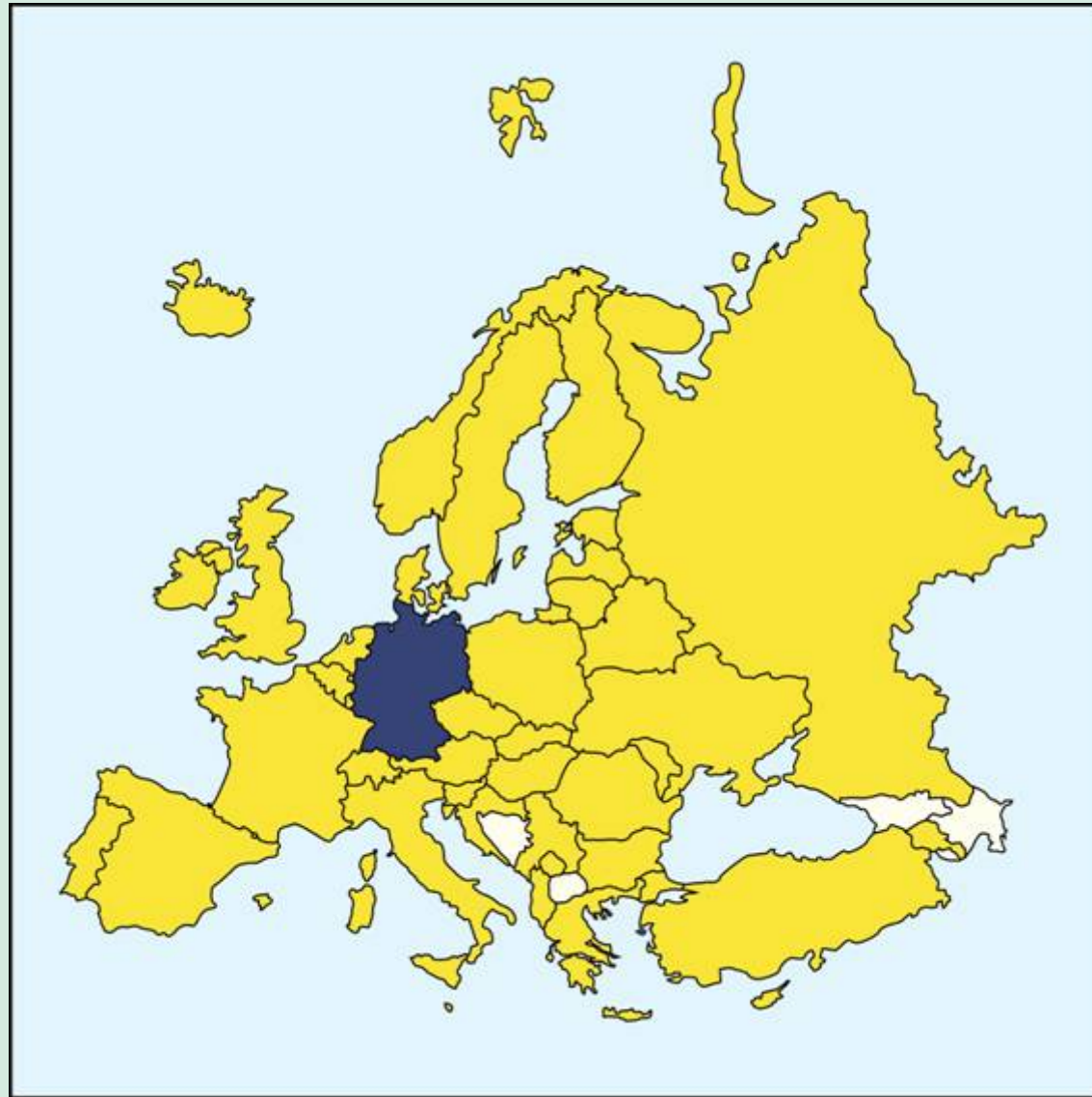


The National SDI for Germany in the European Context

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Frankfurt am Main, Germany
www.bkg.bund.de

- 1. Introduction**
- 2. Development of the German SDI: GDI-DE**
- 3. European Spatial Data Infrastructure**
 - EuroGeographics
 - INSPIRE
 - GMES
- 4. Conclusion**



**Frankfurt am Main
(Headquarter)**



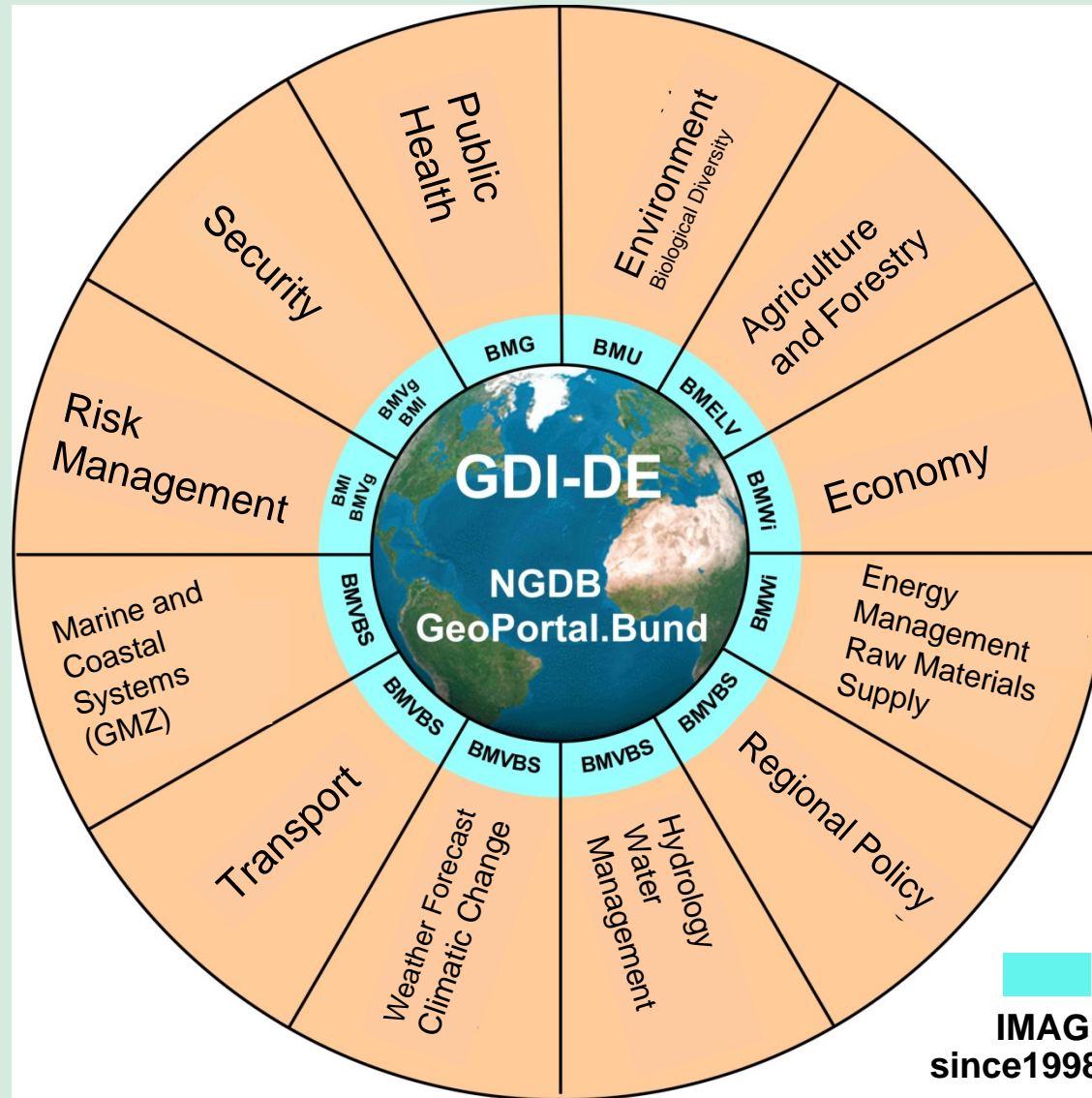
Leipzig



**Geodetic Observa-
tories Wettzell and
Concepcion, Chile**



National Geospatial Data Infrastructure - Fields of Applications



GDI-DE: Geospatial Data Infrastructure for Germany

NGDB: National Geodatabase
Consisting of validated metadata, spatial basic data and thematic geodata

GeoPortal.Bund: Central entrance into the GDI-DE
with the necessary services

German Spatial Data Infrastructure (GDI-DE)

**GDI-DE[®] = {NGDB, network, services,
standards}**

National Geo Data Basis
**NGDB = {reference data, thematic
data, metadata}**

GeoPortal.de
the central point of entry to GDI-DE

ATKIS: Topo reference data for Germany

Object-based data



Digital Landscape Models (DLM)

Base
DLM

DLM 50

DLM 250

DLM
1000

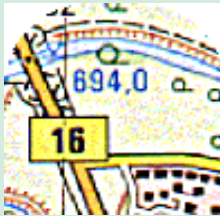
1: 5..10/25.000

1: 50.000

1: 250.000

1: 500.000

Raster data



Digital Topographic Maps (DTK)

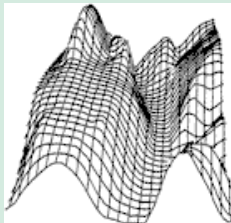
DTK10-V
DTK25-V

DTK50-V
DTK100-V

DTK250
DTK500-V

DTK
1000-V

Grid



Digital Terrain Models (DGM)

DGM5

DGM-
DE

DGM50 /
DGM 250

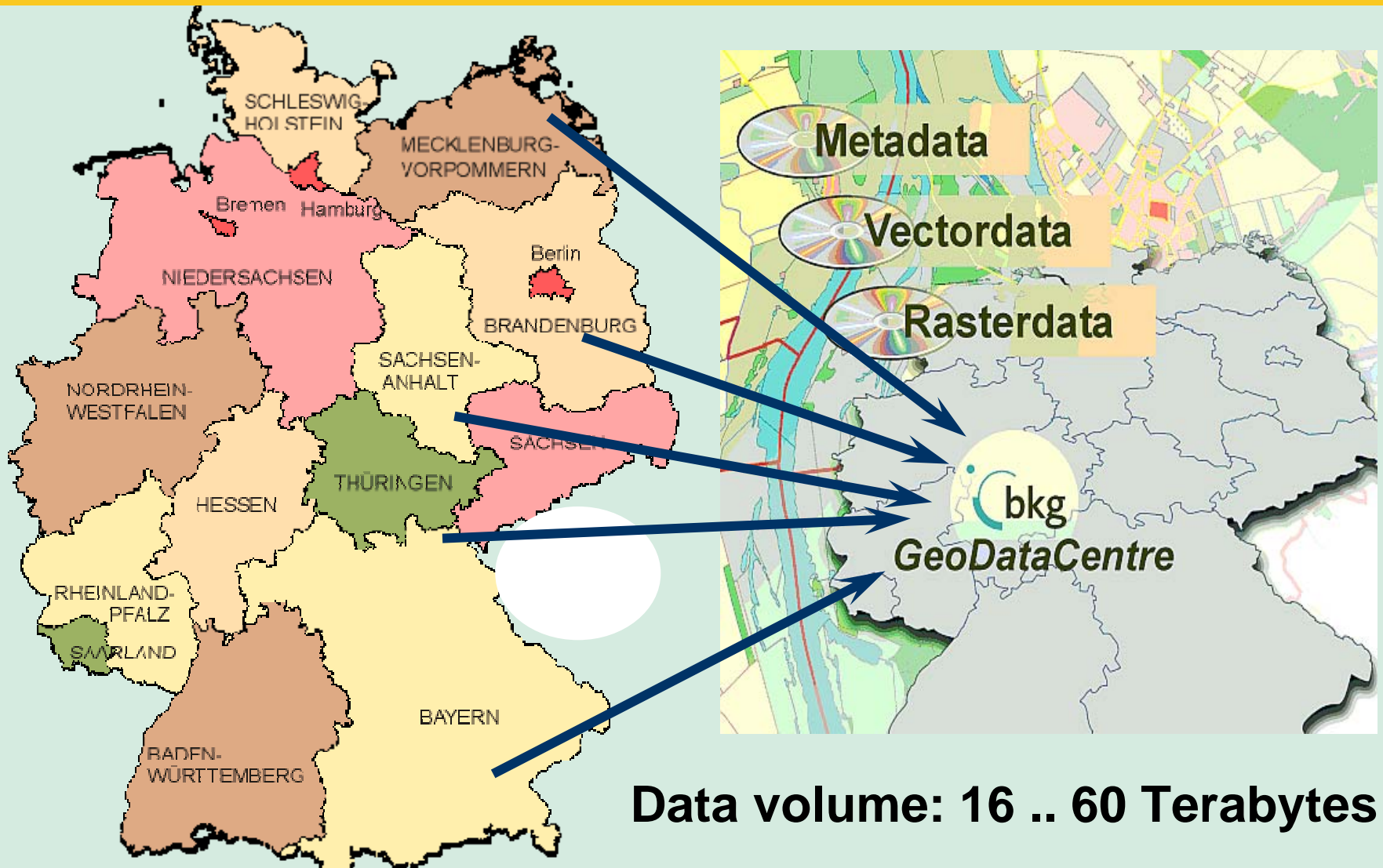
DGM
1000

Raster data



Digital Orthophotos (DOP)

National GeoDataCentre at BKG



Data volume: 16 .. 60 Terabytes

1998 Federal Cabinet founded the IMAGI

- *Efficient Management for Spatial Data*
- *Cooperation with States*
- *Standards & Norms*

IMAGI



2001 & 2003 Resolutions of German Parliament

- *Development of SDI*
- *User-friendly Access*
- *Cooperation with States and Industry*

2004 Resolution of CEOs of Chancellery & State Prime Ministries

- *Establishment of a Steering committee GDI-DE for the 3 administrative Levels*

2007 INSPIRE Directive

- *Directive committing the EU MS to share their NSDIs with the EU*

2009: SDI Law of the Federation + states

- *National adoption of the INSPIRE Directive in Germany*



Organisation of GDI-DE (since 2005)

Political Level (E-Government)

National SDI is coordinated by the Steering Committee GDI-DE

The Steering Committee comprises representatives of all levels of public administration:

- national: 2 Federal Ministries
 - regional: 1 each State (16),
 - local: 3 Associations of Municipalities
-
- strategic decisions
 - conceptual framework

Steering Committee GDI-DE



↓
*decisions,
work orders*

↑
*proposals,
reporting*

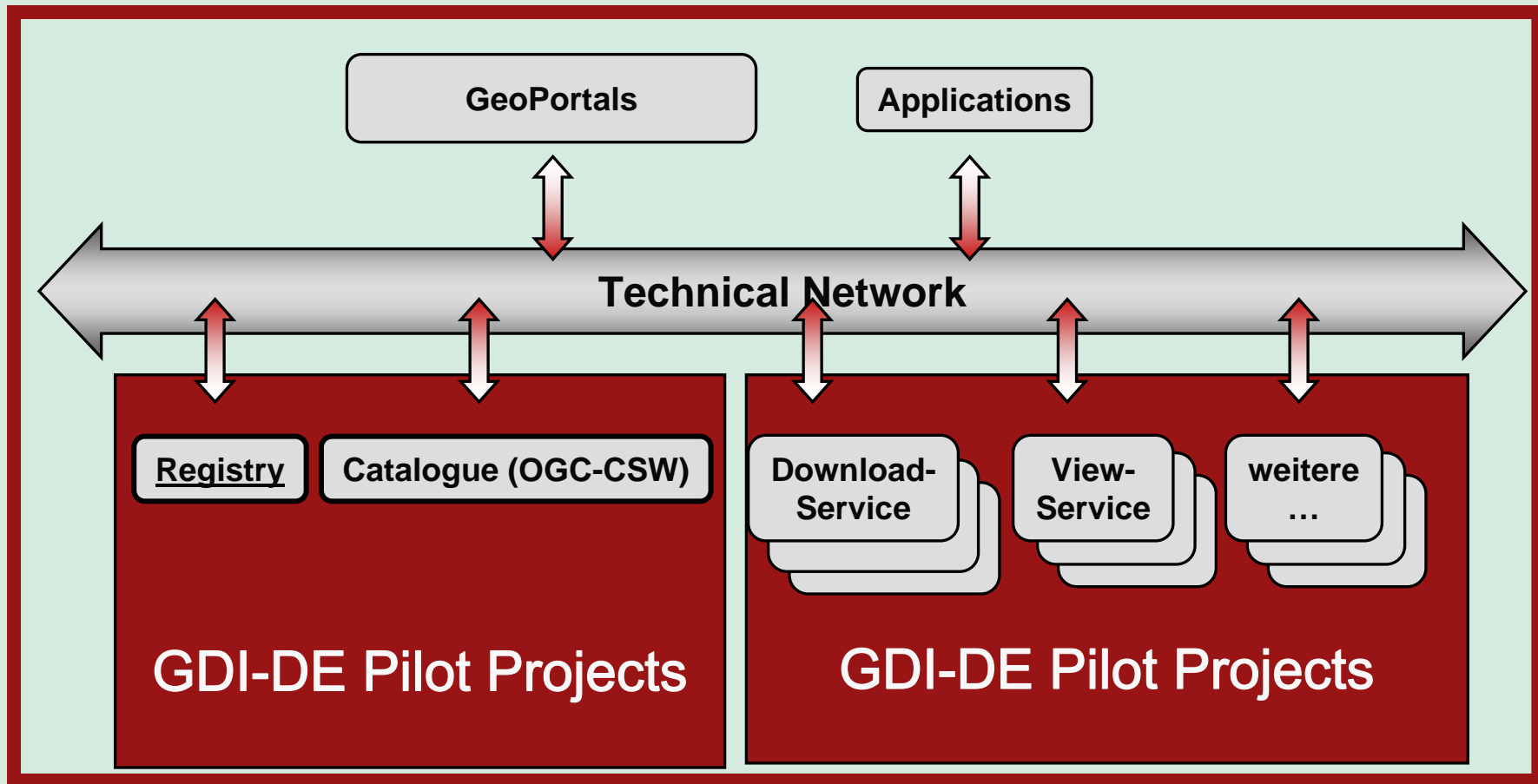
Coordination Office GDI-DE



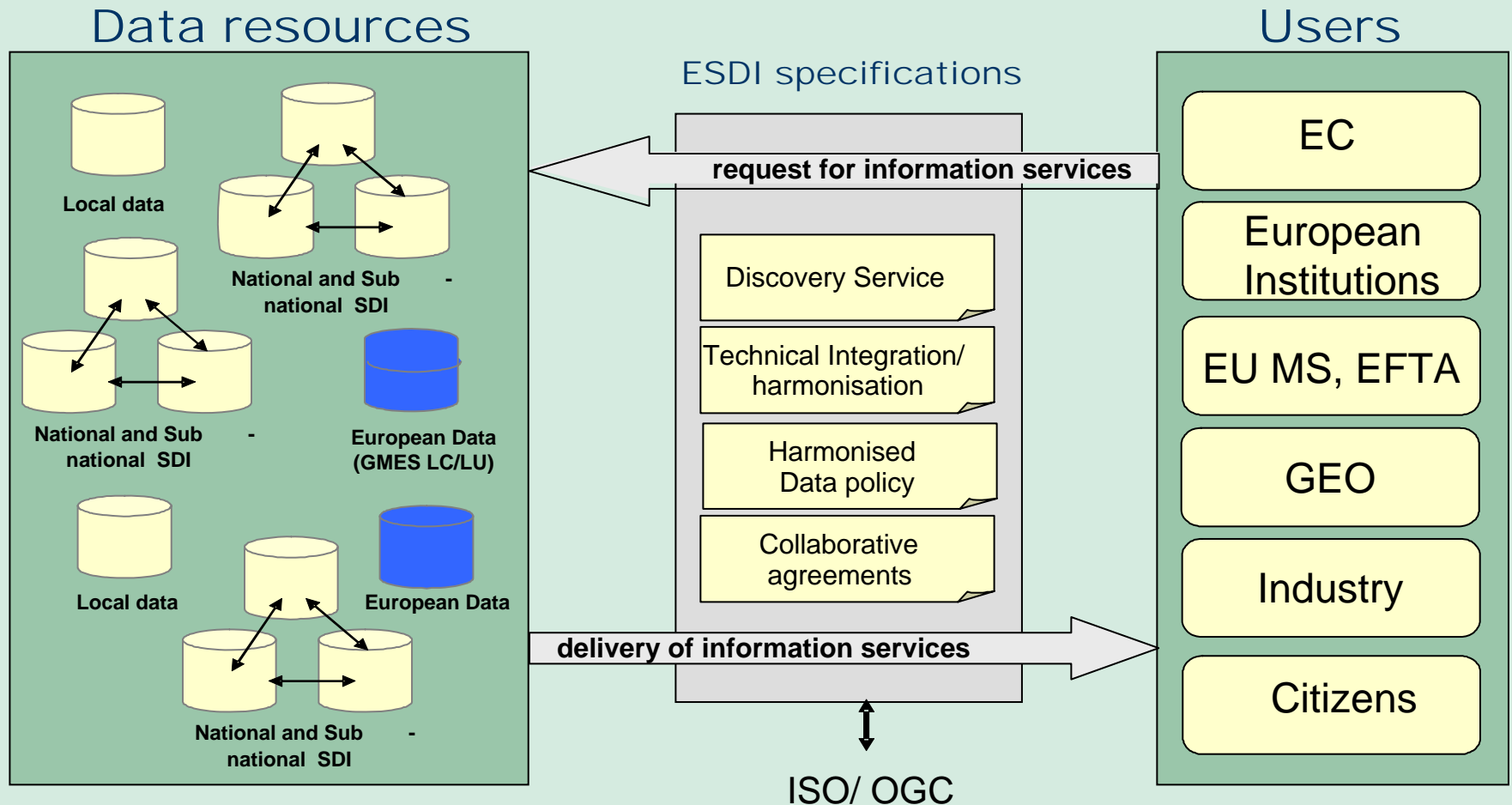
NETWORK: Partners of Federation and States, Working Groups, INSPIRE Experts, Universities,....



GDI-DE Architecture Data, Standards, Network, Services



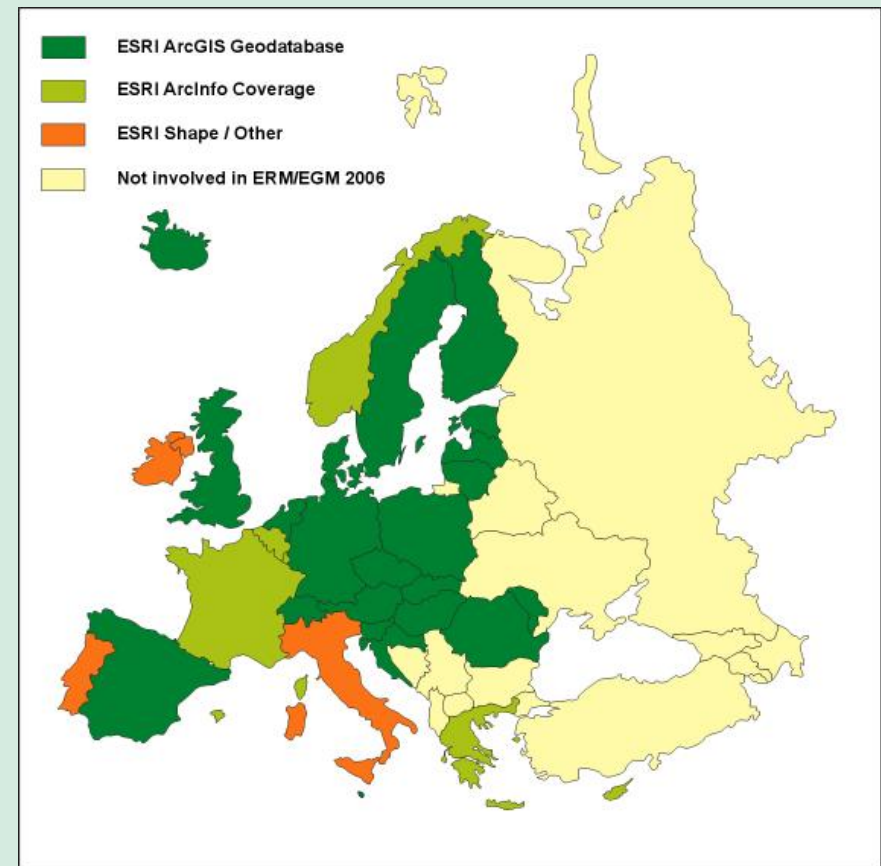
European Spatial Data Infrastructure



Organisation of work for EBM / ERM / EGM / EDEM



- **Decentralised production**
All participating countries produce their own data according to the specification
- **Data Integration** and final data assembly by project leader:
 - ERM: IGN Belgium
 - EGM: NLS Finland
 - EBM: BKG Germany
 - EDEM: BKG Germany
- **QA/QC** by
Regional Coordinators and
Project Leader



25.4.2007

EN

Official Journal of the European Union

L 108/1

I

(Acts adopted under the EC Treaty/Euratom Treaty whose publication is obligatory)

DIRECTIVES

DIRECTIVE 2007/2/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 14 March 2007

establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)

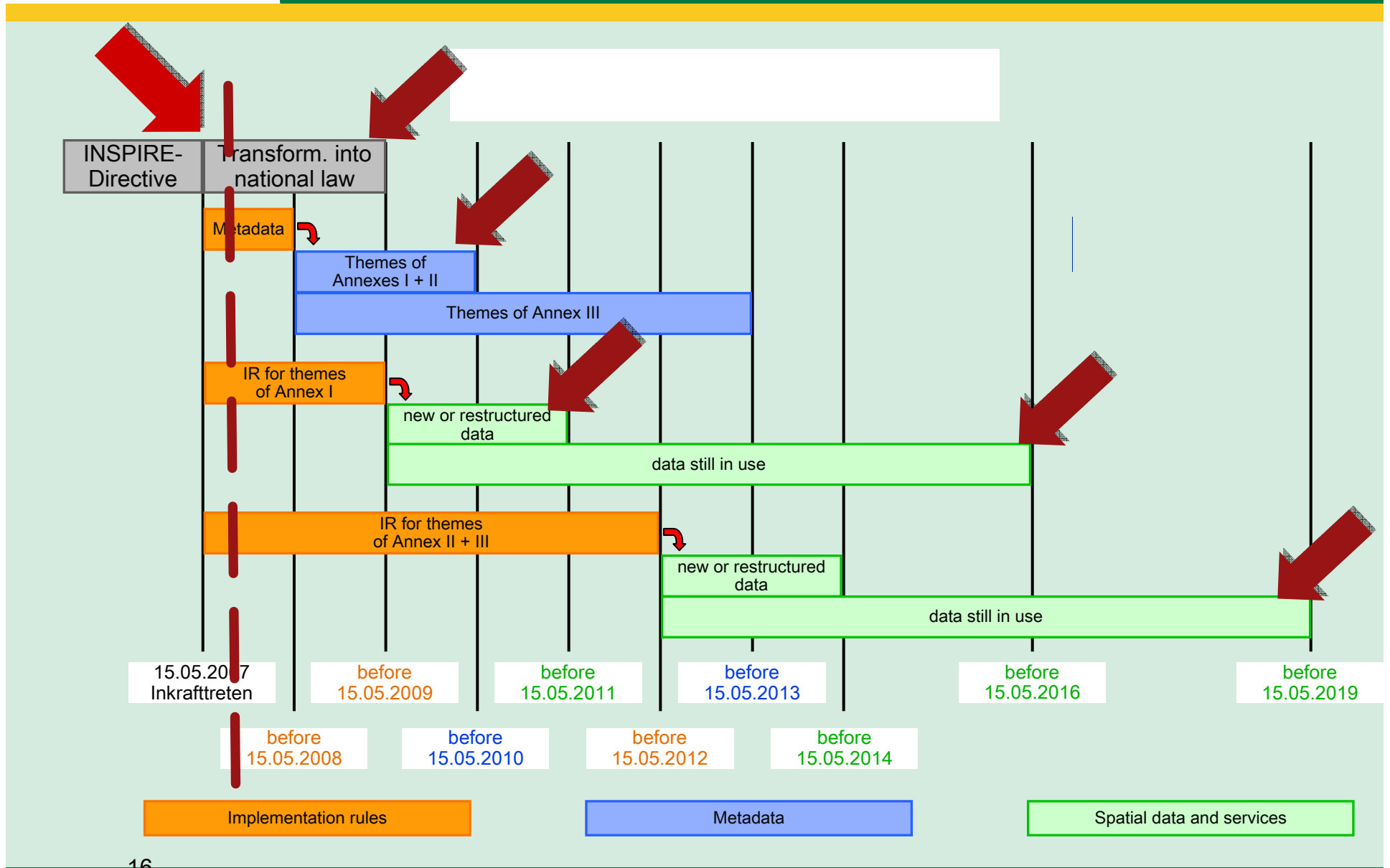
1. The purpose of this Directive is to lay down general rules aimed at the establishment of the Infrastructure for Spatial Information in the European Community (hereinafter referred to as Inspire), for the purposes of Community environmental policies and policies or activities which may have an impact on the environment.



INSPIRE Regulations:

- Chapter II – Metadata: descriptions of spatial datasets about INSPIRE-conformity, licenses and prices, quality, validity
- Chapter III – Interoperability: common rules with implementing rules like unique identifier, relations, key attributes, temporal dimensions etc.
- Chapter IV – Network Services: providing geographic information with discovery-, view-, download-, transformation- and invoke-services
- Chapter V – Data Sharing: measures for easy access and use of spatial data sets including licensing, pricing and e-commerce
- Chapter VI & VII – Coordination, Complementary Measures and Final Provisions: SDI-structures, contact point, monitoring, reporting and legal implementation
- Annex I – III: Definition Content

Details are regulated through the INSPIRE Implementing Rules



About geographical names in SDI

- have to be “integrated into national spatial data infrastructures”
(United Nations, Resolution VIII/6, 2002)
 - **but have been (in general) not yet fully integrated into national spatial data infrastructures**
- are “geographic identifiers” used for indirect spatial referencing (ISO 19112 – spatial referencing by geographic identifiers)
 - **but there has been no European standardization organisation with power behind it**
- are “core reference data components” (INSPIRE)
 - **but (in general) have been neglected so far in developing SDIs**

Project EuroGeoNames (EU FP7 funding) 2006-2009



**border crossing routing;
transport and delivery
service networks**



**emergency services;
health and safety**



**private sector map
and atlas producers**



**cross border market
analysis & asset management**



mass media (broadcast, TV)



**hotel reservation
services; tourism**



**educational establishments,
libraries**



location based services (LBS)

Resolution of the European Council (2001) :

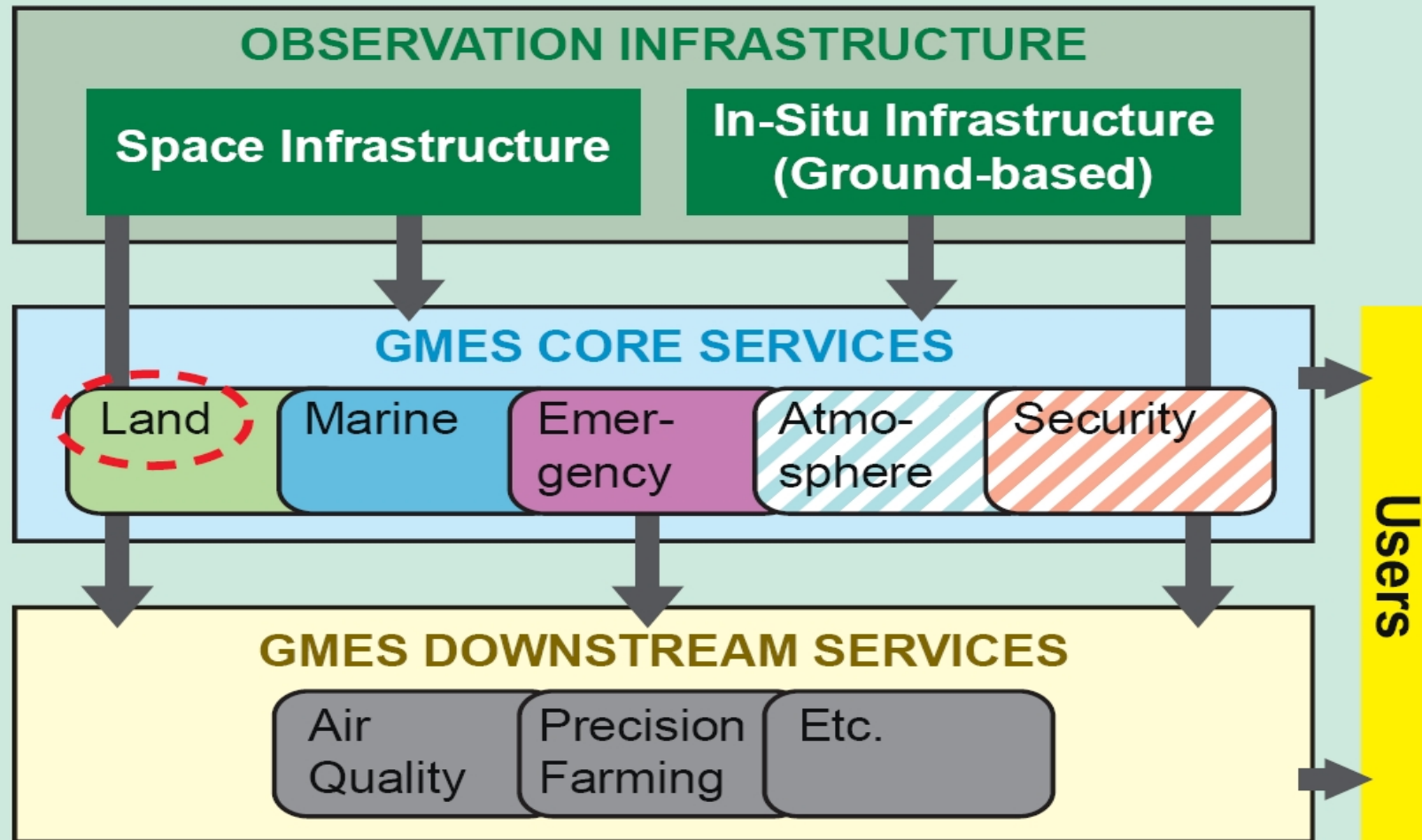
**„To develop an independent,
sustainable and reliable European
Earth observation capacity
operational by the end of 2007“**



since 2003:

GMES → EU's contribution to GEOSS

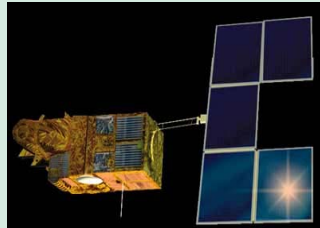
GMES Architecture



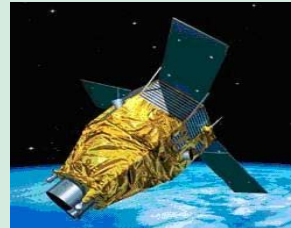
GMES: Contributing EO Missions



Cosmo-SkyMed



SPOT



Pleiades



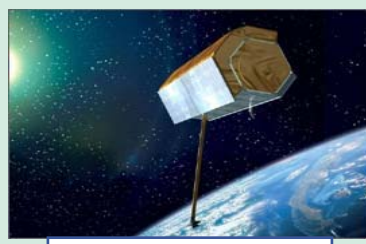
Jason-2



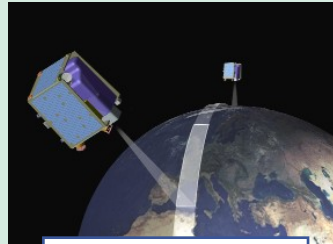
Radarsat



TopSat



Terrasar-X



Rapideye

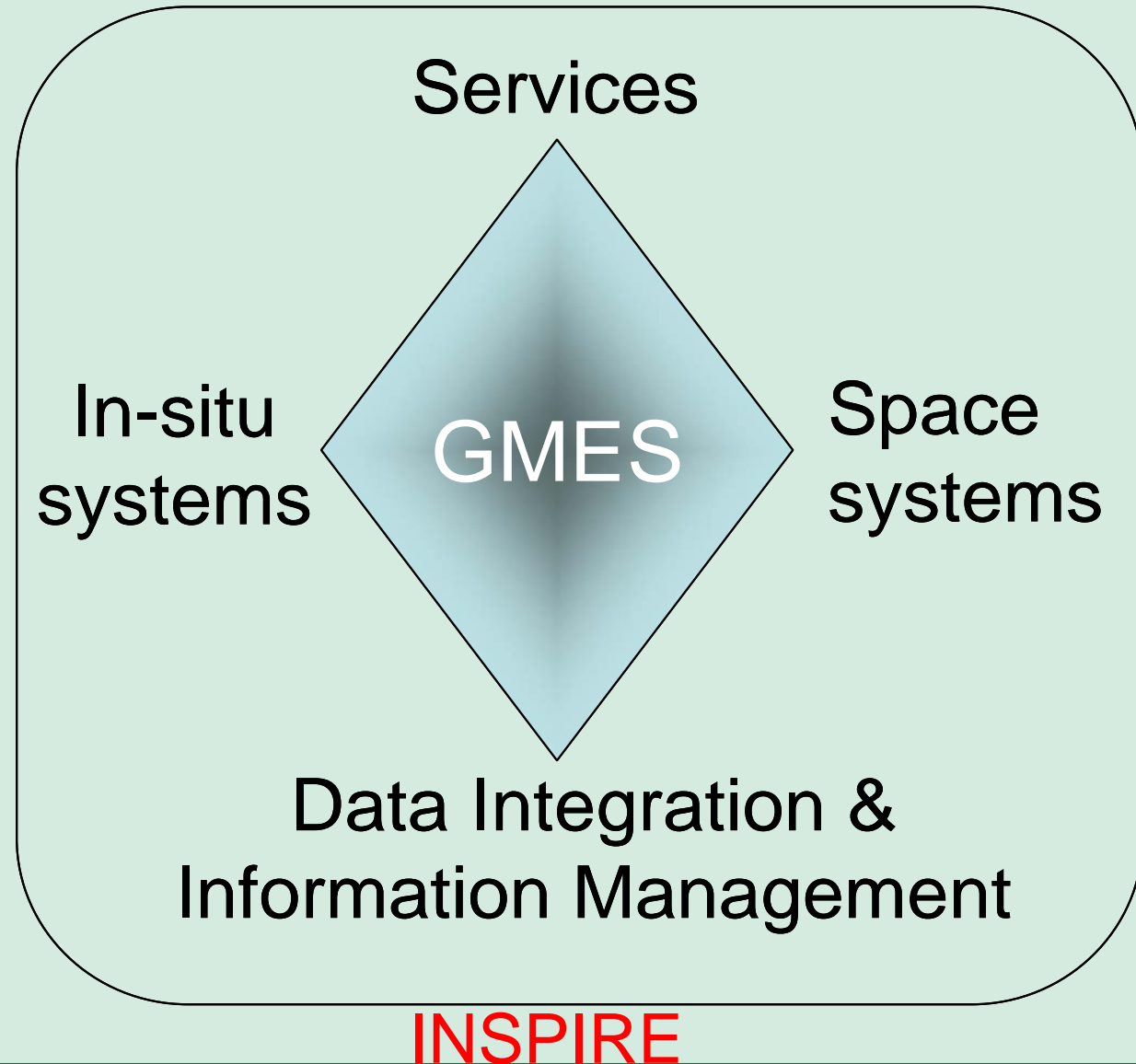


UK-DMC

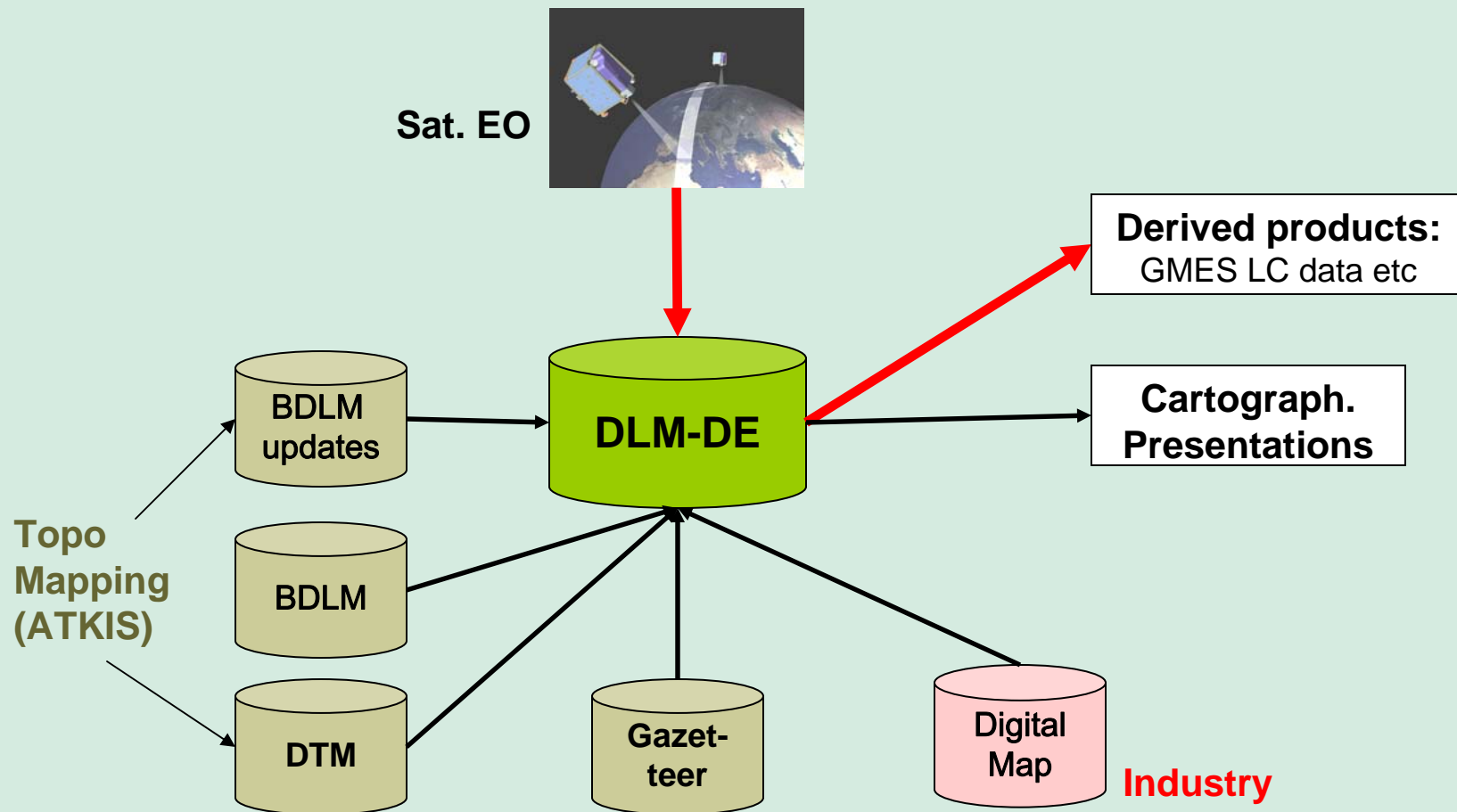


METOP

+ ESA's EO Development: GMES sentinels 1-6
to be launched from 2013 onwards



DLM-DE - large-scale reference data set within GDI-DE



1. Sustainable development, land management and spatial planning depend on reliable, useful geoinformation with a NSDI at the core.
2. The development of the German SDI - GDI-DE – is going well both in terms of coordination, technology and stepwise implementation
3. GDI-DE is designed such that it also is going to contribute to the European SDI (INSPIRE, GMES) and the international monitoring program GEOSS and the UNSDI.



Thank you for your attention!

www.bkg.bund.de