EOSC-Pillar

Coordination and Harmonisation of National & Thematic Initiatives to support EOSC

Solving the service findability and the analytics problem

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Virtual Research Environments

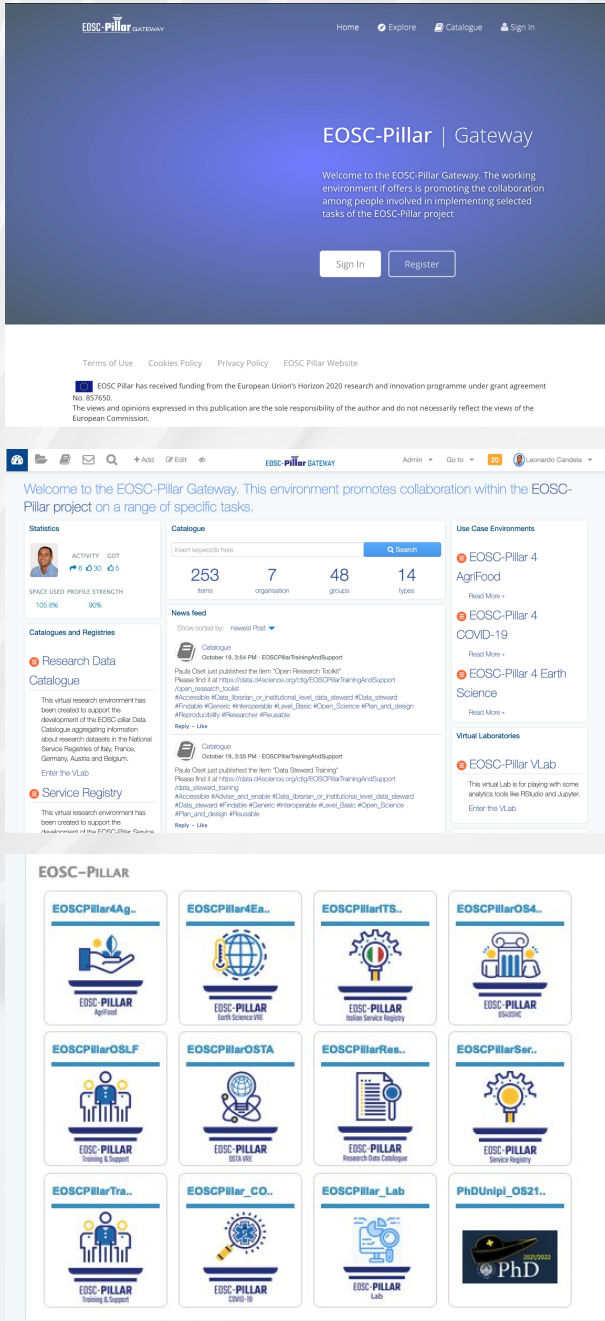
* Researchers need a **working environment** making available:
  * the **data** they are willing to use
  * the **computing capacity** they need
  * the **services** they are willing to use
* Every working environment should serve **many users** (a **community of practice**) rather than a single user:
  * enact the **collaborative working**
  * facilitate **co-creation** and **Open Science**, by early sharing new data, results, pipelines / workflows
* **Velocity** and **multi-tenancy** make traditional approaches in "application" development not viable
  * **as-a-Service** delivery mode
* **Open Science** calls for "**sharing *** as convenient/early as possible"
  * **provider** and **consumer** perspectives

The EOSC-Pillar Way

* An approach the develop an **interoperable [National/Thematic] Service Catalogue** supporting Service publishing & discovery

* An approach (catalogue driven) supporting [Data] **discovery** and facilitating early **sharing & publishing**

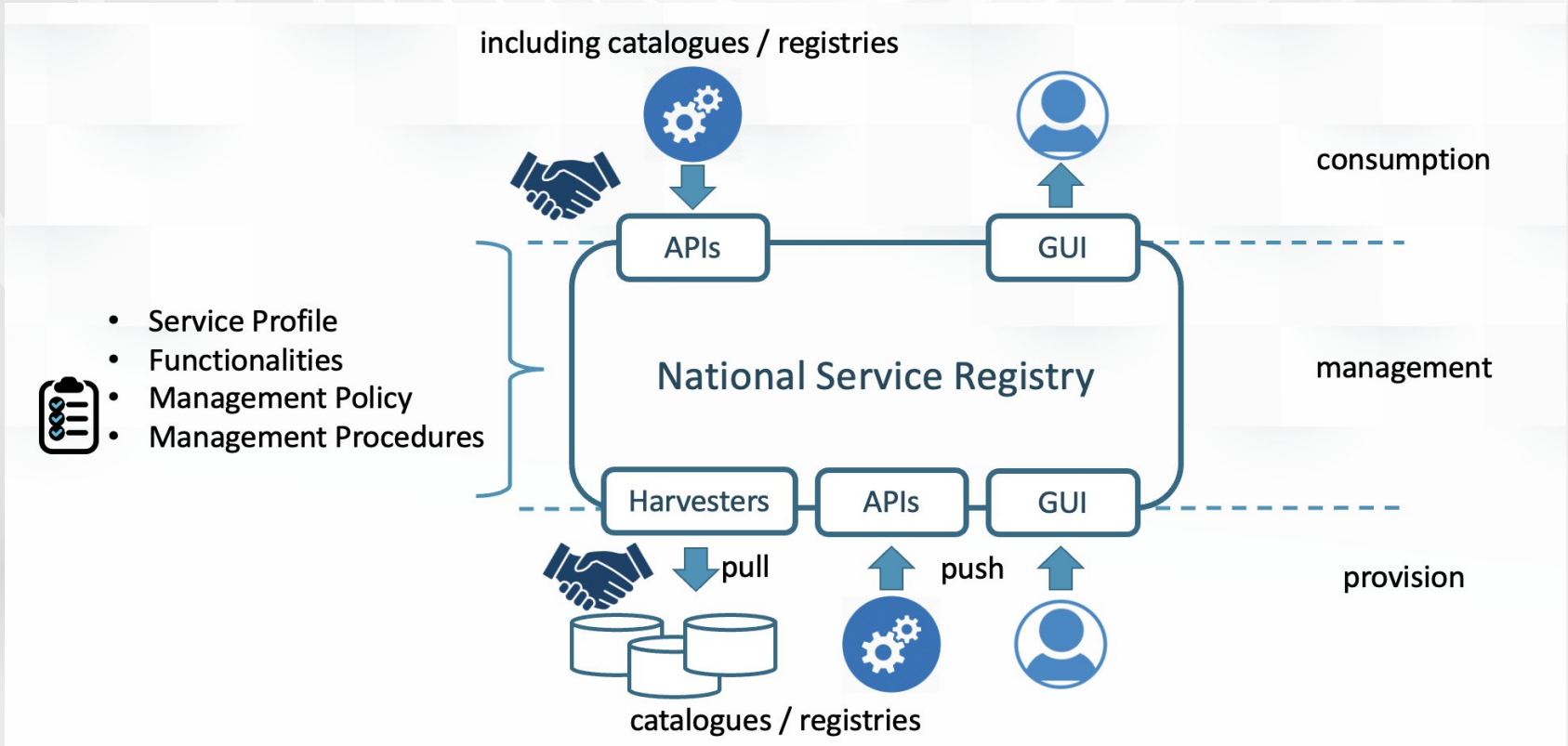
* An approach providing communities of practices with **Virtual Research Environments** (by D4Science) and ready-to-use services



https://eosc-pillar.d4science.org/

Developing Interoperable [National / Thematic] Service Catalogues

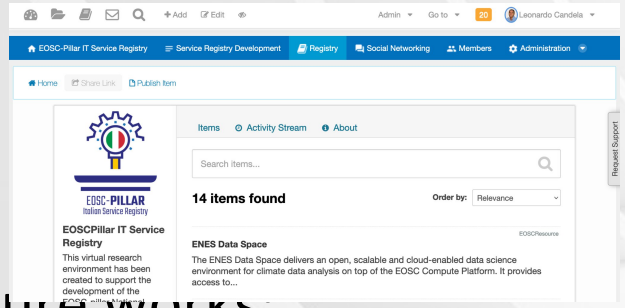
* Yet another catalogue?
  * no global catalogue will match the needs of a specific community
  * Do not start from scratch and cater for interoperability

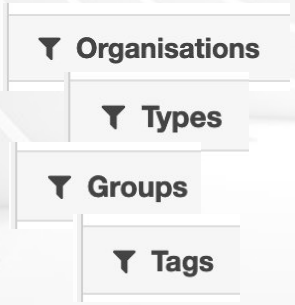


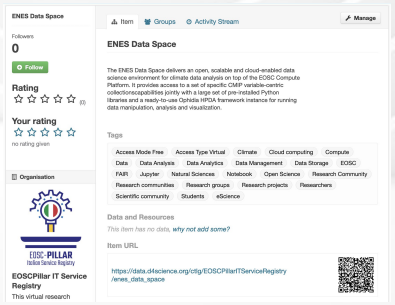
Developing Interoperable [National / Thematic] Service Catalogues [cont.]

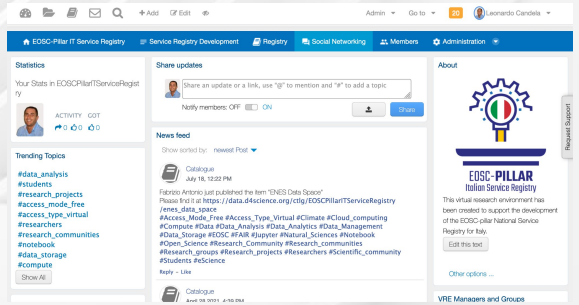
The working environment for the Italian prototype is operational

* https://eosc-pillar.d4science.org/web/eoscpillaritserviceregistry
* Configured with latest EOSC Provider and Resource Profiles
* Embedded into a VRE for collaborative development
* Populated with selected services from CNR, GARR, CINECA, CMCC





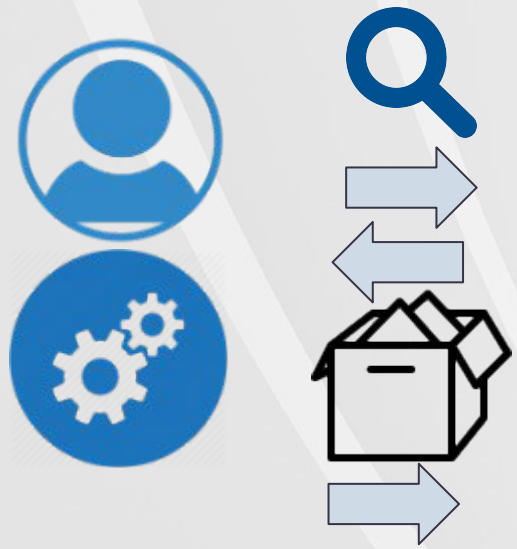


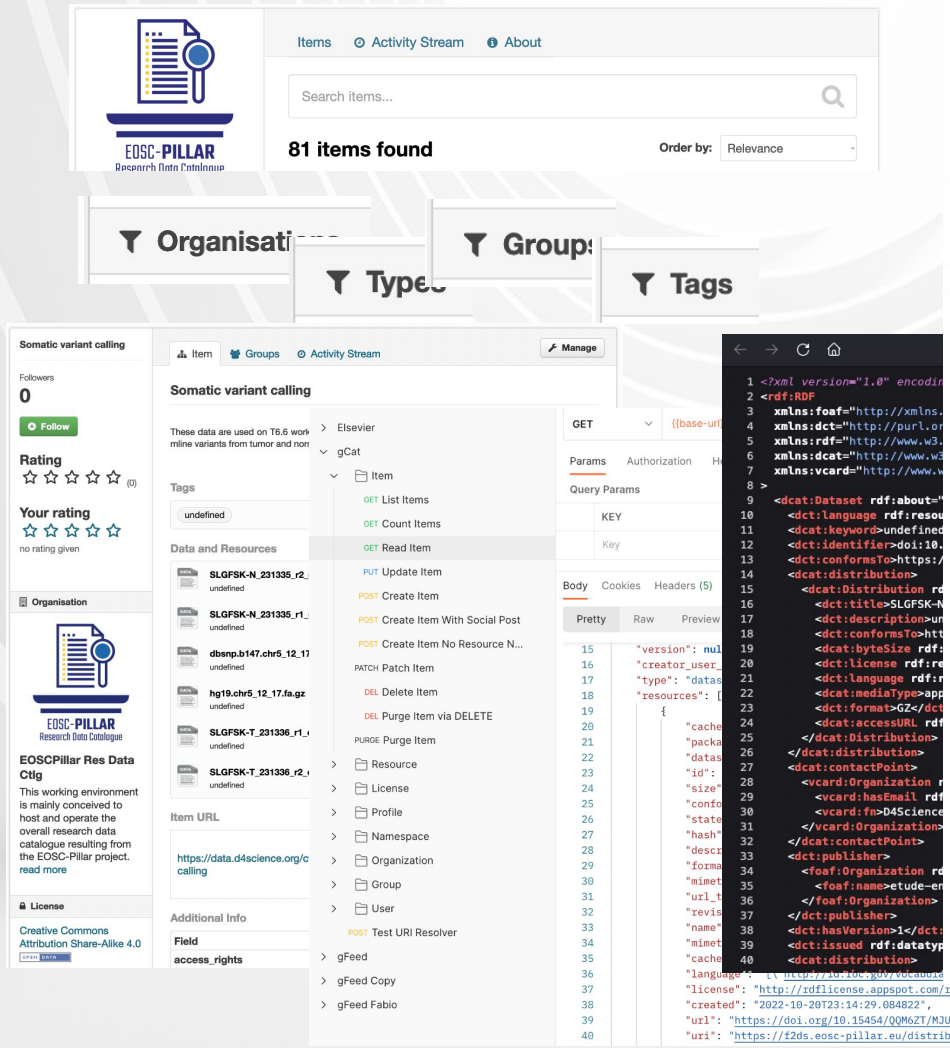


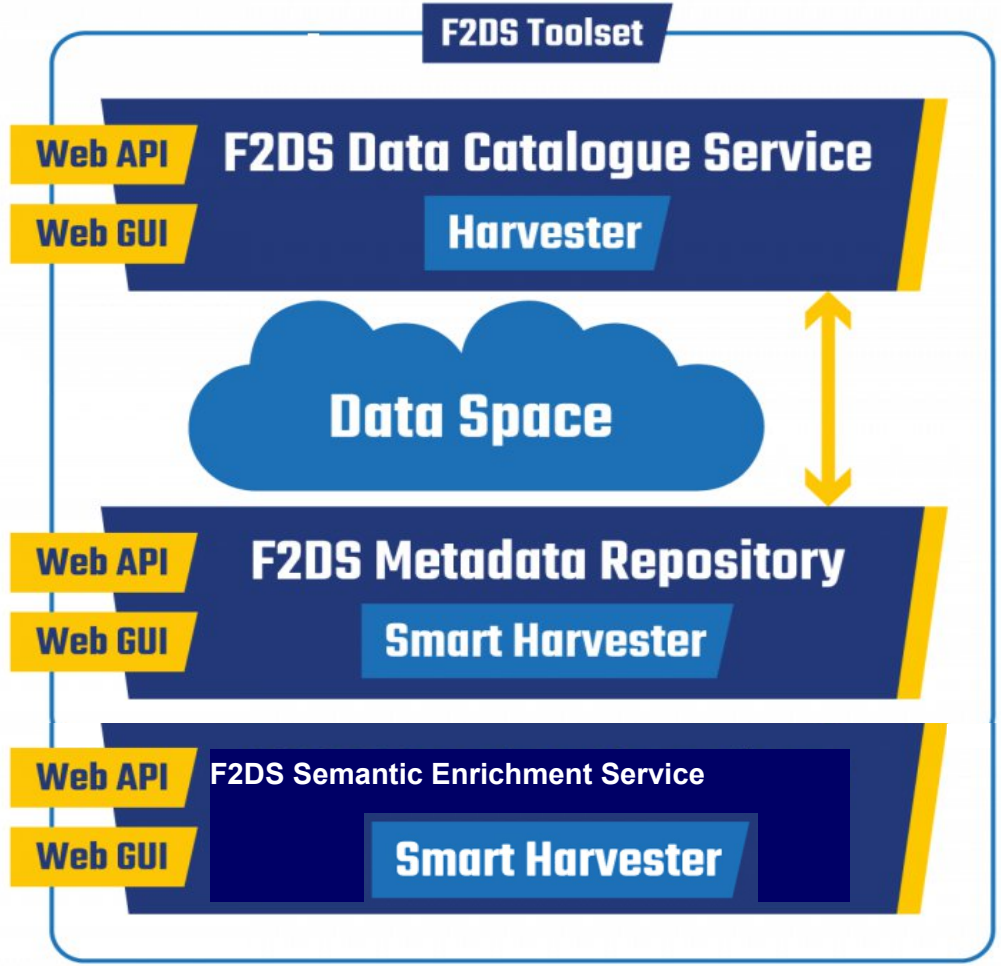
Future works:

* Reinforce the liaison with the ICDI community
* Test EOSC Onboarding
* Sum up the model (technical and organizational), the issues faced, and the lesson learned into a white paper

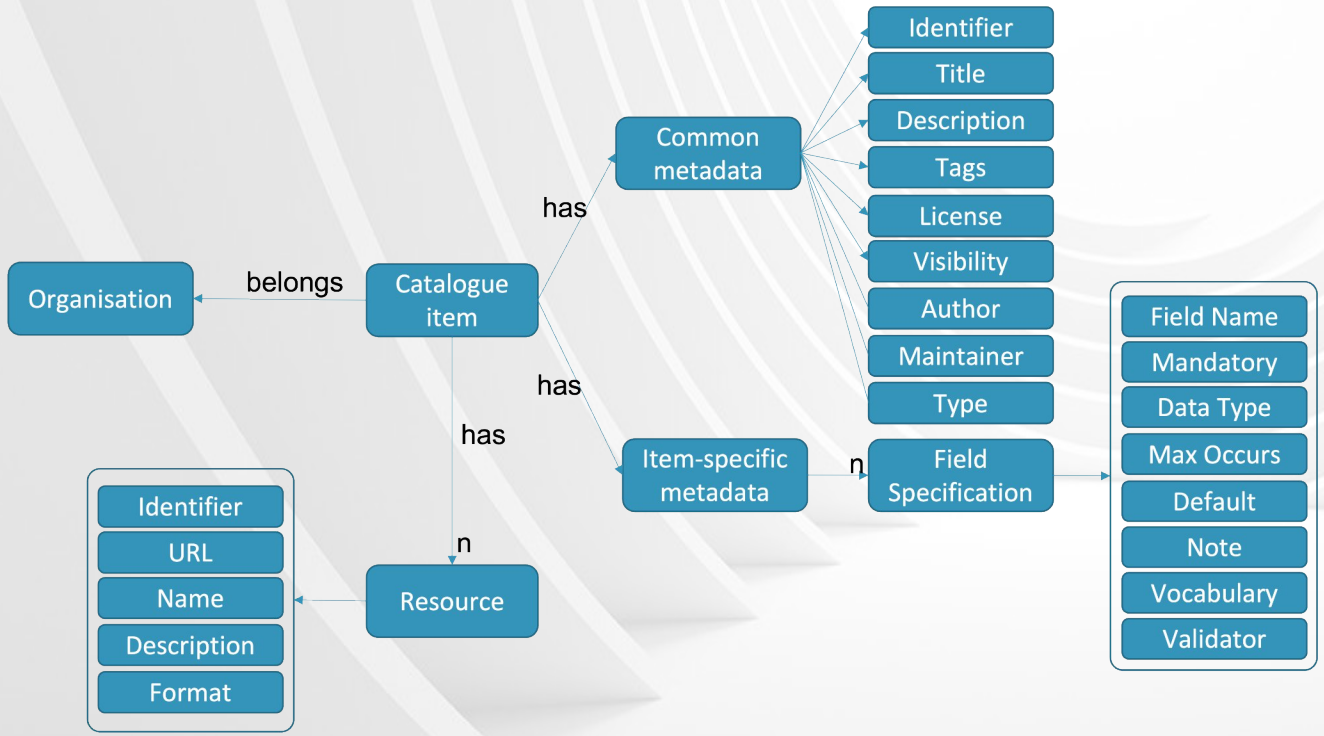
Developing a Catalogue for Data Discovery and Publishing

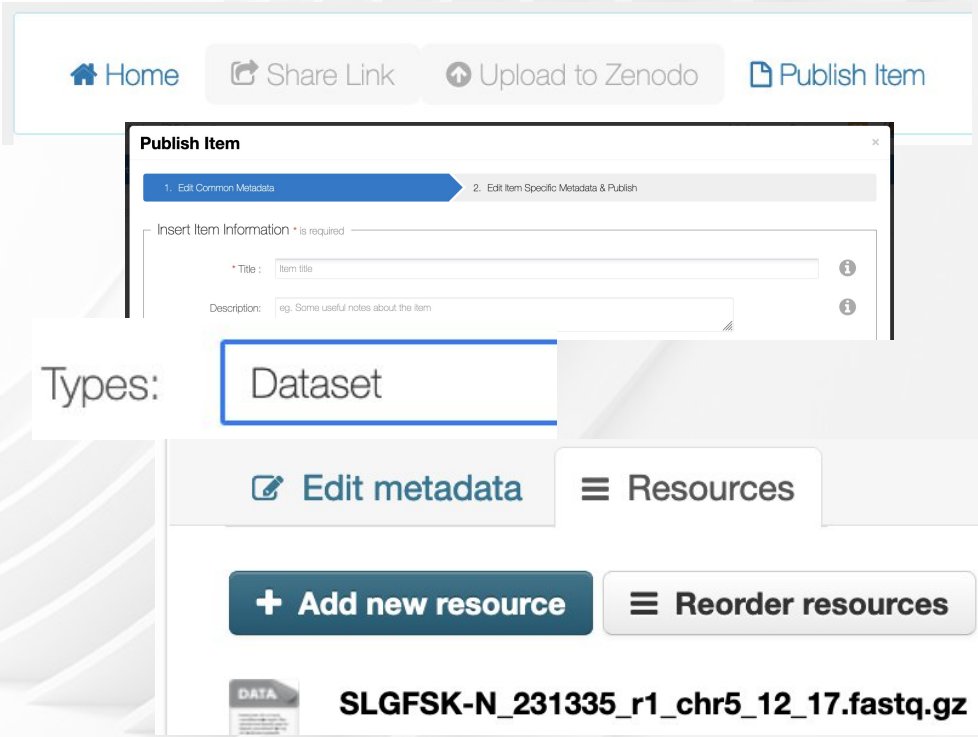






Developing a Catalogue for Data Discovery and Publishing [cont.]

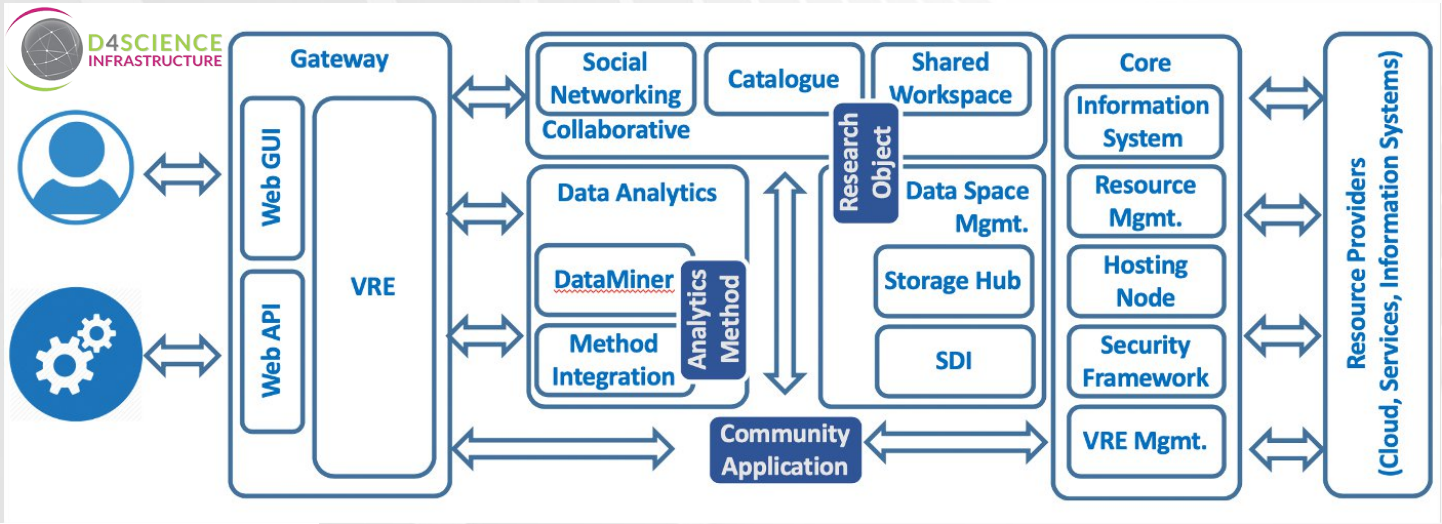


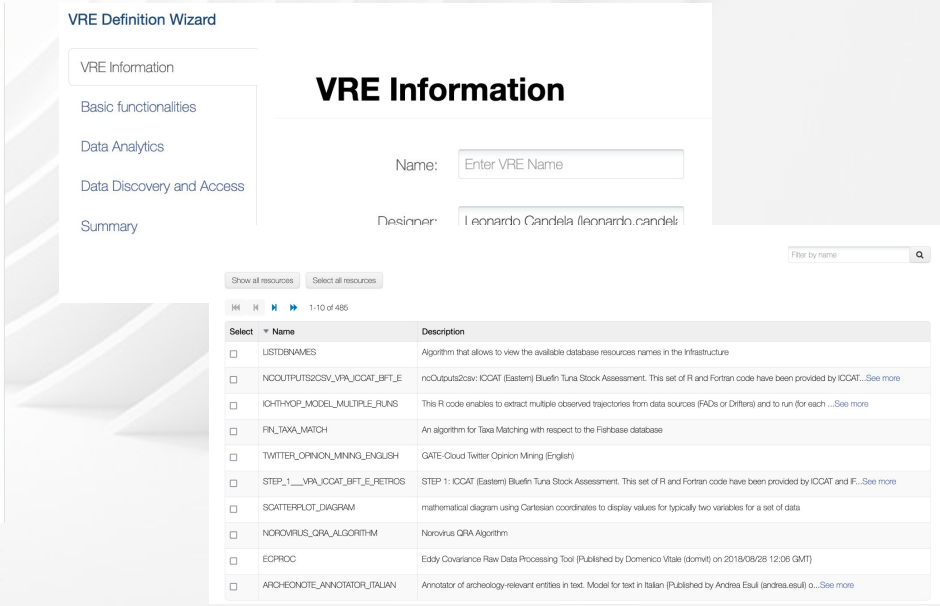


Rich and Flexible Metadata + As many resources as needed

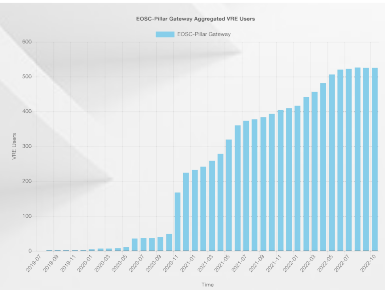
Virtual Research Environments and Ready-to-use Services

A VRE is an **innovative**, **web-based**, **community-oriented**, **comprehensive**, **flexible**, and **secure working environments** conceived to serve the needs of "**modern**" **science** delivered **as-a-Service** and catering for **co-creation***

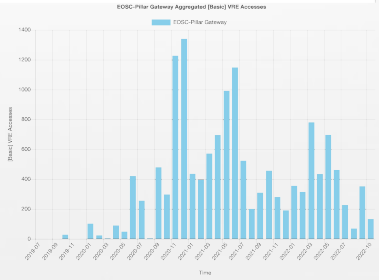




12 VREs



+512 users



+14,000 sessions

* M. Assante et al (2019) Enacting Open Science by D4Science Future Generation Computer Systems 10.1016/j.future.2019.05.063

M. Assante et al (2022) Virtual Research Environments co-creation: the D4Science experience Concurrency Computat Pract Exper 10.1002/cpe.6925

Virtual Research Environments and Ready-to-use Services [cont.]

Ready to use services (proposal)

- The use of acceleration resources (GPU, FPGA)
- Galaxy as a service platform - Laniakea@ReCaS service & contribution to Galaxy-E
- Virtual Laboratories / Virtual Research Environments
- Virtual Research Environment based service for research data publishing
- PICO2
- Materials Modelling Market
- OIE

Ready to use services provided as In-kind by the partners

- Indigo- IAM by INFN-CNAF
- FG-iRODS by France Grilles
- VIP (Virtual Imaging Platform) b
- France Grilles
- HPC resources by
- Cloud com
- resources by GAR
- storage services based on iRODS by CINES, KIT and CINECA
- VM service by KIT

Services from the WP6 call*

*ation in a previous session

- trics
- MM
- AstroODA (MMODA)

Service coming from WP5

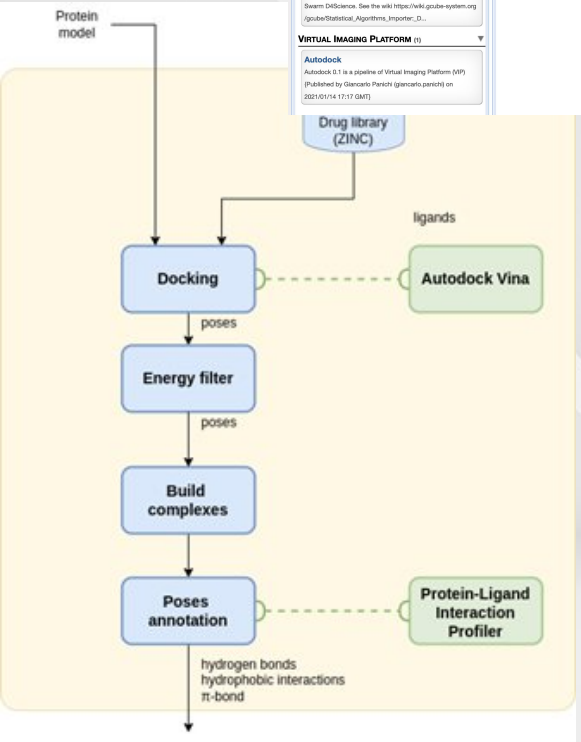
- F2DS

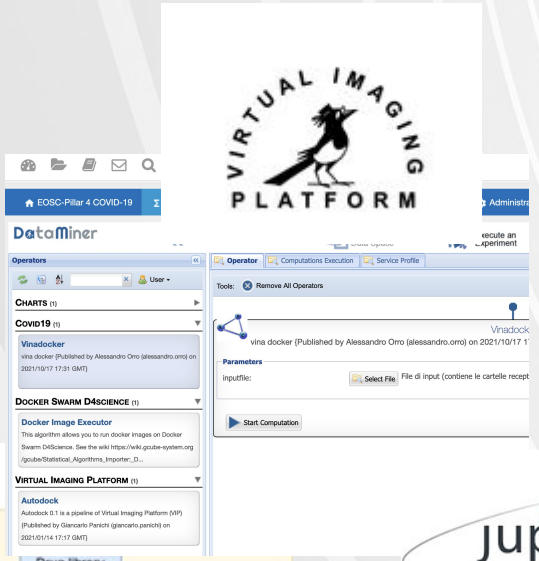
Services provided by WP6 use cases

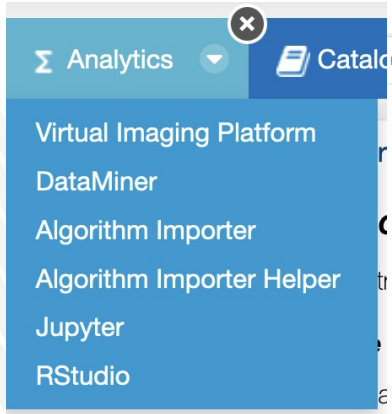
- Software Heritage
- Datainrae
- Simbad
- VITAM

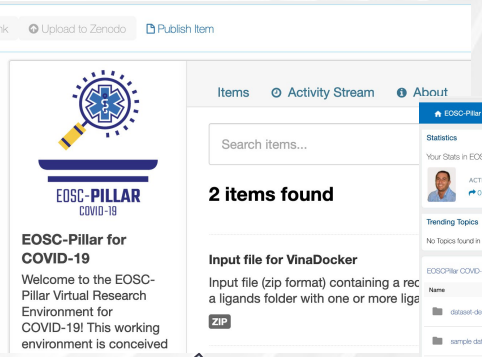
Rich array of services ... more today @ 17:00 - 18:00 Sustainability Track: Sustainability and business models

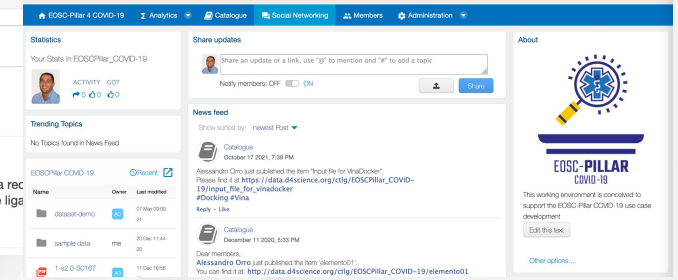
The COVID-19 VRE

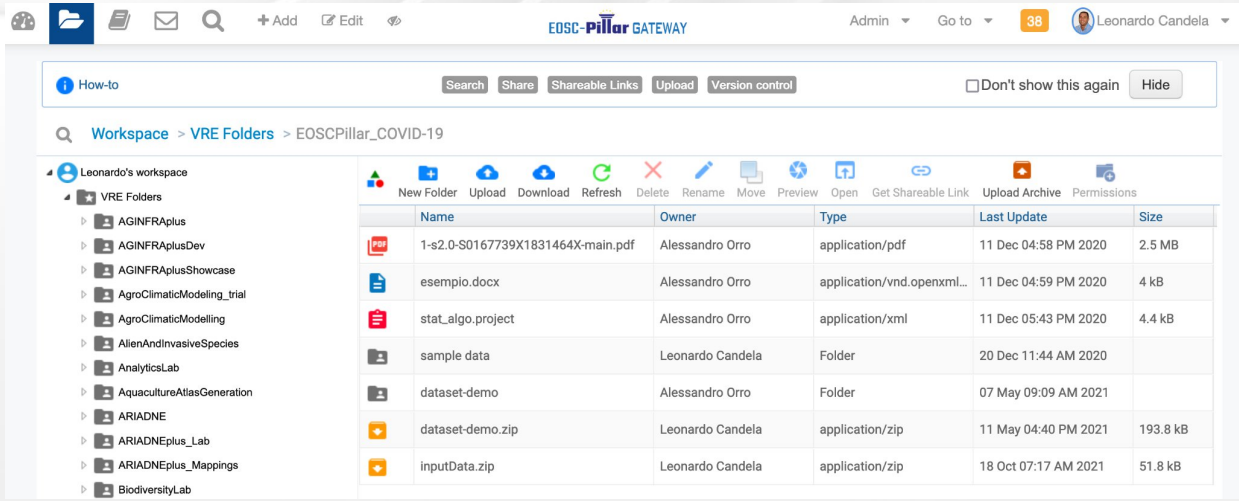












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Thank you!

Get in touch with us!

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