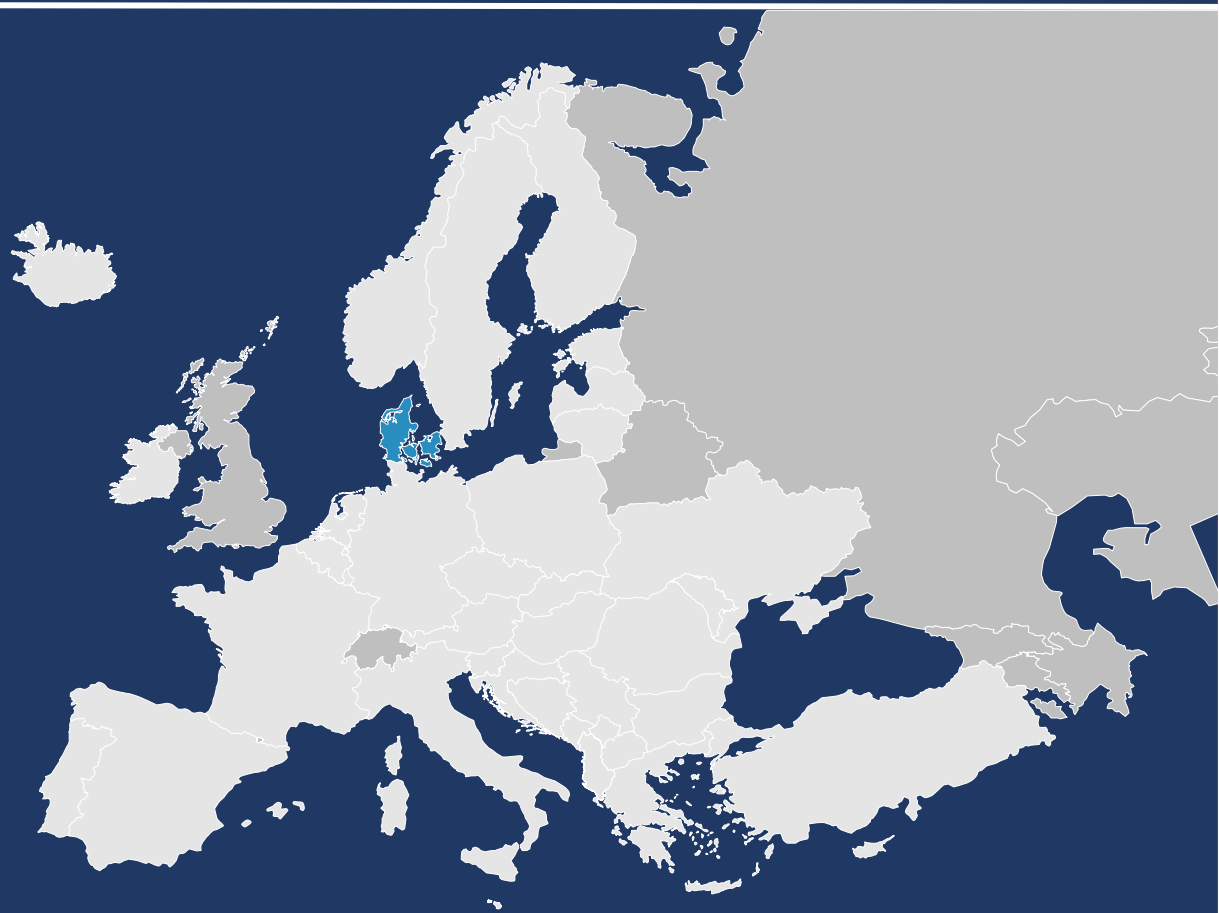


DENMARK

2024 Digital Public Administration Factsheet

Supporting document





Main developments in digital
public administrations and
interoperability

JULY 2024

Table of Contents

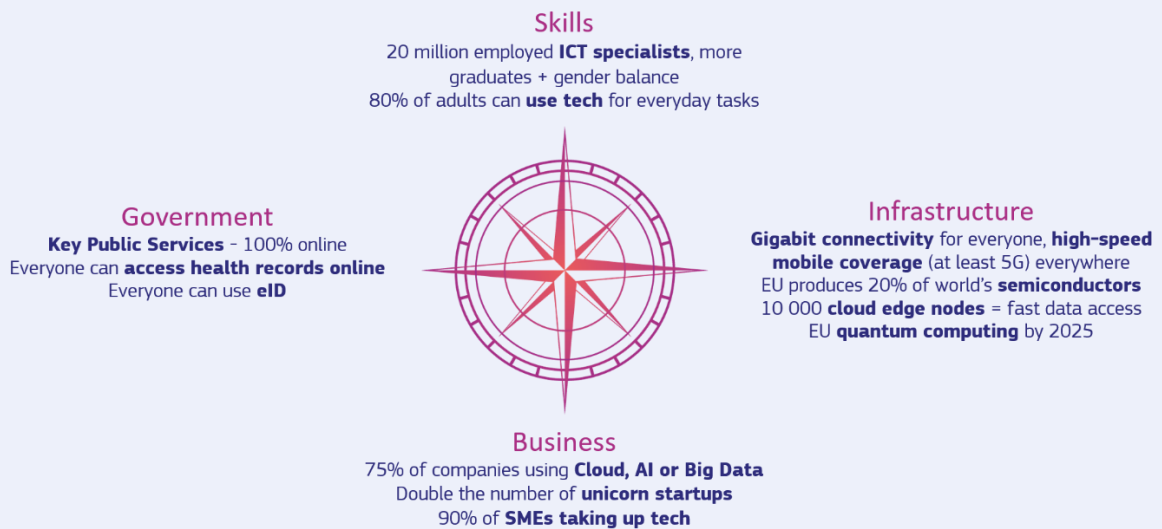
1.	Interoperability State-of-Play	3
2.	Digital Transformation of Public Administrations	6
3.	Interoperability and Data	9
4.	Digital Transformation of Public Services	15
5.	Trust and Cybersecurity.....	20
6.	Innovative Technologies	23
7.	Digital Public Administration Governance	27
8.	Cross border Digital Public Administration Services for Citizens and Businesses	30

Icons Glossary		
<i>Political Communication</i>	<i>Legislation</i>	<i>Infrastructure</i>
		

2030 DIGITAL DECADE

The **Digital Decade policy programme 2030** sets out digital ambitions for the next decade in the form of clear, concrete targets. The main goals can be summarised in 4 points:

- 1) a digitally skilled population and highly skilled digital professionals;
- 2) secure and sustainable digital infrastructures;
- 3) digital transformation of businesses;
- 4) digitalisation of public services.



The production of the **Digital Public Administration factsheets and their supportive documents** support the objectives and targets of the Digital Decade programme. By referencing national initiatives on the digital transformation of public administrations and public services, as well as interoperability, they complement existing data and indicators included in the Digital Decade reports and related resources. They also highlight and promote key initiatives put in place or planned by EU countries to reach the Digital Decade's targets.



1. Interoperability State-of-Play

In 2017, the European Commission published the [European Interoperability Framework \(EIF\)](#) to give specific guidance on how to set up interoperable digital public services through a set of 47 recommendations divided in three pillars. The EIF Monitoring Mechanism (MM) was built on these pillars to evaluate the level of implementation of the framework within the Member States. The mechanism is based on a set of 91 Key Performance Indicators (KPIs) clustered within the three scoreboards (Principles, Layers, Conceptual model and Cross-border interoperability), outlined below.

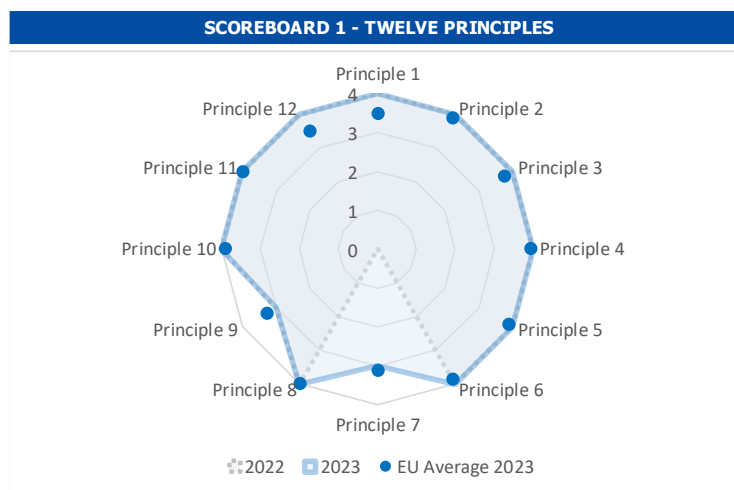
Starting from the 2022 edition, an additional scoreboard, Scoreboard 4, focusing on cross-border interoperability, has been incorporated. This scoreboard assesses the adherence to 35 Recommendations outlined in the EIF framework. Specifically, it encompasses Interoperability Principles 2, and 4 through 11 from Scoreboard 1, all recommendations pertaining to Interoperability Layers from Scoreboard 2, as well as Conceptual Model recommendations 36 to 43 and 46 to 47 from Scoreboard 3.

Scoreboard 1 Interoperability Principles		Scoreboard 2 Interoperability Layers		Scoreboard 3 Conceptual Model	
	Recommendation(s) n°		Recommendation(s) n°		Recommendation(s) n°
Principle 1 - Subsidiarity and Proportionality	1	Interoperability Governance	20-24	Conceptual Model	34-35
Principle 2 - Openness	2-4	Integrated Public Service Governance	25-26	Internal information sources and services	36
Principle 3 - Transparency	5	Legal Interoperability	27	Basic Registries	37-40
Principle 4 - Reusability	6-7	Organisational Interoperability	28-29	Open Data	41-43
Principle 5 - Technological neutrality and data portability	8-9	Semantic Interoperability	30-32	Catalogues	44
Principle 6 - User-centricity	10-13	Technical Interoperability	33	External information sources and services	45
Principle 7 - Inclusion and accessibility	14			Security and Privacy	46-47
Principle 8 - Security and privacy	15				
Principle 9 - Multilingualism	16				
Principle 10 - Administrative simplification	17				
Principle 11 - Preservation of information	18				
Principle 12 - Assessment of Effectiveness and Efficiency	19				

Scoreboard 4 Cross-border Interoperability

Source: European Interoperability Framework Monitoring Mechanism 2023

Each scoreboard breaks down the results into thematic areas (i.e. principles). The thematic areas are evaluated on a scale from one to four, where one means a lower level of implementation and four means a higher level of implementation. The graphs below show the result of the EIF MM data collection exercise for Denmark in 2023, comparing it with the EU average as well as the performance of the country in 2022.

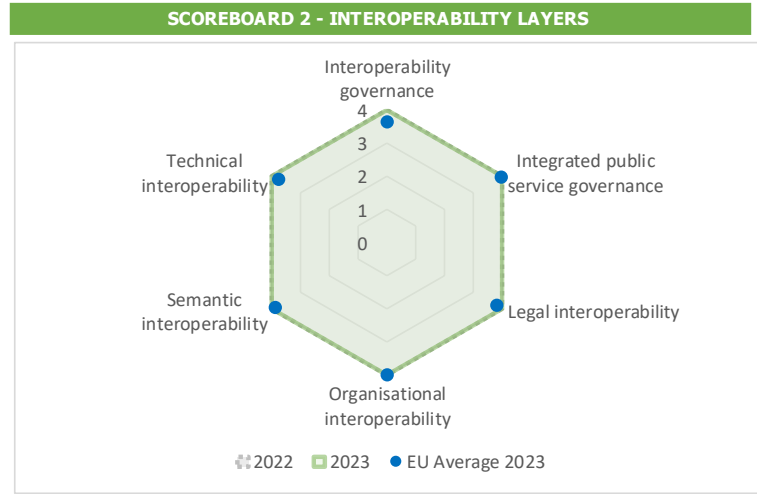


Source: European Interoperability Framework Monitoring Mechanism 2023

The Danish results in Scoreboard 1 stand for an overall good implementation of the EIF Principles. Denmark performs above the European average for Principle 12 (Assessment of Effectiveness and Efficiency) and Principle 1 (Subsidiarity and Proportionality). Potential areas of improvement relate to the implementation of Principle 9 (Multilingualism) for which the score of 3 could be

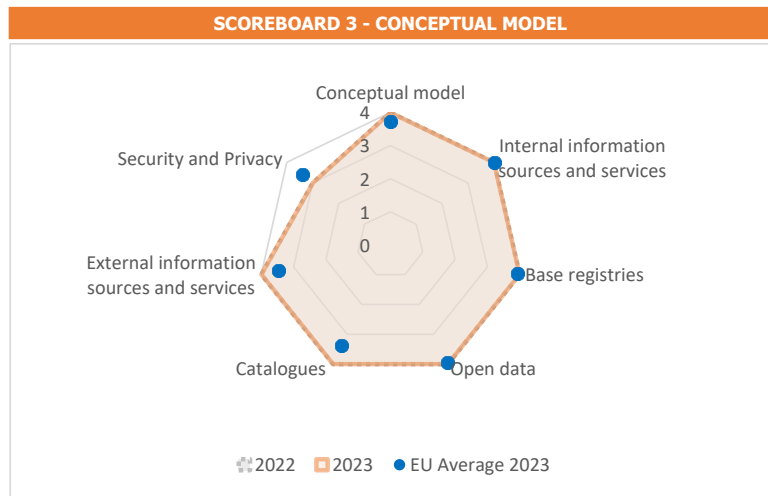


further improved to reach the European average. In particular, Denmark could increase the number of language resources proposed to users (Principle 9 – Recommendation 16).



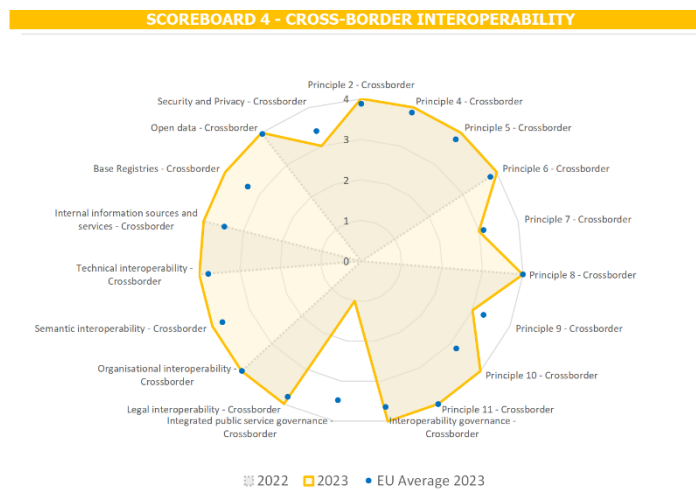
Source: European Interoperability Framework Monitoring Mechanism 2023

Denmark’s scores in Scoreboard 2 illustrate a very good performance of the country with scores of 4 in all the interoperability layers. The only improvement that could be considered is the score for recommendation 29, which is currently 3. To improve the score, Denmark could further clarify and formalise organisational relationships for establishing and operating European public services. It should be mentioned that this has no impact on the overall performance of the organisational interoperability layer.



Source: European Interoperability Framework Monitoring Mechanism 2023

The Denmark results in relation to the Conceptual Model in Scoreboard 3 show a good performance of the country. Denmark has the maximum score in all areas but security and privacy, with a score slightly lower than the EU average. To improve its score on security and privacy, Denmark could increase its efforts to put in place trust services according to the Regulation on eID to ensure secure and protected data exchange in public services (Recommendation 47).



Source: European Interoperability Framework Monitoring Mechanism 2023

The results of Denmark on Cross-Border Interoperability in Scoreboard 4 show a very good performance of the country. Particularly, Denmark has the maximum score of four for fifteen principles out of nineteen. However, Denmark has still some margin for improvement in relation to four indicators where the country obtains a lower performance, such as Principle 7 (Inclusion and accessibility – Cross border), Principle 9 (Multilingualism – Cross border), integrated public service governance, and security and privacy, with the latter three also lower compared to the EU Average.

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

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

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

- [Eurostat Information Society Indicators](#)
- [Digital Economy and Society Index \(DESI\)](#)
- [eGovernment Benchmark](#)
- [Repository of good practices on the EIF implementation](#)



2. Digital Transformation of Public Administrations

Main Digital Strategies, Action Plans and Legislations

Digitalisation Strategy 2024–2027

On 8 February 2024, a new [Digitalisation Strategy for Denmark for the period 2024–2027](#) was agreed upon by the Danish government and all of the parties in the Danish Parliament. The strategy includes investments amounting to DKK 740 million in digitisation across the public and private sectors. The aim is utilising Denmark's strong digital starting point to ensure growth, jobs and better welfare. To that end, the strategy contains 29 concrete initiatives across seven visions that will be implemented over the next four years. It focuses on areas such as artificial intelligence (AI), automation and digitalisation of small and medium-sized enterprises (SMEs), an efficient green transition through digital solutions, the strengthening of digital competencies across society, and the enhancement of Denmark's international engagement and regulatory framework conditions. As central initiatives the strategy prioritises a new strategic work on AI, which aims at securing a responsible and strong foundation for the use of AI across society, the introduction of 'technology understanding' classes in primary schools, a programme for the digitalisation of the supply sector, and further training and retention of information technology (IT) specialists. The Digitalisation Strategy 2024–2027 builds upon an existing national effort that was part of the former governments' proposal for a National Digital Strategy for 2022–2026. Even before launching the strategy for 2022–2026, and as part of a new reform package and of the Finance Act of 2022, the government had decided on a number of digital initiatives aiming at retaining Denmark as a digital frontrunner and using digital solutions, new technology and data to strengthen Danish welfare, accelerate the green transition, promote growth and the digital transformation of Danish SMEs, and strengthen cyber and information security. These initiatives, among other things, aim to strengthen the digital transformation of SMEs, ease the administrative procedures for companies when reporting to authorities, make public data more accessible to businesses, researchers and citizens, and strengthen the use of new technologies, such as AI in the public sector. Moreover, they focus on strengthening data ethics and digital-ready legislation. Both the Digitalisation Strategy 2024–2027 and the initiatives that were part of the reform package and the Finance Act of 2022 build on the recommendations from the Danish government's 'Digitalisation Partnership' (see below). The two digitalisation strategies are supplemented by the Strategy for Cyber and Information Security 2022–2024 (see Section 5 for an elaborated description).

Initiatives on Digital Inclusion

On 27 June 2023, the Danish government and a large proportion of the parties in the Danish Parliament entered into an agreement on 'efforts to further digital inclusion', aiming at further supporting the digital inclusion of all citizens. With the agreement, DKK 54.5 million are invested in **five concrete initiatives aimed at putting the citizen at the centre of digital development**. These initiatives are designed to strengthen individuals' ability to receive the necessary help and guidance, expand access to digital training, and make it easier to be a digital support person and IT volunteer. Along with a range of existing efforts in the field, this agreement further contributes to achieving an inclusive digital welfare society for everyone, regardless of their digital skills.

Berlin Declaration on Digital Society and Value-Based Digital Government

In December 2020, the Danish government signed the Berlin Declaration on Digital Society and Value-Based Digital Government, thus re-affirming its commitment – together with other 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.



Digitalisation Partnership for Denmark's Future

In the spring of 2021, the Danish government launched a Digitalisation Partnership. The partnership involved top managers and experts from the Danish business community, the research community, civil society, stakeholders from the labour market, Local Government Denmark and Danish Regions. In October 2021, the partnership concluded its work and submitted [46 recommendations](#) on how Denmark can harness and utilise future technological opportunities. The recommendations offer suggestions for both the public and private sector as well as public-private collaboration.

In May 2022, the Danish government presented a new [National Digitalisation Strategy](#) building upon the above-mentioned recommendations. The strategy is the first of its kind in Denmark in that it covers both the public and the private sector. However, the strategy was never subjected to negotiations within Parliament due to the national elections held in October 2022. Nonetheless, before launching the strategy, as part of a new reform package and of the Finance Act of 2022, the government had already decided on a few digital initiatives addressing some of the recommendations. Following this, on 8 February 2024 the Danish government and all parties in the Danish Parliament agreed on a new Digitalisation Strategy for Denmark, building on the former Digital Strategy.

Strategy for Denmark's Digital Growth 2018–2025

The [Strategy for Denmark's Digital Growth](#) encompasses a series of goals and actions fostering the digital transformation of Danish commerce and industry. More specifically, the strategy consists of 38 initiatives, allocating a total of EUR 112 million from 2018 to 2025 to support the digital transformation of SMEs. Subsequently, the strategy foresees a EUR 10 million investment per year. Some of the key actions that the strategy includes are the following:

- Digital enhancement of SMEs;
- Digital hub for stronger digital growth;
- Digital skills for all;
- Data as driver of growth in trade and industry;
- Agile regulation in the areas of trade and industry; and
- Increased cybersecurity within companies.

Guidelines on How to Make Legislation Digital-Ready

Denmark has had a process in place to ensure the digital readiness of proposed legislation since July 2018. Official [Guidelines on How to Make Legislation Digital-Ready](#) outline seven principles for digital-readiness and how to apply them in the legislative process. Additionally, all proposed legislation must be assessed for potential impacts in terms of project risk, organisational changes, data protection and citizens' rights. The findings must be described in the legislative proposal together with possible mitigating measures.

To ensure that legislation is digital-ready, every legislative proposal is screened for compliance with the guidelines and consultation responses are sent to the responsible Ministries by a unit established within the Ministry of Finance. Since 2018, approximately 600 consultation responses have been submitted. In support of this approach, a [course on digital-ready policymaking](#) is also available to legislative drafters and policy officers in government departments.

With the [political agreement on the government's new Digitalisation Strategy for the period 2024–2027](#) all parties in Parliament agreed to undertake a study on the potential for updating the existing digital check and the associated guidance to encompass a more comprehensive focus on the impact of new legislation upon citizens and businesses. Among other subjects, this could entail a broader focus on questions related to data ethics.

Public Sector Digitisation Strategies

In 2021, a set of initiatives was agreed upon between the Danish government, Local Government Denmark and Danish Regions, with the purpose of extending and strengthening the main goals of the Common Public Sector Digitisation Strategy 2016–2020 (also known as the 'Digital Strategy') throughout 2021 and 2022, until a new strategy was agreed upon.

In May 2022, a succeeding strategy to the Common Public Sector Digitisation Strategy 2016–2020 was agreed upon between the Danish government, Local Government Denmark and Danish Regions. The succeeding strategy, called Joint Public Digital Strategy 2022–2025, was finalised and published in June 2022, allocating DKK 320 million for a series of initiatives. The goal of the strategy is to help shape the future of a digital Denmark and ensure that the public sector is prepared to seize the advantages of technology. The strategy covers a number of themes related

to the digitisation of the public sector, including initiatives aimed at the use of technology to reduce the climate footprint and to ensure efficient adaptation to climate change, as well as to deal with the challenges related to labour shortage.

Digitalisation of Internal Processes

Strategy for ICT Management in Central Government

The latest **Strategy for ICT Management in Central Government** aimed to improve the operational management of information and communication technology (ICT) systems and projects. The 13 initiatives contained in the strategy address issues such as the mandatory compliance to the national model for ICT systems portfolio management, the periodic review by the National ICT Council of each Ministry's ICT system management, the revision of the national model for ICT projects and the establishment of the Government Digital Academy. Today the main initiatives have already been implemented, and the National ICT Council offers advice and guidance on large-scale ICT projects and management of ICT systems portfolios to Ministries, national agencies and State-funded self-governing institutions.

Multi-Platform Knowledge Management

Knowledge management related to the Danish digital public administration infrastructure is distributed across a number of platforms and websites, and administered by various government bodies. The Agency for Digital Government is responsible for a website hosting common public sector resources on methodology, reference architectures and specifications related to cross-cutting digital government. The target group includes Ministries, regions and municipalities, and the focus is on general digital government capabilities and interoperability. The Agency is also responsible for a catalogue of core concepts and data models used across government as well as a central portal harvesting metadata from decentralised data catalogues.

GovCloud

The Agency for Governmental IT Services in Denmark, established in 2020, runs a private cloud service that is available to public sector authorities. GovCloud is a secure and convenient supplement to other cloud services for State authorities in need of a Platform as a Service (PaaS) solution. It is a community cloud based on container-technology built mainly on open source. The use of GovCloud ensures that all data are physically located in the data centres of the Agency in Denmark, eliminating any legal concerns related to third country transfers under the General Data Protection Regulation (GDPR). Furthermore, GovCloud offers an optional DevOps toolchain to aid public agencies in developing and commissioning applications on the platform, specifically supporting planning, coding, building and testing, releasing and deploying, as well as operation and monitoring. GovCloud is only available for customers of the Agency for Governmental IT Services and, hence, only to governmental organisations. All agencies using GovCloud are invited to join the 'GovCloud Customer Community'. There, users of GovCloud are able to suggest ideas and discuss the further development of the platform together with the Agency for Governmental IT Services.

Government Cloud Services and CEF eDelivery Services

Work is currently ongoing to support the public sector use of cloud offerings, including a Guidance on the Use of Cloud Services published in November 2019 and the provision of various cloud offerings to government bodies serviced by the Agency for Governmental IT Services. Furthermore, CEF eDelivery is used in Denmark and supports various cross-border domain solutions such as eInvoicing, business registry interconnected systems and electronic exchange of social security information. It is also planned to use it for the Single Digital Gateway Once-Only Technical System.

Digitalisation Supporting the EU Green Deal

No particular initiatives in this field have been reported to date.





3. Interoperability and Data

Interoperability Framework



Common Framework for Public Sector Digital Architecture (Danish NIF)

In 2017, the central government, Local Government Denmark and Danish Regions agreed on a common [Federal Digital Architecture \(FDA\)](#) focusing on data sharing and cross-organisational processes.

The FDA includes a general framework as well as a number of specific architecture assets. The core is a set of general architecture principles and rules supported by guidelines on architecture description and communication, as well as rules for concept and data modelling. Activities such as skill development, architecture guidance and project review support the adoption of the common framework. The FDA then also includes a number of concrete architecture assets, like reference architectures on common issues such as the sharing of data and documents, user and rights management across domains, coherent user journeys in relation to digital self-services, and user-centric and cross-cutting overview of data relevant to each citizen and enterprise (e.g. in relation to cases, payments, debt, appointments and deadlines). Finally, the FDA encompasses a number of common technical solutions such as the national infrastructure solutions for ID, digital signature, single sign on and digital post, among others.

The application of the general governance structure is voluntary depending on relevance, logic, and business case. Nonetheless, some elements, such as Digital Signature and Digital Post, are mandatory. Projects falling within the Common Public Sector Strategies shall take the FDA into account and undergo an architecture review.

The FDA will undergo a review in 2024 following the adoption of the Interoperable Europe Act to ensure an alignment with the act and the Interoperable Europe initiatives.



Legislative Focus on Interoperability

Most digitalisation initiatives are developed with a focus on ensuring interoperability across different solutions. An example are the guidelines on the use of [MitID Act No. 899 of 21 June 2018](#), [Act No. 783 of 4 May 2021](#) and [Danish Executive Order No. 1778 of 1 September 2021](#)). Denmark is preparing compliance with the new Interoperable Europe Act, which is expected to strengthen even further the systematic focus on interoperability aspects and consequences of new legislation at the national as well as at the European level.



Single Digital Gateway

In Denmark, the Agency for Digital Government has the responsibility for coordinating the implementation of the [Single Digital Gateway \(SDG\) Regulation](#). Implementation is based on the appropriate level, scope and ambition for the national implementation. Among other things, this includes a more advanced identity matching service.

Data Access, Management and Reuse



Rules for Concept and Data Modelling

It is important that authorities and businesses are able to retrieve, understand and reuse data in the public sector. Therefore, the Common Public Sector Digital Architecture recommends applying the [Rules for Concept and Data Modelling](#) to document concepts and data. The rules ensure that concepts and data are described and documented thoroughly, correctly and consistently, whilst reusing national and international models, standards and knowledge to the extent possible. In connection with the rules, a Model Catalogue has been implemented to aid in finding models for reuse.



Reference Architecture for Sharing Data and Documents

Denmark published a [reference architecture](#) in May 2018 to facilitate the sharing of data and documents electronically. The reference architecture revolves around describing the disclosure of data by transmission. Disclosure by transmission focuses on the actual action of



passing on data, whereas the interpretation of the sharing of data is broader and includes making data available for potential reuse, even if data may never be accessed. One of the main purposes of this reference architecture is to guide and assist in the choice between two fundamental business patterns for the disclosure of data by transmission:

- Transmission on request: typically, system-to-system integrations using an application programming interface (API); and
- Transmission by message: typically, the legally binding communication of data (possibly in the form of documents) from public authorities to citizens and businesses, but also a classical pattern in system-to-system integrations.

The fundamental difference between the two is whether it is the actor transmitting data or the actor receiving data who is responsible for the concrete data process flow.



Access to Public Administration Documents Act

Access to government records is governed by the [Access to Public Administration Documents Act](#), which came into force on 1 January 2014. The act is applicable to central government as well as to regional and municipal authorities, and, as opposed to the previous act, also to enterprises fully or partially owned by central government, enterprises making decisions on behalf of central government, Local Government Denmark and Danish Regions.

The act allows any person to request documents from an administrative file. Authorities must respond as soon as possible to such requests and, if this exchange takes longer than seven days, they must inform the requestor of the reasons why the response is delayed and when an answer is to be expected. In case of a decision of non-disclosure, complaints can be submitted to the Parliamentary Ombudsman, who can issue non-binding opinions on whether documents are to be disclosed.

However, all documents produced by the courts and by legislators are exempted from the provisions of the act. The same applies to documents relating to the security of the State, defence, protection of foreign policy, law enforcement, taxation and public financial interests.



Reuse of Public Sector Information and the Open Data Directive

The Act Amending the Law on the Reuse of Public Sector Information of 10 May 2021 implements the [Open Data Directive 2019/1024/EU of 20 June 2019 \(ODD\)](#), which is a recast of Directive 37/2013/EU and Directive 2003/98/EC on the re-use of public sector information.

The ODD was included in the existing landscape of open data initiatives. The National Data Portal (see the section on Data Platforms and Portals below) is the Danish national single information point under the ODD.

The implementing act on High Value Datasets (HVD) is being implemented with all datasets expected to be documented on the National Data Portal before the deadline of 9 June 2024.

Open Data



Open Government Partnership Action Plan 2023–2025

As part of the [Open Government Partnership](#), which is an international collaboration, the Danish government adopted its [fifth National Action Plan 2023–2025](#), with five initiatives promoting open governance and involvement of civil society. The action plan focuses on civic participation, digital innovation and open data.

Base Registries

The following table lists the Danish base registries:

National	
Business and Tax	The Central Business Registry (CVR) is the Danish government’s master registry of information about businesses in Denmark and Greenland. The Act on the Central Business Registry states that the Danish Business Authority is the owner of the CRV and the body responsible for the maintenance and development of the Central Business Registry. The Danish Business Authority cooperates with customs, tax and statistical authorities for the registration and maintenance of certain basic data and activities. The purpose of the Registry is to:



	<ul style="list-style-type: none"> Record basic data on legal entities (e.g. a natural person in its capacity as employer or self-employed, a legal entity or a branch of a foreign legal person, an administrative entity, a region, a municipality or a municipal association); Secure a unique numbering for legal entities; and Make basic data available to public authorities and institutions, as well as the private sector. <p>Registrations in the Registry is performed at www.virk.dk and data within the Registry is made publicly available at www.cvr.dk. The CVR connects to the Central Person Registry (CPR) and the Danish Authoritative Registry for Addresses (DAR) as a consumer of these registries. Data from the CVR are not consumed by these registries. Numerous consumers of the data from the CVR exist, but these are not interconnected. The CVR is interconnected to the Danish Tax Authority Registry and the Statistical Bureau of Denmark's registry, and all three registries are able to transmit and import data from each other, in accordance with agreed upon transmission rules. The data transferred between the interconnected registries are transferred via legacy protocols and application programming interfaces (APIs). Data within the Registry is in the Standard Query Language (SQL) format and is converted into the JavaScript Object Notation (JSON) for transfer.</p>
<p>Transportation / vehicles</p>	<p>Transportation and vehicle registries are not under the common governance of the base registries in Denmark, but the Motor Registry operated by the Danish Motor Vehicle Agency contains information about all motor vehicles registered in Denmark. The Act on the Registration of Vehicles mandates the operation and use of the Motor Registry, and enables the Minister for Transport to regulate access to the data in the registry.</p>
<p>Land</p>	<p>The Danish Cadastre is the basis for all land registration in Denmark. The registry is operated by the Danish Geodata Agency. Consisting of a country-wide cadastral map, an official registry and a cadastral archive, it plays a central role in the public management and administration of land ownership. The Act on Subdivision contains provisions about the registration of real properties (parcels, condominiums and buildings on leased ground) in the Cadastre and about cadastral work. Standardised and quality-assured property data will, for example, make it much easier to get the necessary information when a person has to buy or sell real estate in Denmark.</p>
<p>Population</p>	<p>The Central Person Registry (CPR) is the Danish government's master registry of information about physical persons in Denmark and Greenland. It is operated by the Ministry of the Interior. The Act on the Central Person Registry states that all physical persons who have resided in Denmark since 1968 or in Greenland since 1972 are to be registered with information about their names, addresses, birth date, citizenship and other essential elements.</p>
<p>Other</p>	<p>The Registry of Owners of Real Property (EJF) is an authoritative registry of the actual owners of all real estate in Denmark. The EJF contains information about the persons and companies who own a property and to whom notices regarding the property can be sent. The Registry of Property Location (EBR) contains a reference between the property and the address used as the location address. The Act on Spatial Information contains provisions about the infrastructure for spatial information. The infrastructure also includes registries contributing to the combination of data across authorities, thereby increasing the usefulness of data. The registries covered by the act include the EJF and the EBR.</p> <p>The Registry on Building and Dwelling (BBR) is a national registry with data on all buildings and dwellings. The information in the BBR covers, for example, area, location, use, installations, water and drainage conditions, kitchen conditions, exterior wall and roof materials, and energy consumption. The Act on Building and Dwelling Registration establishes the BBR and stipulates (i)</p>



	<p>the responsible authority; (ii) how the maintenance and operational costs are allocated; and (iii) the aim of the Registry, which is to register (i) basic data on construction and housing as well as plants and equipment; and (ii) unique data on all buildings, residential and commercial units as well as technical equipment.</p> <p>The Civil Registration System (CPR) is a national population registry that contains basic personal data about everyone with a Danish civil registration number.</p> <p>The Danish Address Registry (DAR) is the basic data registry for addresses and road names. The aim is to distribute authoritative addresses and road names to authorities, businesses and citizens. Bases registries such as the CPR, the CVR and the BBR are obliged to exclusively use authoritative addresses from the DAR.</p> <p>The Danish Place Names Registry is the official basic data registry for place names in Denmark. The registry contains approximately 150 000 Danish place names, all with a geographical location. The geographical distribution of the place name can be described by a point, a line or an area.</p> <p>GeoDenmark is a collaboration between the Danish Agency for Data Supply and Infrastructure (SDFI) and Denmark’s 98 municipalities to establish and maintain a nationwide common public basis for spatial administration. The dataset consists of vector data and orthophotos. Vector data helps decision-makers and caseworkers in the public sector ensure better public administration. Orthophotos are based on nationwide aerial photography post-processed for use in maps.</p> <p>The Danish Administrative Geographical Division Registry (DAGI) is a standardised reference dataset that shows Denmark’s administrative divisions. The DAGI dataset can be combined with other data for end-user products or included in various services.</p> <p>The Registry of Foreign Service Providers (RUT) is the Danish government’s official registry to report a foreign service.</p>
Sub-national	
<p>Base Registries</p>	

 **Common Basic Data Infrastructure**

Denmark has a common basic data infrastructure established through the [Basic Data Programme 2012–2019](#). Since implementation, the common infrastructure, with coherent data across the basic data registries and the different domains, has been provided through one unified distribution platform, i.e. the Data Distributor. It currently receives 18.2 billion webservice requests (annual total for 2023) and consists of six domains: individuals, businesses, properties, addresses, maps and geographical information. The Data Distributor enables easy access to data across domains that can be combined on a platform with secure operations. Support and change processes are coordinated across the registry authorities and governed through a common governance. The SDFI is the basic data authoritative agency responsible for the Data Distributor and coordinates the collaboration across registry authorities, and users in the public and private sector.

Basic data in the Data Distributor is critical infrastructure for digital Denmark, and a lot of sectors are dependent on its operation and further development. That is why it has also been prioritised



in the Danish Digitalisation Strategy 2024–2027. The Data Distributor is currently under technical modernisation with focus on improving the IT architecture, stable and scalable operation, security, time-to-market, display of data, flexibility and other aspects. Modernisation is currently in the development phase, which started in January 2024 and will run until October 2025.

Data Platforms and Portals

The following table lists the Danish data platforms and portals infrastructures:

<p>National Data Portal</p>	<p>In 2022, the Danish government launched a new National Data Portal, Datavejviser.dk, to improve access to data held by the public sector. The portal aims to provide descriptions of and links to valuable public sector data, and help users navigate the data landscape.</p> <p>Denmark has a long history of using high quality data for public administration purposes, including geospatial data, population statistics, and data on the flora and fauna of Denmark. In recent years, public sector organisations have increasingly made this data available to a wider range of users, much of it as open data.</p> <p>In this context, the new National Data Portal is part of a wider European effort to leverage data to solve societal challenges, and spur innovation and economic growth. The portal uses the DCAT-AP-DK standard for metadata, which is based on European and international standards and has been adopted as part of the common digital architecture for the Danish public sector. The portal will continuously develop based on user demand, with an in-house team of developers implementing changes using agile methodologies.</p> <p>Data in the portal is also available through the European Data Portal, data.europa.eu.</p>
<p>National Portal for Cyber and Information Security</p>	<p>Since 2018, the information portal sikkerdigital.dk has provided readily accessible information, advice and specific tools for citizens, businesses and authorities regarding information security and data protection, as well as information on how to comply with current legislation in those fields. The portal is managed by the Agency for Digital Government in collaboration with various other authorities and non-governmental organisations (NGOs).</p>
<p>Data Distributor</p>	<p>The Data Distributor is a single point of entry for basic data from several authorities. It replaces a series of public distribution solutions, and ensures that authorities and companies are provided with easy, safe, and reliable access to basic data in one collective system. By now, the Data Distributor samples a unique variety of basic data, e.g. civil registration numbers, registered data on land, properties, parcels and buildings, registered data on companies, registered data on addresses, administrative divisions and place names, geographical base maps, geodata, etc.</p>
<p>DCAT Application Profile - Applications</p>	<p>A Danish application profile based on version 2.0 of the DCAT Application Profile for data portals in Europe (DCAT-AP) has been completed and approved for use in the context of the Danish public sector (DCAT-AP-DK).</p> <p>Furthermore, to support higher reuse and quality of metadata about IT systems, two application profiles have been established: a Basic Application Profile describing the core properties of public sector IT systems and an Archive Application Profile extending the basic profile elements relevant to the submission of information about IT systems to the National Archives.</p> <p>In addition, a method for describing dataset quality has been established. The method has been developed on the basis of international standards such as the W3C Data on the Web Best Practices, including the Data Quality Vocabulary, and ISO 25012 on Data Quality.</p>

Cross-border Infrastructures

The following table lists the European cross-border infrastructures of which Denmark is part of:

European Business Registry	Denmark is part of the European Business Registry Association (EBRA) .
EUCARIS	EUCARIS is a cooperative initiative between several national registration authorities, including the Danish. Formalised in a multilateral treaty, this cooperation is focused on data exchange regarding vehicle registration, driving licences, and the accompanying personal data. For this exchange, a system is used which was especially developed for this purpose, i.e. EUCARIS II. Each country is responsible for its own registry of vehicle and driving licence information, and its own registration procedures. Through their national registration authority, other government institutions can request information on e.g. vehicles from another country. The national registration authority becomes a central hub in EUCARIS.
TESTA	In Denmark, the Trans European Services for Telematics between Administrations (TESTA) network is used for a number of cross-border use cases.
Once-Only Technical System (OOTS)	To ensure the SDG Regulation's suitability and functionality in the Nordic and Baltic countries, and to ease the process of implementing its designed architecture at the national level, the SDG Once-Only principle (OOP) Proof of Concept (PoC) pilots project was established. Funded by the Nordic Council of Ministers and ended in June 2023, this former Cross Border Digital Services (CBDS) Programme gathered legal and technical experts from Denmark, Estonia, Finland, Latvia, Lithuania, Norway and Sweden.
EU Digital Wallet	Denmark is part of the NOBID Consortium
European Blockchain Services Infrastructure (EBSI)	The European Blockchain Services Infrastructure (EBSI) is a partnership of all EU Member States, Norway and Liechtenstein, as well as the European Commission, aimed to build an EBSI.



NOBID Project

Denmark is a member of the [Nordic-Baltic Cooperation on Digital Identities \(NOBID\)](#), a project initiated and managed by the Nordic Council of Ministers supporting the implementation and utilisation of the national electronic identification (eID) infrastructure. The goal is to provide citizens and businesses using their own national eIDs borderless access to digital services throughout the Nordic-Baltic region.

NOBID has been extended until the end of 2024 and has become a sub-project under the CBDS Programme with the aim of creating a common Nordic-Baltic platform for the implementation of parts of Regulation (EU) No. 910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation) and the SDG Regulation.



4. Digital Transformation of Public Services



Digital Public Services for Citizens



Mandatory Digital Self-Service

The Danish government wants at least 80% of all written communication between citizens and businesses, and the public sector to be done exclusively through a digital channel. As part of the implementation of the Common eGovernment Strategy 2011–2015 by the central, regional and local governments, the Danish Parliament passed legislation making **digital self-service solutions** mandatory by law (though with certain exemptions) in 2015, resulting in a total of more than 100 different service areas where online self-service is mandatory (again subject to certain exemptions).



Mandatory Digital Post

As part of the implementation of the Common eGovernment Strategy 2011–2015 by the central, regional and local governments, the Danish Parliament adopted the **Act on Public Digital Post** in June 2012. The act came into force on 1 November 2014 for citizens and on 1 November 2013 for businesses. It states that citizens and businesses must have a digital letter box for receiving digital messages, letters, documents, etc. from public authorities rather than receiving paper-based letters by traditional postal service. The act also provides that digital messages transmitted through the Digital Post solution have equal legal status and effect as paper-based letters, messages, documents, etc. The act covers all citizens over the age of 15 years and all businesses.



Borger.dk - National Citizen Portal

First launched in January 2007, the **National Citizen Portal** (borger.dk) is a single point of entry for citizens to online information and eServices published by the public sector, regardless of the public authority. It is a shared infrastructure funded by national, regional and local authorities. Within their area, each public authority has the responsibility to ensure that information on borger.dk is relevant, correct and updated. The National Citizen Portal also contains an English **sub-site for international citizens**, lifeindenmark.dk. Borger.dk is developed and run by the Danish Agency for Digital Government.

The National Citizen Portal provides general, location-specific (e.g. region or municipality) and personal information, data and eServices for citizens, including access to Digital Post (for more information on Digital Post, see below). In addition, the Citizen Portal features a range of self-services, allowing citizens to manage their communications with the public sector effectively and efficiently. Furthermore, a single sign-on (SSO) solution allows citizens to receive and access information and services from several agencies, without having to log on several times.

The portal currently contains more than 2 000 self-services. Borger.dk has a stable user satisfaction level, with 9 out of 10 visitors satisfied, and more than 70 million visits annually.



My Overview

My Overview is the citizens' personal page on the Citizen Portal. Here, citizens can log on using their MitID to access some of the personal information public authorities have registered, such as information on tax, debt, student grants or housing as well as status of benefits, ongoing cases with public authorities and upcoming appointments.

The development of My Overview is part of a joint public political vision for creating transparency, and a better and more coherent digital service in the public sector. My Overview is a supplement to existing websites or self-service solutions offering a wider digital overview of a citizen's data and interactions with the public sector as well as links to the relevant public websites. The overview is personalised and therefore no one but the citizens themselves have access to the data on the site. New public authorities join My Overview every year, and display relevant information and data to citizens.



Digital Guides to Life Events

The Agency for Digital Government and the Danish Business Authority are developing digital guides to support coherent user journeys in relation to the eleven most common life events for citizens and the ten most common life events for **businesses**. The guides provide citizens and businesses with a personalised overview of what they need to know and understand regarding their life event, and give them a collection of relevant links to e.g. public services and self-service solutions. The guides are published on the portals borger.dk (citizens) and virk.dk (businesses). They will be further developed as new user needs are identified, and so will be the architecture supporting them.



Digital Post

Digital Post is the public authorities' shared IT solution enabling them to communicate securely with citizens, companies and other governmental institutions.

In March 2022, Denmark introduced a new version of **Digital Post**. The public sector now has increased ownership of the solution, providing greater flexibility, better adaptation to future needs and improved coherence with other public IT solutions. Similar to the previous version, the new Digital Post is a coherent and easily accessible IT solution ensuring that citizens and companies using Digital Post experience an improved user-friendliness.

To date, approximately 5.2 million citizens and 833 300 businesses use and receive messages via Digital Post, while 740 authorities are part of the system and use it to send Digital Post messages. A user satisfaction survey from 2023 shows that 79% of the surveyed citizens are generally satisfied with Digital Post.



'Live' Operational Status

The site digitaliser.dk shows the operational status 'live' on common public sector digital services, and provides guidance for authorities, suppliers and businesses. The operational status service covers the following public key services: (i) the single sign-in solution NemLogin; (ii) the eID/digital signature solution MitID; (iii) the National Citizen Portal borger.dk; (iv) the National Business Portal virk.dk, including its self-service solution '*Blanketmotoren*'; (v) the bank account registry for public sector transfers NemKonto; (vi) the public digital postal service Digital Post; and (vii) the National Healthcare Portal sundhed.dk.



Local Government Denmark and Danish Regions

One of the overall objectives of digitalisation in Denmark is to associate the relevant levels of government. Thus, Local Government Denmark and Danish Regions are also involved in several of the nationally operated portals, e.g. borger.dk and sikkerdigital.dk.

eInvoicing



Act on Electronic Invoicing

eInvoicing to all public authorities and institutions has been mandatory for suppliers of goods and services since 2005. To facilitate and ease cross-border trade and invoicing, the use of a cross-border network based on eDelivery has become possible for the public sector, allowing for direct eInvoicing of Danish public entities.

Denmark has implemented and transposed Directive 2014/55/EU on electronic invoicing in public procurement.

eHealth and Social Security



Coherent and Trustworthy Health Network for All - Digital Health Strategy 2018–2024

The **Digital Health Strategy 2018–2022** aimed to enable hospitals, municipal health services, general practitioners, and other public and private participants throughout the health sector to use digital tools to cooperate in an integrated patient-centered way, creating a personalised and coherent health system where more tasks can be performed closer to patients. The strategy created a basis for a joint digitalisation effort of the entire Danish health system. By strengthening the digital foundation for providing healthcare across the sector, it also strengthened the security

of personal health data, and enabled the safe and secure exchange of relevant data in the health sector.

The government of Denmark, Local Government Denmark and Danish Regions have reached an agreement to pursue the ongoing digital transformation of the healthcare system. As a result, the Digital Health Strategy 2018–2022 has been extended to 2024.

Vision for Strategic Cooperation on Better Use of Health Data

In 2021, the relevant parties in the field of health data agreed on the Vision for Strategic Cooperation on Better Use of Health Data, which will support the use of data for secondary purposes. The objective is to create a simpler and smoother access to health data, to enable advanced data analytics across data sources as well as to ensure high data security and transparency about the use of data. More specifically, the vision aims to ensure: i) easy and quick access to application and approval; ii) secure and flexible access to data on a common national analysis platform; iii) better and shared data services; and iv) high data security and transparency. The vision is implemented by establishing a single contact point for smooth access, approval and guidance to health data, as well as a common national analysis platform offering a secure analytical environment, and allowing for linking data sources and conducting complex analyses.

Other Key Initiatives

Real Property Portal

The **Real Property Portal** contains articles, step-by-step guides, tools and documents designed to make it easier and more secure for users, i.e. businesses and citizens, to sell or buy homes. It also provides an overview of the buying and selling processes at work. The portal thus offers an insight into housing transaction processes designed to prepare the property owner to engage with professional advisers. Several tools and documents enable property owners to carry out parts of a housing transaction single-handedly. Furthermore, property owners get access to large national databases containing data about buildings and can get acquainted with or updated on rules regarding business rentals, purchase and rental of summer houses and holiday homes, and real estate services.

ePayment - NemKonto

A NemKonto is a normal bank account that a citizen or a company already has and assigns as NemKonto. All payments from public institutions in Denmark, such as tax or VAT refunds, pensions or social welfare payments, are transferred directly to the citizen's or company's NemKonto through the NemKonto system. All citizens and companies registered in Denmark are required to have a NemKonto to receive public payments. Enterprises, such as insurance companies or private employers, are also able to make payments to a NemKonto.

Digital Public Services for Businesses

Act on Business Promotion

Article 11 of the **Act on Business Promotion** specifies that the Danish Business Authority will manage a digital platform for business promotion and development. Other authorities are obliged to deliver relevant content to the platform. The purpose of the platform is to provide information and services to start-ups and businesses in Denmark on how to start, run and develop a business. The platform gathers guidance on the most relevant business regulations from relevant authorities, as well as guidance on starting, running and developing a business. It also contains digital articles and tools, spanning from regulation on how to hire your first employee and how to pay VAT to advice on how to improve the sales technique and how to write a business plan. The platform, called *Virksomhedsguiden* (The Business Guide), was launched on 28 June 2019.

Act on Information Society Services and Electronic Commerce

Known as the eCommerce Act (No. 227), the **Act on Information Society Services and Electronic Commerce of 22 April 2002** transposes Directive 2000/31/EC of 8 June 2000 on certain





legal aspects of information society services, in particular electronic commerce in the Internal Market.

Virk.dk - Business Portal

The **Business Portal** is the common public web portal for businesses, allowing them to handle their reporting obligations towards the public sector. The overall objective of virk.dk is to relieve Danish businesses from administrative burdens and provide a single entrance to the public sector.

Virk.dk also features a personalised dashboard for businesses to provide them with an overview of current deadlines, tasks and obligations towards public authorities. The dashboard contains basic information on the business, some deadlines and the status of pending cases, access to Digital Post, access to the user administration interface, and a few services with information on permits and authorisations held by the company. In cooperation with the relevant competent authorities, the dashboard is continuously expanded with new deadlines and pending cases, so as to make the overview complete.

To date, the portal contains more than 1 500 eForms and in 2023 user sessions totalled 8.4 million.

Automated Business Reporting

European companies spend too much time on administrative and manual processes that can be digitalised and automated, and essentially make it easier for businesses to exchange business data with customers, authorities and business partners. Increased automation of companies' bookkeeping practices and financial reporting entails yearly efficiency savings of EUR 400 million in Denmark.

The core component of automated business reporting is the use of digital management systems (ERP systems) ensuring that companies have access to standardised data in all parts of their business process, from initial order placement to final reporting to a public authority. This enables businesses to automate their business processes, and allows for digitalised and automated reporting to public authorities.

In 2022 the Danish government issued a new Bookkeeping Act requiring digital bookkeeping for 416 000 Danish companies with an annual turnover of minimum DKK 300 000 (approx. EUR 40 000). By making it mandatory to use digital bookkeeping systems supporting automated bookkeeping, eInvoicing and submission of annual reports to the Danish Business Authority, the Bookkeeping Act contributes to efficiency gains, fraud prevention and simplified compliance. The gross domestic product (GDP) effects of the current legislation are estimated to be at least EUR 255 million. The Danish Business Authority is currently analysing the business case for extending this requirement to businesses below the current threshold.

Automated and digital business reporting also provides clear benefits for the authorities, both through potential efficiency savings, and through a more targeted and efficient auditing and financial monitoring. When financial records are kept in digital accounting systems, any changes in the records are logged and disclosed to the authorities. Based on this information, authorities can target monitoring operations and minimise the number of audits on law-abiding companies. Consequently, authorities are able to combat economic crime and tax fraud more efficiently.

Possible ways forwards are currently being explored in the context of automated business reporting with regards to increasing the uptake of eInvoicing among Danish businesses, which has the potential to lead to significant savings in their administration costs in both B2B and G2B relations. The work on eInvoicing is closely related to the EU Directive on VAT in the Digital Age (ViDA), which is still being negotiated.

Climate Compass

To give businesses a user-friendly, transparent and uniform tool to calculate their climate footprint, and gain an overview of how their climate impact is spread across activities and scope 1, 2 and 3 over time, the Danish Business Authority and the Danish Energy Agency have introduced the Climate Compass. The tool targets SMEs and allows businesses to: (i) calculate direct climate emissions of company activities (i.e. own transportation, and oil and gas consumption); (ii) calculate the indirect climate emissions from their energy providers, subcontractors and customers; and (iii) estimate the climate impact of various greenhouse gas (GHG)-reducing initiatives in the company. The Climate Compass also allows users to set up climate targets and forecast emissions to evaluate how far the company is from reaching its targets. Further functionalities of the Climate Compass are currently being developed.



Public Procurement

eProcurement Initiatives

Several initiatives aimed at digitising procurement procedures in the public sector were initiated in January 2019 and are scheduled to end in 2024/25. The focus is on standardising eProcurement documents in the procure-to-pay workflow.

SME-friendly National Tender System

A new national tender system will be developed which businesses may be obliged to use when participating in a tender for a public contract. The new system will handle tender notices below the threshold values, thus making it easier for SMEs to tender for a public contract.

Executive Government Order concerning the Procedures for the Awarding of Public Works Contracts and Public Supply Contracts

In Denmark, Article 22 of [Directive 2014/24/EU](#) was transposed by the [Executive Order on the Use of Electronic Communication in Tenders and on Public Procurement under the Thresholds with Clear Cross-border Interest](#) (No. 1572 of 30 November 2016), under the authority of Section 194 of the [Public Procurement Act](#) (No. 1564 of 15 December 2015). All communication on a public procurement procedure within the scope of Titles II and III of the [Public Procurement Act](#) and the [Executive Order on the Procedures for Contracts within Water and Energy Supply, Transport and Postal Services](#) (No. 1624 of 15 December 2015) must be made digitally, according to Section 2 of Executive Order No. 1572, with the exception of the specific situations mentioned in Article 22(1)(a)-(d) of [Directive 2014/24/EU](#).

Procurement Portal

The [Procurement Portal](#) offers public and private providers guidance on the knowledge and tools necessary for the provision of tendering services. The purpose of the portal is to facilitate cooperation between enterprises and the public sector as a means to promote public services efficiently.

Nemhandel

Nemhandel is an open network with its own document standards making eProcurement between suppliers of goods, and public authorities and institutions easy, secure and efficient. *Nemhandel* functions as one common standard for eProcurement and makes it possible for all businesses to connect once and reach all systems - irrespective of the purchasing system or the IT service provider.

Nemhandel has continuously and actively participated in European and international cooperation on eProcurement. In 2017, it began to be integrated into Peppol, and in 2019 and 2020 it became mandatory for all public authorities to be affiliated to the Peppol network via the *Nemhandel* Registry, which is also a Peppol registry.

Nemhandel is in the process of being upgraded. The network has been moved to the EU's eDelivery AS4 transport protocol (from a transport protocol that predated the formalisation of AS4) and the OIOUBL documents used in the network are being upgraded.

The Agency for Public Finance and Management is in the process of investigating the practicality of and business case for mandating that certain categories of public procurement must use eOrders and eCatalogues, and for introducing a mandate that public sector entities must send eInvoices to their debtors.

Digital Inclusion and Digital Skills

Act on Web Accessibility

To implement [Directive 2016/2102/EU](#), Denmark adopted the [Act on Web Accessibility](#) (No. 692 of 08 June 2018), describing the requirements for public authorities' websites and mobile applications.



5. Trust and Cybersecurity

eID and Trust Services



Electronic Identification and Trust Services for Electronic Transactions

Denmark is compliant with the eIDAS Regulation. The supporting legislation came into effect on 1 July 2016. To provide guidelines for citizens and authorities with regard to issuance, revocation and suspension, Act No. 783 on MitID and NemLog-in, the Act on the Issuance of the NemID with Public Digital Signature for Physical Persons and Employees in Legal Entities and the Danish Executive Order No. 1778 on MitID for Private Persons entered into force in 2021.

In addition, Act No. 617 of 8 June 2016 appointed the Agency for Digital Government under the Ministry of Digital Government and Gender Equality as the Danish supervisory body, and set out the rules for Danish trust service providers with reference to existing national legislation. The Agency for Digital Government provides qualified trust services on behalf of the Danish State. The supported services are certificates, timestamping and signature validation.



Digital Signature MitID

MitID is an identification and authentication service only; signing can be achieved using a remote signing capability built in the national Danish trust services component and with MitID as the means of authentication. The MitID solution has been developed in a well-established partnership between the Danish public sector, and Finance Denmark, the Danish Business Association for Banks and other financial institutions. The partnership has the shared goal of a strengthened, secure and flexible digital infrastructure in Denmark. More than 5 million users are using the MitID solution to access both public and private service providers.

The MitID business solution, called MitID Erhverv, was launched in the second half of 2022, and enables businesses and their employees to access digital self-service solutions with MitID on behalf of the business entity. MitID Erhverv will thus be the main channel for companies when using digital self-service solutions (e.g. Virk and Digital Post) on behalf of the business entity, which makes reporting to the public sector easier.

In October 2022, Denmark completed the process of notifying MitID in accordance with Article 9 of the eIDAS Regulation, with publication in the Official Journal of the European Union (OJEU). MitID incorporates the necessary technical specifications making it possible for the other EU Member States to integrate MitID in their respective eIDAS nodes.



eIDAS eID-Gateway Node

The Danish eIDAS infrastructure, called **eID-Gateway**, went into production on 28 September 2018. The eID-Gateway consists of the Danish eIDAS Connector and the Danish eIDAS Proxy Service. The latter went live on 25 November 2021. The eID-Gateway utilises the existing national SAML protocol, which is also implemented in the national broker for public services, NemLog-in (see below).

Currently, a handful of eServices are connected to the Danish eIDAS Connector. Work is ongoing regarding the implementation of the SDG Regulation, as well as to the integration of more national eServices into the Danish eIDAS infrastructure. Furthermore, Denmark is one of the few Member States that provides a solution for identity matching, a functionality in the eIDAS Connector which went into production in 2023. The solution became semi-automated by the fourth quarter of 2023, enabling to scale up the identity matching process of European citizens.



NemLog-in: Sign-In Solution

NemLog-in is a vital part of the public infrastructure and is the primary joint identity broker/identity provider solution. It also serves as integration point for public IT service providers and self-service solutions.

NemLog-in consists of a number of components that make up the Danish national platform for login and user access management. One of the primary components is a login/authentication service with SSO functionality. Citizens, employees in companies and authorities can log on to public self-service solutions and portals. Other NemLog-in components include central user access management, a signing service (including signature validation and possibly long-term storage), a power of attorney functionality and a security token service (STS) functionality. Lastly, NemLog-



in provides an administration component, where IT service providers and IT vendors can maintain their self-service solution integrations to NemLog-in. Established in 2008, NemLog-in is today in its third generation, with over 150 IT service providers. It offers 500 self-service solutions and records more than 100 million logins a year.

Digital Driving License App and Digital Health Insurance Card App

Since 24 November 2020, Danish citizens have been able to download their driving licence in a mobile app (*kørekort-appen*) and leave their physical driving licence at home. The app has a built-in QR-code that enables the Danish police to use their dedicated app to confirm the digital driving licence validity without touching the driver's phone. More than 500 000 downloads of the Digital Driving Licence App within 24 hours after its release and almost 2.9 million downloads to date demonstrate that citizens have quickly adopted the digital driving licence. More specifically, 46% of Danish driving licence holders also have the digital driving licence.

In June 2021, the Agency for Digital Government introduced yet another digitised version of the Danish citizens' universally issued ID cards. The *Digital Health Insurance Card App (sundhedskort-appen)* is a voluntary digital supplement to the Danish Health Insurance Card. It is valid documentation of the citizen's right to receive healthcare in Denmark, equal to the physical Health Insurance Card, and can be utilised in all circumstances as the physical card. The Digital Health Insurance Card App has reached more than 3.1 million downloads since the launch, with 48% of potential users having a Digital Health Insurance Card. From 15 April 2024, Danish citizens have the opportunity to discontinue using the physical Health Insurance Card and only hold the Digital Health Insurance Card.

Cybersecurity

National Strategy for Cyber and Information Security 2022–2024

On 15 December 2021, the government launched a *National Strategy for Cyber and Information Security 2022–2024* to replace the previous strategy covering the period 2018–2021. The new strategy strengthens national cyber and information security in society through 34 specific initiatives and increased obligations regarding the area of critical infrastructure protection, among others. The initiatives aim to strengthen security through:

- Robust protection of the key functions of society (16 initiatives);
- Increased level of competencies and management responsibilities (six initiatives);
- Strengthened public-private cooperation (seven initiatives); and
- Active international engagement in the fight against cyberthreats (five initiatives).

The threats related to cyberespionage and cybercrime are very high and the strategy seeks to address them by increasing the level of ambition regarding the efforts of the industry, and in relation to the national critical infrastructure and cross-sectoral commitments. The strategy also focuses on increasing the level of cyber and information security of citizens, businesses, and authorities.

The Cybersecurity Alliance is a public-private partnership aiming to ensure that Danish SMEs become the most cybersecure in Europe. It aims to do this by coordinating SME-oriented efforts in cybersecurity, exchange of data and knowledge to create a national picture of the security situation and initiate new collaborations across the public and private sectors to strengthen SMEs' opportunities to protect themselves against cyberattacks.

Regulation on General Data Protection

The GDPR (Regulation (EU) 2016/679 of 27 April 2016) regulates the processing of personal data in the EU. Additional rules complementing the GDPR were included in the *Danish Data Protection Act* (No. 502 of 23 May 2018) and entered into force on 25 May 2018.

The Law Enforcement Directive (Directive (EU) 2016/680 of 27 April 2016, LED) regulates the processing of personal data in the EU by competent authorities for the purposes of prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties. It also regulates the free movement of such data. The *Danish Law Enforcement Act* (No. 506 of 23 May 2018) implements the LED and entered into force 25 May 2018.

Acts on the Processing of Personal Data

Other laws regulating the processing of personal information by the public sector include the *Public Administration Act* (consolidating Act No. 433 of 22 April 2014), the *Publicity and*

Freedom of Information Act (consolidating Act No. 145 of 24 February 2020), the Public Records Act of 1992 and the National Registries Act of 2000. These laws set out basic data protection principles, and determine which data should be available to the public and which data should be kept confidential.





6. Innovative Technologies

Artificial Intelligence

Strategic Work on Artificial Intelligence

The Digitalisation Strategy 2024–2027 prioritises a new strategic work on AI aiming at securing a responsible and strong foundation for the use of AI across society. As a first step, the government will present a vision paper for AI, which will set the direction for the implementation of the framework, and further strategic and analytical work.

National Strategy for Artificial Intelligence

On a strategic level, Denmark's efforts relating to emerging technologies such as AI are based on two national strategies: the National Digital Strategy (2022) and the Joint Public Digital Strategy (2022–2025). Several initiatives under these two strategies support the experimentation, use and upscaling of emerging technologies such as AI.

In 2019, Denmark also established an investment fund (2019–2022) to support the testing of AI in the public sector. The fund supported 40 signature projects to test AI within the healthcare, climate, and social and employment areas. In addition, the Finance Act of 2022 included a fund of EUR 19.2 million for the period 2022–2025 to accelerate the use of emerging technologies, such as AI, in the public sector.

A Common Danish Language Resource

As Danish is a language spoken in a small area, the Danish government has taken initiatives to improve Danish language technology (LT) in order to secure that new technology, such as AI, functions in Danish. The initiative 'A Common Danish Language Resource', which was launched in 2020, has established a free-to-use catalogue of publicly available language data. The catalogue allows developers to use existing knowledge and data to create and improve Danish LT that benefits citizens, authorities and businesses.

Regulatory Sandbox for Artificial Intelligence

The Danish Data Protection Agency (DPA) and the Agency for Digital Government have jointly established a regulatory sandbox for AI. There, both new and established companies, and authorities working with AI can test their use cases under supervised conditions. The purpose of the regulatory sandbox is to provide the necessary guidance to help companies and authorities make use of AI while staying compliant with the GDPR and EU AI Act. Insights from the sandbox will be shared in order to support compliant uptake of AI among Danish companies and authorities.

At first, the sandbox will only offer guidance in relation to the GDPR. Currently in its start-up phase, the regulatory sandbox for the GDPR will be open for the first round of applications in mid-2024.

Distributed Ledger Technologies

Regulatory Sandbox

The Danish Financial Supervisory Authority (DFSA) runs a regulatory sandbox where both new and established companies within the financial sector can test new business models and the use of new technologies in a safe environment. The purpose of the regulatory sandbox is, on the one hand, to provide the necessary guidance to help financial companies lever the opportunities offered by new technologies, to the benefit of both the participating company and the financial sector in general. On the other hand, the tests in the sandbox provide valuable insights on how to ensure an efficient and technology-neutral regulation for the future.

In 2022–2023, the DFSA completed a test with a company planning to use distributed ledger technology (DLT) in providing capital market infrastructure.



Big Data

No particular initiatives in this field have been reported to date.

Cloud & Edge Computing

Guidance on the Use of Cloud Services

In 2019, the Agency for Digital Government and the Centre for Cybersecurity released the 'Guidance on the Use of Cloud Services'. The guide highlights key areas, questions and considerations that any organisation should be aware of as part of the uptake of the cloud. It also lowers the barriers for using cloud technology, which is part of Denmark's National Strategy for AI and a series of other political strategies. The guide comprises four main sections:

- 1) An introduction to cloud services providing an understanding of the main characteristics of cloud infrastructure, the main service models (Infrastructure as a Service or IaaS, Platform as a Service or PaaS and Software as a Service or SaaS), as well as the differences between private clouds, shared clouds, public clouds and hybrid clouds;
- 2) A walkthrough of important organisational and business considerations to be taken into account when making decisions about migrating to the cloud;
- 3) An overview of legal considerations and requirements to be worked through when migrating to and using the cloud;
- 4) A focus on security and safety considerations to be taken into account prior to as well as after transitioning to the cloud.

The guide was last updated in July 2020. The Agency for Digital Government is currently evaluating the needs of public organisations and whether additional supporting measures should be taken.

Legal Framework for Collaboration on the National Digital Research Infrastructure

A legal framework has been established for collaboration on the national digital research infrastructure, including in the field of high-performance computing (HPC). As a collaboration with and between Danish universities, the Danish eInfrastructure Collaboration (DeiC) aims to ensure computing power, data storage and network infrastructure for Danish research and education. To that end, it is responsible for coordinating and facilitating the usage of the national HPC available for Danish researchers. Computers are operated and developed by universities, which then provide computing power for researchers independently of their institutional affiliation.

The national HPC landscape consists of five different types of supercomputers and a user interface. The fifth type is the European pre-exascale supercomputer LUMI. Abbreviation of Large Unified Modern Infrastructure, LUMI is located in the CSC – IT Center for Science Ltd's data centre in Kajaani (Finland) and is part of the European EuroHPC project. It is managed by a consortium of nine countries (Finland, Belgium, Czechia, Denmark, Estonia, Norway, Poland, Sweden and Switzerland). DeiC also coordinates the Danish participation in EuroHPC and Danish researchers' access to resources at LUMI.

Internet-of-Things

No particular initiatives in this field have been reported to date.

Quantum Computing

Strategy for National Collaboration on Digital Research Infrastructure 2019–2029

In 2019 the Danish Agency for Higher Education and Science published a [Strategy for National Collaboration on Digital Research Infrastructure](#), covering a 10-year period. The strategy draws attention to the importance of a well-developed digital infrastructure including HPC. It sets out a vision that researchers at Danish universities must have access to digital infrastructure including HPC, enabling world-class research and education. Regarding HPC in particular, the strategy lays out five targets for national cooperation: i) establishing a new common model for open access to national HPC facilities; ii) ensuring the operation and upgrade of existing national HPC resources;

iii) providing increased HPC resources; iv) strengthening and coordinating HPC competences in Denmark; and v) continuing strengthening Danish membership of the EuroHPC collaboration.



Legal Framework for Collaboration on the National Digital Research Infrastructure

A legal framework has been established for collaboration on the national digital research infrastructure, including in the field of HPC. Collaboration with and between Danish universities is called DeiC. The legal basis of DeiC was recently established by a new text annotation to the Finance Act of 2023, as well as by an executive order, which came into force on 1 January 2023. The most significant changes as a result of the new legal framework are that DeiC's Board gets more autonomy, with a clearer division of responsibilities between the Ministry of Higher Education and Science, and DeiC's Board.



Gigabit and Wireless High-speed Networks



Broadband Speed

Denmark has a good high-speed broadband coverage, also in rural areas. The broadband target set at political level, i.e. that all households and businesses shall have access to 100/30 Mbps, was confirmed in 2021, and a new target was agreed stating that 98% of households and businesses shall have access to infrastructure capable of delivering gigabit speed by 2025. In 2022, 96% of all households and businesses were covered with at minimum 100/30 Mbps and 91% were covered with gigabit speed. An ambitious commercial roll-out of high-speed fixed broadband is expected. Consequently, a recent forecast estimated that 99% of all households and businesses will be covered with fixed high-speed broadband in the mid-2020s. Furthermore, 98% of Denmark is estimated to be covered with 5G by one or more mobile operators

GovTech



GovTech Programme Denmark 2019–2020

The Danish Business Authority and the Agency for Digital Government established the (pilot) GovTech Programme Denmark in 2019 to strengthen public sector innovation and develop GovTech as a Danish position of strength. The aim of the programme was to increase cooperation between the public sector and tech companies, and thereby the application by the public sector of innovative technologies. More specifically, the programme sought to match selected challenges from the public sector with solutions or ideas from innovative tech companies, and actively supported this matchmaking process by facilitating market dialogue and offering guidance on procurement rules. The programme also focused, among other things, on the typical barriers experienced by SMEs participating in public-private innovation. The GovTech Programme was ended in 2020 after completing two rounds of matchmaking and the lessons learned fed into the development of the new National Centre for Public-Private Sector Innovation (CO-PI) which was established in 2022.

Others



Strategy for Denmark's Tech Diplomacy 2021–2023

In February 2021, the Danish government launched the [Strategy for Denmark's Tech Diplomacy 2021–2023](#). It consisted of three pillars that are central to future technological development and governance: (i) responsibility is key – the tech industry shall meet its societal responsibility and operate on a level playing field; (ii) democracy should be the premise of governance, also in a digital world – global digital governance shall build on democratic values and human rights; and (iii) security is central – technology shall support Denmark's safety and security.

In addition, Denmark has led the 'Tech for Democracy' flagship initiative, a multi-stakeholder push for protecting and promoting human rights and democratic values in an era of rapid technological development. The initiative has produced the Copenhagen Pledge on Tech for Democracy, with more than 200 signatories from governments, industry and civil society. It has also gathered twelve action coalitions working on concrete solutions to issues of the digital age.



White Paper: Towards a Better Social Contract with Tech Giants

In June 2021, the former Danish government published a [White Paper](#) with a proposal for debate and nine principles for a more responsible and fair society with regard to major tech companies. The White Paper aims to initiate a public debate as well as to formulate and implement Danish initiatives to address the business models of major tech companies and the platform economy with a view to ensuring that digitalisation provides the most fertile ground for Danish democracy, economy and culture.



7. Digital Public Administration Governance

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

National

Ministry of Digital Government and Gender Equality

As a result of the formation of a new government on 15 December 2022, the [Ministry of Digital Government and Gender Equality](#) was established. It coordinates the collective efforts to digitise Denmark, while also working towards equality for everyone in all aspects of society. In this context, the Ministry deals with the digitalisation of both the public sector and private businesses to ensure the best possible digital solutions that make it easier to be a Danish citizen or business owner. Furthermore, the Ministry follows the international digitalisation and equality agendas, and acts as the responsible government body for interoperability activities in Denmark.

Agency for Digital Government

As part of the Ministry of Digital Government and Gender Equality, the [Agency for Digital Government](#) (formerly known as Agency for Digitisation) is a catalyst for digital development in Denmark. The [Agency](#) gathers strategic, professional and technical competencies. One of its main roles is to coordinate public digitalisation, from concept to output. To that end, it facilitates and participates in different initiatives across the entire public sector and coordinates public digitalisation across the different levels of government.

In addition, the Agency acts as secretariat for three [steering committees](#) on Digital Infrastructure, Digital Communication, and Technology and Data. Different authorities are represented in the committees with the aim to ensure technical and functional interoperability as well as coherence within public sector digitalisation. They are therefore responsible for the public sector digital infrastructure.

Ministry of Finance

The [Ministry of Finance](#) provides the framework for good and efficient governance throughout the Danish government, including the use of digital means for providing public services. For more than a decade the vision has been that the public sector should improve procedures and methods to deliver public services of the best possible quality using digital solutions and modern technology, where possible. To this end, the Ministry of Finance develops and implements initiatives concerning public finance and digital administration, as well as public leadership to improve the efficiency and effectiveness of the public administration.

Agency for Public Finance and Management, Ministry of Finance

As part of the Ministry of Finance, the [Agency for Public Finance and Management](#) supports the Danish government in good and efficient governance. It offers advice and guidance on large-scale ICT projects and management of systems portfolios to Ministries and national agencies as well as State-funded self-governing institutions. In this context, the Agency is responsible for the development and maintenance of the national model for ICT projects and the national model for ICT systems portfolio management, both of which are stipulated by the common budgetary framework for the Danish government.

Agency for Governmental IT Services, Ministry of Finance

Also part of the Ministry of Finance, the [Agency for Governmental IT Services](#) (*Statens It*) is a shared service centre for the national government providing ICT services to the majority of Denmark's Ministries and national agencies. The Agency for Governmental IT Services aims to provide accessibility, stability, effectiveness and information security with a focus on delivering (i) a common central government platform for ICT usage; (ii) standardisation of generic

administrative systems; and (iii) effective outsourcing of operational contracts through standard framework procurements.

National ICT Council, Agency for Public Finance and Management

In 2011, the Danish government established the **National ICT Council** to optimise and professionalise the management of the Danish government's ICT projects and systems. The ICT Council comprises senior managers, primarily from the private sector, but also from semi-public and public IT-intensive organisations. All members have great experience with large-scale ICT projects or change management and offer solid and competent guidance to Ministries and national agencies on the management of their projects and systems portfolios. The National ICT Council is supported by the Agency for Public Finance and Management.

Ministry of Industry, Business and Financial Affairs

The **Ministry of Industry, Business and Financial Affairs** is responsible for the digital aspects of a number of policy areas which are important for the general business environment, including business regulation, intellectual property rights, competition and consumer policy, finance and shipping. The Ministry works to promote digitalisation within the business environment and in relation to public services for businesses in coordination with the Ministry of Digital Government and Gender Equality.

The **Danish Business Authority**, an agency under the Ministry, focusses on smart regulation, free movement and the Digital Agenda for Europe to reduce regulatory burdens and enhance growth in the EU. In particular, the Digital Agenda for Europe aims to promote a coherent digital economy in Europe.

Ministry of Climate, Energy and Utilities

The **Ministry of Climate, Energy and Utilities** is also responsible for the telecommunication policy, including roaming, competition regulation, and mobile and broadband penetration.

Data Ethics Council

In early 2019, the government created a **Data Ethics Council** to facilitate public debate about e.g. the use of technology, data and AI in both the public and private sectors. With the aim to reap the many advantages offered by the use of data, the Data Ethics Council seeks to support ethical considerations in the development and use of technology, e.g. citizens' fundamental rights, legal certainty and the fundamental values of society. The Council is composed of members from universities, trade unions and think tanks as well as representatives from the public and private sectors.

Agency for Data Supply and Infrastructure

In Denmark, the **Data Distributor** acts as a data hub for basic data and base registries. The Agency for Data Supply and Infrastructure is the authority in charge of the Data Distributor. However, a wide range of authorities collect and distribute basic data from different sources, which entails that many different authorities provide data to the Data Distributor. These include, but are not limited to, the **Agency for Data Supply and Infrastructure**, the **Danish Geodata Agency**, the **Danish Business Authority**, the **Danish Agency for Digital Government** and the **Danish Tax Authority**.

National Audit Office of Denmark

The **National Audit Office of Denmark** (*Rigsrevisionen*) is a public institution whose primary task is to audit the State accounts and examine whether State funds are administered in accordance with the decisions of the Parliament. The Office carries out both financial and performance audit in accordance with the principles of 'good public auditing practice'.

Danish Data Protection Agency

The **Danish Data Protection Agency** exercises surveillance over the processing of data to which the **Act on the Processing of Personal Data** applies. It mainly deals with specific cases based on inquiries from public authorities or private individuals or takes up cases on its own. The Danish DPA is also responsible for supervising data protection practices in the two subnational levels of governance in Denmark.



Subnational (Federal, Regional and Local)

Local Government Denmark

Local Government Denmark is the national association of local authorities (municipalities) represented in the Steering Committee for Joint Government Cooperation (STS) to report relevant information from the central government to the local authorities. Its mission is to safeguard the common interests of local governments, assist municipalities with consultancy services and ensure that local governments are provided with relevant up-to-date information.

Danish Regions

Danish Regions is the national association of Regional Councils. It is represented in the STS alongside Local Government Denmark. Danish Regions represents the five regions negotiating with the central government and ensures that regional authorities are provided with relevant up-to-date information.

Municipalities and Regions

Municipalities and regions are responsible for the vast majority of community-centred service delivery and thus play a central role in the public sector. The annual budget agreements between the central government and the organisations representing subnational government, i.e. Local Government Denmark and Danish Regions, are crucial for the government's cooperation with municipalities and regions.

The 98 municipalities are responsible for carrying out most tasks related to citizen service delivery, including social services, childcare, elderly care, healthcare, employment, culture, environment and planning. The five regions are mainly responsible for the health sector, e.g. hospitals. Municipal and regional bodies implement the individual action plans previously articulated at cross-governmental and departmental level and by domain area, in compliance with the overall national eGovernment Strategy.

Subnational Interoperability Coordination

In Denmark, one of the overall objectives of digitalisation is to facilitate cooperation between the three levels of government. Thus, Local Government Denmark and Danish Regions are also involved in several of the nationally operated interoperability coordination initiatives, e.g. all the steering committees created as part of the Digital Strategy and the Digitisation Pact. The Committee for Architecture and Standards, whose aim is to facilitate digital coherence in the public sector at several levels, usually deals with questions and issues related to interoperability (for more information on the IT architecture, read [here](#)).

Ankestyrelsen

Since April 2017, *Ankestyrelsen*, a Danish agency, has been responsible for auditing the two subnational levels of governance in Denmark

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

Please note that, in most cases, the EU rights described in Your Europe apply to all EU member countries plus Iceland, Liechtenstein and Norway, and sometimes to Switzerland. Information on Your Europe is provided by the relevant departments of the European Commission and complemented by content provided by the authorities of every country it covers. 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.

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).

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 Digital Services (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from the Ministry of Digital Government and Gender Equality.



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