INSPIRE MIWP overview

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9th Czech and Slovak INSPIRE Conference – "Inspirujme se"

Joint Research Centre
the European Commission's
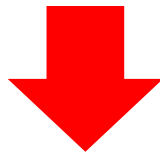in-house science service

INSPIRE MIWP 2014-2016

- **Engage users!**
- Adopt to emerging priorities (EC **DSM, Better Regulation** and MSs);
- **Demonstrate** short term **benefits of current investment;**
- **Facilitate implementation** (e.g. through appropriate simplification measures);
- Ensure **sustainability of INSPIRE**.

LEARN FROM THE PAST

INSPIRE MIWP 2017-2020

Past - Status legacy MIWP actions 2016

| 5	Validation	Draft ATS for NS, SDS and MD; 1st release Testing framework and ETS	6/2017
6	Registers	Completed	
7a	SOS	Completed	
7b	WCS	Completed	
8	Metadata	Completed	
10	Data specs	Completed	
14	Thematic Clusters	platform operational, TG change proposals and IR issues endorsed by MIG-P	on-going
16	Monitoring	Completed	
18a	xsds	Completed	
sds	SDS	Completed	
ext	Extensions	Study & inventory completed	

Registries and registers – Deliverables

- Guidance / best practices document
  - Best practices for setting up registers / registries
    - for register managers & users
  - INSPIRE Register Federation – Overview
  - How to join the INSPIRE register federation
    - for register managers
  - How to use the INSPIRE register federation
    - for register users
  - Annexes (examples of descriptors, validation stylesheet)

- Terms of reference for control body and submitting organisations for central INSPIRE registry and register federation
  - formalise maintenance process (based on ISO 19135)
  - as light-weight as possible

INSPIRE Registry

Joint Research Centre

TGs & tools for observation & coverage data – Deliverables

- Technical Guidelines for Download Services based on
  - **SOS (INSPIRE SOS profile)**
  - **WCS (INSPIRE WCS profiles)**

- Update of D2.9 Guidelines for the use of O&M and SWE
  - Focus on implementers
  - Guidance tailored to INSPIRE
  - Previously existing content as Annexes
  - Simpler and shorter document
  - Alignment with TG for download services

- SOS Open Source Implementation (52North) with support for additional observation types (e.g. PointObservation, ProfileObservation, TrajectoryObservation, …)
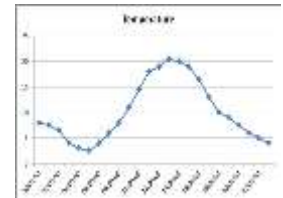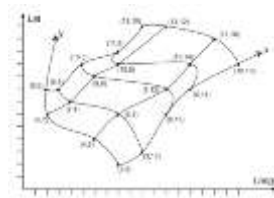
Updated Metadata TG – Deliverable

- **TG for metadata v2.0**
  - Including all requirements on metadata from different legal acts → Conformance classes for
    – Data sets
    – Network services
    – Spatial data services
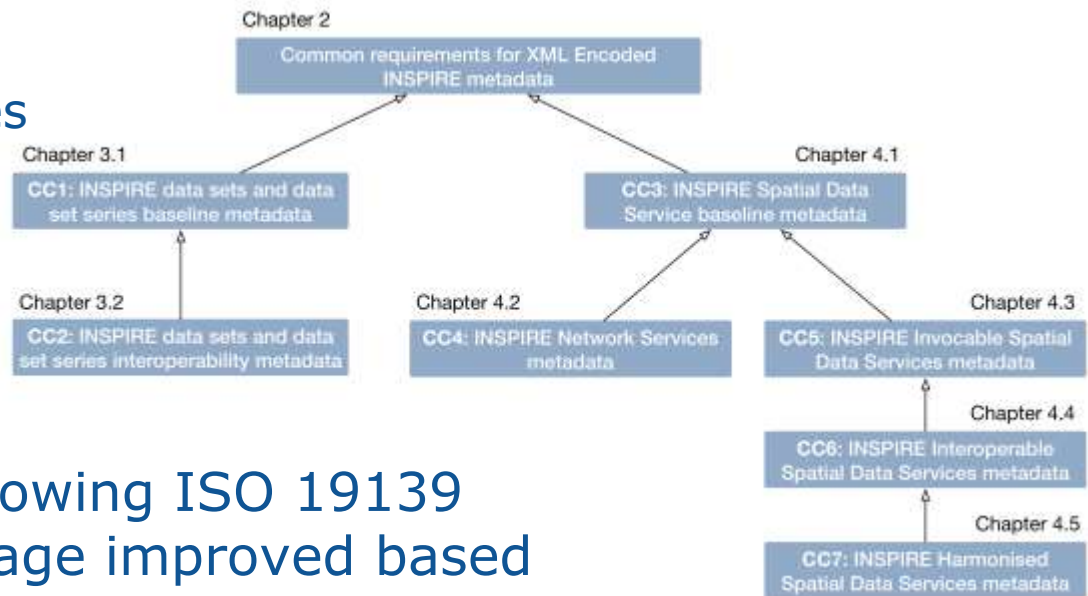
  - TG re-structured following ISO 19139
  - Requirements language improved based on MIWP-5 feedback
  - Transition period (1.3 → 2.0) of 3 years from agreed date

New INSPIRE Work Plan 2017-2020
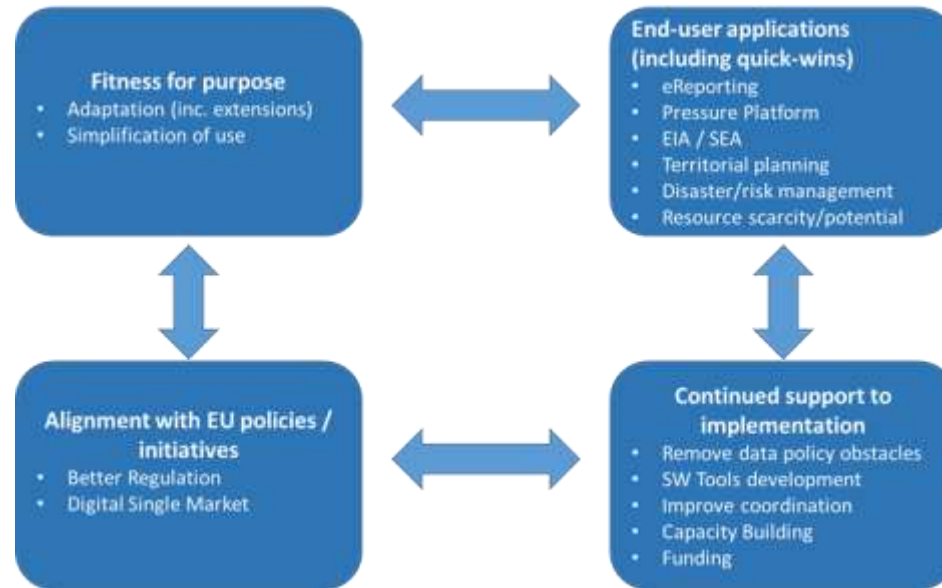
- *The four main work areas under the INSPIRE MIWP 2017-2020.*
- *The areas are closely interlinked and close collaboration should be ensured between them.*

Action 2016.1 Fitness for purpose – Analysis

- Temporary MIG sub group "Reflection group" established - **3rd Meeting planned 22.2. 2017**

1. **Simplification of IRs & TGs**
   - Initial scope reduced to **data interoperability IR and TGs (Annex 3))**
   - Evidence based approach (**MS feedback needed!!**)
   - Provide input/feedback to the drafting of the mandate for the INSPIRE Committee (June 2017)

- Implementation approach & compliance & conformity
   - making **INSPIRE TGs more readable** and simpler, adapt according technical and scientific evolution

- Dependency on standards
   - set up a regular agenda item on standardization in the MIG starting with a **strategic orientation debate**

Action 2016.1 Fitness for purpose – Analysis

2. Simplification of use

- **INSPIRE user engagement strategy**
  - To identify and classify actual and potential users for INSPIRE (as a multipurpose European SDI)
  - To collect feedback from users categories within the INSPIRE scope
  - To feed it back into the maintenance and evolution process of INSPIRE
  - To check & monitor the "fitness for purpose" of INSPIRE for various categories of users

- **Data sharing and access**
  - Exploitation of EC initiatives e.g. Free flow of data or others
  - Update of Inspire licenses

Action 2016.2 Inspire M&R 2019 – Why?

- Current **system can be improved** e.g.:
  - too much textual information-time consuming
  - not comparable results across MS
  - not (always) consistent with MD
  - some recommendations from MIWP-16 still to be addressed
  - future system should be fully automated (based on metadata)

- Develop and implement an optimized process according to **Art. 21 of INSPIRE Directive**, in line with the **Better Regulation Guidelines (COM(2015)111)** and the aims of the *Fitness Check* on environmental M&R

- Adopt the concepts of **Key Performance Indicators** (KPIs), dashboards, country fiches,

Tasks

- Conceptual [2016]
  - work plan
  - needs analysis (EC, MS) and issue collection
  - Development of KPIs framework
  - Analyse change impact, functional and technical needs

- Implementation [2017]
  - Revision of the IRs (if necessary and or approved)
  - Proposals for an updated M&R IRs and TGs → INSPIRE Committee
  - Develop and test the new process and system (agile), including the Country fiche system
  - Develop guidelines (user documentation)

- Transition [2018]
  - Testing and corrective maintenance
  - MS Capacity building (training, support)

Overview

- Meetings
1. Kick-off meeting 2016-10-27 (face-to-face) JRC Ispra
2. Meeting (Virtual), 2016-11-21
3. Meeting (Virtual), 2016-12-20
4. Meeting (face-to-face), 2017-02-07-08

- Participants

Erik Obersteiner (AT)	Alberto Conte (IT)	Alain Buogo (CH)
Jitka Faugnerova (CZ)	Ine de Visser (NL)	Christine Najar (CH)
Kai Koistinen (FI)	Ewa Surma (PL)	Vlado Cetl (JRC)
Etienne Taffoureau (FR)	Simona Bunea (RO)	Robert Tomas (JRC)
Ouns Kissiyar (BE)	Henrique Silva (PT)	Joeri Robbrecht (ENV)
Marc Leobet (FR)	Martin Koska (SK)	Christian Ansorge (EEA)
Sabine Geissler (DE)	Paloma Abad Power (ES)	Daniela Docan (EEA)

Current activities

- Gather information on M&R issues, information needs, relevant indicators
  - Short survey, Reuse of MS 2016 reports

- Review monitoring and reporting
  - Review monitoring/reporting indicators and process
    - To be metadata based
    - Maximally automated
    - In line with better regulation
    - Serving implementation, application, compliance progress monitoring

- **Priorities**
  - **Objective 1:** Draft KPI framework and how to implement
  - **Objective 2:** Make a list of proposed changes (legal changes, corrections, technological /scientific adaptations,) to the Reporting Decision for the MIG/Committee June 2017

Action 2016.3 Validation & conformity testing

- Common tools for validation (of metadata, services, data) – Why?
  - for implementers to understand where they are with their implementation & where there are gaps
  - for national coordinators for monitoring the implementation in their countries
  - for DG ENV/JRC/EEA to monitor the implementation across Europe
  - for solution providers to check their software solutions against the INSPIRE requirements

- Validation service available from JRC and in some Member States and projects
  - → duplication of effort
  - → potentially inconsistent results

Common INSPIRE validator – Status

- Supported by ARE3NA ISA action
  - Contractors: PwC and interactive instruments
  - Support and accelerate ongoing work in the MIG-T (MIWP-5)

- **Scope: Conformance testing of INSPIRE Metadata, Network Services and Data Sets based on an agreed set of abstract tests**

- Aims
  - Development of a reusable, open source, reference validator
  - Build upon existing solutions
  - Offering configurable software and test rules for organisations to test conformance
  - Create a 'reusable' testing infrastructure for INSPIRE

ETS development – current status

- Available draft test suites
  - Metadata (ISO 19115/19119)
  - Data Specification Template
  - Annex I Data Specifications

- To be developed (using ETF tests as starting point)
  - WMS 1.3 / INSPIRE View Service
  - WFS 2.0 Pre-defined / INSPIRE Download Service
  - WFS 2.0 Direct Access / INSPIRE Download Service
  - ATOM INSPIRE Download Service
  - Updates needed based on the ATS and to improve usability
  - Integrate OGC CITE Tests

Sample test report

2016.3 – next steps

- Testing of release candidates of testing framework and ETS

- Discuss in spring 2017
  - which missing parts can be developed by MS and which missing parts need to be procured by EC
  - the roadmap for further developments and maintenance of the testing framework

Action 2016.4 Theme specific issues

https://themes.jrc.ec.europa.eu/

Thematic Clusters platform – Why?

- Many implementation questions, approaches, best practices and planned extensions are theme-specific

- A number of theme-specific issues have been raised for several data specification TGs

- TGs still allow some degrees of freedom for implementing the IRs → develop "harmonised" approaches for implementation.

- Discuss links to other environmental policies and reporting obligations

Thematic Clusters platform – Status

- Discussion of concrete theme-specific implementation issues & questions since Dec 2014

- Important source for identifying implementation issues
    - Simplification / bug-fixing of TGs
    - TG corrigenda published in the INSPIRE knowledge base

Some stats (Nov 2016)
- 727 registered members
- 50 groups & sub-groups
- 458 discussion topics
- 1200+ responses
- 76 pages on specific topics

- **Community implementation knowledge base**
    - Exchanging implementation practices

- Dedicated thematic webinars, e.g.
    - Coverages, GeoSciML, land cover / land use

2016.4 – next steps

- Discuss approach for integrating helpdesk functionality and FAQs
- TC facilitators to
  - mention new "hot issues" in monthly status update before virtual MIG-T meetings and
  - deliver a detailed report of "hot issues" well (at least 4 weeks) before MIG-T face-to-face meetings (including also the "parked" change proposals)
- Reinforce the role of MIG-T liaisons
- Integration with the INSPIRE in Practice platform (Are3na)

2016.4 – next steps

INSPIRE Data Specification on Elevation – Technical Guidelines

Document Information

Document: INSPIRE Data Specification on Elevation – Technical Guidelines

Corrigenda: Corrigendum technical guidelines
Agreed changes to the INSPIRE Technical Documentation for "D2.8.II.1 INSPIRE Data Specification on Elevation – Technical Guidelines" version 3.0

Description: This document describes the INSPIRE Data Specification for the spatial data theme Elevation

Subject: INSPIRE Data Specification for the spatial data theme Elevation
Publisher: European Commission Joint Research Centre
Published Date: Tuesday, December 10, 2013
Type: Guidance document
　　　　　Technical Guidelines

🏷 **Category:**
　　Data Specifications
　　Elevation
Version: 3.0

INSPIRE thematic extensions study

Main aim of the study:

To provide guidance that helps to select **organisational and technical patterns to extend INSPIRE data models**, depending on the specific needs to extend.

http://inspire-extensions.wetransform.to/

Main Achievements:

- Inventory on best practices in extending INSPIRE models (117 responses, 40 data models described);
- Identified and categorised modelling patterns that can be useful to be followed by MS data providers;
- F̲   ion;
- M   ;

Joint effort (MS coordinator, SW tool provider, MS experts, EC&EEA)

- End-to-end transformation process Tutorial including recommended SW tools;
- All the results available on line:

   http://inspire-extensions.wetransform.to/

All results available:

http://inspire-extensions.wetransform.to/

- Introduction
- Results of the Survey
- Inventory of Model Extensions
- The INS
- The Ext
- The Patt

New way of publishing guidelines/best practices for INSPIRE implementation

- An End-to-End Tutorial Project
- Conclusions and Outlook

Open living site - user feedback or modification
https://github.com/wetransform/inspire-extensions

New Action 2016.5 – Priority list of data sets

- New MIG temporary sub-group – (to be set up soon!!)

Agreed tasks:

1. **Provision of the agreed priority datasets for environmental reporting:**
   - Develop a methodology for incremental update of the list of datasets
   - Make those datasets as-is accessible through the European Spatial Data Infrastructure following the prioritisation.
   - Monitor the provision of datasets related to environmental reporting utilising new KPI(s).

2. **Analysis "As Is"**
   - Develop a detailed conceptual mapping between the objects defined in reporting obligations and INSPIRE spatial object types.
   - Identify the supporting information for the reporting obligations (information pyramid)
   - Proposal for streamlining taking into account cost&benefit analysis of possible changes to reporting obligations and/or INSPIRE legal & technical framework.

3. **Implementation**
   - Implement the recommendations in the reporting framework (EC)
   - Implement the new eReporting process (MS) and support core data flows (CDF) (EEA)
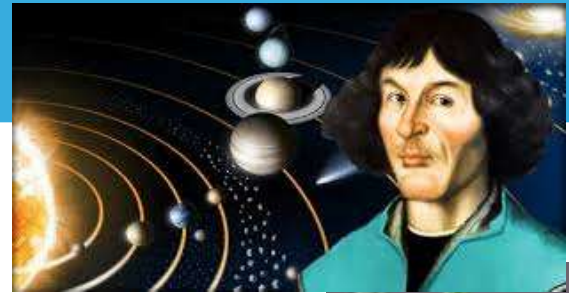
INSPIRE & Copernicus

- JRC proposal for Copernicus
  - new MIWP Action

- Possible synergies
  - INSPIRE technical framework for interoperable sharing of spatial data can be reused by Copernicus services to connect their products to the INSPIRE infrastructure
  - In the future, Copernicus can connect to and benefit from the INSPIRE infrastructure by providing their data products conformant with the technical standards suggested and developed by INSPIRE
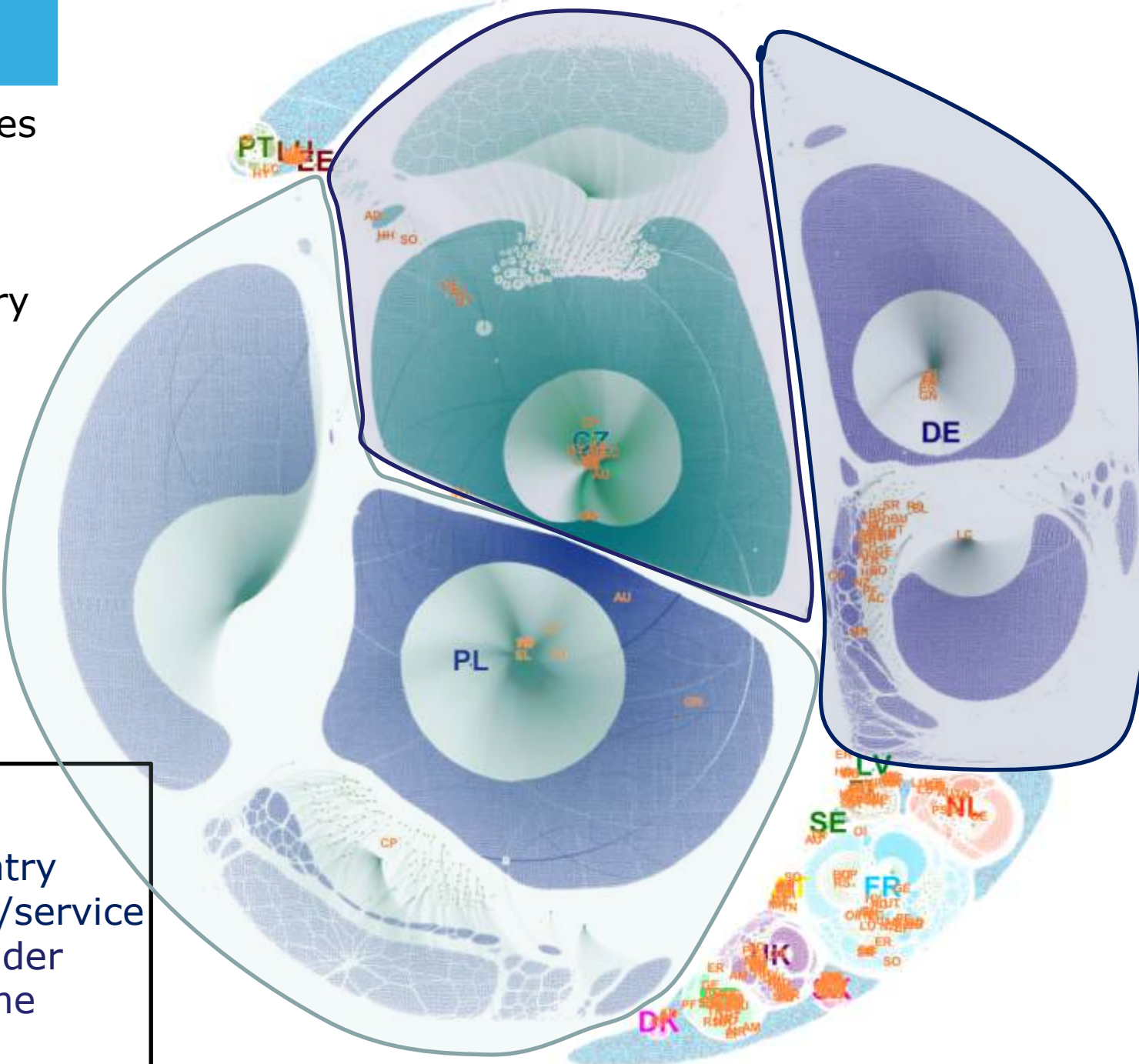 - Main beneficiaries would be the potential Copernicus users

INSPIRE on-going "PILOTS"

1. **INSPIRE X BIODIVERSITY REPORTING**

2. **INSPIRE X EU REGISTER OF EMISSION SITES**

3. **INSPIRE X POPULATION CENSUS 2021**

4. **INSPIRE X DISASTER DAMAGE AND LOSS RECORDING**

5. **INSPIRE X RAW MATERIALS**

6. **INSPIRE X ENERGY EFFICIENCY OF BUILDING**

7. **INSPIRE X INTELLIGENT TRANSPORT**

2011

466k data/services
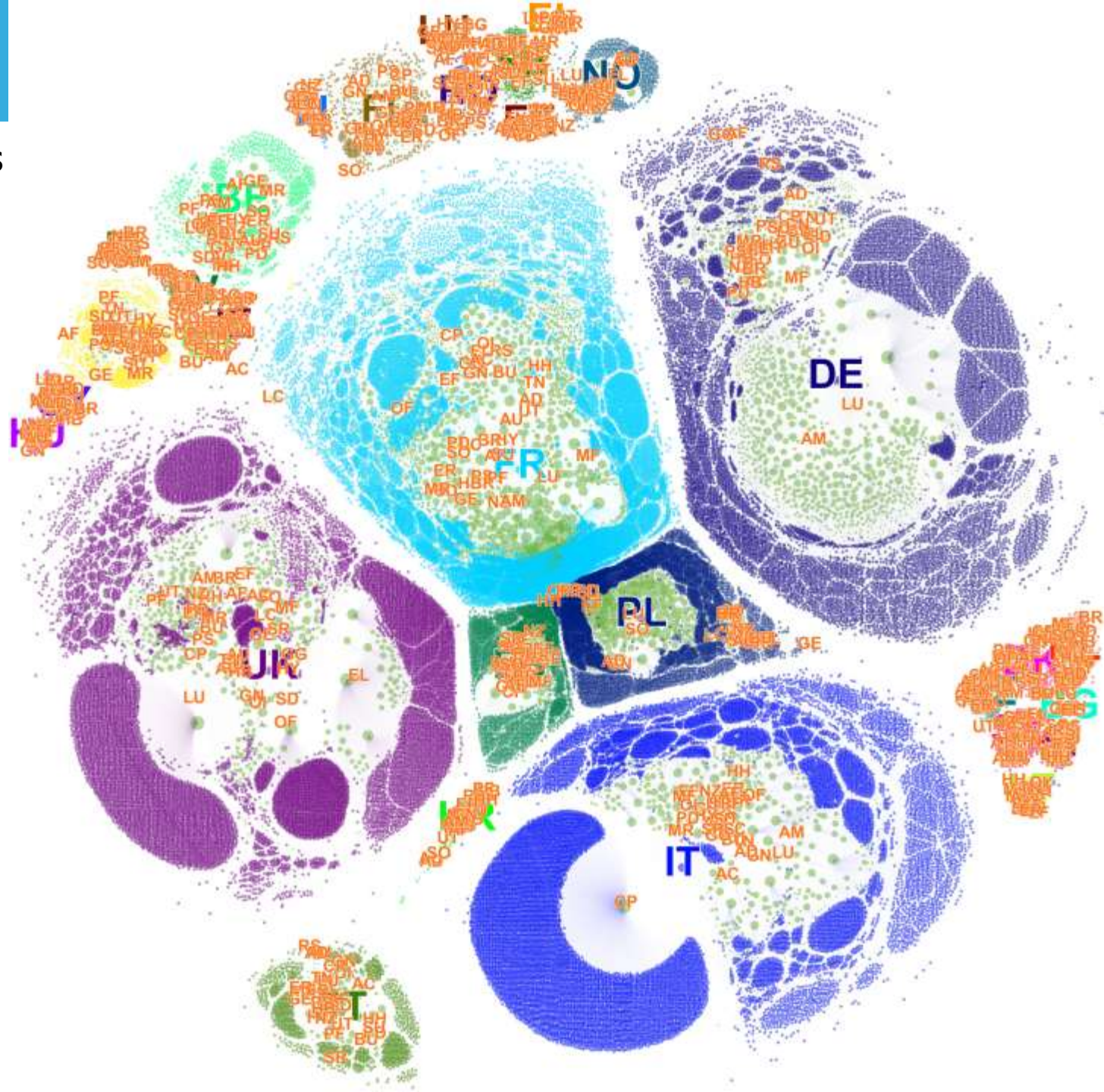1900 providers
16 countries

Metadata on every
mapsheet

2017

129k data/services
8500 providers
31 countries

Legend:
- Private (yellow)
- Commercial (green)
- -unknown- (grey)
- Government (red)
- Academia (blue)
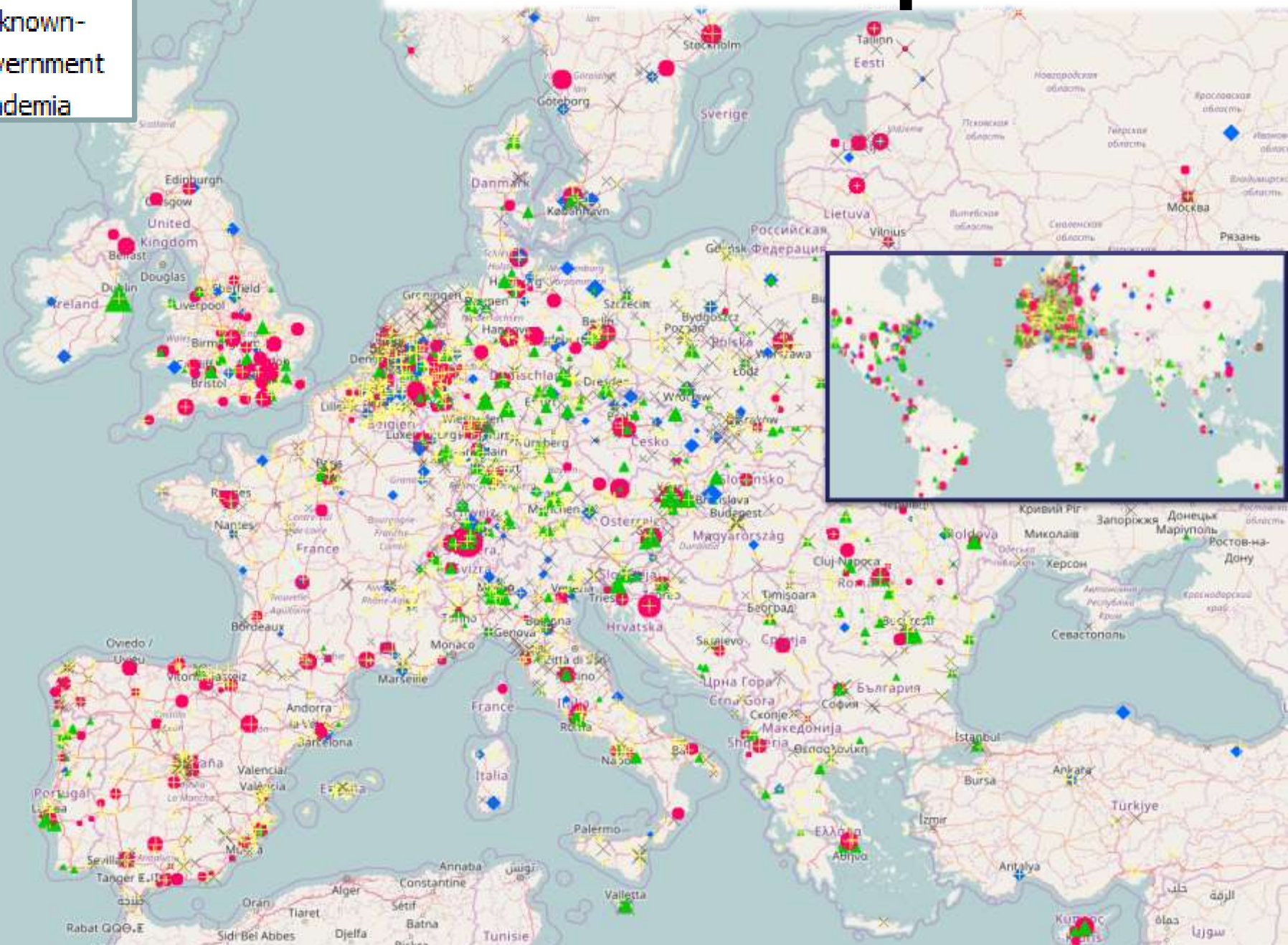
More information

- INSPIRE
  - http://inspire.jrc.ec.europa.eu/

- INSPIRE Thematic Clusters
  - https://themes.jrc.ec.europa.eu/

- INSPIRE GeoPortal
  - http://inspire-geoportal.ec.europa.eu/

- INSPIRE Registry
  - http://inspire.ec.europa.eu/registry/

- INSPIRE data specifications
  - http://inspire-regadmin.jrc.ec.europa.eu/dataspecification/

- INSPIRE MIG Collaboration platform
  - https://ies-svn.jrc.ec.europa.eu/

Thank you for your attention.

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Interoperability is better achieved

...sharing solutions in a collaborative way