



# The modelling framework for INSPIRE data specifications

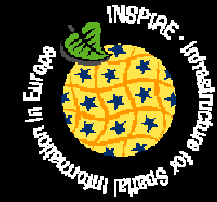
Clemens Portele (Drafting Team „Data Specifications“, Chair)



# Extracts from the Directive

- Article 7(1)
  - „Implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, [...]“
  
- Article 3(7)
  - „‘interoperability’ means the possibility for spatial data sets to be combined, and for services to interact, without repetitive manual intervention, in such a way that the result is coherent and the added value of the data sets and services is enhanced“

# Conclusion: Two-step approach for interoperability of spatial data



## Step 1:

Modelling framework based on the ISO 19100 series

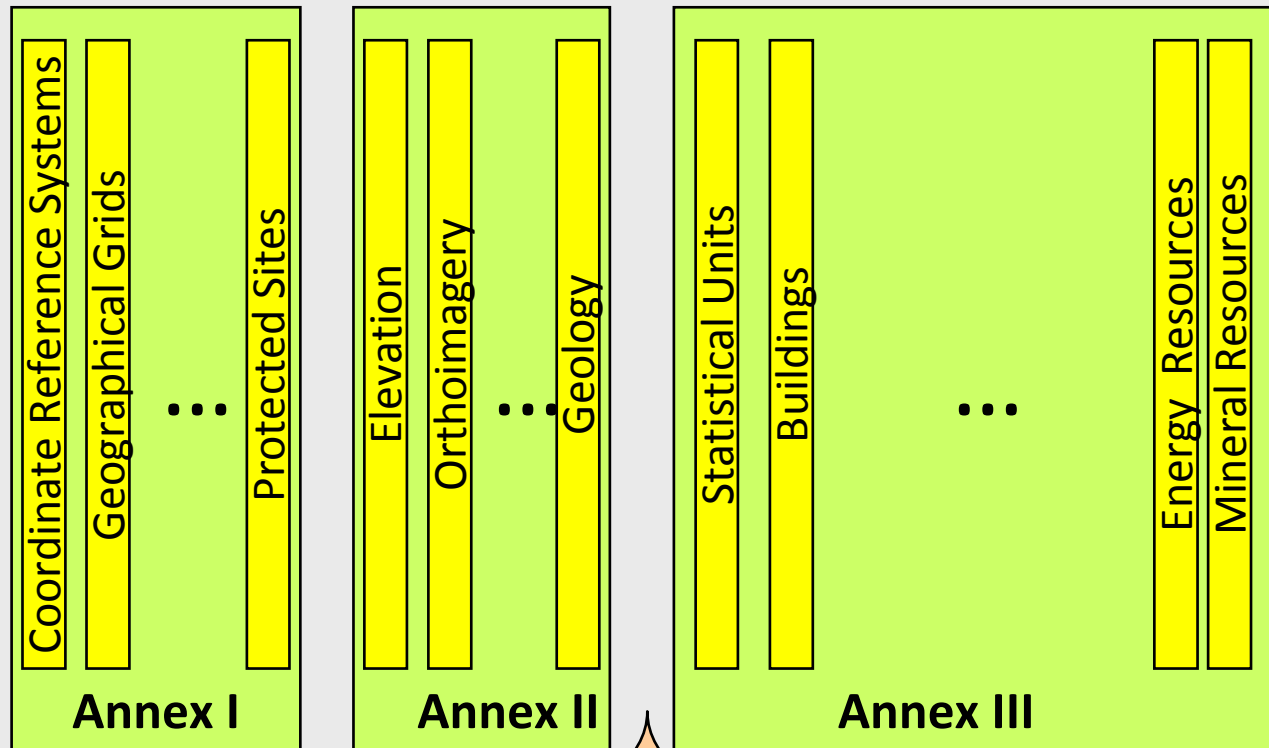
→ *Drafting Team (DT)*

## Step 2:

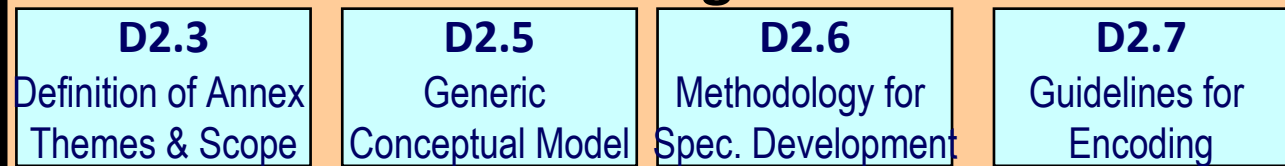
Data specifications for the 34 themes are being developed until 2012 based on the framework

→ *Thematic Working Groups (TWG)*

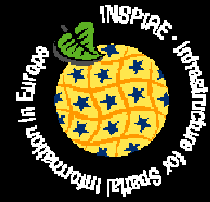
Implementing Rules comprising data specifications for 34 themes



## Modelling Framework



# Conceptual framework and specification methodology deliverables

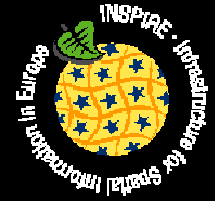


Related to the content of data specifications


Deliverable	Current Stage
D2.3: Scope and Definition of Annex I/II/III Themes	Baseline version available
D2.5: Generic Conceptual Model → this presentation	Baseline version available
D2.6: Methodology for the development of data specifications → next presentation	Baseline version available
D2.7: Guidelines for the encoding of spatial data → this presentation	SDIC/LMO consultation starts July 2008

Related to the process of creating data specifications

# Generic Conceptual Model



- Rules that apply to the data specifications of all INSPIRE spatial data themes
  - Common terminology and basic concepts
  - 75 requirements
  - 28 recommendations



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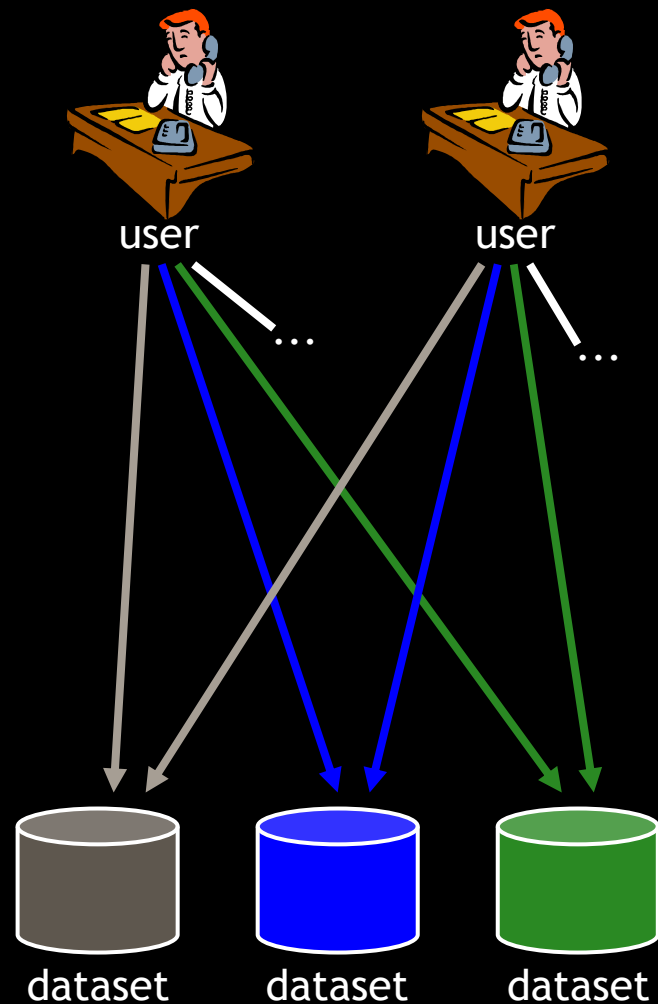
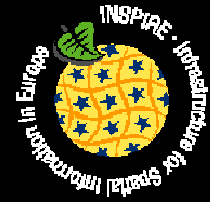
Drafting Team "Data Specifications"  
Generic Conceptual Model

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Title	Drafting Team "Data Specifications" – deliverable D2.5: Generic Conceptual Model
Status	Draft
Creator	Drafting Team "Data Specifications"
Date	2007-04-05
Subject	Generic Conceptual Model of the INSPIRE data specifications
Publisher	Drafting Team "Data Specifications"
Type	Text
Description	Draft of the Generic Conceptual Model of the INSPIRE data specifications
Contributor	Members of the INSPIRE Drafting Team "Data Specifications"
Format	MS Word (doc)
Source	Drafting Team "Data Specifications"
Rights	Open access; comments limited to registered SD/ICs and LMOs
Identifier	D2.5_v2.0_submittedToICT.doc
Language	en
Relation	n/a
Coverage	Project duration

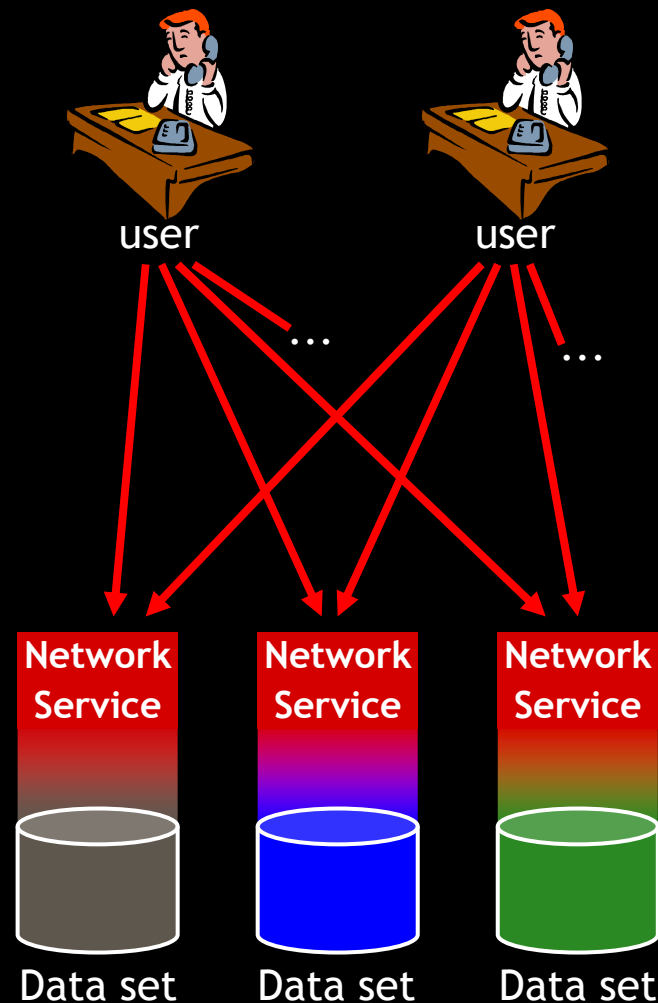
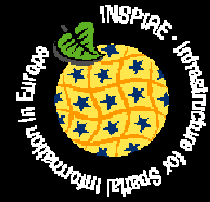
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# Interoperability of data – The starting point ...



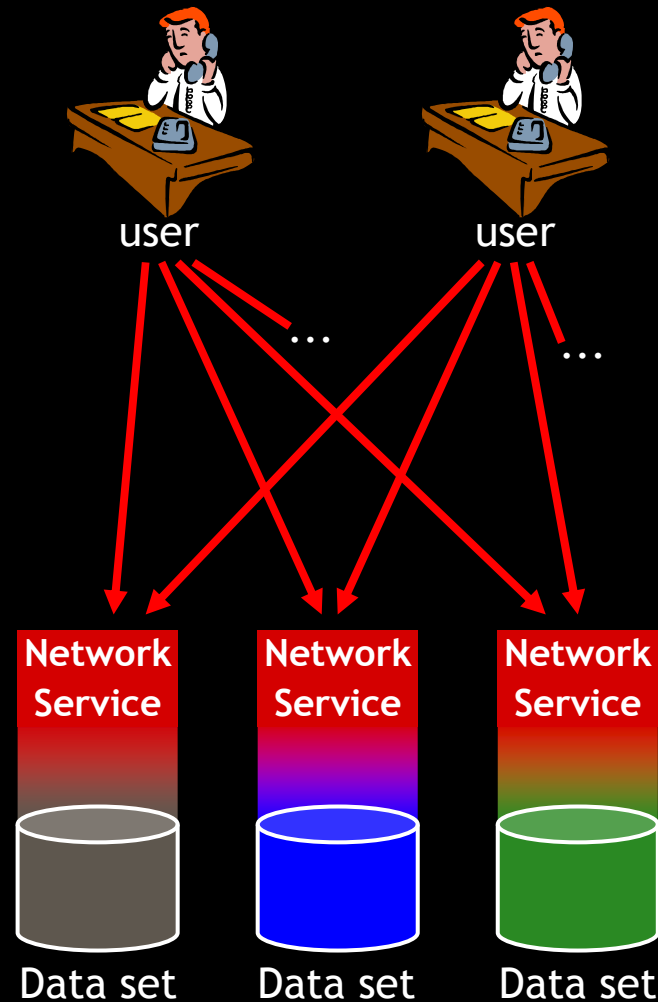
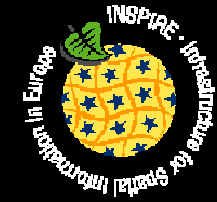
- Access to complete spatial data sets
- User has to deal with interpreting heterogeneous data in different formats, identify, extract and post-process the data he needs  
→ lack of interoperability

# Interoperability of data – ... and what INSPIRE is aiming at



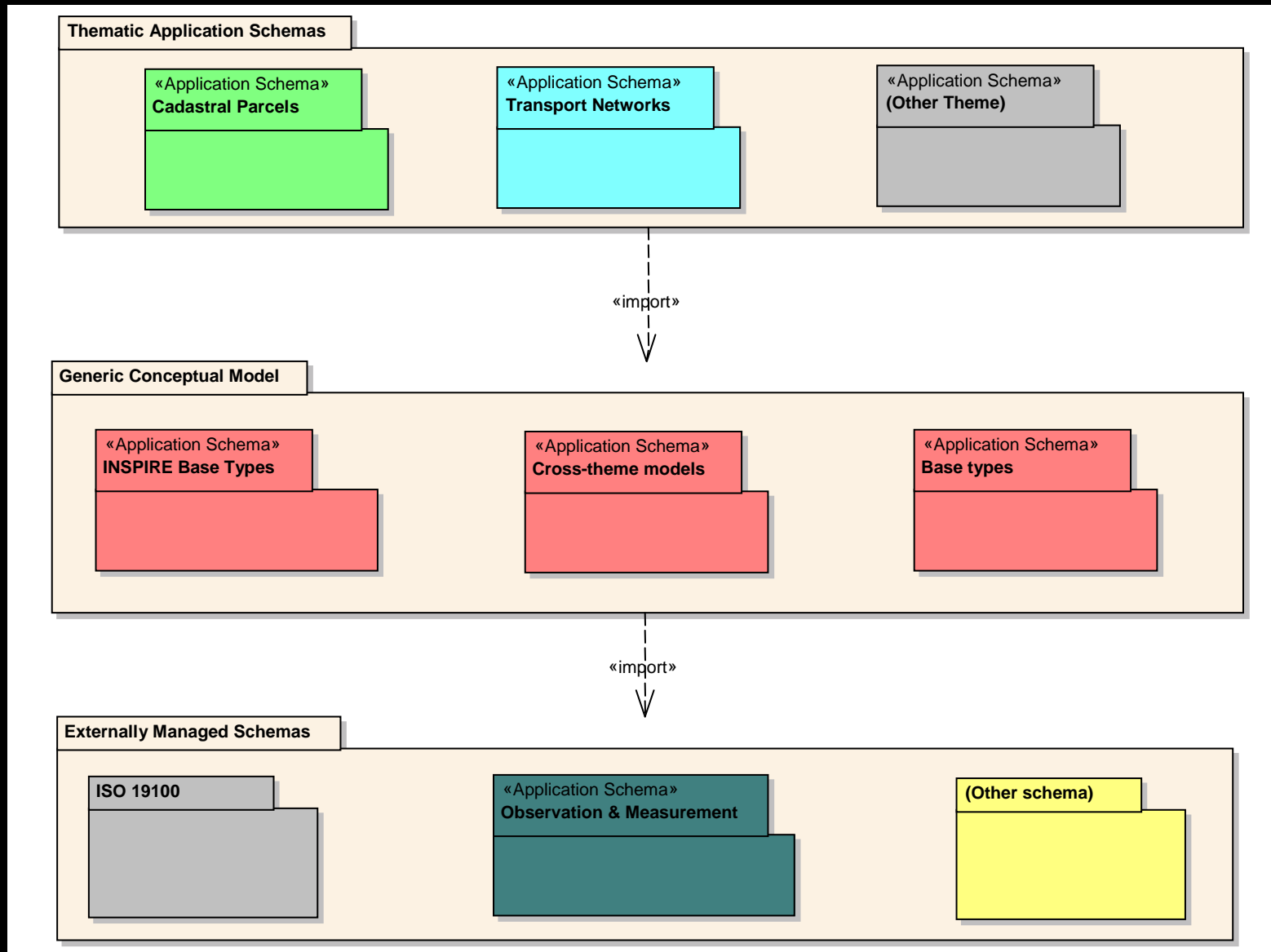
- Provide access to spatial data via services and according to harmonised data specifications → interoperability of data
- ! Structure of existing data sets can stay as it is
- ! Content providers have to translate between their internal data model and the INSPIRE data specification
  - e.g., transform on-the-fly or maintain a shadow data set structured according to the INSPIRE schemas

# *Interoperability of data – ... and what INSPIRE is aiming at*

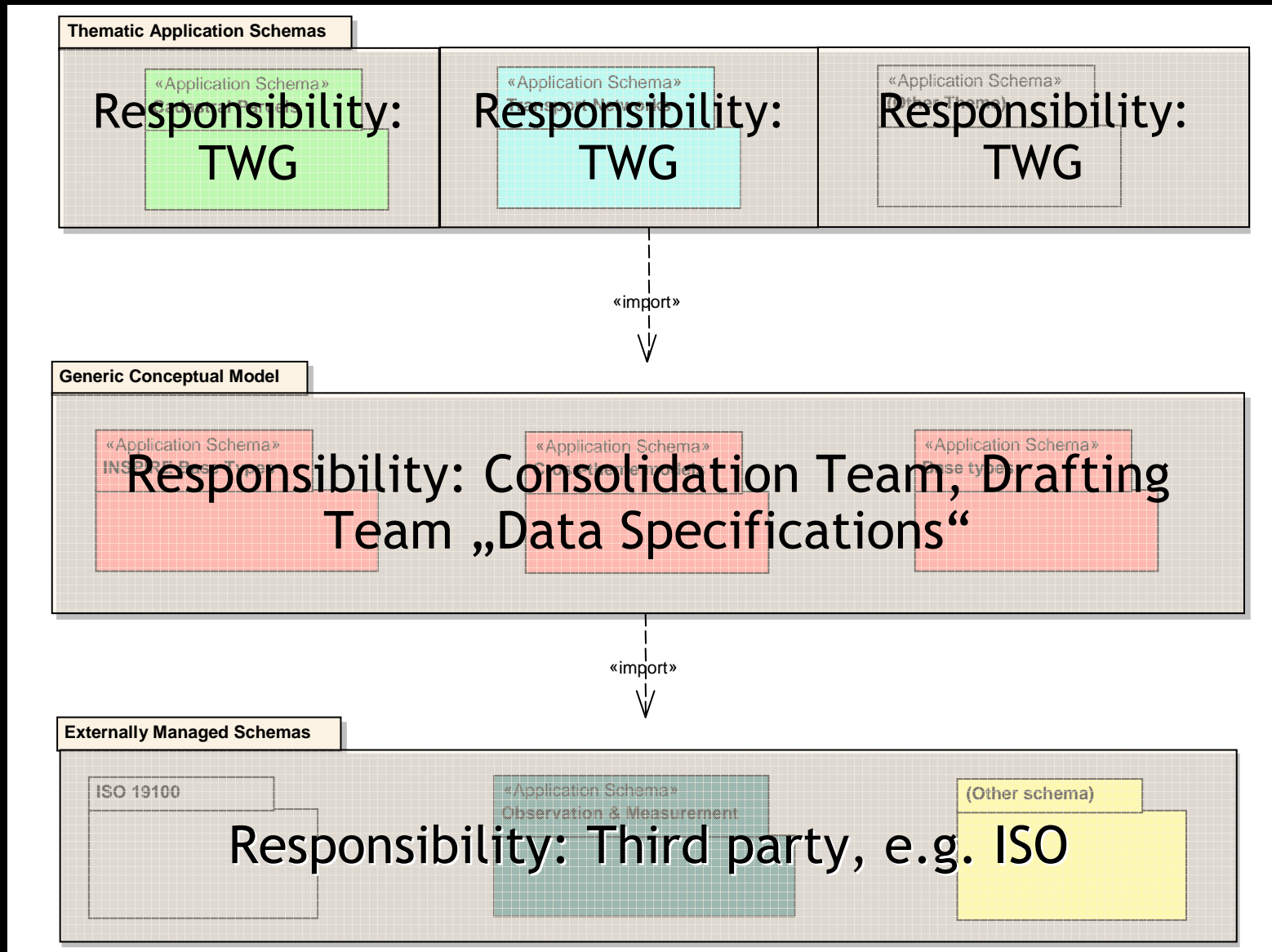


- INSPIRE data specifications need to specify agreements on many aspects, including:
  - Terminology
  - Application schemas
  - Code lists
  - Multi-lingual support
  - Coordinate reference systems
  - Identifiers
  - Encoding
  - Level of detail / scale
  - Metadata including quality information
  - Portrayal rules
  - ...

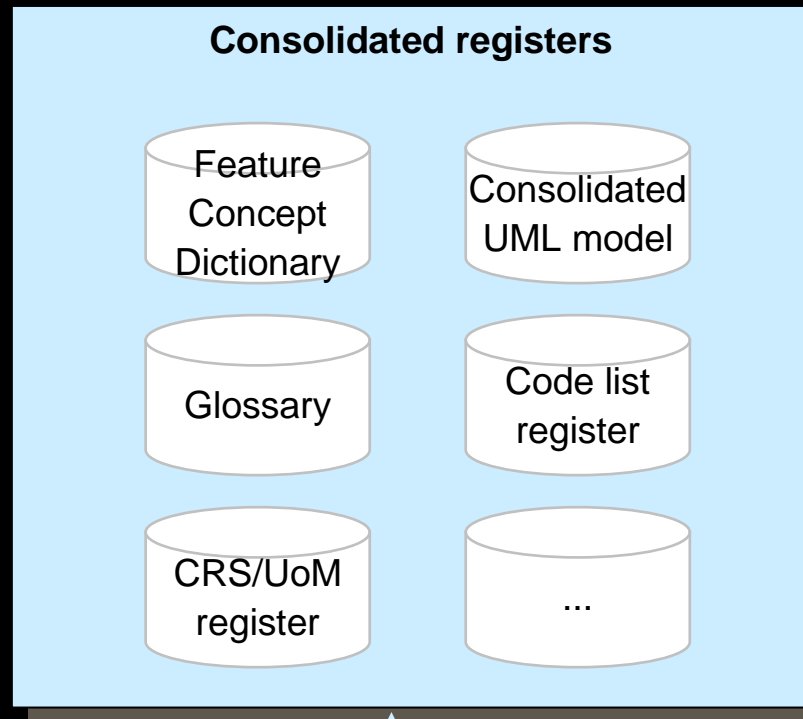
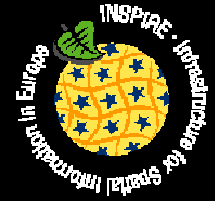
# Consolidated UML Model



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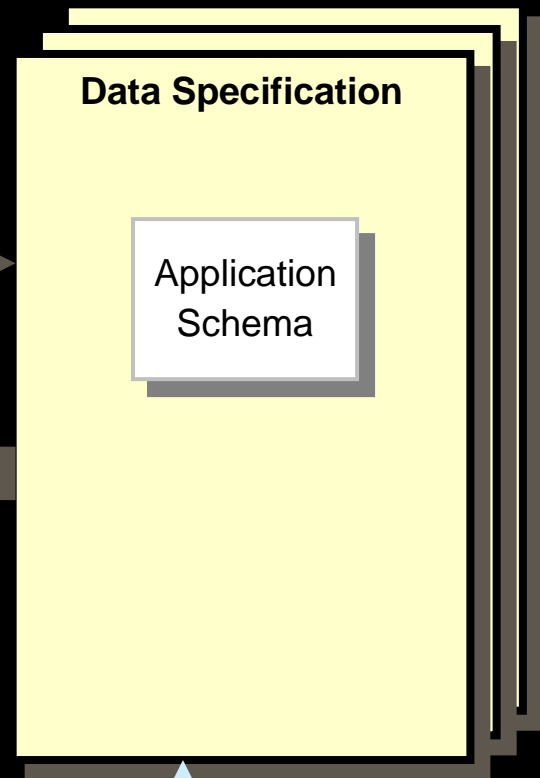


# Management of data specification items



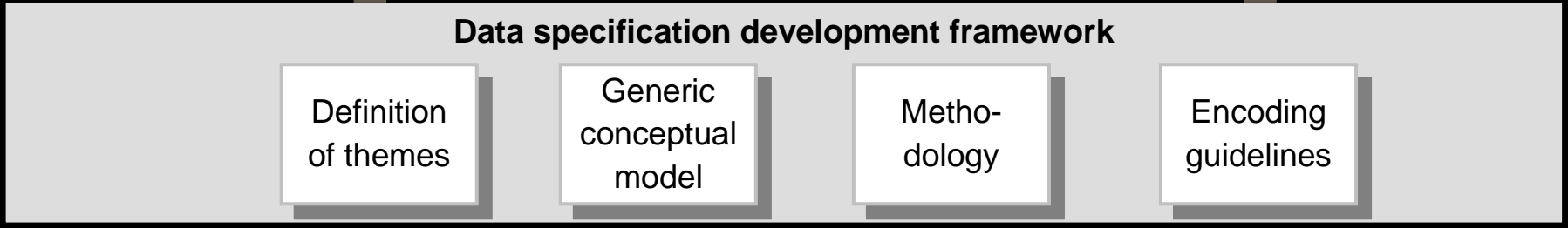
provides baseline

provide change requests



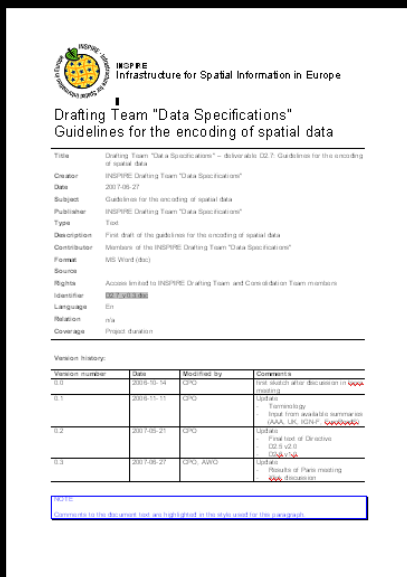
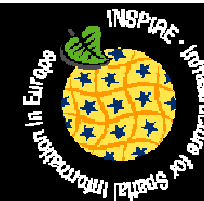
provides framework

provides framework





# Data transfer – Guidelines for the encoding of spatial data



**Drafting Team "Data Specifications"**  
Guidelines for the encoding of spatial data

**Title:** Drafting Team "Data Specifications" – Deliverable D2.7: Guidelines for the encoding of spatial data  
**Creator:** INSPIRE Drafting Team "Data Specifications"  
**Date:** 2007-08-27  
**Subject:** Guidelines for the encoding of spatial data  
**Publisher:** INSPIRE Drafting Team "Data Specifications"  
**Type:** Text  
**Description:** Final draft of the guidelines for the encoding of spatial data  
**Contributor:** Members of the INSPIRE Drafting Team "Data Specifications"  
**Format:** MS Word (doc)  
**Source:**  
**Rights:** Access limited to INSPIRE Drafting Team and Consultation Team members  
**Identifier:** [INSPIRE-D2.7](#)  
**Language:** EN  
**Relation:** n/a  
**Coverage:** Project duration

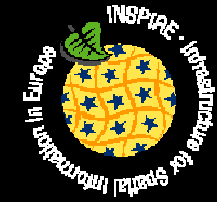
**Version history**

Version number	Date	Modified by	Comments
"0.0"	2007-10-14	CPD	First draft after discussion in <a href="#">SDIC</a> meeting
"0.1"	2007-10-11	CPD	Terminology from team available summary on <a href="#">SDIC-06-10-11-01-01-0000000</a>
"0.2"	2007-08-21	CPD	Final draft of Deliverable D2.7.2.2 <a href="#">D2.7.2.2</a>
"0.3"	2007-08-27	CPD; AWV	Final draft of Final meeting <a href="#">D2.7.2.2</a>

**NOTE:**  
Comments to the final draft are available in the table used for this purpose.

- Conformant spatial data in INSPIRE will use an encoding that clearly specifies the rule how spatial objects specified in an INSPIRE data specification are encoded
- The default encoding rule will be based on the encoding rules of GML and ISO/TS 19139
- Additional encoding rules may be specified for any application schema in INSPIRE
- Encoding is expected to be part of a guideline - not the implementing rule

SDIC/LMO consultation of the document will start in July 2008



# Thank you !

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