



The B2 SERVICE SUITE

www.eudat.eu/services

About EUDAT

This pan-European Data Infrastructure (EUDAT) is a network of collaborating, cooperating centres, combining the richness of numerous community specific data repositories with the permanence and persistence of some of Europe's largest scientific data centres.

EUDAT offers common data services, supporting multiple research communities as well as individuals, through a geographically distributed, resilient network of 33 European organisations.

B2 SERVICE SUITE



B2DROP

Sync and Exchange Research Data



B2SHARE

Store and Share Research Data



B2SAFE

Replicate Research Data Safely



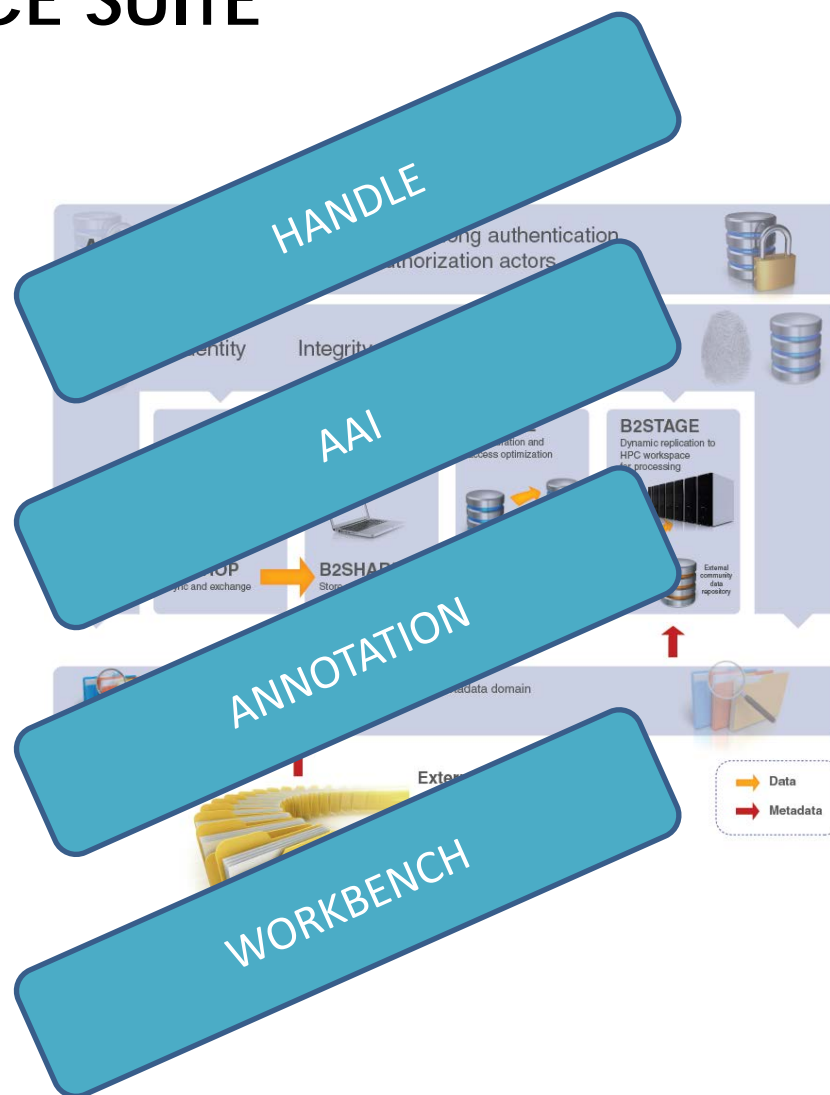
B2STAGE

Get Data to Computation



B2FIND

Find Research Data



<http://www.eudat.eu/services>

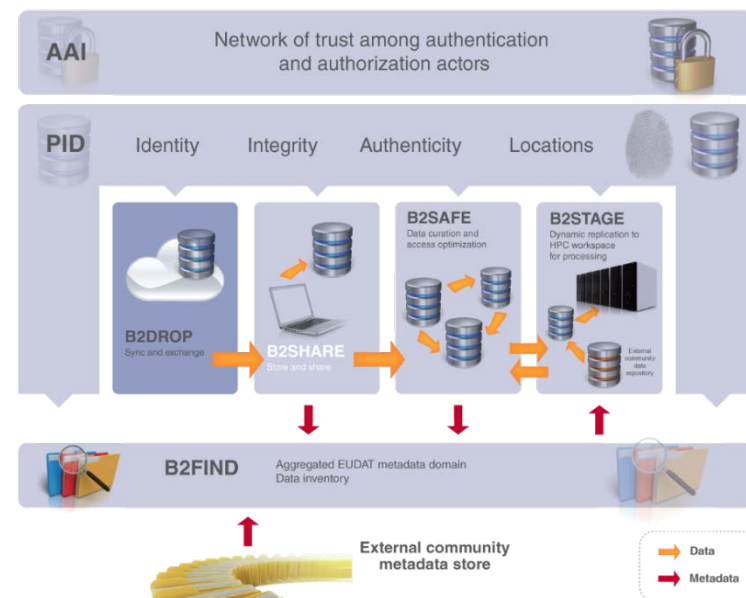
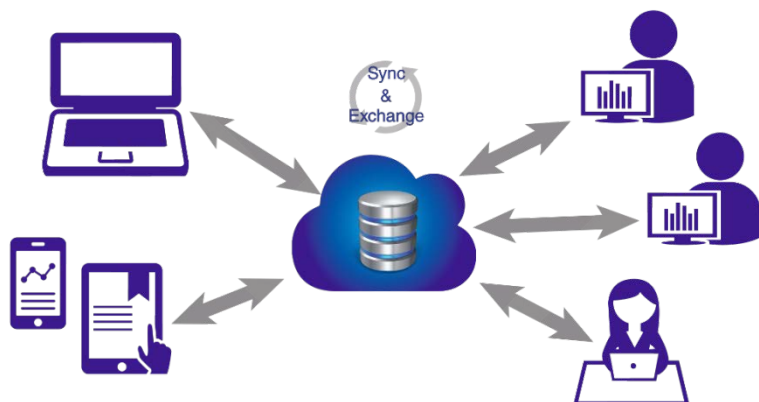


B2DROP
Sync and Exchange Research Data

B2DROP is a **secure and trusted** data exchange service for researchers and scientists to keep their research data **synchronized** and up-to-date and to exchange with other researchers.

An ideal solution to:

- Store and exchange data with colleagues and team
- Synchronize multiple versions of data
- Ensure automatic desktop synchronization of large files

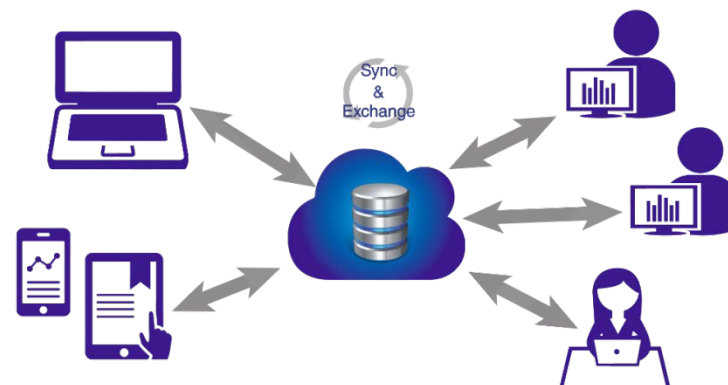


B2DROP features



b2drop.eudat.eu

- future **integration with the B2 suite of services** to allow user-friendly data sharing
- users decide **with whom to exchange data**, for how long and how
- **up to 20GB of storage space** for research data
- **access and manage permissions** to files from any device and any location
- **simple to use and open to all** researchers, scientists, communities alike to **synchronize and exchange data with one or multiple users**



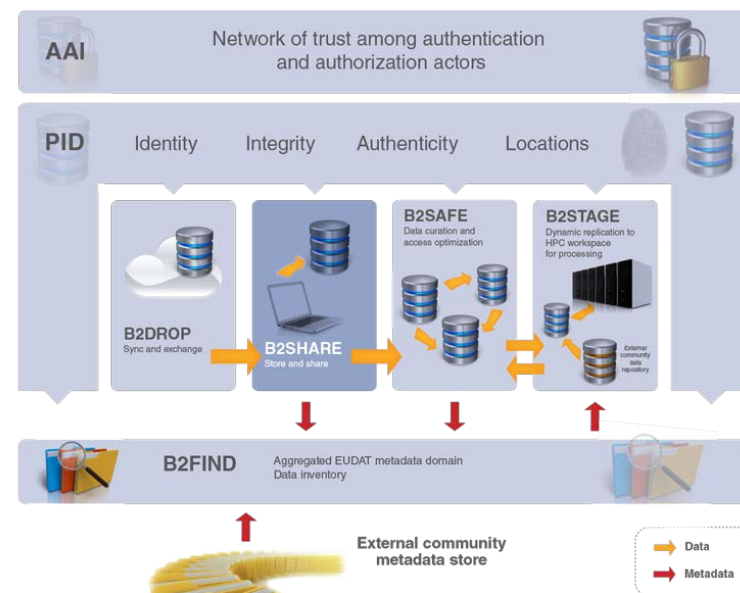
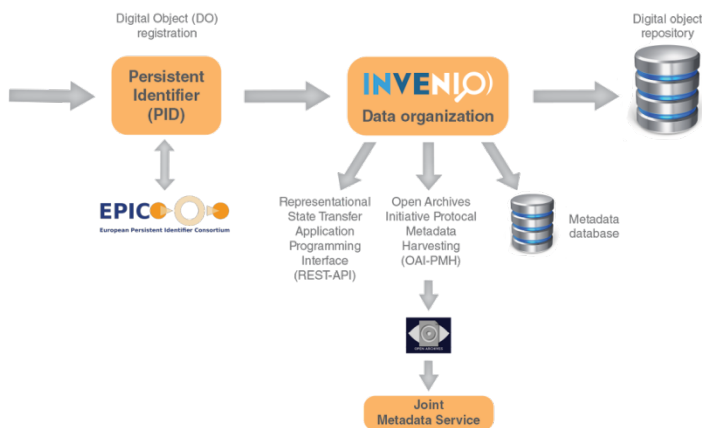
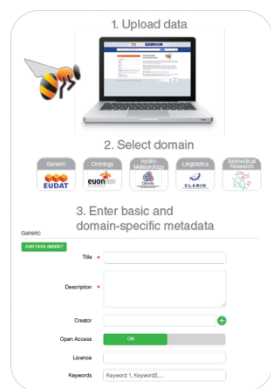


B2SHARE
Store and Share Research Data

B2SHARE is a **user-friendly, reliable** and **trustworthy** way for researchers, scientific communities and citizen scientists to **store** and **share** small-scale research data from diverse contexts.

A winning solution to:

- **Store:** facilitates research data storage
- **Preserve:** guarantees long-term persistence of data
- **Share:** allows data, results or ideas to be shared worldwide



B2SHARE features



b2share.eudat.eu

- integrated with the **EUDAT collaborative data infrastructure**
- free **upload and registration** of stable research data
- data assigned a **permanent identifier**, which can be retraced to the data owner
- **data owner defines access policy**
- **community-specific metadata extensions and user interfaces**
- **openly accessible and harvestable metadata**
- **representational state transfer application programming interface (REST API)** for integration with community sites
- **data integrity ensured by checksum** during data ingest
- **professionally managed storage service** – no need to worry about hardware or network
- **EUDAT user support**
- **monitoring of availability and use**

Within ENES several partners have already established infrastructures for the long term preservation of data, especially well structured large data collections.

- There is a need for preservation of long tail data within ENES.
- DKRZ is interested to run a b2share instance for ENES users.

People

- EUDAT: Hannes, Carl Johan
- ENES: Hannes

Timeline

- Delayed until autumn 2015

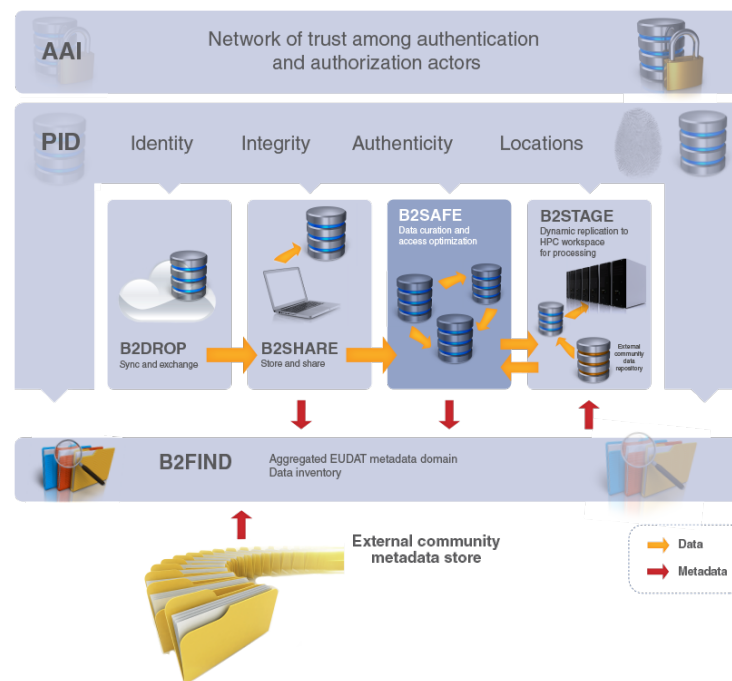


B2SAFE
Replicate Research Data Safely

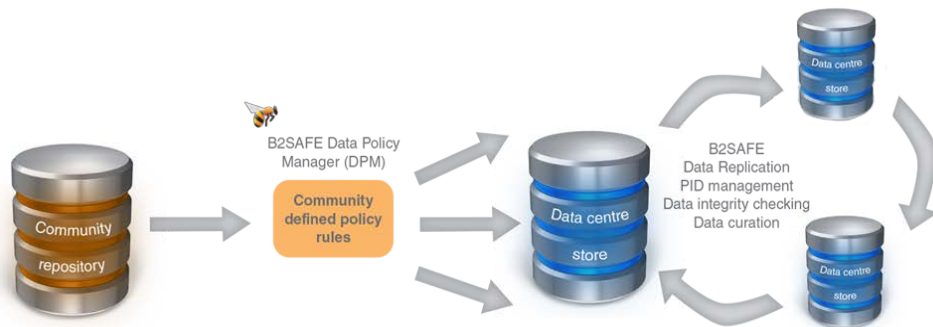
B2SAFE is a **robust, safe and highly available service** which allows community and departmental repositories to **implement data management policies on their research data** across multiple administrative domains in a trustworthy manner. eudat.eu/b2safe

A solution to:

- Provide an **abstraction layer** which **virtualizes large-scale data resources**
- Guard against data loss in long-term **archiving and preservation**
- Optimize access** for users from different regions
- Bring data **closer to powerful computers** for compute-intensive analysis



- based on the execution of **auditable data policy rules** and the use of **persistent identifiers (PIDs)**
- respects the **rights of the data owners** to define the **access rights for their data** and to decide how and when it is made **publicly referenceable**
- data policies are **centrally managed via a Data Policy Manager**, and the policy rules are implemented and enforced by **site-local rule engines**
- able to **aggregate data from different disciplines** into a storage system of **trustworthy and capable data service providers**
- support for **repository packages** (e.g. DSPACE, FEDORA) and a **lightweight HTTP-based solution**



Who benefits

- ❖ repositories lacking the **capacity and / or funding** to offer **reliable storage and access services** over longer periods of time
- ❖ repositories **without adequate compute capacity** for **data-intensive computational services** based on their data
- ❖ **data producers** who need to be sure that **trusted centres** are taking **care of their data**
- ❖ consumers wishing to access **optimized services** on **data sources of interest to them**
- ❖ consumers who wish to **apply interdisciplinary data-intensive methods** using data collected from **various communities**

CEDA (Centre for Environmental Data Archival) could be joined into B2SAFE to replicate data across sites for load balancing and security.

- Cooperating partner will be STFC

People

- EUDAT: Jens Jensen

- ENES: Phil Kershaw

Timeline

- ...

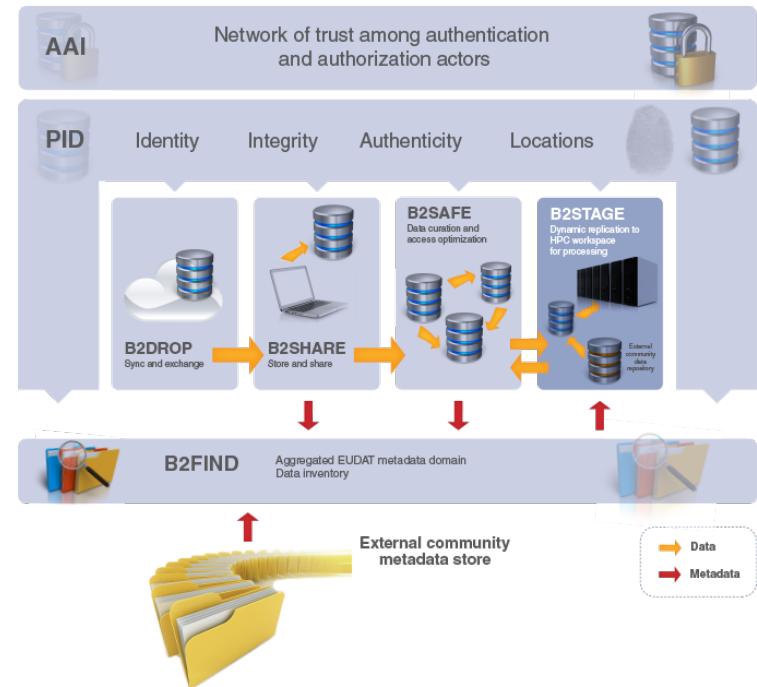


B2STAGE
Get Data to Computation

B2STAGE is a **reliable, efficient, light-weight and easy-to-use** service to **transfer research data sets** between EUDAT storage resources and high-performance computing (HPC) workspaces. eudat.eu/b2stage

The service allows users to:

- Transfer large data collections from EUDAT storage facilities to **external HPC facilities for processing**
- In conjunction with B2SAFE, **replicate community data sets, ingesting them** onto EUDAT storage resources for long-term preservation
- Ingest computation results** into the EUDAT infrastructure
- Access data through a **RESTful HTTP interface** (in progress)



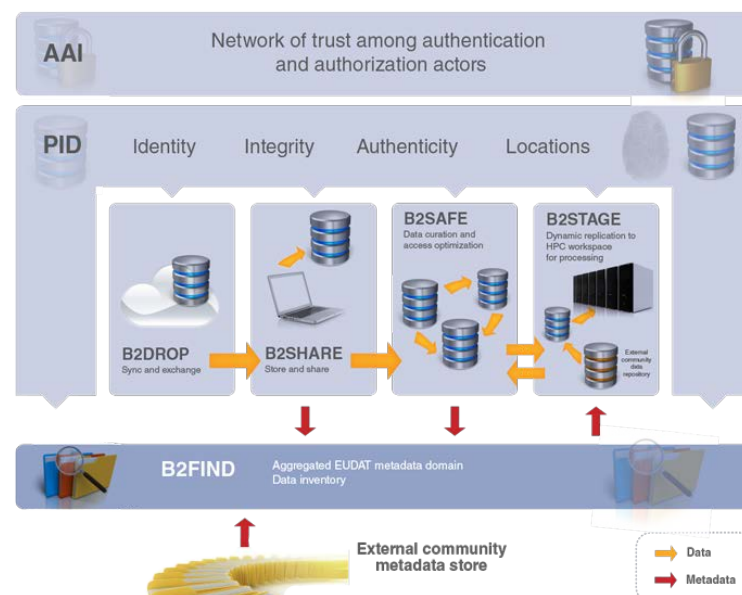


B2FIND
Find Research Data

B2FIND is a simple, user-friendly **metadata catalogue** of **research data collections** stored in EUDAT data centres and other repositories.

A service which allows users to:

- Find collections of scientific data quickly and easily, irrespective of their origin, discipline or community
- Get quick **overviews** of available data
- Browse through collections using **standardized facets**



B2FIND features



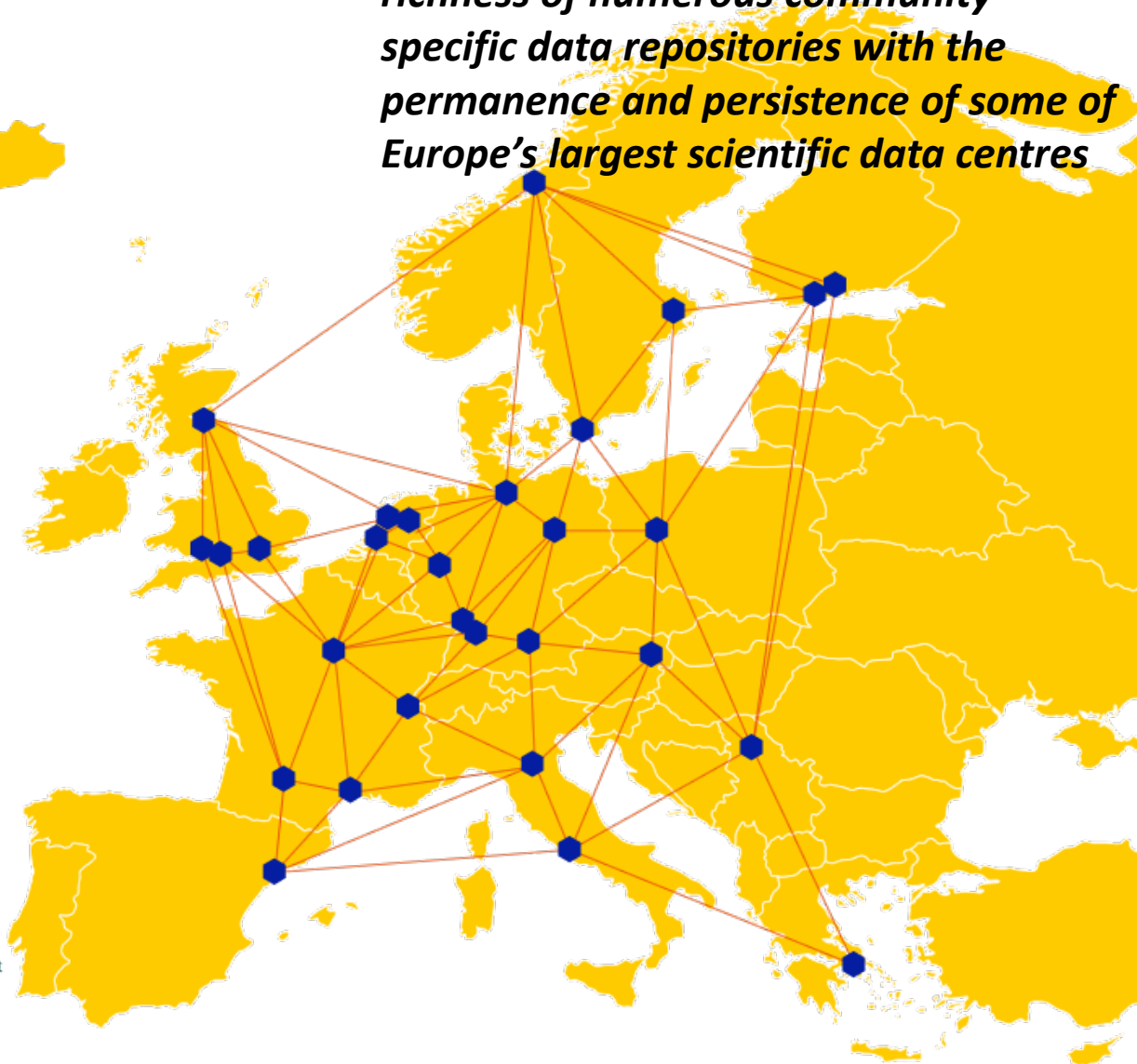
b2find.eudat.eu

- based on a **comprehensive joint catalogue of EUDAT services and external metadata**
- **metadata is mapped onto standardized facets**
- **supports faceted, geospatial and temporal metadata searches**
- **allows users to search and browse datasets via keyword searches**
- **results displayed in user-friendly format and listed in order of relevance**
- **access to the scientific data objects is given through references provided in the metadata**
- **initially available for communities in the EUDAT registered domain of data**
- **EUDAT will then extend the service to other interested and reliable data and metadata providers**



A pan European Consortium

a network of collaborating, cooperating centres, combining the richness of numerous community-specific data repositories with the permanence and persistence of some of Europe's largest scientific data centres



About EUDAT

Research communities from different disciplines have different ambitions and approaches – particularly with respect to data organization and content but they share one common point: **they all have basic data service requirements.**

EUDAT offers common data services, supporting multiple research communities as well as individuals, through a geographically distributed, resilient network connecting general purpose data centres and community-specific data repositories. These shared services and storage resources are distributed across 15 European nations and data is stored alongside some of Europe's most powerful supercomputers. EUDAT, a user-driven, service-oriented, trusted, secure and sustainable data infrastructure offers solutions for finding, sharing, storing, replicating, staging and performing computations with primary and secondary research data. Community-specific data repository managers can join the data infrastructure to archive, replicate, process and catalogue data on behalf of their community. While researchers (from academia and industry), citizen scientists, policy makers, and members of the public can share, discover and re-use data via EUDAT www.eudat.eu