

# The European Commission's science and knowledge service

Joint Research Centre

## *Spatial Data Infrastructures and INSPIRE*

Vlado CETL

<https://ec.europa.eu/jrc>



European  
Commission

# Outline

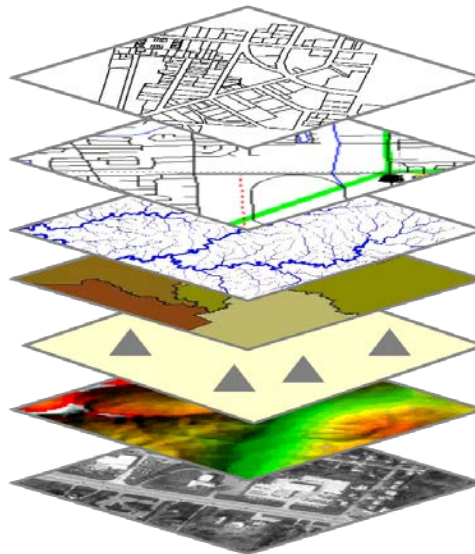
- SDI
- European SDI (INSPIRE)
  - Policy
  - Principles
  - Components
  - Roadmap
  - Current status



## SDI definition

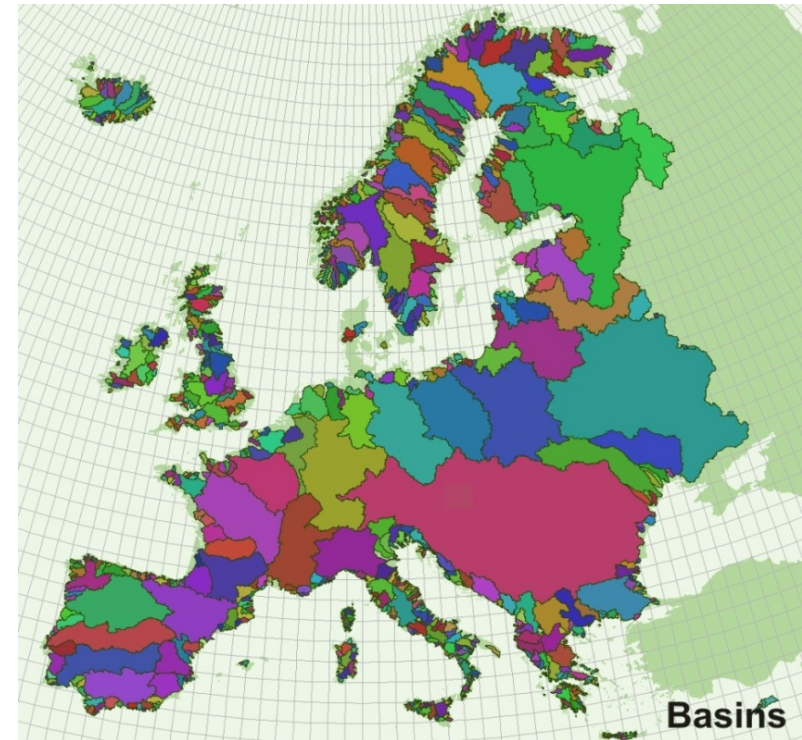
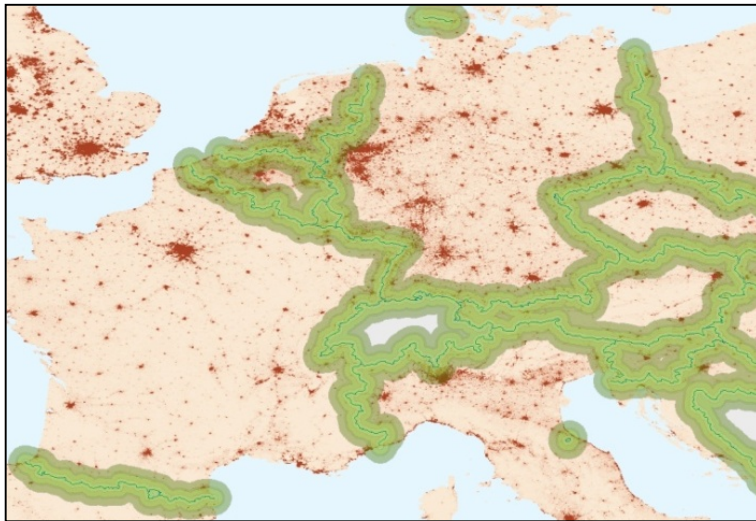
- A spatial data infrastructure (SDI) is a data infrastructure implementing a framework of geographic data, metadata, users and tools that are interactively connected in order to use spatial data in an efficient and flexible way (Wikipedia)
- SDIs are defined as the technology, policies, standards, human resources, and related activities necessary to acquire, process, distribute, use, maintain, and preserve spatial data (Masser, 2005)
- National Spatial Data Infrastructure (NSDI) means the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data (Executive Order 12906, 1994)

## SDIs initiatives - Legal vs. „Others”



# Why Europe needs a spatial data infrastructure (SDI)?

- Natural Disasters and as well as other environmental phenomena do not stop at national borders!
- 20% of the EU citizens (115 million) live within 50 Km from a border



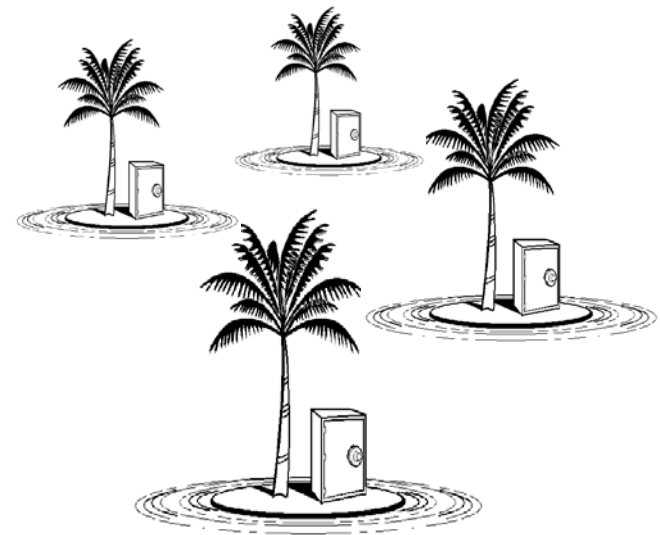
- 70% of all fresh water bodies in Europe are part of a trans-boundary river basin !!



1. **Data policy restrictions**
  - pricing, copyright, access rights, licensing policy
2. **Lack of co-ordination**
  - across borders and between levels of government
3. **Lack of standards**
  - incompatible information and information systems
4. **Existing data not re-usable**
  - fragmentation of information, redundancy, inability to integrate
5. **Missing data**
6. **Data quality**
  - Not comparable, not timely available, ...

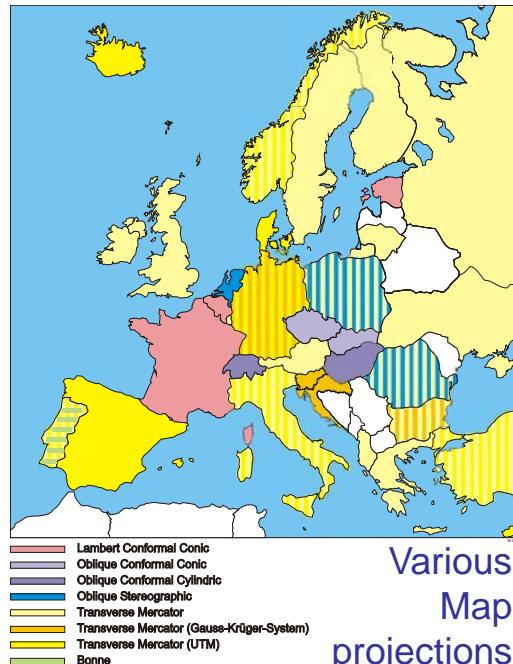
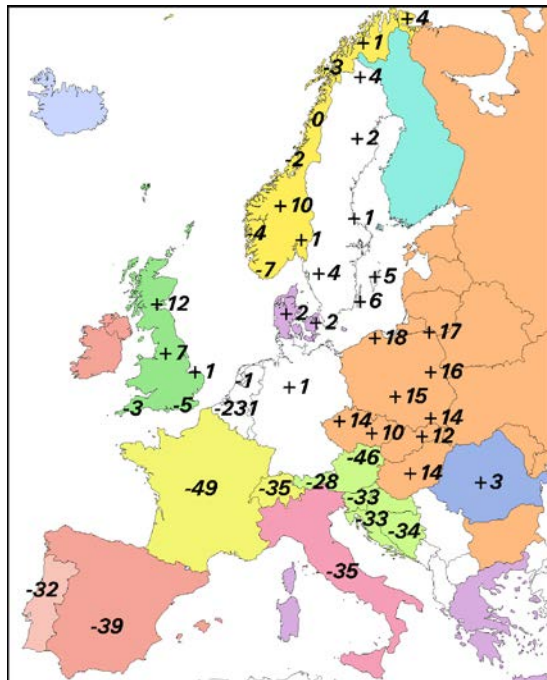
## EU Status 2002

**EU has islands of information & data of different standards and quality...**

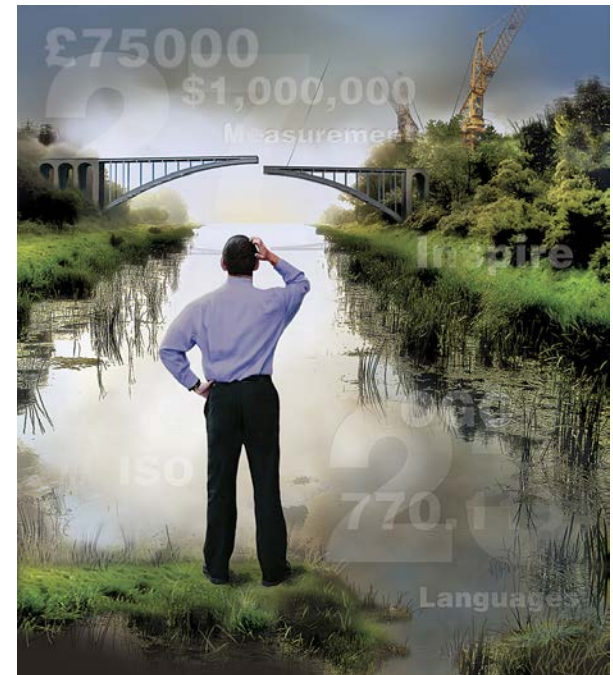


# Building a European SDI is complex

- Europe is a patchwork of several countries with different traditions, cultures and socio-economic models



- This is reflected in the different ways in which geo-spatial data is managed



# INSPIRE

**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)





## INSPIRE - movie



# INSPIRE Data Themes

## Annex I

1. Coordinate reference systems
2. Geographical grid systems
3. Geographical names
4. Administrative units
5. Addresses
6. Cadastral parcels
7. Transport networks
8. Hydrography
9. Protected sites

## Annex II

1. Elevation
2. Land cover
3. Ortho-imagery
4. Geology

## Annex III

1. Statistical units
2. Buildings
3. Soil
4. Land use
5. Human health and safety
6. Utility and governmental services
7. Environmental monitoring facilities
8. Production and industrial facilities
9. Agricultural and aquaculture facilities
10. Population distribution – demography
11. Area management/ restriction/regulation zones & reporting units
12. Natural risk zones
13. Atmospheric conditions
14. Meteorological geographical features
15. Oceanographic geographical features
16. Sea regions
17. Bio-geographical regions
18. Habitats and biotopes
19. Species distribution
20. Energy Resources
21. Mineral resources

# INSPIRE Directive

## General rules to establish an Infrastructure for Spatial Information in Europe for

- Community environmental policies and policies or activities which impact on the environment
- INSPIRE is built on the **NSDIs established and operated by the Member States**
- Spatial data held by/on behalf of **public authorities**
- Does **not** require **collection of new data**
- INSPIRE is a **Framework Directive**
- Detailed technical provisions in Implementing Rules

**DG ENV** is the **policy master**

**DG JRC** is the **technical coordinator**

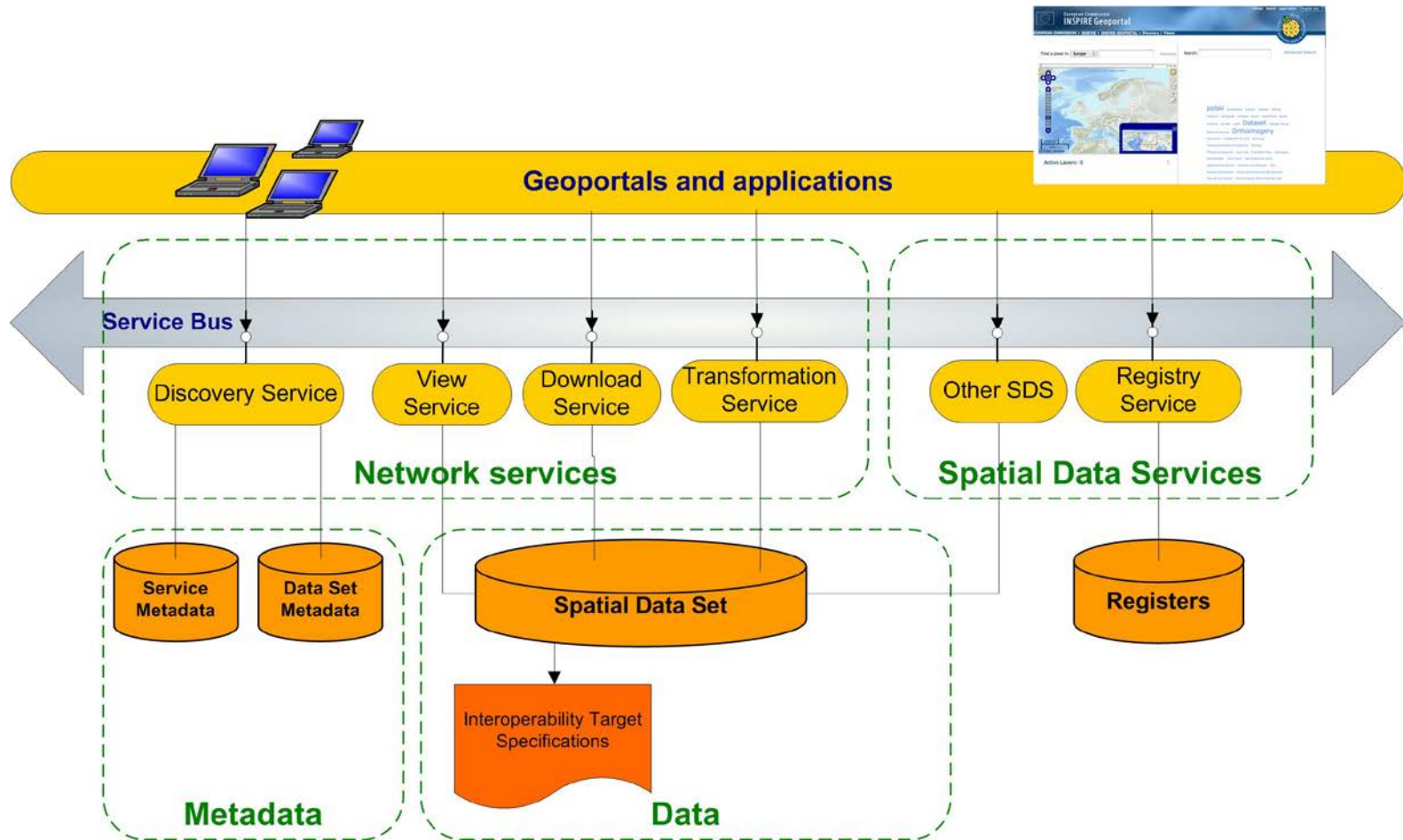


# INSPIRE Directive & Implementing Rules

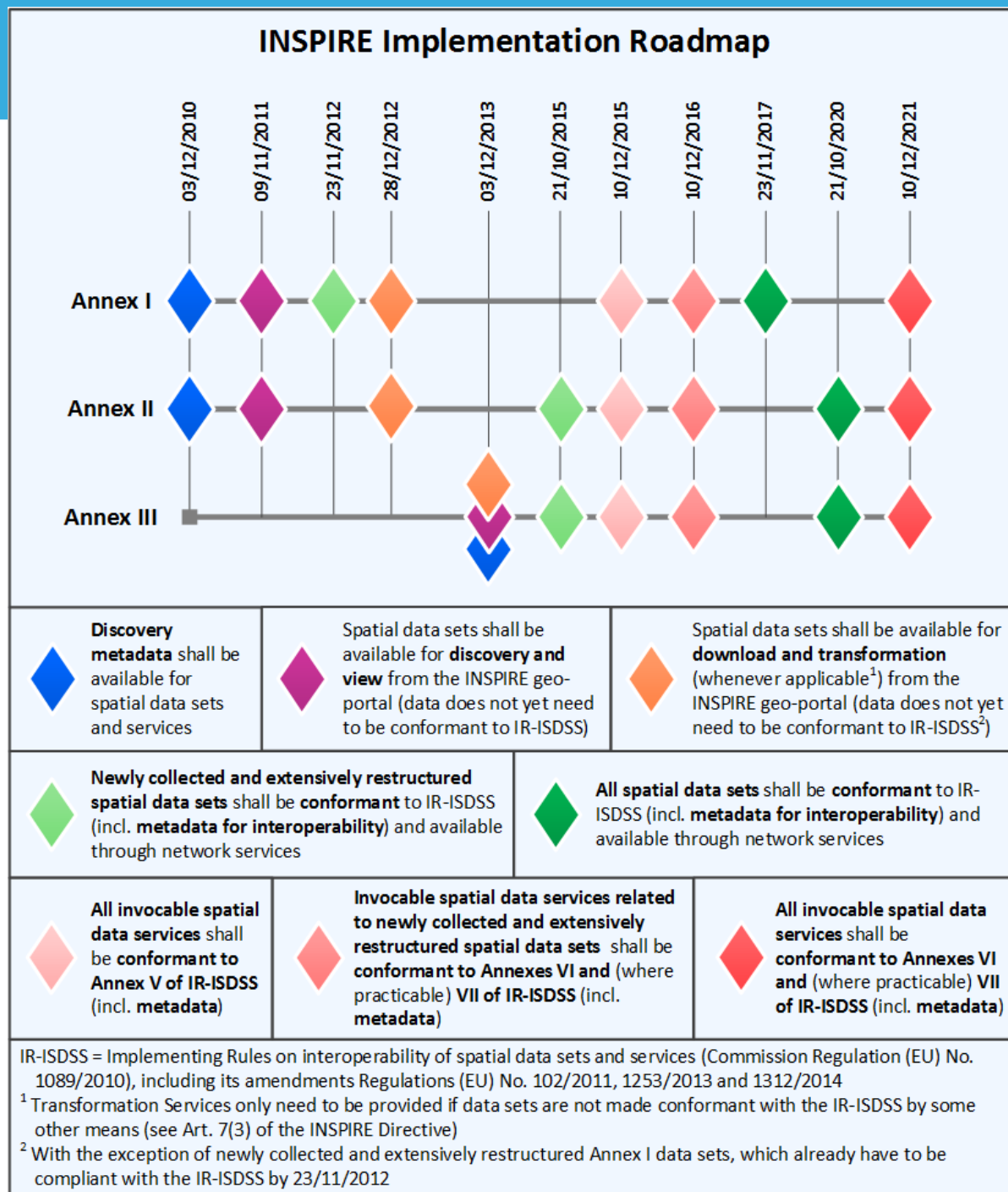
- The INSPIRE Directive lays down general rules to establish an Infrastructure for Spatial Information in Europe for the purposes of Community environmental policies and policies or activities which may have an impact on the environment
- Implementing Rules (IR, legal acts + TG)
  - Metadata
  - Interoperability of spatial data sets and services
  - Services (discovery, view, download, transform, invoke)
  - Data and Service sharing (policy)
  - Monitoring & reporting



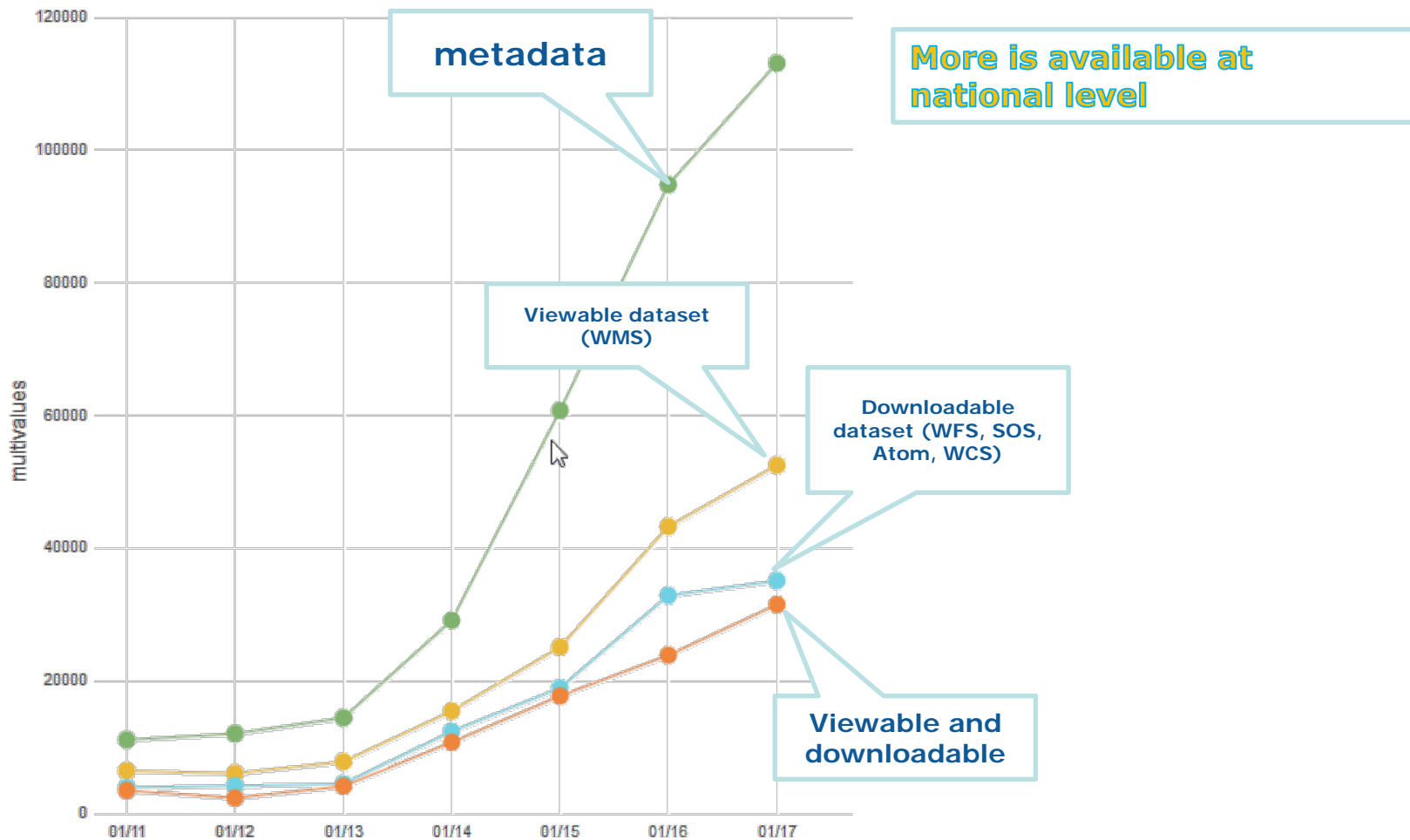
# INSPIRE architecture



# Implementation Roadmap



# 2018: Implementation 'state-of-play'



Source: EEA INSPIRE Dashboard



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English (en)



## INSPIRE KNOWLEDGE BASE

Search...



Infrastructure for spatial information in Europe

European Commission > INSPIRE

[Home](#) [Learn](#) [Implement](#) [Participate](#) [Use](#) [Toolkit](#)

### INSPIRE Video

The INSPIRE Directive: a brief description



### Latest News

18/06/2018

Open Call for support study on Digital Government

13/06/2018

Programme INSPIRE 2018 Conference online

01/06/2018

Geospatial Knowledge Base (GKB) Training Platform launched

[All News](#)

### Focus On

MAKE INSPIRE WORK FOR YOU!

This short video uses the example of the energy efficiency of buildings to demonstrate how to make INSPIRE work for you.

HEIGHT

AGE

USE



### Quick Links

### INSPIRE Conference

## INSPIRE CONFERENCE 2018

#INSPIRE\_EU2018



Antwerp

18-21 September



### Events

18/09/2018

INSPIRE Conference 2018

06/06/2018

INSPIRE Good Practice: GeoDCAT-AP

01/03/2018

2nd Webinar on Spatial Data on the Web and INSPIRE

[All Events](#)

### Tweets



INSPIRE\_EU @INSPIRE\_EU

1 hour 25 min ago

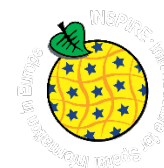
RT @EULocation: Announcement: Open Call for support study on Digital Government under ELISE - deadline 23 July 2018 - More info at... <https://t.co/K7wvECFLDq>



INSPIRE\_EU @INSPIRE\_EU

5 days 15 hours ago

RT @rmdt\_it: "#GeoDCATAP as an @INSPIRE\_EU good practice": anche l'esperienza e i lavori in corso italiani di @AgidGov nella pre... <https://t.co/DDPweFKMe7>



■ INSPIRE Knowledge base

■ <http://inspire.ec.europa.eu/>





# Thank you!

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