



Parthenos underlying infrastructure

Donatella Castelli

CNR-ISTI

Introducing PARTHENOS – integrating the digital humanities,

14th December 2016, Prato, Italy

CONTEXT

Data infrastructure for research

Data infrastructure offering services for the research communities

Data infrastructure

“e-Infrastructure” offering services for collection, deposition, storage, preservation, access, retrieval, analysis/mining/processing, publication, etc.

e-Infrastructure

Electronic platform operated by a responsible entity offering an open set of basic enabling services (including access to resources) to a distributed Community of Practice



More on Infrastructures

The chef view



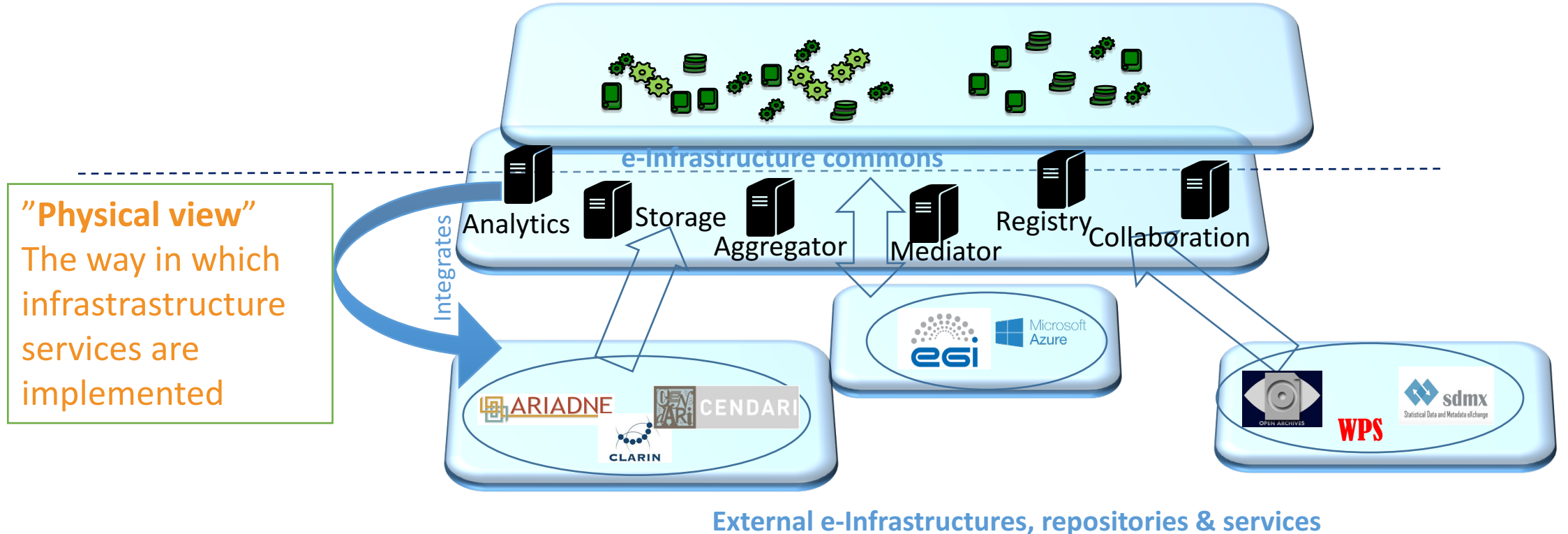
User services

The plumber view

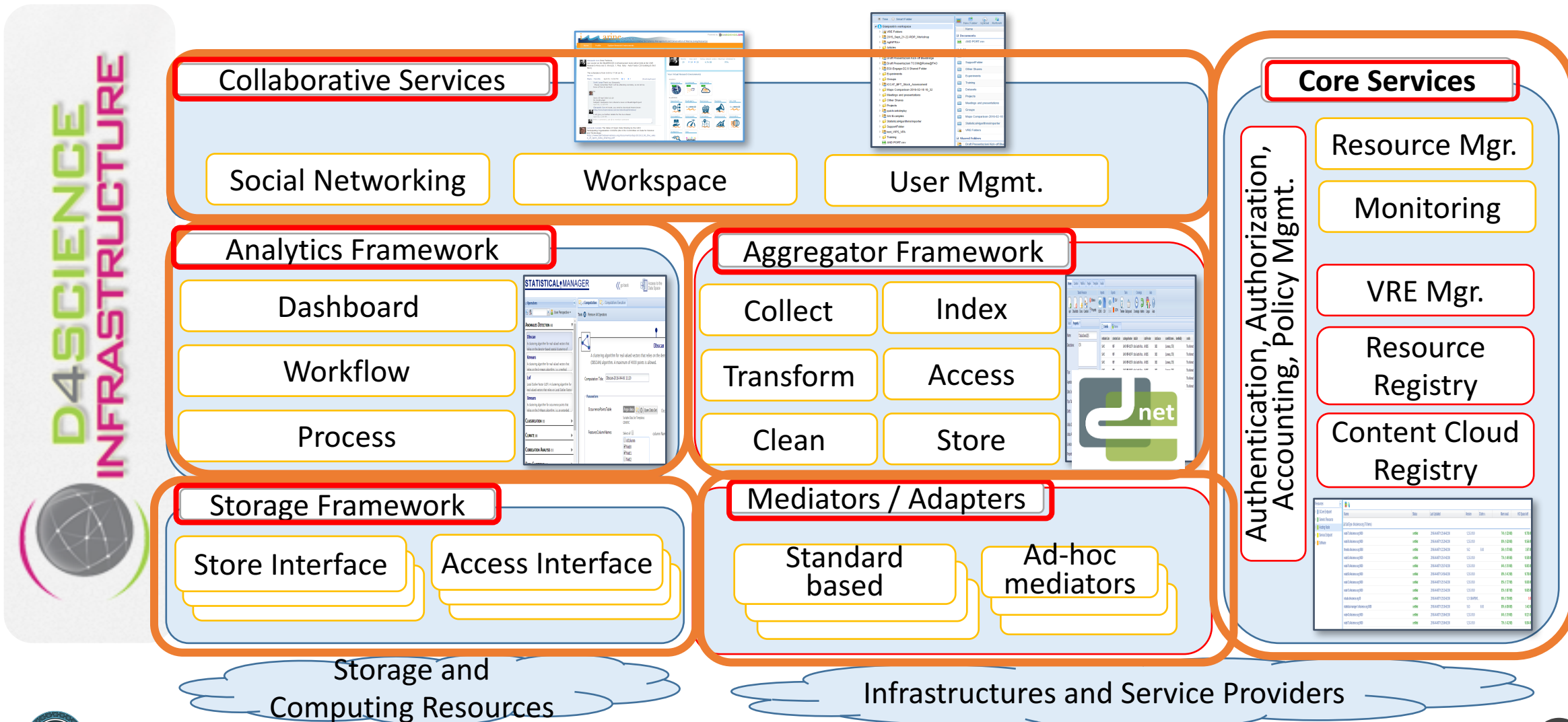


How the services are implemented and operated

THE PLUMBER VIEW

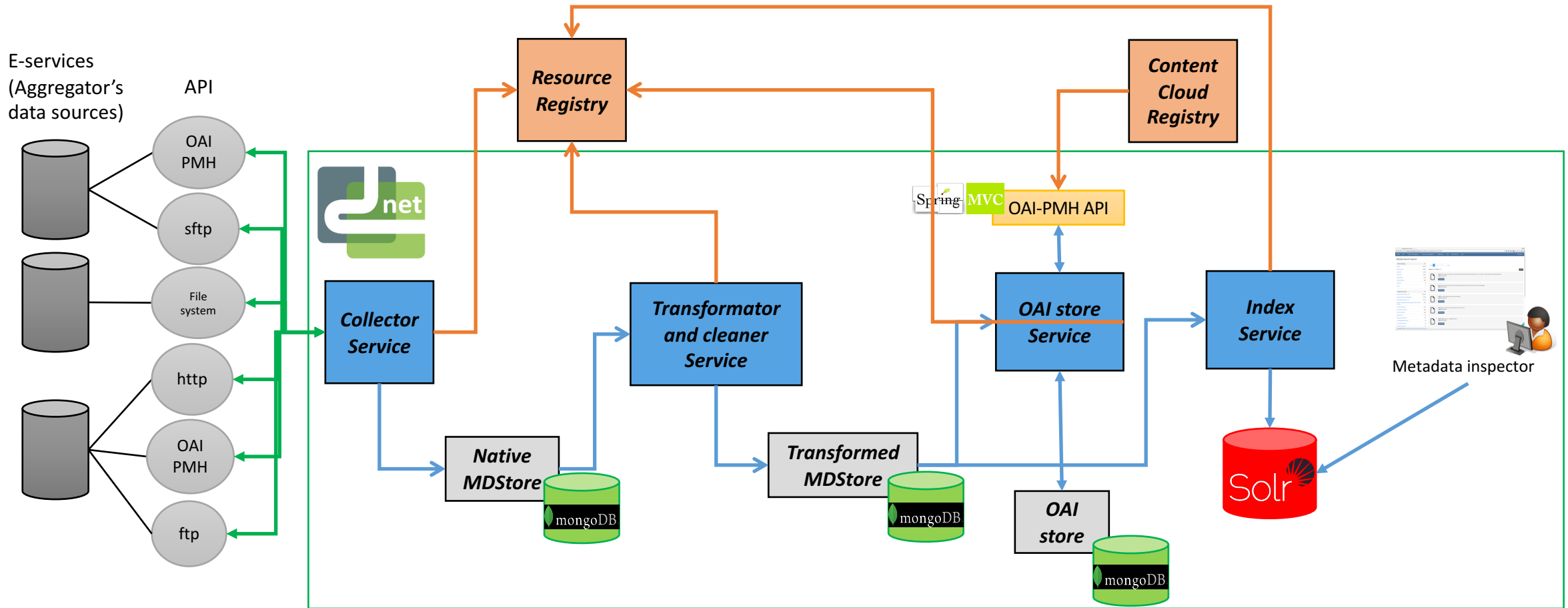


THE PLUMBER VIEW: D4Science.org architecture



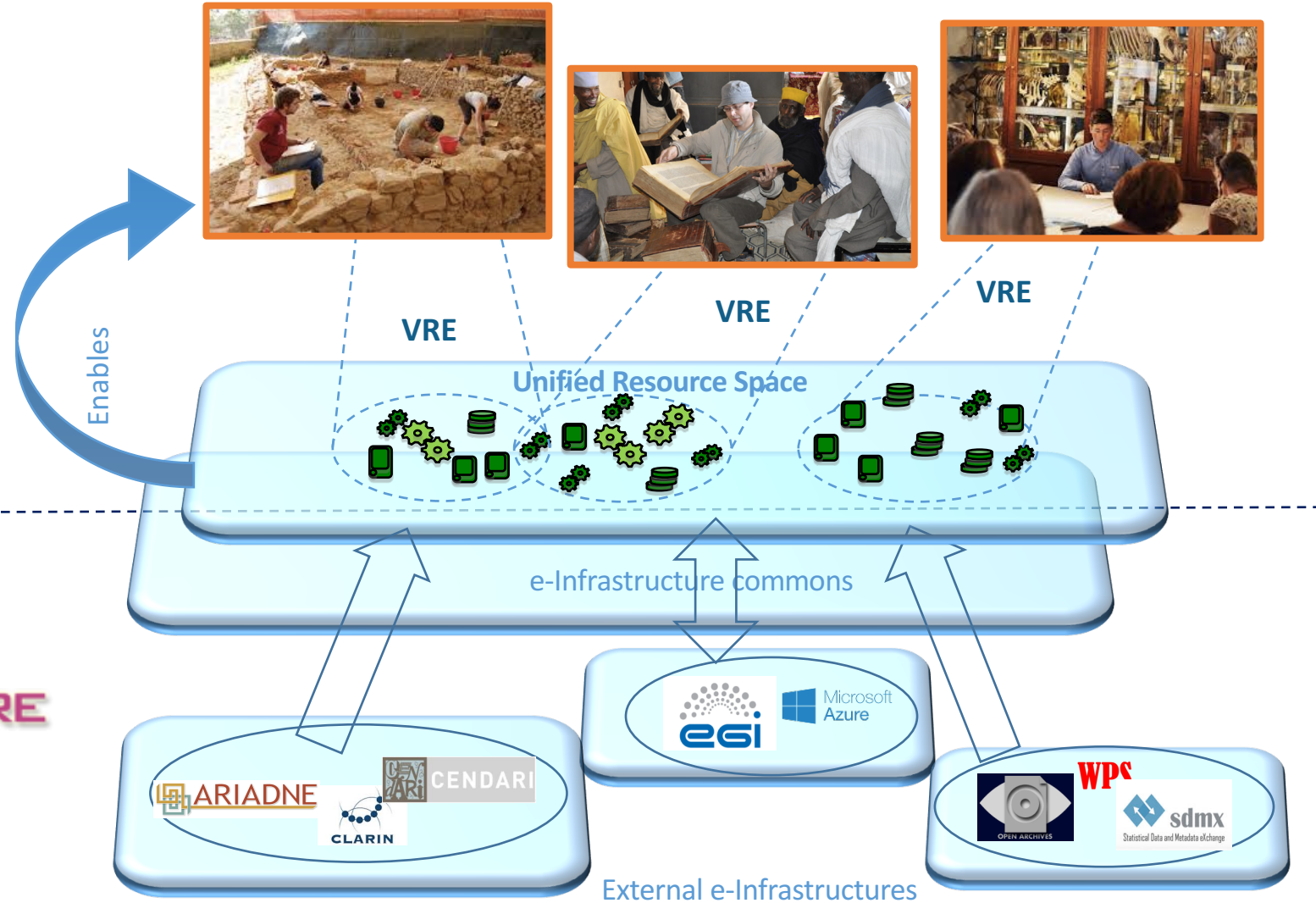
Aggregator Framework

Key components



The Chef View: Virtual Research Environments

"Logical view"
The way in which infrastructure services are perceived by the users and how they are exploited



OTHER SERVED COMMUNITIES

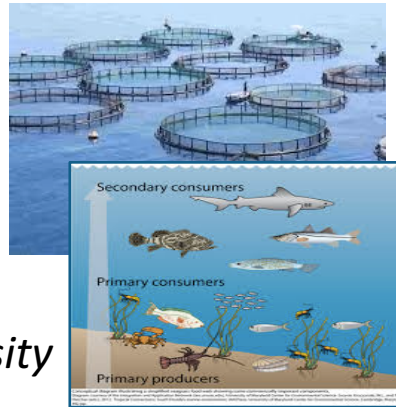


1. *Social Mining & Big Data Ecosystem*, a research infrastructure for ethic-sensitive scientific discoveries and advanced applications of social data mining.

www.sobigdata.eu

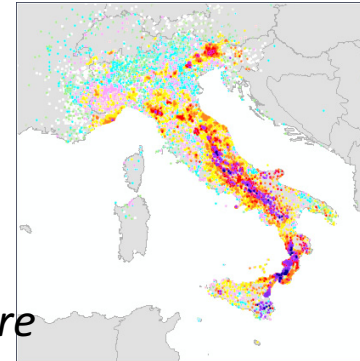


3. *Fisheries & Aquaculture*
Increasing scientific knowledge to enlarge the spectrum of growth opportunities as addressed by the Blue Growth Societal Challenge



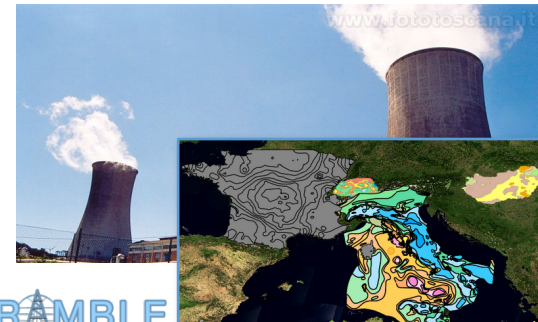
4. Processing and management of heterogeneous **environmental and Earth system data**

www.envriplus.eu



5. Used to build a pan-European **geothermal energy map**

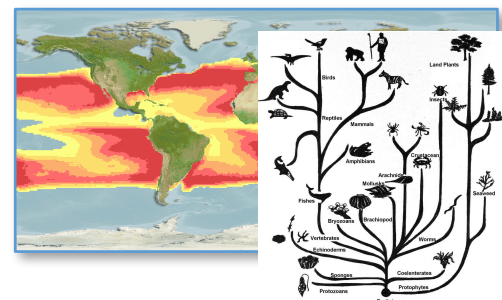
www.egip.d4science.org



2. *Marine Biodiversity*
More than 25 000

taxonomic studies per month
More than 60 000 **species distribution maps** produced and hosted

www.d4science.eu



D4Science: NUMBERS

as on 13 December 2016

- + 430 millions service invocations in the last year
- + 1600 distinct caller hosts
- + 3100 users in 52 countries (133 PARTHENOS users)
- + VREs users belonging to 443 distinct institutions
- + 99.8% service availability

PARTHENOS: NUMBERS

Archaeology

- Ariadne
- 600,000 from Cultura Italia

Archival descriptions

- 600,000 from CENDARI
- ~200,000 from EHRI
- CH collections

Description of resources for Hum& Social sciences

- ~4M 500K resources from HumaNum

Descriptions of language res, tools, lexicons, corpora

- ~200,000 from CLARIN
- ~2,000 from LRE Map (CNR-ILC)
- - ~2,600 from METASHARE (CNR-ILC)

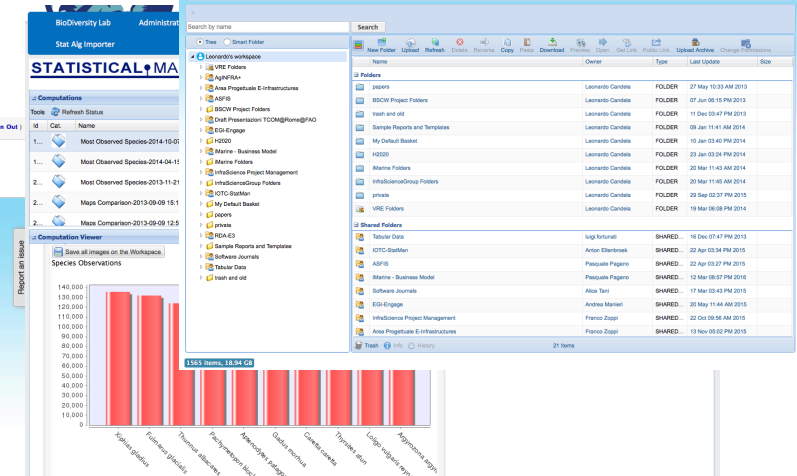
CH collections

- ~1,600 from DARIAH

MORE ON VREs

Web-based, community-oriented, comprehensive, flexible, and secure working environments

- Define sub-communities
- Allow temporary dedicated assignment of computational, storage, and data resources
- Simplify the management of accounting, authentication and authorization
- Hide resources configuration and setup
- Facilitate data and information sharing
- Facilitate collaboration



VRE DEFINITION

Name: MyPersonalVRE
 Designer: Pasquale Pagano (pasquale.pagano)
 VRE Manager: Leonardo Candela (leonardo.candela)
 Description: The environment for my research

Life time
 From: November 22, 2014
 To: November 22, 2015

Metadata

- Taxonomic Data Comparison
- ConnectCube
- Enhanced Documents Management
- Information Objects Discovery
- Messaging
- Shared Workspace
- Social Networking Facilities
- GeosCube
- Geospatial Data Discovery
- Geospatial Data Processing
- StatsCube
- Code List Management
- Statistical Service
- Geospatial Data Management

Service

Simple and effective process to define a new environment

Available Resources for Occurrence and Taxonomic Data Discovery

Name	Description
CatalogueOfLife	A virtual biodiversity repository of Catalogue of Life data. The ...
GBIF	A virtual biodiversity repository of GBIF data. The ...
BrazilianFlora	A virtual biodiversity repository of List of Species of ...
ITIS	A virtual biodiversity repository of ITIS data. ITIS pr...
WoRDSS	A virtual biodiversity repository of WoRDSS data. T...
OBIS	A virtual biodiversity repository of OBIS data. The ...
WoRMS	A virtual biodiversity repository of WoRMS data. Th...
ASFIS	Runtime Resource for ASFIS Plugin
IRMNG	A virtual biodiversity repository of IRMNS data. The...

Data

Resources for Statistical Service

Name	Description
OBIS_SPECIES_OBS...	Algorithm returning most observed species in a sp... Resource name: OBIS_SPECIES_OBSERVATIONS_PER_MEOW_AREA Description: Algorithm returning most observed species in a specific years range collected from OBIS database).
LISTDBSCHEMA	Algorithm that allows to view the schema names of...
Intersection	GIS intersection process. The native algorithm is i...
Spread	Spread
SPECIES_OBSERVAT...	Algorithm returning most observed species in a sp...
OCCURRENCES_DU...	A transducer algorithm that produces a duplicate fr...
XYEXTRACTOR_TABLE	An algorithm to extract values associated to a table...

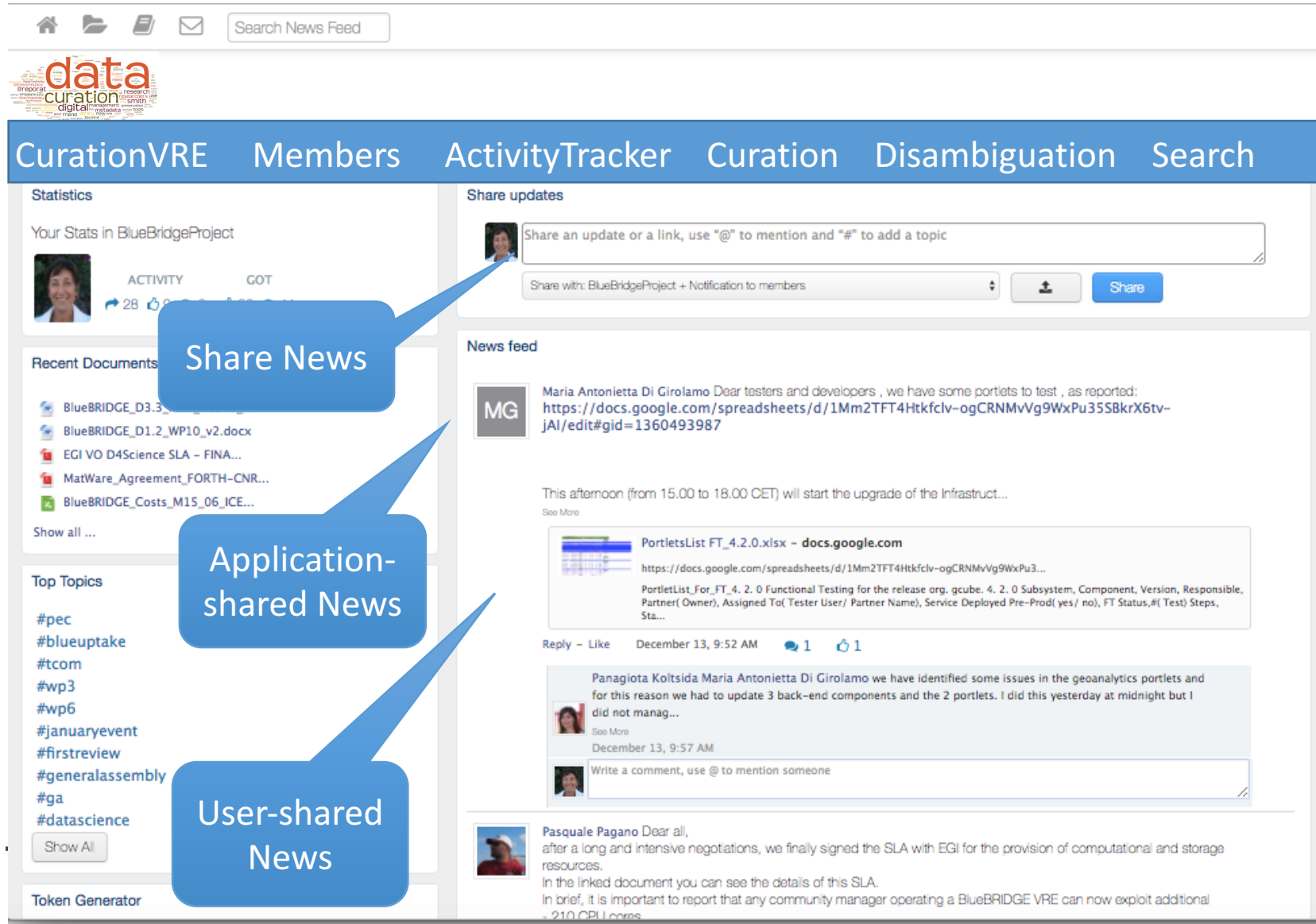
Configuration

Inside a VRE



CURATION VRE

Request Access Info



Home Folder Mail Search News Feed

data curation digital

CurationVRE Members ActivityTracker Curation Disambiguation Search

Statistics
Your Stats in BlueBridgeProject

Share updates
Share an update or a link, use "@" to mention and "#" to add a topic

Recent Documents

Top Topics

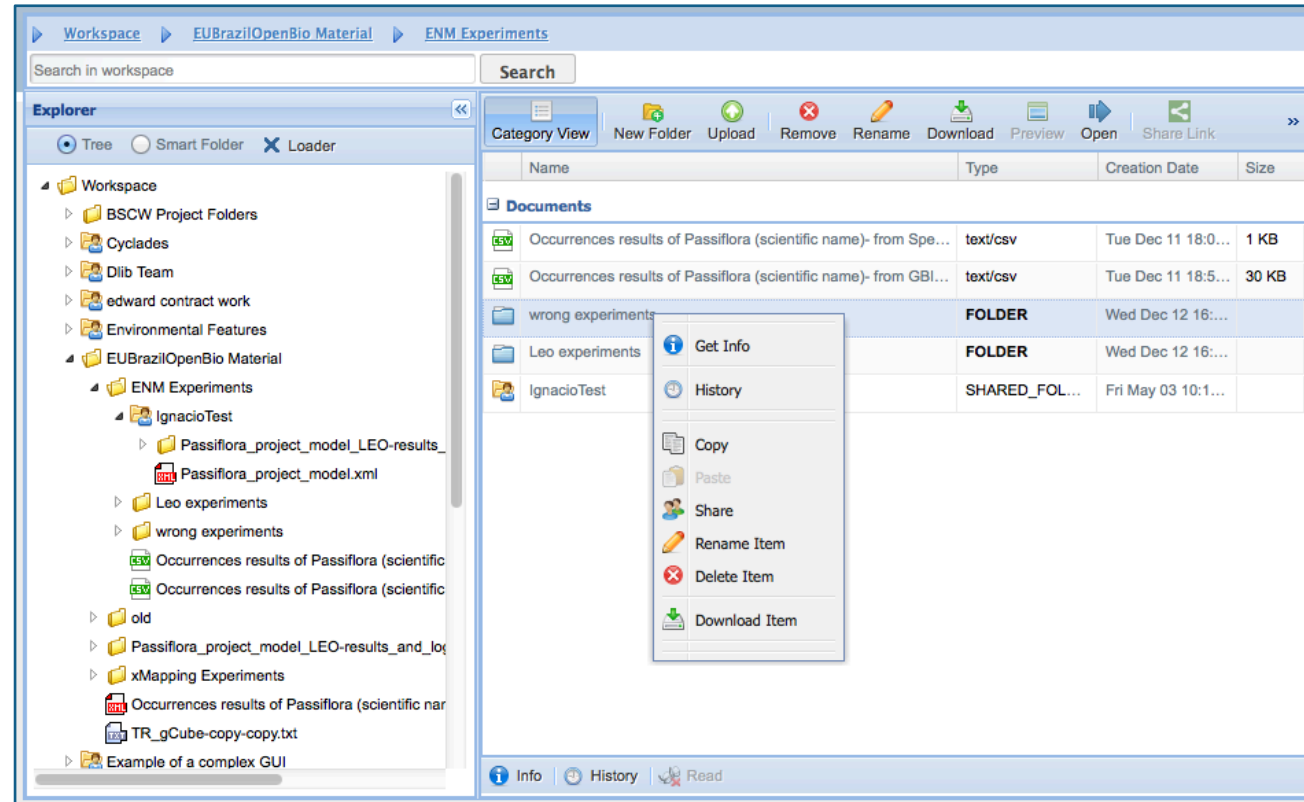
Token Generator

Share News

Application-shared News

User-shared News

SHARED WORKSPACE



- ✓ Files, dataset, workflows, computational analysis, etc.
- ✓ Shared, disseminated via public URLs



Donatella.castelli@isti.cnr.it

Parthenos: www.parthenos-project.eu

D4Science Web site: <http://www.d4science.org>; info@d4science.org

gCube Web site: <http://www.gcube-system.org>

VREs: <https://services.d4science.org/web/guest/virtual-research-environments>

D-NET web site: <http://www.d-net.research-infrastructures.eu>

