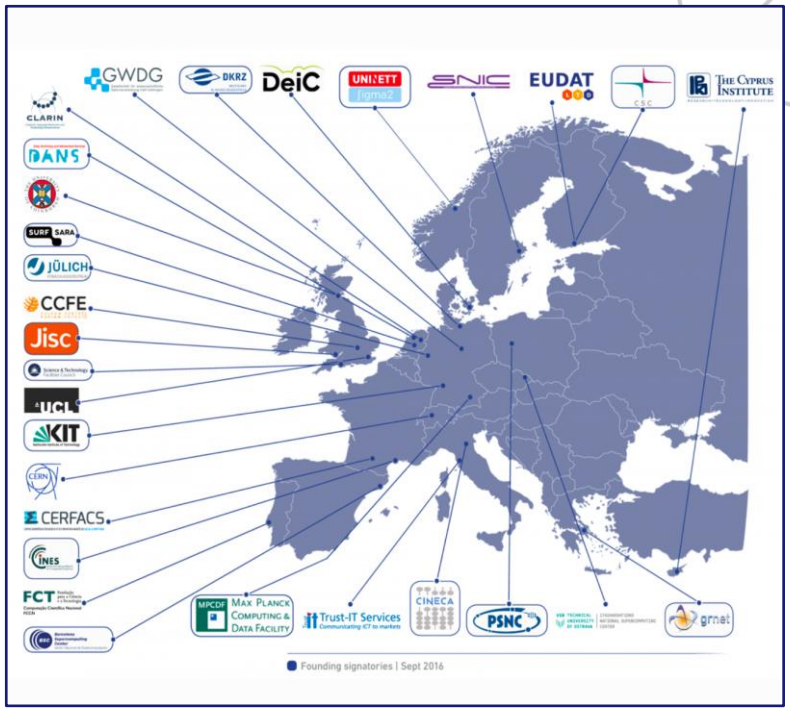
EUDAT Collaborative Data Infrastructure

EUDAT OVERVIEW

Antti Pursula | Head of Secretariat

EUDAT Collaborative Data Infrastructure

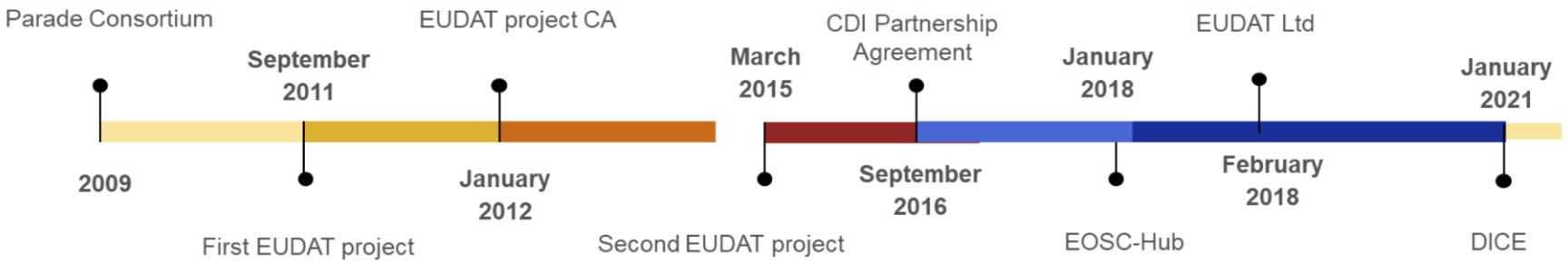
- EUDAT Collaborative Data Infrastructure (CDI) is one the major European e-infrastructures supporting research
- EUDAT provides a set of interoperable services that focus different phases of the research data life cycle



EUDAT's vision:

Data is shared and preserved across borders and disciplines

History of EUDAT



Riding the wave

How Europe can gain from the rising tide of scientific data

Final report of the High Level Expert Group on Scientific Data
A submission to the European Commission

October 2010

EUDAT Collaborative Data Infrastructure

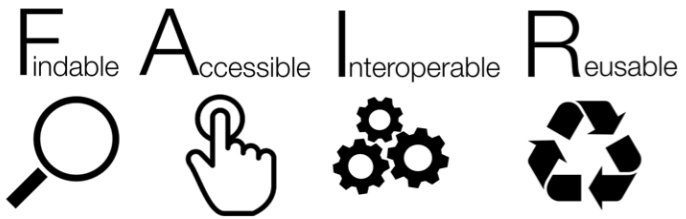
Research data management

Data management is a set of practices to handle collected and created information. It consists of a wide range of practices, concepts, procedures, processes, policies, and of accompanying systems. It enhances the value of data by making it interoperable, easier to find and understand, less likely to be lost, and more likely to be used and reused during original use and beyond.

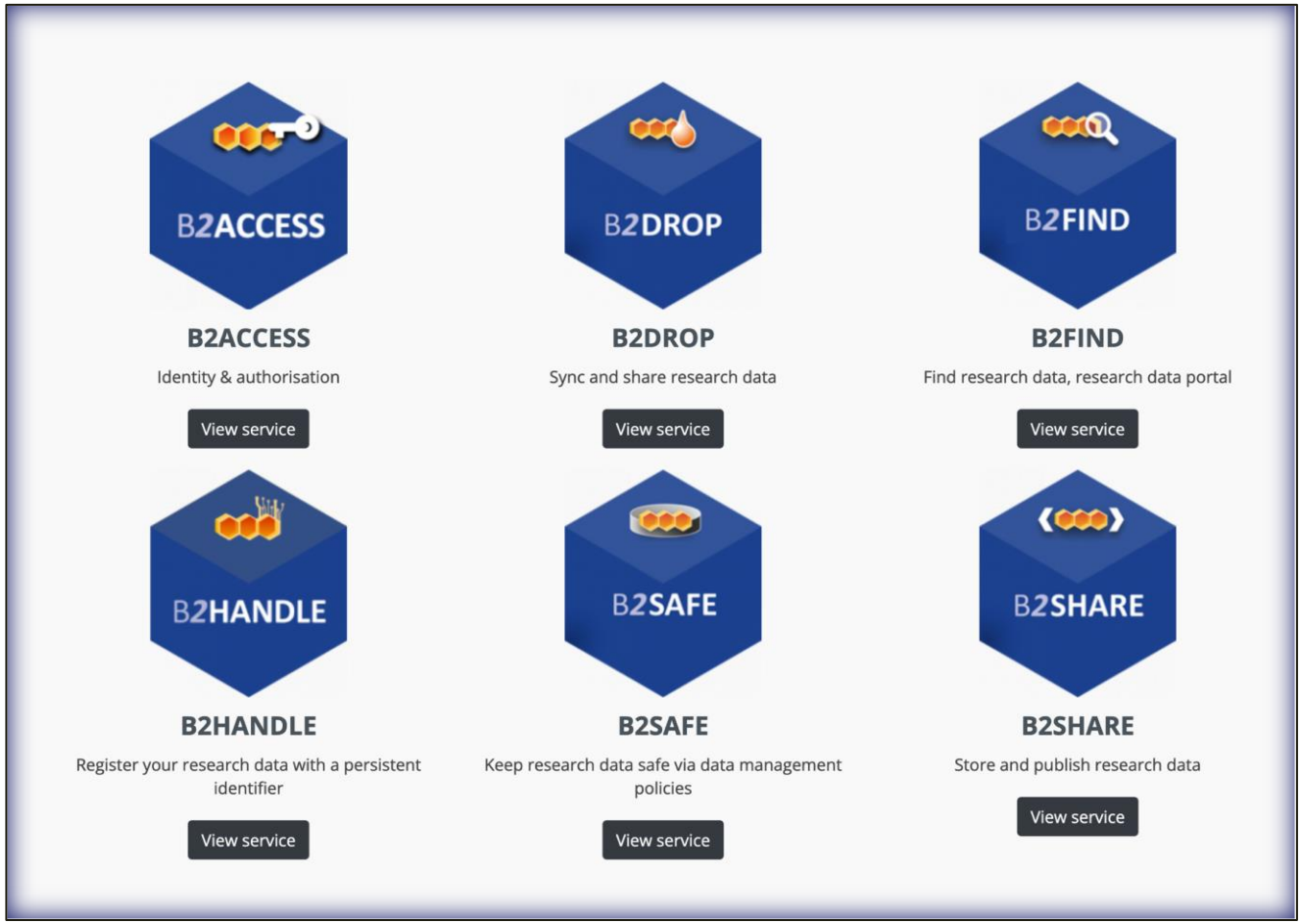
Enabling good research data management requires

- Policies
- Skills and support
- Services and infrastructure

https://doi.org/doi:10.2777/1524



The EUDAT Service Suite



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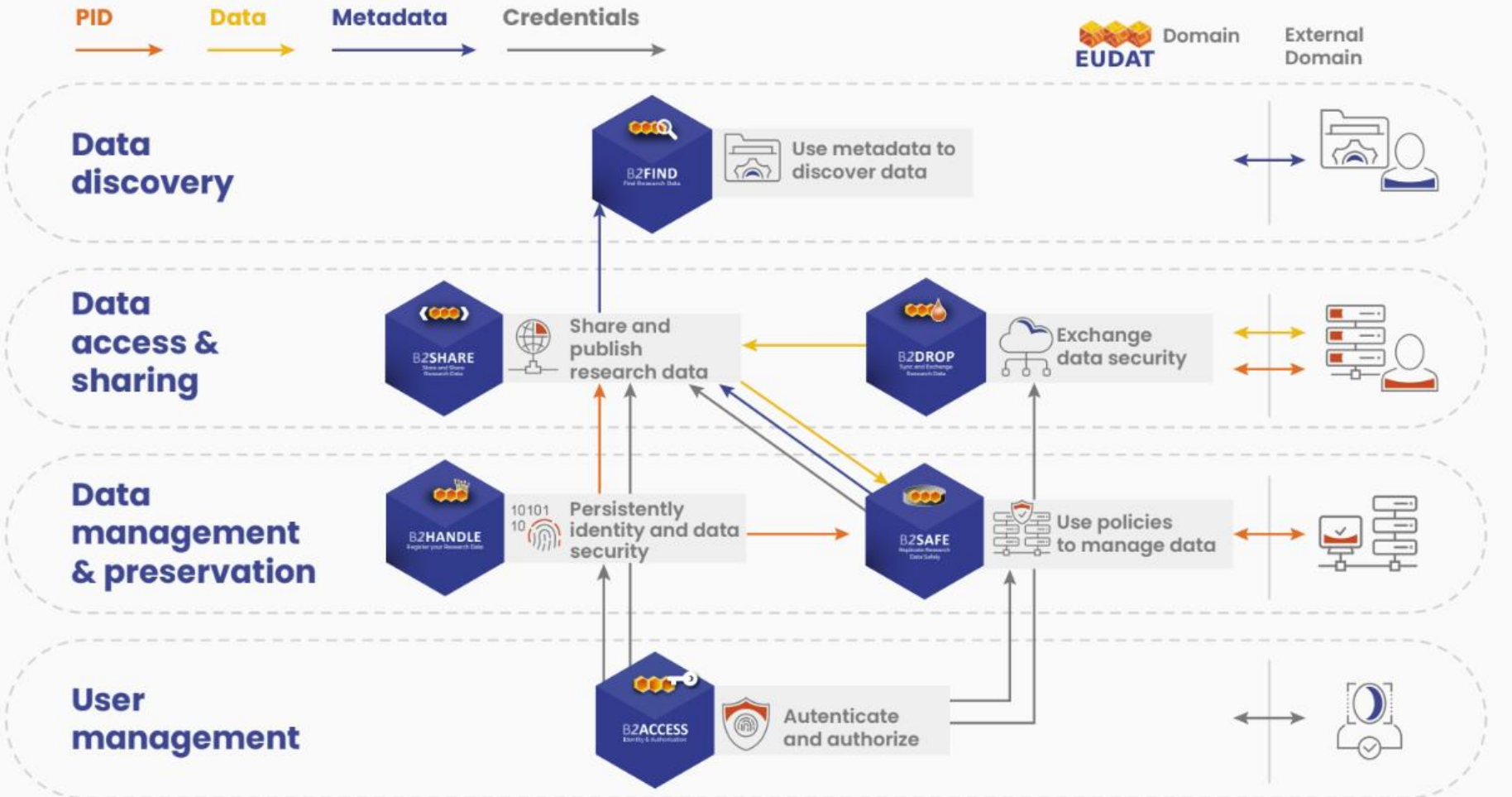


Use cases

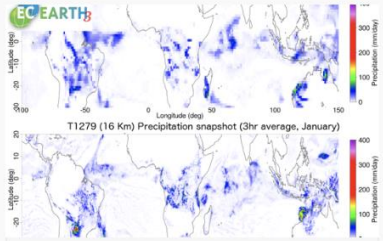
Home » Use cases

Blue-Cloud provides cross-domain marine data with EUDAT's B2FIND

EUDAT services in ROHub for storage of scientific artefacts and publication of research objects

Data Management in CompBioMed using EUDAT services

European Network for Earth System Modelling



Data storage and preservation of high resolution climate experiments

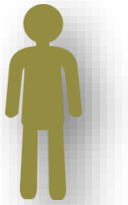
EUDAT services to guarantee long time archiving and visibility to the repository of IST Austria

Linked Data service pilot

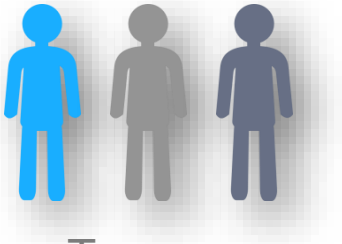
A distributed infrastructure for life-science information

EUDAT Collaborative Data Infrastructure

Users - Collaborators - Customers



Single researcher



Team

Community

Upload and download

Upload, add metadata, share

Periodic transfers, quality checks …

Different strategies for different usage scenarios

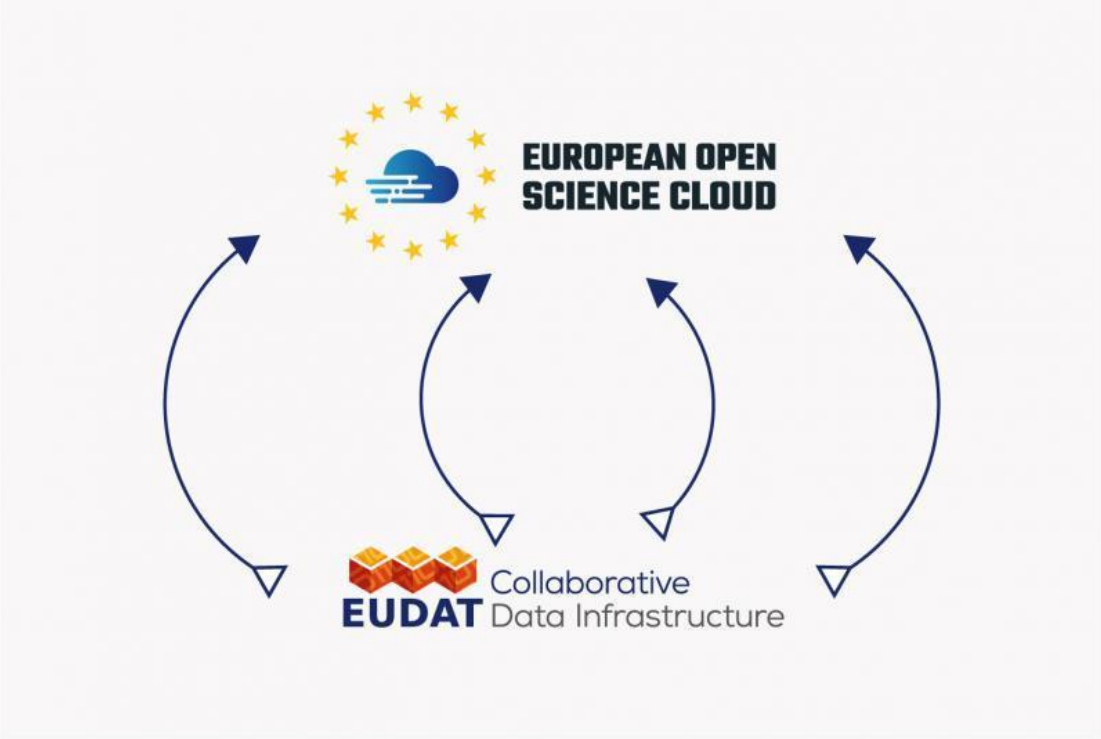
Offering for organisations

EUDAT offering for Research performing organisations (RPOs) and service provider organisations

- EUDAT offers service contracts for RPOs to
  - Deliver B2 services according to defined service levels
  - Possibities for tailoring the services, e.g. with metadata extensions, integrations, larger storage capacity, and other additional features
- For service providers
  - Leverage the EUDAT services and technologies in their service provision
  - Join the EUDAT CDI for being part of the European network benefirting from sharing knowledge, joining the development and contribute in the EUDAT vision

EUDAT and EOSC

- The EUDAT CDI supports the vision of the European Open Science Cloud offering open and seamless services for storage, management, analysis and re-use of research data, across borders and scientific disciplines.



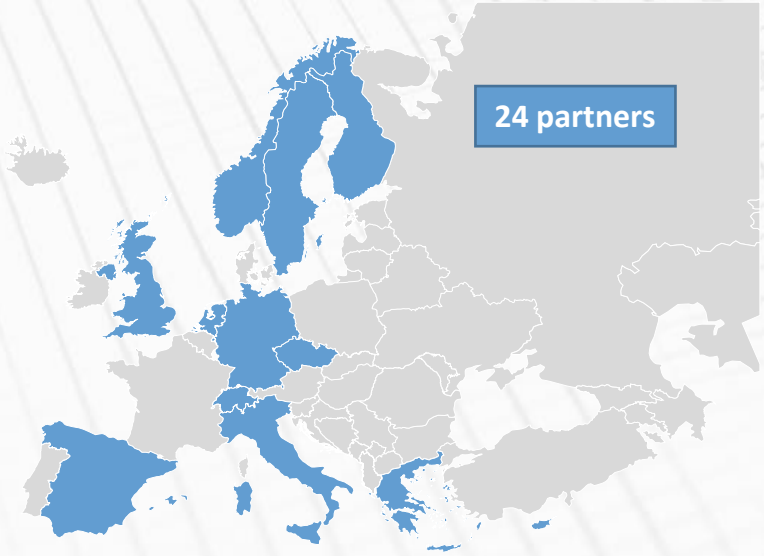
eosc

DICE
Data Infrastructure Capacity for EOSC

EOSC Future

DICE
Data Infrastructure Capacity for EOSC

Data infrastructure capacity for EOSC



Service providers

CINECA
JÜLICH Forschungszentrum
CSC
Barcelona Supercomputing Center
Centro Nacional de Supercomputación
MPCDF Max Planck Computing & Data Facility
grnet
KIT Karlsruhe Institute of Technology
DKRZ Deutsches Klimarechenzentrum
ETH zürich CSCS Centro Svizzero di Calcolo Scientifico Swiss National Supercomputing Centre
SURF
INFN Istituto Nazionale di Fisica Nucleare
KNAW
DataCite FIND, ACCESS, AND REUSE DATA
SNIC
The Cyprus Institute Research·Technology·Innovation
GWDG Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen
VŠB Technická univerzita Ostrava | IT4Innovations Národní superpočítačové centrum
cesnet
UNINETT
Sigma2

Users' communities

ASTRON
ICOS Carbon Portal
UCL

Outreach & sustainability

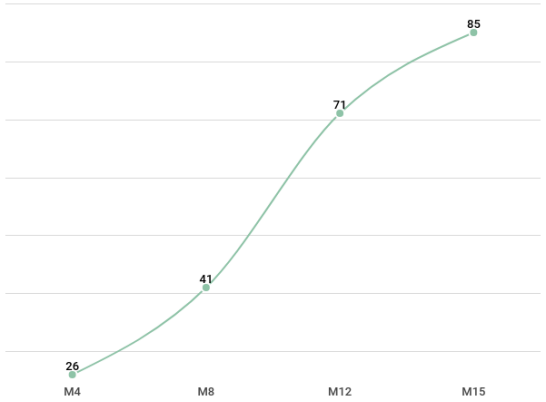
Trust-IT Services Communicating ICT to markets
EUDAT LTD

14 service providers are EUDAT members

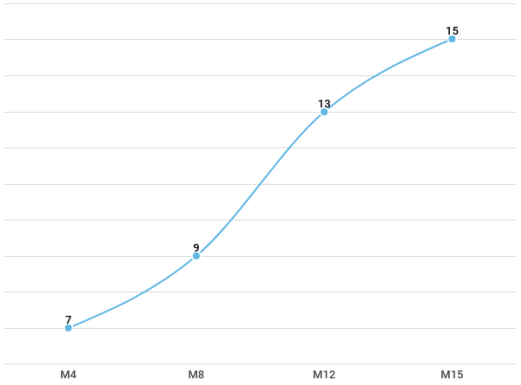
EUDAT Collaborative Data Infrastructure
Data shared and preserved across borders and disciplines

Usage

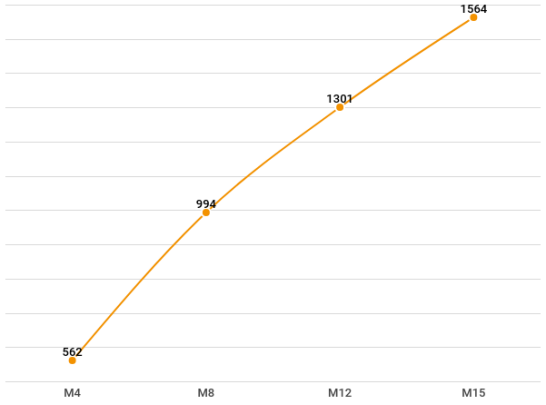
Number of projects



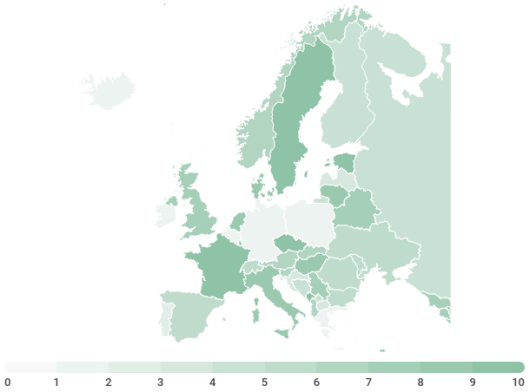
Number of domains



Number of users

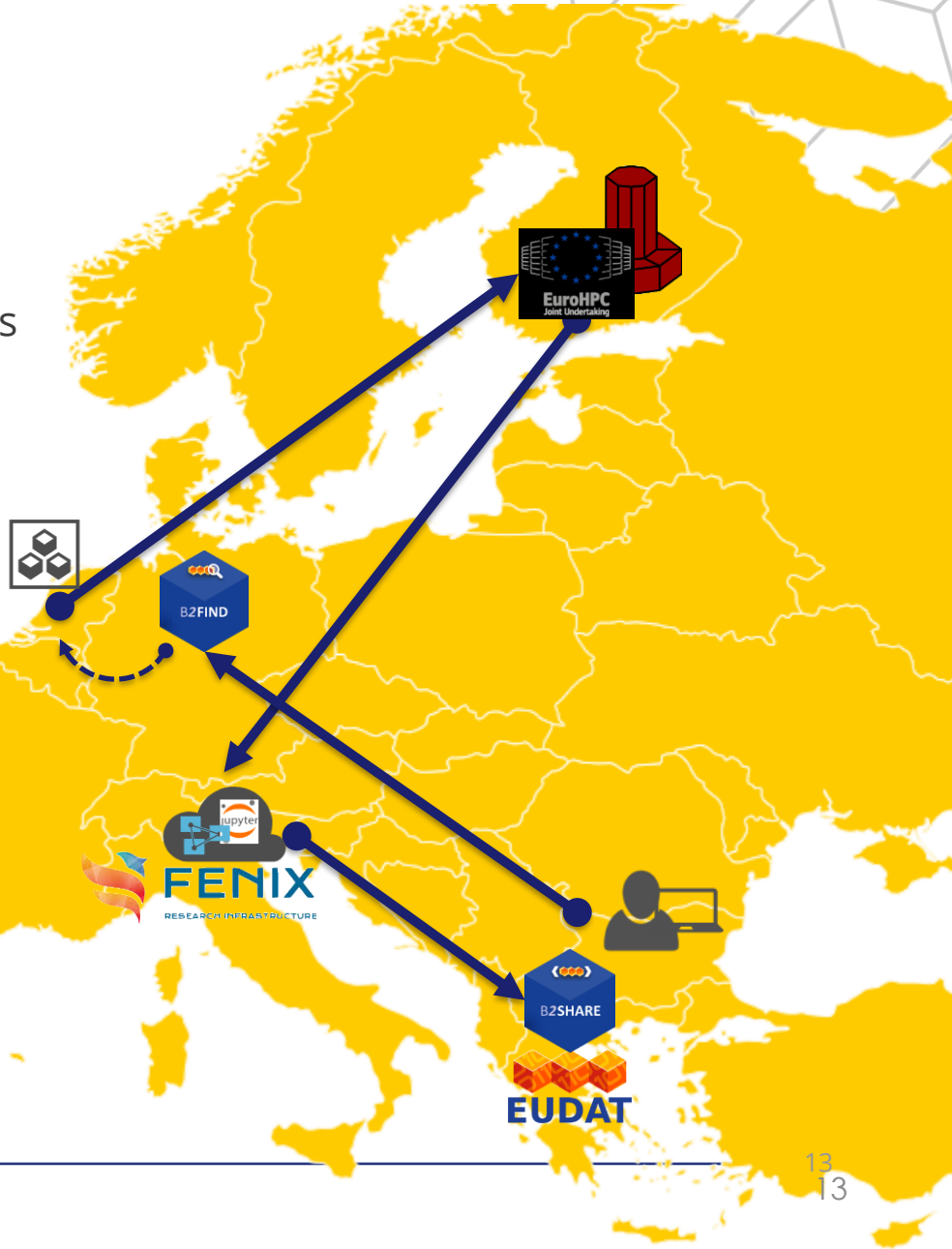


Number of countries



Integrating Data and HPC

- Integrating data and compute platforms is essential as the communities and researchers need both
- Access to HPC is typically time limited meaning that preparatory and post-processing steps are not done on the top notch HPC systems
- Support for easy data transfers for communities and researchers needed
- Schematic example on the map



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EUDAT in European landscape

https://youtu.be/7icIGfyQjsE

Welcome to EUDAT 2022

THANK YOU