

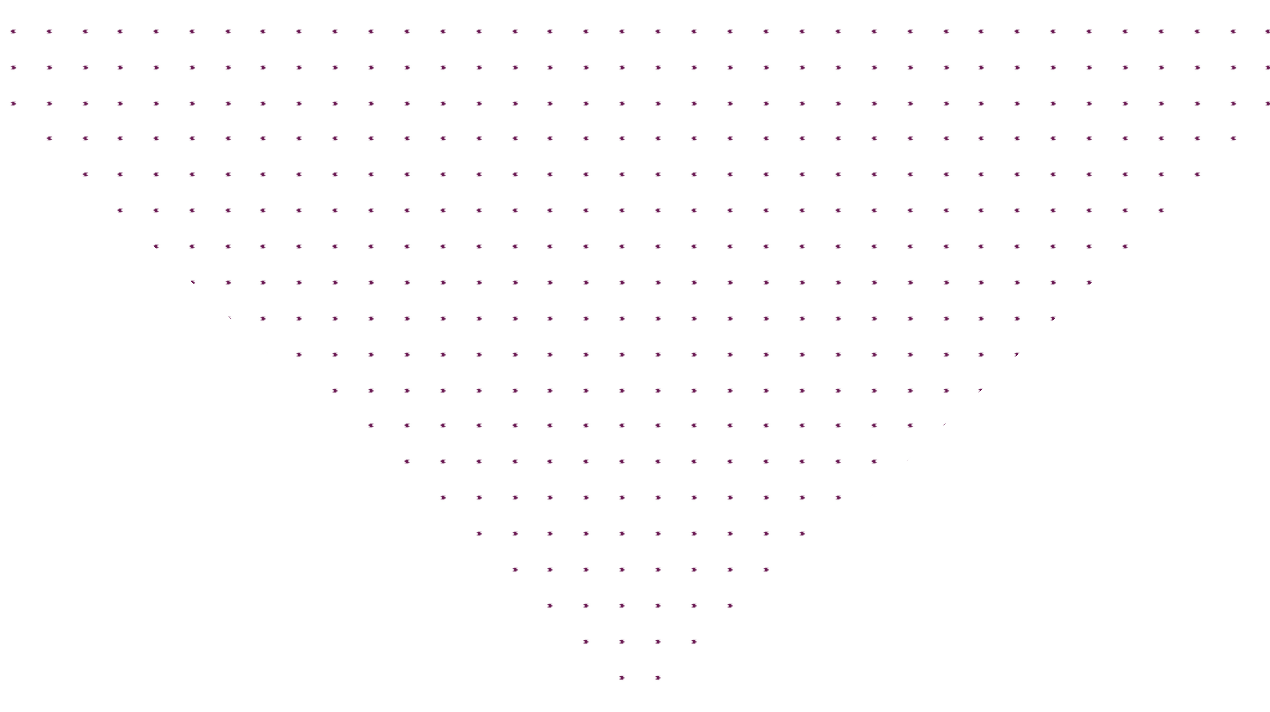
A STRONGER AND MORE SECURE **DIGITAL DENMARK**

## Digital Strategy 2016-2020

The Government /

Local Government Denmark / Danish Regions /

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**A STRONGER AND MORE SECURE DIGITAL DENMARK**

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# CONTENTS

[A STRONGER AND MORE SECURE DIGITAL DENMARK 4](#_bookmark0)

[We must seize the digital opportunities 6](#_bookmark1)

[Denmark on the way 10](#_bookmark2)

[THE DIGITAL STRATEGY 12](#_bookmark3)

[15 years of digital strategies 13](#_bookmark4)

[VISION AND GOALS 14](#_bookmark5)

[CHART OF INITIATIVES 16](#_bookmark6)

[DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 19](#_bookmark7)

1. [A user-friendly and simple digital public sector 21](#_bookmark8)
2. [Better use of data and quicker case processing 25](#_bookmark9)
3. [Better and more cohesive welfare services 28](#_bookmark10)

[DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH 33](#_bookmark11)

1. [Better framework for the business community 35](#_bookmark12)
2. [Public sector data as a growth driver 38](#_bookmark13)
3. [An efficient utilities sector 41](#_bookmark14)

[SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 45](#_bookmark15)

1. [The public sector protects data 47](#_bookmark16)
2. [Robust digital infrastructure 51](#_bookmark17)
3. [Digitisation for everyone 55](#_bookmark18)

[PROGRESS, MANAGEMENT AND ONGOING ADAPTATION 59](#_bookmark19)

# A STRONGER AND MORE SECURE DIGITAL DENMARK

Denmark and the world are facing funda- mental changes. Rapid ongoing digital de- velopments are already changing the way in which we live, the way we run our busi- nesses 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 op- portunities that not many of us would want to do without. The invention of the automo- bile gave us far more mobility and flexibility. Automation of processing and packaging processes within the food industry improved opportunities within supply and flexible con- sumption. 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 un- certain 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 develop- ment 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 pros- perity and welfare while still preserving the uniquely Danish sense of security and confi- dence in each other and in society.

#### Digital Denmark

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

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

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 business- es 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.**

**A STRONGER AND MORE SECURE DIGITAL DENMARK 5**

# 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 gener- ally embraced digital technologies. There is a strong tradition of collaboration and find- ing new and practical solutions between public authorities, and across the public and private sectors.

Furthermore, the public sector began in- troducing 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 in- frastructure, 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 in- tegral part of many public services. Care workers use tablet computers to moni- tor and register any changes in the health status of their elderly clients. Teachers use digital learning tools and materials to differ- entiate their teaching to the individual stu- dent, and health technologies make it possi- ble for patients to monitor their condition in their own homes.

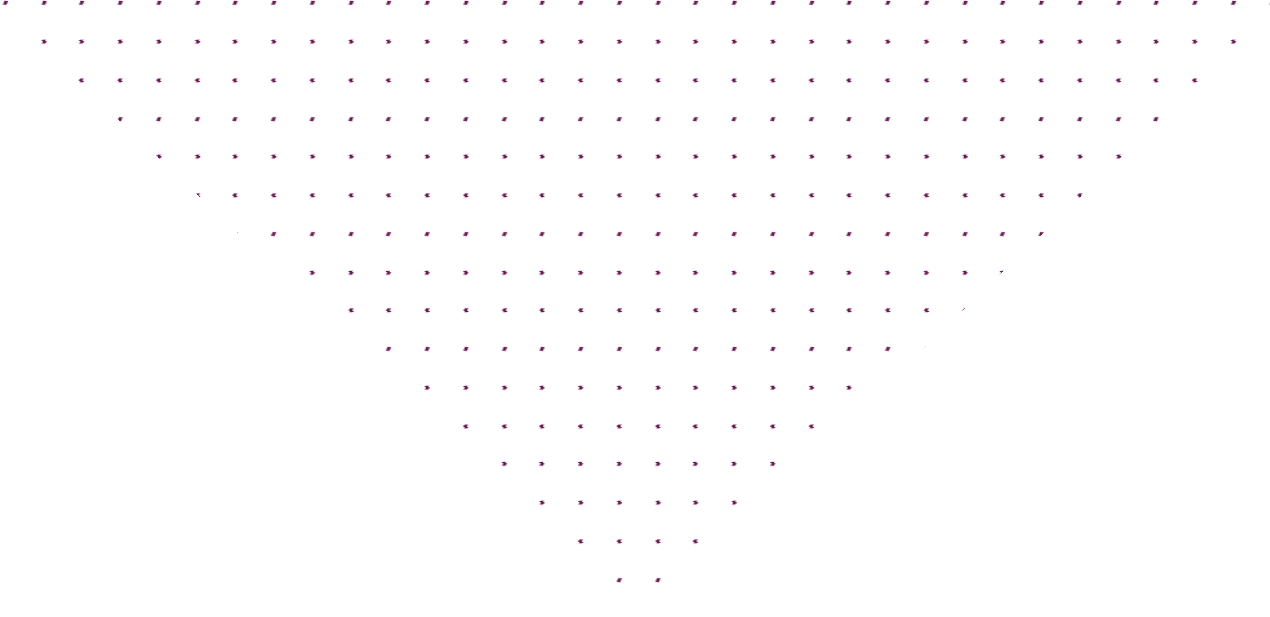
Some individuals and businesses have wel- comed the developments and can easily cope, while others have taken some time to adjust to new ways of dealing with things. Local and regional governments have played and are still playing an active role in ensuring that citizens and businesses are guided through 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

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

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

Digital safety and security of individuals and businesses are essential to being able to ex- ploit the opportunities offered by digitisation to develop and improve the Danish welfare system; and digitisation does offer huge op- portunities for individuals as well as for so- ciety in general.

The Danish public sector is designed to ensure that services for citizens and busi- nesses are as far as possible organised at local or regional levels within the frame- work of the law. This approach helps en- sure 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 re- sponsibility. 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 empower- ment 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 Den- mark 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 digi- tal welfare solutions, citizens can become 'co-players' in delivery of their welfare ser- vices. With more efficient, digital solutions it is possible to improve the quality of services and enable local development.

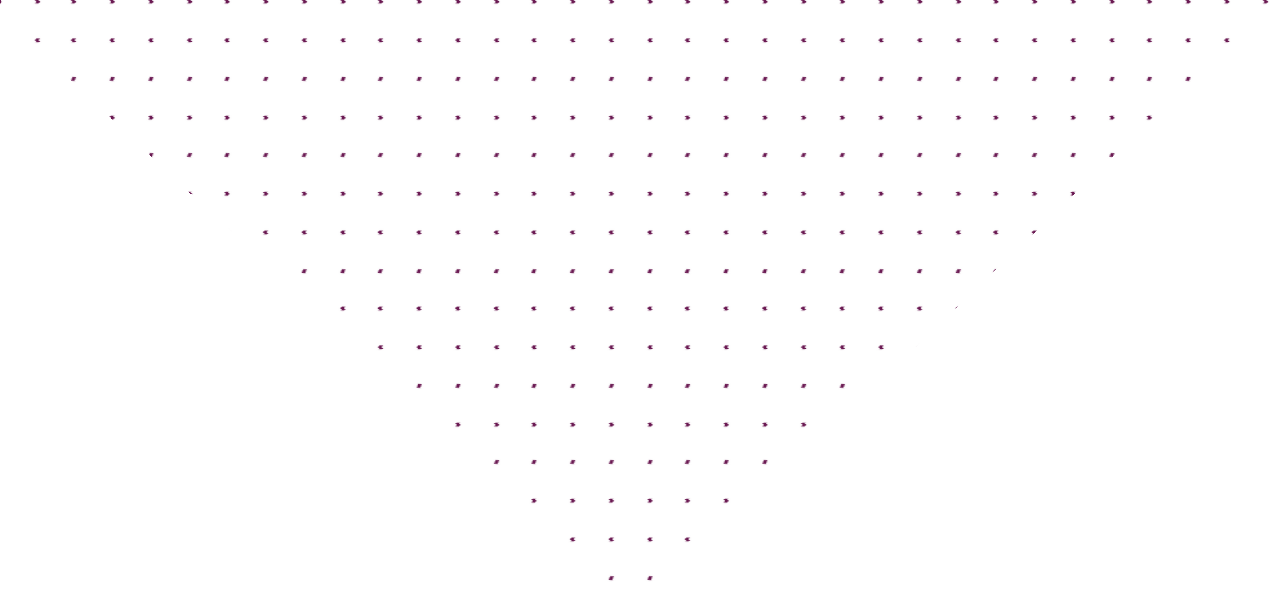
Denmark has a well-developed infrastruc- ture for mobile and broadband coverage However, if we are to continue to have a society that works efficiently and with local anchoring, we need to ensure that this good mobile and broadband coverage is improved even more.

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

We can establish a simpler and more co-

hesive public sector in which the author-

**A STRONGER AND MORE SECURE DIGITAL DENMARK 7**

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 shar- ing of data wherever this is possible, rele- vant and secure. Increased use of data can be supported by common data standards, standardised data formats, common IT ar- chitectures and a robust IT infrastructure.

Increased sharing of data will enable new generations of digital solutions which can automatically find the necessary data. In- dividuals 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 organisa- tional units will provide individuals and busi- nesses 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, infor- mation to the authorities once, instead of having to enter the same information in seve- ral places in public digital solutions.

Greater use and reuse of data will also im- prove the basis for the public services de- livered. 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.

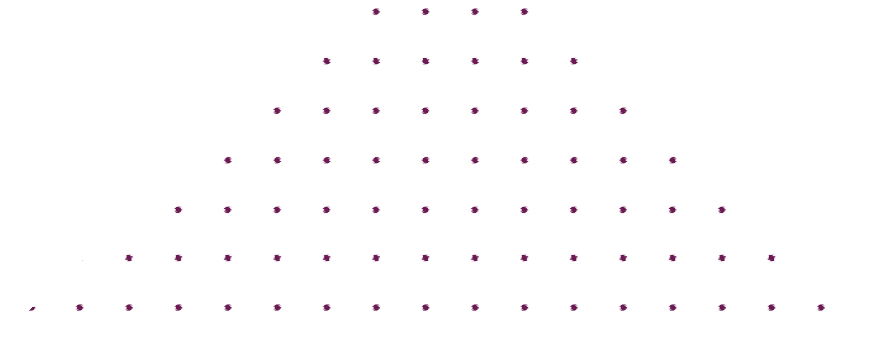
#### New business opportunities

The business and growth policy of the

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

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 en- trepreneurship 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 busi- nesses become better at exploiting the potential in, for example, automation and new technologies, and, by doing so, en- hance 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 frame- work 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 busi- ness 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, combin- ing and reusing data to develop new inno- vative products and services, so that busi- nesses 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 solu- tions and automated data collection from businesses should contribute to the goal of reducing significantly the administrative burden on businesses.

**A STRONGER AND MORE SECURE DIGITAL DENMARK 9**

# 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 every- day life.

However, technological developments are happening at such a pace that we are not always able to predict the digital opportuni- ties, users' needs and societal benefits that the future will bring. When development of the eIdentification 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 bank- ing 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 soci- ety. This will require investment. In future years, it will also be necessary for a num- ber 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 process- es 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 sec- tors.

Much data is still stored differently and de- fined differently from one public authority to another. This makes exchange of data across sectors or administrations very dif- ficult. This in turn makes it unnecessarily complicated for different authorities to col- laborate to deliver the best and most effi- cient 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 ser- vice 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 au- thorities.

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

#### Expenditures and revenues will come under pressure

The public sector will be faced with a signifi-

cant 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 accessi- bility 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, per- haps require new solutions.

New, internet-based business models can pro- vide new opportunities for growth, greater flex- ibility 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.

**A STRONGER AND MORE SECURE DIGITAL DENMARK 11**

# THE DIGITAL STRATEGY

This Digital Strategy runs up to 2020, and in it the central, regional and local govern- ments 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 collab- oration between local, regional and central governments. This is applies especially in areas in which it is necessary and appro- priate to develop cross-cutting solutions. The work has been embedded in multi-year strategies covering central, local and region- al governments.

The strategic digital initiatives make it pos- sible for the public sector to make joint investments in areas which are particu- larly complex and in which there are inter- dependencies across different authorities and sectors.

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

endeavours for closer public sector colla- boration to deliver good, efficient and coher- ent 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 responsi- bility 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 organisa- tions and NGOs are also contributing to find- ing common solutions for the digital transi- tion and helping to secure the foundation for a strong and secure Digital Denmark.

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

# 15 years of digital strategies

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **2004**  **EFFICIENT PAYMENT AND INTERNAL DIGITISATION** |  | **2007**  **COMMON INFRASTRUCTURE** | **2011**  **DIGITAL COMMUNICATION** |  |
| **2001**  **DIGITAL COLLABORATION** |  |  |
|  | * **NemID (eID solution), NemLog-in (federated user management and log-in to online public services etc.), eIndkomst (digital reporting of income)** * **Digital Post (digital mailbox for messages and commications from public authorities), NemSMS (text message reminders from the authorities), Borger.dk (digital public services web portal for citizens)** * **Authorities must use common IT infrastructure** | * **Digital Post made mandatory for individuals and businesses** * **Online self-service solutions made mandatory for individuals and businesses** * **Dissemination of digital welfare services** * **The Basic Data Programme** |  |
| * **Digital signature** * **Citizens can send emails to public authorities** * **Digital communication by the authorities** |  | * **NemKonto (mandatory default citizen's account for payments from the authorities) and eInvoicing** * **Virk.dk (digital public services web portal for businesses) and Sundhed. dk (web portal providing personal access to all own health data)** * **Secure government email systems** |

### DENMARK IN THE DIGITAL LEAD

**Over the past 15 years, Denmark has undergone a unique transition to digital public admini- stration, communication and services. A number of solutions originating from previous digi- tal 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 eIdentification 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 man- datory online self-service for individuals and businesses. Telemedicine solutions for people with chronic disorders and digital learning tools and materials are becoming more wide- spread 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.**

**A STRONGER AND MORE SECURE DIGITAL DENMARK 13**

# 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 pub- lic 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 devel- opment 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 im- prove 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, Den- mark 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.

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

# 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.



**3**

BETTER AND MORE COHESIVE WELFARE SERVICES

**2**

BETTER USE OF DATA AND QUICKER CASE PROCESSING

**1**

A USER-FRIENDLY AND SIMPLE DIGITAL PUBLIC SECTOR

DIGITAL SOLUTIONS MUST BE EASY-TO-USE,

**QUICK AND ENSURE HIGH QUALITY**

**6**

AN EFFICIENT UTILITIES SECTOR

**5**

PUBLIC-SECTOR DATA AS A GROWTH DRIVER

**4**

BETTER FRAMEWORK FOR THE BUSINESS COMMUNITY

DIGITISATION MUST PROVIDE GOOD

**CONDITIONS FOR GROWTH**



**9**

DIGITISATION FOR EVERYONE

**8**

ROBUST DIGITAL INFRASTRUCTURE

**7**

THE PUBLIC SECTOR PROTECTS DATA

**SECURITY AND CONFIDENCE**

MUST BE IN FOCUS AT ALL TIMES

**A STRONGER AND MORE SECURE DIGITAL DENMARK 15**

# CHART OF INITIATIVES

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



**1.1**

**A user-friendly and simple digital public sector**

**More cohesive user journeys**

**1.2**

**Better digital communication**

**2.1**

**Better use of data and quicker case processing**

**Clear legal framework for eGovernment**

**3.1**

**Better and more cohesive welfare services**

**Cohesive welfare pathways for citizens**

**2.2**

**Progress with good basic data**

**3.2**

**Better data about disabled and marginalised adults**

EGOVERNMENT MUST PROVIDE **GOOD CONDITIONS FOR GROWTH**

|  |  |
| --- | --- |
| **Better framework for the business community** | **4.1 4.2**  **Automatic business Digital tendering procedures**  **reporting and procurement** |
|  | **5.1 5.2** |
|  |  |
| **Public-sector data as a growth driver** | **Open public-sector data Smart City partnership** |
|  | **6.1 6.2** |
|  |  |
| **An efficient utilities sector** | **Common data on topography, Open data on energy supply climate and water** |

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



**7.1**

**The public sector protects data**

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

**8.1**

**Robust digital infrastructure**

**Good data and efficient data sharing**

**9.1**

**Digitisation for everyone**

**Digital skills for children and young people**

**7.2**

**Common standards for secure exchange of information**

**8.2**

**Robust operation of the common infrastructure**

**9.2**

**Information and help for citizens and businesses**

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

|  |
| --- |
| **1.3 1.4 1.5**  **Overview of own Better technicalsupport All communication from**  **interaction with for citizens and public authorities is digital**  **authorities and benefits businesses**  **2.3** |
| **Correct payments and better data on the individual**  **3.3 3.4 3.5** |
|  |
| **Further deployment of Digital learning Digital competences for digital welfare solutions and teaching public employees** |

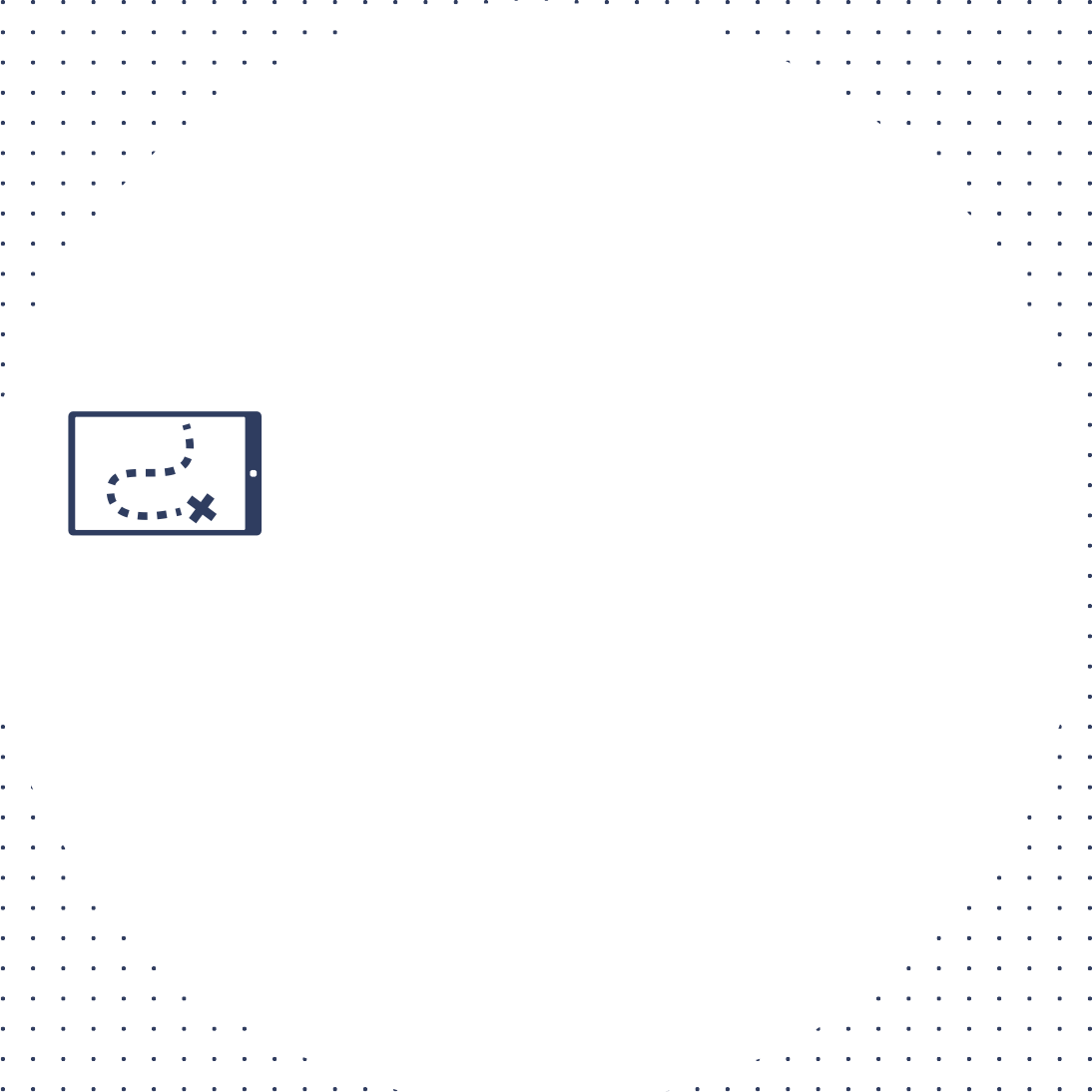
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| **4.3**  **Cloud computing in the public sector**  **5.3** |
| **Infrastructure for positioning and navigation data**  **6.3 6.4** |
|  |
| **Exchange of data on Overall IT architecture for underground infrastructure data on waste** |

|  |
| --- |
| **7.3 7.4 7.5**  **Digital identity and rights New generations of Secure ID solutions for management NemID, NemLog-in and children and young people**  **Digital Post**  **9.3** |
| **High level of awareness of information security** |

**A STRONGER AND MORE SECURE DIGITAL DENMARK 17**





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



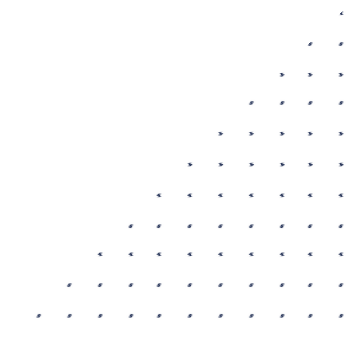


# DIGITAL SOLUTIONS MUST BE EASY-TO- USE, QUICK AND ENSURE HIGH QUALITY

### 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-proces- sing 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 documen- tation for information that is already in public registries.**

**Better information sharing between authorities will also provide citizens with more cohe- sive 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.**

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



Focus area 1

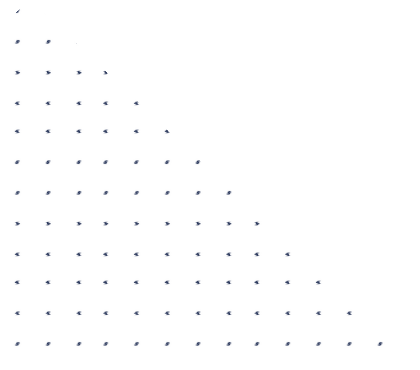
**A user-friendly and simple digital public sector**

Danes have to serve themselves on the in- ternet 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 digi- tal 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 ap- plication 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 coor- dination across sectors.

#### Being digital should be easy

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

Today, we are used to seeing easy and rap- id digital services from private businesses make a positive difference in our lives. For example, when we can easily transfer mon- ey 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 exam- ple, that the individual self-service solu- tions 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 acces- sible 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 pos- sibilities and user requirements there will be in the future. Therefore, the user-friend- liness of public digital solutions for citizens and for businesses must be measured regularly. Knowledge about the effect and

**DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 21**



value of solutions for users and for the au- thorities 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 effective- ly 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 solu- tions 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 respon- sibility 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 entre- preneur to set up a company will be made more user-friendly and cohesive, where to- day at least five or six self-service solutions are required. Firstly, the business has to be registered on the business portal virk.dk to get a central business registration number, and a NemKonto bank account for the busi-

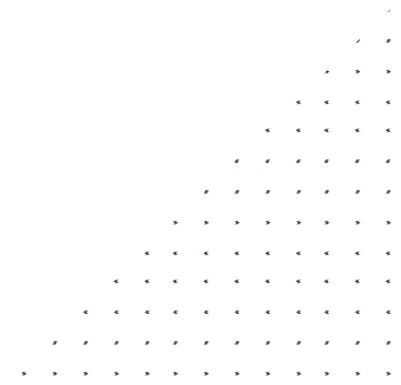
ness has to be set up with a bank. Next, a NemID eID and digital signature has to be ordered on medarbejdersignatur.dk and a Digital Post mailbox needs setting up for the business.

There could also be improvements in digi- tal 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 transpar- ent. 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 in- formation, for example about pensions and health benefits.

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

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



to check both their Digital Post mailbox and their physical mailbox. In future, business- es 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.

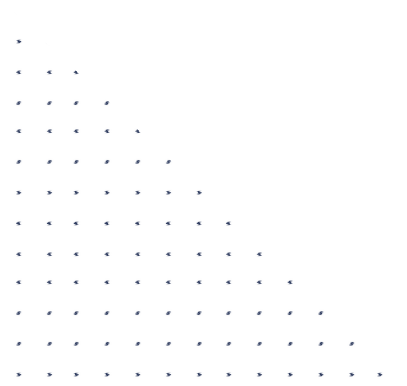
#### The right help

Digital communication with the authorities can be an advantage, for example for the el- derly 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 let- ter 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, irrespec- tive 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 authori- ties 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.**

**DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 23**



# INITIATIVES 1.3

### OVERVIEW OF OWN INTERACTIONS

**WITH AUTHORITIES, AND BENEFITS**



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 solu- tions and authorities. Work on selected user journeys, for example divorces or business start-ups, will secure easier and more straight- forward self-service processes. Users will be guided through the process and thereby they will be able to serve themselves easily and sim- ply 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, infra- structure components and portals must meet a few agreed requirements when new solutions are developed or further developed. The re- quirements 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.

Citizens and businesses will be offered insight into relevant information about themselves held by pub- lic authorities. This information will be presented in a context tailored to the individual user. The author- ities 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 pro- grammes 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 de- central 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 specif- ic 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 be- tween 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.

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



Focus area 2

**Better use of data and quicker case processing**

Time is one of the important service parame- ters 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 reduc- tions in the administrative burden will make the public sector more efficient and easier to use for the individual person and for bu- sinesses.

#### Relevant knowledge to be used across authorities

Relevant information from self-service solu-

tions, public registries, etc. will be exchanged much more extensively between the autho- rities’ specialist systems, it will support the work of case officers and it will be reused across authorities in order to simplify repor- ting 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 rapid- ly, 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 happe- ning to some extent, for example with regard to payment of benefits such as child allow-

ance, maternity leave benefits and state reti- rement 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 efficient- ly, 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 pro- viding 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 appli- cations, reportings and notifications already have some fields completed with relevant information in advance. This means that ci- tizens and businesses can have their cases processed faster, for example when applying for something or notifying any changes.

Reusing data from public registries also con- tributes to preventing incorrect payments

**DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 25**



and fraud, among other things, because the individual or business is not at risk of for- getting 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 te-

chnical challenge. There is also a challenge in safeguarding a regulatory framework to ensure that new opportunities offered by digitisation become assets for Danish so- ciety. 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 or- ganise 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 con- nection 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 moder- nise 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 sig- nificance of the Regulation for digitisation work, including identifying the specific consequenc- es for public authorities. This work will be performed collaboratively between the relevant public parties.**

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



# 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 per- manent 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, harmoni- sation 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, build- ings, 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 ad- ministration can lead to considerable efficiency improvements in government. Furthermore, businesses and citizens can be spared from having to provide the same information to the au- thorities 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.**

**DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 27**



## 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 digi- tisation leads to improved and better coor- dinated 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 be-

tween the hospital and the local health service, for example, makes it easier to co- ordinate 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 pris- on 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 gen- eral. However, this also places demands on government authorities throughout the pub- lic sector to develop and expand further on existing opportunities and arrive at a shared understanding of IT architecture, data, clas- sification and data quality, so that data can be exchanged securely, efficiently and ef- fectively, 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 digital- ly smoother to collect consent from individ- uals, so that processes are simpler.

#### Further deployment of digital welfare solutions

The majority of citizens want to live ac-

tive 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 individ- uals not only improves the quality of life of individuals; it also improves the econo- my. For example, telemedicine for citizens with chronic obstructive pulmonary disease

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



(COPD) makes these patients feel more se- cure 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 citi- zens 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 fur- ther, 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 lev- el and for Denmark to decide, up to 2020, on the deployment of additional digital welfare solutions with a proven track record of pro- viding value for citizens.

The continued development and testing of digital welfare solutions and new technol- ogies for the public sector will in many sit- uations 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 opportuni- ties 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 chil- dren and young people. New digital tools and learning materials must challenge the digi- tal generation at day-care facilities, schools and other educational institutions, and sup- port 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 edu- cational 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 indi- vidual.

#### Competencies

As welfare services are increasingly be- ing 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 di- rect contact with citizens, such as teachers, child carers, and healthcare and care staff.

**DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 29**



# INITIATIVES



## BETTER AND MORE COHESIVE WELFARE SERVICES

**3.1**

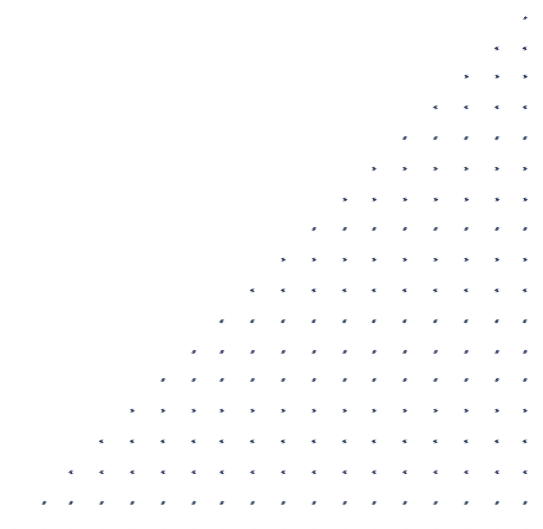
### COHESIVE WELFARE PATHWAYS FOR CITIZENS

Welfare pathways will be analysed: 1) cross-sec- toral, coordinating interventions for citizens with concurrent substance use and mental health disorders; 2) unemployed young people on edu- cational programmes; and 3) incarceration at in- stitutions under the prison and probation services and subsequent reintegration into society. Pro- posals 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 coordinat- ed, 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 contin- ued. By supporting digitally a more uniform and structured practice of documentation across lo- cal governments in the social services field, citi- zens 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 sec- tors.

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



**3.3**

### FURTHER DEPLOYMENT OF DIGITAL WELFARE SOLUTIONS

Experience gained from large-scale testing of digital welfare solutions should be documented and solu- tions with a proven track record will be deployed further to benefit citizens. The goal is that eight dig- ital welfare solutions will have been analysed and a binding decision taken before 2020 on nationwide deployment of approximately four solutions. A suc- cessful 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 pri- mary and lower-secondary schools will be meas- ured. There will be efforts to support the imple- mentation 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-sec- ondary school. In 2019, all relevant upper-sec- ondary 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 digi- tisation 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. Further- more, every public employee will be continuously informed about the requirements for information security.

**DIGITAL SOLUTIONS MUST BE EASY-TO-USE, QUICK AND ENSURE HIGH QUALITY 31**



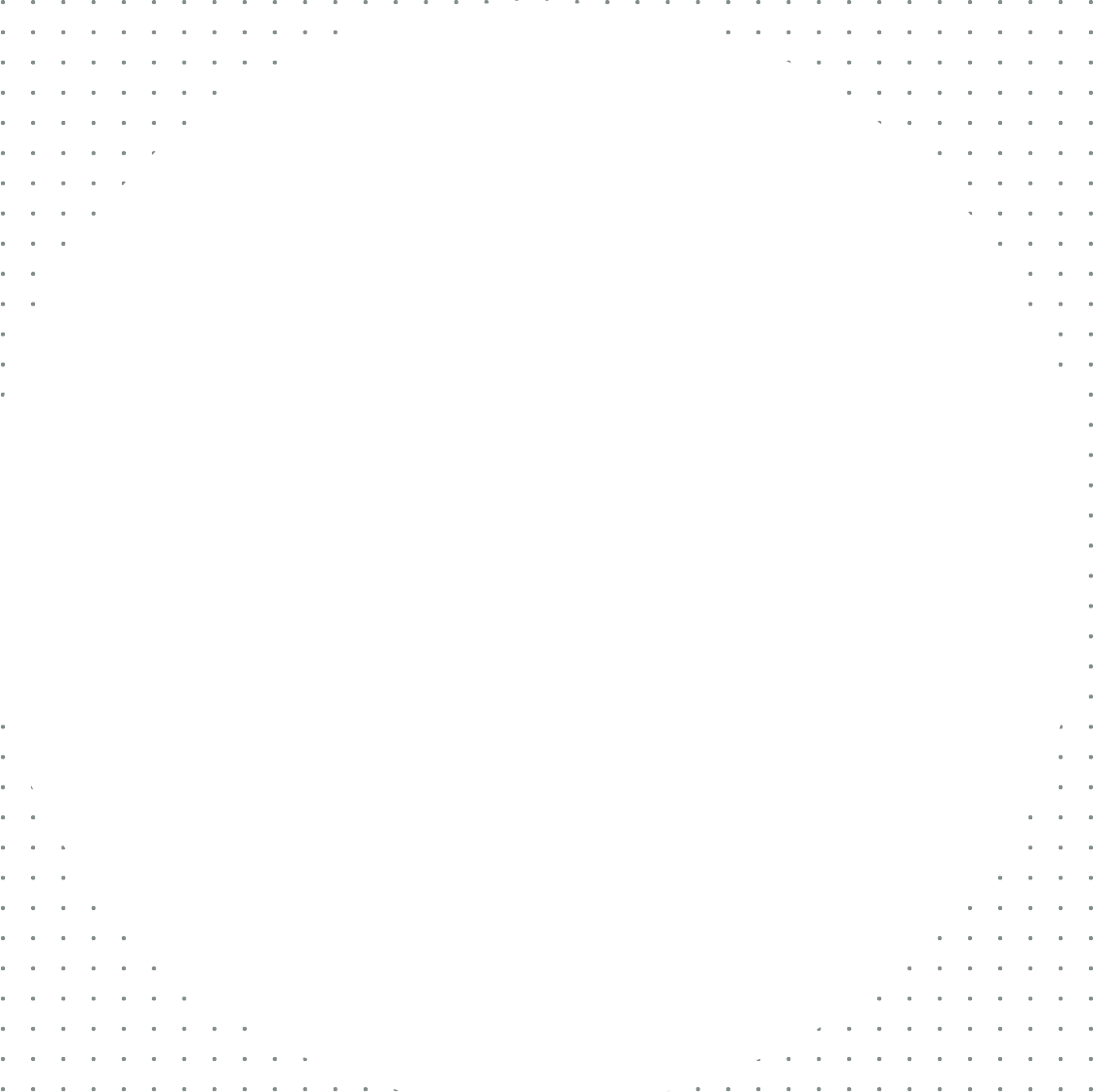
                                         





DIGITISATION MUST PROVIDE

**GOOD CONDITIONS FOR GROWTH**



# DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH

### FOCUS AREAS

1. BETTER FRAMEWORK FOR THE BUSINESS COMMUNITY
2. PUBLIC SECTOR DATA AS A GROWTH DRIVER
3. 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 admi- nistrative 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 am- bition 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.**

**34 DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH**



Focus area 4

**Better framework for the business community**

Throughout the years, the public sector has played an important role in the digital transi- tion of businesses, for example through man- datory digital communication and e-invoi- cing 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, digitisa- tion 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 Dan- ish businesses.

#### Less administrative burden

Digitisation offers an opportunity to dras- tically reduce the administrative burden of businesses. Businesses today spend a sub- stantial 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 authori- ty which another authority already holds. Furthermore, there is a vision to complete- ly 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 indi- vidual 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 en- tails 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 Procure- ment Directive, from October 2018 open procedures must be digital, from announ- cing to submitting tenders. Denmark should aim even higher. The authorities are already receiving invoices electronically. We there- fore have to aim at an even more digital tendering and procurement procedure up to and including payment, and we should ex- ploit the opportunities for reusing data.

A digital tendering and procurement proce- dure can make communication more effi- cient and reduce transaction costs for busi- nesses and public authorities alike. A more

**DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH 35**



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 oper- ating costs of the authorities. The authori- ties 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 standard- ised 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 ser- vice 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 (soft- ware, 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.**

**36 DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH**



# 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 autho- rities and businesses. A trial process will be carried out for a number of volunteer busines- ses in the area of financial and economic repor- ting 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 Directi- ve, digital tendering procedures must be in place by October 2018, so that businesses can submit tenders digitally in open procedures. An analy- sis of the tendering and procurement procedure will be launched, which will identify opportuni- ties 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 securi- ty perspective. Therefore, an updated legal guide- line 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 ad- dresses assessment and management of security risks.

**DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH 37**



## Focus area 5

**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 quantiti- es 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 pub- lic 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 autho- rities and fellow businesses. In the digital age, data is one of the most valuable resour- ces 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 Program- me, 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 grow- th potential for the businesses, and at the same time promote increased use of data.

Data will not automatically be utilised me- rely by making it available. When data is collected from a larger and more heteroge- neous number of sources, IT systems and employees are challenged, not the least in small and medium-sized enterprises. Expe- rience 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 re- levant for businesses and cost-effective for the authorities, and, of course, within the framework of the law.

It can also be advantageous for the autho- rities to plan access to data from the be- ginning when buying new IT systems or

**38 DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH**



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

#### Smart Cities

The use of new technologies such as solu- tions related to the Internet of Things (IoT) and data used in the design of modern intel- ligent cities are often referred to as the con- cept 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 pro- jects 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 move- ments of large crowds of people, road con- gestion, local environmental conditions in connection with flooding and cloud bursts, etc. Furthermore, the launch of the Euro- pean Galileo satellite navigation system will speed up the development of technological solutions with accurate and dynamic data.

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





**DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH 39**

# 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 com- mon public sector partnership will be set up com- prising 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 en- suring clear framework conditions for use, as well as draw attention to the value of using data, for example through hackathons and the establish- ment 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 sy- stems 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 pri- vate 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 navigati- on data. The analysis will serve as the basis for deciding on implementation of one or two pilot projects.

**40 DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH**



## Focus area 6

**An efficient utilities sector**

Danish society is dependent on good and ef- ficient utilities. The utilities sector supplies electricity, gas, district heating, water and telecommunications services to consumers and it collects and manages waste and wa- stewater. In 2014, total costs of production in the electricity, gas, district heating, waste and wastewater sectors amounted to bil- lions 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 infra- structure 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 pro- duction, 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 con- sumption of electricity, gas and heating, as well as data about cables, for example tele- vision, traffic-light and internet cables, etc.

Many such data sets already exist, but the- se 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 op- timise operations. This also makes it expen- sive 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 manage- ment 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 infra- structure and, thus, lower prices for consu- mers and businesses.

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

**DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH 41**



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 renewab- les 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 lo- cal and regional governments are to plan and make decisions about, for example, expanding water and wastewater manage- ment utilities to prevent sewers from over- flowing and to ensure clean drinking water in connection with extreme weather events. At the same time, effective common public sector combining and distribution of ter- rain, climate and water data are important and will provide positive benefits for other sectors, such as building and construc- tion, insurance and agriculture. Better and more accessible data can also help promo- te innovation in private businesses, just as it can open up for new data-driven products and services for both private and public se- ctor clients.

Furthermore, the display and accessibility of existing data on energy supplies, for examp- le production and consumption of electricity, gas and heating, could greatly benefit the Danish transition to less energy consump- tion 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 infrastruc- ture, for example electric cables, district- heating pipes, sewage pipes, natural-gas pipes or antenna cables. Consistent infor- mation about the grid system will make it easier and cheaper to maintain and establish new underground infrastructure. Better sha- ring of data about underground infrastruc- ture 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 develop- ment by local governments. It is necessary to modernise existing national IT systems used to collect data so that local govern- ments, for example, can use data about waste to optimise waste management in Denmark.

**42 DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH**



# 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 emer- gency situations in connection with extreme we- ather events and it will promote development of new products and technologies.

**6.2**

### OPEN DATA ON ENERGY SUPPLY

Conversion to more renewable energy has crea- ted 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 conduc- ted of the potential for making available data on energy consumption in buildings. The analysis will also identify general possibilities arising from in- tegrating this data into the utilities sector. Data will be tested through a pilot project for ener- gy-efficient buildings.

**6.3**

### EXCHANGE OF DATA ON UNDERGROUND INFRASTRUCTURE

Currently, maintaining and constructing infra- structure 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 con- sequences 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

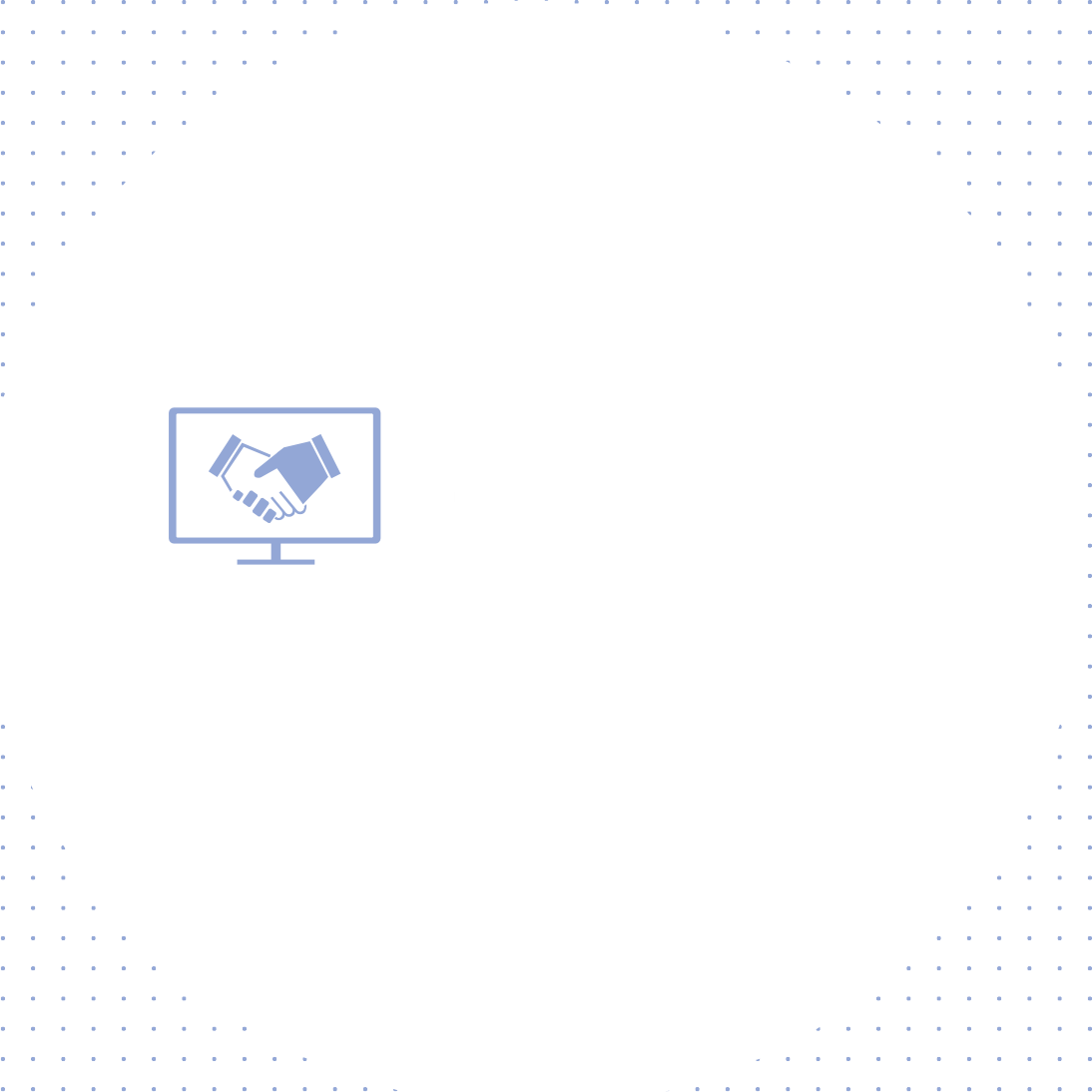
Better data on waste will enable local govern- ments to plan, enforce and evaluate local govern- ment waste schemes more optimally to benefit the public and businesses. Currently, waste data is collected through a number of IT systems which have been established separately and which can only to a limited 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.

**DIGITISATION MUST PROVIDE GOOD CONDITIONS FOR GROWTH 43**





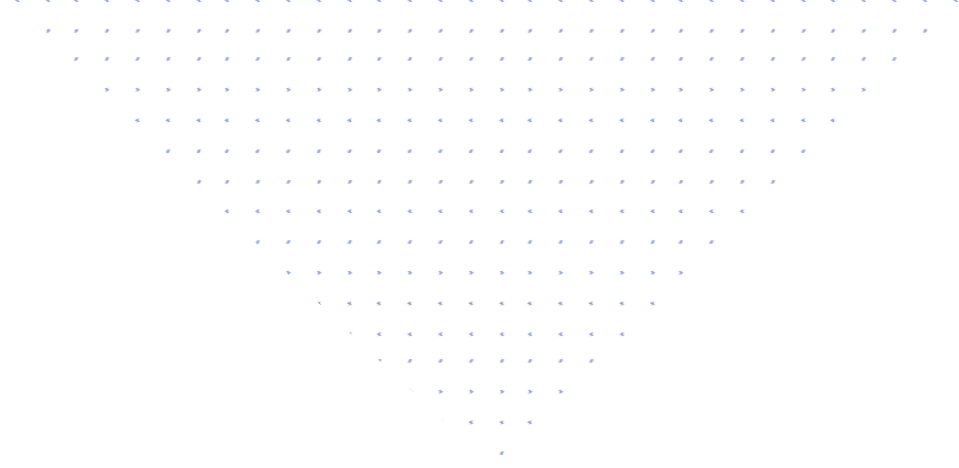


**SECURITY AND CONFIDENCE** MUST BE IN FOCUS AT ALL TIMES



# SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES



### FOCUS AREAS

1. THE PUBLIC SECTOR PROTECTS DATA
2. ROBUST DIGITAL INFRASTRUCTURE
3. 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 infrastruc- tures 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 autho- rities.**

**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 educa- tion and the rest of their lives.**

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



Focus area 7

**The public sector protects data**

Citizens and businesses should feel confi- dent 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-fri- endliness in digital solutions and on financi- al considerations.

#### New level of ambition

Digital solutions and digital technologies have created new possibilities for dialogue and involvement, brand new businesses op- portunities, etc. However, increased digitisa- tion has also brought with it a risk of new ty- pes 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 im- portant 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 digi- tal transformation. Several employees deal with sensitive or confidential data in their work and case processing. Other security procedures are required when manual pa- per-based workflows become digital and sharing information becomes easier.

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

Public employees should have, and be famili- ar with, clear guidelines on how to collect, sto- re and use data, and not least sensitive per- sonal 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

**SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 47**



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 in- corporated into the design and development of public IT solutions from the very outset. Investing in security comes at a price. How- ever, in an ever-more digital world, data pro- tection 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. More- over, the Danish public sector must have a full realistic overview of the current security situation and threat levels with regard to cy- ber 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 Den- mark will have to deal with a large number of foreign citizens without a Danish or Euro- pean 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. Mo- reover, 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 solu- tions 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 solu- tions, for example in connection with school.

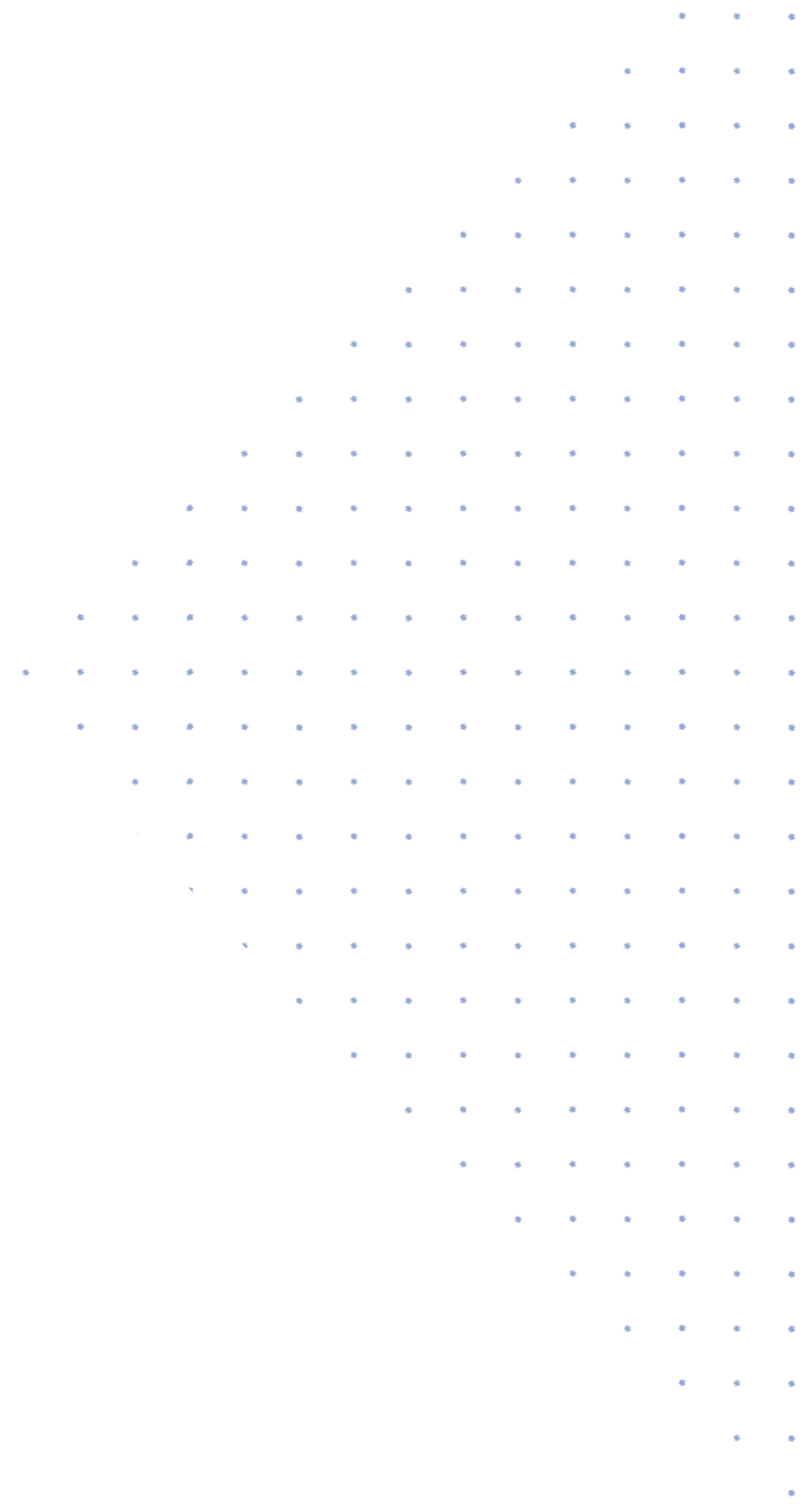
As of 2018, digital identity (such as NemID) must be usable in all public sector digital solutions in all EU Member States. For example, a Danish student will be able to use a NemID in connection with an application to study abroad. Moreover, a foreign employee in Denmark will be able to log on to a 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 citi- zens and businesses that enable safe and secure digital communication and interacti-

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



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 manage- ment, communication, user-friendliness and accessibility.

**SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 49**

# 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 pub- lic authorities will therefore have to commit to the principles set out in the international informa- tion 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'.

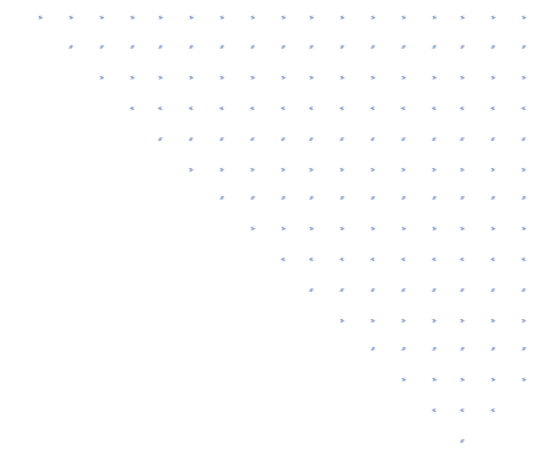
**7.2**

### COMMON STANDARDS FOR SECURE EXCHANGE OF INFORMATION

Exchange of information must be conducted securely throughout the public sector. Therefo- re, 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 mo- ving to Denmark, for example, will be improved. The possibility to surrender digital power of at- torney 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 pro- cedures will be held for the three infrastructure components in the strategy period. Among other things, the tendering procedures will ensure con- tinuous 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 solu- tion 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.

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



## Focus area 8

**Robust digital infrastructure**

Denmark has come a long way in estab- lishing 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 digi- tal foundation is about ensuring common frameworks for IT architecture, and a con- sistent IT infrastructure.

#### Common frameworks for IT architec- ture 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. Prin- ciples 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 infrastruc- ture 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 in- frastructure 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.**

**SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 51**



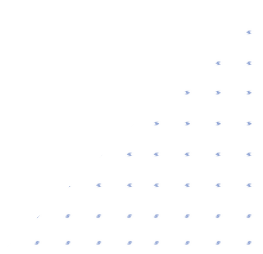
Therefore, more than ever, there is a need for an approach in which authorities colla- borate across sectors in selected key areas to share information and ensure stable and robust solutions; an approach that makes it easy to gain an overview of the current operating status. It must be easy for the authorities 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 expecta- tions 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 infrastruc- ture 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 inter- net regardless of where they live or work in Denmark. Denmark generally has a highly developed broadband infrastructure, howe- ver 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 govern- ments 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 con- ducted of the broadband coverage as well as of the requirements imposed by the digital welfare services.**

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



# INITIATIVES



## ROBUST DIGITAL INFRASTRUCTURE

**8.1**

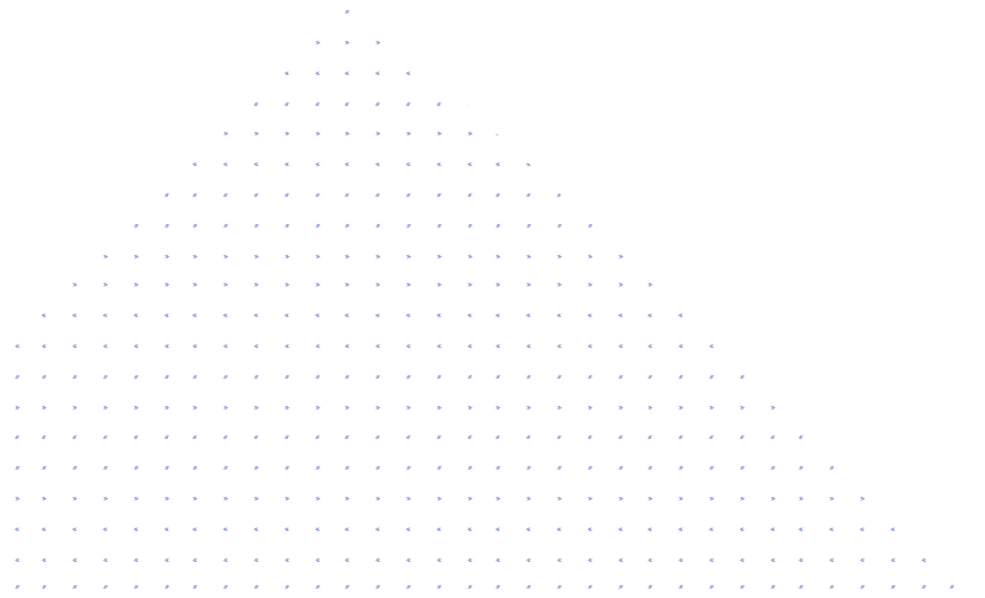
### GOOD DATA AND EFFICIENT DATA SHARING

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 pro- cessing, 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 communica- tion platform will be developed, on which author- ities and other stakeholders can find information about the current operating status.

**SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 53**



### 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 man- agement 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 profes- sional 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 man- agement 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 fur- ther 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 profes- sional 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 municipal- ly-owned KMD had a monopoly. In the coming years, local governments will face a challeng- ing 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 manage- ment 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 require- ments 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 cen- tral government and local governments, and thereby supports collaboration on common public sector IT projects between regions, local governments and central government.**

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



## Focus area 9

**Digitisation for everyone**

The use of digital technologies and soluti- ons 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. commu- nication with public authorities which has gradually become more digital in recent years.

As a society, we are obligated to continual- ly 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 conti- nues throughout the educational system. Children and young people must therefore be able to use digital technologies, tools and platforms. They must possess know- ledge 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 authori- ties.

**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.**

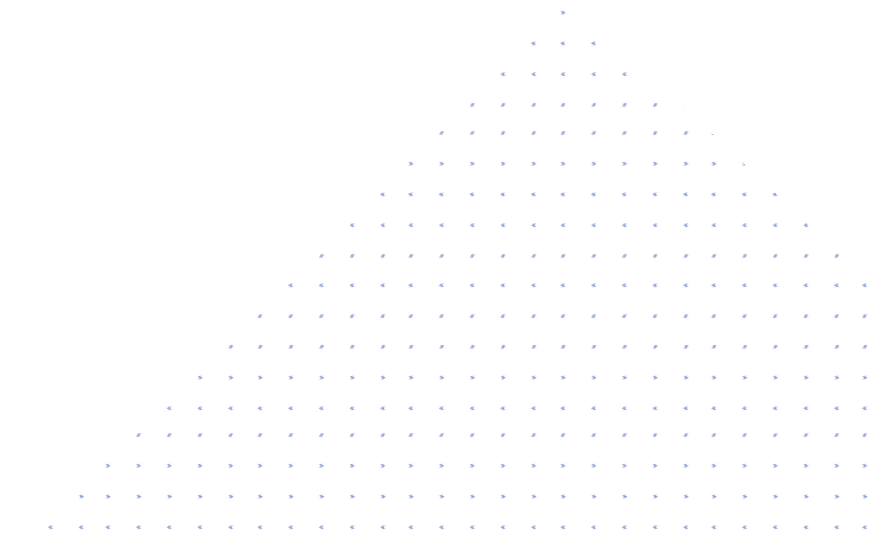
**Digital culture is about preparing children and young people to cope socially and ethically in a digital world. Among other things, children and young people must obtain the necessary digital competences to enable them to use IT as a working tool and to acquire knowledge and solve problems. They must 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.**

**SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 55**



#### 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 govern- ments, regions, the central government, vol- untary organisations, and increasingly also the business community. All these players are strongly committed to improving the IT competences of the population. This collab- oration 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 giv- en 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 avail- able for individuals who cannot use digital portals to the public sector. Such individuals will still be able to contact and communi- cate 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 commu- nication and are only rarely exempted from Digital Post, will be offered help to use these digital channels.

#### Security

The public sector should be co-responsi- ble 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 pri- mary consideration for businesses. Busi- nesses should be prepared to meet the challenges of digital security in order to reduce the risk of losing data due to cyber attacks.

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



# INITIATIVES



## DIGITISATION FOR EVERYONE

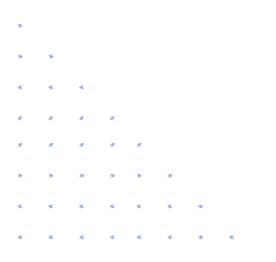
**9.1**

### 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 se- condary school and in upper secondary education will provide them with digital skills to interact di- gitally 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 digital- ly with the authorities must be given the neces- sary help and support. Initiatives aimed at spe- cial target groups will be launched on a regular basis to ensure that as many people as possible benefit from the digital opportunities. These in- clude 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 por- tals to the public sector.

**9.3**

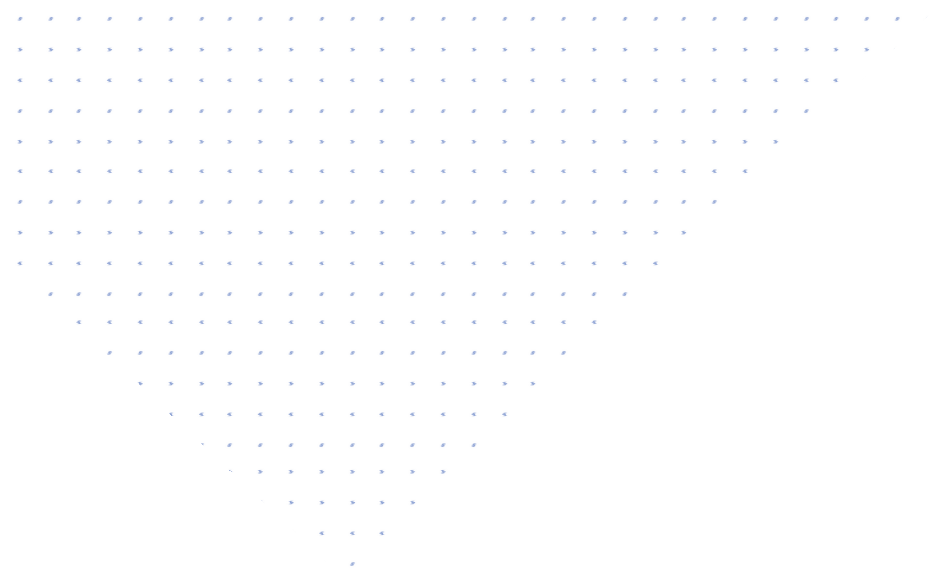
### HIGH LEVEL OF AWARENESS OF INFORMATION SECURITY

Technological and digital development impo- ses increasing requirements for the knowledge and competences of individuals and businesses. Therefore, ongoing information campaigns and initiatives about good digital behaviour will be lau- nched 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.

**SECURITY AND CONFIDENCE MUST BE IN FOCUS AT ALL TIMES 57**



### 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 in- tegral 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 compo- nents 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.**

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



**PROGRESS, MANAGEMENT AND** **ONGOING ADAPTATION**

-

The new st rat egy set s a clear and binding direction for digitisation effort s. Reali sing th e st rat egy is about developing new IT soluti ons as well as about ensuring more consist ent and systemati c dissemination of the common soluti ons. This imp oses strong demands on solid decentrali sed impl emen­ tati on capacit y, but also on centrali sed coordinati on effort s.

**Digital goals will bring about change** The financial situ ati on has put pressure on central, regional and local governments t o find effi cient soluti ons for smar t er and more effi cient ways to perform t asks. Digi­ tisation plays a key role in this context, and has become an permanent part of negoti­ at ion s abo ut the economy of local govern­ ments and regions.

Decisions on new invest ments in IT must always have a solid decision base, including a well-d ocumented business case. Acco unt should also be t aken of the faet th at some author iti es have old IT syste ms and are strugglin g with fund ament al chall enges, and therefore are facing a major mode rni­ sat ion task.

**Room for agility**

Society is changing rapidly with dramatic technol ogical development. The coming years will see new possibilities and needs th at we cannot predict at thi s point. The analyses to be launched in connection with thi s st rat egy will help us choose direction. Therefore, t ogeth er we must t ake st ock of th e possibilities, discuss impl ementat ion and continuously ad just ef fort s and pro­ cesses where needed throughout the st rat­ egy period.

A project port folio steerin g committ ee will beset up for the Digit al Str at egy 2016-2020 in ord er t o ensure coord inat ion and ongoing adaptation of the strat egy. This will ensure st rong com mon publi c sector organisation of th e implementati on of initi ati ves under the strat egy, so th at authoriti es receive th e suppor t they need t o achieve th eir ambi­ ti ous goals.

The rel evant minist ries will ensure that legisl ati on, rules and standards support efficient digital processes in th e major wel­ fare areas. In add iti on, t he project portfo­ lio stee ring committ ee will make sure that central, regional and local governments reali se their goal s and milest ones for eac h area. St eerin g groups can be set up to ad­ vise decision maker s.

**A STRONGER AND MORE SECURE DIGITAL DENMARK** - **59**



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