

eENVplus pilot applications

& two and a half pilots as examples

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IS

Scenarios & Pilots

3 Cross-border Pilots:

- ☐ Czech Republic/Slovakia for everyday life issues connected to Environmental aspects
- ☐ Hungary/Slovakia for Nature Conservation
- ☐ Italy/Slovenia for Environmental Risk (Geohazard)

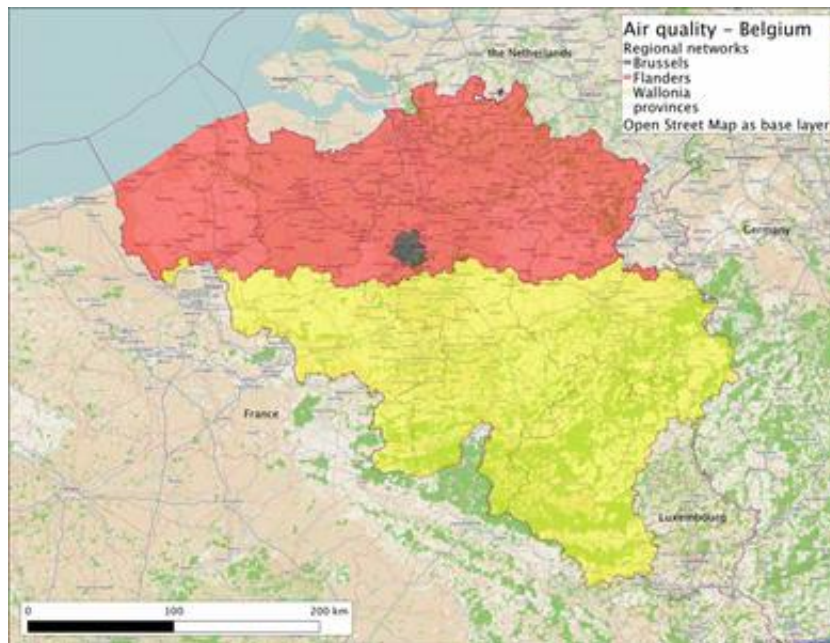
1 Scenario in two Pilots

- ☐ Belgium and Italy for Air Quality



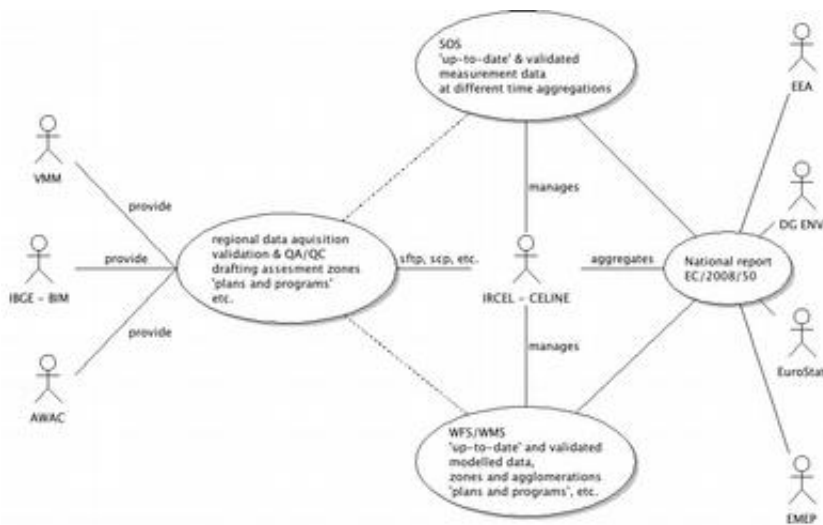
EP01 - Pilot in Belgium: Scenario: Implementation of a SEIS for air quality data

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

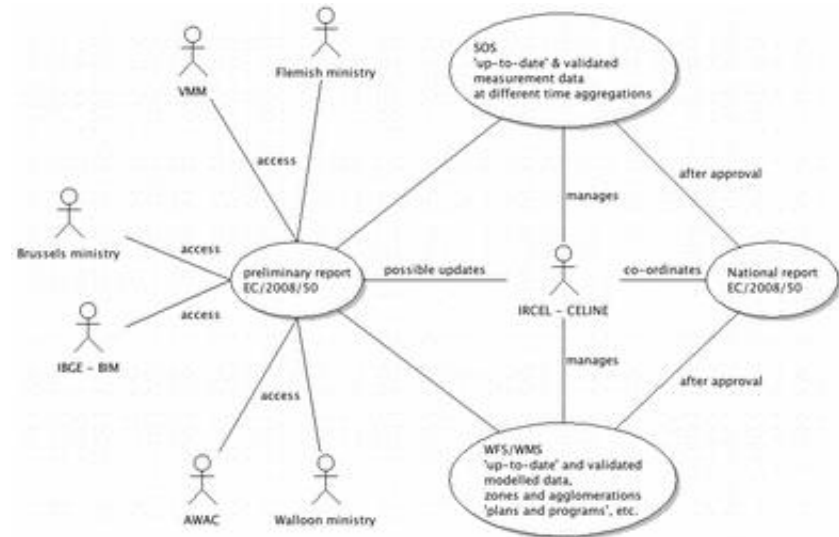


Datasets in BE

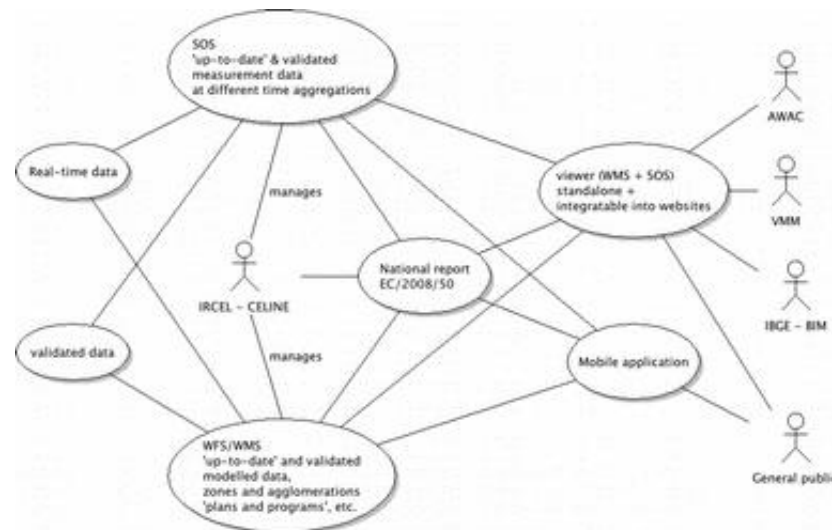
INSPIRE DT	Content	Metadata	IPR / Open Data
III.11.AM	Dataset B – "zones and agglomerations"	ISO 19115	Open data
III.11.AM	Dataset C – "assessment regime"	ISO 19115	Open data
III.11.AM	Dataset D – "assessment methods"	ISO 19115	Open data
III.7. EF	Dataset E1a – "primary validated assessment data – measurements"	ISO 19115	Open data
III.13 AC	Dataset E1b – "primary validated assessment data – modelled"	ISO 19115	Open data
III.7. EF	Dataset E2a – "primary up-to-date assessment data – measurements"	ISO 19115	Open data
III.13 AC	Dataset E2b – "primary up-to-date assessment data – modelled"	ISO 19115	Open data
III.7. EF	Dataset F1a – "aggregated data - primary validated measurements"	ISO 19115	Open data
III.13 AC	Dataset F1b – "aggregated data - primary validated modelled"	ISO 19115	Open data
III.7. EF	Dataset F2 – "aggregated data - primary up-to-date measurements"	ISO 19115	Open data
III.11.AM	Dataset G – "attainment of environmental objectives"	ISO 19115	Open data
III.11.AM	Dataset H – "air quality plans"	ISO 19115	Open data
III.11.AM	Dataset I – "source apportionment"	ISO 19115	Open data
III.11.AM	Dataset J – "scenario for the attainment year"	ISO 19115	Open data
III.11.AM	Dataset K – "measures"	ISO 19115	Open data



UC-EP01-01 - The reporting service



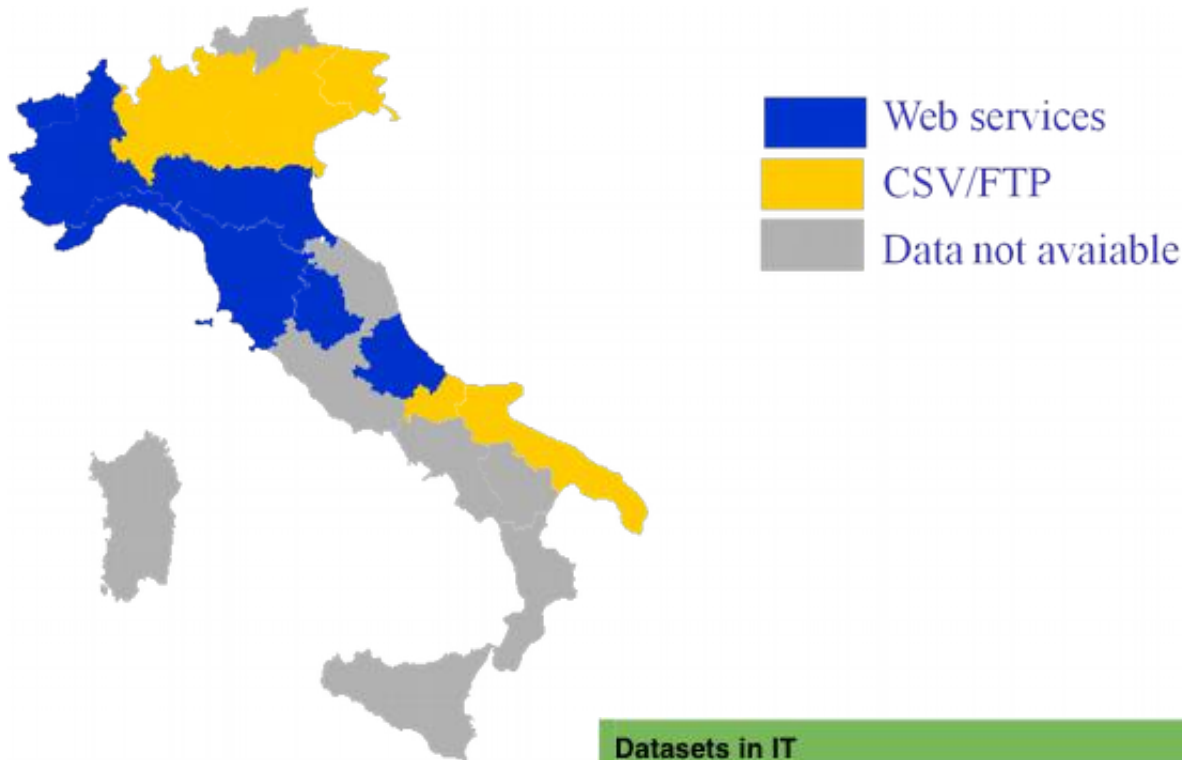
UC-EP01-02 - Validation and official submission



UC-EP01-03 - Providing useful open services derived from the same data

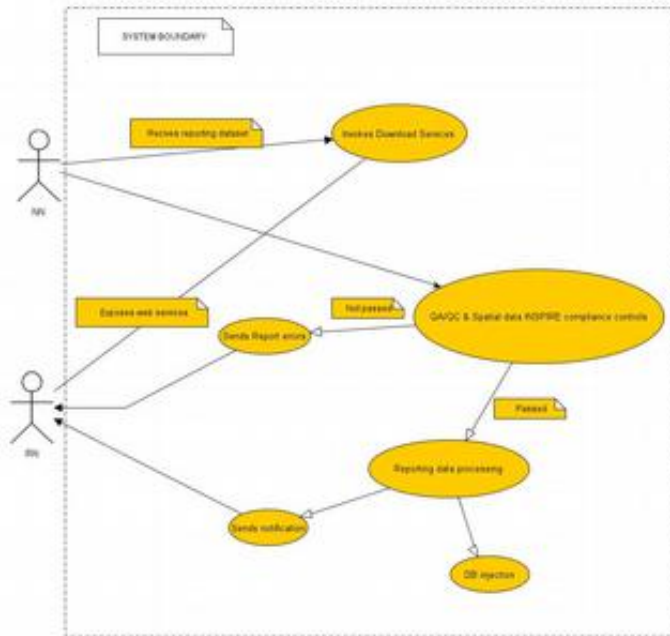
EP02 - Pilot in Italy: Scenario: Implementation of a SEIS for air quality data

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



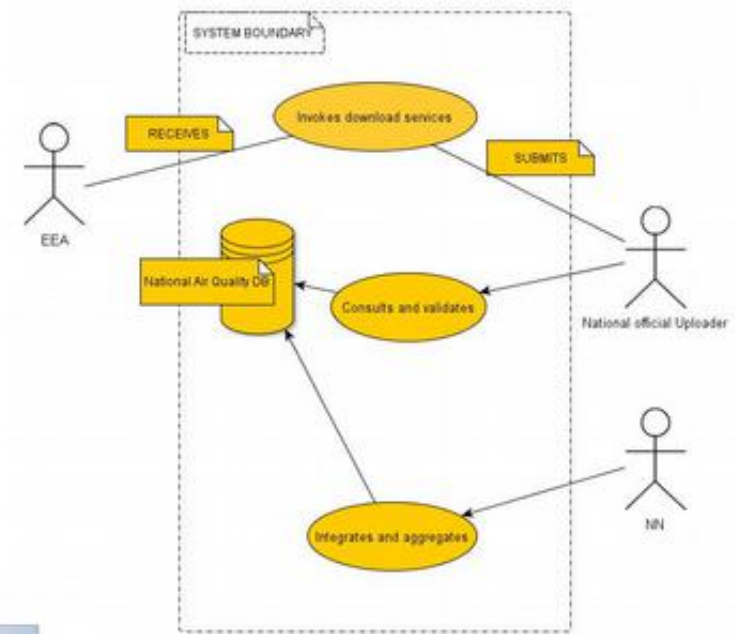
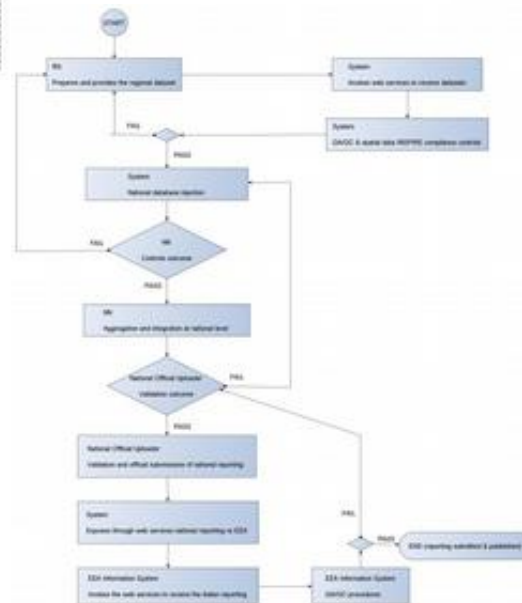
Datasets in IT

INSPIRE DT	Content	Metadata	IPR / Open Data
11. AM	Air Quality Zone and Agglomerations Information	ISO19115/INSPIRE	Free under specific agreement (IPR mention), data available for eENVPlus use



UC-EP02-01 - National collection of reporting data

Flowchart diagram



UC-EP02-02 - Official submission of National Reporting

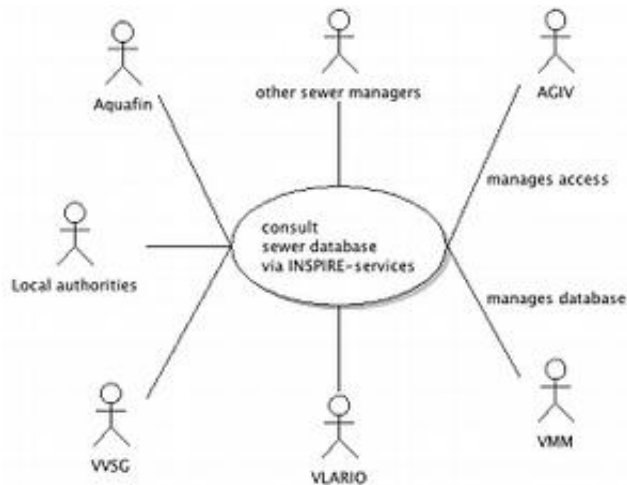
EP03 - Pilot in Belgium:

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

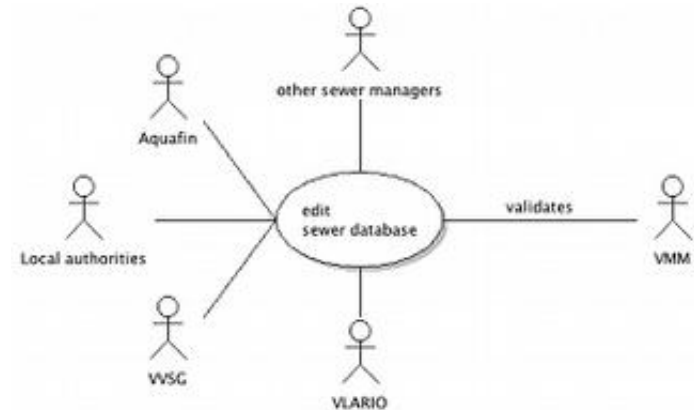
- UC-EP03-01: Consulting the sewage database for the expansion and maintenance of the sewage system and wastewater treatment infrastructure
- UC-EP03-02: Joint management tool for the sewage database
- UC-EP03-03: Dissemination of information on sewage system to all stakeholders

Datasets in BE

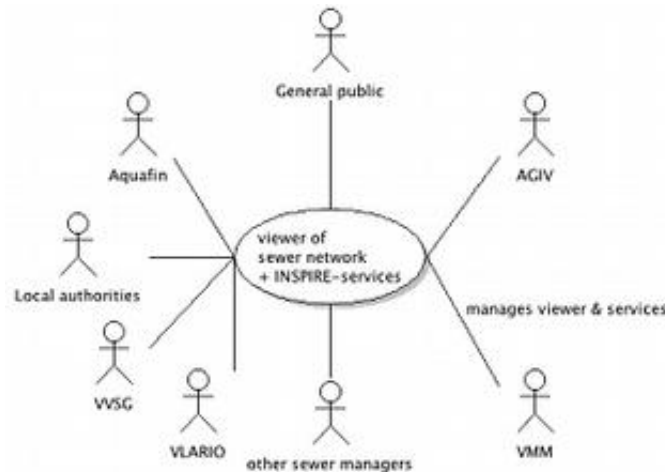
INSPIRE DT	Content	Metadata	IPR / Open Data
III.6. US	Sewage database	No	Open Data
I.8. HY	Dataset Hydrography (WMS)	ISO 19115	Open Data



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

EP04 - Cross-border Pilot in Czech R. / Slovakia

Scenario: CSspire - Everyday Life Issues Connected to Environmental Aspects

- 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 qm/day (build a well and draw water)
- UC-EP04-03: I am seeking a quiet and clean place to build a cottage



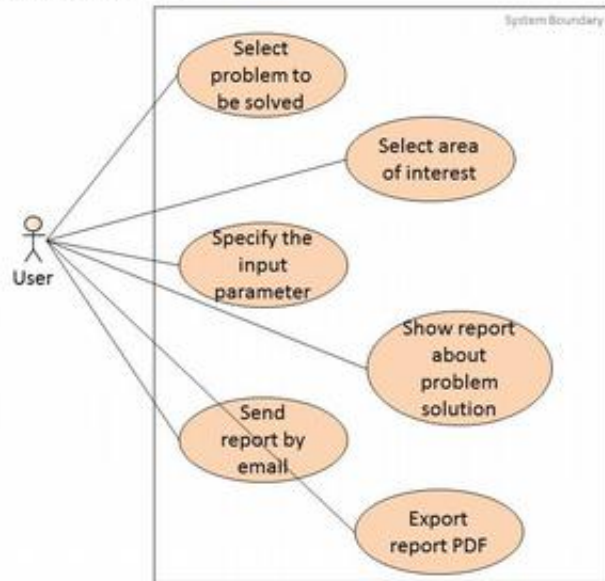
Datasets in CZ

INSPIRE DT	Content	Metadata	IPR / Open Data
I.6 CP	Cadastral parcels	ISO 19115	Open data
I.9 PS	Protected areas	ISO 19115	Open (WMS), Free under the specific agreement, data available for eENVplus use
I.9 PS	Important landscape elements	ISO 19115	idem
II.2 LC	CORINE	ISO 19115	Free for research and education, data available for eENVplus use
III.8 PF	ePRTR	ISO 19115	Open data

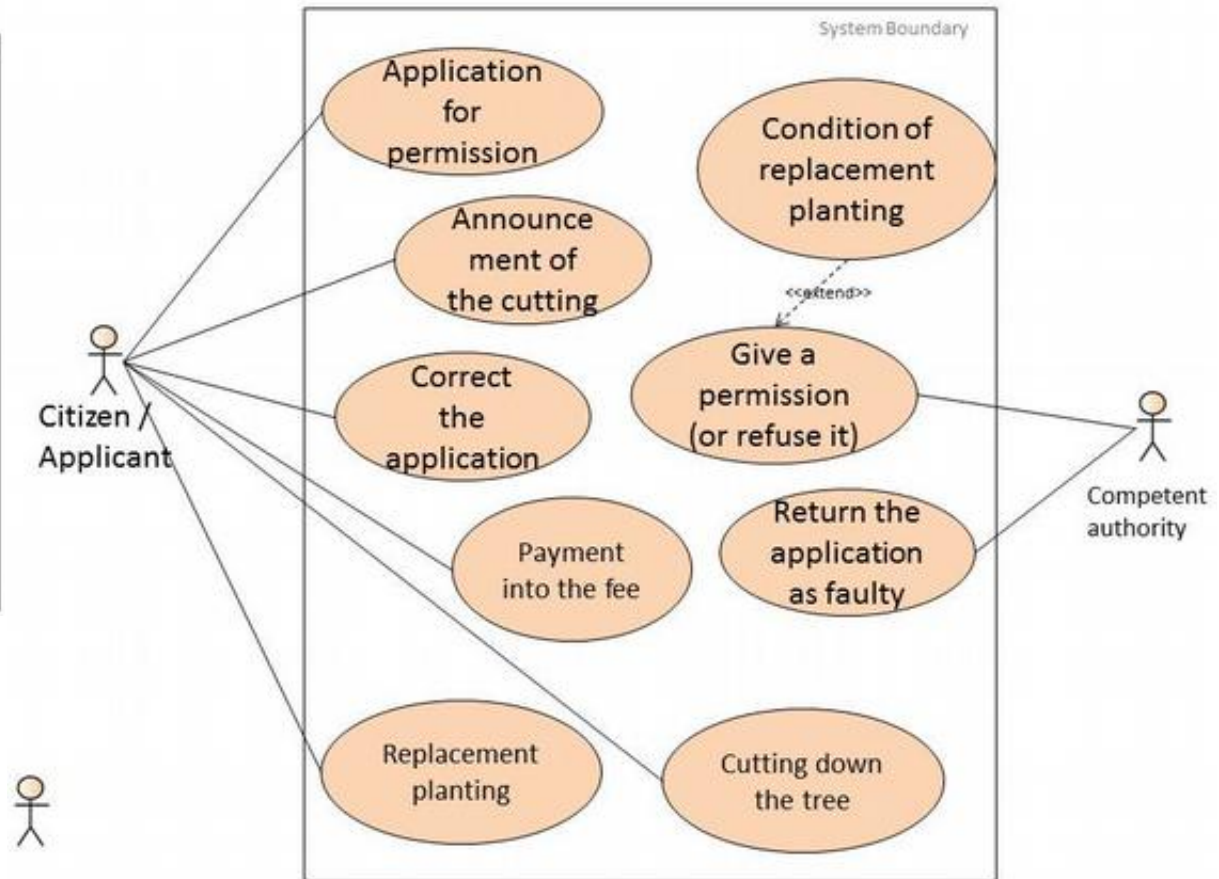
Datasets in SK

INSPIRE DT	Content	Metadata	IPR / Open Data
I.9 PS	Protected areas	ISO 19115	IPR data, (Free for research and education), data available for eENVplus use
I.9 PS	Important landscape elements	ISO 19115	idem
II.2 LC	CORINE	ISO 19115	Free for research and education, data available for eENVplus use
III.4 LU	Local plans	ISO 19115	IPR, data available for eENVplus use
III.6 US	Responsibility of the Office state and public administration	ISO 19115	Open data
III.8 PF	ePRTR	ISO 19115	IPR, data available for eENVplus use

Use Case - Georeport



General diagram - Georeport



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

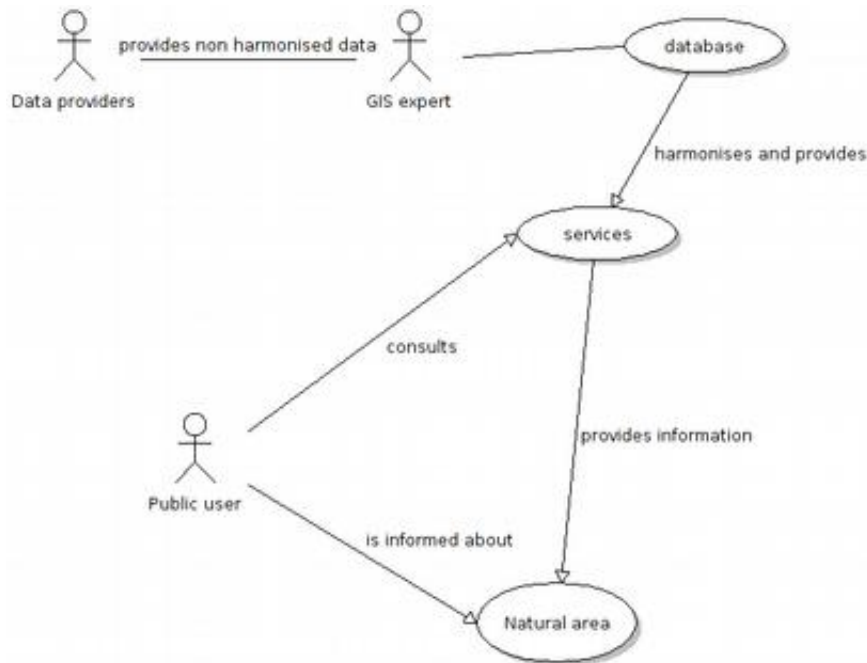
EP05 - Pilot in France: Scenario: Natural Areas INSPIRE Compliance Toolbox

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



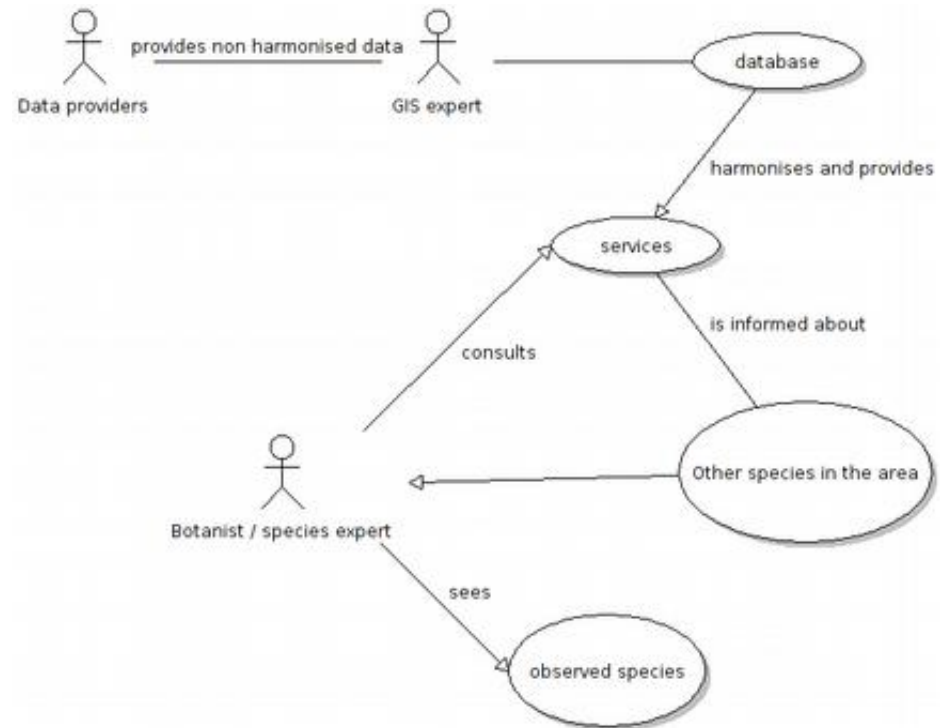
Datasets in FR			
INSPIRE DT	Content	Metadata	IPR / Open Data
I.9 PS	Parcs Nationaux Terrains des Conservatoires d'Espaces Naturels Réserves Naturelles Nationales	ISO19115 / INSPIRE	IPR protected but free access and use (*).
III.17 BR	Régions Biogéographiques	idem	idem
III.18 HB	Inventaire des Zones Naturelles d'Intérêts Ecologiques, Faunistiques et Floristiques Type 1 (ZNIEFF Type 1)	idem	idem

(*) The text « Muséum national d'Histoire naturelle » must be mentioned whenever the layer is used. The use of the data is allowed for the user's own internal business use, not for any commercial purpose, and not for financial profit or gain. No modification of the data is allowed.



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?



EP06 - Pilot in Greece: Scenario: Forest Fire Management

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



Datasets in EL

INSPIRE DT	Content	Metadata	IPR / Open Data
II.2: LC	Fuel types classification, using the INSPIRE LC Data Specification (COVERAGE: -National)	ISO 19115	IPR, data available for eENVplus
III.7: EF	Weather conditions and their measurements; precipitation, temperature, evapotranspiration, wind speed and direction (COVERAGE: Regional)	No	IPR, data available for eENVplus
III.14: MF	idem	idem	idem

Note: Additionally, the following datasets are included as well:
Spatial-temporal processed data:

- Fire Linear Intensity, BYR (Kw/m) / WCS
- Cloud Coverage, CLO (%) / WCS
- Dead Fuel Moisture, DFM (%) / WCS
- Air Relative Humidity, HRE (%) / WCS
- Probability of Ignition, PIG (%) / WCS
- Rain precipitation in the last hr, PPH (mm) / WCS
- Accumulated Precipitation, PPD (mm) / WCS
- Temperature, TEM (Celsius) / WCS
- Wind Speed, WSP (m/sec, integer) / WCS
- Wind Direction, WDI (Degrees Clockwise) / WCS

Spatial-static processed data:

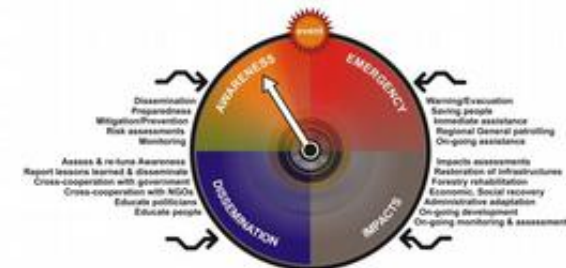
- Aspect, ASP (Degrees) / WCS
- Slope, SLO (Degrees) / WCS
- Fuel Models, FMO (List of models) / WCS

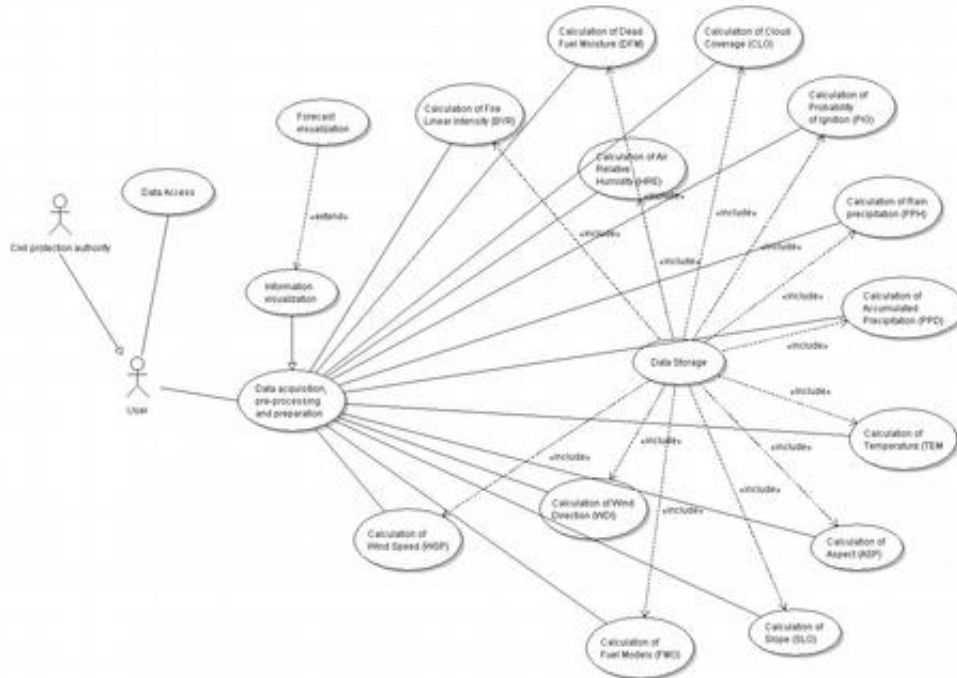
Background map

- CORINE Land Use / WCS
- OSM Road Network / WFS

Infrastructures

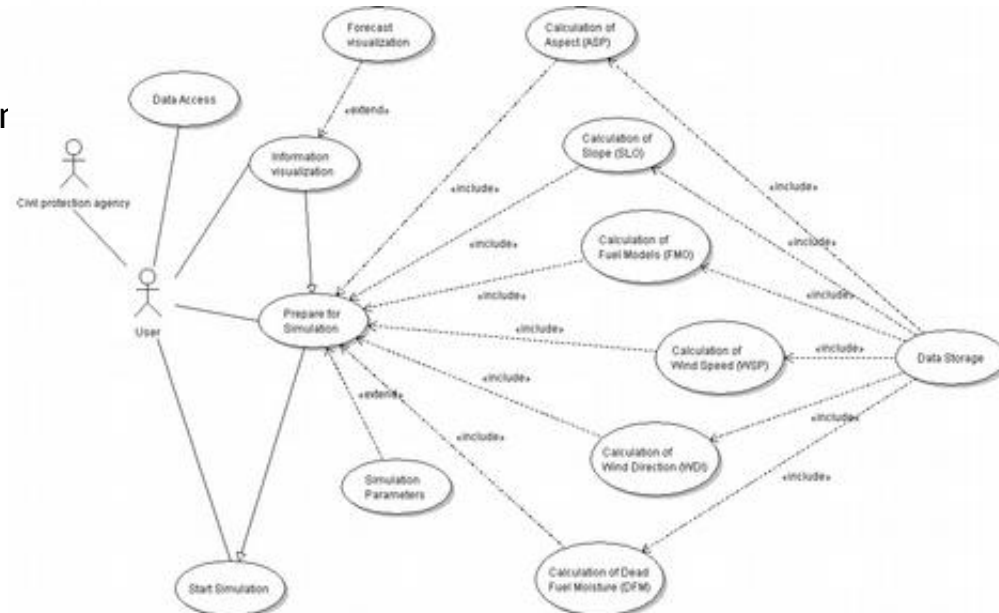
- Infrastructures related to forest fires / WFS
- Building blocks / WCS





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

UC-EP06-02 - Emergency Phase



EP07 - Cross-border Pilot in Hungary / Slovakia

Scenario: Window on the Protected Areas - Mobile Conservation Map

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

Datasets in SK (Area covered: Slovak Republic)

INSPIRE DT	Content	Metadata	IPR / Open Data
I.9. PA	Protected areas, important landscape elements	ISO 19115	IPR data (Free for research and education), data available for eENVplus use
I. 8. HY	Surface and ground water	ISO 19115	idem

Datasets in HU (Area covered: Hungary)

INSPIRE DT	Content	Metadata	IPR / Open Data
I. 8. HY	Lakes (surface over 10 km ²), River water body, River catchments (over 500 km ²), Water authority administrative boundaries	ISO 19115	Open data for eENVplus use
I.9. PA)	Protected sites IUCN, Natura 2000 sites, Ramsar sites, UNESCO Biosphere Reserves, UNESCO World Heritage Sites	ISO 19115	Open data for eENVplus use

EP08 - Pilot in Iceland:

Scenario: INSPIRE Geoportal - Nature Conservation data in Iceland

- UC-EP08-01: Discover and Viewing, INSPIRE compliant services for nature conservation purpose

UC-EP08-02: Crowd sourcing on environmental objects in Iceland

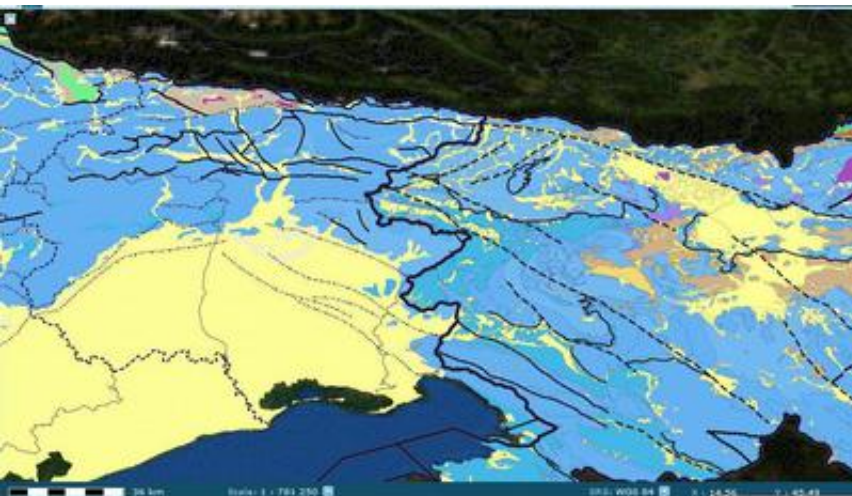
Datasets in IS (Area covered (103.000 km³): Whole Iceland)

INSPIRE DT	Content	Metadata	IPR / Open Data
I. 1. RS	Information of the Icelandic coordinate reference system (vertical and horizontal)	ISO 19115	Open data
I. 4. AU	Municipality boundaries (second level)	ISO 19115	Open data
I. 9. PS	Nature protected sites in Iceland (such as National Parks and reserved areas)	ISO 19115	Open data
I. 7.TN	Road database of Iceland (from the NLSI)	ISO 19115	Open data

Note: And Topographic map IS 50V (WMTS)

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 (geohazard): analysis of flooding phenomena
- UC-EP09-03: Environmental analysis: geological and environmental features of karst area

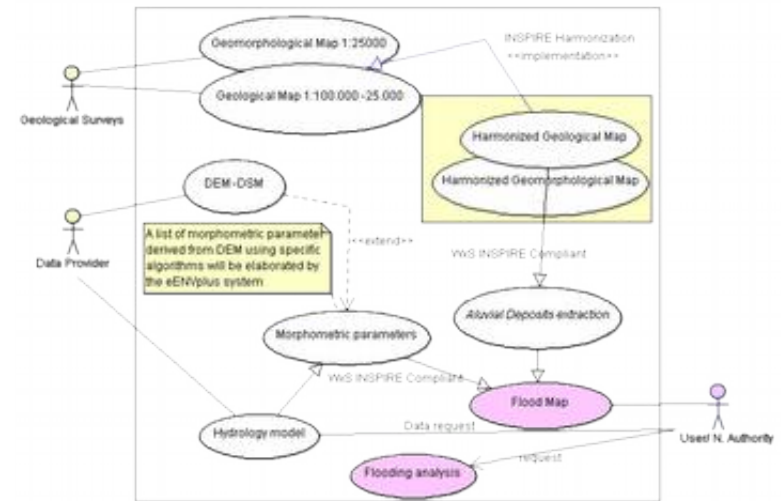


Datasets in IT

INSPIRE DT	Content	Metadata	IPR / Open Data
II.4. GE:	Geology 1M	ISO 19115	Open Data
II.4. GE:	Geolithology 100K	ISO 19115	No commercial use
II.4. GE:	Geology 25K	ISO 19115	No commercial use
II.4. GE:	IFFI Landslide	ISO 19115	No commercial use
II.4. GE:	Sinkholes	ISO 19115	No commercial use
II.4. GE:	ITHACA	ISO 19115	No commercial use
II.1. EL:	DEM	ISO 19115	No commercial use
I.7. TN:	Road and Railway network	ISO 19115	No commercial use
III.12. NZ	Landslide susceptibility map	No	No commercial use
III.12. NZ	EEE Catalogue	No	No commercial use

Datasets in SI

INSPIRE DT	Content	Metadata	IPR / Open Data
II.4. GE:	Geological and structural map	ISO 19115	Open Data
II.4. GE:	Basic geological map 1:100 000 sheet Beljak and Pontebba	ISO 19115	Copyright
II.4. GE:	Basic geological map 1:100 000 sheet Tolmin and Videm	ISO 19115	Copyright
II.4. GE:	Basic geological map 1:100 000 sheet Gorica	ISO 19115	Copyright
II.4. GE:	Basic geological map 1:100 000 sheet Trst	ISO 19115	Copyright
II.4. GE:	Geological map of Slovenia 1:250K	No	Copyright
II.4. GE:	Structural-tectonic map of Slovenia 1:250K	ISO 19115	Copyright
III.12. NZ:	Landslide susceptibility map of Slovenia 1:250K	ISO 19115	Copyright
III.12. NZ:	Debris-flow map of Slovenia 1:250K	No	Copyright
I.8. HY:	Hydrogeological map of Slovenia 1:250K	ISO 19115	Copyright



UC-EP09-02 - Environmental risk (geohazard): analysis of flooding phenomena



EP10 - Pilot in Portugal Scenario: Urban Landuse Planning

- UC-EP10-01: Delineation of study areas
- 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



Datasets in PT (Area covered: Tomar, Abrantes and Loures)

INSPIRE DT	Content	Metadata	IPR / Open Data
I. 4. AU	Administrative units of the country: CAOP dataset	ISO 19115	Open data
II. 3. OI	Ortho imagery	ISO 19115	IPR, data available for eENVplus use
III. 1. SU	Official statistics related to housing and demography	ISO 19115	idem
III. 4. LU	COS90	ISO 19115	Open data
III. 4. LU	COS2007	ISO 19115	IPR, data available for eENVplus use

IS

Scenarios & Pilots

3 Cross-border Pilots:

- ☐ Czech Republic/Slovakia for everyday life issues connected to Environmental aspects
- ☐ Hungary/Slovakia for Nature Conservation
- ☐ Italy/Slovenia for Environmental Risk (Geohazard)

1 Scenario in two Pilots

- ☐ Belgium and Italy for Air Quality



eENVplus use case definition and user requirements collection

- 26 use cases were defined for each of the Pilot Applications
- A Technical Team was established to analyse the provided use cases and extract user and system requirements.
- These requirements (ca. 190) are the basis for the specifications of the eENVplus software products.
- A collaborative software environment (bug tracker and project management tool) has supported the requirements collection phase.
- A strong communication effort between all partners has been of great importance.

Step 1

- collection

Use Case descriptions

10 Pilot Applications

26 Use Cases

EP01 - Pilot in Belgium Scenario: Implementation of a SEIS for air quality data

- UC-EP01-01: The reporting service
- UC-EP01-02: Validation and official submission
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EP02 - Pilot in Italy Scenario: Implementation of a SEIS for air quality data

- UC-EP02-01: National collection of reporting data
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EP03 - Pilot in Belgium Scenario: Providing INSPIRE-compliant access to utility services: the case of sewage networks in Flanders

- 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
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EP04 - Cross-border Pilot in Czech R. / Slovakia Scenario: CSpire – Everyday Life Issues Connected to Environmental Aspects

- UC-EP04-01: I want to cut a tree down on land which is under my ownership (outside of the forest)
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EP05 - Pilot in France Scenario: Natural Areas INSPIRE Compliance Toolbox

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EP06 - Pilot in Greece Scenario: Forest Fire Management

- UC-EP06-01: Awareness Phase, data acquisition, pre-processing and preparation
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EP07 - Cross-border Pilot in Hungary / Slovakia Scenario: Window on the Protected Areas - Mobile Conservation Map

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

EP08 - Pilot in Iceland Scenario: INSPIRE Geoportal

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

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- UC-EP09-03: Environmental analysis: geological and environmental features of karst area

EP10 - Pilot in Portugal Scenario: Urban Landuse Planning

- UC-EP10-01: Access to data and definition of study areas
- 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

- Matrix mapping Use Cases to functionalities

Pilots

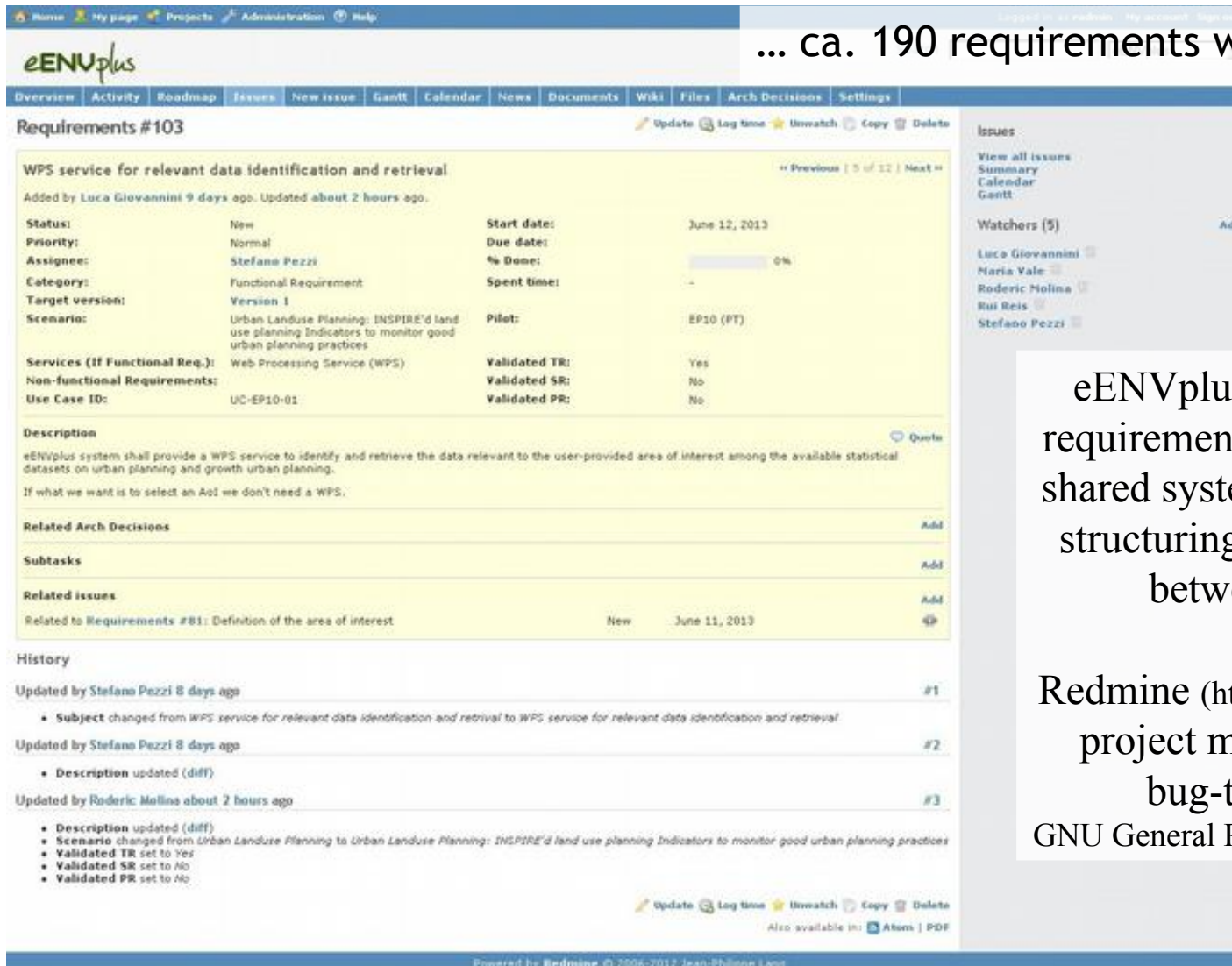
Pilot Number	Scenario Title	Pilot Responsible	Technical Responsible (Proposal)	Data Themes
EP01	Implementation of a SES for air quality data	Oliv Pedrera (VMM-RCCLN)	Oliv Pedrera (VMM-RCCLN), Carmelo Astoriz (GISQ), EPSIT	8.11 AM, 8.7. EF, 8.13 AC
EP02	Implementation of a SES for air quality data	Giovanni Luciano (ISPR)	Giovanni Luciano (ISPR), Carmelo Astoriz (GISQ), EPSIT	11 AM
EP03	Providing INSPIRE-compliant access to utility services: the case of sewage networks in Flanders	Karlsson Miroslav (VMM), Kristof Deconinck (VMM)	Karlsson Miroslav (VMM), Rodolphe Molins (GISQ)	18. HY, 8.6. US
EP04	Coastal - Everyday Life Issues Connected to Environmental Aspects	Jarmila Cikanova (CENIA), Marek Czech (IAOP), Veronika Kodova (IAOP)	Marek Czech (GISQ)	18. CP, 18. HY, 18. PS, 8.2 LC, 8.5 HY, 8.6 PS, 8.4 LU (8K), 8.6 US (SA), 8.17-19 (P)
EP05	Natural Areas INSPIRE Compliance Toolbox	Sophie Gras (ATEN)	Stefano Piller (GRAPHTECH), Marek Czech (IAOP)	19. PS, 8.17 BR, 8.17 HY, 8.19 SO
EP06	Forest Fire Management	Walter Santacatterina, Aluisio Antunes (EPRA, CA)	Giovanni Luciano (EPSIT)	8.2 LC, 8.7 EF, 8.14 MF
EP07	Window on the Protected Areas - Mobile Conservation Map	Alina Andras Tabara (NPO), Boris Markus (GEO), Marek Czech, Veronika Kodova, Martin Kuska (IAOP)	Stefano Piller (GRAPHTECH)	19. PA, 1. 8. HY
EP08	INSPIRE Geospatial - Nature conservation data in Iceland	Edda Lindal Fimbergadal (NLI)	Joni Stalla (PNO), Desirée Samuelsen (PNO)	11. PS, 14. AU, 19. PS, 17. TN
EP09	Geological Map Harmonization	Walter Santacatterina (ISPR), Mateusz Nowak (IAOP)	Carlo Capolupo (ISPR), Stefano Piller (GRAPHTECH)	8.4. GE, 8.11. EL (PT), 1.7. TN (OT), 8.12. AL, 18. HY (OT)
EP10	Urban Land-use Planning: INSPIRE's land use planning indicators to monitor good urban planning practices	Björk Rose, Maria Vale (DOT), Raquel Saracina (DOT)	Björk Rose & Maria Vale (DOT), Rodolphe Molins (GISQ)	1.4. RU, 8.3. CH, 8.5. LU, 8.4. LU

Functionalities

				Services															User Requirements (Desired)												
				Thesaurus Exploitation Services			Data Access Services					Other Functional Requirements							Nonfunctional (Desired Category)												
				TF for Metadata Compilation	TF for Data Discovery	TF for Semantic Exploitation Search	Web Map Service (WMS)	Web Feature Service (WFS)	Web Coverage Service (WCS)	Catalogue Service for Web (CSW)	Sensor Observation Service (SOS)	Web Processing Service (WPS)	Customization Service	Reporting Service	Classifying Service	Validation Service	Integration Service and Work Flow	Advanced (SOAS) Visualization Support Service	Other Functional Requirements	User Interface	Usability	Performance	Operational	Security	Legal						
EP01-01	EP01-02	EP01-03	EP01-03	EP01-03	EP01-03	EP01-03	EP01-03	AS	EP01-03	AS	EP01-03			EP01-01	EP01-02	AS	AS	EP01-03	EP01-03 (H)	EP01-03		EP01-03		EP01-02	EP01-03						
AS	AS			EP02-01			AS	AS				AS	EP02-01	EP02-02	AS	AS	AS		EP02-02 (2)	see redmin. & require events											
AS (H)	AS (H)	AS					AS	AS		AS					EP03-03	AS	AS		see redmin. requirements			AS	AS								
AS	AS	Maybe					AS	AS		AS		AS	EP04-01	EP04-02	EP04-03		AS		AS (H)				AS								
AS	AS		AS		AS	AS	AS	AS		AS					EP05-02		AS				AS	AS		EP05-02	AS						
EP06-02	X					AS		AS	AS			AS	AS				EP06-01 (H)	EP06-02		AS											
EP07-01	EP07-03		EP07-03		EP07-02		EP07-02	EP07-02	EP07-03	EP07-03					EP07-01				EP07-02					EP07-01	EP07-02	EP07-01	EP07-01				
EP08-01	EP08-02	EP08-03 (H)		EP08-01	EP08-01	EP08-01	EP08-01	EP08-01	EP08-01	EP08-01 (H)									EP08-01 (H)					EP08-01							
AS	AS	AS			AS	AS	AS	AS		AS	EP09-03						AS	EP09-01	EP09-02	EP09-01	EP09-02	EP09-01	EP09-02	AS	AS	EP09-01	EP09-01	AS			
AS	AS			AS			AS	AS				AS	EP10-01	EP10-02	EP10-03		AS	EP10-01	EP10-02	EP10-01	EP10-02	EP10-01	EP10-02	AS	AS						
Reasons for Data (As Above)				EP11.1. Giovanni Luciano (EPSIT) + SANIGIS				EP11.2. Giovanni Luciano (EPSIT) + SANIGIS				EP11.3. Giovanni Luciano (EPSIT) + SANIGIS				EP11.4. Giovanni Luciano (EPSIT) + SANIGIS				EP11.5. Giovanni Luciano (EPSIT) + SANIGIS				EP11.6. Giovanni Luciano (EPSIT) + SANIGIS				EP11.7. Giovanni Luciano (EPSIT) + SANIGIS			
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- Project management via a tracking system

... ca. 190 requirements where defined



The screenshot displays the Redmine web application interface for eENVplus. The top navigation bar includes links for Home, My page, Projects, Administration, and Help. The main content area shows a requirement entry titled "Requirements #103" with the description "WPS service for relevant data identification and retrieval". The entry includes fields for Status (New), Priority (Normal), Assignee (Stefano Pezzi), Category (Functional Requirement), Target version (Version 1), and Scenario (Urban Landuse Planning: INSPIRE'd land use planning Indicators to monitor good urban planning practices). It also shows a progress bar for % Done (0%), Spent time, and a list of services (Web Processing Service (WPS)). The right sidebar lists issues, watchers (Luca Giovannini, Maria Vale, Roderic Molina, Rui Reis, Stefano Pezzi), and a list of related arch decisions, subtasks, and issues. The bottom of the page shows a history of updates, including changes to the subject, description, scenario, and validation status.

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)

Example of requirements:

#	Subject	Use Case ID	Assignee
15	Metadata Compilation for time-aggregated datasets	UC-EP01-01 UC-EP01-02	
16	Service Discovery	UC-EP01-03	
17	Semantic Explorative Search	UC-EP01-03	
35	WMS support for web-based mapping client	UC-EP01-01 UC-EP01-02 UC-EP01-03	Stefano Piffer
36	WFS support for web-based mapping client	UC-EP01-01 UC-EP01-02 UC-EP01-03	Stefano Piffer
54	Mobile app for Air quality dataset	UC-EP01-03	Stefano Piffer
58	Advanced Visualization in Web Client	UC-EP01-03	Stefano Piffer
60	SOS support for browser-based mapping client	UC-EP01-01 UC-EP01-02 UC-EP01-03	Stefano Piffer
90	Integrate Download Service into INSPIRE infrastructure	UC-EP01-03	
91	Integrate View Service into INSPIRE infrastructure	UC-EP01-03	
109	Ingestion Service for air quality data	UC-EP01-01, UC-EP01-02, UC-EP01-03	Stefano Pezzi
140	Validation Service for air quality data	UC-EP01-01	Giacomo Martirano
141	Transformation service for air quality data	UC-EP01-01	

EP01 (& EP02) & EP03

two and a half pilots as examples

EP01 (& EP02)

A Shared Environmental Information System (SEIS) for Air Quality data

Juliette Dujardin - Olav Peeters
Belgian Interregional Environment Agency (IRCEL - CELINE)

- Most important functions of IRCEL - CELINE (air quality):
 - Continuous forecasts (cf SMOG alert)
 - Informing the public (real-time and assessment)
 - National report under the air quality directive (2004/107/EC)
 - Enforcing a common scientific basis between monitoring networks
 - Interregional calibration laboratory
 - Interregional data processing centre (IDPC) - real-time database
- National Focal Point (Eionet)
- Compilation GHG inventory



Flemish Environment Agency



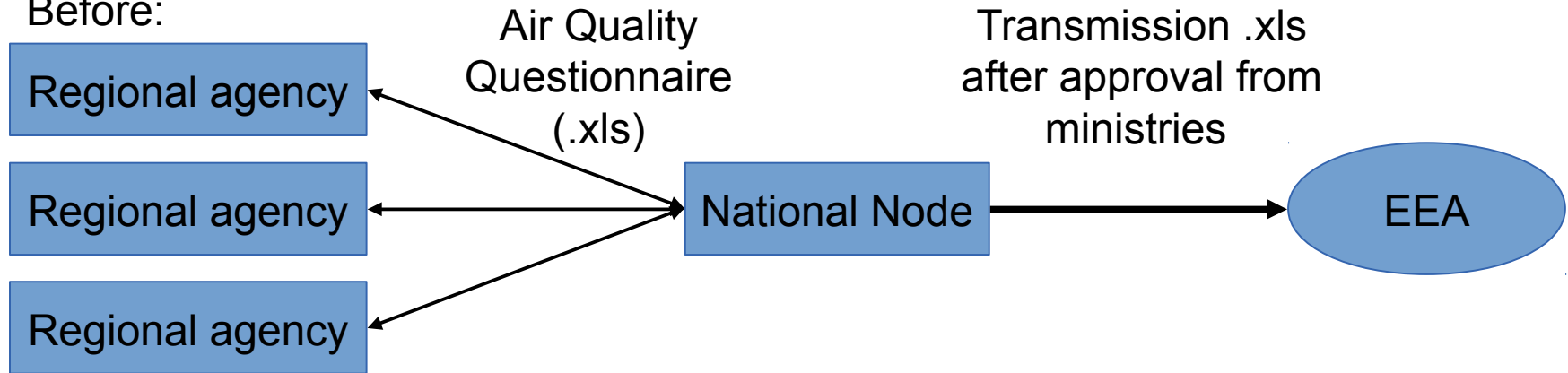
Brussels Environment



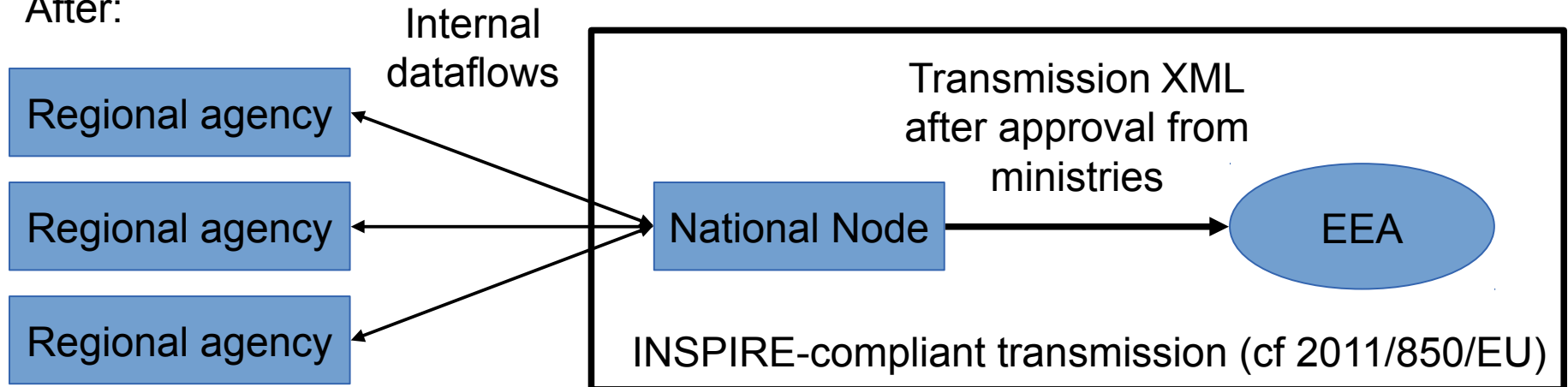
Walloon
Agency for Air and Climate

IPR = Implementing Provisions for Reporting

Before:

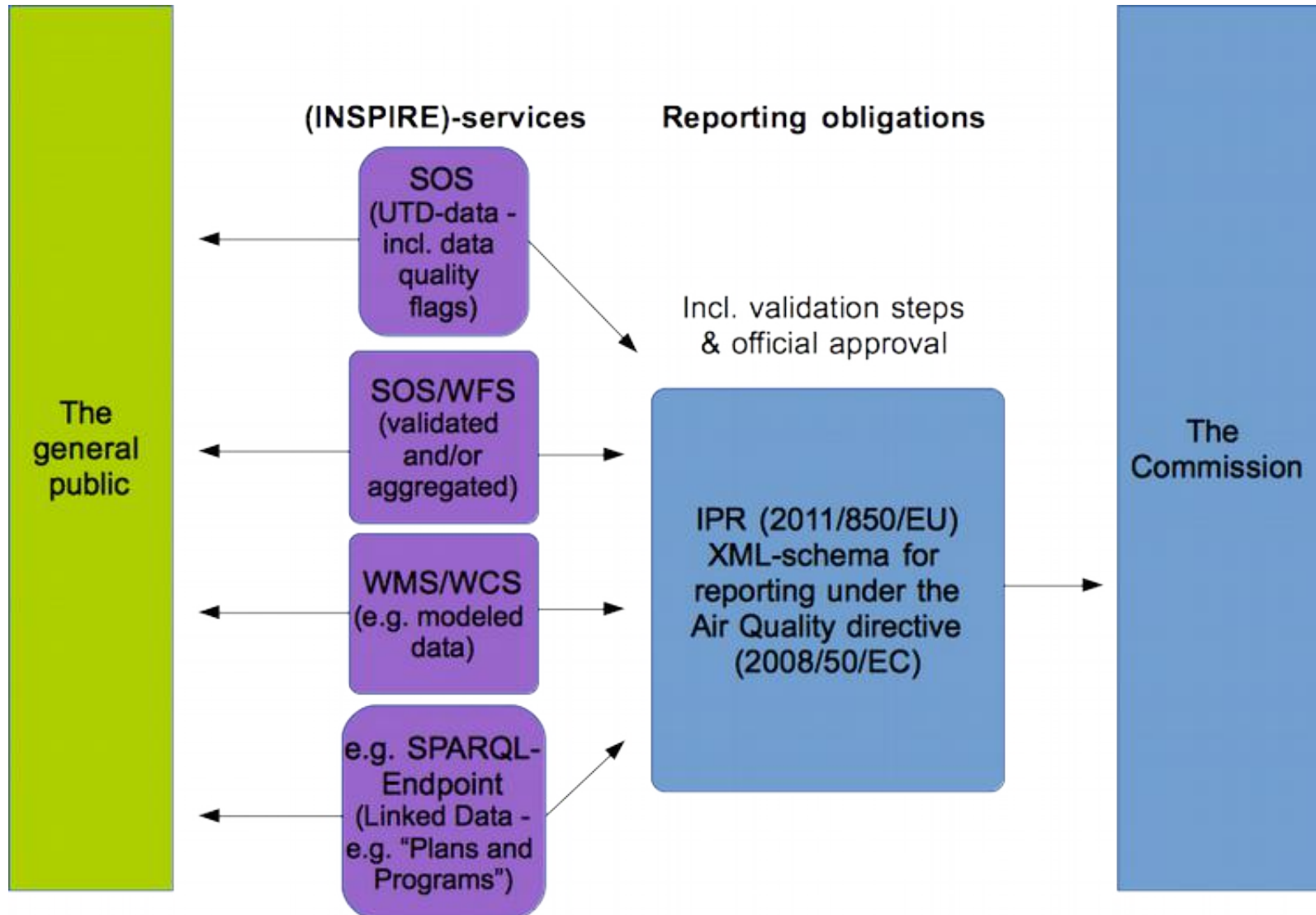


After:

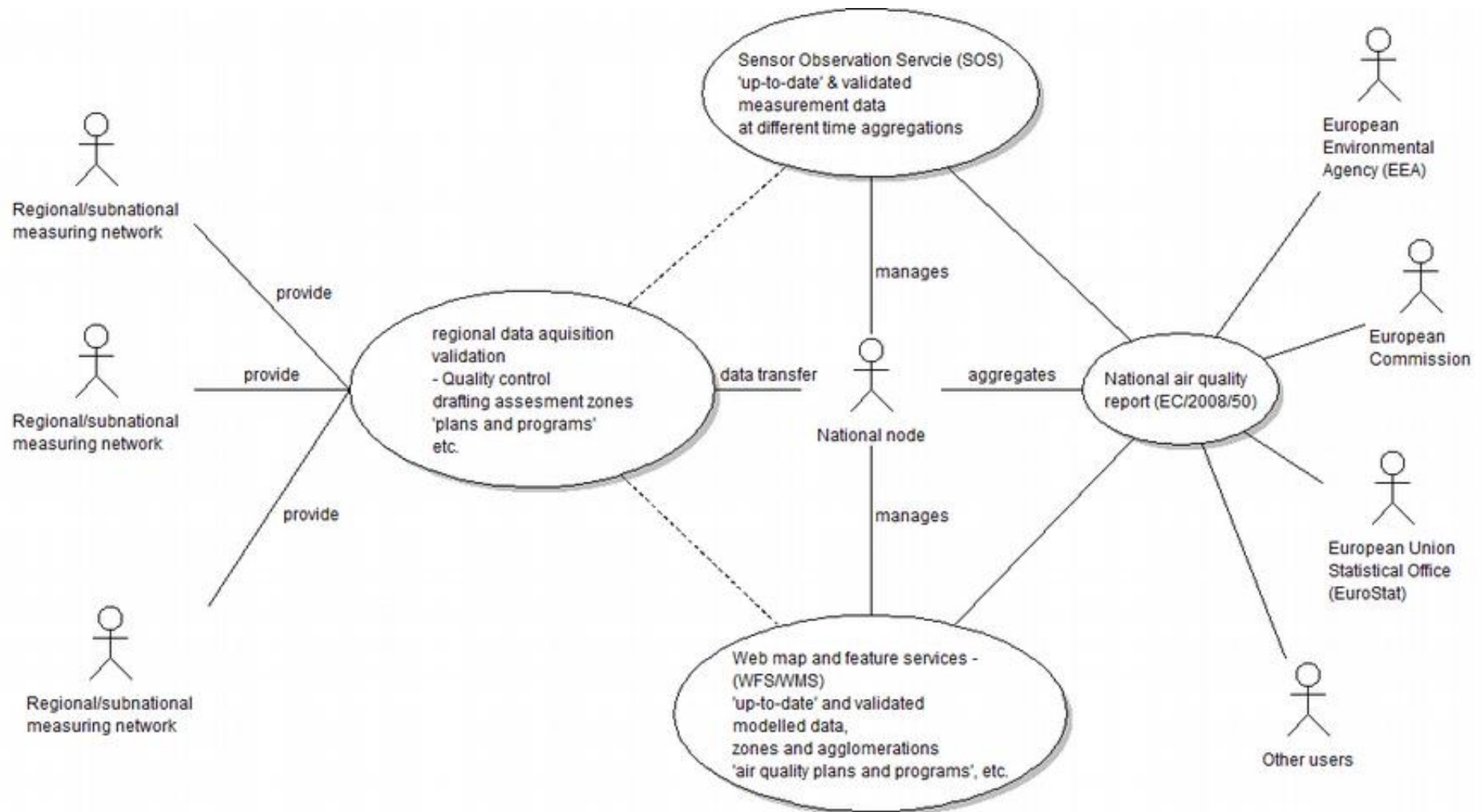


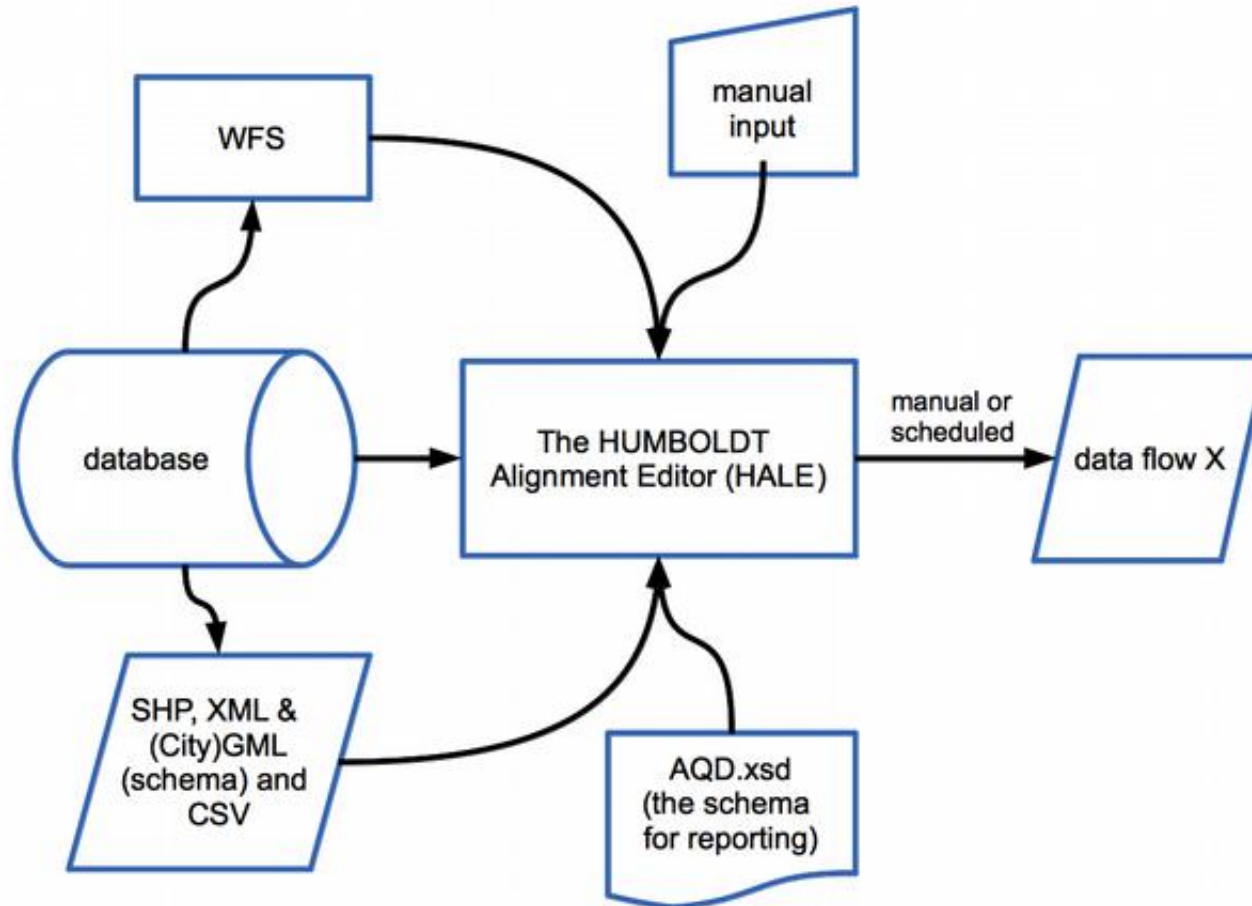
INPIRE Data Theme	Content
III.11.AM	Dataset B – "zones and agglomerations"
III.11.AM	Dataset C – "assessment regime"
III.11.AM	Dataset D – "assessment methods"
III.7. EF	Dataset E1a – "primary validated assessment data – measurements"
III.13 AC	Dataset E1b – "primary validated assessment data – modelled"
III.7. EF	Dataset E2a – "primary up-to-date assessment data – measurements"
III.13 AC	Dataset E2b – "primary up-to-date assessment data – modelled"
III.7. EF	Dataset F1a – "aggregated data - primary validated measurements"
III.13 AC	Dataset F1b – "aggregated data - primary validated modelled"
III.7. EF	Dataset F2 – "aggregated data - primary up-to-date measurements"
III.11.AM	Dataset G – "attainment of environmental objectives"
III.11.AM	Dataset H – "air quality plans"
III.11.AM	Dataset I – "source apportionment"
III.11.AM	Dataset J – "scenario for the attainment year"
III.11.AM	Dataset K – "measures"

+ Dataset A: a header transmitted with every separate submission



Different services exposing data for several purposes





Making use of an ETL-tool
both static and dynamic datasets

EP03

Providing INSPIRE-compliant access to utility services:

**A wider use of sewage data for local
authorities based on a new sewage datamodel
for Flanders**

Juliette Dujardin - Katleen Miserez
Flemish Environment Agency (VMM)

- ☐ Contribute to the realisation of the environmental policy objectives by reporting on the state of the environment
- ☐ Preventing, limiting and reversing harmful impacts on water systems and contribute to the realisation of the integrated water policy objectives
- ☐ To manage the air quality monitoring network, performing scientific research and reporting on air quality
- ☐ Number of employees : 1024

VMM as a rightful authentic source on sewer network data

- Highly complex playing field (distributed management)
- “hidden under the ground ... somewhere”

Development of an interoperable format for data exchange:

- ☐ Starting from the existing model (in line with INSPIRE-specs)
- ☐ Consultation of and cooperation with local communities
- ☐ To cover all needs of internal and external stakeholders
- ☐ To stimulate a wider use of the geodata

IMKL RIO+

IMKL 2.1

{ Additional attributes

Revision based on stakeholder consultations

+

Depth

Additional topography

Additional plan

Annotation

Connection

Additional information {

Based on an international standard, adapted for Flanders

+

Variations:

Electricity

Tele-communication

Thermal

Oil, gas, chemicals

Water supply

sewerage

Common objects

Utility network

Generic network model

INSPIRE

InterRio



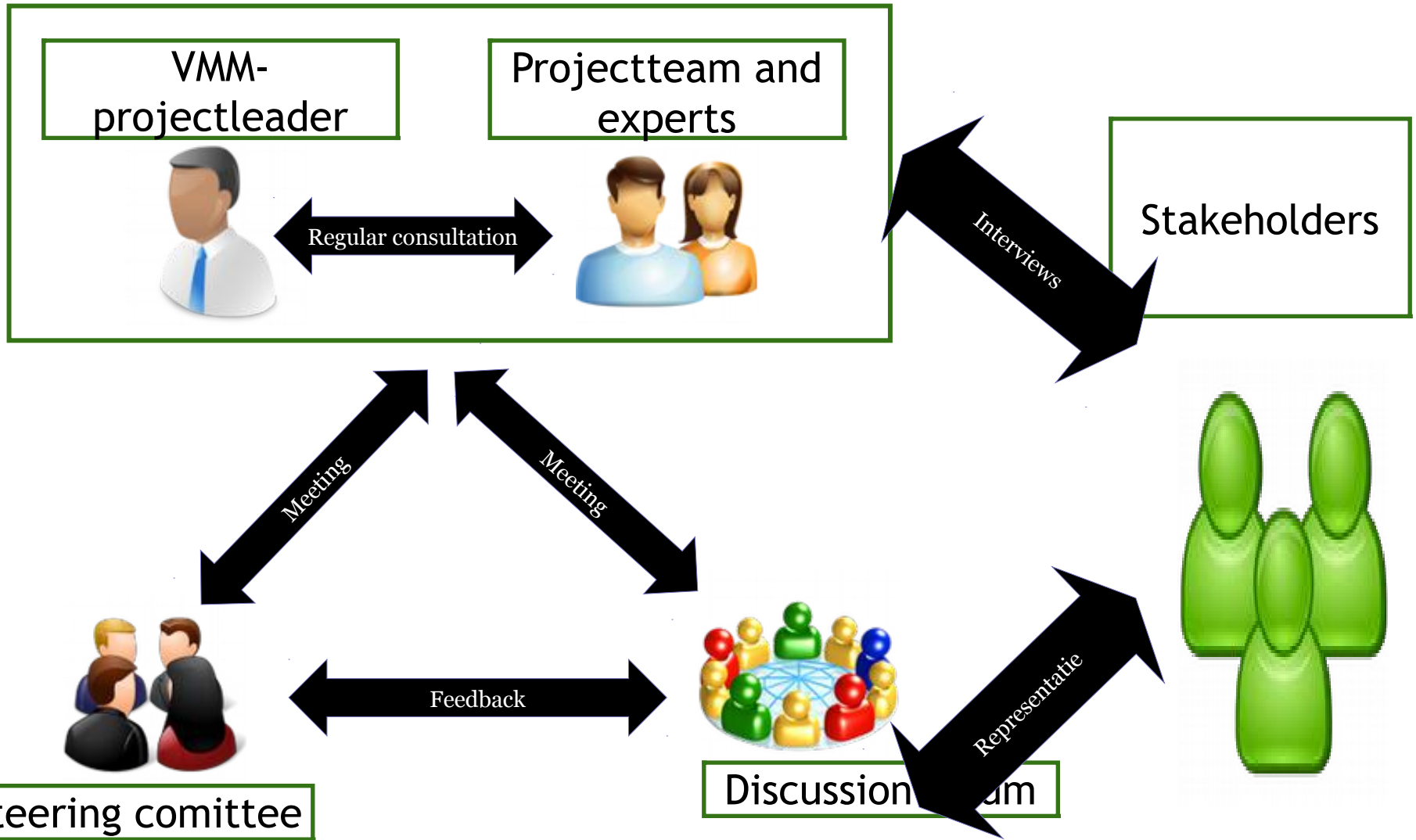
VIVAQUA

infrax



AquaRio

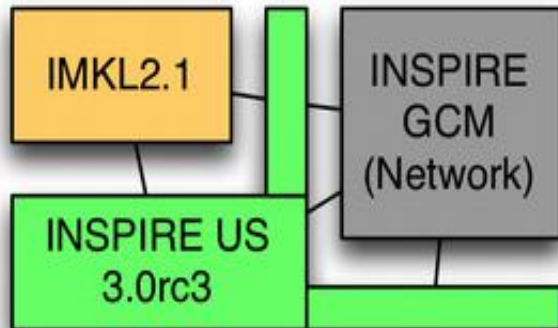




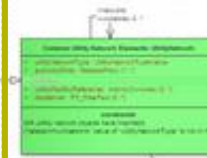
Complementary with existing initiatives:

■ Cables and pipes information platform (KLIP)

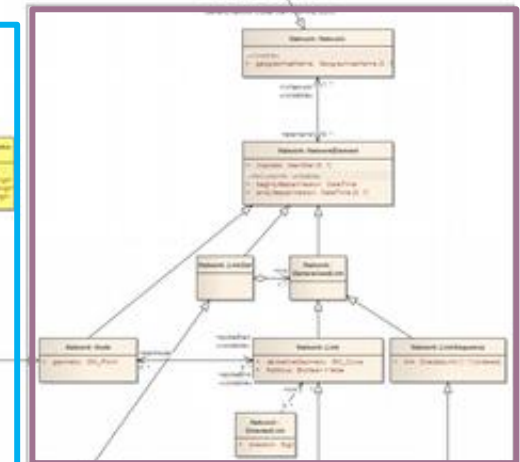
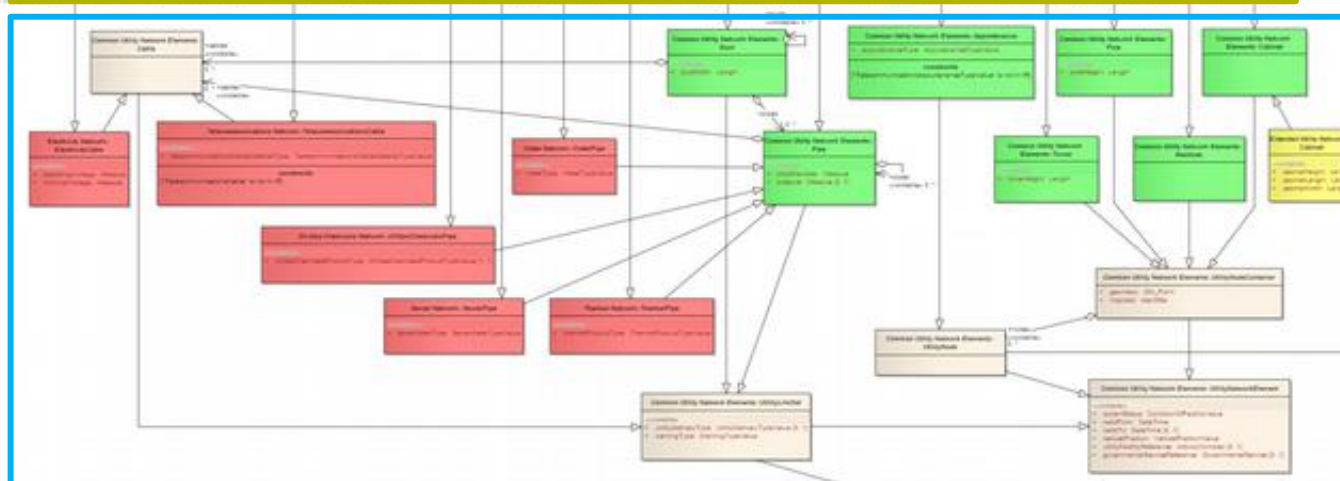
- specific purpose : Avoid damage
- Fast and uniform data on cables and pipes
- Same basis exchange standard => allows alignment
- Legally binding from 01/01/2016



INSPIRE GCM = Generic Conceptual Model
INSPIRE US = Utility Services



INSPIRE GCM



Missing elements



INSPIRE U.S. 3.0rc3

Thank you

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Flemish Environment Agency (VMM) & Belgian Interregional
Environment Agency (IRCEL - CELINE)