



Shared data - many users

Danish Natural Environment Portal

by/ Jens Jakob Nørtved Bork, Enterprise Architect

What is Danish Natural Environment Portal?

Containers of shared natural environment information

Provider of services for maintaining the natural environment information

Background

- The Structural Reform abolished the county level in Denmark, and the responsibility for data collection were divided between local and national authorities.
- The 14 Danish counties held the majority of environmental data.
- They had established a number of systems for processing, storing and reporting data – basically 14 different set-ups.
- Thus, a need for a common share point for data.
- **Result: Co-operation on establishing the Danish Natural Environment Portal (DMP), launched January 2007 resulting in a partnership a cross of authorities.**

Aims of the Danish Natural Environment Portal

- Give the authorities access to store, read and maintain their data
- Give the citizens and other parties access to relevant information about their natural environment

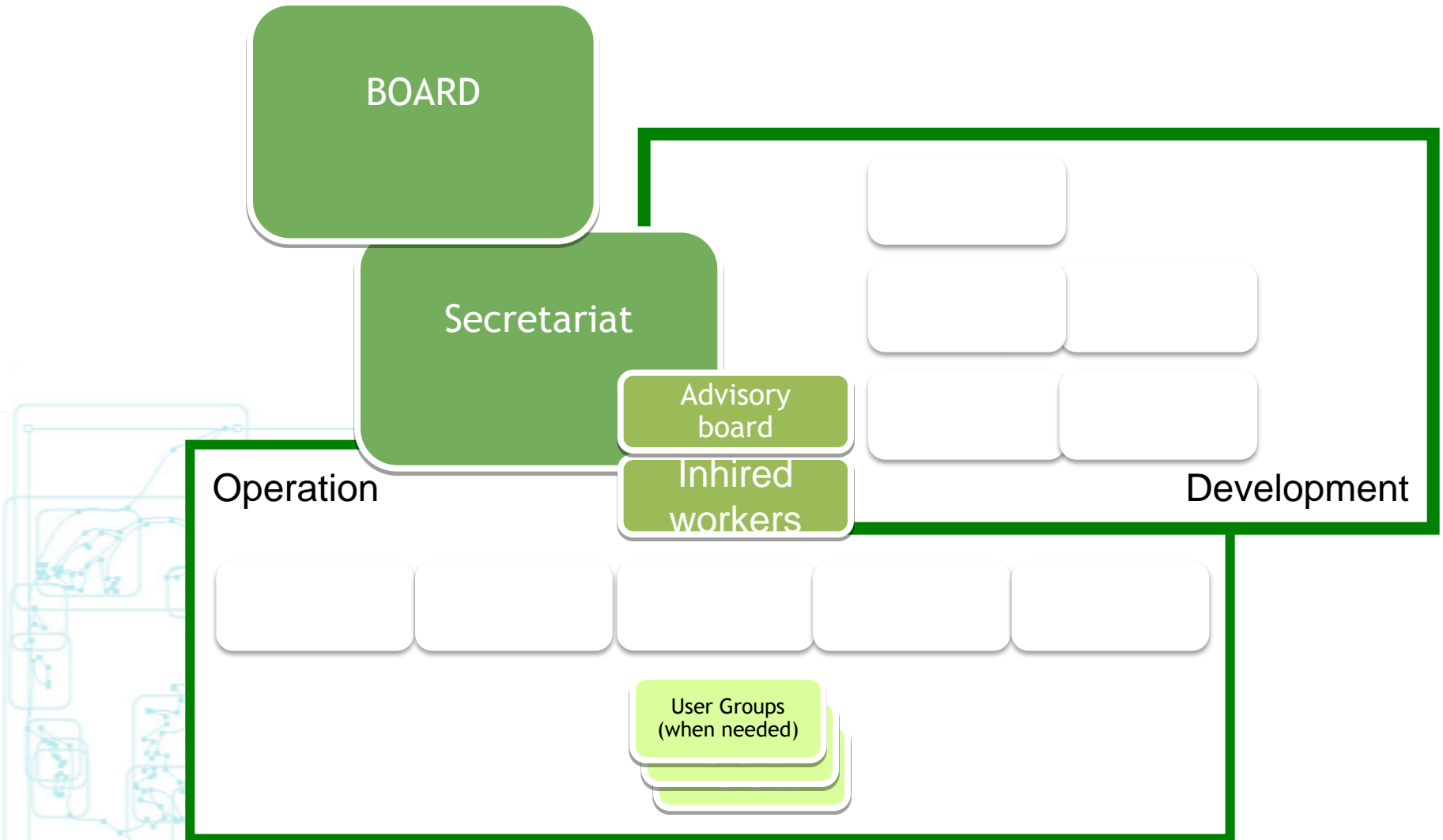
The organisation

Based on an agreement that specifies.:

- *data responsibilities who, when and where for over 200 different types of data*
- Members of the board
- The Ministry of Environment appoints the chairman
- Budget
 - Municipalities pay 45 %
 - The ministry pays 45 %
 - The five regions pay 10 %

Danmarks Miljøportal

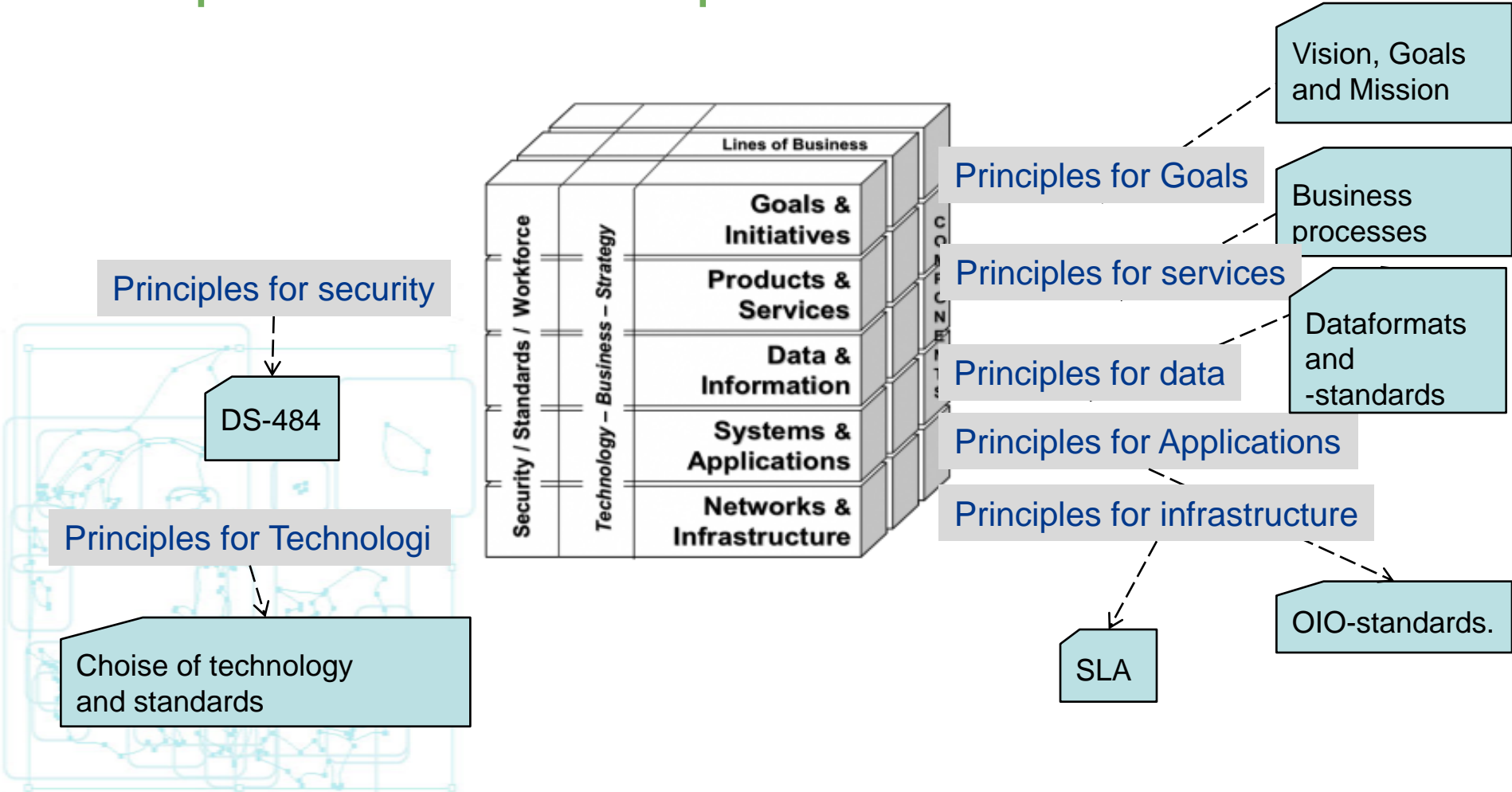
Data om miljøet i Danmark



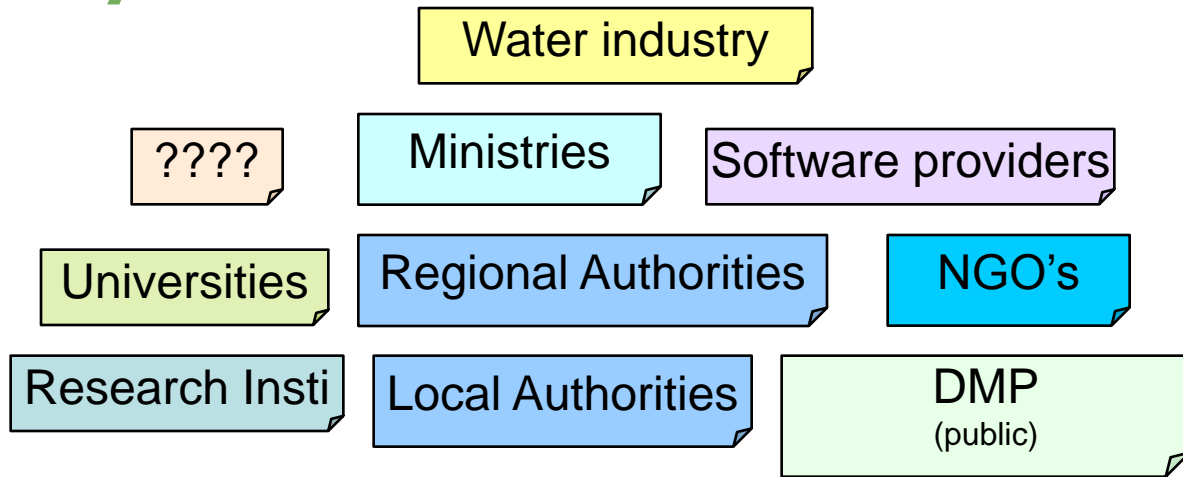
What is the content?

- Five fields of data: Nature, GIS information, Surface water including pointsources, Ground water, Soil.
- The IT-platform is a mix of inherited county systems and new developed systems
- A large scale Identity management system based on active directory federation service has been established

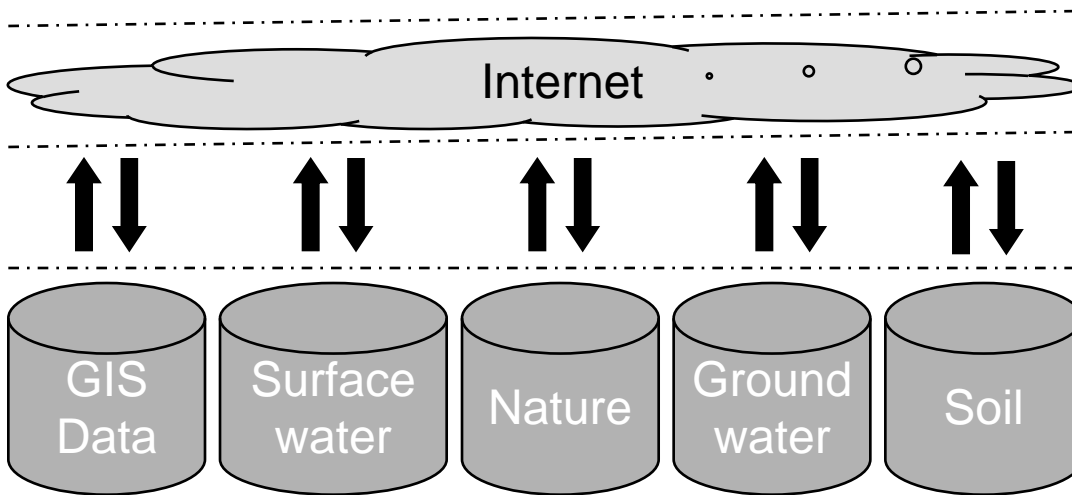
Principles based enterprise architecture



Danmarks Miljøportal – Architecture and systems



Applications giving access to natural environment data – according to the specific needs of the users



Internet

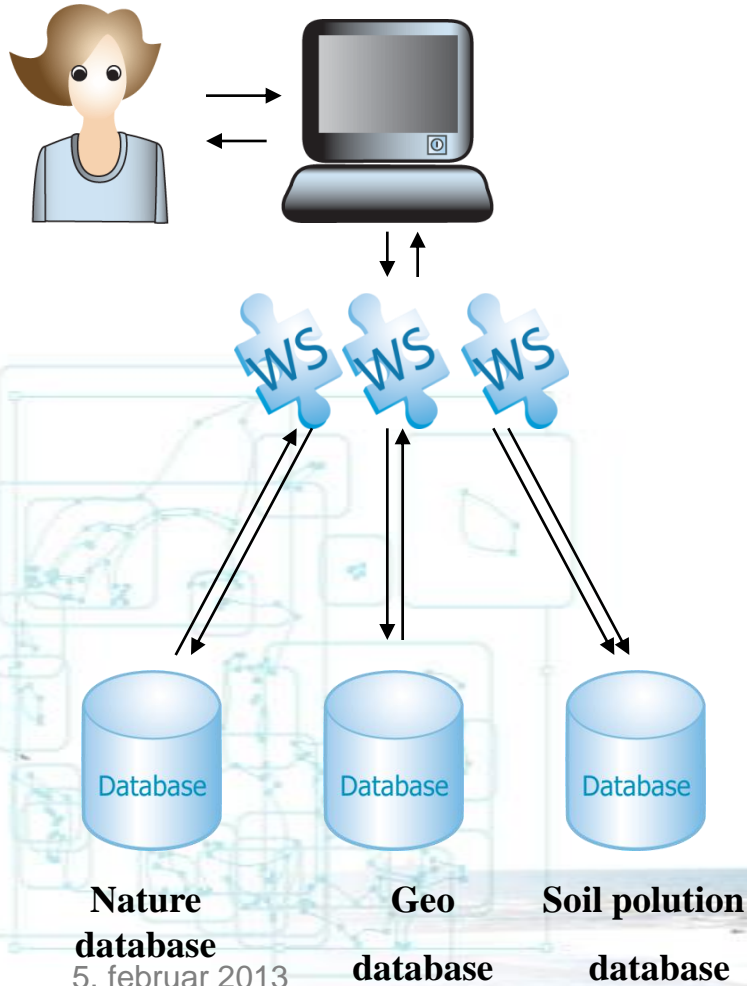
Web-Services are reached through the net

Web-service layer

Services that can read and write

Shared Databases

Geodata



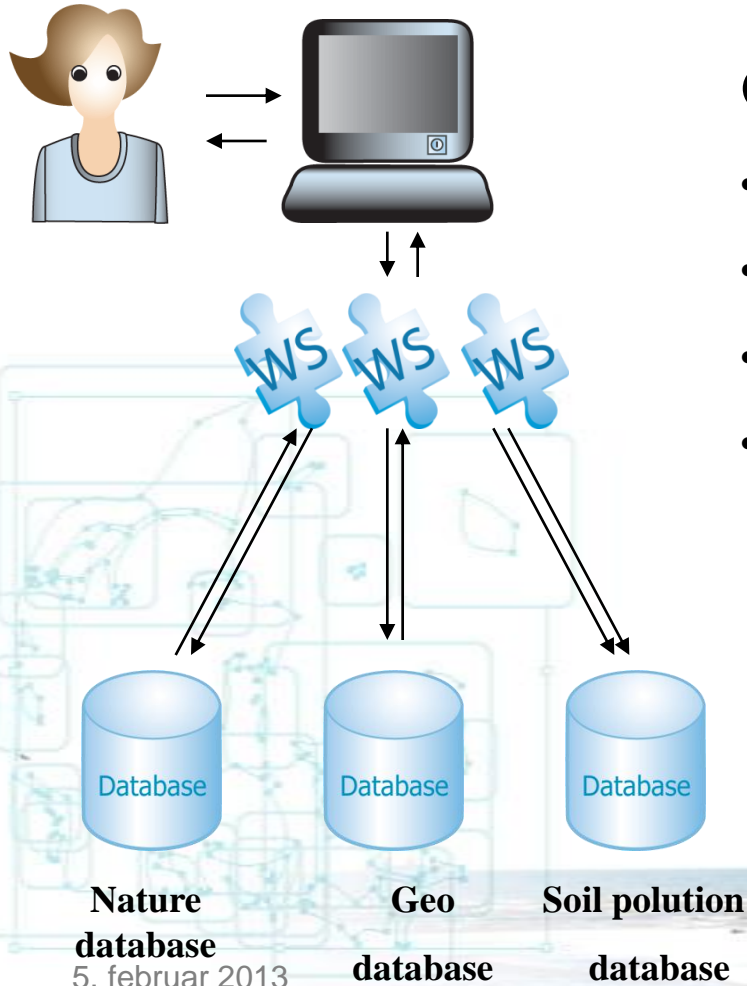
Implemented geodata architecture.

- Geodata assembled in one database
- Geodata integrated with environmental data using UUID.
- Based on identity managed Soap-services

Opportunities.

- Large possibilities for integrations between different types of natural environment data.
- Minimal extent of redundancy in data
- Possibilities for sharing of geodataobjects with other than environmental authorities

Geodata



Challenges

- Possibilities for inconsistency in data.
- Major requirements for the server operations.
- Orchestrated services are challenging.
- Important requirements for building services.

Our presentation of natural environment data with geographical references - Arealinformation

The screenshot displays the Danish Environmental Portal (Miljøportal) interface. The main title is "Danmarks Miljøportal" with the subtitle "Data om miljøet i Danmark". The current page is titled "Demo – Ingen sagsbehandling". The search bar contains the word "natur".

The interface includes several toolbars and panels:

- Topbar:** "Brug kortet", "Søge og finde", "Koordinater og mål", "Andre værktøjer".
- Measurement Tools:** "Mål afstand", "Opmål areal", "Tilføj som grafik", "Slet grafik", "Ryd alle".
- Information Panel:** "Opmålings information" (Total længde: 0.00, Sidste segment: 0.00), "Enheder" (Meter (m)), "Udpeget koordinat" (N: 56°22'34", Ø: 9°4'29"), "Koordinatsystem" (Lat/Lon (DMS), Standard (25832), Web Mercator, UTM 32N (ETRS89), Lat/Lon (DD), Lat/Lon (DMS)).
- Map:** A topographic map showing a coastal area with labels for "Grønborg", "Borris", "Vesterby", "Tårn", "Anum", "Albæk", "Kodbøl", "Nørremose", "LUNDENÆS PLANTAGE", and "BORRIS-FASTER KOMMUNEPLANTAGE". A scale bar shows 1 mi and 1 km.
- Left Panel (Temaer):** "Valgbare temaer" with checkboxes for "Naturdata", "Drikkevand og grundvand", "Overfladevand", "Overfladevand", "Dansk Vandløbsfaunaindeks (DVFI)", "Fysiske indeks i vandløb", "Smådyrsfauna i vandløb", "Tilsyn og prøver i marine områder", "Tilsyn og prøver i søer", "Tilsyn og prøver i vandløb", "Vandkemi og Feltmålinger", "Marinbakterieller og Natura 2000".

Who is using Danish Natural Environment Portal?



Case officer



Technical data center



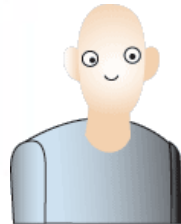
Head of Public service IT



System supplier



Private sector consultant



Citizen



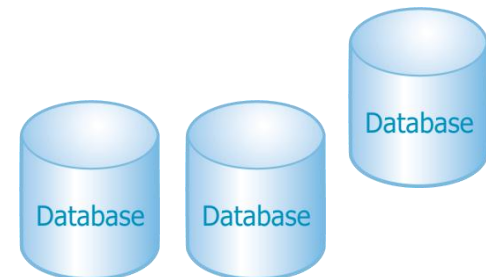
Estate agent



Field surveyor

What are our challenges?

- Many databases
- Many systems
- Many needs
- Many users
- Several authorities and other partners must collaborate

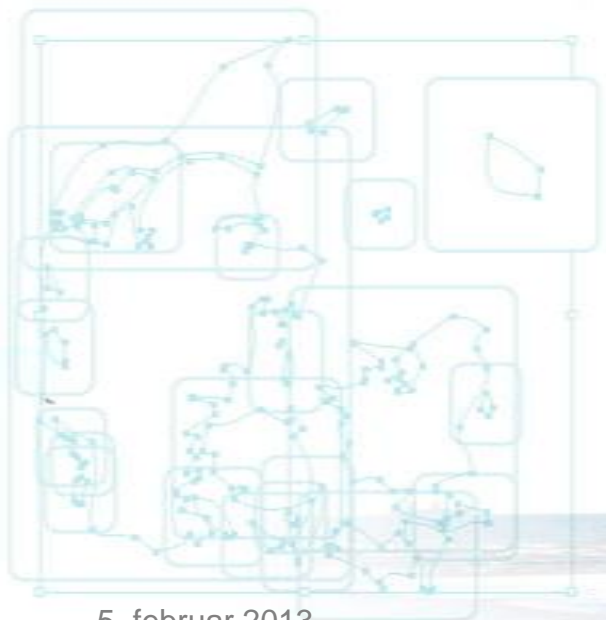


Future

Focus areas:

1. Consolidation of the data content
2. Consolidation of operational environment
3. Inclusion of new areas
4. Efficient digital workflow
5. Public information

Questions



5. februar 2013

Miljoportal.dk

16



Thank you!

