

06-11 MAY 2018 EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT: ENHANCING THE GEOSPATIAL

MATURITY OF SOCIETIES





Report on the impact open geographical data

Danish effect studies -

(Paper no 9603)





- Intro teaser
- 2. Basic digital infrastructure framework DK
- 3. The Basic Data Program
- 4. The impact of the open geographical data follow up study
- 5. Questions and answers / dialogue

?? Basic Data is a common digital resource







01.01.2013

"Free access to public basic data for everyone!

(Part of The Basic Data Program)









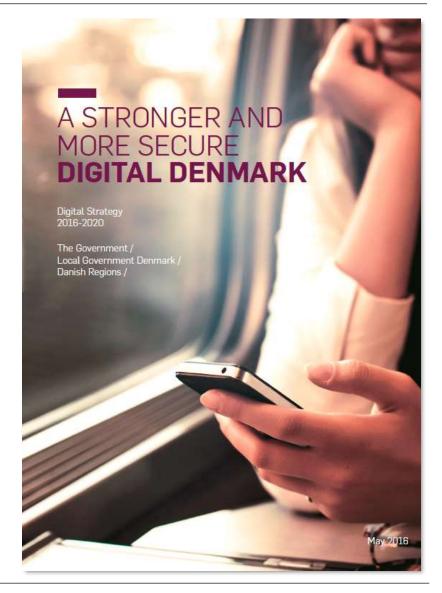
BREAKING





Common Public Digitisation Strategies – since 2001

⁹⁹ 94% of all Danes are online daily (2017)







Denmark on the digital stairway to a digital enabled and driven society – 17 years of political consensus

2001 DIGITAL COLLABORATION

- Digital signature
- Citizens can send emails to public authorities
- Digital communication by the authorities

2004 EFFICIENT PAYMENT AND INTERNAL DIGITISATION

- NemKonto (mandatory default citizen's account for payments from the authorities) and elnvoicing
- 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

2007 COMMON INFRASTRUCTURE

- 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

2011 DIGITAL COMMUNICATION

- 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





Data infrastructure:

" Infrastructure – fundamental facilities and systems essential to enable, sustain, or enhance societal living conditions







Data Infrastructure – general:

"The technologies, policies, standards and human resources and related activities that are necessary for us to collect, process, store, distribute and improve the use of data."

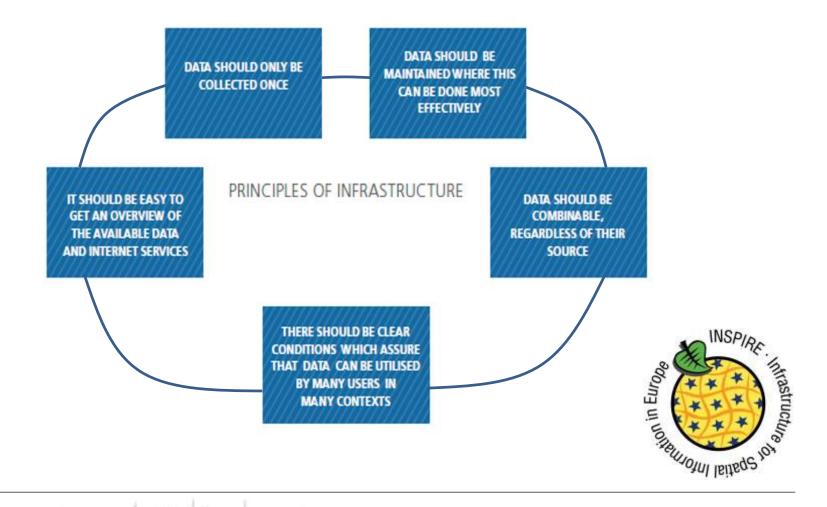
Spatial Data Infrastructure – special:

"A spatial data infrastructure (SDI) is a data infrastructure implementing a framework of geographic data, metadata, users and tools that are interactively connected in order to use spatial data in an efficient and flexible way."





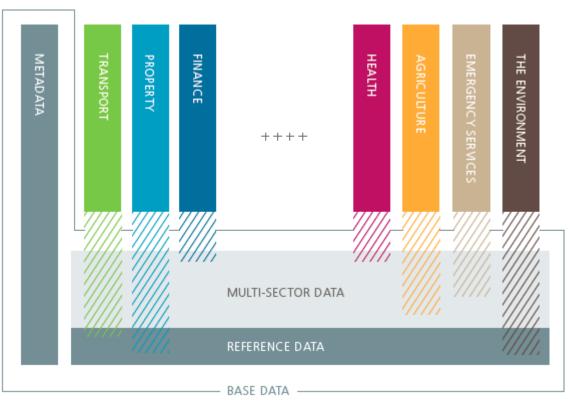
INSPIRE – Basic common principles for Spatial Data Infrastructure







NSDI – The Danish Spatial Data Infrastructure Model



SECTOR-SPECIFIC DATA:

are geodata used exclusively within one administrative area.

MULTI-SECTOR DATA:

are geodata used to support activities or transactions in more than one sector.

REFERENCE DATA:

are the fundamental geodata and maps, that can be used as a reference to ascribe precise location to other data, and which can be used in all sectors. Examples of reference data are topographic maps, cadastral maps, municipality codes, place names, cadastral numbers, building identification numbers, street names, address points, etc.

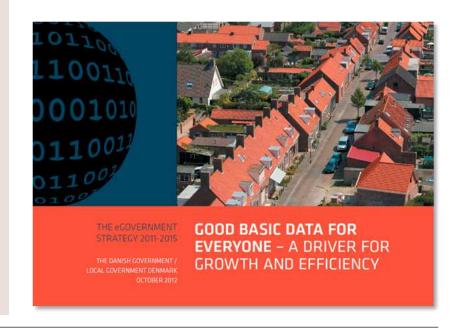
METADATA:

are information describing geodata sets and the associated web services that make it possible to find, display and use them.





Pasic data –
Denmark's
digital raw material.
Has to be "in game"
to create value

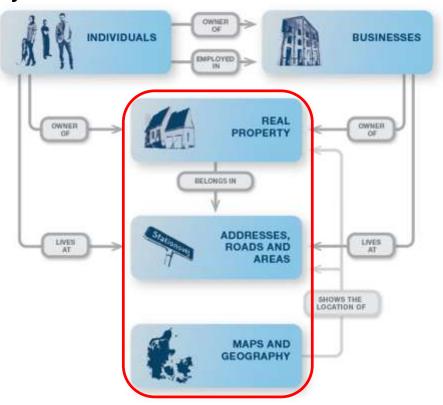






Basic Data in brief – especially geographical basic data

"Basic data is the core information authorities use in day-to-day processing to carry out its tasks"







Key issues of the Basic Data Program:

Support the data driven society – Make digital public data available to create social value

Modernizing the public sector – Create a more efficient administration and reduce costs of administration

Innovation and growth in the private sector – Create better conditions for the private sector to develop new products and to create new jobs







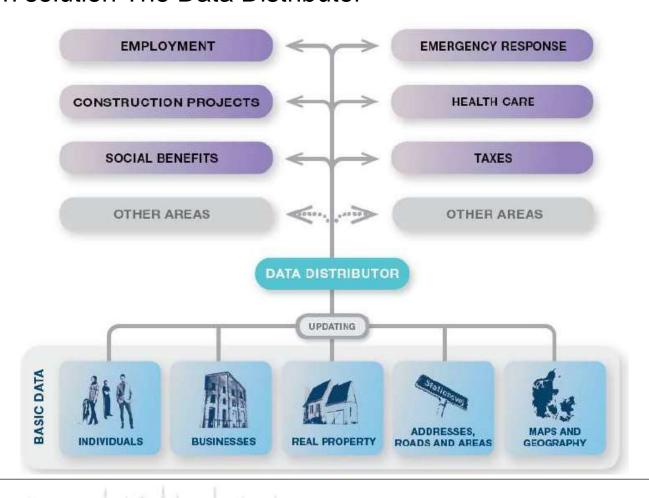
Five processes forward the goals ("INSPIREd"):

- 1. Releasing public basic data for free use To ensure the re-use of data and to prevent double registration and shadow registers, there will be given open and free access to public basic data for everyone for freely use for commercial as well as for non-commercial purposes.
- 2. Enhancing the quality of data Improvement of coherence in the basic data registers
- 3. Make it possible to link data Efforts will be made to ensure that data conforms to the same technical requirements
- 4. Establishing of a cross-institutional basic data Committee To ensure efficient, effective and coordinated development and use of basic data





5. Improve the distribution of data — Establishing of a common single distribution solution The Data Distributor



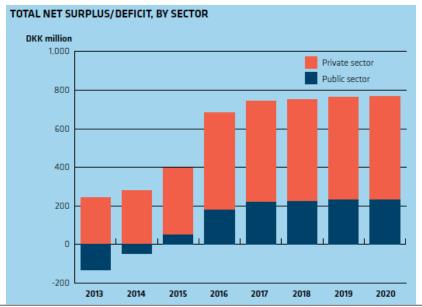




The Financing – business case:

Cost savings internal savings – less IT, less administration reduced costs of updating data

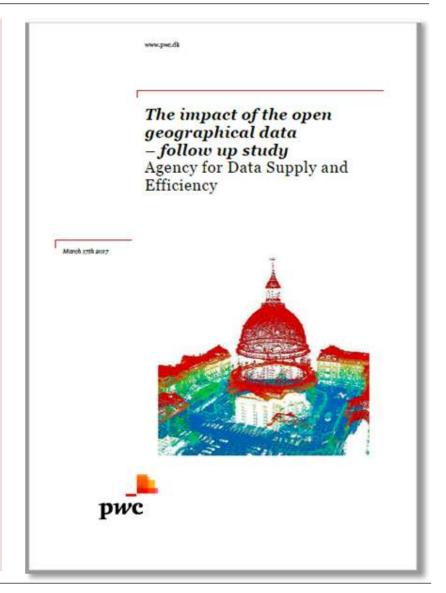
Gains efficiency gains in the public sector product and efficiency gains in the private sector







"Open geographical data generates a socio-economic value



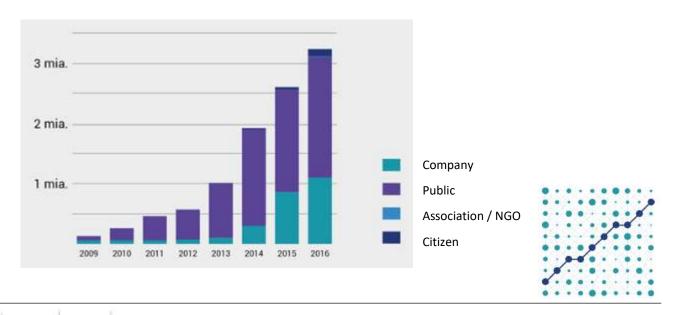




Statistics – The Danish Agency for Data Supply and Efficiency (ADSE):

Inquiries on geographical data (real property, maps and geography) has increased from 0,8 bil. to 3,3 bil. requests per year – from 2013 to 2016 (latest news 4,4 bil. requests in 2017)

Numbers of users has increased from 800 to 60.000 – from 2013 to 2016





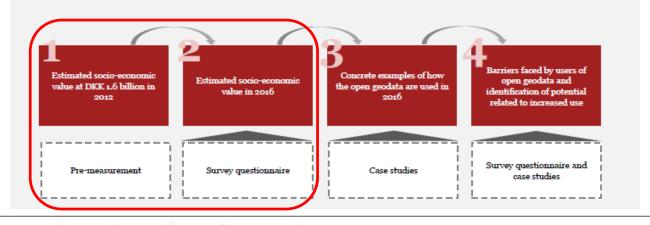


Follow up study "The impact of open geographical data" made by PwC:

Purpose – throw light on the value-generative role of geodata in the public and private sector

Scope – "Comparable" analysis (Q/A) of the total socio-economic value of the open geodata in 2012 and in 2016 on geodata distributed by

- ADSE e.g. national orthophotoes, DK-Height Model, topographic maps
- The Danish Geodata Agency e.g. cadastral data and cadastral maps



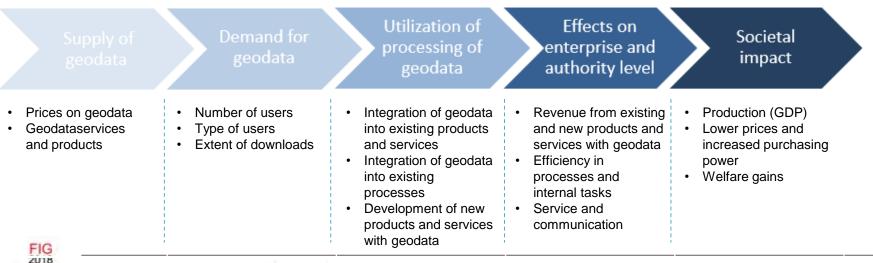




Socio-economic value of geodata – the impact of geodata in the community in terms of contributions to social activity or production (GDP).

The calculation is based on the premise that the open geodata generate a market / production and efficiency effect.

Effect chain – from the release of geodata to an effect on the socioeconomic level





Private sector socio-economic value of the open geodata 2012 and 2016:

Resulting from processing of geodata in products and services and through efficiency of internal workflows

Market / production effect – the added value of developing and selling new products and services

Efficiency effect – cost savings due to the use of geodata for own use in work processes and the performance of internal tasks

| Private sector | 2012 | 2016 | |
|-----------------------------|------|------|--|
| Production effect mio. dkr. | 116 | 446 | |
| Efficiency effect mio. dkr. | 40 | 726 | |
| Sum | 156 | 1172 | |





Public sector socio-economic value of the open geodata 2012 and 2016:

Resulting from the authorities' use of geodata in relation to internal work processes

Production effect – the average value added per employee who is critically dependent on the free basic data and geo solutions

Efficiency effect – cost reductions due to the use of geodata for own use in work processes and internal tasks

| Public sector | 2012 | 2016 |
|-----------------------------|------|------|
| Production effect mio. dkr. | 1286 | 2096 |
| Efficiency effect mio. dkr. | 150 | 273 |
| Sum | 1436 | 2369 |



The impact of the open geographical data – follow up study



The socio-economic value of open geodata in 2012 and 2016

| DKK in millions | 2012 | 2016 |
|---|-------|-------|
| Production effect of the open geodata | 1.402 | 2,542 |
| Private enterprises | 116 | 446 |
| Government agencies | 321 | 373 |
| Municipalities | | 1,376 |
| Regions | 965 | 151 |
| Independent institutions, etc. | | 196 |
| Efficiency effect of the open geodata | 190 | 999 |
| Private enterprises | 40 | 726 |
| Utility companies | 100 | 229 |
| Government agencies | | 22 |
| Municipalities | 50 | 18 |
| Regions | 50 | 2 |
| Independent institutions, etc. | | 2 |
| Total socio-economic value of the open geodata 1.592 | | 3,541 |

Source: The questionnaire survey has been performed among private enterprises, utility companies and public authorities and pre-measurement (2012)



Questions and answers / dialogue







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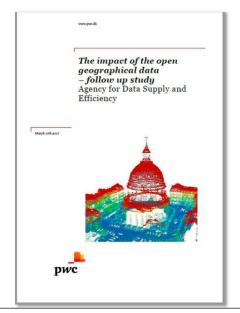


Reference list





https://en.digst.dk/media/14139/grunddata_uk_web_05102012_publication.pdf



http://sdfe.dk/media/2917052/20170317
-the-impact-of-the-open-geographicaldata-management-summary-version13-pwc-qrvkvdr.pdf

