



European
Commission



Digital Public Administration factsheet 2023

European Union

Table of Contents

1. Interoperability State-of-Play	5
2. Governance	10
3. Political Initiatives for Digital Public Administration in the European Union	13
4. Legislative Instruments for Digital Public Administration in the European Union	21
5. Funding programmes for Digital Public Administration in the European Union	31
6. Digital Public Administration Infrastructure	35
7. Digital Public Administration Services	40

Executive Summary

Over the past three years, the quality of public administrations has been confirmed to be the key success factor towards COVID-19 recovery, as it enables economic prosperity, social progress and fairness. This was further stressed by the European Commission through its Staff Working Document 'Supporting Public Administrations to deliver reforms and prepare for the future'. Following a period where the reliance on digital public services increased, continuing to implement strategies and funding programmes that foster the coordinated modernisation of public administrations in the Member States prevails as an important course of action. This can also be seen through the Member States' National Recovery and Resilience Plans, where the digitalisation and modernisation of the public sphere play an important role.

The EU remains focused on adapting and overcoming the challenges of globalisation, by narrowing the gap between the leading and lower-performing Member States, as well as increasing the connectivity and security of services across borders for the benefit of consumers, business and society.

This factsheet presents an overview of the European landscape in terms of digitalisation of public administrations and interoperability, outlines the main EU actors responsible for this transition and offers an overview of the primary political initiatives, legislative instruments and funding programmes supporting the digitalisation of the European public administration and interoperability in the European Union.

The EU's main actors and institutions responsible for the coordination and implementation of digital public administration services and the implementation of legislative initiatives for the modernisation of the public sector are overseen by the [Executive Vice-President-designate for a Europe fit for the Digital Ages](#), Ms. Vestager. Ms. Vestager is the highest representative of the EU charged with ensuring Europe's digital development, with the support of the [Directorate-General for Informatics \(DIGIT\)](#) and the Commissioner for Budget and Administration, Mr. Hahn, as well as the [Directorate-General for Communications Networks, Content and Technology \(CNECT\)](#).

On top of recent political initiatives stand out the strategy [Shaping Europe's Digital Future](#), the [Digital Decade Policy Programme 2030](#) and the associated [European Declaration on Digital Rights and Principles](#), as well as the [Digital Education Action Plan actions for the period 2021-2027](#), or the [Digital Europe Work Programme for 2023-2024](#), part of the European Commission's top priorities for 2019-2024. Other political initiatives aimed at promoting the digitisation of the public sector have been put forward in recent years, including the European data strategy, and are now being translated into concrete initiatives such as the [Data Governance Act](#) or the [Digital Services Act](#).

Additionally, the European Commission also put forward new legislative initiatives, such as the proposal for the [Interoperable Europe Act](#) and the proposal for a [Council Recommendation on improving the provision of digital skills](#). In 2022, the European Parliament approved the [Digital Markets Act](#). These examples of initiatives at different stages of progress aim to harmonise the rules and objectives for digital public administration in the EU Member States.

The chapter on the funding instruments available to the Member States, that help contribute to the public sector modernisation at national and regional levels, including the [Digital Europe Programme \(DEP\)](#), setting up the strategic digital capacities of the EU and promoting a far-reaching deployment of new technologies, and [Horizon Europe](#), the key funding programme for research and innovation, to the [Connecting Europe Facility \(CEF\)](#) outlined in detail later in the document.

Finally, the chapter on the Digital Public Administration Infrastructure presents the networks for cross-border inter-administrative operations and communication, while the chapter on Digital Public Administration Services showcases the existent cross-border public services for citizens, businesses and public administrations through a single access point.



1

Interoperability
State-of-Play

1. Interoperability State-of-Play

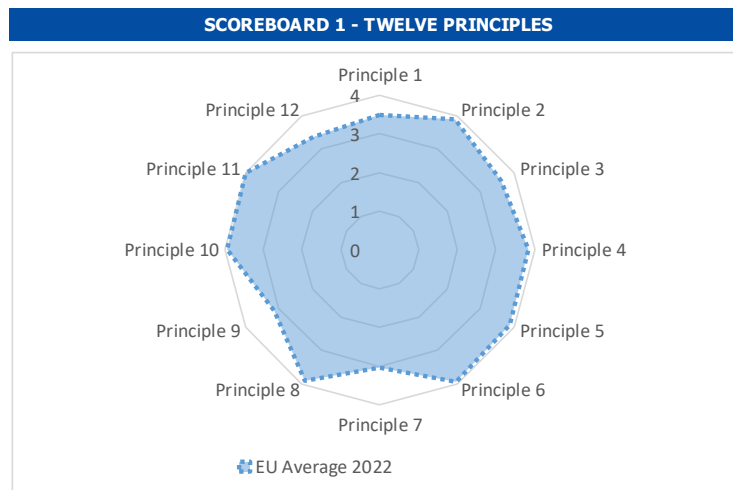
In 2017, the European Commission published the European Interoperability Framework (EIF) to give specific guidance on how to set up interoperable digital public services through a set of 47 recommendations divided in three pillars. The EIF Monitoring Mechanism (MM) was built on these pillars to evaluate the level of implementation of the framework within the Member States. Whereas during the previous, the MM relied upon three scoreboards, the 2022 edition includes an additional scoreboard on cross-border interoperability, assessing the level of implementation of 35 Recommendations. The mechanism is based on a set of 91 Key Performance Indicators (KPIs) clustered within the four scoreboards (Principles, Layers, Conceptual model and Cross-border interoperability), outlined below.

Scoreboard 1 Interoperability Principles		Scoreboard 2 Interoperability Layers		Scoreboard 3 Conceptual Model	
	Recommendation(s) n ^a		Recommendation(s) n ^a		Recommendation(s) n ^a
Principle 1 - Subsidiarity and Proportionality	1	Interoperability Governance	20-24	Conceptual Model	34-35
Principle 2 - Openness	2-4	Integrated Public Service Governance	25-26	Internal information sources and services	36
Principle 3 - Transparency	5	Legal Interoperability	27	Basic Registries	37-40
Principle 4 - Reusability	6-7	Organisational Interoperability	28-29	Open Data	41-43
Principle 5 - Technological neutrality and data portability	8-9	Semantic Interoperability	30-32	Catalogues	44
Principle 6 - User-centricity	10-13	Technical Interoperability	33	External information sources and services	46
Principle 7 - Inclusion and accessibility	14			Security and Privacy	46-47
Principle 8 - Security and privacy	15				
Principle 9 - Multilingualism	16				
Principle 10 - Administrative simplification	17				
Principle 11 - Presentation of information	18				
Principle 12 - Assessment of Effectiveness and Efficiency	19				

Scoreboard 4 Cross-border Interoperability

Source: European Interoperability Framework Monitoring Mechanism 2022

Each scoreboard breaks down the results into thematic areas (i.e. principles). The thematic areas are evaluated on a scale from one to four, where one means a lower level of implementation and four means a higher level of implementation. The graphs below show the result of the third EIF Monitoring Mechanism data collection exercise within the 27 Member States (EU average) in 2022.

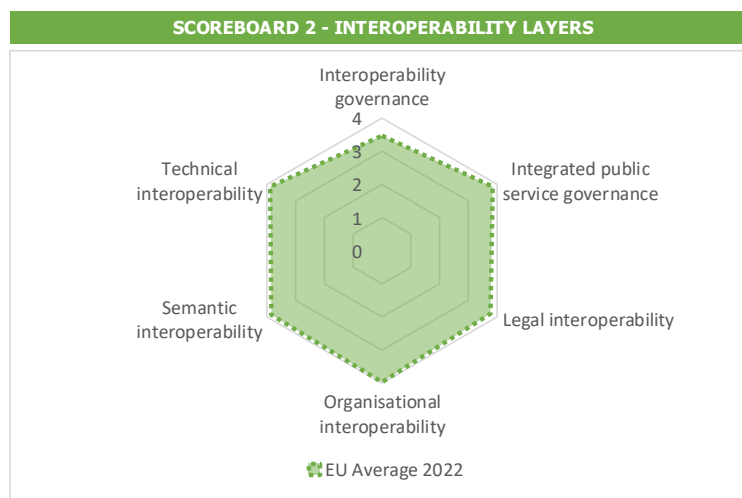


Source: European Interoperability Framework Monitoring Mechanism 2022

The results in Scoreboard 1 show an overall good implementation of the EIF principles for the 27 Member States with multiple principles scoring at 4. Areas of improvement are concentrated in the Principle 1 (Subsidiarity and Proportionality), 7 (Inclusion and Accessibility), 9 (Multilingualism) and 12 (Assessment of Effectiveness and Efficiency), for which the score of 3 shows an upper-medium performance in the implementation of the corresponding recommendations. However, it should be noted that Principle 1 (Subsidiarity and Proportionality)

and Principle 12 (Assessment of Effectiveness and Efficiency) outperform 2021 and therefore score slightly above 3 in 2022.

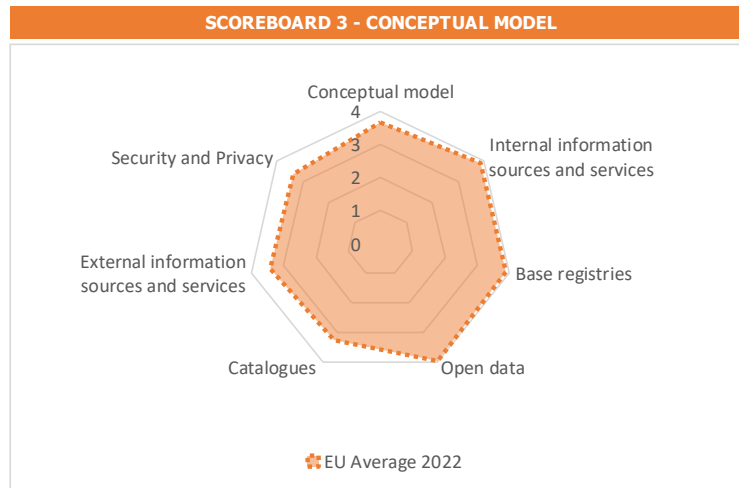
The result of 3,5 for Principle 1 (**subsidiarity and proportionality**), at European level, shows a partial implementation of EIF recommendations in existing or ongoing NIFs and policies. However, the analysis of the results revealed that the number of countries reporting a high level of alignment of their NIFs and strategies with the EIF increased from 13 in 2021 to 15 in 2022. When analysing the overall European countries' performance on Principle 7 on **inclusion and accessibility**, the results revealed a partial implementation of the accessibility standards set forth by the Directive (EU) 2016/2102 on the accessibility of the websites and mobile applications of public- sector bodies (Recommendation 14). The results of the EIF Monitoring Mechanism with regard to **multilingualism** showed a heterogeneous implementation of the principle. For instance, the possibility of accessing instructions for completing the procedures in an official EU language is not always ensured in the European countries, especially for procedures related to moving. With an average score of 3, the results for Principle 12 on **effectiveness and efficiency** showed that return on investment and adaptability are the least considered when assessing the effectiveness and efficiency of public services, while simplification of administrative processes and reusability are more commonly taken into account across Europe (Recommendation 19).



Source: [European Interoperability Framework Monitoring Mechanism 2022](#)

For the implementation of interoperability layers assessed for Scoreboard 2, the 27 Member States show on average a very good performance in implementing almost all layers with the score of 4. The European Union's implementation of the Scoreboard 2 recommendations in the areas of interoperability governance has decreased and is now between 3 and 4 in 2022 instead of 4.

With respect to the **interoperability governance** layer (Recommendations 20 to 24), there have been significant improvements mainly regarding the implementation of a holistic governance across all administrative levels and sectors, and the implementation of defined processes for the selection and adoption of standards and specifications. More specifically, almost all European countries now provide interoperability governance with a holistic approach across all administrative levels and sectors, with the exception of three countries that are still in the process of doing so.

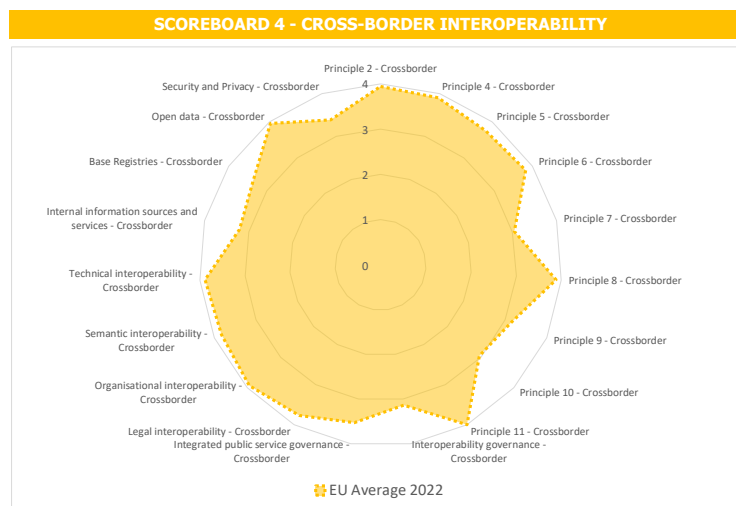


Source: European Interoperability Framework Monitoring Mechanism 2022

The average scores assessing the Conceptual Model in Scoreboard 3 of the 27 Member States show a good performance in the implementation of recommendations associated with the conceptual model, internal and external information sources and services, base registries and open data. However, some improvements can be made in implementing recommendations related to catalogues, external information sources and services as well as in the area of security and privacy although their performance was better in 2022 than in 2021.

The results on **Catalogues**, at European level, for this particular indicator outlined a partial implementation of these key catalogues within public administrations (Recommendation 44). Indeed, while open data portals and catalogues of public data are used in a vast majority of European countries, it appears that other types of catalogues, such as libraries of software components and catalogues of specifications and guidelines are yet to be implemented uniformly across Europe. The 2022 results of the EIF Monitoring Mechanism revealed that European countries insufficiently rely on **external sources and services** for the development of their public services (Recommendation 45). On the one hand, it appears that the use of Internet of Things sources (e.g. sensors) and social web applications is quite low across Europe. On the other hand, the use of payment services provided by financial institutions or other actors, connectivity services provided by telecommunications providers, open data, data from other organisations (e.g. international organisations, chambers of commerce, etc...), eID and eSignature are much more widespread among European public administrations.

The score for **security and privacy** at the European level, showed an overall good implementation of Recommendation 46 within national frameworks, with an increase in the implementation of all privacy and security elements and measures, but with the exception of risk management. However, the scores for Recommendation 47 are heterogeneous, as the number of trust service providers present on national trusted lists complying with the [eIDAS Regulation](#) varies across countries and remains insufficient in some of them.



Source: European Interoperability Framework Monitoring Mechanism 2022

The results of the 27 Member States concerning Cross-border Interoperability in Scoreboard 4 show a good performance in 16 indicators. However, there is still margin for improvement. For instance, the Member States could focus on Principle 7 (Inclusion and accessibility), Principle 9 (Multilingualism), Principle 10 (Administrative simplification) as well as Interoperability governance and Security and Privacy which all have a score of 3. The key priorities should be on the simplification of processes and the use of digital channels whenever appropriate for the delivery of European public services, to respond promptly and with high quality to users’ requests and reduce the administrative burden on public administrations, businesses and citizens (**Administrative simplification** - Recommendation 17) but also on the use of a structured, transparent, objective and common approach to assessing and selecting standards and specifications (**Interoperability governance** - Recommendation 22). Lastly, a particular effort should be made on the use of trust services according to the Regulation on eID and Trust Services as mechanisms that ensure secure and protected data exchange in public services (**Security and Privacy** - Recommendation 47).

An in-depth analysis of the European results in the 2022 edition of the EIF Monitoring Mechanism will be available within the Annex 2 of the State of Play report on digital public administration and interoperability in Europe. Whereas additional data on specific Member States’ results on the EIF Monitoring Mechanism is available online through [interactive dashboards](#).

Curious about the state-of-play on digital public administrations in the EU?

Please find here some relevant indicators and resources on this topic:

- [Eurostat Information Society Indicators](#)
- [Digital Economy and Society Index \(DESI\)](#)
- [eGovernment Benchmark](#)



2 Digital Public Administration Governance

2. Digital Public Administration Governance

Executive Vice-President for a Europe fit for the Digital Age

As **Executive Vice-President for a Europe fit for the Digital Age**, Ms. Margrethe Vestager has a dual function. She chairs the Commissioners' Group on a Europe fit for the Digital Age and, in addition, she is responsible for the competition portfolio. Her mission is to ensure all policy dimensions are fully considered. She is also accountable for the Secretariat-General and the Directorate-General for Competition.

Commissioner for Budget and Administration

As **Commissioner for Budget and Administration**, Mr. Johannes Hahn is responsible for the DG for Budget, the DG for Human Resources and Security; the DG for Informatics (DIGIT); the DG for Translation and the DG for Interpretation. Similarly, he is responsible for the Office for the Administration and Payment of Individual Entitlements; the Office for Infrastructure and Logistics in Brussels; the Office for Infrastructure and Logistics in Luxembourg; the European Personnel Selection Office; the Publications Office of the European Union and the European School of Administration. Respecting its investigative independence, he is also responsible for the European Anti-Fraud Office. Mr. Hahn oversees implementing the full digitalisation of the Commission and ensures that staff acquire the necessary digital skills.

Commissioner for Internal Market

As **Commissioner for Internal Market**, Mr. Thierry Breton is responsible of the new DG for Defence Industry and Space, as well as the DG for Communications Networks, Content and Technology and the DG for Internal Market, Industry, Entrepreneurship and SMEs. He works under the guidance of the Executive Vice-President for a Europe fit for the Digital Age.

Directorate-General for Informatics (DIGIT)

The **mission** of the **Directorate-General for Informatics (DIGIT)**, led by Ms. **Veronica Gaffey**, is to deliver digital services, enabling the effective implementation of EU policies and to support the Commission's internal administration.

With this goal in mind, DIGIT, as a trusted partner has the responsibility to provide the EC, and whenever appropriate other European Institutions and bodies, with high quality and innovative

- Workplace solutions: creating new ways of working and collaborating for staff;
- Business solutions: delivering information systems supporting rationalised business processes within the framework of the corporate IT Governance strategy;
- Infrastructure solutions: providing reliable, cost-effective and secure infrastructure and services;
- Effective solutions: aligning IT investments with business priorities, facilitating relationships with our strategic partners, balancing risk with business value for the Institution.
- Support the modernisation of public administrations by promoting and facilitating interoperability so that European public administrations can work seamlessly and together across boundaries - Interoperability solutions.

DG DIGIT is also accountable for the coordination of the eCommission strategy and its implementation via the delivery of IT systems and services. Moreover, through Interoperable Europe, DIGIT facilitated the deployment of pan-European eGovernment services to administrations, citizens and enterprises/businesses. Finally, it is also responsible for developing the building blocks for digital government, under the **Digital Europe Programme**, the funding programme focused on bringing and ensuring a wide use of digital technologies by businesses, citizens and public administrations.

DIGIT Unit B2 – Interoperability Unit

The Unit is led by Ms. Leontina Sandu, who currently manages and coordinates interoperability-related affairs, interoperability solutions and EU programmes, and will be managing the execution of specific Objective 5 of the **Digital Europe Programme**, particularly the Common Service Platform (CSP) and the Interoperability Knowledge and Support Centre (IKSC).

The Unit supports the development of digital solutions which enable European societies to benefit from interoperable cross-border and cross-sector public services.

Directorate-General for Communications Networks, Content and Technology (CONNECT)

The mission of the Directorate-General for Communications Networks, Content and Technology (CONNECT), led by Mr. [Roberto Viola](#), is to conceive and implement the policies required to create a digital single market to foster growth and employment. The aim is to enable citizens, businesses and public administrations to seamlessly and fairly access and provide digital goods, content and services.

DG CONNECT is thus responsible for fostering a modern, secure, open and pluralistic society and for helping drive the digital transformation of European industry and public services through the use of innovative digital technology, among others.

DG CONNECT Unit H4 – eGovernment & Trust

The mission of the Unit to advance the quality and innovation of public administrations and accelerate the large-scale public sector and private sector use of trusted identification and trust services in the digital single market.

The Unit promotes modernisation of public services to meet citizens' expectations regarding efficiency, quality, transparency, accountability, user centricity and inclusiveness.

Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (GROW)

The mission of the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (GROW), led by Ms. [Kerstin Jorna](#), is to enhance the European business environment by developing and carrying out the Commission's policies related to business and industry. The Directorate-General is also accountable for the Single market policies. With this goal in mind, GROW, as a trusted partner, has the responsibility to foster entrepreneurship and growth by reducing the administrative burden on small businesses and by facilitating access to funding for SMEs and to help turn the EU into a smart, more sustainable and inclusive economy.

DG GROW will also be responsible for the implementation of the [Once Only Principle](#) by the end of 2023. It will facilitate the sharing of data between public entities, so citizens are only required to enter their information once. From 2023, it is envisaged that public administrations will be able to reuse or share data and documents in a transparent and secure way.

Other DGs

Within the European Commission, individual Directorates-General are responsible for the implementation of IT solutions within the mandate of their respective competencies:

- [DG JUST](#) – for a modern judicial system;
- [DG EMPL](#) – for policy in the field of employment, social affairs and inclusion, which is a shared competence between the EU and its member countries;
- [DG REGIO](#) – for strengthening economic, social and territorial cohesion by reducing disparities between regional and national levels of development in the European Union.
- [DG REFORM](#) – for providing tailor-made support to all EU countries for their institutional, administrative and growth-enhancing reforms.
- Internal Audit Service (IAS) of the European Commission

Operating under the responsibility of Mr. [Didier Reynders](#), European Commissioner for Justice, the [Internal Audit Service](#) (IAS) is a core part of the internal audit system for the European Commission and EU agencies. The mission of the IAS is to provide independent, objective assurance and consulting services designed to add value and improve the operations of the European Commission.



3

Digital Public Administration Political Initiatives

3. Political Initiatives for Digital Public Administration in the European Union

3.1 Political Initiatives on Digital Public Administration

Shaping Europe's Digital Future

The strategy on [Shaping Europe's Digital Future](#) covering the period of 2019-2024, is the European Union's approach to a digital transformation that will address how the European Union should continue to meet new risks and challenges posed by digital technology. It is based on the following three pillars:

- Technology that works for the people - investing in digital competences for all Europeans; further protecting people from cyber threats; and ensuring Artificial Intelligence is developed in ways that respect people's rights;
- A fair and competitive digital economy - enabling a vibrant community of innovative and fast-growing start-ups and SMEs to access finance and to expand; proposing a Digital Services Act to strengthen the responsibility of online platforms; and ensuring that all companies compete in Europe on fair terms;
- Open, democratic and sustainable society - using technology to help Europe become climate-neutral by 2050; empowering citizens with better control and protection of their data; and creating a European health data space to foster targeted research, diagnosis and treatment.

2030 Digital Compass: the European way for the Digital Decade

The [2030 Digital Compass](#) is a strategy launched on 9 March 2021 that sets objectives to achieve EU's vision for the digital future. The strategy identifies the main goals through four priority areas:

- Digitally skilled population and highly skilled digital professionals
- Secure and performant sustainable digital infrastructures
- Digital transformation of businesses
- Digitalisation of public services

On 26 January 2022, building on previous initiatives including the [Tallinn Declaration on eGovernment](#), the [Berlin Declaration on Digital Society and Value-based Digital Government](#), and the [Lisbon Declaration](#), the Commission proposed a [Declaration on European Digital Rights](#) with the aim to inform people and provide a reference for policymakers and digital operators in their actions in the digital environment. More specifically, the Declaration has at its core key rights and principles for the digital transformation, such as placing people and their rights at its centre, supporting solidarity and inclusion, ensuring the freedom of choice online, fostering participation in the digital public space, increasing safety, security and empowerment of individuals, and promoting the sustainability of the digital future.

The Berlin Declaration on Digital Society and Value-based Digital Government

The [Berlin Declaration on Digital Society and Value-based Digital Government](#) of 2020, henceforth referred to as Berlin Declaration, was preceded by the [Tallinn Declaration](#). The Berlin Declaration reaffirms and acknowledges the importance of the public sector in the European Single Market, taking the service-oriented and citizen-centric principles formulated in the Tallinn Declaration a step forward. The Berlin Declaration reiterates the common political commitment of the Commission and the Member States to continue investing in high quality, user-centric and seamless cross-border digital public services.

3.2 Interoperability

Interoperability Action Plan supporting the implementation of the revised European Interoperability Framework

The revised [European Interoperability Framework](#) (EIF) was adopted on 23 March 2017. The framework provided specific guidance on how to set up interoperable digital public services. It offers public administrations a set of 47 concrete recommendations on how to improve governance of their interoperability activities, establish cross-organisational relationships,

streamline processes supporting end-to-end digital services, and ensure that both existing and new legislation do not compromise interoperability efforts.

In October 2021, a [Study supporting the evaluation of the implementation of the EIF](#) was written by CEPS and published by the Commission with the purpose of assessing whether relevant recommendations should become part of a mandatory instrument.

The revised EIF is accompanied by the [Interoperability Action Plan](#), outlining priorities to support the implementation of the EIF. The Action Plan consists of 22 actions, grouped into five focus areas:

- Ensuring governance, coordination and sharing of interoperability initiatives;
- Developing interoperability solutions to foster collaboration between organisations;
- Engaging stakeholders and raising awareness of interoperability;
- Developing, maintaining and promoting key interoperability enablers;
- Developing, improving and promoting supporting instruments for interoperability.

As the ISA² programme came to an end in December 2020, the European Commission evaluated it along with the [European Interoperability Framework](#) and presented [Interoperable Europe](#), a reinforced public sector interoperability strategy committed to transform the public administrations in Europe and help them in their digital transformation. An [expert group on Interoperability of European Public Services](#) has also been formed whose goal is to identify and exchange good practices when implementing the EIF, to provide the Commission with opinions, analysis and reports on interoperability of public services, to identify and assess the legal, organisational, semantical and technical obstacles preventing the set-up of interoperable European public services, among others.

For regional and local interoperability, the [European Interoperability Framework for Smart Cities and Communities \(EIF4SCC\)](#) aims to support local administrations and policy makers in offering interoperability services to citizens and businesses by providing definitions, principles, recommendations, practical use cases and a common model that will enable public service delivery across domains, cities, regions and borders. The EIF4SCC is managed by DG CONNECT under the framework of the [Living-in.eu](#) movement. This initiative aims to roll out interoperable urban digital platforms and a set of standards and technical specifications, such as the [Minimum Interoperability Mechanisms \(MIMs\)](#).

3.3 Key Enablers

3.3.1 Open Data, Reusability and Access to Public Information

European Data Strategy

The [European Data Strategy](#) communication, as published on 19 February 2020, outlines a vision of a genuine single market for data which tackles the problems that have been identified through various policy measures and funding. The strategy is based on four pillars, as follows:

- Cross-sectoral governance framework for data and access use – Key actions include proposing a legislative framework for the governance of common European data spaces; Enacting legislation on high-value data sets; Proposing a Data Act, where possible; and analysing the importance of data in the digital economy and reviewing the existing policy framework in this area.
- Investments in data and strengthening Europe's capabilities and infrastructures for hosting, processing and using data, interoperability – Key actions include investing in a high-impact project on European data spaces; Signing a Memorandum of Understanding with Member States on cloud federation; Launching a European cloud services marketplace; and establishing an EU (self) regulatory cloud rulebook.
- Empowering individuals, investing in skills and in SMEs – The key action of this pillar involves exploring the ways in which the portability right for individuals under Article 20 of the GDPR can be enhanced in order to give them more control over who can access and use machine-generated data.
- Common European data spaces in strategic sectors and domains of public interest – The key action of this pillar involves creating a framework designed to measure data flows and estimate their economic value within Europe, and between Europe and other global actors.

3.3.2 eID and Trust Services

No political initiative was adopted in this field to date.

3.3.3 Security aspects

EU's Cybersecurity Strategy for the Digital Decade

Presented on 26 December 2020, the [EU's Cybersecurity Strategy for the Digital Decade](#) encompasses three areas of action to increase Europe's collective resilience against cyber threats and ensure that citizens and business can benefit from secure digital tools:

1. Resilience, technological sovereignty and leadership;
2. Building operational capacity to prevent, deter and respond; and
3. Advancing a global and open cyberspace through increased cooperation.

The EU's Cybersecurity Strategy requires for existing EU-level measures aimed at protecting key services and infrastructures from cyber-attacks to be updated, through the proposed [Directive](#) on measures for high common level of cybersecurity across the Union and the Critical Entities Resilience (CER) [Directive](#).

Cybersecurity research, investments in the entire digital technology supply chain and support to SMEs is funded under the [Digital Europe Programme](#), [Horizon Europe](#), as well as the [European Defence Fund](#).

Roadmap on security and defence technologies

In February 2022, the Commission set out a [roadmap on security and defence technologies](#) for boosting research, technology development and innovation and reducing the EU's strategic dependencies in critical technologies and value chains for security and defence. This goal will notably be reached by:

- Identifying technologies critical for EU security and defence, boosting them through European (RTD&I) programmes;
- Ensuring that defence considerations are better taken into account in civilian European RTD&I programmes and industrial and trade policies, as appropriate, while possible civilian uses of technologies are also better considered in defence RTD&I programmes;
- Promoting from the outset an EU-wide strategic and coordinated approach for critical technologies for security and defence, to make the best use of EU and Member States' RTD&I programmes, achieve synergies between civilian and defence RTD&I communities and mitigate strategic dependencies from external sources;
- Coordinating as much as possible with other like-minded partners, such as the United States and the North Atlantic Treaty Organization (NATO), under mutually beneficial conditions.

3.3.4 Interconnection of base registries

No political initiative was adopted in this field to date.

3.3.5 eProcurement

No political initiative was adopted in this field to date.

3.4 Other relevant EU political initiatives

An SME Strategy for a sustainable and digital Europe

The communication outlining an [SME Strategy for a sustainable and digital Europe](#) as published on 10 March 2020, sets out the strategy of the European Commission for helping SMEs lead the transition to climate neutrality and digital transformation. The Strategy forms part of an Industry Policy Package led by a Communication on a '[New Industrial Strategy for Europe](#)'. It puts forward several actions based on the following three pillars:

- Capacity-building and support for the transition to sustainability and digitalisation;
- Reducing regulatory burden and improving market access;
- Improving access to financing.

These actions will build upon on the existing policy framework and support programmes of the EU with regards to SMEs, such as the various SME support actions funded under the [Horizon 2020 Programme](#) and [European Structural and Investment Funds](#).

EU strategy for space traffic management

On 15 February 2022, the Commission adopted an [EU strategy for space traffic management](#) aimed at ensuring a safe and sustainable use of space while preserving the EU space industry's competitiveness.

new Recommendation on improving the provision of digital skills in education and training

As part of the [Digital Education Action Plan actions for the period 2021-2027](#), the European Commission has developed a proposal in April 2023, for a [Council Recommendation on improving the provision of digital skills](#). Adoption by the Council must be confirmed. The primary goal of this initiative is to empower European citizens to develop basic and advanced digital skills through education and training.

new Recommendation on the enabling factors for digital education

A [Recommendation on the enabling factors for digital education](#), aimed to set out the investments and policy reforms needed to ensure access to digital education for all, was adopted in April 2023.

Action Plan for Better Implementation and Enforcement of Single Market Rules

As published on 10 March 2020, the [Action Plan](#) for better implementation and enforcement of single market rules aims to address the existing challenges with regard to implementation and enforcement of single market rules. The Strategy emphasises the core role that the single market has to play in the industrial transformation of the European Union, outlining 22 actions organised under 6 subcategories as follows:

- Increasing knowledge and awareness of single market rules;
- Improving the transposition, implementation and application of EU rules;
- Making the best use of preventive mechanisms;
- Detecting non-compliance inside the single market and at the external borders;
- Strengthening enforcement on the ground;
- Improving handling of infringement cases.

new Single market emergency instrument

As part of the Europe fit for the digital age and as a response to the unprecedented disruption of the single market caused by the Covid-19 pandemic, the Commission stated in the [Work Programme 2022](#), that a competition policy will be launched to ensure the suitability of the various instruments as well as the creation of a single market emergency instrument with the purpose of preventing future disruptions. The key elements of the latter will be:

- Reinforced single market governance tools and procedures;
- Improved transparency and coordination on intra-EU export restrictions and services restrictions;
- Structures and tools to facilitate circulation of goods and services in the context of border restrictions;
- Targeted measures for speedier product availability;
- Enhanced market surveillance procedures;

Reinforced cooperation and information-sharing in public procurement the [legislative initiative](#) on this instrument was adopted in September 2022.

Industrial Strategy for a globally competitive, green and digital Europe

This [strategy](#), as outlined in March 2020, forms the foundations of a future industrial policy that will aim to support the twin transitions, enhance Europe's strategic autonomy and increase the competitiveness of EU industries globally. The strategy was developed after identifying the three goals for the transformation of European industry, supporting SMEs and keeping Europe sustainable and competitive, as follows:

- A globally competitive and world-leading industry
- An industry that paves the way to climate-neutrality
- An industry shaping Europe's digital future

On 5 May 2021, the Commission adopted the [update on the 2020 Industrial Strategy](#). The updated strategy took into account the experiences of the COVID-19 crisis and its impact on the Single Market, taking into account aspects such as dependencies in key strategic areas and looking to drive the digital transformation in a more sustainable, digital, resilient and globally competitive economy.

ICT Standardisation Priorities for the Digital Single Market

In August 2021 was closed the [public consultation](#) for the future standardisation strategy, aimed at collecting feedback on the current strategy, address the challenges faced in the European standardisation system and discuss on ways to improve it. In February 2022, the Commission adopted the revised strategy. Furthermore, as part of the [eGovernment Action Plan](#), a catalogue of services for ICT procurement was put together. The European Catalogue will contribute to making procured solutions more interoperable and towards creating a more transparent public procurement market. The catalogue will serve as a one-stop-shop for procurement guidelines, including on vendor lock-in, on the use of standards, and a lifecycle costingscheme.

Rolling Plan for ICT Standardisation

In 2021, the European Commission released the [Rolling Plan for ICT Standardisation 2021](#), which includes new chapters such as 'COVID-19', 'Safety, transparency and due process online', 'Circular economy' and 'U-space'. The requested actions in support of the recovery of Europe now take into consideration permanent and structural changes in our societal and economic life and address issues such as teleworking, eLearning, eCommerce, eGovernment and the potential development of a universally accepted eID which will allow for simpler, more trusted and securer access to cross-border digital public services.

Open-Source Strategy 2020-2023

The [Open Source Software strategy](#) of the European Commission approved on 21 October 2020 aims to encourage the development of open, secure, private and accessible software solutions. The implementation of the strategy will be guided by 6 principles (open, transform, share, contribute, secure, stay in control) and 5 key objectives aim to enable the Commission to:

- Progress towards digital autonomy of Europe's own, independent digital approach;
- Implement the European Commission Digital Strategy;
- Encourage sharing and reuse of software and applications, as well as data, information and knowledge;
- Contribute to the knowledge society by sharing the Commission's source code;
- Build a world-class public service.

Action Plan on Integration and Inclusion 2021-2027

Published on 24 November 2020, the [Action Plan on Integration and Inclusion 2021- 2027](#) builds on the achievements of the 2016 action plan, focusing on promoting inclusion for all and the important contribution of migrants to the EU and focusing on the barriers that can hinder participation and inclusion of people with a migrant background.

Considering the individual characteristics that may present specific challenges to the people with migrant background, the action plan includes five actions to support the effective integration and inclusion in all sectoral areas:

1. Building strong partnerships for a more effective integration process;
2. Increased opportunities for EU funding under the 2021-2027 Multi-annual Financial Framework;
3. Fostering participation and encounters with the host society;
4. Enhance the use of new technologies and digital tools for integration and inclusion; and
5. Monitoring progress: towards an evidence-based integration and inclusion policy.

The implementation of the action plan will entail the creation of partnerships between migrants, host communities, social and economic partners, civil society, local and regional authorities as well as the private sector.

3.5 Innovative technologies

3.5.1 Artificial Intelligence (AI)

White Paper on Artificial Intelligence: a European approach to excellence and trust

Published on 19 February 2020, the [White Paper on Artificial Intelligence](#) marks the first major publication as part of the European Union's goal of [Shaping Europe's Digital Future](#). The White Paper outlines the European Commission's proposed approach to the regulation of artificial

intelligence, with the aim of promoting Europe's capacity to innovate in this field while simultaneously supporting the development and uptake of ethical and trustworthy artificial intelligence throughout the European Union. The WhitePaper proposes the following:

- Outlining measures that will help to streamline research, increase financial investment into the development and deployment of artificial intelligence, and foster collaboration in this field between Member States.
- Strategising potential policy options for a future EU regulatory framework determining the types of legal requirements that would apply to relevant actors.

There is a key focus on a risk-based approach, with the European Union arguing that regulatory requirements should be deemed as mandatory when dealing with "high-risk" applications, such as healthcare. Additionally, the White Paper outlines proposed procedures for testing and certifying artificial intelligence applications, to ensure compliance with any new regulatory framework that is developed.

On 21 April 2021, the Commission's communication on [Fostering a European approach](#) to Artificial Intelligence offered a proposal for a regulatory framework and a revised coordinated plan, which aim to promote the development and address the potential risks of AI.

3.5.2 *Distributed ledger technologies*

No political initiative was adopted in this field to date.

3.5.3 *Big data*

No political initiative was adopted in this field to date.

3.5.4 *Cloud computing*

Joint declaration on cloud

Member States have signed a [Joint declaration on cloud](#) in October 2020, expressing their will to collaborate towards a European cloud. The aim of this initiative is to create a secure and competitive cloud that can provide the trustworthy data processing infrastructure and services that public administration, business and citizens need.

In particular, Member States have agreed in the Declaration that their joint actions will focus on:

- Combining private, national and EU investment in deploying competitive, green and secure cloud infrastructures and services. This will mean pursuing the next steps together with industry and experts to shape the European Alliance on Industrial Data and Cloud.
- Defining a common European approach on federating cloud capacities, by working towards one set of joint technical solutions and policy norms to foster pan-European interoperable EU cloud services.
- Driving the take-up of more secure, interoperable and energy-efficient data centres and cloud services in particular for small and medium enterprises, start-ups and the public sector.

European Alliance on Industrial Data, Edge and Cloud

Building on the [European data strategy](#), the [European Alliance on Industrial Data, Edge and Cloud](#) was launched in 2021 by the European Commission, allowing interested Member States, industries and experts to collaborate in designing the detailed business, investment and implementation plan to deploy the next generation cloud capacities for the public and private sector.

Moreover, it will feature the development of several work streams, related to key EU policy goals:

- Joint Investment in cross-border cloud infrastructures and services to build the next generation cloud supply;
- EU Cloud Rulebook for cloud services;
- A European marketplace for cloud services.

3.5.5 *Internet of Things (IoT)*

No political initiative was adopted in this field to date.

3.5.6 *High-performance computing*

No political initiative was adopted in this field to date.

3.5.7 High-speed broadband connectivity

No political initiative was adopted in this field to date.

3.5.8 Other innovative technologies

new Proposal for a policy communication on a Drone Strategy 2.0 for Europe

As announced in the Sustainable and Smart Mobility Strategy, the European Commission adopted the [Drone Strategy 2.0](#) in November 2022. The strategy aims to provide a comprehensive policy package and address obstacles to the development of new drone applications and transport services and to the competitiveness of this industry. It also fosters the uptake of this innovative technology in Europe while establishing the right balance between safety, security and other societal concerns, contributing to a new offer of sustainable services and transport.

3.5.9 Govtech

new GovTech Incubator and programmes

As part of the [Digital Europe Work Programme for 2021-2022 and 2023-2024](#), the European Commission launched a pilot project "Govtech4all", introducing the GovTech ecosystem to the European public sector. The pilot project includes the creation of an [European GovTech Incubator](#), which will foster the deployment of a cross-border collaboration between actors of the GovTech. This new initiative, which is still in development, will promote the deployment of new human-centric digital public services, promote innovative digital governments reusable solutions (preferably open-source) and interoperability by default, increase the collaboration through piloting activities in a variable scale geometry and encourage the participation of European SMEs/startups. In May 2023, the GovTech4all GovTech Incubator was [launched](#) at the 2023 Digital Government Summit.

In addition, to support governments in the EU embracing GovTech, a [report](#) has been released in 2022. The report provides an overview of the diversity of GovTech programmes and shares lessons learnt for setting up government-run GovTech programmes. While the focus of this report is on national GovTech programmes, its findings and conclusions can be applied to other levels of government as well.



4 Digital Public Administration Legislation

4. Legislative Instruments for Digital Public Administration in the European Union

4.1 Legislation on Digital Public administration

Regulation (EU) 2021/694 of the European Parliament and of the Council of 29 April 2021 establishing the Digital Europe Programme

As part of the [Multiannual Financial Framework 2021-2027](#), the European Commission decided to set up a new funding programme, the [Digital Europe Programme](#), whose goal is to boost Europe's digital transformation and to further develop the digital single market and promote the uptake of digital technologies in both the public and private sectors.

The funding programme is to provide EUR 7.5 billion to be invested in specific domains such as supercomputing, artificial intelligence, cybersecurity, advanced digital skills and ensuring a wide use of digital capacity across the economy and society.

The Regulation establishing the Digital Europe Programme was published on 11 May 2021, entered into force the same date and has applied retroactively since 1 January 2021.

Proposal for a Regulation of the European Parliament and of the Council on modernising judicial cooperation between EU countries – use of digital technology

The initiative launched by the Commission aims at [modernising EU cross-border judicial cooperation](#) in civil, commercial and criminal matters by making mandatory the use of digital technology to increase the efficiency and resilience of the communication between competent authorities. By using digital channels by default, all electronic communication in cross-border procedures involving individuals and businesses should be accepted by the Member States.

Following the public consultation period from February to May 2021, the initiative has been adopted in December 2021. After which the feedback period started until March 2022.

Proposal for a Regulation of the European Parliament and of the Council on fighting cross-border crime – IT collaboration platform for joint investigation teams

The proposal on [Joint Investigation Teams \(JIT\) IT collaboration platform](#) complements the digitalisation of the justice strategy brought forward by the Commission. The objective of the initiative is to increase the efficiency and effectiveness of investigations and prosecutions done by JITs in cross-border cases, facilitated by digital communication, document/evidence storage and exchange tools. The regulation has been adopted in December 2021.

4.2 Interoperability

Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on Services in the Internal Market

The objective of the [Services Directive](#) was to release the untapped growth potential of services markets in Europe by removing legal and administrative barriers to trade in the services sector.

The Directive required the Member States to simplify procedures and formalities that service providers needed to comply with. In particular, it required Member States to remove unjustified and disproportionate burdens and to substantially facilitate the establishment of a business and the cross-border provision of services. The Services Directive strengthened the rights of recipients of services, which could be for both consumers and SMEs. It also laid down a set of measures to promote a high quality of services and to enhance information and transparency relating to service providers and their services. Finally, the Services Directive obliged the Member States to cooperate with each other to ensure efficient supervision of providers and their services.

new Proposal for the Interoperable Europe Act

The proposal for the [Interoperable Europe Act](#) was published by the Commission in November 2022. The Act proposes to introduce a structured, shared EU cooperation framework for public administrations, with the following pillars:

- An Interoperability Council of Europe - jointly owned by the Member States and the EU and supported by public and private stakeholders - responsible for developing a common strategic agenda for cross-border interoperability, supporting the operational implementation of interoperability solutions and monitoring progress.
- Mandatory interoperability assessments to evaluate the impact of changes in IT systems linked to cross-border interoperability in the EU.
- An "Interoperable Europe " portal, which will serve as a community platform and one-stop shop for shared and reusable interoperability solutions
- Innovation and support measures, including regulatory sandboxes and GovTech cooperation, to promote policy experimentation, skills development and the scaling up of interoperability solutions for re-use.

4.3 Key enablers

4.3.1 Open Data, Reusability and Access to Public Information

new Regulation on European Data Governance

In February 2020, the European Commission published its European Strategy for Data. A subsequent consultation revealed that 90% of respondents considered that the EU lacks a solid data governance mechanism that would facilitate data sharing across the EU and between sectors. Hence, in November 2020, the European Commission published its draft [Data Governance Act](#) and a year later, in November 2021, it reached a [provisional agreement](#) with Parliament to promote the availability of data across the EU. The informal agreement entered into force on June 2022 and the [Data Governance Act](#) will be applicable from September 2023. Specifically, the Act:

- Introduces conditions under which public sector bodies may allow the re-use of certain data they hold (e.g. data protected on the grounds of confidentiality, protection of intellectual property rights or of personal data),
- Imposes obligations on providers facilitating the sharing of personal and non-personal data,
- Establishes a 'register of recognised data altruism organisations' in order to increase trust in the operations of registered organisations that facilitate the voluntary sharing of data for the common good,
- Creates a formal expert group: the 'European Data Innovation Board'.

new Proposal for the Data Act

The European Commission published in February 2020 a [Communication](#) on a European strategy for data which stressed that further actions should be taken towards a European Data Act. This initiative aims at facilitating access to and use of data, particularly by fostering business-to-government data sharing and further supporting business-to-business data sharing. In May 2021, the Commission published its [Inception Impact Assessment](#) on the forthcoming Data Act and conducted a public consultation until 25 June 2021. Feedback has been taken into consideration for the initiative to be tabled in Q3-Q4 of 2021.

In February 2022, the Commission proposed [new rules](#) on the use and access to data generated in the EU across all economic sectors. Following the [Data Governance Act](#), this proposal is the second main legislative initiative resulting from the [European strategy for data](#). According to the Commission, the aim is to create a single market to allow data to flow freely within the EU and across sectors for the benefit of businesses, researchers, public administrations and society at large. The Data Act will clarify who can create value from data and under which conditions. The text of the [Data Act](#) has been adopted by the European Parliament in March 2023 after several amendments.

new Directive (EU) 2016/2102 of the European Parliament and of the Council of 2 December 2016 on the Accessibility of Websites and Mobile Applications of Public Sector Bodies

The objectives of the [Web Accessibility Directive](#) were two-fold; firstly, the directive aimed to ensure equal access to public sector information and services for people with disabilities, and

secondly, the harmonisation of approaches to accessibility reduced technical barriers on the digital single market. In accordance with the directive, Member States must appoint a national body in charge of periodically monitoring the compliance with the provisions of the directive, and to report the outcome of such monitoring to the Commission.

The European Commission reviewed the Web Accessibility Directive in 2022. The Commission report is [published on the EUR-Lex portal](#).

Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information

The Directive on open data and the re-use of public sector information, also known as the 'Open Data Directive' (Directive (EU) 2019/1024) entered into force on 16 July 2019. It replaces the Public Sector Information Directive, also known as the 'PSI Directive' (Directive 2003/98/EC) which dated from 2003 and was subsequently amended by the Directive 2013/37/EU. The proposal for a revision of the Directive was adopted by the European Commission on 25 April 2018. On 22 January 2019, negotiators from the European Parliament, the Council of the EU and the Commission reached an agreement on the revision proposed by the Commission. When adopted in June 2019, the Directive was renamed as the Open Data and Public Sector Information Directive and will make public sector and publicly funded data re-usable.

The aim of the rules is to broaden the scope of application to include data held by public undertakings (under a specific set of rules) and research data resulting from public funding.

Regulation (EU) 2018/1724 Establishing a Single Digital Gateway to Provide Access to Information, to Procedures, and to Assistance and Problem-Solving Services

On 27 September 2018, the Council adopted a regulation on setting up a single digital gateway. The Single Digital Gateway will address the current fragmentation and information gaps by completing, improving and linking up relevant EU and national-level online information, assistance services and procedures in a user-friendly way. The aim is to provide businesses and citizens with high quality, comprehensive information, effective assistance and problem-solving services and efficient compliance procedures regarding EU and national rules applicable to citizens and businesses when they want to do business and/or to travel to, buy from, work, study or reside in another Member State. The gateway will be based on a user interface that would search the best service package for any query a user may have.

The Single Digital Gateway Regulation introduces (Article 14) the once-only principle for cross-border transactions, meaning that citizens and businesses will not have to provide data more than once to public administrations in the EU. This principle will be applicable for all the procedures under Annex II.

Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a Framework for the Free Flow of Non-Personal Data in the European Union

In line with the objectives of the Communication on Building a European Data Economy, the Regulation, applicable as of 28 May 2019, aimed to achieve a more competitive and integrated EU market for data storage and/or processing services and activities. More specifically, this entails:

- Reducing the number and range of data localisation restrictions;
- Enhancing legal certainty;
- Facilitating cross-border availability of data for regulatory control purposes;
- Improving the conditions under which users can switch data storage and/or processing service providers or port their data back to their own IT systems;
- Increasing trust in and the security of cross-border data storage and/or processing.

4.3.2 eID and Trust Services

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 Proposal for the revision of eIDAS - European Digital Identify

The Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market, the eIDAS Regulation, is a major step in building a Digital Single Market and in boosting trust, security and convenience online, for governments, businesses

and consumers. Thanks to eIDAS, the EU now has a predictable legal framework providing legal certainty beyond national borders forelectronic identification (eID) and for electronic trust services (such as electronic signatures, seals, time stamping, delivery services and website authentication).

In this regard, the eIDAS Regulation:

- Ensured that people and businesses can use their own national electronic identification schemes (eIDs) to access public services in other EU countries where eIDs are available.
- Created a European internal market for trust services by ensuring that they will work across borders and have the same legal status as traditional paper-based processes.

Member States have been working on setting up their national eIDAS nodeswith help from the Connecting Europe Facility Programme of the Commission, i.e. the required infrastructure for the eID cross-border connection, and all are expected to be ready by the required deadline.

On 3 June 2021 the Commission proposed the framework for the revision of the eIDAS and the [European DigitalIdentity](#). Under the new regulation, Member States will issue European Digital Identity Wallets that will enable users to access services online without using private identification methods or share unnecessary data. The proposal is accompanied by a Recommendation inviting Member States to cooperate within the framework to developa digital toolbox. This toolbox should include a comprehensive technical architecture and reference framework, a set of common standards and technical references and a set ofguidelines and descriptions of best practices covering at least all aspects of the functionalities and interoperability of the European Digital Identity Wallets.

4.3.3 Security aspects

new EU space-based global secure communications system

The legislative initiative on building an EU space-based global secure communications system, with the purpose of offering broadband connectivity where it is currently missing, was expected in Q2 2022.

In this regard, on 15 February 2022, the Commission adopted the [proposal for a Regulation establishing the Union Secure Connectivity Programme for the period 2023-2027](#) following three policy objectives:

- Ensuring the provision of secure satellite communication for evolving public needs,
- Increasing Member States and the Union resilience by guaranteed access to secure communication,
- Avoiding critical dependencies on non-EU infrastructures as for governmental communication needs.

On 14 February 2023, the Plenary of the Parliament approved an [agreement](#) which includes the name of the infrastructure, as well as its related acronym: 'infrastructure for Resilience, Interconnection and Security by Satellite'- IRIS². It also clarified the EU total budget contribution to the programme. The Parliament notably MEPs ensured the incorporation into the regulation of provisions aiming at strengthening the environmental sustainability of the system, with measures to prevent space debris proliferation, light pollution and provide with carbon footprint compensation. The programme will be implemented in cooperation with the European Space Agency.

new Review of the Directive on Security of Networks and Information Systems (NIS2)

In December 2020, the Commission adopted the proposal for the [revision of the Directive on Security of Network and Information Systems \(NIS 2 Directive\)](#).

Despite the notable achievements of the NIS Directive, the digital transformation of our societies and economies, further boosted by the COVID-19 crisis, has identified new challenges and limitations in the current Directive, requiring tailored responses.

Indeed, the Commission proposal expands the scope of the current NIS Directive, aimingto reinforce the security requirements appointed, focusing on the security of supply chains, simplifying reporting obligations, introducing tougher supervisory measures and stricter enforcement requirements including harmonised sanctions across MemberStates. The proposal also includes a suggestion for information sharing and cooperationon cyber crisis management at national and at EU level.

In January 2023, the [Directive \(EU\) 2022/2555](#) (known as NIS2) entered into force replacing [Directive \(EU\) 2016/1148](#). ENISA supports the [implementation of the NIS2 Directive](#), which aims to improve the status of cyber security in the EU in a number of ways:

- creating the necessary cyber crisis management structure (CyCLONe);
- increasing the level of harmonization regarding security requirements and reporting obligations;
- encouraging Member States to introduce new areas of interest such as supply chain, vulnerability management, core internet and cyber hygiene their national cybersecurity strategies;
- bringing novel ideas such as the peer reviews for enhancing collaboration and knowledge sharing amongst the Member States;
- covering a larger share of the economy and society by including more sectors which means that more entities are obliged to take measures in order to increase their level of cybersecurity.

[Directive \(EU\) 2016/1148 of the European Parliament and of the Council of 6 July 2016 Concerning Measures for a High Common Level of Security of Network and Information Systems Across the Union](#)

The [Directive on Security of Network and Information Systems](#) (the NIS Directive) was adopted by the European Parliament on 6 July 2016 and entered into force in August 2016. The Directive ensured Member States' preparedness for cyber threats by requiring them to be appropriately equipped. They were required to establish a Computer Security Incident Response Team (CSIRT) Network, in order to promote swift and effective operational cooperation on specific cybersecurity incidents and sharing information about risks.

In 2017, the Commission put forward a [draft Implementing Regulation Pursuant Art 16\(8\) of the NIS Directive](#). This Regulation specified further the elements to be considered by digital service providers when identifying and taking measures to ensure a level of security of network and information systems, which they use in the context of offering services referred to in Annex III to [Directive \(EU\) 2016/1148](#).

[Regulation \(EU\) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation \(EC\) No 45/2001 and Decision No 1247/2002/EC](#)

On 4 May 2016, the official texts of the [General Data Protection Regulation](#) (GDPR) were published to adopt a comprehensive reform of data protection rules in the EU. The provisions of the Regulation became directly applicable in all Member States on 25 May 2018.

The aim of GDPR was to update data protection rules in order to protect all EU citizens from privacy and data breaches in an increasingly data-driven world that was vastly different from the time in which the [Directive 95/46/EC](#) was established. In this regard, the GDPR Regulation introduced several significant changes when it came to data protection in the EU:

- Each private company working with data needed to have delegated Data Protection Officers;
- Companies not complying with the Regulation faced fines of up to EUR 10 million or 2% of the company's global annual turnover;
- Introduction of the 'privacy by design' principle;
- Data controllers were required to: (i) maintain certain documentation, (ii) conduct a data protection impact assessment for more risky processing (DPAs may compile lists of what is caught), and (iii) implement data protection by design and by default, e.g. data minimisation.

Furthermore, according to the Regulation data subjects must consent to the collection and use of their data and have the right for their information to be 'forgotten'.

[Regulation 2018/1725](#) sets forth the rules applicable to the processing of personal data by European Union institutions, bodies, offices and agencies. It is aligned with the General Data Protection Regulation and the Data Protection Law Enforcement Directive. It entered into application on 11 December 2018 and established a [European data protection supervisor \(EDPS\)](#). The EDPS is an independent EU body responsible for monitoring the application of data protection

rules within European Institutions and for investigating complaints. The Commission reviewed the legislative framework around data protection in order to enforce the law in Q2 2022.

new European Cyber Resilience Act

As part of the Europe fit for the digital age, the Commission stated in the [Work Programme 2022](#), that a European cyber resilience act will be proposed to establish common cybersecurity standards for products. A proposal on this Act was published in Q3 2022.

4.3.4 Interconnection of base registries

[Directive 2012/17/EU of the European Parliament and of the Council of 13 June 2012 Amending Council Directive 89/666/EEC and Directives 2005/56/EC and 2009/101/EC of the European Parliament and of the Council as Regards the Interconnection of Central, Commercial and Companies Registers](#)

Directive 2012/17/EU on the interconnection of business registers entered into force on 7 July 2012. Ensuring that information about companies was always up to date was one of the main objectives of this Directive. Business registers were required to make available information on the rules in their national law, according to which third parties could rely on certain company documents. This information was also available on the eJustice portal.

The Directive also required a Business Registers Interconnection System (BRIS) to be established. The Commission implementing [Regulation \(EU\) 2015/884](#) set out technical specifications and procedures required for the system of interconnection of business registers. Member States had to transpose the remaining rules and make the necessary preparations for connecting to the new system by 8 June 2017. BRIS made it easy to access information on EU companies via the eJustice or other national portals. In addition, it facilitated electronic communication between registers in relation to cross-border mergers and branches of companies registered in other Member States.

4.3.5 eProcurement

[Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on Public Procurement and Repealing Directive 2004/18/EC](#)

The [Directive](#), which took effect on 26 February 2014, set out the legal framework for public procurement, including electronic procurement. It established the procedures which must be followed before awarding a contract to suppliers (i.e. providers of works, supplies or services) when its value exceeded set thresholds, unless it qualified for a specific exclusion - e.g. on grounds of national security. The EU Member States were required to transpose the Directive into national law by 18 April 2016.

The Directive introduced a set of new rules, including a new electronic self-declaration for bidders (ESPD), which paved the way for the digitisation of public procurement, which considerably increased the efficiency of the public procurement system.

[Directive 2014/55/EU of the European Parliament and of the Council of 16 April 2014 on Electronic Invoicing in Public Procurement](#)

EU countries and the European Commission decided to introduce a European Standard for eInvoicing in response to the many eInvoice formats used across the EU. Once the [eInvoicing Directive 2014/55/EU](#) was transposed into the national laws of EU countries, the deadline for implementing the norm has passed, and electronic invoices are able to flow seamlessly across the EU.

[Commission Implementing Regulation \(EU\) 2019/1780 of 23 September 2019 establishing standard forms for the publication of notices in the field of public procurement](#)

The [Regulation](#) of 23 September 2019 establishes the use of eForms with common standard and terminology by public buyers to publish notices on [Tenders Electronic Daily](#)- an online portal for public procurement notices from across the EU. The adoption of eForms represents the core of the digital transformation of public procurement in the EU, helping reduce the administrative burden for buyers, increasing the ability of governments to make data-driven decisions about public spending, and making public procurement more transparent.

4.4 Other relevant EU legislative initiatives

new

Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act)

In December 2020, the European Commission published a proposal for a [Regulation on contestable and fair markets in the digital sector](#), aimed at regulating the behaviour of digital platforms acting as gatekeepers between business owners and their customers in the EU. In October 2022, the DMA was published in the Official Journal and [entered into force](#) on 1 November 2022. Before 3 July 2023, companies have to provide the Commission with information about their number of users so that the Commission can designate “gatekeepers” before 6 September. Gatekeepers will then have until March 2024 to ensure that they follow the obligations of the DMA.

new

Regulation of the European Parliament and of the Council on a single market for digital services (Digital Services Act)

In parallel to the abovementioned [Digital Markets Act](#), the Commission also unveiled in December 2020 a new legislative proposal on [Digital Services Act](#), so as to update the current EU legal framework governing digital services. This proposal aims at creating a safer and trusted online environment for European citizens and businesses, by laying down a set of harmonised EU-wide rules to ensure transparency, accountability and regulatory oversight of the EU online space.

Following the [adoption](#) of the Digital Services Package in the first reading by the European Parliament in July 2022, both the Digital Services Act and Digital Markets Act have been adopted by the Council of the European Union, signed by the Presidents of both institutions and published in the Official Journal. The DSA has been published in the Official Journal as of 27 October 2022 and [came into force](#) on 16 November 2022. The DSA will be directly applicable across the EU and will apply fifteen months or from 1 January 2024, whichever comes later, after entry into force.

Foreign Direct Investment (FDI) Screening Regulation

In view of developments such as the adoption of the Multiannual Financial Framework for the years 2021 – 2027, the [Foreign Direct Investment \(FDI\) Screening Regulation](#) aims to amend the [Regulation \(EU\) No 2019/452](#) establishing a framework for the screening of foreign direct investments into the Union. The amendment involves significant funding and updates the list of projects and programmes of EU interest covered by EU law on critical infrastructure, technologies or inputs essential for security or public order (e.g. artificial intelligence, robotics, satellite navigation).

The programmes listed in the draft delegated regulation include the Horizon Europe, Connecting Europe Facility and Digital Europe Programme.

new

European Chips Act

As part of the Europe fit for the digital age, the Commission stated in the [work programme 2022](#), that a [European Chips Act](#) will be adopted with the purpose of promoting a state-of-the-art European chip ecosystem to boost EU innovative capacity, security of supply and develop new markets for ground-breaking European tech.

In this regard, on 8 February 2022, the Commission adopted a ‘European chips act package’ focused on the strategic objective of increasing the resilience of the EU’s semiconductor ecosystem and increasing its global market share.

The Commission [welcomes the political agreement](#) reached today between the European Parliament and the EU Member States on the European Chips Act, proposed by the Commission on 8 February 2022, including on the budget.

4.5 Innovative technologies

4.5.1 Artificial Intelligence (AI)

new Proposal for a Regulation on a European approach for Artificial Intelligence

The European Commission unveiled in April 2021 a new [EU regulatory framework on AI](#), which aims at providing a European technology- neutral definition of AI systems within EU law.

The Internal Market Committee and the Civil Liberties Committee adopted a [draft negotiating mandate](#) on the first ever rules for Artificial Intelligence in May 2023. Through their amendments to the Commission’s proposal, Members of the European Parliament (MEPs) aim to ensure that AI systems are overseen by people, safe, transparent, traceable, non-discriminatory, and environmentally friendly.

4.5.2 Distributed ledger technologies

No legislation was adopted in this field to date.

4.5.3 Big data

No legislation was adopted in this field to date.

4.5.4 Cloud computing

No legislation was adopted in this field to date.

4.5.5 Internet of Things (IoT)

No legislation was adopted in this field to date.

4.5.6 High-performance computing

Regulation on establishing the new European High Performance Computing Joint Undertaking (EuroHPC JU)

The [European High-Performance Computing Joint Undertaking \(EuroHPC JU\)](#) was established in October 2018 as a legal and financial framework to pool EU and participating countries’ resources to build a European world-class supercomputing and data infrastructure with exascale capabilities in the next years, and post-exascale facilities by 2027. In the near future, Europe’s leading role in the data economy will increasingly depend on its capability to develop key HPC technologies. For this reason, the European Commission has drafted a [Proposal for a Council Regulation on establishing a EuroHPC](#) which is a continuation of the existing initiative established under [Council Regulation \(EU\) 2018/1488](#). The proposed Regulation introduces modifications to adapt the Regulation to the new multiannual financial framework (MFF) programmes and to the priorities outlined in the European Strategy for Data and in the Communication Shaping Europe’s Digital Future.

4.5.7 High-speed broadband connectivity

Harmonising spectrum for enhanced connectivity

In February 2022, the Commission adopted four [implementing decisions](#) to ensure that the [EU’s radio spectrum policy](#) meets the growing demand for broadband and for innovative digital applications:

- [Commission Implementing Decision](#) on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing electronic communications services in the Union
- [Commission Implementing Decision](#) on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands;
- [Commission Implementing Decision](#) as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices.

- Commission Implementing Decision on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of wireless access systems including radio local area networks.

new Revision of the EU rules on high-speed broadband (Directive 2014/61/EU)

A Revision of the EU rules on high-speed broadband (Directive 2014/61/EU) was adopted by the Commission in February 2023:

- Enable a quicker and more efficient rollout of very high-capacity networks, including fibre and 5G
- Ensure the rules are aligned with the European Electronic Communications Code
- Explore potential environmental safeguards.

In addition, the Commission reviewed the Broadband Cost Reduction Directive and proposed the [Gigabit Infrastructure Act](#) for the quick rollout of Gigabit connectivity. There is a rising demand for digital technology and more innovative tools, services and solutions. They will depend on the availability of faster, more reliable, data-intensive connections. The proposed rules will support the 2030 Digital Decade target on connectivity, which aims to ensure everyone across the EU has access to fast Gigabit connectivity and fast mobile data by 2030.

4.5.8 Govtech

new GovTech in the proposal for the Interoperable Europe Act (Article 10)

GovTech appears in the Interoperable Europe Act proposal (Article 10), GovTech is a crucial driver for innovative public services. GovTech refers to the use of technology to improve and transform public services provided by the government. By fostering collaboration between the public sector and start-ups/SMEs to acquire innovative technological solutions, GovTech is changing the way public services are delivered.



5 Digital Public Administration Funding Programmes

5. Funding programmes for Digital Public Administration in the European Union

5.1 Recovery and Resilience Facility

The **Recovery and Resilience Facility** (the Facility) is the key instrument at the heart of NextGenerationEU, the temporary recovery instrument that allows the Commission to raise funds to help repair the immediate economic and social damage brought about by the coronavirus pandemic. The Facility is to make EUR 723.8 billion available to the Member States, through loans and grants that will support reforms and investments in the countries. The overall aim is to help the countries mitigate the economic and social impact of the crisis and make European economies and societies more sustainable, resilient and better prepared for future challenges.

In order to benefit from the support of the Facility, Member States submitted their Recovery and Resilience Plans for approval to the European Commission. These Plans set out a package of reforms and public investment projects that the Member States will need to implement by 2026 in order to benefit from the support (and funding) of the Facility. The Commission assessed the recovery and resilience plans based on criteria set out in the **Regulation** establishing the Recovery and Resilience Facility.

5.2 InvestEU

The **InvestEU** programme builds on the successes of the Investment Plan for Europe, in order to give an additional boost to sustainable investment, innovation and job creation in Europe, always in line with EU policies and will contribute to the EU's economic recovery.

The programme will be structured around four policy areas:

- Sustainable infrastructure;
- Research, innovation and digitalisation;
- SMEs;
- Social investment and skill.

5.3 REACT-EU

The **Recovery assistance for cohesion and the territories of Europe (REACT-EU)** is a top-up to the 2014-2020 European Regional Development Fund and European Social Fund allocations, as a crisis-response and crisis-repair measure and constitutes a bridge to the long-term recovery plan.

Hence, the overall budget of EUR 50.6 billion will be allocated to projects that foster crisis repair capacities in the context of the coronavirus crisis, as well as investments in operations contributing to the preparing a green, digital and resilient recovery of the economy.

The allocation of funds takes into consideration the economic and social impact of the crisis on EU countries, reflecting their GDP drops and rise of unemployment, particularly among young people, as well as the countries' wealth.

5.4 Digital Europe Programme (DEP)

As part of the new Multiannual Financial Framework for the period 2021-2027, the European Commission has proposed a new funding programme: the **Digital Europe Programme (DIGITAL)**, whose goal will be to set up the strategic digital capacities of the EU and to promote a far-reaching deployment of new technologies, to be used by the EU's citizens and businesses. With an overall budget of EUR 7.5 billion for the period 2021-2027, the Digital Europe Programme aims to define and bolster the digital transformation of Europe's society and economy.

The programme will heavily focus on investing and boosting Europe's use of emerging technologies such as supercomputing, artificial intelligence, the Internet of Things, and blockchain, among others. In addition, it will boost investments in cybersecurity and advanced digital skills so as to improve Europe's competitiveness in the global digital economy and increase its technological autonomy.

5.5 The Connecting Europe Facility 2021-2027

As part of the next long-term EU budget (MFF 2021-2027), the European Commission proposed to renew the [Connecting Europe Facility \(CEF\)](#), the funding programme supporting the development of transport, energy and digital infrastructure within trans-European networks. The Council and the European Parliament decided to allocate an overall budget of EUR 33.71 billion to better integrate the transport, energy and digital sectors, and to help achieve EU climate objectives, while at the same time fostering job creation, economy growth and the deployment of emerging technologies.

The CEF Transport part of the programme, with an overall budget of EUR 22.9 billion (the highest amount among the three pillars of CEF 2), will strongly promote the shift to decarbonisation and will work towards making transport connected, sustainable, inclusive, safe and secure. Priority will also be given to further develop the trans-European transport networks (TEN-T), with a particular focus on missing links and cross-border projects.

The energy sector of the programme, with a dedicated budget of EUR 5.2 billion, will contribute to transitioning towards clean energy and complete the Energy Union, by further integrating the European energy market, improving the interoperability of energy networks across sectors and borders, fostering decarbonisation and ensuring security of supply.

The digital envelope, of EUR 1.8 billion, will aim at improving digital connectivity through the creation of very high-capacity broadband networks as a basis for better digital services.

5.6 Horizon Europe

As a continuation of Horizon 2020, [Horizon Europe](#) is the EU's main funding programme for research and innovation, with an overall budget of EUR 95.5 billion. The programme aims at facilitating collaboration among Member States when it comes to research and innovation, so as to create and better disperse knowledge and technologies. The programme will also contribute to the development of the European Research Area, a single market for research, innovation, and technology across the EU.

5.7 European Regional Development Fund (ERDF)

The [European Regional Development Fund \(ERDF\)](#) aims to strengthen economic, social and territorial cohesion in the European Union by correcting imbalances between its regions.

For the period 2021-2027, the fund will enable investments to make Europe and its regions:

- More competitive and smarter, through innovation and support to small and medium-sized businesses, as through their digitalisation;
- Greener and more resilient;
- More connected, through the enhancement of regional mobility;
- More social, by supporting effective and inclusive employment and education, among others;
- Closer to its citizens, by supporting locally-led development as well as sustainable urban development across the EU.

5.8 European Social Fund Plus (ESF+)

In the same spirit as the previous [European Social Fund 2014-2020](#), the [European Social Fund Plus \(ESF+\)](#) aims at supporting Member States to tackle the crisis caused by the coronavirus pandemic, to achieve high employment levels and fair social protection and most importantly, to foster a skilled and resilient workforce that is ready for the transition to a green and digital economy. With a budget of EUR 99.26 billion, the ESF+ will focus its investments in three main policy areas: education and skills, employment and social inclusion, so as to finance the implementation of the principles of the [European Pillar of Social Rights](#).

5.9 Structural Reform Support Programme (and Service)

The [Structural Reform Support Programme](#) was established with the objective of strengthening the overall capacity of Member States to prepare and implement growth-enhancing institutional, structural and administrative reforms. The programme assists in the efficient and effective use of Union funds at the request of Member States. Since January 2020, [DG REFORM](#) coordinates the

Structural Reform Support Programme, previously carried out by the Structural Reform Support Service.

The new Structural Reform Support Programme for the period covering 2021-2027 has not been adopted yet. However, it has been decided that with its overall budget of €25 billion, the programme will focus on three main elements:

- The creation of a Reform Delivery Tool, so as to grant financial support to all Member States, for reforms identified in the context of the European Semester;
- The setting-up of a Technical Support Instrument, which will bring further technical support to reinforce the administrative capacities of Member States to carry out the reforms;
- The establishment of a Convergence Facility, to provide both financial and technical support to those Member States aspiring to join the eurozone.

5.10 European Innovation Council (EIC) Fund

The [European Innovation Council](#) established under the Horizon Europe programme provides funding for individual companies through grants and investments through the EIC Fund. This fund focuses on financing and supporting all stages of innovation, from R&D on the scientific underpinnings of breakthrough technologies, to validation and demonstration of breakthrough technologies and innovations to meet real world needs, to the development and scaling up of start-ups and small and medium-sized enterprises (SMEs).

Higher education institutions and research and technology organisations can also apply to the various open and challenge driven funding opportunities.

5.11 EU Funding for Broadband 2021-2027

To meet the ambitious goal set by the Commission's Digital Compass proposal that by 2030 all European households will be covered by a gigabit network and that all populated areas will be covered by 5G, strong funding instruments are needed.

The European Union has made available the following [financial tools](#) to support Member States and private investors:

- Recovery and Resilience Facility;
- European Regional Development Fund;
- European Agricultural Fund for Rural Development;
- Just Transition Fund;
- Connecting Europe Facility - Digital;
- Connecting Europe Broadband Fund;
- InvestEU Fund.



6 Digital Public Administration Infrastructure

6. Digital Public Administration Infrastructure

This chapter is meant to provide an overview of the main guidelines and standards available to European countries on digital public administration, as well as a repository of software and networks for cross-border inter-administrative operations and communication. These infrastructures have the purpose of promoting interoperability and secure data exchange within Member States' Public Administrations.

6.1 Common Assessment Model Standards and Specifications (CAMSS)

CAMSS aims at promoting collaboration between public administrations through a Common Assessment Method for Standards and Specifications. This helps to expand interoperability between EU Member States through the sharing of information and knowledge, and the alignment of national processes by using CAMSS. It also aims to speed up the assessment processes, reduce their cost throughout European public administrations and avoid ICT vendor specific lock-in. The main objective of CAMSS is to become the method of reference for the assessment of technical specifications and standards in the field of ICT, helping to promote transparency regarding selection procedures for eGovernment solutions and standards, and increasing the sharing and reuse of eGovernment projects. The CAMSS toolkit consists of:

- A documented reference assessment process;
- A set of quality requirements (criteria);
- Assessment tools: online and offline (also in open source);
- The collection of assessments performed with the method;
- A list of standards which compiles standards and specifications (recommended and mandatory) that are included in national lists.

CAMSS is supported through Interoperable Europe.

6.2 Interoperability Maturity Assessment of a Public Service (IMAPS)

The IMAPS (Interoperability Maturity Assessment of a Public Service) is a self-assessment tool that will evaluate and ultimately improve European public service interoperability maturity. It currently consists of:

- A compact and user-friendly self-assessment. The 30-minute questionnaire looks at the context of the public service, how the service is delivered, how it consumes existing services and how it is managed.
- On completion of the IMAPS, the Results Output will offer tailored recommendations and confidential improvement guidance.

The IMAPS is designed to help public service owners (i.e. those in charge of key services such as online tax filing, online business registration, online change of address, etc. – no matter at what government level: national, regional, local, international) evaluate, improve and consider all key interoperability aspects of their public service.

6.3 EU Catalogue of Standards for ICT Procurement

Under Interoperable Europe, the European Commission is creating a [Catalogue of Standards of ICT Procurement](#). The European Catalogue will help ensure that procured solutions are interoperable and increase the transparency of the ICT procurement market. The Catalogue will offer a one-stop-shop for procurement guidelines, including vendor lock-in, the use of standards, and a lifecycle costing scheme that accounts for the often-neglected interoperability costs.

At present, the [Catalogue](#) is a draft version to demonstrate the concepts. The prototype proposes procurement needs in four domains: cloud computing, transport systems, eGovernment, and smart and efficient use of energy.

6.4 Interoperable Europe Core Vocabularies

Core Vocabularies are simplified, reusable, and extensible data models that capture the fundamental characteristics of an entity, such as a person or a public organisation, in a context-neutral manner.

Public administrations can use and extend the Core Vocabularies in the following contexts:

- Information exchange between systems: The Core Vocabularies can form the basis of a context-specific data model to exchange data among existing information systems.
- Data integration: The Core Vocabularies can be used to integrate data disparate data sources.
- Data publishing: The Core Vocabularies can be used as the foundation of a common export format for data in base registries like cadastres, business registers and service portals.
- Development of new systems: The Core Vocabularies can be used as a default starting point for designing the conceptual and logical data models in newly developed information systems.

Interoperable Europe is developing the Core Vocabularies for public administrations in an open process with the active involvement of the SEMIC and Catalogue of Service action stakeholders.

6.5 Free and Open-Source Solutions for European Public Services (FOSSEPS) Pilot Project

The **FOSSEPS Pilot Project** has been launched in February 2022 by the European Commission and the European Parliament as a response to the need to manage and protect open source.

The project will achieve the following specific objectives:

- Build a European open-source Applications Catalogue (with data drawn from national catalogues) and release on the web for public search and use.
- Create an inventory of Europe's most critical open-source software used by European Public Services.
- Encourage and establish a framework e.g. via a European Public Services Open Source User Group (EPS-OS-UG), for sharing of knowledge, experiences and initiatives on open source at a European level.

6.6 Online consultation platform on European Digital Identity Wallets

On 3 June 2021, the Commission **proposed** a trusted and secure digital identity for all Europeans, including digital identity wallets. Personal digital wallets will enable citizens to digitally identify themselves, store and manage identity data as well as official documents in electronic format (e.g. driving license, medical prescriptions, diplomas, etc.). This tool will therefore enable citizens to prove their identity when necessary to access online services, share digital documents.

In February 2022, the Commission has launched an **online platform** to gather feedback from interested parties to shape future European Digital Identity Wallets.

6.7 European Health Data Space

In January 2022, the Commission published a summary report of public consultation with stakeholders on the proposed initiative for a **European Health Data Space**.

The aim of this initiative will be to promote better exchange and access to different types of health data (electronic health records, genomics data, data from patient registries etc.), not only to support healthcare delivery (so-called primary use of data) but also for health research and health policy making purposes (so-called secondary use of data). The European Health Data Space will be built on 3 main pillars:

- A strong system of data governance and rules for data exchange;
- Data quality;
- Strong infrastructure and interoperability.

The legislative proposal was published in May 2022.

6.8 TESTA, Secure and Reliable Communication for EU Public Administrations

The TESTA network service, originating from the IDA programme in 1996, has been supported by various EU programmes, including IDA, IDABC, ISA, ISA2, and most recently, the Digital Europe Programme (DEP). As the trusted solution endorsed by the Member States, TESTA was developed to meet the need for secure information exchanges between EU public bodies, ensuring guaranteed service levels for network availability, performance, and security.

Key features:

- Encrypted by EU approved encryption devices
- Isolated from the Internet
- Secure data exchange between EUIBAs and public authorities
- Available to Member States, UK, EFTA, and candidate countries (Montenegro and North Macedonia)
- Efficient cross-border inter-administrative operations
- Easy onboarding of new applications
- Trans-European level communication in a safe, reliable, and prompt manner

6.9 GÉANT

GÉANT is the pan-European research and education network that connects Europe's National Research and Education Networks (NRENs).

Through its integrated catalogue of connectivity, collaboration and identity services, GÉANT provides over 50 million users at 10 000 institutions across Europe with highly reliable, unconstrained access to computing, analysis, storage, applications and other resources, to ensure that Europe remains at the forefront of research.

6.10 Common Communications Network/ Common Systems Interface (CCN/CSI)

The CCN/CSI network is a common platform based on the common communication network (hereinafter the 'CCN') and common system interface (hereinafter the 'CSI'), developed by the Union for electronic communications between competent authorities regarding customs and taxation.

6.11 Pan-European blockchain regulatory sandbox

The European Blockchain Partnership and the Commission are planning a [pan-European blockchain regulatory sandbox](#), a space where regulators, blockchain experts and users can interact in a safe environment to test innovative solutions and identify obstacles that arise in deploying them. It is aimed for use cases in and outside the European Blockchain Services Infrastructure (EBSI) and in particular for data portability, business-to-business data spaces, smart contracts, and digital identity. The sandbox will be applied to many sectors such as health, environment, mobility and energy and is expected to be launched in 2021/2022.

6.12 Connecting Europe Facility (CEF) Building Blocks

The [Connecting Europe Facility \(CEF\)](#) programme gives governments, businesses and solutions providers access to free tools to help build digital services. The open and reusable digital solutions provided by the CEF, Building Blocks, are endorsed by the Commission and ensure that the digital services are fully compatible across borders and sectors, helping ensure interoperability. The available Building Blocks for the development of digital public administration infrastructure include:

- Big Data Test Infrastructure, a set of services to help public administrations explore and experiment with various data sources, softwares and methodologies, and collect useful insights that will contribute to better public decisions;
- European Blockchain Services Infrastructure (EBSI), a EU-wide blockchain infrastructure leveraging the creation of cross-border services for public administrations and their ecosystems to verify information and make services trustworthy, as well as help citizens

- take control of their data and effortless interaction from businesses with government agencies;
- Context Broker, a digital platform component that enables the integration of gathered data from different sources, including insights for further exploitation that can support smart decisions at the right time;
 - eDelivery, a set of technical specifications and standards, installable software and auxiliary services to allow projects to create a network of nodes for secure digital data exchange, laying the foundation for cross-domain and cross-project interoperability;
 - eID, a set of services provided by the European Commission to enable the mutual recognition of national electronic identification schemes (eID) across borders for citizens to access online services from other European countries;
 - eInvoicing, a digital solution that enables public sector contractors and companies to receive and process electronic invoices, reducing costs and administrative burden;
 - eSignature, a set of free standards, tools and services that help public administrations and businesses accelerate the creation and verification of electronic signatures across all Member States; and
 - eTranslation, an automated translation tool available to translate text excerpts or complete documents that can be integrate into digital systems and covering more than 24 languages.



7 Digital Public Administration Services

7. Digital Public Administration Services

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

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

7.1 Life and Travel

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

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

7.2 Doing Business

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

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

The Digital Public Administration Factsheets

The factsheets present an overview of the state and progress of Digital Government European countries.

They are published on the Joinup platform, which is a joint initiative by the Directorate General for Informatics (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from the European Commission.



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

An action supported by Interoperable Europe

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

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

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