

MINING HORIZONS

Exploration of critical and strategic minerals in Asturias

May 2026



CRMs DataSpace RFCS PROJECT

Common European Data Space for the Green Deal



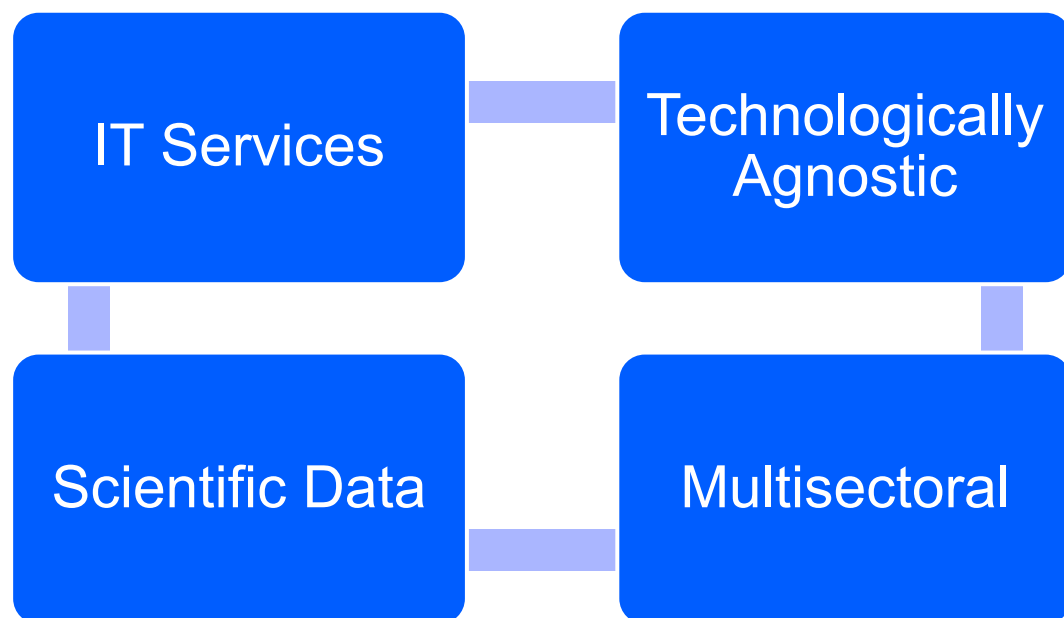
Co-funded by
the European Union



satec_

Who is SATEC

A Spanish multinational specialising in solutions architecture and services in the field of information and communication technologies.



Project Context

EU Goals →

SETTING 2030 BENCHMARKS FOR STRATEGIC RAW MATERIALS



EU EXTRACTION

At least **10%** of the EU's annual consumption for extraction



EU PROCESSING

At least **40%** of the EU's annual consumption for processing



EU RECYCLING

At least **15%** of the EU's annual consumption for recycling



EXTERNAL SOURCES

Not more than **65%** of the EU's annual consumption of **each strategic raw material at any relevant stage of processing** from a single third country

Source: [Factsheet - European Critical Raw Materials Act](#)

Obligations Of Member States →

Directive 2006/21/EC on the management of waste from the extractive industries.
Facilities inventory

Objectives

Funded by the **Research Fund for Coal and Steel (RFSC)**, the CRMDataSpace project aims to create, for the first time, a critical raw materials data space ecosystem for the European Green Deal enabling:

- ✓ The development of a **data catalogue and data model** that leverages metadata and data management tools focused on CRMs derived from waste in the extractive industry.
- ✓ Facilitate the **exchange and integration of CRMs data** among stakeholders via a data space platform aligned with European regulations and standards.
- ✓ Develop **cross-cutting solutions for the CRMs ecosystem**, addressing both data supply and demand and creating services directly derived from the data.

Consortium 2025 - 2028

Partners



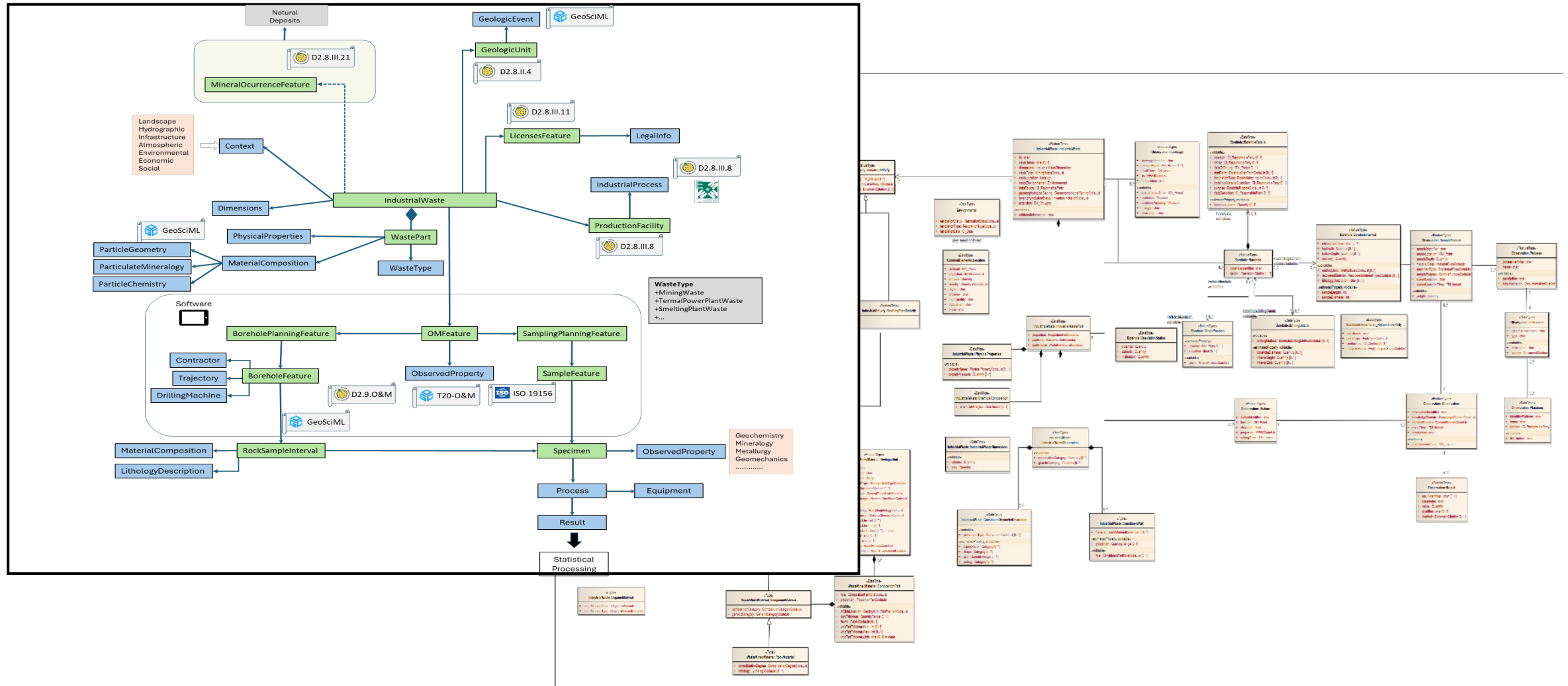
Universidad de Oviedo



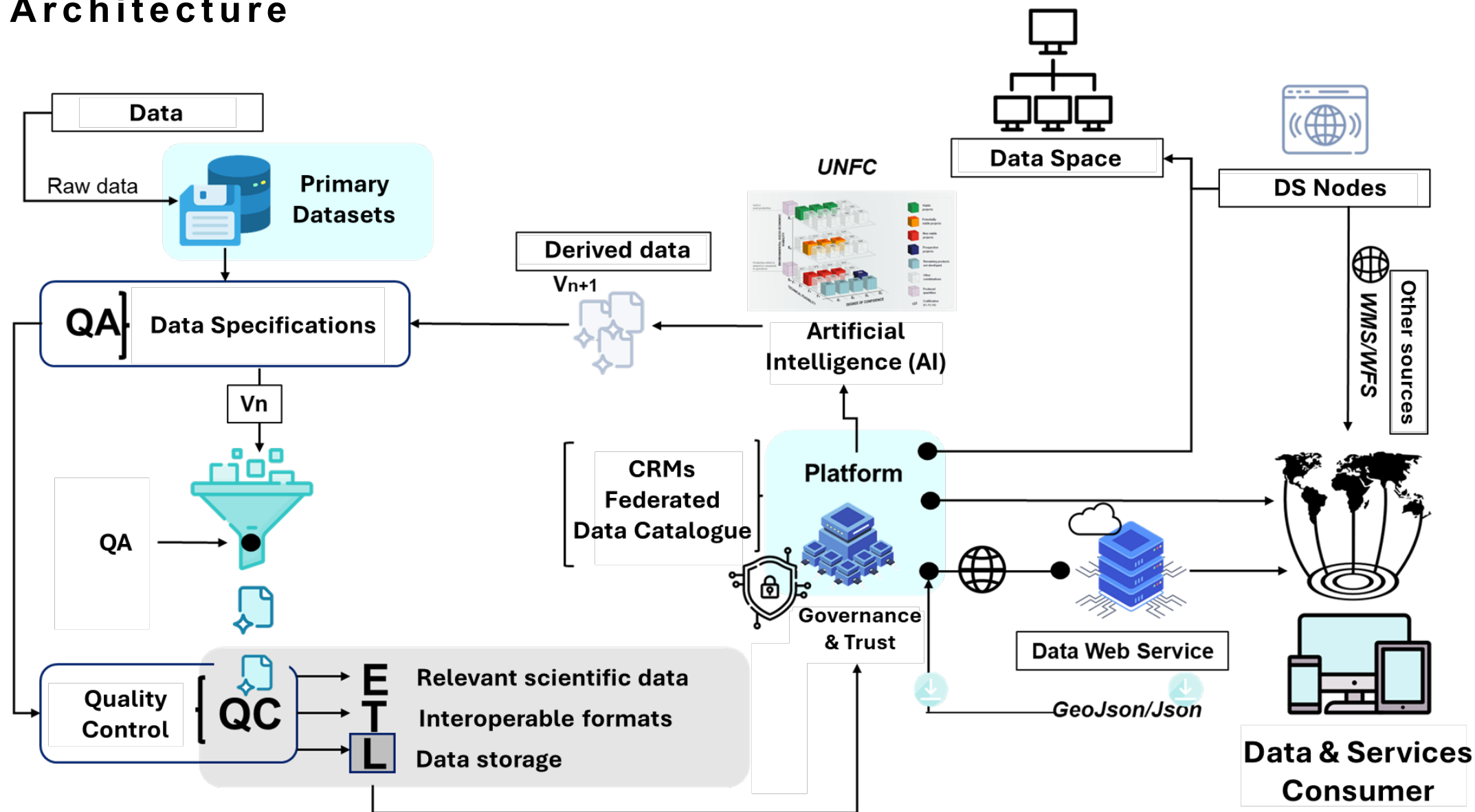
Collaborators



Overview of the Data Model



Architecture



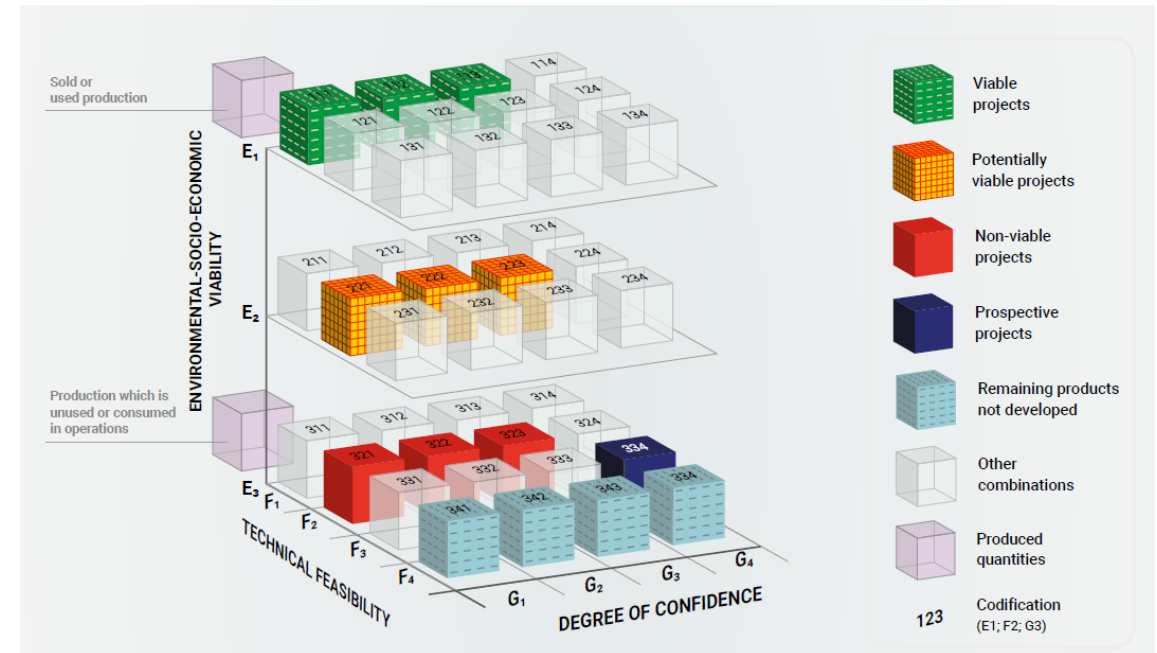
United Nations Framework Classification for Resources (UNFC)

- ▶ UNFC is based on three fundamental criteria (axes) that describe the status of any specific resource project:

Environmental-socio-economic viability: the degree to which the project is socially acceptable and environmentally and economically viable.

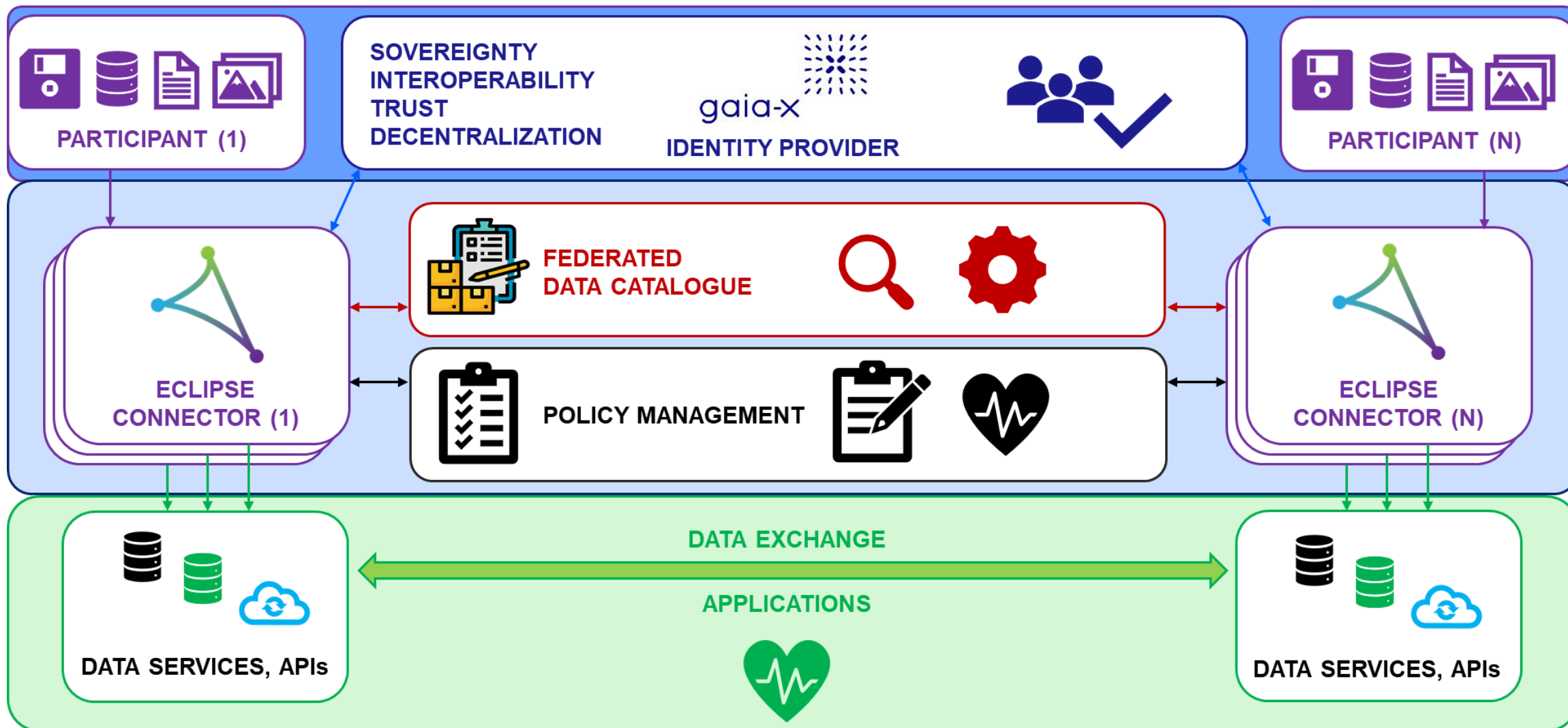
Technical Feasibility: the degree to which the project can be implemented with available technology and infrastructure.

Degree of confidence: the degree to which the quantity and quality of the resource are known and verified.

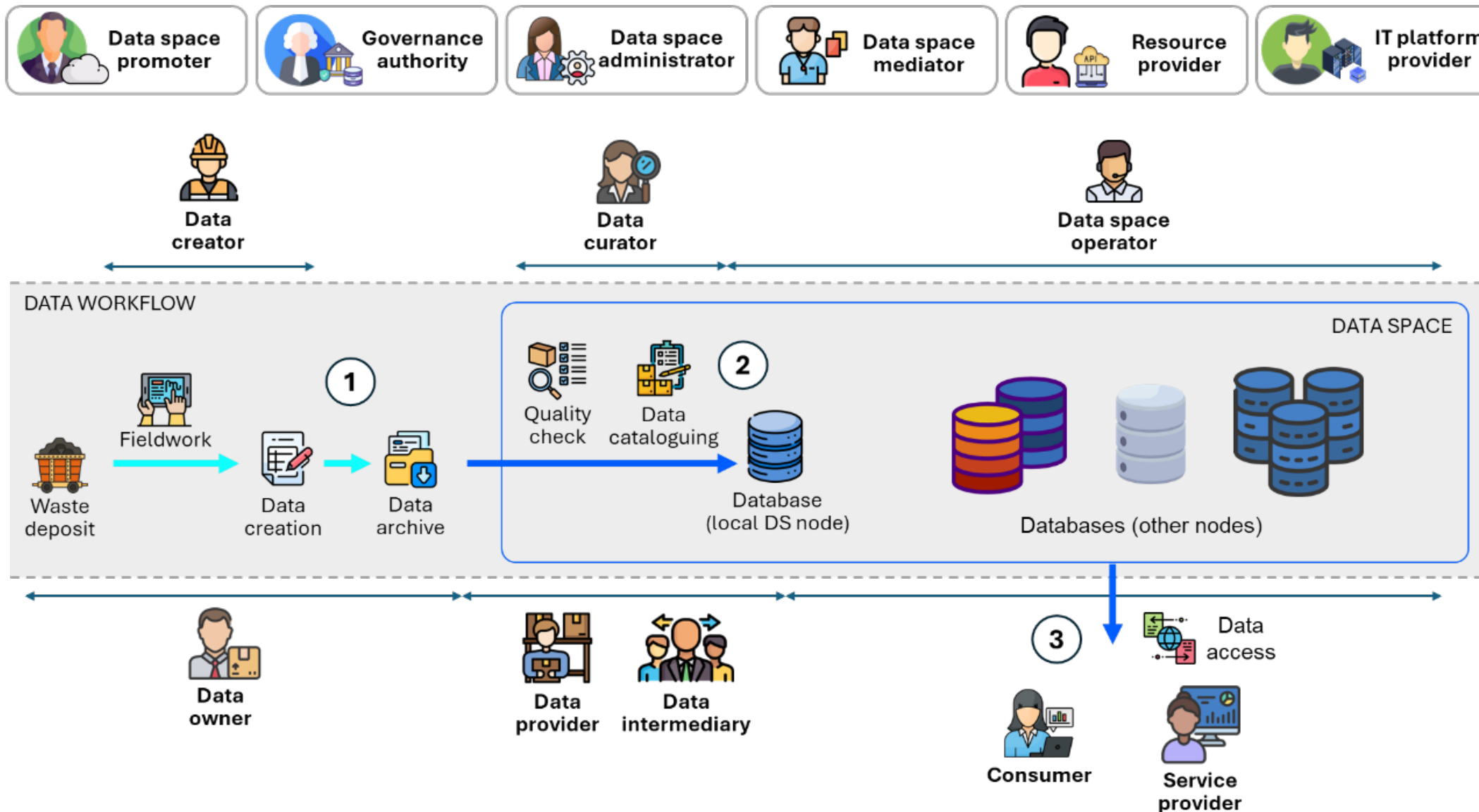


- ▶ Reference for the CRMDataSpace project: Supplementary Specifications for the Application of the United Nations Framework Classification for Resources to **Anthropogenic Resources**.

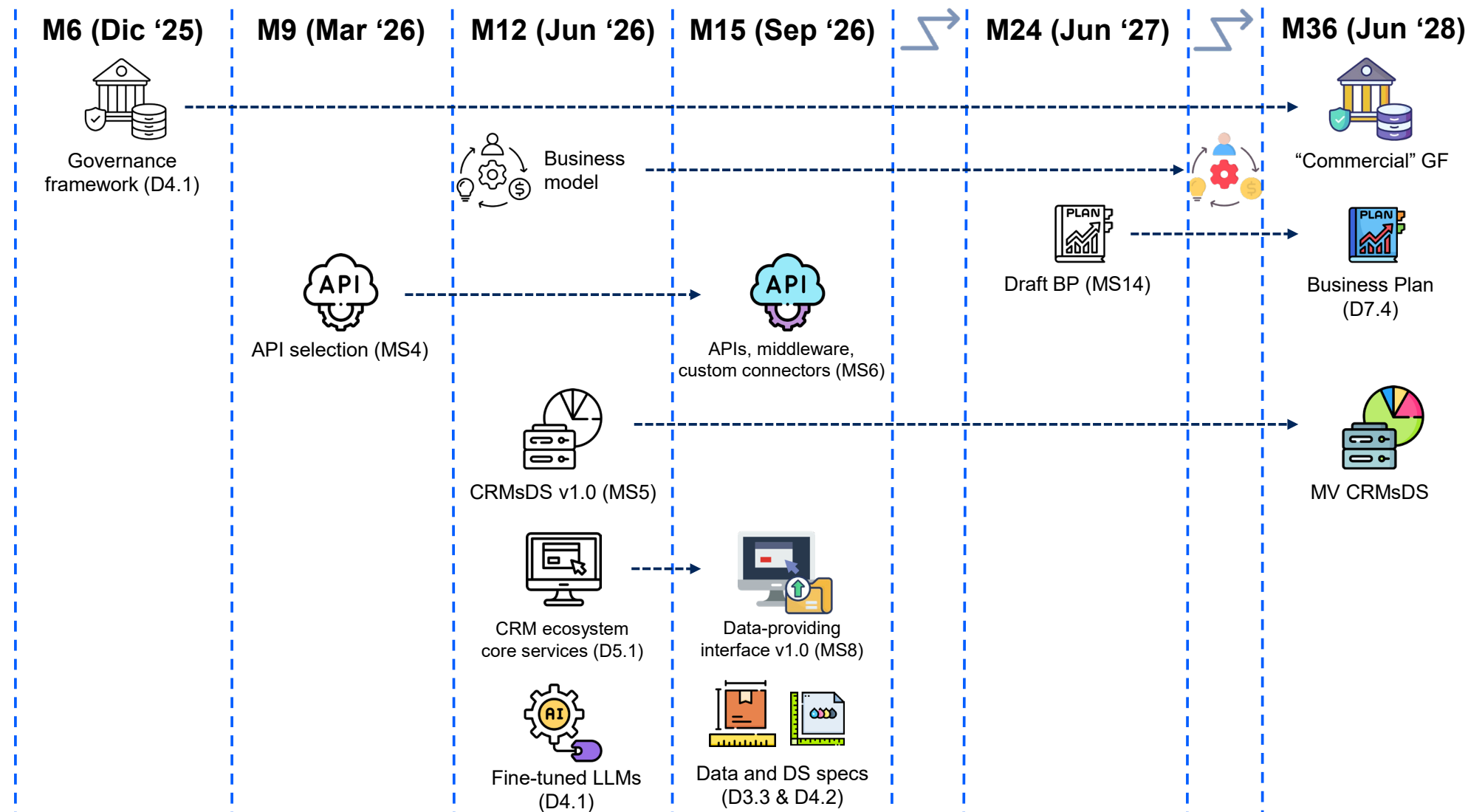
Data Space Concept



Data Space Governance



Project Milestones



📍 CRMSDATASPACE

Common European Data Space on Critical Raw Materials

Critical raw materials are essential to modern economies, enabling technologies that power the energy transition, digital infrastructure, and advanced manufacturing. This portal provides access to data on waste sites and secondary resources where CRMs might be potentially recovered. By providing value-added data services, CRMDataSpace supports the identification and assessment of opportunities to recover critical raw materials within the EU.

🔍 Browse catalogue

🔗 Contribute to CRMDataSpace

12+

INDUSTRIAL
WASTE

4

CRMS SERVICES

DISCOVERY

Access high-quality CRM-related information in the CRMDataSpace community

Browse our catalogue for information on potential CRMs deposits. Access & Download any dataset you are interested in.



CRMs Datasets

Explore and access key information on critical raw materials, including locations, properties, and related datasets, to support research and planning.



Lab Results

Review laboratory analyses of samples, including measured concentrations of critical raw materials and related parameters.



Resource Estimation

Check the potential for exploiting CRMs in a selected area using available data and models.



Legacy Info

Review information related to the original extractive sites.



Reporting

Generate summaries of data, analyses, and findings for documentation and decision-making processes.



Environment

Access to environmental information regarding the waste facilities and the original extractive operations.

foster collaboration and improve knowledge on Critical Raw Materials in

Share Data

Make your relevant datasets available to the CRMs Data Space community to foster collaboration and improve knowledge on Critical Raw Materials in Europe.

Select the data type you want to contribute to the CRMs Data Space.

RESOURCE ESTIMATION

Data that contribute to the accurate characterization of the industrial site and provide information for the assessment of CRM exploration criteria. Some data sets include topographical and morphological data on the industrial site, data on material dumping at waste sites, drilling data, or geological and geotechnical information.

LABORATORY DATA

Laboratory results for samples taken from waste sites, including characterization test to evaluate their physical, chemical and mechanical properties. Information on environmental data is also included, such as leachate analyses and potential interactions with the surroundings of the industrial site.

SITE REPORTING

EIAs, operational reporting for production and closure operations, as well as site restoration reports, including UAVs or satellite imagery and related results (e.g., vegetation indices).

Join the CRMDataSpace community

Access high-quality datasets to explore and assess CRMs recovery opportunities.

Make your relevant datasets available to the CRMDataSpace community to foster collaboration and improve knowledge on CRMs in the EU.

DATA TRUST

Quality Assurance & Control

All CRMs datasets undergo a validation process to ensure quality, consistency, and compliance with EU regulations and information standards.

These steps help ensure that the data made available in the platform are reliable and ready for reuse.

[→ Start browsing](#)

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[Register my organisation](#)[Create user account](#)[I am already registered](#)

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PROCESS

How It Works

From data discovery to collaboration in four simple steps.

San Nicolás
✕

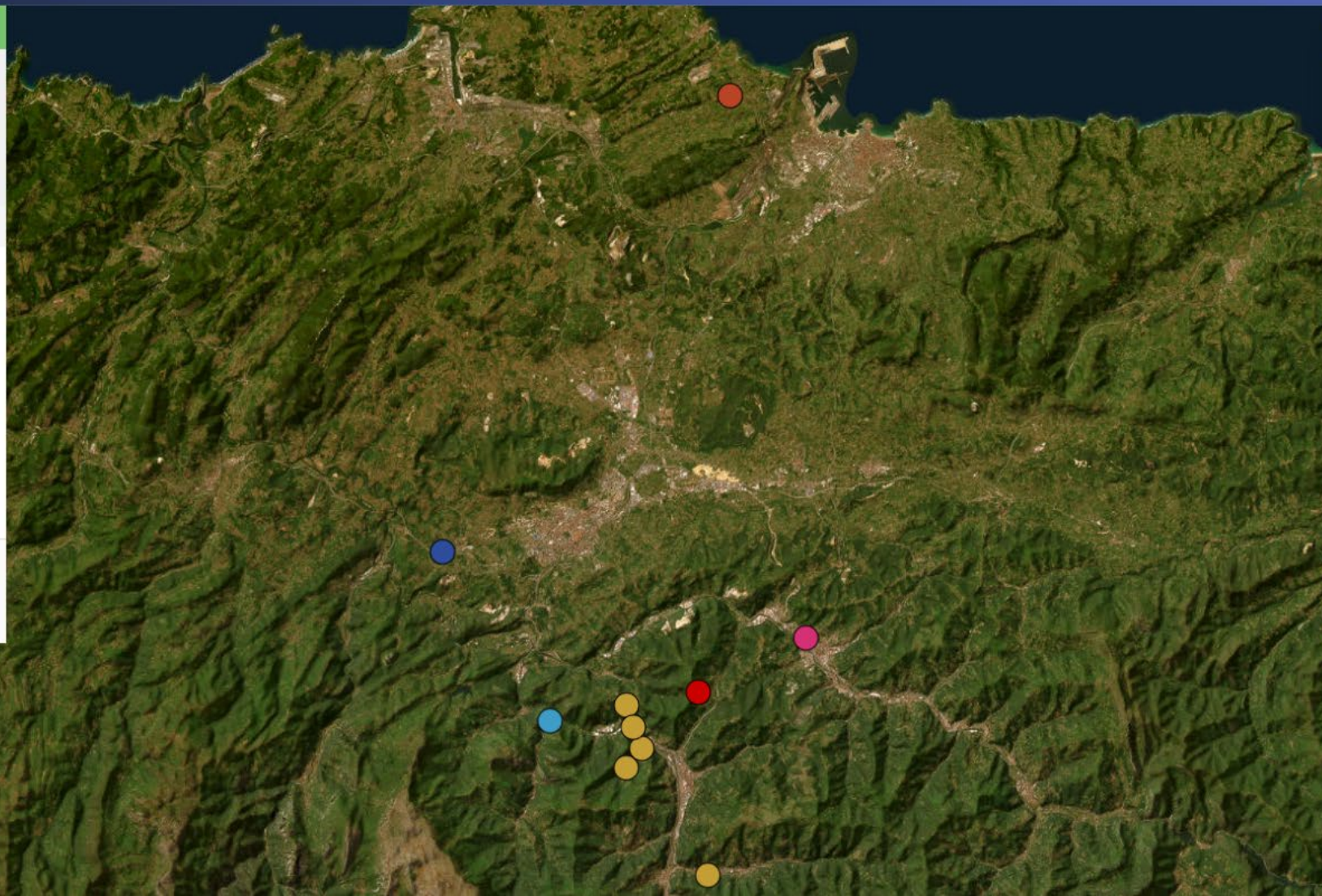


▼ General Information

Deposit type	Waste
Country	Spain
Province	Asturias
Municipality	Mieres
Main commodity	Coal
Waste source	Energy mining
Area (m ²)	68000
Volume (m ³)	1001-10000
Restoration type	Not restored

View Docs
 View Multimedia

Center




▼ Layers

Industrial Waste

- Commodity ⓘ
- Deposit Type ⓘ
- Perimeter ⓘ
- Restoration Type ⓘ
- Waste Source ⓘ

- Energy mining
- Mining of rocks and industrial
- Metallurgy
- Industrial process
- Metal mining
- Civil Engineering

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General Information

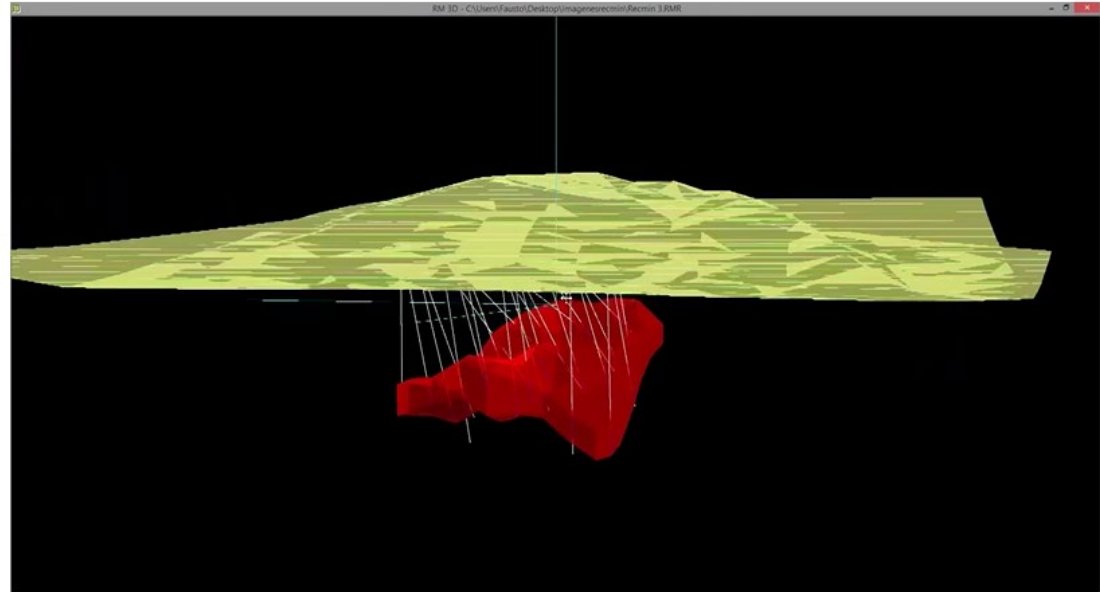
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[View Docs](#) [View Multimedia](#)

[Center](#)

Multimedia — San Nicolás ✕

RECMIN Modules Pentahedral Method vs Block Model



Overview of the main modules of RECMIN software for mining resource management and modelling.

Layers

Industrial Waste

- Commodity ⓘ
- Deposit Type ⓘ
- Perimeter ⓘ
- Restoration Type ⓘ
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 - Energy mining
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Contact



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