# Pilot Applications deployment

ISPRA- Geological Survey of Italy
Carlo Cipolloni

Workshop INSPIRE Conference 2014 – Aalborg 17th June

# Scenarios >> Pilots: INSPIRE Data Themes

- In 10 pilots, 9 Scenarios, 3 cross-border


| Scenario Title | ENV Aspect | Pilots |
|---|---|---|
| Implementation of a SEIS for air quality data | Air Quality | BELGIUM |
| | | ITALY |
| Providing INSPIRE-compliant access to utility services: the case of sewage networks in Flanders | Water | BELGIUM |
| CSspire | Everyday life issues connected to Environmental aspects | CZECH REPUBLIC / SLOVAKIA |
| Natural Areas INSPIRE Compliance Toolbox | Nature Conservation | FRANCE |
| Forest Fire Management Scenario | Environmental Risk (Fire) | GREECE |
| Window on the Protected Areas - Mobile Conservation Map (WMA MCM) | Nature Conservation | HUNGARY / SLOVAKIA |
| INSPIRE Geoportal | Nature conservation | ICELAND |
| Geological Map Harmonization | Environmental Risk (Geohazard) | ITALY / SLOVENIA |
| Urban Ecological Landuse Planning | Ecological Landuse Planning | PORTUGAL |

# Scenarios >> Pilots: INSPIRE Data Themes

- In 10 pilots, 9 Scenarios, 3 cross-border

| | BE | CZ | FR | GR | HU | IS | IT | PT | SK | SL |
|---|---|---|---|---|---|---|---|---|---|---|
| **ANNEX I** | | | | | | | | | | |
| 1. RS: Coordinate reference systems | | | | | | ✔ | | | | |
| 4. AU: Administrative units | | | | | | ✔ | | ✔ | | |
| 6. CP: Cadastral parcels | | ✔ | | | | | | | | |
| 8. HY: Hydrography | ✔ | ✔ | | | ✔ | | | | ✔ | ✔ |
| 9. PS: Protected sites | | ✔ | ✔ | | ✔ | ✔ | | | ✔ | |
| **ANNEX II** | | | | | | | | | | |
| 2. LC: Land cover | | ✔ | | ✔ | | | | ✔ | ✔ | |
| 3. OI: Orthoimagery | | | | | | | | ✔ | | |
| 4. GE: Geology | | | | | | | ✔ | | | ✔ |
| **ANNEX III** | | | | | | | | | | |
| 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 management/ restriction/ regulation zones & reporting 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 | | | ✔ | | | | | | ✔ | |

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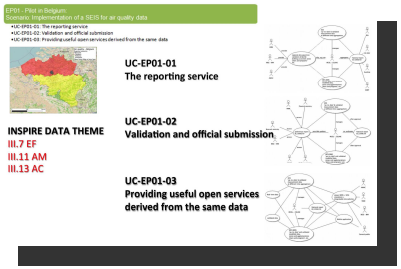
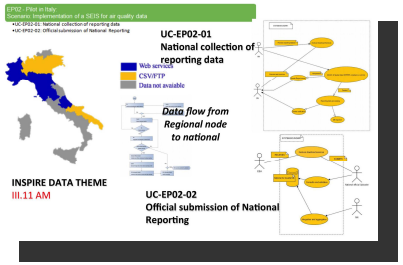
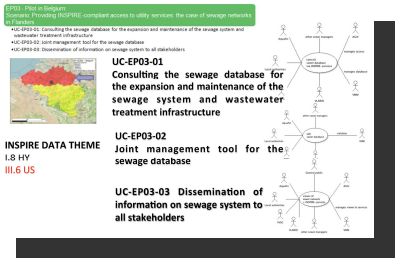
| Landuse Planning | Ecological Landuse Planning | PORTUGAL |

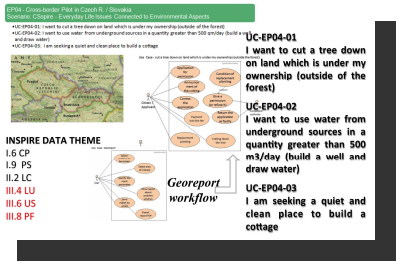
21 INSPIRE Data themes

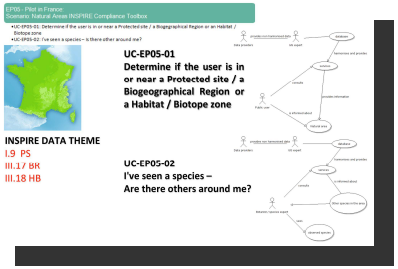
# Pilots definition

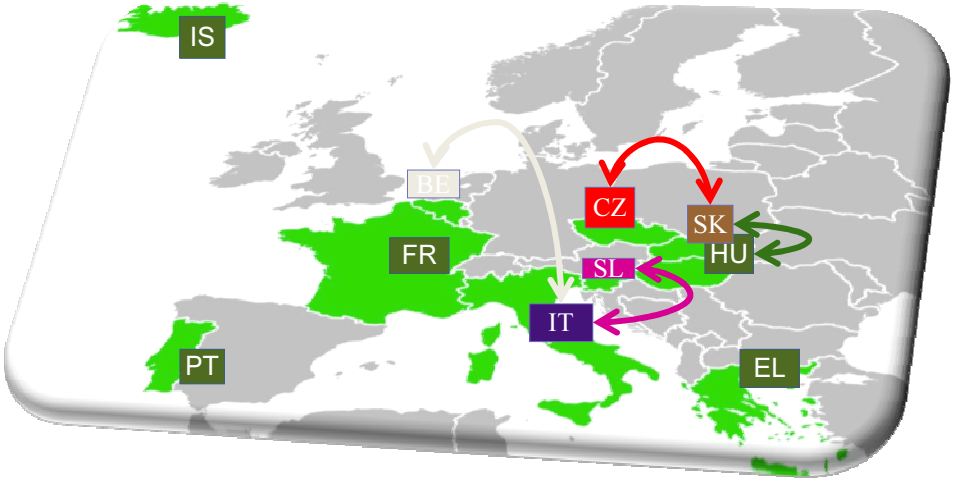


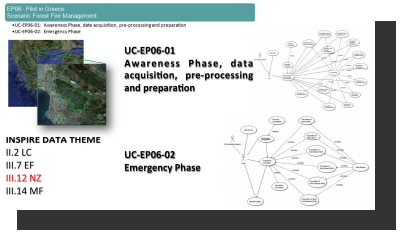



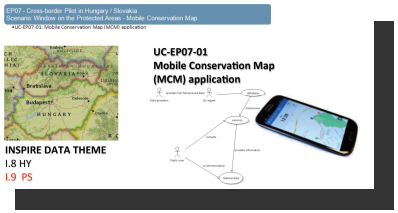



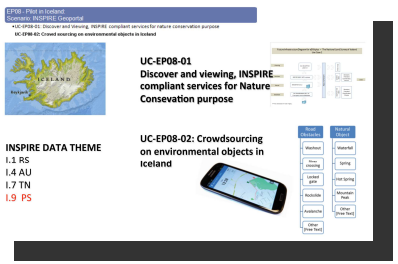



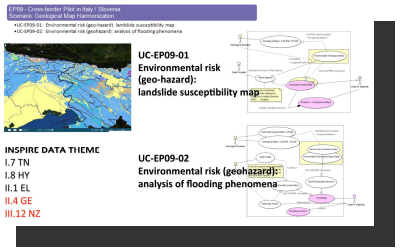



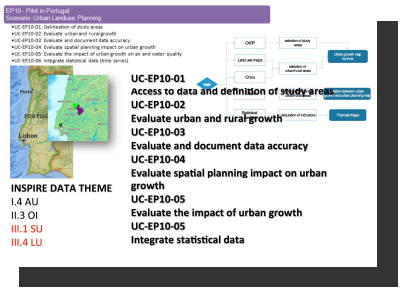



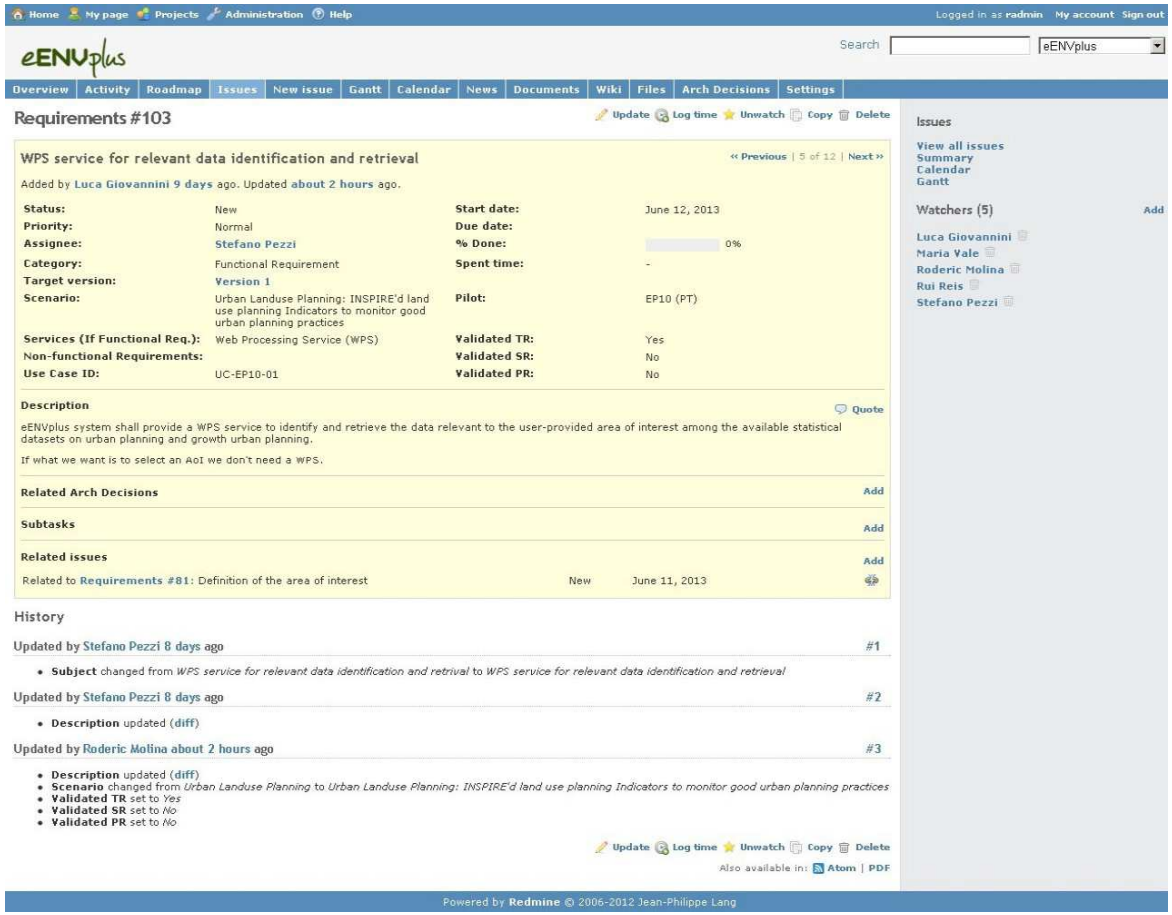



# User requirments

First year has dedicated to define the user requirements

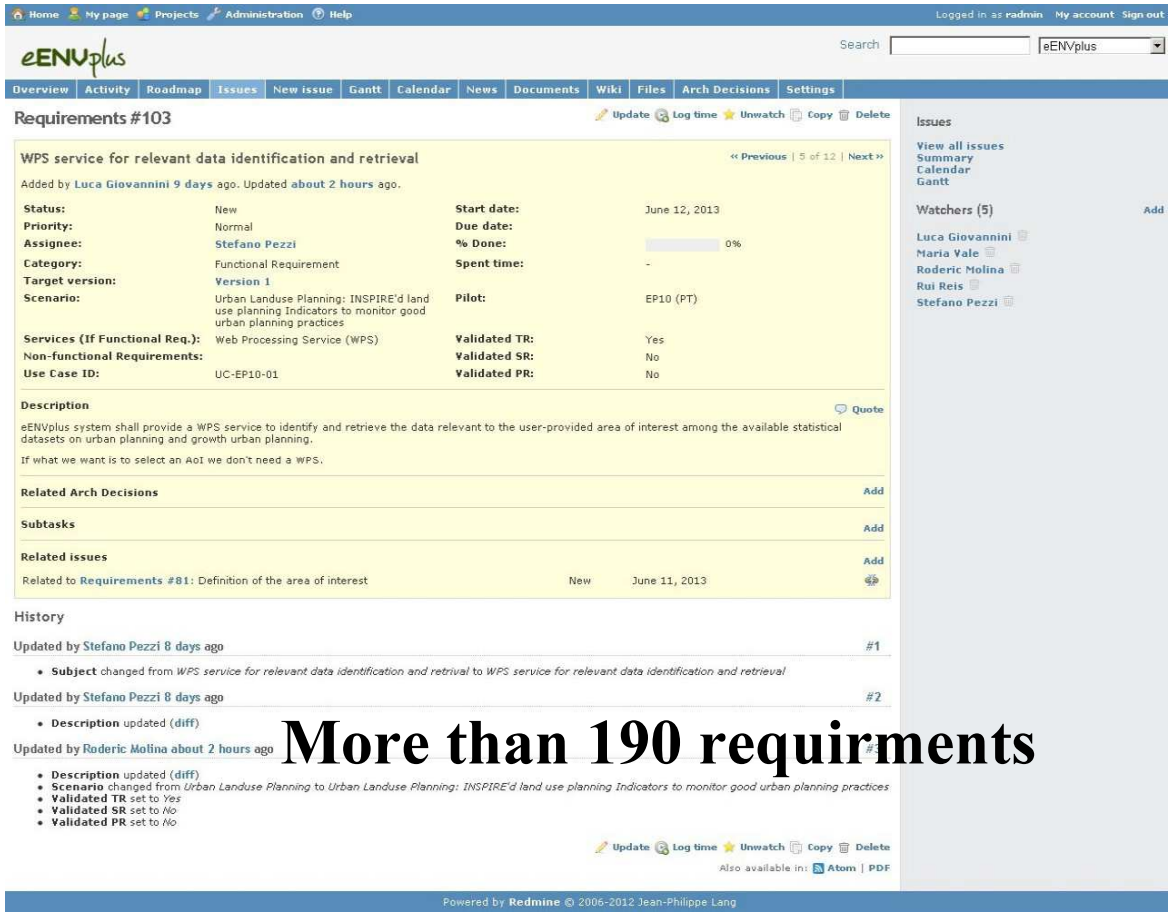


# User requirments

## First year has dedicated to define the user requirements

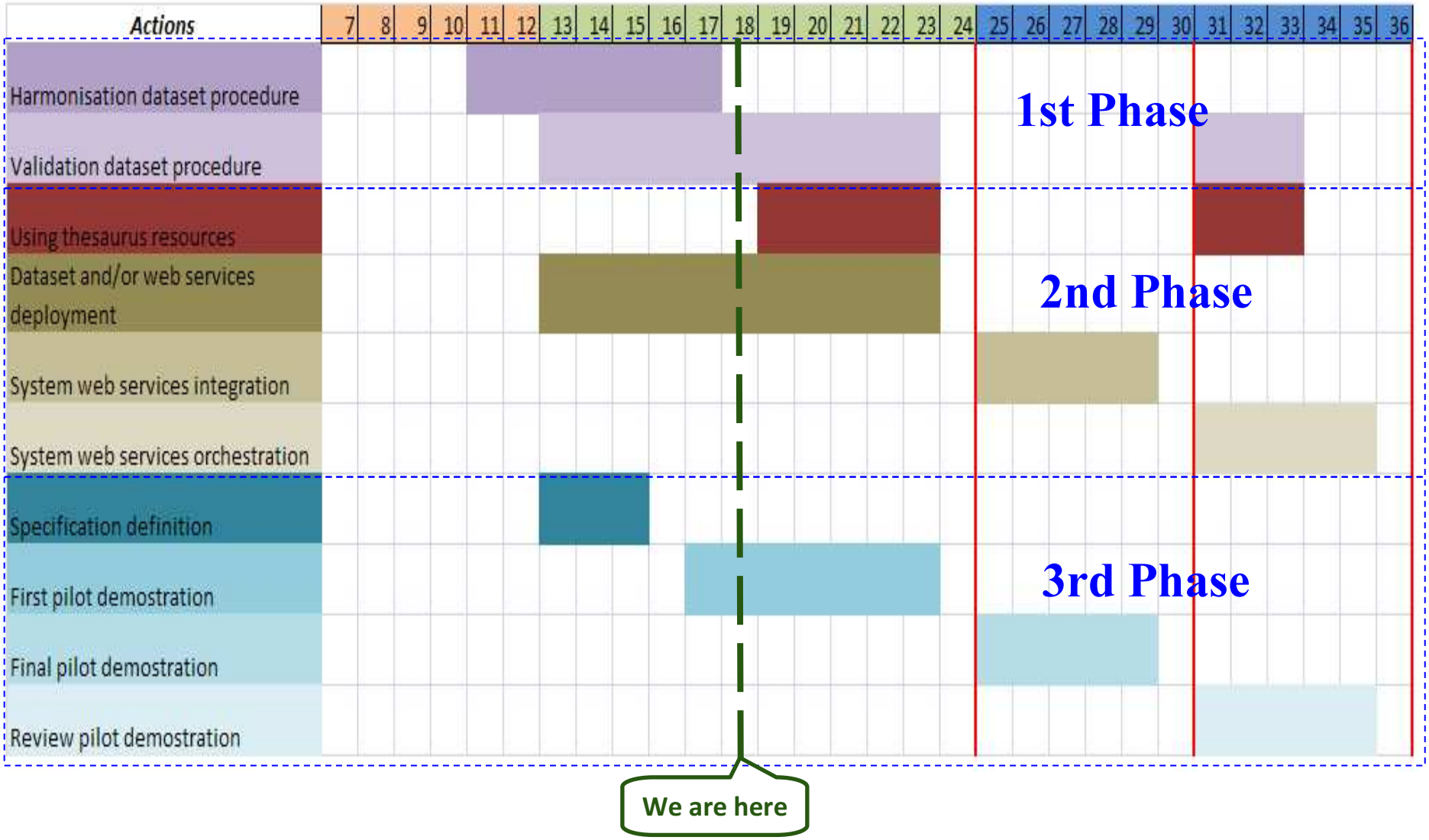
eENVplus user & system requirements are tracked in a shared system stimulating & structuring communication between partners.

**Redmine** (http://www.redmine.org/)
project management and
bug-tracking tool
GNU General Public License v2 (GPL)



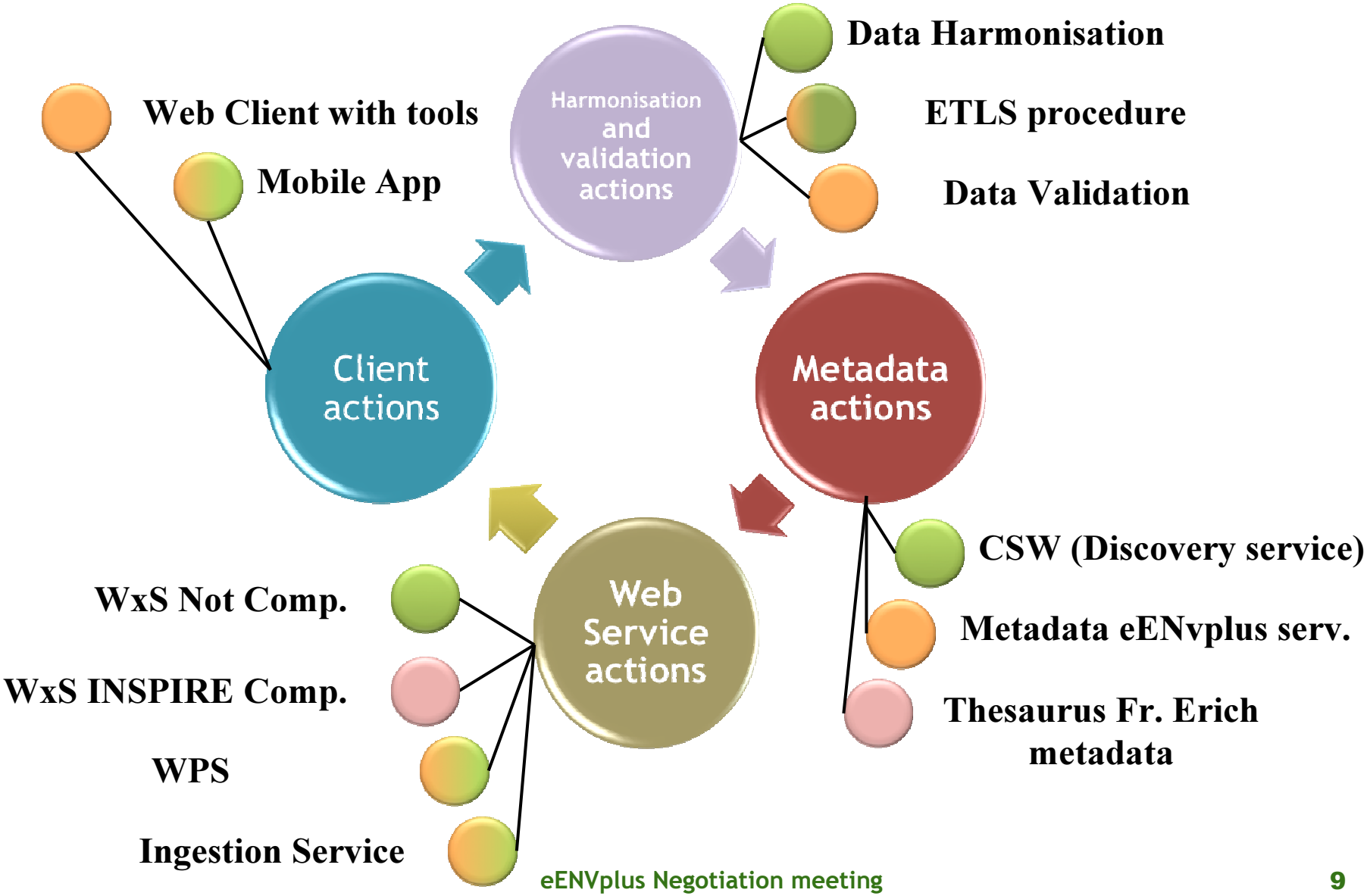

**More than 190 requirments**

# eENVplus Pilots implementation plan

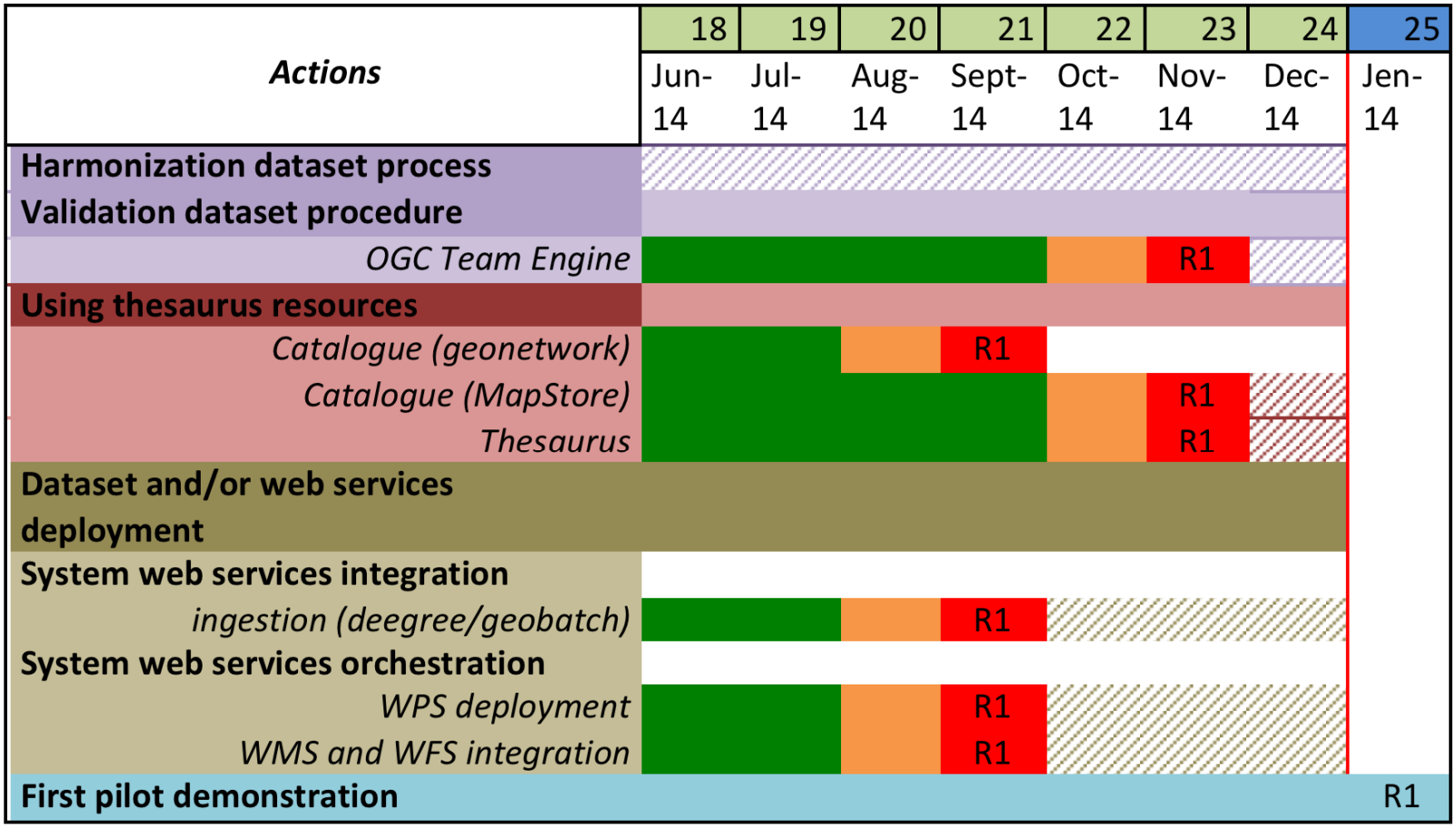


# Resolution Conflict

# Pilots development



# Pilots development



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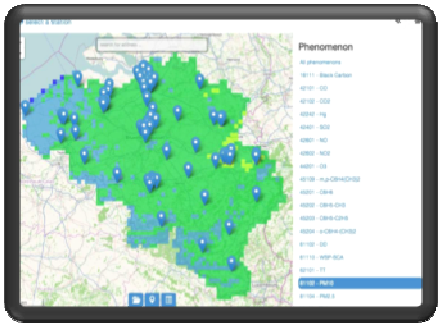
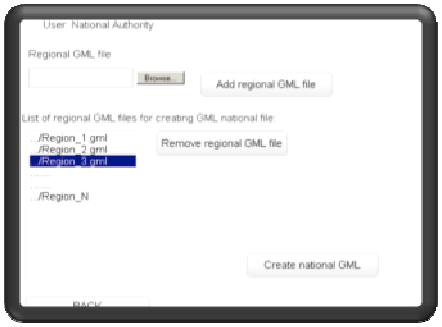
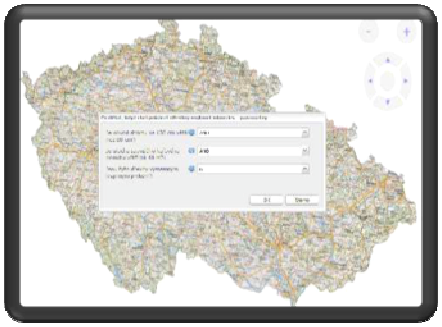
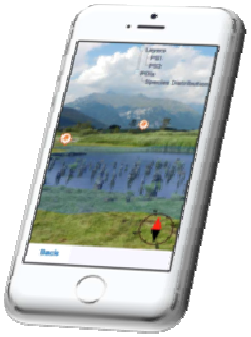
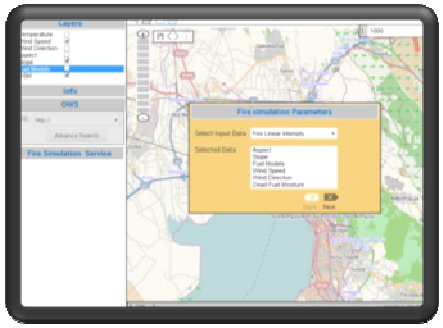
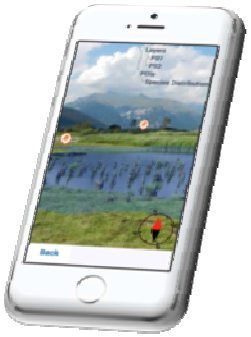


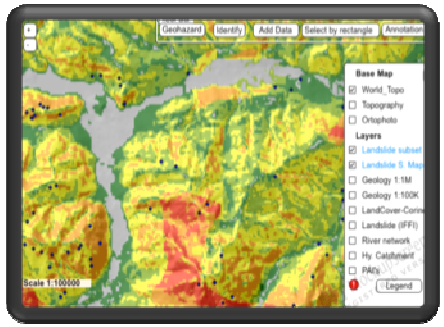



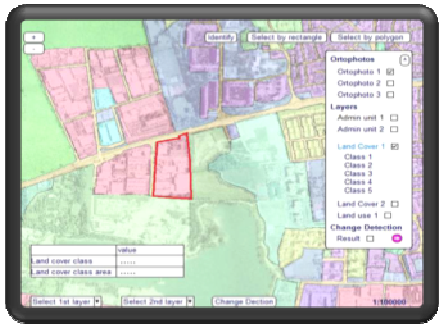







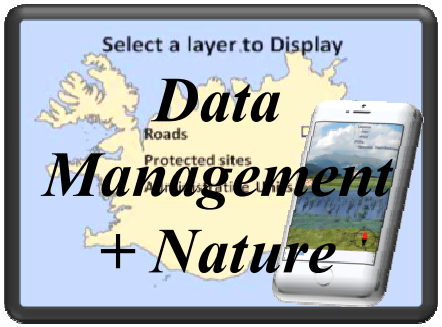



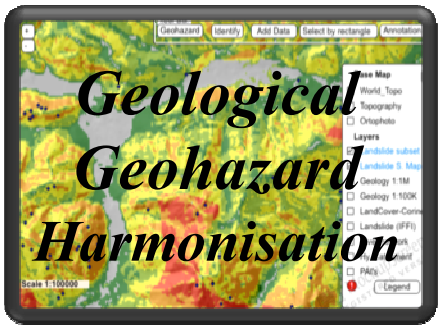
# Pilots development







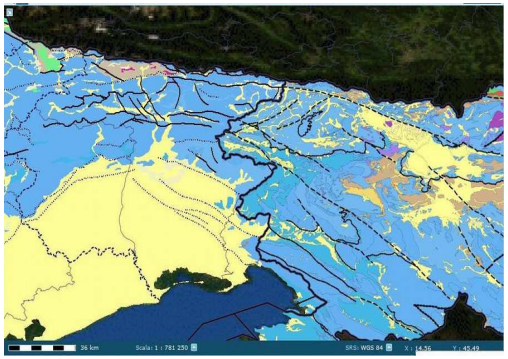




# The Geological harmonisation pilot

## A short example of pilot development

# Pilot development example

## Starting from OneGeology- Europe activity



- OneGeology-Europe dataset
- Evaluate litho-stratigraphic anomalies
- Solve semantically and geometrically problems
- Using 1GE vocabularies
- Mapping in GE INSPIRE data model

# Pilot development example

## Using OneGeology- Europe approach

- Geological Map 1:100k dataset
- Evaluate lithology + cronostratigraphic anomaly contact
- Solve semantically problems and feasible geometrically
- Using CGI-IUGS vocabularies
- Mapping in INSPIRE extension GeoSciML 3.2 data model

# Harmonising procedure

## CGI Vocabularies used

**International Chronostratigraphic Chart (2013)**

http://resource.geosciml.org/vocabulary/cgi/201211/ + timescale/isc-2013.rdf

**CGI Simple Lithology Categories**

+ SimpleLithology201211.rdf

**CGI compound Material Constituent Part Role vocabulary**

+ CompoundMaterialConstituentPartRole201211.rdf

**CGI Proportion Term Vocabulary**

+ ProportionTerm201211.rdf

**CGI Event Environment Categories**

+ EventEnvironment201211.rdf

**CGI Event Process Categories**

+ EventProcess201211.rdf

**CGI Geologic unit type vocabulary**

+ GeologicUnitType201211.rdf

**CGI Consolidation Degree Term Vocabulary**

+ ConsolidationDegree201211.rdf

**CGI Foliation Type categories**

+ FoliationType201211.rdf

# Harmonising procedure

## WFS INSPIRE compliant


```
– <wfs:FeatureCollection xsi:schemaLocation="http://inspire.ec.europa.eu/schemas/ge-core/3.0rc3 http://inspire.jrc.ec.europa.eu/draft-schemas/ge-core/3.0rc3/GeologyCore.xsd">
  – <gml:featureMember>
    – <ge:MappedFeature gml:id="FeatureID1">
        <gml:identifier codeSpace="http://sgi.isprambiente.it/geodata/">Geo1MDB</gml:identifier>
      + <ge:shape></ge:shape>
        <ge:mappingFrame xlink:href="http://sweet.jpl.nasa.gov/ontology/earthrealm.owl#LandSurface"/>
        <!-- Geological part -->
      – <ge:specification>
        – <ge:GeologicUnit id="GU_1">
          – <ge:inspireId>
            – <base:Identifier>
                <base:localId>InspireID_1</base:localId>
                <base:namespace>ISPRASGI_Geo</base:namespace>
              </base:Identifier>
            </ge:inspireId>
            <ge:name>Geo1MDB_G_1</ge:name>
          – <ge:geologicHistory>
            – <ge:GeologicEvent id="EventID_1">
              – <ge:name>
                  Def: Deltaic, alluvial and coastal plain deposits; aeolian deposits
                </ge:name>
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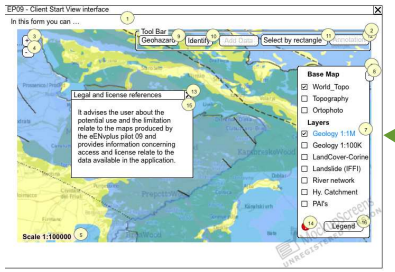
# Use case procedure chain

# Use case procedure chain

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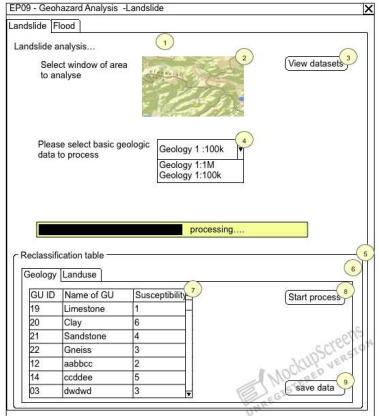


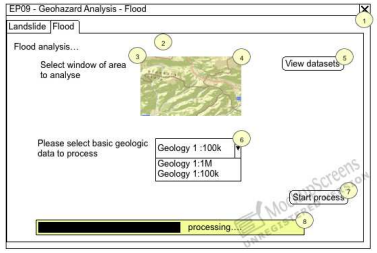


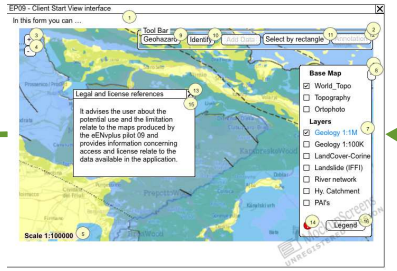


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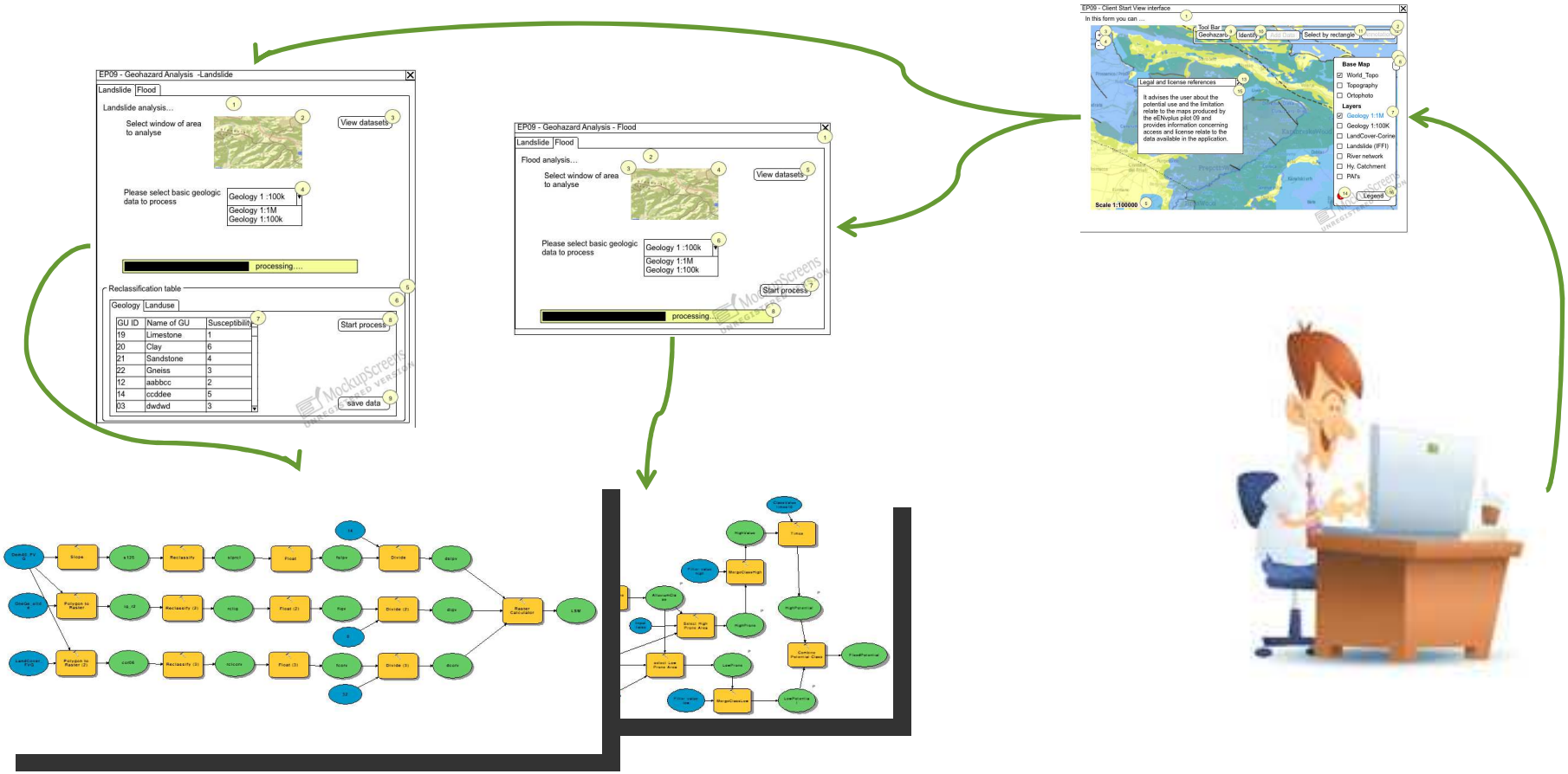

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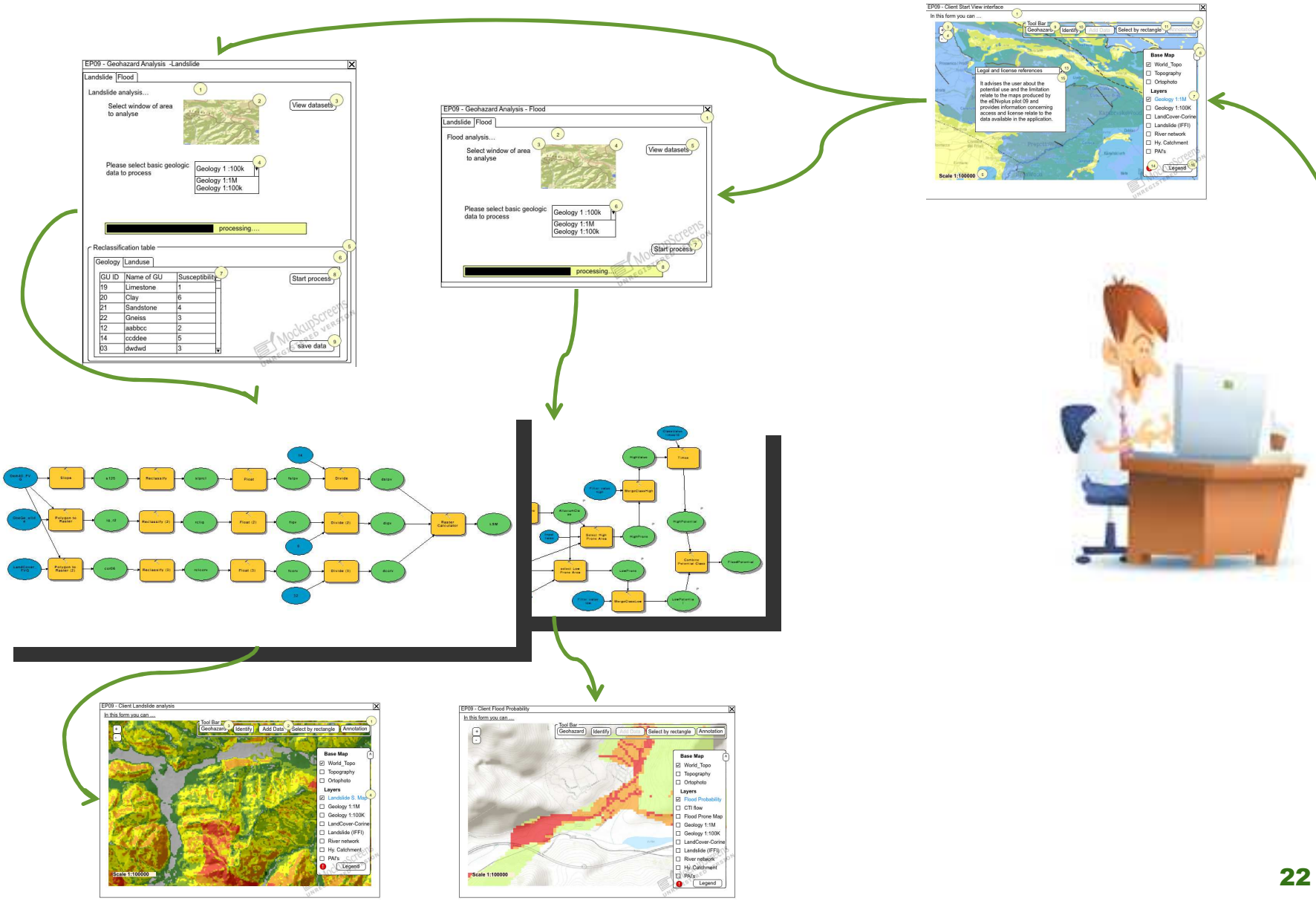

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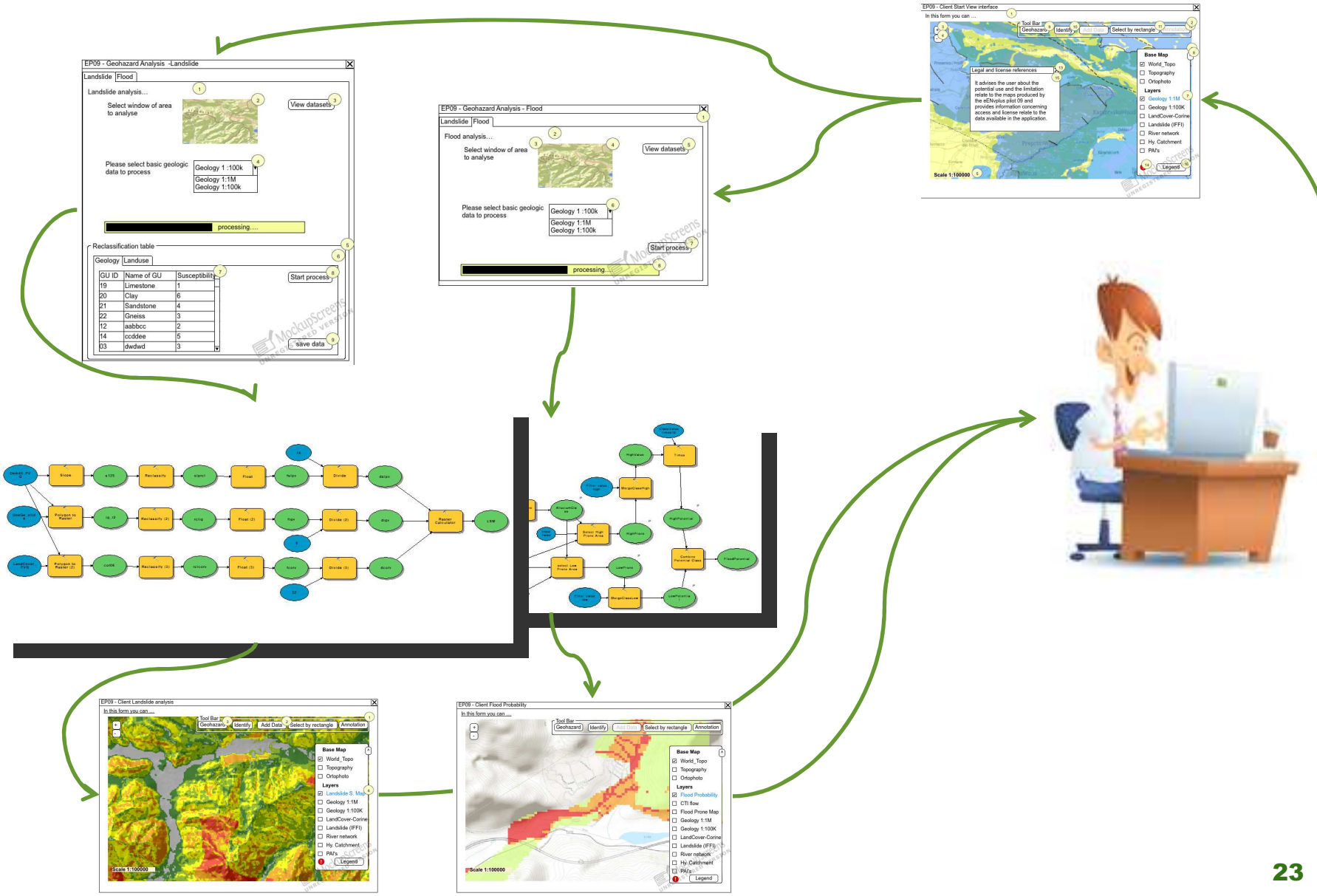
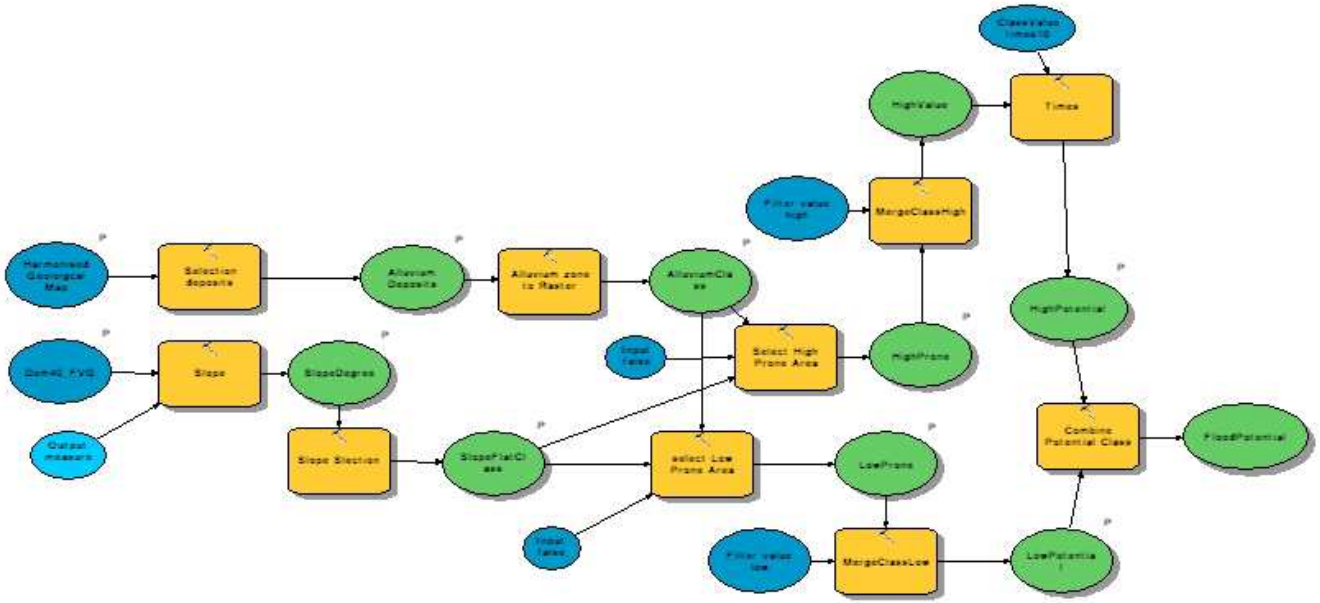


# Flood procedure



# Flood procedure

**Geology 1:1M OneGeology-Europe served in GE INSPIRE Data Model**

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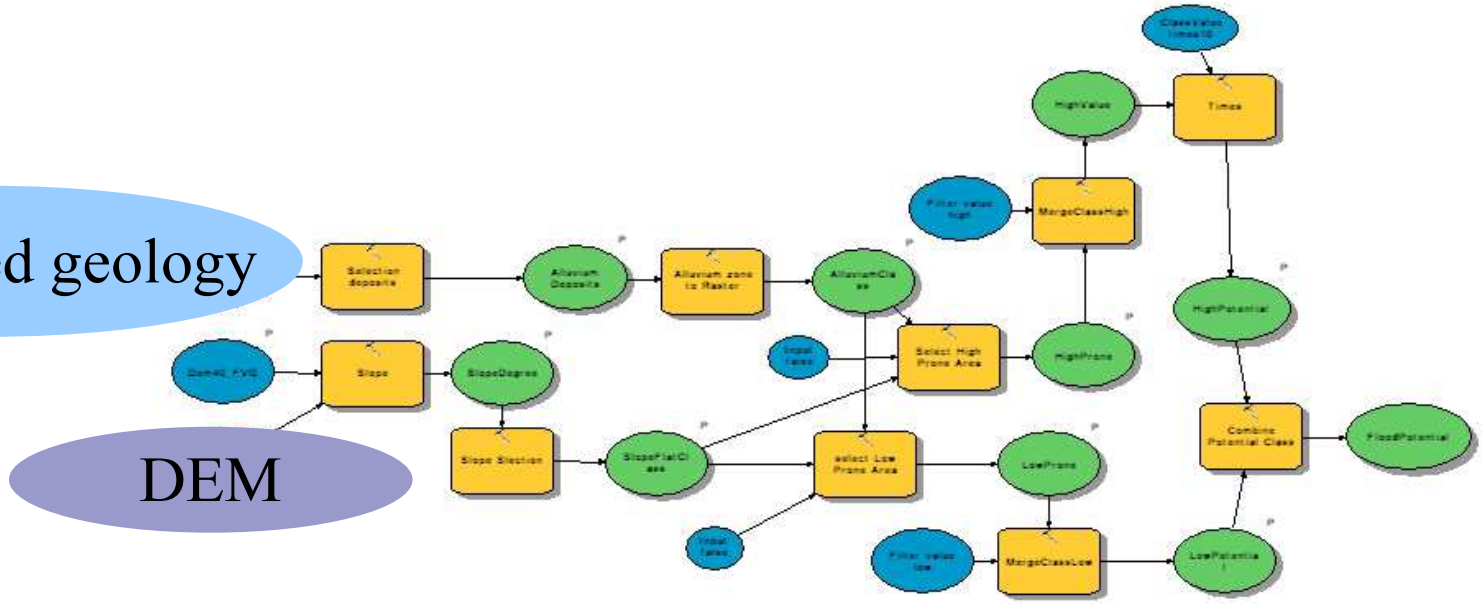
Harmonised geology

DEM



# Flood procedure

**Geology 1:1M OneGeology-Europe served in GE INSPIRE Data Model**

<ge:eventEnvironment
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**Geology 1:100k GeoSciML 3.2 Data Model**

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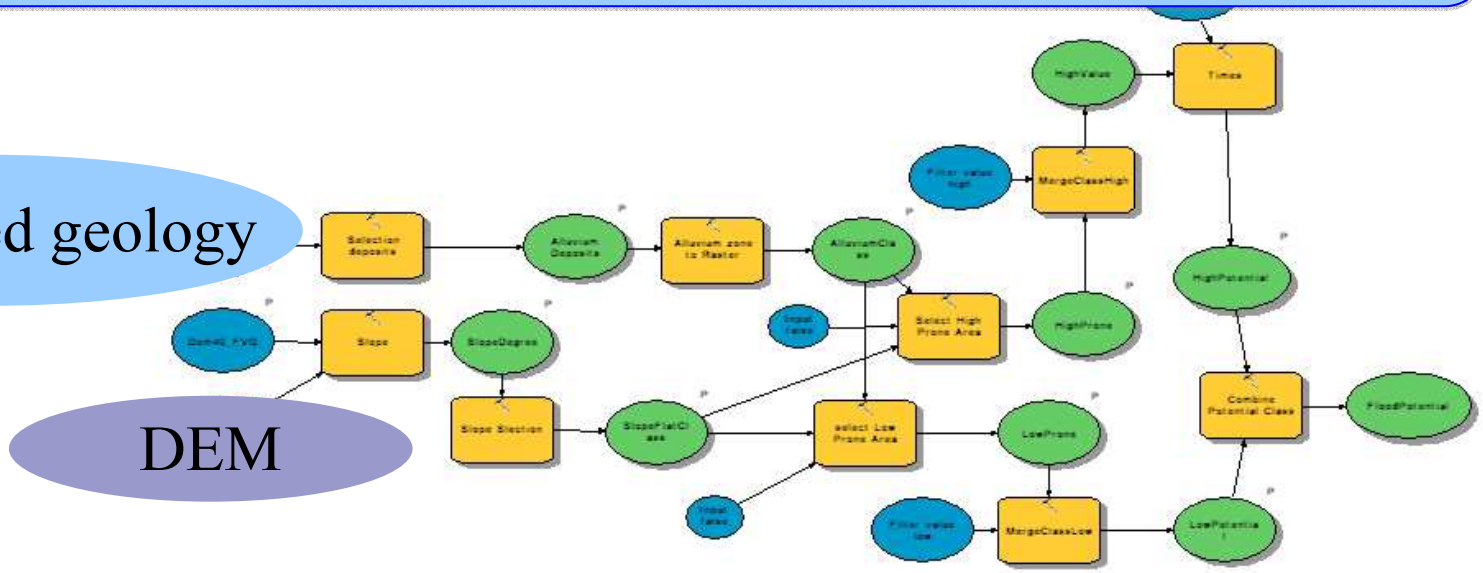
Harmonised geology

DEM



# Thank you for the attention!

# ? Questions

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