

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			✓						✓	

o Title	ENV Aspect	Pilots
EIS for air quality data	Air Quality	BELGIUM
		ITALY
Compliant access to utility age networks in Flanders	Water	BELGIUM
...pire	Everyday life issues connected to Environmental aspects	CZECH REPUBLIC / SLOVAKIA
...E Compliance Toolbox	Nature Conservation	FRANCE
...gement Scenario	Environmental Risk (Fire)	GREECE
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Geoportal	Nature conservation	ICELAND
Harmonization	Environmental Risk (Geohazard)	ITALY / SLOVENIA
Landuse Planning	Ecological Landuse Planning	PORTUGAL

21 INSPIRE Data themes

EP01 - Pilot in Spain
 Scenario Implementation of a SES for air quality data

- UC-EP01-01: Reporting service
- UC-EP01-02: Validation and official submission
- UC-EP01-03: Providing useful open services derived from the same data

INSPIRE DATA THEME
 III.7 EF
 III.11 AM
 III.13 AC

EP02 - Pilot in Italy
 Scenario Implementation of a SES for air quality data

- UC-EP02-01: National collection of reporting data
- UC-EP02-02: Official submission of National Reporting

INSPIRE DATA THEME
 III.11 AM

EP03 - Pilot in Belgium
 Scenario: Providing INSPIRE-compliant access to utility services: the case of sewage networks

- UC-EP03-01: Consulting the sewage database for the expansion and maintenance of the sewage system and wastewater treatment infrastructure
- UC-EP03-02: Joint management tool for the sewage database
- UC-EP03-03: Dissemination of information on sewage system to all stakeholders

INSPIRE DATA THEME
 I.8 HY
 III.6 US

EP04 - Cross-border Pilot in Czech R. / Slovakia
 Scenario: "Slovakia - Everybody (Re)connected to Environment (Agents)"

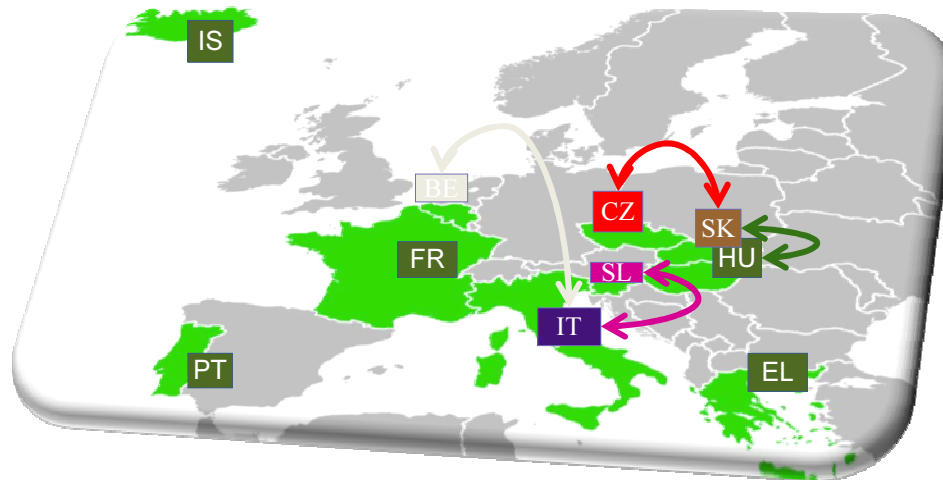
- UC-EP04-01: I want to cut a tree down on land which is under my ownership (outside of the forest)
- UC-EP04-02: I want to use water from underground sources in a quantity greater than 500 m³/day (build a well and draw water)
- UC-EP04-03: I am seeking a quiet and clean place to build a cottage

INSPIRE DATA THEME
 I.5 CP
 I.9 PS
 II.2 LC
 III.4 LU
 III.6 US
 III.8 PF

EP05 - Pilot in France
 Scenario: National Air Quality Control System

- UC-EP05-01: Determine if the user is in or near a Protected site / a Biogeographical Region or a Habitat / Biotope zone
- UC-EP05-02: I've seen a species - Are there others around me?

INSPIRE DATA THEME
 I.9 PS
 III.17 BR
 III.18 HB



EP06 - Pilot in Germany
 Scenario: Forest Management

- UC-EP06-01: Awareness Phase, data acquisition, pre-processing and preparation
- UC-EP06-02: Emergency Phase

INSPIRE DATA THEME
 II.2 LC
 III.7 EF
 III.12 NZ
 III.14 MF

EP07 - Cross-border Pilot in Hungary / Slovakia
 Scenario: Wildlife on the Protected Areas - Mobile Conservation Map

- UC-EP07-01: Mobile Conservation Map (MCM) application

INSPIRE DATA THEME
 I.8 HY
 I.9 PS

EP08 - Pilot in Iceland
 Scenario: Crowdsourcing INSPIRE compliant services for Nature Conservation purposes

- UC-EP08-01: Discover and viewing INSPIRE compliant services for Nature Conservation purpose
- UC-EP08-02: Crowdsourcing on environmental objects in Iceland

INSPIRE DATA THEME
 I.1 RS
 I.4 AU
 I.7 TN
 I.9 PS

EP09 - Cross-border Pilot in Italy / Slovenia
 Scenario: Geological Map Harmonization

- UC-EP09-01: Environmental risk (geo-hazard): landslide susceptibility map
- UC-EP09-02: Environmental risk (geo-hazard): analysis of flooding phenomena

INSPIRE DATA THEME
 I.7 TN
 I.8 HY
 II.3 EL
 II.4 GE
 III.12 NZ

EP10 - Pilot in Portugal
 Scenario: Urban Land-use Planning

- UC-EP10-01: Access to data and definition of study area
- UC-EP10-02: Evaluate urban and rural growth
- UC-EP10-03: Evaluate and document data accuracy
- UC-EP10-04: Evaluate spatial planning impact on urban growth
- UC-EP10-05: Evaluate the impact of urban growth on soil water quality
- UC-EP10-06: Integrate statistical data time series

INSPIRE DATA THEME
 I.4 AU
 II.3 OI
 III.1 SU
 III.4 LU

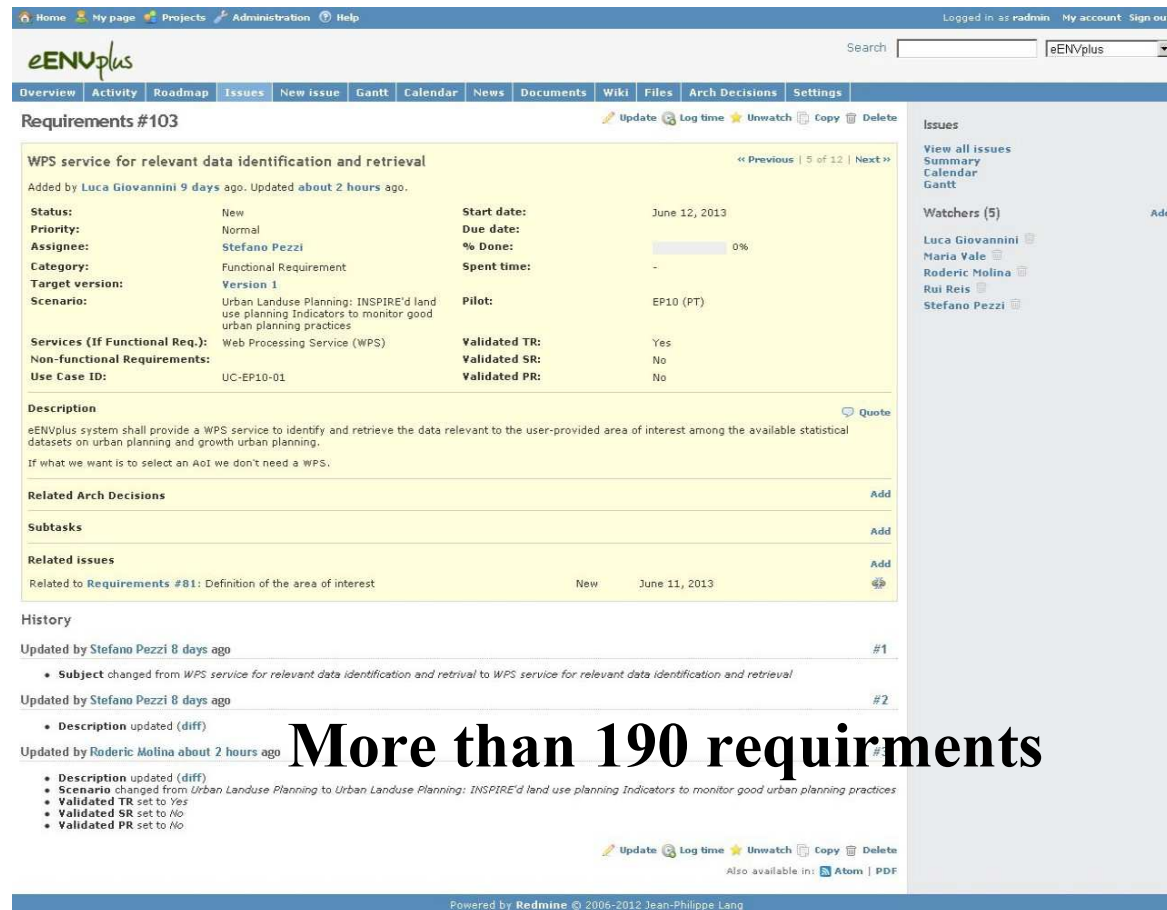
First year has dedicated to define the user requirements

The screenshot displays the 'Requirements #103' page in the eENVplus system. The page includes a navigation bar with links like Home, My page, Projects, Administration, and Help. The main content area shows the details of a requirement: 'WPS service for relevant data identification and retrieval'. Key fields include Status (New), Priority (Normal), Assignee (Stefano Pezzi), Category (Functional Requirement), and Scenario (Urban Landuse Planning: INSPIRE'd land use planning Indicators to monitor good urban planning practices). A description states that the system shall provide a WPS service to identify and retrieve data relevant to the user-provided area of interest. The page also features a 'History' section with three entries detailing updates to the subject, description, and scenario. A right-hand sidebar shows 'Watchers (5)' including Luca Giovannini, Maria Vale, Roderic Molina, Rui Reis, and Stefano Pezzi. The footer indicates the system is powered by Redmine.

First year has dedicated to define the user requirements

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

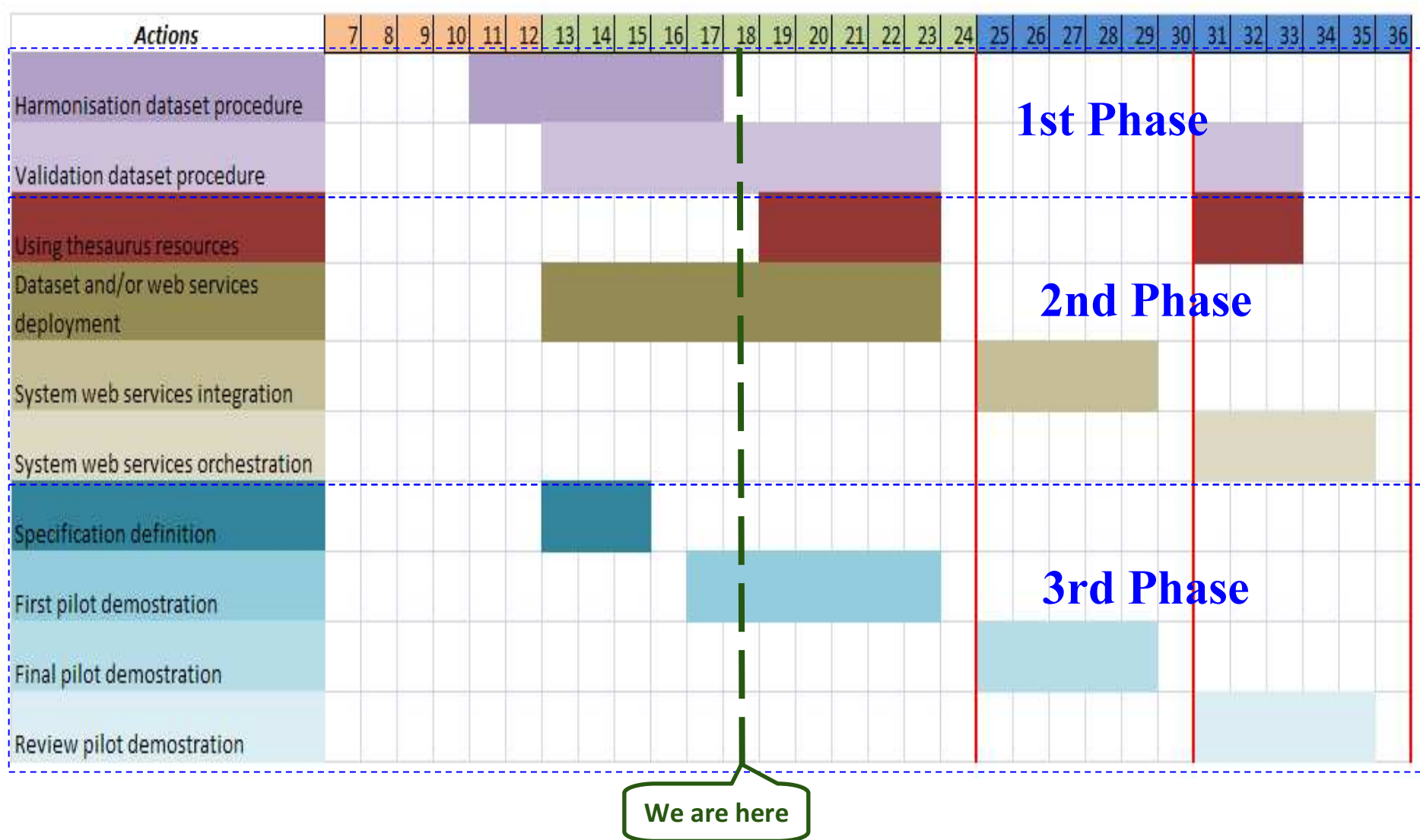
Redmine (<http://www.redmine.org/>) project management and bug-tracking tool
 GNU General Public License v2 (GPL)



The screenshot shows a Redmine interface for a requirement titled "Requirements #103". The requirement is "WPS service for relevant data identification and retrieval", added by Luca Giovannini 9 days ago. It is a Functional Requirement for Version 1, with a priority of Normal. The assignee is Stefano Pezzi. The start date is June 12, 2013, and the due date is also June 12, 2013. The % Done is 0%. The scenario is "Urban Landuse Planning: INSPIRE'd land use planning Indicators to monitor good urban planning practices". The services are "Web Processing Service (WPS)". The validated TR is Yes, validated SR is No, and validated PR is No. The description states: "eENVplus system shall provide a WPS service to identify and retrieve the data relevant to the user-provided area of interest among the available statistical datasets on urban planning and growth urban planning. If what we want is to select an AOI we don't need a WPS." The history shows updates by Stefano Pezzi and Roderic Molina, including changes to the description, scenario, and validation status.

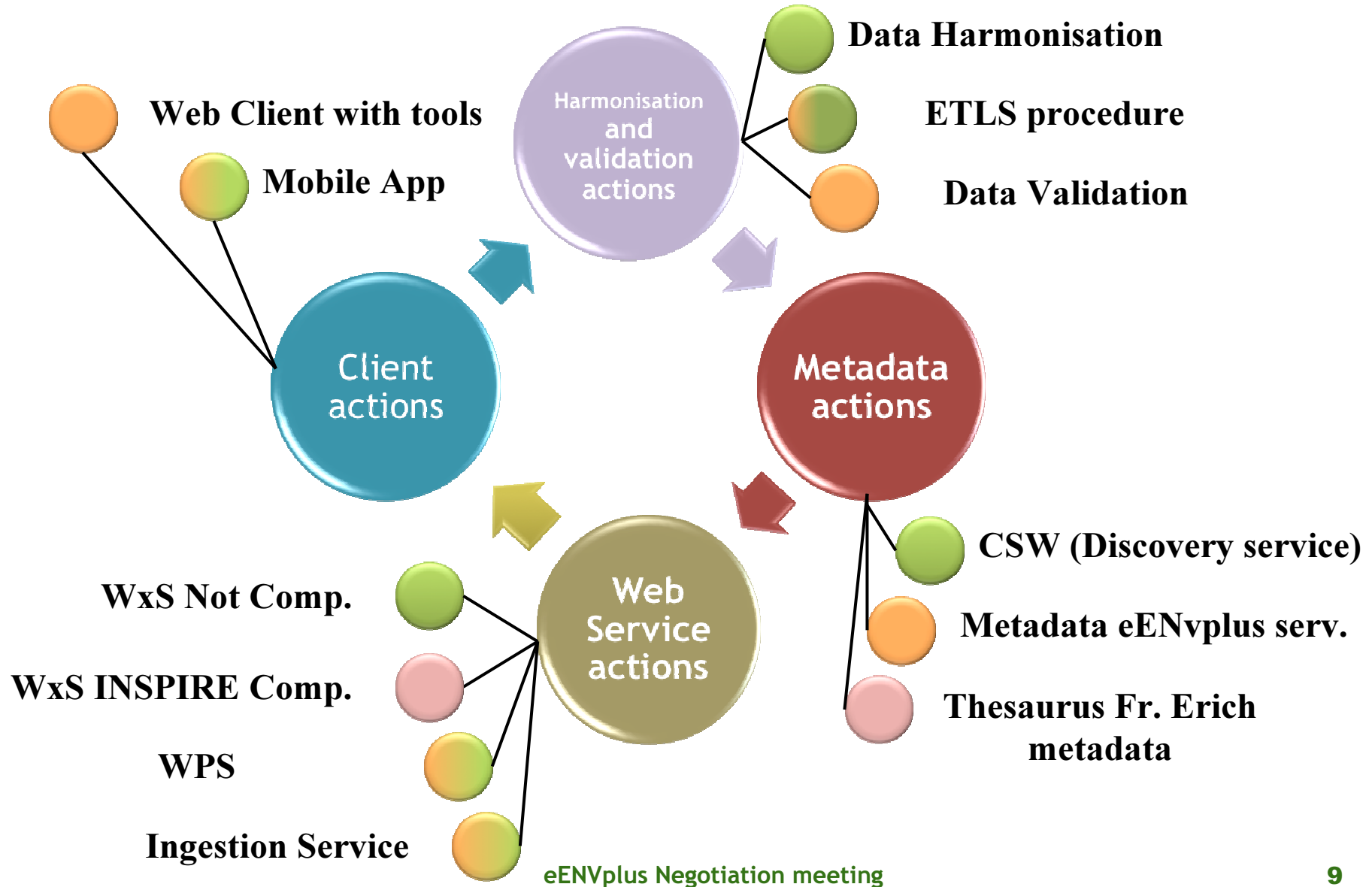
More than 190 requirements

eENVplus Pilots implementation plan

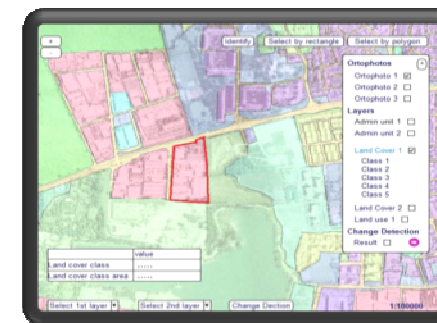
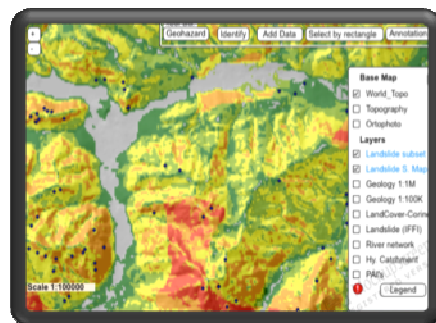
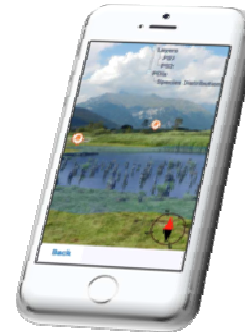
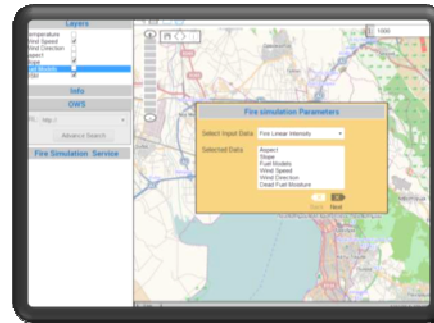
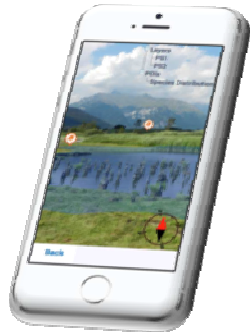
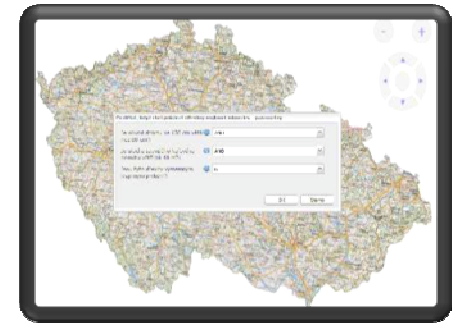
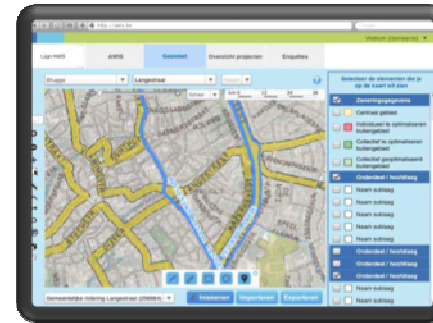
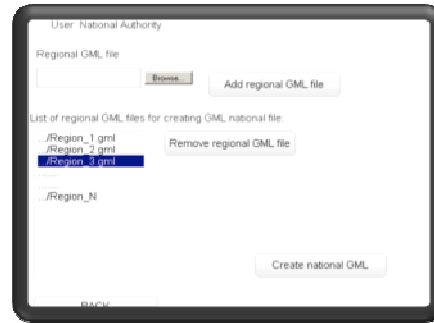
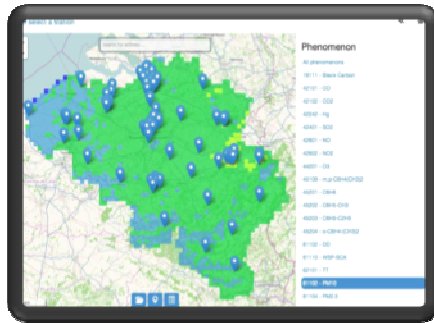


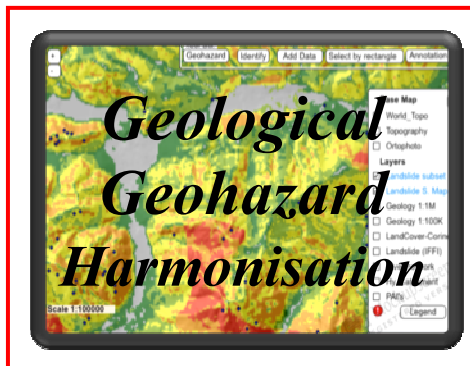
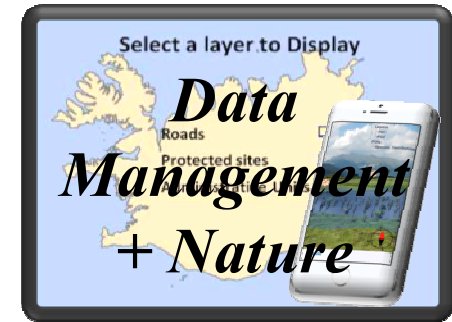
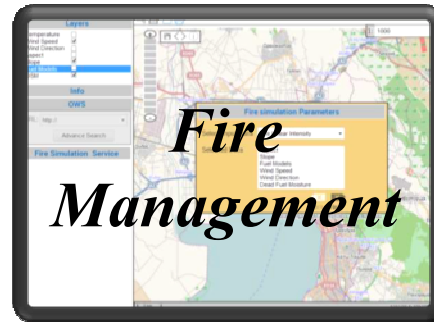
Resolution Conflict





Actions	18	19	20	21	22	23	24	25
	Jun-14	Jul-14	Aug-14	Sept-14	Oct-14	Nov-14	Dec-14	Jen-14
Harmonization dataset process								
Validation dataset procedure								
<i>OGC Team Engine</i>						R1		
Using thesaurus resources								
<i>Catalogue (geonetwork)</i>				R1				
<i>Catalogue (MapStore)</i>						R1		
<i>Thesaurus</i>							R1	
Dataset and/or web services deployment								
System web services integration								
<i>ingestion (deegree/geobatch)</i>				R1				
System web services orchestration								
<i>WPS deployment</i>				R1				
<i>WMS and WFS integration</i>				R1				
First pilot demonstration								R1



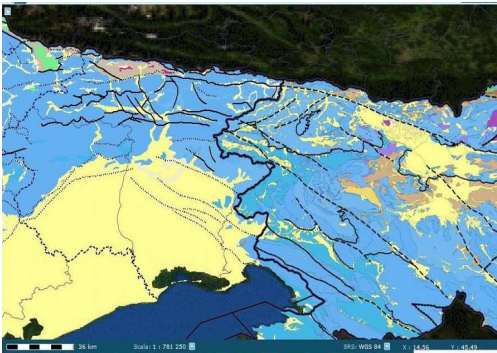


The Geological harmonisation pilot

A short example of pilot
development

eENVplus 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

eENVplus 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



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](#)

WFS INSPIRE compliant

```

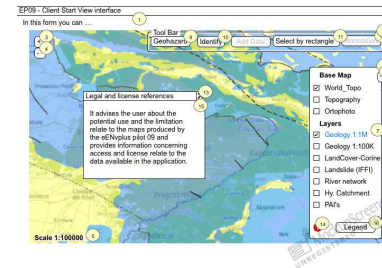
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- <ge:CompositionPart>
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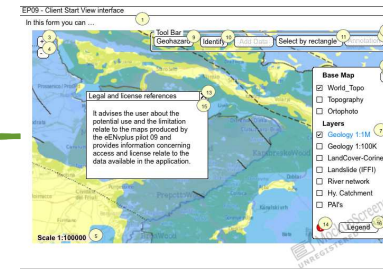
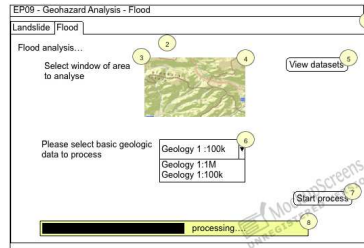
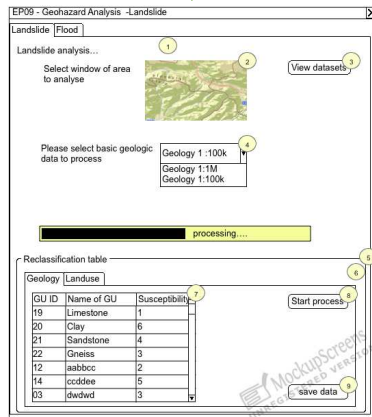
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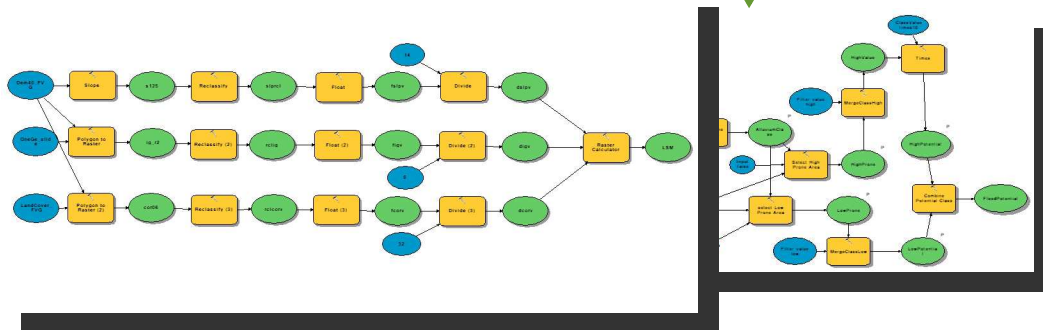
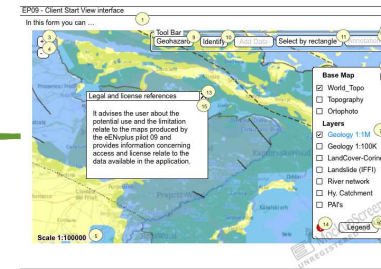
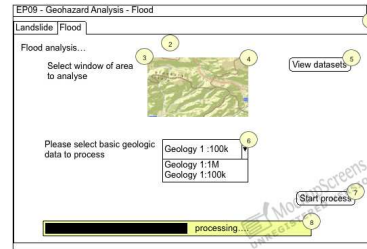
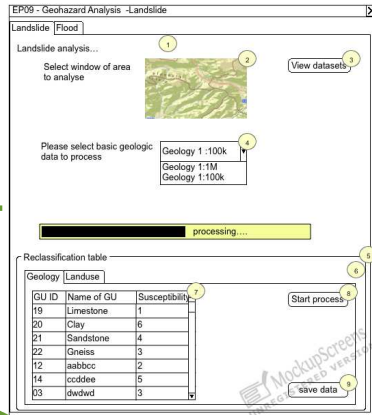
eENVplus

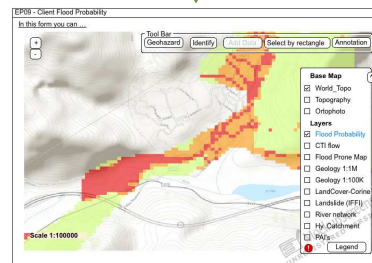
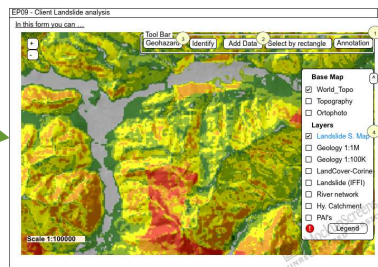
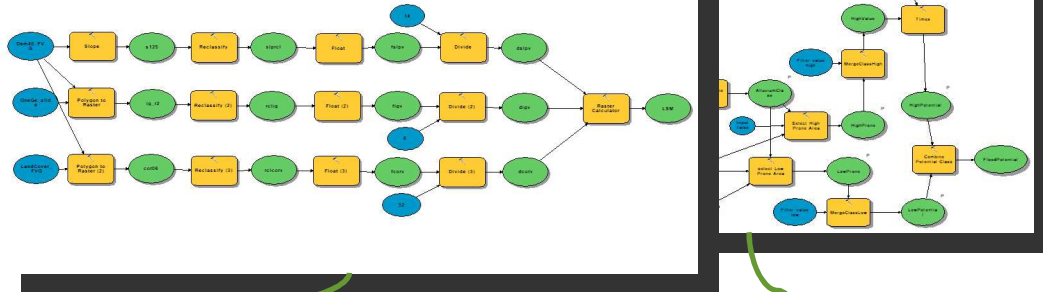
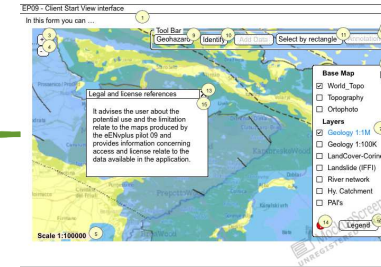
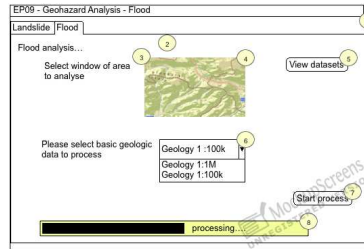
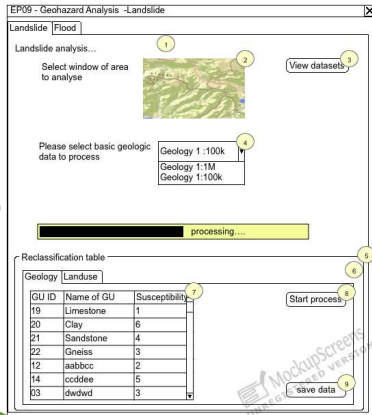
Use case procedure chain

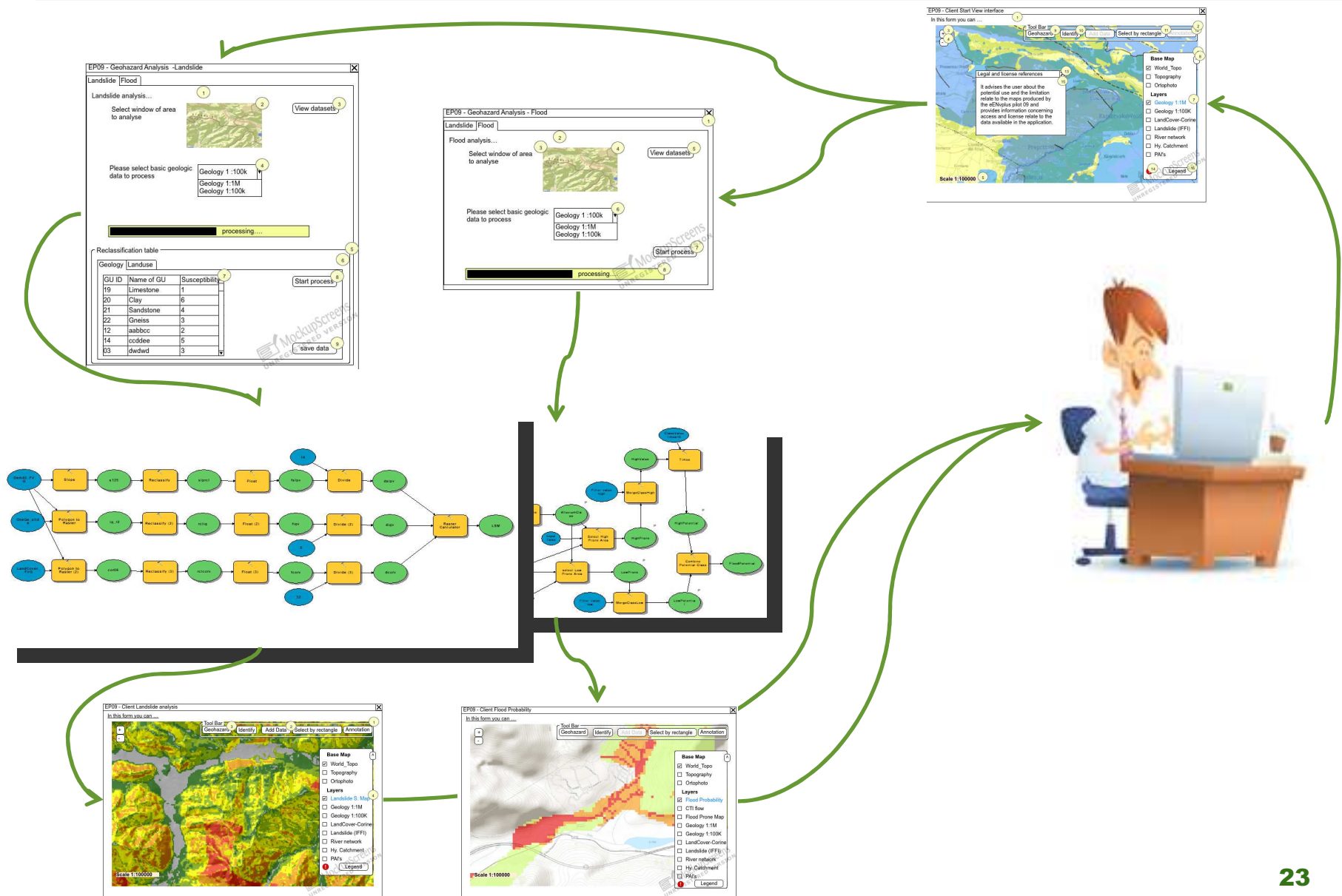


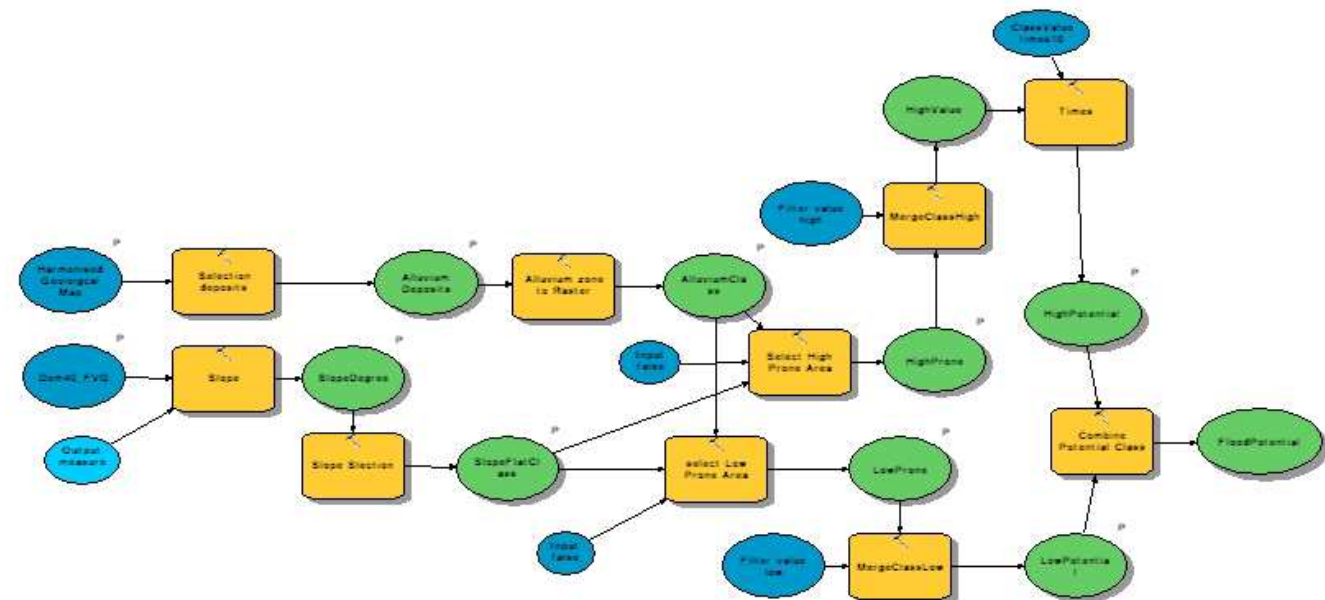










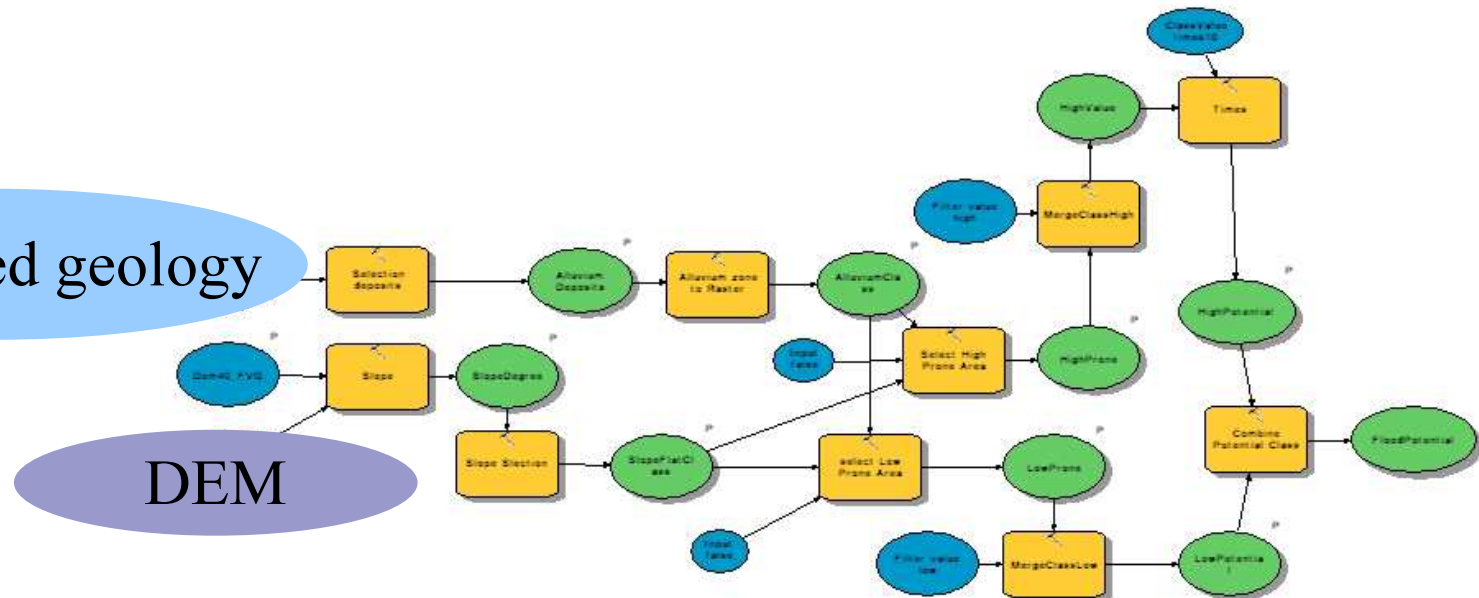


Geology 1:1M OneGeology-Europe served in GE INSPIRE Data Model

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Harmonised geology

DEM



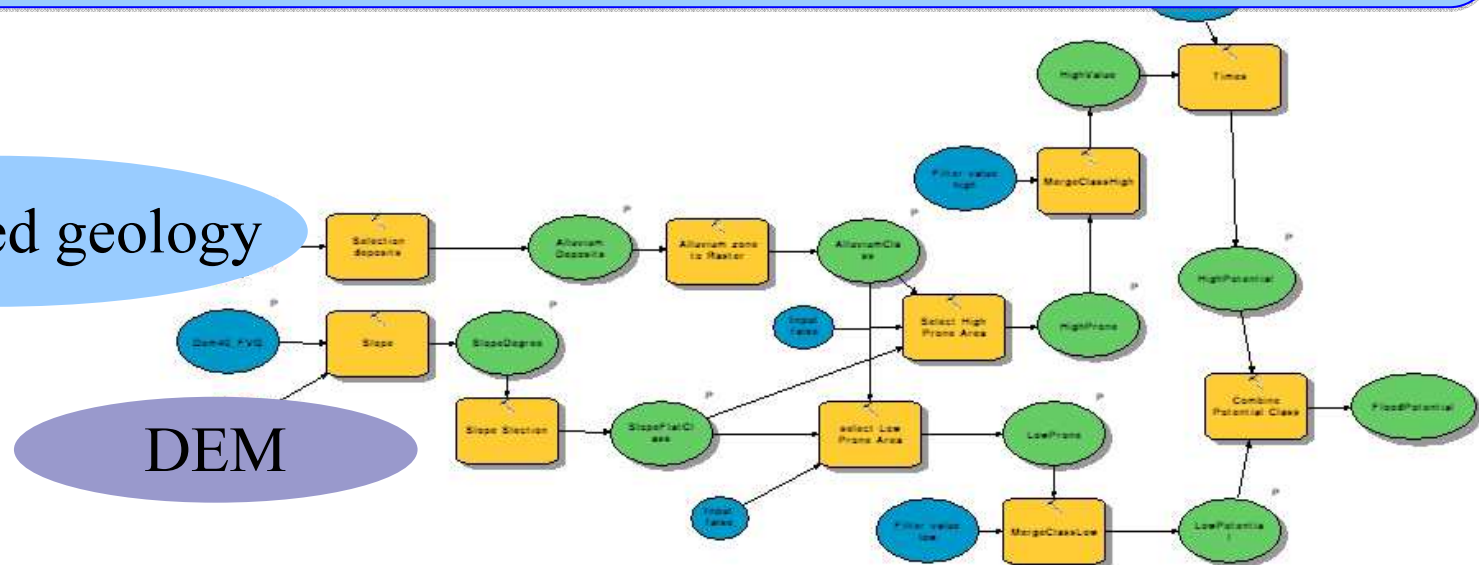
Geology 1:1M OneGeology-Europe served in GE INSPIRE Data Model

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Geology 1:100k GeoSciML 3.2 Data Model

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Harmonised geology



Thank you for the attention!

? Questions

WP7 Leader

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ISPRA - Geological Survey of Italy

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