THE eGOVERNMENT STRATEGY 2011-2015

GOOD BASIC DATA FOR EVERYONE – A DRIVER FOR GROWTH AND EFFICIENCY

THE DANISH GOVERNMENT /
LOCAL GOVERNMENT DENMARK
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A DRIVER FOR GROWTH AND EFFICIENCY

Public authorities in Denmark register various core information about individuals, businesses, real properties, buildings, addresses, and more. This information, called basic data, is re-used throughout the public sector. Re-use of high-quality data is an essential basis for public authorities to perform their tasks properly and efficiently across units, administrations and sectors.

Basic data is an important contribution to modernising the public sector. The public and businesses are provided a better and more efficient service, when data that has already been recorded is shared across institutions and is included directly in case processing. Furthermore, employees in the public sector will be less burdened by repetitive and routine tasks, and this, in turn, will release more resources for increased welfare in e.g. the healthcare and education sectors.

However, open and homogenous re-use of basic data also has great value for the private sector, partly because businesses use this data in their internal processes and, partly, because the information contained in public-sector data can be exploited for entirely new products and solutions, in particular digital ones. In short, basic data freely available to the private sector is a potential driver for innovation, growth and job creation.

OBSTACLES MUST BE REMOVED

Denmark has come a long way in its basic data efforts compared with many other countries. However, there is still some way to go before the authorities and businesses alike can harvest the full potential of good common basic data.

There are problems with gaps and redundancy in the data sets used across public administration in Denmark today. There is also a lack of clarity about who can use the data and for what purposes. Moreover, both public authorities and private businesses still have to pay for access to certain data.

The general result is, firstly, that many prefer to obtain the information themselves and to keep their own shadow registers. This means that resources are unnecessarily spent on maintaining the same data in several places, and individuals and businesses are burdened unnecessarily by having to repeatedly supply the same information.

Secondly, in addition to the financial obstacles, technical and legal obstacles also stand in the way of authorities and businesses capitalizing on obvious opportunities to replace their manual and paper-based work procedures with automated and digital ones.

Thirdly, red tape and the price of data may prevent both entrepreneurs and established businesses from testing the commercial opportunities associated with exploiting public-sector basic data in new and creative ways.

FIVE PROCESSES TOWARD THE GOAL

THE WAY TO OPEN AND EASY-TO-ACCESS HIGH-QUALITY BASIC DATA INVOLVES FIVE PARALLEL PROCESSES:

1

In order to **ensure the re-use of data and to prevent double registration and shadow registers**, map data, cadastral maps, Central Business Register data, and company data will be financed by the government and released to the public and the private sectors, as is already the case with address and real property data. By releasing this basic data, public authorities and private businesses alike will be able to use it freely, for commercial as well as for non-commercial purposes, provided, of course, such use is lawful.

2

In order to **enhance the quality of data,** the registers of map data, real property data, address data, as well as business registers, will be expanded to include other necessary data. As a result, a number of existing registers will become redundant and therefore can be phased out.

3

In order to **make it possible to link data**, efforts will be made to ensure that all data conforms to the same technical requirements.

4

In order to **improve the distribution** of common public-sector data, a common infrastructure is to be established providing for stable and efficient distribution of data; a data distributor.

5

In order to ensure **efficient, effective and coordinated development and use** of basic data, a cross-institutional basic-data committee is to be established.

TANGIBLE BENEFITS

Good basic data for everyone is part of the common public-sector digitisation strategy for 2011 to 2015 (eGOVERNMENT strategy 2011-2015), adopted by the government, Local Government Denmark and Danish Regions (see page 20). The vision is that basic data is to be the high-quality common foundation for public sector administration; efficiently updated at one place, and used by everyone – including the private sector. Open basic data will benefit public-sector efficiency as well as innovation and value creation by Danish society in general. With basic data as a new digital raw material, commercial products can be developed, and public information and services can be improved, providing for greater insight and stronger democracy.

Open basic data will provide the public, businesses and the authorities alike with a number of tangible benefits.

THE PUBLIC

SMOOTHER INTERACTION WITH PUBLIC AUTHORITIES

- Better public services in the form of speedier case processing and fewer errors in individual cases
- Less reporting to public authorities, for example to correct errors
- Less need for re-entering data in online self-service solutions, when forms are filled in automatically with relevant and fully up-to-date basic data.

BUSINESSES

LESS RED TAPE, MORE GROWTH

- Less red tape – less reporting and registration
- Faster digitisation, fewer errors and more efficient and effective procedures
- Cheaper procurement of public-sector data
- Improved foundation for collaboration with the public sector due to the existence of common data
- Improved as well as new opportunities to develop new data-based services and products.

PUBLIC AUTHORITIES

MORE EFFICIENT AND EFFECTIVE ADMINISTRATION

- Efficient and effective maintenance of basic data and fewer redundant registers
- Operational savings on own IT systems and update of data locally
- Cheaper development of IT systems, when basic data is accessible from a single source
- Fewer manual workflows, fewer errors and shorter case-processing times
- Improved control e.g. of payments, so that social welfare fraud can be reduced.

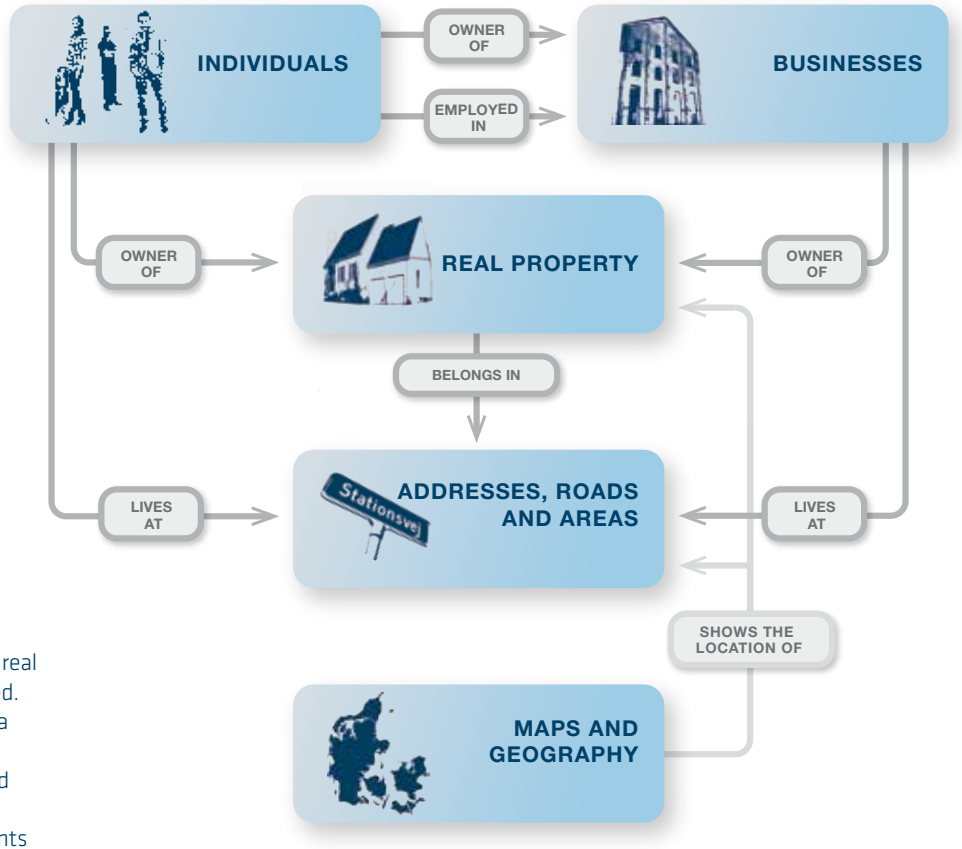
WHAT IS BASIC DATA?

Basic data is the core information authorities use in their day-to-day case processing. Basic data is e.g. data on individuals, businesses, addresses, real properties and geography (i.e. digital maps). Basic data can include personal data covered by the Act on Processing of Personal Data. This data will remain protected as it is today.

The modernisation of basic data will initially include the most important information about businesses, cadastral registers, maps and buildings, and it will establish a new register of property owners of real property (Register of Property Owners). At a later stage, modernisation can be expanded to include e.g. personal data, data on incomes, road infrastructure, and the financial statements of businesses.

The most important objectives for developing basic data are:

- basic data needs to be as correct, complete and up-to-date as possible
- all public authorities must use public-sector basic data
- as far as possible, basic data (excluding sensitive personal data) must be made freely available to businesses as well as the public
- basic data must be distributed efficiently, accommodating the needs of the users.



Information about individuals, businesses, real properties, geography etc. is naturally linked. The establishment of a common basic-data infrastructure ensures that data is made accessible and easy to use by the public and the private sectors, and that all basic data conforms to the same technical requirements and is compatible, so that it can be used in digital procedures and case processing.

FREE ACCESS TO BASIC DATA FOR EVERYONE

As a general rule, all basic data is to be made freely available to all public authorities, private businesses and individuals. This makes basic data a common digital resource, which can be exploited freely for commercial as well as non-commercial purposes. This means that basic data can be used for all purposes, ranging from hobby-related projects to fully commercial products and services.

By releasing basic data, the public sector wants to remove the barriers to using public-sector basic data without demanding a share of revenues etc. Basic data should be fully exploited to improve efficiency, and create growth and new and innovative digital services.

However, some basic data cannot be made accessible to everyone. This includes sensitive personal data, e.g. data from the Civil Registration System.

Even if basic data is made accessible for everyone, the public authorities will still have to spend resources on producing, maintaining and ensuring the quality of the data.

This work will still have to be financed to ensure the continued availability of quality basic data. Therefore the government and Local Government Denmark have agreed to redistribute the costs of basic data, so that public authorities contribute to basic data via their allocation or block grant.

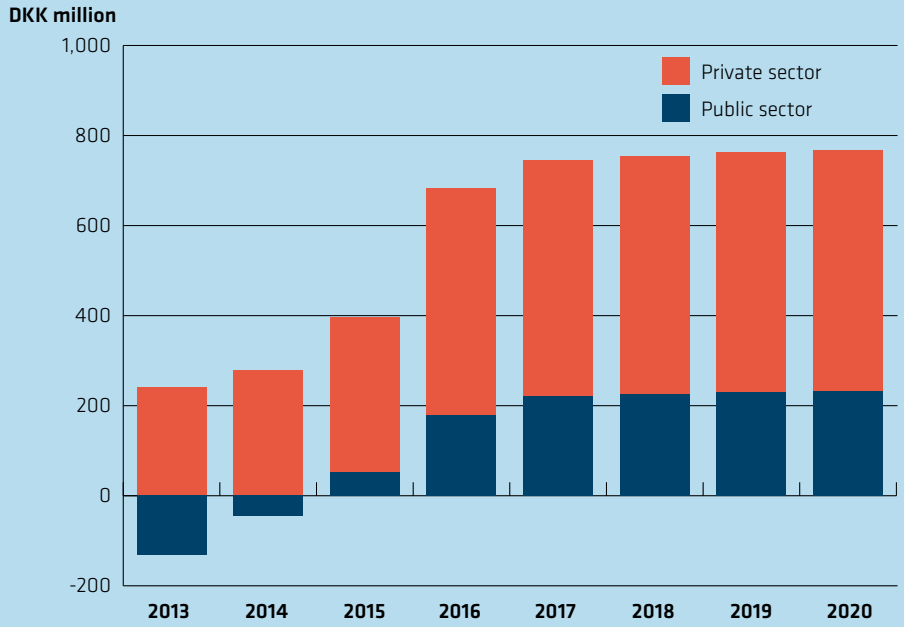
Free access to good basic data for everyone is good business; for the public sector and for society in general. Once the initiatives have been fully implemented in 2020, revenues for society are expected to be approx. DKK 800 million annually.

Once the initiatives have been fully implemented, the revenues for society are expected to be approx. DKK 800 million annually. Private-sector revenues will be up to DKK half a billion annually, and it is expected that e.g. the real estate, insurance, financial, and telecom sectors, as well as GPS (sat-nav) manufacturers, public companies and entrepreneurs will be among those to benefit hugely from the initiatives.

TOTAL NET PUBLIC-SECTOR NET SURPLUS

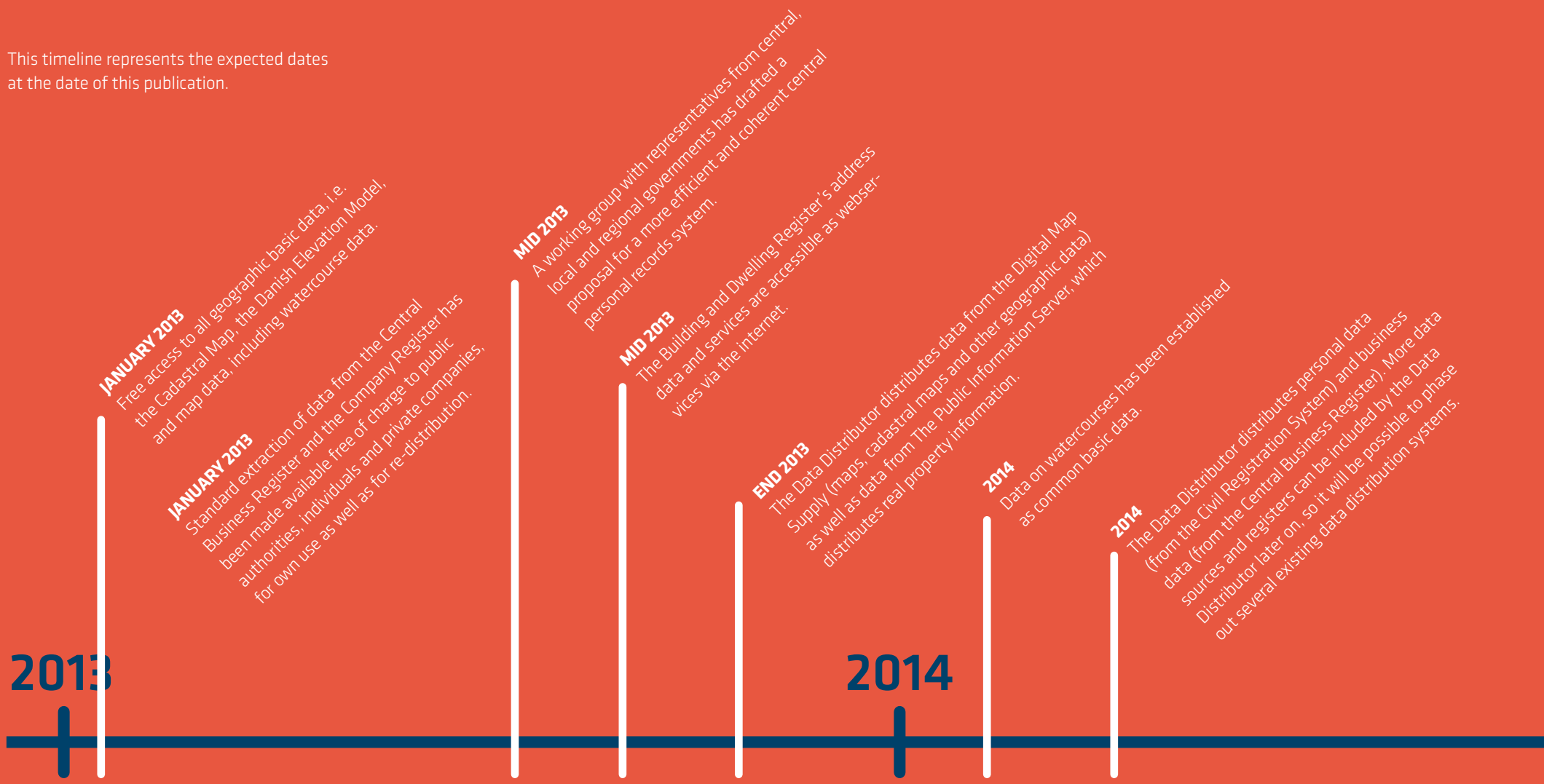
DKK MILLION	2013	2014	2015	2016	2017	2018	2019	2020
Ministries	-108	-81	-50	-26	3	9	29	42
Municipalities	-24	24	79	143	165	169	174	175
Regions	1	11	23	33	43	43	43	43
TOTAL IMPACT	**-131**	**-45**	**52**	**149**	**211**	**221**	**246**	**260**

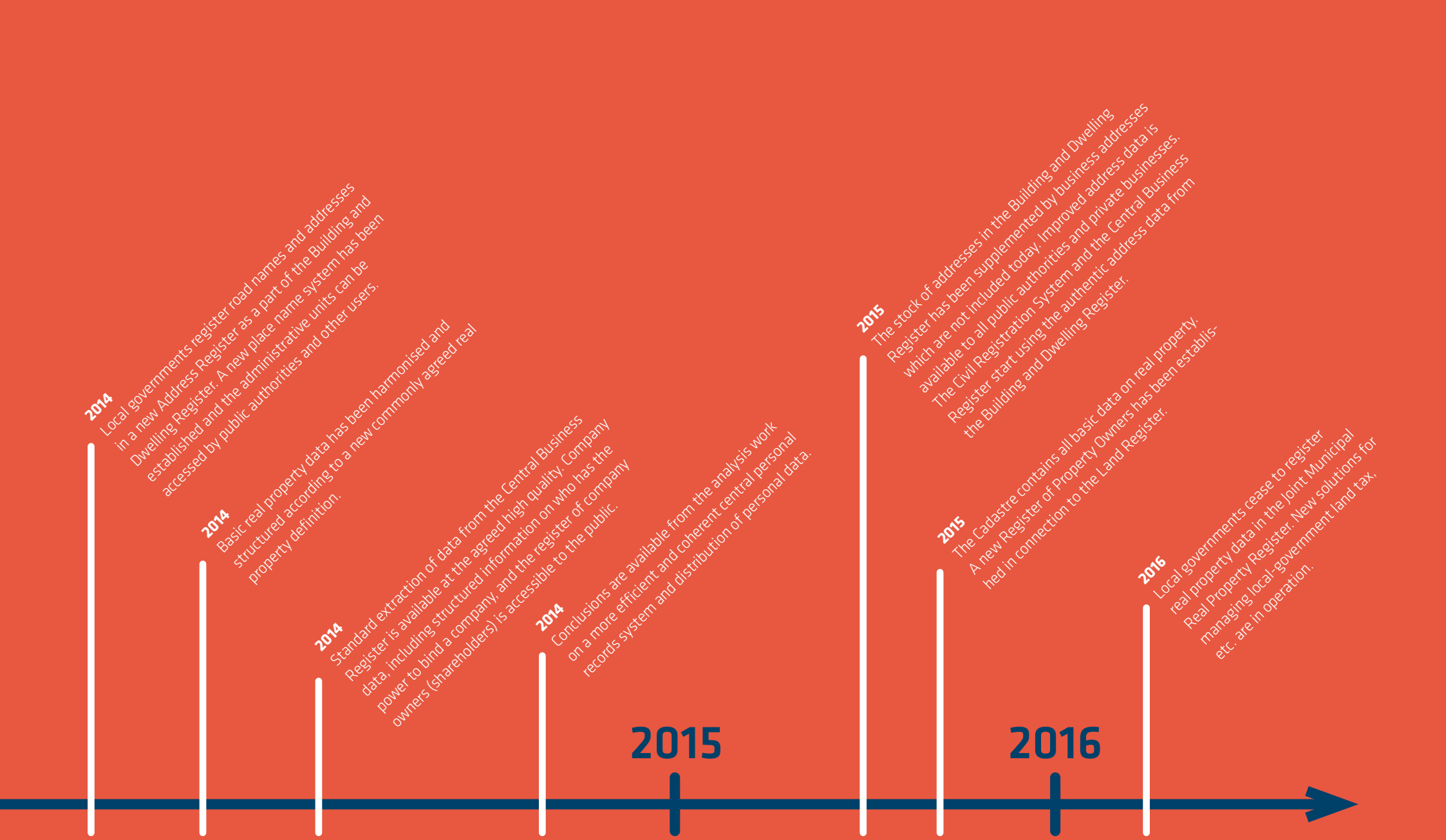
TOTAL NET SURPLUS/DEFICIT, BY SECTOR



TIMELINE

This timeline represents the expected dates at the date of this publication.




2014
Local governments register road names and addresses in a new Address Register as a part of the Building and Dwelling Register. A new place name system has been established and the administrative units can be accessed by public authorities and other users.
2014
Basic real property data has been harmonised and structured according to a new commonly agreed real property definition.
2014
Standard extraction of data from the Central Business Register is available at the agreed high quality. Company data, including structured information on who has the power to bind a company, and the register of company owners (shareholders) is accessible to the public.
2014
Conclusions are available from the analysis work on a more efficient and coherent central personal records system and distribution of personal data.
2015
2015
The stock of addresses in the Building and Dwelling Register has been supplemented by business addresses which are not included today. Improved address data is available to all public authorities and private businesses. The Civil Registration System and the Central Business Register start using the authentic address data from the Building and Dwelling Register.
2015
The Cadastre contains all basic data on real property. A new Register of Property Owners has been established in connection to the Land Register.
2016
2016
Local governments cease to register real property data in the Joint Municipal Real Property Register. New solutions for managing local-government land tax, etc. are in operation.

JOINT MANAGEMENT OF BASIC DATA

A cross-institutional basic-data committee is to help ensure efficient and coordinated development and use of basic data across the public sector. The basic-data committee will:

- ensure the coordination of large development initiatives and changes to existing basic data;
- draft proposals for new developments and efficiency-improvement projects relating to basic data, including financing analyses and minor development activities;
- ensure that the interfaces, standards and data models for basic data are coordinated with each other;
- improve budgets, development plans, data content etc. for the Data Distributor;
- enter into dialogue with public and private-sector users about the potentials in better use of public-sector basic data;
- ensure that all public authorities are fully exploiting the potentials in efficient use of basic data;
- document and follow up on use of basic data by public authorities and report annually about this to the government and Local Government Denmark.

COMMON DISTRIBUTION OF BASIC DATA

Public authorities and businesses using basic data must be able to receive data rapidly and reliably. At the same time there is money to be saved in the public sector by distributing data via a single common channel rather than via several different channels. This constitutes the reason for establishing a Common Public-Sector Data Distributor.

Today, there is a great number of related systems for distributing basic data about individuals, businesses, addresses, dwellings and geography.

Due to increased demand for data, there is increasing pressure on registers to deliver the desired information to users. Moreover, since many solutions are also becoming technically obsolete, this means that existing systems for data distribution are not always capable of delivering the desired data as fast as the users' request.

A common distribution solution will accommodate the need to retrieve data rapidly, easily and reliably, and as cheaply as possible. Furthermore, the authorities responsible for the registers will save resources, as they will no longer have to modernise a host of different distribution solutions individually.

TIMETABLE

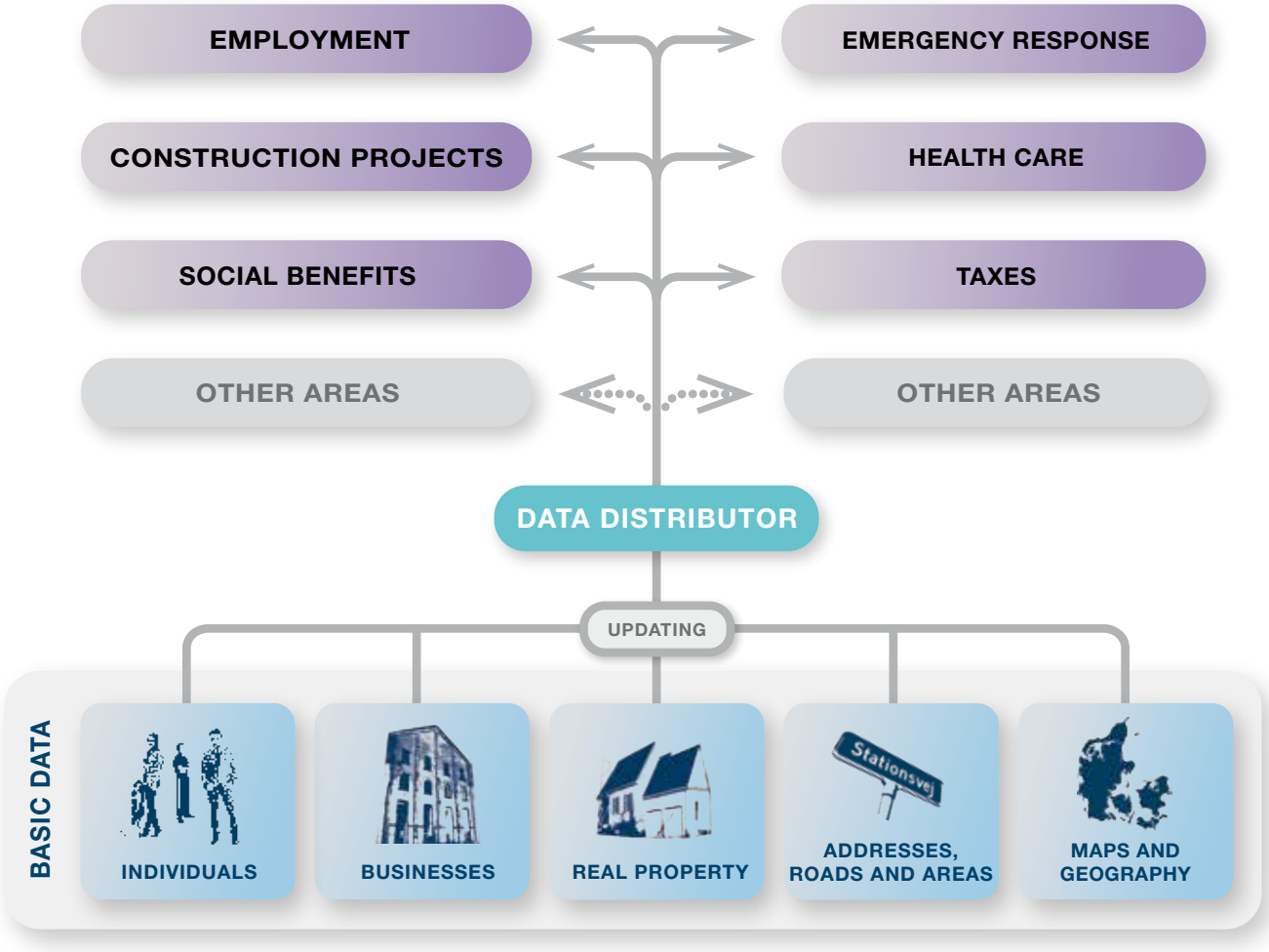
By end 2013 the Data Distributor will distribute data from the Digital Map Supply (maps, cadastral maps and other geographic data) as well as data from The Public Information Server, which distributes information about real property in Denmark.

From 2014 the Data Distributor will distribute personal data (from the Civil Registration System) and business data (from the Central Business Register).

More data sources and registers can be included by the Data Distributor later on, so that it will be possible to phase out several existing data distribution systems.

THE DATA DISTRIBUTOR

The Data Distributor conveys updated and authentic information from basic data registers on to the relevant public or private-sector administrative field or business area.



IMPROVING EFFICIENCY – BETTER USE OF BASIC DATA

WE'VE DONE IT BEFORE

The economic benefits from releasing data were evident when the address data in the Building and Dwelling Register was released in 2002.

Public-sector data has been released before with great success.

In 2002, address data from the Building and Dwelling Register was released, making many public-sector procedures the far more efficient. According to an analysis, benefits for society in the period 2005 to 2009 amounted to DKK 471 million. The public sector saved DKK 38 million alone on not having to negotiate purchase agreements, manage rights etc.

Great demand
It turned out there was a great demand for the public-sector address data. In 2009, the number of professional users of addresses had multiplied to a total of 1,200, 70% of which were businesses.

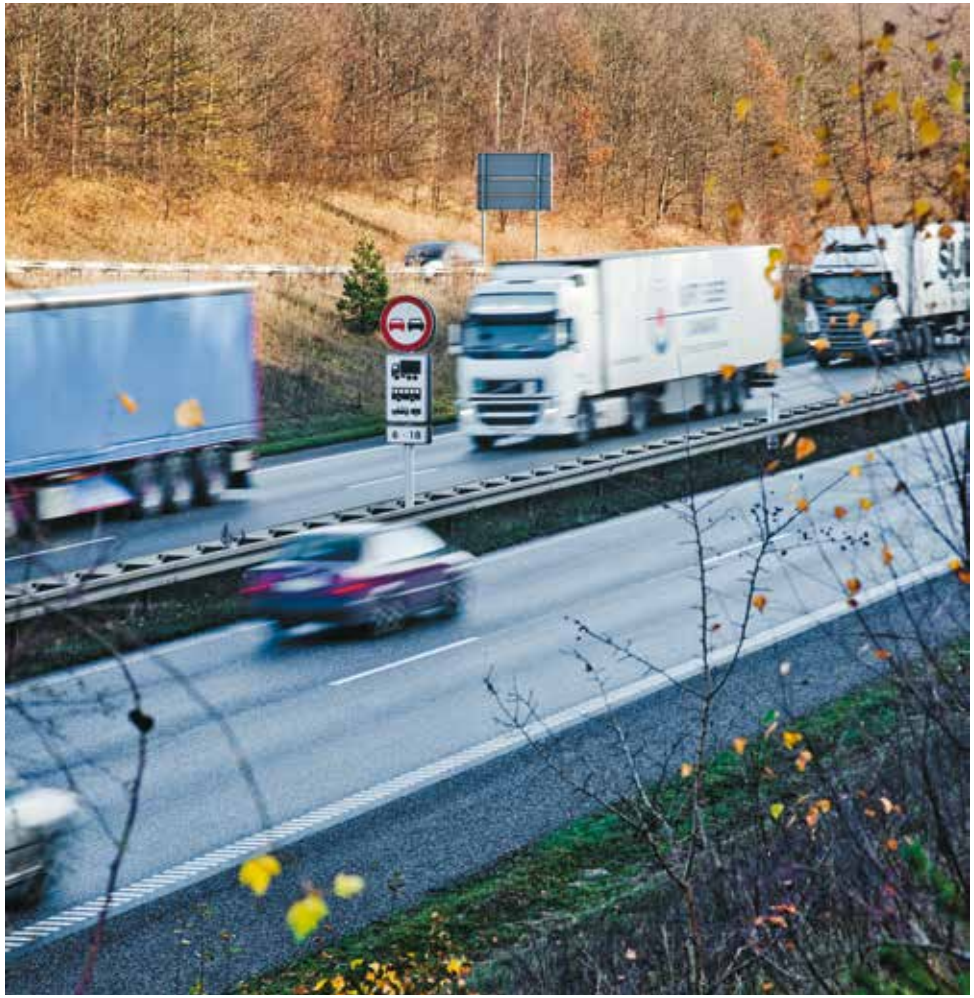
The open data from the Building and Dwelling Register has meant an increase in the number of digital services and websites, and this enhances transparency and competition in the Danish real property market. For example, this applies to www.boliga.dk, which today is the largest independent real estate information site in Denmark.

It is estimated that the value for society of releasing the data increases by 15% every year, and there is still good growth potential in areas such as:

- GPS navigation and mobile application services
- Logistics and transport
- Real estates and utilities
- The environment, energy and climate.

You can find the study here:

www.adresseinfo.dk/Portals/2/Benefit/Value_Assessment_Danish_Address_Data_UK_2010-07-07b.pdf



BETTER QUALITY CORE SERVICES

The police can work better and more efficiently, if they have access to good and coherent basic data.

The police use many different types of basic data, both on a day-to-day basis and in critical situations.

Following a serious explosion at a fireworks storage facility in a residential area in 2004, the police linked business data from the Central Business Register to map data to identify other places in the country where fireworks businesses were situated in close vicinity to residential areas.

Furthermore, when people have to be evacuated after an accident, it is vital that the police can compare business data (e.g. data on sector, number of employees etc.) to geographic data as well as to personal data from the Civil Registration System.

The police can also better prevent burglaries, for example, if they can use location-specific data about a new wave of burglaries in a specific sector or commodity group to contact business owners in the hardest hit areas.

Today, the Danish National Police typically buy data from different private data suppliers, which have refined raw data from the basic-data registers. With improvements in the quality of and access to public-sector basic data, in future the police will only have to retrieve data from a single point. In addition to ensuring better quality police work, this will also provide a huge potential for efficiency improvements in police procedures.

GROWTH – OPEN BASIC DATA

GROWTH IN THE DANISH BUSINESS COMMUNITY

Easy and open access to high-quality basic data constitutes a huge growth potential for businesses and organisations working professionally with public-sector data. Moreover this provides good opportunities for new businesses to emerge.

ENHANCED INNOVATION AND COMPETITIVENESS

The price of data, and rights to it, can be a barrier for new businesses who want to exploit data commercially. Furthermore, both purchased and re-sold data has to be managed and paid for, which costs resources for both private buyers and the authorities. However, with open basic data, businesses can test new ideas at low risk, which leads to a great potential for innovation within the market; innovation which in turn generates growth and improved products for users. For example, open geographic data, possibly linked to other types of data, can be applied in new and creative solutions within climate change adaptation, planning of construction and building projects by engineering firms, and development of new applications for smart phones by IT companies.

NEW CUSTOMERS, NEW PRODUCTS AND MORE JOBS

When data is no longer expensive, products that were previously only affordable by a small circle of customers can be sold at a price which is attractive to small and medium-sized businesses. Furthermore, with open access to business data, entirely new products can be developed, such as sector-specific business data and business statistics, as well as industrial reports. Exploitation of new technologies and media enhances the opportunities for making public-sector information and technology available to businesses and the public, and for increasing collaboration between the public sector and civil society. Not to mention the fact that innovation will make for new jobs. Real property data linked to geographic data can result e.g. in energy conservation initiatives aimed at homeowners, which will benefit the climate as well as create jobs e.g. for builders.

A MORE ROBUST BUSINESS

In general, open basic data will contribute to better quality data for businesses to use commercially, and in many circumstances it can eliminate the need for businesses to collect their own data. For example, the release of business data can contribute to improving the quality of internal calculations by banks of customers' capital requirements. Moreover, with improved opportunities for insight into a given customer's activities, banks will also be able to enhance the quality of their advice. For example, open business data can simplify the processes associated with buying a home, so that home buyers experience a smoother process, while estate agents, banks and mortgage banks save both time and money.

CHEAP DATA GIVES HIGHER GROWTH

Business growth is 15% higher in countries where public-sector geographic data is freely available or is sold at considerably reduced prices.

This is the conclusion of a Finnish study covering approx. 14,000 small and medium-sized businesses across 15 countries in the period 2000 to 2007. The businesses in the study are businesses within sectors which are typically dependent on access to public-sector map and geographic data, as either end-users or developers of commercial products based on public-sector data.

In Austria, the price of a series of public-sector digital maps, including the cadastral map, was reduced by 97% in 2006. Impacts included a tenfold increase in demand for topographic data. Moreover, use of the cadastral map increased by 250%. Demand also went up from entirely new sectors such as insurance, health and geomarketing. Similar trends have been reported in Spain and Australia.

The Finnish study also shows that growth set in quickly. In countries in which prices were changed from one year to the next, increased growth was already observed after the first year. After two years, moreover, businesses were reaping the full benefit of the low data prices.

Read more:

http://www.etla.fi/files/2696_no_1260.pdf

THE FIRST BASIC-DATA REGISTERS

The **Central Business Register** contains information on Danish businesses, including central business registration number, legal form of organisation, date of start-up and any cessation of the business, legal name and address, owners, affiliated production units, sector code, number of full-time employees, and credit status.

The **Company Register** contains information on all registered companies, e.g. limited companies and limited partnerships. Some information, such as legal form of organisation, name, address and sector code, is recorded in the Company Register and transferred to the Central Business Register. Information about the management, auditors, provisions regulating the powers to bind, etc. is only accessible via the Company Register.

The **Cadastre** consists of both the Cadastral Register and the Cadastral Map, which contains information about the approx. 2.5 million land parcels in Denmark, including area size etc. Each land parcel is identified by a cadastral number and its location is identified on the Cadastral Map. The Cadastre will have to be expanded to include other types of real property, so that land parcels, individually owned apartments, and buildings on leased land are identified and recorded uniformly in future. Information on real properties with distinct ownership shares will continue to be registered in the Land Register and is not basic data. The Cadastral Map is a legal map for all of Denmark which shows information e.g. about cadastral boundaries, rights of way, forest protection areas, coastal protection zones, and dune protection areas.

The **Building and Dwelling Register** contains detailed information about all buildings and dwellings in Denmark, including details on age, usage, area/acreage, number of floors, heating, technical installations, fresh water supply and drainage, annual rent, etc. The Building and Dwelling Register also contains the complete register of all addresses in Denmark, including geographic positions.

The **Register of Property Owners** is a new authentic register of actual owners of all real property in Denmark. The register will include all transfers of ownership, regardless of whether these are registered or not. The new register will be linked to the Land Register.

Map data from the FOT Register (common public-sector geographic data) describes landscape forms and special characteristics such as towns, roads, cliffs, tracks, watercourses, wind turbines, and a wealth of other significant points in the landscape.

DAGI (Danish administrative and geographical boundaries) shows the detailed geographical demarcation of a number of administrative units such as municipalities, regions, parishes, judicial districts, postal codes, and more.

The **Danish Elevation Model** contains a digital elevation model of the terrain, with information about the elevation of the terrain above sea level.

The **Place Name and Information Register** contains approx. 200,000 place names, including those that appear in the topographical maps and in the Digital Map Supply. In the future, more data will become basic data and the registers will be included in the basic-data infrastructure.

The **Civil Registration System** contains basic data on individuals, including civil registry number, name, address, date of birth, marital status, kinship, nationality, membership of the Danish national church, and guardianship. Both current and historic data is recorded.

In the future, more data will become basic data and the registers will be included in the basic-data infrastructure.

PART OF **THE EGOVERNMENT STRATEGY**

The basic-data programme is part of the eGOVERNMENT strategy 2011-2015. In this strategy, the government spotlights the following public-sector basic data, which are deemed to hold the greatest potential for re-use, and thus the greatest value for both public and private-sector users:

- personal data
- business data
- real property data
- address data
- geographic data
- incomes data.

These types of basic data are covered by initiatives 10.1 to 10.5 of the eGOVERNMENT strategy and are included in the current work on establishing a basic-data infrastructure. A goal of the eGOVERNMENT strategy is moreover to establish a shared platform for distribution of basic data, the Common Public-Sector Data Distributor (initiative 9.5).

You can follow the development of the basic-data programme in its entirety at www.digst.dk

EGOVERNMENT STRATEGY 2011-2015

In 2011, the Danish government, Local Government Denmark and Danish Regions drafted a common digitisation strategy for the public sector.

The goal of the strategy was to ease everyday life for individuals and businesses in Denmark and to cement Denmark's cutting-edge position within digitisation by ensuring an even more efficient public sector in Denmark.

The strategy has three main tracks:
1. No more printed forms and letters
2. New digital welfare
3. Digital solutions for closer collaboration.

The idea is that enhanced digitisation is to help safeguard future welfare. IT is to be used to a greater extent and more effectively in public schools; technology is to improve patient treatment; healthcare IT is to ease everyday work at hospitals; employment efforts are to be simplified; data is to be shared efficiently and effectively between public authorities; and printed forms and letters from public authorities to members of the public and businesses are to phased out completely.

Read more in The digital path to future welfare. Available at: www.digst.dk/Digitaliseringsstrategi/~/media/Digitaliseringsstrategi/Tilgaengelig_engelsk_strategi.ashx.

APPENDICES

BASIC DATA **– THE SPECIFICS**

GEOGRAPHIC DATA

Geographic basic data is location-specific data e.g. about land parcels, buildings, road infrastructure, watercourses and lakes. In Denmark, this type of map data is generally of very high quality, however there is room to exploit it even more, both in the public and in the private sectors.

If the data is made openly available, private businesses will be able to use the map data without being limited by financial considerations or data rights. Public authorities will save money on not having to repeatedly negotiate financial agreements to use map data, just as they will save money on more efficient use of the data.

EFFECTIVE CLIMATE CHANGE ADAPTATION

Climate change adaptation is one of the areas in which the data basis for effective collaboration can be improved.

By establishing common national basic data for watercourses, and an up-to-date common elevation model, climate change adaptation efforts can be made more effective – and more cost-effective. By simulating surface-water flow, it is possible to identify areas at risk of flooding after cloudbursts. Water utilities play an important role in climate change adaptation.

As things are today, when the utilities buy data, they often choose the cheapest solutions, which means the data is not always up-to-date. If map data is open to all, it will be easier for water utilities to base their efforts on the same information as local governments, which will enhance common climate efforts.

PRIVATE GROWTH AND TANGIBLE BENEFITS

Open access to key geographic basic data, in particular the Cadastral Map, will have great significance for the real estate and the utilities sectors. For example, in the real estate sector the Cadastral Map is important documentation. With free access to the Cadastral Map the sector can establish more efficient administrative procedures across estate agents, land registry, mortgage-credit institutions, sellers and buyers.

In addition there are the direct savings that businesses will get from no longer having to pay for data.

GEOGRAPHIC DATA NOW ...

- The production of maps and cadastral maps is financed in part through the sale of data rights to private businesses and public authorities.
- The cross-institutional public-sector financing agreements only allow for the free use of data between the public authorities.
- Several watercourse registers are currently maintained at both central and local-government levels and on the basis of different legislation and administrative arrangements.
- Data on the geographic position of watercourses is held e.g. in the FOT Register, which is maintained jointly by central and local governments and without crucial coherence with other registered watercourse data.
- Updates to the Danish Elevation Model are only made locally, and due to data rights issues other collaboration partners do not always have access to the updated data. Private businesses therefore have to buy supplementary data from one of several producers of elevation models in Denmark. Consequently, work is often not carried out on the basis of the same model.

... AND IN THE FUTURE

- All geographic basic data can be used freely for commercial as well as for non-commercial purposes. This means that private businesses will also be free to use geographic basic data in their commercial products and solutions, even in combination with other information.
- On the basis of existing registration of watercourse data in the FOT Register, coherence will be created between public authorities' watercourse data across administrative boundaries.
- An up-to-date elevation model will be fully accessible for both public and private partners.

TIMETABLE

1 January 2013
Open access to all geographic basic data, i.e. the Cadastral Map, the Danish Elevation Model and map data, including watercourse data.

2014
Watercourse data has been established as common basic data.

www.kms.dk

GEOGRAPHIC DATA – IMPROVED COLLABORATION ON CLIMATE ETC.

FREELY AVAILABLE MAP DATA IS POPULAR

Twenty-fold increase in the use of data and direct annual returns of DKK 150 million; this was the impact of Australia giving everyone free access to its map and geodata.

Early this century, the public authorities in Australia released their map and geodata, making the data freely available for everyone. Five years after the release, the datasets in question were downloaded twenty times more often than previously. Furthermore, in 2011 the direct annual net surplus from the agreement was estimated at least than DKK 150 million. The return for society from the digital maps alone is estimated to be DKK 25 million annually.

An analysis of the release indicates that the returns from exploiting the data in a considerable number of third-tier and fourth-tier products and solutions are considerably higher than the direct returns, which are much easier to measure.

The Australian pubic authorities are currently in the process of expanding the agreement.

Read more at the Australian National Data Service: http://ands.org.au/resource/cost-benefit.html

IMPROVED CLIMATE EFFORTS AND BETTER COLLABORATION

Common environmental data will significantly enhance the quality of climate and planning work. For example, the collaboration between water utilities and local government leaves room for improvement.

Today, water utilities have to go out and buy the relevant geographic basic data they need, and many of them tend to prefer the cheapest solutions on the market rather than the public-sector basic data. It is therefore uncertain whether, for example, the water utilities and local governments base their analyses and calculations on the same data basis, e.g. when planning measures to safeguard against climate change.

It can mean that water utilities and local governments cannot readily compare data. This causes problems for collaboration on efficient and effective common solutions and may ultimately lead to flooded cellars after cloudbursts, which could otherwise have been prevented.

Effective and less expensive

The data basis will be significantly improved, when all environmental data is based on the same basic data. This will potentially strengthen the collaboration between e.g. the utilities sector and local governments, make efforts more efficient and effective, and provide considerable savings for the utilities sector.

Considerable resources are being used today on providing and receiving the right data. Pursuant to e.g. the Environmental Protection Act and the Water Sector Reform Act, Danish water utilities are required to provide a large amount of data, which is not basic data, to the public authorities, without receiving any payment. Furthermore, the water utilities have to buy all their basic data from the public sector. Open data will make for a more efficient flow of data. When the financial and technical barriers have been removed, and when there is free and open access to basic data, the foundation for smoother collaboration between the public and the private sectors will have been laid.

ADDRESS DATA

Today, Denmark benefits from very high quality registration of addresses, place names and administrative units. However, by ensuring improved concerted efforts to update and use this data, a considerable amount of money can be saved on administration, both in the public and in the private sectors.

COMMON BASIS FOR EFFICIENT PUBLIC ADMINISTRATION

Addresses and administrative units are used across the entire public administration, and address data is included in a vast amount of IT systems and products, both in the public and the private sectors.

More or less all online self-service solutions currently being developed will automatically retrieve the address data, so that the user does not have to spend time entering this data and risk errors in data entry. If the correct address appears immediately on online forms, individuals, businesses and the relevant public administration will save time.

Furthermore, if all public authorities use the same address basis, there will be fewer mistakes and better possibilities to check payments and social benefits. At the same time, public authorities will have the right basis for optimising administrative procedures and processes, for example when planning routes in connection with inspections and deliveries.

Naturally, this is provided the common data is current and complete. The plan therefore also entails setting aside resources at local-government level to maintain the address data and correct any erroneous data as quickly as possible.

IMPROVED EMERGENCY MANAGEMENT, GREATER SECURITY

Current and updated addresses and place names are vital when the police and the emergency services have to respond to an accident or crises. Place names, for example of universities, train stations, and geographic locations are just as important as the correct address, when an ambulance has to find an accident site.

THREE TYPES OF ADDRESS DATA

Addresses consist of a road name, a house number and a postal code etc., which are always linked to a geographic position. The location of an address in a specific district is what decides which public authority is to process a given case.

Place names are known names for places or areas such as cities, hospitals, parks, castles, train stations, and geographic locations. Place names are often used instead of an address.

Administrative units are e.g. municipalities, parishes, judicial districts, postal codes and electoral districts. In Denmark, each municipality also has subdivisions such as school districts or social districts.

PRIVATE-SECTOR BENEFITS

Many businesses will be able to use the open basic data on addresses to optimise their business processes and achieve more efficient logistics, for example when delivering goods.

Furthermore, improved and freely available data will generate new and improved products, in particular within the fast-growing market for satellite-based navigation. For example, the location-based services for smartphones or tablets, which use the time and the geographic position as input, could benefit from the improved data.

ADDRESS DATA NOW ...

- There is currently no coherence between basic data on postal codes, roads, addresses, place names and administrative units.
- Addresses are maintained by the municipalities in the Building and Dwelling Register. In addition, many public authorities maintain addresses in systems of their own, and some addresses are also maintained in several registers, some of which are only updated once a year. If there is an error in an address, it is often only corrected locally, while the erroneous information continues to be used elsewhere.
- Place names are registered both centrally and at more fragmented levels by various public authorities, often without the possibility of sharing or linking data.
- Today, some administrative units are double-registered, as they are registered both in DAGI (Danish administrative and geographical boundaries) and in the Civil Registration System's Road Register.

... AND IN THE FUTURE

- The Building and Dwelling Register will be the authentic address register, and data from this register will be used as the basis for registration in the other registers and solutions, e.g. the Civil Registration System and the Central Business Register. In the Danish Civil Registration System, the Road Register will be phased out.
- Address data will be kept more up-to-date and any errors and omissions will be quickly corrected.
- A place name system will be established. All public authorities and private businesses will have access to this information, which is coordinated with the road names and addresses in the Building and Dwelling Register.
- The Danish administrative and geographical boundaries (DAGI) will be expanded into a basic register in which the relevant public authorities maintain data. The location of addresses and place names within administrative units and subdivisions will be automatically derived from DAGI.
- The municipal subdivisions and districts will be maintained according to uniform standards and norms.
- All data will be fully accessible for public-sector and private-sector IT solutions and products.

TIMETABLE

Mid 2013
The address data in the Building and Dwelling Register is accessible on the internet via webservices.

Mid 2014
Local governments register road names and addresses in a new address register in the Building and Dwelling Register. A new place name system has been established and the administrative units can be accessed by public authorities and other users.

Mid 2015
The stock of addresses in the Building and Dwelling Register has been supplemented by the business addresses currently not included. Improved address data is available to all public authorities and private businesses. The Civil Registration System and the Central Business Register start using the authentic address data from the Building and Dwelling Register.

Read more in the publication Brug adresserne bedre (Better utilisation of addresses; only available in Danish)

www.mbbl.dk/publikationer/brug-adresserne-bedre – og på mbbl.dk under Ejendomme

ADDRESS DATA – FEWER ERRORS, IMPROVED EMERGENCY RESPONSE

THE CORRECT DATA CAN SAVE LIVES

Good basic data guarantees fewer errors. Reliable GPS navigation data about roads and addresses ultimately saves lives.

Every now and then things happen which shouldn't. The GPS (sat-nav) device directs firefighters in the wrong direction, so they have to stand helplessly by and watch the building burn down in the distance. Why? Because their navigation data on roads and addresses is incomplete.

This is what happened in 2011 on the island of Falster, Denmark; and this example is far from unique. When the fire department, the police or the ambulance services fail to reach the scene of an incident on time, it may be because the data used by their sat-nav system is either incomplete, wrong or obsolete. For the people who receive help too late, the consequences can be catastrophic, and the financial loss for society is considerable.

In many cases, the correct information is already available in the public-sector basic data that central and local governments update on a continuous basis. Sat-nav devices, smartphone applications and web-based solutions would exploit the data more efficiently, if the technical or financial obstacles to using the data were removed. Furthermore, situations like the one on Falster in 2011 would be avoided.

IMPROVED ADDRESS DATA PROVIDES ADMINISTRATIVE SAVINGS

Registration of real property rights in the Land Register is one of many areas in which administrative benefits can be reaped, if every public authority uses the same, correct address data.

In connection with the registration of certain real property types (e.g. individually owned apartments), incorrect or incomplete addresses are often given. As a consequence, local government wastes resources trying to identify the correct address to register transfers of ownership etc.; data used, for example, when collecting land tax.

Furthermore, today uncertainties and risks of mistakes arise when road names are changed, or when two flats are converted into one.

In future, registration of real properties will be based exclusively on correct address data. It will no longer be possible to enter an address manually; rather addresses will be selected and retrieved from the Building and Dwelling Register.

The same principle applies for online self-service solutions. Self-service solutions for the public will be simpler, the number of errors and mistakes will be reduced, resources will be saved on case processing, and public authorities will be able to process data automatically.

REAL PROPERTY DATA

Today, real property data on land parcels, buildings and dwellings is registered inconsistently, which makes it difficult to compare data from different registers. The data therefore has to be improved and made freely accessible in authentic registers. This will make for simpler administration, fewer errors, and it will eliminate the obstacle to private-sector use of the data. Furthermore, double maintenance of data will be prevented and redundant registers can be phased out.

SIMPLIFIED WORK PROCEDURES AND FEWER ERRORS

When there is open access to high-quality basic data on real properties, public authorities do not have to spend resources on registering and checking data themselves, and they do not have to wait for data from other providers. Simplified work procedures also reduce the risk of human error and make it easier for new employees to take over the administration task without having to be experts in real property and old and complex IT systems.

LESS RED TAPE FOR BUSINESSES

When public authorities no longer define real property differently, it is easier for businesses to collaborate with the individual authorities involved in real-property issues.

GROWTH BENEFITING THE ENVIRONMENT

With the right idea and linked to other data, improved and freely available real property data can generate a wealth of relevant information for homeowners and many others. For example, improved calculations of the energy consumption of houses will benefit both the environment and employment when developing and realising environmentally friendly initiatives.

REAL PROPERTY DATA NOW ...

- Today, information about real properties and buildings in Denmark is stored in several different registers, in which the underlying terminology is different. Even the key term "Real Property" is defined differently in these registers. This makes it difficult to compare and merge data across the registers.
- A number of public authorities hold their own shadow registers to supplement the hard-to-access real property data kept in legacy systems. For example, for land taxation purposes local governments have established the Joint Municipal Real Property Register, which is also used by the Land Valuation Authorities.
- In many contexts, for example purchase and sale of real property, there is a need to compare information from different registers. This involves several manual procedures and processes.

... AND IN THE FUTURE

- Information about real properties and buildings, as well as their owners, will be registered uniformly in the authentic registers of the real property domain.
- The authentic registers for basic data in the real property domain will include the Cadastre, the Danish Building and Dwelling Register, and the new Register of Property Owners, where the latter will be established in connection to the Land Register.
- Early and unambiguous identification of real properties, as early as in the project stage, will provide a more reliable basis for the many transactions that take place before a property is sold, mortgaged and built.
- Basic data about real properties will be harmonised according to a new commonly agreed definition of real property and will be registered in the same place; the Cadastre.
- A number of shadow registers will be phased out.

TIMETABLE

2014
Basic data on real property data has been harmonised and organised according to a new commonly agreed real property definition.

2015
The Cadastre contains all basic data about real property. A new Register of Property Owners has been established in connection to the Land Register.

2016
Local governments cease to register real property data in the Joint Municipal Real Property Register. New solutions for managing local-government land tax, etc. are in operation.

Read more in the publication Enkel og effektiv ejendomsregistrering (Simple and efficient registration of real property; only available in Danish).

www.mbbl.dk/publikationer/enkel-og-effektiv-ejendomsregistrering

REAL PROPERTY DATA – SAVINGS AND GROWTH

BUYING A HOME TRIGGERS EXPENSIVE DATA FLOW

In addition to generally benefiting society, easy and free access to data can provide smoother case processing for home buyers, and save money and time for the financial sector.

For example, if someone buys a home, this will trigger a flow of data between a number of actors: the estate agent, bank, mortgage bank, and so on. As things are today, the financial sector typically develop their own systems with data from different, and not always updated, sources, in order to avoid the costs of using public-sector data. Furthermore, they only retrieve the barest minimum of data necessary.

This means that administrative procedures are not optimal and that time and money is being spent on developing systems that open data would render unnecessary. Public authorities moreover use considerable resources on checking whether the financial sector is paying the required fees for using the data.

FEWER MANUAL PROCESSES IN LOCAL GOVERNMENTS

Today, local governments maintain their own registers to collect land tax, etc. With the simplification of real property data this will be rendered superfluous.

Today, local governments have to record whenever there is a change in information on a real property. They have to do this, partly, because they need an overall register of real properties in Denmark and, partly, because they need to have a reliable list of who owns which properties. They need the information e.g. to calculate and collect land tax and other property fees. The information is registered in the register part of the Joint Municipal Real Property Register.

With the planned Register of Property Owners, and with a common definition of real property, a link can be established automatically to both the Cadastre and the Land Register. The common real property definition also means that local governments will no longer need to maintain an independent real property register. In this way, local governments can eliminate a number of manual work flows for checking and registering data from different registers, including the Land Register.

Moreover, the register part of the Joint Municipal Real Property Register can be closed down and considerable operating costs can be saved. Local governments are already in the process of converting the Joint Municipal Real Property Register, and the register part can now be omitted.

BUSINESS DATA

Business data in the Central Business Register and in the Company Register is currently not sufficient in scope to form a basis for e-government. The data therefore has to be improved and free access to both the public and private sectors will be established. This will also remove an important barrier to business development in the private sector.

RESOURCES RELEASED FOR CORE TASKS

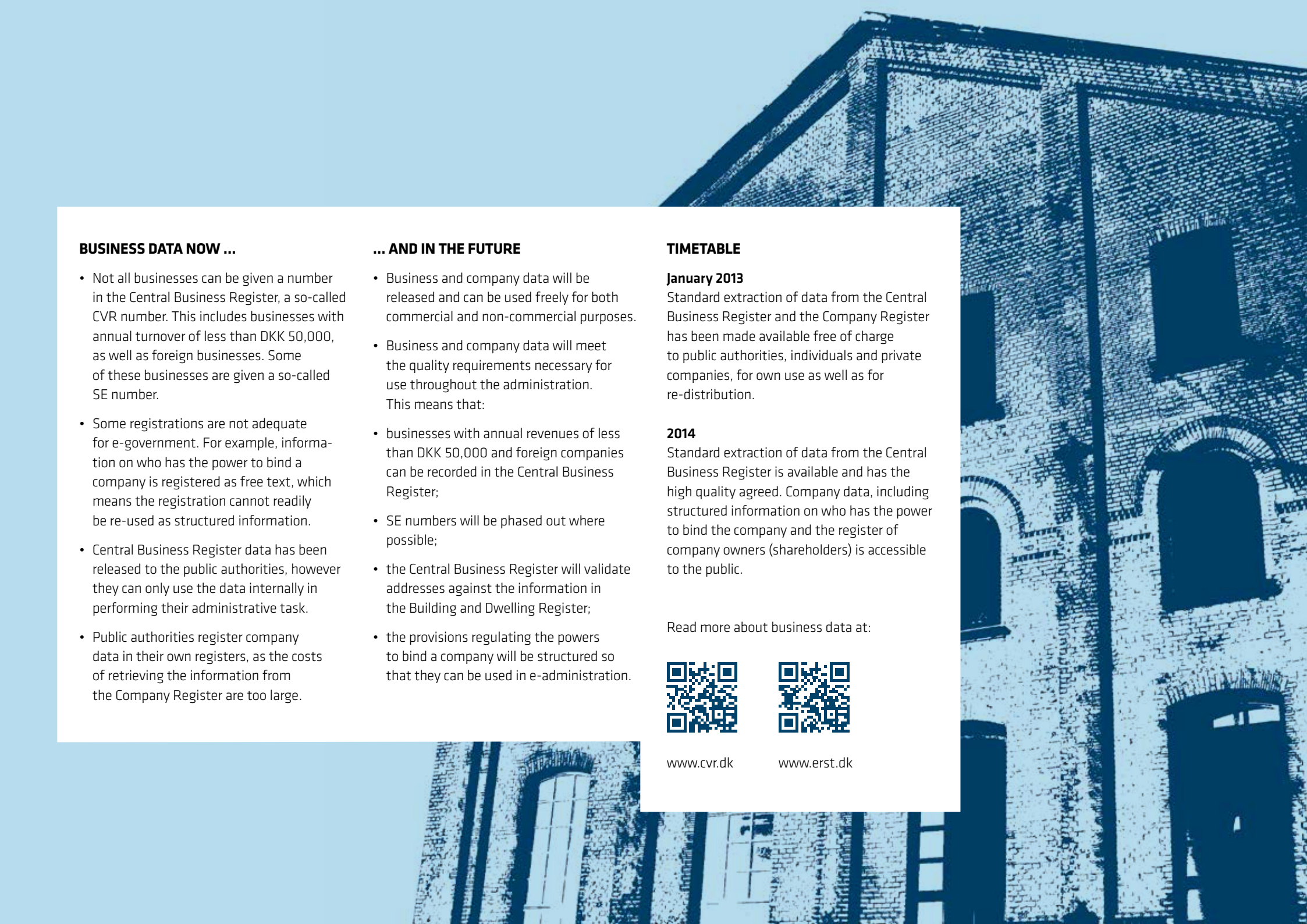
When the Central Business Register and the Company Register are amended so that they contain the right high-quality data, public authorities no longer have to spend time registering, checking and updating information about businesses in their own shadow registers. This will release resources from administration for core tasks, and it will establish a foundation for e-administration.

LESS RED TAPE FOR BUSINESSES

Businesses will no longer be asked for the same information time and time again. Furthermore, they will experience speedier and more correct case processing.

GROWTH IN THE PRIVATE SECTOR

Improved data quality and free accessibility will provide businesses with opportunities to develop new products that exploit public-sector business data. Furthermore, the market will be opened up for new players who today are having difficulties getting started because data is too expensive and too difficult to access.



BUSINESS DATA NOW ...

- Not all businesses can be given a number in the Central Business Register, a so-called CVR number. This includes businesses with annual turnover of less than DKK 50,000, as well as foreign businesses. Some of these businesses are given a so-called SE number.
- Some registrations are not adequate for e-government. For example, information on who has the power to bind a company is registered as free text, which means the registration cannot readily be re-used as structured information.
- Central Business Register data has been released to the public authorities, however they can only use the data internally in performing their administrative task.
- Public authorities register company data in their own registers, as the costs of retrieving the information from the Company Register are too large.

... AND IN THE FUTURE

- Business and company data will be released and can be used freely for both commercial and non-commercial purposes.
- Business and company data will meet the quality requirements necessary for use throughout the administration. This means that:
- businesses with annual revenues of less than DKK 50,000 and foreign companies can be recorded in the Central Business Register;
- SE numbers will be phased out where possible;
- the Central Business Register will validate addresses against the information in the Building and Dwelling Register;
- the provisions regulating the powers to bind a company will be structured so that they can be used in e-administration.

TIMETABLE

January 2013
Standard extraction of data from the Central Business Register and the Company Register has been made available free of charge to public authorities, individuals and private companies, for own use as well as for re-distribution.

2014
Standard extraction of data from the Central Business Register is available and has the high quality agreed. Company data, including structured information on who has the power to bind the company and the register of company owners (shareholders) is accessible to the public.

Read more about business data at:

www.cvr.dk www.erst.dk

BUSINESS DATA – DEVELOPMENT AND EFFICIENCY IMPROVEMENTS

EVEN MORE DIGITISATION

Competition for more intelligent ways of capitalising on public-sector data could help to modernise Denmark and increase exports of digital solutions.

The possibilities for linking data are plentiful, and open basic data could stimulate competition to develop products that contain public-sector data and contribute to new knowledge and better decisions. Open access to Central Business Register and company data will make it easier for businesses to check out their potential business partners and optain up-to-date information about e.g. management and the board of directors of the relevant company.

OPEN DATA GIVES A BETTER DECISION BASIS

As things are today, it is somewhat costly to produce useful business information. Open basic data is therefore advantageous to the business community as such, as well as for businesses that refine and re-sell the information.

Businesses that, for example, produce printed and digital information services use e.g. company data and data from the Central Business Register and the Civil Registration System in their services. As things are today, data costs money. Furthermore, current rules on re-distribution constitute a barrier to product development. Open basic data will allow businesses to develop new products such as sector-specific business data and business statistics, as well as industrial reports, which in turn can provide a better basis for investment decisions. None of this is taking place today, because it is too expensive.

FINANCIAL-SECTOR BENEFITS

Open business data could ease administration and make for improved customer advice.

Public-sector data is an important part of the customer knowledge required by banks. Making business data open and free of charge will therefore provide banks with the opportunity to gain better insight into the activities of a given customer, and thus enable them to provide better advice. Public-sector business data is also used by banks to calculate capital requirements, as well as for other internal purposes.

PERSONAL DATA

Correct and complete basic registration of personal data is essential for almost all processes in public administration. Continued digitisation and efficiency-improvement of the public sector make it increasingly important that all public authorities use the same, up-to-date basic data on individuals in their registration and decisions.

The Central Office of Civil Registration has a long tradition for reliable registration of the Danish population, as well as of foreigners with a fixed address in Denmark. However, an ever increasing number of foreigners reside in Denmark for shorter or longer periods of time, e.g. in connection with employment or collaboration with Danish businesses. This needs to be taken into account in the registration of personal data.

PERSONAL DATA NOW ...

- Several different public authorities, rather than a single central authority, carry out basic registration of foreigners with a fixed address in Denmark. This results in redundant records, inability to link data from across different public administration areas, greater costs of IT and burdensome administration in e.g. local governments.
- Foreigners without a civil registry number cannot get a NemID (translates EasyID; a common log-in solution for Danish Internet banks, government websites, etc.), which prevents them from using online self-services based on NemID.
- Maintaining redundant registers burdens some public authorities unnecessarily due to the high costs of personal data.

... AND IN THE FUTURE

A working group will be established with representatives from central, local and regional governments, which up to negotiations in June 2013 on the finances of local and regional governments will be drafting a proposal for a more efficient and coherent central personal records system and distribution of personal data via a Common Public-Sector Data Distributor.

Initially, personal data will not be included in the release of basic data.

TIMETABLE

Following entry into agreement up to the finance negotiations in June 2013, work on the personal records system is commenced.

BASIC DATA AND THE ACT ON PROCESSING OF PERSONAL DATA

The release of basic data does not change the fact that any recoding, processing and/or further distribution of basic data about individuals must comply with current legislation on personal data, in future as well as today, including the Act on Processing of Personal Data.

BASIC DATA FOR IMPROVED EFFICIENCY AND GROWTH

The eGOVERNMENT strategy 2011-2015
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