ENVRI Common Operations of Environmental Research Infrastructures

Requirements and Common Operations of Environmental Infrastructures

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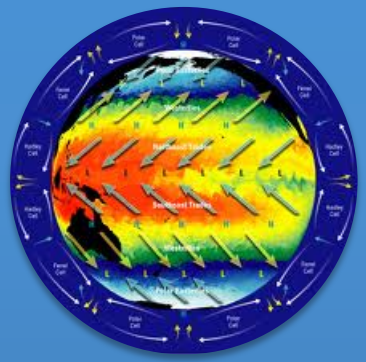
Project number: 283465

Environmental Science

oceanic and atmospheric processes



long-term development of the climate system

Biological processes

biodiversity

development of the cryosphere and lithosphere

Earth as a single complex and coupled system

Coordinates

ENVRI

Title: Common Operations of Environmental Research Infrastructures

Call Identifier: FP7-INFRASTRUCTURES-2011-1

Information: www.envri.eu

Starting Date: 01/11/2011

Duration: 36 Months

Partners: 16

Coordinator: Wouter Los, Univ. Amsterdam

Keywords: Environmental Research Infrastructures

Data processing, Interoperability, Reuse, GEOSS

Mission - The Planet is our laboratory

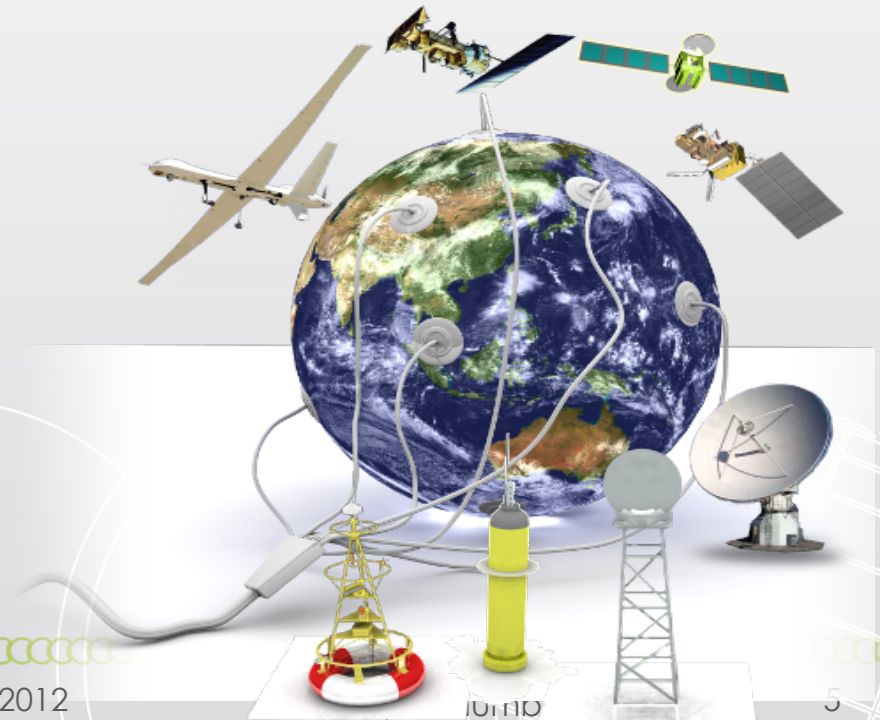
Connecting information
and knowledge
from Deep Earth,
land and sea,
the atmosphere

- Both living and dead environments

Goal

Enable multidisciplinary scientists to **access, study** and **correlate** data from **multiple domains** for "system level" research

by providing solutions and guidelines for the RIs common needs



ESFRI Environmental Research Infrastructures

- Tropospheric research aircraft

COPAL

- Upgrade of incoherent SCATter facility

EISCAT-3D

- Multidisciplinary seafloor observatory

EMSO

- Plate observing system

EPOS

- Global ocean observing infrastructure

EURO-ARGO

- Aircraft for global observing system

IAGOS

- Integrated carbon observation system

ICOS

- Biodiversity and ecosystem research infra

LIFEWATCH

- Svalbard arctic Earth observing system

SIOS

Approach

Promote Accessibility

PROVIDE SOFTWARE TOOLS TO

discover data which are heterogeneous in format, content, and metadata description

harmonise, **integrate** and **analyse data** across domains and RIs

Preserve Specificity

ICT perspective: complex infrastructure

Data acquisition is continuous

- Datasets are not static since data are continuously streamed from data sources
- Need a persistent identifier

Data stored in multiple sites

- Each site combines data from sources in different ways
- Not true replication
- Same data stream stored at different sites has a different persistent ID

Federated AAI

- Each site is responsible for authentication and authorization
- Common LDAP (Lightweight Directory Access Protocol) for users' credential with Shibboleth on top

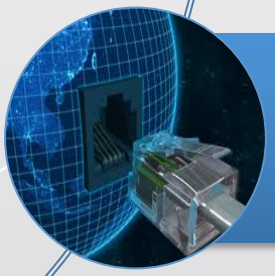
Different access rights

- Anonymous for public data
- Read-only for not-public data
- Not-public data may become public after the embargo period is expired

First steps - priority areas

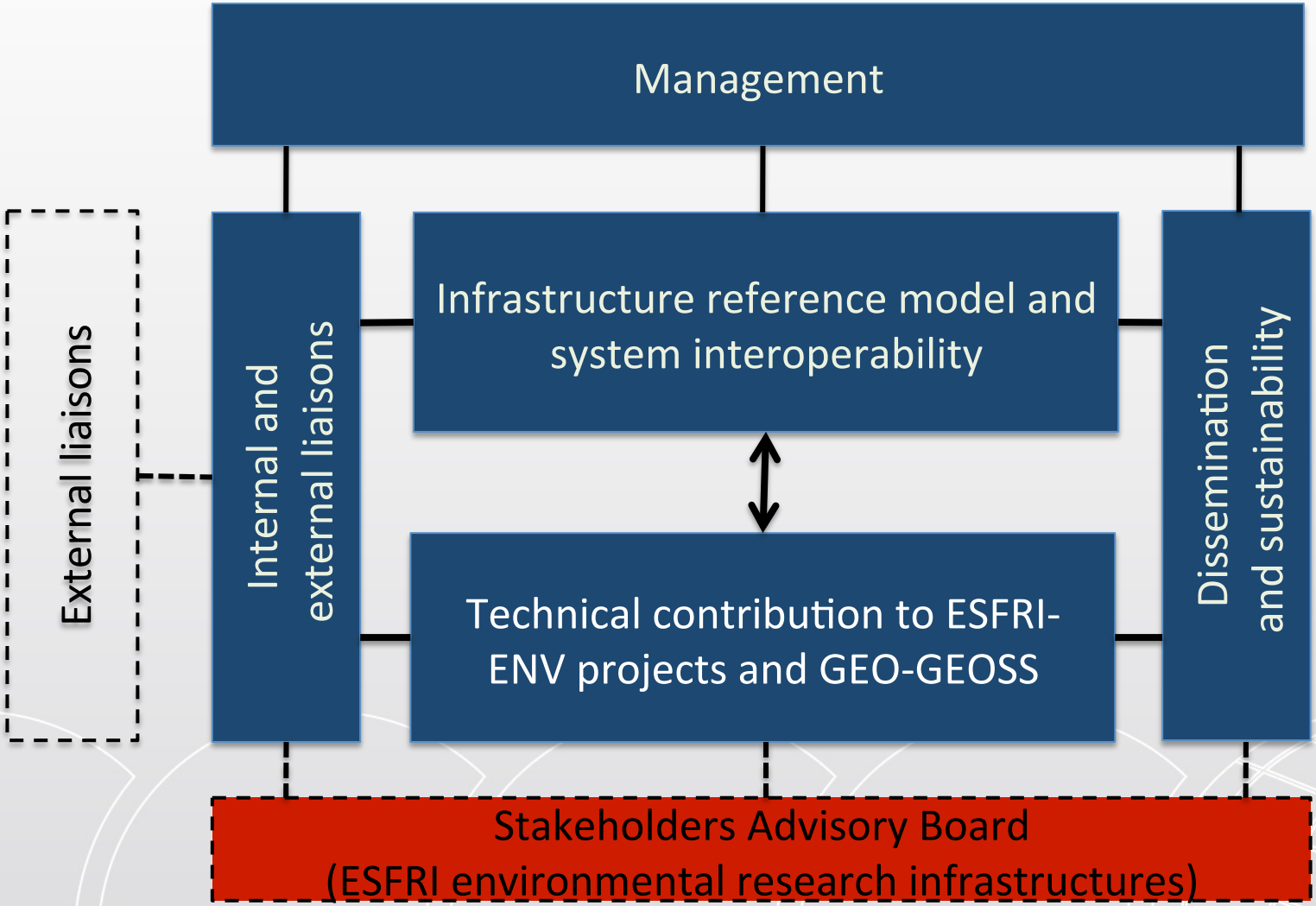
Integrated data discovery across various centres / catalogues

(near) Real-time data handling



Federation over existing (national or international) infrastructures / services

ENVRI Structure



ENVRI – JRC collaboration

Reference model and system interoperability

- JRC experience – dialog on RM and system interoperability

Contribution of ESFRI-ENV projects to GEO-GEOSS

- JRC contributions to GEO-GEOSS?
- Dialog with JRC on data, tools and service contributing to ESFRI ENV and global observation systems (GEO-GEOSS)

Starting the collaboration:

- Organizing a joint workshop or JRC is welcome to participate in next ENVRI technical workshop (Sept 11-13, Edinburgh)