European Commission

RECOVERY AND RESILIENCE SCOREBOARD

Thematic analysis

Digital public services

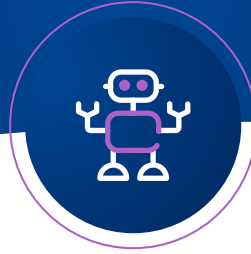December 2021

Policy Overview

The digital public services policy area refers to the use of technology to provide services to citizens and businesses at local, regional and national levels; it encompasses different dimensions: e-government, the digital-isation of the healthcare and justice systems and, crucially from a climate policy perspective, the digitalisation of the transport and energy systems. The EU is working to help public administrations across Europe to make the change to digital so that the benefits of smart public services can be widely enjoyed.

Digital technologies increasingly place new demands and expectations on the public sector. Realising the full potential of these technologies has therefore become a key challenge for public authorities. Effective e-government can provide a wide variety of benefits including more efficiency and savings for governments, citizens and businesses. It can also increase transparency and openness, particularly through the adoption of new organisational processes which boost collab-oration within and beyond government boundaries.

The EU's objective[1] is to ensure that, by 2030, all key public services will be fully accessible online for everyone, including persons with disabilities, and will benefit from a best-in-class digital environment providing for easy-to-use, efficient and personalised services and tools with high security and privacy standards. 80% of citizens will use a digital ID solution. User-friendly services will allow citizens of all ages and businesses of all sizes to influence the direction and outcomes of government activities more efficiently, thereby improving public services. This will also contribute to stimulating productivity gains by European business, thanks to the provision of more efficient services that are digital by default[2], and will incentivise businesses (in particular, SMEs) to move towards a greater digitalisation of their activities; as administrative procedures are simplified, the compliance costs for businesses will be reduced and time will be freed up for more productive uses. Secure electronic identification (eID) has an important role to play in this context, as it can guarantee the unambiguous identification of a person and ensures the right service is delivered to the person who is really entitled to it. For all these reasons, it is clear that accelerating the digitalisation of public services is crucial for Europe's post-pandemic recovery.

Healthcare systems require reforms and innovative solutions to increase their digitalisation and become more resilient, accessible and effective in providing quality care to European citizens. COVID-19 has put a spotlight on Member States' healthcare systems and exposed their vulnerabilities. Moreover, the pandemic has highlighted the impera-tive of having timely access to health data for research, innovation, regulatory and policy-making purpose. Apart from the shocks induced by the pandemic, the EU faces also other, enduring health-related issues, such as ageing, multi-morbidity, health workforce shortages, etc. Public spending on health and long-term care is rising in Member States and is expected to continue to do so.

Digital technologies offer new opportunities to transform the way we receive and provide healthcare services, thus helping address the current challenges. Digital technologies can empower citizens to monitor their health status, adapt their lifestyles, support independent living, prevent non-communicable diseases, and bring efficiency to health and care providers and health systems. Coupled with adequate digital skills, citizens will be using tools that help them to continue active professional life as they age, and health professionals and carers will be able to reap the full benefits of digitally enabled health solutions to monitor and treat their patients. The pandemic has shown the potential and paved the way for generalised use of innovative telemedicine, remote care and robotics solutions for protecting medical staff and helping patients being remotely cared for at their home. The ability for European citizens to access, and control access to, their electronic health records (EHR) across the EU should be greatly improved by 2030, when they should cover 100% of the

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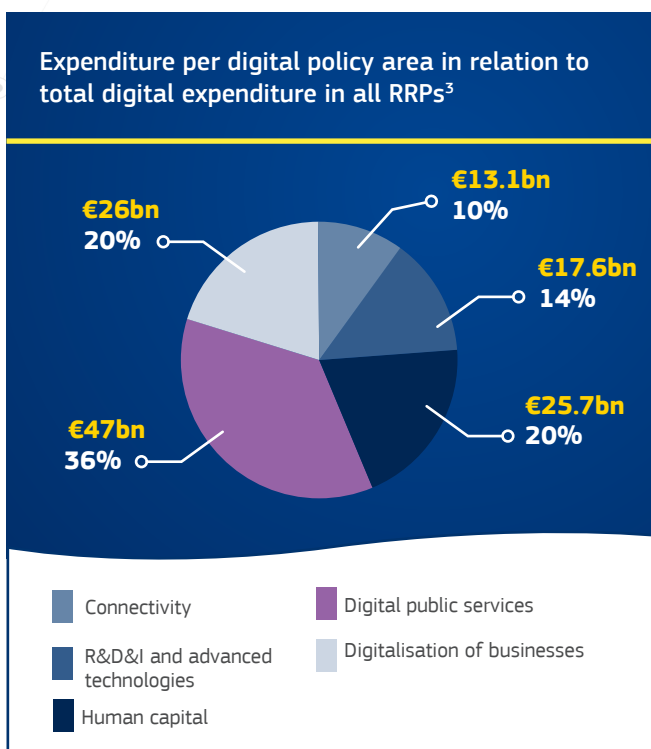[1]European Commission (2021) - 2030 Digital Compass: the European way for the Digital Decade.
[2]Digital services that are so straightforward and convenient that all those who can use digital services will choose to do so, while those who cannot are not excluded.
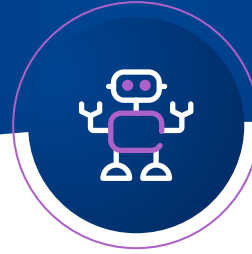
population[3]. The European Health Data Space will strengthen the access and control of patients over their health data, as well as the re-use of data for research, policy making and regulatory purposes.

The pandemic has given extra impetus to the efforts conducted by Member States in making the best use of ICT tools in their justice systems and has underlined the need to strengthen the resilience of the justice system across the EU. The functioning of Member States' justice systems has been significantly impacted by the pandemic, which has created significant challenges relating to, among others, access to justice, the communication between the different actors involved in judicial proceedings, and to cross-border judicial cooperation.

Expenditure per digital policy area in relation to total digital expenditure in all RRPs[3]

€13.1bn 10%

€17.6bn 14%

€25.7bn 20%

€47bn 36%

€26bn 20%

- Connectivity
- R&D&I and advanced technologies
- Human capital
- Digital public services
- Digitalisation of businesses

Against this background, it is essential that the EU brings the digitalisation of justice up to full speed. While a number of initiatives have already produced positive results, significant work ahead remains to be conducted both at national and at EU level to further strengthen the resilience of the justice systems and improve their capacity to make fully use of the opportunities offered by digital solutions. The digital transformation should enable justice systems to become truly modern and efficient[4].

The digitalisation of the transport sector is another key objective of the European Commission[5] in the process of achieving sustainable, smart, and resilient mobility. Indeed, digitalisation will become a key driver for the modernisation of the entire system, making it seamless and more efficient. Europe also needs to use digitalisation and automation to further increase the levels of safety, security, reliability, and comfort, thereby maintaining the EU's leader-ship in transport equipment manufacturing and services and improving our global competitiveness through efficient and resilient logistics chains. Digital solutions for connected and automated mobility have great potential for reducing traffic accidents, enhancing quality-of-life, and improving the efficiency of transportation systems, including concerning their environmental footprint. Rural and urban communities will be able to benefit from digital technologies that enable services such as multi-modal intelligent transport and traffic management systems.

Digitalisation also supports energy system integration. Better monitoring of energy flows can enable dynamic and interlinked flows of energy carriers and allow for more diverse markets to be connected with each other and tackle grid congestions and provide the necessary data to match supply and demand at a more disaggregated level and closer to real time. The EU strategy for energy system integration[6] sets out key actions to accelerate the implementation of digital solutions driving the clean energy transition. The system-wide digitalisation of Energy Action Plan[7] has been proposed on the actions contributing to the EU energy objectives, the action plan aims at supporting the development of a sustainable, (cyber) secure, transparent and competitive market for digitalised energy services, ensuring data privacy and sovereignty, and also by supporting investment in digitalising the energy infrastructure.

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[3]The figures based in this thematic analysis are based on the pillar tagging methodology for the Recovery and Resilience Scoreboard and correspond to the measures allocated to the policy area "E-Government, Digital Public Services and Local Digital Ecosystems" as primary or secondary policy areas.
[4]European Commission (2020) - Digitalisation of justice in the European Union: A toolbox of opportunities
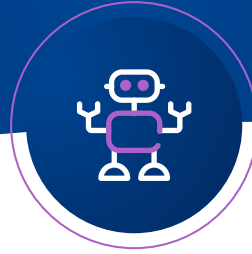[5]European Commission (2020) - Sustainable and Smart Mobility Strategy – putting European transport on track for the future
[6]European Commission (2020) - Powering a climate-neutral economy: An EU Strategy for Energy System Integration
[7]The Digitalisation of Energy Action Plan is foreseen for adoption the first half of 2022.

Digitisation will also be fundamental in electricity markets, where the development of smart grids can boost the integration of renewable sources and allow for better cooperation of a range of actors, from generators of different sources, aggregators, system operators, and heavy consumers. It will improve the overall security of supply and grid reliability by reducing transmission and distribution losses, increasing the ability to rapidly isolate incidents and remedy them, as well as enhancing the preventive maintenance capabilities. The use of smart meters can also allow for a more responsive energy demand management from a greater number of customers, who can automatically react to price signals; some consumers will be empowered as 'prosumers', putting small amounts of renewable energy onto the gird. This will allow an efficient and reliable integration of more renewables into the system, particularly as storage increases. But digitalisation also represents a challenge when it comes to cybersecurity, increased energy demand for ICT equipment, networks and services which needs to be adequately managed in the context of an integrated energy system.

While digital solutions have the potential to improve the functioning and availability of various subsets of public services, we must also recognise that there is still a significant gap to reach this vision and objectives. The RRF is the EU's response to that; and while this new recovery instrument will not be sufficient on its own and additional efforts from national governments and the private sector will need to complement it, the Commission has encouraged Member States to include in their recovery and resilience plans (RRPs) investment and reforms to improve the use of digital technologies in the public administration at large.

Digital Public Services in the recovery and resilience plans

Overview of the plans[8]

E-government, digital public services and local digital ecosystems

Measures aimed at digitalising public services and at introducing or improving e-government solutions figure prominently across RRPs. It is clear that all Member States seek to modernise and improve public administration processes in order to make them more user-friendly, citizen-oriented and interoperable, thereby aiming to boost the access to and uptake of digital public services by individuals and businesses.

Reforms

Reforms aimed at **integrating eID solutions** in government processes are present in many endorsed RRPs, which is encouraging from the perspective of the EU objective, as expressed in the Digital Decade Communication and proposed Decision for a Policy Programme, to achieve by 2030 a wide deployment of a trusted, user-controlled identity, allowing each citizen to control their online interactions including with public administrations.

Ensuring the **interoperability of various digital public platforms** is also a common concern for most Member States and many RRPs include reforms in this area, with the stated objective of achieving compliance with the "once only" principle, whereby citizens and businesses provide data to the public administration only once, while public bodies exchange this data when needed rather than requesting it again. These measures are expected to significantly reduce the administrative burden for users of digital public services.

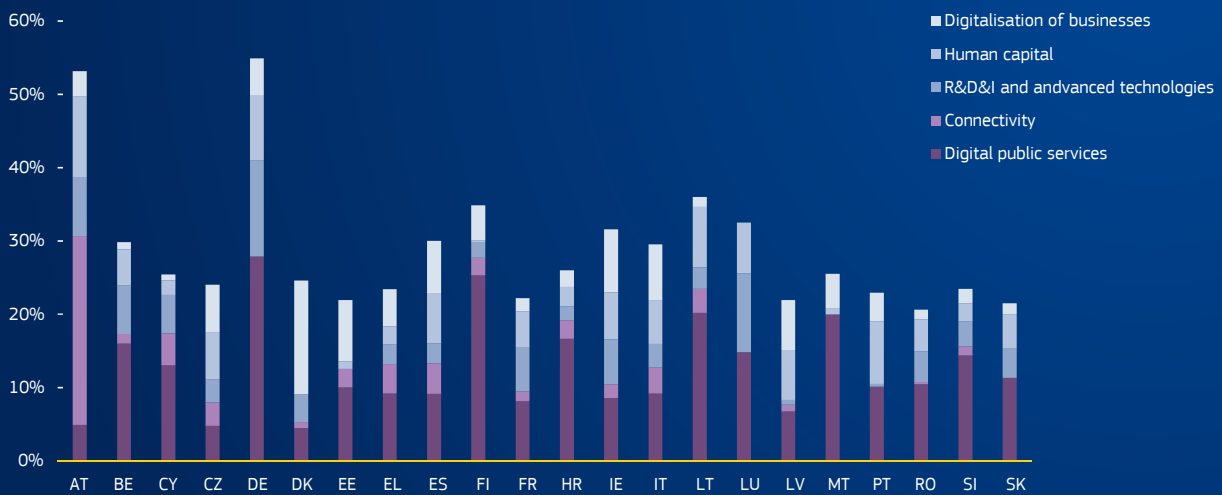Member States have also considered the importance of **data collection and management** and a number of plans include

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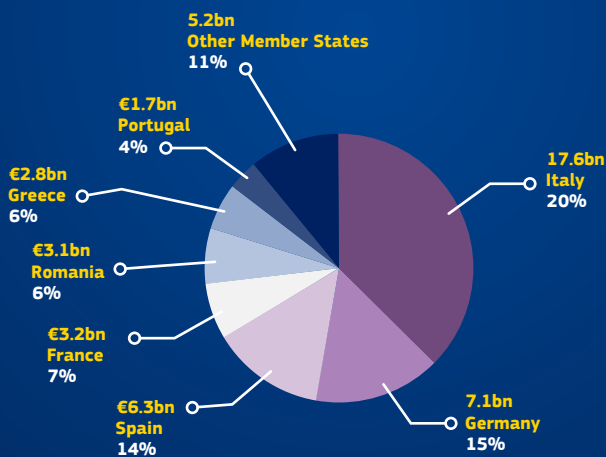[8]Sample of plans: 22 endorsed RRPs (i.e. all Member States, except BG, HU, NL, PL and SE).

Digial expenditure per Member State as share of RRP total allocation and breakdown per digital policy area

Legend:
- Digitalisation of businesses
- Human capital
- R&D&I and andvanced technologies
- Connectivity
- Digital public services

measures aimed at improving the skills and organisational structures for the use and management of data within public administrations. Similarly, measures that introduce advanced data analytics and AI solutions in public administration feature in several plans and are expected to support data-driven decision-making going forward.

Total digital public services expenditure per Member State

- 5.2bn Other Member States 11%
- €1.7bn Portugal 4%
- €2.8bn Greece 6%
- €3.1bn Romania 6%
- €3.2bn France 7%
- €6.3bn Spain 14%
- 17.6bn Italy 20%
- 7.1bn Germany 15%

Investments

Several RRPs include measures aimed at **integrating advanced technologies in government processes**. Governmental clouds will be set up in several Member States and are expected to simplify citizen interaction with public authorities by reducing information processing time, lowering the cost of government services and enhancing the security of sensitive data. Due consideration is also given in a number of plans to strengthening the state's cybersecurity capacity, given that- cyber-crimes now have demonstrated their potential to block critical public services.
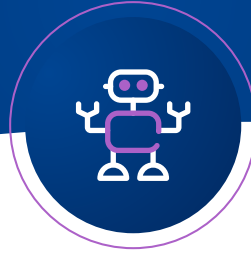
Taken together, these measures are expected to have a lasting impact on the digital transition of EU Member States' public administrations, by ensuring that they become more user-friendly, citizen-oriented and efficient thanks to improved processes running on a modern digital infrastructure. Some of the key deliverables through which the implementation of these measures will be tracked and assessed are: the number of new digital identity cards produced and in circulation, entry into force of interoperability laws aligned with the European Interoperability Framework, number of public institutions connected and fully using the Government Cloud.

Digitalisation of healthcare systems

Many RRPs contain measures aimed at the digitalisation of national healthcare systems, which is clearly viewed by Member States as a means not only to address with the weaknesses exposed by the COVID-19 pandemic but also as an opportunity to ensure innovative, accessible and effective healthcare services to citizens in the long term.

Reforms

The RRPs contain a number of reforms aimed at **providing a solid legislative and administrative foundation for further digitalisation of the healthcare sector.** These reforms complement and amplify the more general, non-digital reforms meant to strenghen the healthcare sector.

Several plans feature reforms aimed at extending the scope of **telemedicine services**, by defining the applicable rules and standards. Establishment of **specific IT systems and electronic platforms,** for example, for e-health services or for monitoring antibiotic consumption and healthcare-associated infections, is also envisaged in some of the plans. Moreover, the RRPs recognise the importance of ensuring **interoperability** between various systems and databases, notably by defining interoperability standards. In a similar context, Member States also plan the consolidation of fragmented national health registries to prepare them for the provision of shared health services and information exchange. These measures are also complemented by specific training **on digital skills.**

Reforms also focus on ensuring a more efficient, innovative and secure **re-use of health data for research, policy making and regulatory purposes.** Member States aim to standardise their data pools, increase data analytics and facilitate exchange of data. One RRP includes the establishment of the Health Data Authority, tasked with the governance of access to health related data, which will be used to better inform policy decisions on health matters by collecting, processing and using health data in a more comprehensive way. Also, new uses of health data are facilitated – for example, by adopting legislation for the safe and efficient secondary use of data for such purposes and R&D&I, education, policy making, etc.
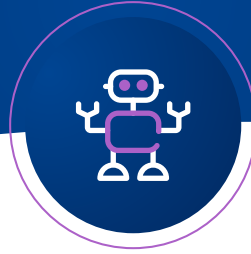
Investments

The areas of reforms are reflected also in the investments into the digitalisation of healthcare.

A number of plans contain investments to **unlock the potential offered by health data,** in line with the EU priorities and in particular the creation of a European Health Data Space. Member States seek to enhance availability, access and exchange of data by notably setting up digital health platforms, interlinking various health registries/databases, and promoting the use of electronic health records. These measures, coupled with the use of innovative technologies such as Artificial Intelligence, are expected to improve healthcare analytics, predictive capacity as well as research in the area of healthcare.

Interoperabilty and security also feature highly on the list of objectives in the Member States' RRPs. In particular, several plans contain measures to ensure the interoperability of e-health infrastructure and software, in light of the considerable number of IT systems/platforms/registries and actors involved. Security in the area of digital health is also a key pre-occupation of Member States, given the sensitivity of health data. For example, one RRP envisages the establishment of a Security Operations Centre (SOC) specifically dealing with e-health to strengthen the capabilities in cybersecurity.

Furthermore, significant expenditure is devoted towards **the increased deployment and uptake of telemedicine** in Member States. Telemedicine has a significant potential to improve the quality and continuity of care, promote access for health services for patients in remote areas, and reduce the costs of healthcare. Among the relevant investments included in the plans are, for example, the development of digital solutions to increase the share of social welfare and health care contacts handled remotely by electronic means (e.g. telephone, chat, video, etc.). Other measures include the increased use of telemedicine to better support patients with chronic diseases, e.g. through remote doctor-patient interactions, in particular for diagnostics and monitoring.

Some investments are aimed at the **digitalisation of the health support to mothers and their children,** for example by developing an electronic mother-child passport platform to improve health opportunities for pregnant and breastfeeding women and their children or by digitalising the administrative body dealing with matters relating to childhood, mother and child protection, and medico-social support for the mother and child.

Digitalisation of justice systems

Measures aimed at the digitalisation of justice systems feature across several RRPs and aim to contribute to national efforts towards completing the digital transformation of justice, as well as to address the country-specific recommendations on improving quality and efficiency of justice.

Reforms

Several RRPs include reforms, including amendments of the national legislation that create the necessary conditions for digitalisation of national justice systems. The reforms aim at improving access to justice and increasing its efficiency.

Several RRPs target reforms to **modernise the courts** by the deployment of videoconferencing, audio-visual recording equipment, and secure electronic channels for communication. Such measures aim at increasing the resilience of justice systems and allowing better access to justice. In addition, Member States focused on measures improving the **digital cooperation between national judicial authorities** through enhancing interoperability between the IT systems across judicial authorities.

Member States have also considered the importance of **digital registries and electronic case management systems.** Several RRPs focus on reforms (and corresponding investments) facilitating the digitalisation of documents, simplification, and standardisation of judicial procedures. RRPs also target measures enabling **digital access to court proceedings,** for example, allowing for electronic communication and interaction with stakeholders (individuals and businesses) and creating **electronic platforms** containing case-related information, which increases transparency.

Measures relating to the digitalisation of justice systems are also reinforced in certain cases by corresponding measures on network security or cybersecurity included in some RRPs.
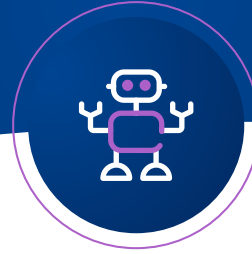
Investments

Investments in RRPs relating to the digitalisation of justice concern the setting up of the corresponding digital infrastructure and IT systems (e.g., interoperability standards, electronic portals with different purposes, such as allowing access to services, document management platforms) to support the digitalised processes in national justice systems. These investments strongly reinforce the reforms by creating the necessary underlying infrastructure and IT systems to achieve the objectives of digitalisation of justice.

Several plans also include measures to improve the digital skills of judges and judicial employees.

Digitalisation of transport and energy systems

RRPs reflect the key role of digitalisation in making the EU transport systems more sustainable and promoting smart and resilient mobility. Several Member States include measures, consisting in investments and reforms, aiming at fostering the digitalisation of different modes of transport. Member States also recognised the potential of digital solutions to **accelerate the decarbonisation of energy networks,** to increase energy efficiency and generally contribute to decarbonisation.

Reforms

While there are no specific reforms targeting the digitalisation of transport or energy systems, the related investments strongly contribute to reforms in the area of decarbonisation and the objectives of the digital transition.

Investments in the digitalisation of transport

Several RRPs include investments that target the **digitalisation of rail and road infrastructure** to ensure interoperability, more efficient management, and improvement of safety. Regarding rail, this includes the extension of the coverage of the European Rail Transport Management System (ERTMS), which ensures interoperability with other European rail networks. Regarding road, measures concern the development and deployment of intelligent transport systems contributing to sustainability and safety goals. Some plans also target the digitalisation of air traffic management systems, ports, and logistics systems.

Member States also focused on enhancing multimodal mobility systems enabled by digital solutions based on the **Mobility as a Service (MaaS)** concept. MaaS allows the integration of various transport services into a service accessible on demand. Some RRPs include measures using digital tools to improve urban **mobility management,** such as smart traffic signals for public transport, real time information systems on public transport services, projects to improve intermodal or inter-service ticketing.

In the context of the RRF, other measures indirectly support the development of smart mobility such as 5G roll-out, the development of artificial intelligence, blockchain, and other efficient digital technologies.

Investments in the digitalisation of energy systems

Several RRPs target investments relating to the integration of **smart meters** in energy systems and the development of **smart grids.** Some measures include the use of digital tools to streamline the permit granting processes for renewable
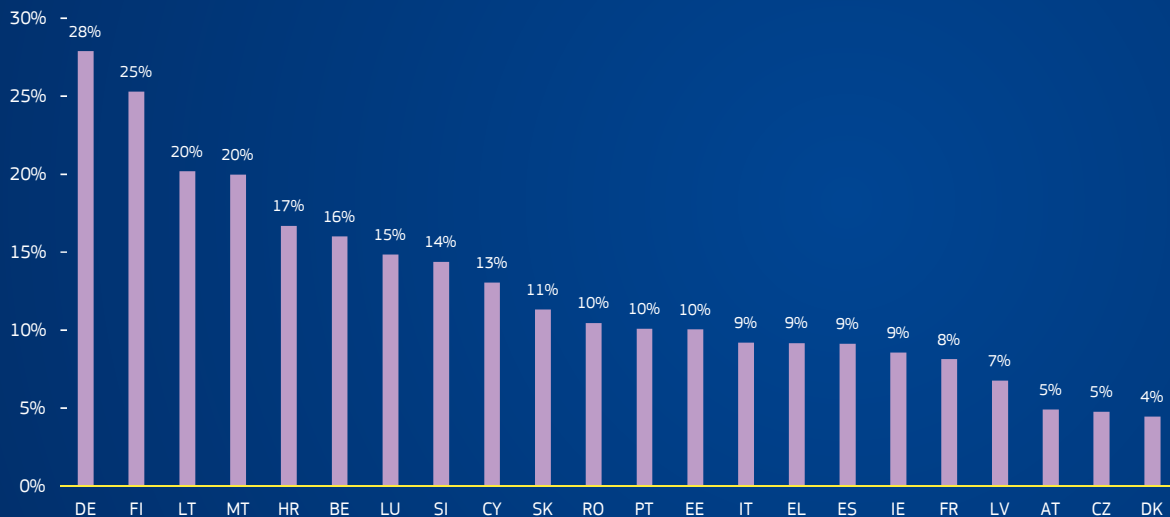
energy and support (technical or financial) for building renovations.

Member States also introduced measures that support R&D projects for the development of **state-of-the art technologies** contributing to the energy transition. In addition, certain **IPCEIs** will also support the objective of accelerating the digitalisation of energy systems. The projects on microelectronics and cloud infrastructure and services are notably expected to develop more energy-efficient solutions and thus contribute to the achievement of climate objectives
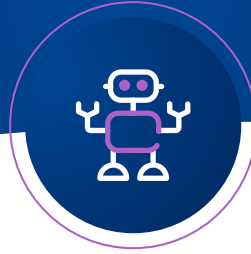
Multi-country or cross-border projects

A number of RRPs will contribute to the multi-country project on European Reference Genome, which aims to support the creation of a federated European genomic reference data resource for public health, healthcare and research purposes. In particular, some measures in the RRPs provide for the creation of a representative collection of reference genome data of citizens. The objective is to strengthen Member States' genetic research and digital capacity in order to facilitate secure matching and analysis of these data

Share of Digital Public Services expenditure
% of total allocation per Member State

Member State	Share
DE	28%
FI	25%
LT	20%
MT	20%
HR	17%
BE	16%
LU	15%
SI	14%
CY	13%
SK	11%
RO	10%
PT	10%
EE	10%
IT	9%
EL	9%
ES	9%
IE	9%
FR	8%
LV	7%
AT	5%
CZ	5%
DK	4%

Examples of measures

E-government, digital public services and local digital ecosystem

The Italian plan includes a measure dedicated to the digital transformation of the public administration. The measure has several objectives: (a) improving the quality, efficiency, usability and accessibility of digital public services; (b) supporting the adoption of key enabling platforms and apps (such as PagoPA) by public administrations ; (c) supporting a wider adoption by public administrations of the digital solution for eID (SPID), the electronic national identification document and the national registry of identifying data; (d) creating digital services access points in areas of the country that, due to their geographical location, are at risk of suffering from a lack of connectivity; (e) supporting public administrations in the gradual adoption of the platform for digital notices.

The digital transformation of public sector entities is also a particular focus of **the Greek plan,** which dedicates Component 2.2 to this objective. The measures included under the component aim at modernising the public administration by improving its operational model and enabling the provision of high-quality services to citizens and businesses. Reforms and investments target: (a) the digital transformation of public sector's organisations, including the digitisation of archives and enhanced digital services; (b) business process improvements followed by the incorporation of modern IT systems; (c) increased interoperability between systems and data; (d) wide-ranging cybersecurity and data governance strategies and policies; as well as (e) extended use of advanced technologies, such as cloud computing and big data.

"One-stop-shops" harmonising and centralising the helpdesk system of all public administrations' online services can lead to considerable improvements in the quality of service provided to citizens and businesses and t**he Croatian plan** includes an investment dedicated to this. The "one-stop-shop" will allow a better communication with public administrations, quicker access to information and possibilities to send feedback and assess the quality of interaction with civil servants. The plan also includes an investment to enable citizens to easily use online public services on their smartphones by creating a digital mobile e-service platform. Finally, the plan also promotes the use of electronic signatures in citizens' interaction with the public administration and includes an investment for the deployment of Croatia's digital identity card to enable users of e-IDs to sign documents on mobile platforms.
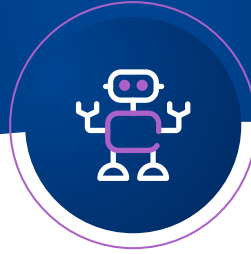
Digitalisation of healthcare systems

Investments in digital solutions in healthcare are covered in **the Finnish plan** and are aimed at: (a) increasing resource efficiency and facilitating access to healthcare services (e.g. by speeding up care needs assessment and referral, as well as enhancing remote diagnosis, monitoring and treatment of diseases); (b) supporting early identification of problems and preventive services; (c) increasing the sharing of multidisciplinary services and expertise between regions and service providers, and (d) strengthening the role of customers. National and regional actors will develop digital services targeting citizens (e.g., preventive services, symptom assessments, self-care services, digital mental health services, etc.), professional systems (e.g., customer segmentation and digital service models based on customer data analysis, new business manage-ment solutions, etc.) and management solutions (e.g., advanced knowledge management and analytics solutions for better control and monitoring of service packages).

Several measures to digitalise the healthcare system are included in **the French plan**: (a) deployment of State information systems (the shared medical record, digital health platform, one-stop shop for all digital services for healthcare professionals, electronic identification cards for healthcare professionals); (b) interoperability and security of software used by the public and private healthcare actors; (c) support to the deployment of software and their integration with existing systems and support for healthcare professionals and users to enhance the take-up of new solutions; and (d) equipping

long-term care facilities with digital infrastructure such as internet connections, computers and software. These measures underpin the establishment of two flagship projects of digital health in France: the health record and the electronic health data space. These measures will have an impact on promoting better exchange and access to different types of health data, which is particularly useful not only to support healthcare delivery, but also for health research and health policy-making purposes.

Proposing fast access to high-quality data in healthcare is a particular focus of **the Slovenian plan** and this will primarily be ensured by: (a) integrating new digital services into healthcare; (b) promoting the use of information technology to communicate with patients and stakeholders; (c) introducing quality monitoring based on real-time data; (d) improving capacity and patient-management planning; and (e) improving the planning of hospital facilities, medical services and material requirements. 1 500 health professionals are expected to have access to the new digital e-health system.

Digitalisation of justice systems

A reform focusing on the digital transformation of the justice system (E-Justice) aiming to improve its efficiency is included in **the Greek plan**. The reform extends to all branches of the judiciary (civil, penal and administrative, Court of audits) and consists of a set of actions aiming at (a) increasing the IT capabilities with regard to the digitalisation of documents, (b) the enhancement of the record-keeping system of the courts, (c) the simplification, standardisation and acceleration of procedures through digitalisation, (d) interoperability of IT systems of the courts with those of the Ministry of Justice, as well as other national and international authorities and/or databases. Similar structural reforms of justice are also included in **the Czech plan** which aims to create the conditions for digital justice through (a) the analysis of the use of data and mapping the needs of digitalisation in the justice sector, along with the deployment of a data warehouse and increased storage capacity, (b) the capacity increase of infrastructure enabling remote access, (c) increasing the number of equipped videoconferencing rooms for the judiciary and audio-visual data recorders for court hearing rooms, and (d) creating an eJustice portal that provides online services and access to information.

Investments aimed at improving the functioning of the justice system (thereby shortening the duration of judicial proceedings) are also part of **the Portuguese plan**. The investment also promotes the adoption of the "digital by default" principle in internal processes and in interaction with stakeholders to make new services available online. The investments are complemented by the enhancement of technology infrastructure and equipment (including datacentres, disaster recovery and the creation of a multichannel contact centre in the field of justice). Investments in this area also have a cross-border dimension as they are expected to develop the interoperability of national systems with those of other EU Member States pursuant to EU initiatives.

Part of a wider overall strategy to digitise and modernise the outdated infrastructure, judicial file management system and network security, a measure in **the Belgian plan** focuses on the digital transformation of civil, commercial and criminal courts, including the modernisation of existing hardware infrastructure and equipment, deploying videoconferencing capabilities, and introducing a digital case file (including a digital registry). In addition, the project aims at increasing the rate of online publication of judgments which is currently low and is essential to help individuals and businesses comply with the law. The RRP also includes measures that aims to digitise police files that can then be exchanged with the justice system, as well as measures to increase the cybersecurity capabilities of law enforcement agencies to ensure that private communication interception operations can be carried out in a 5G environment and that such intercepted communications can be digitally registered and shared with prosecutors.
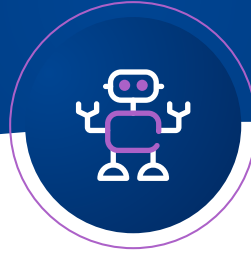
Digitalisation of transport

Investments in the local urban transport (Sustainable urban mobility) and on the national network (Sustainable long-distance mobility) are part of **the Spanish plan** and they involve all modes of transports (rail, road, air, and ports) with the aim of making transport more interconnected, secure, and sustainable. On urban mobility, the measures promote the digital and sustainable transformation of the public transport sector as a real alternative to the use of private vehicles with actions like real time information systems on public transport services, projects to improve intermodal or inter-service ticketing, projects to support traffic and mobility management and information analysis in order to increase the efficiency of the transport system. On long-distance mobility, there are investments in European Rail Traffic Management Systems (ERTMS) and the digitalisation of passenger and freight transport services while reforms will put forward a strategy for the digitalisation of transport and innovation in order to ensure the development of connected and smart mobility solutions.

A reform aimed at the establishment of an intelligent transport system (ITS) in urban areas and the Cyprus TEN-T network, using digital technologies is included in **the Cypriot plan.** The objective of the measure is to enhance the technological infrastructure, to enable better and more efficient monitoring of the infrastructure and to introduce smart features to it. The reform provides for the delivery, installation, and connection of 300 sensors. This equipment is expected to constitute the basis for the digitalisation of the physical mobility networks in a geographical information system (GIS) database and the integration of mobility services.

Supporting the modal shift by investment in rail, local public transport, smart mobility, and inland waterways is a key objective of **the Belgian plan**, which notably includes an investment into a smart mobility application based on open data for rail transport (at the level of the Federal State) and MaaS deployment (in the Brussels-Capital Region). The measures aim at improving traffic management and ticketing. Furthermore, an investment in the Walloon Region foresees the installation of smart road signals for public transport buses.

Digitalisation of energy systems

The Croatian plan covers an investment in upgrading and digitalising the Croatian transmission and distribution electricity network. The measure targets the modernisation of the distribution system, including the purchase and deployment of 40 000 smart meters and the development of a "smart grid". This project would enable integration of new renewable energy capacity, better connection of the south-north grid as well as connecting six islands to the mainland grid in order to increase their potential. As a result, electricity produced from renewable sources can flow from the south of Croatia, where most renewable energy sources can be deployed, to the north, where most electricity is consumed. A similar investment concerning the installation of a total electricity storage capacity of at least 240MW (or 480MWh) by 31 December 2025 is also part of the **Romanian plan**. This investment will contribute to increasing the flexibility of the electricity grid and the integration of additional renewables generation capacities.

An investment aiming to contribute to reaching climate neutrality objectives by creating a sustainable grid infrastructure in which green technologies (notably wind) may be more easily deployed is included in **the Latvian plan.** The measure is also expected to contribute to the synchronisation of the Baltic electricity systems with continental European networks and the objectives and activities of the Baltic Electricity Market Integration Plan. The measure consists of direct investment in upgrading the electricity grid, developing IT solutions to increase the flexibility and security of the transmission system and distribution system and creating among others a national electricity market data exchange and storage platform and an automated smart metering system. The measure shall also improve the regulatory framework and the enabling conditions to facilitate the deployment of onshore wind energy on state forest land and to reduce legal uncertainty for investments in wind power.
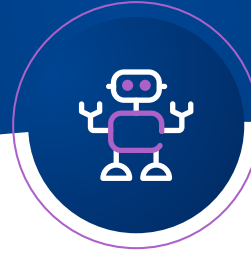
Country overview

For all Member States, the listed relevant components are based on the Council Implementing Decision. The allocations are based on the pillar tagging methodology for the Recovery and Resilience Scoreboard and correspond to the measures allocated as primary or secondary policy areas to the policy area "E-Government, Digital Public Services and Local Digital Ecosystems". The descriptions are based on the content of endorsed plans and on the 2021 Digital Economy and Society Index country reports.

Austria

Allocation: EUR 170 million. Relevant components: 2C, 4A, 4C

The RRP includes the following measures to improve digital public services: (i) digitalisation fund public administration which will be used to implement IT consolidation in the Federal government, to develop public and business services and to improve the efficiency of procedures; (ii) electronic mother-child passport platform which aims to improve health opportunities for pregnant and breastfeeding women and their children and increase social cohesion; and (iii) digitalisation of cultural institutions.

Belgium

Allocation: EUR 948 million. Relevant components: 1.2, 2.2, 2.3, 3.2, 4.1, 4.3, 5.2

The measures in digital public services include:

Measures to digitalise services offered by the social security institutions, as well as interactions between users and the administration.

⇢ A package of 12 investment measures to digitalise several federal public administrations, among which the justice system, but also the Federal Employment Agency, the Ministry of Foreign Affairs, the Federal Agency for the Safety of the Food Chain, asylum and immigration processes, as well as crisis management. There will also be a cross-cutting project to improve the use of public data and one project to implement the Single Digital Gateway.

⇢ Measures on e-health that will give healthcare providers new digital tools (for instance, in the fields of video consultations and home hospitalisation) and will support the effective adoption of these tools. They also aim to increase the secure use of health data for public policies

and for research and innovation. The RRP also provides for the establishment of the Health Data Authority, tasked with the governance of access to health related data.

⇢ Several measures to digitalise regional and local public services in Wallonia, Brussels or Flanders. Some of these investments are targeted at specific institutions or procedures, for instance the digitalisation of services offered by the Office of Birth and Childhood of the Wallonia-Brussels Federation, or of urban and environmental permit procedures in the Brussels region and in Wallonia.

⇢ Four investment projects in the field of energy, in particular an offshore energy island to improve the integration of renewable energies in the grid.

Croatia

Allocation: EUR 1.1 billion. Relevant components: 2.3, 5.1, 2.5

The plan includes significant investments for the digitalisation of public administration, supporting the modernisation of the digital infrastructure and the improvement of digital public services for citizens and businesses. The plan includes a number of consistent measures to improve the interoperability of information systems used by the Croatia's government, which will materialise with the establishment of a central register for public authorities and support data driven decision-making at all levels of the administration. It is reinforced by significant investment to expand the capacity of the State cloud and integrating it the Shared Services Centre into the Common European Data Spaces. The plan includes an investment to create a one-stop-shop harmonising and centralising the helpdesk system of all public administrations' online services to strengthen the interactions between citizens, business and public services. The plan also includes an investment to enable citizens to easily use online public services, by creating a digital

mobile e-service platform, promoting the use of electronic signatures in citizens' interaction with the public administration and investments for development of digital identity card. Measures to digitalise the healthcare sector are also envisaged, including upgrading the central information health system, improving the digitalised system of joint procurement, and investments into digital tools in hospitals.

Cyprus

Allocation: EUR 157 million. Relevant components: 1.1, 2.1, 2.2, 3.1, 3.3, 3.4, 3.5, 4.2, 5.2

Component 4.2 is dedicated to promoting e-government, a goal also envisaged by various other complementary measures of the plan. The component includes reforms and investments for creating secure and quality digital services for the public, developing a government cloud, creating a modernised registry for companies (beneficial owners), and digitising central government services, including certain police services, and the processes carried out in the Cyprus Ports Authority. Component 3.5 provides additional measures for digitalising public administration, e.g. the digitalisation of the tax and customs departments and the investment in a cloud-based IT system for the Cypriot Securities and Exchange Commission. Components 3.1, 3.3 and 3.4 include measures for (i) strengthening e-justice, (ii) setting up a blockchain platform for local traditional foods and drinks, (iii) creating an information system for the Registrar of Companies, (iv) improving public procurement using an e-procurement tool, (v) digitally transforming the Law Office and courts and (vi) strengthening the e-system for issuing building permits. Component 5.2 includes the digitalisation of the social insurance system and the labour department and public employment services, while components 2.1 and 2.2 include investments in smart metering infrastructure, smart grids and Intelligent Transport System. Finally, component 1.1 supports the digitalisation of healthcare infrastructure and equipment, stepping-up e-health services, developing dedicated digital platforms for the healthcare staff, in particular, designing an electronic platform for monitoring antibiotic consumption and healthcare-associated infections and deploying cross-border interoperable e-health services based on EU standards.

Czechia

Allocation: EUR 334 million. Relevant components: 1.1, 1.2, 1.6, 2.1

The plan envisages building a robust back-end infrastructure to link multiple public administration IT systems. The upgraded core registers are expected to facilitate data exchange between institutions and strengthen the 'once-only' principle. Czechia will focus on e-health solutions with improved data sharing between healthcare providers, greater interoperability stronger cybersecurity, and development of telemedicine and new digital services. The RRP also plans to support digitalisation of and new technologies for railway infrastructure.

The plan also outlines action to upgrade or create new front-end portals (for individuals, for justice matters, healthcare and for entrepreneurs) that are expected to make digital public services more user-friendly and interoperable. Single log-in interfaces and more pre-filled forms are expected to increase the number of e-government users. The number of digital public services for individuals and enterprises should also increase. Czechia plans to set up specialised competency centres to guide and advise in the process of public sector digitalisation. The plan also contains measures to aid publication and a wider use of open data. It is expected to lead to a significant increase (from 23 to 100 by 2024) in the volume of publically available datasets.

Czechia aims to use the RRF to digitise the construction permitting procedure and thus contribute to the general reform that should shorten the whole process, which has been an obstacle both for individuals and for organisations.

Denmark

Allocation: EUR 69 million. Relevant component: 6

As part of its RRP, Denmark has sought to make its healthcare system more resilient by focusing on data management and digitalised patient treatments, such as tele-medicine, electronic patient records, and digital management systems.

Denmark also intends to continue to develop its digital public administration, as part of the digitalisation strategy that will be adopted at the beginning of 2022.
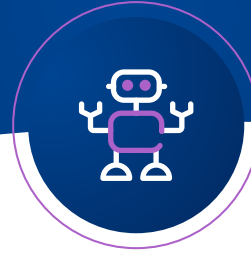
Estonia

Allocation: EUR 97 million. Relevant components: 1, 3

Component 3 of the Estonian RRP ('Digital state') is almost entirely focused on further advancing the already-well-digitalised Estonian public administration. It includes measures to help businesses and the public to take advantage of the opportunities offered by the latest technologies.

Almost half (47%) of the measures supporting the digital transformation in the Estonian plan will aim at further digitalising the administration and public services. The most important measures in the plan are:

→ The reconfiguration of basic digital public services and the safe transition of these services to cloud infrastructure to increase their resilience, security and reliability. The IT systems and services of the public authorities will be migrated to a private cloud and will require large-scale security testing.

→ The development of business-event services and a digital gateway to improve efficiency in the delivery of public services and reduce administrative burden for businesses.

→ The redesign of several public services (and the underlying IT systems) to enable their automatic delivery on the basis of life events or business events experienced by citizens (such as a marriage, the birth of a child, or the creation of an enterprise).

→ Setting-up a national, virtual-assistant platform in the #Bürokrat programme to improve the user-friendliness of access to online public services.

→ The creation and development of a centre of excellence for data management and open data to foster better management of the data collected and held by the Estonian public authorities. This will aim at improving the quality of the data, increasing its use for decision-making, and making the data available as open data so that it may also be reused by other stakeholders.

Finland

Allocation: EUR 528 million. Relevant components: P2C1, P2C2, P2C3, P3C1, P3C2, P4C1

The Finnish RRP includes significant investments in the digitalisation of public administration and improvement of digital public services for the public and businesses. The plan envisages important investments to complement the ongoing reform of the social and health care sector, introducing a wide range of digital innovations and eHealth projects, including contacts with patients handled remotely by electronic means. The reform of the public employment services process also encompasses important digital innovations to support the development of personalised and integrated services for job-seekers, thereby increasing active labour market integration. A digital information system will be developed to support inter alia customer relations management, appointment booking, self-reporting by job seekers and online guidance. The plan also includes several measures promoting the digitalisation of public administration, with a focus on data-driven innovation, the exchange of digital information and use of public sector data (e.g., an electronic solution for the prevention of money laundering, real-time structured exchange of digital financial data such as e-invoices or procurement documents, and residential and commercial property information system). The plan also contains investments in the digitalisation of rail transport, encompassing the preparation and carrying-out of testing and piloting activities that will lead to the introduction of the European Rail Traffic Management System (ERTMS), along with the 4G and 5G-based Future Railway Mobile Communication System (FRMCS).

France

Allocation: EUR 3.2 billion. Relevant components: 7 and 9

The plan includes a number of measures aimed at improving digital public services, including digitalisation of the state and territories, E-identity (eID) with the objective of delivering in 2023, up to 12.5 million national digital identity cards and an application for online authentication. A measure is devoted to cybersecurity specifically for strengthening public services whose disruption would have a strong detrimental impact on citizens. It also supports innovation competitions to develop an efficient and competitive cybersecurity offer and make local centres able to respond to cybersecurity challenges. Another important focus of the plan is the digitalisation of health, supporting national digital health service infrastructure and project management. The plan will also finance software updates to interoperability standards, upgrades or new software, and the integration, transformation and sharing of data. These measures underpin the introduction and establishment of two digital health flagship projects: health records and the electronic health data space.
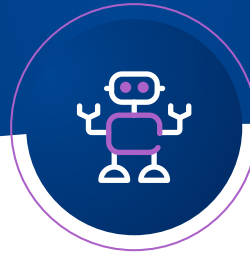
Germany

Allocation: EUR 7.1 billion. Relevant components: 2, 4, 5, 6

Seven measures in the Plan are entirely linked to digital public administration and services:

→ The measure 'European Identity Ecosystem' under the Component Modern public administration is designed to enable citizens to securely issue, transmit and deposit — and to transfer and use — proof of identity in a user-friendly and self-determined manner.

→ Implementation of the Online Access Act which aims to digitalise the German administrative landscape. This is to enable a fully digital and user-oriented offer of public administrative services by the Federal Government, the Länder and municipalities.

→ The measure 'modernisation of registers' (Registermod-ernisierungsgesetz) aims at preventing citizens from having to resubmit their data and to submit evidence to different authorities by connecting registers using a unique identification number.

→ The digital pension overview under the Component Social inclusion aims to enable citizens to easily retrieve information about their own retirement provisions, presenting the information in an understandable, reliable and comparable way.

→ The measure 'Support for the digitalisation of rail' in the Component Digitalisation of the Economy aims at replacing conventional signposting and will boost the use of digital components in the railway sector (fast-track programme (Schnelläuferprogramm) to speed up roll-out of 'Digital Rail Germany'.

→ Two measures in the Component Strengthening a pandemic-resilient health system support the digitalisation of the health system: Strengthening the digital and technical resources of the public health service and Programme to future-proof hospitals .

In addition, the Component Reducing barriers to investment contains reforms to accelerate public and private investments.

🇬🇷 Greece

Allocation: EUR 2.8 billion. Relevant components: 2, 3, 4

Key investments and reforms include, among others:

→ The digitisation of archives in key services (justice, urban planning agencies, cadastre, immigration & asylum) and

their integration in the relevant IT systems, coupled with system interoperability initiatives that allow the application of the 'once only' principle. This is the foundation for the digital transformation of public sector bodies and will help reduce the administrative burden on people and enterprises.

→ Reforms and investments related to digital capacities and advanced technologies: measures on cloud infrastructures and cybersecurity.

→ Investments in cloud computing and big data, in particular to link back-office and front-office processes and ensure the interoperability of systems, processes, applications and services.

→ Investments into the digitalisation of healthcare, including the operationalisation of the national digital health record, rollout of the cancer treatment digital transformation program, capacity expansion of the national telemedicine network, improvement of hospital digital readiness and the digital transformation of the national organisation for healthcare provision.

→ The development and implementation of a cybersecurity strategy to increase the reliability and security of public sector systems and data and improve the public's trust in interactions with the public sector. The strategy will include the creation of a National Cybersecurity Operations Centre (SOC), and advanced security services in G-Cloud critical infrastructure to improve the security of the public sector's central infrastructures and information systems.

🇮🇪 Ireland

Allocation: EUR 85 million. Relevant component: 2

The plan includes two investment measures relating to digital public services. One investment concerns the development of an online response option for the population census in order to improve the efficiency of data collection and analysis by digitalising the census. The other investment concerns a suite of eHealth projects, including the deployment of ePharmacy systems across hospitals in Ireland to better monitor the use and costs of medication and the deployment of an integrated financial management system to provide financial and procurement efficiencies within the health system.

🇮🇹 Italy

Allocation: EUR 17.6 billion. Relevant component: A

The plan includes significant investments for the digitalisation of public administration, supporting the modernisation of the digital infrastructure, the reinforcement of cybersecurity, the interoperability of databases and the improvement of digital public services for the general public and businesses.

Investments are expected to help build a secure and energy-efficient national cloud-based hybrid infrastructure (called 'Polo Strategico Nazionale') and migrate local and central public administrations' IT system to a cloud-based system for a more efficient and secure delivery of public services. Moreover, a reform ('cloud first and interoperability') is planned to remove obstacles to cloud adoption, streamline data-exchange processes between public administrations, and boost the broad adoption of digital services, by introducing a set of incentives and obligations.

Measures also aim to increase the accessibility and interoperability of online public services and complete key digital platforms like SPID and ANPR. Leveraging on the above-mentioned 'middleware' platforms (ANPR, SPID, IO), the plan foresees the creation of a National Digital Data Platform ("Piattaforma Digitale Nazionale Dati"). Through a catalogue of application programming interfaces (APIs), the platform aims to guarantee the interoperability of datasets and empower the once-only principle, including with forms pre-filled with information already available to the government across the different institutions. In parallel, three investments are expected to improve quality, accessibility and compliance with Single Digital Gateway procedures of citizen-facing digital services, including municipalities, schools and cultural institution websites.

The plan aims to reinforce cybersecurity capabilities by investing in both technology tools and operating structures. Among other things, the plan will support a 'national hyper Security Operations Centre (SOC)', expected to be integrated within the European network of SOCs to foster the sharing of information and best practices to prevent and mitigate cyber threats. In addition, the plan included the setting up of the new national cyber security agency, which will also be in charge of supporting the development of cybersecurity firms in Italy.

Finally, measures are expected to reinforce the digital back-office and front-office of main central public administrations, such as the Ministry of Justice, Defence and Home Affairs.

In the health sector, investments aim to support the completion and interoperability across regional systems of the electronic health record (EHR) and data usage for health risk monitoring. These investments will be complemented with measures to boost the use of telemedicine solutions and the digital upgrade of hospitals and diagnostic equipment.

Additional sectoral investments are planned to support the digitalisation of the justice system.

🇱🇻 Latvia

Allocation: EUR 123 million. Relevant components : 2, 6

The digital transformation of the public administration (including municipalities) is addressed in Latvia's Recovery and Resilience Plan via three measures focused on modernising governance and data strategy:

⇢ Administration modernisation and digital transformation of services, including the business environment, which aims to develop ICT solutions for modernised public administration functions.

⇢ Support for centralised governance platforms and systems.

⇢ Data availability, sharing and analysis, with the aim to develop data on the national economy and the digital services economy.

Latvia will take part in the IPCEI of Common European data infrastructure and services (including the Cloud Federation).
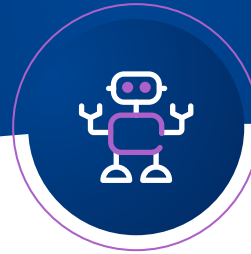
🇱🇹 Lithuania

Allocation: EUR 449 million. Relevant component: C

The Lithuanian Recovery and Resilience Plan is expected to implement and monitor 15 public services digitisation projects, which aim at convenience and interactivity for end users, as a result of using advanced technologies such as artificial intelligence and data analytics.

Another measure focuses on developing the public cloud infrastructure. This would enable the launch of the Open Data and Digital Transformation Competence Centre and the implementation of a data management model and dedicated data exchange tool to integrate 376 information resources. The plan also focuses on digitalising the health sector. The measures included in the plan are to contribute achieving the increase in the share of the country's population provided with healthcare-related electronic services to 60%, the share of health care institutions using e-health products to 70%, as well as the share of healthcare professionals whose license is recorded and digitally monitored to 50%. Another measure concerns launching a digital employment platform.

With regard to health, the plan includes rolling out genome sequencing infrastructure, which should allow for 1,570 completed sequencing tests for the whole human genome, contributing to the Genome of Europe multi-country project.

There is a measure focusing on new digital public ICT solutions, which should enable the practical use of e-invoices and e consignments. In addition, at least 60% of people with disabilities should be satisfied with digital public services.

Luxembourg

Allocation: EUR 14 million. Relevant components: 1B, 3B

Luxembourg's Recovery and Resilience Plan contains of a number of measures which contribute the digitalisation of public administration and services and the health system.

The key investments are related the introduction of 12 new online services – aligned with the priorities of the Single Digital Gateway Regulation – to expand the digital offer to citizens and businesses and simplifying different administrative processes, as well as ensuring document management in public administration, offering virtual appointments and developing a national platform for the management of public surveys procedures. Luxembourg will also digitalise the Agency for the Development of Employment (ADEM) to improve the efficiency of the public authorities in ensuring satisfaction of labour market needs.

The measures related to digitalisation of health aim to set up a single digital register for health professions, collecting administrative and professional data, in order to manage data on health professionals, forecast needed professions and skills and mobilise staff during crises, as well as

a telemedicine solution for remote medical follow-up of patients.

Malta

Allocation: EUR 63 million. Relevant components: 3, 4, 6

The Maltese plan places a strong focus on the digitalisation of the public administration and public services. These investments are framed in the context of the upcoming Public Administration Strategy (2022-2027) and the overarching National Digital Strategy 2021-2027. Investments aim to support the following three measures:
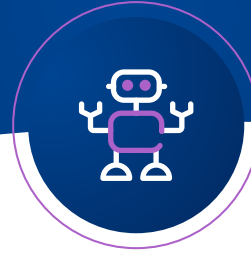
→ Reinforcing the government's digital backbone, i.e. investments in digital services and infrastructure (including, for example, data centres and cloud services) which are expected to improve service delivery, increase interoperability across public administrations and enable the implementation of the "once-only principle". The investment also covers tools and infrastructure for cybersecurity, which aims to support the work of a Security Operations Centre (SOC).

→ Digitising the Merchant Shipping Directorate within Transport Malta, to boost the efficiency of regulatory practices and improve internal operations and customer relations. The measure also covers the upskilling of public officers.

→ Improving digital public services, including reengineering services which are manual, paper-based or hosted on non-responsive legacy platforms; setting up registers for data sharing and reuse purposes (targeting, in particular, the processes for the clearance of goods and property transfer); and improving customer care through physical and online hubs. The investment will also provide laptops and virtual desktops for remote work by public officers.

The plan also addresses digitalisation in the healthcare system by supporting the digitalisation of outpatient and consumer engagement processes, to improve resource utilisation, quality of patient care and patient experience and reduce waiting times.

Finally, the plan is also devoted to digitising Malta's justice system. It envisages the implementation of digital solutions and tools to foster collaboration and integration across the justice system, increasing accessibility and efficiency. The

investment supports the development of various solutions, such as an integrated e-filing system or the use of e-ID authentication in public-facing solutions, allowing single-sign-on for various services. The regional hubs operated by the National Agency responsible for Public Services (servizz.gov) are expected to help less digitally literate users access services online.

Portugal

Allocation: EUR 1.7 billion. Relevant components: 1, 3, 4, 8, 17, 18, 19

The Recovery and Resilience Plan dedicates significant investments to e-government and digital public services. Structural reforms and measures to increase its service effectiveness for users and its cost-efficiency for the State underpin the investments including in the sphere of public finances, economic justice and business environment, and the national health service. The investments in digital public administration include measures to (i) modernise consular services via an omni-channel response capacity (single digital gateway, call centre and in-person services), (ii) foster adoption of cloud and 5G services, (iii) reduce asymmetries in the provision of public services, and (iv) upgrade the information systems for public financial management. Actions are also foreseen to reinforce the use of data by public services, strengthening interoperability and data sharing with external entities and cross-border connections e.g. with the European Open data portal. Other investments will target the government's IT network, improve the coverage and capacity of the State Emergency Communications network and the national internal security network, and review the information systems and processes of the country's security forces. These investments will implement the once-only principle in order to reduce the administrative burden on citizens and businesses. Measures also tackle obstacles in obtaining business licences and inefficiencies in the justice system. The ambition to use RRF funds to modernise the public administration using novel technologies is noteworthy e.g. cloud. Specific reforms aim to improve the interoperability of the public administration at national and international level, to comply with the requirements of the single digital gateway regulation. In the health sector, the plan provides for investments in the upgrade of the IT systems and equipment of hospitals, telemedicine, improvement of the health data network and of interoperability between different information systems, as well as specific training on digital skills and support for the digitalisation of health records.

Romania

Allocation: EUR 3.1 billion. Relevant components: 4, 7, 10, 11

The Recovery and Resilience Plan includes a key reform on the development of the government cloud, which aims to modernise the public administration by establishing the necessary framework for achieving interoperability of the various public institutions' IT&C systems, ensuring coherence with the eIDAS Regulation and implementing the "once only" principle embedded in the Single Digital Gateway Regulation.

The plan includes a number of measures that are entirely linked to digital public administration and services. Some of the reforms and investments are related to the implementation of the National Building Register, development and implementation of a unitary framework for defining the architecture of a government cloud system as well as complete cloud development and migration, promotion of the 12 touristic/cultural routes and development of a digital system for cultural funding processes, technical support for the revision of the taxation framework, improving tax and tax administration processes, supporting the process of assessing and recalculating pension files and support the operational efficiency through digitalisation of the pension system, implementing eForms electronic forms in public procurement. Moreover, the plan aims to contribute to the digital transformation in civil service management and investments for digitalisation in employment and social protection, develop performance human resources management in the public sector. Significant investments are also aimed at digitalisation of transport, eHealth and e-justice solutions.
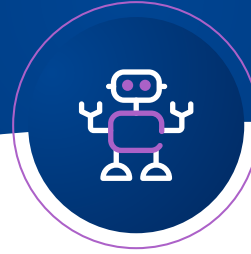
Spain

Allocation: EUR 6.3 billion. Relevant components: 1, 6, 11, 18

Digital public administration and services will be supported and driven forward through reforms and investments included in Component 11 and, partly, through many other components dealing with digitalisation of the health system; transport, energy. Some of the main measures included in the plan for digital public administration are:

⇢ Reforms to modernise and digitalise the administration in general, including specific reforms in areas such as justice and national public procurement.

⇢ Investments to modernise the general State adminis-

tration through: 1) citizen-oriented administration and improvement of interoperability and digital public services provided to citizens and businesses; 2) smart operations and data government (i.e. procurement management); and 3) digital infrastructure and cybersecurity.

⇢ Specific measures to digitalise: 1) the health system; 2) the justice system; 3) public employment services; 4) inclusion, social security and migration; 5) consular services; and 6) pilot initiatives for security and agriculture.

⇢ Investment in digital transformation and modernisation of the Ministry of Territorial Policy and the Civil Service and of the administration of the Autonomous Communities and local authorities.

⇢ Investments in innovative energy storage and the digitalisation of energy networks.

⇢ Digitalisation of transport with investments in the rail and road networks as well as in the airlines sector with the Single European Sky initiative.

Slovakia

Allocation: EUR 717 million. Relevant components: 3, 11, 12, 14, 15, 16, 17

Investments in digital technologies in the public administration are a strong focus of the plan, including the roll-out of information systems to increase the quality and efficiency of the judiciary, healthcare, police and rescue systems. Digital investments are planned to simplify public procurement and insolvency proceedings. A new digital platform for providing more efficient and better-quality public services will be developed as part of the plan in order to improve the quality and accessibility of e-government solutions. The Slovak authorities will identify 16 priority 'life situations' for citizens and businesses, where simplified and more efficient digital solutions will be proposed. These measures will minimise the required administrative steps for citizens and businesses, reduce the time and costs, and improve the user-friendliness of services. In addition, the plan also envisages measures for a more efficient management of IT resources in the public administration. Slovakia also intends to strengthen and standardise cybersecurity across all sectors of public administration to increase trust in the new e-services.

Slovenia

Allocation: EUR 357 million. Relevant components: C2K1, C2K2

Slovenia's RRP brings a comprehensive approach to digitalisation of the public administration. A balanced package of reforms and investments in ICT infrastructure aims to strengthen e-government, the data economy and R&D for AI.
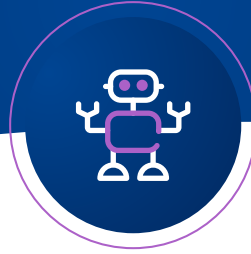
The plan introduces a national electronic identifier to speed up the development of e-services nationally and cross-border, opening access to interoperable e-services. Slovenia is expected to adopt the 2021-2030 digital public services strategy and re-establish the Informatics Development Council as the coordinator for all ICT investments. The national cybersecurity strategy will strengthen capacity and diminish risks. Investment in research, development and innovation as regards the digital transition should ensure state-of-the art digital solutions. The one-stop shop for businesses in their dealings with the public administration will be expanded for the public, aiming to reduce the administrative burden for businesses by providing them with a single digital identity, facilitating market access, increasing security and reducing operational risks. Key measures in these components include a strategy for digital transformation of the public sector including eIDs for the public and companies.

The RRP promotes the digitalisation of the following areas: (i) the public administration for internal security (upgrade the technology available to the police via state-wide TETRA digital radio network infrastructure, involving 11 000 users); (ii) education; (iii) science and sport; (iv) space and environment; (v) agriculture, food and forestry; (vi) culture (building an e-culture platform); (vii) spatial planning; (viii) real estate; (ix) nature; (x) water; and (xi) justice (upgrading equipment for courts, and providing a virtual assistant at the Supreme State Prosecutor's Office, making the justice system more accessible and shortening the time needed to handle cases).

The Slovenian plan also allocates a significant amount of funds for digitalisation of health. The objectives of the investment are to ensure fast access to high-quality harmonised data in healthcare, primarily by integrating new digital services into healthcare; to promote the use of information technology to communicate with patients and other health system stakeholders; to introduce quality monitoring based on real-time data, to improve capacity and patient manage-

ment planning and planning of hospital facilities, medical services and material requirements.

The investment consists of, among other things, an expansion of the Patient Data Register; the introduction of a central storage of images accessible to all relevant stakeholders; implementation of the national telemedicine treatment platform; strengthening of digital competences of actors in healthcare; and an upgrading of the eMedical Appointment system.