The eENVplus vision

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Initiatives   Policy   Environmantal Directives

- ❑ to solve daily operational needs according to the policies directives
- ❑ adapting the operational processes to the policies
- ❑ aligning the policies with contributions coming from the operational experiences
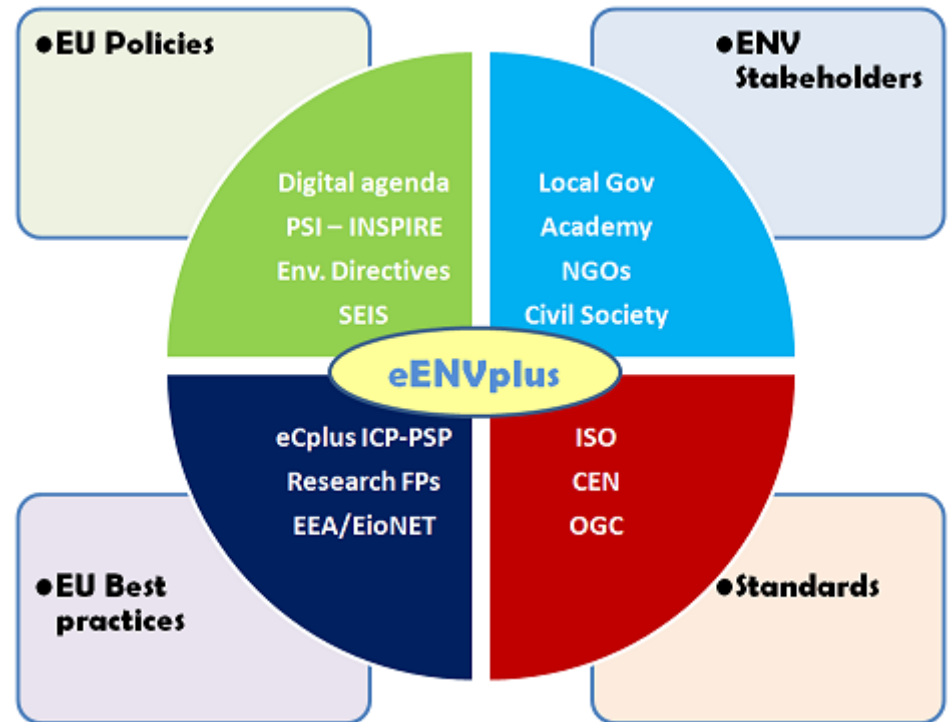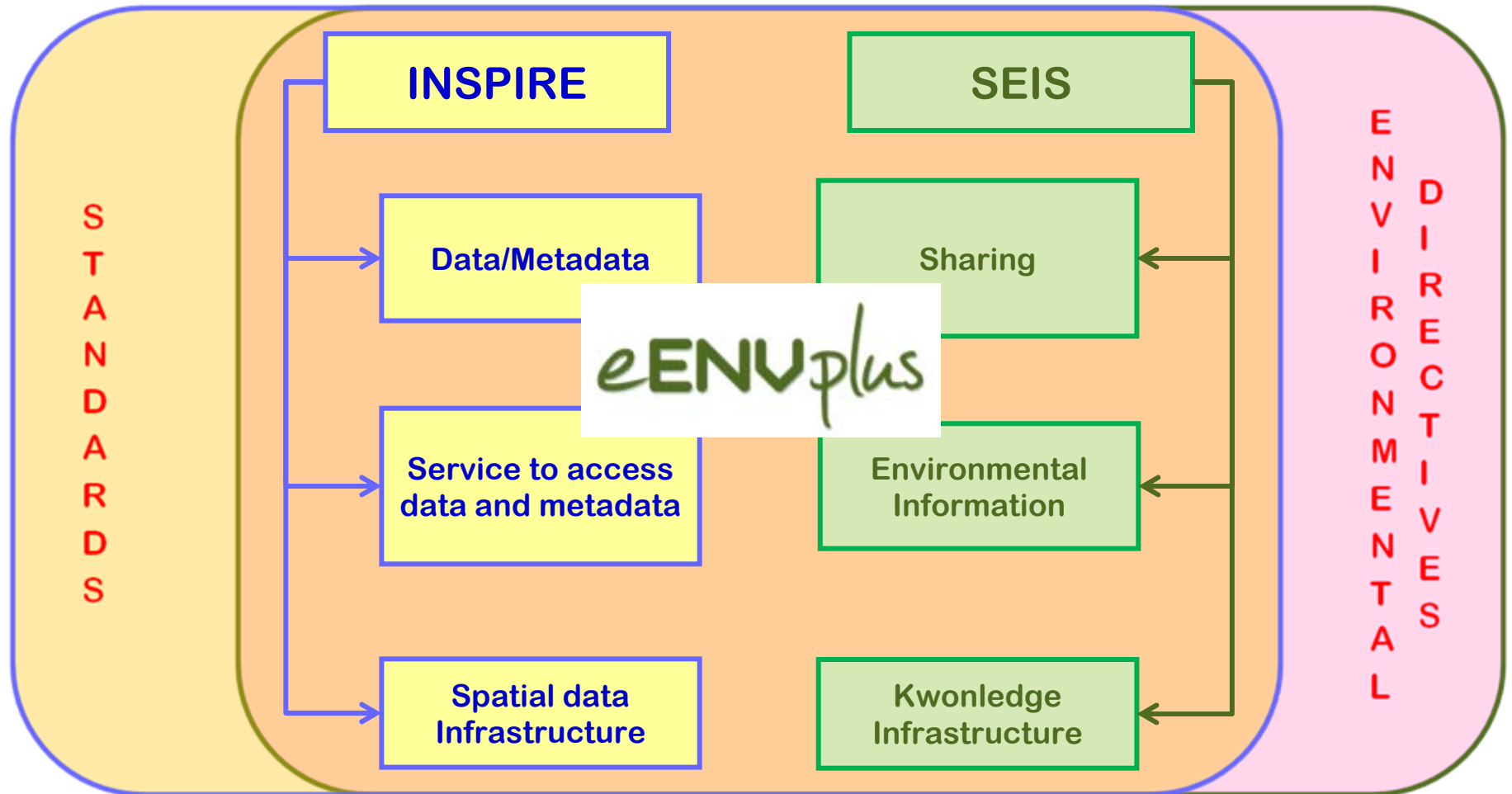
Key objective

- **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.

- EU Policies
  - Digital agenda
  - PSI – INSPIRE
  - Env. Directives
  - SEIS

- ENV Stakeholders
  - Local Gov
  - Academy
  - NGOs
  - Civil Society

eENVplus

- EU Best practices
  - eCplus ICP-PSP
  - Research FPs
  - EEA/EioNET

- Standards
  - ISO
  - CEN
  - OGC

Contribution to the EU policy

Metadata / data harmonisation   (1/2)
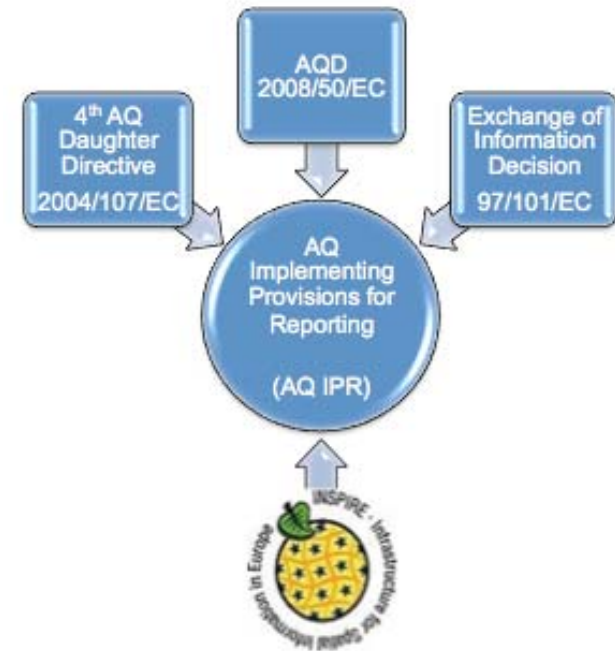
METADATA

- IR for metadata from 2008

- Good awareness between stakeholders

- consolidated solutions (INSPIRE geoportal tools)

DATA

- the complexity for understanding the models

- the physical building of the harmonised data through tools often complex and with not sufficient support

- the validation processes of the produced data which until now cannot be objectively and uniquely defined.

Metadata / data harmonisation   (2/2)

- implementing the environmental monitoring and reporting processes by the integration and adaptation of the existing EU directives (INSPIRE, ISA, eGov) and their implementing rules and guidelines, driving the process by the requirements and the constraints coming from the **operational application** of the directives in regional, national and European context.

Services requirements (1/2)

- **Five main classes of services has been identified**
  - ☐ Ingestion, harmonisation and validation services
  - ☐ Data access services
  - ☐ Processing services
  - ☐ Metadata services
  - ☐ Advanced services
- **The data access services represent the entry point for data processing ➔ an easy-to-use solution for setting data access services according to the reference standards**

Services requirements   (2/2)

- The processing services should be based as much as possible on standard interfaces that means to use the data access services as input/output interface protocols.

- the processing services are required to be open to standard data model (INSPIRE data themes) but also to consume service exposing not INSPIRE compliant data

Semantic interoperability

- the need to have at disposal a shared understanding on terms and meanings related to the different environmental themes. This is driven:
  - at top level by the INSPIRE directive but, overall,
  - by the harmonisation processes requested in operational analysis of heterogeneous datasets and services.

- ➔ shared terminologies and services to drive
  - the harmonisation of the data content
  - the provision of semantic services exploiting the harmonised content of the exposed data.

Strategic requirements (1/2)

- the feasibility to replicate the developed services in different thematic contexts as well as location contexts
  - to drive the design of the processing services to be independent by the data format and extent,
  - to separate the data ingestion by the data processing but respecting the IPR on data.

- The re-use needs ➔ open software development trend **minimizing the use of licensed tools** and components **to guarantee the re-usability** of the produced tools with low cost and low licences constraints.

- scalable design ➔ to modulate and to distribute the infrastructure components in distributed computational resources

Strategic requirements   (2/2)

- Making the eENVplus services operational means to make operational also the involved stakeholders which have to manage and exploit the designed technological solutions

- ➔ to support the stakeholders for building the capacity in organizing, managing and exploiting these new technologies through a set of actions focused on:

  - ☐ Increasing the awareness

  - ☐ Sharing the knowledge

  - ☐ Stimulating the cooperation and collaborations

- ➔ the exploitation of the Training framework

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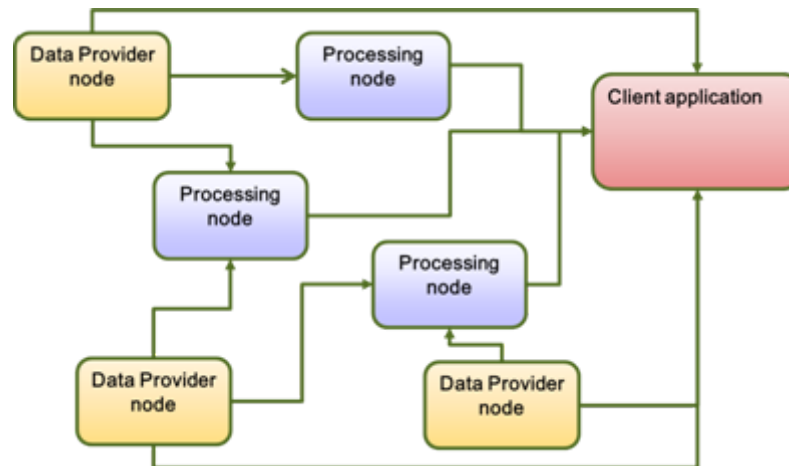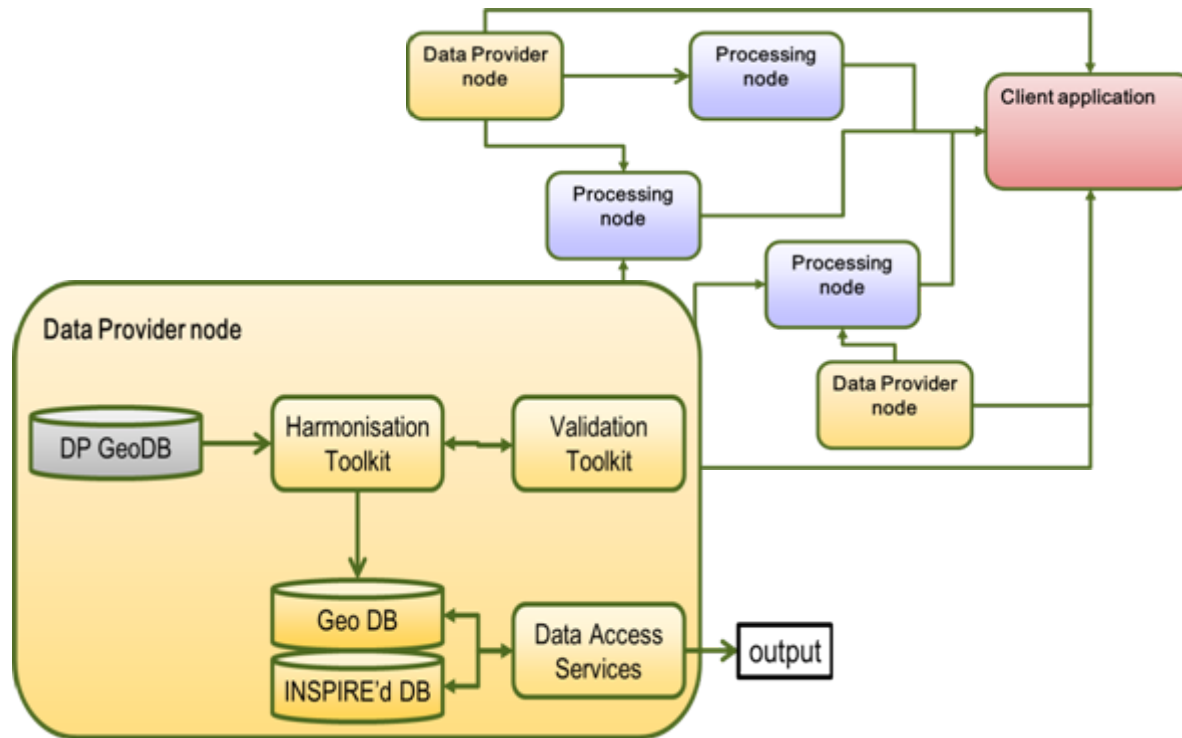

Software components

| Harmonisation Toolkit | Validation Toolkit | Data Access Services | Ingestion Services | Processing Services |
| Crowdsourcing Services | Thesaurus Framework | TF Exploitation Services | Authentication Services | Notification Services |

Data structure components

| Geo DB | INSPIRE'd DB | Metadata | Triple store | Crowd data |

The eENVplus infrastructure is composed by different nodes which are linked between them through input/output interface protocols realised by the ingestion services (input) and data access service (output).

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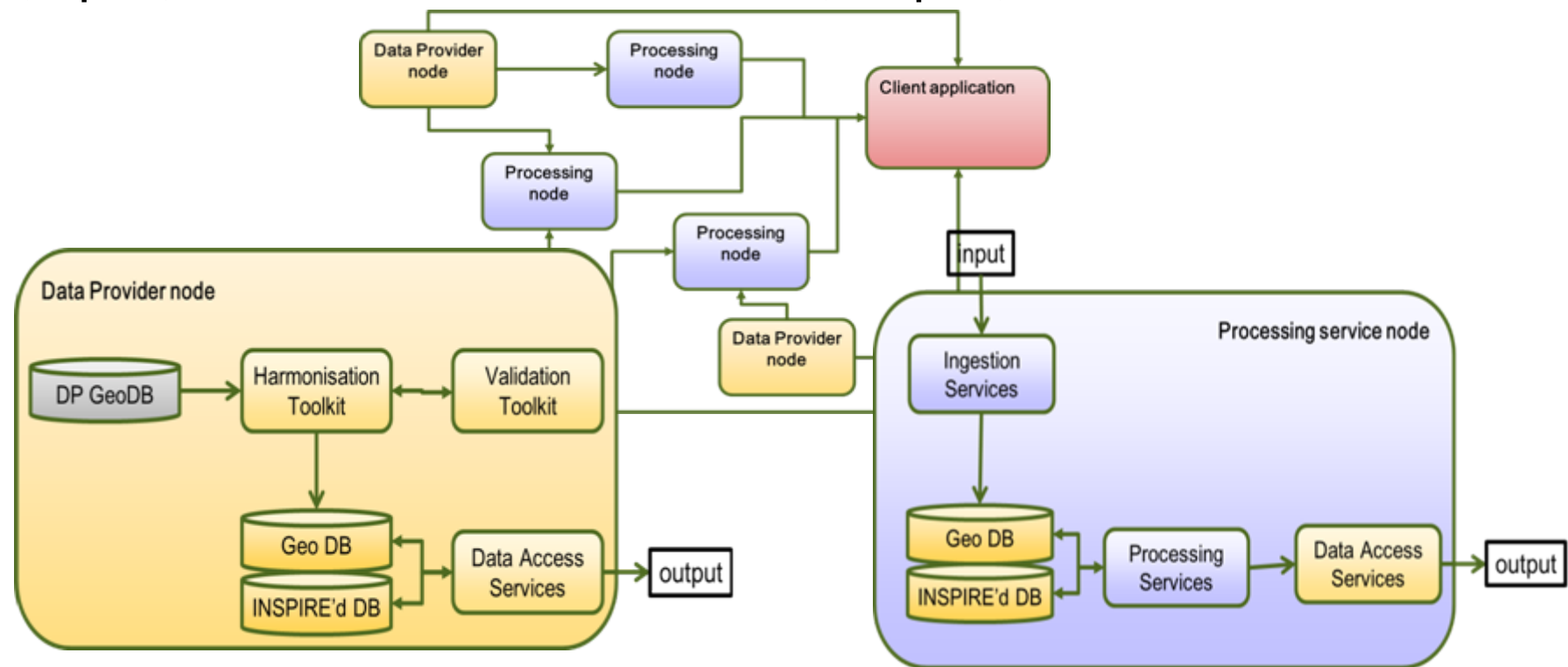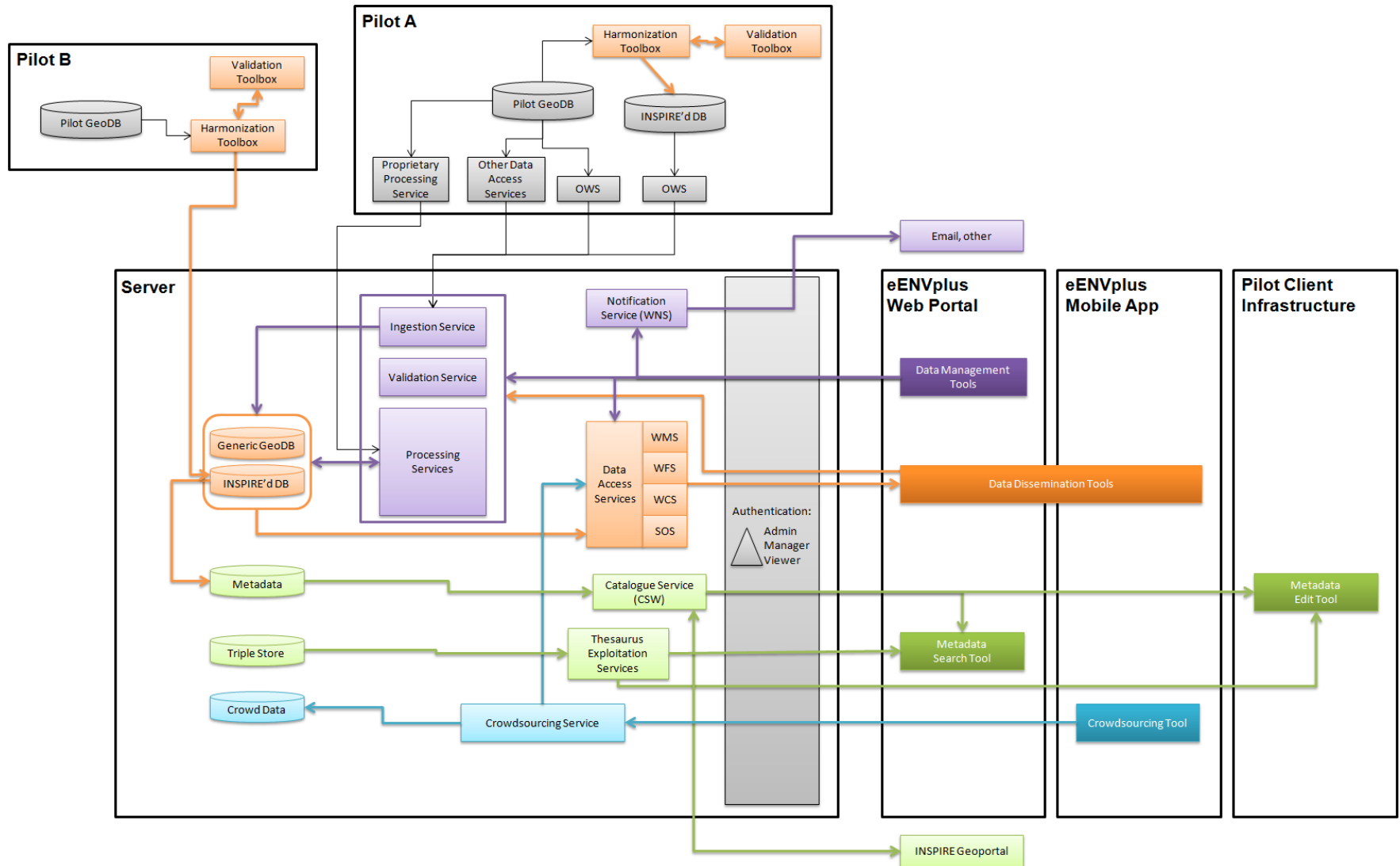
DIGITAL AGENDA FOR EUROPE

A Europe 2020 Initiative

Open up public data resources for re-use

European Union Location Framework

Re-usable INSPIRE Reference Platform

Improving semantic interoperability in EU eGov system

Main eENVplus goals

➢ The provision of an **interoperable** solution to share and process geo-spatial data in order to provide added value information and services to be shared in a cross-language, cross-scale and cross-thematic environment

➢ The provision of **re-usable** solutions, in term of open data, open services, open components, open infrastructures, open applications

➢ The **contribution to the European policies** and international standards in the frame of the European eGovernment actions, with a special attention to the EU Directives like INSPIRE, PSI, the Environmental Directives (Air, Water, Habitas, Flood, Waste, etc.) based on the best practices coming from the application in real and heterogeneous contexts of the eENVplus infrastructure.

In Perspective

- eENVplus Infrastructure is the base for including new applications and new services also within future projects at a European and National level
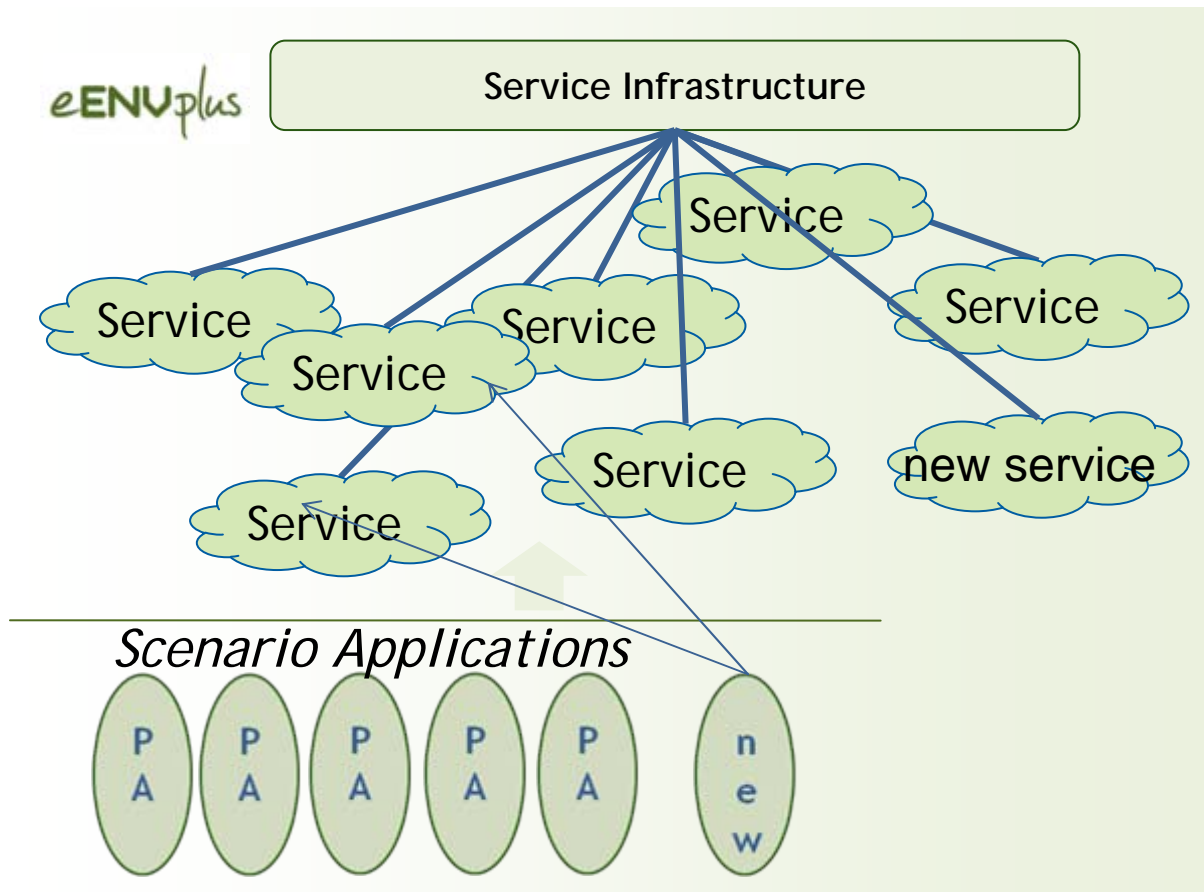
- eENVplus will be then the Framework for implementing/use/sharing eEnvironmental services

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

Thank You!

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