eENVplus Infrastructure

Umberto Di Staso

Fondazione Graphitech

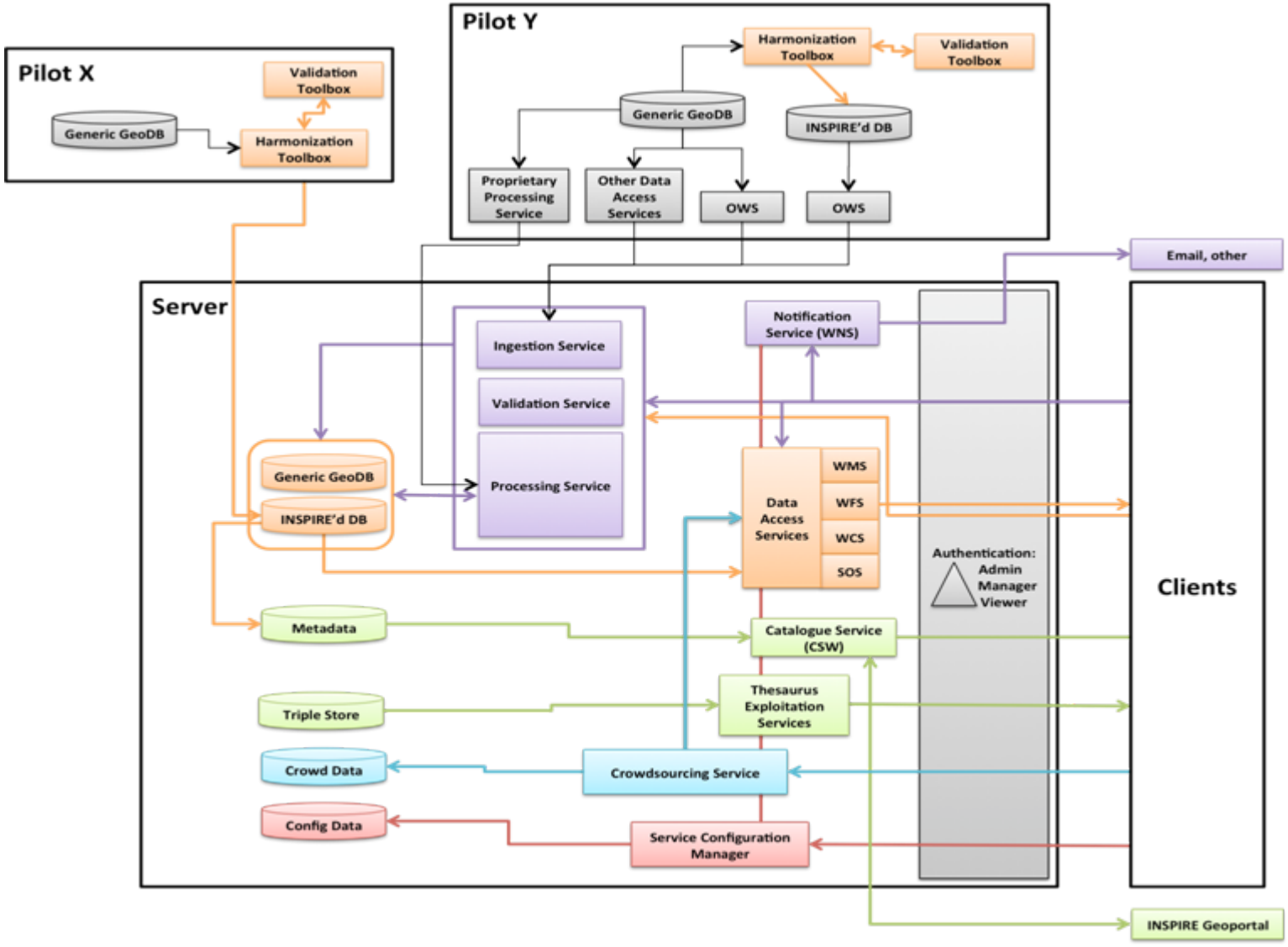
eGovernment and web services: the eENVplus approach opening new operational solutions

eENVplus Infrastructure

The eENVplus infrastructure includes:

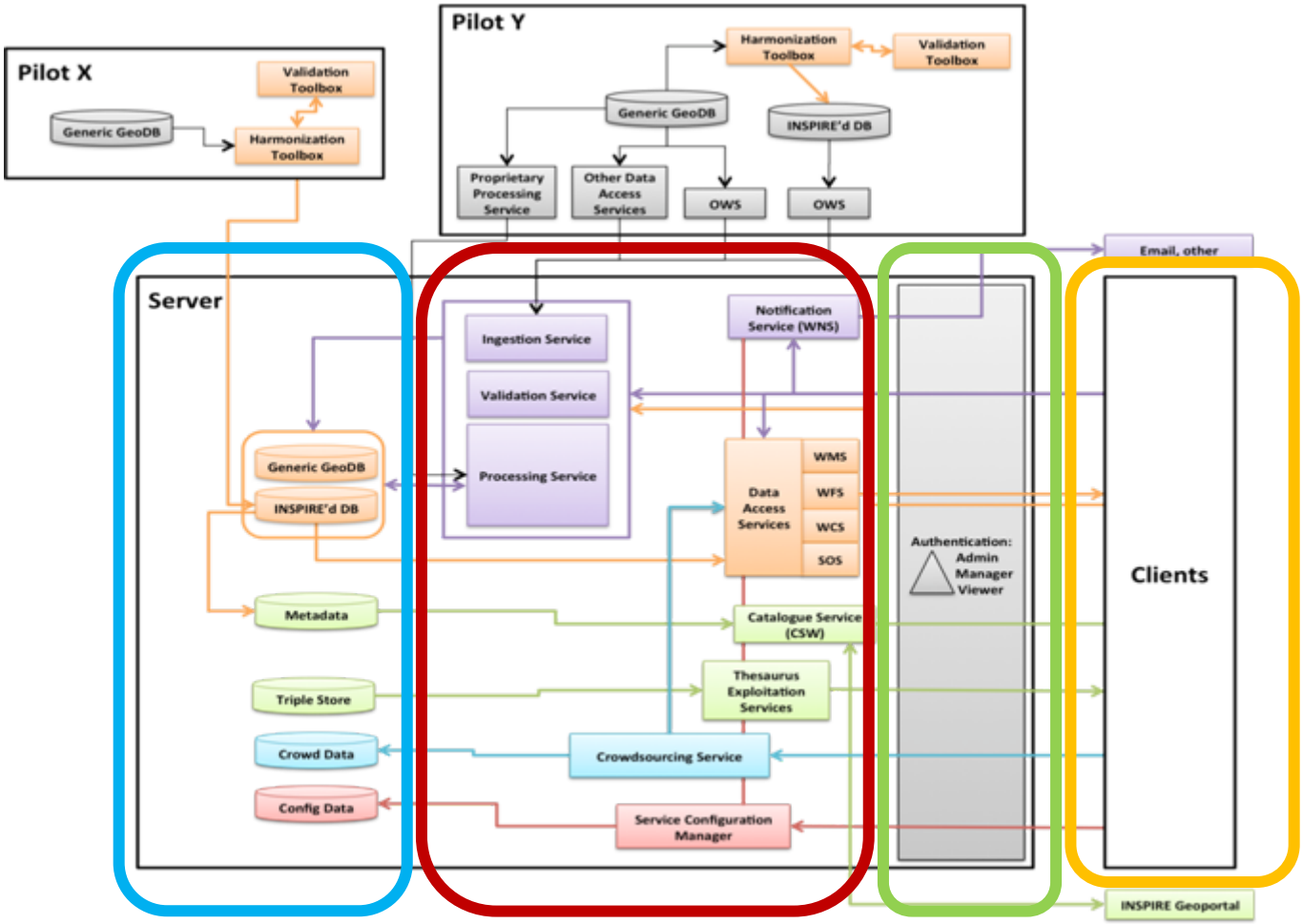
- A set of web services for data access, data ingestion and data exposal.
- A set of server-side features to manage advanced geo-processing services.
- A set of clients used to use the offered services.

Proposed Architecture



eENVplus Infrastructure

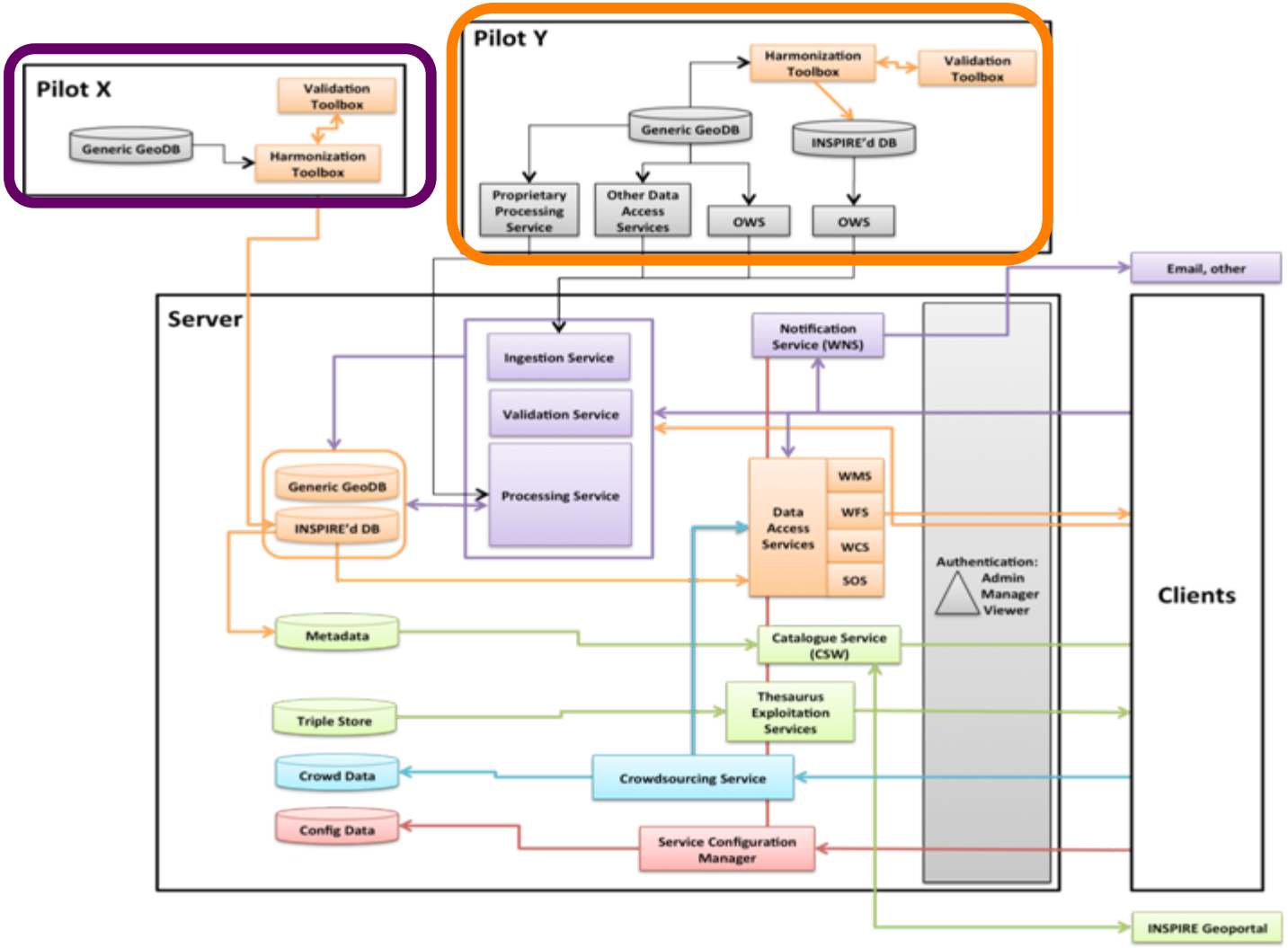
Data Layer | Middlewar Layer | Security Layer | Application Layer



Architecture Layers

- Data Layer: set of databases that have to be set up to store provided data
- Middleware Layer: core of the infrastructure, contains the set of components used to ingest and expose data
- Security Layer: intermediate layer that manages access to resources
- Application Layer: contains the eENVplus client applications

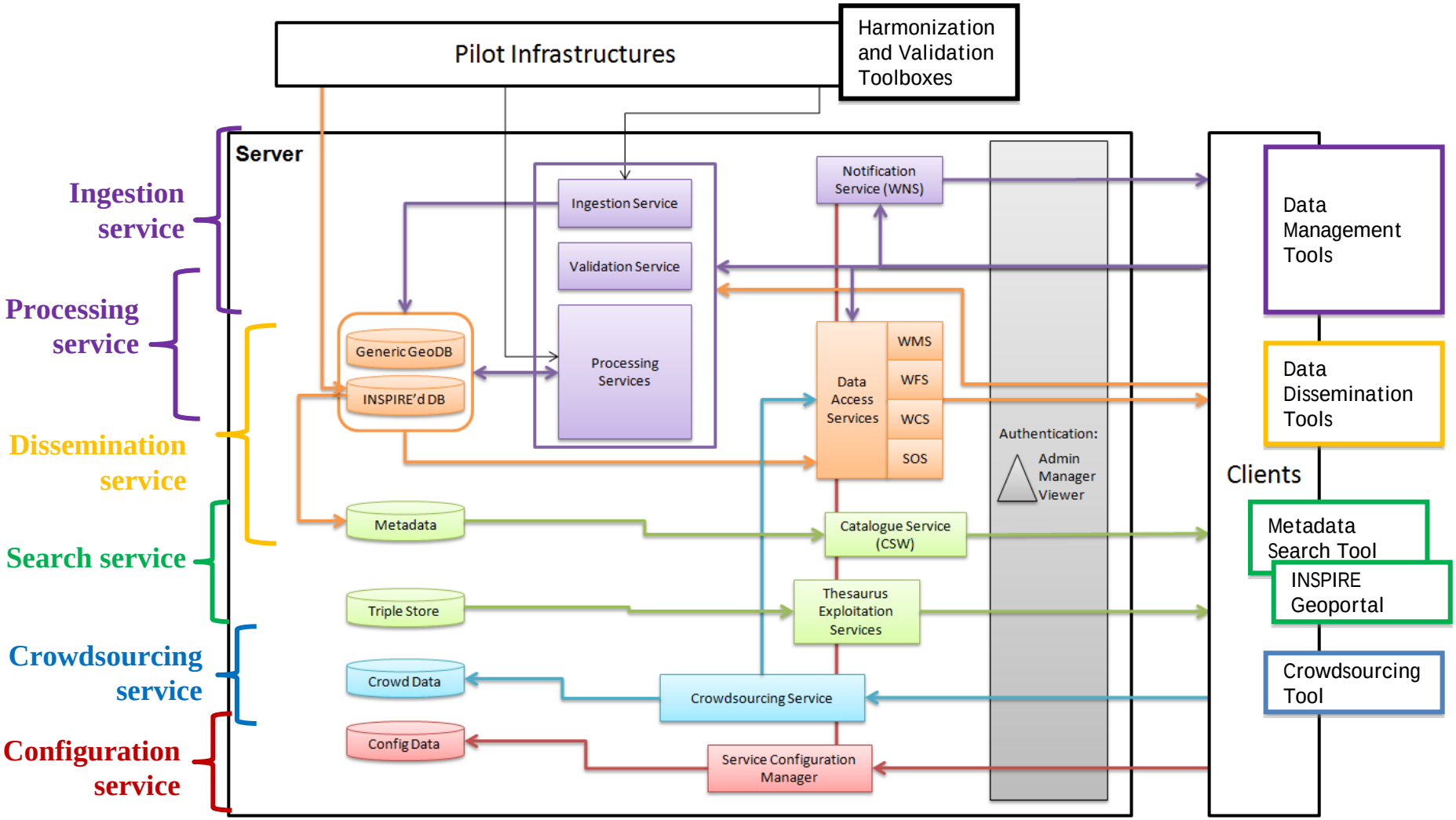
eENVplus Infrastructure



Architecture Layers

- Pilot X: pilot who haven't its own SDI and it is not able to expose data.
- Pilot Y: pilot who is able to expose data in some way (OWS – INSPIRE web services – proprietary web services).

Service Layers



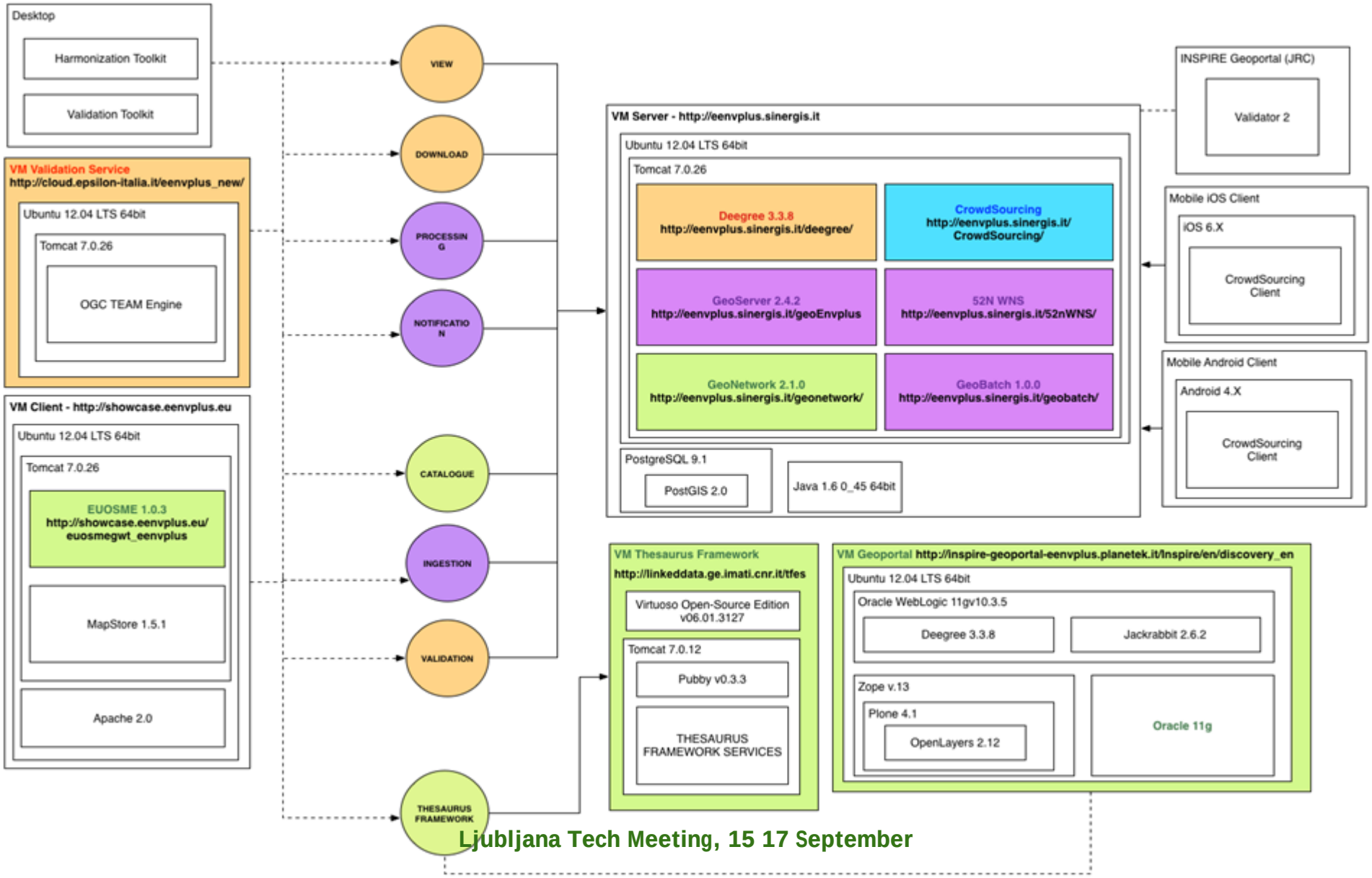
Service Layers

- Ingestion Service: contains the set of software components used to manage the ingestion of data provided by pilots in the eENVplus infrastructure
- Processing Service: contains the set of web services used to fulfill the requirements about processing (WPSs)
- Dissemination Service: contains the software components that allows users to access data by the use of INSPIRE compliant web services

Service Layers

- Search Service: contains the software components used to perform semantic search in the metadata catalog
- Crowdsourcing Service: data and software structure that allows users to enrich the set of data available by giving theirs contribution

Component Diagram



Component Diagram

- The core of the eENVplus infrastructure is composed by a set of free and open source software:
  - Deegree 3.x: used for the generation of the PSEUDO-INSPIRE database, that allows the ingestion of INSPIRE compliant GMLs
  - GeoServer 2.4.x: used for processing services and streaming of non-harmonized datasets
  - GeoBatch 1.0: used for the ingestion of non-harmonized datasets

Component Diagram

- The core of the eENVplus infrastructure is composed by a free and open source software:
  - GeoNetwork: used for storeing dataset's metadata
  - INSPIRE metadata editor (custom): used for publishing or editing metadata
  - INSPIRE geoportal (custom): used for discovery services
  - OGC Team Engine (custom): used for validating INSPIRE compliant datasets against their specific data theme

Thank you