

ICOS

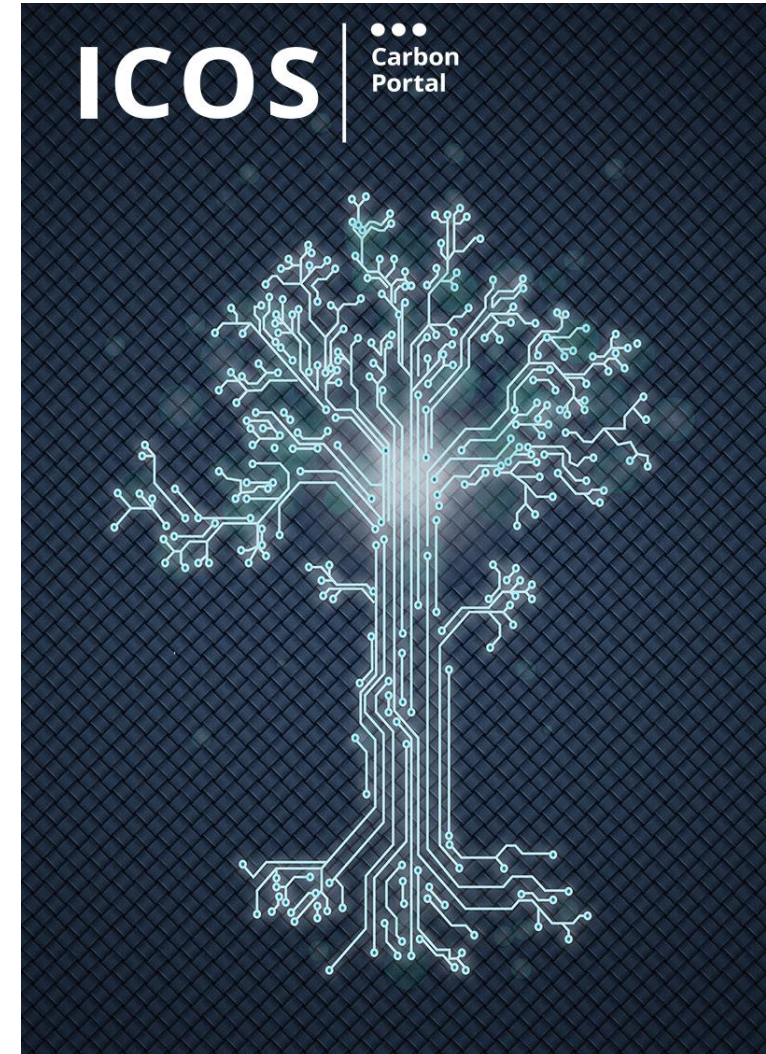
Carbon
Portal

ICOS

Collaboration with e-infrastructures

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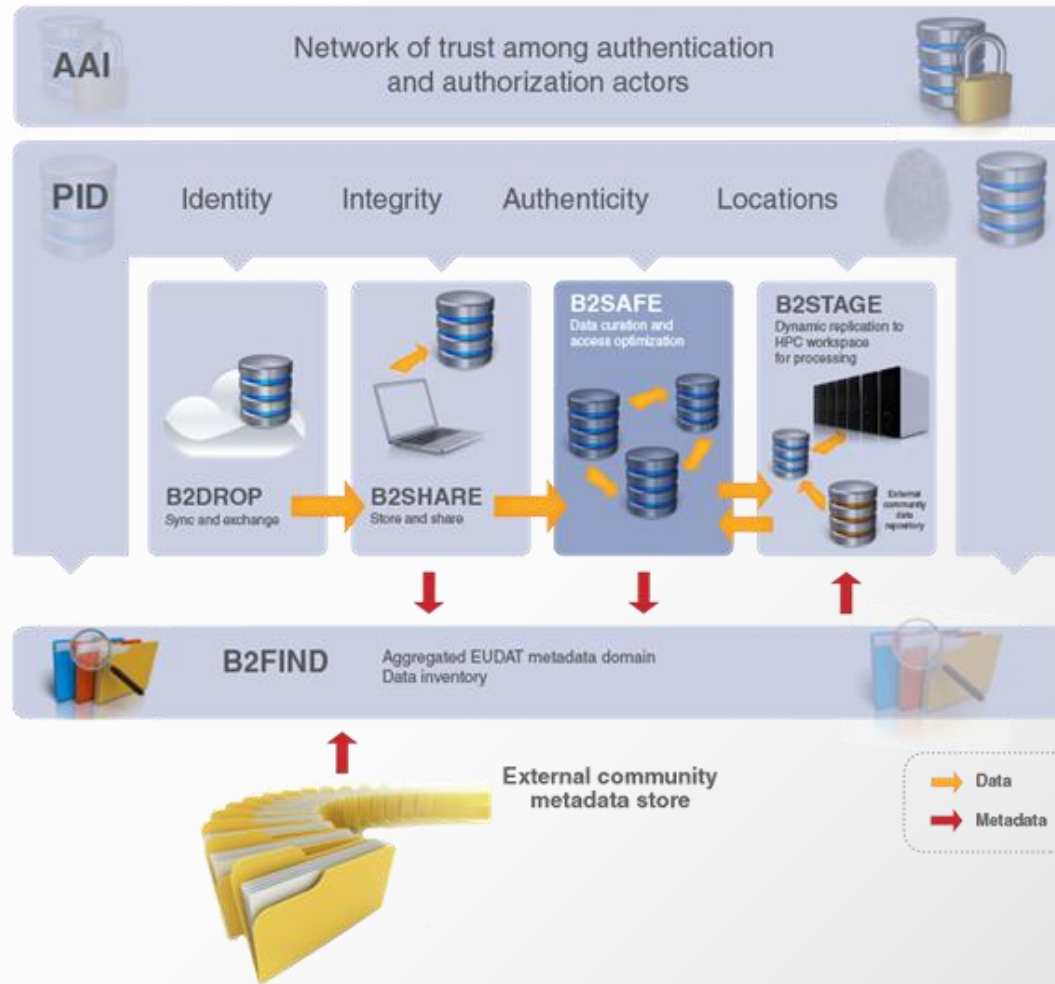
EUDAT/EUDAT2020

European Data e-Infrastructure

ICOS: one of 6 user cases

- Use of trusted repositories for sensor data
- PID services (at all data product levels)*
 - Last month a course on use PID's in EUDAT
- Safe, long-term data product storage with fast access (via ICOS data portal)
- Simplify usage of ICOS data "at source" for modellers (high-volume users)
- User authorization, authentication and identification service (beyond current "federations")

EUDAT2020 services

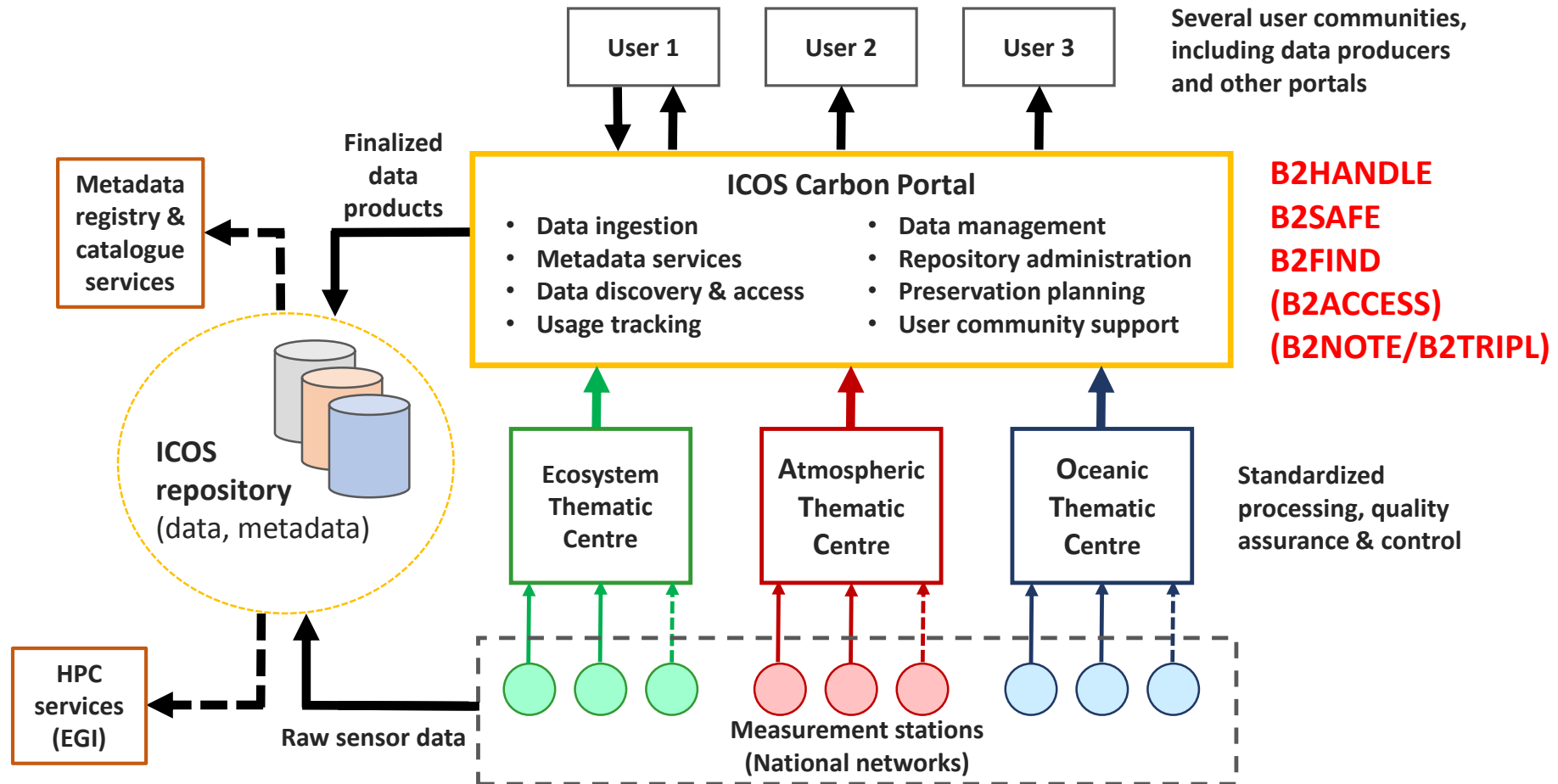


ICOS wants to use

- PID
- B2SAFE
- B2FIND
- +
 - AAI
 - B2STAGE

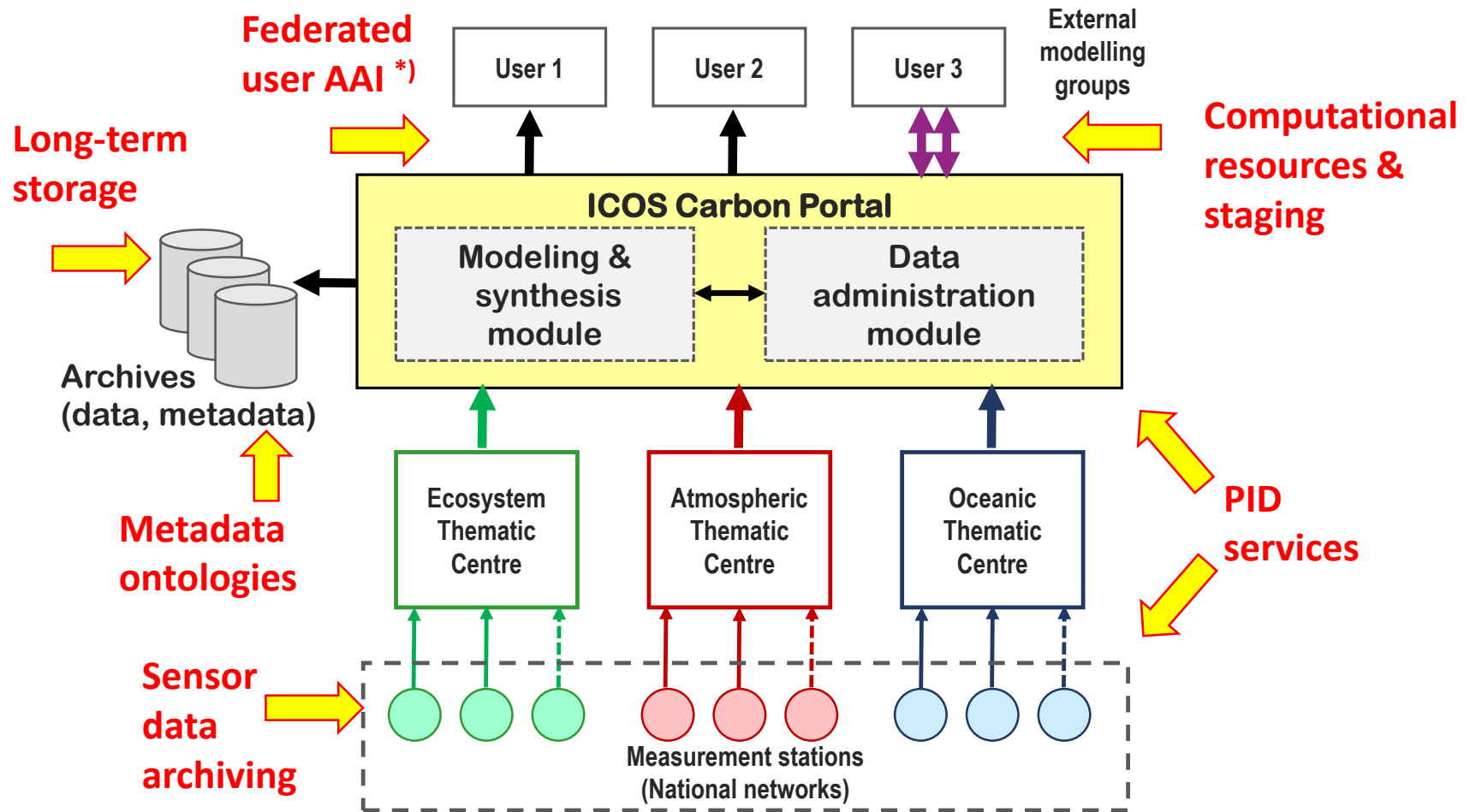
"Pilot" to implement this during 2015-2016

Data flow in ICOS



Basic ICOS data flow

With EUDAT2020 services!



*) AAI = Authentication, authorization & identification

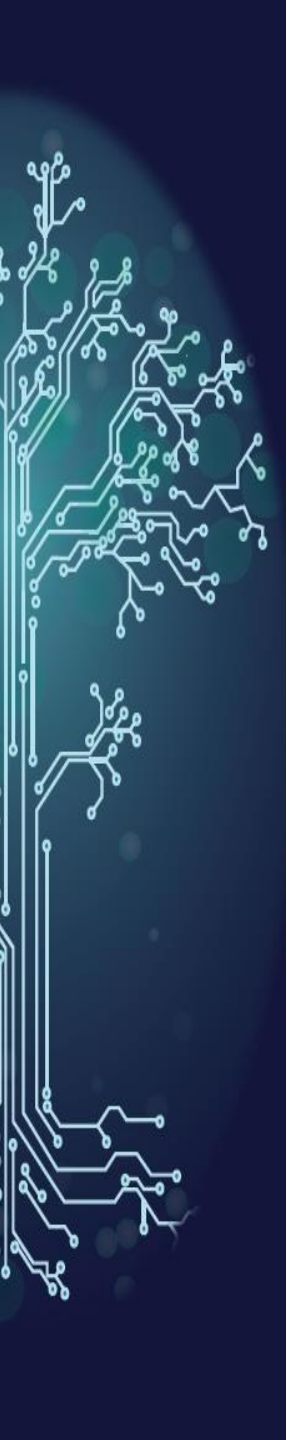


ENVRIplus

bringing together 21 different Environmental and Earth System Research Infrastructures
Besides ICOS, eg Elixer, AnaEE, LTER, ACTRIS etc.

Common model

ICOS-CP is leading WP6 on Research Infrastructure data identification and citation services



- Development of a system for citation of datasets with PID is part of the ENVRI-Plus project.

- Example of an existing approach to develop a citing standard is

DataCite, using Digital Object Identifier (DOI)

<https://www.datacite.org/>

Fair Data principles: FORCE11
(www.force11.org)



Cooperative projects

Research Data Alliance (RDA) a worldwide initiative to improve data sharing and re-use

<https://rd-alliance.org/>



RDA has a high number of working groups on a wide range of data questions regarding 'long term use'/sustainable data:

- Metadata standards
- Data Type Registries
- Data Citation
- Etc

Today involved in setting up a Working Group: The Array Database

OGC WMS WCS SOS

OGC: Open Geospatial Consortium

- Geospatial and location standards, eg:
 - Netcdf
 - KML
 - SOS: Sensor Observation Service
 - WCS: Web Coverage Service
 - WMS: Web Map Service
 - WPS: Web Processing Service

Servers and clients often lacking or only partially working

CP will deploy THREDDS server, OpenGeoPortal, custom clients



Some other 'e-infrastructures' to follow:

Data Seal of Approval: www.datasealofapproval.org

Certifying your repository against the 16 Data Seal of Approval guidelines

Data Observation Network for Earth's (DataONE's): www.dataone.org

combining multi-scale, multi-discipline, and multi-national observational data