

Case studies on digital transformation of social security administration and services

Reference Project: CHN/18/01/EUR - Improving China's Institutional Capacity towards Universal Social Protection

CASE STUDY
EUROPEAN UNION

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	IV
1. INTRODUCTION	1
2. CASE CONTEXT	2
3. GOVERNANCE.....	6
SOCIAL PROTECTION	7
DIGITAL ECONOMY AND SOCIETY.....	8
DATA GOVERNANCE AND AI.....	10
4. LEGAL AND REGULATORY FRAMEWORK, STANDARDS.....	12
5. BACK-END SERVICE PRODUCTION ECOSYSTEM	18
6. FRONT-END SERVICE DELIVERY ECOSYSTEM	22
7. SKILLS AND CAPABILITIES	24
8. EXPANDING INCLUSION AND COVERAGE.....	25
9. LESSONS LEARNED.....	28
REFERENCES	31

Copyright © International Labour Organization 2022
First published 2022

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Licensing), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: rights@ilo.org. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered with a reproduction rights organisation may make copies in accordance with the licences issued to them for this purpose. Visit www.ifrro.org to find the reproduction rights organisation in your country.

ISBN: 9789220385296 (printed version), 9789220385289 (electronic version)

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

ILO publications and digital products can be obtained through major booksellers and digital distribution platforms, or ordered directly from ilo@turpin-distribution.com. For more information, visit our website: www.ilo.org/publns or contact ilopubs@ilo.org.

This document was produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

ACKNOWLEDGEMENTS

This report is part of series of country and case study analysis developed as a part of the *Study on the digital transformation of social insurance administration and services to ensure universal social security coverage in the People's Republic of China*.

The project is managed by International Labour Organization (ILO), in partnership with the United Nations University Operating Unit for Policy-Driven Electronic Governance (UNU-EGOV). The work is led by Luis Frota and Morten Meyerhoff Nielsen. This *Case study on the European Union* is authored by, Zoran Jordanoski, Soumaya Ben Dhaou and Morten Meyerhoff Nielsen with contributions made by Moinul Zaber and Oxana Casu. Additional contributions made by Luis Frota and Zhou Jie at the ILO, Raul Ruggia Frick and Ernesto Brodersohn at the International Social Security Association (ISSA) and Yanli Zhai and his team at the Ministry of Human Resources and Social Security (MOHRSS), in China.

The ILO and UNU-EGOV would also like to express their gratitude and appreciation to the Ministry of Human Resources and Social Security (MOHRSS) in China and International Social Security Association (ISSA) for their collaboration on the project.

The project and this report is produced under the EU-China Project *Improving China's Institutional Capacity towards Universal Social Protection (2019-22)* (CHN/18/01/EUR), in partnership with the ILO and UNU-EGOV.

For further information please contact:

ILO Country Office for China and Mongolia

1-10 Tayuan Diplomatic Office Building
Beijing, 100600
China

<https://www.ilo.org/beijing/>
beijingl@ilo.org

UNU-EGOV

Campus de Couros
Rua Vila Flor 166
4810-445 Guimarães
Portugal

<https://egov.unu.edu/>
egov@unu.edu

1. INTRODUCTION

The case study on digital transformation of social security in the European Union (EU) consists of seven parts:

- The context of EU digitisation and social security
- Governance, intergovernmental collaboration and coordination in relation to technology for digital transformation of EU social security.
- Legal and regulatory framework, standards relating to digital transformation of EU social security.
- Front-end service delivery ecosystem for social security in the EU.
- Back-end service production ecosystem for social security in the EU.
- Skills and capacities in EU social security entities and for social security clients and customers.
- Expanding Inclusion and coverage.

The specific aim is linked to core research questions for guiding the case, which are outlined for each of the seven sections below.

2. CASE CONTEXT

The European Union (EU) is a political and economic union of 27 member states with more than 450 million citizens¹ and 24 official languages, of which three – English, French and German – adopt an elevated status as ‘procedural’ languages of the EU administrative body, i.e. the European Commission (EC). This contrasts with the Council of the European Union (i.e. representative forum for ministers responsible from each member states, collegially often known as the Council of Ministers) and the European Parliament (EP) which accept all official languages as working languages.²

Powers of the EU and its institutions (esp. the EC and EP) have evolved over the years, with more authority being transferred from member states to the EU. Currently, the EU is a mix of supranational organisations and a federal country element where the legislative power is shared among the Institutions of the EU and its member states. The Treaty on European Union and the Treaty on the Functioning of the European Union (Lisbon Treaty, or TFEU) sets the rules and powers of EU institutions as opposed to those of the member states.

The EU has a surface area landmass of 4 million km², Germany is the largest country by population and GDP, France by size of territory, and Malta has the smallest population and smallest territorial landmass.³ The population density of the EU in 2021 was 112 people per km². The overall figures for immigrants in European society on 1 January 2021 showed that 23.7 million were non-EU citizens (5.3% of EU’s total population), and 37.5 million people were born outside the EU (8.4% of all EU inhabitants)⁴

Population (July 2021 est.)	450,131,902
Territory (km ²)	4,236,351
Population density (2021 est.) ⁵	112
Official languages	24 official languages: Bulgarian, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovene (<i>Slovenian</i>), Spanish, Swedish. Note: a number of regional minority languages enjoy official recognition and protection e.g. Basque, Catalan, Sami, Roma, Yiddish, etc.
Life expectancy / median age (2021 est.)	77.63 / 44

¹ The World Bank. Data Bank. 1961-2021. Accessed 15 July 2022: https://data.worldbank.org/indicator/EN.POP.DNST?end=2021&locations=MT-LU-CY-SI-BE-NL-DK-EE-SK-HR-LV-LT-IE-CZ-AT-PT-HU-BG-GR-RO-IT-PL-FI-DE-SE-ES-FR&name_desc=false&start=1961&view=chart

² Languages of the European Union - Wikipedia. Accessed 18 July 2022: https://en.wikipedia.org/wiki/Languages_of_the_European_Union

³ Facts and figures on life in the European Union. Size and population. Accessed 18 July 2022: https://european-union.europa.eu/principles-countries-history/key-facts-and-figures/life-eu_en

⁴ Statistics on migration to Europe. Accessed 19 July 2022. https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/statistics-migration-europe_en#RefugeesinEurope

⁵ The World Bank (2021). Data Bank. Population density (people per sq. km of land area) – European Union. Accessed 1-15 July 2022: <https://data.worldbank.org/indicator/EN.POP.DNST?locations=EU>

Urbanisation (%) of total population (2021 est.) ⁶	75 %
GDP (PPP) (USD, 2020 est.)	9,885 trillion
GDP per capita (PPP) (USD, 2021 est.)	44,817.4
GDP growth rate (%) (2021 est.)	5.4%
Unemployment (2021 est.)	7%
Imports (USD (2021 est.))	8.01 trillion
Exports (USD (2021 est.))	8.67 trillion

Table 1: Socio-economic data, average for the EU 27 member states

(Source: CIA - Central Intelligence Agency, 2022)

The social security system of the EU is a composition of national social security schemes of the 27 EU member states and members of the European Economic Area (EEA) (i.e. Iceland, Liechtenstein, Norway and Switzerland).⁷ At present, each member state has exclusive power to decide who will be insured according to its national legislation, which benefits are granted and under what conditions, how these benefits are calculated and what contributions should be paid.

The EU has legislative authority to adopt provisions for coordinating social security, merely to prevent citizens from losing part or all their social security rights when moving from one member state to another. These rules do not seek to replace or harmonise national rules for social security. Currently, Implementing Regulation (EC) No 883/2004 and Regulation No 987/2009 comprise this legislative package called “*modernised coordination*” of social security systems (European Commission, 2022).

The responsibility for employment and social policy lies primarily with national governments of EU member states, whose efforts are supported and complemented by the European Union, especially with policies with a cross-border dimension.

EU action on social security issues in the EU relates closely to implementation of the **European Pillar of Social Rights** as well as labour market developments. The EU helps to promote social cohesion, seeking to foster equality as well as solidarity through adequate, accessible, and financially sustainable social protection systems and social inclusion policies. EU spending on social security is tied to labour market measures. Progress can be observed on issues such as work-life balance and equal opportunities.⁸ Over the last 10–15 years, a lot of discussion in Europe has related to changes to social security systems. The debate has been diffuse, and emphasis has shifted over time depending on the specific political, socio-economic and culturally dominant factors in the context of each member state. In some, the debate focused on the overall level of spending and fiscal deficit, in other states and at other times it focused more on centralisation/decentralisation, while others focused on the specific mode of delivery of particular social goods and services (i.e. private or public), or the rights of inter-European migrant workers (e.g. seasonal, short-term and long-term migrants).⁹

⁶ The World Bank. Data Bank. Urban population (% of population) – European Union. Accessed 19 July 2022: <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=EU>

⁷ For readability the case will refer simply to the EU institutions and EU member states only.

⁸ EU policies – Delivering for citizens: Health and social security. Accessed 14 July 2022: [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2018\)630272](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2018)630272)

⁹ Social Security Reforms in Europe. Accessed 17 July 2022. https://link.springer.com/chapter/10.1007/978-3-540-24780-7_15

The EC coordinates and monitors national policies and implementation of EU law and promotes sharing of best practice in areas such as workers' rights in the workplace, coordination of social security schemes, training, skills and entrepreneurship (European Commission, 2022).

Four main principles generally apply in the EU for the context of social security. These principles are (European Commission, 2022):

- **Single legislation application:** A citizen can be covered by the legislation of one member state at a time. The decision of which law applies will be made by social security institutions.
- **Equal treatment and non-discrimination:** Every person (citizen or not) has the same legal rights and obligations as nationals of the member state where he/she is covered.
- **Fair treatment and mutual recognition:** When claiming a benefit, all previous periods of insurance, work or residence in other member states must be taken into account.
- **Exportability:** Cash benefits can generally be received, even if citizens live in a different member state.

Member states are exclusively responsible for designing and delivering their social services. The EU does not provide services or benefits directly to EU citizens. The EU takes the lead in digitalising social security coordination for the exchange, access and processing of data requests. So far, the EU has established the **Mutual Information System on Social Protection (MISSOC)** to promote continuous exchange of information on social protection among member states, **Electronic Exchange of Social Security Information (EESSI)** to enable exchange of information between social security institutions across Europe, and launched a pilot project to explore feasibility of a **European Social Security Pass (ESSPASS)** to simplify citizens' interactions with social security institutions, healthcare providers and labour inspectorates.

With regards to digital transformation, the EC and EU institutions have guided digitisation of the public sector, and the socio-economic transformation of Europe. This was particularly focused on the legal and regulatory framework and standards to ensure cross-border compatibility and integration of systems and data exchange, but also on the availability of key infrastructure components (e.g. eID/eSignatures and data exchange platforms), key benchmark services (i.e. 12 for citizens and 8 for businesses), national one-stop portals for citizens, businesses, public procurement etc. The principles guiding the EU with respect to IT, technology and the digital transformation are similar to those outlined for social security.

Internet access and a minimum level of digital literacy and competencies are essential pre-conditions, as regards the terms for online service delivery (Meyerhoff Nielsen, 2017). Investments in internet and communications infrastructures ensure that EU member states offers widely accessible online government services. The EU is among the most connected areas globally, with high internet usage rates and high-speed infrastructure availability.

Population covered by a mobile-cellular network (2020)	99.78%
Population covered by at least a 3G mobile network (2020)	99.37%
Population covered by at least 4G mobile network (2020)	99.04%

Households with Internet access at home (2021)	88.44%
Mobile-cellular subscriptions per 100 inhabitants (2020)	122.52
Active mobile broadband subscriptions per 100 inhabitants (2020)	111.3
Fixed broadband subscriptions per 100 inhabitants (2020)	35.48
Individuals using the Internet (% of the population) (2020)	86.26%

Table 2: Connectivity and use of the Internet by households and individuals, EU 27 member states average (Source: ITU, 2021)

Another essential element for social security and take-up of online protection services, is the country's general ICT skills. Data shows that 53% of the population in the EU possess basic or above basic level ICT skills.

Basic digital skills	58.33%
Standard digital skills	38.52%
Advanced digital skills	5.93%

Table 3: ICT skills 2021, EU 27 member states average (Source: ITU, 2021)

3. GOVERNANCE

Mandates of EU institutions are defined in the founding treaties, namely the Treaty on the Functioning of the European Union (1957) and the Treaty on European Union (1992) and the Lisbon Treaty (2007). Four key institutions are:

- **European Council:** The highest political body, whose main role is to determine the EU's political direction. It comprises the heads of state or the EU member states' governments.
- **Council of the European Union:** Legislative body of the EU mandated to adopt decisions on European laws jointly with the European Parliament. It comprises relevant national ministers from each government, and these meet to adopt laws and coordinate policy. The Council of the EU is a single legal entity, but it meets in ten different 'configurations', depending on the subject under discussion. Relevant configurations in terms of social protection issues and the digital agenda are:
 - **Employment, Social Policy, Health and Consumer Affairs Council (EPSCO):** brings together ministers responsible for employment, social affairs, health and consumer policy from all EU member states
 - **Transport, Telecommunications and Energy Council (TTE):** brings together ministers responsible for transport, energy and telecommunications.
 - **Competitiveness Council (COMPET):** brings together ministers responsible for trade, the economy, industry, research and innovation.
- **European Parliament (EP):** Shares legislative power with the Council of the EU and approves the EU budget. It is composed of directly elected representatives of citizens of EU Member States.
- **European Commission (EC):** The main executive body of the EU, with the right and the authority to initiate proposals for new laws. It also manages EU policies and the EU budget, and ensures that countries apply EU law correctly. It is composed of commissioners, each of them covering a specific area.

In practice, EC, Council of the European Union, and EP decide. This is based on strategic guidance of the European Council but also on consultation with and advising the Economic and Social Committee and the Committee of the Regions (i.e. regions within the EU at large and in individual member states). With respect to decisions, the EC may make proposals, but these must be approved by the Council of the European Union and subsequently passed in the EP (both are permitted to suggest amendments). Similarly, the Council of the European Union and the EP may make proposals. These will nonetheless be formulated by the EC before being presented to the Council of the European Union, who may suggest amendments before final decisions are made.

Considering the complex governance and decision-making process in the EU, the focus of interest will be the executive level, which is mandated with proposing new laws and policies and monitoring correct and proper implementation of the current one's by all member states. The EC is organised into Directorates-General (DGs), responsible for different areas of policy. Currently, there are 34 DGs, each covering specific policy areas.

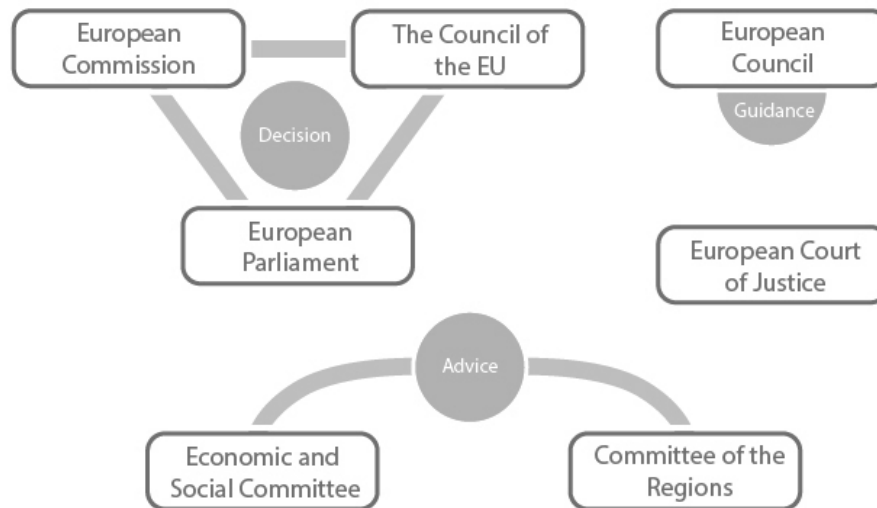


Figure 1: Major EU institutions and their role

(Source: EU Commission, adapted by University of Pittsburgh, 2022)

Social Protection

In terms of social security (or social protection as it is also referred to) issues, the EC has established the **Commissioner for Jobs and Social Rights** and the **Commissioner for Budget and Administration**, which are by and large responsible for developing strategy. Regarding the operational and implementation level, the **Directorate-General for Employment, Social Affairs & Inclusion (DG EMPL)** is key with respect to developing policies, and monitoring implementation for employment and social protection, education and training. However, as employment and social protection falls under the jurisdiction of member states, the work of DG EMPL and the other related EU institutions is limited. Specifically, the role of EU institutions is limited to just coordinating and monitoring national policies, implementation of EU law (i.e. compliance) and sharing and promoting best practices in areas such as rights at work, coordination of social security schemes, training, skills and entrepreneurship (DG EMPL, 2022).

The main platform for coordination and working with member states is through the **Social Protection Committee (SPC)**. The SPC uses the **Open Method of Coordination**¹⁰ in areas of social inclusion, healthcare, long-term care and pensions (i.e. social OMC). The SPC also performs a role acting as an advisor to Ministers in the Employment and Social Affairs Council (EPSCO). The responsibilities of the SPC include:

- Monitoring the social situation and development of social protection policies in member states and the EU.
- Promoting discussion and coordination of policy approaches among national governments and the EC.
- Preparing reports, formulating opinions or undertaking other work within its fields of competence, at the request of either the European Council, the EC or on its own initiative.

¹⁰ EUR-Lex. Access to European Union law. Reinforcing the Open Method of Coordination for social protection and social inclusion. Accessed on 11-15 July 2022: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:em0011>

- Preparing European Council discussions on social protection and country-specific recommendations in the context of the European Semester.

The **social OMC** is a voluntary process for political cooperation based on agreeing common objectives and measuring progress towards these goals using common indicators. The process also involves close cooperation with stakeholders, including social partners and civil society (DG EMPL, 2022).

Another important forum is the **European Social Policy Network (ESPN)**, empowered to support the EC in monitoring progress towards EU social protection and social inclusion objectives set out in the **Europe 2020 strategy**, including the **European Pillar of Social Rights**, and in the **European Semester**.¹¹ It provides the EC with a comprehensive overview of policies on social protection (i.e. pensions, healthcare and long-term care) and social inclusion in countries covered, including their strengths and weaknesses, and identifies areas most in need of further social investment.

The role of the EU in coordinating social security systems is not limited to regulation. The EC takes a more pragmatic approach to the politically sensitive area of EU-wide social protection. It developed IT projects whose primary role is to facilitate the flow/sharing of information between governments of different countries, to promote free movement of workers within the single EU market (DG EMPL, 2022). Table 4 summarises the EU coordination model for social security.

Year	Coordination of social security implementation	Wider coordination for development of the information society
Vision	Council of the European Union, European Commission (DG EMPL), member states	European Parliament, CPC, ESPN, other stakeholders
Strategy	Council of the European Union, European Commission (DG EMPL), member states	European Parliament, CPC, ESPN, other stakeholders
Implementation of action plans	European Commission (DG EMPL), member states	European Parliament, CPC, ESPN, other stakeholders
Implementation of individual initiatives	European Commission (DG EMPL), member states	European Parliament, CPC, ESPN, other stakeholders
Monitoring and measurements	Council of the European Union, European Commission (DG EMPL), member states	European Parliament, other stakeholders

Table 4: EU coordination model for social security (Source: Authors, 2022)

Digital Economy and Society

In the EU context, digital transformation of the public sector was incorporated in the broader field of Digital Economy and Society. Issues relating to Digital Economy and Society, research and innovation is the remit of the EC. At the policy and strategy level, the EC created an **Executive Vice-President for a Europe fit for the Digital Age** position, and allocated significant decision-making power to the **Commissioner for Budget and Administration** and the **Commissioner for Internal Market**. However, the main operational and implementation role in terms of the digital agenda is allocated under several DGs, such as the **Directorate-General**

¹¹ European Commission. The European Semester. Accessed on 11-15 July 2022: https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester_en

for Informatics (DG DIGIT), Directorate-General for Communications Networks, Content and Technology (DG CNECT), and the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW).

The mission and aim of DG DIGIT is to deliver digital services, enabling effective implementation of EU policies and to support the internal administration of the EC. DG CNECT’s goal is to conceive and implement policies required to create a digital single market, to foster growth and employment and to help drive digital transformation of European industry and public services through innovative digital technology, including infrastructure and telecommunications issues. Lastly, the mission of DG GROW is to enhance the European business environment by developing and carrying out the EC’s policies relating to business and industry. It is responsible for implementing the Once-Only Principle by the end of 2023. Table 5 summarises the EU coordination model for IT and technology issues relating to the digital transformation of the public sector – including social security services – society, and the wider economy.

Year	Coordination of strategy implementation	Wider coordination for development of the information society
Vision	Council of the European Union, European Parliament, European Commission (DG CNECT)	Member States, other stakeholders
Strategy	Council of the European Union, European Parliament, European Commission (DG CNECT)	Member States, other stakeholders
Implementation of action plans	European Commission (DG CNECT, DG DIGIT and DG GROW)	Member States, other stakeholders
Implementation of individual initiatives	European Commission (DG CNECT, DG DIGIT and DG GROW)	Member States, other stakeholders
Monitoring and measurements	European Commission	Member States, other stakeholders

Table 5: eGovernance and coordination model (Source: Authors, 2022)

A monitoring system measures the progress of the EU digital society and digital principles, and also assesses which areas have insufficient development at the level of member states, including, for instance, lack of action or incomplete implementation of key regulatory proposals. The EC is responsible for analysis and overall reporting on progress at a European level. Such reporting will provide an overview and analysis of the situation, and show the remaining distance still to travel to reach digital targets. The final purpose is to identify in which areas progress is lagging behind and how these identified gaps can be addressed through measures and recommendations on a European and/or national level.

The Digital Economy and Society Index (DESI) is a key monitoring and measurement tool in this respect. Since 2014, the DESI has summarised indicators on Europe’s digital performance and tracks the progress of EU member states. Indicators are collected across five thematic areas, and these are: Human capital; Connectivity; Integration of digital technology; Digital public services; Research and development in ICT. The DESI includes country profiles which support member states in identifying areas requiring priority action as well as thematic chapters offering a European-level analysis across key digital areas, essential for underpinning policy decisions on an EU-wide as well as on a national level. Data is provided by statistical

agencies in each member state, and is based on the same methodology. In fact statistical collection and frameworks are part of the so-called *Acquis Communautaire*¹² – essentially the EU's legal and regulatory framework – which all EU member states and potential member country candidates must comply with. In 2020, the International DESI (I-DESI) mirrors and extended DESI by utilising 24 datasets to enable trend analysis and comparison of the digital performance of 45 countries. This analysis includes EU27 member states and 18 non-EU countries. The 18 non-EU countries incl. EEA member states, global leaders including China in order to achieve global cover. The DESI 2021 has been adjusted to reflect the two major policy initiatives set to have an impact on digital transformation in the EU in coming years: the Recovery and Resilience Facility (RRF) and the Digital Decade Compass. The RRF is a response to both the global climate crisis, the digital revolution and COVID-19 pandemic, and a minimum of 37% of funding must be used to address the climate crisis and further environmental sustainability and a minimum of 20% must be used to further digital transformation of the public sector, society and the wider economy.



Figure 2: DESI 2021 (Source: EC, 2022)



Table 3 I-DESI 2020 (Source: EC, 2021)

The policy programme will set up a mechanism to enable EC engagement with member states through close cooperation and coordination, to take joint commitments as well as possible measures at EU and national level, taking implementation of other digital policies and initiatives into account. In addition, the policy programme will allow EC engagement with member states, to launch and shape multi-country Projects.

Data Governance and AI

The EU's data governance approach currently draws on a range of overarching principles from a set of policy instruments. Critical instruments include the European Strategy for Data, whose core proposal is that *"...the EU can become a leading role model for a society empowered by data to make better decisions – in business and the public sector."* They also include the upcoming European Declaration on Digital Rights and Principles for the Digital Decade. It focuses on connecting and aligning digital governance with core areas of human rights as established by EU law, EU values (dignity, freedom, democracy, equality, the rule of law and human rights) and the European Pillar of Social Rights. The innovation principle is another underlying principle the EU draws on in its vision for data governance. These ensure that all new EU policies or regulations support innovation and that the regulatory framework in Europe is innovation friendly. Data governance should positively contribute to people's

¹² The *Acquis Communautaire* is a French term referring to the cumulative body of European Community laws. As the legal and regulatory framework of the EU, the *Acquis Communautaire* comprises EC objectives, substantive rules, policies and, in particular, primary and secondary legislation and case law – all of which form part of the legal order of the EU. EU standards are an integral part of the *Acquis Communautaire*.

autonomy and their ability to participate in society, and to make claims about their needs on a more general level.

Artificial intelligence (AI) makes value articulation necessary, because it represents a change in the scale and nature of the data governance challenge. It takes what was often an issue of individual rights and control and adds to its problems of collective rights.

The 2020 European Data Strategy is grounded in finding ways to ensure that society can make better decisions, with greater agency over data. It emphasises that strict protection and controls should be maintained to ensure that the legal framework prioritises data protection, fundamental rights, safety, and security. More detailed laws are already in place in the EU that impact data governance in different ways, such as General Data Protection Regulation (GDPR), Data Protection Law Enforcement Directive, and the Privacy and Electronic Communications Directive (i.e. the ePrivacy Directive) (for details, see section 4).

4. LEGAL AND REGULATORY FRAMEWORK, STANDARDS

Successful digital transformation of government and public service delivery requires more than merely applying technology and moving services from offline to online environments. Digitisation-ready legislation is essential to achieve the full potential of digitalisation and technology adoption. It must establish the legal basis for key enablers, reengineering and integration of administrative processes; and it must re-think the overall concept for service production and delivery to take full advantage of new digital platforms.

Currently, the EU has the exclusive power and authority for adopting regulations and mandatory rules, or questions relating to customs union; competition rules for the single market; monetary policy for Eurozone countries; trade and international agreements (under certain circumstances); and marine plants and animals regulated by the common fisheries policy. The EU and member states have shared competencies for adopting regulations in the following areas:

- European single market.
- Employment and social affairs.
- Economic, social and territorial cohesion.

Sectors and topics covered include agriculture, fisheries, the environment, consumer protection, transport, trans-European networks, energy, justice and fundamental rights, migration and home affairs, public health (for aspects defined in Article 168 of the Treaty on Functioning of the European Union (TFEU)), research and space, and development of cooperation and humanitarian aid.

The last category is where member states have exclusive power to regulate, while the EU can only provide support (supporting competencies). These areas include public health, industry, culture, tourism, education and training, youth and sport, civil protection, and administrative cooperation.

Social security and social protection (i.e. social security) are a subcategory of social policy, which is a shared competence between the EU and member states under Article 4 [TFEU](#). It is mainly covered under Articles 151-161 TFEU. Article 151 TFEU sets out the EU and member states' objective of promoting 'proper social protection'. Article 153 TFEU states that the EU shall 'support and complement' the activities of member states in the field of social security and social protection of workers by, for instance, encouraging cooperation and best practice.

Social security systems may differ significantly from one member state to another. Individual national governments are free to determine features of their own social security systems (benefits provided, conditions for eligibility, calculation of benefits, contributions to be paid). These systems are governed by Regulation ([EC No 883/2004](#))¹³ on the coordination of social security systems with regard to sickness, maternity and paternity, family, invalidity, survivors',

¹³ EUR-Lex. Accessed 11-15 July 2022: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02004R0883-20140101>

unemployment and pre-retirement benefits, and in respect of work-related accidents and diseases, old-age pensions and death grants, as well as [Regulation \(EC\) 987/2009](#)¹⁴ on the process for implementing the former regulation¹⁵.

Each EU member state has its own social security laws. The obligations and rights under these laws are the same for all workers in that country, whether ‘locals’ or whether they come from abroad.

However, EU rules coordinate national systems to make sure **people moving to another EU country do not lose their social security cover** (for example pension rights and healthcare) and always know which national laws apply to them¹⁶. In this regard, the Treaty on the Functioning of the European Union defines, that EU has the mandate to provide common rules to protect individuals’ social security rights when moving home within Europe (i.e. EU 27 plus the EEA countries of Iceland, Liechtenstein, Norway and Switzerland). The rules are not intended to replace national systems with a single European one. Rather, all member states have legislation defining which benefits are granted and under what conditions. A more uniform legal framework across EU member states is considered essential to facilitate the single European market, including free movement of labour. This includes deepening and strengthening of the EU Digital Single Market. Thus, the EU legal framework regulates many key aspects of digital transformation, such as the re-use of Public Sector Information(PSI) and data protection and privacy through GDPR etc. EU legal acts are adopted as Regulations or Directives. This requires each EU member state adopting EU acts into the national legal system, but this national implementation may vary as long as the stated aims of the EU acts are achieved.

In addition to EU regulations directly applicable in all member states, social security complies with several pieces of legislation to enable large-scale digitisation. Table 6 summarises the most important legal acts that are used at EU level, with respect to the digital transformation society, the private and public sectors, including social security.

	yes/no	Name of acts and regulations	Description
General Digital transformation legislation	yes	Digital Services Act (proposal)	Digital Services Act (proposal) has been proposed by the European Commission and aims to create a safer and trusted online environment for European citizens and businesses by laying down a set of harmonised EU-wide rules to ensure transparency, accountability and regulatory oversight of the EU online space.
eID and PKI legislation	yes	Regulation (EU) No 910/2014 on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (eIDAS Regulation)	Regulation (EU) No 910/2014 on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (eIDAS Regulation) . The Regulation ensures that people and businesses may use their national electronic identification schemes (eIDs) to access public services in other EU countries where eIDs are available and created an internal European market for trust services, by ensuring that these will

¹⁴ EUR-Lex. Accessed 11-15 July 2022: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009R0987>

¹⁵ European Parliament. Briefing. EU Policies – Delivering for citizens. Health and social security. Accessed 11-15 July 2022: https://www.what-europe-does-for-me.eu/data/pdf/focus/focus09_en.pdf

¹⁶ Your Europe. Social Security. Accessed 11-15 July 2022: https://europa.eu/youreurope/business/human-resources/social-security-health/social-security/index_en.htm

			work across national borders and will have the same legal status as traditional paper-based processes.
Access to Public Sector Information	yes	<p>Regulation on a Single Digital Gateway to Provide Access to Information, to Procedures, and to Assistance and Problem-Solving Services (Regulation (EU) 2018/1724)</p> <p>Directive (EU) 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies (Web Accessibility Directive)</p>	<ul style="list-style-type: none"> • Regulation on a Single Digital Gateway to Provide Access to Information, to Procedures, and to Assistance and Problem-Solving Services (Regulation (EU) 2018/1724) on establishing and operating a single digital gateway to provide citizens and businesses with easy access to high-quality information, the use of procedures by cross-border users, and implementation of the 'once-only' principle. • Directive (EU) 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies (Web Accessibility Directive) aims to ensure equal access to public sector information and services for people with disabilities and to harmonise approaches to accessibility, and to reduce technical barriers in the digital single market.
Security, Data Protection and Privacy legislation	yes	<p>General Data Protection Regulation (EU) 2016/679</p> <p>Directive (EU) 2016/680 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data</p> <p>Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data</p> <p>Regulation (EU) 2018/1807 on a Framework for the Free Flow of Non-Personal Data in the EU</p> <p>Directive (EU) 2016/1148 concerning measures for a high common level of security of network and information systems across the Union (NIS Directive)</p>	<ul style="list-style-type: none"> • General Data Protection Regulation (EU) 2016/679, or GDPR, replaces the Data Protection Directive 95/46/EC, and its goal is to harmonise data privacy rules in the EU, protect EU citizens' privacy by bringing a new approach to data privacy and to impose new regulations and standards, especially relating to the territorial scope, data subjects' rights, consent standards, fines, etc. GDPR strengthens data subjects' rights by establishing clear rules and standards, such as the rights to information, access, rectification, withdrawal of consent, objecting (in general), objecting to automated processing, erasure (Right to be forgotten) and data portability. • Directive (EU) 2016/680 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data. The Directive lays down rules relating to the protection of natural persons, with regard to processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or executing and enforcing criminal penalties, including safeguarding against and preventing threats to public security. • Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data. The Regulation sets forth rules applicable for processing of personal data by European Union institutions, bodies, offices and agencies. It is aligned with the GDPR and the Data Protection Law Enforcement Directive. • Regulation (EU) 2018/1807 on a Framework for the Free Flow of Non-Personal Data in the EU. The regulation aims to achieve a more competitive and integrated EU market for data storage and/or processing services and activities. • Directive (EU) 2016/1148 concerning measures for a high common level of security of network and information systems across the Union (NIS Directive). The Directive provides legal measures to boost the overall level of cybersecurity in the EU. The European Commission submitted a proposal for a review of the NIS Directive (the NIS 2 Directive).

<p>Re-use of Public Sector Information</p>	<p>yes</p>	<p>Directive on open data and the re-use of public sector information Data Governance Act (proposal) Data Act (proposal) AI Act (Proposal)</p>	<ul style="list-style-type: none"> • Directive on open data and the re-use of public sector information (Directive (EU) 2019/1024) establishes a set of minimum rules governing re-use and practical arrangements for facilitating re-use of public sector information. • Data Governance Act (proposal) has been proposed to regulate the data governance mechanism that would facilitate data sharing across the EU and between sectors. • Data Act (proposal) is proposed to create a framework for data sharing. • AI Act proposes horizontal rules for the development, commodification and use of AI-driven products, services and systems
<p>eCommerce legislation</p>	<p>yes</p>	<p>Directive 2000/31/EC on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce) Digital Services Act (proposal) Digital Market act</p>	<ul style="list-style-type: none"> • Directive 2000/31/EC on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce). The e-Commerce Directive is the legal framework for the EU's online services. It aims to remove obstacles to cross-border online services. • Digital Services Act (proposal) has been proposed by the European Commission and aims to create a safer and trusted online environment for European citizens and businesses, by laying down a set of harmonised EU-wide rules to ensure transparency, accountability and regulatory oversight of the EU online space (European Commission, 2021). • Digital Market Act seeks to address imbalances in digital markets in the EU arising from dominance of large online platforms (so-called gatekeeper platforms), by setting out harmonised rules that define and prohibit certain unfair practices by gatekeepers and providing an enforcement mechanism based on market investigations.
<p>eCommunication legislation</p>	<p>yes</p>	<p>Directive (EU) 2018/1972 establishing the European Electronic Communications Code</p>	<p>Directive (EU) 2018/1972 establishing the European Electronic Communications Code The European Electronic Communications Code updates and merges EU telecommunications rules under one regulatory framework designed to boost connectivity and to better protect users throughout Europe. The Law sets the basis for digital communications in the EU (and its member states), and implements the EU regulatory framework for electronic communications, namely: Directive 2002/21/EC (Framework Directive); 2002/20/EC (Authorisation Directive); 2002/19/EC (Access Directive); 2002/22/EC (Universal Service Directive); and 2002/58/EC (Directive on privacy and electronic communications).</p>

Table 6: eGovernment Legal Framework in the EU (Source: European Commission, 2021)

With respect to the technical infrastructure, the role of the EU is to establish an appropriate legal basis and standards for harmonisation and re-use of major key enablers used within and between member states, including Digital ID, the national Public Key Infrastructure (PKI) schemes, Single Sign-On (SSO) etc. The objective of the EU legal framework is to establish infrastructure and transform standards enabling the EU to be transformed into a single market, or region, with a legal framework for cross-border use of eID and trust services, particularly those provided by the public sector. Table 10 summarises the key regulations, standards and principles relating to key digital enablers.

	yes/no	Solution	Description
Electronic ID	yes	eIDAS Regulation	The Regulation ensured that people and businesses could use their own national electronic identification schemes (eIDs) to access public services in other EU countries where eIDs are available and created a European internal market for trust services, by ensuring that they will work across borders and have the same legal status as traditional paper-based processes.
Public Key Infrastructure (PKI)	yes	eIDAS Regulation	This Regulation ensured that people and businesses may use their own national electronic identification schemes (eIDs) to access public services in other EU countries where eIDs are available, and created a European internal market for trust services by ensuring that they will work across borders and have the same legal status as traditional paper-based processes.
Single Sign-On (SSO)	yes	EU Login	EU Login authentication service (previously ECAS). Allows users access to a wide range of European Commission information systems.
National data exchange platform	yes	<ul style="list-style-type: none"> European Interoperability Framework (EIF) Electronic Exchange of Social Security Information (EESSI) European Social Security Pass pilot project 	<ul style="list-style-type: none"> European Interoperability Framework (EIF) for cross-border data exchange provides specific guidance and 47 recommendations for member states on how to set up interoperable digital public services. Electronic Exchange of Social Security Information (EESSI): IT system that helps social security institutions across the EU exchange information relating to different branches such as applicable legislation, sickness, occupational diseases and accidents at work, pensions, unemployment and family benefits more rapidly and securely, as required by EU rules on social security coordination. European Social Security Pass pilot project: aims to explore the feasibility of a digital solution to improve cross-border verification of social security coverage and to address challenges in mobile citizens' identification and authentication for social security coordination purposes. The solution will be developed by leveraging the European Blockchain Services Infrastructure (EBSI) platform, the first EU-wide blockchain infrastructure supporting delivery of cross-border services, for instance, for citizens to manage their own identity, educational credentials and register documents.
Once-only principle	yes	Single Gateway Regulation	The Regulation covers establishment and operation of a single digital gateway to provide citizens and businesses with easy access to high-quality information, use of procedures by cross-border users, and implementation of the 'once-only' principle.
Digital post	yes	<ul style="list-style-type: none"> eIDAS Regulation Directive for the Electronic Communications Code Digital Services Act (proposal) 	The current and proposed legal frameworks set up the legal basis for ensuring two routes to electronic communication between public administrations and citizens and businesses, including establishing digital post.
Usability service standards	yes	Accessibility requirements for ICT products and services (EN 301549:2021)	This standard specifies the functional accessibility requirements applicable to ICT products and services, with a description of the test procedures and evaluation methodology for each accessibility requirement, in a form suitable for use in public procurement within Europe (CEN/CENELEC, 2022).

Personalised and proactive services	yes	2030 Digital Compass	One of the 2030 Digital Compass (strategy) priorities is digitalisation of public services, providing easy-to-use, efficient and personalised services and tools with high security and privacy standards, ensuring that it will be fully accessible for everyone including people with disabilities.
--	-----	----------------------	---

Table 7: Availability of the major key enablers and standards in the EU
(Source: European Commission, 2021)

5. BACK-END SERVICE PRODUCTION ECOSYSTEM

The EC has developed support for back-end ecosystem, initiatives to advance digitisation in order to coordinate social security systems. Concepts and technologies have been examined to streamline data exchange between social security institutions and prevent fraud. The objective is to make it easier for mobile EU citizens to access information from and communicate with social security institutions. Several initiatives have been adopted, including the Electronic Exchange of Social Security Information (EESSI), European Social Security Pass (ESSP) and the European Health Data Hub.

The European Commission developed an EESSI Infrastructure¹⁷. The Electronic Exchange of Social Information is designed to add and strengthen protection of social security rights, by allowing social security institutions to process claims for social security benefit across national boundaries. This infrastructure's purpose is to simplify European citizens' formalities for an interchange, that should theoretically be processed abroad. This IT system seeks to facilitate data exchange between social security organisations in the EU. It allows dematerialisation of exchanges between relevant institutions to exchange social services information. In addition, it will enable national social security institutions to determine social security rights, combat fraud and errors, and handle personal data securely. This server, hosted by the EC, will route electronic documents from the local body to the insured person's affiliation body. Nearly 200 forms are affected by this integration. Social security institutions across the EU plus Iceland, Liechtenstein, Norway, Switzerland and the United Kingdom exchange information digitally through EESSI. All 32 participating countries are connected to the EESSI system and are able to conduct electronic exchanges on some of the business processes. In 2022, EESSI is expected to be in full production in all participating countries. This system speeds up and simplifies information exchange between social security institutions in a secure manner. Figure 4 outlines the EESSI concept.

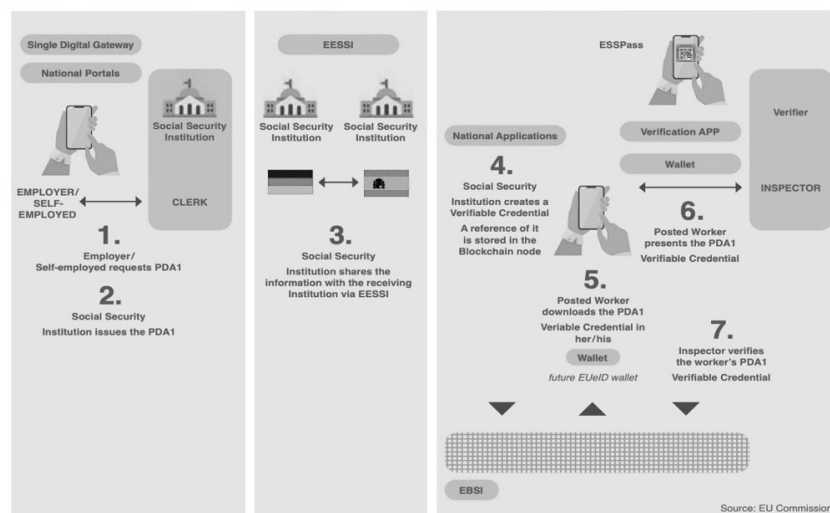


Figure 4: Digitalising the coordination of the social security systems (Source: EU Commission)

¹⁷ <https://ec.europa.eu/social/main.jsp?catId=1544&langId=en>

European Social Security Pass (ESSP)¹⁸ is an EU pilot project (launched in 2021) in collaboration with the Italian Social Security Institution (Istituto Nazionale della Previdenza Sociale (INPS)). The aim is to explore feasibility of a European Social Security Pass to simplify citizens' interactions with social security institutions, healthcare providers and labour inspectorates. The ESSP is a digital solution to improve portability of social security rights across national boundaries. The EU pass permits digital verification of citizens' social security coverage and entitlements by competent actors and institutions. It will also address challenges in identifying and authenticating mobile citizens' for social security coordination purposes. The ESSP solution will adopt the European Blockchain Service Infrastructure (EBSI) platform. It is the first EU-wide blockchain infrastructure supporting delivery of cross-border services, allowing citizens to manage their identity, educational credentials, and registration documents. This pilot includes: Digitalisation of the process for document portability; A digital wallet owned by mobile people handling social security credentials verifiable online across borders; Mobile people are in control of their personal data. No need for a unique identifier, such as a European Social Security Number, and; More efficient cross-border verification and fraud reduction.

European Health Data Space¹⁹ is a health-specific ecosystem encompassing rules, common standards and practices, infrastructures and a governance framework that aims to empower individuals to utilise increased digital access for improved control of their personal health data on a national level and EU-wide and to support their free movement, as well as fostering a genuine single market for electronic health record systems, relevant medical devices, and high-risk AI systems. It will also provide a consistent, trustworthy and efficient set-up for using health data for research, innovation, policy-making and regulatory activities. The European Health Data Space will provide a setting for accessing and processing a wide range of health data. It builds on GDPR, the Data Governance Act and the Network Information Systems Directive (NIS).

In addition, the EC launched a public consultation on formulating a set of EU digital principles as a follow-up to the 2030 Digital Compass communication²⁰. These principles would be integrated into the joint declaration of main EU institution members. They will commit to digitalisation of social security and healthcare systems. The goal of EU digital principles²¹ is to ensure the development of policies (EEESI, European Social Security Pass and the European Health Data Space), to increase sustainability and accessibility within and across borders that will allow users to be informed, and will guide policymakers and digital operators such as:

Principals	Adaptation to Digital Social and Health security.
------------	---

¹⁸ <https://ec.europa.eu/social/main.jsp?catId=1545&langId=en>

¹⁹ https://health.ec.europa.eu/ehealth-digital-health-and-care/european-health-data-space_en

²⁰ <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52021DC0118>

²¹ Digital principles are rooted in primary EU law, notably the Treaty on European Union (TEU), the Treaty on the Functioning of the European Union (TFEU), the Charter of Fundamental Rights and case-law of the Court of Justice of the European Union, as well as in secondary legislation

Universal digital education and skills for people to take an active part in society and democratic processes	When it comes to specific online services provided by public administrations, and in particular social security institutions, digitalisation can help improve the accessibility and availability of services. Social security institutions are adapting their IT infrastructure to facilitate portability and interoperability of data through EESSI. Digitalisation does not eliminate the need to maintain face-to-face services, including as access for people with limited digital skills or specific needs.
Accessible and human-centric digital public services and administrations	Digital skills development and education should be a priority to avoid the risk of excluding an important part of the population from accessing online services. It should be provided as part of lifelong learning. However, digitalisation raises the stakes for work-life balance by requiring workers to be available at all times.
Access to digital health services	Access to inclusive and equitable digital health and care services and their electronic health records should be coupled with investment in digital health literacy, minimum standards for telehealth equipment and, at the same time, reinforced community-based services. In personalised medicine, new digital technologies and health data should be leveraged to promote targeted risk diagnosis and foster the shift towards prevention.
European digital identity	Digital identity provides beneficiaries secure access to online social security services. New tools might be needed in this field, specifically to verify insurance status abroad in a timely, secure and GDPR-compliant manner. For instance, an EU system to strengthen recognition of national social security identifiers, with high data reliability could be useful. It should be stressed that any EU tool should be developed in close cooperation with social security institutions.
Additional digital principles	<p>Establishing common EU governance and infrastructure(s) for (sensitive) data exchange and placing safeguarding occupational health & safety and worker's rights on an equal footing as fundamental rights.</p> <p>It is important to maintain and continue fostering a high level of data protection while implementing services, in full compliance with GDPR.</p>
Ethical principles for human-centric algorithms	Promoting a citizen-centred approach to designing AI solutions highlights the importance of avoiding algorithm-based decisions and their impact on people. This is particularly relevant for developing AI-enabled digital solutions which apply to healthcare. To ensure trustworthy and secure uptake of AI, mechanisms behind AI must be transparent and human oversight must be maintained.

Table 8: EU Digital principles²²

The EC will propose including such a set of digital principles and rights in an inter-institutional declaration between the EC, EP and the Council. The digital principles are a proposal from the EC and build on and complement the experience of the European Pillar of Social Rights.

Other solutions and experiences show directly or indirectly how we guide digital transformation of social security in the EU, and include the following large-scale and fully funded pilot study:

- Pan-European Public Procurement Online (PEP-POL)²³ which developed Business Interoperability Specifications (BIS) for common e-Procurement processes such as e-Catalogue, e-Orders, and e-Invoices to standardise electronic documents exchanged

²² Public consultation on a set of European Digital Principles available at: <https://digital-strategy.ec.europa.eu/en/consultations/public-consultation-set-european-digital-principles>

²³ PEP-POL, <https://peppol.eu/>

and validated through an open and secure network, between sending and receiving Access Points for public sector buyers and their suppliers across Europe. The PEP-POL project has been a key driver of both the European Interoperability Framework (EIF), as well as for promoting the once-only principle.

- Secure identity across borders linked 2.0 (STORK)²⁴, on cross border recognition and use of secure and trusted electronic identities and signatures. This developed a cross-border interoperability eID platform, common specifications including manuals, guidelines and common codes and attributed a quality authentication assurance (AQAA) framework, enabling a quality rating.
- The Once-Only Principle Project (TOOP)²⁵ for once-only and cross border data exchange, identification and services. With a particular focus on data from businesses, this explored and tested better ways of exchanging data or documents with and between public administrations and reduced administrative burdens for both businesses and public administrations.

²⁴ STORK, <http://science2society.eu/content/stork-20>

²⁵ TOOP, <https://toop.eu/>

6. FRONT-END SERVICE DELIVERY ECOSYSTEM

The EU implemented measures at an early stage, to ensure that working in another member state does not result in losing social security rights. These measures enable mobile workers in the EU to claim health, pension insurance and unemployment benefits under simplified conditions, when they move to another member state. They are protected under the European coordination law regarding social security.

The EU provides a number of services and strives to make social security more client-oriented, visible and digitally accessible.

The EU front-end is described by two policies for improving communication between citizens and social security²⁶: Health and care policies and social security policies. Some of these digital service delivery programs are presented in Table 9.²⁷

Policies	Descriptions
Health and Care Policy program	<ul style="list-style-type: none"> Measures to support members states' health reforms include effective, accessible, and resilient health systems (Commission communication, 2014). Measures to strengthen country-specific and EU-wide knowledge and to look at how health systems can remain fit for purpose, and help people improve their health (State of Health in the EU, 2016). The Commission's communication on transformation of Digital health and care set out a plan to enhance digitisation of health and care sectors in citizen empowerment and person-centred care. EU is also exploring the option of establishing a platform for monitoring vaccinations. Strengthening health systems by assisting health authorities in digital transformation of health and care through national reform processes and programmes.
Social Security Policy program	<p>The following initiatives apply to the relationship between EU citizens and social security institutions and are intended to complement the EESSI:</p> <ul style="list-style-type: none"> The EU social security number initially adopted for EU citizens is considered a uniform, cross-system identifier in all member states. It should enable clear identification of people and a quick check of social security status across national borders. It should also contribute to avoiding errors when exchanging data and combating abuse when claiming social security benefits. The Regulatory Scrutiny Board recently stopped it. European Digital Identity and ID-Wallet store digitally, in which case a person will be identified via the EU-ID. The ESSP should enable relevant actors and labour inspectors to digitally check the social security status as well as benefits and entitlements for mobile EU citizens in real time, once they have been identified. ID-wallets will be based on national systems, provided that they already exist, and will be issued by member states within twelve months of the proposed regulation coming into force. Single Digital Gateway. SDG is a module for digitising communications between EU citizens and social security institutions. The purpose of SDG is to create a uniform European portal for data and digital handling of specific administrative procedures within the EU. This portal should also include an overview of essential rights and obligations under EU law. Your Europe Platform. Standard digital point of contact between EU citizens and the public administration of member states, including social security institutions. Portals belonging to all member states have been bundled into the common EU portal since the end of 2020, and this allows EU citizens to search in all EU languages and access national portals. In the field of coordination of social security systems, this will include requests for the portable PDA1 document, the EHIC and pensions of mobile EU citizens. Several European social security organisations already provide relevant information online, such as health insurance cover, unemployment or retirement pension information in keeping with SDG requirements,

²⁶ https://dsv-europa.de/lib/03_Themenletter/ED_0321/Themenletter_ed_0321_EN_ba.pdf

²⁷ https://ec.europa.eu/commission/presscorner/detail/en/IP_18_4043

	and they are working to have all procedures set up online by 2023. However It seems to be complex to implement the Once-only principle.
--	---

Table 9: Healthcare and social security programmes

The front-end should promote inclusive growth and social cohesion by focusing on economic empowerment of people through a life-course approach. For the young, the right to social protection must be upheld in an increasingly digital and globalized economy where platform work and migration are widespread. Social security efforts during the pandemic of the last two years or more were particularly effective in this regard. During the pandemic, unemployment and sickness insurance benefits were key pillars of social security responses. Social security institutions focused on business continuity and service delivery to support people, and ensure they had jobs.

Digitalisation strategies implemented during the pandemic were essential for further development of effective citizen-oriented social security systems and services. Protection under social security law across European national borders requires extensive exchanges between social security institutions in relevant countries. Exchanging necessary data, forms and invoices were paper based, but they will soon become solely electronic processes. The COVID 19 pandemic recently accelerated these processes. Nine participating countries were already fully connected to the process for exchanging social security data electronically within the EU by October 2021. Other countries are close to finalisation.

7. SKILLS AND CAPABILITIES

The EC is determined to tackle issues relating to the digital skills gap and to promote strategies improving the level of digital skills, to allow EU citizens to access healthcare as well as social security and protection benefits.

Many Europeans do not have adequate digital skills. The DESI shows that 4 out of 10 adults and every third person who works in Europe lack basic digital skills. This is the case especially among women and the most vulnerable members of society, who also need health cover and social protection. The EC has set targets with the European skills agenda and the digital education action plan, to ensure that 70% of adults have basic digital skills by 2025. The European Pillar of Social Rights Action Plan intends²⁸ to target raising the proportion of adults with at least basic digital skills to 80%, by 2030. As recommended by digital principles, access to education facilitating acquisition of basic digital skills should be a right for all EU citizens, and lifelong learning should become a reality to allow all Europeans to fully benefit from welfare in an inclusive digital society.

The EU has also implemented the digital skills platform, a new initiative providing information and resources on digital skills, training and funding opportunities. Furthermore, the EU is investing €700 million to ensure that the current and future workforces have the opportunity to easily acquire advanced digital skills through long-term and short-term training courses and on-the-job training, regardless of the member state they reside in. In the Digital Europe Programme, Digital Innovation Hubs will carry out targeted programmes for public administrations to equip healthcare and social protection staff and personnel with the advanced skills needed, to be able to access the new opportunities offered by supercomputing, artificial intelligence and cybersecurity.

Large technological projects for Europe's digital transition require a European approach to building digital capacities. However, European capacities need a critical mass of funding and alignment of all actors. A high-tech partnership is planned to ensure this, for digital skills through the Pact for Skills. Growing and widening gaps for ICT specialists in all ecosystems, regions and member states affect and impact the public sector in particular. A large-scale multi-stakeholder skills partnership is proposed as the primary strategy to fill this gap. It will allow building bridges between supply and demand, foster more significant public-private investment, increasing the quantity and quality of provision of specialised education and training and boosting excellence in higher education institutions, making them more attractive and responsive to needs of the labour market in terms of digital agendas, and improving the general digital skills level for transition to the EU-Digital society.

²⁸ The European Pillar of Social Rights Action Plan COM (2021) 102. Adopted on 3 March 2021.

8. EXPANDING INCLUSION AND COVERAGE

The EU and specifically the EC, welcome member states' strong commitment to making Europe fair, inclusive and full of opportunities. With their national commitments, member states are supporting joint efforts to reach the three EU headline targets for employment, skills and reducing levels of poverty. Still, according to ISSA (International Social Security Association), the main challenges for social security services in the EU are still covering gaps, demographic changes and labour market transformations that require adaptation and reforms. In this sense, it is essential to maintain and extend social security coverage using digital platforms and technologies. The EU and many European governments are taking important steps to address this.

Given the increased demands and expectations from EU citizens, as illustrated in Figure 5 below, the EC has developed an important program to support upcoming development in the field of social protection and healthcare cover. A critical priority area is ensuring and extending social security cover for migrant workers through bilateral and multilateral agreements, and ensuring that people access their rights to social security.²⁹

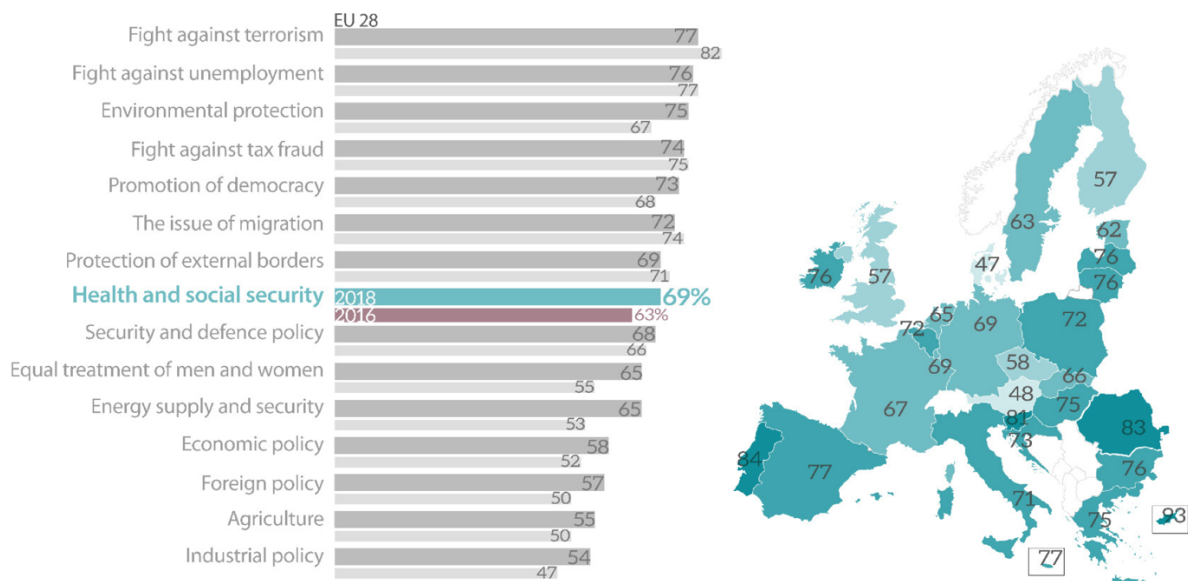


Figure 5: Citizens' expectations from the EU with respect to health and social security.

By 2030, the EU's objective is to ensure that social security and protection online will be fully accessible for everyone, including people with disabilities, and that people will all benefit from a best-in-class digital environment providing easy-to-use, efficient, and personalised services and tools with high levels of security and privacy standards.

²⁹ ISSA, Priority for social security in Europe. Available at - <https://ww1.issa.int/news/priorities-social-security-europe-new-issa-report>

To achieve this, the EC has initiated a number of specific activities. For instance, the **Europe 2020 strategy**³⁰ for smart, sustainable and inclusive growth, which aims to lift at least 20 million people out of poverty and social exclusion.

The **European Pillar of Social Rights Action Plan** sets out the EU's ambition for a strong social Europe that focuses on jobs, skills and social inclusion, which is translated in three **EU-level social targets to be achieved by 2030**, including: A minimum of 78% of people aged from 20 to 64 should be in employment; at least 60% of all adults should participate in training every year, and; the number of people at risk from poverty or social exclusion should be reduced by at least 15 million, including at least 5 million children, in comparison to 2019.

The flagship initiatives of the Europe 2020 strategy, including the **Platform against Poverty and Social Exclusion** and the **Agenda for New Skills and Jobs**³¹, support efforts to achieve these targets.

Through its **Social Investment Package**, the Commission provides guidance to member states, to modernise their welfare systems towards social investment throughout life. The package complements: **Employment Package**³², which sets out the way ahead for a job-rich recovery; **Youth Employment Package**, which deals specifically with the situation of young people, and; **White Paper on Pensions**³³, presenting a strategy for adequate, sustainable and safe pensions.

For the 2021-2027 period, the most significant part of funding is planned to be allocated for improving social inclusion, health, education, and employment:

- For the healthcare policy, a substantial effort (and expenditure) is planned to strengthen the health systems by assisting health authorities in digital transformation of health and care and national reform processes. Furthermore, new initiatives are planned to be designed supporting, among other things, EU health legislation for health technology assessment and consolidating cooperation among member states for assessing health technologies.
- For the social security policy, an essential part of the social inclusion program, particularly in member states with above EU-average rates of young people neither in employment nor in education or training, should dedicate some of the budget to social innovation and cross-border test innovations. There is a programme to modernise coordination of social security systems through new technologies, as well as improving transparency and legal predictability of working conditions. This modernisation takes into consideration the role of the EU commission to adapt social

³⁰ European Commission. Social protection & social inclusion. Accessed on 11-15 July 2022: https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester_en

³¹ European Commission. Employment, Social Affairs and Inclusion. Policies and activities. Accessed on 11-15 July 2022: <https://ec.europa.eu/social/home.jsp?langId=en>

³² European Commission. Employment, Social Affairs and Inclusion. Employment package. Accessed on 11-15 July 2022: <https://ec.europa.eu/social/main.jsp?catId=1039&langId=en>

³³ European Commission. Employment, Social Affairs and Inclusion. EU sets out plans for adequate, safe and sustainable pensions. Accessed on 11-15 July 2022: <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=1194&furtherNews=yes>

protection schemes to the new reality, to accommodate the platform for remote workers, atypical workers and situations. Reforms will be necessary, to reduce the difference in treatment across different forms of work and to expand social protection, such as improving effective access to social security systems and not just statutory access.

There is also a request from the EP to the EC to consider introducing a European social security card or another EU-wide document, subject to strict data-protection rules, to make it easier to exchange data and carry out a pilot project for a European early-warning system on undeclared work. As a new way of building digital public services, including social security services, Government as a Platform will provide holistic and easy access to healthcare platforms and social security services with a seamless interplay of advanced capabilities, such as data processing, AI and virtual reality.³⁴

Collectively, the aim is for the EU framework to lead to broad deployment of trusted, user-controlled identities, allowing each citizen to control their online interactions and presence by 2030, while all Europeans will have full use of user-centric, easy to use online services throughout the EU while preserving their privacy.³⁵

³⁴ <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52021DC0118>

³⁵ <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52021DC0118>

9. LESSONS LEARNED

The EU, as a whole, is a collection of relatively strong welfare states where digital transformation is driven either by an ageing population, pressure to increase efficiency and productivity, or a combination of both. It is defined by a specific model based on a collective agreement of 27 individual member states.

With respect to many parameters, the EU is collectively the global leader in digital transformation of the public sector and social security. The EU has successfully implemented electronic and digital government and the majority of member states continuously rank in the top quartile of the UNDESA biannual E-Government Readiness Survey and Index. Across the EU, individual member states are considered global innovators with regards to digital service delivery and citizen participation.

With respect to digital transformation of social security, the EU and its institutions defined a vision and several programmes to improve citizen access to healthcare and social security and protection across EU member states. Specifically, the EU's objective is to ensure that social security and protection online will be fully accessible for everyone by 2030. This involves transformation of all communications between the social security institutions, beneficiaries, and contributors, and third parties where relevant.

With respect to digital transformation of social security across EU member states, the EU has initiated numerous initiatives relating to back-end and front-end ecosystems, with the strategic objective of:

- Supporting digital portability of social security entitlements for mobile workers (EU term for cross-border labour movements).
- Ensuring compliance with EU norms and standards, including EU GDPR, IOP, EA, IDM standards.

That said, considerable investment is still needed on a European level and within individual member states. Like big countries with federal structures, digital transformation of social security in the EU has an added layer of complexity. This complexity is the result of:

- National social security systems, their corresponding administrative structures, the degree of digitisation and type of technologies used differ from one another. The administrative procedures embodied in these technologies will therefore differ.
- Systems compatibility and data interoperability takes times to implement, as illustrated by EESSI.
- The EU-ID, as a key enabler for online IDM and cross-border social security provision, in the ESSP project, requires further adjustments in member states, and it cannot be implemented in the short term.
- Alignment between EU and member states' regulatory frameworks remains problematic.
- Compliance with EU wide standards for IOP, IDM, GDPR are at times problematic, as they may be interpreted differently by individual member states.

Specific lessons to be learned from EU cases relate to strategy and policy formulation. In practice, strategic direction of both social service and digital transformation is formulated directly at an EU level. This ensures that all member states are moving in the same direction and all adopt a similar timeframe (*i.e. to change*). The multi-stakeholder governance model ensures political co-ownership of EU level decisions within and across member states. This in turn, establishes a basic strategic framework for digital transformation of social security in central, regional and local government. For instance, in the most recent EU policies and strategies, the EU encourages member states to optimise delivery of social services, transparency, and inclusion through utilising technologies. In doing so the EU, and in particular the EC, is also establishing the foundation of data sharing and collaboration between member states and across service sectors. Solving cross-sectorial challenges through EU institutions and working groups, and use of EU-level tools for monitoring, compliance, troubleshooting/escalation. Initiatives such as DESI and I-DESI allow for monitoring, member state alignment with strategic objectives but also create a healthy sense of competition between member states, thus driving innovation and performance.

This advanced state, and the globally leading position of EU, is partly due to the early start and take up of digital transformation in several member states, but more importantly it is the result of a coordinated, collaborative, and cross-border approach. A key enabling factor, is adoption of relevant standards, legal and regulatory elements. The focus on interoperability, enterprise architecture, identity management, cyber security, data protection and privacy are key, as they establish a common reference framework for all public and private sector actors across the EU and its member states. In practice, EU standards and the legal and regulatory framework are evident, reflected across all member states and their respective levels of central, regional and local government. This includes both back-end and front-end ecosystems and individual infrastructures, systems and solutions components within the public sector and in social security.

Several lessons to be learned from EU digital transformation of the social security experience:

- Capturing the complexity of the EU landscape for social security digital transformation, a robust governance model including representatives of key national, regional and local stakeholders. This should include the public sector, *i.e.* social security organisations, the private sector and citizens. The governance model must set the strategic direction, monitor and measure progress, and evolve troubleshooting and escalation mechanisms.
- Digital transformation should be proactively addressed and translated in actionable policies and strategies, engaging and involving the member states and the concerned stakeholders from public sector, private sector and other partners. Strategies must include measurable strategic objectives for all social security silos, across all levels of government. The vision, mission and strategy must be underpinned by action plans and specific initiatives. Strategic and operational objectives must be linked, monitored and measured.
- Standards and the legal and regulatory framework must be established, and must cover all levels of government and must be applied across all service areas. Compliance must be monitored as part of the governance model. The greater the number of stakeholders and the greater the level of complexity of governance model (*e.g.* the EU or federal countries), the more important and significant a shared set of standards, the legal and regulatory framework will be. Compliance with regulations, standards in respect of

diversity is also an important factor to consider, specifically concerning data protection and privacy.

- Standards as a minimum must address: Technical, semantic, and organisational interoperability, governance of the interoperability standard plus data governance, data taxonomy and the once-only principle; Enterprise architecture; Identity management (analogue and digital); Cyber security, protection of data and privacy; Design and web accessibility standards.
- Proactive investment in ICT with key enabling infrastructure such as base registries, data distribution, eID and eSignature, shared service portals between key drivers in individual EU member states.
- Coordination and data sharing between the EU, citizens, and social security institutions from different members states exploring innovative and advanced technologies such as AI and blockchain-based infrastructure has been a critical factor for digital transformation of social security systems, particularly those involving a complex network and ecosystem. Large-scale EU pilot projects such as PEP-POL, STORK, eIDAS, TOOP successfully tested and developed models benefiting digital transformation of service delivery across the EU member states and across borders.
- Investment in continuous training is key, to develop skills and capabilities, both for beneficiaries of social security but also within the public sector and social security organisations. Improving digital literacy early in the process was part of the strength of digital transformation of the EU, and in particular social security. Similarly, EU member states which invest in continuous skills and capacity development for civil servants are seen to perform better than those who do not.

REFERENCES

1. European Commission (2021). Digital Public Administration factsheet 2021 European Union. Accessed 1-15 July 2022. Available at: https://joinup.ec.europa.eu/sites/default/files/inline-files/DPA_Factsheets_2021_EU_vfinal.pdf
2. European Commission (2022). EU social security coordination. Accessed 1-15 July 2022. Available at: <https://ec.europa.eu/social/main.jsp?catId=849&langId=en>
3. CEN/CENELEC (2022). eAcc – eAccessibility. Accessed 1-15 July 2022. Available at: https://standards.cenelec.eu/dyn/www/f?p=CEN:110:0:::FSP_PROJECT,FSP_ORG_ID:72841,855949&cs=108625A8722D15E3CD8195B467C1F5C0A
4. DG EMPL (2022). Employment, Social Affairs & Inclusion. Accessed 1-15 July 2022. Available at: <https://ec.europa.eu/social/home.jsp>



UNU EGOV

UNITED NATIONS
UNIVERSITY
UNU-EGOV



Search for us online



UNU-EGOV