



European  
Commission



# Digital Public Administration factsheet 2020

Denmark

## Table of Contents

1	Country Profile.....	4
2	Digital Public Administration Highlights .....	9
3	Digital Public Administration Political Communications .....	11
4	Digital Public Administration Legislation .....	18
5	Digital Public Administration Governance .....	23
6	Digital Public Administration Infrastructure.....	31
7	Cross-border Digital Public Administration Services for Citizens and Businesses ..	40



1

Country  
Profile

# 1 Country Profile

## 1.1 Basic data

**Population:** 5 806 081 inhabitants (2019)

**GDP at market prices:** 310 937.1 million Euros (2019)

**GDP per inhabitant in PPS (Purchasing Power Standard EU 27=100):** 129 (2019)

**GDP growth rate:** 2.4 % (2019)

**Inflation rate:** 0.7 % (2019)

**Unemployment rate:** 5% (2019)

**General government gross debt (Percentage of GDP):** 33.2 % (2019)

**General government deficit/surplus (Percentage of GDP):** 3.7 % (2019)

**Area:** 42 924 km<sup>2</sup>

**Capital city:** Copenhagen

**Official EU language:** Danish

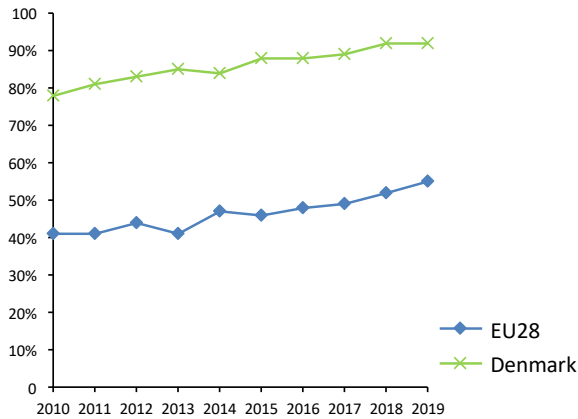
**Currency:** DKK

Source: Eurostat (Last update: 26 June 2020)

## 1.2 Digital Public Administration Indicators

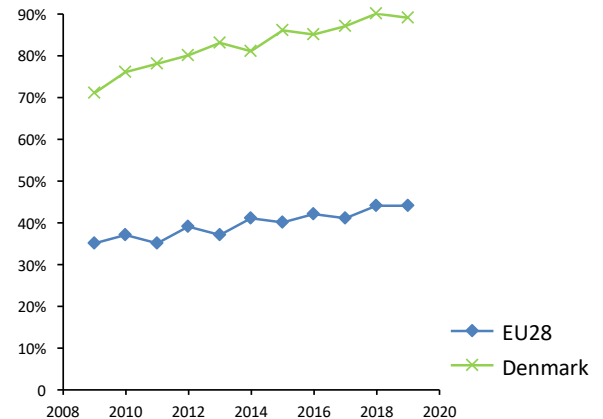
The following graphs present data for the latest Digital Public Administration Indicators for Denmark compared to the EU average. Statistical indicators in this section reflect those of Eurostat at the time the Edition is being prepared.

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



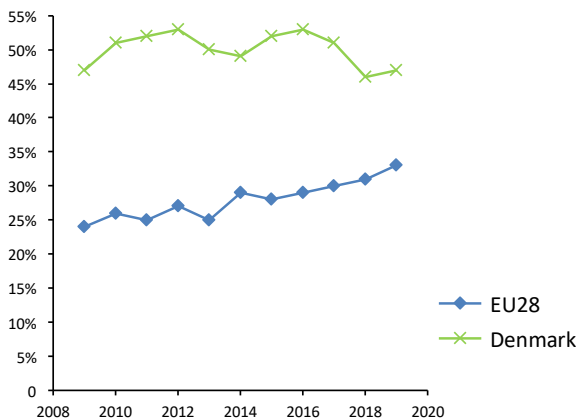
Source: Eurostat Information Society Indicators

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



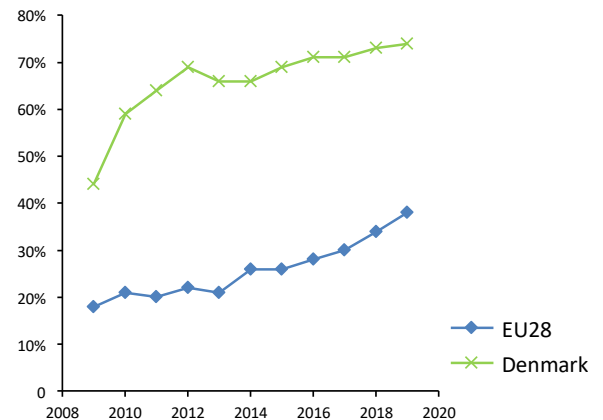
Source: Eurostat Information Society Indicators

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



Source: Eurostat Information Society Indicators

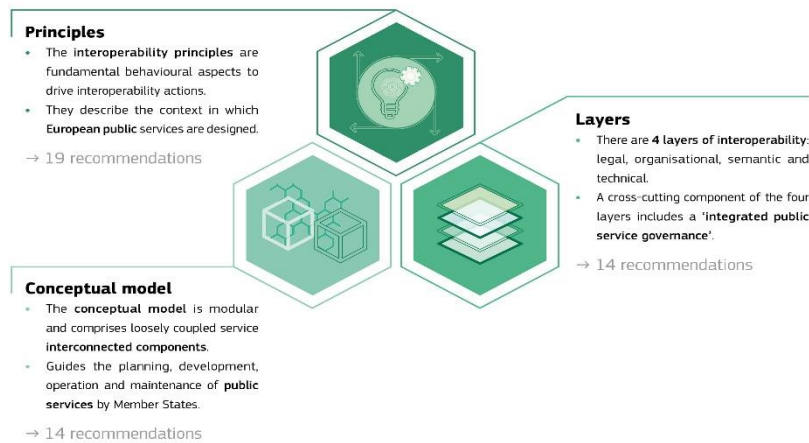
Percentage of individuals using the internet for sending filled forms to public authorities in Denmark



Source: Eurostat Information Society Indicators

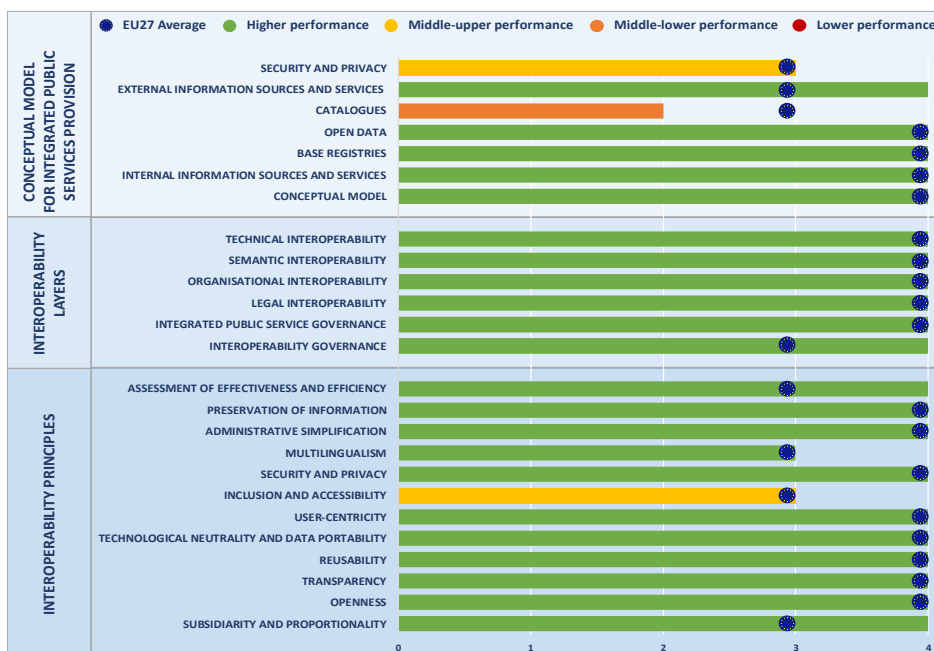
### 1.3 Interoperability State of Play

In 2017, the European Commission published the European Interoperability Framework (EIF) to give specific guidance on how to set up interoperable digital public services through a set of 47 recommendations. The picture below represents the three pillars of the EIF around which the EIF Monitoring Mechanism was built to evaluate the level of implementation of the EIF within the Member States. It is based on a set of 68 Key Performance Indicators (KPIs) clustered within the three main pillars of the EIF (Principles, Layers and Conceptual model), outlined below.



Source: European Interoperability Framework Monitoring Mechanism 2019

For each of the three pillars, a different scoreboard was created to breakdown the results into their main components (i.e. the 12 principles of interoperability, the interoperability layers and the components of the conceptual model). The components are evaluated on a scale from one to four, where one means a lower level of implementation, while 4 means a higher level of implementation. The graph below shows the result of the first EIF Monitoring Mechanism data collection for Denmark in 2019. It is possible to notice an overall good performance of the country, with particularly positive results within the first and second scoreboard (interoperability principles and layers). The main area of improvement is related to the creation of catalogues of public services, public data, and interoperability solutions within the third scoreboard.



Source: European Interoperability Framework Monitoring Mechanism 2019

## 1.4 eGovernment State of Play

The graph below is the result of the latest eGovernment Benchmark report, which evaluates the priority areas of the eGovernment Action Plan 2016-2020, based on specific indicators. These indicators are clustered within four main top-level benchmarks:

- **User Centricity** – indicates the extent to which a service is provided online, its mobile friendliness and usability of the service (in terms of available online support and feedback mechanisms).
- **Transparency** – indicates the extent to which governments are transparent about (i) the process of service delivery, (ii) the responsibilities and performance of public organisations and (iii) the personal data processed in public services.
- **Cross-Border Mobility** – indicates the extent to which users of public services from another European country can use the online services.
- **Key Enablers** – indicates the extent to which technical and organisational pre-conditions for eGovernment service provision are in place, such as electronic identification and authentic sources.

The 2020 report presents the biennial results, achieved over the past two years of measurement of all eight life events used to measure the above-mentioned top-level benchmarks. More specifically, these life events are divided between six 'Citizen life events' (Losing and finding a job, Studying, Family life, all measured in 2012, 2014, 2016 and 2018, and Starting a small claim procedure, Moving, Owning a car, all measured in 2013, 2015, 2017 and 2019) and two 'Business life events' (Business start-up, measured in 2012, 2014, 2016 and 2018, and Regular business operations, measured in 2013, 2015, 2017 and 2019).

eGovernment performance across policy priorities			
		EU27+ average [%; 2018-2019]	Country average [%; 2018-2019] (growth since 2016-2017)
USER CENTRICITY	Overall scores	86.5	97 (+4) •
	Online availability	86.8	99 (+4) •
	Usability	90.5	95 (+3) •
	Mobile friendliness	76.3	94 (+5) •
TRANSPARENCY	Overall scores	65.6	75 (+8) •
	Service delivery	57.8	73 (+10) •
	Public organisations	74.4	64 (+3) •
	Personal data	64.8	88 (+10) •
CITIZEN CROSS BORDER MOBILITY	Overall scores	50.8	65 (+7) •
	Online availability	62.3	73 (0) •
	Usability	65.0	84 (0) •
	eID	9.3	25 (+25) •
BUSINESS CROSS BORDER MOBILITY	Overall scores	67.0	84 (0) •
	Online availability	75.5	100 (0) •
	Usability	75.5	84 (0) •
	eID	36.0	50 (0) •
	eDocuments	51.0	50 (0) •
KEY ENABLERS	Overall scores	61.4	91 (+4) •
	eID	57.4	96 (+12) •
	eDocuments	68.4	96 (+5) •
	Authentic sources	56.9	69 (-2) •
	Digital post	67.3	100 (0) •

Source: eGovernment Benchmark Report 2020 Country Factsheet



2

Digital Public  
Administration  
Highlights



## 2 Digital Public Administration Highlights

### Digital Public Administration Political Communications

Digitalisation of the Danish public sector is based on close and binding cooperation between the government, the five Danish regions represented by [Danish Regions](#) and the 98 municipalities represented by [Local Government Denmark \(LGDK\)](#). Accordingly, the [Digital Strategy \(2016-2020\)](#) is an agreement between all three parties. The strategic digital initiatives make it possible for the public sector to make joint investments in areas which are particularly complex and in which there are inter-dependencies across different authorities and sectors.

Furthermore, Denmark has published a variety of topic-specific strategic political communications, e.g. within health services, security issues, public ICT management, and emerging technologies.

### Digital Public Administration Legislation

The Danish legislation covers many areas related to public digitalisation, e.g. access to public information, data protection, spatial information, business promotion, and digital communication. Relevant legislation constitutes a mix of nationally initiated acts and legislation passed as a response to EU regulation.

Furthermore, in 2018, Denmark made it a strong priority for legislation to be “[Digital-ready](#)”. The [Danish Agency for Digitisation](#) screens the Danish legislative programme for digital implementation impacts. The agency has been consulted in the drafting of more than 200 legislative proposals since 2018.

### Digital Public Administration Governance

By agreeing to the “[Digitisation Pact](#)” in the spring of 2019, the government, LGDK and Danish Regions committed to continued cooperation on new and prioritised digitalisation initiatives. Among these is working to apply AI-solutions to the public sector in an ethically sound way.

The parties have recently adopted a new model for the governance of public sector digitalisation with fewer administrative levels, which reduces complexity, streamlines the decision-making process and allows for ongoing prioritisation of new initiatives. Moreover, in the spring of 2020, the parties will conduct negotiations on renewed cooperation on public sector digitalisation in the coming years.

### Digital Public Administration Infrastructure

The Danish digital infrastructure is developed with the overall objective of making public digital services easy, fast and secure. The infrastructure constitutes a number of digital services for citizens and businesses.

Some of the largest infrastructure elements are the eID solution NemID (which will be replaced by MitID in 2021), the digital communication system Digital Post, and the citizen portal borger.dk. A recent focus within these solutions is on improving the user experience, e.g. by developing user journeys and personalised overviews.

In addition, infrastructural development includes a continuous focus on coordination of supporting functions such as data sharing, data protection, improvements of base registries etc.



3

Digital Public  
Administration  
Political  
Communications

## 3 Digital Public Administration Political Communications

### 3.1 Specific political communications on digital public administration

#### Strategy for Denmark's Digital Growth

The Strategy for Denmark's Digital Growth contains clear goals and initiatives for the digital transformation of Danish commerce, including:

- digital hub for stronger digital growth;
- digital enhancement of SMEs;
- digital skills for all;
- data as driver of growth in trade and industry;
- agile regulation of trade and industry; and
- strengthened cybersecurity in companies.

#### Guidelines on How to Make Legislation Ready for Digitisation

A broad political agreement was reached in January 2018, requiring all legislation proposed after 1 July 2018 to comply with seven principles for digital-ready legislation. In particular, the Guidelines on How to Make Legislation Ready for Digitisation include the following principles:

- simple and distinct rules: legislation should be simple and distinct, thus contributing to a more uniform and digital administration;
- digital communication: legislation should underpin digital communication with citizens and corporations;
- automated digital case processing: legislation should underpin a fully or partly automated digital case processing while still taking into account the legal rights of citizens and companies;
- consistency across authorities: concepts should be uniform and data should be re-used;
- safe and secure data management: data security should be prioritised;
- use of public IT-infrastructure: public IT-solutions and standards should be applied; and
- prevention of fraud and errors: legislation must be designed to support the use of IT for control purposes.

Additionally, all proposed legislation must be assessed for potential implementation impacts in terms of, inter alia, project risk, organisational changes, data protection and citizens. The findings must be documented in the legislative proposal and mitigating measures should be described.

A Secretariat was established within the Ministry of Finance in February 2018 to drive the process and facilitate the sharing of best practices among departments. More in detail, the Secretariat screens a draft of the government's legislative programme to help identify legislation that needs further work to become digital-ready. To further support this work, departments are required to consult the Secretariat at an early stage of the preparatory legislative work concerning legislative proposals that are expected to have implementation impacts. Since 2018 the Secretariat has been consulted in the drafting of more than 200 legislative proposals. In addition, to facilitate the sharing of best practices the Secretariat regularly identifies legislative proposals featuring exemplary compliance with the principles for digital-ready legislation. Summary case descriptions

are produced for these legislative proposals to help illustrate how the principles work in practice.

In 2020 the first annual report was published, showing a broad level of knowledge on how to make legislation digital-ready among government departments. The report also identifies a number of barriers for fully realising the potential for digital-ready legislation.

As a result of this work, a course in digital-ready legislation and policymaking is expected to be made generally available to legislative drafters and policy officers in government departments by early 2021.

### Public Sector Digitisation Strategy: a Stronger and More Secure Digital Denmark (2016–2020)

The **Common Public Sector Digitisation Strategy (2016–2020)** (also known as Digital Strategy) was agreed upon by the Danish government, **Local Government Denmark** and Danish Regions, and entered into force on 12 May 2016. The goal of the Strategy is to help shape the digital Denmark of the future and ensure that the public sector is prepared to seize the technological opportunities of tomorrow to create benefits and growth, and improve its efficiency. The Strategy covers numerous themes related to the digitisation of the public sector, such as automation of public administrative procedures, better user experience for citizens and businesses, digital welfare, data sharing, and others.

At a general level, the Strategy sets three main goals:

- to create more cohesive and efficient public services with digital, high-quality welfare solutions;
- to make it easier and more attractive to start and run a business in Denmark; and
- to ensure that all developments related to the Strategy take into account data security for citizens and businesses to make sure that Danes continue having high confidence and trust in digital solutions.

To reach the above-mentioned goals, the Digital Strategy 2016–2020 contains 33 specific initiatives laying the foundation for the digitisation of the public sector up to and including 2020.

As part of the Digital Strategy 2016–2020, in June 2017 the government published a **White Paper on a Common Public-Sector Digital Architecture**. The architecture must ensure cross-organisational processes and efficient sharing of data across the public sector and between the public and private sectors. The goal is that citizens and businesses experience services that are efficient, coherent, transparent and targeted at the individuals' needs, and also provide good conditions for innovation, growth and development in the society. Further information is available on <https://arkitektur.digst.dk/>.

### Common Municipal Digitisation Strategy (2016–2020)

The **Common Municipal Digitisation Strategy (2016–2020)** supplements the national public sector Digital Strategy (2016–2020). The Strategy builds on the vision that a successfully decentralised public sector can be achieved through joint municipal efforts for a coherent digitisation. Together with the Strategy, an Action Plan was launched setting the direction for inter-municipal collaboration in the sphere of digitisation. The Action Plan consists of seven focus areas, with each area containing specific initiatives which will help to achieve the common vision of the Strategy.

## Strategy for ICT Management in Central Government

A [Strategy for ICT Management in Central Government](#) was launched on 21 November 2017, aiming to improve the operational management of ICT systems. The 13 concrete initiatives forming the framework for a better management of ICT systems address issues such as the mandatory compliance to the central government's ICT system management model and the periodic review by the National ICT Council of each ministry's ICT system management.

## 3.2 Interoperability

### Common Framework for a Public-Sector Digital Architecture (Danish NIF)

Citizens and businesses should experience services that are efficient, coherent, transparent and targeted to their needs. To achieve this, the Danish local, regional and central governments have agreed on a [Common Framework for a Federal Digital Architecture \(FDA\)](#) that focuses on data sharing and cross-organisational processes. In particular, the Framework includes general architecture principles, rules and guidelines on architecture description and communication.

The Framework is supported by skill-development, architecture guidance, and project reviews. The Federal Digital Architecture includes reference architectures on common issues such as sharing of data and documents, coherent user journeys in relation to digital self-services, user-centric overview of data relevant to each citizen or enterprise (e.g. in relation to cases, payments, debt, appointments and time limits), and user and rights management.

The general Framework and the various reference architectures are also supported by more detailed specifications, guidelines, communications, catalogues and courses, e.g. common rules for concept and data modelling, and a common catalogue of concepts and data models to be used in digital solutions across all tiers of government.

### Common Rules for Concept and Data Modelling

Importantly, authorities and companies need to be able to retrieve, understand and use data originating from other authorities. Therefore, the common Public-Sector Digital Architecture recommends to apply the Common Rules for Concept and Data Modelling to document data. The [rules](#) ensure that concepts and data are described and documented thoroughly, correctly and consistently and are based on national and international methods, standards and experience.

## 3.3 Key enablers

### 3.3.1 Access to public information

#### Open Government Partnership Action Plan (2019–2021)

As part of the [Open Government Partnership](#), an international collaboration, the Danish government drafted a fourth [National Action Plan \(2019–2021\)](#) containing seven initiatives from various parts of the Danish public sector.

The Action Plan aims to strengthen trust and transparency in public authorities, especially in public digitisation.

#### Basic Data Programme

Established in 2012 and completed in 2019, the [Basic Data Programme](#) is a driver for growth and efficiency. The initial goal of the programme was to open and create easy-

to-access high-quality basic data, through the following vision: 'The Basic Data Programme ensures correctness of the basic data, which is updated in one place and used by all efficiently, and safely distributed to authorities and companies. The Basic Data Programme thereby contributes to efficiency, modernisation and better governance in the public sector as well as increased growth and productivity in the private sector'.

### Open Data Directive

Denmark is currently implementing the EU Directive on open data and the re-use of public sector information (Open Data Directive, 2019) by incorporating it into the existing landscape of open data initiatives and revising legal regulations. Among other things, the Directive focusses on the quality and openness of high value datasets held by the public sector. The purpose is to exploit the potential of public sector information for the European economy and society, for instance by increasing the supply of valuable public data for re-use. Denmark has a long tradition of working with high value basic data, such as public register data, in the central, regional and local governments.

### 3.3.2 eID and Trust Services

#### NOBID Project

Denmark is a member of the Nordic-Baltic Cooperation on Digital Identities (NOBID), a project governed by the Nordic Council of Ministers supporting the implementation and utilisation of the national eID infrastructure. In particular, the stated goal of the **NOBID Project** is to secure borderless access for citizens and businesses using their own national eIDs to digital services throughout the Nordic-Baltic region. To that end, both technical and legal barriers were identified, and requirements were set for enabling interoperability both nationally and in a Nordic-Baltic context.

The NOBID Project is officially scheduled to end in 2020. However, as the Project has proven valuable for testing cross-border digital services, an extension until 2024 under the Cross-Border Digital Service (CBDS) Programme is currently being considered. The CBDS Programme is also governed by the Nordic Council of Ministers and focuses on cross-border digital services within the Nordic-Baltic region. The common objective of NOBID and the future CBDS Programme is to establish a common Nordic-Baltic platform for the implementation of parts of the eIDAS Regulation and the Single Digital Gateway Regulation.

#### Danish Trust Service Providers

Currently, only one trust service is listed on the **Danish Trust Service List**. An initiative aimed at increasing the number of trust services listed is in the planning phase. The government has decided to establish an accreditation scheme allowing Danish companies to gain accreditation as compliance assessment bodies. That way, barriers will be lowered for Danish trust service providers aiming at qualifying for being listed on the national Trust Service List.

### 3.3.3 Security aspects

#### National Strategy for Cyber and Information Security

The **National Strategy for Cyber and Information Security 2018–2021** sets the framework for cyber and information security in the Danish government. With 25 concrete initiatives, the Strategy contributes to strengthening government security, improving the competencies of the population, and ensuring far more coordinated efforts and initiatives across authorities. Initiatives with a specific focus on digital government include the introduction of the mandatory technical security requirements that went into force on 1 January 2020, as well as a continuous focus on ensuring the

implementation of ISO 27001 standard for information security management across all government authorities.

### 3.3.4 Interconnection of base registries

#### Basic Data Programme

The **Basic Data Programme** was evaluated in the spring of 2020 at its completion and the main findings will be communicated soon. In any case, one of the main findings is that Denmark as a united public sector has succeeded in realising an ambitious vision for better basic data for everyone. That success is due to a strong cooperation across the public sector.

### 3.3.5 eProcurement

#### eProcurement initiatives

Expanding upon the conclusions and recommendations from the Danish eProcurement analysis project in 2017, several initiatives related to digitising procurement procedures in the public sector are undergoing implementation. The focus of these initiatives is the standardisation of electronic procurement documents related particularly to eCatalogues and eOrders, and their mandatory use in public eProcurement by 2022.

## 3.4 Domain-specific political communications

### A Coherent and Trustworthy Health Network for All - Digital Health Strategy 2018–2022

The aim of the **Digital Health Strategy** is to allow patients in Denmark to experience the health system as a coherent and trustworthy health network for all which is both inherently digital and personal.

#### Strategy for Digital Welfare (2013–2020)

The Danish government, Local Government Denmark and Danish Regions jointly launched a common public sector **Strategy for Digital Welfare 2013–2020**.

The aim of the Strategy is to accelerate through concrete initiatives the use of ICT and welfare technology in frontline public service delivery, specifically within healthcare, care for the elderly, social services, and education. Also, the Strategy aims to ensure that the public sector continually acquires new knowledge of the effects of digital technologies. Thus, the Strategy includes a plan for testing promising technologies to determine whether it would be advantageous to use them throughout Denmark.

Overall, the Strategy aims to modernise, rethink, and make more effective and efficient the production and provision of public welfare services. The goal is to maintain or increase the quality of public welfare services while reducing public expenditure.

The Strategy is now an integrated part of the Common Public Sector Digitisation Strategy 2016–2020.

#### Technology Pact

In April 2018, the Danish government launched the **Technology Pact**, with more than 80 partners among companies, educational and research institutions, businesses, private companies, non-profit organisations, and private foundations. With the Pact, the Danish government committed to a joint mission to ensure that more Danes obtain technical and digital skills, as Danish companies are increasingly demanding employees with precisely those skills.

## 3.5 Emerging technologies

### National Strategy for Artificial Intelligence

Denmark's recent efforts in the area of emerging technologies focus on artificial intelligence (AI). The **National Strategy for Artificial Intelligence** was launched on 14 March 2019, aiming to promote the responsible use of artificial intelligence within both the public and private sectors, as well as to strengthen research and development of AI solutions. Furthermore, the Strategy aims to strengthen the use of artificial intelligence within **four priority areas**, i.e. healthcare, energy and utilities, agriculture, and transport. In particular, the Strategy aims to reach these goals through 20 initiatives covering four focus areas:

- a responsible foundation for artificial intelligence;
- more and better data;
- strong competences and new knowledge; and
- increased investment in artificial intelligence.

Noteworthy initiatives are the presentation of six ethical principles for the use of artificial intelligence, a better access to public data as well as the development of a common Danish language resource to support and accelerate the development of language-technology solutions in Danish.

With the Strategy, Denmark also established a new investment fund to support the testing, implementing and scaling of new technologies, and in particular artificial intelligence in the public sector. The fund supports 15 signature projects to test artificial intelligence within healthcare, the social and employment areas, and the cross-sector case processing. In addition, the fund is planned to launch additional projects annually, e.g. in the welfare, climate and administration areas.

The Strategy will be reviewed and, if need be, adjusted on an annual basis.



A person in a blue suit is standing at a desk. On the desk, there is a laptop, a stack of books, and a scale of justice. The person is holding a book and looking at it. The background is a blurred office setting.

# 4

## Digital Public Administration Legislation

## 4 Digital Public Administration Legislation

### 4.1 Specific legislation on digital public administration

#### Standing Committee for the Legal Framework on eGovernment

As part of the Digital Strategy 2016-2020, presented by the former government, a Standing Committee was set up to create a clear legal framework for eGovernment. The work is ongoing and divided into different sections.

### 4.2 Interoperability

#### Legislative Focus on Interoperability

Most Danish digitisation initiatives are developed with a focus on ensuring interoperability across different solutions. This is reflected in most of the legislation described in this chapter, which covers cross-sector solutions (e.g. as described in sections 4.3.2 and 4.3.4). An example is offered by the legislation providing guidelines for the use of the Danish cross-sectional eID solution NemID (Act no 439 of 08/05/2018 and Act no 899 of 21/06 2018).

### 4.3 Key enablers

#### 4.3.1 Access to public information

##### 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 new Act applies to central, regional and municipal authorities and, as opposed to the previous act, also to companies in which the government has a substantial ownership interest, companies making decisions on behalf of the government, Local Government Denmark (KL, i.e. the association of municipalities) and Danish Regions (*Danske Regioner*, i.e. the association of 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 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.

Non-disclosure, however, is allowed for Courts or legislators: all documents produced by these entities are exempted from the provisions of the Act. The same applies to documents relating to the security of the State, the defence of the Realm, the protection of foreign policy, law enforcement, taxation and the public financial interests. In case of non-disclosure, complaints can be lodged with the Parliamentary Ombudsman, who can issue non-binding opinions recommending that documents be released.

##### Act Amending the Law on the Re-use of Public Sector Information

The Act Amending the Law on the Re-use of Public Sector Information of 2 June 2014 implements Directive 37/2013/EU of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information. As a result, Denmark notified full transposition of the Directive. The Act was then reviewed as part of the upcoming implementation of Directive 2019/1024 on open data and the re-use of public sector information, amending Directive 37/2013/EU.

### 4.3.2 eID and Trust Services

#### Electronic identification and trust services for electronic transactions

Denmark is compliant with Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation). The supporting legislation came into effect on 1 July 2016 with the purpose of setting down mandates and obligations in the field.

To provide guidelines for citizens and authorities with regard to issuance, revocation and suspension, both 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 on the Issuance and Suspension of the NemID with Public Digital Signature](#) were enforced in 2018.

In addition, [Act No 617 of 8 June 2016](#) defined the Agency for Digitisation under the Ministry of Finance as the Danish Supervisory Body and set out the rules for Danish trust service providers with reference to existing national legislation.

Finally, Denmark started the process of notifying the Danish eID, the [NemID](#), in August 2019, in accordance with Article 9 of the eIDAS Regulation. The process was completed in January 2020.

### 4.3.3 Security aspects

#### Act on the Processing of Personal Data

The [Act on the Processing of Personal Data](#) entered into force on 1 July 2000 to implement [Directive 95/46/EC](#) on the protection of individuals with regard to the processing of personal data and on the free movement of such data, allowing individuals to access their records held by public and private bodies. The Act is enforced by the [Datatilsynet](#) (Data Protection Agency) and was amended in 2007. Other laws regulating the processing of personal information by the public sector include the [Public Administration Act](#) of 1985, the [Publicity and Freedom of Information Act](#) of 1985, the [Public Records Act](#) of 1992 and the [National Registers 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.

#### Regulation on General Data Protection

Denmark is currently preparing for the entry into force of the [General Data Protection Regulation](#), with the publication of a number of [national guidelines](#) and the guidelines from the Article 29 Group.

#### Act on Data Protection

The main legal framework for public data protection in Denmark is the [Act on Data Protection](#), enforced by the Data Protection Agency (DPA), which is responsible for the supervision of all processing operations covered by the Act on the Processing of Personal Data. If the DPA becomes aware that a data controller is in breach of the Act, the DPA can state their legal opinion and impose fines accordingly. A person who violates the Act is liable to a prison sentence of up to four months. In addition, compensation can be imposed for any damage caused by the processing of personal data in violation of the Act.

### 4.3.4 Interconnection of base registries

#### Act on the Central Business Register

This [Act on the Central Business Register](#) states that the [Central Business Register](#) (i) is the body which is responsible for the maintenance and development of the base registry;

(ii) cooperates with customs, tax and statistics authorities for the registration and maintenance of certain basic data and activities; and (iii) is obliged to 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);
- a unique numbering for legal entities; and
- basic data available to public authorities and institutions, as well as private ones.

### Act on Building and Dwelling Registration

The [Act on Building and Dwelling Registration](#) establishes the Register and stipulates (i) the responsible authority; (ii) how the maintenance and operational costs are allocated; and (iii) the aim of the Register, which is to:

- record basic data on construction and housing as well as plant and equipment; and
- record a unique registration for all buildings, residential and commercial units as well as recorded technical equipment.

### Act on Subdivision

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.

### Act on Spatial Information

The [Act on Spatial Information](#) contains provisions about infrastructure for spatial information. The infrastructure also includes registers contributing to the combination of data across authorities, thereby increasing the usefulness of data. The registers covered by the Act include the Register of Owners of Real Property and the Register of Property Location.

## 4.3.5 eProcurement

### 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 implemented in 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 30/11/2016), under the authority of Section 194 of the [Public Procurement Act](#) (No 1564 of 15/12/2015). All communication exchanges in connection with a public procurement procedure within the scope of Title 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 15/12/2015) must be made using electronic means of communication, according to Section 2 of the [Executive Order](#) (No 1572), with the exception of the specific situations mentioned in Article 22(1)(a)-(d) of [Directive 2014/24/EU](#).

### Act on Electronic Invoicing

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

Denmark has implemented and transposed [Directive 2014/55/EU](#) on electronic invoicing in public procurement in accordance with the directive.

## 4.4 Domain-specific legislation

### Act on Business Promotion

Article 11 of the [Act on Business Promotion](#) specifies that the Danish Business Authority will lead a digital platform for business promotion and development. The purpose of the platform is to provide information and services to start-ups and businesses in Denmark. Other authorities are obliged to deliver relevant content to the platform. The platform, called *Virksomhedsguiden*, 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 implements [Directive 2000/31/EC](#) of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce in the Internal Market.

### Mandatory Digital Self-Service and Mandatory Digital Post

The Danish government wants at least 80% of all written communication between citizens and businesses, and the public sector to be done through the digital channel only.

As part of the implementation of the Common eGovernment Strategy 2011–2015 (by the central, regional and local governments), the Danish Parliament passed in June 2012 the first piece of legislation on Digital Self-Service, making the first set of [Digital Self-Service solutions](#) mandatory. Since then, additional legislation has been passed to make a second and third set of solutions mandatory. A fourth and final set of Digital Self-Service solutions became mandatory in December 2015, resulting in a total of more than 100 different service areas mandatorily to be used online only.

The Danish Parliament also passed legislation on 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. The Act states that citizens and businesses must have a digital letter box for receiving from public authorities digital messages, letters, documents, etc., rather than paper-based letters by traditional post. The Act also provides that digital messages transmitted through the Digital Post solution have equal status and effect as paper-based letters, messages, documents, etc. The Act covers all citizens over the age of 15 years and all businesses.

### Act on Web Accessibility

To implement [Directive 2016/2102](#), Denmark has adopted the [Act on Web Accessibility](#) (No 692 of 08/06/2018), describing requirements for public authorities' websites and mobile applications.

## 4.5 Emerging technologies

No legislation has been adopted in this field to date.

A close-up photograph of a classical stone column, showing its base and several fluted sections. The column is made of light-colored stone and is set against a blurred background of other similar columns. A green rectangular overlay is positioned on the right side of the image, containing the number '5' and the text 'Digital Public Administration Governance'.

5

Digital Public  
Administration  
Governance

## 5 Digital Public Administration Governance

### 5.1 National

#### 5.1.1 Policy

##### Ministry of Finance

The **Ministry of Finance** is the main initiator of strategies and policies related to public digitisation in Denmark. Strategies are developed according to the vision that the public sector should improve work procedures and methods to deliver the best possible quality of services. Thus, the Ministry of Finance develops initiatives concerning administration, public leadership and digitisation to improve the efficiency of the public administration.



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**Source:** <http://uk.fm.dk/>

##### Agency for Digitisation, Ministry of Finance

The **Agency for Digitisation**, under the Ministry of Finance, is a catalyst for digital development in Denmark. The Agency was set up in November 2011, after the abolishment of the former National IT and Telecom Agency and the transfer of responsibilities regarding public sector digitisation from the former Agency for Governmental Management. With the creation of the Agency for Digitisation, the government further consolidated and strengthened the efficiency and effectiveness of the public sector enabled by the ICT. The Agency's main responsibilities are to implement the government's political vision in the digital era, develop strategies concerning digitisation as well as develop and manage the Danish digital infrastructure.



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##### 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, the financial sector and shipping. The Ministry works to promote digitisation within the business environment and in relation to public services for businesses in coordination with the Ministry of Finance. The [Danish Business Authority](#), an agency under the Ministry, is responsible for the Danish Business Portal.



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## 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.

### 5.1.2 Coordination

#### Agency for Digitisation, Ministry of Finance

The [Agency for Digitisation](#) gathers strong strategic, professional and technical competences within one single organisation. One of its main roles is to coordinate public digitisation from concept to output. The Agency facilitates and participates in different initiatives across the entire public sector. For example, the Agency is responsible (together with the Centre for Cybersecurity - CFCS) for the National Steering Committee for Cyber and Information Security. In addition, the Agency coordinates public digitisation across the different levels of governance.

#### Agency for Governmental IT Services, Ministry of Finance

The [Agency for Governmental IT Services](#) (*Statens It*) was established on 1 January 2010 as a shared service centre for the central government providing basic ICT services by merging eight ministries' operational ICT organisations. In the period 2010–2014 a number of projects harmonised and standardised different ICT platforms into one common operational platform with the aim of achieving higher quality and lower costs through economies of scale. More in detail, the Agency aims to provide accessibility, stability, effectiveness, and information security with a sharp focus on delivering: (i) the central government ICT workplace as common central government basic platform for ICT usage; (ii) an operational ICT infrastructure which can be adapted to different tasks; (iii) standardisation of generic administrative systems through the creation of common platforms; and (iv) effective outsourcing of operational contracts through standard framework procurements.





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**Source:** <http://www.statens-it.dk/>

### 5.1.3 Implementation

#### Agency for Digitisation, Ministry of Finance

The **Ministry of Finance** develops and implements initiatives concerning administration, public leadership and digitisation to improve the efficiency of the public administration. In this context, the Agency for Digitisation is responsible for public sector digitisation.

#### Government Departments and Agencies

Individual government departments and agencies implement digital initiatives falling within their respective areas of competence, as well as individual action plans decided at cross-governmental and departmental levels by domain area.

### 5.1.4 Support

#### Agency for Governmental IT Services, Ministry of Finance

The **Agency for Governmental IT Services** has the responsibility of running an efficient IT support and ensuring high and consistent IT services across Denmark. The main tasks of the Agency include the support, development and harmonisation of IT throughout the territory.

#### Division for Central Government Digital Projects, Ministry of Finance

The **Division for Central Government Digital Projects** resides within the Agency for Digitisation, Ministry of Finance, and offers advice and coaching to public institutions that implement large ICT projects. The task of the Division is to develop and maintain the common IT project model for the state.

#### Data Ethical Council

In early 2019 the government created a **Data Ethical Council** to facilitate a public debate about i.e. the use of technology, data and AI in both the public and private sector. The Council includes members from universities and think tanks as well as the public and private sector.

### 5.1.5 Interoperability coordination

#### Agency for Digitisation

The body in charge of interoperability activities in Denmark is the **Agency for Digitisation**.

In Denmark, there are various initiatives that improve interoperability coordination in different digitisation-related fields. As a result of the Digitisation Strategy and the

Digitisation Pact, the Agency for Digitisation hosts three [steering committees](#) within Digital Infrastructure, Digital Communication, and Technology and Data. The steering committees, which include different authorities, work to ensure interoperability and coherence in public digitisation.

In addition to the three main committees, several different topic-specific steering committees exist, e.g. within cyber and information security, basic data, etc. As the Agency for Digitisation is represented in all these steering committees, the agency works to ensure efficiency and interoperability across all sectors.

### 5.1.6 Base registry coordination

#### Ministry of Social Affairs and the Interior

In Denmark, each person has a personal registration number, which is called CPR number. CPR numbers are stored in the [Civil Registry for Personal Data](#), which is a part of the Ministry of Social Affairs and the Interior. The CPR number is essential to have any contact with Danish authorities, especially in relation to tax and social security issues.

#### Danish Agency for Data Supply and Efficiency

The [Agency for Data Supply and Efficiency](#) is responsible for a number of base registers. The [Danish Address Register \(DAR\)](#) is the official register of road names and addresses in Denmark. Overall, around 3.5 million addresses are registered in the Danish Address Register. All addresses are registered with a geographical coordinate, a unique address description and a unique key that make them easy to use across public and private IT systems.

The [Danish Administrative Geographical Division \(DAGI\) Register](#) contains the official administrative divisions in Denmark. Currently, the DAGI Register records the boundaries for Denmark's parishes, municipalities, regions, jurisdictions, police districts, constituencies, polling districts and postcodes, and the boundaries at sea, like territorial waters.

The [Danish Place Names Register](#) is the official register of place names in Denmark. The Register comprises the geographical names of everything, from the renowned oak tree *Kongeegen* and the city *Centrum* to the peninsula of *Jutland*. In total, 130,000 place names are registered, all with a geographical location.

The association [GeoDanmark](#) is responsible for updating and maintaining a base map dataset covering Denmark, i.e. the Geodata Registry. The members of the association are all 98 municipalities in Denmark and the Danish Agency for Data Supply and Efficiency. The Geodata Registry includes orthophotos and about 70 different topographical features. The Registry is updated in a yearly cycle and through case management (e.g. building case management in the municipality).

The Agency for Data Supply and Efficiency is also responsible for the implementation of the [INSPIRE Act in Denmark](#), as well as for a number of other geospatial datasets and maps.

#### Danish Geodata Agency

The [Danish Geodata Agency](#) is responsible for three base registers: the Cadastre, the Register of Owners of Real Property and the Register of Property Location.

The [Cadastre](#) is the basis for all land registration (parcels, condominiums and buildings on leased ground) in Denmark and consists of a country-wide cadastral map, an official register and a cadastral archive.

The Register of Owners of Real Property contains information on owners, administrators and other persons to be contacted in matters relating to real property.

The Register of Property Location contains addresses chosen in the Danish Address Register (DAR) representing the real properties registered in the Cadastre.

## Ministry of Taxation

The **Danish Tax and Customs Administration** is responsible for administering and enforcing tax laws. A foreign company or an individual can get guidance from the Administration on subjects such as direct and indirect taxes, customs and the registration tax of vehicles.

The Ministry of Taxation also deals with the **registration of vehicles**. In fact, a car registered in a country outside of Denmark must be registered within 14 days of arrival or within 14 days of obtaining a CPR number.

## Danish Patent and Trademark Office, Ministry of Industry, Business and Financial Affairs

The **Danish Patent and Trademark Office** works to ensure that Danish companies can enforce the rights deriving from their own ideas to create the best possible conditions for growth and development, both within the borders of Denmark and beyond. To that end, the Office grants patents and utility models, and registers trademarks and designs. The Office aims to secure that all businesses can use intellectual property rights to create a competitive advantage. The Office hereby supports the vision of having the best framework to develop and run a business.

## Catalogue of Base Registries

In Denmark, the **Data Distributor** acts as a basic data hub containing basic data from different sources. The authorities providing data to the Data Distributor are the **Agency for Data Supply and Efficiency**, the **Danish Geodata Agency**, the **Business Authority**, the **Social Security Office** and **Tax Authority**.

### 5.1.7 Audit

#### National Audit Office of Denmark

The **National Audit Office of Denmark** is a public institution whose primary task is to audit the state accounts and to 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'.

### 5.1.8 Data Protection

#### 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. The Agency mainly deals with specific cases on the basis of inquiries from public authorities or private individuals or takes up cases on its own.

## 5.2 Subnational (federal, regional and local)

### 5.2.1 Policy

#### Local Government Denmark (LGDK)

Local Government Denmark is the national association of local authorities (municipalities) and is represented in the Steering Committee for Joint Government Cooperation (STS) to report relevant information from the central government to the local authorities.

#### Danish Regions

Danish Regions is the national association of county councils. Danish Regions is represented within the Steering Committee for Joint Government Cooperation (STS) alongside Local Government Denmark (LGDK).

### 5.2.2 Coordination

#### Municipalities and regions, Ministry of Finance

Municipalities and regions are responsible for the vast majority of community-centred service delivery and thus play a central role in the public sector. Crucial for the government's cooperation with municipalities and regions are the annual budget agreements between the central government and the organisations representing subnational government, i.e. Local Government Denmark and Danish Regions. The annual budget agreements cover the yearly economic arrangements and several other aspects, some of which are related to eGovernment and the public sector digitisation. The Ministry of Finance, with the involvement of several other ministries, is responsible for coordinating these annual negotiations between the government and, respectively, Local Government Denmark and Danish Regions, and following up on agreements concerning eGovernment and related projects.

### 5.2.3 Implementation

#### Municipalities and regions

The 98 municipalities are responsible for carrying out most tasks related to citizen service delivery, including social services, childcare, elderly care, health care, 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.

### 5.2.4 Support

#### Local Government Denmark (LGDK)

Local Government Denmark's mission is to safeguard the common interests of the local authorities, assist municipalities with consultancy services and ensure that local authorities are provided with relevant up-to-date information.

#### Danish Regions

Danish Regions represents the five regions at negotiations with the central government and ensures that regional authorities are provided with relevant up-to-date information.

## *5.2.5 Interoperability coordination*

### Subnational Interoperability Coordination

In Denmark, one of the overall objectives of digitisation is to associate the relevant levels of the public sector. Thus, Local Government Denmark (LGDK) and Danish Regions (DR) are also involved in several of the nationally operated interoperability coordination initiatives, e.g. all the steering committees created as a part of the Digital Strategy and the Digitisation Pact (see section 5.1.5).

## *5.2.6 Base registry coordination*

### Local Government Denmark and Danish Regions

Local Government Denmark and Danish Regions have been involved in the Basic Data Programme as responsible subnational authorities.

## *5.2.7 Audit*

### Ankestyrelsen

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

## *5.2.8 Data Protection*

### Danish Data Protection Agency

The Danish Data Protection Agency is responsible for supervising data protection practices in the two subnational levels of governance in Denmark.



6

## Digital Public Administration Infrastructure

## 6 Digital Public Administration Infrastructure

### 6.1 Portals

#### 6.1.1 National Portals

##### Data Distributor

Data Distributor is the distribution channel making basic data from several authorities accessible for businesses, government and citizens.

Data Distributor replaces a series of public distribution solutions and ensures that authorities and companies are provided with easy and safe access to basic data in one collective system, rather than having many different systems and interfaces. By now Data Distributor samples a unique variety of basic data, e.g. civil registration numbers, data registered on land, properties, parcels and buildings, data registered on companies, data registered on addresses, administrative divisions and place names, geographical base maps, geodata, etc.

A modern, stable and easily accessible distribution of registered basic data is essential if the Basic Data Programme is to realise its vision of improving, modernising and increasing the efficiency of management in the Danish public sector. Better data and better distribution also create better conditions for innovation and growth in private companies. More data will be made available on Data Distributor on an ongoing basis.

##### Digital Guides

Guides to support coherent user journeys in relation to the 11 most common life events for citizens and 10 most common life events for businesses are being developed. The Guides provide citizens and businesses with an overview of what they need to know and understand regarding their life event and give them a collection of relevant links to i.e. public services and self-service solutions. The Guides can and will be found on the portals [borger.dk](http://borger.dk) (citizens) and [virk.dk](http://virk.dk) (businesses). The Guides will be further developed as new user needs are identified, and so will be the architecture supporting the Guides.

A reference architecture for the implementation of online services for citizens and businesses published in December 2018 helps public authorities develop better self-service solutions and support progress in developing more coherent user journeys that consist of multiple online services. The reference architecture for the implementation of online services for citizens and businesses is part of the [White Paper on a Common Public-Sector Digital Architecture](#) published in June 2017.

##### Borger.dk - Citizen Portal

First launched in January 2007, the [Citizen Portal](#) (or the [English-language Citizen Portal for Foreigners Living in Denmark](#)) is a single Internet entry point to public sector information and eServices to citizens, regardless of the public authority. The Portal is jointly operated and funded by national, regional and local authorities. The Portal provides general, location-specific (e.g. region or municipality) and personal information, data and eServices for citizens, including access to Digital Post. In addition, the Portal features a range of 'self-service' sections, allowing citizens to manage their communications with the public sector effectively and efficiently. Furthermore, a single sign-in solution allows citizens to receive and access information and services from several agencies, without having to log on several times.

'My Page' is the citizens' personal page on the Portal. Here, citizens can log in using their NemID (eID solution) and have access to some of the information on them held

by public authorities, such as information on tax, pensions, health, student grants or housing.

Currently, efforts are being made to create an additional page, called 'My Overview'. The programme 'My Overview' is part of a joint public political vision for creating transparency, and a better and more coherent digital service. The aim is to gather and display relevant data about each citizen across the public sector. In practice, 'My Overview' contains the information held by public authorities about each citizen, such as the status of ongoing cases with public authorities, an overview of social benefits, and upcoming agreements and deadlines. The overview is personalised and therefore no one but the citizen has access to the data on the site. 'My Overview' will not replace existing websites or self-service solutions but will be a supplement offering a wider digital overview of a citizen's data. Finally, 'My Overview' will guide the citizen wanting to know more to the relevant government websites. New public authorities will join 'My Overview' every year and display new information and data to citizens. 'My Overview' is expected to be completed in 2024.

The Portal currently contains more than 2,000 self-service solutions and accommodates more than 3.9 million visits per month. In 2019 visits totalled 46.2 million (over a population of 5.6 million people). The Portal offers a user-friendly interface personalisation of content and syndication of borger.dk content, and flexibility for authorities adding location-specific content to the Portal. User surveys show that 91% of the users are satisfied or very satisfied with the Citizen Portal and 92% of the users feel confident using it.

### Virk.dk - Business Portal

The business portal [Virk.dk](#) is the common public eService channel 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. To that end, Virk.dk delivers a number of fully digital solutions for the benefit of businesses and the administration, regardless of the competent administrative body. The Portal contains more than 1,000 eForms. In 2019 user sessions on Virk.dk totalled 28 million.

Virk.dk offers a number of transverse workflows which are customised in a way that the flow automatically finds the forms that are relevant to each individual user. Importantly, the company start up workflow automatically presents users with forms and queries concerning their business interest, avoiding irrelevant forms.

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, a calendar, access to Digital Post, access to the user administration interface and a few services with information from specific public authorities. The dashboard is continuously expanded with new services.

In addition to Virk.dk, a new Business Promotion Portal called [Virksomhedsguiden](#) ('The Business Guide') was launched on 28 June 2019 aiming 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 more than 16 different authorities, as well as guidance on starting, running and developing a business. At the launch, the platform contained more than 150 digital articles and tools, spanning from regulation on how to hire your first employee and how to pay VAT to how to improve your sales technique and how to write a business plan. [Virksomhedsguiden](#) also offers an overview of all available business promotion services for start ups and businesses that are offered across Denmark. Approximately 700



services are available on the platform, ranging from access to finance and 1:1 meetings to events, innovation programmes and networks.

The Danish Business Authority, under the Ministry of Industry, Business and Financial Affairs, is responsible for the business portals *Virk.dk* and *Virksomhedsguiden*. Moreover, the Danish Business Authority hosts the Danish government's point of single contact, *Business in Denmark*, for foreign service providers from other EU/EEA countries with business activities in Denmark. Here, service providers can obtain information about procedures and formalities relating to access to a service activity, and complete registrations related hereto.

### 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. The Portal also provides an overview of buying and selling processes, and details of the people using them. The Portal thus offers an insight into housing transaction processes designed to prepare the homeowner for cooperation with professional advisers. Several tools and documents enable homeowners to carry out parts of a housing transaction themselves, but also to access the large national databases containing data about buildings. Further information can be found on rules for business rental, and rental of summer houses and holiday homes, as well as real estate services.

The Danish Business Authority is responsible for the Real Property Portal.

### 'Live' Operational Status

In October 2017 the Agency for Digitisation launched a service, *Digitalisér.dk/services*, where businesses and citizens will be able to see the operational status 'live' on common public sector digital services. The operational status service covers the following public key services: the Single-Sign-In solution *NemLogin*; the eID/digital signature solution *NemID*; the national Citizen Portal *borger.dk*; the eCommerce register solution *NemHandel*; the bank account register for public sector transfers *NemKonto*; and *Digital Post*, i.e. the mandatory digital letterbox for communicating with public authorities.

### National Portal for Cyber and Information Security

An information portal, *sikkerdigital.dk*, has been established with 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 jointly by the Agency for Digitisation and the Danish Business Authority in collaboration with various other authorities and NGOs.

## 6.1.2 Subnational Portals

### Local Government Denmark and Danish Regions

One of the overall objectives of digitisation 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*.

## 6.2 Networks

### Basic Data Programme

Currently, no government-wide data network exists in Denmark. However, a central Data Hub for the distribution of core data, Basic Data, was established as part of the Basic Data Programme.

## 6.3 Data Exchange

### Reference Architecture for Sharing Data and Documents

Denmark has published a reference architecture 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. A main purpose 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 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 these two scenarios is, whether it is the actor transmitting data or the actor receiving data, who is responsible for the concrete data process flow.

### Guidelines and Rules for Data Modelling and Guidelines on REST-based Webservices and APIs

Denmark's [Guidelines and Rules for Data Modelling](#) ensure that concepts and data are thoroughly and correctly described and documented.

[Guidelines on REST-based Webservices and APIs](#) describe best practices for designing, specifying and documenting web services in public sector IT solutions.

### POC Study on eDelivery

A POC study is currently being carried out for the possible implementation of eDelivery in the public sector and healthcare domain.

### New Application Profiles

A Danish application profile of version 2.0 of the [DCAT Application Profile](#) for data portals in Europe (DCAT-AP) is currently under development for use in the context of the Danish public sector (DCAT-AP-DK).

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.

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.

## 6.4 eID and Trust Services

### eIDAS eID-Gateway Node

The Danish eIDAS infrastructure, called the **eID-Gateway**, went into production on 28 August 2019. The eID-Gateway consists of the DK eIDAS Connector and the DK eIDAS Service. Currently, 69 eServices are connected to the DK eIDAS Connector and work is progressing on integrating other notified eIDs. The eID-Gateway is connected to existing eServices and utilises the existing national SAML protocol which is also implemented in the national broker for public services, NemLog-in, described further down. Denmark was one of the first countries to recognise the German eID and by the end of 2019 citizens from five different EU Member States were able to access Danish eServices, with more following in 2020. Work is continuing on providing solutions for identity matching as well as supporting businesses and their employees in accessing connected eServices.

Work is also progressing on supporting the national implementation of the Single Digital Gateway and preparing for the integration of Danish eServices into the national eID-Gateway.

Furthermore, in January 2020 Denmark finished the process of notifying the Danish eID, NemID, in accordance with Article 9 of Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market. Once the Official Journal of the European Union (OJEU) has published the official opinion and Denmark has finalised the implementation of the necessary technical changes in the NemID infrastructure, the EU Member States will begin the work to integrate the NemID in their respective eIDAS nodes.

### NemID Digital Signature

Since 1 July 2010, **NemID**, the national digital signature, has provided easy and safe access to a wide range of public and private self-service solutions on the web, including eBanking, tax forms, insurance and pension funds. With this digital signature, citizens use the same user ID and the same password for online banking, government websites and a wide range of private services online. NemID is the result of the collaboration between the state, municipalities and regions, the financial sector, and a private contractor. More than 5.1 million personal NemIDs have been issued to citizens from the age of 15 and up. In addition, NemID can now be used by business-owners in more than half a million companies as a way to log in to digital self-service solutions (for example **Virk** and **Digital Post**) on behalf of the business entity, making reporting to the public sector easier, especially for SMEs. Previously, a NemID Employee Certificate was the only electronic key to digital self-service solutions.

In cooperation with the **Danish Association of the Blind**, a special solution was also developed for blind and partially sighted people.

The Agency for Digitisation is responsible for the development of an efficient and secure infrastructure for digital signatures, which continuously supports the demand for a safe and leading knowledge society in Denmark.

## NemLog-in: Sign-In Solution

NemLog-in is a central part of the public infrastructure and consists of different components.

First, NemLog-in ensures that users can access all public self-service solutions across the Danish municipalities and regions and the government with a single login (WebSSO). When logging in to a public website such as borger.dk, users will be redirected to the NemLog-in login page and returned to the website after login. NemLog-in also enables citizens and employees to sign legally binding documents digitally.

Furthermore, NemLog-in ensures that organisations can delegate rights to their employees and powers of attorney to external users to make sure that the right people can get the right access to the digital public self-service solutions. In addition, if help is needed in digital self-service solutions, e.g. to access digital health information or change address digitally, also citizens can give a power of attorney to, for example, a relative.

Lastly, NemLog-in includes a component where public authorities and their IT vendors can manage the connection of self-service solutions to NemLog-in.

### ePassports

The Danish National Police started issuing electronic passports in October 2006. These new, secure ePassports feature a polycarbonate data page containing a contactless microprocessor chip running a highly secure operating system. The chip not only features the identity information already laser-engraved on the first page, but also contains the passport holder's digitised photograph.

## 6.5 eProcurement

### eCatalogues and eOrders

A pre-study analysis of the implementation project for increased adoption of eCatalogues and eOrders was completed with positive recommendations. The implementation project was initiated in January 2019 and is scheduled to end in 2021, mandating the use of eCatalogues and eOrders in public procurement for central and sub-central purchasing bodies.

### 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. Furthermore, some regional and local authorities make use of private marketplaces. The state-owned company National Procurement Ltd (SKI) has set up simpler eTendering solutions systems (NetIndkøb & Netkatalog).

### eInvoicing

The European standard for eInvoicing was adopted in Danish legislation in 2019. The legislation applies to all public authorities in accordance with Directive 2014/55/EU on electronic invoicing in public procurement.

### Nemhandel

Nemhandel allows businesses and public entities to send standardised electronic invoices, orders and catalogues in a secure and reliable manner. Nemhandel was

developed as a Danish infrastructure in 2009, but since 2018 has been increasingly integrated with the Peppol eDelivery network, functioning today as both national and cross-border network with national and international document standards based on the UBL.

The Danish Nemhandelsregister records users and service providers with the relative addresses. In a way, the Register corresponds to the yellow pages of the telephone directory. Through the Register, users can see who can receive and send eBusiness documents and to which address they will be sent.

As Nemhandel is based on open standards and open source components, any IT vendor or IT service provider can freely incorporate the technology into their commercial products and connect to the open infrastructure, ensuring dissemination and uptake, and rapidly building a critical mass.

## 6.6 ePayment

### Agency for Digitisation

The Agency for Digitisation is responsible for the [NemKonto](#) solution, supporting secure payments from public authorities to citizens.

## 6.7 Knowledge Management

### Information Repository and Platform for Collaboration

[Arkitektur.digst.dk](#) is the central repository for reference architecture models, data standards and general advice developed to support work on architectures in the digitisation of public authorities. The site is developed in a cooperation between the central government and local government authorities. To ensure continuity with previous work, the site is linked with its predecessor, [Digitaliser.dk](#), including previous repositories of information on data interchange standards for the public and private sectors and a collaboration tool for the development of the information society in Denmark. The main purpose is to support the exchange and reuse of data related to public and private service delivery, including cooperation, business reengineering and alignment of related services. [Digitaliser.dk](#) also provides a basis for debating common public digitisation by using web-based interaction rather than formal processes.

### Danish Dataset Catalogue

A [Dataset Catalogue](#) was established by the [Agency for Digitisation](#). The purpose of the Danish Dataset Catalogue is to make it easy for authorities to describe their datasets in a consistent manner while also providing an overview of public sector datasets. At the moment, however, the Catalogue only provides an overview of a part of the public datasets. Whenever possible, the Dataset Catalogue also guides data users to access public datasets through a direct link to the dataset or to a landing page. On the contrary, the Catalogue does not distribute the datasets themselves. In addition, where possible, the Catalogue provides contact information so that data users can contact data custodians for additional information, if required.

## 6.8 Cross-border platforms

### Government Cloud Services and CEF eDelivery Services

Work is currently being undertaken to support the public sector use of cloud offerings, including the 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.

## 6.9 Base registries

### Base Registry Data available on the Data Distributor

Data from the following base registries have been made available via the **Data Distributor**: the Danish Address Register (DAR), the Central Business Register (CVR), the Danish Place Names Register (*Danske Stednavne*), the Danish Administrative Geographical Division (DAGI) Register, the Civil Registry of Personal Data (CPR), the Register of Buildings and Dwellings (BBR), the Cadastre, GeoDanmark, the Register of Property Valuation (VUR), the Register of Owners of Real Property (EJF) and the Register of Property Location (EBR).



7

Cross-border  
Digital Public  
Administration  
Services

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

Further to the information on national digital public services provided in the previous chapters, this final chapter presents an overview of the basic cross-border public services provided to citizens and businesses in other European countries. **Your Europe** is taken as 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 SMEs, both managed by DG Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) - below the main groups of services for each section are listed.

### 7.1 Life and Travel

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

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

### 7.2 Doing Business

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

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



## The Digital Public Administration Factsheets

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

The factsheets are published on the Joinup platform, which is a joint initiative by the Directorate General for Informatics (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from Anne Sif Kock Nielsen, Danish Agency for Digitisation.



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

## An action supported by ISA<sup>2</sup>

ISA<sup>2</sup> is a EUR 131 million programme of the European Commission which develops digital solutions that enable interoperable cross-border and cross-sector public services, for the benefit of public administrations, businesses and citizens across the EU.

ISA<sup>2</sup> supports a wide range of activities and solutions, among which is the National Interoperability Framework Observatory (NIFO) action.

ISA<sup>2</sup> solutions can be used free of charge and are open source when related to IT.

## Contact ISA<sup>2</sup>

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