



# INSPIRE - A Legal framework for environmental and land administration data in Europe

Dr. Markus Seifert

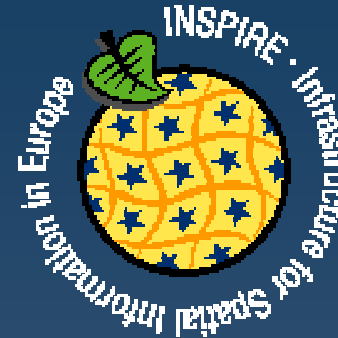
Bavarian Administration for Surveying and Cadastre  
Head of the SDI Office Bavaria  
Delegate of Germany to FIG Commission 7

Open Symposium "Environment and Land Administration", Verona , 14.09.2008





# *IN*frastructure for *SP*atial *Info*Rmation in *EU*rope *INSPIRE*



- Initiative of the department of environment of the European Commission
- The aim is a harmonised framework directive for the implementation of a European spatial data infrastructure (ESDI)
- INSPIRE will also determine detailed and considered implementing rules



# SDI obstacles today

## Data policy restrictions

pricing, copyright, access rights, licensing policy

## Lack of coordination

across borders  
between levels of government

## Lack of standards and their use

incompatible information  
incompatible information systems  
fragmentation of information  
redundancy

## Lack of data





# INSPIRE Directive: The Mission

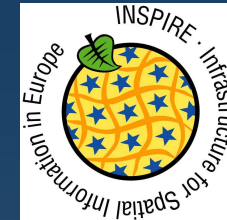


**Make relevant, harmonised spatial data available for Community Environmental Policy (formulation, implementation, monitoring and evaluation) and for the citizen ...**

**... through the establishment of integrated spatial information services, based upon a distributed network of databases, linked by common standards and protocols to ensure compatibility.**



# INSPIRE Framework Directive



- Objectives

Linked to legal basis, integration of data, protection of the environment, sustainable development

- Scope

Use of existing spatial data, public sector, electronic format, content corresponding to Annex themes

- General principles

Policy measures, requirement of datasets with corresponding metadata, data harmonisation and use of services

- Data policy

- 1) Licensing framework for sharing between public bodies,
- 2) Publish, discover and view services free of charge,
- 3) No charging constraints on access



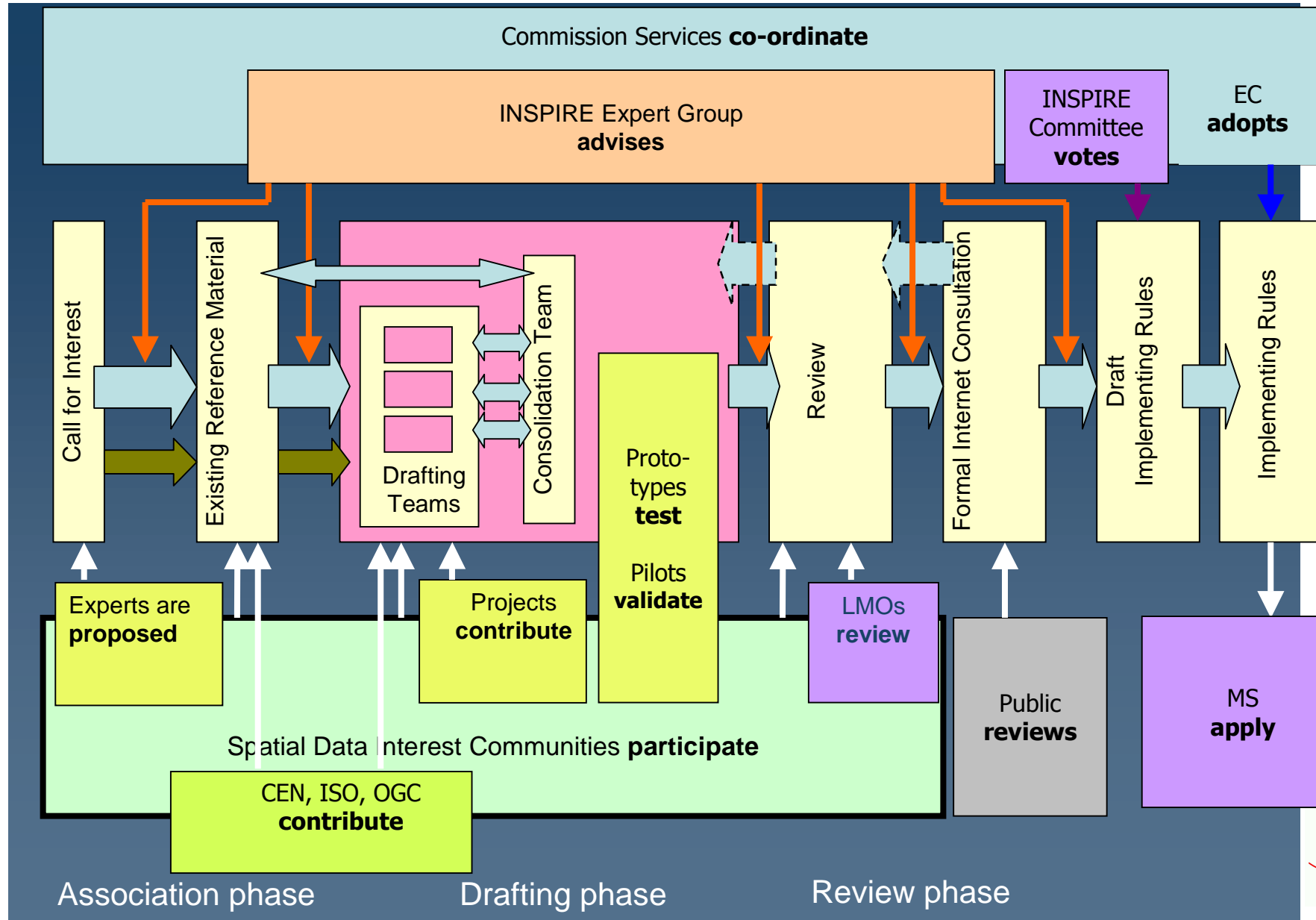
# INSPIRE principles



- Spatial data should be collected once and maintained at the level where this can be done most effectively
- It must be possible to combine seamlessly spatial data from different sources across the EU and share it between many users and applications
- It must be possible for spatial data collected at one level of government to be shared between all the different levels of government
- Spatial data needed for good governance should be available on conditions that are not restricting its extensive use
- It should be easy to discover which spatial data is available, to evaluate its fitness for purpose and conditions for its use.

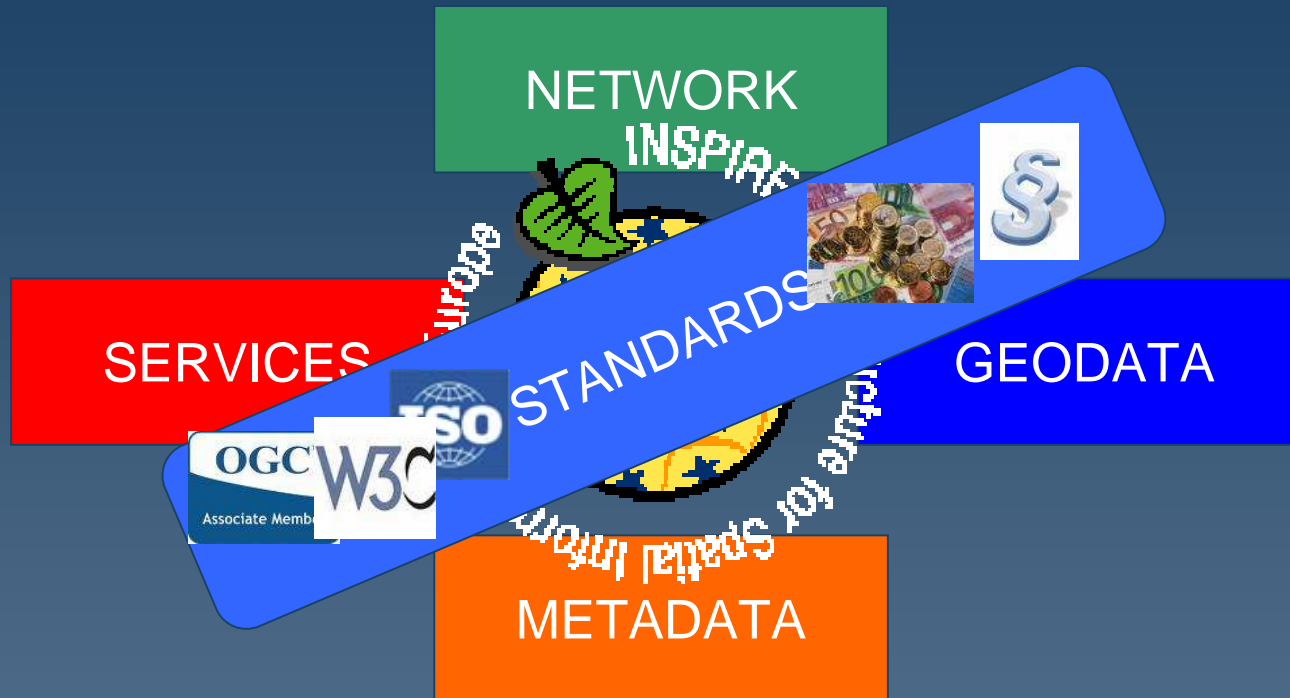


# INSPIRE process





# INSPIRE-Elements



So: What does INSPIRE need in detail?

Answer: Technical implementing rules that give advice what to do.  
That will be done by the INSPIRE Drafting Teams.





## INSPIRE Drafting Teams

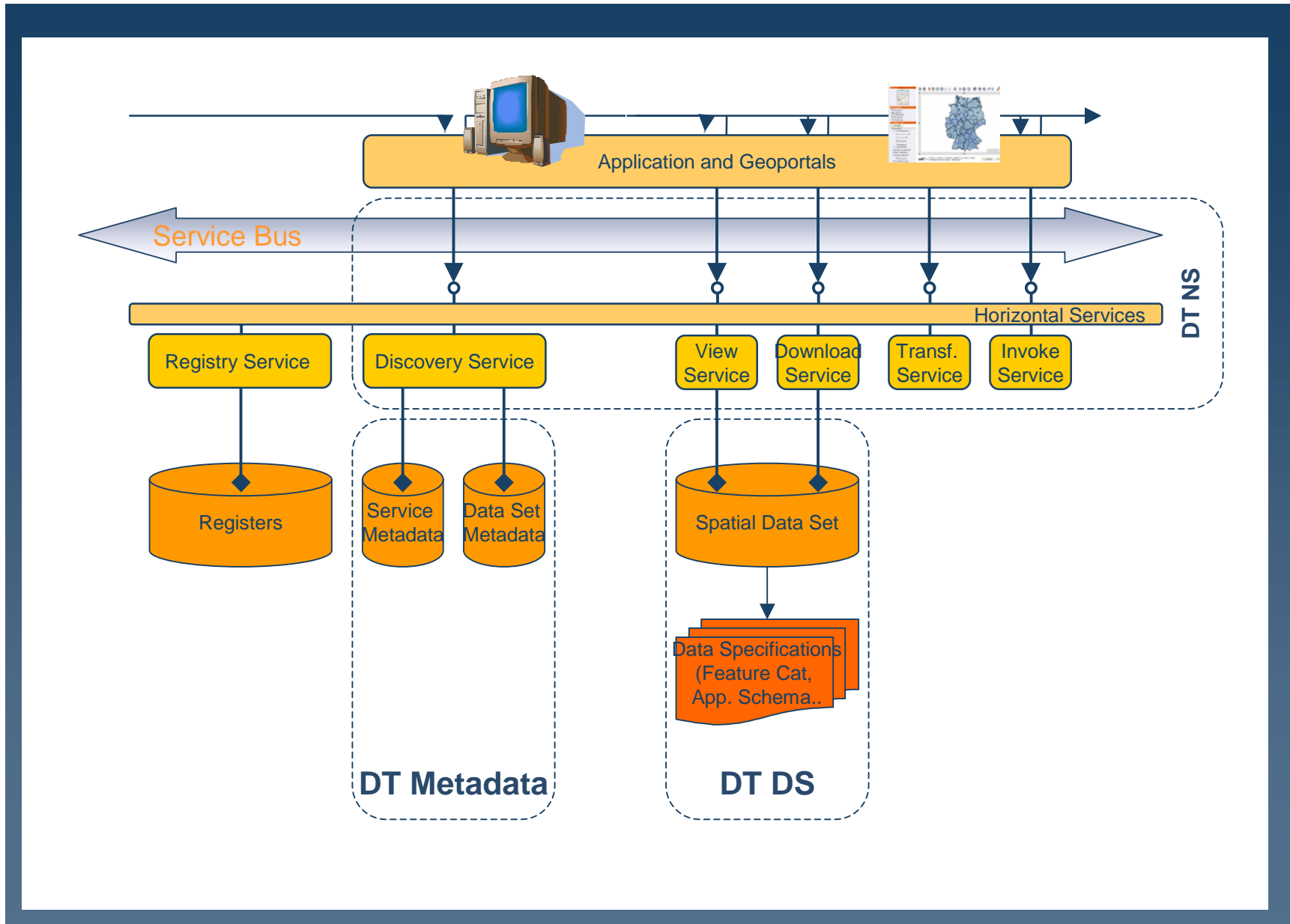
For developing of concrete implementation rules specific Drafting Teams have been introduced in October 2005. The addressed tasks of these teams are also reflecting the requirements for INSPIRE and the content of the framework directive:

- Metadata (Data about data)
- Data Specification (Data modeling)
- Network Services (Geo web services)
- Data Sharing (Policy)
- Monitoring and Reporting (Controlling)

The implementing rules are developed for a EU framework directive and will automatically come into force to the EU member states directly after the review process.



# INSPIRE Architecture





# INSPIRE-Elements

## METADATA



product: orthoimagery



cycle of update: 3 years

resolution: 2 meters

ref. -system: Gauß-Krüger/Bessel

Status: IR for metadata are already adopted.



# INSPIRE Data Themes

## GEODATA

Annex I	Annex II	Annex III
<ul style="list-style-type: none"> <li>• Coordinate reference systems</li> <li>• Geographical grid systems</li> <li>• Geographical names</li> <li>• Administrative units</li> <li>• Addresses</li> <li>• Cadastral parcels</li> <li>• Transport networks</li> <li>• Hydrography</li> <li>• Protected sites</li> </ul>	<ul style="list-style-type: none"> <li>• Elevation</li> <li>• Land cover</li> <li>• Orthoimagery</li> <li>• Geology</li> </ul>	<ul style="list-style-type: none"> <li>• Statistical units</li> <li>• Buildings</li> <li>• Soil</li> <li>• Land use</li> <li>• Human health and safety</li> <li>• Utility and governmental services</li> <li>• Environmental monitoring facilities</li> <li>• Production and industrial facilities</li> <li>• Agricultural and aquaculture facilities</li> <li>• Demography</li> <li>Etc.</li> </ul>

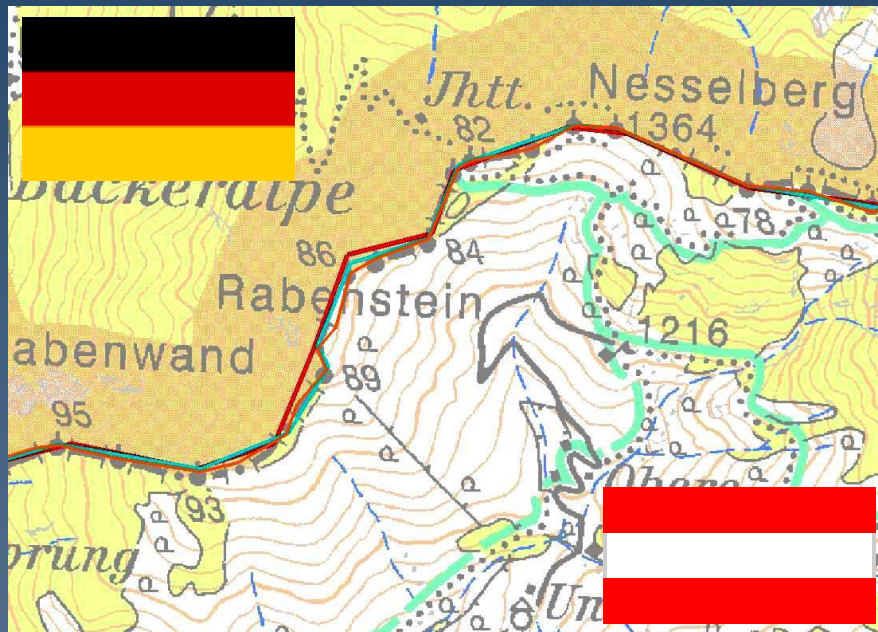




# INSPIRE Elements

GEODATA

Similar data but....



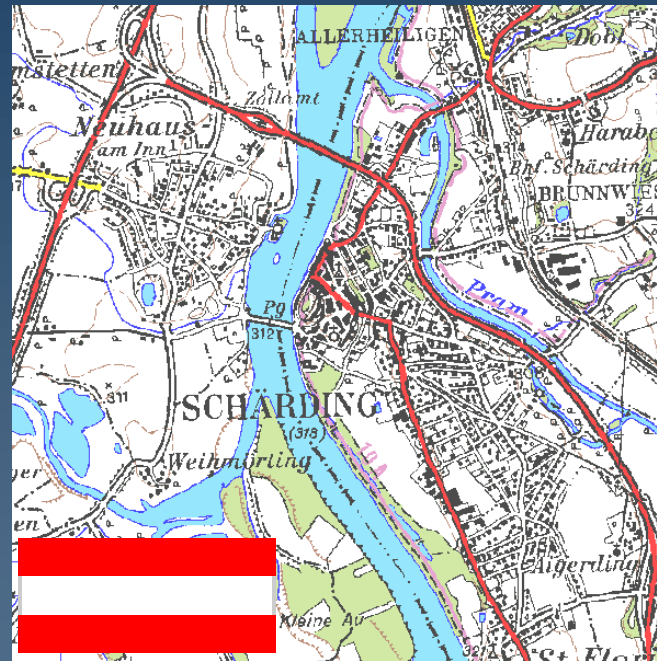
...different in terms of content, semantics and geometry.



# INSPIRE Elements

## GEODATA

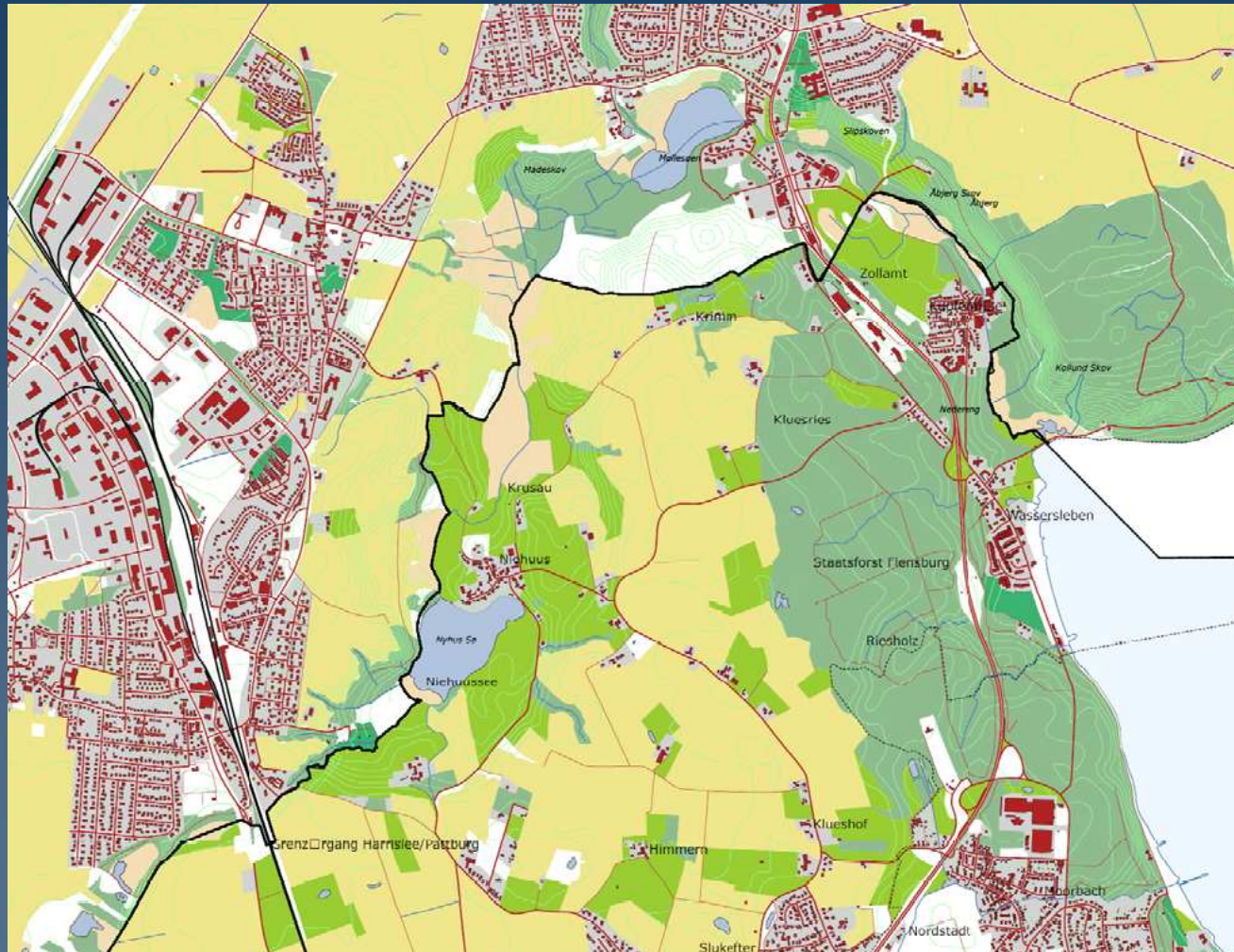
Similar data but...



...differences concerning actuality, criteria of collection, geometry, presentation and documentation of geodata.



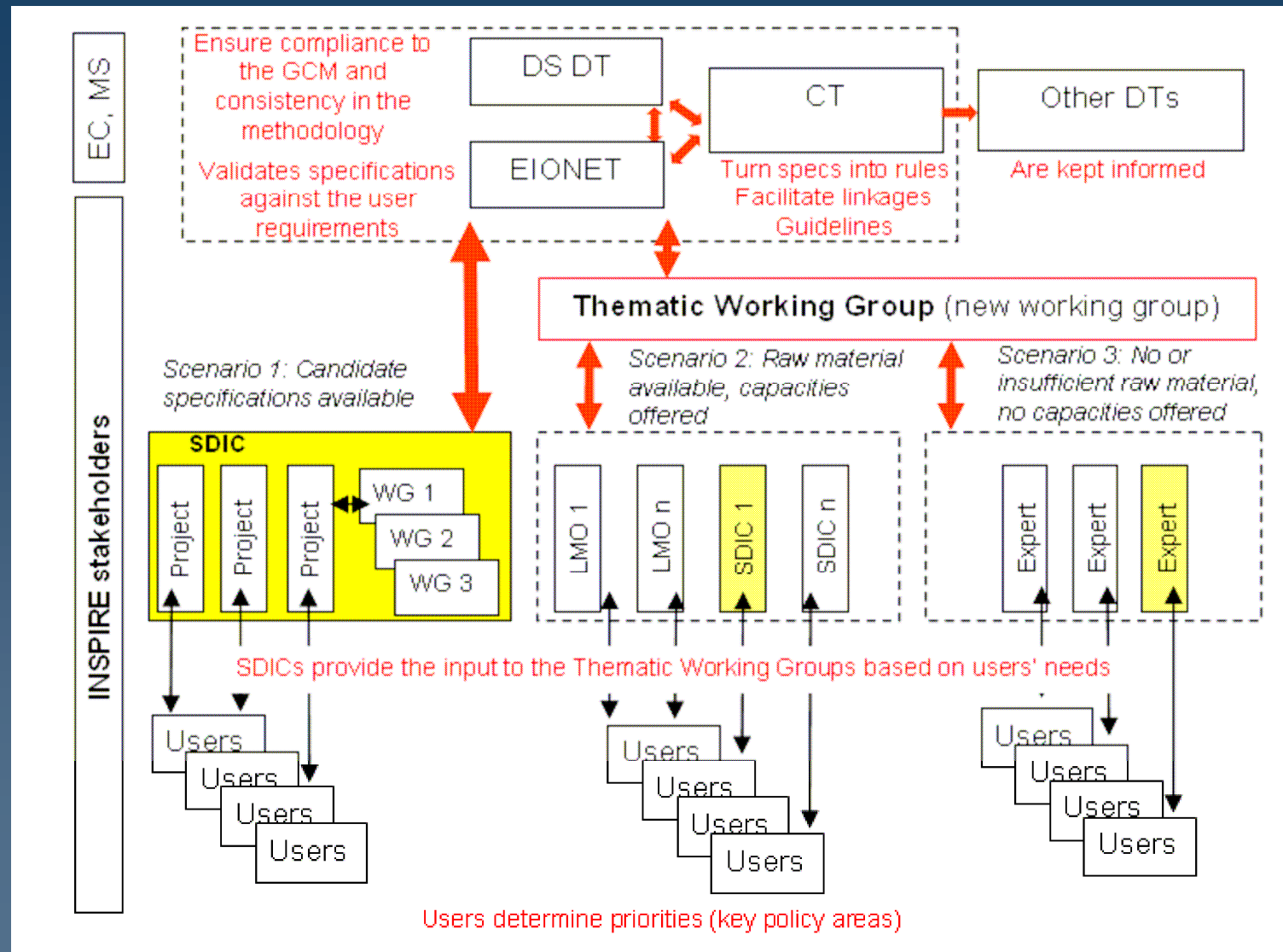
## The overall aim







# How to develop European Specifications

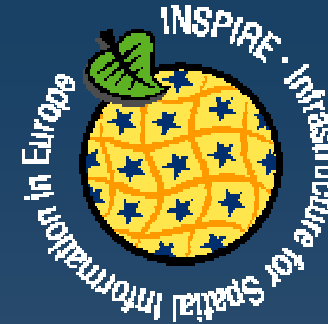




# Thematic Working Groups (TWG)

## TWG for Annex 1 Data Themes

- Coordinate Reference Systems and Grid Systems
- Geographic Names
- Administrative Units
- Addresses
- Cadastral Parcels
- Transportation Networks
- Hydrography
- Protected Sites



8 TWGs have been applied for all annex I themes

For each TWG:

- Facilitator (knows methodology, coordinates the process)
- Editor (documentation; data models)

**Status:** Data product specification will be ready end of September 2008



# INSPIRE Elements

## SERVICES



discovery  
service



download  
service

viewing  
service

transformation  
service



Status: IR for discovery service are in the review process and not yet adopted.



# INSPIRE IR for Network Services

INSPIRE Directive



**INSPIRE**  
Infrastructure for Spatial Information in Europe

**INSPIRE Technical Architecture - Overview**

<b>Title</b>	INSPIRE Technical Architecture - Overview
<b>Created</b>	Drafting Team: "Data Specifications"
<b>Date</b>	05.11.2007
<b>Subject</b>	Overview of the technical architecture
<b>Status</b>	Final publicly available version
<b>Publisher</b>	Drafting Team: "Data Specifications"
<b>Type</b>	Text
<b>Description</b>	This document provides an overview of the technical architecture of INSPIRE as introduced by the INSPIRE Directive. It is intended to be a general technical specification, to result of future progress.
<b>Contributor</b>	Data Specifications, Network Services
<b>Format</b>	PDF
<b>Source</b>	Data Specifications, Network Services
<b>Rights</b>	Public
<b>Keywords</b>	INSPIRE Technical Architecture Overview
<b>Language</b>	EN
<b>Relations</b>	Directive 2007/2/EC of the European Parliament and of the Council of 15 March 2007 on INSPIRE
<b>Coverage</b>	EU

INSPIRE Technical Architecture Overview

**INSPIRE**  
Infrastructure for Spatial Information in Europe

**INSPIRE Network Services**

<b>Title</b>	Network Services Architecture
<b>Created</b>	Network Services Drafting Team
<b>Date</b>	11-12-2007
<b>Subject</b>	INSPIRE Network Services
<b>Status</b>	Draft
<b>Publisher</b>	Network Services Drafting Team
<b>Type</b>	Text
<b>Description</b>	Draft Network Services Architecture
<b>Format</b>	MS Word
<b>Source</b>	Network Services Drafting Team
<b>Rights</b>	Open access, contents have to be registered in INSPIRE
<b>Keywords</b>	INSPIRE Network Services
<b>Language</b>	EN
<b>Relations</b>	Not applicable
<b>Coverage</b>	EU

INSPIRE Network Services Architecture

**INSPIRE**  
Infrastructure for Spatial Information in Europe

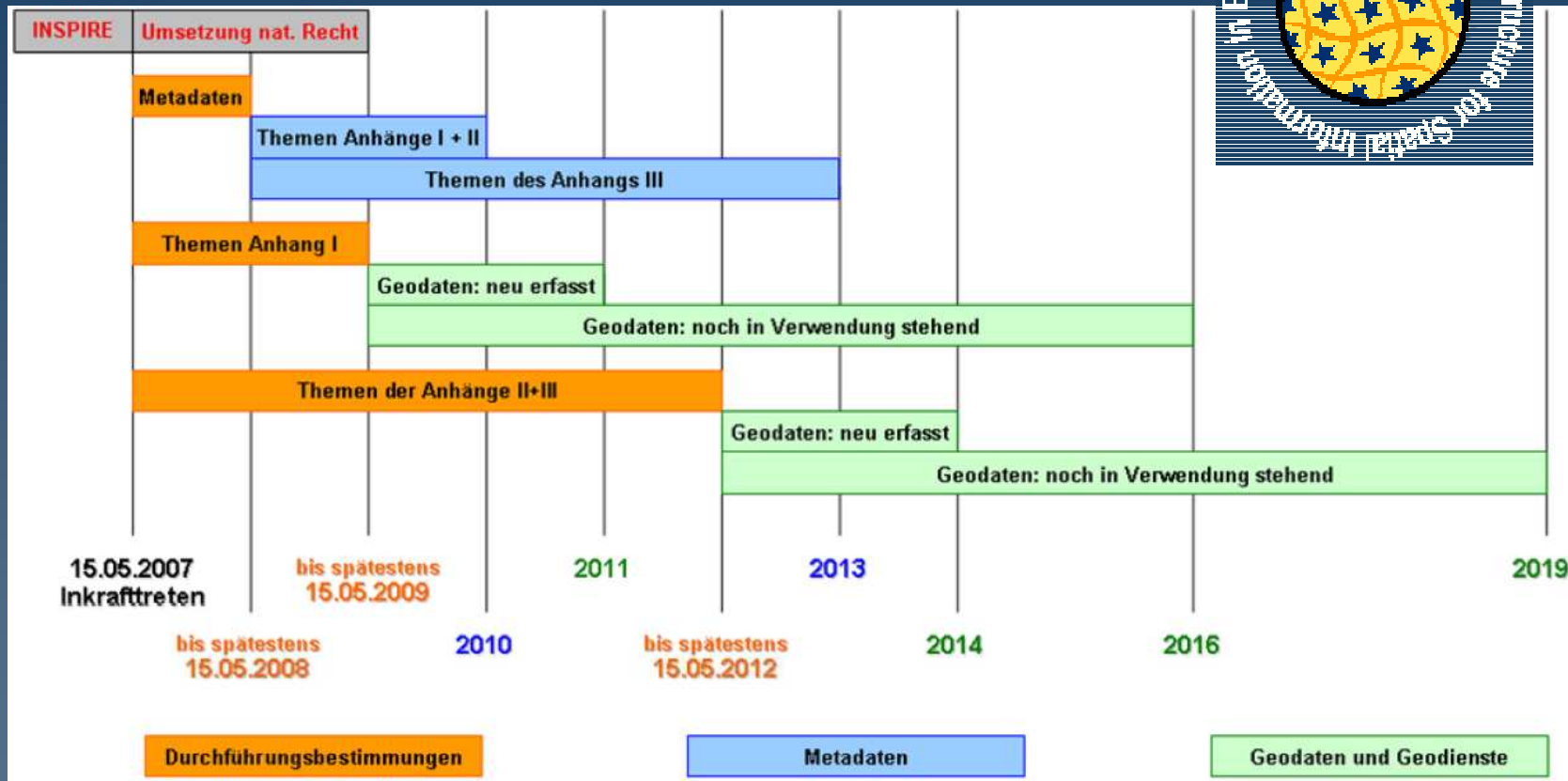
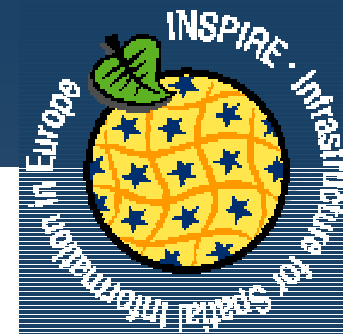
**Draft Implementing Rules for Discovery and View Services (IR1)**  
Drafting Team: "Network Services"

<b>Title</b>	Draft Implementing Rules for Discovery and View Services (IR1)
<b>Created</b>	Network Services Drafting Team
<b>Date</b>	11.12.2007
<b>Subject</b>	Implementing Rules for Discovery and View Services
<b>Status</b>	Draft
<b>Publisher</b>	Network Services Drafting Team
<b>Type</b>	Text
<b>Description</b>	This document provides the implementing rules, technical details and guidelines for Discovery and View Services for INSPIRE network services.
<b>Contributor</b>	Members of the INSPIRE Drafting Team "Network Services"
<b>Format</b>	MS Word (doc)
<b>Source</b>	Network Services Drafting Team
<b>Rights</b>	Open access, contents have to be registered in INSPIRE
<b>Keywords</b>	EU Draft IR Discovery and View Services (IR1) (12.12.07)
<b>Language</b>	EN
<b>Relations</b>	Not applicable
<b>Coverage</b>	EU

Draft Implementing Rules for Discovery and View Services (IR1)



# INSPIRE Schedule





# INSPIRE Schedule for IR

Milestone date	Article	Description
2007-05-15		Entry into force of INSPIRE Directive
2008-05-15	5§4	Adoption of IR for the creation and updating of metadata <b>Today</b>
2008-11-15*	21(4)	Adoption of IR for monitoring and reporting ←
2008-11-15*	16	Adoption of IR for discovery and view services
2009-05-15*	16	Adoption of IR for download services
2009-05-15*	16(a)	Adoption of IR for coordinates transformation service
2009-05-15*	17(8)	Adoption of IR governing the access rights of use to spatial data sets and services for Community institutions and bodies
2009-05-15	9(a)	Adoption of IRs for the interoperability and harmonisation of spatial data sets and services for Annex I spatial data themes
2009-05-15	24§1	Provisions of Directive are brought into force in MS
2010-11-15*	16	Adoption of IR for schema transformation and “invoke spatial data services” services
2012-05-15	9(b)	Adoption of the IR s for the interoperability and harmonization of spatial data sets and services for Annex II and III



**Thank you for your kind attention!**