

El proyecto europeo Minerals4EU, un caso práctico de implementación de La Directiva INSPIRE

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OBJETIVO DE LA PRESENTACIÓN

- **Compartir la experiencia del desarrollo del proyecto al amparo de la perspectiva INSPIRE**
 - **Retos de implementación**
 - **Dificultades encontradas**

EL PROYECTO MINERALS4EU


- **Antecedentes:** Marcan sus directrices conceptuales y tecnológicas y condicionan sus objetivos y resultados.
 - Raw Material Initiative, ProMine, EuroGeoSource.
- **Objetivo 1:** *Diseñado para cumplir con las recomendaciones de la Iniciativa de Materias Primas (RMI) con el fin de lograr un conocimiento profundo de los recursos minerales del continente europeo, incluyendo los recursos marinos.*
- **Objetivo 2:** *Desarrollo de una estructura de Red de Inteligencia Mineral de la UE (EU-MKDP). Con soporte de:*
 - Datos estructurados: información espacial georeferenciada (geología y recursos minerales)
 - Datos semi y no estructurados: estadísticas minerales, estudios de prospectiva y los informes anuales.

EL PROYECTO MINERALS4EU




You are here: Home

Knowledge Data Platform




>> Enter

YouTube Channel



All videos



NMP - Nanosciences, Nanotechnologies, Materials and New Production Technologies

The Minerals4EU Project

The Minerals4EU project is designed to meet the recommendations of the Raw Materials Initiative and will develop an EU Mineral intelligence network structure delivering a web portal, a European Minerals Yearbook and foresight studies.

The network will provide data, information and knowledge on mineral resources around Europe, based on an accepted business model, making a fundamental contribution to the European Innovation Partnership on Raw Materials (EIP RM), seen by the Competitiveness Council as key for the successful implementation of the major EU2020 policies. [Read more.](#)

MINERALS4EU – The leading minerals information network





MINERALS4EU Minerals Intelligence Network for Europe

Search...

Home News About the project Partners and Contacts Downloads 'Minerals4EU' Knowledge Data Platform

You are here: Home > About the project

About the project

- Project Management
- Minerals Intelligence Network
- Knowledge management
- Mineral statistics
- Knowledge data platform
- Foresight study

 NMP - Nanosciences, Nanotechnologies, Materials and New Production Technologies

 Part-financed by the European Union

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The Minerals4EU project will firstly establish the EU minerals intelligence network structure, comprising European minerals data providers and stakeholders, and transform this into a sustainable operational service. Minerals4EU will therefore contribute to and support decision making on the policy and adaptation strategies of the Commission, as well as supporting the security of EU resource and raw materials supply, by developing a network structure with mineral information data and products, based on authoritative of information sources.

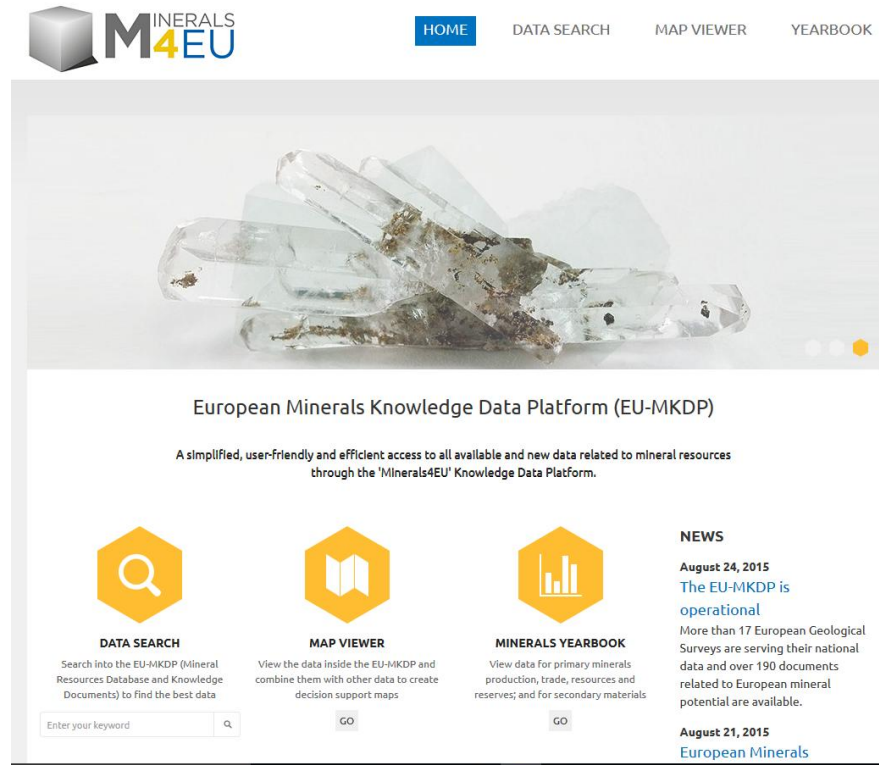
The Minerals4EU project is built around an INSPIRE compatible infrastructure that enables EU geological surveys and other partners to share mineral information and knowledge, and stakeholders to find, view and acquire standardized and harmonized georesource and related data.

The target of the Minerals4EU project is to integrate the best available mineral expertise and information based on the knowledge base of member geological surveys and other relevant stakeholders, in support of public policy-making, industry, society, communication and education purposes at European and international levels.

The Minerals4EU consortium possesses the skills and resources to make this the leading European mineral information network structure that will provide tools and expertise to enhance resource efficiency, minerals supply security and support sustainable mineral development for Europe.

<http://www.minerals4eu.eu/>

EL PROYECTO MINERALS4EU



The screenshot shows the Minerals4EU website. At the top left is the logo 'MINERALS4EU' with a 3D cube icon. To its right is a navigation menu with 'HOME' (highlighted in blue), 'DATA SEARCH', 'MAP VIEWER', and 'YEARBOOK'. Below the navigation is a large image of a mineral specimen. Underneath the image is the title 'European Minerals Knowledge Data Platform (EU-MKDP)' and a subtitle: 'A simplified, user-friendly and efficient access to all available and new data related to mineral resources through the 'Minerals4EU' Knowledge Data Platform.' Below this are three main sections: 'DATA SEARCH' with a magnifying glass icon and a search input field; 'MAP VIEWER' with a map icon and a 'GO' button; and 'MINERALS YEARBOOK' with a bar chart icon and a 'GO' button. On the right side, there is a 'NEWS' section with two entries: 'August 24, 2015 The EU-MKDP is operational' and 'August 21, 2015 European Minerals'.

<http://m4eu.geology.cz/metadata/>

<http://minerals4eu.brgm-rec.fr/minerals4EU/>

Search > Found (2)

Found: 2

Mineral Resources (Industrial Minerals and Rocks) in Spain - INSPIRE harmonized for Minerals4EU project

Dataset contains information related to the mining operations (both abandoned or operating continuously or intermittently) and minerals occurrences of industrial minerals and rocks. These data have been generated by the IGME along numerous projects since the early 70s to the present. It has national coverage.

Metadata Contact: Geological Survey of Spain (IGME), España, Date Stamp: 2015-07-28

Service-Mineral Resources (Industrial Minerals and Rocks) in Spain-INSPIRE download service harmonized for Minerals4EU

WFS service provides access to basic information related to the mining operations (both abandoned or operating continuously or intermittently) and minerals occurrences of industrial minerals and rocks. Service was created in the framework of the Minerals4EU project and its harmonized according to the INSPIRE requirements-

Metadata Contact: Geological Survey of Spain (IGME), España, Date Stamp: 2015-08-28

Metadatos de CDE del proyecto M4EU

Search metadata records

Fulltext:

All Title Abstract

M4EU Harmonized

M4EU keywords:

Keywords (INSPIRE Themes, Gemet, 1G-E):

Type:

Organisation:

Country:

Sort by:

Use map extent

Search > Found (2) > Basic metadata > Full metadata

Mineral Resources (Industrial Minerals and Rocks) in Spain - INSPIRE harmonized for Minerals4EU project

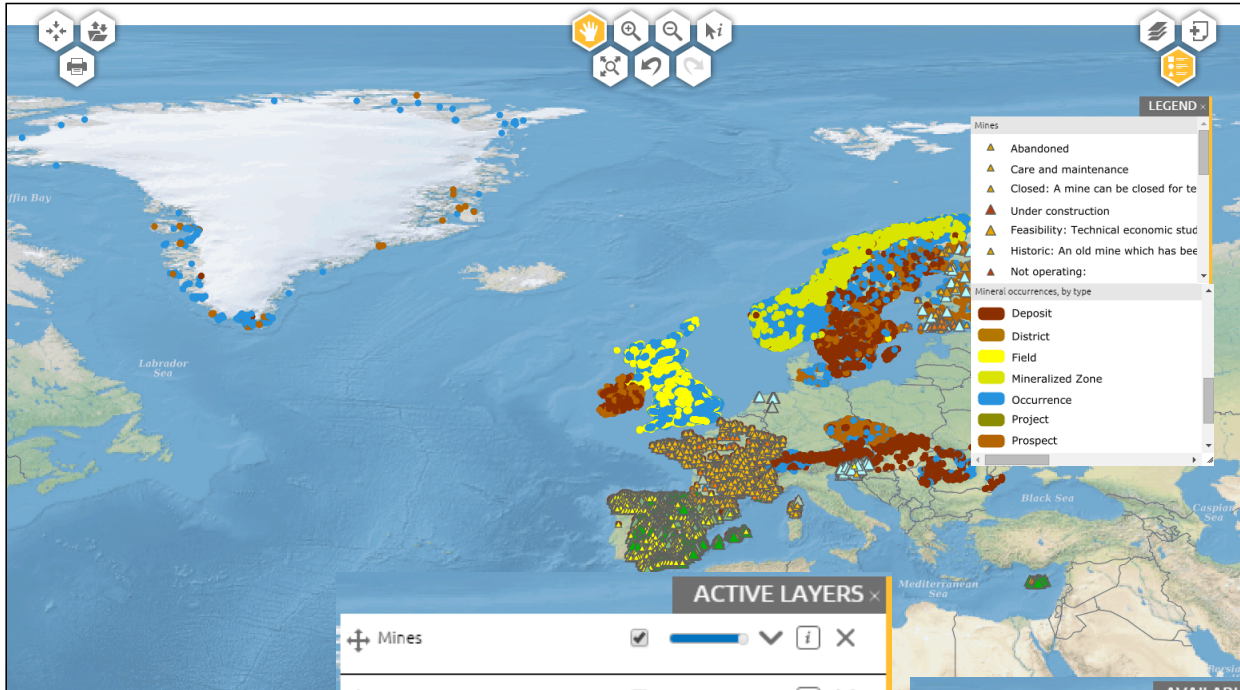
Full metadata

Reference System

MD_ReferenceSystem:	
referenceSystemIdentifier:	
RS_Identifier:	
code:	http://www.opengis.net/def/crs/EPSG/0/4258
Code Space:	urn:ogc:def:crs:EPSG

Identification

Data Identification:	
citation:	
Citation:	
Title:	Mineral Resources (Industrial Minerals and Rocks) in Spain - INSPIRE harmonized for Minerals4EU project
Date:	
CLDate:	
Date Type:	creation
date:	2015-07-24
CLDate:	
Date Type:	publication
date:	2015-07-24
Identifier:	
RS_Identifier:	
code:	13
Code Space:	www.igme.es
Presentation Form:	Digital map
Abstract:	Dataset contains information related to the mining operations (both abandoned or operating continuously or intermittently) and minerals occurrences of industrial minerals and rocks. These data have been generated by the IGME along numerous projects since the early 70s to the present. It has national coverage.
purpose:	Project Minerals4EU and harmonization of data according to the INSPIRE requirements
credit:	Technical editor: Silvia Cervel de Arcos. Web tool IGME Scientific editor: IGME (several authors). José Manuel Barullu Martín, Mª Teresa López López, Angel Ferrero Ariza, Victoria Monteserin López, Cesar Nullo Ortes, Javier Marmón, Javier Rubio Navas, Manuel Ruiz Montes, Manuel Reguero, Vicente Caberón, Alejandro Díez Montes, Ana Cabrera Ferrero, Andrés del Olmo, Jorge Fernández Suárez, Rafael Navarro Domínguez, Josefine Sánchez Valverde.
status:	under development
status:	onGoing
Point of Contact:	
Responsible Party:	
Individual Name:	López López, Mª Teresa
Organisation Name:	Geologic Survey of Spain (IGME)
Position Name:	[TEXTO EN ESPAÑOL] Unidad de Innovación y Desarrollo Tecnológico. Departamento de Infraestructura geocientífica y Servicios



ACTIVE LAYERS

+	Mines	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+	Mineral occurrences, by type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+	World	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AVAILABLE LAYERS

Minerals4EU LAYERS

- WMS Mineral4EU (With Filters)
 - Mineral occurrences (Primary Commodity)
 - Mineral occurrences (Amethyst)
 - Mineral occurrences (Antimony)
 - Mineral occurrences (Beryllium)
 - Mineral occurrences (Beryl)
 - Mineral occurrences (Calcite)
 - Mineral occurrences (Chrome)
 - Mineral occurrences (Copper)
 - Mineral occurrences (Diamond)

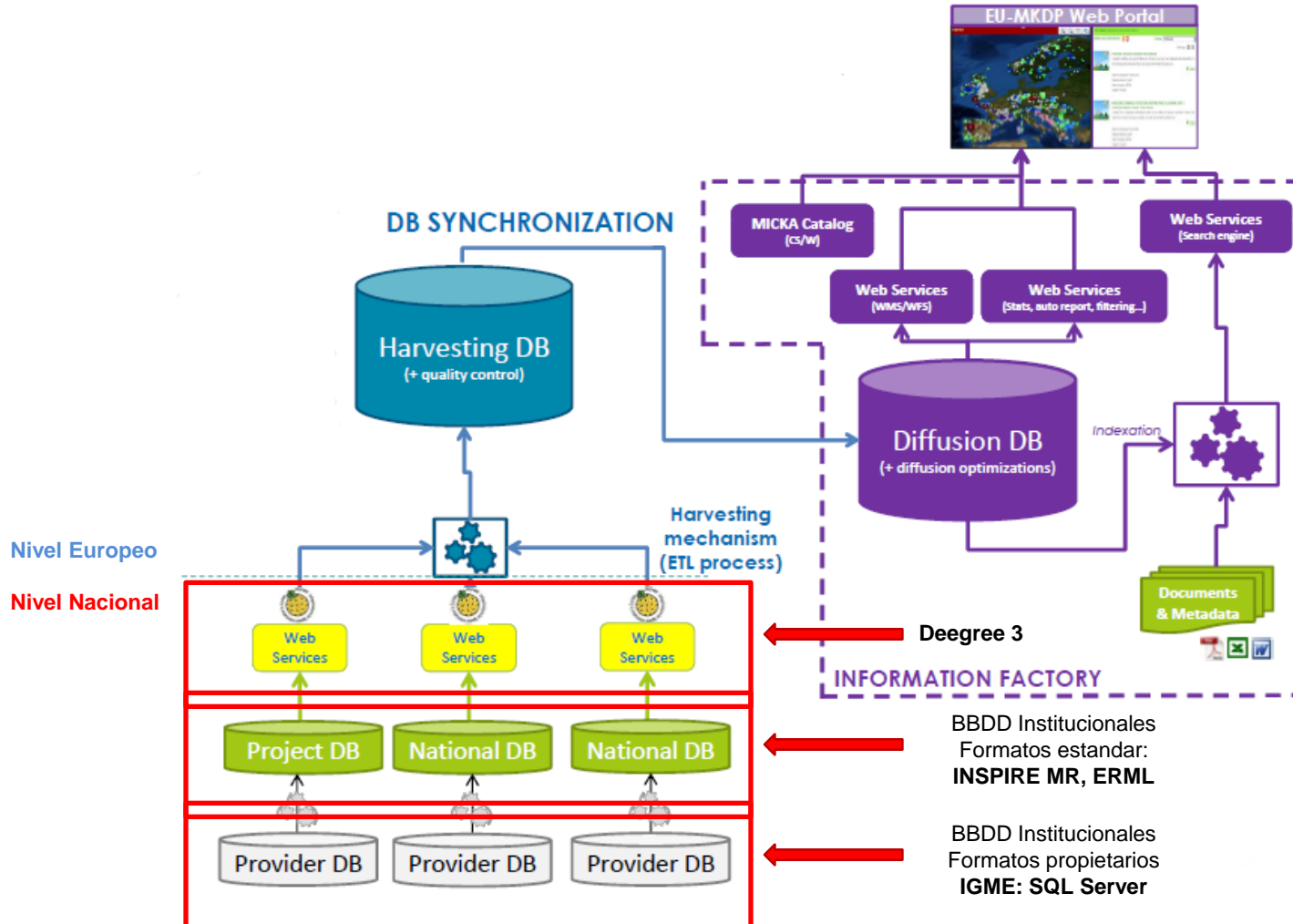
Context LAYERS

ProMine LAYERS

CSW catalog

OGC SERVER

ARQUITECTURA DEL MKDP



DISEÑO E IMPLEMENTACIÓN DE UNA BASE DE DATOS CONFORME A M4EU

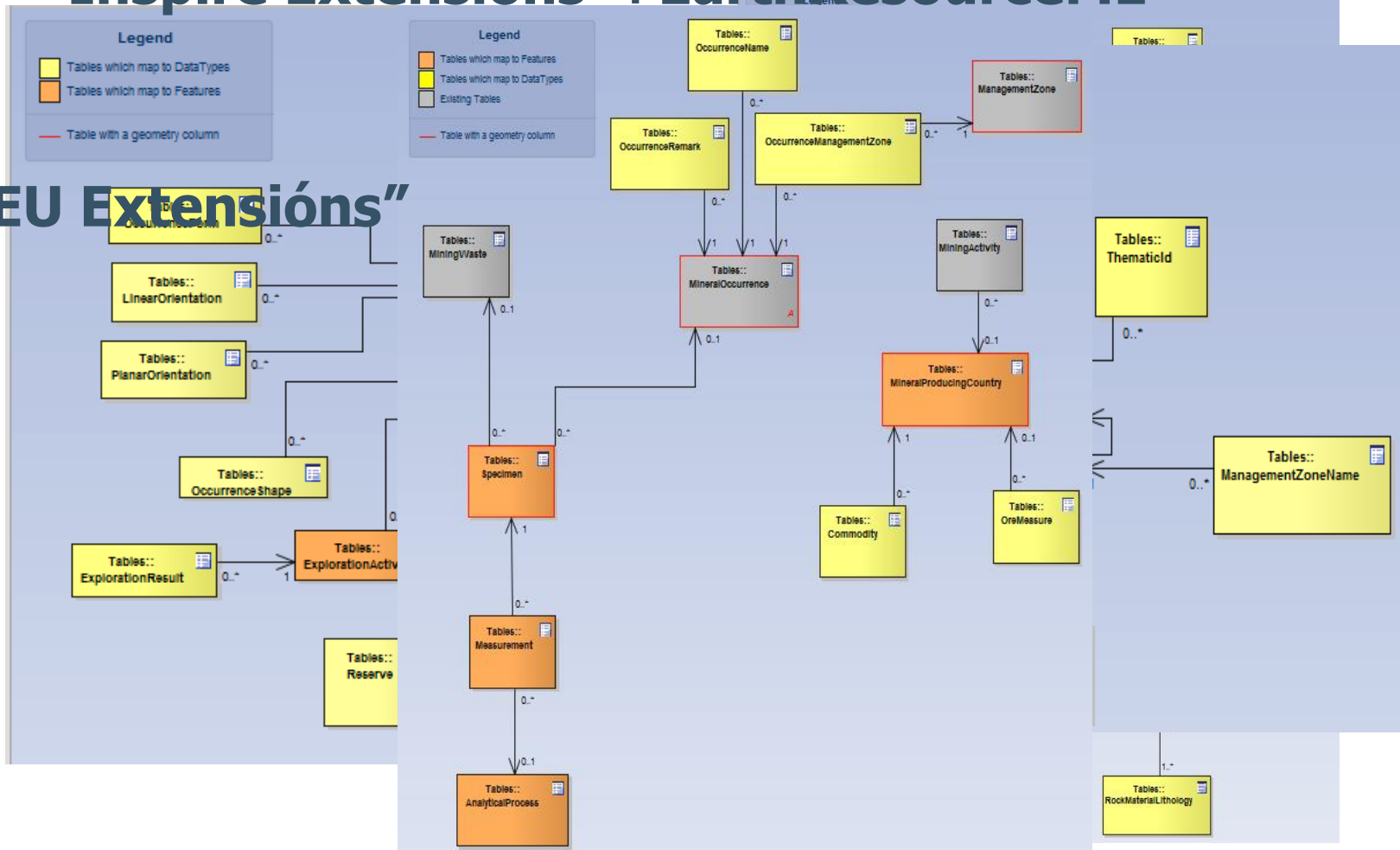
**El modelo de datos INSPIRE no es
suficiente**



**Se ha de trabajar en un Nuevo Modelo
de Datos M4EU**

CORE "Inspire Area Mangementment" "Inspire Extensións" + EarthResourceML

"M4EU Extensións"



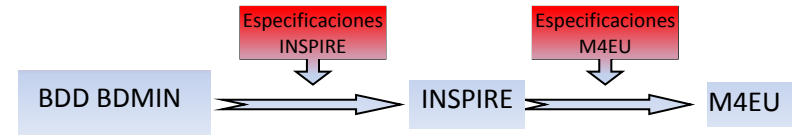
SOLUCIONES ADOPTADAS PARA LA IMPLANTACIÓN:

- Desarrollo de nuevas especificaciones de datos.
 - “Mapping Guide to M4EU Database From Your Own Dataset”
- Ampliación y modificación de la terminología.
 - “Common Terminology For Minerals4EU”
- Guía para la implantación del nuevo modelo de datos y relleno de la información.
 - “Service implementation cookbook” : fichero de instalación y configuración del modelo de datos M4EU en Postgre SQL/PostGIS.

Minerals Intelligence Network for Europe	
Minerals4EU-WP5:	
The Enterprise Architect UML and model for M4EU Database	
Title of the project: Minerals Intelligence Network for Europe – Minerals4EU	
Grant Agreement Funding Scheme Start date: Duration: Document title:	Minerals Intelligence Network for Europe – Minerals4EU
Workpackage: Author(s):	WP5: Common terminology for Minerals4EU - draft
Date of delivery: Dissemination level: Reviewed by: Status of the document: Document location:	
Project web site:	Minerals Intelligence Network for Europe – Minerals4EU 608921 FP7-NMP-2013: 4.1-3 –CSA (COORDINATING) 01.09.2013 24 months Code Lists proposal for Minerals4EU WP5 10.06. 2014 Chris Schubert (EC-JRC), Jouni Vuollo (GTK), Robert Tomas (EC-JRC), Daniel Cassard (BRGM), and WP5 Partners 30.09. 2014
Annexes:	PU/PP/RE/COI
Dissemination level:	WP5 partners
Reviewed by:	Draft / Final
Status of the document:	Folder: Minerals4EU\Work Package 5\All documents
Document location:	https://vyi-som.e2.vy-verikko.fi/gtk/Minerals4EU
Project web site:	

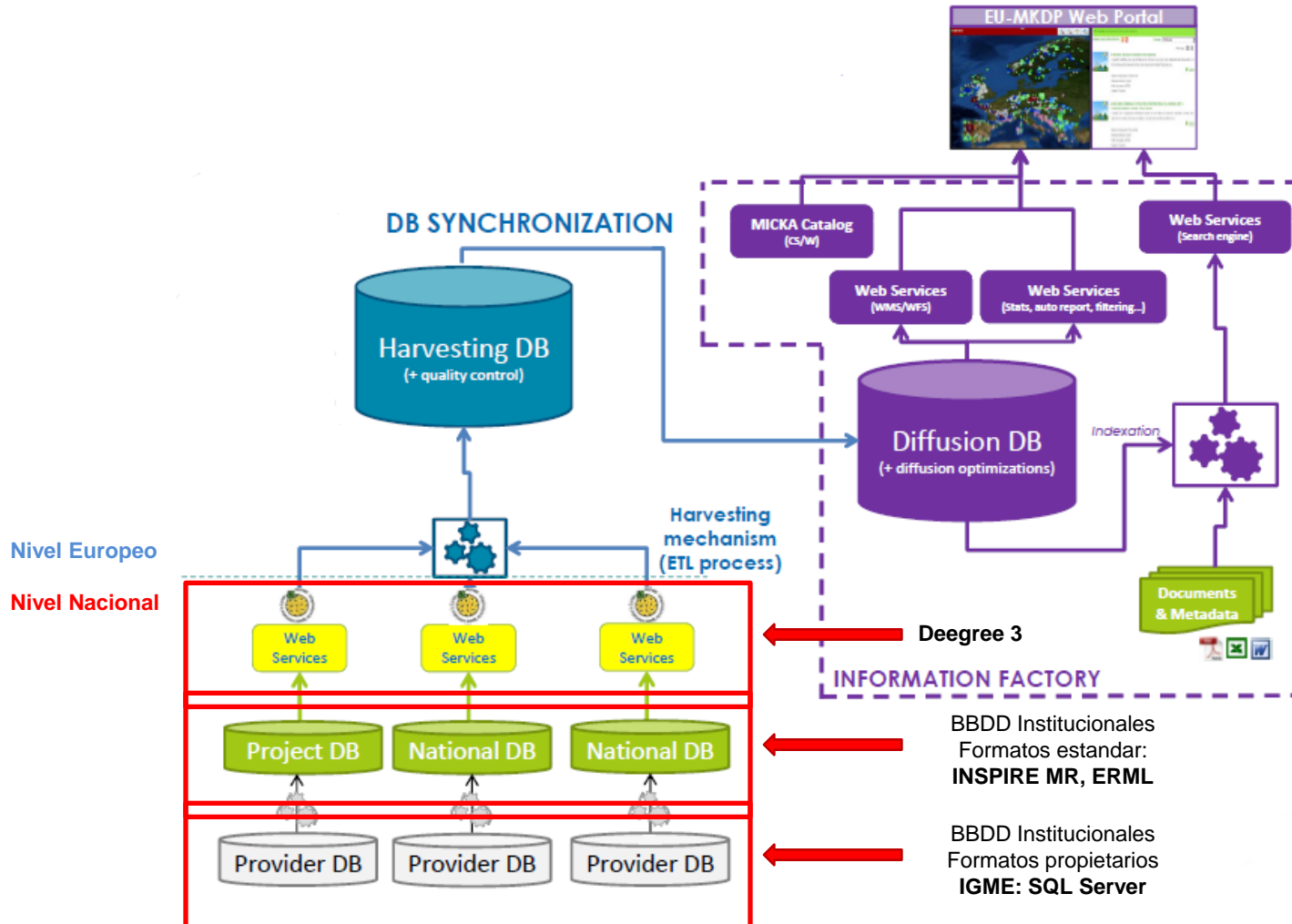
DIFICULTADES:

- Nuevo análisis de especificaciones y de datos



- Necesidad de nuevas transformaciones.
 - Mayor grado de incertidumbre en los resultados
 - Problemas de interoperabilidad semántica
- Adaptación implementación BBDD definida en el proyecto a la tecnología del IGME.
 - La BBDD de M4EU está diseñada para ser implementada en Postgre SQL/PostGIS. El IGME trabaja sobre SQL Server.
- Modelo de datos de mínimos: De las 47 tablas definidas en la BBDD M4EU sólo se ha trabajado sobre 5.

ARQUITECTURA DEL MKDP



BBDD Institucionales
 Formatos estandar:
INSPIRE MR, ERML

BBDD Institucionales
 Formatos propietarios
IGME: SQL Server

GENERACIÓN DE SERVICIOS WFS CONFORMES CON EL PROYECTO M4EU

**Desarrollos a medida “open source”
para guiar la implementación de los
nuevos requerimientos.**



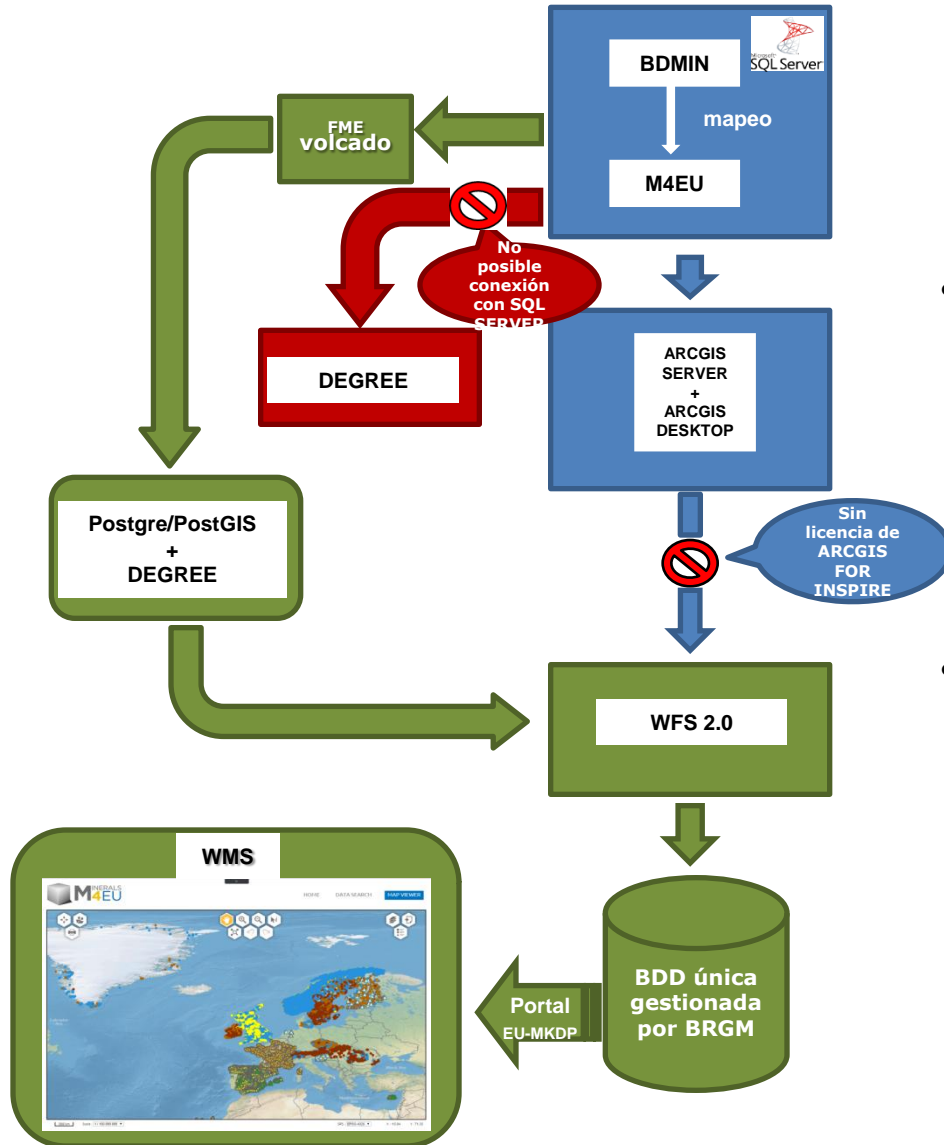
**Selección de software específico “open
source”**

SOLUCIONES ADOPTADAS PARA LA IMPLANTACIÓN:

- “Service implementation cookbook”:
 - Fichero XML de mapeo de la Base de Datos M4EU para la generación del GML, definido para implementarlo den Degree.

Minerals Intelligence Network for Europe	
Minerals4EU-WP5:	
Service implementation cookbook	
Title of the project:	Minerals Intelligence Network for Europe – Minerals4EU
Grant Agreement number:	608921
Funding Scheme:	FP7-NMP-2013: 4.1-3 –CSA (COORDINATING)
Start date:	01.09.2013
Duration:	24 months
Document title:	Minerals4EU-WP5: Service implementation cookbook v0.7.0.2
Workpackage:	WP5
Author(s):	Frands Schjøth (GEUS), Frank D.E. Waardenburg (TNO), Tjerk C. Heijboer (GEUS) and WP5 Team
Date of delivery:	20.08.2014
Dissemination level:	PU/PP/RE/CO ¹
Reviewed by:	
Status of the document:	Final
Document location:	Folder: Minerals4EU/WP5/Cookbook
Project web site:	http://www.minerals4eu.eu

DIFICULTADES:



- La política de sistemas de información del IGME no soporta ni mantiene la tecnología seleccionada en M4EU.
- La implantación del proyecto ha requerido un esfuerzo extra de técnicos de sistemas.

RESULTADOS Y CONCLUSIONES

- Se va a trabajar con proyectos con necesidades que van más allá de INSPIRE
 - Es necesario y fundamental el desarrollo de especificaciones adicionales
 - Se puede incurrir en problemas de interoperabilidad
- Los requisitos específicos van a requerir desarrollos -a medida- que van a limitar el software a utilizar
 - Pueden conllevar conflictos con políticas de sistemas de las organizaciones
 - Pueden poner en peligro el mantenimiento de los sistemas a largo plazo
- Hay que hacer una evaluación de esfuerzo-resultado

Muchas gracias!!!!!!