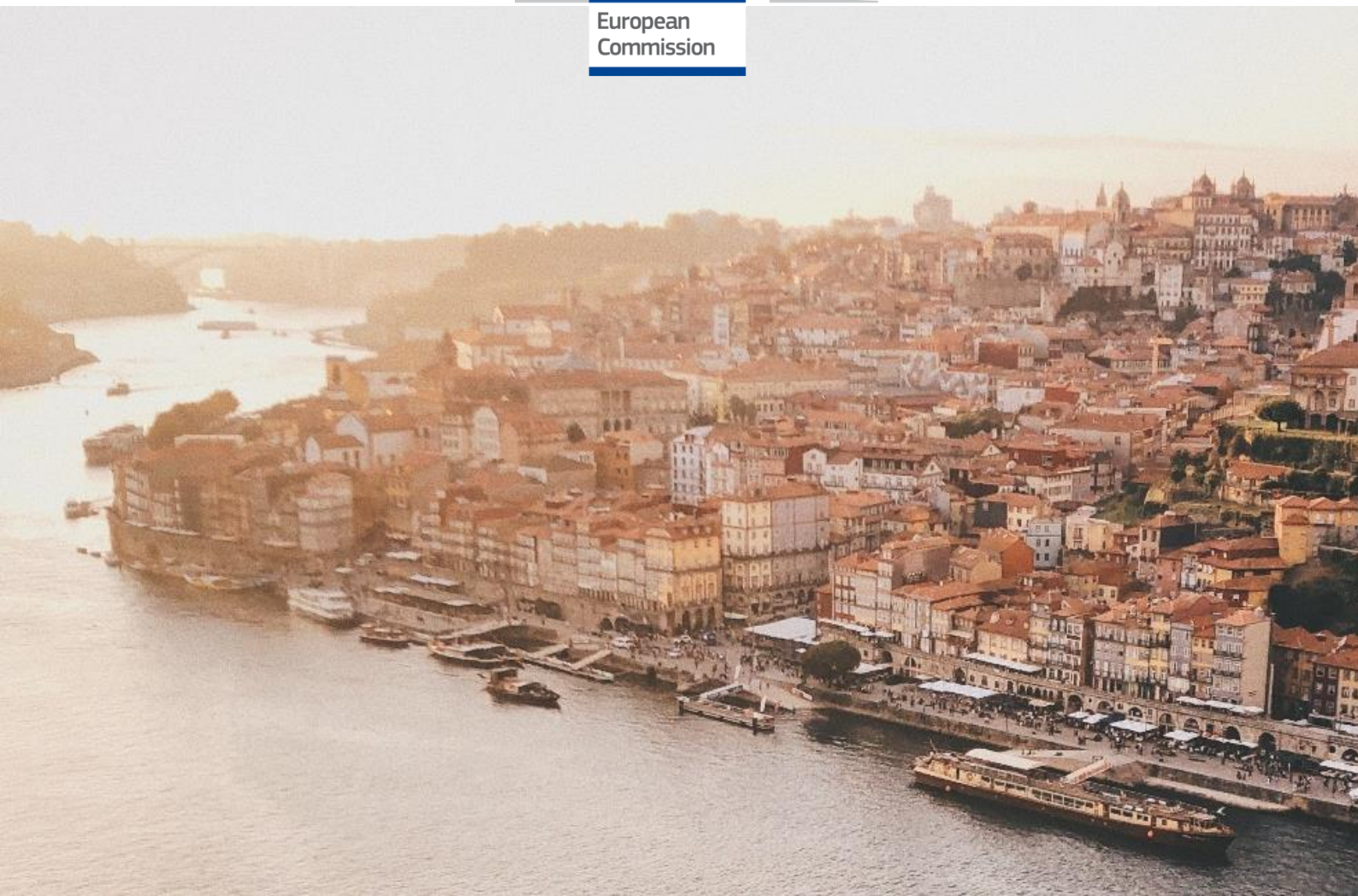




European
Commission



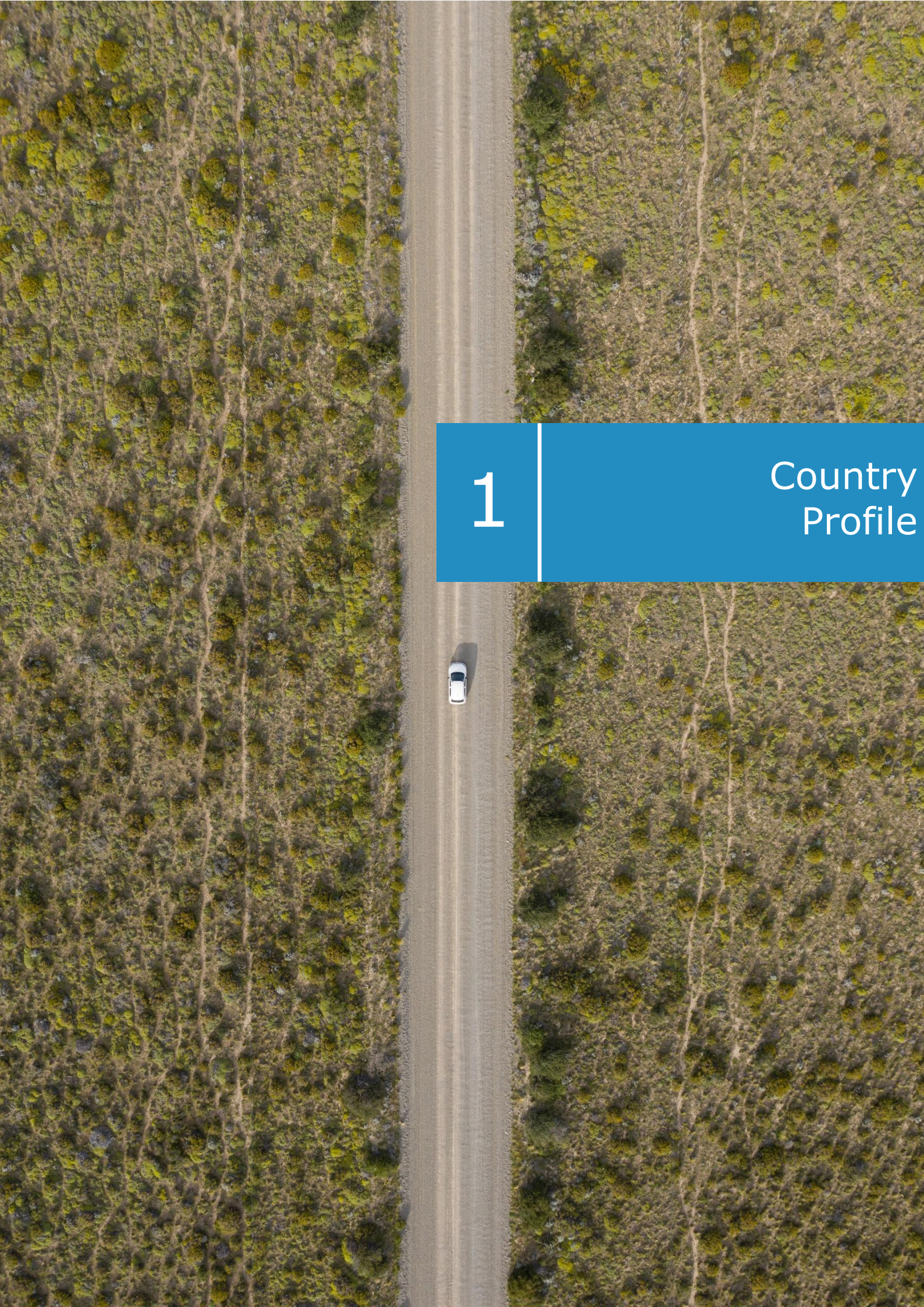
Digital Public Administration factsheet 2022

Portugal



Table of Contents

1	Country Profile	4
2	Digital Public Administration Highlights	10
3	Digital Public Administration Political Communications	12
4	Digital Public Administration Legislation	22
5	Digital Public Administration Governance	34
6	Digital Public Administration Infrastructure.....	38
7	Cross-border Digital Public Administration Services for Citizens and Businesses ..	60



1

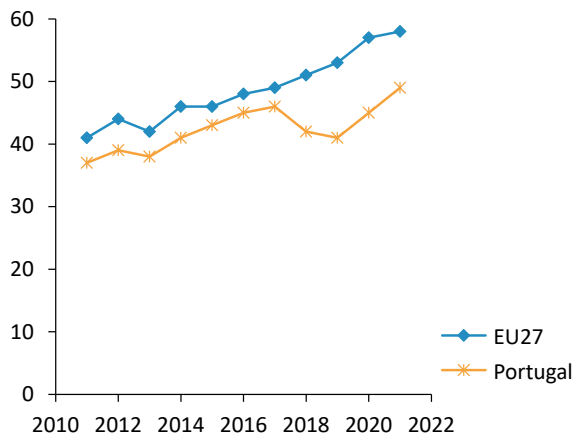
Country
Profile

1 Country Profile

1.1 Digital Public Administration Indicators

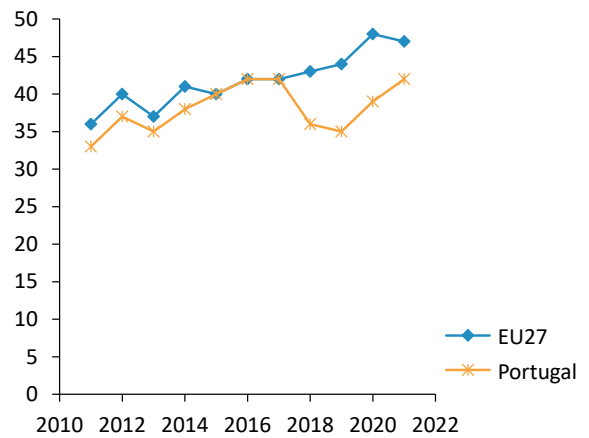
The following graphs present data for the latest Digital Public Administration Indicators for Portugal compared to the EU average. Statistical indicators in this section reflect those of Eurostat at the time the Edition is being prepared.

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



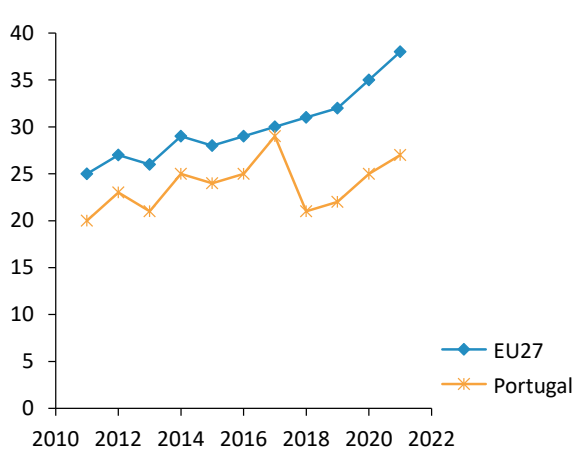
Source: Eurostat Information Society Indicators

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



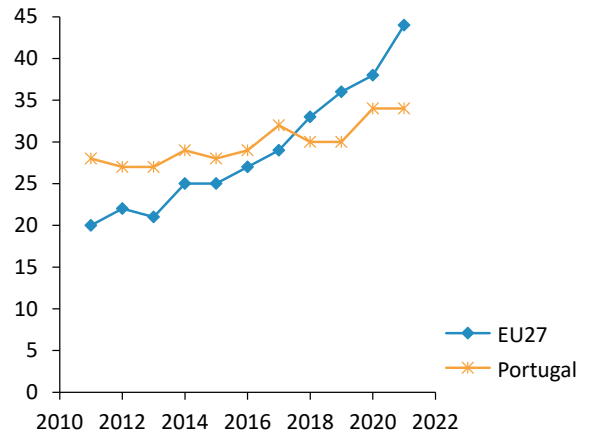
Source: Eurostat Information Society Indicators

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



Source: Eurostat Information Society Indicators

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



Source: Eurostat Information Society Indicators

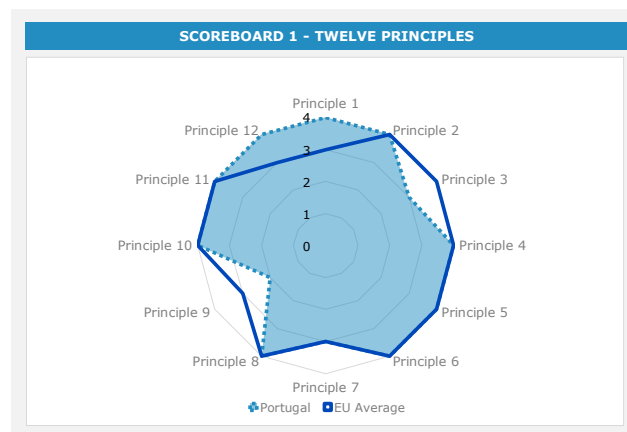
1.2 Interoperability State of Play

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



Source: European Interoperability Framework Monitoring Mechanism 2021

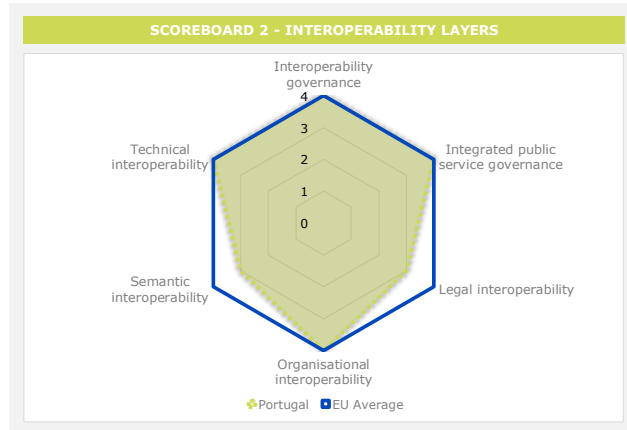
For each of the three pillars, a different scoreboard was created to breakdown the results into their main thematic areas (i.e. the 12 principles of interoperability, the interoperability layers and the components of the conceptual model). The thematic areas are evaluated on a scale from one to four,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



Source: European Interoperability Framework Monitoring Mechanism 2021

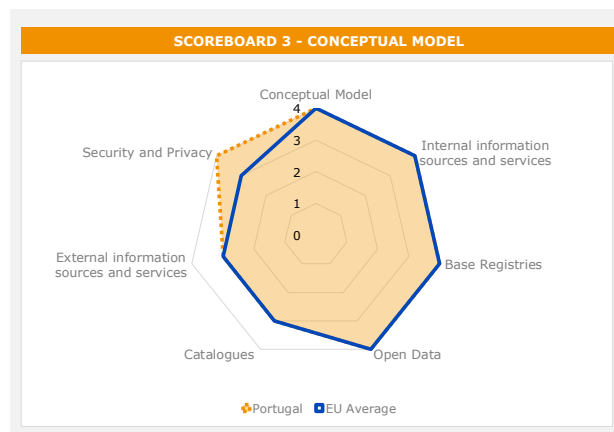
Portugal's results in Scoreboard 1 show an overall good implementation of the EIF Principles, scoring above the European average for Principle 1 (Subsidiarity and Proportionality) and Principle 12 (Assessment of Effectiveness and Efficiency). Areas of improvements are concentrated in Principle 9 (Multilingualism) for which the score of 2 shows a medium performance in the implementation of corresponding recommendations. In particular, Portugal should focus its efforts on improving and

fostering the use of information systems and technical architectures that cater for multilingualism when establishing a European public service (Principle 9 – Recommendation 16). Another area of improvement for Portugal should be Principle 3 (Transparency) for which the score of 3 shows an upper-medium performance in the implementation of corresponding recommendations. Particularly, the degree of internal visibility and provision of external interfaces for European public services (Principle 3 – Recommendation 5) are partial and could be bettered to reach the European average of 4.



Source: European Interoperability Framework Monitoring Mechanism 2021

The Portuguese results for the implementation of the interoperability layers assessed for Scoreboard 2 show an overall good performance with scores of 3 and 4. Potential areas of improvement to enhance the country’s implementation of the recommendations under Scoreboard 2 are concentrated in the areas of legal interoperability and semantic interoperability. More specifically, the score of 1 for Portugal in Recommendation 30, declaring that data and information should be perceived as a public asset that should be appropriately generated, collected, managed, shared, protected and preserved lowers the overall implementation of semantic interoperability in Portugal.



Source: European Interoperability Framework Monitoring Mechanism 2021

Portugal’s scores assessing the Conceptual Model in Scoreboard 3 show an overall good performance in the implementation of recommendations with scores of 3 and 4, and above the European average for the area of Security and Privacy. One area of improvement could be in the implementation of the recommendations related to open data. Precisely, by publishing open data in machine-readable, non-proprietary formats and ensuring that open data is accompanied by high quality, machine-readable metadata in non-proprietary formats, and fostering the use of common vocabularies for

expressing metadata (Open data – Recommendation 42) could be further improved to better the overall Portuguese score on Open Data, and on Scoreboard 3 in general.

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

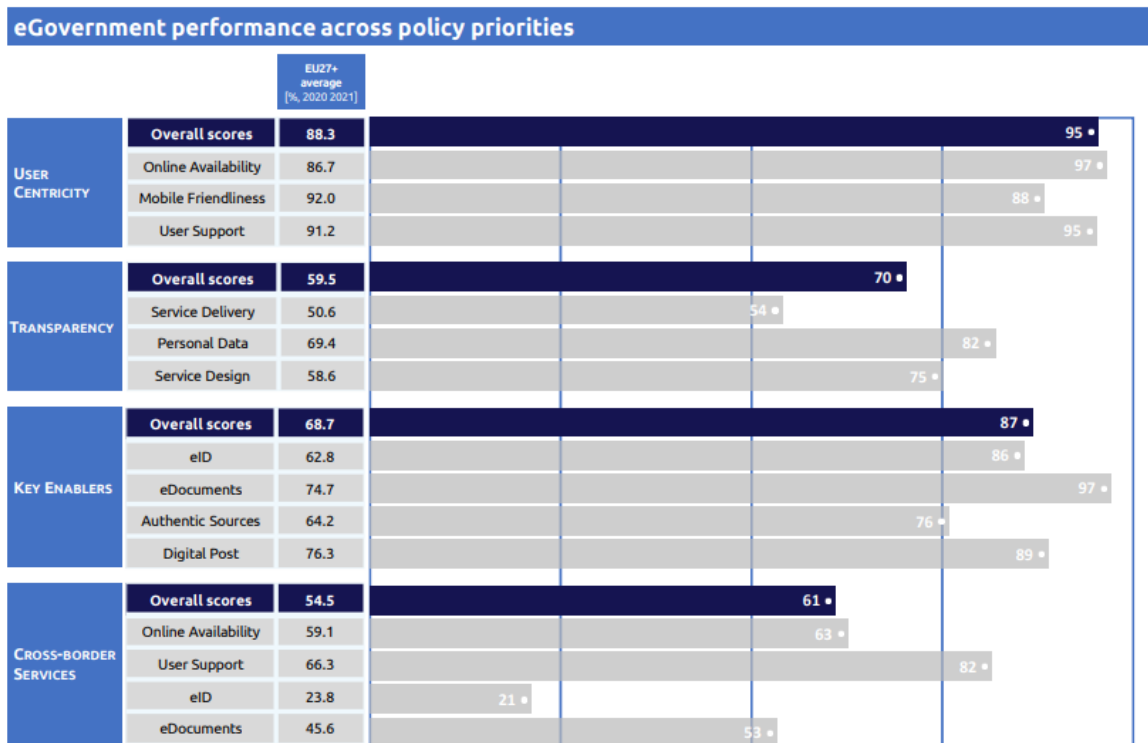
1.3 eGovernment State of Play

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

The study evaluates online public services on four dimensions:

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

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



Source: eGovernment Benchmark Report 2021 Country Factsheets



2

Digital Public Administration Highlights

2 Digital Public Administration Highlights



Digital Public Administration Political Communications

Published in September 2021, the Strategy for the Digital Transformation of Public Administration 2021-2026 (and the corresponding Action Plan for the Digital Transformation of Public Administration 2021-2023) envisions a “more digital Public Administration: better services, greater value”, aimed at delivering simpler and more inclusive, integrated and transparent services to citizens and businesses. The Strategy encompasses six lines of action: digital public services; valorisation of data; reference architectures; ICT skills; ICT infrastructure and services; security and trust.



Digital Public Administration Legislation

Resolution of the Council of Ministers nº 131/2021, of 10 September, approves the Strategy for the Digital Transformation of Public Administration 2021-2026 and the respective Action Plan for Digital Transformation 2021-2023, in line with the implementation schedule of the National Recovery and Resilience Plan and mandating the Council for Information and Communication Technologies in Public Administration (CTIC) to implement it.



Digital Public Administration Governance

The Administrative Modernisation Agency (AMA) is the public institute in charge of digital government and administrative modernisation and simplification, focusing on three main areas: digital transformation and strategy; omnichannel public services delivery; and innovation and public participation.

AMA operates under the superintendence and tutelage of the Secretary of State for Digitalisation and Administrative Modernisation, who is responsible for the modernisation of public administration and digital government, under the direct tutelage and guidance of the Prime Minister. AMA works on a cross-sector basis and in partnership with other public entities to bring digital transformation for the whole public administration.



Digital Public Administration Infrastructure

The ePortugal.gov is the Portuguese single digital gateway for digital public services, providing informational and transactional services for both citizens and companies. It is organized around life and business events, according to the core public service vocabulary, and integrates innovative support instruments such as the Citizen Map, which provides georeferenced information for all public services and digital queue tickets for onsite public services, and the AI-powered chatbot SIGMA.



3

Digital Public
Administration
Political
Communications

3 Digital Public Administration Political Communications

3.1 Specific political communications on digital public administration

Berlin Declaration on Digital Society and Value-Based Digital Government

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

The Declaration acknowledges the public sector as an essential element for the European Single Market and a driving force for new and innovative technological solutions for public services and societal challenges.

Strategy for the Digital Transformation of Public Administration 2021–2026

The Council for Information and Communication Technologies in Public Administration (CTIC) defined the new Strategy for the Digital Transformation of Public Administration 2021-2026 and the corresponding Action Plan for the Digital Transformation of Public Administration 2021-2023, both published in September 2021 ([Resolution of the Council of Ministers n° 131/2021](#)). These documents are duly aligned with other overarching national policies, namely the Strategy for Innovation and Modernisation in the State and Public Administration 2020-2023, the Action Plan for the Digital Transition of Portugal and the national Recovery and Resilience Plan.

The Strategy aims to deliver simpler and more inclusive, integrated and transparent services to citizens and businesses, focusing on six lines of action:

- Digital public services;
- Valorisation of Data;
- Reference architectures;
- ICT skills;
- ICT infrastructure and services; and
- Security and trust.

As for the Action Plan, it encompasses the priority measures to be developed until 2023, when an interim assessment will be carried out and an extension for the 2024-26 period will be elaborated. The Strategy for the Digital Transformation of Public Administration 2021-2026 includes a [report](#) about the implementation of the previous ICT 2020 Strategy (effective between 2017-2020), which encompassed over 700 projects to improve public services with estimated benefits of EUR 721 million.

National Recovery and Resilience Plan

The [Portuguese Recovery and Resilience Plan](#), which was submitted in April 2021 to the European Commission, is a national investment plan, with an exceptional implementation period lasting until 2026. It is based on three structuring dimensions: resilience, climate change and digital transition.

In what regards digital transition, the aim is to ensure that Portugal accelerates the transition to a more digital society. For that purpose, significant reforms and investments are planned in the following areas: empowerment and digital inclusion of people through education; training in digital skills and promotion of digital literacy; digital transformation of the business sector; and digitalisation of the State. The

measures to support digital objectives represent 22% of the total allocation of the plan, exceeding the threshold of 20% set by European regulation: 12 of the 20 components of the Plan have a direct contribution to achieve the digital agenda.

SIMPLEX Programme

SIMPLEX is the Portuguese flagship simplification and modernisation programme. It follows a citizen-driven approach and has a strong focus on co-creation, with the ultimate goal of simplifying as much as possible citizens and businesses' everyday life, as well as their interaction with the public administration. SIMPLEX pursues in one single governmental programme the objectives of better regulation, administrative burden reduction, service interoperability, digitisation, red tape reduction and digital government promotion.

The responsibility for the programme lies with the Secretary of State for Digitalisation and Administrative Modernisation, under the Prime Minister and with the technical support of the Administrative Modernisation Agency. Furthermore, SIMPLEX includes a Focal Point Network, consisting of representatives of the various Ministries.

The programme is highly inclusive and innovative, involving citizens, entrepreneurs and public servants in determining and designing the initiatives to be implemented by the public administration. Participants are offered channels for their involvement through the organisation of nationwide meetings and brainstorming design sessions, 'Start-up SIMPLEX' competitions and the SIMPLEX website.

Overall, SIMPLEX has already launched over 1 600 simplification measures.

SIMPLEX has proven to be a successful and replicable model, with an average annual execution rate exceeding 90% (2016-2021) and a positive feedback from the programme's stakeholders. In 2019, an Ernst & Young evaluation, commissioned by the European Commission in coordination with the Portuguese government, analysed the impact of 40 measures of SIMPLEX 2016 and 2017, concluding that they represented a yearly net saving of EUR 170.1 million and 15 million working hours, plus a potential additional benefit for the economy corresponding to EUR 89 million. The effectiveness of the SIMPLEX methodology has been further recognised by the European Institute of Public Administration, which awarded SIMPLEX the **European Public Service Award 2019** in the European and national category.

'Transform' Programme

The '**Transform**' Programme, launched in June 2021, is a LabX - Centre for Innovation in Public Sector action model, which articulates around three closely linked areas of action: innovation in public services, administrative simplification and the participation of all people.

It consists in a portfolio of 17 initiatives, in each of the three areas of action, which are managed as a whole to promote the transformation of the public sector. This programme materializes a vision of administrative modernisation powered by digital, but conceived and implemented dynamically by people, inside and outside the Public Administration and embedded in their management models.

Portugal INCoDe.2030

The National Digital Competences Initiative e.2030 - **Portugal INCoDe.2030**, launched in April 2017, is an inter-ministerial action that brings together the areas of economy, digital transition, science, technology, higher education, labour, solidarity and social security. It aims to upgrade the ICT basic skills of Portuguese citizens, preparing them for emerging and digitally-based employment opportunities.

This initiative is structured around five main axes: inclusion, education, qualification, specialisation and research. It includes a variety of measures to be implemented by different governmental bodies in collaboration with the private sector, academia and civil society.

Examples of activities include: (i) a training programme for Chief Data Officers; (ii) the signing of cooperation protocols between public entities to qualify the specialised human resources of each institution; (iii) the launch of a EUR 10 million project competition to support the development of partnerships between the public administration and research and development (R&D) institutions in the fields of artificial intelligence and data science; and (iv) the development of the strategies for artificial intelligence (AI Portugal 2030) and for advanced computing (Advanced Computing Portugal 2030). In May 2021, Portugal revised its National Digital Skills Initiative (INCoDe.2030) to promote, amongst others, the Digital Public Administration Programme, aimed to reinforce the digital skills of public servants and to accelerate the digital transformation of the public administration.

The INCoDe.2030 programme created an 'action INCoDe.2030' seal for individuals, organisations and public and private entities which contribute to the improvement of digital skills in Portugal.

Strategy for Innovation and Modernisation in the State and Public Administration

The Strategy for Innovation and Modernisation in the State and Public Administration 2020–23, promoted by the area of government responsible for State modernisation and public administration, was developed through a participatory process that involved public servants, the academia and the private sector.

The strategy was approved by the Resolution of the Council of Ministers No. 55/2020 and was presented in July 2020 as a roadmap for modernising the State and the public administration, with 14 strategic objectives distributed among four transformative axes:

- Investing in People, aiming to attract and mobilize public officials, including through renewed and dynamic leadership models;
- Developing Management, aiming to strategically manage employees and leverage performance through business models focused on value creation;
- Exploring Technology, aiming to provide citizens and businesses with secure, accessible, integrated and seamless services; and
- Strengthening Proximity, aiming to bring decision-making and public action closer to citizens.

These objectives are achieved through cross-cutting and sectoral measures, uniting government in a common purpose: developing a permanent transformative capacity in public administration to anticipate and respond promptly to all the challenges it faces.

Action Plan for the Digital Transition

The Action Plan for the Digital Transition (APDT) was published on 21 April 2020 (Resolution of the Council of Ministers No.30/2020) and encompasses three pillars: (i) digital empowerment of people; (ii) businesses' digital transformation; and (iii) digitisation of the State, plus a cross-cutting catalyst dimension to accelerate the digital transition in Portugal.

The action plan consists of 12 flagship initiatives in total. In particular, the pillar relating to the digitisation of the State includes the following:

- Digitalisation of the 25 public services most used by citizens and companies, aiming to ensure simplification of and online access to the 25 most used administrative services, and to ensure that all citizens have access to digital public services;
- Increase in the offer and translation of digital services of interest to the internationalisation of the ePortugal Portal, aiming to ensure that the services provided on the ePortugal Portal have multi-language capabilities and information content, and electronic forms translated into languages other than Portuguese, ideally always by default into English;

- Implementation of a cloud strategy for the public administration, aiming to create a strategic framework for the integration of public administration in the cloud through the adoption of computing tools that work in the cloud; and
- Simplification of the procurement of ICT services by the public administration, aiming to adopt an exceptional scheme for the acquisition of goods and services within the scope of information and knowledge technologies, as per the specific legislation.

Collaborative Work Plan

The Collaborative Work Plan aims to address the challenge of bringing together transversal and multidisciplinary teams from different public administration and civil society organisations to discuss common issues. The primary goal has been evolving since the first edition and, in the latest one, it consisted in quickly producing support materials for the public sector teams that were working in new settings because of the pandemic. Since April 2020, 45 projects have been produced, focusing on tools for remote working, daily organisation, leadership and digital public services design. As part of the plan, 26 webinars were held, with over 18 500 participants.

The third edition of the Public Administration Collaborative Work Plan, launched in February 2021, integrates three core areas: (i) administrative simplification, (ii) innovation in public service delivery, and (iii) communication to accelerate cultural change.

3.2 Interoperability

No political communication was adopted in this field to date.

3.3 Key enablers

3.3.1 Access to public information

National Action Plan for Open Administration

Portugal joined the Open Government Partnership (OGP) in 2017, publishing its first National Action Plan for Open Administration (NAP) in December 2018. The NAP was developed by the National Network for Open Administration through a process of co-creation with the public sector and civil society, including an online public consultation. This plan was implemented between January 2019 and August 2020 and included eight commitments to promote transparency and access to public sector information, foster public participation and boost the use of public open data.

The second NAP, which includes 9 commitments, was published in August 2021 and will be implemented until August 2023.

3.3.2 eID and Trust Services

Digital Identification Mechanisms

The development of Portuguese digital identification mechanisms and the promotion of their uptake by citizens, businesses and the public administration itself are at the top of the political agenda, with ongoing initiatives targeting different end-users. The constant addition of new features (e.g. mobile eSignature), the swift integration of these mechanisms in digital public services delivered by different areas of government, and their steady adoption by the private sector (e.g. banking, utilities) are some of the positive outcomes of setting electronic identification (eID) as a political priority.

Furthermore, the Strategy for the Digital Transformation of Public Administration 2021-2026 includes a target to increase the number of public services that require

authentication through the national public eID ecosystem. This element is also inscribed in the national RRP, which ensures due funding.

3.3.3 Security aspects

National Strategy for Cyberspace Security 2019–2023

The National Strategy for Cyberspace Security 2019–2023 (Resolution of the Council of Ministers No. 92/2019), published on 5 June 2019, aims to deepen the security of network and information systems as a way to protect the cyberspace of national interest and to promote its free, safe and efficient use for all citizens, companies, and other public and private entities.

This strategy, which is annually assessed by the High Council of Cyberspace Security, has been developed based on the lessons learned and the developments in the digital domain since the approval of the first version in 2016. It establishes three strategic objectives for 2019–2023:

- Maximising resilience, i.e. overcoming the threats that could compromise cyberspace of national interest's security;
- Promoting innovation, i.e. affirming the cyberspace as a domain for the economic, social and cultural development and prosperity; and
- Generating and ensuring resources, i.e. contributing to achieving adequate resources to guarantee the country's cyberspace security capacity.

In the context of the objectives established by the National Strategy for Cyberspace Security 2019–2023, the National Cybersecurity Centre (CNCS) created the Public Administration Cybersecurity Forum, which aims to identify and disseminate cybersecurity best practices within public administration and to foster information sharing at management and policy levels.

It is also worth mentioning that, in August 2019, Portugal became a participating State in the European Centre of Excellence for Countering Hybrid Threats (Hybrid CoE), recognising said threats as a cross-cutting priority that requires a cooperative approach within the EU and NATO, and in line with the objective of creating a national plan to counter disinformation and cyberattacks.

3.3.4 Interconnection of base registries

No political communication was adopted in this field to date.

3.3.5 eProcurement

No political communication was adopted in this field to date.

3.4 Domain-specific political communications

Closer Justice Plan 2020–2023 (*Justiça + Próxima 2020–2023*)

The Closer Justice Plan 2020–2023 aims to increase transparency and trust in the judicial institutions, fostering citizens' participation in the ideas, initiatives and projects introduced to improve justice in Portugal. It encompasses four fundamental pillars:

- Efficiency, by simplifying and dematerialising procedures;
- Innovation, by modernising justice;
- Proximity, by offering citizens clear, transparent and accountable information; and
- Humanisation, by valuing tangible and intangible resources.

The methodological approach called for scheduled measures to be implemented in successive waves, with periods of analysis in collaboration with the judicial organisations and officials responsible for their implementation. The Directorate-General for Justice Policy is responsible for managing and monitoring the plan, in close coordination with the Ministry. By the end of 2019, 131 measures were completed out of the 197 planned.

A second edition of the [Closer Justice Plan 2020–2023](#) is currently underway with 141 measures, some of which were included in the first edition but were not completed by the end of 2019.

Consigo - Social Security Modernisation Strategy

The Consigo Strategy aims to establish a more customer-centred approach, supported by innovative and differentiating technological solutions, to strengthen the right to social security for all citizens, based on the strategic values of trust, simplification, transparency and innovation.

This strategy includes 34 initiatives, fully implemented and grouped into four major areas of intervention:

1. Relationship with customers;
2. Social benefits;
3. Declarations and contributions; and
4. Social security efficiency.

Digital Skills Training

Digital skills is a strategic training area for the public administration, as established through Ministerial [Order No. 3431/2019 of 19 March 2019](#) of the Minister for Finance, following a proposal by the National Institute of Administration (INA). This strategic training area is implemented by the INA Training Centre through the [Programme for the Development of Digital Skills](#) (supported by the national Recovery and Resilience Plan), which includes four training syllabuses with different training paths:

- Training programme for zero infoexclusion, aimed to foster digital inclusion through the promotion of the ability to use essential digital tools;
- Training programme for the digital transformation of public administration, focused on skills in emerging technologies;
- Training programme for digital tools, aimed to develop the ability to work with wordprocessing tools, edit spreadsheets, manage databases and other relevant digital tools; and
- Training programme for the development of IT staff skills, aimed to provide and update specific ICT skills.

Additionally, amongst other areas of training, INA is also providing specific training programmes for public sector leaders (middle and top managers), with a focus on understanding digital trends, supporting digital procurement and managing change driven by digital technology within public sector organisations.

More Science, Less Bureaucracy Programme

The More Science, Less Bureaucracy Programme promotes rationalisation and administrative simplification for the scientific community, with the aim of promoting the scientific, social and cultural responsibility of all actors operating in the fields of science and technology. In this context, and considering the programme's broad scope, it is worth highlighting some already-implemented initiatives, namely [Ciência ID](#) (unique ID for scientists) and [Ciência Vitae](#) (a national system for the management of scientific CVs linked to [Ciência ID](#)), plus a central element for monitoring scientific and technological activity, and a support system for the modernisation of public administration. The measures related to the [SIMPLEX Programme](#), such as the [NAU Platform](#) (online platform for remote education and training), are also relevant.

3.5 Emerging technologies

3.5.1 Artificial Intelligence (AI)

GuIA - Guide for Artificial Intelligence

GuIA is a guide for responsible AI in the public sector and a self-assessment tool. The guide (i) describes the national and international AI context and it identifies the arising changes in the emergence of AI; (ii) presents the dimensions, values, and principles for an ethical AI; (iii) suggests a conceptual framework for implementing responsible AI projects in the public and other sectors; and (iv) explains the self-assessment tool applicable to projects with AI.

The core chapter of the guide addresses governance and accountability. It revolves around five main dimensions: fairness, ethics, explainability, transparency, and accountability.

GuIA provides recommendations for preserving values and principles that define an ethical AI, including, among others, elements such as privacy, human values, cooperation, and human control within the AI systems. It also includes recommendations on how to submit AI projects and generate algorithms.

The self-assessment tool translates values and principles described in the guide for a responsible AI in all 5 dimensions. The tool will be available on a public administration website and it will be at the disposal of all those who are interested in assessing the risks of an AI project and its lifecycle. All the code for the tool will be open source and shared in GitHub.

The tool is a work in progress and is open to incorporate feedback. Yearly reassessments will also include new features.

National Strategy for Artificial Intelligence: AI Portugal 2030

The **National Strategy for Artificial Intelligence**, launched in June 2019, was promoted by the Portugal INCoDe.2030 coordination structure in cooperation with the Science and Technology Foundation (FCT), the National Innovation Agency (ANI), *Ciência Viva* and the Administrative Modernisation Agency (AMA).

Developed within Portugal INCoDe.2030's axis 5 ('Research'), the strategy is aligned with the European Coordinated Plan on Artificial Intelligence and is based on seven pillars:

- Promoting a better society;
- Fostering AI skills and 'digital minds' for all;
- Promoting new jobs and developing an economy of AI services;
- Fostering Portugal as a living lab for experimenting new developments;
- Securing AI niche markets through key specialised services in Portugal;
- Contributing to generating knowledge and new developments through AI research and innovation; and
- Providing better public services for citizens and businesses and adopting evidence-based approaches in public policies and decision-making processes.

More in general, the strategy aims to improve the frontline position in fundamental and applied AI research and increase the qualifications of the labour force and the added value brought by AI technologies to the economic growth.

In the scope of the national strategy for AI, INCoDe.2030 foresees the following initiatives:

- Actions to publicize and promote initiatives developed at national level by public and private entities, academia, innovation centres, etc;
- webinars on topics related to AI;
- Development of PT AI WATCH platform, which will allow the mapping of projects in AI;
- Promotion of actions aimed at the development of digital skills, namely in AI technologies; and

- Review of the current strategy and development of a new National AI Strategy and Implementation Plan.

AI Forum

The AI Forum was launched in 2021. It is a virtual space of discussion aimed to bring more and better AI practices to the society as a whole and to involve all stakeholders in the development of AI research and innovation in Portugal, bearing in mind the constraints, societal issues and opportunities offered by AI.

3.5.2 Distributed ledger technologies

Blockchain

Portugal is one of the signatories of the agreement that established the **European Blockchain Partnership (EBP)** and is one of the current co-chairs of the group, a position that significantly facilitates the access to information about the European Blockchain Services Infrastructure (EBSI).

The Portuguese Blockchain Innovation Hub was created at the city of Guarda, so that Portugal becomes technically part of EBSI and the Portuguese Public Administration has the necessary tools to start using blockchain technology. There are also research centres and several companies in Portugal developing use cases, pilots, and products in the area, for other companies and public institutes.

Portugal wants to go further and is about to develop its National Blockchain Strategy. This strategy will meet the objectives set out in the context of the Digital Transition and it will also accompany the development of a Europe committed to change.

3.5.3 Big data

No political communication was adopted in this field to date.

3.5.4 Cloud computing

Public Administration Cloud Strategy

The CTIC created a working group (CloudAP) that presented a **Strategy for Cloud Computing** to be adopted by the public administration with a view to increasing reliability, efficiency and flexibility, and pushing forward innovation and digital transformation. The **Cloud Strategy for the public administration** has already been published and, at the moment, instruments are being made available for their adoption in the public administration. This strategy defends a public cloud smart adoption, but, if more appropriate, it also allows for other scenarios.

The CloudAP group also created subgroups to identify barriers and deploy actions to accelerate Cloud adoption by the Public Sector. The subgroups are working on the following:

- Creating a common framework for evaluating the Go/No Go for Cloud (completed);
- Making this framework available online and part of the ICT procurement process (in progress);
- Identifying barriers in the legal framework and proposing solutions in several dimensions: procurement, financing, accounting and budgeting (completed);
- Making available standard tender documents (completed);
- Creating and implementing a capacitation for the public sector (in progress); and
- Making available cloud framework agreements (in progress).

INA is participating in this project and is responsible for presenting a proposal for a training plan for this digital area.

3.5.5 Internet of Things (IoT)

No political communication was adopted in this field to date.

3.5.6 High-performance computing

Advanced Computing Portugal 2030: ACP.2030

Advanced Computing Portugal, which also falls within the scope of Portugal INCoDe.2030 and is closely related to AI Portugal 2030, is a science, innovation and growth strategy aimed at promoting and expanding advanced supercomputing infrastructure in Portugal until 2030. Its purpose is to generalise access to scientific computing, foster cooperation based on advanced scientific computer networks and promote international collaboration to support advances in different areas and fields.

ACP.2030 encompasses three major domains of activity:

- Creating a national supercomputing infrastructure at the service of research and innovation;
- Developing and retaining high-value people with advanced computing skills; and
- Implementing a public policy info-structure to fill in the gap between infrastructures and people in a way that fosters the creation of high-value services and software.

A relevant initiative in this domain has been the inauguration, in July 2019, of the Minho Advanced Computing Centre (MACC), home of the first supercomputer operating in Portugal (BOB). This machine is part of the Iberian Advanced Computing Network and marks the start of the Portuguese participation in the European High-Performance Computing initiative (EuroHPC). Deucalion, the second supercomputer to operate in Portugal under the EuroHPC, will also be installed at MACC.

The national HPC network and the forthcoming Digital Innovation Hub's network should bring new offers to the cloud-to-edge market and foster cloud adoption.

3.5.7 High-speed broadband connectivity

5G strategy

The Resolution of the Council of Ministers No. 7-A/2020 approves the strategy for 5G adoption in Portugal.

This 5G Strategy sets out 13 different action points, covering specific KPIs and associated timelines. All action points/goals are aimed at ensuring strategically selected and geographically cohesive coverage, with major milestones to be reached by 2020, 2023, 2024 and 2025.



4

Digital Public
Administration
Legislation

4 Digital Public Administration Legislation

4.1 Specific legislation on digital public administration

Strategy for the Digital Transformation of Public Administration 2021-2026

Resolution of the Council of Ministers nº 131/2021 approved the Strategy for the Digital Transformation of Public Administration 2021-2026 and the respective Action Plan for Digital Transformation 2021-2023, in line with the implementation schedule of the national Recovery and Resilience Plan (RRP). The Council for Information and Communication Technologies in Public Administration (CTIC) has been mandated to implement it.

Coordination of the Digital Component of the Recovery and Resilience Plan

Resolution of the Council of Ministers No. 129/2021 approved the coordination procedure of the Public Administration's Digital Transition initiatives integrated in the RRP. It further established that such investments must comply with the principles of digital government inscribed in the common model for the design and development of digital services, published on tic.gov.pt, and comply with current European or national regulations and standards, including those defined or approved by the CTIC. The Administrative Modernisation Agency (AMA) is responsible for ensuring the strategic compatibility of the projects to be implemented with the cross-cutting solutions included in the RRP component relating to the Public Administration's digital transition, as well as verifying technical requirements and dependencies and promoting agility in development and alignment with the goals and milestones defined in the RRP.

TIC APP – Centre for Digital Competences of the Public Administration

Resolution of the Council of Ministers No. 22/2018 established TicAPP – the Centre for Digital Competences of the Public Administration - as a specialised skills centre for the digital transformation of the public administration. In 2019, it started its operation within AMA to support different government areas in the process of digital transformation.

TicAPP's role is to act as a centre of digital expertise, developing projects across public administration in the fields of:

- Digital architecture: collaborating with public entities in defining and planning their corporate architecture and information systems;
- Digital transformation: providing support in process modelling, optimisation, simplification and integration through IT resources; gathering, analysing and defining information systems requirements (in collaboration with public entities), including the exploration, design and development of prototypes and proofs of concept (PoCs); and elaborating technical specifications and clauses for the contracting of information systems, specifically in the areas of software and services; and
- Data science: developing quantitative and predictive models to use available data to support the political and administrative decision-making process.

It also supports the development and implementation of some SIMPLEX emerging technology measures in the domains of AI (gIAp) and blockchain (Participa 5.0).

Single Digital Address and Public Service of Electronic Notifications

Law Nº 9/2017, of 3 March, authorised the Government to create the public service of electronic notifications associated with the unique digital address.

Decree-Law No. 93/2017, of 1 August 2017, created the unique digital address, linking the electronic notifications public service to a unique digital address. The electronic

notifications public service, associated to the single digital address, is regulated by Ordinance No. 365/2017, of 7 December 2017.

Decree-Law on Digital Services

Decree-Law No. 74/2014, of 13 May 2014, further amended by Decree-Law No. 105/2017, of 29 August 2017, introduced the rule of digital provision of public services by default. In parallel, it enshrined the principle of digital assistance via a Citizen Spot network as an essential complement. In this way, those who cannot, will not or do not know how to use digital tools can benefit from the support and guidance of a public servant/digital mediator. The objective is to give all citizens the possibility to access digital services.

Decree-Law on Administrative Modernisation

Decree-Law No. 135/1999, of 22 April 1999, further amended by the Decree-Law No. 73/2014, approved in May 2014, introduced important administrative modernisation measures, including the Once-Only principle, according to which citizens shall not be obliged to give the public administration the same document twice. The Once-Only principle implies several standards being applied, particularly relating to administrative communications.

Decree-Law on Zero Licensing

The Portuguese Zero Licensing Programme is one of the most representative initiatives of the eGovernment agenda. Its main objective is to considerably simplify the licensing procedures necessary to carry out several economic activities by reducing red tape through an electronic single contact point. One of the first objectives was achieved in April 2011, following the approval of Decree-Law No. 48/2011, of 1 April 2011, which provided for a significant reduction in the required licences. The Programme was further strengthened with the approval of Decree-Law No. 10/2015, of 16 January 2015, which regulated the entire procedure for food and beverage establishments, as well as for trade and services establishments.

Decree-Law on the Responsible Industry System

Decree-Law No. 169/2012, of 1 August 2012, introduced the Responsible Industry System (SIR), which lays down the necessary procedures for industrial activities. The SIR was first amended by Decree-Law No. 73/2015, of 11 May 2015. All SIR procedures are carried out electronically on the SIR Platform, which is accessible through the Entrepreneur's Desk and competent public entities' in-service counters.

Portuguese Charter on Human Rights in the Digital Age

Law no. 27/2021 of May 17th approved the Portuguese Charter on Human Rights in the Digital Age, promoting Portugal's participation in the global process of transforming the Internet into an instrument for achieving freedom, equality and social justice and a space for the promotion, protection and free exercise of human rights, with a view to social inclusion in a digital environment. The Charter includes 21 articles that provide for the rights, freedoms and guarantees of citizens in the cyberspace.

4.2 Interoperability

Resolution of the Council of Ministers No. 91/2012

Resolution of the Council of Ministers No. 91/2012, of 8 November 2012, introduced the National Digital Interoperability Regulation and the standards that can be used to provide interoperability in public administrations' information systems. It was revised by Resolution of the Council of Ministers No. 2/2018, of 5 January 2018.

Resolution of the Council of Ministers on the Interoperability Platform for the Public Administration

Resolution of the Council of Ministers No. 42/2015, of 19 June 2015, foresaw the preferential adoption of the Interoperability Platform for the Public Administration (iAP) as primary means for exchanging information among public administration departments and entities.

4.3 Key enablers

4.3.1 Access to public information

Law on Access to Administrative Documents

Article 268(2) of the Portuguese Constitution provides for the fundamental right of access to administrative archives and registries, except for information related to State security, criminal investigation and personal privacy.

In addition, Law No. 26/2016, of 22 August 2016, regulates access to administrative and environmental data, as well as reuse of administrative documents. It transposes the European Parliament and Council Directive 2003/4/EC on public access to environmental information, and European Parliament and Council Directive 2003/98/EC on the re-use of public sector information. One of its highlights is the implementation of the principle of active information dissemination, by which entities falling within the scope of the law publish a set of updated information on their websites, without the citizen having to ask for it.

Law No. 26/2016 has been subject to an amendment process which resulted in Law No. 68/2021. The aim was to transpose 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.

Science, Technology and Higher Education

Resolution of the Council of Ministers No. 21/2016, of 11 April 2016, established the guiding principles for the implementation of a national policy on open science and universal access to knowledge. It has direct implications at the level of public information access, knowledge sharing and dissemination, and the preservation of information for its reuse.

Decree-Law on the Accessibility of Public Sector's Websites and Mobile Applications

Decree-Law No. 83/2018, of 19 October 2018, transposed Directive (EU) 2016/2102 on the accessibility of public sector's websites and mobile applications into Portuguese law. According to this decree-law, all public sector bodies, including regional and local administrations, shall comply with the EU standards and best practices adopted, namely EN301549 or WCAG 2.1 'AA' from W3C, thus making their websites and mobile applications more accessible to users and allowing everyone, including people with disabilities, to use the available information.

AMA shall ensure that the public sector's websites and mobile applications comply with these rules. For that purpose, a set of tools have been made available, including an Accessibility and Usability Kit for public sector's websites, an Accessibility WCAG 2.1 Validator – AccessMonitor -, the Accessibility Statement Generator and the Usability and Accessibility Seal of Excellence.

In order to raise awareness of the importance of accessibility, Portugal has also created the Portuguese Observatory of Digital Accessibility, where each public body may observe the level of accessibility of their own website(s).

Open data and reuse of public sector information

Law no. 68/2021, of 26 August, approved the general principles on data, transposing Directive (EU) 2019/1024 into Portuguese law. It formally recognized dados.gov.pt as the central catalogue of open data in Portugal, with the function of aggregating, referencing, publishing and hosting open data from different bodies and sectors of the Public Administration, and also encourages dialogue to build a national data strategy.

State Organisation Information System

The State Organisation Information System (SIOE), updated and expanded by Law No. 104/2019, of 6 September 2019, is an information system which provides information on the existing public administrations and the social activity of public employers.

The afore-mentioned law, besides extending the information scope to the social activity of public employers, also extended the type of data collected to include the characteristics of public employers, identification data and other employees' personal data.

This extension of data collection and processing with regard to employees' data is intended to achieve the following purposes:

- Collecting, preparing and producing information and indicators within the framework of labour market statistics and other management and planning indicators;
- Planning, implementing, monitoring and evaluating the budgeting and implementation of human resource management policies;
- Managing, controlling, monitoring and evaluating employees' movements;
- Managing and controlling the system of time credits and temporary transfers of public employees due to public interest within the scope of trade union activity and under the terms foreseen in the General Law of Labour in Public Functions; and
- Ensuring the electronic exchange of data within the social security systems coordination framework.

With regard to public employers' data, each public employer is to draft social balance sheets or equivalent management instruments built on their own internal data, which are compiled in specific tables and are based on relevant indicators. These documents will be included in their planning and management instruments.

The SIOE may also serve as a platform for electronic processing of administrative procedures, information provision and decision-making:

- Among public employers, or among these and other national entities, without sharing or using any of the employees' identification data or personal data; and
- Among public employers and the institutions of the EU or its Member States, using workers' identification data and other personal data, limited to the strict pursuit of the objectives set out.

The purposes of the SIOE may be pursued by sharing data via web services or by using open standards, in accordance with the law.

4.3.2 eID and Trust Services

Law on Citizen Card

Law No. 7/2007, of 5 February 2007, introduced the Citizen Card and regulated its issuance, replacement, use and cancellation. Article 18 outlined the provisions for digital certificates, i.e. electronic documents using a digital signature. The eSignature based on a qualified certificate is optional, and can only be activated and used by citizens over the age of 16. No eSignature based on a related qualified certificate can be activated if the holder requesting a Citizen Card is deemed unsuitable.

Law No. 32/2017, of 1 June 2017, introduced significant changes to the Citizen Card, in particular the integration of the Professional Attributes Certification System (SCAP), which allows citizens to use their national eID card to digitally sign not only as citizens, but also as certified professionals of a specific recognised profession (e.g. as an engineer or as a physician). The law is in the process of being amended to comply with Regulation (EU) 2019/1157 of the European Parliament and of the Council, of 20 June 2019, which aims to strengthen the security of Union citizens' identity cards, and residence permits issued to citizens of the Union and their family members.

Trust Services

Decree-Law No. 12/2021, of 9 February 2021, provided the framework for the application of the regime introduced by 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 (eIDAS Regulation). In particular, it regulates the activities of trust service providers established in Portugal, designating and establishing the Portuguese authorities with the powers to carry out the supervisory activities provided for in the regulation, as well as defining the sanctioning framework applicable in case of violation of the regulation's rules.

At the same time, the opportunity was taken to consolidate the existing legislation both on the validity, effectiveness and probative value of electronic documents, and on the State's Electronic Certification System - Public Key Infrastructure.

Law on the Digital Mobile Key

Law No. 37/2014, of 26 June 2014, established the Digital Mobile Key, an alternative and voluntary citizens' authentication system in portals and websites of the public administration. The introduction of Law No. 32/2017, of 26 June 2017, added eSignature features, allowing citizens to digitally sign documents by entering a mobile phone number, followed by a permanent password and a unique, temporary and automatically-generated numeric code received by SMS or via a specific smartphone app.

Administrative Rule No. 73/2018 is also relevant in this context, as it defines the terms and conditions for use of the SCAP (Professional Attributes Certification System) for the certification of professional, business and public attributes through the Citizen Card and the Digital Mobile Key, as is Administrative Rule No. 77/2018, which regulates the use of the Digital Mobile Key for digitally signed documents.

ID.gov.pt

ID.gov.pt is legally supported by Law No. 37/2014^o, of 26 June 2014, amended by Article 407 of Law No. 2/2020, which guarantees citizens the portability of their personal data (in compliance with the GDPR), by granting:

- Access to the data contained in their identification documents or issued by public entities through a mobile application made available by AMA (i.e. Id.gov.pt);
- Access to the data contained in the databases of public administration bodies, made available at autenticacao.gov.pt through secure authentication; and
- The same legal value of the original documents to the data obtained/presented through the above-mentioned mobile application (Id.gov.pt).

4.3.3 Security aspects

Law on the Use of Open Standards in Public Administration Information Systems

Law No. 36/2011, approved in June 2011, established the use of open standards in the public administrations' information systems. This was considered a fundamental step

for public institutions' autonomy and control over their own documents, thus reducing the dependence on businesses and external applications that can properly interpret electronically stored information.

Subsequently, the RNID – originally published in 2012 and updated in 2018 by the **Resolution of the Council of Ministers No. 2/2018** – established (among other standards) the OpenDocument Format (ODF) 1.2 as a mandatory standard.

Law on the Protection of Personal Data

Law No. 41/2004, of 18 August 2004, transposed into national law Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector, except for Article 13, which concerned unsolicited communications. This legislation applies to the processing of personal data within the context of publicly available electronic communications services and networks, while complementing the provisions of Law No. 67/1998 (Law on the Protection of Personal Data). Its provisions ensure protection of the legitimate interests of legal entities' subscribers, to the extent that such protection is consistent with their nature.

On 8 August 2019, Law No. 58/2019 was published, establishing the application of Regulation (EU) 2016/679 of the European Parliament and the Council of 27 April 2016, on the protection of individuals with regard to the processing of personal data and to the free movement of such data (GDPR) in Portugal, thus repealing Law No. 67/1998.

Cybersecurity Legislation

Decree-Law No. 136/2017, of 6 November 2017, defined the structure of the Portuguese National Cybersecurity Centre, and Law No. 46/2018, of 13 August 2018, established the legal regime for the security of cyberspace, transposing Directive 2016/1148 of the European Parliament and of the Council, of 6 July 2016, on measures to ensure a common level of network and information security throughout the Union, and adding public administration to its scope.

In 2021 was adopted the Decree-Law No. 65/2021, of 30 July, regulating the legal regime for the security of cyberspace and defining the cybersecurity certification obligations in implementation of Regulation (EU) 2019/881 of the European Parliament of 17 April 2019.

4.3.4 Interconnection of base registries

Civil Registry

The Civil Registry was first regulated by Decree Law No. 131/1995 and later repeatedly modified. This law prescribed the type of civil life events that must be registered, identified the civil registries and their mandates, and described the archiving procedures.

Commercial Registry

The Commercial Registry is regulated by Decree Law No. 403/1986. This law established the different types of businesses, identified the authorities responsible for the registration and described the registration process, among others. Several amendments were made to this legislation.

Land Registry

The Land Registry is regulated by [Decree Law No. 224/1984](#). It identifies the incidents that must be registered and describes the registration process. This legal act was revised multiple times.

Vehicle Registry

The Vehicle Registry is regulated by [Decree Law No. 54/1975](#) and subsequent amendments. This legislation describes a complex registration system for vehicles.

Sharing Information between the National Commercial Registry and EU Member States

[Decree-Law No. 24/2019](#) established the rules applicable to the sharing of information between the National Commercial Registry and the commercial registries of other EU Member States in accordance with [Directive 2012/17/EU](#).

4.3.5 eProcurement

eProcurement Legislation

The Public Procurement Code (PPC), approved by [Decree-Law No. 18/2008](#), of 29 January 2008, transposed the following EU public procurement acts:

- [Directive 2014/23/EU](#) of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts;
- [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](#);
- [Directive 2014/25/EU](#) of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing [Directive 2004/17/EC](#);
- [Directive 2014/55/EU](#) of the European Parliament and of the Council of 16 April 2014 on electronic invoicing in public procurement; and
- [Delegated Regulation \(EU\) 2019/1828](#) of the European Commission amending [Directive 2014/24/EU](#) of the European Parliament and of the Council regarding thresholds for public supply contracts, public service contracts and public building contract, as well as for design contests.

[Law no. 30/2021](#) approved special measures for public procurement and amended the PPC.

[Law No. 96/2015](#), of 17 August 2015, regulates the availability and use of electronic platforms for public procurement. Currently, two platforms are used for procurement: (i) the BASE Portal, an online platform that enables the processing of contracts in the context of public procurement both in the pre- and post-award phase; and (ii) the *Plataforma Eletrónica de Compras*, a central online platform that manages a series of public eProcurement procedures, including eInvoicing, in the context of the framework contracts established by the government Shared Services Entity (eSPap).

Finally, [Decree-Law No. 72/2018](#) mandated the creation of the National State Suppliers Portal, whose purpose is to simplify and expedite the procedures to verify that there are no impediments to contracting, as provided for in the PPC.

eInvoicing Legislation

In Portugal, the responsible entity for eInvoicing is the [Ministry of Finance](#). The legislation in this field refers to the PPC, which was reviewed in September 2017 (by [Decree-Law No. 111-B/2017](#), of 31 August 2017) in order to transpose [Directive 2014/55/EU](#).

[Decree-Law No. 123/2018](#), of 28 December 2018, defined the governance model for the implementation of electronic invoicing in public contracts.

Decree-Law No. 28/2019, of 15 February 2019, regulated the obligations related to the processing of invoices and other fiscally relevant documents, as well as the book-keeping obligations, including records and respective supporting documents, that apply to VAT taxable persons.

Decree-Law No. 84/2019, of 28 June 2019, established the State budget execution rules for 2019 within the scope of financial services, defining the conditions for the adoption of the accounting information system provided by eSPap.

Ordinance No. 289/2019, of 5 September 2019, regulated complementary elements of the electronic invoice.

Prior Opinion

Decree-Law No. 107/2012, of 18 May 2012, regulated the duty to provide information and the issuing of an opinion prior to the acquisition of ICT goods/services costing EUR 10 000 or more. It applies to both direct and indirect administration bodies and State services. AMA is the entity responsible for assessing the compatibility of the acquisition proposals with the strategic objectives of the digital transformation of the public administration (including, for example, an assessment of free and open source software solutions, whose total ownership cost is lower than that of a solution entailing proprietary software or specific licensing).

4.4 Domain-specific legislation

Education Legislation

Executive Order No. 6/2018, of 12 April 2018, established the school registration procedures and their renewal, and the norms to observe concerning children and pupils' distribution. In this context, it established that the preferred channel for the enrolment of pupils should be the digital one.

Decree-Law No. 65/2018, of 16 August 2018, amended the legal regime for higher education degrees and diplomas, previously established by Decree-Law No. 74/2006, of 24 March 2006, improving simplification and dematerialisation.

Decree-Law No. 66/2018, of 16 August 2018, approved the legal regime for the recognition of academic degrees and diplomas of higher education awarded by foreign higher education institutions. In this context, it established that the recognition of foreign academic degrees and diplomas of higher education is carried out through an electronic platform.

Decree-Law No. 55/2018, of 6 July 2018, established the curriculum for primary and secondary education, and the guiding principles for learning assessment. In line with the priorities of simplification and dematerialisation of the public administration, it states that the certificates and diplomas templates for the various educational and training paths should be issued by schools in an electronic format.

Resolution of the Council of Ministers No. 30/2020 approved the Action Plan for the Digital Transition, which recommends the provision of individual equipment to students and teachers (in various delivery phases), and provides for the guarantee of free mobile connectivity for students and teachers and access to quality digital educational resources (e.g. digital manuals and repositories of digital educational resources (RED)), as well as a strong commitment to a 'digital teacher' training plan.

Ordinance No. 194/2021, of 17 September, defines the templates for the diplomas and certificates of basic and upper-secondary education pathways in an electronic format.

Digital Skills Training

Order No. 3431/2019, of 19 March 2019, stipulated that training in digital skills is a strategic area for the public administration.

Ordinance No. 250-A/2020, of 23 October 2020, created the Programme 'Jovem + Digital', targeting the development of digital skills in young adults aged between 18 and

35, with the strategic objective of enhancing the quality, efficiency and agility of training and professional qualification.

Ordinance No. 179/2021, of 27 August, created the Programme “Digital Skills Certificate”. This programme aims to raise the digital skills of the Portuguese population, enhancing their social inclusion and employability. It is targeted at citizens aged 18 or over willing to obtain training, skills recognition or certification of skills in the digital area. The certification awarded is in line with the Digital Competence Dynamic Reference Framework, corresponding to levels 1, 2 and 3. Each pathway lasts up to 200 hours.

Code of Criminal Procedure

Law No. 1/2018, of 29 January 2018, amended the Code of Criminal Procedure, allowing to make notifications to legal representatives by electronic means.

Foreign Languages in the Civil Registry

Decree-Law No. 51/2018, of 25 June 2018, ensured that the documents to be registered in the Civil Registry can be written in foreign languages. To apply for such registration, applicants must make an appointment online.

Online Certificates for Organisations

Decree-Law No. 52/2018, of 25 June 2018, prepared the creation of online certificates for organisations. These certificates allow for an electronic search of organisations on the constantly updated Central Registry of Organisations.

Electronic Processing of Cases in the Administrative and Fiscal Jurisdiction

Law No. 118/2019, of 17 September 2019, amending, among other things, the Code of Procedure in Administrative Courts, modified procedural regimes within the administrative and fiscal jurisdiction, making it mandatory to process cases electronically in administrative courts. This allows for the speeding up of cases and increases efficiency in the processing of disputes. At the same time, the speeding up of proceedings improves the quality of services offered to citizens by the public administration.

Social Security Legislation

The social security system in Portugal is supported by the following laws:

- **Ordinance No. 358/2019** implemented electronic communications between courts, enforcement agents and Social Security in connection with the provision of social benefits and pensions.
- **Decree-Law No. 126-A/2017** and **Decree-Law No. 136/2019**, of 6 September 2019, promote electronic information exchanges, allowing for greater effectiveness of the framework of social benefits in the area of disability.
- **Law No. 100/2019** concerning the Informal Caregiver Statute, regulated the rights and duties of the caregiver and of the person being cared for, establishing the respective support measures and allowing for electronic information exchanges.
- **Ordinance No. 191/2019** implemented the automation of the proof of schooling situation, aimed at obtaining information on the schooling situation for public education students. It simplifies and facilitates citizens’ lives by reducing bureaucracy in the process of proving eligibility to benefits such as family allowances and study grants.
- **Decree Law No.16-A/2021** implemented the ‘Instant Pension’, a SIMPLEX 20/21 measure that allows citizens to request their pension online, through Social Security Direct, with immediate communication of the provisional amount that will be awarded.

- Article 154 of **Law No. 71/2018** regulated the data interconnection process between the Institute of Employment and Vocational Training and Social Security, thus improving the attribution of public support like the unemployment benefits granted by Social Security.
- **Decree-Law No. 28/2004** established the electronic remittance of the certificate of temporary incapacity from Health Services to Social Security, allowing, at the time, to take an important step towards the digitisation of processes between distinct bodies of the Portuguese public administration. This allows for a faster payment of sickness benefits, without errors due to manual analysis, and with greater convenience for citizens.
- **Ordinance No. 348/2019** regulated the electronic communications between the judicial courts and Social Security within the scope of civil tutelary, and promotion and protection proceedings.
- **Law No 110/2009**, in its current wording, provided for communications, by electronic means, between the tax administration and the social security institution of the starting date of activity of self-employed workers, several identification elements, and declared income.
- **Ordinance nº 257/2012**, in its current wording (amended by Ordinance 253/2017, of 8 August), determined that the verification of income for the purpose of granting the social insertion income benefit takes into account the information available in the social security system. It is also based on the interconnection of data between the social security and tax administration.

4.5 Emerging technologies

4.5.1 Artificial Intelligence (AI)

Portuguese Charter on Human Rights in the Digital Age

Law no. 27/2021 of May 17th adopted the Portuguese Charter on Human Rights in the Digital Age. Its Article 9 states that the use of artificial intelligence and robots shall be “guided by the respect of fundamental rights, guaranteeing a fair balance between the principles of explicability, security, transparency and responsibility, which takes into account the circumstances of each specific case and establishes processes aimed at avoiding any prejudice and any form of discrimination”.

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

No legislation was adopted in this field to date.

4.5.7 High-speed broadband connectivity

Broadband universal service

Decree-Law No. 66/2021, of 30 July 2021, approved the creation of a social tariff for the provision of broadband internet access services in Portugal in the scope of universal service. The social tariff is made available by all companies that provide this type of service to low income consumers or consumers with special social needs, with the aim of mitigating the high price of access as a barrier to the use of broadband Internet. The tariff comprises a monthly fee of EUR 5 (EUR 6,15 including 23% VAT) for the broadband internet access service and a one-off maximum price of EUR 21,45 euros (EUR 26,38 with 23% VAT) for activating the service and/or for access equipment.

Connectivity Working Group

Ministerial Order n° 10631/2021 established the Connectivity Working Group with the mission of analysing the existing needs in the national territory regarding the coverage of fixed and mobile networks, as well as the availability of public funding funds, namely from the European Union, and private funds for investment in connectivity infrastructures.

Very high-capacity networks

Ministerial Order n° 10987/2021 entrusted the National Communications Authority (ANACOM) with the tasks of:

- Obtaining updated information on existing infrastructure, i.e., the coverage of public electronic communications networks with very high-capacity in the national territory, including a forecast on planned deployments of broadband networks; and
- Preparing the documents relating to public tender procedures to be carried out by the government for the installation, operation and maintenance of very high-capacity networks in designated areas. The final objective of the public tender is to contribute to meet the connectivity goals established by the European Commission for 2030, namely Gigabit network coverage to all households.

4.5.8 Other emerging technologies

Free Technological Zones (ZLT)

Resolution of the Council of Ministers n° 29/2020 established general principles for the creation and regulation of Free Technological Zones (ZLT), which are physical environments geographically located in a real or near-real environment, aimed at the safe testing of technologies, products, services and innovative technological processes with the support and monitoring of the respective competent authorities.

Decree-Law n° 67/2021 established the basic legal framework applicable to the governance model to promote technological innovation with the setup of ZLTs. It is expected that technologies such as AI, distributed ledger, cloud computing, IoT and HPC can be boosted in this context.



5

Digital Public
Administration
Governance

5 Digital Public Administration Governance

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

5.1 National

Secretary of State for Digitalisation and Administrative Modernisation

The Secretary of State for Digitalisation and Administrative Modernization is responsible for the modernisation of public administration and digital government, under the direct tutelage and guidance of the Prime Minister.

Administrative Modernisation Agency

Created in 2007, the Administrative Modernisation Agency (AMA) is the public institute in charge of digital government and administrative modernisation and simplification, under the superintendence and tutelage of the Secretary of State for Digitalisation and Administrative Modernisation.

AMA's activity is divided in three major areas: (i) digital transformation; (ii) public services delivery (both physical and digital); and (iii) innovation and public participation. AMA operates in areas such as ICT strategy and governance, administrative simplification, services redesign and experimentation, digital identity, interoperability, single digital gateway, open data, emerging technologies, AI and other building blocks of the digital government in Portugal.

AMA is also the responsible body for interoperability activities in Portugal.

Council for Information and Communication Technologies in Public Administration

The Council for Information and Communication Technologies in Public Administration (CTIC), created by the Resolution of the Council of Ministers No. 33/2016 of 3 June 2016, is the coordination structure responsible for developing and managing the ICT strategy and the overall action plan for ICT in the Portuguese public administration. It is intended to effectively articulate with the SIMPLEX Programme to recover measures that take advantage from the transformative potential of ICTs and to implement new measures that will improve the quality of citizens' lives and reduce the costs for companies. The CTIC brings an ICT governance model in the public administration that is open to society and well-adjusted to the government's objectives, thereby enabling the effective development of a global ICT strategy.

The CTIC responds directly to the Prime Minister, who delegated this attribution to the Secretary of State for Digitalization and Administrative Modernisation. Its Technical Committee (which includes a representative of each Ministry) is chaired by AMA, thus giving that entity a cross-sectorial management role in the Portuguese eGovernment policy domain.

The mandate of the Council runs until December 2023, through the Resolution of the Council of Ministers No. 84/2020 of 1 October 2020.

Interministerial Network for Administrative Modernisation

The Interministerial Network for Administrative Modernisation (RIMA), established by Decree-Law No. 4/97 and reviewed by Decree-Law No. 72/2014, brings together representatives from all government areas to pursue a collaborative work in the field of administrative simplification and modernisation, and streamline the relationship between the State, citizens and businesses.

In particular, it establishes administrative modernisation measures on the methodology and mechanisms for regulatory impact assessment of normative acts.

Commission for Administrative Modernisation

The Commission for Administrative Modernisation brings together business associations, social partners, consumer protection organisations, professional associations and representatives of both central and local government, with the aim of promoting the sharing of ideas between the different stakeholders and partners in the modernisation of public administration.

Management Centre for the Electronic Government Network

The Management Centre for the Electronic Government Network (CEGER), under the Prime Minister's Office, provides IT support to government bodies. It is responsible for the management of all the technological infrastructure of the government network, including maintenance of the Data Processing Centre, technological equipment, systems and the electronic communication network. In addition, CEGER focuses on electronic security and advanced systems in support of government decision-making. It also acts as the certification manager for the State Electronic Certification System - Management of Public Keys (SCEE). Finally, it is the responsible entity for registration of GOV.PT internet sub-domains.

Government Shared Services Entity

The Government Shared Services Entity (eSPap) ensures the development and provision of public services, and designs, manages and evaluates the national procurement system. In addition, it ensures the management of the PVE (State Vehicle Fleet). It supports the development of strategic policies by the Ministry of Finance and the Ministry of State Modernisation and Public Administration in the area of ICT. It also ensures the planning, designing, execution and evaluation of digitisation initiatives of the respective services and organisations.

5.2 Subnational (federal, regional and local)

Secretary of State for Digitalisation and Administrative Modernisation

The Secretary of State for Digitalisation and Administrative Modernisation is responsible for the modernisation of public administration and digital government, under the direct tutelage and guidance of the Prime Minister.

Secretary of State for Local Administration and Land Planning

The Minister of Territorial Cohesion is responsible for formulating, implementing and evaluating a comprehensive and coordinated policy in agreement with local governments, through the Secretary of State for Local Administration and Land Planning.

Directorate-General for Local Administrations

The Directorate-General for Local Administrations (DGAL) is a service integrated in the Ministry of Territorial Cohesion, whose mission is to design, study, coordinate and implement measures to support local administrations, and to strengthen cooperation between the latter and the central administration. Its tasks include, for example, the design and development of information systems in the areas of financial, patrimonial, administrative and human resources management.

Administrative Modernisation Agency

The **Administrative Modernisation Agency (AMA)** coordinates administrative modernisation programmes and involves, via a very active model, most of the municipalities on how to implement them at regional and local level. Many of the several existing initiatives focus on areas such as co-financing (SAMA), licensing (Zero Licensing and Industrial Licensing) and Citizen Spots (multiservice physical desks for assisted digital service delivery, in partnership with municipalities).

Regions and Municipalities

Regions and municipalities are in charge of policies/strategies within the scope of their competences.

National Association of Portuguese Municipalities

The **National Association of Portuguese Municipalities (ANMP)** is the representative body of the Portuguese municipalities. It promotes their interests and provides support services in various areas, including ICT and public management.



6

Digital Public Administration Infrastructure

6 Digital Public Administration Infrastructure

6.1 Portals

6.1.1 National Portals

Government portal

The **Government Portal** is the institutional website of the Portuguese government, providing information to businesses and citizens on matters such as the government programme, the government composition and diverse documentation (e.g. political communications) or ongoing public consultations, as well as generic information about Portugal.

ePortugal

ePortugal.gov was launched in February 2019 (**Resolution of the Council of Ministers No. 46/2019**, of 22 February 2019) as a Single Digital Gateway which centralises all digital public services for both citizens and companies, as well as the information inscribed in the National Catalogue of Entities and Services (directory of public entities, services, points of care, websites, mobile applications, etc.).

The portal was developed under SIMPLEX, the national simplification and modernisation programme, and is organised around life and business events according to the core public service vocabulary (e.g. having a child, getting married and retiring). It provides both informational and transactional services, in line with the citizen-driven approach that the Portuguese government has been implementing for the last few years. Additionally, the portal integrates the **Entrepreneur's Desk**, which is the single point of contact for digital services related to the exercise of economic activity.

The ePortugal Portal is dynamic and adaptable to individual users: it offers a Reserved Area where users can check information regarding their relationship with the public administration and access a documents folder, in which they can save and share files with other registered users or with public entities. Likewise, ePortugal provides innovative support instruments such as the **Citizen Map** (available as an app, for **Android** and **iOS**), which provides georeferenced information for all public services and digital queue tickets for onsite public services, and the AI-powered chatbot **SIGMA**, that helps users to find and use the available services and allows to request a contact with one of the available helplines for citizens and entrepreneurs.

In 2021, ePortugal continued to evolve and integrate new areas related to services and information provided, in line with the Single Digital Gateway Regulation. The part of the portal dedicated to business activities has been expanded, integrating new information and services, and a new section with information for migrants living in Portugal has been added.

Following the 2020 COVID-19 pandemic, the relevance of ePortugal has increased, as it became the preferential means to access online public procedures, thus reducing demand for in-person services and preventing the gathering of crowds in public spaces.

COVID-19 Public Information: EstamosOn

On 18 March 2020, the central administration launched **EstamosOn** as the single point of contact for all relevant information on the COVID-19 prevention and containment measures. This national platform, directed to citizens, families and companies, offers:

- Communication campaigns to encourage the use of digital public services, promoting the ePortugal Portal as a way to minimize social contact;
- Technological tools (and related tutorials) to make telework possible and facilitate the pursuit of day-to-day activities;

- A list of the exceptional measures adopted by each governance area, as well as political communications and relevant legislation (accompanied by FAQs);
- A dashboard with the epidemiological evolution in Portugal;
- A section with questions collected from social networks and answered by the competent health authorities; and
- A complete, consolidated and reliable list of emergency and support contacts created by the various public services.

Open Data (Dados.gov+)

Following international practices in the area (e.g. the US or the UK Data.Gov projects), AMA has committed to the development of a wide and open platform containing all kinds of data from public bodies. The objective of this policy - keeping in mind the right of any citizen to consult public administration information - is to facilitate citizens' access to public open data. As a result, the [Open Data Portal](#) makes available to citizens an extensive range of information from very diverse areas.

The Dados.gov web-portal was relaunched in May 2018 as Dados.gov+, replacing its previous 2012 version. Developed under the SIMPLEX+ Programme, this new version was designed to conform to the best international practices in the field and incorporate innovative solutions in terms of user experience, content structure, data integration and user licenses.

Managed by AMA and available in open source, Dados.gov+ is based on the French UDATA platform, which was developed by ETALAB, and which already has more than 4 900 datasets. It is free and open to all users that want to access data, but also to citizens and organisations that wish to make available data of public interest. All they need to do is to register, receive their application programming interface (API) key and characterise the dataset they wish to upload. Each dataset can have more than one associated resource and can be published in different and multiple formats, which is one of the features enabling data reuse. It is also possible to index datasets by introducing an URL referring to the origin of the data, which is ideal for entities that already have the information available in their own platforms, like the [partilha.justiça.gov.pt](#) from the Ministry of Justice or the [Lisboa Aberta](#) portal from the Lisbon City Hall. In case the supplying entity already possesses its own data portal, the publishing process can also be made through data harvest, thus collecting data regularly and automatically.

Participa.gov

[Participa.gov](#) is a centralised platform that supports all of Public Administration's participatory processes (e.g. participatory budgets), be it open to the general population or restricted to the public sector (nationwide or local processes). End-users can participate in open calls by submitting their own proposals and/or by voting on their preferred ones, making use of secure authentication and voting mechanisms, namely the national eID mechanisms (recognized by the European eIDAS Regulation with the highest level of assurance) and blockchain technology, guaranteeing transparency, security and anonymity in the voting process and avoiding possible fraud.

Recuperar Portugal

This [portal](#) was developed to manage, monitor and execute the national RRP. It presents relevant statistics in this regard, namely the volume of contracts signed between 'Recuperar Portugal' and the entities responsible for the implementation of investments with the Plan funds.

Transparency Plus

Launched in April 2021, "[Transparency Plus](#)" is a digital platform that allows citizens to access easy-to-read information on public resources and policies. The portal kicked off with an area dedicated to European funding, which provides real-time, accessible information on the progress of measures and projects financed or co-financed by

European funds, related to NextGenerationEU and the Multiannual Financial Framework 2021-2027.

The portal also focuses on municipalities, encompassing 5 areas of analysis: economic dynamics, financial management, administrative management, tax decisions and decentralization of competences. For each of these areas, a set of reference indicators is presented to provide a global picture for the 308 municipalities.

The involvement of citizens with special needs in the design and testing of the platform allowed improvements to be incorporated, guaranteeing accessibility for all citizens. The portal was awarded the golden badge for accessibility and usability, the highest standards of compliance with best practices in this field.

Web Accessibility and Usability Ecosystem

AMA is responsible for developing, promoting and monitoring the implementation of usability and accessibility guidelines and regulations, ensuring compliance with national and international standards and best practices (namely EN301549 and WCAG 2.1 from W3C) and enabling citizens, especially those with disabilities, to access and use public services online.

To this end, AMA made available an ecosystem, aggregated in the [acesibilidade.gov.pt](https://www.acessibilidade.gov.pt) web portal, with information about laws, guidelines and best practices, as well as practical online tools for public entities, which include:

- An accessibility and usability kit for public sector's websites (with all resources available on Github);
- An accessibility WCAG 2.1 validator;
- An accessibility statement generator;
- An Observatory of Digital Accessibility; and
- A usability and accessibility seal of excellence.

The **Usability and Accessibility Seal**, in particular, is an indicator of the quality of the contents and services made available online by public and private entities, according to three levels of compliance with standard requirements: bronze seal (lowest level of conformity, i.e. to level 1 requirements), silver seal (intermediate level of conformity) and gold seal (highest level of conformity). For instance, all the websites and mobile applications that have a gold seal were subject to usability tests that involved participants with disabilities.

App.gov.pt

App.gov.pt was launched in 2018 as a directory of mobile apps that centralised various applications made available by the public administration to make life easier for citizens. The app was developed and is managed by AMA, which ensured the indexation of the apps developed by the public bodies themselves.

App.gov.pt is available for both Android and iOS devices.

Bussola.gov

The **Bussola.gov** is a SIMPLEX initiative that was launched in 2020 as an intranet portal for public servants, aiming to foster sharing of knowledge and experiences, collaboration between entities and the provision of content relating to careers, employment exchange, training, social services and existing protocols.

OGP Portugal

The **OGP Portugal Portal** was developed within the scope of the Portuguese participation in the OGP, to centralise all information about the process, progress, evolution and monitoring of the **National Open Administration Action Plan**, and to foster public participation. Citizens are invited to contribute to the promotion of open administration in Portugal; the portal collects the contributions and ensures that feedback is given to them. This portal has been available since October 2018 and is also highlighted in the

"Participation" area of the [ePortugal Portal](#), with the objective of promoting its dissemination and visibility.

The activities of OGP Portugal are allowing a free exchange of ideas and suggestions between civil society organisations and public entities, highlighting the relevance of including civil society topics. These must continue to be considered in future to keep promoting open administration in Portuguese public entities, namely the digital transition process and the guarantee of a wider inclusion and representativeness within the participation in State activities.

Tax Authority Portal

The Ministry of Finance makes available to citizens and companies a [web portal](#) allowing for tax submission and the consultation of their fiscal situation, among a wide range of digital services. The [Portal das Financas](#) allows secure authentication via the Citizen Card and the Digital Mobile Key. On the web portal, users can consult their tax files and statistics and conduct simulations. In addition, a complimentary app was made available in 2018 to facilitate the payment of taxes and the consultation of the citizen's fiscal status.

Advanced functionalities were recently integrated into the system allowing for enhanced usability, the most notable being the automated income tax declaration. The pre-filling of the declaration already began several years ago, culminating in the current fully automated procedure, in which the personal income tax can be settled without any intervention by the taxpayer. Developed as a SIMPLEX measure, this feature automatically prefills the citizen's income statement with all relevant data conforming to data protection regulations. Then, the declaration receipts and the notification of the final tax calculation can be confirmed electronically.

National Health System

The [National Health System \(NHS\) Portal](#) provides citizens with online access to a wide range of information and services, including a Transparency section centralising the data produced by health care entities and making it available for reuse without any restrictions. Additionally, the omnichannel solution SNS24 provides the following tools:

- SNS24 Portal – allows, among other functions, for the consultation/download of health information and access to georeferenced information about health providers;
- SNS24 app (mHealth) – allows the access to and the portability of health information and services by citizens;
- SNS24 telephone hotline – single point of contact which provides citizens with a set of information and services that facilitate access, ensure equity and simplify the use of the NHS; and
- SNS24 Balcão ('SNS24 Counter') – physical counter to facilitate citizens' access to the various digital services of the NHS, in partnership with municipalities.

Once logged into the SNS24, citizens and health professionals have direct access to RSE – the Portuguese Electronic Health Records (EHR) platform, which aims to facilitate the sharing of information between citizens, health professionals and public health entities. SNS24 also makes available a sign language video functionality that allows deaf citizens to communicate with NHS professionals with the support of a sign language interpreter. In the context of the fight against the COVID-19 pandemic, SNS24 allows the issuance of [provisional declarations of precautionary isolation](#) in an electronic format, and the 'Evaluate Symptoms' functionality was improved to cover COVID-19.

Social Security - Direct Social Security

Via the [Direct Social Security Portal](#), citizens can access their social security data and perform a wide range of operations, from submitting requests for unemployment benefits, child allowances and leaves, to making payments, while enjoying and having

access to the information they need regarding their rights and duties in the social security domains. The Portuguese Social Security has been strongly investing in a digital transformation strategy, to respond to the needs of citizens and economic agents, and providing them with a simple, inclusive, intuitive and transparent experience, in self-service mode, with total convenience and autonomy. To this end, the Direct Social Security Portal currently offers over 250 digital services, including the possibility to request pensions and social benefits, consult and update information on a citizen's contribution history and obtain an integrated overview of all credits and debits. In the portal, employers and independent workers may also find the main services that allow them to fulfil their obligations to Social Security. Finally, the Direct Social Security Portal includes the possibility of authentication with the Digital Mobile Key and the Citizen Card (eID). A lot of the information is already pre-filled, based on back-office automation and interconnection with other public organisations.

The Education and Training Courses Portal

The [Education and Training Courses Portal](#) is a national technological platform that allows for a personalised search of education and training offers currently available in the Portuguese education and training system.

Qualifica

The [Qualifica](#) Portal aims to ease access to information, services and tools included in the Qualifica Programme (i.e. the National Credit System for vocational education and training and the Qualifica Passport). It targets trainees, employers, and adult education and training providers. It enables citizens to find a Qualifica Centre, to consult education and training opportunities, and to update the Qualifica Passport. The Qualifica Passport is an online tool that records the education and training pathways attained; it also provides guidance to pathways in order to complete or obtain a new qualification, taking into consideration the already attained training and the acquired skills.

National Catalogue of Qualifications

The [National Catalogue of Qualifications](#) has been renewed to become more user-friendly, clearer and more suitable to the needs of its main users. As such, the new website:

- Increases the visibility of the set of activities and skills associated with each qualification, and clearly shows how to access those qualifications;
- Integrates short and medium-term training courses, for young people and adults, in emerging areas with added value for the economy, namely in the field of digital competences;
- Integrates Competence Units (UC)/Short Term Training Units (UFCD) related to transversal competences that are of crucial importance for education, training and work, in emerging domains such as 'soft skills', new ways of working, digital and leadership;
- Integrates existing essential apprenticeships by qualification, with regard to the different professional courses modalities;
- Allows the search of qualifications by Sectorial Council for Qualification;
- Allows the integration of qualifications structured in UC, based on and described in learning outcomes (AR);
- Allows users to independently search for UC integrated in the key competency benchmarks for adult education and training - basic level and secondary level;
- Presents a simpler search of UC/UFCD which allows the use of a broader set of search filters; and
- Allows access to a diverse set of information on the home page, namely catalogue updates, news and events.

National Commission for the Promotion of the Rights and the Protection of Children and Young People

The **CNPDPCCJ Portal** is managed by the National Commission for the Promotion of the Rights and the Protection of Children and Young People (CNPDPCCJ) and provides citizens with a wide range of information on: (i) the promotion and protection of children and young people; (ii) activities pursued by the CNPDPCJ and other national entities towards the implementation and realisation of these goals; (iii) the national and international framework of the activities developed by the CNPDPCJ; and (iv) the Portuguese system of promotion and protection of children and young people in danger. The CNPDPCJ Portal also conveys updated data and assessment reports on the activities of the local Commissions for the Protection of Children and Young People and provides citizens with an additional channel for reporting situations of children and young people at risk or in danger, including by filling out an online form that is automatically forwarded to the competent Local Commission once submitted.

DGERT Portal

In terms of digital transformation, since April 2018, the Directorate-General of Employment and Labour Relations (DGERT) has made available, within the scope of its attributions in terms of collective regulation and labour organisations, access to various information services aimed at companies and workers, organizations representing workers and employers, public services and society in general, as well as access to data on trade unions and employers' organizations registered in this service since 1975, including, among others, elements relating to statutes, elected directors and instruments of collective labour regulations concluded, which include:

- The search of **collective labour agreements** by Portuguese Classification of Economic Activities (CAE, Rev.3) and geographical area;
- The status of requests for depositing collective bargaining agreements;
- The list of registered (active and cancelled) trade union and employer organizations and their contact details; and
- Data about trade unions and employers organizations registered with DGERT on the platform "DOT – Data from Labor Organisations".

National Official Statistics

The **Statistics Portal for Official Statistics**, managed by Statistics Portugal (INE), is where citizens, companies and researchers can access official statistics about the Portuguese society and economics. It is available in Portuguese and English and is free of charge. It also boasts a Webbing approach for electronic replies to official statistical surveys. In the Portal is also possible to find an IT platform for Census 2021 provisional results, at parish level, allowing easy access to census information.

The portal is optimised for access from mobile devices such as tablets and smartphones, and it makes available a set of feeds (RSS, ICS and JSON) that provide direct connection to other third-party applications, allowing users to receive INE's news in real time on their IT systems or computers. It also provides a REST API that allows for the creation and extraction of a catalogue of indicators available in the website database, thus enabling users to extract statistical indicators and related metadata.

Online Security Accreditation

The **Online Security Accreditation Platform (CRESO)**, managed by the National Security Office, was developed in the scope of the SIMPLEX Programme and aims to make it easier for citizens and companies to interact with the public administration, whenever it is necessary to obtain or renew a security clearance. For this purpose, the **Resolution of the Council of Ministers No. 70/2019**, of 11 April 2019, declassified some of the forms required to apply for accreditation.

Justice Portal

The **Justice Portal**, launched by the Ministry of Justice in 2017, offers a wide catalogue of services related to the area of justice, including courts, registries and notary, reintegration and prison services, and industrial property. The platform congregates in a single website information about the judicial services in a clearer and more accessible language (all contents are written in 'plain language' and can be easily searched by using a simple interface). The platform marked a watershed moment in how citizens, companies and their agents interact with the various services in the justice sector. The creation of a common network to aggregate the websites of the area of governance of Justice is also relevant with a view to enabling better sharing and availability of content, news, statistics and documents. In this context, the justica.gov.pt network already integrates seven public bodies websites.

CITIUS

CITIUS (the Latin word for 'faster' from the Olympic motto) is the project aimed at the dematerialisation of processes in judicial courts developed by the Ministry of Justice, encompassing computer applications for the various judicial operators (judicial magistrates, prosecutors, judicial officials and judicial agents). The CITIUS service enables the electronic submission of documents for their use in court cases. Lawyers can present evidence and documents to the courts, check their distribution, look up cases and keep track of fees electronically. For civil cases and injunctions, most correspondence can be conducted electronically. Sets of copies and duplicates are no longer needed. The system is secure in that the use of personal, non-transferable electronic certificates is required.

Justice Open Data

Partilha.justica.gov is a portal that acts as an extension of the open government plan in the sector of justice to publish high-value datasets to achieve more participation, more transparency and more justice. More accountability and availability of datasets gives citizens and scholars the opportunity to adopt participatory and collaborative approaches to the management of the Portuguese justice system. Participatory democracy is made by everyone.

Justice Statistics

The **Justice Statistical Information System** covers several areas, including courts, registries and notaries, police forces and other investigative bodies, alternative dispute resolution bodies, rehabilitation, and the enforcement of sentences and measures. The Justice Statistical Information System includes information collected from different entities and services, which contributes to the portrayal of different topics of interest to society. It also offers geographical information on various justice services.

Electronic Yellow Book

The **Electronic Yellow Book**, launched as a SIMPLEX+ initiative, allows businesses and citizens to leave a complaint or a suggestion, or write a compliment regarding the public administration and its services, namely the digital ones.

Public Employment Service

The **IEFP OnLine Portal** provides citizens and companies with a wide range of services related to job seekers, including unemployment allowances, browsing and applying for training opportunities, advertising jobs, automated cross-matching between employers and job seekers, and applying to support under the framework of labour market policies. With electronic authentication via Citizen Card or Digital Mobile Key, the portal allows a totally dematerialised relationship between the user and the public employment service.

Public Procurement - BASE

The **BASE Portal** gathers all relevant information on public procurement in Portugal, making it available to citizens in an open and transparent way.

It was created after the publication of the **Portuguese Public Contracts Code (CCP)**, in January 2008, which transposed Directives 2004/17/EC and 2004/18/EC. **Ordinance No. 57/2018**, of 26 February 2018, regulates the functioning and management of the BASE Portal and approves the data models to be transmitted to this platform, for the purposes of the provisions of the CCP.

Education Human Resources

The **Education Human Resources Interactive System (SIGRHE)** is a web platform based on open-source technology, whose function is to manage the education human resources processes and dematerialise the administrative procedures.

This platform, which was conceived as a shared service, has currently about 400 000 registered users and is available 24/7. SIGRHE users are extremely varied, covering the whole of the educational community. Besides individual users, such as teachers or non-teaching staff, also others, such as representatives of school clusters/non-clustered schools and parents' associations or local authorities, use the platform for various purposes.

SIGRHE also allows access to various services to the different bodies of the Ministry of Education, for whom it works as a tool for consultation, analysis, control and/or validation of data on both staff and schools, always in strict compliance with data protection regulations.

Developed in 2011, SIGRHE is a dynamic platform designed to allow constant development and upgrade by adding and configuring other applications, according to the needs of the Directorate-General for School Administration (DGAE) and the whole education system, as well as by introducing changes, corrections and adaptations that may seem necessary. Amongst the functions provided by the SIGRHE platform, module E72 (made available in March 2020) stands out as a digital communication service (available 24h/day, 365 days/year) conceived to respond to citizens and organisations within 72 hours, as part of a centralised communication policy.

travelBI

The business intelligence platform **TravelBI**, developed by Turismo de Portugal, integrates information from various national and international information systems, disseminating the main performance indicators of the tourism sector, competitive analyses and the continuous monitoring of the 25 main incoming markets for Portugal. That way, tourism investors and companies can easily access statistical information and analyses on tourism, the main markets, and national strategic and emerging market trends. In order to adapt to the needs of companies and the market for more information, TravelBI includes a specific Open Data Portal.

ConsultaLex

ConsultaLex is a central portal for public legislative consultations, accessible to all, which allows citizens to participate in the legislative process. Citizens can consult the files and formulate suggestions, as well as follow at all times the drafting process of laws, until their final approval. The creation of ConsultaLex is one of the measures foreseen by the first National Open Administration Action Plan, which was itself developed via a participatory process.

Local Administrations

Managed by the Directorate-General of Local Administrations, the **Local Administrations Portal** gathers information on all Portuguese local administrations and provides several online services to support them, such as (i) the Integrated Local Administrations Information System (SIIAL) and the Information System for the Local Administration

Subsector (SISAL), which centralise the collection and validation of financial and non-financial information on local administrations; or (ii) the Information System for the Legal Regime of Urbanisation and Building, which simplifies and dematerialises the processes of urbanisation operations.

This portal is directed to both public servants and citizens in general, as a complementary channel to the local administrations' institutional websites.

6.1.2 Subnational Portals

No particular infrastructure in this field was reported to date.

6.2 Networks

Cybersecurity Digital Innovation Hub

The Cybersecurity Digital Innovation Hub (C-Hub) has been created in June 2021 to integrate the National Digital Innovation Hub (DIH) Network, with the aim to access the European DIH Network. Different kinds of organisations are part of this DIH, such as the CNCS, AMA, academic organisations and the private sector. The purpose of this DIH is to implement the digital transformation processes, focusing in particular on cybersecurity; providing innovative services, advice and planning to both public and private entities (in particular SMEs). This DIH is partially financed by the RRF, and it will be further developed to be part of the European DIH Network.

SIMPLEX Focal Points Network

The SIMPLEX Programme includes a network of SIMPLEX Focal Points, consisting of representatives of the various areas of government, and playing a central role both in the development of the programme and in the subsequent monitoring of the implementation of its various measures.

Innovators Network + Experimentation Labs Network

In its mission of being a reference for experimentation in the Portuguese public administration, LabX, an organic unit of AMA, has been launching network-based initiatives to bridge the existing capacity and expertise within both the public sector and the innovation ecosystem. Among the initiatives developed in this context, the following stand out:

- The Network of Innovators is a community of practices, with 675 members, aiming to promote collaborative work sessions among public administration workers to share knowledge and experiences resulting from projects and/or experimental approaches. The network has at its disposal two instruments to promote its dynamisation: (i) LabXpresso, a bimonthly newsletter where projects, case studies and tools applied by the LabX team are presented; and (ii) WORKSHOP@LabX, face-to-face or virtual sessions that take place in an informal environment and can have different formats, where participants can identify challenges and opportunities for innovation within the public administration; and
- The Network of Experimentation Labs is an initiative in which public administration teams are given project-based training to apply in rapid prototyping cycles. They use LabX's approach to materialise experimental projects (with a duration of up to six months), which allows these teams to accelerate transformational proposals, for both public service delivery and public sector organisations. The Network of Experimentation Labs allows the development of a 'belt of multipliers' which will promote and scale innovation within the public administration.

At the moment, LabX has been working with four teams of public entities of local government (three municipalities and a central organisation) through established partnerships based on protocols.

Collaborative Work Plan Network

The Collaborative Work Plan is a framework for collaborative projects emerging organically from public leaders, aiming to tackle difficult challenges and deliver results through combined efforts and resources from several organisations, including universities and not-for-profit organisations. The network is growing, delivering three collaborative work plans so far, and expanding the 'Commitment to collaborate' signed by the involved leaders.

Citizen Shops

The **Citizen Shops** are a concept of public service delivery that combines in the same physical space several public and private entities. It does so with the aim of expediting relations between citizens, companies and the public administration.

The establishment of the first Citizen Shops took place in 1999 in Lisbon and Oporto. Their opening was the first step in the direction of the one-stop-shop concept for public service delivery since citizens now have access to a wide range of public and private services in the same place.

This model has been continuously developed to respond to the evolving needs of citizens and companies. Examples include the availability of free Wi-Fi and the possibility to automatically assess, through QR code or free SMS, the services provided in the shops. As of March 2022, the network of Citizen Shops comprises 64 one-stop-shops.

Citizen Spots

The **Citizen Spot** is a multiservice physical counter where a specialised mediator assists citizens in accessing a portfolio of digital public services, available on various websites, and further teaches them how to operate on their own thereafter.

All spots are equipped with a double-screen system (one screen for the mediator and one for the citizen), which allows citizens to follow the steps being taken by the mediator. In addition, all operations are supported by the national eID mechanisms, namely the PIN-protected Citizen Card and the Digital Mobile Key, thus strengthening the citizens' trust in digital services.

The combination of public digital services with the onsite assistance of a specialised mediator, in a hybrid model of service delivery, has proven to be an effective way to engage citizens in the use of digital services. It makes everyone more aware of the available services and their respective benefits, and also of online security, which is fundamental to boost public confidence in the use of ICTs in general.

As of March 2022, there were 799 spots located in town halls, parishes or public libraries throughout the country (aiming to be close to citizens of all backgrounds) and also in the cities of São Paulo (Brazil), Paris (France), Brussels (Belgium) and London (UK), providing more than 50 services, in a base catalogue of 13 entities, with nearly 8,2 million attendances.

The Citizen Spot concept was extended with the launch of (i) the Solidarity Citizen Spot, which specifically targets day-care centres, nursing homes and residential structures for the elderly, and includes the operation of mobile kits by a trained mediator; and (ii) the Mobile Citizen Spot, which foresees the use of minivans to provide digital assistance in remote locations or catastrophic situations.

6.3 Data Exchange

Interoperability Platform of the Public Administration

The Interoperability Platform of the Public Administration (iAP) is a service-oriented central platform that aims to make available to all public administrations a shared tool that allows multichannel services for citizens and enterprises. The iAP comprises four independent services: (i) the 'Integration Platform' provides a simple and integrated delivery of cross-cutting electronic services, becoming a cornerstone in the administrative modernisation process; (ii) the 'Authentication Supplier' allows authentication using the Citizen Card in portals duly accredited and authorised for that purpose; (iii) the 'Payments Platform' enables the availability and integrated management of multiple payment methods for different channels; and (iv) the 'SMS Gateway' enables the sending and receiving of SMSs via short numbers between citizens and public administration bodies, thus enlarging the number of available contact channels for managing the relationship with citizens.

This shared tool for interconnection between different systems enables the provision of digital public services like dematerialised medical ePrescriptions (mandatory and fully electronic since 2016) and the automated social energy fare (automatically processing social benefits related to the energy bill by integrating data from Social Security).

The public administration's interoperability platform has been progressively extended to the private sector, enabling the provision of services such as the dematerialised bank account opening, available since July 2018 and allowing banks and financial companies to obtain data on the professional situation of potential clients in a fully dematerialised way.

The iAP's website was completely revamped in 2020, to improve the communication of the services available, and the main figures and benefits. In 2021, the iAP surpassed a total of 2 000 million interactions since 2007, with increasing numbers every year.

Traffic Exchange Point

The Resolution of the Council of Ministers No. 12/2012, of 7 February 2012, approved the Global Plan for Rationalisation and Cost Reduction concerning ICT in the public administration, establishing a set of ground rules to rationalise the ICT assets used by the Portuguese government.

Concerning consolidated ICT solutions, as per Decree-Law No. 151/2015, of 6 August 2015, it was decided to build an infrastructure that supports (voice and data) communications between the public entities, in a private, secure environment and without the service fee charged by commercial providers, i.e. a Traffic Exchange Point (PTT) that guarantees direct access to all public entities while promoting a better service and secure, faster and easier access, with lower costs.

The implementation of the PTT is still progressing towards the designated goal of covering the whole public sector: the backbone link between the ICT entities of each one of the Ministries was achieved in early 2019, with more than 25 different services made available for common use. In October 2020 another goal was achieved, with the implementation of the second node of the PTT, thus increasing access redundancy and resilience.

The rollout process will continue during the next years with the implementation of an increasing number of new services in the PTT, which already amount to more than 40.

6.4 eID and Trust Services

Electronic Authentication Platform

The Electronic Authentication Platform brings together the different authentication and electronic signature solutions available to citizens, allowing them secure access and authentication in the portals and internet sites of different public entities (such as the

Citizen Portal or the Tax Authority Portal). Available authentication tools are the Citizen Card, the eID-based Portuguese identity card and the Digital Mobile Key, an ID mobile solution that allows citizens to authenticate solely with a mobile device, thus eliminating the need to use a personal computer with a smartcard reader. 2017 saw the release of a Digital Mobile Key dedicated app to facilitate the use of the eID from the smartphone.

Another feature of Autenticacao.gov is the Professional Attributes Certification System (SCAP), which allows citizens to authenticate and/or sign as certified professionals of a specific recognised profession (e.g., as an engineer or a physician).

Electronic Identity Card – Citizen Card (*Cartão de Cidadão*)

The **Citizen Card** is the Portuguese civil and eID card that provides both visual identity authentication and electronic identity authentication using biometrics and electronic signatures. It allows the holder to provide secure authentication when dealing with digital services and to digitally sign electronic documents. Citizens can thereby take advantage of a multichannel service delivery in their interactions with public and private services.

The national eIDAS node is implemented and in production on the ePortugal.gov.pt web portal. The Citizen Card notification was published in the [Official Journal of the European Union \(OJEU\) 2019/C 75/04](#) with a 'high' Level of Assurance.

Mobile Identification - Digital Mobile Key (*Chave Móvel Digital*)

The **Digital Mobile Key** is a mobile authentication and signature mechanism associated with the Citizen Card and other documents. It is a form of secure online citizens' authentication and signature, based on a system similar to home banking solutions, through the introduction of a username (citizen's mobile number), password (chosen by the citizen) and a one-time password sent by SMS, e-mail or Twitter account (also chosen by the citizen). Since December 2017, citizens can also use a Digital Mobile Key app for receiving the one-time password associated with each authentication through push notifications on their smartphones. More recently, in April 2018, the Digital Mobile Key was upgraded with a remote qualified signature feature, according to the eIDAS Regulation.

The main objective is to offer a complementary authentication solution through mobile devices, safer than access via username and password (ensuring more security to the State) and simpler for the citizen (ensuring more effectiveness and efficiency for citizens and companies). As of March 2021, more than 2.4 million citizens have already been enrolled in the Digital Mobile Key system.

The eID scheme concerning the Digital Mobile Key was published in [OJEU 2020/C 116/01](#) with a 'high' Level of Assurance.

ID.gov.pt

The **ID.gov.pt** app is a digital wallet available for iOS and Android that allows citizens to view, save and share certified versions of personal identification documents, including the national ID card (Citizen Card), the driver's licence and the vehicle registration document, among others. The digital documents generated by the app, which requires secure authentication via the eIDAS-compliant Digital Mobile Key, have the same legal value as the original paper versions, and can be validated by public and private authorities in real-time through a QR code available in the application or through the insertion of a temporary code in a reserved area of Autenticacao.gov.pt.

The undisputable identification of citizens is essential for the good provision of services. Hence, Id.gov.pt is part of the national strategy for dematerialising the citizen-State relationship with a focus on the mobile channel, which has a high uptake in Portugal.

Portuguese Electronic Passport

The **Portuguese Electronic Passport (PEP)** represents the beginning of a new generation of eID documents with the most rigorous security patterns. While preserving the features of traditional passports as to the identification of its holder, it integrates innovative components ranging from facial recognition to the incorporation of a contactless chip that allows the automatic processing of entries and exits. All the information contained in the chip can only be read by the specialised equipment of the State Electronic Certification System (SCEE).

State Electronic Certification System

The **State Electronic Certification System (SCEE)** is an infrastructure of public keys which supports electronic signatures and other electronic security services activated by public keys (algorithms). The SCEE architecture constitutes a hierarchy of trust that guarantees the electronic security of the State and the strong digital authentication of electronic transactions among several public services and organisations, and between the State, citizens and businesses. It allows interoperability with the infrastructures that fulfil the necessary rigorous authentication requirements through adequate technical mechanisms and compatibility in terms of certification policies, primarily within the scope of the EU Member States.

6.5 eProcurement

Public eProcurement Platforms

There are five private platforms, certified by the National Security Office (GNS) and licensed by the Institute of Public Markets, Real Estate and Construction (IMPIC), through which all public procurement procedures have to be conducted, regardless of the nature of the contracting entities.

The national public procurement portal (**BASE**) publishes all notices and contract announcements electronically and lists all certified eTendering platforms. Public entities can acquire eTendering services with minimal effort. Calls for tender are published in the **Electronic Official Journal (DRE)**. Publication requests can only be submitted electronically. Some innovations are not commonly used (e.g. eAuctions and dynamic purchasing systems) and eProcurement in the post-award phase (e.g. ordering, invoicing and contract management) is still in its infancy.

All public administration contracts are required to be published on the BASE Portal. Among other actions, a user can perform a thorough search, and analyse expenses by the public sector, public bodies and enterprises. This portal is one of the key examples of transparency efforts involving all public administration activities.

In 2019, eSPap developed a platform for the **Annual Procurement Plan (PAN)**. The eAggregation solution became available in early March 2020 and its main objective is to reduce the administrative burden associated with the process of preparing the National Public Procurement Plan (PNCP) and allow those involved to invest more time in analysing the collected data and not in the process itself, as the data aggregation process is automatic. The PAN is a fundamental instrument for planning the activity of the Ministerial Purchasing Units (UMC) and eSPap, namely in the centralised procurement procedures conducted by these entities. Furthermore, it allows to assess the level of coverage of each of the framework agreements signed by eSPap versus the amount entered in the State budget for each of the economic classifications covered by the framework agreements.

The **portal of the National Public Procurement System**, launched in 2020, centralises the tools related to the management of this ecosystem.

In March 2021 the new Needs Aggregation Tool (FAN) was made available to all National Public Procurement System (SNCP) entities, integrated in the National Public Procurement Catalogue (CNCP) portal.

Also, a new **Electronic Public Procurement platform** was made available, in May 2021, to the approximately 2 500 voluntary purchasing entities that make up the SNCP and to the co-contractors of the framework agreements.

Portal of Public Contracts

In 2008, the Public Procurement Code (**Decree-Law No. 18/2008**, of 29 January 2008) established that 'the constitution, operation and management of a single internet portal dedicated to public procurement' was paving the way for the online consultation of all contracts resulting from the public procurement process. This information is now centralised and made available through the BASE Portal, which collects all information on public procurement and publishes it openly and transparently, thus becoming an instrument of accountability and transparency in public purchasing.

The BASE Portal is managed by the Institute of Public Markets, Real Estate and Construction (IMPIC), according to **Decree-Law No. 232/2015**, of 13 October 2015.

Electronic Invoicing Portal for the Public Administration

The **Electronic Invoicing Portal for the Public Administration (FE-AP)** was implemented in 2018 and allows for receiving invoices and rectifying documents in electronic format, ensuring the control and monitoring of all stages of the process:

- Reception;
- Validation;
- Archiving;
- Verification; and
- Processing in accounting systems.

The solution is available to any public entity and allows direct integration with the Financial Resource Management in Shared Mode (GeRFiP) solution or via web services with any other accounting or document management system. In addition to the exchange of electronic documents, the technological solution also dematerialises the dialogue with suppliers, transforming the verification process into a digital format.

The implementation programme of electronic invoicing in the public administration, executed by the Finance Shared Services, is based on the availability of two solutions around electronic billing:

- FE-AP, to be used by public entities in the invoice reception and verification procedures (already in production); and
- Business to AP (B2AP), to be used by suppliers of the public administration, as co-contractors, in the monitoring of the electronic invoice delivery and status evolution (in the pilot phase).

The use of electronic invoices in public contracts, both their issuance and reception, was gradually introduced by public contractors and co-contractors until 1 July 2022.

A collaborative process between the Unit for the Implementation of the Budget Framework Law (UniLEO) and eSPap is underway to promote the integration of electronic invoices into the new Information System for Public Financial Management (SIGFinP).

6.6 ePayment

Interoperability Platform of the Public Administration

The **Interoperability Platform of the Public Administration (iAP)** includes a Payments Platform (PPAP) that allows for the provision and integrated management of multiple payment methods (ATM, credit card, etc.), according to the different public service delivery channels. This platform guarantees full integration with operating systems via web services, simplified and secure operational management through a back office, and the use of the 3D Secure platform (Verified by Visa and Secure Code from Mastercard) to prevent fraudulent use of cards.

In 2021, the PPAP processed over 3.5 million payments, amounting to EUR 286 million.

6.7 Knowledge Management

Centre for Innovation in the Public Sector - LabX

LabX was created in 2017 as an organic unit of AMA to research, design and experiment with innovative solutions to improve public services, driven by citizens' and business' needs and expectations. With a small multidisciplinary team that combines service designers, public servants and social scientists, LabX focuses on evidence-based knowledge, collaborative exchanges, experimentation and impact assessment, using different approaches from service design or gamification to behavioural sciences and participatory techniques, and privileging liaisons with civil society organisations, national research and development centres or the community of entrepreneurs.

LabX's activity is anchored to four cornerstones:

- Experimentation: development of experimental projects to provide an opportunity to research, design and experiment;
- Empowerment: development of different training programmes for the public administration;
- Connection: creation of bridges between public entities, on the one side, and national research and development centres, the community of entrepreneurs, civil society organisations and citizens, on the other; and
- Exploration: pursuit of initiatives on the use of service design in experimental projects, the application of behavioural sciences in public policy, the interface between humans and machines when dealing with emerging technologies or the use of gamification as a way to change the organisational culture.

LabX projects include, among others:

- The Death and Bereavement Service, which streamlines the red tape relatives have to face after the death of a family member;
- Citizenship Education, in charge of alternative models and initiatives for citizenship education, as well as approaches that promote civic participation by children and young people;
- Tax Citizenship 2.0 (developed jointly with the Tax and Customs Authority), which improves the communication between the Tax and Customs Authority and its different end-users by sharing fiscal information in a more simplified and concise manner;
- Public Service as a Living Lab, which creates a safe, open and transparent space inside a Citizen Shop, so that public entities, in collaboration with LabX and research and development centres, can test innovative solutions to improve public services through tests in a real context, involving citizens in a process of continuous and iterative improvement; and
- The Self-Service Accelerator (3As), aimed at exploring the essential characteristics of a solution that allows citizens to perform digital public services autonomously.

LabX paved the way for Portugal's participation, since November 2017, in the [States of Change](#) group, a group of countries that stand out as 'international champions' of innovation in the public sector.

Incentive System for Innovation in Public Management

The [Incentive System for Innovation in Public Management \(SIIGeP\)](#) is a programme which aims to foster innovation capacity in human resources to improve the work environment and the development of management models. The coordination of the programme falls upon AMA, INA and the Directorate-General for Administration and Public Employment (DGAEP).

The SIIGeP includes a set of incentives to promote innovative practices in valuing human resources, improving the work environment and developing management models, which can be of three types:

- Training actions, i.e. work experiences in innovative international institutions and other similar incentives;
- Support to the development of experimental projects, through privileged access to training for innovation, tools that facilitate the elaboration of projects and the possible temporary suspension of legal regimes in force for the duration of the project (the 'right to challenge' mechanism); and
- Awarding of a prize to innovative management projects that present measurable results.

Online Knowledge Library

The **Online Knowledge Library (b-on)** is a virtual library which provides unlimited and permanent access to international scientific journals from a wide range of publishers, through subscriptions negotiated on a national basis with publishing houses.

National Bibliographic Database

The primary objective of the **National Bibliographic Database (PORBASE)** is the permanent update and promotion of the National Library's general catalogue, current national bibliography and the Portuguese library's collective catalogue. It includes the collections of the National Library, and over 170 Portuguese private and public libraries. PORBASE currently contains over 1.5 million bibliographic records. The database is updated daily, and its average annual growth is estimated at 10 000 bibliographic records.

AMA Academy

Implemented by AMA, the **AMA Academy** develops projects in the areas of training, qualification and skills development for the Public Service Network, composed by the Citizen Shops and the Citizen Spots located both in Portugal and abroad.

It also designs training solutions for the whole public administration, allowing the public bodies and their employees to keep abreast of digital government innovations, new electronic public procedures and guidelines within the scope of administrative modernisation, thus collaborating in the simplification of their internal processes and the relationship with their end-users.

Furthermore, the AMA Academy develops tailor-made training solutions for public and private partners, both national and from Portuguese-speaking countries, through face-to-face pedagogical methodologies, eLearning, virtual action learning and serious games.

The AMA Academy is a training entity certified by the Directorate-General of Employment and Labour Relations since May 2014, under the provisions of Ordinance No. 851/2010, of 6 September 2010, amended and republished in Ordinance No. 208/2013, of 26 June 2013.

Massive Open Online Courses Platform

The **Distance Education and Training of Public Administration for Large Audiences (Sempre a Aprender, NAU)** is the platform that results from the national initiative to build and operate a technological platform to support the publication and promotion of content in Massive Open Online Courses (MOOC). Initially courses were only in Portuguese, but now there are also some training programs in English.

This project is also part of the transversal actions of the Portugal INCoDe.2030 initiative, as it promotes the digital development, digital inclusion, literacy, education and qualification of the active population.

INA, as well as other public entities, already uses this tool to make some of its training offer available (in an asynchronous format). In addition, INA will use this platform to make available most of the programs for digital capability.

6.8 Cross-border platforms

eIDAS

The national eIDAS node is already implemented and in production on the ePortugal.gov.pt web portal, with the eID scheme concerning the Citizen Card (national eID card) published in the OJ on 28 February 2019 and attaining a 'high' level of assurance. Additionally, the eID scheme concerning the Digital Mobile Key (mobile eID mechanism) was also published in the OJ with a 'high' level of assurance.

Recognition of Foreign Degrees and Diplomas

Following the implementation of the new regime for the recognition of foreign degrees and diplomas (Decree-Law No. 66/2018, of 16 August 2018), a common platform was created, shared by all public higher education institutions and managed by the Directorate-General for Higher Education. It centralises the submission of all requests for the recognition of foreign higher education degrees and diplomas, processes said requests and then issues the corresponding certificates.

EU Platforms

Portugal is involved in the interconnection of trans-European interconnections systems such as:

- The European Land Information Service (EULIS), providing direct access to the Portuguese Land Registry;
- The European Criminal Records Interconnection System (ECRIS);
- The Business Registries Interconnection System (BRIS), sharing data and documents obtained through the Integrated Business Registration System (SIRCOM);
- The European Register of Road Transport Undertakings (ERRU), with data provided by the Directorate-General of Traffic (DGT) through the intermediation platform (SARA + sTesta-II);
- The Réseau Permis de Conduire (RESPER);
- The Internal Market Information System (IMI), facilitating the cross-border exchange of information between public authorities in multiple policy areas; and
- The EU Gateway, which stands as the EU interoperability infrastructure for the authentication of EU Digital COVID Certificates (DCC).

MyHealth@EU – eHealth Digital Service Infrastructure (eHDSI)

The eHealth Digital Service Infrastructure (eHDSI) is an infrastructure ensuring the continuity of care for European citizens while they are travelling abroad in the EU. This gives EU countries the possibility to exchange health data in a secure, efficient and interoperable way.

Portugal has the two existing cross-border eHealth services in operation. These are:

- Patient Summary – provides doctors with essential information in their own language concerning the patient.
 - Portuguese citizens have this service available for unplanned care in Croatia, Czech Republic, France, Luxembourg, Malta and Spain;
 - Additionally, if a Croatian, a Maltese or a Spanish citizen needs urgent health care in Portugal, health professionals can access their patient summary in order to guarantee the continuity of treatments and the patient's safety;
- ePrescription and eDispensation – obtain medication in a pharmacy located in another EU country.
 - Portuguese citizens can retrieve their prescriptions in Croatia, Estonia and Finland.

- Croatian and Finnish citizens can retrieve their prescriptions in Portuguese pharmacies.

6.9 Base registries

Interoperability Platform of the Public Administration

As a result of the consecutive eGovernment national strategies and related programmes (e.g. SIMPLEX), many base registries and respective services are available online. The Interoperability Platform for the Public Administration (iAP) is connected to the base registries of social security, finance, health and justice, thus allowing for the collection of specific information within these base registries.

6.10 Emerging Technologies

6.10.1 Artificial Intelligence (AI)

AI4PA – Artificial Intelligence and Data Science for the Public Administration

Under the Action Plan for the Digital Transition (APDT), Portugal has formalised the digital innovation hub **AI4PA - Artificial Intelligence & Data Science for the Public Administration**. Led by AMA, the hub aims to support the digital transition of public administration using Artificial Intelligence and other innovative technologies. It intends to increase the effectiveness of public policies and the quality of public services, as well as empowering central, regional, and local public administration and SMEs offering digital solutions tailored to the needs of the State - both at the national and European level.

Citizen-centered AI: a Systemic Approach to Assessing Virtual Assistants in Public Services

The project, piloted by LabX, led to the development of a systemic approach to assessing Virtual Assistants (VAs) in public services. In order to assess Portuguese public entities, a new approach was designed. This approach can fully capture the different facets associated with VAs, as it combines the analysis of the technology in terms of its readiness level with the analysis of the evaluation carried out by users, as well as of the study on the interaction between humans and machines.

More in detail, the four exploration routes considered were:

- Multidimensional readiness, starting from the proposal of a VA-oriented evaluation model, developed by the EC and then adjusted to the Portuguese context, which assesses the readiness levels of the different domains (artificial, social, legal and organisational intelligence) of the technology solution;
- Users' needs, expectations and issues;
- Interaction between humans and machines; and
- VA metrics.

The methodology developed, even if it is still experimental, revealed the potential to be used by the public administration for assessing and optimizing VAs.

SIGMA

SIGMA is an AI-based VA, available on the ePortugal Portal, that allows to easily dispel any doubts and supports navigation through the website. With the help of SIGMA, ePortugal users can perform transactional services such as changing the address on the Citizen Card.

Intelligent Solution for Face-to-face Service

gIAp is a technological solution based on advanced data analysis and AI tools that aims to balance the demand and offer of onsite public services. To this end, it allows to evaluate the efficiency of services in the face-to-face channel, the simulation scenarios and the respective impacts on the service at a given time, as well as the solutions proposed for improvement. gIAp contains specific dashboards to assist managers in making decisions at both operational and strategic levels.

This solution was designed in such a way that it is easily possible to include more services, entities and service points, as well as other service channels, in addition to the face-to-face.

AI for Cybersecurity

Via SAMA2020, the National Cybersecurity Centre is developing AI-based processes to improve cybersecurity management procedures and allow for a better identification of threats through trends detection.

Social Security - Artificial Intelligence

In 2019, the Social Security Informatics Institute developed a prototype machine-learning project. This project focused on the Social Security inspection system and aimed to test the possibility of complementing the inspection activity with predictive models that, managed by AI/machine learning methodologies, points out which entities need to be supervised based on the results of the learning algorithms, using the historical data of the Social Security Information System (SISS).

Social Security – Chatbot

Social Security adopted a chatbot solution in response to the COVID-19 crisis to support automated responses to the citizens' main questions. The second phase is currently being launched: it is foreseen to implement the contextual integration with the Social Security Portal and AI features, in order to automate more responses. A live chat with human Contact Centre agents is also planned.

Ministry of Economy and Digital Transition - Chatbot

The Ministry of Economy and Maritime Affairs adopted chatbots to interact with and answer to users' questions in some areas of business. These new virtual assistants support automated responses to economic operators and entities. This functionality involves a dialogue structure developed through an AI tool and results from the operationalization of a SIMPLEX+ 2018 measure.

6.10.2 *Distributed ledger technologies*

Participa.gov

Participa.gov is a **centralised platform** aimed at supporting public administrations' participatory processes (e.g. participatory budgets) making use of blockchain technology for attributing votes to citizens in a transparent, secure and anonymous way. Participa.gov uses the national eID scheme to guarantee authenticity and citizens' security in participatory processes.

6.10.3 *Big data*

Social Security – Big Data Platforms for Monitoring

The Social Security Informatics Institute builds in-house infrastructure monitoring solutions using big data tools and methodologies.

The technological stack consists of a large number of mostly open-source components (e.g. HDFS, YARN, ZooKeeper, Kafka, Kudu and Fluent), as well as a few proprietary

ones, mainly for administration and data visualisation. The main component is a Cloudera Cluster running on Linux over commodity hardware.

This toolset allows for the development of efficient pipelines for the ingestion, processing and sharing of large volumes of very heterogeneous data within a short time to market. The ingested data consist mostly of application and system logs, data obtained by querying business databases and instrumentation tools, along with a few more unusual sources. The result is a near real-time update of a few hundred system indicators (and some business performance ones).

Social Security – Data Quality and Business Intelligence

The big data platform adopted for infrastructure monitoring, with a few additional software components (e.g. Sqoop and Spark job), is also the foundation on which some business intelligence jobs are built. These business intelligence jobs are oriented to data quality (consolidation of data with more than a single source of truth) and fraud detection.

This toolset allows Social Security to deliver, in a matter of minutes or hours, information and insights that might take days to calculate using more traditional tools. Without this toolset, the output of these jobs would be, in most cases, outdated at birth.

6.10.4 *Cloud computing*

No particular infrastructure in this field was reported to date.

6.10.5 *Internet of Things (IoT)*

No particular infrastructure in this field was reported to date.

6.10.6 *High-performance computing*

Social Security - Service Edge

Edge computing is a distributed computing paradigm that brings computation and data storage closer to the location where it is needed to improve response times and save bandwidth. Social Security is adopting this new concept to accelerate the internal services in the network edge and support working from home for a large number of remote users who adopt Secure Access Service Edge (SASE) technology to get secure access to the services and applications with the best user experience and highest security.

6.10.7 *High-speed broadband connectivity*

Gigabit network

In order to ensure coverage of all households, in the national territory, with a Gigabit network by 2030, the government mandated the National Communications Authority (ANACOM) to:

- Collect up-to-date information on the coverage of very high capacity networks (VHCN), including information on plans of any undertaking to roll out broadband networks, including VHCN;
- Designate the geographical areas without VHCN (“white areas”) based on the information collected; and
- Prepare the proposals for the specifications of the tendering procedures to be carried out by the government for the installation, operation and maintenance of Gigabit networks in the identified areas.

In what concerns the provision of mobile services, including broadband services to achieve Gigabit connectivity, the 5G auction regulation established coverage and

network development obligations to boost the population's digital skills, economic growth, social inclusion, and the competitiveness of the country and all of its regions. Considering that higher bandwidths are needed to achieve Gigabit connectivity, on 23 December 2021 ANACOM has decided to assess the market's interest in making the spectrum available in the 26 GHz band. This is one of the pioneer/priority bands for the development of 5G, particularly because it allows for a more limited coverage compared to other frequency bands (700 MHz and 3.6 GHz), but with ultra-high capacity. In this way, new business models and sectors of the economy will be able to benefit from 5G.

6.10.8 *Other emerging technologies*

Social Security - Process Automation and Mining

Social Security adopted the Robotic Process Automation (RPA) technology and implemented automation of several business processes, including European pensions forms E250/P5000 and special needs education forms. At present, it is starting to evaluate, by means of process mining, other business processes which could be automated. The use of these technologies aims to significantly reduce the process execution time, eliminate the backlog and free human resources to execute other processes.

A person's hands are shown writing on a notepad with a pencil. The notepad contains a diagram with various boxes and lines, and some handwritten text. In the background, a laptop and a tablet are visible on a desk. The scene is lit with a soft, blueish light.

7

Cross-border Digital Public Administration Services

7 Cross-border Digital Public Administration Services for Citizens and Businesses

Further to the information on national digital public services provided in the previous chapters, this final chapter presents an overview of the basic cross-border public services provided to citizens and businesses in other European countries. **Your Europe** is taken as a reference, as it is the EU one-stop-shop that aims to simplify the life of both citizens and businesses by avoiding unnecessary inconvenience and red tape concerning 'life and travel', as well as 'doing business' abroad. To do so, Your Europe offers information on basic rights under EU law, but also on how these rights are implemented in each 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 are also available.

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

7.1 Life and Travel

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

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

7.2 Doing Business

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

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

The Digital Public Administration Factsheets

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

The factsheets are published on the Joinup platform, which is a joint initiative by the Directorate General for Informatics (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from Cláudia Barroso and Tiago Mendonça, AMA - Administrative Modernization Agency.



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

An action supported by Interoperable Europe

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

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

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

Follow us



[@InteroperableEurope](#)

[@Joinup_eu](#)



[Interoperable Europe](#)

interoperable
europe

innovation ∞ govtech ∞ community

