

EUHubs4Data Federation Implementation

Data Platforms 2022-02-01



The EUHUBS4DATA project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 951771



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This project is part of [BDV PPP](#)

Understanding the model

Definition and objectives to build a federation of DIHs

The federation

- EUHubs4Data is a project that **will result in a federation of DIHs**
- Currently we have **21 DIHs**
- ...and more will be joining in 2022
- **Each one having its own**

EUHubs4Data catalogue of services, datasets



1st step

- We want to **work as a single entity**; the federation.
- Offering a global catalogue from a local perspective
 - Common **catalogue**
 - Local **support**



2nd step

The objective is to create a **Real Federation**

- Reach **interoperability** between DIHs.
- Offer **services** and **datasets** to SMEs as a federation.



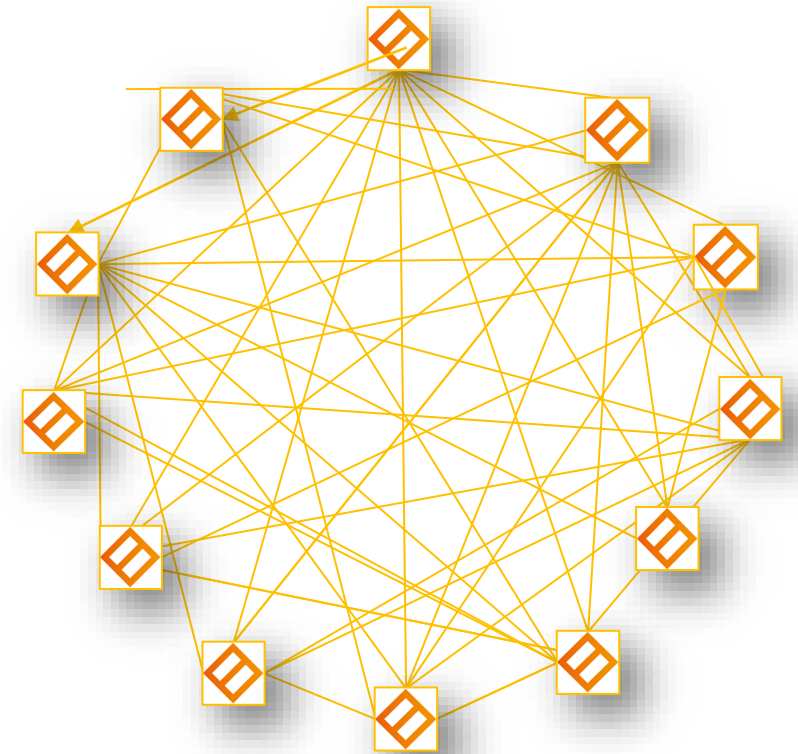
Building the model

How we are achieving this

Federation implementation

We are **working** mainly on:

- 1) The federated catalogue
- 2) Interoperability, using IDSA components
- 3) Service Delivery Framework



The federated catalogue

- **1st version** produced for the 1st Open Call of experiments
- **Currently the 2nd version** is available and the 2nd Open Call is running
- **Planned feature:** Control over the catalogue (Service Delivery Framework)
 - What is shown in my Hub (local catalogue)
 - What I want to propagate (to the federation catalogue)
 - Validation of assets if required (i.e. legal/ethics aspects of a dataset)

THE FEDERATION THE CATALOGUE THE COMMUNITY EXPERIMENTS OPEN CALLS NEWS & EVENTS THE PROJECT

SERVICES

Discover all the services the EUHubs4Data members can offer to your organization.

ALL SERVICES OPEN CALL SERVICES

Showing 1 to 20 of 162 entries

FILTERS	SERVICE NAME	CATEGORY	DESCRIPTION	KEYWORDS	MEMBER
TYPE OF SERVICE	Access and support to Big Data-AI stack environment	Big Data Platforms (PaaS)	Access and support to a ready-to-use Big Data and AI experimental...	analytics, artificial intelligence, HDFS, notebooks, Python libra...	The Data Cycle Hub
MEMBERS	Access to Big Data resources & consulting services	Big Data Platforms (PaaS)	CESGA offers access to ready-to-use Big Data solutions as well as...	analytics, Big Data, Hadoop, HDFS, Jupyter Notebooks, Spark, stor...	DIHGIGAL
SEARCH	Access to Cloud computing resources & consulting services	Computing and Storage Infrastructure (IaaS)	CESGA offers cloud computing resources and support to create diff...	cloud, containers, virtualization, VM	DIHGIGAL
Type and search	Access to Cognitive Big Data Infrastructures and	Big Data Platforms	CeADAR provides access to this platform to all its member	Big Data, Docker, GPU, HPC,	CeADAR



How to achieve interoperability

Create a **trusted data exchange** environment

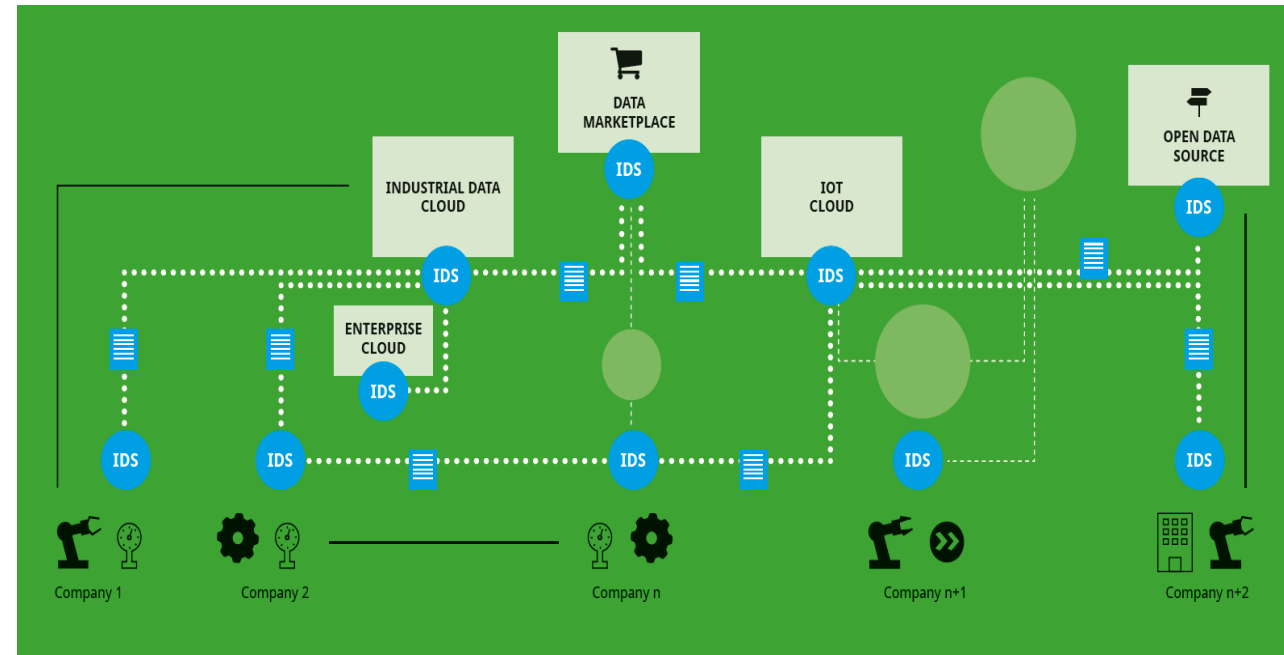
- **Adopting** technological standards
 - IDS Reference Architecture model
- **Implementing** them
 - Deploying most important components of the RAM: connectors, broker, daps

**INTERNATIONAL DATA
SPACES ASSOCIATION**



IDSA connectors deployment

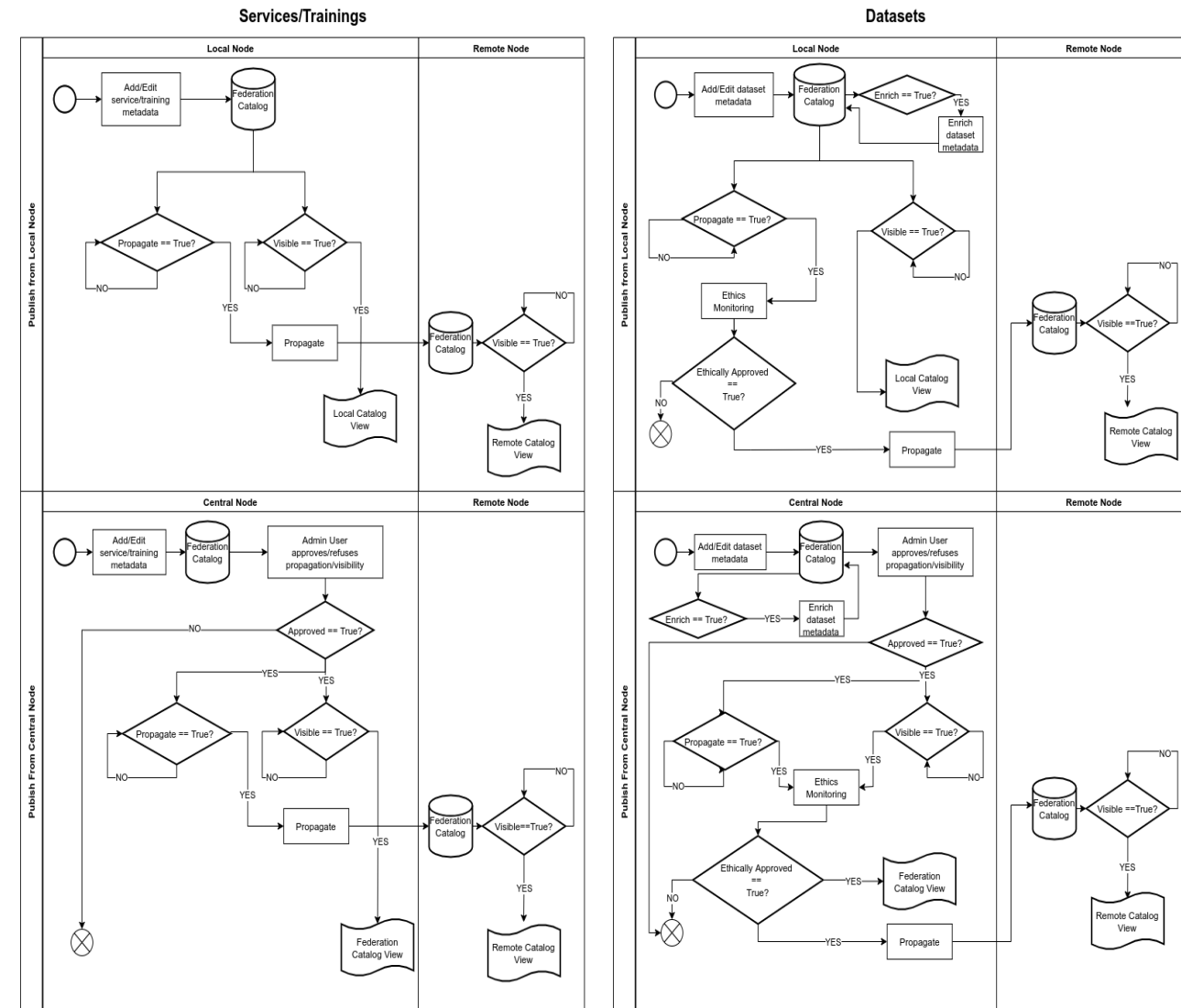
- We are **using** (deploying) the DataSpace Connector (**DSC**) **V6.x**
- First objective: provide **access to datasets** through IDSA connectors
- Currently we have a test



environment where **two**
different Hubs share assets

Service Delivery Framework

- This software component **updates the catalogue** of assets
- It will **interact also with DSC** connectors
- Currently there is a **PoC implementation**



Lessons learnt until now

- Positive points
 - High level of **collaboration** between Hubs and SMEs
 - **Useful services** to improve SME's AI technologies
- What could be better
 - **Complexity** in terms of deploying connectivity through IDSA connectors
 - **Learning curve on** Reference



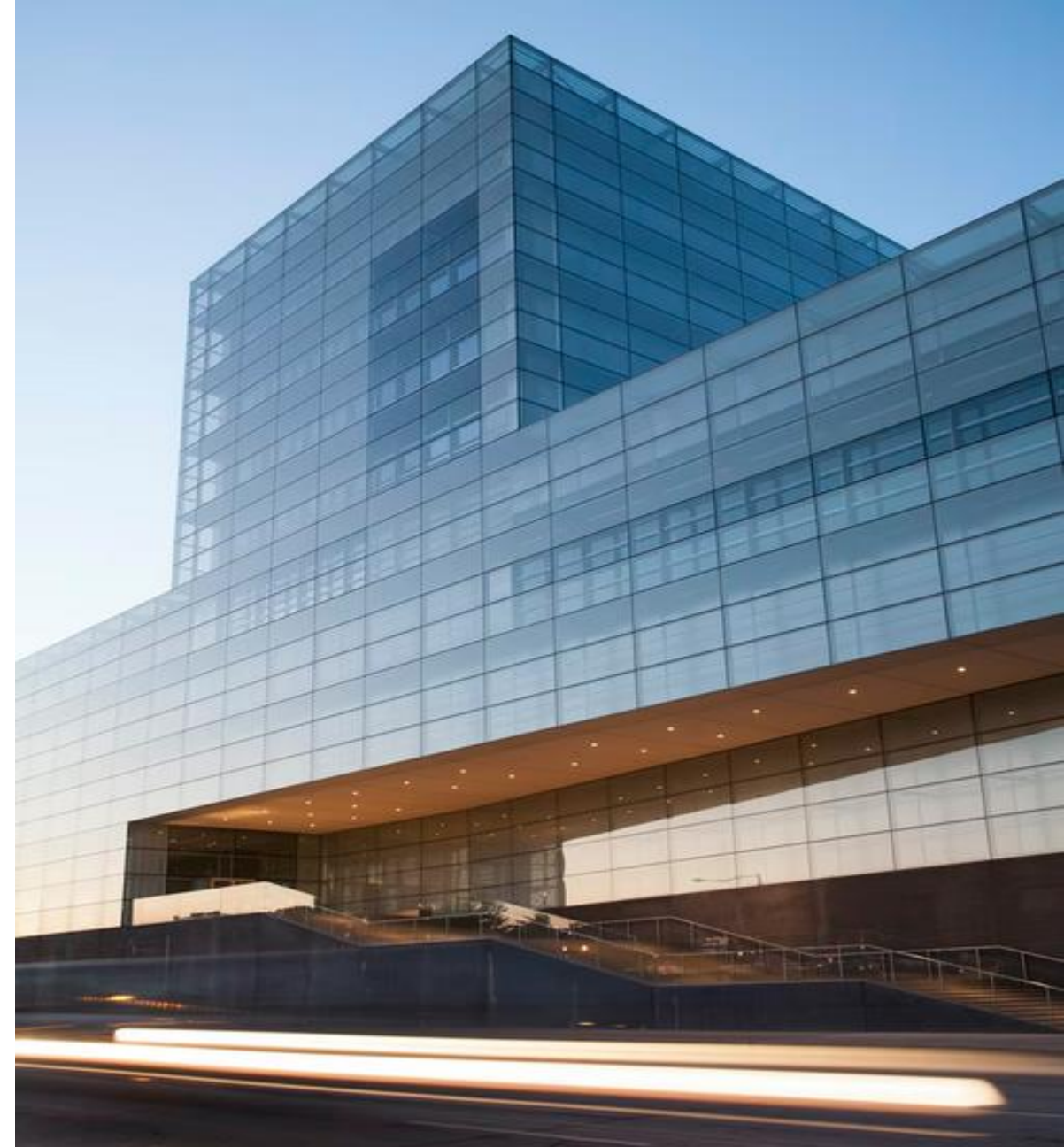
New DIHs integration

1) Catalogue

- Add new services
- Already done for OC2

2) Interoperability

- Adoption of IDS RAM



DSC v6.x → v7.x? → Eclipse DSC?



www.euhubs4data.eu



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