

# eENVplus - eEnvironmental services for advanced applications within INSPIRE

CIP – Pilot Actions

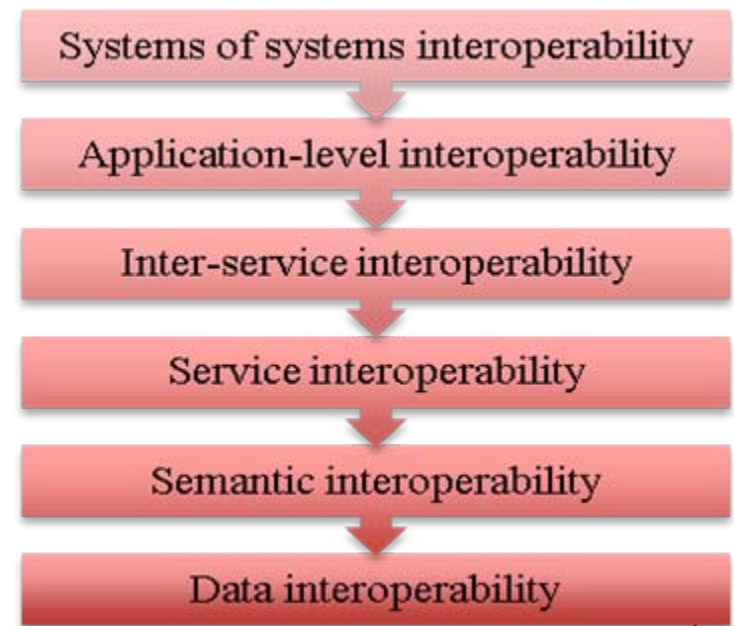
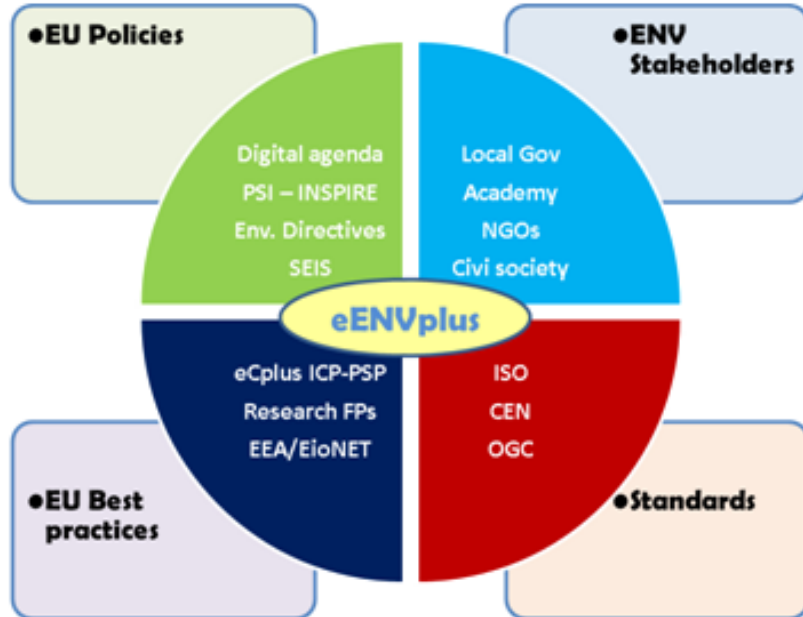
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GISIG

## Key objective

- to support INSPIRE and SEIS implementation
- through deployment and integration of value-added eEnvironment services
- available at national level and through past/on-going key EC-funded project
- eENVplus provides Members State and the GI Communities, with tools addressing a multi-level interoperability stack:



Initiatives

Policy

Environmental Directives

Digital Agenda  
10011001011011011000100 2010-2020  
for Europe



EIS

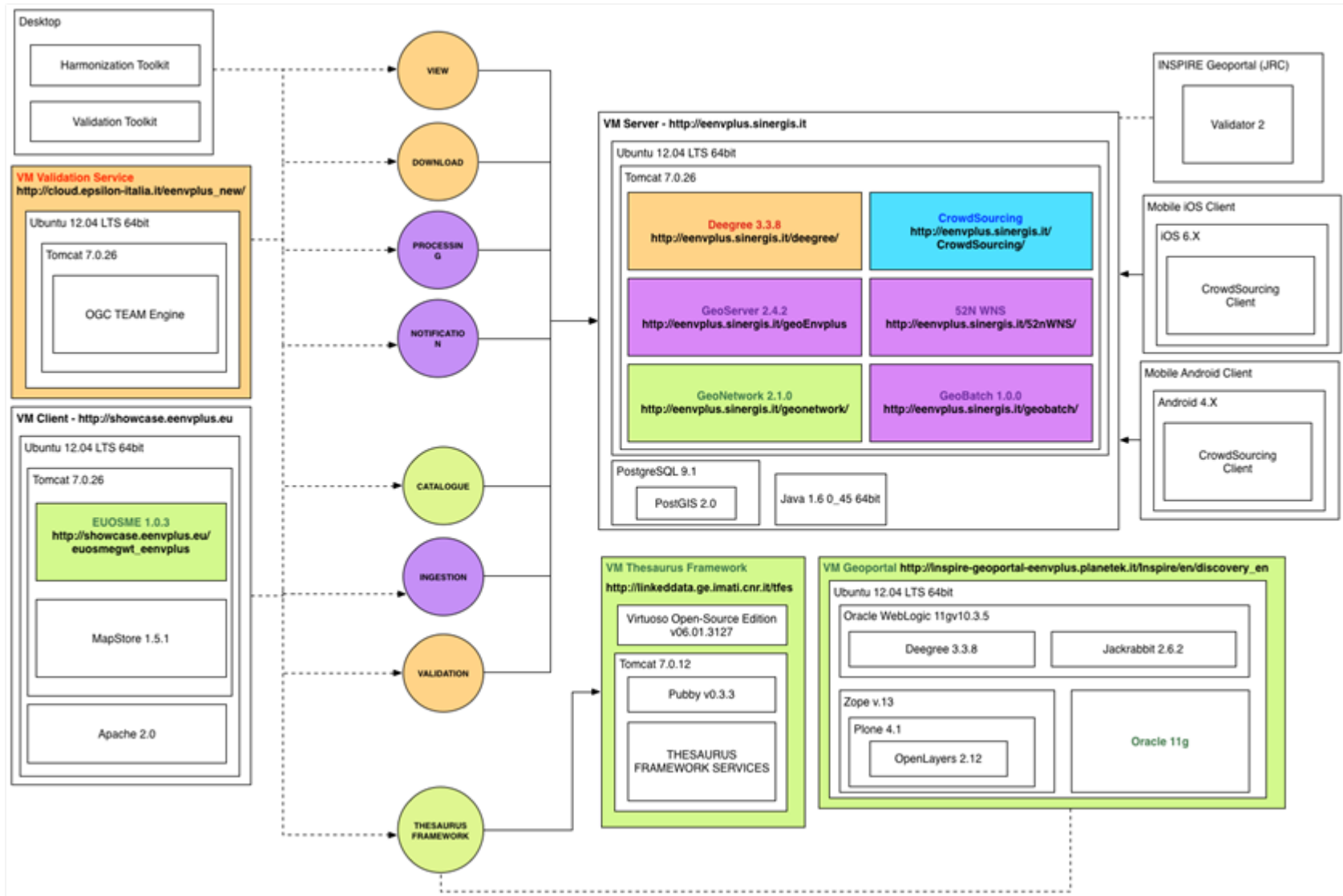
PSI



## From Objectives to the

# eENVplus





eENVplus interoperable infrastructure provides Member States and Geographic Information Communities with:

- A comprehensive, open and scalable infrastructure able to integrate existing infrastructures according to the INSPIRE requirements, open standards and interoperable innovative services
- A common Environment Thesaurus Framework, supporting the integration of existing thesauri relevant for the environmental sector via Linked Data and providing added-value services for its integration and exploitation in pilot applications
- A comprehensive toolkit with procedures, guidelines and examples for data harmonisation and validation supporting Member States during INSPIRE implementation
- A set of innovative on-line added-value interoperable services aiming to facilitate the development of innovative environmental applications
- A Training Framework to support, with eLearning tools, the development of the necessary capacities and knowledge to implement INSPIRE, to develop a SEIS and to keep this new adapted infrastructure operational

## Pilots / Scenarios / Use Cases

- In 10 pilots, 3 cross-border
  - Pilots (10): the actual implementation of the scenarios in a geographical area
  - Scenarios (9): the different use cases considered by eENVplus, which the applications correspond to
  - Use Case (26): a methodology used in system analysis to identify, clarify, and organize system and user requirements
- 
- Offering examples on how the eENVplus outcomes can be utilized in a variety of different situations (ENV aspects) and users' needs
  - Providing streamline of the tools available to the project into the main flow of INSPIRE compliance
  - Proposing interoperability among applications (existing or planned)

- Implementation of a SEIS for air quality data, pilots in **Belgium and Italy**
- Providing INSPIRE-compliant access to utility services: the case of sewage networks in Flanders, pilot in **Belgium**
- CSspire - Everyday life issues connected to Environmental aspects in **Czech Republic and Slovakia**, cross-border pilot
- Natural Areas INSPIRE Compliance Toolbox, pilot in **France**
- Forest Fire Management, pilot in **Greece**
- Window on the Protected Areas - Mobile Conservation Map in **Slovakia and Hungary**, cross-border pilot
- INSPIRE Geoportal - Nature conservation data in Iceland, pilot in **Iceland**
- Geological Map Harmonization **in Italy and Slovenia**, cross-border pilot
- Urban Landuse Planning: in **Portugal**





## ■ National Agencies:

- Environmental Agencies: VMM (BE), ISPRA (IT), CENIA (CZ), SAZP (SK), MRD (HU) with support of GEO (HU); moreover, EPSILON in close cooperation with GR EA
- Mapping Agencies: **DGT (PT)**, NLSI (IC)
- Thematic Agencies: Geological (GeoZS, SLO), Nature (ATEN, FR)

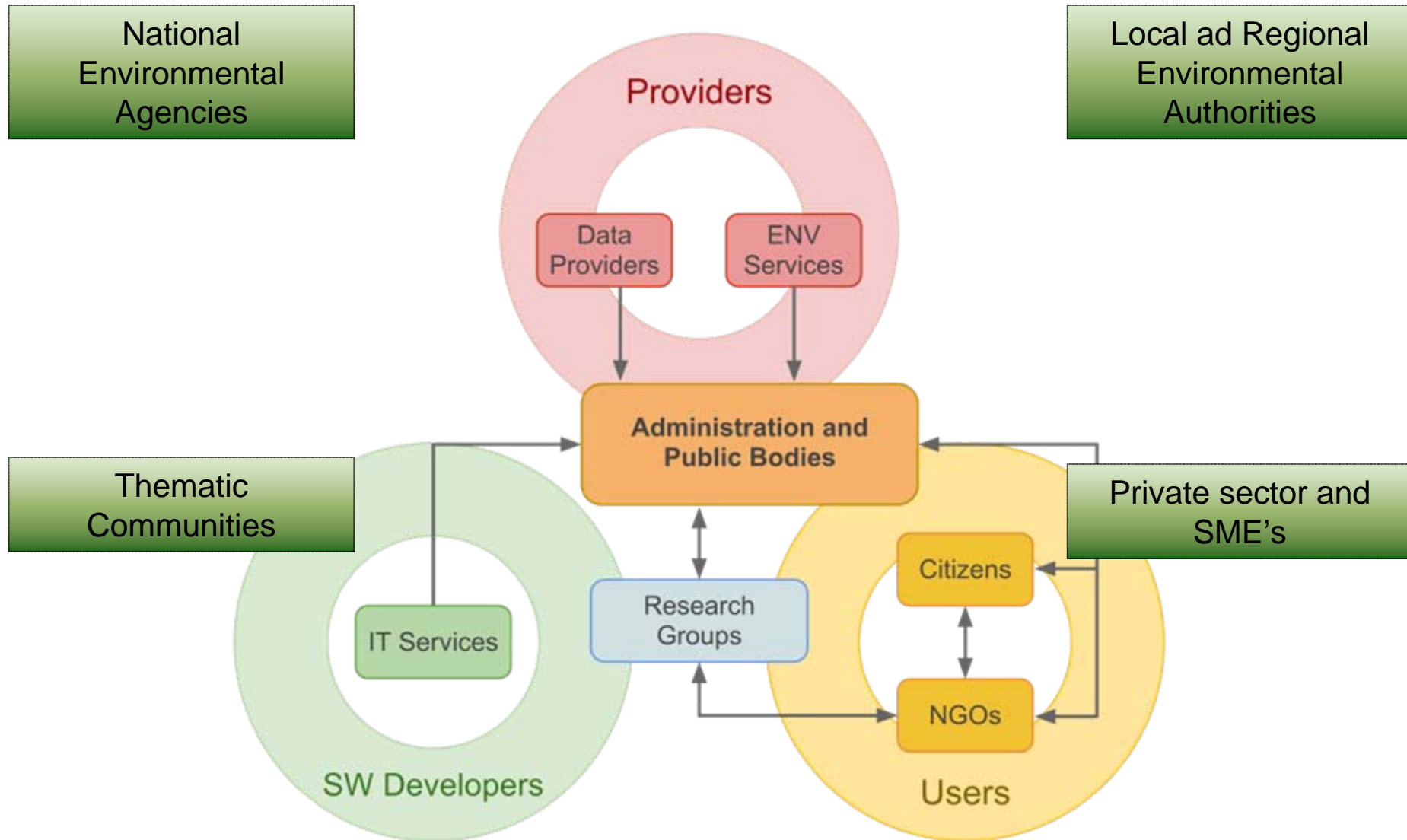
■ **Technical partners:** CNR-IMATI, Epsilon, Sinergis, Graphitech, disy, EPSIT, PKH

■ **University:** GEO

■ **Standardization Body:** GIST (Secretary of CEN TC/287 Geographical Information)

■ **European Association:** GISIG (eENVplus Coordinator)





# Underlying content, INSPIRE data Themes

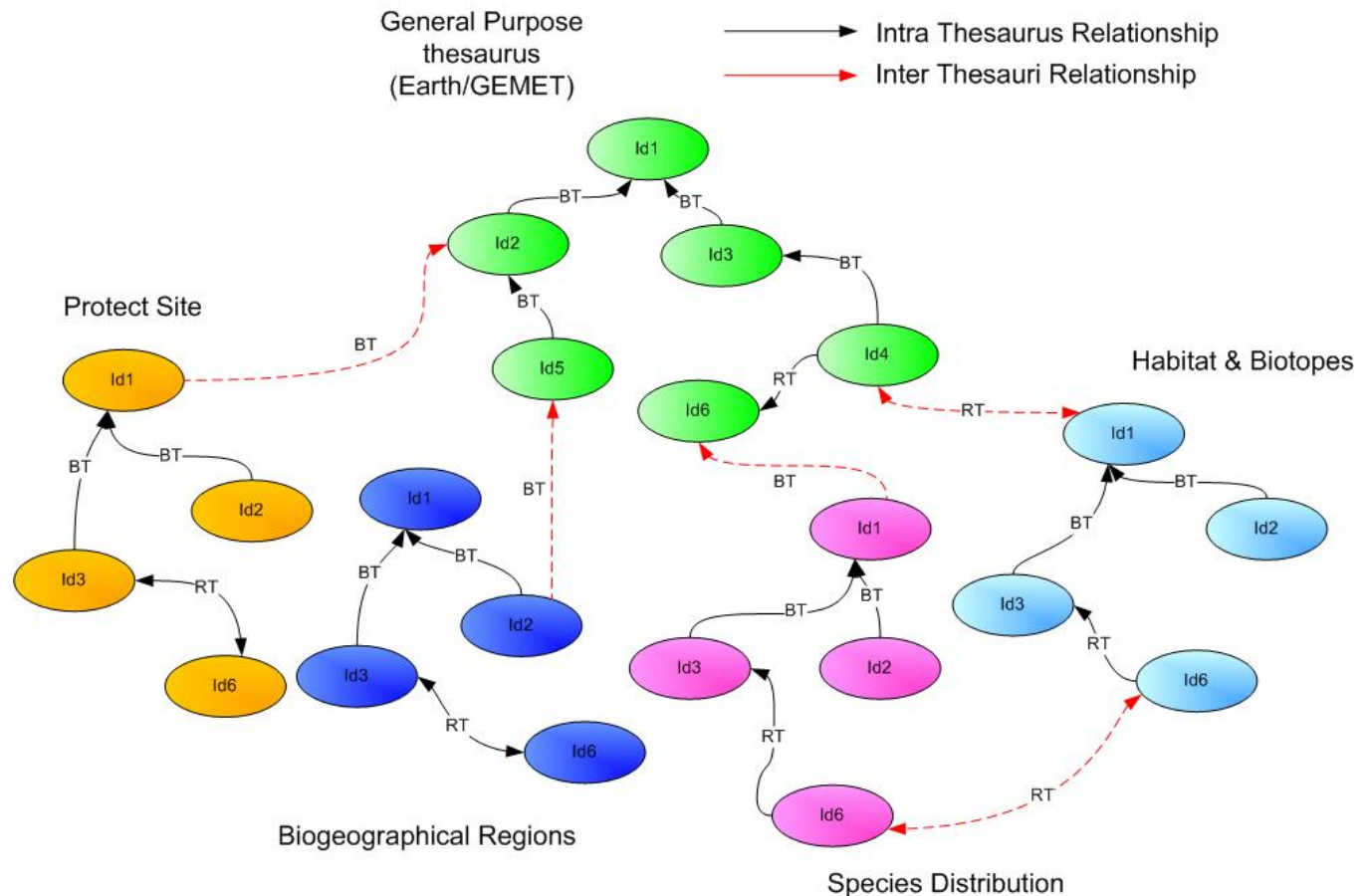
- Various National datasets related to many INSPIRE Annex I-II-III Data Themes, are considered for eENVplus (some are under IPR, many are Open Data)
- After the 1<sup>st</sup> data analysis, not all of them will be harmonised

Pilot Applications: EP01 EP02 EP03 EP04 EP05 EP06 EP07 EP08 EP09 EP10									
<b>ANNEX I</b>									
1. RS: Coordinate reference systems									
4. AU: Administrative units									
6. CP: Cadastral parcels									
8. HY: Hydrography									
9. PS: Protected sites									
<b>ANNEX II</b>									
2. LC: Land cover									
3. Ol: Orthoimagery									
4. GE: Geology									
<b>ANNEX III</b>									
1. SU: Statistical units									
4. LU: Land use									
5. HH: Human health and safety									
6. US: Utility and governmental services									
7. EF: Environmental monitoring facilities									
8. PF: Production and industrial facilities									
11. AM: Area mng/rest/reg zones & rep. units									
12. NZ: Natural risk zones									
13. AC: Atmospheric conditions									
14. MF: Meteorological geographical features									
17. BR: Bio-geographical regions									
18. HB: Habitats and biotopes									
19. SD: Species distribution									

## The HUMBOLDT Alignment Editor

- The HUMBOLDT Alignment Editor (HALE) is a tool for defining and evaluating conceptual schema mappings.
- HALE is currently being used intensively in the context of the eENVplus “WP3 Harmonisation and Validation” tasks.
- The Data Harmonisation Panel:
  - ☐ Supports a community of experts and organisations that have to deal with spatial data harmonisation.
  - ☐ Disseminates and exploits the HUMBOLDT Tools.
  - ☐ GISIG is one of the Data Harmonisation Panel Founding Members.
- A joint collaborative initiative between the eENVplus project and the Data Harmonisation Panel is under development.





- integration of different available thesauri
- cross walking from a thesaurus to another

- eENVplus infrastructure is composed by a set of components combined into the nodes of the infrastructure

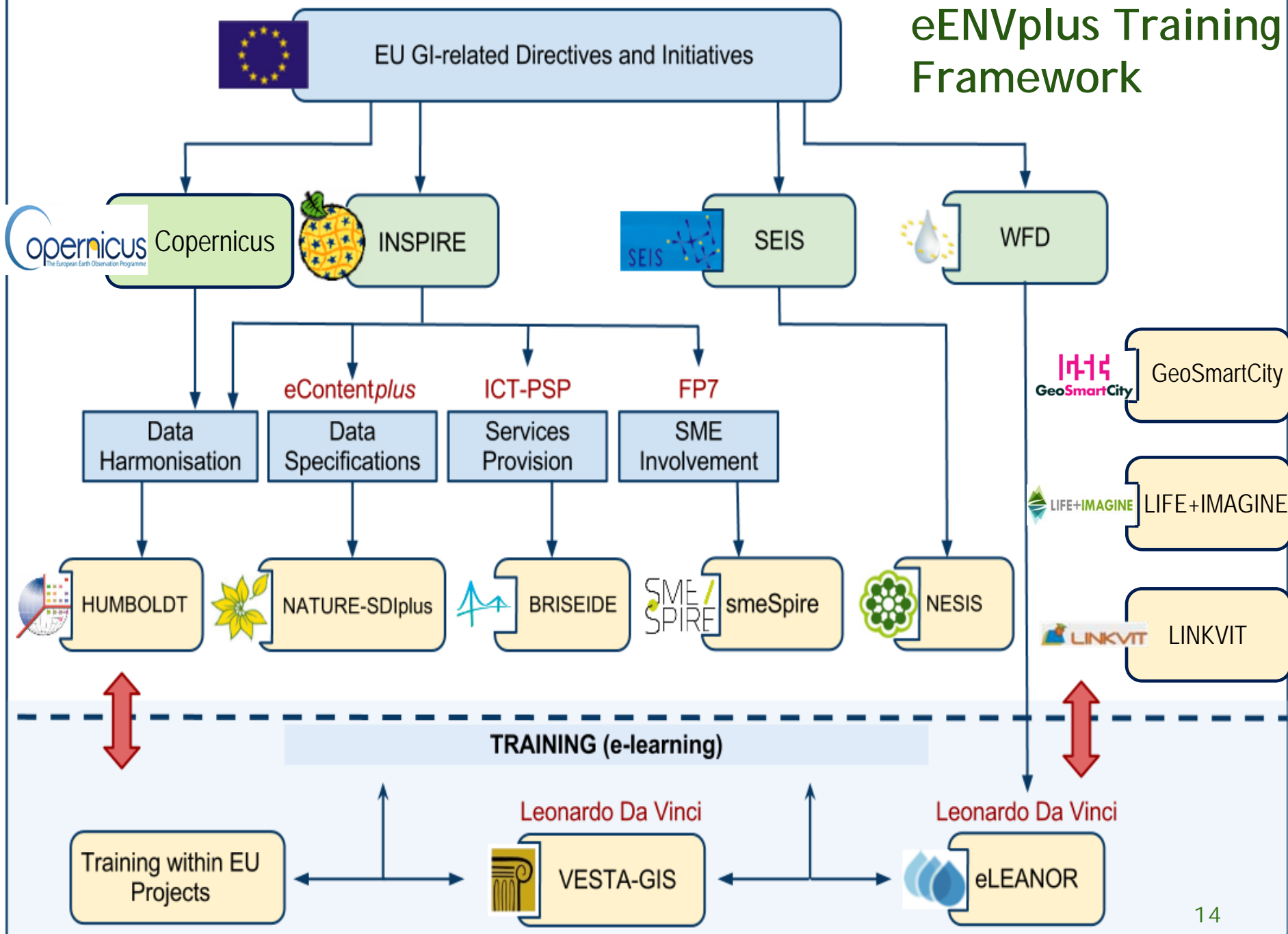
## Software components



## Data structure components



# eENVplus Training Framework





Copernicus



INSPIRE



SEIS



WFD

Data  
Harmonisation

# eENVplus



GeoSmartCity



LIFE+IMAGINE



LINKVIT

HUMBOLDT

NESIS

TRAINING (e-learning)

Training within EU  
Projects



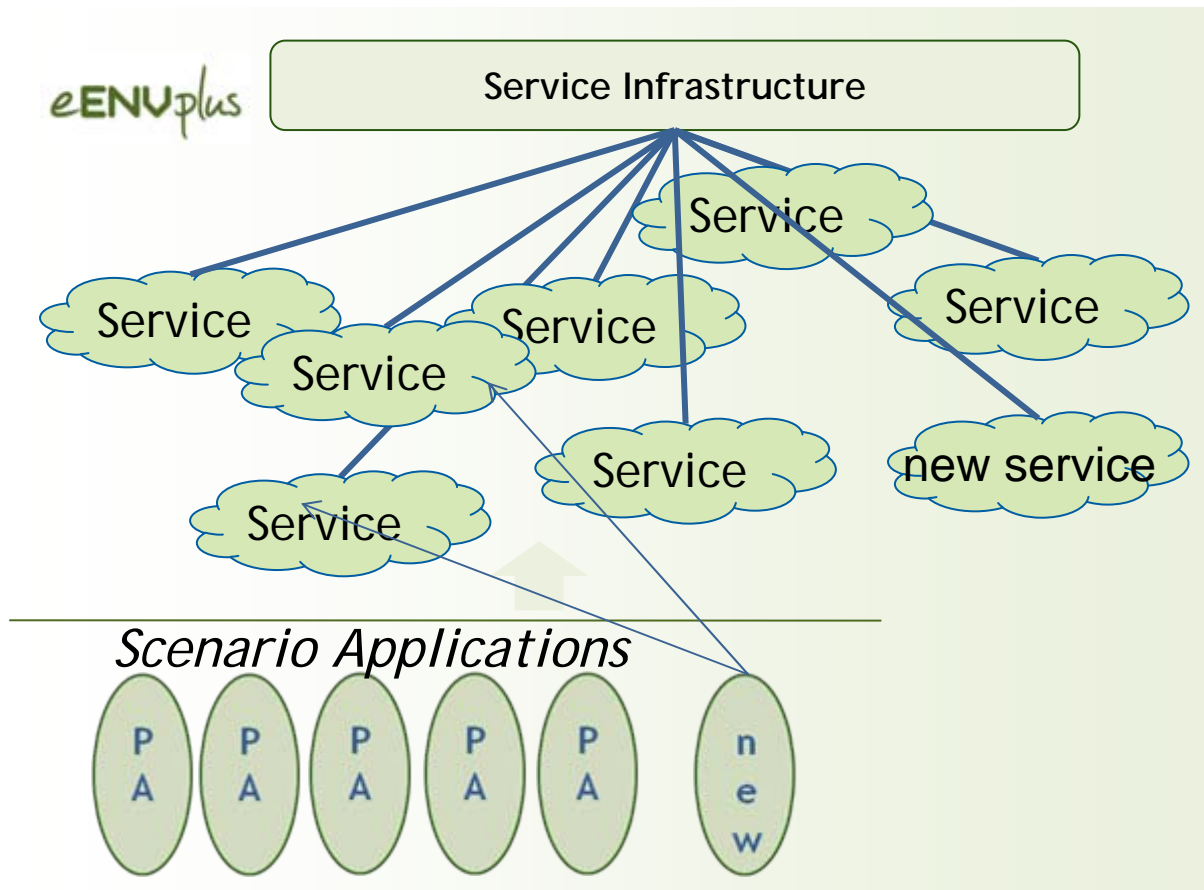
VESTA-GIS



eLEANOR



- eENVplus Infrastructure is the base for including new applications and new services also within future projects at a European and National level



- eENVplus will be then the Framework for implementing/use/sharing eEnvironmental services

**GeoSmartCity**

new service

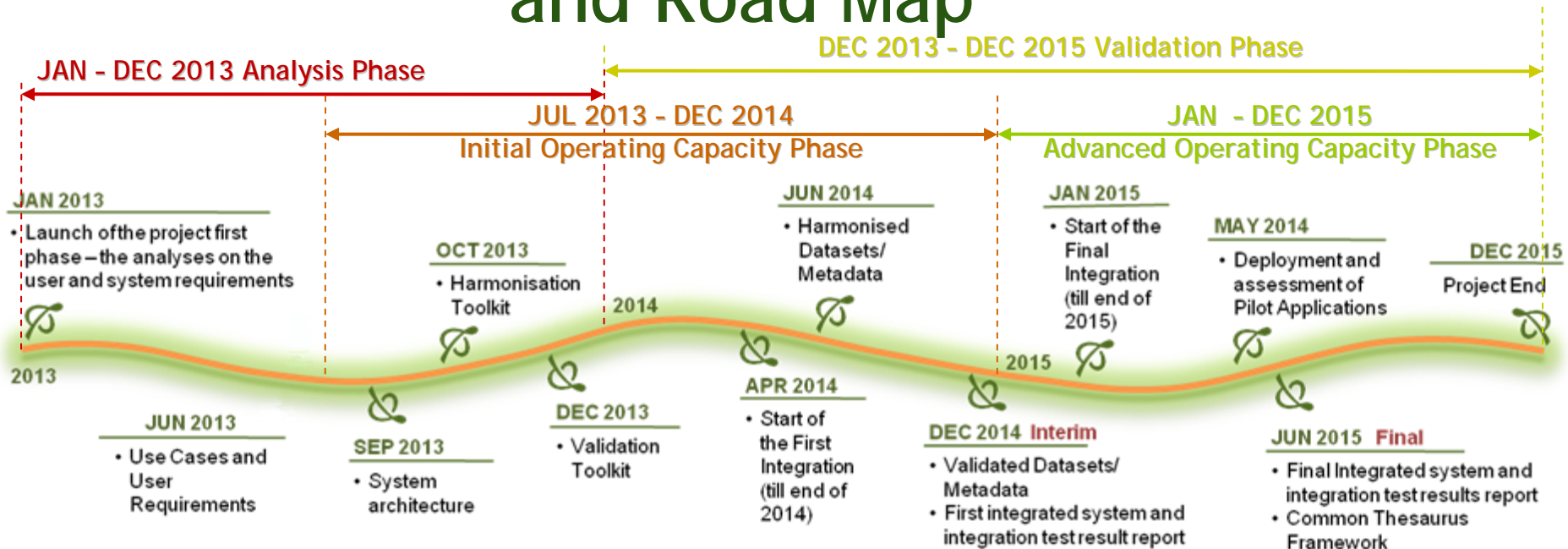
**LIFE+IMAGINE**

- That will be part of the long term sustainability plan after the project conclusion

# Macro-actions foreseen by eENVplus



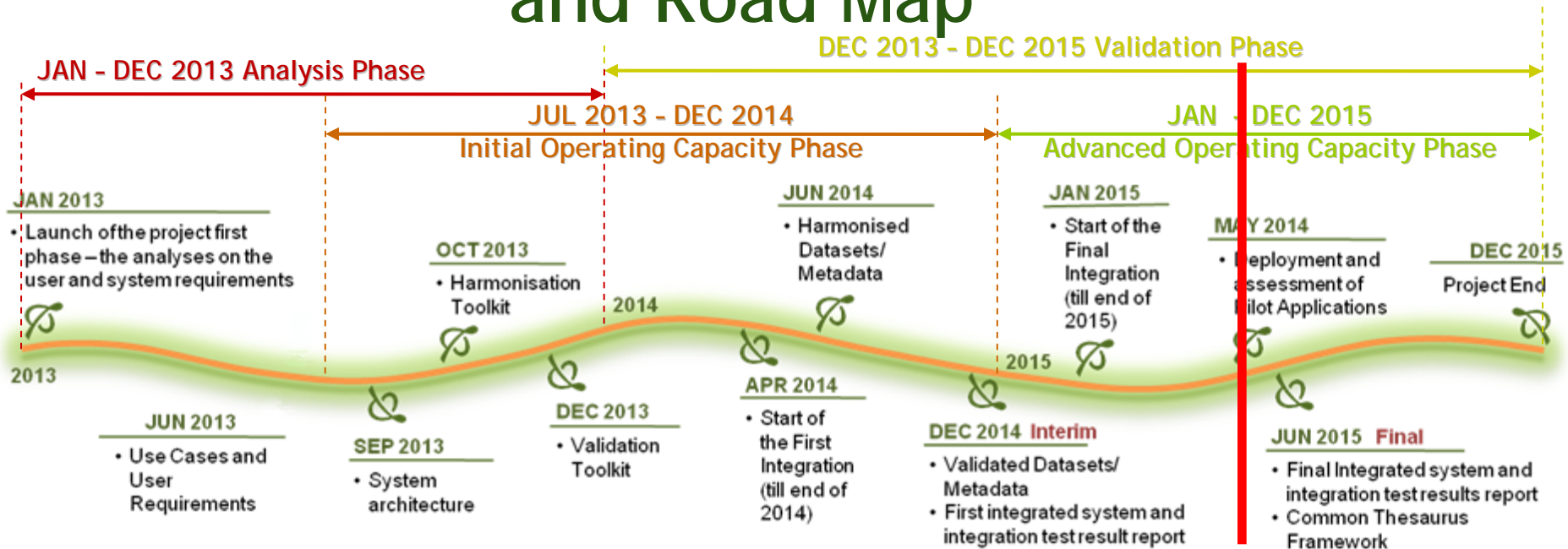
## and Road Map



# Macro-actions foreseen by eENVplus



## and Road Map



- The eENVplus project overview (GISIG)
- The eENVplus infrastructure (GRAPHITECH/SINERGIS)
- The Thesaurus Framework and its exploitation for metadata annotation and data discovery (CNR-IMATI)
- Validation service (EPSILON ITALIA)
- The environmental scenario overview (ISPRA/VMM)
- The Portugal pilot example (DGT)
- Live-demo

# Thanks for your interest in eENVplus !

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