

Digital Public Services Strategy

2030





REPUBLIC OF SLOVENIA



Digital Public Services Strategy

2030



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Table of contents

1. Preface/introduction	9
2. Glossary	11
3. The Vision of Digital Public Services by 2030.	13
4. Overview of the Current State of Digital Services	15
5. Positioning in the Strategic Framework and Structure of the Strategy ..	19
6. Principles and Values Guiding Digital Public Services	25
7. Description of Strategic and Specific Objectives.....	27
I. Strategic objective: An efficient and secure environment for the delivery of digital services is ensured	27
I.A All key public services are digitally accessible	28
I.B Harmonising access to digital services.....	29
I.C Access to the contents and use of your own personal data	29
I.D Communication between service users and public administration is digital	30
I.E Introduction of combined digital services	31
II. Strategic objective: All digital services are co-created with users and user-centric.	32
II.A Digital services are co-created with users	33
II.B Digital services are simple to use.	34
II.C Systematic monitoring of the performance of digital services	35
II.D Digital services promotion, trainings and support for users.	36
II.E Digital services are inclusive for all users	37
III. Strategic objective: Widespread use of digital identification solutions.	38
III.A User-friendly solutions for digital identification	39
III.B Single service for user identification and signing	40
III.C Ensuring modern and user-friendly trust services.	41
IV. Strategic objective: Modern information technology for trusted data management	42
IV.A Modern information technology.	43
IV.B Management processes have been put in place for trusted data	45
IV.C Establishing national and cross-border data interoperability	46
IV.D Data catalogue and the introduction of data processing standards	47
IV.E Setting up data spaces	48

V. Strategic objective: Public administration is interoperable and digitally empowered	49
V.A Digitally equipped employees in the public sector	51
V.B Use of advanced tools and data for effective management and decision-making	52
V.C Interoperability, optimisation and digitalisation of processes	53
V.D The legal and organisational framework supporting the deployment and use of digital services	55
V.E Organisation and management adaptations	56
8. Indicators for Strategy Monitoring	59
9. Action Plan	61
10. Responsibility for Implementing the Strategy	63

Introduction



Sanja Ajanović Hovnik



Emilija Stojmenova Duh

Efficient digital public services are an extremely important part of a country's public service and, as such, an important cornerstone of the country's digital transformation.

This document gives them their due importance, a framework and a clear direction for development. The fundamental aim is to design digital public services that are perceived as trustworthy, simple and user-friendly, and therefore delivered online as much as possible.

We have put people at the heart of the development of digital public services, focusing on close co-creation and collaboration with users and other stakeholders. Rapidly-evolving digital technologies can be a good support, aid and tool, and it is the preferences and needs of users that we will follow first and foremost in developing services. Simplicity, trust, innovation, communication, a good user experience and multichannel service will be key considerations in our development and day-to-day operations.

We will use the data already available to the country as a starting point for designing proactive, tailored services.

In this way, digital public services will increasingly make the public administration and the public sector key players and drivers in the development of the country's digital transformation. The Government wants to work in partnership and, through

co-creation and collaboration, deliver the kind of digital public services that our users need both at home and across borders.

To raise awareness, strengthen digital skills, increase the use of digital tools and reduce the digital divide, a range of support activities will be organised on site, through various interest groups and information channels.

We will develop specific actions to address the topics covered in this document and put them into practice through annual action plans, where we will monitor progress in a transparent manner.

Finally, we want to move forward as a country and society along the path of development – both domestically and internationally.

We believe that digital public services are a key enabler of digital transformation, development and progress, contributing to the well-being and prosperity of us all.

Sanja Ajanović Hovnik, Minister of Public Administration
Emilija Stojmenova Duh, Minister of Digital Transformation





1. Preface/Introduction

The digitalisation of public services is one of the key elements of Slovenia's digital transformation by 2030. The Digital Public Services Strategy sets out a clear direction for the development of digital public services, putting people and businesses at the heart of digital transformation. The Strategy defines a framework that will enable the development of simple to use services and promote their widespread use. This requires a single digital identity, effective use of modern IT and infrastructure, and a digitally empowered public sector. Our ambitious goals will be achieved through processes of co-creation of public services in cooperation with all stakeholders, more active integration of local government services, promotion of digital services and highlighting the benefits of using them, as well by ensuring the security of users' data.

The accelerated development of new technologies is increasingly influencing the way we live and do business today and changing users' expectations of the digital services that government must provide. These services need to be user-friendly, simple and comprehensive, but above all they must be organised around users' needs and support the events in their lives and the needs of business users. They must meet users' expectations in terms of security, reliability and accessibility.

In the coming years, the development of digital public services will therefore place even more emphasis on collaborating with service users and other stakeholders to deliver more customized and innovative services, while increasing user trust and usage. When designing new digital services, we will take into account that the country already has a lot of data on users, which is the starting point for a shift towards designing digital services that take into account user-side circumstances. We will provide users with a transparent overview of their digital interactions with public institutions, allowing them insight into the status of their data and processes, and an overview of their obligations and rights.

At the same time, digitalisation offers opportunities for proactive action by the state and local communities through proactive services and interoperability of public institutions, and the use of data and data analytics for decision-making. This will be key to simplifying and removing administrative burdens and will have a positive impact on the efficiency of interactions with public institutions, thus simplifying the lives of private and business users. Users will be provided with a single access to comprehensive digital services that will reduce the need for digital interactions with multiple public institutions.

The modern way of living, working and doing business requires public services to be also accessible across borders, within the EU Single Market. By digitalising public services and amending legislation accordingly, we will ensure that the location of the user does not affect the accessibility of services. We will cooperate internationally to transfer best practices, increase efficiency and ensure the alignment of our solutions.

Currently, the complex and heterogeneous ways of authenticating users are a major barrier to the widespread use of digital public services. We will offer users a single digital identity for all public services (at both national and local level), simplifying their use, bringing services closer to the wider population and strengthening trust in digital transactions with the public sector. We will strive to maximise the potential of modern technologies to deliver even more efficient services.

When designing digital services, we will take into account the limitations of certain users in accessing them or potential difficulties in using them. In order to overcome such limitations, a multi-channel service approach will be provided. We will also ensure that the development of all digital services will take into account standards to enable people with disabilities to access and use services.

In order to achieve this level of service, the role of the Digital Service Deployment Coordinator will need to be strengthened to ensure a balanced and coherent development of digital public services in different sectors of the country and to bring together public institutions in their development and delivery. It is important to have a single approach and a single public institution to coordinate the roll-out of digital services, to lead the digital transformation of public administrations and to ensure the right level of accountability and visibility. A coordinated approach will be particularly important in further integrating the digital services of public administrations and the digital services of local self-government authorities and public authority holders, which will be essential to achieve an optimal user experience, savings on the public sector side, greater consistency in the development levels across the country, more consistent compliance with legislative requirements at European and national level, etc.

The Digital Public Services Strategy 2030 will also have an indirect impact on reducing the burden on the environment. We are committed to ensuring that the public sector contributes directly and indirectly to improving quality of life and reducing the carbon footprint of service users and the public sector itself. By delivering key services digitally, we will achieve a significant reduction in the number of journeys users make to public institutions and, as a consequence, in the carbon footprint these journeys generate. In addition, we aim to reduce the public sector's environmental footprint by making more efficient use of energy, including in IT infrastructure, data storage and processing, and by introducing circular economy concepts in the procurement, use and disposal of computer equipment.

While we expect our digital transformation journey to be complex and challenging, we are fully committed to making this process a success and to creating a digital, inclusive and efficient environment in which digital public services are user-centred.

2. Glossary

- **Public services** are services provided by public administrations in the public interest for all their users;
- **Key public services**¹ are defined according to the EU eGovernment benchmarking methodology as services within nine life events;²
- **Combined services** are tailor-made services based on key life events, e.g. moving house, starting a business, etc.;
- **Proactive services** are public services in which the procedure for providing the service is initiated ex officio and only a proposal for a decision is sent to the user;
- **A life event** is an event supported by a package of public services on a specific theme, which are interlinked from the perspective of a citizen or an entrepreneur and usually involve several public institutions;
- **A digital public service** is usually accessible to users via the internet or other modern communication channels and is provided in a permanent, comprehensive, simple, digital by default, trustworthy and secure way;
- **A digital public service user** is anyone who uses the digital services of the state, e.g. citizens, businesses, municipalities, national government, public administration, etc.;
- **Digital transformation** means transforming its business by embracing digital technologies to improve operations and deliver better results;
- **Digitalisation** means applying new digital technologies (e.g. artificial intelligence, internet of things, big data) to existing ways of doing business and internal processes;
- **Digital business** is the ability of an organisation to combine digital technologies with its digital processes, digital culture and digital competences to do business in a different way;
- **Digital competences** refer to the confident and critical use of digital technology to acquire and share information, communicate and solve problems in all areas of life;

1 if the European Commission's forthcoming policy programme, Path to the Digital Decade, uses a different methodology than the EU eGovernment Benchmarking as a key benchmark for monitoring progress in on-line public services, the definition of key public services under this strategy will change accordingly.

2 <https://op.europa.eu/en/publication-detail/-/publication/333fe21f-4372-11ec-89db-01aa75ed71a1>

- **Smart government** uses information and communication technology to improve its performance;
- **Digital identity** is a means of electronic identification, which is a material and/or immaterial unit containing person identification data and which is used for authentication for an online service;
- **SI-PASS** - is a single point for verifying the identity of different users (citizens, business entities, public sector employees) and for electronically signing applications and other documents. SI-PASS is generally used in the context of the provision of specific electronic services (e.g. eGovernment);
- **smsPASS**- mobile identity smsPASS is a way of logging in to SI-PASS that enables electronic signing of documents and reliable identification of the user when using electronic services by means of a one-time password sent by SMS;
- **Interoperability** is the ability of equipment, systems, applications or products from different manufacturers to work together in a coordinated way, without involving the end user. It allows unlimited sharing of data and resources between systems over local area networks (LANs) or wide area networks (WANs);
- The **digital divide** is the inequality caused by the inability to access or use information technologies;
- **European Wallet** - the European Digital Identity Wallet will enable citizens and businesses to digitally identify, store and manage identity data and official documents electronically. Users will have full control over the data they exchange, and the use of the wallet will be voluntary for users³;
- **User experience** is the way a user perceives and experiences the use of a product, system or service.

3 Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0281>

3. The Vision of Digital Public Services by 2030

Citizen- and business-centric digital public services that enable citizens and businesses to interact with public administration in an integrated, coordinated, secure and efficient way.

Digital transformation means more than just improving IT systems and work processes. It is about a holistic change of the organisation, embracing digital technologies, and at its core it is about going beyond traditional ways of working in order to design better policies and make better decisions. The most important part of the digital transformation is taking place primarily on the business and organisational side, while the technology side is supporting it with new technologies and digital tools. The accelerated digital transformation of the Slovenian public sector puts the user at the heart of digital public services. Public services are no longer just accessible online - but are instead oriented towards meeting the needs of the user through data sources, modern technologies (e.g. AI⁴, Blockchain⁵, etc.) and optimised processes. Users actively participate in the co-creation of public services and favour digital communication channels over other options. Digital public services are fully accessible to all, and all people and businesses benefit from the best digital environment, offering efficient and easy-to-use services and tools with high standards of security and privacy. EU rules, principles and recommendations on interoperability at all levels are also taken into account⁶.

To achieve this vision, **three strategic priorities** have been identified, which represent digital targets at the highest level and are also aligned with the strategic context of the European Union:

1. By 2030, all key public services⁷ will be provided online and accessible to all users,
2. at least 80% of key public services that are digitally accessible will also be performed digitally; and
3. at least 80% of users of public services will use their digital identity.

4 National programme on encouraging the development and use of artificial intelligence (AI) by 2025 (NPAI), <https://nio.gov.si/nio/asset/nacionalni+program+spodbujanja+razvoja+in+uporabe+umetne+inteligence+rs+do+leta+2025+npui>

5 European Blockchain Service Infrastructure EBSI, <https://www.gov.si/zbirke/projekti-in-programi/evropska-blockchain-infrastruktura-storitev/>

6 European Interoperability Framework <https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/european-interoperability-framework-detail>

7 the set of key public services is taken from the EU policy programme Path to the Digital Decade (detailed description below) https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_sl

KEY PUBLIC SERVICES

Key public services are identified on the basis of the European Digital Goals 2030, the policy agenda for the Path to the Digital Decade 2030 (currently under development), in which the digitalisation of public services is one of the four main points of the Digital Compass.

As the European Commission notes in its latest regular annual EU eGovernment Benchmarking Report, it is this that is intended to be a key benchmark for monitoring progress in online public services. The EU eGovernment Benchmarking methodology identifies the following as key services under the nine life events:



Business start-up (a business life event related to the economic affairs domain, covering services around: orientation, administrative requirements, basic registration, tax-related matters, insurance-related matters, hiring a first employee and request an environmental permit, etc.).



Regular business operations (a business life event related to the economic affairs domain, covering services around: tax and corporate finance, VAT and business changes, etc.).



Career (a citizen life event related to the employment domain, covering services around: immediate actions for unemployed, guidance on additional benefits and allowances, maintaining applicable benefits, finding a new job and fulfilling duties being employed and retiring, etc.).



Studying (a citizen life event related to the educational domain, covering services around: orientation, enrolment and study guidance, etc.).



Family (a citizen life event related to the social protection domain, covering services around: birth, marriage, personal documents, registering death, etc.).



Moving (a citizen life event related to the housing domain, covering services around: find, adapt and move to new house, and moving and living abroad, etc.).



Starting a small claims procedure (a citizen life event related to the justice domain, covering services around: preparing claim, issuing claim and monitoring status and appeal, etc.).



Transport (citizen life event related to the transport domain, covering services around: buying a car, and taxes, certificates and permits, etc.).



Health (A citizen's health life event, covering basic health services such as finding the right healthcare provider, EU health insurance, ordering health services, the option of communicating online with a doctor (e-consultations), e-prescriptions, access to medical records.

4. Overview of the Current State of Digital Services

The outbreak of the COVID-19 pandemic has increased the opportunities to seize the opportunities offered by digitalisation in different policy areas, governmental levels and across European borders. The COVID-19 pandemic has accelerated changes in the digitalisation of public services, but public institutions have adapted in different ways during the pandemic, and only some institutions have successfully digitised their services, while others are still providing services in a merely physical way. In response to the COVID-19 crisis, European governments, including that of Slovenia, have shown that they have what it takes to effectively deploy digital public services. With the right motivation and sufficient resources, digital transformation can be fast and effective. This is how the country was able to rapidly digitise services to support the response to the health crisis.

Yet gaps remain between the delivery of different public services digitally across different public institutions. There are also gaps between the digitalisation of public services at central level and those at local government level. At present, gaps in services between local and national level cause friction: 85% of all services offered by central government organisations at EU level are available online, compared to only 59% of local services. **The digitalisation of services offers the opportunity to simplify interactions with public institutions at all levels**, and the data above suggests that support for the digitalisation of public services at local level will be particularly important. National users are favoured over cross-border users, and more connectivity and interoperability would make it easier for Europeans to move across the old continent. In the EU, 81% of national services are available digitally, but cross-border users can access less than half (43%) of these services online.

Since 2014, the European Commission has been monitoring Member States' digital progress and publishes annual reports on the **Digital Economy and Society Index (DESI)**. Each year, the reports contain country outlines to help Member States identify areas for priority action and thematic chapters analysing key areas of digital policy at EU level. Slovenia is ranked 13th among EU countries overall in DESI 2021. The DESI index consists of four components; 1. human capital, 2. connectivity, 3. digital technology integration and 4. digital public services.

In the category of digital public services addressed in this document, Slovenia is ranked 15th among EU countries, which leaves much room for improvement. In Slovenia, 77% of all internet users already use digital public services, which is higher than the EU average of 64%. In the category of pre-filled forms, Slovenia is also above the EU average, with a score of 67%, compared to the EU average of 63/100. For digital services for citizens, Slovenia is just below average, with 74% against the EU average

of 75%. Slovenia's score for digital public services for business is significantly behind the EU average at 78% compared to 84%. The country performs well in the Open Data indicator, ranking 10th.

In assessing Slovenia's shortcomings, DESI 2021 cites the lack of a common national electronic identifier and the establishment of an e-identity system. Currently, most e-services rely on qualified digital certificates issued by the public or private sector for identification or electronic signature purposes. Their disadvantage is their complexity of use and their dependence on the policies of web browsers. Breakthroughs in this area have already taken place in 2021 with new legislation for electronic identification and trust services and the introduction of a national electronic ID card.

To accelerate the deployment of secure, unique and user-friendly solutions, the introduction of digital identity and trust services is essential to encourage the use of digital public services, increase trust in online transactions and enable mobile and cross-border access to public services.

Interoperability between public IT systems (e.g. tax authority, land registry, business registry, etc.), which are mostly designed as closed systems and operate with different access codes than the overall digital public services platform, is not satisfactory and needs to be improved.

According to the latest e-Government Benchmark Report⁸, Slovenia has a medium level of penetration with an average level of digitalisation in public services. It is therefore part of the "unexploited eGov" scenario, in which the innovation process has been effectively implemented, but it is desirable to increase the number of digital service users to fulfil its potential.

The OECD's Digital Government Review of Slovenia benchmarking study⁹ made a number of suggestions for Slovenia to improve its digital public services, which are set out below.

In the category of general, contextual factors and institutional models, the OECD advises taking advantage of favourable circumstances to build on existing foundations, ensure stability of digital government, exploit the advantages of a small country, and continue strong links with the EU. The influence of the organisation responsible for the development of digital public services should be strengthened: political support, additional financial and human resources, stronger governance levers and a stronger coordinating role. Coordination mechanisms should be improved: digital transformation should be steered at government level, and the functioning of the Council of IT Development in State Administration should be re-established, preferably with a two-tier structure and with the active involvement of external stakeholders. We need to ensure coherence and integration with other ministries and the wider society, advocate a common vision, highlight good practices, and invest in data foundations and innovation.

8 <https://op.europa.eu/en/publication-detail/-/publication/a9c1ef4e-4370-11ec-89db-01aa75ed71a1/language-en>

9 <https://www.oecd-ilibrary.org/sites/954b0e74-en/index.html?itemId=/content/publication/954b0e74-en>

In the category of policy levers to drive digital transformation, the OECD recommends raising the priority level for digital government: a new strategy should be adopted with the active participation of the whole stakeholder ecosystem, with concrete priorities and an action plan. The new strategy should be widely adopted and should be integrated and aligned with other policies for public sector modernisation and sustainable development. Governance levers should be strengthened, in particular business cases, project management, IT procurement and investment validation. In this context, it is essential to leverage the influence and role of the Council of IT Development and to stress the importance of using common building blocks in public administration (e.g. digital identity and interoperability standards). There is a need to continue to optimise legal frameworks to best manage digital transformation by defining the role of the Chief Digital Officer (appointment of an official or a unit or an existing institution), harnessing the potential of digital technologies, ensuring alignment with civil society, placing greater emphasis on digital rights, ethics and trust, and fostering and developing a culture of agility and experimentation.

In the category of digital talent for transforming public sector culture, the OECD recommends developing a digitally enabling environment and fewer hierarchical levels, fostering a culture of learning and flexible ways of working with leadership support, clearly communicating the benefits of digital transformation, funding the acquisition and enabling the use of acquired digital skills. Public digital literacy needs to be raised and the public should be encouraged to use digital services, while ensuring that these services are accessible to all. Strengthen professional digital skills and management effectiveness at all levels and ensure that teams represent a diverse range of professional profiles. It is essential to systematically recruit and retain digital talent, to offer them a stimulating and flexible working environment that allows for autonomy and personal and professional growth, and to better fund teams as projects and encourage rotation and innovation.

In developing digital services, the OECD recommends emphasising a commitment to the principles of modern 'service design' and clearly communicating how modern services can improve lives. Central advice, support and training for institutions should be provided and supported by a new strategy. New services should be developed with user journeys in mind, supporting multi-channel access to services and local government services to prevent digital divides. A culture of "service design" should be established, putting the user and their needs at the centre, developing some model inter-departmental services with modern user-centred concepts to promote new ways of working across the administration, encouraging and supporting user communities. It is recommended that a "government-as-a-platform" concept be established, offering institutions not just individual building blocks but a whole ecosystem of resources and tools for developing modern services and ensuring the sustainability of the funding of this ecosystem. At the same time, a standard for digital services should be defined, with expectations in terms of functionality and quality, ensuring maximum flexibility and minimising the burden of "legacy" equipment.

In addition, the OECD advocates a public sector that uses data for decision-making and the provision of strong leadership with adequate powers and resources to manage data effectively. The role of the “chief data officer” (a specific functionary or unit or existing institution) should be defined and assigned, a data strategy should be formulated to comprehensively cover all types and phases of data, to ensure appropriate skills in the public administration and to improve the legal basis for sharing and using data for monitoring, forecasting and services. The technical and practical data foundations should be built on with a comprehensive strategic approach. There is an urgent need to strengthen the understanding of data as a critical element for building trust, with an important factor being to ensure the security and privacy of citizens and businesses, to provide better insight into the content and use of their data in public records, and to systematically increase the transparency of data and algorithms.

We are well aware that there is a lot of work to be done and a long way to go, which the Digital Public Services Strategy 2030 will support. **The Strategy aims to address the identified gaps in the current state of Slovenia’s digital public services and bring them to an enviable level at the very top of Europe by 2030.**



5. Positioning in the Strategic Framework and Structure of the Strategy

In developing the Digital Public Services Strategy 2030, we have taken into account a number of previous documents that directly and indirectly address digital public services. In designing the new strategy, we have taken into account the documents listed below and the key principles they set out.

The overarching strategic development document in Slovenia, which defines the way forward, is the **Slovenian Development Strategy 2030**¹⁰, which, among other things, highlights the need for a higher quality, more transparent and accountable public sector. This can also be achieved through changed ways of working, using innovative methods based on creative problem-solving, with an emphasis on the introduction of digital solutions. The strategic orientation is to create friendly, accessible, transparent and efficient public services, in an inclusive way with relevant stakeholders, while exploiting the opportunities of digitalisation.

In the **Digital Slovenia 2020**¹¹ **Strategy**, we recognised that by opening up public data to all stakeholders, the government can enable the development of new innovative solutions for better digital public services. Therefore, in setting the Digital Public Services Strategy 2030, we have applied the principles already set out in the previous document, which states the need to develop digital infrastructure for open research and public data, and underlines the necessity for the government to work towards the development of interoperable, open standards and data-driven solutions (where appropriate) in order to open up opportunities for the ICT sector to operate in foreign markets.

The Public Administration Development Strategy 2015-2020¹² highlighted simpler communication and better information for citizens and businesses as key factors contributing to the increase in the use of digital public services. The Strategy stressed the need to consolidate and modernise entry points for citizens and business, to provide reliable online information and simple one-stop e-procedures, taking into account user needs (life events) and to introduce systematic measurement of user satisfaction.

The importance of digitising public services is reflected in current European policy documents. The vision, goals and options for a successful digital transformation of Europe by 2030 were set out by the European Commission in March 2021 in the

10 Strategija_razvoja_Slovenije_2030.pdf (gov.si) <https://www.gov.si/zbirke/projekti-in-programi/izvajanje-strategije-razvoja-slovenije-2030/>

11 DIGITAL SLOVENIA 2020 – DEVELOPMENT STRATEGY FOR THE INFORMATION SOCIETY BY 2020 (gov.si) <https://www.gov.si/assets/ministrstva/MDP/DID/Strategija-razvoja-informacijske-druzbe-2020.pdf>

12 Strategija-razvoja-javne-uprave-2015-2020.pdf (gov.si) <https://www.gov.si teme/kakovost-in-inovativnost-v-javnem-sektorju/>

European Digital Decade: Digital Goals for 2030¹³, which proposes agreeing on a set of digital principles for the rapid deployment of major cross-country projects and preparing a legislative proposal setting out a robust governance framework to monitor progress - the **Digital Compass**. It is based on four main pillars: a digitally empowered population and highly skilled digital professionals; secure, efficient and sustainable digital infrastructures; the digital transformation of businesses; and the digitalisation of public services. The 2030 targets for the digitalisation of public services include the online provision of all key public services to citizens and businesses, access to their health records for all EU citizens, and the use of digital identification by at least 80% of EU citizens. In September 2021, the European Commission published a proposal for a Decision of the European Parliament and of the Council establishing the **Path to the Digital Decade by 2030**, which aims to achieve, accelerate and shape a successful digital transformation of the EU economy and society.

The Digital Public Services Strategy 2030 reflects the content of the **Declaration on Digital Rights and Principles**¹⁴ for the digital decade, which provides a reference framework for citizens on their digital rights and sets guidelines for EU Member States and businesses when interacting with new technologies. The implementation of the strategy puts into practice the following digital rights and principles: Putting people and their rights at the heart of digital transformation; supporting solidarity and inclusion; ensuring freedom of choice online; promoting participation in the digital public sphere; enhancing the safety, security and empowerment of individuals; and promoting the sustainability of the digital future. The importance of values has also been emphasised in the **Berlin Declaration on Digital Society and Value-Based Digital Government 2020**¹⁵. The Declaration aims to promote the pioneering role of public administrations in digital transformation, based on different values, while strengthening digital democracy and participation and also focusing on the EU's digital sovereignty. The Lisbon Declaration also emphasises the values and ethical principles of digital transformation - Digital democracy with a purpose¹⁶.

Slovenia will address the ambitious targets set by the European Digital Compass with a new overarching strategy for digital transformation - Digital Slovenia 2030, which is currently under preparation. Digital Slovenia 2030 is one of the three key sectoral strategies (**alongside the Slovenian Research and Innovation Strategy**¹⁷ **and the Slovenian Industrial Strategy**¹⁸, **with the associated Digital Transformation Strategy**¹⁹) that set the direction for the creation of a knowledge-based innovation

13 European Digital Decade: Digital Targets for 2030 | European Commission (europa.eu) https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_sl

14 Declaration on digital rights and principles (europa.eu) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOC_2023_023_R_0001

15 Berlin Declaration: Digital Society and Value-Based Digital Government | Advanced Technologies for Industry (europa.eu) <https://nio.gov.si/nio/asset/berlinska+deklaracija+o+digitalni+druzbi>

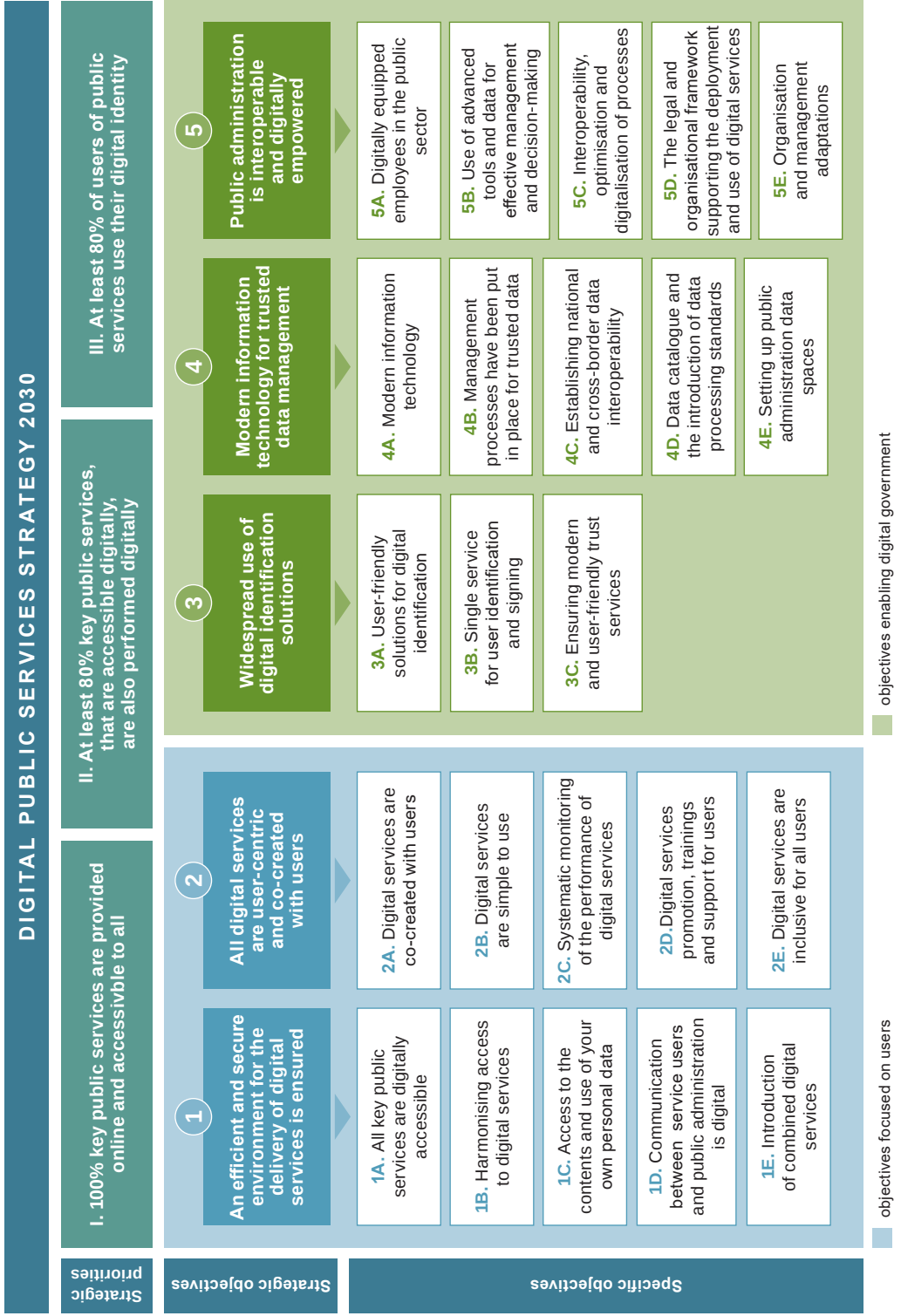
16 Digital democracy with a purpose; Lisbon declaration, <https://www.lisbondeclaration.eu/>

17 <http://www.pisrs.si/Pis.web/pregledPredpisa?id=RESO133>

18 <https://www.gzs.si/Portals/206/Slovenska%20industrijska%20strategija.pdf>

19 <https://www.gov.si/zbirke/projekti-in-programi/strategija-digitalne-transformacije-gospodarstva/>

Figure 1: Graphical representation of the strategy structure



society and are linked by the Smart Specialisation Strategy as a platform for focused investment in priority areas.

As the structure of the Digital Slovenia 2030 Strategy is aligned with the priority areas of the European Digital Compass, the Digital Public Services Strategy 2030 addresses one of its four areas in an integrated way. For these reasons, this strategy does not only address services provided by the devolved administrations, but also the digitalisation of public services provided by local authorities and the wider public sector (including digital public services in health, justice, etc.), where this makes sense and is feasible from the point of view of improving the user experience.

The Digital Public Services Strategy 2030 is an umbrella document that addresses all digital public services in the Republic of Slovenia and is built around three strategic priorities - (I) 100% of key public services are provided online and accessible to all users; (II) at least 80% of key public services that are digitally accessible are also performed digitally; and (III) at least 80% of public service users use their digital identity.

The document is structured as a pyramid, cascading the strategic priorities into five strategic objectives that will help us achieve the priorities. The five strategic objectives are linked to 23 carefully designed specific objectives. Each of them has concrete steps defined in an action plan. The action plan will be updated every two years to reflect on current actions and to take stock of actions already implemented.

The strategic objectives are as follows:

An efficient and secure environment for the delivery of digital services is ensured - the aim of which is to build an environment in which digital public services can be developed and deployed. It addresses the need to digitise key public services, to harmonise access to digital services, to allow users to see the content and use of their data across the whole cross-section of records, regardless of the body managing the records, to communicate with users digitally and to introduce combined digital services.

All digital services are co-created and user-centric - this objective underlines the need to co-create digital services with their users, to make services simple, to monitor the performance of digital services, to systematically measure user satisfaction, to promote, train and support users, and to involve everyone in the use of digital services.

Widespread use of digital identification solutions - a single digital identification of users when using services is a prerequisite for the mass use of services. The objectives are therefore defined as user-friendly digital identification solutions, cross-border interoperability, a single service for user identification and electronic signatures, and the provision of modern and user-friendly trust services.

Modern IT for trusted data management - the objective aims at providing modern IT infrastructure and governance processes for trusted data, establishing interoperability of data between institutions and across borders, upgrading the catalogue of databases and introducing standards for data processing, and establishing data spaces.

Scope of the Strategy

The Strategy covers all digital public services provided to users by public administration providers (central government, municipal administrations and public authority holders) and providers from the wider public sector.

The Strategy is an umbrella document that guides digital public service providers to develop actions in line with its contents, included in the action plan for the implementation of the Strategy, at national, regional and local level.

Through this document, the Government of the Republic of Slovenia commits all providers of digital public services to implement the activities falling within their scope in the manner and within the timeframes defined in this document and the corresponding action plan.

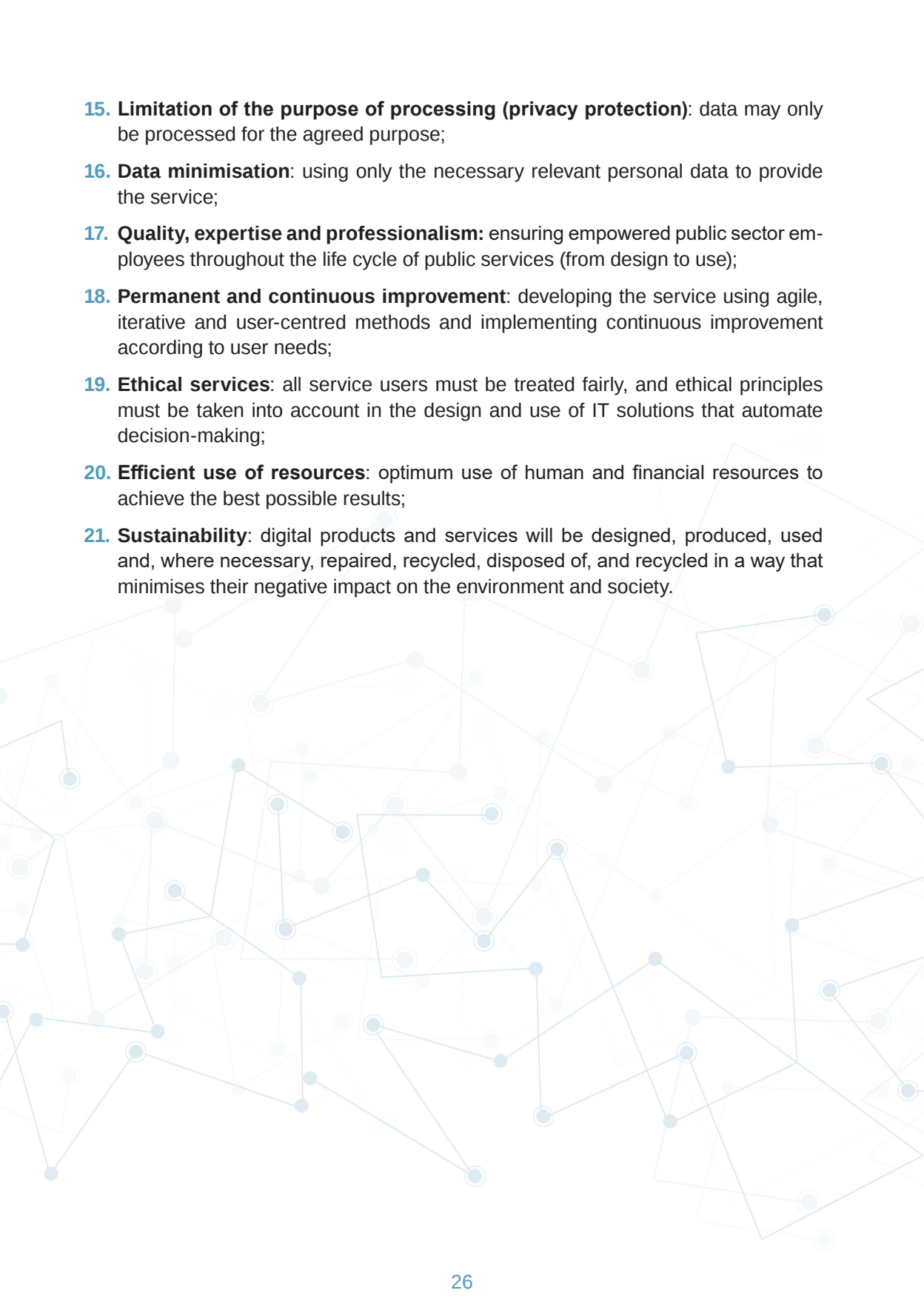
An interoperable and digitally empowered public administration - the objective addresses the conditions on the part of the state that need to be met for the successful digitalisation of public services - public sector employees need to be digitally equipped, trained to use innovative methods, aware of the importance of quality of performance, using advanced tools and methods and data to enable effective management and decision-making, business processes must be optimised and integrated into the digital environment at the same time as they are digitised; legislation must be developed in a digital business environment and must also support the introduction and use of digital services in terms of content, in a way that does not hinder the continuous progress of digital solutions and distances itself from the regulation of technological and technical issues that are not normative.



6. Principles and Values Guiding Digital Public Services

The Digital Public Service Strategy document clearly sets out the principles and values that digital public services follow:

1. **User-centred:** services are developed and implemented to be as user-friendly and tailored to the user's needs as possible;
2. **Digital first:** services are provided primarily digitally, second only by other appropriate means;
3. The **'once only' principle:** ensuring that citizens and businesses do not have to submit the same information to the public administration more than once;
4. **Inclusion and accessibility:** digital public services that are inclusive and accessible to users with different needs;
5. **Openness and transparency:** public institutions share information and data and give citizens and businesses access to their data in an open and transparent way;
6. **Cross-border:** digital public services are made available across borders, avoiding further fragmentation and ensuring mobility within the EU Single Market;
7. **Interoperability:** services are designed to be interoperable and work seamlessly across the Single Market and across different organisations;
8. **Credibility and security:** ensuring reliable and credible data and a balanced approach to managing information and other risks with minimum burden on users; both personal data security and general information security are important;
9. **Co-creation:** close cooperation of the central government and municipalities with the interested stakeholders to create new or improve existing services;
10. **Technological neutrality:** neutrality in the choice of technologies with the aim of interchangeability, compatibility and substitutability;
11. **Multi-channel - no "wrong door":** services are made available to users in one place, regardless of the choice of communication channel;
12. **moving "from documents to data":** focusing on data standardisation and semantic structuring of documents;
13. **Re-use of data, applications (building blocks) and services:** focusing on the use of existing resources to increase efficiency;
14. **One-stop-shop administration:** focus on multi-tasking for the benefit of the user using a single point of access;

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- 15. Limitation of the purpose of processing (privacy protection):** data may only be processed for the agreed purpose;
- 16. Data minimisation:** using only the necessary relevant personal data to provide the service;
- 17. Quality, expertise and professionalism:** ensuring empowered public sector employees throughout the life cycle of public services (from design to use);
- 18. Permanent and continuous improvement:** developing the service using agile, iterative and user-centred methods and implementing continuous improvement according to user needs;
- 19. Ethical services:** all service users must be treated fairly, and ethical principles must be taken into account in the design and use of IT solutions that automate decision-making;
- 20. Efficient use of resources:** optimum use of human and financial resources to achieve the best possible results;
- 21. Sustainability:** digital products and services will be designed, produced, used and, where necessary, repaired, recycled, disposed of, and recycled in a way that minimises their negative impact on the environment and society.

7. Description of Strategic and Specific Objectives

I. STRATEGIC OBJECTIVE: An efficient and secure environment for the delivery of digital services is ensured

Digital transformation provides new opportunities for simpler and faster interactions with public institutions, greater efficiency in the functioning of public institutions, and opportunities for new forms of social inclusion, new processes for shaping public opinion and removing administrative barriers. The strategic objective aims to build an environment in which digital public services can be developed and deployed, making it easier for users to engage with the public sector or public institutions.

Today, existing public sector services vary widely in their level of digitalisation, and many public services are not yet accessible through digital channels at all. Existing ones are accessible through different service portals, with different design and functionality specificities. Today, users do not have a single point of access to the data held on them by the different data controllers. Services are often organised and offered from the point of view of the specific institution offering the service or part of the service. As a result, in a given life situation, the user often has to find and use separate services from different providers, only some of which maybe digitised. This is one of the reasons for the low share of public services performed digitally.

We will ensure that all key public services are digitally accessible. We will harmonise access to digital services and introduce common standards for digital services, so that all digital services follow a common graphic design and use similar functionalities, facilitating the user experience regardless of the electronic device used.

In compliance with the principle of transparency and openness, users will be able to access and use the data held on them by public institutions, and to see an audit trail of the use of data by public institutions, without any compromises on data protection and privacy of all users.

Communication between service users and public institutions will primarily be digital and only exceptionally (e.g. if the user is unable or unwilling to use the digital channel or if the digital service is not available) will it be done through other channels, allowing for faster and simpler communication and increased efficiency. Digital services need to be optimised to the end-user's needs, and we will therefore also introduce combined digital services to enable users to efficiently use key life event services, reducing the burden on users to find and research the organisation of the relevant institutions for service delivery.

I.A ► All key public services are digitally accessible

Users want a simple way to communicate with public institutions, therefore we will work to accelerate the digitalisation of all public services, with a focus on key services based on the European Digital Compass. This means that users will be able to access such services fully digitally, while for exceptional cases access to them will still be possible by other channels.

We want to make it easy for users to use simple procedures and interact effectively with public institutions. We want to enable the government to deliver services without the need for a physical presence, bringing contact with users into the digital sphere. The shift in this direction is increasingly evident with the significant increase in digital content and the use of mobile phones, tablets and computers in everyday life, and the development of new technologies that allow new ways for inclusion of vulnerable groups in society.

We will accelerate the digitalisation of all public services, adapting existing digital services to the new common standards for digital services. Priority will be given to services identified as key in the EU Digital Compass. We will also define a methodology for prioritising the digitalisation of services.

Access to these services will be multi-channel, i.e. through digital platforms running on computers and various mobile devices, and other channels (physical, mail) to ensure that services are accessible to all users. We will pursue the “digital first” principle and provide all the necessary support to enable users to use digital services.

We will systematically inform users about the existence of digital services, new developments and improvements and encourage their use.

This specific objective will require investments and effort from all the competent institutions that need to participate in the delivery of key services, and from the administrators of the portals where the services will be published, as well as from the administrators of the common building blocks and functionalities that will be used for the rapid and unified development of the services. There must be a strong emphasis on cooperation between institutions and on developing solutions together. Solutions must not be allowed to be developed in a closed system of a single institution or level (national, local), but must always be designed with a view to integration and user-centricity in mind, regardless of the institution or level of service provision. Regarding services in which regulations need to be changed, the legislative process will also need to be used and, where appropriate, the mechanism for removing administrative barriers.

I.B ► Harmonising access to digital services

Unified access to digital services is an important factor contributing to the ease of use of services for users, and to improve the user experience, we will harmonise access to digital services offered by different public institutions.

The objective also aims to raise the visibility of digital public services.

We will define a common standard for digital services, standardising the way information is delivered, common graphical elements and common functionalities, including by promoting the use of common building blocks and common functionalities (single sign-on, e-delivery, e-authorisation...). We will adapt common building blocks and common functionalities to the common standard and enable “seamless” use, so that the user experiences the digital service as a coherent package and not as a jigsaw puzzle of different pieces.

The new common standard for digital public services will be a joint foundation for online services and dedicated mobile applications and will be developed with the participation of the managers of existing service portals. The standard will allow a unified approach to multi-channel service delivery. The user can have the entire service delivered digitally, or, exceptionally, use a physical method.

We will take into account accessibility standards and good practices for people with different disabilities and other vulnerable user groups. We will introduce a new umbrella ‘brand’ for digital public services to improve their consistency and visibility and to help increase the use of different digital channels.

This specific objective will require investments on the part of the managers of existing portals and common building blocks, who will have to adapt to the new common standard and the new umbrella brand. Central monitoring of compliance and guidance and assistance to institutions in adapting will be needed.

I.C ► Access to the contents and use of your own personal data

Transparency in the management of users’ personal data is a cornerstone of trust in the use of digital public services. Ensuring the protection of personal data, establishing the possibility to have access to one’s own personal data, the availability of information on how this data was shared and on the levers to change it are key elements in building such trust.

The requirements for the establishment of these functionalities are contained in the EU General Data Protection Regulation and the Personal Data Protection Act. From the point of view of a uniform user experience, transparency and rationality, it makes sense for these purposes to establish a common functionality that can be used by all data controllers, rather than being developed by each controller alone.

We will establish a central point of access to own personal data, through which users will be able to consult in a uniform way the personal data held on them by the data

controllers, including information regarding to whom the personal data have been disclosed, when, on what basis and for what purpose. This will improve the transparency of public sector operations and the trust of end-users.

As a basis, we will use this type of functionality, which is already available to users today, within the portal eUprava, which serves as a channel for accessing the data held on users by each operator. We will expand the set of connected operators and standardise access to ensure that users have the easiest possible access and operators have the quickest possible implementation at the lowest possible cost. Specific public services that have already developed access tailored to the needs of their users will continue to use it, aiming for a seamless user experience.

In addition to insight into the contents and use of data, we will make clear to the user the options for asking questions and correcting any incomplete, inaccurate or outdated data about him or her, and for seeking legal protection in the event of a breach of his or her rights.

This specific objective will require investments in the single central point and investment on the side of data controllers. The data managers will also provide support to users for any answers and clarifications on the content displayed.

I.D ► Communication between service users and public administration is digital

Digital communication with users is not limited to digital service delivery.

If we want to ensure that users can interact with the government in a seamless digital way, we also need to digitise communication from the government to users (e.g. e-delivery), user support and user feedback and suggestions from users. Digital channels are also offering new opportunities for co-creation of policies and services.

In addition to the delivery of digital services, the digitalisation of communication with users also needs to take into account the way in which users are assisted and involved in the development of policies and services (co-creation), which is still done in a rather limited and non-digital way today. Good examples of policy co-creation opportunities are, for example, the “Stop Bureaucracy” and “I Propose to the Government” portals. There are major untapped opportunities in the co-creation of services and the digitalisation of customer support.

Communication from public institutions to users will also be digital, e.g. using e-delivery and SMS notification. The government has already partially set up a system of electronic service between institutions and end-users (citizens and businesses), but the service will need to be further developed and integrated into all procedures, and its widespread use must be ensured and also accessible to other public sector institutions in need of such services.

For all services, help will be available to users in digital format, uniformly for all services. On some websites or service portals, such help is already available in the form of contact forms, through which users can obtain help and provide feedback, comments and suggestions for improving individual services in a variety of ways. In addition to call centre assistance, we will maximise the potential of digital guides, such as Live Chat and Chat-Bot. As a rule, videos will also be made available for services, showing users in a simple way how to use a certain service.

In addition to providing opportunities for digital communication with users, it is also important that digital communication is used as much as possible in practice, not only for services but also for other communication. To promote the use and support of digital channels, we will regularly develop promotional campaigns to encourage the use of digital channels, tailor-made training for users, and monitor the impact and adapt training and promotional activities on an ongoing basis.

To achieve this specific objective, investments will be needed to digitise specific services at the competent institutions, to promote digital channels among users, to improve and extend the use of common building blocks and functionalities (e-delivery, SMS notifications, etc.), and to strengthen digital helpdesks (live chat and chatbots).

I.E ► Introduction of combined digital services

A good user experience is key to the widespread use of digital public services. We will design digital services based on life events that support users' needs in a holistic way and, behind the scenes, link the processes of the relevant institutions that should be involved. The user should not necessarily be made aware of the organisational complexity behind the scenes and only a minimum of interaction should be required of them.

The ideal service is designed and optimised from the user's point of view, seamlessly integrating the responsibilities of the different providers that connect in the back office, while providing a good user experience. It should require minimal clicking and data entry by the user. The development and provision of such services must involve the active participation and collaboration of all stakeholders and be properly managed to ensure that they are up-to-date, consistent and optimal from the user's point of view, and that all institutions involved are involved at all times. Ease of use for the end-user is more important than ease of execution in the background; background tasks can be supported and optimised by digital technologies and automation, with the necessary transparency.

We will prioritise the creation of end-to-end digital services tailored to the end-user, linked to key life events of citizens and businesses. New, combined and optimised digital services will comprehensively cover at least the most important life events of citizens, from birth, enrolment in kindergarten, primary and secondary school and

university, to employment, marriage, family, retirement, finding long-term care services and, last but not least, the death of loved ones. Similarly, life events will be designed in different content areas and also in services for business users.

Where possible, services will be designed to be proactive, with the government initiating a service ex officio and only sending a decision proposal to the user. An example of such a service is the informative income tax calculation, for which the user does not have to submit an application but receives a proposal for a decision, which they can accept or oppose to. These are mainly services where users have a legal right but may not even know it, which can also lead to inequality and digital divides between citizens.

Combined services will be designed to provide a single, good user experience, independent of the public authority in charge of delivering each service within a specific life event. For each such combined service, a “service owner” will be identified who will be responsible for its updating, consistency and optimality.

This specific objective will require investments in the digitalisation of specific services in the competent institutions, encouraging and guiding cooperation between institutions, promoting good practice and, in some cases, adapting regulations to allow for optimal integration of the processes of the different institutions and, where possible, proactive service delivery.

II. STRATEGIC OBJECTIVE: All digital services are co-created with users and user-centric.

We recognise that the importance of delivering digital services is to simplify users' interactions with public institutions, so as part of Strategic Objective 2, we will actively engage with all users and other stakeholders in the design of digital services.

Currently, approaches to co-creating digital services with end-users are not yet sufficiently streamlined, coordinated and systematic, and users are often only invited to participate when testing a new service, which is significantly too late. As a result, many digital services are too complex for many users, which discourages many from using the digital channel. In addition, users are often unaware of the existence of a digital service, and there is no common overview and comparison between the number of physical and digital services performed. Physical assistance to entrepreneurs is provided at SPOT points, but no such assistance is organised for physical users today. The possibilities for promoting digital services at physical service points (e.g. administrative units, social work centres, etc.) are poorly exploited.

We want public administration digital services to be as intuitive and easy to use as possible, designed according to the best principles of digital services, with the best possible user experience. We will therefore work with users in the design of all key digital services, designing services through understanding their needs and the process of use, involving users in design thinking, and using methods such as

interviews, focus groups, mock-up sessions, etc. This will allow us to develop services that are intuitive, modern, seamless, easy to use and require a minimum amount of data from the user, as they are extracted from existing databases.

We will regularly monitor the performance of digital services through a common method of collecting and reporting on relevant metrics on the use of digital services, and through measuring user satisfaction in order to improve and continuously update them.

We will actively promote digital services to ensure that they are used as widely as possible. We will provide education and training and all necessary support to users through digital tools, educational institutions and NGOs. In addition, we plan to introduce incentives for the use of digital services, as we want to ensure the widest possible adoption and use of services and more efficient public institutions.

In line with the Tallinn Declaration on eGovernment, we will design digital services taking into account standards and recommendations and good practices on making digital services more accessible. In addition, we want all users of public services to have the opportunity to use digital services, so we will systematically identify and reduce digital divides, actively engage with specific groups of vulnerable individuals and help them to improve their opportunities for inclusion.

Empowering all users of digital services to meet the challenges of the digital world responsibly, while also helping users with disabilities to remain digitally equal in the new world, is a reflection of digital culture. Creating and sustaining such a culture is the responsibility of society as a whole.

II.A ► Digital services are co-created with users

Working with users to design digital public services aims to bring the functionality of services closer to users' needs. That's why we will co-create new digital services with the end-users for whom they are intended.

Systematic promotion and monitoring of new ways of working and collaboration will help to gradually establish local knowledge centres at the competent institutions to coordinate co-creation at these institutions.

Services will be primarily designed to address the needs of users (User Centric) and not to digitise existing administrative processes. Processes will be reviewed, optimised and then digitised. This will also be done by amending legislation where necessary. The development of digital services will follow modern principles such as: design thinking, user stories, user journey mapping, standard personas, prototyping, mock-ups, and iterative development. Service owners and service providers will work with end-users to design a new service that is tailor-made for end-users without imposing additional burdens on service providers. For co-creation methods to be effective, the types of participation (call for comments, active participation or hiring of expertise from a specific target group, etc.) must be differentiated and the application of the principles adapted accordingly.

To date, the government has already made some efforts to provide training to the public administration on service co-creation. The results of such efforts have been limited, so we will seek and promote good practices across institutions, highlight digital champions and support internal transfer of knowledge and experience within institutions. We will organise specific training on co-creation of digital services and facilitate coordination between institutions. We will systematically monitor and promote the application of these development principles. And we will rigorously follow all standards when creating new services which will be designed for a harmonised and good user experience. A new governance and coordination model will be designed to ensure clear accountability of the institutions involved and timely co-creation processes.

The implementation of this specific objective will require the strong support of the management of the institutions owning and providing the services, as it is a change of business culture that will also require new skills, changes in organisation and reallocation of resources. Institutions will be provided with training and support in the application of co-creation principles, and systematic promotion and monitoring of the introduction of co-creation processes in the country's development processes will need to be organised. This will require resources to set up a Hub for transforming ways of working and addressing societal challenges. The related changes in organisation and governance are also addressed in Strategic Objective 5E.

II.B ► Digital services are simple to use

Users expect to interact with public administrations digitally and seamlessly at a time that suits them, so they must be offered better alternatives to traditional ways of interacting with public administrations. Digital services must be simple, intuitive and transparent.

Several factors determine the ease of use of digital services. The service must be transparent, the user must be able to find it independently and be clear about what needs to be done and what the effect will be, the interaction must be consistent (seamless) and minimal (as little input and clicking as possible), and uniform standards must be applied to the design and functionality of the services, both through the web and mobile interfaces. The simplicity of digital services is also supported by modern technologies and data integrations, which consequently make it possible not to ask the user for data that the system can already retrieve itself (the 'data only once' principle).

If the process allows it, the services will be proactive, meaning that the user may not have to take the first step, may not even have to request a right, but may be offered it in advance by the State. This level of service will require changes to a number of business processes and changes to some regulations, and is therefore closely linked to the specific objectives in Strategic Objective 5 of this Strategy.

We will pay particular attention to and actively engage with vulnerable social groups, such as the elderly and people with disabilities, and we aim to systematically make it as easy as possible for all social groups to use digital services, thus bridging the digital divide. Users are provided with effective support if they encounter any problems when using the service.

In order to achieve this specific objective, it will be necessary to strengthen the institutions' awareness of the need to continuously optimise processes and to constantly review and adapt to the needs of all user groups and the possibilities offered by modern technologies. Institutions will need to be assisted through common standards and guidance, and systematic assistance in removing administrative barriers and optimising processes, and in introducing new technologies and data integrations.

II.C ► Systematic monitoring of the performance of digital services

Regular monitoring of the use of digital services is key to planning improvements. We will provide a system for common reporting and collecting information on the volume and proportion of use of digital services compared to other channels.

In addition to monitoring the volume of digital business compared to other channels, we will systematically and uniformly monitor user satisfaction with individual digital services with a view to their continuous improvement. In addition to a common methodology for monitoring the performance of digital services, we will set up a central technical system for collecting, processing, reporting, and publishing the data collected.

As one of the foundations for such a system, an up-to-date catalogue of all public services will also need to be established, including for each service the possible channels for its provision. The catalogue of digital public services will thus be contained in the above-mentioned catalogue of all public services. The central technical system will, among other things, allow the monitoring of which services are not yet digitised or which digital services are underused.

To achieve this specific objective, a common methodology and central technical system will need to be established at central level, and all service and service portal administrators will need to adapt the way they collect and report data on the number and proportion of digital services and develop and harmonise the way they monitor user satisfaction.

II.D ► Digital services promotion, trainings and support for users

To bring digital public services closer to users, we will strengthen promotional activities and training. This objective is therefore aimed at familiarising users with the digital services available. It is equally important that users know how to use the services and that help and support are provided when problems arise in using the service.

We will ensure that digital public services are promoted in an organised and active way, through a variety of communication channels and in the ways that are most effective for individual stakeholders. Promotion will focus on familiarising users with the types of digital public services as well as with specific functionalities that have so far proved more challenging to use (e.g. use of digital identification and trust services).

In addition to making users aware of the existence of digital services, promotion also means encouraging use by providing certain advantages to users if they engage with the service digitally. Such benefits may also be conditional on legislative changes, which is why the specific objective in this section links to the objective 5D - of creating legislation in the digital environment and supporting legislation for the introduction and use of digital services.

A new single brand will be introduced to make digital public services more visible and thus more effectively promoted. Continuous training of users in the use of digital services will be established, working closely with the various organisations that can offer such training, such as educational institutions, libraries and NGOs.

Online training will also be available, allowing remote learning, which is particularly important for those who find it difficult to attend physical training (e.g. people with disabilities).

Effective help and support will be provided to users through a call centre and digital channels (live chat, chatbots, FAQs, video tutorials, etc.).

In order to implement this specific objective, it will be necessary at a central level to organise promotional activities and to encourage the use of digital channels and good user support by making maximum use of digital channels. Active promotion of the use of digital services will also be needed on the part of service providers, e.g. administrative units, social work centres, etc.

II.E ► Digital services are inclusive for all users

The government must ensure that digital services are equally accessible to all users, thereby preventing digital divides. The aim is to maintain or establish mechanisms to enable all individuals to engage in a modern way of communicating with the government.

This provides assurance that all individuals have the option to use digital services. At the same time, we will systematically identify and overcome digital divides. To this end, we will actively engage with specific groups of vulnerable individuals to enable them to co-create digital services and help them improve their opportunities for inclusion.

We will take into account accessibility standards, recommendations and good practice when developing digital services - websites and mobile apps must be perceivable, functional, understandable, robust and therefore accessible. Services will be available on all devices (desktop, laptop, phones, tablets) and will work regardless of the type of operating system. In terms of accessibility, the use of digital identification methods and trust services will need to be specifically addressed. A central e-authorisation solution will be key to this, allowing, for example, older people to authorise other, more skilled people to carry out a specific e-service on their behalf. The service will be available through the central SI-PASS platform. Its purpose will be more general, also for enabling authorisation among other different stakeholders who do not belong to any of the underprivileged groups. Measures to support e-authorisation at the level of cross-border provision of services are expected at the EU level and national solutions will have to follow.

When accessing digital services, it is important that users are able to connect to broadband internet. Today, there are still households in the country where there is neither adequate infrastructure nor the market interest to build it, the so-called 'white spots', which will make it essential to ensure that users have the possibility to connect to broadband internet. This area is addressed in the Digital Slovenia Strategy 2030 in the section on ensuring connectivity.²⁰ For those who do not have access or their own devices for various reasons, access should be ensured at public points such as libraries, administrative units, municipalities, post offices, schools, etc.

Achievement of this specific objective will require continued efforts by website and mobile app providers to ensure and maintain compliance with accessibility requirements and standards. Central support and guidance to authorities on how they can comply with these requirements in a uniform and efficient way must also be organised. It will also be important to invest in systematically addressing "white and grey spots" in broadband access and ensuring adequate coverage of public hotspots where people who do not otherwise have a suitable connection or device themselves can access the internet and digital public services.

20 Link to the Broadband Network Plan <https://www.gov.si/teme/elektronske-komunikacije/#e176317>

III. STRATEGIC OBJECTIVE: Widespread use of digital identification solutions

In the digital world, there is a growing need for reliable proof of user identity. In Slovenia, there are no simple and sufficiently widespread solutions. The most widely used are qualified digital certificates, which users store in their browsers' repositories and which, although offering satisfactory security since 2000, do not offer sufficient user-friendliness. In 2018, we launched the first mobile identity and e-signature solution, smsPASS, which addresses some of the shortcomings of digital certificates. We introduced a central Authentication and eSignature Service, SI-PASS, which is now integrated in more than 50 different systems. The take-up rate is relatively low, and the solutions are still too complex for widespread use. According to official data, 21% of citizens held a qualified digital certificate in 2017, while we believe that today the figure is around 45%. There has also been no possibility for unified access to digital services in the private sector. Today's solutions cannot yet be used cross-border by users in the EU Single Market.

We need a single, user-friendly digital identity that provides intuitive, secure, convenient and up-to-date user identification, regardless of the service provider. As one of the basic user-friendly solutions for digital identification, we will enable the secure establishment of a digital identity without prior physical identification at the registration desks using a biometric identification document (a new identity card or passport), which will further enable the widespread use of digital identities and, consequently, digital services. Digital identity will be recognised throughout the EU. The use of e-ID cards and mobile solutions will be enabled, with the widest possible support for mobile devices.

We will follow new technological trends in the development and use of digital identity to provide users with secure and convenient digital identity solutions and trust services that keep pace with the times. We will unify and modernise the use of digital identities and enable single sign-in.

III.A ► User-friendly solutions for digital identification

Efficient and simple digital identification is a prerequisite for doing business with the state in a digital world.

We therefore need to provide users with modern, user-friendly and reliable solutions to identify citizens and businesses in electronic transactions and electronic services.

In Slovenia, in 2022, we will have an electronic identity card, which is an established technology for electronic identification methods. Ensuring a good experience in its use in combination with different devices, including mobile devices, will be essential for the widespread use of the new ID card in the provision of digital public services. Once the process of notifying an electronic ID card for cross-border use in the EU has been completed, citizens will also be able to use it to access public sector e-services across the EU as a means of high assurance.

We will continue to provide citizens with a new, modern, mobile means of e-identification and e-signature, which they will be able to obtain even without being physically present, presumably on the basis of identity verification using biometric data on identity documents. The solution will pay particular attention to security, simplicity and user-friendliness and will be aligned with the requirements for the European Digital Identity Wallet. The latter will enable users, natural persons and persons who are required to prove their identity on behalf of a business entity, to prove their identity and other characteristics through different identification proofs required for the performance of various public administration services and also in the private sector. It will be used domestically and in the EU. Users will be able to use it for public services and for certain areas in the private sector, which will be regulated by new European legislation governing the European Digital Identity Framework²¹. This legislation should also oblige large platform providers to rely on these resources in order to achieve universality of use.

Currently, the most promising decentralised approach to identity management is based on blockchain. This approach should allow users to have more control over their personal data. For wider applicability and uptake, joint activities and cooperation with different stakeholders, notably research institutions, technologically advanced companies and also other countries, are needed.

The actions of this specific objective will have a direct impact on users of public and private services and on the providers of these services. Involvement in pilot projects for the implementation of the European Wallet will be necessary. The introduction of new technologies will require cooperation with research institutions and other stakeholders in Slovenia and in the EU.

21 Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A281%3AFIN>

III.B ► Single service for user identification and signing

We will ensure a single sign-on for all digital public services. We will further develop the Single Identity Point of Service (SI-PASS) to improve the user experience and update its integration into the portals through which users access digital services. The objective is to extend SI-PASS to digital services offered not only by public sector service providers but also by business service providers. This will also make an important contribution to increasing the use of public services.

The single point for verifying the identity of different users, both domestic and foreign EU citizens, and for e-signing applications and other documents (SI-PASS) was introduced a few years ago to make the use of digital public services more efficient. The further development of SI-PASS will also be guided by collaborative and modern methods (co-creation), e.g., through consultations with existing and potential e-service providers and other stakeholder associations.

We will develop SI-PASS integration guidelines to guide service providers in implementing SI-PASS to access their e-services with a single user experience. The guidelines are relevant on the user interface side of the institution portals themselves (descriptions, instructions, use of the SI-PASS logo, implementation of redirects, etc.) and on the back-end systems side, for safe and secure use of SI-PASS.

The new legislation on digital identification and trust services²² supports the use of SI-PASS in the private sector, which will significantly contribute to increasing the use of e-services in the public sector. If citizens use SI-PASS more frequently to access services from business providers, citizens will be more proficient and will also make greater use of digital public services.

SI-PASS also plays an important role in meeting the requirements for the functioning of the Digital Single Market for the use of digital public services. SI-PASS supports the registration of foreign EU citizens whose means of digital identification are notified for cross-border use in accordance with the eIDAS legislation²³. Conversely, SI-PASS will play a key role in the access of Slovenian citizens to foreign digital services in the EU once the Slovenian electronic identity card and, presumably, the smsPASS mobile identity have been officially notified for cross-border use in accordance with the eIDAS legislation.

The implementation of this specific objective will require adaptation on the part of public service providers to optimise the integration of SI-PASS in order to improve the user experience for end-users. A business model for private service providers will be developed. Adequate support for the implementation of these activities will also need to be provided.

22 Electronic Identification and Trust Services Act (Official Gazette of the Republic of Slovenia [Uradni list RS] Nos. 121/21 and 189/21 - ZDU-1M) <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7550>

23 Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC <https://eur-lex.europa.eu/legal-content/SL/ALL/?uri=CELEX:32014R0910>

III.C ► Ensuring modern and user-friendly trust services

We will provide more user-friendly and reliable trust services to ensure trust in e-commerce is comprehensive and effective. As a guarantee of their quality and reliability, all services will be provided with a qualification status compliant with the requirements of the eIDAS legislation.

To support reliable e-commerce, various trust services are already available to users today, which service providers can integrate into their e-services, in addition to electronic proof of identity. Support for new trust services will increase in the coming years as a result of technological advances underpinned by new EU legislation governing trust services.

Qualified certificates for e-signatures have been available for many years and certificates from different issuers can be used for e-services in public administrations. The issuer at the Ministry of Public Administration will modernise the issuance of certificates in line with the expectations and needs of users and service providers, for example by providing qualified e-signatures with SIGEN-CA certificates for employees of business entities. The central SI-PASS service already enables the implementation of qualified e-signatures for domestic and foreign EU citizens, independent of the user's environment. We will ensure that these solutions also offer support to users and service providers for different use cases, e.g. batch e-signing, etc., or other enhancements aligned with the expectations of different stakeholders. SI-PASS will continuously update its services in compliance with user needs and improve the user experience.

Due to technological advances and the increasing shift towards mobile devices, measures will be taken to enable e-signatures on mobile devices via dedicated applications. They will also be aligned with the requirements of the European Digital Identity Wallet. Slovenia envisages the implementation of remote e-signatures on the basis of a qualified service for the management of remote e-signature creation devices, similar to the one already supported today by SI-PASS.

Electronic service will become the predominant way of completing administrative and other services. The e-service will be easily accessible and user-friendly for citizens, businesses and public sector institutions. Citizens will be able to use secure mailboxes from different providers, and already today there is a secure mailbox provided on the eGovernment portal. Businesses will also be able to use the secure e-Wallets on the SPOT portal. The development of e-servicing will also follow other legislation at national and EU level. In line with the legislation on de-bureaucratisation²⁴, services may also be made to ordinary electronic mailboxes if circumstances allow.

We will also introduce other qualified trust services in line with technological developments and legislation. The introduction of a new qualified trust service for the provision of electronic attribute validation is foreseen, which will be essential to support the

24 De-bureaucratisation Act (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 3/22) <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO8346>

functioning of the European Digital Identity Wallet in order to enhance the reliability of the various data/evidence sources. New qualified services are also expected to be launched in other areas, such as long-term preservation.

Trust services can be relatively complex for end-users to use, so it is important to continuously strive to evolve them through modern methods to improve the user experience, meet user and regulatory requirements, and keep abreast of technological developments.

This objective requires investment in trust service providers, both technologically and organisationally. New trust services will need to be adapted to the requirements set by the relevant legislation. Service providers will need to adapt their services to use the new trust services.

IV. STRATEGIC OBJECTIVE: Modern information technology for trusted data management

A high-quality and efficient ICT infrastructure is one of the cornerstones of the digital transformation, as it not only digitises public services but also strengthens research and development potential. The need for faster internet connections is increasing as they are used simultaneously, by different users, with different tools. At the same time, digital transformation is increasing the need for digital archives and data warehouses to store, share and reuse data for different purposes.

The government will deliver digital public services that keep pace with the times, are secure, adequately protected against cyber-attacks and use trusted data that is carefully stored²⁵, by deploying a modern ICT infrastructure with a lower carbon footprint that is more efficient and more energy-efficient. In addition, we will provide advanced server infrastructure and mass storage systems with integrated backups.

We will establish a common framework of processes, rules, relations and standards for responsible data management, based on the European Data Strategy, to ensure data quality, transparency, availability, connectivity, security and legality. In cooperation with stakeholders, we will establish interoperable public administration data spaces (including in compliance with the General Data Protection Regulation (GDPR), the Data Governance Act (DGA) and the Open Data and Re-use of Public Sector Information Directive (ODD), following the INSPIRE Directive and other EU and international guidelines.

We will establish interoperability of data between institutions and across borders to ensure that the “only once” principle is implemented. This will reduce the number of times a user will have to provide the same data and inputs when using digital services.

²⁵ Cyber security is regulated by the Information Security Act (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 30/18 and 95/21) and UDecree on information security in the state administration (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 29/18 and 131/20). <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7707>

We will implement all the necessary standards and guidelines to improve data interoperability, and update and upgrade the data catalogue. We will establish guidelines for responsible data management and the use and sharing of data by content and purpose. Interoperable data spaces and the necessary modular data platforms will be put in place to improve interoperable and standardised data sharing.

It is important to raise the awareness of data owners, custodians and managers of the importance of database management and data accuracy. To this end, it is necessary to raise the level of substantive and technical knowledge of the databases, the procedures for extracting and producing the data, and the mechanisms for monitoring changes and ensuring that employees and custodians of collections are up-to-date.

Emphasis must be placed on the objective that digital public services are reusable, cost-effective and that the guidelines for their implementation prevent public institutions being tied to specific IT solution providers. In addition, measures will be planned to promote the use of open standards and open source solutions wherever possible, in compliance with the European Open Source Strategy EIF²⁶..

IV.A ► Modern information technology

A high quality, efficient and secure ICT infrastructure is the foundation for a successful digital transformation. This requires increasing the resilience of the infrastructure environment to existing risks, increasing the level of cyber-security and improving the adaptability of the infrastructure environment to new challenges.

Modern IT is a prerequisite for effective digital transformation and, by its very nature, it ensures more efficient use of server resources through their virtualisation of server resources and, as a result, a lower carbon footprint of data centres as a measurable environmental unit. Digital transformation is thus aligned with the European Commission's priorities of ensuring a sustainable and inclusive recovery to promote the green and digital transition.

Employees and other customers of digital public services expect high bandwidths, better services and fewer problems with infrastructure performance and potential outages. New technologies such as 5G and the use of cloud services, the use of different mobile devices and the growing number of new digital services, including cross-border services, will enable a higher level of digitalisation in all areas of the country. The European Commission announced a European Data Strategy in early 2020. It proposes investing in data and strengthening European capacity and infrastructure for data hosting, processing, use and interoperability, with the aim of deploying a powerful, modern and secure infrastructure to support the cross-sectoral (and cross-border) connectivity of public services.

26 https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/informatics/open-source-software-strategy_en

Information infrastructure is evolving rapidly, and users expect and demand new digital services. Modern technology trends in blockchain, artificial intelligence, quantum computing, smart homes, cities and countries are already in use or will be suitable for production use in the next five years. The data centre field is evolving towards converged cloud architectures and software-defined operations, which are already established practices in the world of cloud data centre architecture. Special attention will be dedicated to the further development of the central state administration communication network (HKOM), which ensures public authorities safe transmission of data and secure access to the internet. We will also pay special attention to high-speed data transmission, which is one of the most important factors for the use of digital services, alongside security.

As part of the creation of a new generation of IT infrastructure, we will set up a new data centre built in compliance with modern cloud infrastructure concepts. The planned modernisation of the national infrastructure will raise the level of service delivery to both public sector employees and service users. We will optimise IT operations, using business information architecture to provide expert assistance to authorities in designing new applications and optimising business processes, with a focus on an excellent user experience.

The increasingly rapid development of cloud services requires the development of guidelines on the use of cloud services for public institutions. This includes both the use of tools that public institutions use for their business and services related to the provision of digital public services to users. The guidelines will follow European and national frameworks, particularly in the area of personal data protection, but also more broadly.

In this context, it is of the utmost importance that the national information infrastructure is provided with an appropriately high level of cyber security. We will reorganise user support to the authorities, merge and introduce an autonomous control structure for remote monitoring of environmental, energy and security parameters in system rooms, unify organisational cultures, upgrade modern geographic information systems for spatial visualisation, offer support for web services, and put more emphasis on users in the public bodies.

IV.B ► Management processes have been put in place for trusted data

Systemic regulation of data management will contribute to secure, transparent and accountable data sharing for user-friendly and proactive public services. Public administration is heavily dependent on reliable, linkable and quality data, which must be secure, available and quickly accessible. The aim is to have quality, reliable and accessible data available for business continuity. Data will be available to those who have a legitimate right to see and use it for public services (decision-making, management, forecasting, etc.) and for sharing in the data economy.

Slovenia is a traditional registry country and has a long and rich experience²⁷ in data management in public administration. Furthermore, the European Commission has recognised the importance of data management and has adopted a European Data Strategy in which Pillar A – Framework for cross-sectoral data access and exchange – is an area of emphasis, with the aim of improving cross-sectoral (and cross-border) data exchange.

A systemic approach to data management in the public sector will help to foster digitalisation, advanced technologies and artificial intelligence, support interoperability requirements, and further the use and sharing of data. Comprehensive data management in governmental public service provision will support data use by defining and applying unified standards and formats. This will lead to greater efficiency, transparency and consistent protection of privacy (when and where appropriate or necessary).

We will establish a framework for the integrated management and use of data for public services and put in place a single policy and guidelines for responsible data management, organisational and legal bases for defining the roles, responsibilities, accountability and transparency of the public sector and the rights and security of users. We will establish the quality of data management and use processes as well as data security, data protection and data accessibility (collection, processing, destruction, sharing, storage, etc.). We will put in place a system of quality control, verification and validation of data for greater exchangeability and reliable services, and introduce system guidelines for the ethical and responsible use and exchange of data by content and purpose (open data, personal data, legally protected data, registries and reference data), defining the roles and responsibilities of data controllers and data users (data subject, data controller, data processor, data user). We will support the development of competences and skills for data management and sharing in public administration, education and for users, and promote awareness

27 The management and protection of personal data is now systematically regulated through the application of the EU General Data Protection Regulation (GDPR) and the Personal Data Protection Act (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 94/07 – Official consolidated text and 177/20). Slovenia is also achieving international success in the field of open data, which is systematically regulated by the Act on Access to Public Information (Official Gazette of the Republic of Slovenia [Uradni list RS], No. 51/06 – Official consolidated text, 117/06 – ZdavP-2, 23/14, 50/14, 19/15 – Constitutional Court Decision, 102/15 and 7/18). <http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO3906>

raising and training for data management and sharing in public administration, education and for users.

The implementation of this specific objective will require investment and effort by all relevant institutions which manage data to put in place appropriate procedures for their activities. Where regulations need to be amended, the legislative process will have to be used and, where appropriate, the mechanism of removing administrative barriers will also need to be used. Awareness raising and training of staff for new roles and activities will also be necessary.

IV.C ► Establishing national and cross-border data interoperability

Interoperability, exchangeability and sharing of public sector data will help to deliver more efficient and user-friendly services in response to predictable life events and needs, including across borders. The aim is for public institutions to use the data already held in their registers and records as often as possible in the delivery of interoperable public services, without additional burdens on the user.

Today, data interoperability in the public sector is not yet developed to a sufficiently high level, with some sector-specific solutions in place, but no single interoperable way of sharing data across organisations (and across borders). As a result, data exchange is less efficient, often requiring additional upgrades and financial resources. The European Commission announced a European Data Strategy in early 2020 in which Pillar B is also emphasized. Investing in data and strengthening European capacity and infrastructure for data hosting, processing, use and interoperability, with the aim of improving interoperability and data quality both across sectors (and across borders) and in the use and sharing of data. The above findings suggest that the area of data management and use must be more comprehensively regulated with the aim of increasing interoperability, exchangeability and efficiency in data use, and better and faster delivery of services internally and to external users.

Data will be harmonised in one place, each piece of information will be transmitted to public institutions only once, and pre-populated forms will be available to users, including for cross-border exchanges.

We will promote the efficient re-use and exchangeability of public sector data (including legally protected data) in a lawful way (in compliance with the EU Data Governance Act and the EU's proposal for an Interoperable Europe Act). This will increase efficiency, accessibility and easiness and support the proactive delivery of services that the public sector can automatically perform based on service catalogues, data and life events for the benefit of the user, including across borders.

We will develop guidelines for an interoperability framework based on the international EIF (European interoperability framework) principles and recommendations for lawful data sharing and interoperable and standardised public services. This will include

guidelines and recommendations for the unified application of data interoperability (legal, organisational, semantic and technical). It will be necessary to develop and promote common definitions and specifications at the semantic level, to establish a catalogue of services between individual data sources and to establish standards for data sharing services. It will also be necessary to establish criteria and conditions for the exchange and use of data, and to provide appropriate mechanisms for checking the correctness of data between linked repositories in order to avoid errors and inconsistencies between contextually related data.

This specific objective will require investment and effort to establish guidelines and recommendations for the uniform application of data interoperability and for their practical implementation by all stakeholders (including across borders). It will also be necessary to raise awareness and support the exchange of good practices on the importance of data interoperability among stakeholders.

IV.D ► Data catalogue and the introduction of data processing standards

To improve data interoperability, we will create data catalogues and introduce data standards with guidelines for their use, based on international principles and recommendations.

Today, data standardisation in the country is implemented mainly in the areas of open and spatial data, where data are already standardly interlinked and interoperable based on international standards (e.g. DCAT, ISO). In other areas of data exchange, several particular solutions do exist but a single standardised way of data description, data catalogues and related implementation activities have not been implemented. The low level of standardisation makes data exchange between public institutions (and across borders) difficult and often requiring additional upgrades and financial resources. However, legislation already makes it compulsory for authorities to maintain and publish metadata on these collections. This is the case of open data, while for other public information it only requires the publication of metadata on the catalogues of these databases (as public information). Standardisation rules for databases still need to be properly adjusted along the lines of the INSPIRE legislation²⁸.

The management of reference data and metadata also needs to be completed and upgraded. Their definition and knowledge will help to ensure the use of harmonised standards and formats.

Even in the area of registers, where each particular base register is regulated by law, there is no common overarching law as well as no uniform guidelines and practices.

We will ensure the development of data catalogues and the introduction of data standards in order to improve the exchangeability and use of data. To this end, we will

28 <https://nio.gov.si/nio/asset/slovenski+metapodatkovni+profil>

update and upgrade the guidelines for the creation of data catalogues and introduce standards based on international principles and recommendations. We will implement international data standards to improve data interoperability and develop guidelines for use of the main components of semantic interoperability, such as a central vocabulary, common and more widely applicable sectoral vocabularies and data models, interchangeability formats, application programming interfaces for using vocabularies, and standards within the frame of Single Digital Gateway (SDG).

We will upgrade and digitally link national data catalogues as published in the national Open Data Portal - the OPSI portal, the data map, the code list catalogue, the repository of reusable domain core models, and prepare guidelines and recommendations on the use of data standards. This will enable automatic data integration and sharing for faster business operations.

This specific objective will require investment and effort to develop national data catalogues and standards and appropriate guidelines for use and will require close cooperation with domain users in the public administration. Awareness raising and training of stakeholders on the importance and how to use them will also be necessary.

IV.E ► Setting up data spaces

To further develop data sharing and the data economy, we will create interoperable data spaces to support better decision-making, by using advanced technologies (artificial intelligence, business analytics, internet of things, etc.) in order to improve digital public services. Data will be made available and shared in a trusted and secure way.

Today, the different types of data in the public sector are organised in different formats and structures and stored in different places, depending on their purpose. Consequently, potential users have to spend a lot of energy, will and time trying to access data and agree upon their possible use. There is still data that do not have a clearly identified custodian, and there is a lot of confusion about how to find and use reference data (e.g. code lists). Furthermore, the European Commission has recognised the importance of data governance and announced a European Data Strategy in early 2020. The Strategy has four pillars, of which we would like to highlight Pillar D – Common European Data Spaces in strategic sectors and areas of public interest. The overall objective is that national data spaces will form a common European data space – a true data single market.

An intelligent interoperable modular data platform will be set up, integrating data management from an organisational, technical and semantic perspective to improve interoperable and standardised data exchange (including across borders). We will thus systematically integrate the existing “Pladenj”²⁹ (Tray) data interchange system, which

29 <https://nio.gov.si/nio/asset/interoperabilnostna+komponenta+pladenj-368>

is offering a controlled and automated transfer of the data needed to deliver services in an orderly way, with the other missing components that we will develop within the data spaces and that are needed for a successful cross-border data exchange.

Common Data Spaces (at national and European level) will bring together relevant data infrastructures and governance frameworks to facilitate data aggregation and sharing (including across borders). This will remove existing legal and technical barriers for data sharing (inter-organisational and cross-sectoral) in support of data-driven innovation.

Data Spaces will enhance the development of new data-driven products and services and create the fundamental fabric of an interconnected and competitive data economy. They will also be our contribution to European data spaces (in particular within the frame of the Public Administration Data Space). We will set up data spaces for the processing of open, personal and other legally protected data, a development and demonstration environment with a marketplace of solutions, including big data.

By setting up data spaces, we will introduce data sharing tools and services to aggregate, process and share data from an open number of organisations, and aggregate energy efficient and trusted facilities and related services. Also put in place will be data management structures that are compatible with the relevant legislation and that define rights related to data access and processing in a transparent and fair way. This will improve the availability, quality and interoperability of data – both in individual areas and across sectors (and across borders).

The implementation of this specific objective will require investment and effort by all institutions to actively participate in the establishment of data spaces under their content remit, together with the definition of roles and responsibilities in their content management processes. Awareness raising and training of stakeholders with regard to use of the new tools and the use of the data spaces will also be necessary.

V. STRATEGIC OBJECTIVE: Public administration is interoperable and digitally empowered

In order to effectively implement digital transformation, including the digitalisation of public services, certain conditions on the part of the state must be met to enable such transformation. In addition to strong leadership support, the long-term stability of the resources needed for digitalisation or digital transformation (finance, human resources, etc.) at all levels of public administration must be guaranteed, because digital transformation is not a one-off project, but a strategic orientation in the field of digitalisation.

We will train public sector employees to ensure that they have all the necessary skills to drive the digital transformation effort. They will be able to identify opportunities to improve existing ways of working and create better services using existing and emerging digital technologies. The basis for the challenges ahead in the digital world is a

public sector workforce that has all the necessary tools for modern and digital ways of working, and in particular the skills, motivation and mission to co-create digital solutions and thereby make a significant contribution to the continuous improvement of the working environment and work outcomes. We will introduce a number of education and training programmes for our employees and ensure that we become an employer of choice for ICT staff.

Many public institutions today have difficulties in recruiting new staff and retaining existing staff with IT skills. The available evidence suggests that the need for ICT professionals will continue to grow. This means that it will become increasingly difficult to attract or retain ICT professionals if employment conditions and pay systems remain unchanged. Therefore, the strategic objective also aims at improving the country's competitiveness in attracting and retaining ICT professionals.

Modern technology and the introduction of new services will enable us to use advanced tools and data for effective management and decision-making, taking into account the ethical aspects of using advanced data and algorithmic technologies. The use of such tools is a lever for more responsive policy-making and better decision-making.

A comprehensive digital transformation also involves redesigning business processes, which can be designed differently and more efficiently using modern technologies. Such transformation is more effective if the initiative to digitise a process lies with its administrator, which also means that institutions must take the initiative to digitise the public services they provide to users. For a successful digital transformation of the country, we will optimise and digitise processes and ensure their interoperability (in compliance with the EU's proposal for an Interoperable Europe Regulation). This will lead to shorter and simpler processes, better user experience and satisfaction, and more efficient government.

Changing the status quo will require in some places an update of legislation (and working processes) that not only encourages the use of digital public services, but also allows for the further digitalisation of public services in a way that does not hinder the adaptation to advances in information technology and only regulates what is strictly necessary from a normative point of view.

The digital transformation of public services will, like any transformation, require adjustments to organisation and management, which will involve management change efforts, the establishment of a new way of designing digital services and the introduction of new, digital ways of working.

V.A ► Digitally equipped employees in the public sector

Public sector employees are key to the successful deployment of digital public services. That's why we will ensure that their digital skills are upskilled, and that they are equipped and provided with a working environment adapted to the rapid development of modern technologies. In addition, the objective also aims to improve the country's competitiveness in terms of working conditions for ICT professionals and to inspire them to work in public institutions.

Rapid developments in modern technologies and digitalisation are having a major impact on the skills and competences needed by public sector employees to successfully meet new challenges, and new digital skills are needed to match this changed role. We need to remain a learning organisation, i.e. one that can learn from the past and anticipate the future. The use of recognised quality management systems (e.g. the Common Assessment Framework CAF) should be promoted to make organisations more agile, flexible, accountable and resilient. At the same time, the confident and critical use of digital technology for information acquisition and sharing, communication and problem solving in all areas should be ensured. Through the Hub for transforming ways of working and tackling societal challenges, innovation will need to be systematically fostered and a culture of agility and experimentation developed.

Strengthening the digital skills of employees has an impact on better integration into the digital society, more effective decision-making, problem-solving and better quality of (public) performance. We will start with a comprehensive assessment of the knowledge and skills of public administration employees regarding digital tools and approaches and use the results to design online digital training programmes to help overcome the identified gaps. We will follow the OECD Framework for Digital Talent and Skills in the Public Sector to strengthen the digital skills of public sector employees, including: training to enhance core 21st century digital skills, training for staff with specialist IT skills, with a particular focus on enhancing the digital skills of senior managers, and the provision of specific training for public sector employees on the use of digital service systems.

It is therefore necessary to continue training staff in the creative, safe and objective use of modern technologies, thus completing the circle of cooperation between users of digital services and public administrations, which contributes to a deeper awareness of the importance of creating a digital culture.

To achieve this objective, we will establish a new human resources management system that will take care of the entire career development life cycle of public sector employees, planning and upskilling staff to a level that meets the needs of the modern public sector and the new digital reality. The digital competences acquired will be crucial in the new digital world, which has already introduced new ways of communicating, educating, doing business, meeting and carrying out the many activities of employees within the public sector and externally with service users.

To meet the new digital requirements and to support digitally empowered staff, we will modernise the ICT infrastructure with all related applications and the entire customer support system for digital public services. The new digital era also requires adapting the equipment of public sector employees to increase their connectivity and reduce their dependency on the traditional office workplace. We will promote the use of mobile devices to support the new orientations towards remote working. This will make workplaces more attractive to attract and retain new generations and talent, with a particular focus on maintaining the right work-life balance.

The state must be able to compete with the economy in today's highly demanding digital talent market. Particular attention will therefore be paid to strengthening the capacity to attract and retain top ICT professionals in the public sector. Now more than ever, the HR function must ensure that lifelong learning and the development of digital competences are systematically developed in managers and staff.

V.B ► Use of advanced tools and data for effective management and decision-making

We will promote the deployment and use of advanced tools that will contribute to efficient, secure and transparent digital public services. The large amount of available data, combined with the use of modern IT tools, should lead to more responsive policy-making and better decision-making in a wide range of areas.

The intensive digitalisation has an impact on the amount of data held and managed by public institutions today – an amount that is growing exponentially, is increasingly diverse and is further increasing as new trends continue to develop. Importantly, only proper storage, processing and visualisation of data can bring true added value. Public institutions must make the most of the potential of big data management to fine-tune the systems they manage, to support decision-making and development and to better invest in infrastructure.

To be ready for these new challenges and to take advantage of the given development opportunities, we need to ensure sufficient capacity and flexibility of data centres, data-enabled infrastructure, advanced technologies such as business intelligence, artificial intelligence and other algorithmic tools, connectivity, and other ICT services to support government business at all levels. In addition, a system should be put in place to report and collect information on the volume and share of digital service use in a uniform way, supported by business intelligence and analytical tools, enabling all public institutions to monitor and analyse data on an ongoing basis and to use the results for transparent and informed decision-making and necessary improvements in the provision of digital public services. The system will therefore allow for continuous and responsive adaptability of public institutions and their data-driven decision-making processes.

We want to support data-driven business and decision-making by using data tools such as the business intelligence system “Skrinja”³⁰ which combines a data warehouse and analytical tools with dashboards for different types of users (e.g. decision-makers, advanced analysts, less sophisticated users). We want to increase the number of users of these tools from different authorities and the number of different topics covered, such as finance, human resources, property, agriculture, environment, social data and so on. At the same time, we want to encourage the use of advanced tools with artificial intelligence, such as the Semantic Analyser³¹, which processes large volumes of text documents and databases. We want to increase the number of users and the number of content areas covered in Slovenian, e.g. legislation, public procurement, strategic materials, policies, various user initiatives from different government portals. Text corpora will be upgraded to support the publicly available digitised Slovenian language vocabulary (legal and public procurement) for algorithmic (including semantic) processing with artificial intelligence. The aim is to better harness the value and potential of the data already collected for better management, decision-making and delivery of public services to users in a transparent, controlled and secure way.

Achieving this will require the introduction of new tools and data systems and the improvement of existing ones to ensure secure data storage and accessibility, and high data protection when data is transferred across networks. This will require an appropriate environment for the development of big data and data analytics (e.g. business intelligence, semantic analyser, digital administrative statistics). This will lead to better decision-making in the long term, in which reliability, simplicity, accessibility, speed, clarity and transparency of data will be key, and must be backed by the trust of decision-makers.

V.C ► Interoperability, optimisation and digitalisation of processes

Digital transformation means reengineering business processes by integrating digital technology solutions. Public service providers will need to streamline, optimise and redefine processes and procedures in a way that embraces digital technologies. This will help us deliver better services and experiences to our users.

The processes that dictate the way a service is delivered need to be continuously updated and optimised so that they can maximise the potential of digital technologies. It is vital to first optimise the existing process in business terms and then digitise it technologically, as this will help to better exploit the potential of digital technologies. Business process re-engineering is key to the digital transformation of the public sector. This will require taking stock of the current state of all services provided by the government to users, identifying their current status (e.g. whether or not they are available in digital form or their level of digitalisation), determining whether a process

30 <https://nio.gov.si/nio/asset/poslovna+inteligenca+skrinja>

31 <https://nio.gov.si/nio/asset/semantichni+analizator+besedil>

is still needed at all, and identifying room for optimisation and planning digitalisation pathways.

The focus on optimising and digitising processes, the development of new information systems and new smart software tools should lead to the establishment of interoperability of digital processes and digital public services at the legal, organisational, semantic and technical levels, following the European interoperability framework to harmonise digitalisation-related activities in the delivery of public services. In the long term, this will contribute to a more agile public administration and remove administrative barriers for all users of digital services.

To achieve interoperability in the country, a single interoperability framework (based on the EIF framework³²) should be developed as an overarching set of policies, services, standards and guidelines describing the way authorities interact digitally. To this end, processes need to be put in place to define the ownership or custodianship, definitions, development, maintenance, monitoring and progression of the standards, protocols, guidelines and technologies that make up all levels of interoperability for more efficient and less costly operations. Interoperability comprises four fundamental levels: legal, organisational, technical and semantic, which form a single entity.

Prioritisation should take into account the wishes and needs of users, as well as technical feasibility and economic viability, and processes should be optimised holistically, both from the perspective of service users and service providers.

Particular attention should be paid to areas of public services that are indispensable to users' livelihoods and the operation of business entities, even though they are highly complex and more difficult to manage in terms of content, procedures, the number of actors and their interactions. One such example is the need to establish an interoperability framework for spatial data by extending the range of digital services.

To achieve this, it will be crucial for public institutions to realise that they are responsible for digitising public services. The digitalisation of public services must be driven by the desire to optimise business processes, and thus the content providers of business processes must take on a greater role and be responsible for generating change and continuing the digital transformation process.

32 European Interoperability Framework <https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/european-interoperability-framework-detail>

V.D ► The legal and organisational framework supporting the deployment and use of digital services

The transition to digital business, framed by a digital legal-organisational framework, is crucial for an effective digital transformation that changes the way society and the state operate as a whole. The opportunities offered by digitalisation must be taken into account in the design of the legal framework, not only in its implementation. The objective is to design legal-organisational solutions to promote the use of digital public services.

The optimisation and digitalisation of processes must be reflected in a process of creating normative solutions that, in addition to assessing the impact on the digital transition, also allows normative solutions to leave room for the continuous progress of information technology. This can further stimulate the development of digital services, while at the same time necessarily setting the framework for appropriate digital action.

A single digital platform for the drafting of regulations and other general acts should be established, which will be used primarily by public administrations, but will also be available as an example of good practice to other standard-setters (e.g. public authority holders, local authorities). The platform must be designed in such a way that it can be continuously developed or upgraded, modern technologies (e.g. AI, Blockchain, etc.) can be introduced and used, and it can be closely integrated with other systems. This platform will also include a single (global) standard for the drafting of all types of regulations and other general acts in digital form, regardless of the field of regulation. This will allow high interoperability between all stakeholders in the drafting and adoption process, as the transmission, exchange, reuse, processing and publication of documents or their data will be based on the same standard. The global standard will also allow for the creation of specialised standards that take into account the specificities of regulations and other general acts in a given field. One of the most important is a specialised standard for the preparation of spatial planning acts (ePA), which will make it possible to digitise public services between spatial planners and between them and users of spatial data. We will also set up data spaces for public administration with text corpora to support a publicly accessible digitised Slovenian language vocabulary (legal order and public procurement) for algorithmic (including semantic) processing.

Mandatory impact assessment in the area of IT and digital transition should be introduced in the digitised process of drafting and adopting legislation, and the impact of the introduced changes on digital transformation should be monitored and evaluated once the legislation is in force.

Regulators need to be empowered to find legislative solutions that support the introduction and use of digital services, but in such a way that the provision and delivery of public services can keep pace with digital progress without (usually delayed) changes to legislation each time. This is why public administration staff need to be properly and continuously trained in this area.

At the same time as strengthening the readiness and capacity of drafters to understand the needs of the constantly evolving digital environment and creating a simpler and digitised environment for managing the legislative process, special attention should be paid to the consistent and timely involvement of users in co-drafting legislative amendments. The already established system of public consultation and the removal of administrative barriers will need to be strengthened and, in particular, the suggestions of users of digital services should be carefully listened to and taken into account.

A regulatory framework that is open to innovative solutions and encourages actors to test new technologies or services in a real environment (e.g. encouraging experimentation through regulatory sandboxes) will need to be gradually built up.

The provision of digital services is becoming a cross-border activity that transcends national regulatory frameworks, which consequently requires effective and interoperable international cooperation in the development of common digital legislation and the urgent need to address and protect against cyber-attacks and threats. Active participation in the development of common European legislation and its strict adherence to and implementation (e.g. GDPR, eIDAS, emerging data regulations, etc.) are important.

V.E ► Organisation and management adaptations

Effective deployment of digital public services requires stable and strong political support, clearly delineated responsibilities for business process change and good coordination between all stakeholders. A central government body will monitor the implementation of the actions of this strategy, which will form the basis for the creation of modern digital public services as a priority for the government.

Best practice for creating an advanced digitally transformed public sector is the creation of a central body with vested responsibility, power and visibility to lead the digital transformation. As mentioned, inter alia, in the OECD's Digital Government Review of Slovenia (2021), the management and stability of digital government needs to be strengthened and the management levers and coordination mechanisms improved. The influence of the organisation responsible for the development of the digital public sector needs to be strengthened, ensuring political support, sufficient financial and human resources, stronger governance levers and a stronger coordination role between public institutions.

The first step towards achieving this objective is therefore to establish a key institution to lead the processes of digital transformation of the public sector in the coming years (definition of the role of the Chief Digital Officer, appointment of an officer or unit or existing institution). This institution will need a clear mandate from the Prime Minister to define the next steps of digitalisation, implement the strategy, coordinate the efforts of all institutions and set up the necessary coordination processes. This institution will

then need to decide how to coordinate efforts with other relevant institutions for the digital transformation process, such as the Informatics Development Council, which will be key to creating an efficient and interoperable infrastructure.

As many institutions are involved in the provision of key services, all will need to play an active role in coordinating and implementing the objectives of this strategy and other strategic documents in the field of digital transformation. In particular, the institutions responsible for development projects and the administrators of the various information systems through which they deliver digital services to end-users will need to work together. Responsibility for the digital transformation of the content areas lies with the content managers of the content areas, with central leadership, coordination and shared services, and with the cooperation of all these stakeholders.

In order to create a digital public sector, it is important to apply advanced HR practices, including appropriate succession planning and the development of a pool of talented human resources to be guided through a digital development and learning programme. In addition, the new environment will need to include the deployment of an automated and digitally equipped work environment that would enable employees to perform tasks faster and more efficiently, resulting in lower costs and increased customer and employee satisfaction; the establishment of modern digital communication through social networks for a fast and immediate response from the public administration. It is also important to systematically encourage innovation, experimentation, the use of modern technologies and cooperation with start-ups (GovTech), both to maximise the potential of modern technology in public administration and to promote digital transformation in society.

Taking into account the specificities of each public procurement, innovative solutions can also be obtained through alternative types of public procurement³³ (e.g. competitive dialogue, innovation partnership, innovative public procurement³⁴).

This will require a clear mandate from the institution responsible for coordinating digital transformation, investing in workforce development and creating a modern working environment.

33 Guidelines for information solutions public procurement, <https://nio.gov.si/nio/asset/smernice+za+javno+-narocanje+informacijskih+resitev>

34 Guidelines for innovative public procurement [https://gradiva.vlada.si/mandat22/VLADNAGRADIVA.NS-F/18a6b9887c33a0bdc12570e50034eb54/86e216169923a06ec1258909003d17ff/\\$FILE/SmerIJN.docx](https://gradiva.vlada.si/mandat22/VLADNAGRADIVA.NS-F/18a6b9887c33a0bdc12570e50034eb54/86e216169923a06ec1258909003d17ff/$FILE/SmerIJN.docx)



8. Indicators for Strategy Monitoring

To monitor the progress of the strategy, we have also identified key performance indicators that can be used to regularly monitor progress throughout the lifetime of the strategy. The Digital Public Services Strategy is a document that essentially builds on the “Path to the Digital Decade” and the guidance provided by the Digital Compass 2030. Like the Digital Compass, the Strategy will be valid for a longer period, until 2030. With a view to making the strategy as concrete as possible despite the longer period it will cover, we have defined key performance indicators at two levels. Thus, we have already identified the strategic priorities emerging from the Digital Compass 2030 as key success indicators. In addition, the Strategy also sets out key performance indicators at the level of strategic objectives, which are user-driven so that their progress can be monitored on an ongoing and regular basis over the period.

The DESI (Digital Economy and Society Index) has been selected to help monitor the progress of the Digital Public Service Strategy at the level of the strategic objectives. The European Commission has been monitoring the digital progress of Member States through the Digital Economy and Society Index reports since 2014. Each year, the DESI includes an overview of Member States according to defined priority areas which supports Member States in prioritising areas for action, and thematic chapters that offer analysis and comparison of key digital areas between Member States that are essential to support decisions and development paths.

The DESI index consists of four components; 1. human capital, 2. connectivity, 3. digital technology integration and 4. digital public services. The fourth component of the DESI, referring to digital public services, is relevant to the Digital Public Services Strategy as it covers the first and second strategic objectives of the Digital Public Services Strategy through its default five indicators. Strategic objectives: 1. Government institutions will ensure that all key services are delivered digitally and all digital services are co-created and user-driven. These are the primary objectives of this strategy and define what digital public services will look like by 2030. The remaining three of the strategy’s five objectives are supporting objectives that enable public administrations to develop the necessary digital services through 3. Implementation of modern and internationally recognised e-Identity, 4. Securely stored data accessible to all government institutions, and 5. A digitally empowered public administration.

The indicators used by DESI in Chapter 4 on digital public services, which are linked to the EU eGovernment benchmarking and to the set of key public services (Chapter 3), are:

- Public services users
- Pre-completed forms

- Digital public services for the population
- Digital public services for business
- Open data

Digital Economy and Society Index 2022 - Slovenia

	Slovenia			EU
	DESI 2020	DESI 2021	DESI 2022	DESI 2022
4a1 e-Government users % internet users	63% 2019	77% 2020	77% 2021	65% 2021
4a2 Pre-filled forms Score (0 to 100)	NA	NA	68 2021	64 2021
4a3 Digital public services for citizens Score (0 to 100)	NA	NA	69 2021	75 2021
4a4 Digital public services for businesses Score (0 to 100)	NA	NA	84 2021	82 2021
4a5 Open data % maximum score	NA	NA	92% 2021	81% 2021

Figure 2: Slovenia's current position on the DESI - Digital Public Services Index

Strategic objectives 3-5 do not have a direct performance indicator, as they are broader objectives of the digital transformation of public administration, which is not only linked to digital public services, but also to the digital transformation trend and their progress is reflected in user-oriented objectives. In other words, progress on objectives 1 and 2 cannot be made without progress on objectives 3, 4 and 5, as these three objectives are a prerequisite for effective digital public services.

Moreover, the use of DESI performance indicators is also a pragmatic choice in terms of the selection of the methodology for calculating the indicators, as it is proven and EU-compliant, widely recognised within Member States, allows for an ongoing, annual analysis and comparison of the progress of all Member States, and is by design compliant with the Digital Decade and the Digital Compass 2030. In addition, the choice of the calculation methodology and collection approach for these indicators can further relieve the burden on the public administration in terms of regular data collection for performance indicators, calculation of indicators and reporting on the performance of indicators. This makes sense as the whole public administration is facing the major challenge of a widespread digital transformation which goes beyond digital public services and will shape much of the activities and resource requirements in this decade.

The progress of the actions of the Digital Public Services Strategy will be monitored in more detail through the Action Plan, which brings together the key actions for 24 months from all departments and will enable the achievement of the Strategy's objectives.

9. Action Plan

To implement the strategy, an action plan will be prepared with concrete measures that will contribute most to the digitalisation of public services in Slovenia by 2030. This is not a duplication of sector-specific strategies, but a summary of those actions that will have the greatest impact on the digital transformation of the public sector and society and the wider ecosystem of related stakeholders over the next 2-3 years. All the actions contained will have specific owners, timelines and financial resources for implementation. Given the relatively long period for which the strategy is prepared, it will be updated on a regular basis (every two years or more frequently). On the basis of and in the context of the strategy, new actions will be included which cannot yet be foreseen during the preparation of the strategy or for which financial and other resources are not currently planned for their implementation. Reporting on the status of implementation of individual actions is planned to take place on an annual basis and will be combined with reporting on the implementation of the European policy agenda “Path to the Digital Decade” by 2030.



10. Responsibility for Implementing the Strategy

The monitoring and coordination of the implementation of the Strategy and the corresponding Action Plan is the responsibility of the authority responsible for the management of public administration information and communication systems and the provision of electronic public administration services. A specific working group will be set up to coordinate the activities related to the Action Plan in order to ensure the operational implementation of the activities related to the implementation of the Strategy.







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