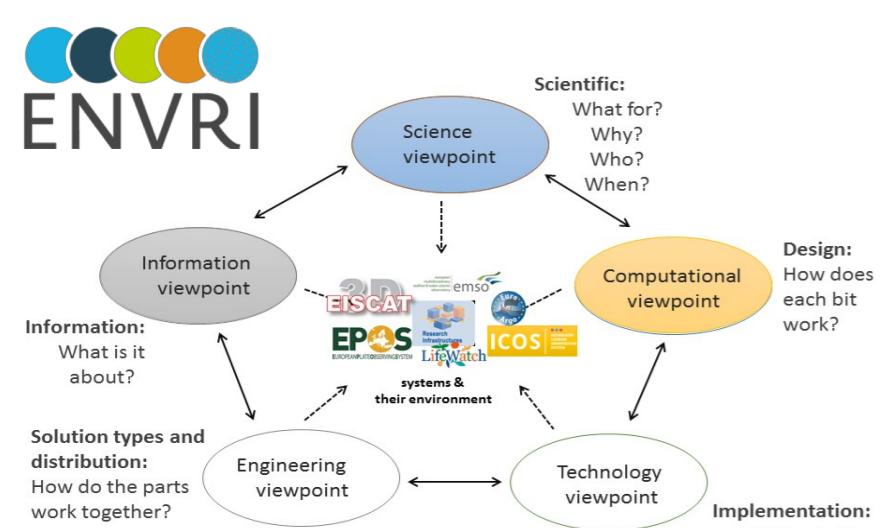


Software and services towards interoperable data management

----- A Service portfolio from the ENVRI^{PLUS} Data for Science theme

Zhiming Zhao, Paul Martin, Malcolm Atkinson, Abraham Nieve De La Hidalga, Alex Hardisty, Keith Jeffery, Alex Vermeulen, Margareta Hellström, Leonardo Candela, Erwann Quimbert, Barbara Magagna, Chris Ariyo, Christian Pichot, Thierry Carval, Yin Chen, Baptiste Grenier

Introduction and background

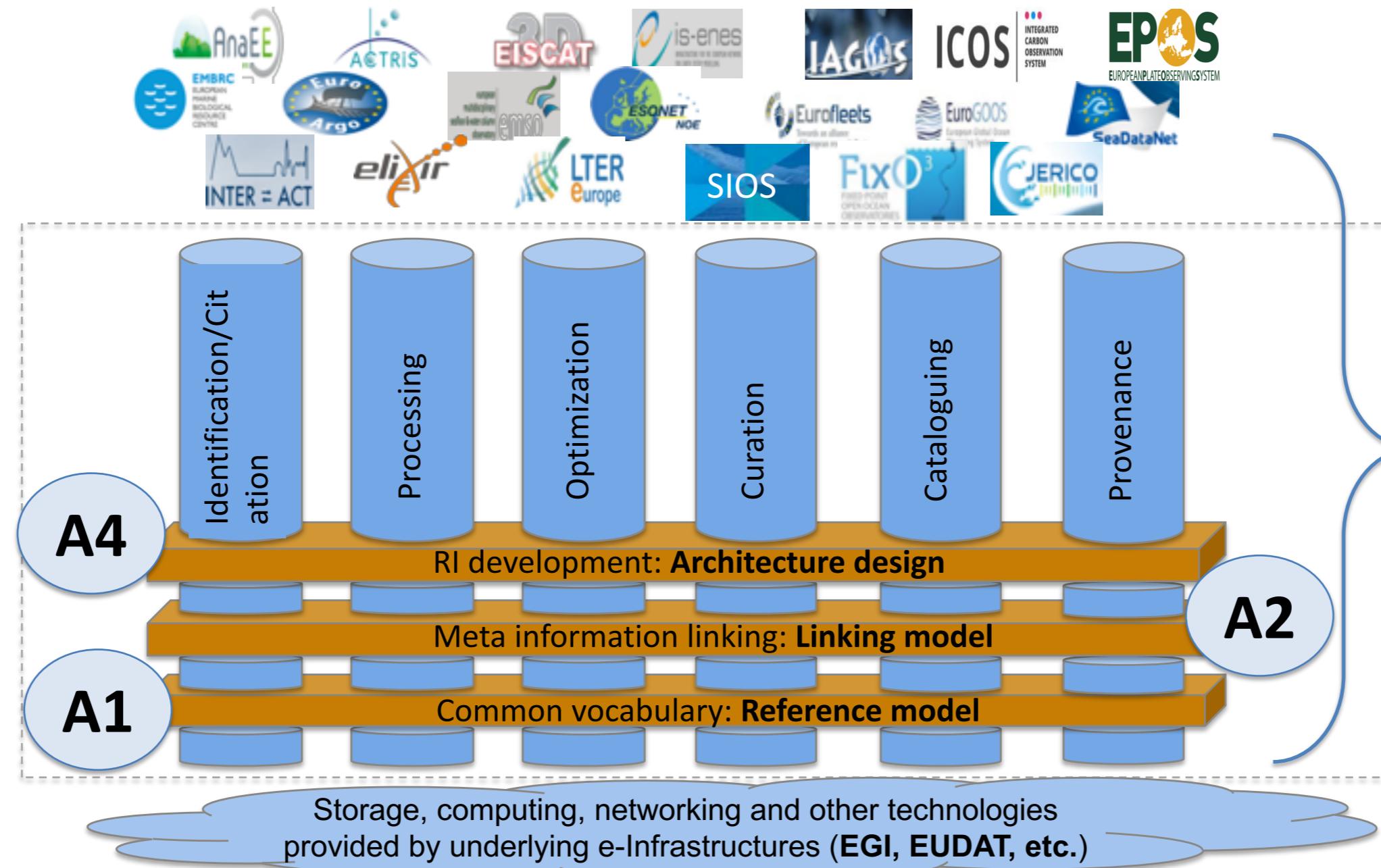


Operational and FAIR compliant services in the European Open Science Cloud (EOSC) ecosystem, open science enabled, etc.

1. ENVRI Reference model guided RI design

A1. RM Training: Practical Introduction to the ENVRI RM
Relation to the data lifecycle: covers all phases
Data for Science crosscutting mechanisms: Common Vocabulary: Reference model and RI design
URL: <https://training.envri.eu/course/search.php?search=ENVRI+RM>
Available Date: 2017/10
Main contributor: Cardiff University
Role of contributor: developer
Contact: Abraham Nieve/Alex Hardisty

A4. Architecture Design
Relation to the data lifecycle: all
Data for Science service pillar: all
URL:
Available Date: 2017
Main contributor: NERC
Role of contributor: consultant
Contact: Keith Jeffery



A3. ENVRI Knowledge Base

Relation to the data lifecycle: all phases
Data for Science service pillar: semantic linking (cross-cutting)
URL: <http://oil-e.vlan400.ulaval.net/>
Available Date: 2017
Main contributor: University of Amsterdam
Role of contributor: developer
Contact: Paul Martin, Zhiming Zhao

A2. Open Information Linking for Environmental science research infrastructures (OIL-E)

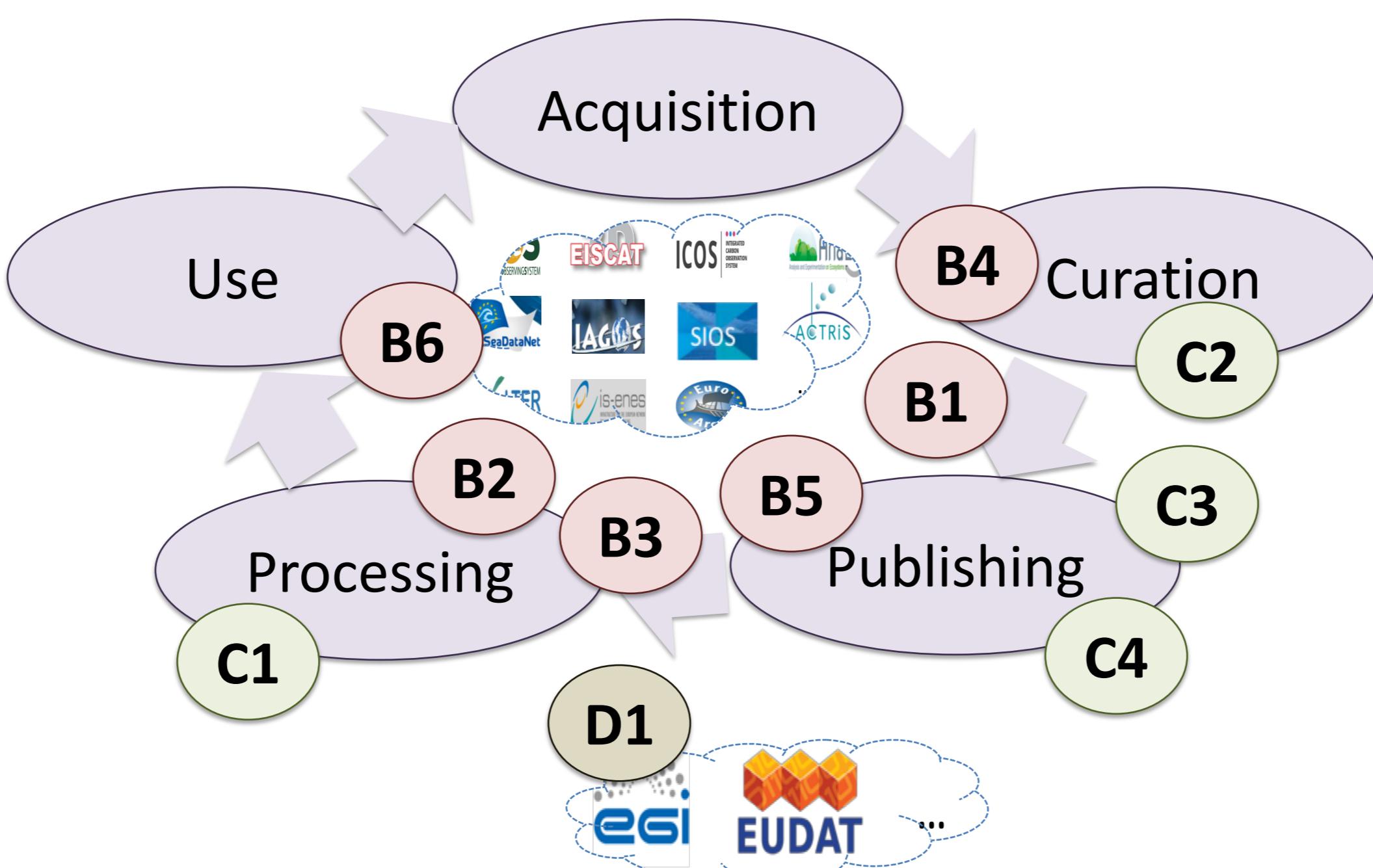
Relation to the data lifecycle: models all phases
Data for Science service pillar: semantic linking (cross-cutting)
URL: <http://www.oil-e.net/>
Available Date: 2017
Main contributor: University of Amsterdam
Role of contributor: developer
Contact: Paul Martin, Zhiming Zhao

2. Interoperable solutions to common data management problems

B2. D4Science Data Analytics
Relation to the data lifecycle: all (processing)
Data for Science service pillar: processing
URL: https://wiki.gcube-system.org/gcube/Data_Mining_Facilities
Available Date: 2012
Main contributor: National Research Council of Italy
Role of contributor: developer, customizer, service provider
Contact: L. Candela, G. Coro, P. Pagano

B3. Dynamic real-time infrastructure planner (DRIP)
Relation to the data lifecycle: data processing and data use
Data for Science service pillar: optimization
URL: https://staff.fwi.uva.nl/z_zhao/software/drrip/
Available Date: 2017
Main contributor: University of Amsterdam
Role of contributor: developer
Contact: Zhiming Zhao

B6. Provenance
Relation to the data lifecycle: all
Data for Science service pillar: provenance (reference model, semantic linking)
URL: <https://wiki.envri.eu/display/ECN/WIKI+for+Semantics+and+Provenance+services>
Available Date: October 2018
Main contributor: EAA
Role of contributor: modeler/recommender
Contact: Barbara Magagna



B1. Linked open data ingestion and metadata service

Relation to the data lifecycle: data identification and citation
Data for Science service pillar: provenance, cataloguing, identification/citation
URL: <https://meta.cosc-eu.org/edit/cpmeta>
Available Date: 2017
Main contributor: Lund University/COS Carbon Portal
Role of contributor: developer
Contact: Alex Vermeulen

B4. Data Curation

Relation to the data lifecycle: data curation and all
Data for Science service pillar: curation and all
URL:
Available Date: 2017
Main contributor: NERC
Role of contributor: consultant
Contact: Keith Jeffery

B5. Flagship catalogue

Relation to the data lifecycle: curation/publication
Data for Science service pillar: cataloguing
URL: <http://eudat6c.dkrz.de/group/envriplus>
Available Date: September 2017
Main contributor: Ifremer
Role of contributor: developer
Contact: Erwann Quimbert

3. Reusable solutions from RI/e-I/VRE communities

C1. Data Subscription Service (DSS)

Relation to the data lifecycle: data processing and data use
Data for Science service pillar: Processing and Optimization
URL:
Available Date: 2017
Main contributor: CSC-EUDAT
Role of contributor: e-infrastructure
Contact: Chris Ariyo

C2. Pipeline for semantic annotation of relational DB and triples generation

Relation to the data lifecycle: data processing and data use
Data for Science service pillar: processing, provenance
Available Date: 2018
Main contributor: INRA
Role of contributor: developer
Contact: Christian Pichot

C3. Data / metadata generation from semantic annotations

Relation to the data lifecycle: data publication
Data for Science service pillar: cataloguing, identification/citation
Available Date: 2018
Main contributor: INRA
Role of contributor: developer
Contact: Christian Pichot

C4. Dynamic ecological information management system (DEIMS)

Relation to the data lifecycle: data publication
Data for Science service pillar: cataloguing
URL: <https://data.lter-europe.net/deims/>
Available Date: 2016
Main contributor: EAA
Role of contributor: developer
Contact: Christoph Wöhner

D1. ENVRIplus Service Testbed based on EGI Cloud Compute

Relation to the data lifecycle: all
Data for Science service pillar: Storage, Computing, Networking and other e-Infrastructure services
URL: <https://www.egi.eu/services/cloud-compute/>
Available Date: 2017
Main contributor: EGI Foundation
Role of contributor: e-Infrastructure Service Provider
Contact: Yin Chen, Baptiste Grenier

