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# A STRONGER AND MORE SECURE **DIGITAL DENMARK**

Digital Strategy  
2016-2020

The Government /  
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Danish Regions /

May 2016



**A STRONGER AND MORE SECURE DIGITAL DENMARK**

The Digital strategy 2016-2020

May 2016

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# A STRONGER AND MORE SECURE DIGITAL DENMARK



Denmark and the world are facing fundamental changes. Rapid ongoing digital developments are already changing the way in which we live, the way we run our businesses and the way our public services and welfare services are delivered.

Technological developments have always played a role in altering the way in which we live, and new technologies have given us opportunities that not many of us would want to do without. The invention of the automobile gave us far more mobility and flexibility. Automation of processing and packaging processes within the food industry improved opportunities within supply and flexible consumption. Old job functions have become defunct and new ones have appeared in their place. We have seen it all before.

However, the rate and evolutionary power of technological developments will accelerate in the years to come. Digital development will be so fast, profound and unpredictable that it will challenge and change society in ways we cannot even begin to imagine.

What the future will bring is now more uncertain than ever. Artificial intelligence, nano and biotechnologies, and the widespread use of Big Data are already at our doorstep. So, the future is now, not tomorrow!

The new technologies provide a multitude of opportunities. However, this development also challenges society and demands change and transition. It is not whether or not the changes will happen, but how, as a society, we are prepared to adapt and to exploit the opportunities offered by the new technologies to produce more prosperity and welfare while still preserving the uniquely Danish sense of security and confidence in each other and in society.

## **Digital Denmark**

Just as globalisation, digitisation raises many difficult questions. In a number of areas, Denmark is well prepared for what the future will bring. However, in other areas, we still have a lot to learn. Therefore, the public sector must work closely with the Danish business community, stakeholder organisa-

tions, etc. to establish the basis for a flexible and adaptive society, ready for an ever more digitised world.

The Digital Strategy 2016-2020 sets the course for Danish public sector digitisation efforts and their interaction with businesses and industry. Jointly with the businesses and public institutions at local, regional and central-government levels which on a daily basis take advantage of the opportunities provided by digitisation, this strategy will help build the basis for a strong and secure digital Denmark.

Some initiatives are being launched now. Others will be defined or adjusted up until 2020 in response to the opportunities and challenges ahead. Therefore, this strategy will fully equip citizens, public employees and businesses for the digital Denmark of the future.

*The Government, Local Government  
Denmark, and Danish Regions*

**WHO IS PARTICIPATING?**

The government Digital Strategies concern the authorities at all levels of government, from state, to regions to municipalities - i.e. both the administrative institutions such as ministries, agencies and the municipal and regional administrations, and the executive institutions such as hospitals, public schools, universities, etc.

# We must seize the digital opportunities

Denmark is in a good position to embrace the digital future. We are a small country with a population that has great trust and confidence in each other and in the public sector. People generally have a high level of education. People and businesses have good digital competences and have generally embraced digital technologies. There is a strong tradition of collaboration and finding new and practical solutions between public authorities, and across the public and private sectors.

Furthermore, the public sector began introducing IT solutions early on, and for this reason in particular it has high-quality data sets and registries which are quite unique in an international perspective. Denmark has built a secure and robust digital infrastructure, which allows individuals and businesses to complete efficiently their business with the public sector over the internet. All of this has enabled a huge digital transition in recent years.

## **Significant digital developments in the public sector**

The internet is today the primary gateway to public administration for the majority of Danes. Individuals and businesses have their own digital mailbox. Online self-service has been made mandatory for more than 100 administrative procedures. When the Central Customs and Tax Administra-

tion (SKAT) opens up for online access to tax assessments, digital Danes flood onto the website.

Furthermore, digital solutions are an integral part of many public services. Care workers use tablet computers to monitor and register any changes in the health status of their elderly clients. Teachers use digital learning tools and materials to differentiate their teaching to the individual student, and health technologies make it possible for patients to monitor their condition in their own homes.

Some individuals and businesses have welcomed the developments and can easily cope, while others have taken some time to adjust to new ways of dealing with things. Local and regional governments have played and are still playing an active role in ensuring that citizens and businesses are guided through the many changes and that there is help available to those who stumble on the way.

## **Focus on user centricity, sense of security and public trust**

The Danish welfare system builds on the public's widespread confidence and trust in the public sector. It is important that we safeguard this public trust now that digital communication and digital services from the authorities are becoming an everyday



fact. It is absolutely vital that we establish safe and secure frameworks for citizens and businesses to interact digitally with the public sector.

Digital safety and security of individuals and businesses are essential to being able to exploit the opportunities offered by digitisation to develop and improve the Danish welfare system; and digitisation does offer huge opportunities for individuals as well as for society in general.


The Danish public sector is designed to ensure that services for citizens and businesses are as far as possible organised at local or regional levels within the framework of the law. This approach helps ensure a greater sense of security and public trust, as well as a greater degree of user centricity in services. Therefore, digitisation must underpin local decision power and responsibility. When public services become digital, people should not feel that the public sector is becoming distant, with no anchoring in the local community. Instead, digitisation should promote a continued feeling of local anchorage.

For example, digitisation can enhance the degree of user centricity and the empowerment of individuals because digital solutions allow them easy access from home, or in their local area, to services and information of high quality, regardless of where in Denmark they live. Digital services are becoming increasingly more adaptable to the needs of the individual, i.e. they are becoming ever more user-centric. Furthermore, with digital welfare solutions, citizens can become 'co-players' in delivery of their welfare services. With more efficient, digital solutions it is possible to improve the quality of services and enable local development.

Denmark has a well-developed infrastructure for mobile and broadband coverage. However, if we are to continue to have a society that works efficiently and with local anchoring, we need to ensure that this good mobile and broadband coverage is improved even more.

### **Public-sector data must be shared and reused**

We can establish a simpler and more cohesive public sector in which the author-



ities can collaborate smoothly to provide good and efficient services to individuals or businesses based on the knowledge that they already have about them. For this to become a reality, the authorities must to a greater extent be able to exchange and access relevant data on individuals in a secure manner; not least in situations in which many authorities are involved.

Local, regional and central governments therefore have to work towards more sharing of data wherever this is possible, relevant and secure. Increased use of data can be supported by common data standards, standardised data formats, common IT architectures and a robust IT infrastructure.

Increased sharing of data will enable new generations of digital solutions which can automatically find the necessary data. Individuals and businesses will save time because they do not have to report data unnecessarily. Furthermore, administrative processes and case work will be eased if manual workflows, and in some situations decisions, can be automated.

More efficient sharing and exchange of data between various IT systems and organisational units will provide individuals and businesses with more efficient case processing procedures and more tailored and coherent interventions.

In future, individuals and businesses should, as far as possible, only have to submit, information to the authorities once, instead of having to enter the same information in several places in public digital solutions.

Greater use and reuse of data will also improve the basis for the public services delivered. This will also contribute to a more modern and efficient public sector and, thus, release resources which can be applied to other political priorities.

These efforts should be continued, taking account of the legislation on processing of personal data and the individual's right to privacy.

### **New business opportunities**

The business and growth policy of the



Government is to create good framework conditions for commerce and industry and, thus, contribute to growth in Denmark through the promotion of digital solutions in Danish businesses, through promotion of entrepreneurship and through establishing the foundation for Danish businesses to be able to continue to compete in the global market. The goal is for Danish businesses to become better at exploiting new paths to growth. This requires that Denmark and Danish businesses become better at exploiting the potential in, for example, automation and new technologies, and, by doing so, enhance productivity and competitiveness. This applies, in particular, to the many Danish small and medium-sized enterprises.

Efforts by the public sector must promote digitisation in the private sector. With more digitisation, businesses will become better at exploiting business potentials in a digital world; they will become more competitive and they will improve their productivity. Creation of a strong digital Denmark with new opportunities and improved framework conditions for businesses calls for new public-private partnerships.

Data is an all-important resource in a digital era; a resource which opens up for new business opportunities and which can be used to optimise internal business procedures.

It is important that, within the framework of the law, more public-sector data is made available to businesses, so that this data can serve as a driver for innovation and new business opportunities in the private sector. This should provide the business community with good opportunities for finding, combining and reusing data to develop new innovative products and services, so that businesses will be well positioned in the future competition.

Digitisation efforts should create strong framework conditions for businesses and support their digital transition. For example, better and more user-friendly digital solutions and automated data collection from businesses should contribute to the goal of reducing significantly the administrative burden on businesses.



## Denmark on the way

Although Denmark has already become far more digital, we have only just embarked on the very extensive process of transition.

With digital solutions becoming ever more widespread, citizens and businesses have high expectations for digital public services that are up-to-date and add value to everyday life.

However, technological developments are happening at such a pace that we are not always able to predict the digital opportunities, users' needs and societal benefits that the future will bring. When development of the identification solution NemID was planned in 2008, smartphones were not that widespread and the computer tablet had yet to be invented. Therefore, it could not have been predicted that, only a few years later, users would want to be able to read their digital post or log onto public-service web portals and onto self-service or online banking solutions from their mobile devices.

### **Continuous modernisation necessary**

Continuous improvement and adaptation of public sector digital solutions and systems are therefore necessary in step with the development of technologies and of society. This will require investment. In future years, it will also be necessary for a number of authorities to modernise or replace

some of their IT systems, either because they are outdated or because they are no longer working according to their intended purpose.

Furthermore, the IT solutions and processes of a number of authorities are today designed to match the internal needs and organisation of the authority rather than the needs of citizens and businesses which, in many cases, go across authorities and sectors.

Much data is still stored differently and defined differently from one public authority to another. This makes exchange of data across sectors or administrations very difficult. This in turn makes it unnecessarily complicated for different authorities to collaborate to deliver the best and most efficient services to individuals and businesses. This calls for solutions.

Therefore, extensive development and clear-up work is required so that citizens and businesses can rest assured the service they receive is coherent and that the IT systems function optimally. However, the public sector has a solid foundation. Many principles and methods have already been developed by different authorities and can be reused and disseminated to more authorities.

## Expenditures and revenues will come under pressure

The public sector will be faced with a significant strain on public expenditure in the years to come. This is due, in particular, to demands to deal with an aging population, climate change, housing and integrating refugees, as well as more expenditure on the health services. At the same time, impacts from the EU with regard to the application of data across national borders, legislation as well as language and accessibility requirements, will be significant for our opportunities to develop Danish public services and administrations.

Financing the Danish welfare system is based on the taxes and charges paid by individuals and businesses. However, digital development and new business models will also challenge the revenue models and regulatory models of the public sector. The global, digital economy is expected to grow and, in the long term, perhaps require new solutions.

New, internet-based business models can provide new opportunities for growth, greater flexibility and a wider range of services for users. However, with regard to taxation and market regulation, etc., these business models will also challenge the structure of society.

# THE DIGITAL STRATEGY



This Digital Strategy runs up to 2020, and in it the central, regional and local governments continue a series of initiatives from the previous Strategy. Furthermore, a large number of new initiatives will create the foundation for the Danish public sector of the future.

## **About the Digital Strategy**

Since 2001, digitisation of the public sector has been driven by close and binding collaboration between local, regional and central governments. This applies especially in areas in which it is necessary and appropriate to develop cross-cutting solutions. The work has been embedded in multi-year strategies covering central, local and regional governments.

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 interdependencies across different authorities and sectors.

Digitisation has proven to be an effective and efficient tool to rethink processes and workflows in the public sector. Furthermore, in several areas, digitisation has given rise to a break with the compartmentalised thinking that is often applied by the public sector. The tradition of common public sector strategic work on digitisation entails continuous

endeavours for closer public sector collaboration to deliver good, efficient and coherent services to citizens and businesses.

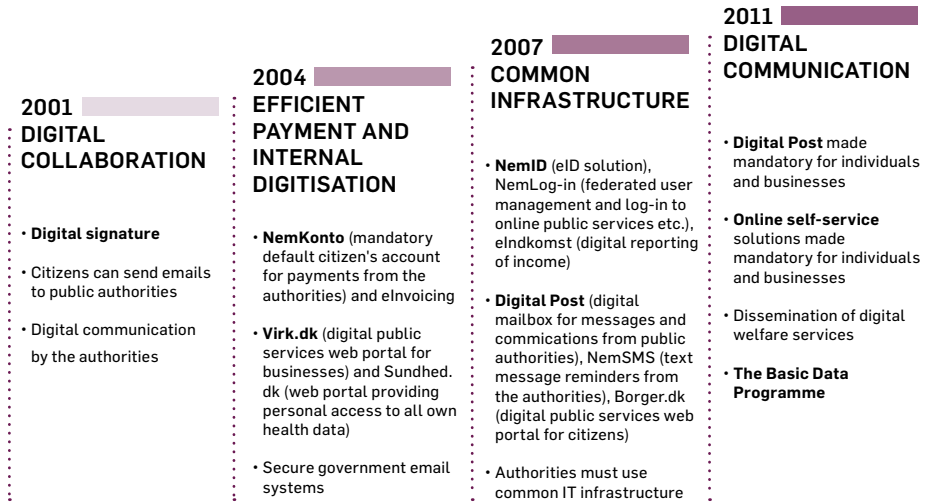
## **Strategic interaction**

Digital strategies are not the sole answer to all the challenges facing Denmark.

The individual authority has a responsibility to realise the digital potential within its own auspice and, thus, to ensure that digitisation leads to the desired change. In parallel with joint public sector efforts, there are sector-specific digitisation projects and strategies, for example joint municipal and regional digital strategies. This approach to public sector digitisation efforts provides a good balance between common strategic targets and local adaptation and priorities.

Furthermore, interacting with the public sector, private businesses, trade organisations and NGOs are also contributing to finding common solutions for the digital transition and helping to secure the foundation for a strong and secure Digital Denmark.

# 15 years of digital strategies



## DENMARK IN THE DIGITAL LEAD

Over the past 15 years, Denmark has undergone a unique transition to digital public administration, communication and services. A number of solutions originating from previous digital strategies have now become routine.

With NemKonto (a mandatory citizen's account for payments from the authorities), the authorities now know which account to pay benefits into. Furthermore, with the secure identification solution NemID everyone has a secure means of personal identification and authentication online. Digital registration of real property rights makes it easier to buy and sell property. Several common, cross-sectoral web portals have been established such as a web portal with access to personal health data (sundhed.dk), a single-point of access to all digital public services (borger.dk), and a public services web portal for businesses (virk.dk). Furthermore, a digital income registry has been established so that, in a number of areas, individuals are no longer burdened with reporting and documenting changes to their income in order to receive benefits.

Some of the most recently introduced initiatives include mandatory Digital Post and mandatory online self-service for individuals and businesses. Telemedicine solutions for people with chronic disorders and digital learning tools and materials are becoming more widespread throughout Denmark. Furthermore, much public-sector basic data is now available online and free of charge for individuals, businesses and authorities alike. All of this makes up the solid foundation which the public sector will develop further up to 2020.

# VISION AND GOALS

*Vision: Public sector digitisation creates value and growth, it provides efficiency improvements and it secures the confidence of Danish people in the digital society.*

Digitisation can provide better quality in public services and it can lead to a more cohesive and efficient public sector that creates value for individuals and for businesses.

Denmark has come a long way in the digital transition of the public sector, but a lot of work still lies ahead.

This Digital Strategy 2016-2020 sets three ambitious, but realistic, goals for the development of a more digital public sector in the years to come:

## **Digital solutions must be easy-to-use, quick and ensure high quality**

The Danish public should see that public-sector digitisation adds real value to their lives. The public sector must offer high-quality digital services and digital welfare solutions. Digitisation should make life easier, make it easier for people to help themselves, and improve the quality of public services. The authorities will share relevant information and work together better for the individual person or business. Furthermore, digitisation will contribute to a more cohesive and efficient public sector.

## **Public sector digitisation must provide good conditions for growth**

Digitisation will make it easier to run a business and will contribute to the Government's goal to reduce the administrative burden on the business community by DKK 3 billion by 2020. The ambition is that the administrative burden on businesses from reporting to public authorities is to be removed through automatic business reporting. All solutions aimed at businesses will be integrated in the Virk.dk portal, and businesses will meet a public sector that fully supports their digital transition. The business community will have access to more public-sector data that can form the basis for new business opportunities and innovation.

## **Security and confidence must be in focus at all times**

The great confidence Danes have in each other and in the public sector is the foundation of Danish welfare. We must safeguard this sense of security in an ever-more digital society. Therefore, we will improve information security in the public sector and enhance the digital competences of citizens and of businesses. A digital infrastructure for the public sector that is crucial for society must be robust and it must meet the needs of its users. Moreover, Denmark will be an inclusive society in which everyone can participate, both those who are ready to digitise, and those who cannot use the digital solutions or who do not have access to them.

# The Digital Strategy 2016-2020

The Digital Strategy sets three ambitious goals supported by focus areas. Each focus area includes a number of underlying, specific initiatives to contribute to realising the goals.




## DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY

- 1  
A USER-FRIENDLY AND SIMPLE DIGITAL PUBLIC SECTOR
- 2  
BETTER USE OF DATA AND QUICKER CASE PROCESSING
- 3  
BETTER AND MORE COHESIVE WELFARE SERVICES



## DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH

- 4  
BETTER FRAMEWORK FOR THE BUSINESS COMMUNITY
- 5  
PUBLIC-SECTOR DATA AS A GROWTH DRIVER
- 6  
AN EFFICIENT UTILITIES SECTOR



## SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES

- 7  
THE PUBLIC SECTOR PROTECTS DATA
- 8  
ROBUST DIGITAL INFRASTRUCTURE
- 9  
DIGITISATION FOR EVERYONE

# CHART OF INITIATIVES



DIGITAL SOLUTIONS MUST BE **EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY**

A user-friendly and simple digital public sector

**1.1** More cohesive user journeys

**1.2** Better digital communication

Better use of data and quicker case processing

**2.1** Clear legal framework for eGovernment

**2.2** Progress with good basic data

Better and more cohesive welfare services

**3.1** Cohesive welfare pathways for citizens

**3.2** Better data about disabled and marginalised adults



EGOVERNMENT MUST PROVIDE **GOOD CONDITIONS FOR GROWTH**

Better framework for the business community

**4.1** Automatic business reporting

**4.2** Digital tendering procedures and procurement

Public-sector data as a growth driver

**5.1** Open public-sector data

**5.2** Smart City partnership

An efficient utilities sector

**6.1** Common data on topography, climate and water

**6.2** Open data on energy supply



**SECURITY AND CONFIDENCE** MUST BE IN FOCUS AT ALL TIMES

The public sector protects data

**7.1** Well-managed information security in all authorities

**7.2** Common standards for secure exchange of information

Robust digital infrastructure

**8.1** Good data and efficient data sharing


**8.2** Robust operation of the common infrastructure


Digitisation for everyone

**9.1** Digital skills for children and young people


**9.2** Information and help for citizens and businesses





**1.3**   
Overview of own  
interaction with  
authorities and benefits


**1.4**   
Better technical support  
for citizens and  
businesses

**1.5**   
All communication from  
public authorities is digital


**2.3**   
Correct payments and better  
data on the individual


**3.3**   
Further deployment of  
digital welfare solutions


**3.4**   
Digital learning  
and teaching


**3.5**   
Digital competences for  
public employees

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**4.3**   
Cloud computing in the public  
sector


**5.3**   
Infrastructure for positioning  
and navigation data


**6.3**   
Exchange of data on  
underground infrastructure


**6.4**   
Overall IT architecture for  
data on waste

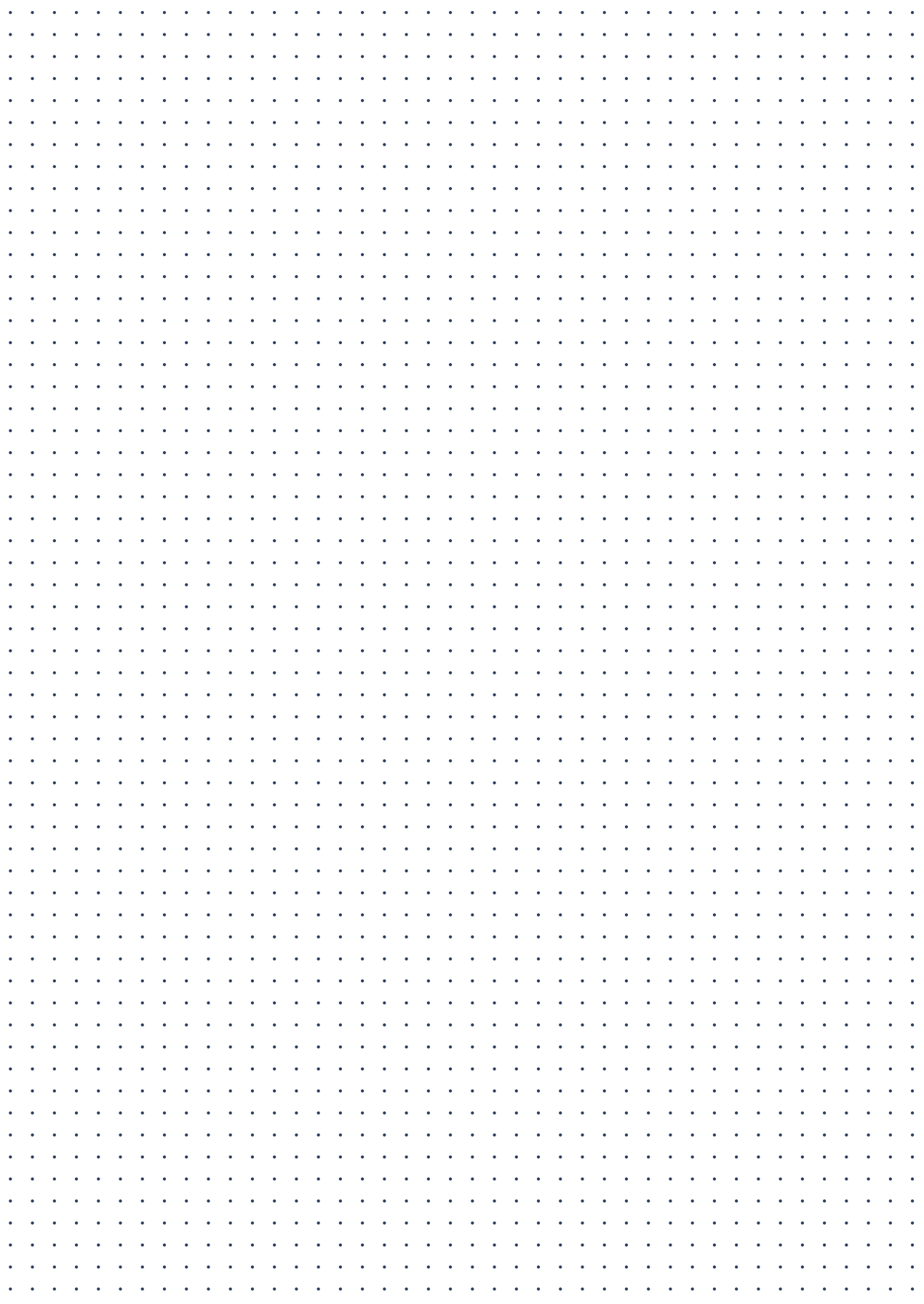
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**7.3**   
Digital identity and rights  
management

**7.4**   
New generations of  
NemID, NemLog-in and  
Digital Post

**7.5**   
Secure ID solutions for  
children and young people

**9.3**   
High level of awareness of  
information security





DIGITAL SOLUTIONS  
MUST BE **EASY-TO-  
USE, QUICK AND  
ENSURE HIGH  
QUALITY**



# DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY

## FOCUS AREAS

1. A USER-FRIENDLY AND SIMPLE DIGITAL PUBLIC SECTOR
2. BETTER USE OF DATA AND QUICKER CASE PROCESSING
3. BETTER AND MORE COHESIVE WELFARE SERVICES

### THE GOAL

Public-sector self-service solutions, websites and portals will constantly be improved so that it is easier to deal with administration and so that services are more targeted towards the individual user. If services are more intelligent and more efficient, and if users are already active on the internet, then users can serve themselves more easily and quickly at whatever time it suits them.

The authorities will share relevant information with each other and they will automatise administrative procedures so that citizens and businesses experience shorter case-processing times for digital applications and notifications. Furthermore, users will be less likely to have to spend time submitting the same information to several places and finding documentation for information that is already in public registries.

Better information sharing between authorities will also provide citizens with more cohesive pathways when a case crosses between authorities, for example a treatment pathway in which both a hospital and the municipal healthcare services are involved. Furthermore, the overall welfare of Danes will be improved through the dissemination of digital welfare solutions.

## Focus area 1

# A user-friendly and simple digital public sector

Danes have to serve themselves on the internet in a large number of areas. This is practical and it saves time for the citizens, businesses and the authorities. Therefore, it is vital that public-sector digital solutions and services are user-friendly, intuitive and of high quality, so that users continue to have confidence in using public-sector digital services.

Work to make modern, digital solutions available for citizens and businesses has only just begun. It has to be easy for citizens and businesses to navigate public digital universes to ascertain whether a digital application has been filled out and submitted correctly, for example, and to know what to do next in the process.

Therefore, in some areas there is a need to improve public digital services so that digital communication between the users and the public sector stays up-to-date. At the same time, digitisation can be used as a lever to improve authority communication and coordination across sectors.

### **Being digital should be easy**

Denmark will have high-quality digital services. Citizens and businesses will see that digitisation of public services adds real value to their lives.

Today, we are used to seeing easy and rapid digital services from private businesses make a positive difference in our lives. For example, when we can easily transfer money to each other via our mobile phones, buy birthday presents on the internet, or check-in and choose our seats in the aeroplane from home before we travel.

It will be equally easy and quick to be in digital contact and have dealings with the public authorities. This means, for example, that the individual self-service solutions and digital solutions (such as NemID and Digital Post) have to be user-friendly, up-to-date and of high quality. The plan is that increasingly digital services from the various authorities will also be accessible from those places on the internet where citizens and businesses are already active. The common public-sector portals, borger.dk and Virk, will also continue to play a central role as entrances to digital public-sector solutions.

Digital developments are so rapid that we cannot always predict what technical possibilities and user requirements there will be in the future. Therefore, the user-friendliness of public digital solutions for citizens and for businesses must be measured regularly. Knowledge about the effect and

value of solutions for users and for the authorities will be used to improve solutions and the information and service received by users.

### **Cohesive digital services**

Communication to citizens and businesses must be clear and coherent so that users are well-informed and feel secure. Users should meet a service-oriented public sector that can guide them rapidly and effectively through the relevant authority areas and services. Poor language or complex rules and processes must not obstruct fast and effective communication.

User journeys through the public digital solutions will be easier and clearer from start to end, so that users know what to do when attending to matters with the public sector.

A particular common public-sector responsibility is to ensure that users receive a cohesive service when they are to deal with different elements of the same case. This is especially relevant when a user is in contact with several different authorities and has to use several self-service solutions, perhaps on different authorities' websites.

For example, the user journey for an entrepreneur to set up a company will be made more user-friendly and cohesive, where today at least five or six self-service solutions are required. Firstly, the business has to be registered on the business portal [virksomheder.virk.dk](http://virksomheder.virk.dk) to get a central business registration number, and a NemKonto bank account for the busi-

ness has to be set up with a bank. Next, a NemID eID and digital signature has to be ordered on [medarbejdersignatur.dk](http://medarbejdersignatur.dk) and a Digital Post mailbox needs setting up for the business.

There could also be improvements in digital user journeys for private individuals, for example in connection with moving home or filing for divorce.

### **Better insight and overview**

The public sector must be more transparent. Therefore citizens and businesses must have easier access to data about themselves held by a specific authority. Furthermore, users should have a greater insight into their cases, applications, data and relationships with the public authorities.

The public digital services will be adapted to the current situation and needs of the individual citizen or business, so that the user meets personalised, relevant content on public-sector websites or portals which the user feels competent and confident in navigating. For new parents, it is relevant to know where and how to name their baby or to enrol the child on the waiting list for a daycare institution. People approaching retirement require other solutions and information, for example about pensions and health benefits.

Today, the authorities can choose whether they will send communications to users digitally or by surface mail. On the other hand, individuals and businesses have

to check both their Digital Post mailbox and their physical mailbox. In future, businesses and the many individuals ready for digital solutions should be confident that they will receive in digital format all relevant post from the public sector that can be digitised.

### **The right help**

Digital communication with the authorities can be an advantage, for example for the elderly who do not live close to their families. Digital solutions mean that family members can help by notifying change of address or applying for housing benefits from their own home. Using a digital power of attorney, people will be able to let their families and others they trust take care of their interests

and access the necessary data digitally. This means that families and others will not have to use solutions such as paper forms or letter post to help someone with their digital administration.

Improving digital communication will mean that fewer people will have to pick up the phone or turn up in person at the citizen service centre to get help, and it means that businesses can save time. At the same time, people who still need help will get it. It will be easier for citizens and businesses to locate and receive the right help, irrespective of whether they are having trouble with NemID, Digital Post, borger.dk or Virk.

## **DIGITAL POST FOR PARENTS WITH JOINT CHILD CUSTODY**

The authorities are increasingly sending correspondence as Digital Post. If the authorities send Digital Post to parents about their joint-custody child, there are circumstances in which just one parent receives the correspondence. This can happen even if, in some areas, the legislation states that both parents are to be informed about matters relating to their child.

The regulations in sector legislation and the individual administrative area determine whether both parents have to be informed about matters relating to their child. Therefore, a common set of guidelines will be drawn up for the authorities, outlining the situations in which information about a joint-custody child is to be sent to both parents.

The guidelines will help clarify how correspondence is to be sent in accordance with relevant legislation. This will also secure equality between parents with regard to receiving information about a joint-custody child.

In the summer of 2016, it will be technically possible for authorities to send one Digital Post communication to several recipients. This means that it will be easier for the authorities, with few administrative procedures, to ensure that both parents of a child receive Digital Post about the child.

# INITIATIVES



## A USER-FRIENDLY AND SIMPLE DIGITAL PUBLIC SECTOR

### 1.1 MORE COHESIVE USER PATHWAYST

Citizens and businesses will experience a more user-friendly and coordinated service when their need for service goes across digital solutions and authorities. Work on selected user journeys, for example divorces or business start-ups, will secure easier and more straightforward self-service processes. Users will be guided through the process and thereby they will be able to serve themselves easily and simply in a more cohesive administrative procedure.

### 1.2 BETTER DIGITAL COMMUNICATION

In order to ensure user-friendly and up-to-date digital solutions, self-service solutions, infrastructure components and portals must meet a few agreed requirements when new solutions are developed or further developed. The requirements are drawn up in collaboration with relevant authorities. For example, these may include that solutions are to work on mobile devices, be accessible for the disabled, and be tested by users. Data will be collected about user experience and use of the solutions so that solutions can constantly be improved.

### 1.3 OVERVIEW OF OWN INTERACTIONS WITH AUTHORITIES, AND BENEFITS

Citizens and businesses will be offered insight into relevant information about themselves held by public authorities. This information will be presented in a context tailored to the individual user. The authorities will increasingly actively inform citizens and businesses about important events. For example, this may be a text reminder that it is time for children to be vaccinated. This means that users will be better able to react to important information in due time.

### 1.4 BETTER TECHNICAL SUPPORT FOR CITIZENS AND BUSINESSES

It will be easier for users to get help if they have problems with NemID, NemLog-in, Digital Post, etc. A number of common public-sector support programmes will be gathered together so that it is easier for citizens and businesses to get help or to be guided to the right authority. Information about operational problems and disruption in common solutions for decentral authorities will be enhanced so that they can provide the best help for users. Knowledge about the problems users meet will be collected and used to improve the digital solutions.

### 1.5 ALL COMMUNICATION FROM THE PUBLIC SECTOR IS DIGITAL

In future, businesses and the individuals ready for digital solutions will receive all their post from public authorities digitally. However, this will exclude specific types of correspondence, for example letters that can only be managed physically, for example sample letters which contain vials, health-insurance cards, etc. Similarly, exchange of digital notifications between authorities will take place through efficient use of digital channels such as secure email and Digital Post, among other things through metadata mark-up of notifications.



## Focus area 2

# Better use of data and quicker case processing

Time is one of the important service parameters in a digital society. The huge amounts of data already under the charge of the public administration will be used more extensively to benefit citizens and businesses wherever possible within the framework of legislation.

Simpler rules, better processes and reductions in the administrative burden will make the public sector more efficient and easier to use for the individual person and for businesses.

### **Relevant knowledge to be used across authorities**

Relevant information from self-service solutions, public registries, etc. will be exchanged much more extensively between the authorities' specialist systems, it will support the work of case officers and it will be reused across authorities in order to simplify reporting to authorities as far as is technically and legally possible.

In the long term, it will be possible for far more case decisions to be made more rapidly, and in some cases immediately, because the necessary information is correct and available in the right place at the right time in the course of a case. This is already happening to some extent, for example with regard to payment of benefits such as child allow-

ance, maternity leave benefits and state retirement pensions.

This means that citizens and businesses are seeing shorter case-processing times, and more often receive an immediate reply, for example, as to whether they qualify for a specific benefit, as well as the amount to which they are entitled. Furthermore, the authorities can perform tasks more efficiently, for example when it becomes possible to automate parts of case processing.

As far as possible, citizens and businesses will not have to spend time submitting the same information to several places or providing documentation for information that is already in public registries. For example, when people have submitted information in one context to one authority, they should not have the inconvenience of submitting the same information to another authority. This could mean, for example, that digital applications, reportings and notifications already have some fields completed with relevant information in advance. This means that citizens and businesses can have their cases processed faster, for example when applying for something or notifying any changes.

Reusing data from public registries also contributes to preventing incorrect payments

and fraud, among other things, because the individual or business is not at risk of forgetting to notify changes in information. Or because the rules are so complex that users unintentionally submit incorrect information.

### **Legal framework conditions for a digital age**

However, data sharing not only poses a technical challenge. There is also a challenge in safeguarding a regulatory framework to ensure that new opportunities offered by digitisation become assets for Danish society. The legislative framework should be up-to-date so that it does not restrict more than necessary data sharing across sectors and functions. If specific legislation does not allow digitisation of processes, this will be examined in more detail. This might lead to proposed legislative amendments.

Simpler rules can provide better opportunity for smoother administrative processes and can make the public sector more efficient and easier to use for citizens and businesses.

At the same time, the legislative framework should continue to set very clear limits so that data on citizens and businesses is only collected and used where necessary and where it produces value for the individual and for society.

Some Danish acts and regulations covering digitisation originate from EU regulations. This places requirements on the way we organise the Danish digital public sector and the way we design our digital solutions and infrastructure, etc. The EU's General Data Protection Regulation will influence how we can work with data in the public sector and in society in general in the future.

## **THE GENERAL DATA PROTECTION REGULATION**

The upcoming General Data Protection Regulation is expected to be adopted by the EU during 2016. The objective of the Regulation is to provide better protection of citizens' rights in connection with processing of personal data, to improve the possibilities for exchanging personal data in the European single market, as well as to reduce administrative burdens and modernise the regulations to reflect the realities of a digital world.

Amongst others, the regulation continues and specifies a number of obligations under the current Data Protection Directive which has been implemented into Danish law through the Processing of Personal Data Act. The Regulation also introduces new requirements on public authorities, for example to appoint a data protection advisor and, in certain situations, prepare impact analyses. Important work lies ahead with regard to establishing clarity about the significance of the Regulation for digitisation work, including identifying the specific consequences for public authorities. This work will be performed collaboratively between the relevant public parties.

# INITIATIVES



## BETTER USE OF DATA AND QUICKER CASE PROCESSING

### 2.1

#### CLEAR LEGAL FRAMEWORK FOR EGOVERNMENT

Legislation and regulations should be adapted to the digital age. To address the cross-sectoral legal challenges of more eGovernment and more use of digital data, a standing committee will be set up under the auspices of the Agency for Digitisation. This committee will collect, screen and prioritise cross-sectoral legal challenges identified by the authorities. The committee will prepare solutions for how to deal with the challenges identified.

### 2.2

#### PROGRESS WITH GOOD BASIC DATA

We must make even more progress in creating good public sector basic data. Therefore, efforts will be set in motion to improve the quality of, and reach the targets set for, existing basic data. The opportunity for launching potential new basic data projects, including on pay and salaries data, as well as joint solutions and services such as tailored data extracts, will be examined. A permanent governance structure will be established, so that the authorities can continue their work to establish reliable and coherent basic data of high quality.

### 2.3

#### CORRECT PAYMENTS AND BETTER DATA ON THE INDIVIDUAL

Work by the public sector to prevent incorrect payments and fraud will be continued. Simple and evidence-based control processes, harmonisation of concepts, high data quality and smooth cross-government collaboration will contribute to continued more efficient and effective efforts to prevent incorrect payments and fraud.

### WHAT IS BASIC DATA?

The public authorities register core information about individuals, businesses, real property, buildings, addresses, and more. This information is called basic data and is used throughout the public sector in day-to-day casework by the authorities. Basic data therefore has to be reliable, of high quality, coherent across registries and databases, and easy to access for authorities, businesses and citizens. All basic data will be retrievable from the Data Distributor.

### ABOUT THE BASIC DATA PROGRAMME

Basic Data Programme has set the framework for joint, structured and coordinated work in a number of prioritised basic data areas. Public registries with central basic data have been improved and data has been made available free of charge to public authorities, businesses and citizens. Less double registration, fewer parallel registries and less expenditure on administration can lead to considerable efficiency improvements in government. Furthermore, businesses and citizens can be spared from having to provide the same information to the authorities again and again. In a number of areas, businesses can moreover retrieve basic data free of charge and use it to develop new, smart solutions and products.

## Focus area 3

# Better and more cohesive welfare services

There is a need for a more holistic approach to the digital interface between citizens and the public sector. Citizens must find that digitisation leads to improved and better coordinated welfare services. To realise this, the authorities must to a greater extent share relevant information with each other.

### **Knowledge sharing for better welfare services**

The exchange of relevant health data between the hospital and the local health service, for example, makes it easier to coordinate cross-sectoral patient pathways. It means that patients do not have to serve as liaison and be responsible for the knowledge transfer between various health staff. This will provide security and improve patient treatment.

Furthermore, it is vital that a young person trying to build a life after prison is offered help to re-enter society. For this to become reality, the local social services should be able to get timely information from the prison and probation services about the young person's upcoming release from prison. These two examples illustrate how sharing relevant data allows government officials to organise citizens' pathways more optimally and coordinate things better on the basis of the specific situation of the individual.

In the final analysis, intelligent sharing and use of relevant data offer many benefits for

the individual as well as for society in general. However, this also places demands on government authorities throughout the public sector to develop and expand further on existing opportunities and arrive at a shared understanding of IT architecture, data, classification and data quality, so that data can be exchanged securely, efficiently and effectively, and taking account of the privacy of the individual. Sharing data must always be within the framework of the law - and with the consent of the citizen, where this is relevant. It should also be easier and digitally smoother to collect consent from individuals, so that processes are simpler.

### **Further deployment of digital welfare solutions**

The majority of citizens want to live active lives, be able to cope on their own and be free to do the things they enjoy. Digital welfare solutions play an important role in making this possible. As citizens in general become increasingly more confident with technology and digital solutions, and as new user-friendly solutions are developed, digital welfare solutions will become an ever more integrated part of modern public services.

Further deployment of digital solutions that provide freedom and empower individuals not only improves the quality of life of individuals; it also improves the economy. For example, telemedicine for citizens with chronic obstructive pulmonary disease

(COPD) makes these patients feel more secure in their everyday lives and gives them more flexibility. Furthermore, telemedicine involves the patients in their own treatment. In addition, welfare technologies for home care, such as paperless toilets, make citizens with disabilities less dependent on care services. Digital welfare solutions also allow healthcare and care staff etc. to plan their work more intelligently and more efficiently. Therefore, digital welfare solutions with a proven track record should be deployed further, so that more citizens can benefit from them.

At the end of 2016, a total of 16 projects will have been launched or completed to test digital welfare solutions on a large scale. Experience from this will be used as a launch-pad for taking things to the next level and for Denmark to decide, up to 2020, on the deployment of additional digital welfare solutions with a proven track record of providing value for citizens.

The continued development and testing of digital welfare solutions and new technologies for the public sector will in many situations take place in collaboration with the business community. This means that the competences and experience of businesses can be brought into play in the development of public services. If digital welfare solutions are deployed on a large scale throughout Denmark, this will generate new opportunities for businesses and give them additional experience which, in turn, can lead to export opportunities in the global market.

### **Digital learning materials and tools**

In a digital world, IT and digital tools and learning materials should be a natural part of didactic practices and teaching for children and young people. New digital tools and learning materials must challenge the digital generation at day-care facilities, schools and other educational institutions, and support good didactic practices and high-quality teaching.

Many child carers and teachers are already using digital tools and learning materials in day-care facilities, schools and youth educational programmes, etc. Digital tools and learning materials can raise the didactic and academic level, motivate children, young people and college and university students, as well as ensure they take a more active role in their own learning, although at their own pace and at a level suited to the individual.

### **Competencies**

As welfare services are increasingly being delivered digitally, public employees must know how to use the digital solutions in their work lives. Furthermore, public employees at the frontline of the welfare system should support and guide citizens in the use of digital web portals, tools and welfare solutions, as well as assist them in their digital dealings with the authorities. So, there is need for public employees with the right competences, and this applies not the least to those employees who are in direct contact with citizens, such as teachers, child carers, and healthcare and care staff.

# INITIATIVES



## BETTER AND MORE COHESIVE WELFARE SERVICES

### 3.1

#### COHESIVE WELFARE PATHWAYS FOR CITIZENS

Welfare pathways will be analysed: 1) cross-sectoral, coordinating interventions for citizens with concurrent substance use and mental health disorders; 2) unemployed young people on educational programmes; and 3) incarceration at institutions under the prison and probation services and subsequent reintegration into society. Proposals will be prepared for how to make pathways more coherent for citizens, for example through data sharing and smoother workflows. Experience from this will be used to ensure more coordinated, efficient and effective welfare pathways in the future. At the same time, there will be pilot tests of a shared approach to easy and uniform data sharing across the various welfare areas.

### 3.2

#### BETTER DATA ABOUT DISABLED AND MARGINALISED ADULTS

Work by local government to strengthen the quality of social services work will be continued. By supporting digitally a more uniform and structured practice of documentation across local governments in the social services field, citizens will be ensured better pathways, systematic follow-up on the effects of interventions, and the opportunity for greater transparency across target groups within the area. Furthermore, this will also establish the foundation for sharing data and collaborating across specialist fields and sectors.



### 3.3

## FURTHER DEPLOYMENT OF DIGITAL WELFARE SOLUTIONS

Experience gained from large-scale testing of digital welfare solutions should be documented and solutions with a proven track record will be deployed further to benefit citizens. The goal is that eight digital welfare solutions will have been analysed and a binding decision taken before 2020 on nationwide deployment of approximately four solutions. A successful deployment requires that several authorities follow the same time schedule.

### 3.4

## DIGITAL LEARNING AND TEACHING

Children and young people should benefit from digital learning tools and materials that enhance teaching. Before the end of 2018, the effect of efforts to apply ICT in teaching in municipal primary and lower-secondary schools will be measured. There will be efforts to support the implementation of the agreement that pupils, parents, teachers and child carers have a shared user portal as their digital access point for learning materials, communications and other information regarding the teaching in primary and lower-secondary school. In 2019, all relevant upper-secondary written exams will be digital, and in 2020 all relevant written primary and lower-secondary school leaving exams will be digital.

### 3.5

## DIGITAL COMPETENCES FOR PUBLIC EMPLOYEES

Public employees should be qualified to deal with the digital requirements of the future. The digitisation goals of Danish university colleges will therefore be followed through and there will be special efforts to enhance digital teaching skills for school teachers and child carers. Furthermore, every public employee will be continuously informed about the requirements for information security.





DIGITISATION  
MUST PROVIDE  
**GOOD CONDITIONS  
FOR GROWTH**



# DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH

## FOCUS AREAS

4. BETTER FRAMEWORK FOR THE BUSINESS COMMUNITY
5. PUBLIC SECTOR DATA AS A GROWTH DRIVER
6. AN EFFICIENT UTILITIES SECTOR

### THE GOAL

Digital solutions have great significance for the framework conditions of businesses. Public sector digitisation should contribute to realising the Government's goal to reduce the administrative burden on the business community by DKK 3 billion by 2020 and to make it easier to run a business in Denmark. Digitisation and new technologies are drastically changing the conditions for businesses. Also in the public sector, there is an untapped potential for exploiting the opportunities provided by digitisation to rethink public services. It is the ambition that a far greater part of reporting by businesses to the public authorities is to take place automatically.

The public sector has large amounts of data which businesses can use to optimise their procedures, and which can form the basis for new business opportunities and innovation. Therefore, the public sector should make more public sector data available to businesses and support exploitation of this data by businesses.

Data must to a greater extent be improved and made available in a number of specific areas in which there is deemed to be a great potential for a more efficient and effective public sector and new business opportunities for Danish businesses. This includes data on waste, underground infrastructure, energy, topography, climate and water.



## Focus area 4

# Better framework for the business community

Throughout the years, the public sector has played an important role in the digital transition of businesses, for example through mandatory digital communication and e-invoicing in dealings with public institutions and authorities.

Public sector digitisation should continue to contribute to raising the digitisation level of businesses. At the same time, digitisation must be targeted to make it easier and more attractive to run a business. The public sector must establish framework conditions which strengthen productivity, business development and competitiveness for Danish businesses.

### **Less administrative burden**

Digitisation offers an opportunity to drastically reduce the administrative burden of businesses. Businesses today spend a substantial amount of resources on reporting data to the authorities. Therefore, we must continue work to reduce this administrative burden.

Businesses should not have the nuisance of submitting information to one authority which another authority already holds. Furthermore, there is a vision to completely eliminate the many requirements for manual reporting, and instead replace this reporting with automatic business report-

ing. This will require that reporting become more automatised, so that the relevant data is retrieved directly from businesses' own systems. This saves time for the individual business and means better and more timely data for public authorities.

To achieve this, there is need for persistent and strong focus over the next many years on adapting IT systems, standardising data and changing workflows. At the same time, it requires addressing barriers relating to administrative law and data law. This entails extremely complex work, but it is the right way forward if digitisation is to make it easier to run a business in Denmark.

### **Digital tendering procedures**

As a consequence of the EU Public Procurement Directive, from October 2018 open procedures must be digital, from announcing to submitting tenders. Denmark should aim even higher. The authorities are already receiving invoices electronically. We therefore have to aim at an even more digital tendering and procurement procedure up to and including payment, and we should exploit the opportunities for reusing data.

A digital tendering and procurement procedure can make communication more efficient and reduce transaction costs for businesses and public authorities alike. A more

efficient tendering procedure will also make it possible to stretch the taxpayers' money further. At the same time, a digital process can raise the visibility of relevant European tendering procedures for Danish businesses.

### **Opportunity for cloud computing**

In upcoming years, there will be focus on creating more competition in the market for public IT solutions and reducing the IT operating costs of the authorities. The authorities should be allowed to exploit the entire spectrum of IT solutions, including cloud computing, and clear framework conditions should be established for this.

For public authorities, improved possibilities to make use of cloud computing in relevant areas will mean that they can buy standardised and flexible IT solutions which, in turn, will allow them to scale capacity up or down as required. This can reduce queues when many citizens want to log in to a given service at the same time. For the authorities, cloud computing used in the right ways, and taking the right security measures, can therefore lead to increased technical and commercial flexibility as well as cheaper and more efficient IT solutions.

### **WHAT IS CLOUD COMPUTING?**

Cloud computing is a business model which entails buying standardised IT products (software, hardware or services) as a service over the internet. This means customers do not have to install and maintain the IT products themselves in house.

Cloud computing can contribute to economic growth by reducing the costs of procuring and operating IT systems. Furthermore, both customers and suppliers can scale IT products up or down as required.



# INITIATIVES



## BETTER FRAMEWORK FOR THE BUSINESS COMMUNITY

### 4.1

#### **AUTOMATIC BUSINESS REPORTING**

The public sector should to a greater extent use automation and data reuse between authorities and businesses. A trial process will be carried out for a number of volunteer businesses in the area of financial and economic reporting to the public authorities. This process will involve automatic exchange of accounting data between the business and the authorities. This trial process will include relevant analyses as the basis for a decision on deploying automatic business reporting.

### 4.2

#### **DIGITAL TENDERING PROCEDURES AND PROCUREMENT**

According to the EU Public Procurement Directive, digital tendering procedures must be in place by October 2018, so that businesses can submit tenders digitally in open procedures. An analysis of the tendering and procurement procedure will be launched, which will identify opportunities to use standards, technical requirements and common public sector components, such as interoperability with future versions of NemID, NemLog-in, NemHandel, Virk.dk and encryption components, etc. The analysis will describe how a coherent digital tendering and procurement procedure can be completed most efficiently with a view to reducing transaction costs for the contracting authority as well as for suppliers.

### 4.3

#### **CLOUD COMPUTING IN THE PUBLIC SECTOR**

The public sector should have opportunity to use cloud computing where this provides value and is appropriate from both a commercial and a security perspective. Therefore, an updated legal guideline will be prepared on the basis of the upcoming General Data Protection Regulation, describing the possibilities available for the authorities with regard to cloud computing, and which also addresses assessment and management of security risks.



## Public sector data as a growth driver

The quantities and quality of data, as well as our possibilities for storing and processing these large quantities of data, are increasing dramatically these years. The authorities at central, regional and local government levels today collect and produce large quantities of data in their daily performance of tasks. Both businesses and citizens report large quantities of data to the public authorities. One of the largest collections of data is therefore held by the public sector.

### Data as resource

In an international perspective, Danish public sector data is of high quality and holds a large commercial productivity and growth potential. Businesses can use public sector data to optimise their business processes and to develop new products and services which create value for citizens, public authorities and fellow businesses. In the digital age, data is one of the most valuable resources for running a business.

In recent years, the public sector has worked to improve the framework conditions for the accessibility of public sector data. With the establishment of the Basic Data Programme, businesses, citizens and authorities gained access to an array of basic data such as address data, business data and property ownership data. The work to make reliable

and coherent public sector data available for society will still be an essential focus area in the future to boost data-driven innovation.

### Benefits must be showcased

Today, businesses and authorities often have difficulty finding, combining and exploiting public sector data. Therefore, there is a need to improve the access of businesses to public sector data which offers a growth potential for the businesses, and at the same time promote increased use of data.

Data will not automatically be utilised merely by making it available. When data is collected from a larger and more heterogeneous number of sources, IT systems and employees are challenged, not the least in small and medium-sized enterprises. Experience suggests that businesses should be made more aware of the value of data and that it should be easier for authorities and businesses to experiment in using data. Opening up for free access to public sector data should take place wherever this is relevant for businesses and cost-effective for the authorities, and, of course, within the framework of the law.

It can also be advantageous for the authorities to plan access to data from the beginning when buying new IT systems or



carrying out substantial new development on existing systems. This must be with consideration for IT security and the protection of data.

### **Smart Cities**

The use of new technologies such as solutions related to the Internet of Things (IoT) and data used in the design of modern intelligent cities are often referred to as the concept of 'Smart City'. This could be waste bins that automatically report when they need emptying, intelligent traffic management systems, and the collection, display and use of public sector data.

Many Danish local and regional governments have launched projects with Smart City solutions, and Denmark has come a long way in this area. Furthermore, Danish businesses have a number of stronghold positions, for example with regard to climate adaptation and energy-efficiency improvement, waste management, and user-friendly design and architecture. Experience from these projects should be further developed and used to promote the deployment of good Smart City solutions.

In future, the use of more types of GPS data and new technology will accelerate. It will be easier to get dynamic localisation data in real time, for example data about the movements of large crowds of people, road congestion, local environmental conditions in connection with flooding and cloud bursts, etc. Furthermore, the launch of the European Galileo satellite navigation system will speed up the development of technological solutions with accurate and dynamic data.

This new GPS data must be freely accessible and sharable across administrative units and fields. Therefore, a common basis for sharing dynamic positioning data across public sector IT systems should be established. With this common basis, central, regional and local governments can develop their own separate systems and solutions which can interoperate and be combined across sectors and units.



# INITIATIVES



## PUBLIC SECTOR DATA AS A GROWTH DRIVER

### 5.1

#### OPEN PUBLIC SECTOR DATA

In order to promote public sector data, including the commercial use of this type of data, a common public sector partnership will be set up comprising Open Data DK, Danish Regions, and the Danish Business Authority. This partnership will consult with businesses and experts to establish a better overall picture of existing open data and promote efforts to ensure access to more open data. The objective of the partnership is also to promote the use of open data, including by ensuring clear framework conditions for use, as well as draw attention to the value of using data, for example through hackathons and the establishment of a public-private data space.

### 5.2

#### SMART CITY PARTNERSHIP

A joint public sector partnership for Smart Cities will promote the use of smart digital solutions and data in urban development efforts as well as support the commercial potential of Smart City solutions. The Partnership will select three to five action areas for focussed efforts to promote the deployment of good Smart City solutions. This could be in areas such as green and sustainable development, intelligent traffic management systems or use of sensor data.

### 5.3

#### INFRASTRUCTURE FOR POSITIONING AND NAVIGATION DATA

New, more accurate and reliable GPS data holds the potential to alter the way authorities and private businesses solve problems, and render their problem-solving more efficient and effective. An analysis will be carried out of public sector and commercial needs for establishing a common public infrastructure for positioning and navigation data. The analysis will serve as the basis for deciding on implementation of one or two pilot projects.





## Focus area 6

# An efficient utilities sector

Danish society is dependent on good and efficient utilities. The utilities sector supplies electricity, gas, district heating, water and telecommunications services to consumers and it collects and manages waste and wastewater. In 2014, total costs of production in the electricity, gas, district heating, waste and wastewater sectors amounted to billions of DKK, corresponding to 2.5 % of the overall Danish economy.

Data on the utilities sector is important for local government decisions about urban and business development projects or for their efforts to build future-proof critical infrastructure for society (to prevent flooding, for example). At the same time, data on the utilities sector can play a significant role in strategic work by the public sector to realise a cost-effective transition of Danish society to less energy consumption, increased production, and more use of renewable energy.

Therefore, we must be good at planning and managing the utilities area effectively and efficiently. This will require better and more coherent utilities data, which businesses, authorities and citizens alike can rely on and exploit.

### **Need for shared utilities data**

Utilities data includes topography and terra-

in data and water data, such as data about wastewater (sewer lines). Utilities data also includes data on the production and consumption of electricity, gas and heating, as well as data about cables, for example television, traffic-light and internet cables, etc.

Many such data sets already exist, but these are often fragmented and difficult to find. The quality and relevance of the information is not homogenous, and it is often difficult to combine the types of data necessary to optimise operations. This also makes it expensive and difficult for public authorities and public sector companies to maintain the many different systems and databases in which the data is stored.

Open and quality-assured data is therefore vital for efficient production and management in the utilities area. There is a great untapped potential in the using data as a driver to improve the efficiency of workflows and procedures in the sector. This will ensure higher returns on the Danish utilities infrastructure and, thus, lower prices for consumers and businesses.

At the same, an improved data basis will provide new business opportunities for Danish businesses. This applies to the primary utility companies which can optimise their operati-

ons, as well as to the businesses which, for example, provide solutions for data-driven decision support systems.

It is anticipated that increased integration of different utilities systems will be vital for conversion of the energy system to renewables which come from intermittent energy sources, for example solar and wind energy.

### **Easy access to good utilities data**

Topography and terrain data as well as data on water and the climate are vital when local and regional governments are to plan and make decisions about, for example, expanding water and wastewater management utilities to prevent sewers from overflowing and to ensure clean drinking water in connection with extreme weather events. At the same time, effective common public sector combining and distribution of terrain, climate and water data are important and will provide positive benefits for other sectors, such as building and construction, insurance and agriculture. Better and more accessible data can also help promote innovation in private businesses, just as it can open up for new data-driven products and services for both private and public sector clients.

Furthermore, the display and accessibility of existing data on energy supplies, for example production and consumption of electricity, gas and heating, could greatly benefit the Danish transition to less energy consumption and more renewables. This transition has meant there is a strong demand for

coherent energy supply data, smart energy management tools and data-driven decision support systems, so that the transition can be as cost-effective as possible. Better data in the area can help produce an even more efficient energy supply and push for the development of new products in the energy supply sector.

It should also be easier for businesses, authorities and other stakeholders to get information about underground infrastructure, for example electric cables, district-heating pipes, sewage pipes, natural-gas pipes or antenna cables. Consistent information about the grid system will make it easier and cheaper to maintain and establish new underground infrastructure. Better sharing of data about underground infrastructure can also reduce damage during digging and excavation.

The waste area is facing serious challenges with regard to generating data of adequate quality and such that it is accessible and useful for planning, inspection and development by local governments. It is necessary to modernise existing national IT systems used to collect data so that local governments, for example, can use data about waste to optimise waste management in Denmark.

# INITIATIVES



## AN EFFICIENT UTILITIES SECTOR

### 6.1

#### COMMON DATA ON TOPOGRAPHY, CLIMATE AND WATER

Data on topography, climate and water is part of the administrative foundation for many sectors and authorities. Consistent provision of up-to-date data on topography, climate and water across sectors will contribute to more effective administration, it will support the frequent emergency situations in connection with extreme weather events and it will promote development of new products and technologies.

### 6.2

#### OPEN DATA ON ENERGY SUPPLY

Conversion to more renewable energy has created a substantial demand for data-driven decision support and tools for smart energy management. This requires the relevant data to be accessible and of good quality. An analysis will be conducted of the potential for making available data on energy consumption in buildings. The analysis will also identify general possibilities arising from integrating this data into the utilities sector. Data will be tested through a pilot project for energy-efficient buildings.

### 6.3

#### EXCHANGE OF DATA ON UNDERGROUND INFRASTRUCTURE

Currently, maintaining and constructing infrastructure is costly for authorities and businesses. A digital platform will therefore be established to exchange data on underground infrastructure to streamline workflows, reduce damage from digging and excavation, and to enable coordination of digging activities as well as exploit synergies between different supply infrastructures. The consequences of this initiative, including scope and any phasing-in, will be discussed with the utilities sector and the telecommunications sector.

### 6.4

#### OVERALL IT ARCHITECTURE FOR DATA ON WASTE

Better data on waste will enable local governments to plan, enforce and evaluate local government waste schemes more optimally to benefit the public and businesses. Currently, waste data is collected through a number of IT systems which have been established separately and which can only to a limited extent share data. An analysis will be initiated to result in an action plan for flexible registration, exchange and use of data between the IT systems in the waste area.







**SECURITY AND  
CONFIDENCE**  
MUST BE IN FOCUS  
AT ALL TIMES



# SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES

## FOCUS AREAS

7. THE PUBLIC SECTOR PROTECTS DATA
8. ROBUST DIGITAL INFRASTRUCTURE
9. DIGITISATION FOR EVERYONE

### THE GOAL

The public sector is to use and manage data on citizens and businesses with care and with the appropriate level of security. Information security in the public sector must be improved. Therefore, all authorities will have to commit to the principles set out in the international information security standard ISO27001. This also means that public employees should have, and be familiar with, clear guidelines on how to store and manage personal data on citizens and confidential data on businesses.

The public sector should ensure robust and efficient operation of systems and IT infrastructures that are crucial for society. New secure and user-friendly generations of NemID, Nem-Log-in and Digital Post must be able to meet future needs and allow citizens and businesses to communicate securely and with confidence, both with each other and with public authorities.

Digitisation should be for everyone – also for individuals with special needs or challenges. Digital competences of citizens and businesses and their knowledge about secure digital behaviour must be improved. Assistance should be available to those who cannot use digital solutions or who do not have access to them. Developing the digital skills of children and young people already begins at preschool, and continues throughout school, further education and the rest of their lives.



## Focus area 7

# The public sector protects data

Citizens and businesses should feel confident and safe using digital public services. The public sector must protect user data, and therefore information security must be improved throughout the public sector. This should be done with emphasis on user-friendliness in digital solutions and on financial considerations.

### **New level of ambition**

Digital solutions and digital technologies have created new possibilities for dialogue and involvement, brand new businesses opportunities, etc. However, increased digitisation has also brought with it a risk of new types of crime. Cyber criminals, misuse of data and breaches of security are more serious than ever. They pose a real risk in the form of losses and costs for individuals, businesses and public authorities, and they can also lead to loss of confidence in IT solutions.

We must therefore aim high with regard to information security in the public sector. Not least the very serious cases of breach of security in recent years have made it important for all public authorities to be in full control of information security and to follow the international standards on managing and storing data.

### **Secure management of information about citizens and businesses**

The need to improve security has developed in line with the increasing need for access to personal data on citizens and confidential data on businesses as a consequence of digital transformation. Several employees deal with sensitive or confidential data in their work and case processing. Other security procedures are required when manual paper-based workflows become digital and sharing information becomes easier.

Citizens and businesses should feel confident and safe when submitting information to the public administration. They should be able to trust that data will be used for relevant purposes and that it will not be lost or fall into the wrong hands. The public sector will use and manage sensitive and confidential data with care and with the appropriate level of security and privacy.

Public employees should have, and be familiar with, clear guidelines on how to collect, store and use data, and not least sensitive personal data and confidential data. Authorities will control who has access to sensitive data on the public and businesses. Management in the authorities will assume responsibility for information security, and the authorities will ensure establishment of secure procedures

and workflows adapted to the individual tasks. Among other things, this will be done through consistently differential access to data so that only relevant employees have access to data on citizens and businesses.

Data protection will, as far as possible, be incorporated into the design and development of public IT solutions from the very outset. Investing in security comes at a price. However, in an ever-more digital world, data protection is an increasing necessity to ensure that people and businesses have confidence in digital public services.

The public sector will work to spread the use of common public security standards. Moreover, the Danish public sector must have a full realistic overview of the current security situation and threat levels with regard to cyber and information security in order to react and initiate preventive measures.

### **Secure digital identities**

In a globalised world, goods, services and people are increasingly crossing borders, not least between the EU Member States. At the same time, the current refugee crisis means that authorities and administrations in Denmark will have to deal with a large number of foreign citizens without a Danish or European ID number. Correct digital identities are required for citizens and employees of businesses to communicate securely with the authorities and with each other.

Therefore, there is an increasing need for certainty about the identity of individuals and

businesses in a digital world. Among other things, there is a need for a common method and stricter process with regard to issuing digital identities such as NemID to foreign individuals and businesses in Denmark. This will ensure that individuals can receive the correct benefits, that businesses can report correct data such as VAT returns, etc. Moreover, a better overview can prevent Danes and foreigners from receiving benefits they are not entitled to after moving away from Denmark.

Similarly, there is a challenge with regard to ensuring the right level of security in ID solutions targeted at children and young people who are not old enough to have a NemID. They should be able to navigate securely online and log on to relevant digital solutions, for example in connection with school.

As of 2018, digital identity (such as NemID) must be usable in all public sector digital solutions in all EU Member States. For example, a Danish student will be able to use a NemID in connection with an application to study abroad. Moreover, a foreign employee in Denmark will be able to log on to a Danish self-service solution (to apply for a tax card, for example) with the digital identity solution of his/her own country.

### **Ongoing development of common solutions**

The public sector has an important task in making available central solutions to citizens and businesses that enable safe and secure digital communication and interacti-





on. Individuals and businesses unable to use digital self-service solutions must be given the opportunity to surrender digital power of attorney to another trusted party, and it should also be possible to provide digital consent.

The major common solutions, NemID, Nem-Log-in and Digital Post, will all be put up for tender in the years to come. This will be a good occasion to develop and rethink the solutions in order to meet the future needs for security, digital identities, rights management, communication, user-friendliness and accessibility.



# INITIATIVES



## THE PUBLIC SECTOR PROTECTS DATA

### 7.1

#### WELL-MANAGED INFORMATION SECURITY IN ALL AUTHORITIES

Information security must be managed better by central, regional and local governments. All public authorities will therefore have to commit to the principles set out in the international information security standard ISO27001. Efforts against hacking incidents will be intensified. Information security should be an intrinsic part of design and development of public IT solutions on the basis of the principles of 'data protection by design' and 'data protection by default'.

### 7.2

#### COMMON STANDARDS FOR SECURE EXCHANGE OF INFORMATION

Exchange of information must be conducted securely throughout the public sector. Therefore, the current and future common public sector standards for secure exchange of information will be disseminated throughout the public sector.

### 7.3

#### DIGITAL IDENTITIES AND RIGHTS MANAGEMENT

Systems and data must only be accessed by the right people. This will be ensured through correct assignment of digital identities (e-identities) and rights. The common method to assign correct digital identities to the public and businesses moving to Denmark, for example, will be improved. The possibility to surrender digital power of attorney and consent will be made easier. Stricter requirements from the EU for mutual acceptance of e-identities across borders must also be met.

### 7.4

#### NEW GENERATIONS OF NEMID, NEMLOG-IN AND DIGITAL POST

NemID, NemLog-in and Digital Post are necessary to ensure efficient and secure digital self-service for citizens and businesses. New tendering procedures will be held for the three infrastructure components in the strategy period. Among other things, the tendering procedures will ensure continuous development of the systems so that they are up-to-date, user-friendly, and secure, and so that they meet the needs of authorities, citizens and businesses.

### 7.5

#### SECURE ID SOLUTIONS FOR CHILDREN AND YOUNG PEOPLE

The need for a more secure identification solution for children and young people has arisen in line with the increasing use of digital solutions. This need applies in particular to the group of 12-15-year-olds who do not yet have a NemID, but have an increasing need for digital confidentiality in connection with login to school intranets, for example. Methods to develop an ID solution for children and young people will be analysed.



## Focus area 8

# Robust digital infrastructure

Denmark has come a long way in establishing an up-to-date and robust basis for eGovernment. In the years to come, the public sector will strive to consolidate the Danish digital foundation. A robust digital foundation is about ensuring common frameworks for IT architecture, and a consistent IT infrastructure.

### **Common frameworks for IT architecture in the public sector**

Effective sharing of data across authorities and with citizens and businesses requires possibilities to reuse relevant data. For IT systems in one public authority to be able to retrieve, understand and use data originating from a system in another authority requires a common framework for how authorities describe and exchange such data. While many authorities, within their respective areas, have developed architecture patterns for their IT systems, common architecture principles and guidelines are necessary for

systems to be able to exchange and use data easily and securely across authorities. Principles and guidelines are based in part on the common public sector work on the Basic Data Programme.

### **Consistent IT infrastructure**

The common public sector digital infrastructure and digital platforms such as NemID, NemLogin, NemKonto bank account, virk.dk, Digital Post, The Civil Registration System etc. are now just as important for Danish society as the physical infrastructure such as roads, railways, the electricity grid and the telephone network. The individual infrastructure components and systems are now so closely linked that a breakdown in one system will impact many other systems and solutions in the public sector as well as in the private sector. For instance, if NemID is down, users cannot read their digital post, use a self-service solution, log on to their online bank account or on to borger.dk.

### **WHAT DOES A COMMON PUBLIC SECTOR IT ARCHITECTURE MEAN FOR DATA SHARING?**

IT architecture to share data consists of common principles and guidelines to describe and exchange data, and it helps authorities retrieve and use data from each other's IT systems. The architecture makes it easier, simpler and more secure to integrate public IT systems with one another and it forms the basis for more efficient data sharing in the public sector.



Therefore, more than ever, there is a need for an approach in which authorities collaborate across sectors in selected key areas to share information and ensure stable and robust solutions; an approach that makes it easy to gain an overview of the current operating status. It must be easy for the authorities to determine the system status if the systems become inaccessible or so overstretched that users are queueing up for access. This will enable the authorities to inform citizens and businesses about the status of their IT solutions.

The digital solutions made available by the public sector must live up to the expectations of citizens and businesses for data protection, information security and stable

operation. The public sector must continue to deliver professional IT operations at all levels, so that public sector solutions can be robust, stable and effective. The infrastructure will be checked regularly, and solutions and the common public sector components will be kept up-to-date.

Danes must have quick access to the internet regardless of where they live or work in Denmark. Denmark generally has a highly developed broadband infrastructure, however in some parts of the country citizens and businesses still do not have the broadband speeds they want. Moreover, an increasing number of activities in the digital society require a good internet connection.

## BETTER BROADBAND THROUGHOUT DENMARK

The Danish Government has a target that by 2020 all households and businesses must have access to a broadband connection with a download speed of at least 100 Mbit/s and upload speed of at least 30 Mbit/s. The point of departure of the Government is that broadband development should be market-driven, and regulation should be technology-neutral.

In order to promote this development and ensure good broadband coverage throughout Denmark, the Government has taken a number of initiatives that will be implemented in the years to come:

- Establishment of a test scheme with a government broadband funding pool of DKK 200 million
- Better opportunities to utilise existing passive infrastructure for broadband such as empty underground pipes and conduits
- Ambitious requirements for coverage in future frequency auctions
- The BoligJobordning (tax deduction scheme for domestic and home-improvement services) can be used for the deployment of broadband.

## KNOWLEDGE OF CURRENT BROADBAND COVERAGE

The Tjekditnet.dk website (check your internet) allows consumers, businesses, local governments and regions to check the current broadband coverage and search for suppliers for a given address. The website is planned to be updated for smartphone use in 2016.

In the 2013-2020 Strategy for Digital Welfare it was agreed to examine the requirements imposed by selected digital welfare services on local coverage. In 2016, a survey will be conducted of the broadband coverage as well as of the requirements imposed by the digital welfare services.



# INITIATIVES



## ROBUST DIGITAL INFRASTRUCTURE

### 8.1

#### GOOD DATA AND EFFICIENT DATA SHARING

A common public sector IT architecture will be developed to set the framework for sharing data between authorities. Among other things, public authorities will be able to use this architecture in their work on standardising and improving data, and when they need to share data with, or use data from, other authorities in connection with case processing, for example. The architecture consists of joint management of public architecture principles and guidelines as well as common frameworks for how to create and share good data.

### 8.2

#### ROBUST OPERATION OF THE COMMON INFRASTRUCTURE

The collaboration on operation of crucial common public sector IT infrastructure systems will be strengthened and their mutual dependencies will be mapped. A common public sector communication platform will be developed, on which authorities and other stakeholders can find information about the current operating status.



## PROFESSIONAL MANAGEMENT OF IT SYSTEMS AND IT PROJECTS

The Danish welfare model requires stable and efficient IT systems, and this is why good management of IT is crucial. The coming years will see a massive professionalisation of IT management in the central government to ensure a robust IT portfolio and foundation for further work to digitise central government. Moreover, the central government will prioritise its IT costs to ensure efficient administration of taxpayers' money. Finally, genuine competition and professional collaboration with suppliers utilising market innovation forces need to be ensured.

## THE COUNCIL FOR IT PROJECTS

For a number of years, the central government has been working consistently to improve management of major government IT projects, e.g. under the auspices of the Council for IT Projects. This has contributed to positive developments for IT projects. However there is a need for further professionalisation, e.g. in connection with support of contract and supplier management as well as in agile development projects.

An analysis of the overall government IT area, which will be completed in 2016, will identify central government management of IT and IT costs. This will contribute to even more professional management of government IT systems and projects

## MUNICIPAL COLLABORATION ON EXPOSURE TO MARKET MECHANISMS AND PROFESSIONAL SUPPLIER MANAGEMENT

Through the joint municipal ordering organisation KOMBIT, local governments have exposed to market mechanisms a number of crucial business systems over which the former municipally-owned KMD had a monopoly. In the coming years, local governments will face a challenging task in implementing new, modernised IT solutions. By joining forces under KOMBIT, local governments can ensure a higher level of professionalisation with regard to specification, tendering procedures, implementation and subsequent administration of large IT projects. KOMBIT is also the hub of municipal knowledge, building on market dialogue, contract management and efficient operation of IT solutions.

## MODEL FOR MANAGEMENT AND CONTROL OF COMMON REGIONAL DIGITISATION PROJECTS

For a number of years, Danish regions have been focusing on digitisation and have made Denmark one of the world leaders with regard to IT support for hospitals. IT projects throughout the healthcare services are increasingly becoming more complex and this increases requirements for competences and management in projects. The regions have therefore developed a model for management and control of digitisation projects as a basis for the common regional projects under RSI (regional healthcare ICT). This model is in line with similar models in central government and local governments, and thereby supports collaboration on common public sector IT projects between regions, local governments and central government.



## Focus area 9

# Digitisation for everyone

The use of digital technologies and solutions is increasing exponentially in society as a whole. Some individuals and businesses have welcomed these developments and can easily adjust to the changes. Others have taken some time to adjust to new ways of dealing with things, e.g. communication with public authorities which has gradually become more digital in recent years.

As a society, we are obligated to continually ensure that individuals are able to cope securely and competently in a digital world, and not least on the labour market, where requirements for digital skills continue to increase. This applies to adults as well as

new to generations growing up as digital natives.

### **Competences for the digital generation**

Children's digital learning and education begins as early as at preschool and continues throughout the educational system. Children and young people must therefore be able to use digital technologies, tools and platforms. They must possess knowledge and skills to make qualified decisions and to navigate safely and securely on the internet. Children and young people of the digital generation must have the digital skills and culture to cope in a digital world and to communicate digitally with authorities.

### **WHAT ARE DIGITAL COMPETENCES AND DIGITAL CULTURE?**

Digital competences and culture are generally important prerequisites for being able to cope in an evermore digital society.

Digital competences include the ability to use digital solutions, tools and online platforms to search, collect and analyse information and knowledge. This includes being able to use a computer, tablet or smartphone to search information on the internet, use NemID, read Digital Post, use online banking etc.

Public employees must be able to use technical tools in their work. For example, home carers use PDAs (Personal Data Assistant devices) and primary school teachers use digital tools and platforms when teaching.

Digital culture is about preparing children and young people to cope socially and ethically in a digital world. Among other things, children and young people must obtain the necessary digital competences to enable them to use IT as a working tool and to acquire knowledge and solve problems. They must be aware of the possibilities and restrictions of the internet and know the consequences of their digital footprints on the internet. They must generally be able to show safe and responsible digital behaviour.

### **Help is available**

The Denmark of the future will embrace those who are ready to digitise as well as those who cannot use the digital channels and solutions or who do not have access to them. Individuals and businesses must have adequate knowledge and the necessary competences to communicate and interact digitally with the authorities. Denmark has unique collaboration between local governments, regions, the central government, voluntary organisations, and increasingly also the business community. All these players are strongly committed to improving the IT competences of the population. This collaboration will be continued and expanded.

Many citizens have needed, and still need, help to become digital and to use digital solutions. Therefore, it is still necessary to help individuals who find it difficult to use the new technology and communicate digitally with the authorities, or who have special needs for help. They should be given the guidance and support they need. This could be help to learn basic digital skills such as using NemID and Digital Post. Others only need help now and again, for example, to carry out a transaction in a self-service solution. Local governments will continue to play an important role in this context.

There should, of course, be good access to the public sector and help should be available for individuals who cannot use digital portals to the public sector. Such individuals will still be able to contact and communicate with the public sector. This means that they can continue to receive printed letters and get help to deal with public authorities by other means than digitally. Moreover, businesses, which, in contrast to individuals, cannot be exempted from digital communication and are only rarely exempted from Digital Post, will be offered help to use these digital channels.

### **Security**

The public sector should be co-responsible for improving information security in Denmark and for helping individuals and businesses to navigate securely in an increasingly digital world. Individuals in Denmark should have a high level of knowledge about secure online behaviour. Protecting business secrets etc. is a primary consideration for businesses. Businesses should be prepared to meet the challenges of digital security in order to reduce the risk of losing data due to cyber attacks.





# INITIATIVES



## DIGITISATION FOR EVERYONE

### 9.1

#### DIGITAL SKILLS FOR CHILDREN AND YOUNG PEOPLE

From a young age, children and young people must build digital competences and culture to prepare them for the digital reality. Information campaigns about competent and safe navigation in the digital society will make children and young people aware of their use of technology so they can navigate safely online. Teaching programmes and material for pupils in primary and lower secondary school and in upper secondary education will provide them with digital skills to interact digitally with society.

### 9.2

#### INFORMATION AND HELP FOR CITIZENS AND BUSINESSES

Individuals and businesses who find it difficult to use digital solutions and to communicate digitally with the authorities must be given the necessary help and support. Initiatives aimed at special target groups will be launched on a regular basis to ensure that as many people as possible benefit from the digital opportunities. These include young people, elderly people, people from non-western countries and businesses that are not quite ready for IT. The authorities will provide clear and consistent information adapted to the target group about the digital channels and portals to the public sector.

### 9.3

#### HIGH LEVEL OF AWARENESS OF INFORMATION SECURITY

Technological and digital development imposes increasing requirements for the knowledge and competences of individuals and businesses. Therefore, ongoing information campaigns and initiatives about good digital behaviour will be launched during the strategy period. The campaign and initiatives will generate knowledge about threats and prepare individuals and businesses for exploiting digital possibilities safely and securely.



## ACCESSIBILITY IN IT SOLUTIONS

As more things can be carried out digitally, citizens are given new possibilities to gain easy and quick access to the public sector. This also applies to individuals with special challenges, e.g. disabilities. Their special needs should be taken into consideration as much as possible when developing digital solutions for the public sector. During 2016, a proposal for an EU directive on accessibility to public sector websites is expected to be implemented in Danish legislation. The directive is to ensure that public sector websites are developed such that as many people as possible can access the information on the websites and use self-service solutions.

It is important that authorities as well as suppliers incorporate technical accessibility as an integral part of digital solutions made available by the public sector. This applies to public sector websites and the digital self-service solutions, but also when developing infrastructure components such as NemID, Digital Post, etc. Public authorities must listen to input from stakeholder organisations, such as the Disabled Peoples Organisations Denmark, which can identify special needs for adjusting and making available solutions, for example certain types of letters in Digital Post.

Where possible, public authorities will incorporate technical accessibility when deploying digital solutions in the individual sectors. For example, this could be in connection with digital welfare services in the healthcare and care sectors or the education area. For example, institutions, schools and local governments procuring digital teaching tools and materials may impose requirements for accessibility to the suppliers of the teaching materials.



# PROGRESS, MANAGEMENT AND ONGOING ADAPTATION



The new strategy sets a clear and binding direction for digitisation efforts. Realising the strategy is about developing new IT solutions as well as about ensuring more consistent and systematic dissemination of the common solutions. This imposes strong demands on solid decentralised implementation capacity, but also on centralised coordination efforts.

## **Digital goals will bring about change**

The financial situation has put pressure on central, regional and local governments to find efficient solutions for smarter and more efficient ways to perform tasks. Digitisation plays a key role in this context, and has become a permanent part of negotiations about the economy of local governments and regions.

Decisions on new investments in IT must always have a solid decision base, including a well-documented business case. Account should also be taken of the fact that some authorities have old IT systems and are struggling with fundamental challenges, and therefore are facing a major modernisation task.

## **Room for agility**

Society is changing rapidly with dramatic technological development. The coming years will see new possibilities and needs that we cannot predict at this point. The analyses to be launched in connection with this strategy will help us choose direction. Therefore, together we must take stock of the possibilities, discuss implementation and continuously adjust efforts and processes where needed throughout the strategy period.

A project portfolio steering committee will be set up for the Digital Strategy 2016-2020 in order to ensure coordination and ongoing adaptation of the strategy. This will ensure strong common public sector organisation of the implementation of initiatives under the strategy, so that authorities receive the support they need to achieve their ambitious goals.

The relevant ministries will ensure that legislation, rules and standards support efficient digital processes in the major welfare areas. In addition, the project portfolio steering committee will make sure that central, regional and local governments realise their goals and milestones for each area. Steering groups can be set up to advise decision makers.

