The Danish SDI: A Technical Perspective

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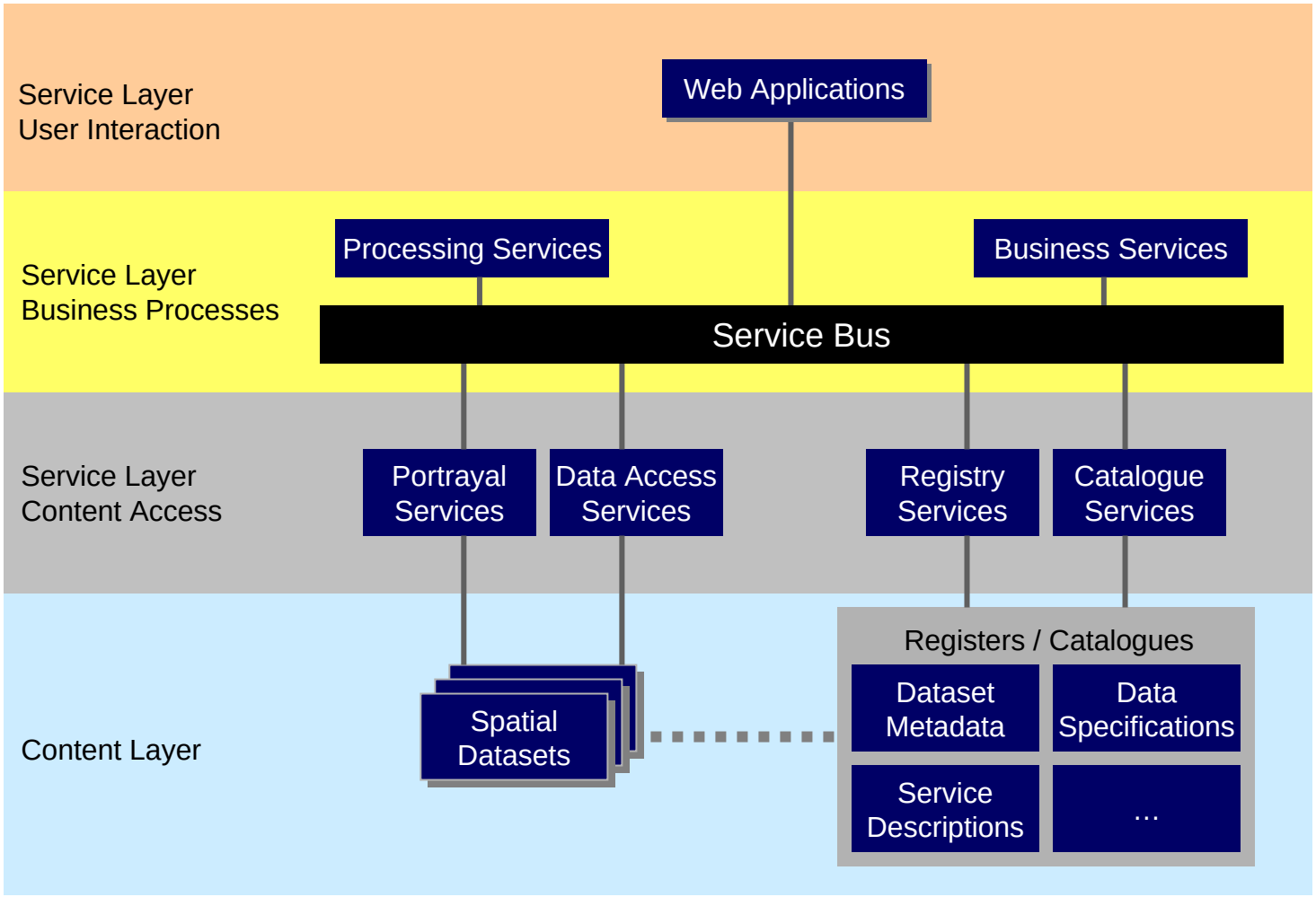
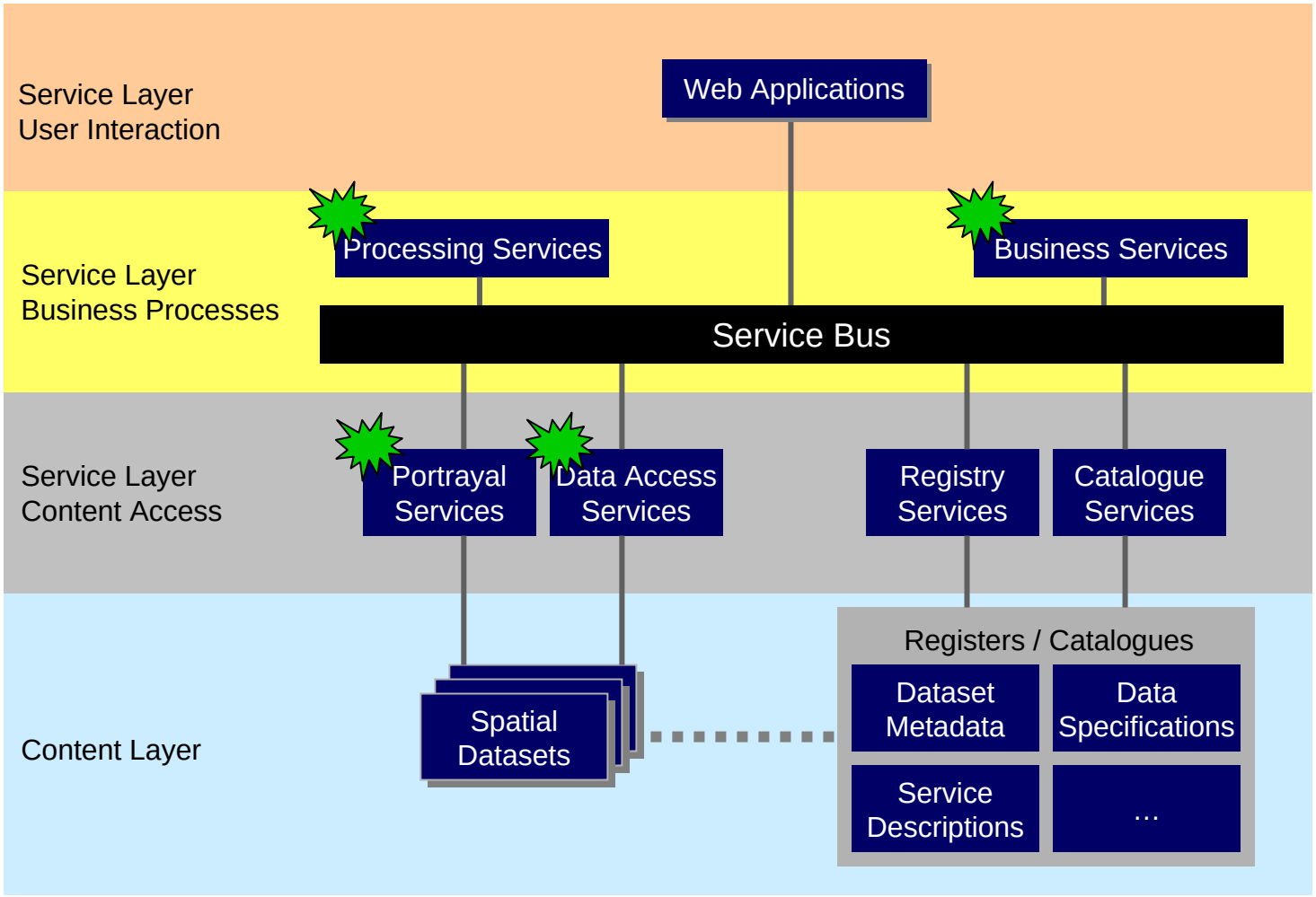
A Conceptual View of an SDI



Existing Services in KMS

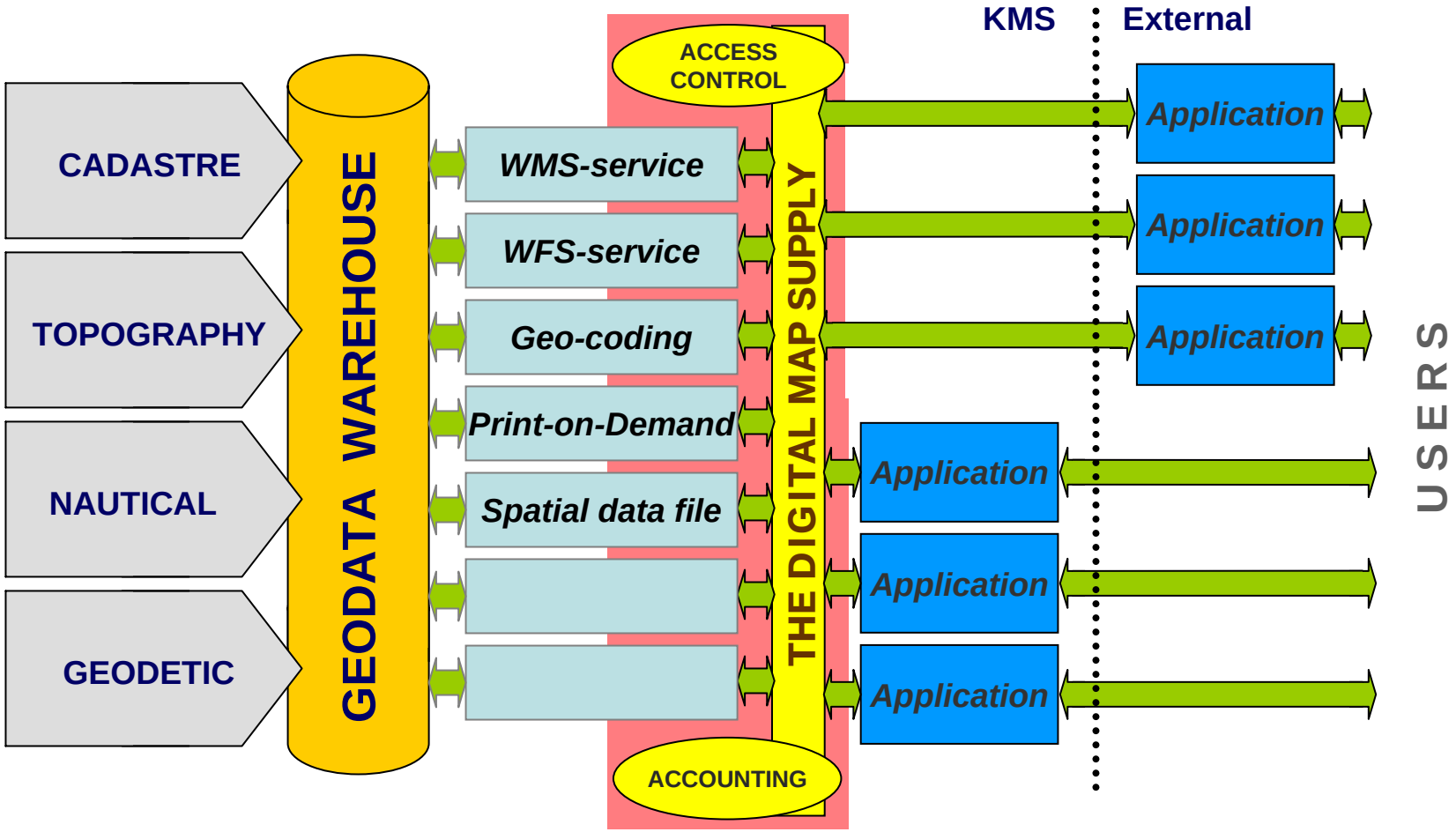


The Digital Map Supply

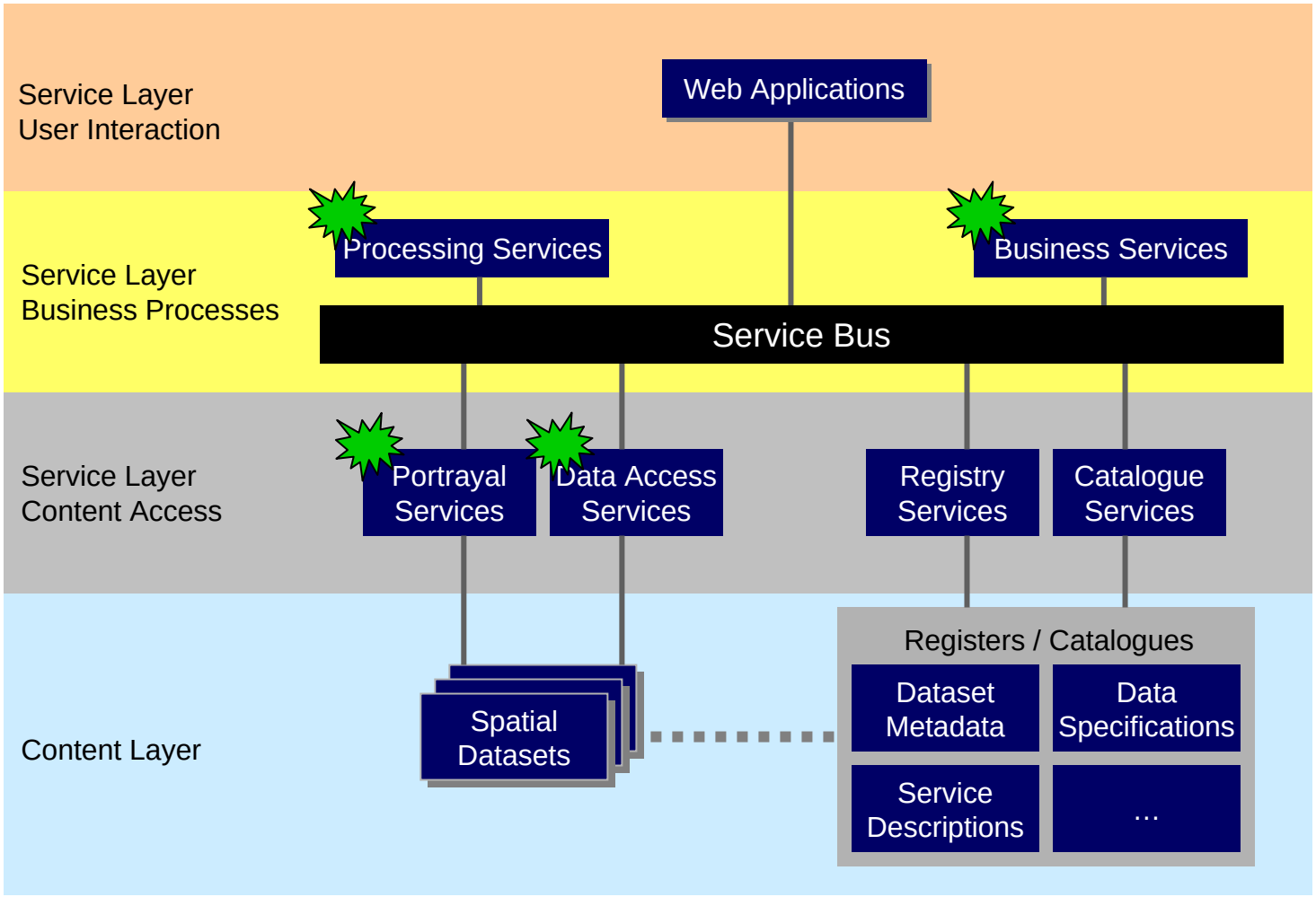
- The Digital Map Supply is the framework used by the National Mapping and Cadastre to share spatial information via the internet
- The Digital Map Supply addresses both technical and business issues for sharing
  - National Survey and Cadastre, Denmark – Focus Areas 2004

- Interface between the SDI and its utilization
- Launched in 2001 – in full service since 2002

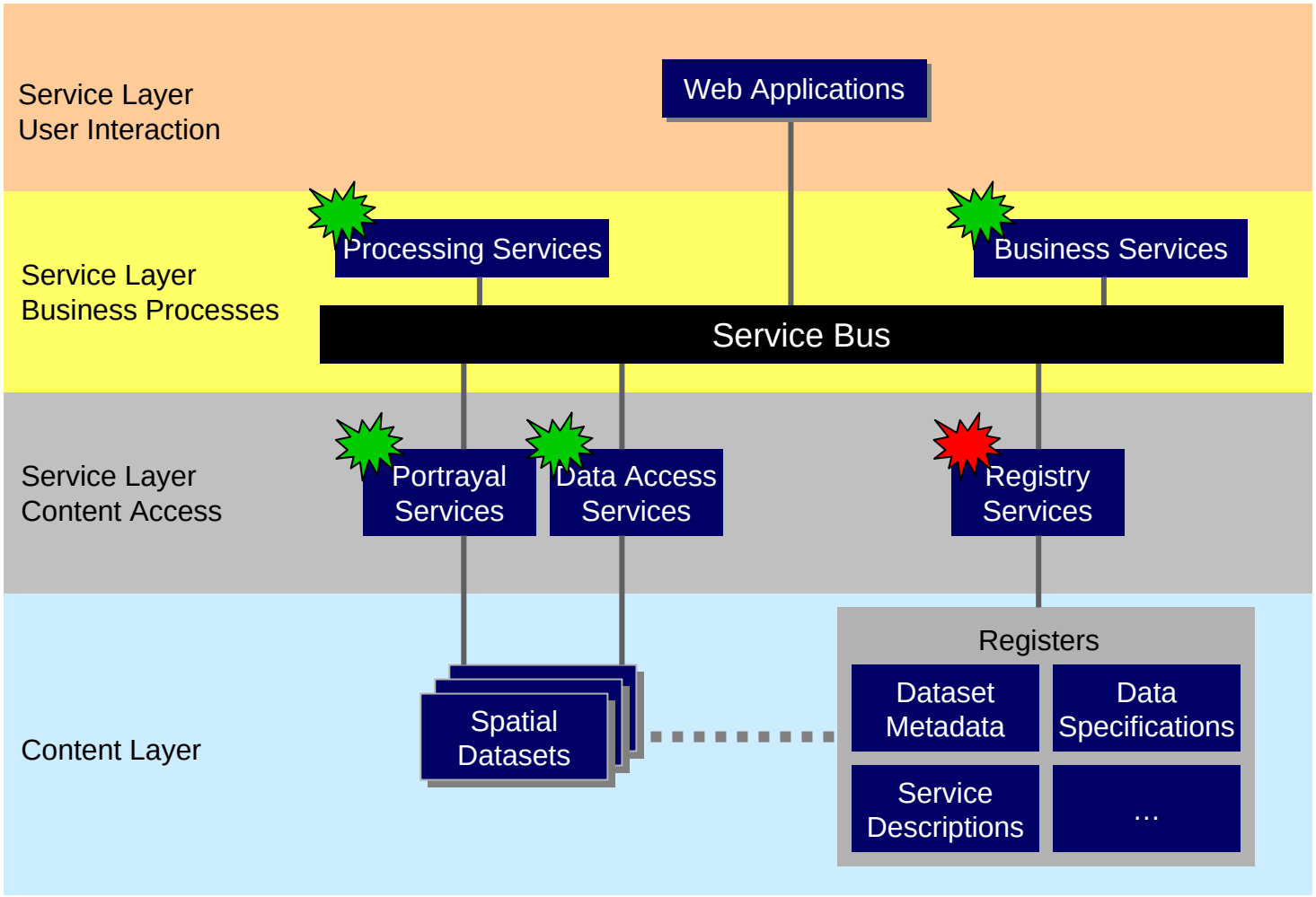
The Digital Map Supply – Data and Functionality



Planned Services in KMS



Planned Services in KMS



Why Registers Instead of Catalogues?

- Initial attempt: Implement INSPIRE compliant metadata solution
- But
  - INSPIRE Implementing Rules not finished
  - INSPIRE Metadata Implementing Rules do not fulfill Danish requirements

⇒ Investigate standards and their relations

Catalogue vs. Register

- No formal definition of catalogue
- Register definition in 19135 does also apply to OGC CSW concepts
- Attempt of new definitions:

catalog

set of metadata entities, which contain identifiers and descriptions of associated items

register

an authoritative catalogue

Catalogue vs. Register

- Registers require support of
  - well-defined registration processes
  - provenance and audit trail
  - versioning
  - security enforcement at several levels

⇒ KMS requires registers

Standards for Registry Services

- OGC CSW-ebRIM and OASIS/ISO ebXML RegRep
  - Both do not yet support all required functionality
  - Extension packages / ebXML RegRep profiles needed in any case
  - ebXML RegRep provides extension mechanisms while CSW does not explicitly

But what about INSPIRE?

- Most likely CSW-ISO will be the choice
- JRC study on CSW interoperability
  - CSW-ISO can be simulated on top of CSW-ebRIM
- GEOSS registry
  - UDDI and CSW-ebRIM interfaces can be build on top of ebXML RegRep

Further Comparison

- Spatial operators: ebXML allows support of *any* query language
  - OGC Filter?
  - But not necessarily needed: Stored queries
- ebXML allows integration into the general IT infrastructure
  - geospatial metadata can be made available in *any portal*
- ebXML RegRep is a Danish standard and recommended from the Danish eGovernment initiative
- ebXML RegRep products aiming at the geospatial community are available

Summary

- KMS's part of the SDI will be governed by an ebXML RegRep
- In a first version, 'classical' metadata (19115/19119) will be registered
- Other types of resources will follow
- The INSPIRE interface will be provided, at least read-only
- All Danish data and service providers will have the possibility to register their resources as well