

An Update from public-data.desy.de

Tim Wetzel, Patrick Fuhrmann, Armando Bermudez Martinez, Uwe Jandt, Paul Millar, Sophie Servan, Peter van der Reest, Regina Hinzmann, Johannes Reppin, Christian Voss, Linus Pithan, Anton Barty, ... (DESY)
Julia Kobus, Philipp Jordt, Linus Liedtke, Bridget Murphy (CAU Kiel)

Slides partly with courtesy from Patrick Fuhrmann



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Scicat Technical, 20 Oct 2025

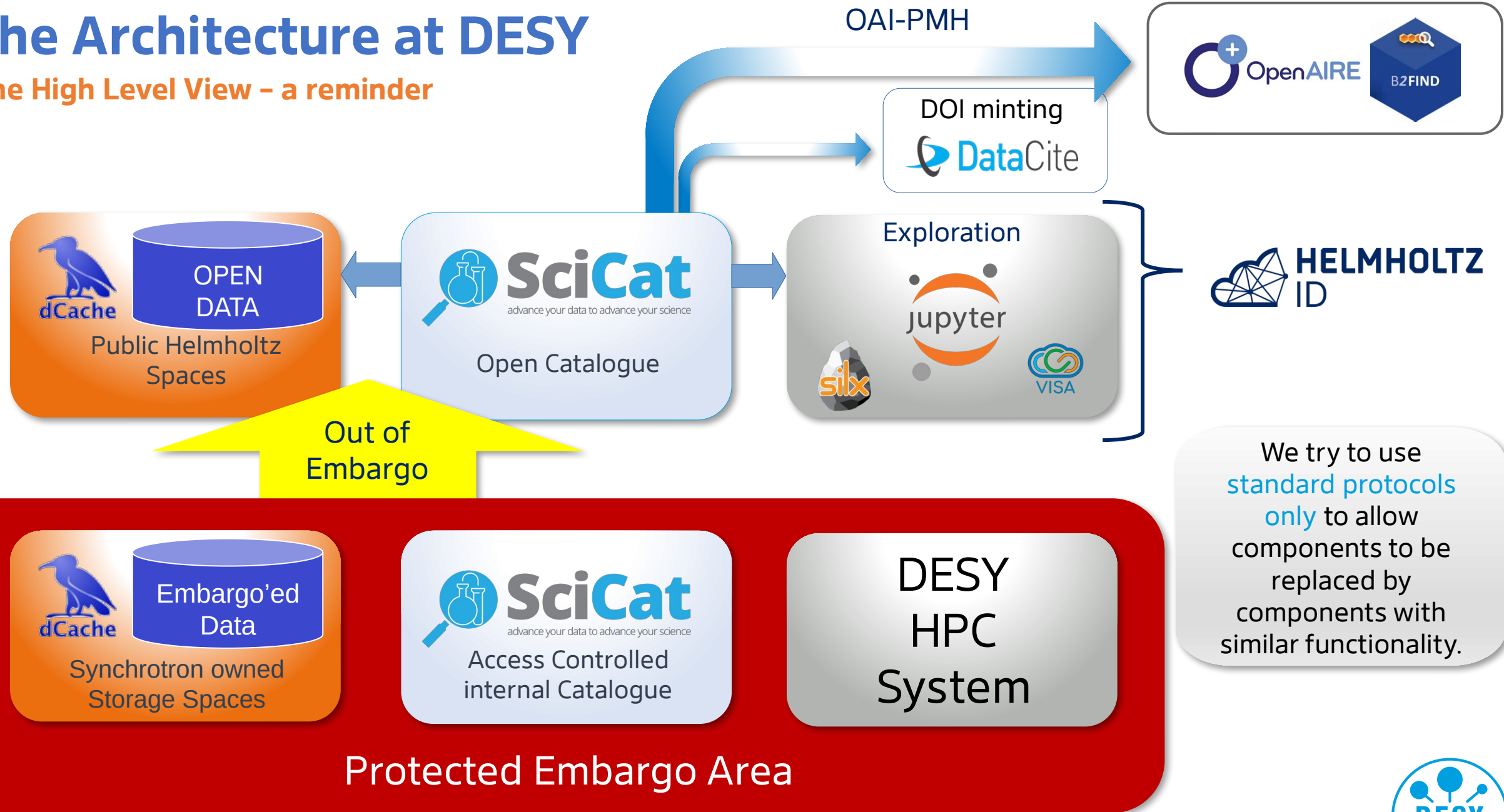
HELMHOLTZ



eosc | **BEYOND**

The Architecture at DESY

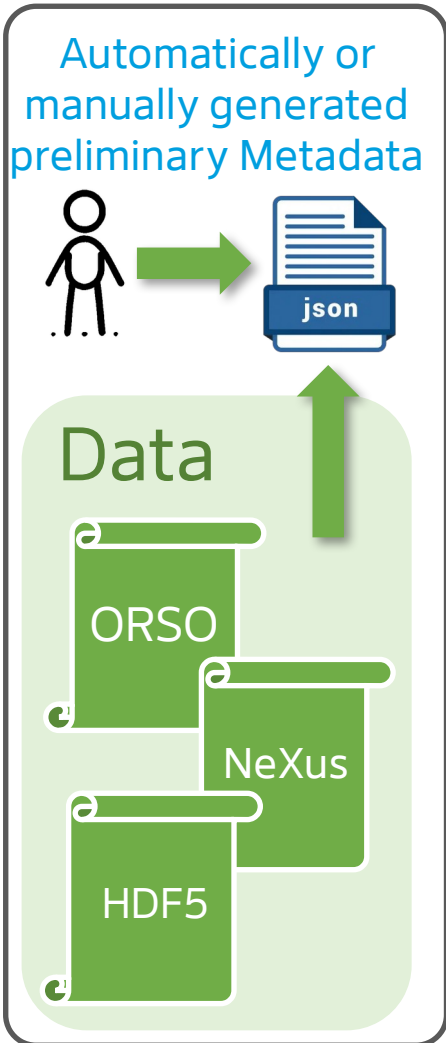
The High Level View – a reminder



The Publishing

sisyphos.desy.de

User Space



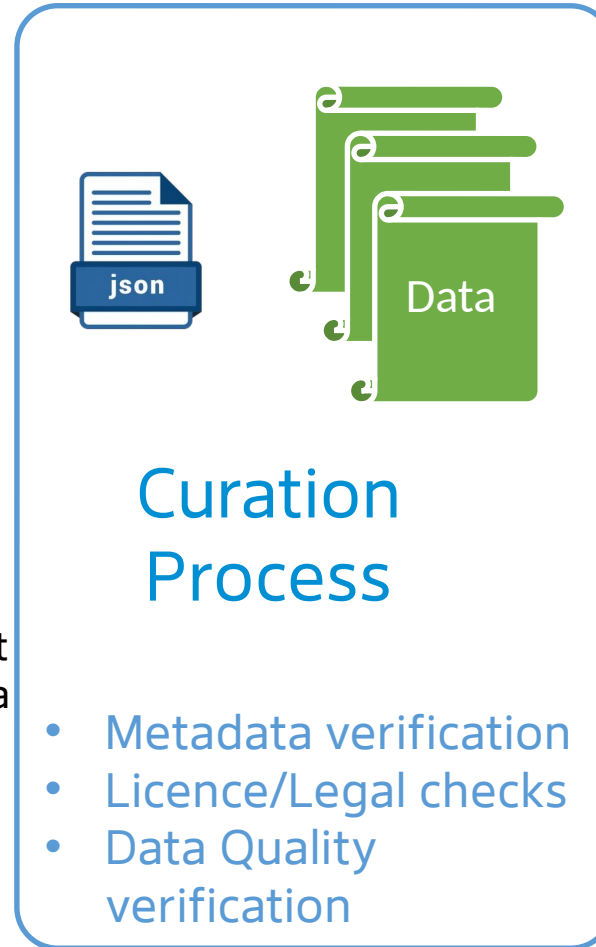
Daphne
Sisyphos
PaN Reflectivity
Database
Upload Tool



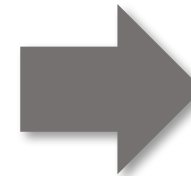
Metadata
validation against
defined schemata
enforced.

UI with field
annotations

HIFIS Staging Space



Final
Publishing



Open Data Portal



DOI minting



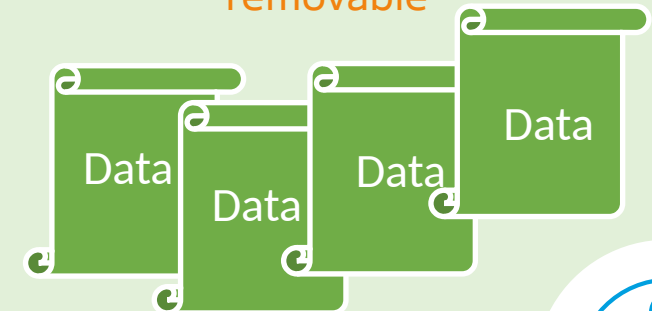
Landing Page

OAI-PMH

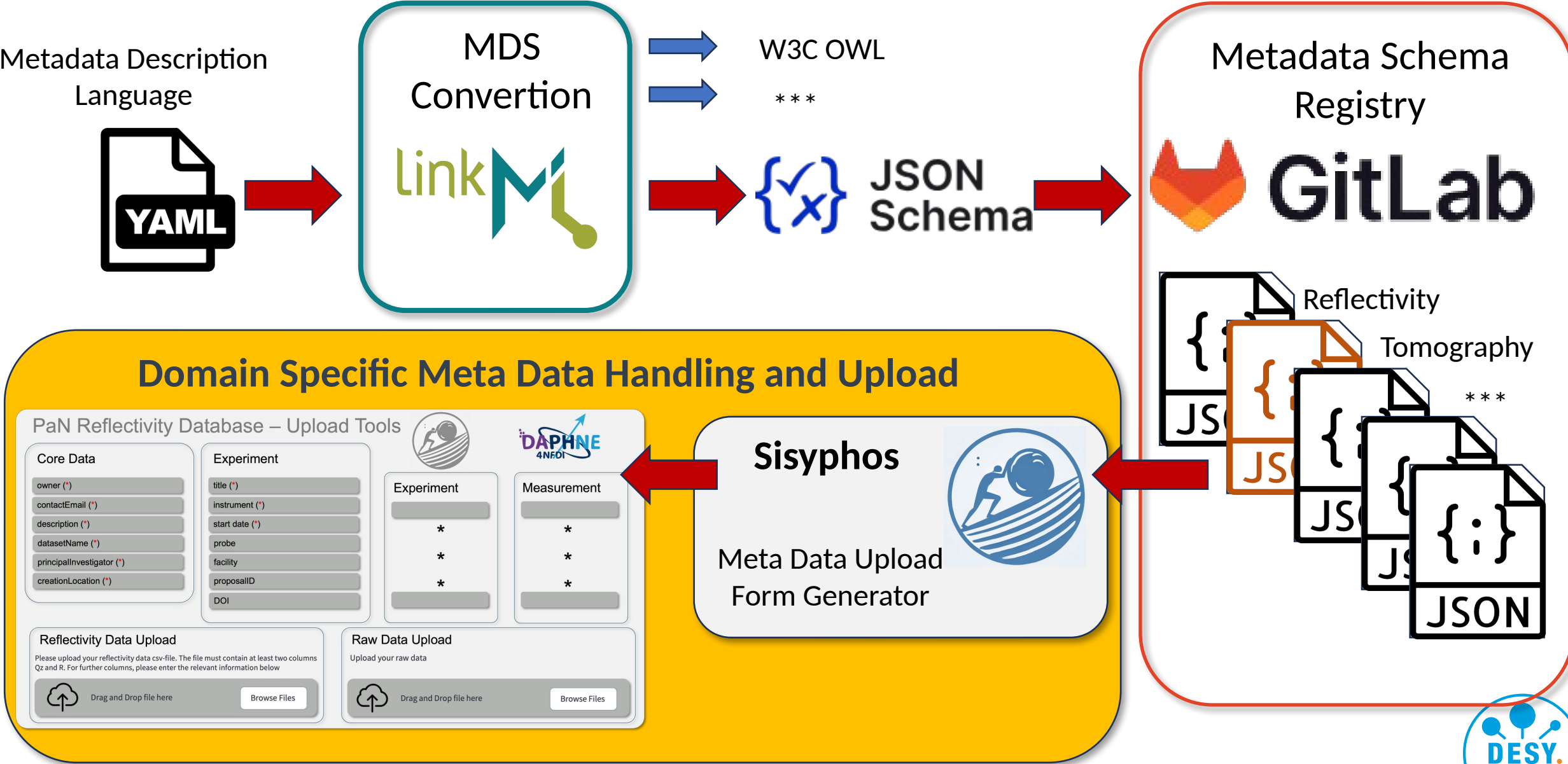


Persistent HIFIS Space

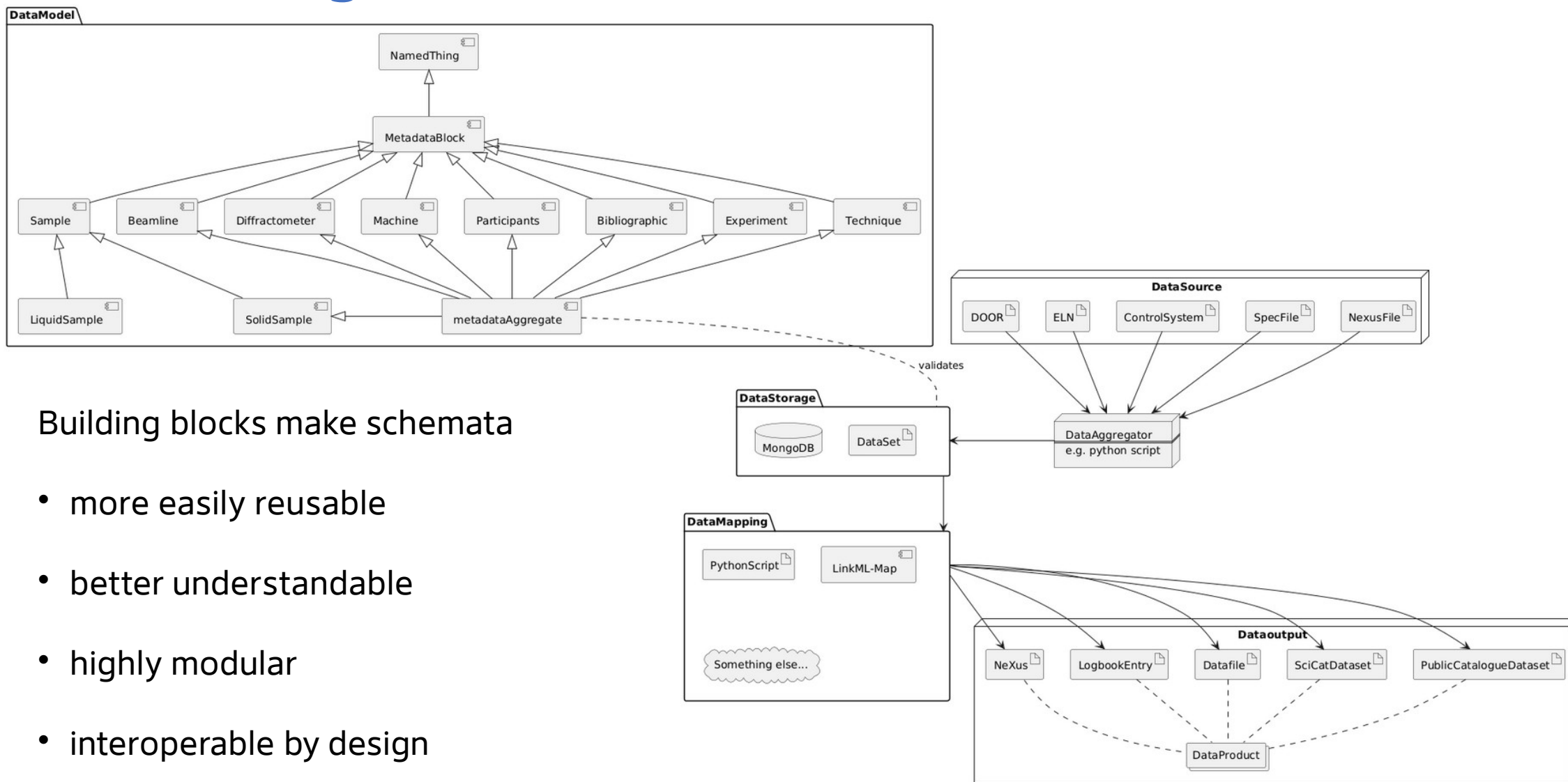
Data is immutable and no longer
removable



The Schemata



The building blocks



Building blocks make schemata

- more easily reusable
- better understandable
- highly modular
- interoperable by design

Source: P. Jordt, CAU, priv. comm.

The Form – sisypchos.desy.de

PaN Reflectivity Database – Upload Tools

Core Data

owner (*)

contactEmail (*)

description (*)

datasetName (*)

principalInvestigator (*)

creationLocation (*)

Experiment

title (*)

instrument (*)

start date (*)

probe

facility

proposalID

DOI

Experiment

*

*

*

Measurement

*

*

*

Reflectivity Data Upload

Please upload your reflectivity data csv-file. The file must contain at least two columns Qz and R. For further columns, please enter the relevant information below

Drag and Drop file here

Browse Files

Raw Data Upload

Upload your raw data

Drag and Drop file here

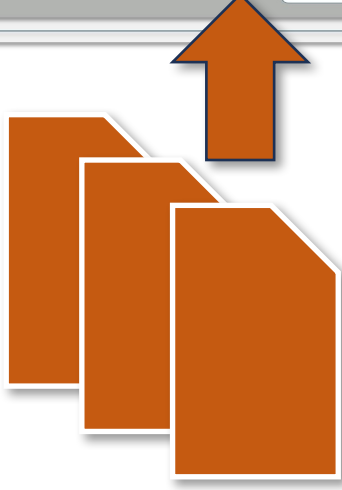
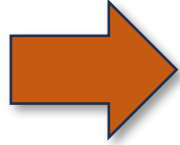
Browse Files

Meta Data



SciCat

advance your data to advance your science



The Form – sisypchos.desy.de

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Experiment

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Measurement

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Browse Files

Raw Data Upload

Upload your raw data



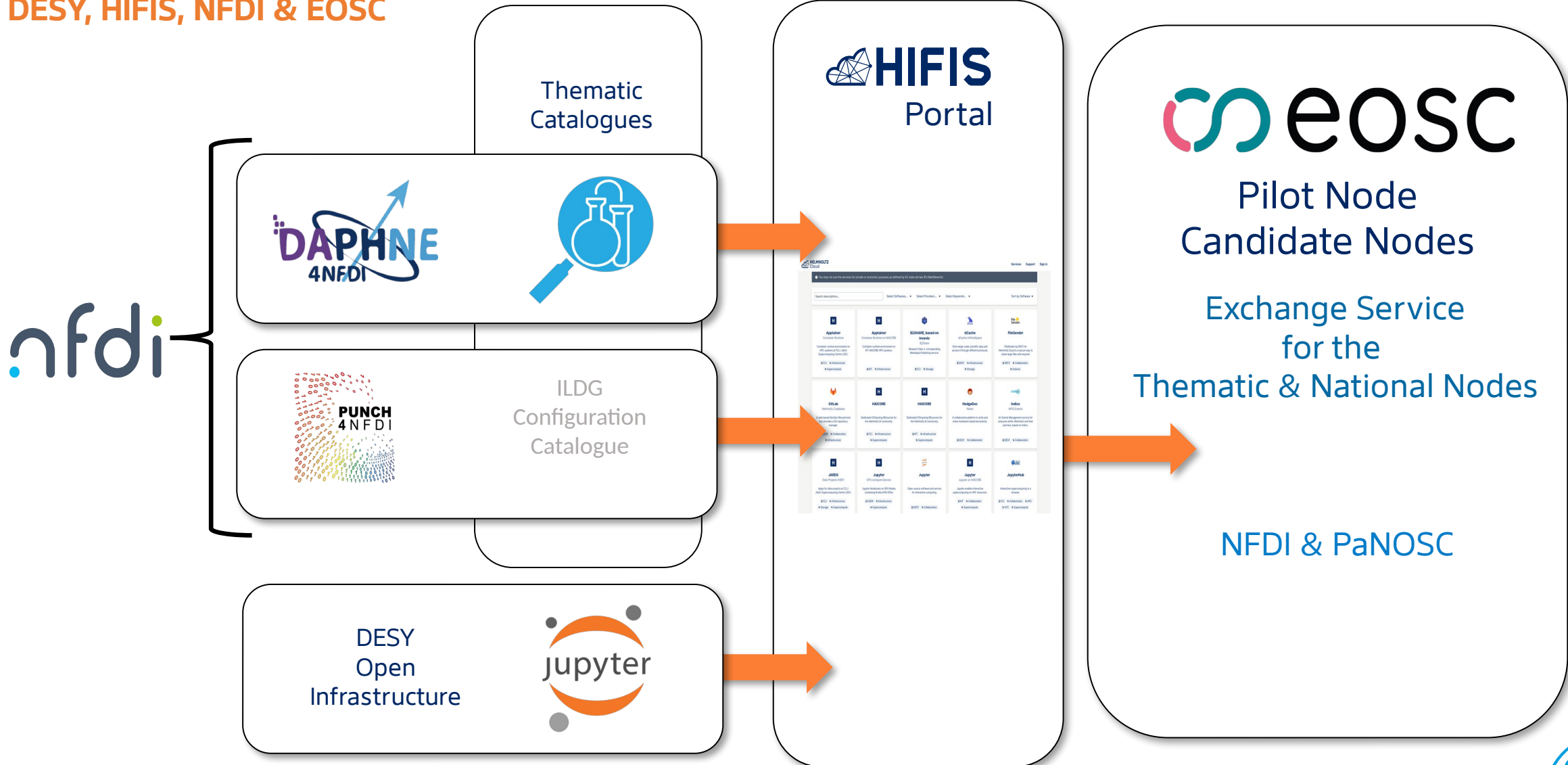
Drag and Drop file here

Browse Files



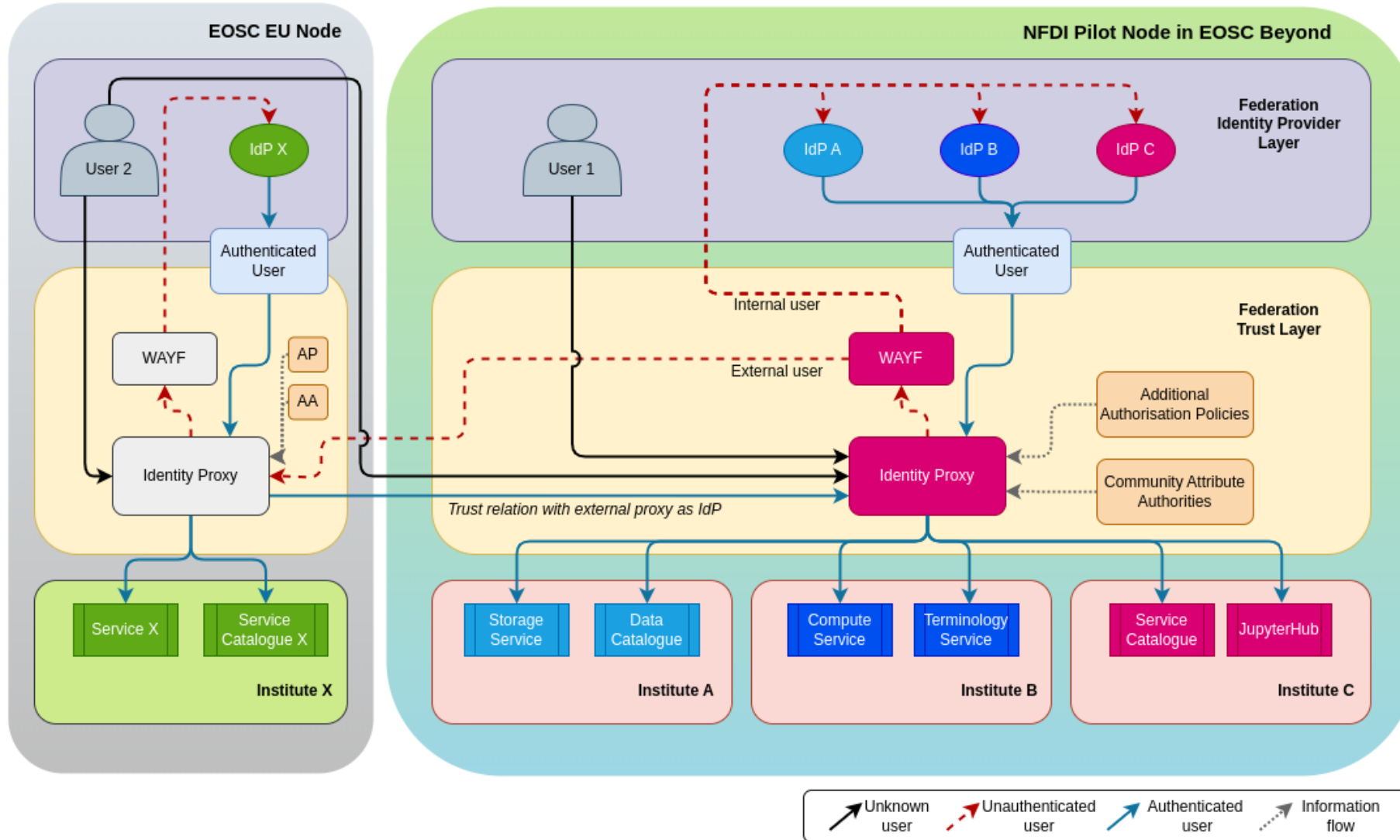
The further Landscapes

DESY, HIFIS, NFDI & EOSC



The Federations

Interfacing with other European communities and services - WIP



The European Open Science Cloud is currently being set up as a network of community-provided platforms ("Nodes")

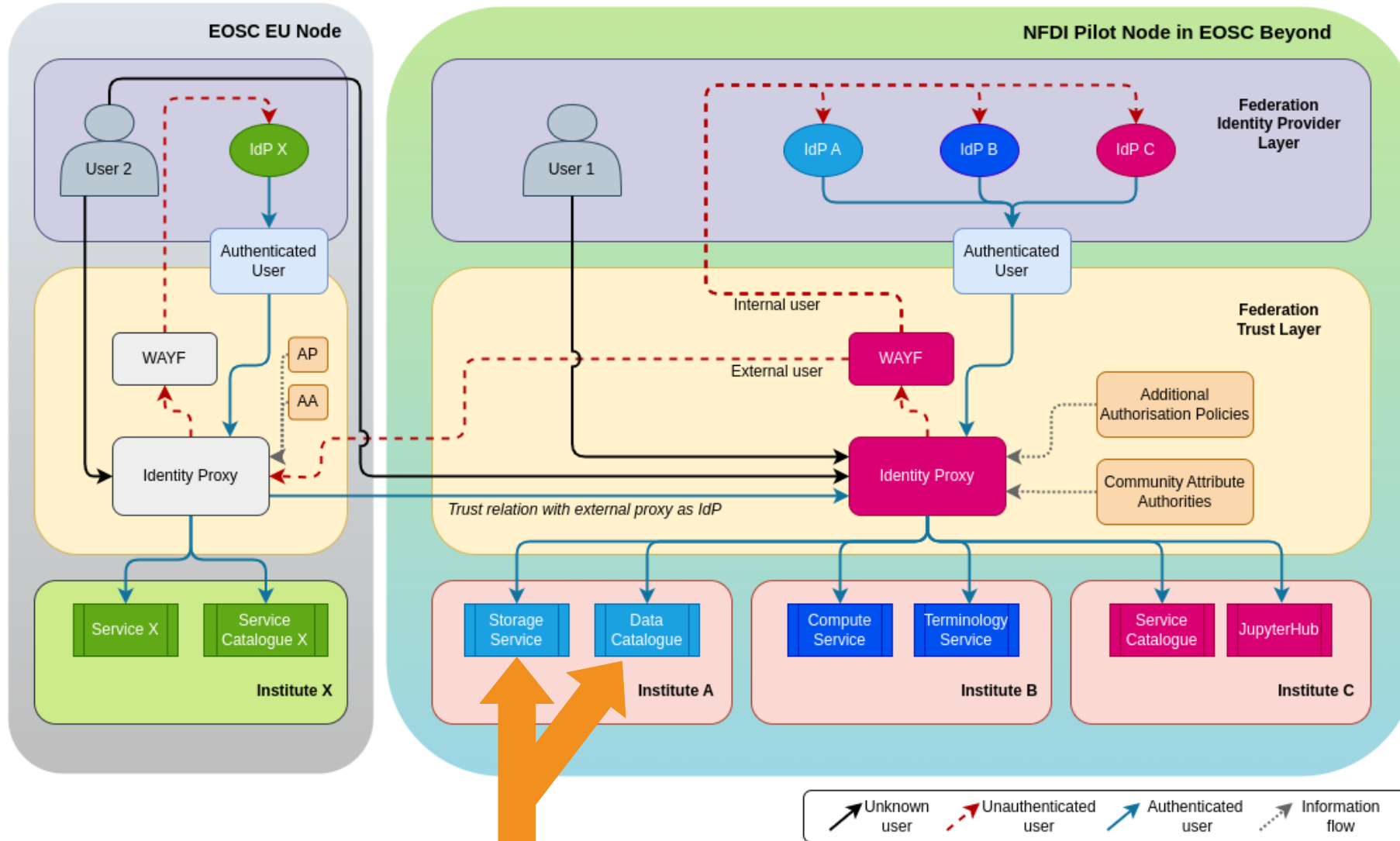
Each node brings their own AAI and services behind it

The nodes are designed to be interoperable in order to bring synergies and interconnections for a more efficient scientific landscape



The Federations

Interfacing with other European communities and services - WIP



Mutual trust for authentication and authorization between communities allows for cross-community usage of

- Identities
- Services
- Data sources
- Infrastructure
- ...

In a modular, unified and transparent way to make it useful and easy for the scientists



The Look

What does the catalogue look like?

DESY Public Data Repository

Public Data Repository Dashboard

Items per page: 20

1 – 5 of 5

<< < > >>

☐	 Title	 Registered Time	 Creator	 Doi
☐	Pilot Dataset Publication, First DOI from DESY Public Data	2025-05-15 14:55	Armando Bermudez Martinez	10.60717/17114434-6bb9-4f3c-865f-59395b7c38c3
☐	Comparison of pseudo XRR and XRR from conventional reflectometry: water	2025-07-15 13:59	Chen Shen	10.60717/39cc1229-6933-4d15-a4a8-aff45d7673c4
☐	Comparison of pseudo reflectivity with the reflectivity from conventional reflectometry	2025-07-15 14:08	Chen Shen	10.60717/041caef8-645a-4dd8-b12d-892ee03084c2
☐	grazing incidence off-specular scattering data and verification of pseudo reflectivity method with extended Capillary Wave Model: first measurements	2025-07-16 13:56	Chen Shen	10.60717/d03aabca-ddc8-4e8d-b5b2-ae3f8243f326
☐	grazing incidence off-specular scattering data and verification of pseudo reflectivity method with extended Capillary Wave Model: POPC monolayer	2025-08-05 16:12	Chen Shen	10.60717/de3ae6ec-a675-4947-8d55-fc3e1926c577



Apply

Reset Filters

public-data/c4f50fde-5213-4ba2-a3e1-7de40165d025

GIXOS-derived pseudo reflectivity of DSPC monolayer on water at 45mN/m at 293K

...952783031! 0 B

2024-10-16 Wed 15:31

raw

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Scicat Technical, 20/10/25

DESY Open Data Portal

Fuhrmann, Wetzel

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The Outlook

Where do we go from here?

SciCat

DESY

Datasets /

Search

Filters and Conditions

Location

Pid

Type

Keywords

Start Date - End Date

Text

Apply

Reset Filters

Pid

Name

public-data/7e2215-2e15-4992-a383-706c2c91cfc4

GIXOS-derived pseudo reflectivity of DPPG monolayer on tris-EDTA buffer surface (pH7.3) at pi = 45mN/m, 295K

public-data/c523532e-eb64-4c77-a886-e4c47c9b2ba7

GIXOS-derived pseudo reflectivity of DPPG monolayer on water at pi = 35mN/m, 295K

public-data/71e277d2-d459-427a-bf15-b74308af8155

GIXOS-derived pseudo reflectivity of the surface of water at 100% ethanol at 293K, circular Qxy resolution

public-data/71e277d2-d459-427a-bf15-b74308af8155

GIXOS-derived pseudo reflectivity of water surface at 295K, circular Qxy resolution

public-data/71e277d2-d459-427a-bf15-b74308af8155

GIXOS-derived pseudo reflectivity of water surface at 295K, circular Qxy resolution

public-data/c4f50fde-5213-4ba2-a3e1-7de40165d025

GIXOS-derived pseudo reflectivity of DSPC monolayer on water at 45mN/m at 293K

- Presented in multiple contexts over the last 12 months
 - e.g. ISGC, HMC, EGI, ORSO,
 - Helmholtz Open Science Office, IBERGRID
- Positive feedback so far
- Currently in early production phase with beta testers
- Ingestion UI needs some more work
- Bulk ingestion to be worked out next
- Slow ramp-up in stored datasets expected until end of the year

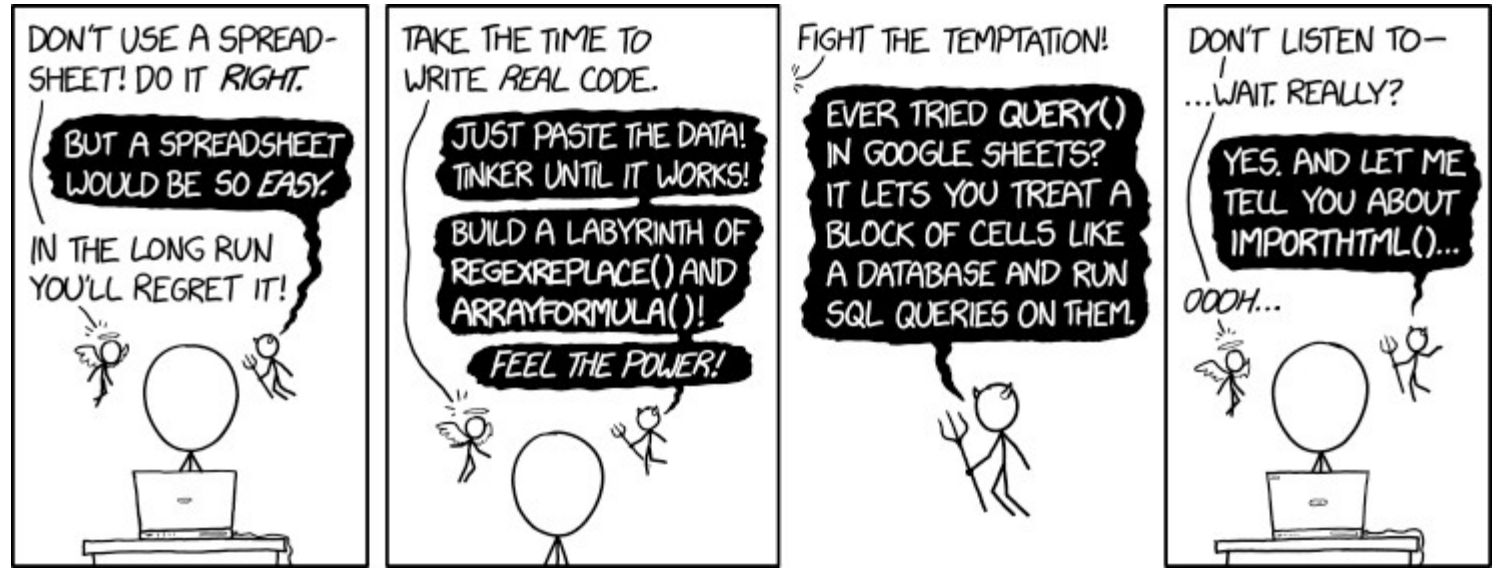
PaN facilities repositories

Facility	Repository	External records	OAI-PMH endpoint	PaN search API endpoint
ALBA	Data Portal		Endpoint: link [Identify] Items: 316 Sets: 2 ▶ Types ▶	Endpoint: link [count] Datasets: 214
DESY	Public Data		Endpoint: link [Identify] Items: 5	
Elettra	Open Access Data Portal		Endpoint: link [Identify] Items: 626	Endpoint: link [count] Datasets: 625
ESRF	Data Portal		Endpoint: link [Identify] Items: 9,098 Types ▶	Endpoint: link [count] Datasets: 702,314
ESS	SciCat		Endpoint: link [Identify] Items: 100	Endpoint: link [count] Datasets: 100
EuXFEL	myMdC		Endpoint: link [Identify] Items: 6 Sets: 1 ▶	Endpoint: link [count] Datasets: 123

From: <https://leaps-wg3.desy.de/open-data-resources.html>



Thank you



xkcd.com/2180

Patrick Fuhrmann, Tim Wetzel

DESY IT

Patrick.Fuhrmann@desy.de, Tim.Wetzel@desy.de