern era;
- Creation of a basis for a modern digital economy;
- Improvement of the ability of public services to innovate and use data; and
- Development and practical implementation of artificial intelligence.

As for the digital government, the ambition is to launch and implement a “data-driven State” concept in the public administration. The aim of the concept is for public administration to adopt decisions based on its best available knowledge. It is necessary to make sure that the institutions know how to use real data and make data-based (and possibly automated) decisions. Transforming the functioning of public

administration organisations and processes is also key, so that such analyses can be effectively used. The action plan also proposes the continuous deployment of fully automated public administration services. This would imply that the system would handle filings automatically based on selected criteria. Currently the 2023–2026 Action Plan for the Digital Transformation of Slovakia is being prepared.

National eGovernment Concept

The National Concept of Informatisation of Public Administration of the Slovak Republic 2030, also known as National eGovernment Concept, has been approved by the Slovak government in December 2021. The National eGovernment Concept will follow these strategic documents: the 2030 Vision and Strategy for Development of Slovakia, the 2030 Digital Transformation Strategy of Slovakia, and the National Cybersecurity Strategy 2021–2025. It contains seven strategic targets:

1. Shared services, government cloud and central common blocks;
2. Management of data;
3. User orientation, multi-canal access, life events;
4. Digital office and starting point for digital transformation;
5. Public procurement;
6. Human resources in IT in public service; and
7. Cybersecurity and information security.

Every strategic target will be regularly evaluated based on indicators.

The National eGovernment Concept concerns all elements of public administration. It formulates a set of strategic goals, priorities and measures which aim to create a central architecture at the national level and to define policy, regulatory and other tools in order to build a controlled and effective level of informatisation in public administration. Currently a new Action Plan for the implementation of the intended goals is being prepared.

2014-2020 Operational Programme 'Integrated Infrastructure'

The Operational Programme 'Integrated Infrastructure' (OPII) is a strategic document developed for the absorption of EU funds in the transport sector and in the area of enhancing access, use and quality of information technologies. The overall focus of the OPII, its specific objectives and activities were set to ensure the fulfilment of the Europe 2020 Strategy priorities and the National Reform Programme of the Slovak Republic.

The overall objective of the OPII was to support sustainable mobility, economic growth, and job creation, while improving the business climate through the development of transport infrastructure, public transport and information society.

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic is responsible for the area of information society within the Operational Programme 'Integrated Infrastructure'. Other objectives of the operational programme were managed by the Ministry of Transport, Construction and Regional Development to support sustainable mobility, economic growth, job creation and improve the business environment through the development of transport infrastructure.

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic acts as an intermediary body responsible for Priority Axis 7 - Information Society. The funds were invested in the development of electronic services for citizens and businesses, suited to complex life events and cross-border interoperability, and aimed at increasing the availability of government data through open data. At the same time, the public administration reform was supported by ICT, including the further expansion of the government cloud. Finally, the allocation for Priority Axis 7 should ensure coverage of all households with broadband internet at a minimum speed of 30 mbps.

This document has been adopted for 2014-2020, but thanks to the 'n + 3' rule for project implementation, it is possible to implement OPII projects until the end of 2023. As a consequence, the actual duration of this program is until 2023. As a follow up document for years 2021-2027, a new programme, called 'Operational Programme Slovakia', is under preparation. Its adoption is foreseen in the first half of 2022.

Strategic Document for Digital Growth and Next Generation Access Infrastructure (2014–2020)

The Strategic Document for Digital Growth and Next Generation Access Infrastructure (2014-2020) defined a strategy for the development of digital services and next generation access infrastructure in Slovakia. It focused on the fulfilment of the ex-ante conditionalities by means of which the EU evaluated the readiness of Member States to implement investment priorities of their choice. In particular, the document deals with information access, use and quality and communication technologies. The strategy aimed to further develop digital infrastructure services and next generation networks in Slovakia for the 2014-2020 period. These could be summarised in the following eGovernment investment priorities emphasised in the 2014-2020 period:

- Services for citizens and businesses;
- Effective public administration; and
- Broadband/Next Generation Network.

The document served as a basis for the preparation of the Operational Programme 'Integrated Infrastructure' (Priority Axis - Information Society) for the 2014-2020 period.

The document was approved by the government of the Slovak Republic on 8 January 2014. A new version of this document for 2021-2027 is currently under preparation.

Proposal for the ESIF Programming Period 2021–2027

Negotiations for the new programming period began in early 2020. The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic proposed a follow-up strategy based on the current investments. The strategy had a higher focus on reducing bureaucracy for businesses and citizens, and the objective of speeding up the digital take-up with digital-by-default services. Moreover, it can be used to support data-driven governance, with more public sector data available, building the digital government structure as a platform based on open APIs. It will also increase the quality of public services thanks to continued feedback from the users.

The partnership agreement proposal released in December of 2020 includes policy objectives aligned with the government digitalisation through the development of the digital and data economy, the modernisation of public services, and the creation of smart regions and cities.

Operational Programme Slovakia and Partner Agreement for 2021-2027

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic is currently preparing a Partner Agreement for 2021 – 2027 for the Operational Programme Slovakia, whose aim is to support science and research; build smart cities and regions; develop digital solutions for citizens, businesses, research organisations and public administrations; develop small and medium-sized enterprises; develop skills for smart specialisation, industrial transformation and entrepreneurship; and increase digital connectivity.

3.2 Interoperability

New National eGovernment Concept

The New National eGovernment Concept, which was approved by the Slovak government in December 2021, contains the strategy for achieving interoperability of public administration services in Slovakia (e.g. data interoperability of information systems, semantic data interoperability, interoperability of publicly available open data from base registries published in the central portal of open data, interoperability of base registries, technological interoperability¹, and interoperability of government cloud).

3.3 Key enablers

3.3.1 Access to public information

Action Plan for the Open Governance Initiative

The Action Plan for the Open Governance Initiative in the Slovak Republic for the years 2020-2021 has been approved by Resolution of the Government of the Slovak Republic No. 553/2019. Its aim is to give access to data owned by the State in a machine-readable format licensed for further use.

3.3.2 eID and Trust Services

New National eGovernment Concept

The New National eGovernment Concept, which was approved by the Slovak Government in December 2021, operates with the concept of eID as one of the key enablers for government services.

3.3.3 Security aspects

National Cybersecurity Strategy 2021–2025

The National Cybersecurity Strategy 2021–2025 was approved by the government in January 2021. It was prepared by the National Security Authority of the Slovak Republic and it takes into account the principles listed in the Security Strategy and EU, NATO, OECD and UN strategies. Building on the cybersecurity strategy for the period 2015-2020, the strategic goals aim to serve the interests of the State and protect the services provided to citizens and businesses. Six principles are defined for the cybersecurity system:

- The primacy of fundamental human rights and freedom in the cyberspace;
- Legal-based cybersecurity in the management system and mechanisms of the security system;
- A comprehensive and universal approach to cybersecurity;
- Risk management as a key element of the national cybersecurity management system;
- Support, cooperation and prevention; and
- Continuous capacity building in the field of the cybersecurity.

The National Cybersecurity Strategy 2021–2025 pursues seven high-level (strategic) goals:

1. A reliable State prepared for threats;

¹ Technological interoperability in this context means that public administration software and hardware must comply with standards that support the interoperability of data, applications and technologies throughout the European area.

2. Effective detection of cybercrime;
3. A resilient private sector;
4. Cyber security as an essential part of public administration;
5. Strong partnerships;
6. Educated professionals and an educated public; and
7. Research and development in the field of cyber security.

The Action Plan for the implementation of the National Cybersecurity Strategy for 2021–2025 was approved by the Government in July 2021. The Action Plan highlights more than 150 tasks for various entities, including all relevant stakeholders, and is followed by several strategic goals based on the National Cybersecurity Strategy. Fulfilment of the tasks is monitored by a special committee established by the National Security Authority.

3.3.4 Interconnection of base registries

New National eGovernment Concept

One of the aims of the New National eGovernment Concept, which was approved by Slovak Government in December 2021, is to achieve the interconnection of public administration information systems and reference registries. The efficient interconnection of systems will allow to merge related services while minimising user interactions or the need for manual data entry by implementing reference data policies and common modules for process and data integration.

3.3.5 eProcurement

IT Procurement in the Public Administration

In May 2019, the Council for Digitalisation and the Digital Single Market of the Government of the Slovak Republic adopted the **Concept for IT Procurement in the Public Administration**. This concept is the result of the multi-stakeholder working group on ICT public procurement.

3.4 Domain-specific political communications

Proposal for the Centralisation and Development of Data Centres in the State Administration

In 2014, the Government of the Slovak Republic approved a **Data Centre Strategy**, whose main goal is to centralise the number of data centres of the State into just two facilities, under the scope of the Ministry of Finance and the Ministry of the Interior. Some of the cloud services included in the scope are, for example, IaaS, PaaS, and SaaS, and they benefited from high levels of quality and safety in the form of catalogue services.

A new National eGovernment Concept, approved by the Slovak Government in December 2021, includes a vision for data centres: they should have a comprehensive concept for building cloud computing services and data centres, including categorisation of data centres based on needs and active planning and area management.

Implementation Plan of the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic ('RIS3 IP')

This implementation plan contains procedures and processes which need to be carried out in order to fulfil missing criteria in relation to thematic ex ante conditionality 1.1

for thematic objective 1. They include: strengthening research, technological development and innovation and implementation of relevant investment priorities funded in the 2014-2020 programming period, as well as measures to which the Slovak Republic committed itself in the Operational Program 'Research and Innovation'. Three basic areas of specialisation were approved, which were transformed into 5 intelligent specialisation domains (one of them being 'Digital Slovakia').

National Strategy and Action Plan to Improve the Position of Slovakia in the Digital Economy and Society Index

In May 2021, the government of the Slovak Republic approved the National Strategy and Action Plan to improve the position of Slovakia in the Digital Economy and Society Index (DESI), whose aim is to bring the country up to speed with the European digital economy level. It sets targets for each of the indicators measured in the DESI (connectivity, human capital, use of internet by citizens, integration of digital technology by businesses, digital public services). In order to achieve these strategic targets/priorities, specific tasks and measures were identified for each dimension.

3.5 Emerging Technologies

3.5.1 Artificial Intelligence (AI)

2030 Digital Transformation Strategy of Slovakia

The 2030 Digital Transformation Strategy of Slovakia identifies several key technologies and technological areas that need to be supported by the government:

- Artificial Intelligence and blockchain, which are key to use the most revolutionary current technologies and find enough use for them (in view of exporting services);
- Data and privacy protection, necessary for creating a functioning base for a vibrant data economy where consumer rights are safeguarded;
- High-performance computing; getting access to high-performance computing and storage capacity that also efficiently uses resources is the cornerstone of success in the digital era. The age of quantum technologies is approaching – quantum computers, quantum cryptography and quantum sensors as part of the IoT will become the decisive technologies in the new IT age;
- Next-generation fixed and mobile networks will allow Slovakia to get access to high-speed broadband connection, extension of NGA technologies in order to transfer data quickly and seamlessly. Subsequently, it will be necessary to build 5G networks to support autonomous and connected mobility and smart transport systems with expected massive utilisation in the future; and
- Internet of Things (IoT), in particular in the context of education. In fact, various primary and secondary school and university curricula in Slovakia have already been extended with matters concerning IoT, thanks to which Slovak students have excellent results in IoT and robotics.

In order to carry out effective measures in the mentioned priority areas, it is necessary to strengthen the institutional background that constitutes the basis of the innovation ecosystem. The 2019–2022 Action Plan for Digital Transformation of Slovakia defines the ambition to create and strengthen the current institutional background in order to bring the benefits of novel technologies across all economic and societal sectors. This could be achieved by supporting the set-up of the different areas in order to facilitate its uptake. The possible measures include:

- Support to activities of the Digital Coalition;
- Support to setting up and connecting DIHs in Slovakia;

- Support to setting up and operating a platform for research on and use of Artificial Intelligence;
- Support to setting up and operating a national high-performance computing competence centre; and
- Support to setting up and operating the national competence and coordination centre for cybersecurity.

Slovakia is currently preparing the 2023-2026 Action Plan for Digital Transformation of Slovakia, as a follow-up to the current Action Plan. It will be built upon the following pillars:

- Support of digital transformation of enterprises and digitalisation of broader economy;
- Support of research and implementation of top digital technologies;
- Build-up of society well adapted to the digital era; and
- Support of the twin transition and sustainable development.

Permanent Commission for Ethics and for the Regulation of Artificial Intelligence

As one of the measures of the 2030 Strategy for the Digital Transformation of Slovakia, the **Permanent Commission for Ethics and for the Regulation of Artificial Intelligence (AI)** was set up in November 2020. The Permanent Commission for Ethics and for the Regulation of AI is an independent advisory body made of experts from various fields, who act in their own capacity. Its main goals are to assess ethical and regulatory framework issues arising from the development, deployment and use of AI technologies, as well as preparing opinions on legislation in the field of the ethical aspects of AI. The Commission may also comment on draft laws at national level or legislative acts at international level.

3.5.2 Distributed ledger technologies

Participation in the European Blockchain Services Infrastructure

Slovakia has been a member of the European Blockchain Partnership since 2018 and part of the European Blockchain Services Infrastructure since 2020. Under the umbrella of the Recovery and Resilience Plan, Slovakia will invest into extending EBSI nodes within its borders. Slovakia will deploy a network of distributed blockchain nodes and fully participate in EBSI pilot projects. Slovakia aims to use EBSI infrastructure also in national eGovernment projects.

3.5.3 Big data

Involvement in the European Digital Innovation Hubs

The Slovak Recovery and Resilience Plan supports the overall takeover of cloud, big data and AI technologies by small and medium enterprises. This goal will be attained by building a network of European Digital Innovation Hubs (EDIH) and Digital Innovation Hubs (DIH) across Slovakia. The network will be spread regionally in order to ensure equal and easy access to services, and they will have a double function: first, they will map the stage of digital maturity of companies in the given region; and second, they will prepare and provide individual digital or technical solutions tailored to their clients. They will use solutions mostly based on new technologies, including cloud, big data and AI, plus other technologies and digital instruments mentioned in the Digital Europe programme.

All entities will provide tailor-made services to their clients - mostly SMEs, but they may also include public authorities and large companies. In Slovakia, one of the major barriers to adopting new technologies by businesses is a low capitalisation of SMEs

specifically; therefore, the services offered by EDIHs/DIHs will be provided for free or for a price lower than the market price. The Hubs will be involved in the wider European network, which is being built with the financial support of the Digital Europe Programme. There will be 5 such hubs put into operation by the end of the 3rd quarter of 2022, as defined in the RRP.

3.5.4 Cloud computing

No political communication has been adopted in this field to date.

3.5.5 Internet of Things (IoT)

No political communication has been adopted in this field to date.

3.5.6 High-performance computing

Involvement in Quantum Research and High-Performance Computing

Slovakia contributes to quantum research and high-performance computing (HPC) infrastructure. The goals are under the umbrella of the RRP. Slovakia is a member of EuroHPC, which has already started to launch dedicated calls for the development and deployment of supercomputers that will be integrated into high-performance computing infrastructure. Slovakia is preparing investment into the top European supercomputer with very high energy efficiency.

Moreover, as part of the RRP investments, Slovakia will create a quantum communication network of 3 links with 12 nodes between research and development centres across the country. The first 6 nodes will be put into operation before the end of 2023. Building on that, the infrastructure will be made available for industrial and public-sector users. Slovakia is also involved in the cross-border European project Quapital and, in October 2020, it established the first functional link between two capitals in the world: Bratislava and Vienna. The next phase of creating a quantum communication ecosystem will consist of extending the links to bordering countries and beyond. The quantum communication infrastructure consists of the following elements:

1. Link Vienna - Bratislava Slovak Academy of Sciences (SAV) - Slovak University of Technology Bratislava (STU) - Trnava - Trenčín - Žilina - Liptovský Mikuláš - Prešov - Košice (prospectively expected to continue to the Czech Republic, Poland and Ukraine);
2. Link Bratislava - Nitra - Zvolen - Banská Bystrica; and
3. Link Bratislava - Komárno (prospectively continued to Hungary).

The Slovak RRP will co-finance the building of the QCI terrestrial network and the development of single quantum photon detectors. Besides that, international connections are planned with neighbour countries and satellite component in the future.

3.5.7 High-speed broadband connectivity

National Broadband Plan

In the course of 2020, experts prepared the **National Broadband Plan**, which was approved by the government of the Slovak Republic on 17 March 2021. The vision of Slovakia is to ensure access to a telecommunication infrastructure that will be able to fulfil the quality and capacity requirements of networks in terms of the Gigabit Society for all citizens, entrepreneurs and public administration. The fulfilment of this vision will be achieved by the following goals by 2030:

1. All households, whether rural or urban, shall have access to the Internet at a speed of at least 100 Mbit/s with the possibility of expansion to gigabit speed; and
2. All-important entities of socio-economic interaction, such as schools, transport hubs, major public service providers, as well as enterprises using digital services, will have access to gigabit connectivity, on the passive part of the infrastructure that will not require replacement in the future due to increasing capacity or other quality and technology requirements.

The national plan will continue with the pre-preparation phase (for a feasibility study and mapping of broadband to addresses).

Memorandum of Cooperation on 'White Spots' Coverage

In 2018, a Memorandum of Cooperation on 'white spots' coverage was signed between the Slovak government and 29 operators, which are committed to grant coverage of at least 50% of the territory of the municipalities on the list with NGA technology at speeds of 30 Mbps by the end of 2020. In May 2021, Slovakia finalised the evaluation of this joint initiative, which ensured the coverage of 1 772 municipalities (98% of the original 1 808 municipalities) by at least one operator. This was achieved directly by stimulating operators' own business plans, without any intervention from the state, and the efforts continued despite the COVID-19 pandemic. At present, 21 municipalities from the original Memorandum of Cooperation remain uncovered (i. e. the coverage did not surpass 50% of their territory). However, a significant number of covered municipalities still only have a little over half of their territory covered.



4

Digital Public
Administration
Legislation

4 Digital Public Administration Legislation

4.1 Specific legislation on digital public administration

Information Technologies in the Public Sector Act No. 95/2019

The Information Technologies in the Public Sector Act No. 95/2019 (ITPS) was published in March 2019. The act repealed and amended the former law from 2006 as a reaction to the general advancement in the digitisation of the Slovak public sector. The Cybersecurity Act serves as national NIS-based legislation and it provides a general national cybersecurity framework for essential services, but it does not cover the public sector specifically. Therefore, this element was added to the new ITPS act. This act sets out cybersecurity measures specific for the public sector and it covers all public bodies, even those who do not meet the definition of 'essential services operator'. The ITPS act also strengthens the competences in proactive Computer security incident response team (CSIRT) services of the Slovak government CSIRT, which include scanning, testing from the internet or governmental network, cybersecurity audits, and hardening or penetration testing of the public bodies' IT.

Act No. 305/2013 on eGovernment

The Parliament adopted Act No. 305/2013 on eGovernment, laying down the basic principles upon which a future electronic public administration will operate. The act did not replace traditional paper procedures from the official agenda, but it created a comprehensive electronic alternative. It also described a number of key elements, such as pursuance by proxy, basic registries, eDesk modules document conversion, electronic payment of fees, authentication of persons in public administration information systems, eDelivery, eForms, electronic personal mailbox, the administration and operation of a central portal for public administration and Integrated Service Points (ISPs) for assisted public administration eServices. Furthermore, it also laid the foundation for a common data layer by defining a common central module for intergovernmental communication. This module implemented the rules and processes for data exchange among IT systems from different segments (see 4.2.4 Interconnection of base registries) and applied the concepts of Master Data Management. This act is updated regularly according to current needs and domestic or international requirements.

Amendment No. 134/2020 and No. 416/2020 to Act No. 305/2013 on eGovernment

The latest amendment to the eGovernment Act entered into force on 30 December 2020. The listed legislation introduced the following changes:

- The Office of the Deputy Prime Minister for Investments and Informatisation of Slovakia, which was the administrator of the Central Government Portal, has been transformed into the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic; and
- The Financial Administration of the Slovak Republic sends official documents only to electronic mailboxes on the Central Government Portal.

Decree No. 179/2020 Laying down the Method of Categorisation and the Content of Security Measures for Public Administration Information Technologies

The decree provides categories of public administration information technologies and details on the method of classification into these categories using the classification of information and the categorisation of networks and information systems according to a

special regulation. It also defined the security of public administration information technologies, the content of security measures, the content and structure of the security project and the scope of security measures depending on the classification of information and the categorisation of networks and information systems.

4.2 Interoperability

Act against Bureaucracy No. 177/2018

Act No. 177/2018 on measures to reduce the administrative burden by using public administration information systems, and on the amendments and supplements to certain acts (Act against Bureaucracy) came into force on 1 September 2018. According to the provisions of Par. 1 of the act, in the performance of their official activities, public authorities are obliged and authorised to obtain and use data stored in public administration information systems to produce extracts, and to provide such data and extracts when necessary.

Moreover, an amendment to the Act against Bureaucracy No. 177/2018 eliminated the need for citizens to provide 11 types of paper documents in their dealings with the authorities.

The amendment to the Act against Bureaucracy (14 April 2019) relieved citizens and companies of their duty to submit further statements and confirmations by using the public administration information system. The removal of administrative burdens and the simplified processes related to the confirmation of arrears within social insurance, as well as health insurance calculations, confirmation of school visits and extracts from the register of NGOs.

In July 2021, the government of the Slovak Republic adopted an amendment to Act No. 177/2018. Following the amendment, the list of documents that citizens and businesses had to obtain and deliver to public authorities within their proceedings was further reduced by 21. Citizens will no longer be required to submit what accounted for more than 4 million papers per year, which will result in savings of approximately EUR 40 million per year. At the same time, the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic is in the process of implementing a unique systematic Data Program, which is aimed at supporting the implementation of data activities across the entire public administration in order to dynamize and digitally help the public administration.

The adoption of the amendment will enhance the automatisisation of the processes and pro-active services of the State. The data automatically retrieved by public authorities from the available registries include birth, marriage and death certificates, confirmation of address changes, certificates stating the existence of a business subject, certificates proving a business is not in liquidation or bankrupt or that it does not employ workers illegally.

Act on Data

Currently, a legislative process is under way on a new proposal for an Act on Data, which aims to help transform Slovakia into a State that makes its decisions on the basis of expert data from analyses, predictions and evaluations using current, available, accurate and complete data. To this end, the draft law contains an amendment to the rights of natural persons and legal entities and the obligations of public authorities in the handling of data on natural persons and legal entities and in the processing thereof.

4.3 Key enablers

4.3.1 Access to public information

Act on Free Access to Public Information No. 211/2000

The Act on Free Access to Information, which came into force on 1 January 2001, defined the term 'public information' and established a general principle of free and unlimited access. Under this act, any person or organisation can request information held by State agencies, municipalities and private organisations that make public decisions. The body has to respond no later than 10 days after receipt of the request and must keep a registry of requests. Costs are limited to reproduction and can be waived. There are a number of exemptions (e.g. for information classified as a State or professional secret, personal information, trade secrets, etc.), which can be withheld. Appeals are made to higher agencies and can be reviewed by a court.

Reuse of Public Sector Information

Slovakia notified the full transposition of Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information (PSI Directive). This legislation was implemented by the Act No. 211/2000 on Free Access to Public Information.

As of 17 July 2021, the Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information (PSI Directive) will be replaced by Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information. This Directive will be transposed by the amendment to Act No. 211/2000 on Free Access to Public Information.

4.3.2 eID and Trust Services

Trust service

Act No. 272/2016 on Trust Services for Electronic Transactions in the Internal Market and amending certain laws (Trust Services Act) regulates the conditions for the provision of trust services, the obligations of trust service providers, the competence of the National Security Authority in the area of trust services and sanctions for breaches of obligations under a special regulation and this Act.

4.3.3 Security aspects

Cybersecurity Act

In March 2018, the Act on Cybersecurity was published in the Collection of Laws as No. 69/2018. This legislation was the first legal norm governing cybersecurity within the Slovak Republic. It came into force on 1 April 2018. The act establishes minimum cybersecurity requirements including incidents and notification procedures. It regulates: the jurisdiction of public administration bodies in the area of cybersecurity; the national strategy on cybersecurity; the cybersecurity Single Information System; the status and the obligations of essential services operators and digital service providers; the organisation and the competencies of CSIRT units; education and awareness building; and inspection mechanisms and sanctions.

The new act transposed the EU Directive on network and information security (NIS Directive) into the Slovak legal system.

An amendment to the Cybersecurity Act was approved in May 2021. The amendment aims to deal with certain open issues identified in practice since the relatively recent adoption of the Cybersecurity Act, most notably the precise extent of operators of

essential services within the public services landscape of the Slovak Republic and particular dynamics of direct blocking of harmful content when a security incident takes place, among others.

The bill further aims to amend various other pieces of legislation with regards to cybersecurity and public administration IT systems in general, such as the Act on IT in Public Administration. Suggested changes to these other laws are mostly of technical nature, rescinding certain obsolete provisions, unifying the terminology used throughout related legislation to safeguard their smooth application, as well as conformity with applicable EU legislation.

The Cybersecurity Act might be subject to further amendments down the line in order to safeguard compliance with the upcoming NIS2 Directive following the adoption thereof.

Act No. 18/2018 on Personal Data Protection

Act No. 18/2018 implements the [General Data Protection Regulation 2016/679 \(GDPR\)](#) and transposes the Directive on the Protection of Natural Persons with regard to the Processing of Personal Data by Competent Authorities for the Purposes of the Prevention, Investigation, Detection or Prosecution of Criminal Offences or the Execution of Criminal Penalties, and on the Free Movement of such Data (2016/680) .

This Act regulates:

- The processing operations which are not within the scope of GDPR;
- The processing of personal data vested in our national legislation by the GDPR;
- The processing of personal data in the law enforcement sector;
- The duties, responsibilities and liabilities in the personal data processing; and
- The scope of the powers and the organisation of the Office for Personal Data Protection of the Slovak Republic.

4.3.4 Interconnection of base registries

Reference Registries Framework in the eGovernment Act

The basic legislative framework related to the base and reference registries and their mutual interconnection is defined in [Act No. 305/2013 on eGovernment](#). Its sixth part contains basic rules for equating data, referencing and correcting data between the registries, as well as rules on obligations of registries administrators. Specific rules regarding the respective registries, including the extent of their data and the opportunities for other entities to access them for specific purposes, are defined in the regulations which created them. The eGovernment Act also created rules for the establishment of a common central process and data integration module, which:

- Grants unified access to data within the information systems in order to allow public authorities to exercise their duties electronically; and
- Integrates and synchronises data during referencing, and offers a single way of providing data from the information systems of public authorities, mainly from reference registries.

At the end of 2018, Slovakia adopted the [Act No. 177/2018 against Bureaucracy](#), which introduced the obligation for public authorities to automatically and electronically exchange the data stored in their information systems without requesting data from the citizens or businesses, following the Once-Only principle. The Act against Bureaucracy was amended in 2021 with the purpose to extend the above-mentioned obligation of public authorities to other official public information systems. The act is supported by the establishment of the Data Office, which implements the policy and its principles in public sector data management.

The interconnection of registries and the exchange of data between public authorities was supported by the Ministry of Investments, Regional Development and Information of the Slovak Republic through the establishment of [the Data Office](#) at the beginning of 2019. The Data Office is responsible for implementing the policy and the principles

in public sector data management. It also works towards a central data model by mapping out the relations between data and registries. The Data Office also oversees data quality, the publication of reference data, open data, the access to MyData and consolidates an analytical background available for policy making.

4.3.5 eProcurement

Act on Public Procurement

The Act No. 95/2013 on Public Procurement, which entered into force on 1 July 2013, amended Act No. 25/2006 on Public Procurement. This legislation implemented Directive 2007/66/EC of the European Parliament. The amendment provided further details on the regulation of review procedures, harmonised the standstill periods applied in the procurement process with the periods laid down in the Directive, and regulated the entire supervision process directly in the Public Procurement Act.

eInvoicing Legislation

In Slovakia, the competent authority for eInvoicing is the Ministry of Finance. The eInvoicing platform is under construction and the launch is planned for 2022. The Ministry of Finance and the Office for Public Procurement are the responsible bodies for the transposition and implementation of Directive 2014/55/EC. The Directive was transposed into the Slovak legislation by means of Act No. 215/2019, which entered into force on 1 August 2019.

4.4 Domain-specific legislation

Act on Electronic Commerce

The Act No. 22/2004 on Electronic Commerce, which came into force on 1 February 2004, regulates the relationships between information society service providers and recipients that may arise when communication takes place remotely, or while electronic devices are connected by means of an electronic communication network. These can be based on electronic processing, transmission, storage, search or collection of data including text, sound and picture, supervision over compliance with this Act, and also international cooperation in electronic commerce.

4.5 Emerging technologies

4.5.1 Artificial Intelligence (AI)

No legislation has been adopted in this field to date.

4.5.2 Distributed ledger technologies

No legislation has been adopted in this field to date.

4.5.3 Big data

No legislation has been adopted in this field to date.

4.5.4 Cloud computing

No legislation has been adopted in this field to date.

4.5.5 Internet of Things (IoT)

No legislation has been adopted in this field to date.

4.5.6 High-performance computing

No legislation has been adopted in this field to date.

4.5.7 High-speed broadband connectivity

No legislation has been adopted in this field to date.



5

Digital Public
Administration
Governance

5 Digital Public Administration Governance

For more details on Slovakia's responsible bodies for digital policy and interoperability, its main actors, as well as relevant digital initiatives, please visit the [NIFO collection](#) on Joinup.

5.1 National

Ministry of Investments, Regional Development and Informatisation of the Slovak Republic

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic (hereinafter the Ministry) is a central public authority body which succeeded the former Deputy Prime Minister's Office for Investments, Regional Development and Informatisation of the Slovak Republic on 1 July 2020. Among the main tasks of the Ministry is the creation and the implementation of a uniform State policy towards EU funds, e.g. in the field of informatisation of society, eGovernment and investments. The Ministry performs tasks that stem from the membership of the Slovak Republic in international organisations, being an intermediary body that manages the Operational Programme 'Integrated Infrastructure' (OPII), Priority Axis 7 and the Digital Single Market policy on the national level. The Ministry also provides for the performance of obligations resulting from binding international treaties and conventions and fall under the scope of competences of the Ministry.

Within the Ministry of Investments, Regional Development and Informatisation, four divisions perform tasks related to the informatisation of the public administration and the broader digitalisation of society: the Public Administration Information Technologies Division, the Digital Agenda Division, the Cybersecurity Division and the Division of the Intermediary Body for the Informatisation of Society. The different divisions are organised as follows:

- A) The **Public Administration Information Technologies Division** is responsible for:
 - Preparing eGovernment concepts and strategies;
 - Overseeing the national eGovernment architecture;
 - Issuing standards for public administration information systems;
 - Drafting legislative measures; and
 - Managing the IT projects and their effectiveness.
- B) The Digital Agenda Division is responsible for:
 - Digital single market policy-making, including new innovative and disruptive technologies;
 - Developing and implementing national strategies for the digital single market and digital transformation; and
 - The European and international agenda, including cooperation with organisations such as the United Nations, the Organisation for Economic Co-operation and Development and others in the field of digital policies, etc.; and
 - The Broadband Competence Office.
- C) The Cybersecurity Division is responsible for:
 - Ensuring the continuous improvement of the overall level of cyber and information security in public administration;
 - Developing and implementing a unified cyber and information security management strategy in public administration;
 - Creating and implementing a uniform methodological basis for cyber and information procedures and security measures in public administration; and

- D) Monitoring compliance with cyber and information procedures and security measures security in public administration, etc. The Division of the Intermediary Body for the Informatisation of Society is responsible for:
- Managing and implementing priority axis 7 of the OPII as an intermediary body relating to the programming period 2014 – 2020;
 - Representing the Ministry in matters relating to the new programming period 2021 – 2027; and
 - Cooperating with the relevant sections of the Ministry in the preparation of projects financed by the European Structural and Investment Funds.

Government Council for Digitalisation of the Public Administration and the Digital Single Market of the Slovak Republic

The Council for Digitalisation of the Public Administration and the Digital Single Market of the Slovak Republic, founded in December 2015, is the advisory and coordinating body, with right of initiative, of the Slovak government focused on the issues related to informatisation and digitisation of public administration and the DSM. The Council is composed of high-level representatives from Ministries and IT associations.

National Agency for Network and Electronic Services

The National Agency for Network and Electronic Services (NASES) is a contributory organisation of the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic. It fulfils professional tasks in the field of informatisation of society and management and operation of electronic communications networks. Its main task and subject of activity is the administration, operation and development of the government data network GOVNET and the operation and development of the services of the Central Government Portal, as basic tools of public administration informatisation in Slovakia.

The agency supports the development of eGovernment services in Slovakia and is a provider of central common information systems. This activity improves the effectiveness of public administration and simplifies the interaction between citizens and authorities, besides supporting the information knowledge base of society, the public sphere, the business community and the general public.

The key tasks of NASES are:

- Organising, operating and developing the GOVNET network;
- Operating the TESTA network in the Slovak Republic;
- Operating and developing the Central Governmental Portal (www.slovensko.sk); and
- Operating and developing central customer services for the Slovak Republic.

National Security Authority

The National Security Authority (NSA) is the central government body for the protection of classified information, cryptographic services, trust services and cybersecurity. The recent change brought on by the EU Regulation on Electronic Identification and Trust Services (eIDAS) and the Act on Trust Services, generated a change in the NSA's scope of responsibilities with respect to the use of the electronic signature and other related services, the so-called trust services.

According to eIDAS, Member States shall designate a supervisory body established in their territory. This body carries out supervisory tasks in a particular Member State. The NSA is the supervisory authority in the Slovak Republic. A 'trust services oversight scheme' is published to ensure that common basic supervisory requirements are met and to ensure a comparable security level of qualified trust services throughout the Union.

Slovakia IT

The State-owned company **Slovakia IT** was established in September 2020. It aims to provide comprehensive IT services (e.g. simplification of processes of public services, development of stable information systems, improving the accessibility of services for citizens); develop innovation and cloud solutions for State-owned enterprises and institutions; and develop mobile applications.

Computer Security Incident Response Team Slovakia

The **Computer Security Incident Response Team Slovakia (CSIRT.SK)** was based on Act No. 69/2018 Coll. on Cybersecurity as amended to ensure adequate protection of the national information and communication infrastructure and critical information infrastructure. It is an independent unit of the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic, which provides services associated with security incidents handling and impact elimination, followed by the recovery of affected information and communication technologies for all public services. It also provides preventive and educational services.

National Cybersecurity Centre

The **National Cybersecurity Centre (SK-CER)** was established on 1 September 2019. It carries out national and strategic activities in the field of cybersecurity management, threat analysis, as well as coordination of national security incident handling and response. The SK-CER also aids in the following areas: governance; development, management and support of training; educational activities; awareness raising; and research.

Data Office

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic has created the **Data Office**. The Office, which operates on a national and subnational level, oversees the integration of processes and data from all base registries by administering an information system for the central management of reference data. Public authorities can integrate this information system and access available public sector data in compliance with the Once-Only principle.

Office for Personal Data Protection

The **Office for Personal Data Protection** of the Slovak Republic is an independent State authority which is in charge of data protection supervision. It also contributes to the protection of fundamental rights and freedoms of citizens with regard to the processing of their personal data.

Broadband Competence Office

The **Broadband Competence Office** was established in January 2020 in cooperation between the Regulation Office of the Slovak Republic and the Ministry of Investments, Regional Development and Informatisation. It is part of a Europe-wide Broadband Competence Offices network between Member States (or regions). Its main task is to meet the objectives of the National Broadband Plan. Other tasks include: strategic planning for broadband deployment, monitoring of the implementation of development plans in the field of communication infrastructure, management of public consultations with telecommunications operators, mapping the communication infrastructure, management of state interventions in the field of communication infrastructure, provision of technical and economic information, expertise of administrative capacities of public authorities in planning, implementation and monitoring of broadband projects.

5.2 Subnational (federal, regional and local)

Association of Towns and Municipalities of Slovakia

The Association of Towns and Municipalities of Slovakia (ZMOS) designed and developed the ISOMI, an internet information system for towns and municipalities. The project was designed to host and integrate municipal websites to support municipalities in providing citizens with information and eServices. Furthermore, the association operates the DCOM (Municipal Data Centre) solution, which offers eServices to citizens at town and municipality level.

DEUS Association

The DEUS Association is the datacentre for the informatisation of the local self-governments of Slovakia. Its priority is to promote electronic communication between all the different levels of government and citizens. The association is in charge of managing the electronic systems of self-governing cities and villages. It cooperates with suppliers who administer these systems to cities and villages.

The association was founded as an association of legal persons with the signing of the memorandum in July 2011. The founding members were the Ministry of Finance of the Slovak Republic and the Association of Towns and Municipalities. The DEUS Association manages the DCOM.



6

Digital Public Administration Infrastructure

6 Digital Public Administration Infrastructure

6.1 Portals

6.1.1 National Portals

Central Government Portal

The main purpose of the **Central Government Portal** "slovensko.sk" is to provide services to the public (natural persons as well as businesses) and public authorities by means of an information system with a single access point. The basis for all future activities of the Central Government Portal is the entry point which allows user authentication, login, data reception and transactions with a particular service provider. The Central Government Portal is an information system designed to provide services and information to the public through the common internet access point. The portal is governed by the provisions of Act No. 95/2019 on Public Administration Information Technologies and Act No. 305/2013 on eGovernment. It also serves as the Single Digital Gateway in Slovakia.

The portal features ten different modules:

- Access component module;
- Authentication module;
- Electronic mailbox;
- eNotifx module – notification module;
- Payment module;
- Electronic filing module;
- Electronic forms module;
- Long-term storage of records module;
- Electronic delivery module; and
- Integration and process platform module.

Anti-Bureaucracy Portal

The **Central Anti-Bureaucracy Portal** "oversi.gov.sk" offers a way for public institutions to access any necessary statements and confirmations issued by other public institutions in order to apply the principles foreseen by the **Anti-Bureaucracy Act** and all its amendments.

Portal of the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic

The official portal of the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic is called **mirri.gov.sk**. The website offers an overview of the projects and work done by the Ministry in the area of implementing information technologies into public administration. It also offers a summary of all relevant legislation and strategic documents guiding the informatisation process.

Portals of Public Authorities

The national administration section and self-government portals belong to the respective administrators. The administration section and self-government portals provide more detailed information for citizens and businesses and may enable the performance of transaction services within the relevant special agendas.

Legislative and Information Portal

The legislative and information portal **Slov-Lex** provides information to professionals and to the general public on law-related issues. It provides effective tools to law makers for the creation of legislation and the relevant lifecycle management. The main parts of Slov-Lex are two closely linked systems: eCollection and eLegislation.

Target audiences include rights holders, i.e. government bodies, State administration bodies, local authorities, judicial authorities, legal professionals (lawyers, notaries, experts, etc.), freelancers, entrepreneurs (natural and legal persons) and citizens.

6.1.2 Subnational Portals

Public Authorities' Portals (self-government portals)

Digital self-government portals in Slovakia are dedicated for citizens and entrepreneurs binding to certain administrative regions.

6.2 Networks

GovNet

GovNet, which was launched in the early 1990s, aims to build a physical network of public administration bodies. GovNet provides the public with administration services such as encrypted eCommunication, a helpdesk, supervision, webhosting, antispam and antivirus protection, and represents the essential component of the national central communication infrastructure.

6.3 Data Exchange

Portal for Employees of the State Administration

The central portal "oversi.sk" offers a way for public institutions to access any necessary statements and confirmations issued by other public institutions in order to apply the principles foreseen by the Anti-bureaucracy Act. It is accessible after registration into the portal.

Government Cloud

On 21 May 2014, the government of the Slovak Republic approved a new **strategic approach** whose main goal was to define the technical, organisational and legal levels of implementation and operation of supra-ministerial data centres as providers of government cloud services. The eGovernment cloud provides national authorities and institutions with cloud services (such as IaaS, PaaS, SaaS), which meet high standards of quality and safety, through a one-stop shop in the form of a service catalogue.

The cloud solution will ensure effective sharing of ICT resources, improve access to data and facilitate the use of big data, as well as unify the environment and methodologies for information systems development and operation.

6.4 eID and Trust Services

eID card

On 1 December 2013, the Ministry of the Interior of the Slovak Republic started issuing **eID cards** for citizens as a means of identification and authentication for individuals within eGovernment and possibly other public and private services. The new eID card, having the shape of a credit card, replaces the existing national identity card and includes the optional electronic signature functionality.

By using a microchip, the card provides an online authentication functionality, applicable to eGovernment transactions. Data from eID cards can only be read with

the consent of the citizen, using a security code and inserting the eID card in the card reader. The safety of the data stored in the contact chip is protected by security mechanisms and by a personal security code (PSC). The PSC is a combination of several numbers that are chosen by the holder when applying for the eID, when collecting the card or anytime during its validity. The PSC is used to confirm the identity of eID holders in electronic communications. Slovakia has implemented project "mobile eID" which should start to operate in 2022.

Trust services

Since 2018 the National Agency for Network and Electronic Services has been a trust service provider of the trust service for preservation of qualified electronic signatures and seals. The Agency has been providing the following services since 2019: the creation, verification, and validation of electronic signatures, electronic seals or electronic time stamps and certificates related to those services; the creation, verification and validation of certificates for website authentication; the preservation of electronic signatures, seals or certificates related to those services.

Cybersecurity Competence and Certification Centre

The Cybersecurity Competence and Certification Centre was established on 1 January 2020 and it acts as the national sectoral and technological research centre in the field of cyber security. It provides services related to the organisation and technical provision of educational activities; it offers consulting activities in the field of protection of classified information, cyber security and trust services, and it organises educational events, courses, training and seminars.

6.5 eProcurement

Information System for Electronic Public Procurement

The Public Procurement Office manages the eProcurement system (IS EVO) used to award contracts above and below a specific threshold, as well as low value contracts. The IS EVO covers the different phases of procurement, which are: eNotification, eDiscovery, eAccess, eSubmission and eAuction (lowest price and MEAT criteria). The basic functions of IS EVO are:

- eID authentication;
- Wizard for contract award notices;
- Explanation of tender documents;
- Remedy request, objection;
- Submission and cryptography of tenders;
- Structural proposal of criteria fulfilment;
- Explanation of offers; and
- Electronic auction.

The IS EVO is not mandatory pursuant to the Law on public procurement. There are 12 information systems providing electronic communication in public procurement in Slovakia. The IS EVO is used in 50% of all published contracts. The Ministry of the Interior manages the Electronic Contracting System (EKS), which is used for a fully automated placement of orders for contracts below the threshold.

eInvoicing Information System

In 2019, the eInvoicing Information System project feasibility study was approved. The Ministry of Finance of the Slovak Republic oversees matters pertaining to eInvoicing, including the management of the related information system and the central economic system. The corresponding information system will offer an interface for issuing, sending and receiving electronic invoices which should be processed

automatically, if possible, in compliance with the relevant national and EU legislation on trade relations between economic subjects within public procurement processes. The system will also define invoicing standards for trade relations with public authorities. It will speed up issuing, receiving and processing invoices, as well as ensure costs savings.

6.6 ePayment

Payment module

Following the eGovernment Act No. 305/2013, a payment module was established in order to facilitate payments of administrative fees or other payments to public authorities. The module consists of a communication part and an administrative part: the former gives updates on payments, while the latter provides records the payments and all necessary details for the creation of payment orders.

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic manages the communication part, while the administrative part is managed by the Ministry of Finance of the Slovak Republic. There are two modules in operation – the electronic payments module and the information system for making administrative and court fees payment and obtaining payment records.

6.7 Knowledge Management

Central Government Portal

The **Central Government Portal**, under the administration of the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic and operated by the National Agency for Network and Electronic Services (NASSES), provides central and unified access to information resources and services of the public administration. The basis for all future activities of the Central Government Portal is the entry point, which enables user authentication, login, data reception and transactions with a particular service provider. Among the tasks of the portal, the most important are directing the interested party to a particular eGovernment service, navigating through the services relevant to a specific life event, and providing useful tips and tricks. The portal currently offers eGovernment services in the areas of running a business, citizenship, justice, registering vehicles, social security and more.

The Portal provides:

- A common registry, an authentication function, an authorisation feature and a user support feature; and
- Management of the information flow, electronic filing, electronic fee payments.

For citizens, the Central Government Portal is:

- The single entry point to public administration affairs; and
- The place where users can find first-hand current and complete information and services.

For public authorities, the Central Government Portal is:

- The interface to communicate with citizens;
- The interface for providing different types of public authorities' information systems; and
- A common national communication infrastructure and entry point.

6.8 Cross-border platforms

eIDAS Module

Following EU Regulation 910/2014 on eIDAS, in September 2018 Slovakia launched an option for foreign natural persons to log into its online public services with a foreign

means of electronic identification (e.g. ID or residence card) via Slovakia's central government portal slovensko.sk.

The possibility to log on all specialised portals of public administration bodies in Slovakia through eIDAS Node has existed since February 2019. The English login page offers users multiple options, including the use of a foreign eIDAS, notified means for electronic identification, a Slovak eID, the use of residence card, and other alternative authenticators. The number of available foreign eIDAS from different countries that can be used on the portal slovensko.sk is steadily growing according to the notification process in accordance with Regulation (EU) No. 910/2014. In 2019, only 89 logins had been recorded by foreigners, but in 2020 this number rose to 1 435 logins and in 2021 to 7 043 logins.

At the end of 2019, Slovakia notified the creation of its eID scheme. Users can log in via eIDAS Node on www.slovensko.sk and other Slovak portals integrated using WebSSO. This login is meant for holders of an identification tool issued in EU Member States. In case of slovensko.sk, users can also enter the electronic mailbox. Slovak eID can be currently used in these countries: Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Germany, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovenia, Spain, and Sweden. A rise in the number of Slovaks using eID abroad has also been reported. Indeed, in 2019 the service did not register any logins, but in 2020 it registered 14 902 logins and in 2021 42 625 logins.

Single Digital Gateway

Since December 2020, the government portal slovensko.sk has served as Single Digital Gateway according to Regulation No. 2018/1724. The information part, which can be found in the 'Life events' section, is available in Slovak and English. The information content is continuously updated according to legislative changes and reports of individual ministries (coordinators).

6.9 Base registries

Common Modules

Public authorities are obliged to use common modules among public administration information systems while performing their roles and exercising power electronically. Common modules ensure that there is no need to mutually integrate all information systems with one another, because each public authority integrates with these common modules where the communication and exchange of data take place.

The Module for Data and Process Integration is one of the common modules and it serves as a unified mechanism for providing data to public authorities. It contains a central system of reference for data management, which provides base registries in Slovakia (the so-called 'reference registries'), as well as other standards for public administration information systems aimed at achieving technical and semantic compatibility of the respective information systems and their data.

The Ministry of Investments, Regional Development and Informatisation of the Slovak Republic manages the Module for Data and Process Integration.

6.10 Emerging Technologies

6.10.1 Artificial Intelligence (AI)

Triple Helix Platforms

In the near future, Slovakia intends to create State, academic and business consortia in the triple helix model (Triple Helix Platforms), to support the development in such

agendas as artificial intelligence or blockchain. Triple Helix platforms should also serve as basic contact points for projects directly managed with EU funds.

6.10.2 *Distributed ledger technologies*

No digital public administration infrastructure has been adopted in this field to date.

6.10.3 *Big data*

No digital public administration infrastructure has been adopted in this field to date.

6.10.4 *Cloud computing*

eGovernment Cloud

The eGovernment cloud provides national authorities and institutions with cloud services (such as IaaS, PaaS, SaaS), which meet high standards of quality and safety, through a one-stop shop in the form of a service catalogue. The cloud solution will ensure effective sharing of ICT resources, improve access to data and facilitate the use of big data, as well as unify the environment and methodologies for information systems development and operation.

6.10.5 *Internet of Things (IoT)*

No digital public administration infrastructure has been adopted in this field to date.

6.10.6 *High-performance computing*

Quantum technologies

In Slovakia, the informal **Slovak National Research Platform for Quantum Technologies** was established in 2018 and was transformed into the National Centre for Quantum Technologies at the end of 2021 under the auspices of the Ministry of Investments, Regional Development and Informatisation and the Ministry of Education, Science, Research and Sport, with participation of the Physics Institute of the Slovak Academy of Sciences and National Security Agency. It represents the Slovak research community working in the area of quantum technologies. Its main goal is to support research in accordance with the Quantum Flagship initiative of the European Commission. It aims to create conditions for increasing competitiveness and Slovakia's excellence in research and innovation in the field of quantum technologies, which will play a key role in future industrial and safety applications.

High-performance computing

In November 2020, the National Super-Computing Centre in Slovakia was established. This Centre is based on a consortium made up of the Centre of Operations of the Slovak Academy of Sciences (CSČ SAV), the Ministry of Investments, Regional Development and Informatisation of the Slovak Republic and the I4DI Association (Innovations for Digital Infrastructure). It aims to develop High-Performance Computing activities in Slovakia. Its vision is to build a new supercomputer that could enable extensive and efficient use of HPC technologies and the use of high-performance data analytics tools, artificial intelligence and machine learning. It will also try to improve competencies among Slovaks in these areas by providing free consultations and educational activities for small and medium-sized enterprises, industrial companies, public administration entities and academic institutions.

6.10.7 *High-speed broadband connectivity*

No digital public administration infrastructure has been adopted in this field to date.



7

Cross-border Digital Public Administration Services

7 Cross-border Digital Public Administration Services

Further to the information on national digital public services provided in the previous chapters, this final chapter presents an overview of the basic cross-border public services provided to citizens and businesses in other European countries. **Your Europe** is taken as reference, as it is the EU one-stop shop which aims to simplify the life of both citizens and businesses by avoiding unnecessary inconvenience and red tape in regard to 'life and travel', as well as 'doing business' abroad. In order to do so, Your Europe offers information on basic rights under EU law, but also on how these rights are implemented in each individual country (where information has been provided by the national authorities). Free email or telephone contact with EU assistance services, to get more personalised or detailed help and advice is also available.

Please note that, in most cases, the EU rights described in Your Europe apply to all EU member countries plus Iceland, Liechtenstein and Norway, and sometimes to Switzerland. Information on Your Europe is provided by the relevant departments of the European Commission and complemented by content provided by the authorities of every country it covers. As the website consists of two sections - one for citizens and one for businesses, both managed by DG Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) - below the main groups of services for each section are listed.

7.1 Life and Travel

For citizens, the following groups of services can be found on the website:

- **Travel** (e.g. Documents needed for travelling in Europe);
- **Work and retirement** (e.g. Unemployment and Benefits);
- **Vehicles** (e.g. Registration);
- **Residence formalities** (e.g. Elections abroad);
- **Education and youth** (e.g. Researchers);
- **Health** (e.g. Medical Treatment abroad);
- **Family** (e.g. Couples);
- **Consumers** (e.g. Shopping).

7.2 Doing Business

Regarding businesses, the groups of services on the website concern:

- **Running a business** (e.g. Developing a business);
- **Taxation** (e.g. Business tax);
- **Selling in the EU** (e.g. Public contracts);
- **Human Resources** (e.g. Employment contracts);
- **Product requirements** (e.g. Standards);
- **Financing and Funding** (e.g. Accounting);
- **Dealing with Customers** (e.g. Data protection).

The Digital Public Administration Factsheets

The factsheets present an overview of the state and progress of Digital Public Administration and Interoperability within European countries.

The factsheets are published on the Joinup platform, which is a joint initiative by the Directorate General for Informatics (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from Henrieta Buvalová (National Agency for Network and Electronic Services), Matej Šalmík (National Security Authority), Ivan Liska, Michaela Galia Pallayová, Rastislav Pavlík, Nadežda Nikšová, Erika Wallová, Dušana Kováčová, Barbora Sedálová, and Lenka Zuborova (Ministry of Investments, Regional Development, and Informatisation of the Slovak Republic).



The Digital Public Administration factsheets are prepared for the European Commission by [Wavestone](#).

An action supported by Interoperable Europe

The ISA² Programme has evolved into **Interoperable Europe** - the initiative of the European Commission for a reinforced interoperability policy.

The work of the European Commission and its partners in public administrations across Europe to enhance interoperability continues at full speed despite the end of the ISA² programme. Indeed, enhanced interoperability will be necessary to unlock the potential of data use and reuse for improved public services, to enable cross-border collaboration, and to support the sector-specific policy goals set by the Commission for the future.

Interoperable Europe will lead the process of achieving these goals and creating a reinforced interoperability policy that will work for everyone. The initiative is supported by the **Digital Europe Programme**.

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