Infrastructure for real property information one stop shopping
Jørgen Skrubbeltrang
Senior adviser

Agenda

1. Background
2. The Property Data Report
3. The applied infrastructure
4. 2½ years in operation – status
5. Conclusions
Background

2006 The Danish Government announces "Better and cheaper transaction of properties". The document contains 12 specific initiatives, which aims to ensure that it becomes easier and cheaper to buy, sell and own housing.

2009 The Finance Committee endorses start of the DIADEM project
- Digital access to information about real properties

2009-2012 The DIADEM project means a lot of extensive collaboration.
With the stakeholders and users:
With several organisations in the public sector:
- Local Government Denmark, Danish Tax and Customs Administration, The Nature Agency, The Danish Nature & Environment Portal, The Danish Road Directorate, Danish Geodata Agency and The Danish Court Administration
And with many consultant agencies and IT companies

2012 The Property Data Report is launched

The Property Data Report

Basic cadastral information
- Parcel identifier, area, area of road, cadastral map etc.
and basic land book information
- Titles, name of property owners, mortgages and easements
has been available online for about 15 years.

What other types of real property information are relevant for property transactions?
- For real estate agents or lawyers?
- For sellers or for buyers?
### The Property Data Report

The Property Data Report delivers within 2 – 3 minutes all the information.

The information is available as:
- a digital report in a website
- and in a PDF report
- and as structured data and annexes in a web service for B2B systems

---

<table>
<thead>
<tr>
<th>Buildings</th>
<th>Economics</th>
<th>Nature, forest, agriculture</th>
<th>Protection lines and zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and Dwelling report</td>
<td>Property tax</td>
<td>Forest conservation areas</td>
<td>Forest protection lines</td>
</tr>
<tr>
<td>Property label report</td>
<td>Property tax message</td>
<td>Continuous forest (natural)</td>
<td>Lake and river protection lines</td>
</tr>
<tr>
<td>Building status report</td>
<td>Property value, land value</td>
<td>Protected nature types</td>
<td>Church protection lines</td>
</tr>
<tr>
<td>Application for building permit</td>
<td>Valuation message</td>
<td>International nature protection areas</td>
<td>Marine protection zone</td>
</tr>
<tr>
<td>Electricity installation report</td>
<td>Rent board case</td>
<td>Properties with farming obligation</td>
<td>Coast protection zone</td>
</tr>
<tr>
<td>Infrastructure-casualty document</td>
<td>Monday professional data</td>
<td>Wetland areas</td>
<td>Limestone and soil flanks</td>
</tr>
<tr>
<td>Flood initials</td>
<td>Windfall (financial aid)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flood initials</td>
<td>Workers (financial aid)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flood initials</td>
<td>Legal aid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil pollution</td>
<td>Water supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food pollution analysis</td>
<td>Drainage facilities</td>
<td>Municipality plans</td>
<td>Environmental case</td>
</tr>
<tr>
<td>Dunes and isolated</td>
<td>Water supply</td>
<td>Zero status</td>
<td>Nature conservation</td>
</tr>
<tr>
<td>Mapped soil pollution</td>
<td>Sewage plans</td>
<td>Local plans</td>
<td>Property identifiable information</td>
</tr>
<tr>
<td>Groundwater – external areas of drinking water</td>
<td></td>
<td>Hot supply</td>
<td></td>
</tr>
<tr>
<td>Groundwater – internal</td>
<td>Mapped vulnerable areas</td>
<td>Planned construction projects (municipal)</td>
<td></td>
</tr>
<tr>
<td>Injunction/dispensation to water extraction</td>
<td>Access to road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injunction/dispensation to water extraction</td>
<td>Transport corridors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FIG Working Week, 7-21 May, Sofia Bulgaria
The applied infrastructure

One stop shopping - service based architecture

18 data sources

DIADEM deliver The Data Report with information from the data sources
The Data Report contains both data and metadata

The Property Data Report interrogates property information from the following 18 data sources
The applied infrastructure

17 data sources are central systems. The information “Overdue Preferential Debt” is decentralised in 36 web-services for the 98 municipalities of Denmark.

Alphanumeric property identification

The property of interest is searchable by address, property number or parcel number.

- The basic register for addresses is Building and Dwelling Register (BDR)
- For property numbers Common Municipal Property Data System (ESR) is basic register
- Parcel numbers are the keys of the Cadastre

There is a transactional consistency across the three databases which makes it possible to use their search keys in conjunction. The most frequently used search key is the address.
The applied infrastructure

Geographical property information identification

Some information are recorded geographically by polygons and line features with varying accuracy. Buffer zones are used to compensate for possible lacking spatial accuracy in digitising the feature.

Some land use regulations are defined by a polygon. These polygons are interrogated by a negative buffer.

Other land use regulation is defined by a line. A positive buffer of 0.5 meter is used for these regulations.

Identification of users and property owners – access to data

Ownership

Ownership is identified by the civil registration number for citizens or by the business number for businesses.

- All citizens in Denmark are registered with their civil registration number in the Central Population Register.
- All businesses are registered with their business number in the Central Business Register.

Digital signature

- 4.5 million Danes (80% of the population) have a digital signature. The signature is linked to the civil registration number.
- All professional users of The Property Data Report have employee digital signatures. Their signatures are connected to the business number.

There is very fine transactional consistency across the registers. It supports a good basis for ensuring who is given ability to see confidential property information.
Status

After 2½ year in operation the status May 2015 is:

- 220,000 reports requested and delivered - requested reports is increasing
- 20 % of the reports are requested via B2B-services
- 1,370 businesses and organisations have signed contracts with the ministry as frequent customers
- 4,600 users are registered at the frequent customers
- There have been almost no challenges with the identification of the right properties in 18 databases, and no challenges with the identification of the ownerships
- Prior to operation some authorities responsible for data worried about data quality
  - Only one small compensation paid
  - Data are produced and delivered from the authorities responsible for maintaining the information
- A subproject on registration of information about fuel tanks related to individual heating of buildings has been successfully completed. Relevant fuel tank details have been extracted from 17 shelf kilometres of documents
- The project has devoted significant resources to assist
  - in the digitization of analogue data in collaboration with municipalities
  - legislation authorities in preparing 2 acts and 8 orders on property regulation for digital applications

Business case – gains

- Economic gains - real estate agents and lawyers: 2 million EUR/year
- Cancellation of fee income from former solution – municipalities: 5.5 million EUR/year

No effect measurement carried out. Feedback from the users and municipalities indicate gains are better than expected. A user board for the professional users has been established and they are very pleased with the Property Data Report, the website and the B2B solution.

Business case – financing

Project loan from The Finance Committee: 23 million Euro

Costs

- Solution Development and Implementation: 15.6 million EUR
- Operation costs: 1.5 million EUR per year

Revenues

- 100,000 property data reports per year – each costing 43 EUR = 4.3 million EUR

Project 2009-2012. Operation from 2013 => Break-even in 2019 and price can be reduced.
Conclusions

The business goals that The Property Data Report and the infrastructure should
• make it faster, easier and more transparent to obtain information
• minimise time spending
• and have an adjustable solution to the professional users needs
have all been met.

The success is based on the fact, that the collaboration across the Danish public sector was driven by the private stakeholders’ demands. The demands made the objectives for the project clear. And on that basis it was possible to be focused and pragmatic and to establish an infrastructure fit for purpose.

Many thanks for your attention