

# Scientific Data E- Infrastructures

## e-SciDR study workshop

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## Quantity and Paradigm Shift

- Modern Science makes increasing use of information and communication technologies
- Volumes of scientific data produced or exchanged is growing very fast



# Scientific Digital Repositories in FP7: 2007/08 e-Infrastructures in Capacities Programme



## FP7/Capacities 2007:

(15 Million €: Call 1 – closed May 2007)

2007-1.2.1: Scientific Repositories

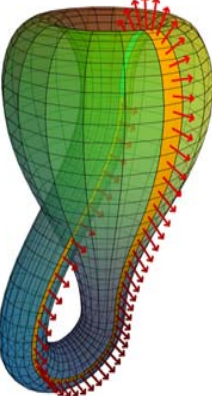


## FP7/Capacities 2008:

(20 Million € planned in a future Call)

2008-1.2.5: Scientific Data Infrastructure

## The Continuum

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- in time: (forever) expandability of repositories, curation and preservation
  - between raw data to publications: linking data with computation and dissemination tools
  - between different scientific domains: the use of data across different disciplines of science
  - between research and education – role of research infrastructures to link research and its dissemination through education

**Figure:** Klein Bottle with Moebius Band. Reference to article "Imaging maths - Inside the Klein bottle" at <http://plus.maths.org/issue26/index.html>. The Klein bottle is a non-orientable surface found by Felix Klein in 1882 while working on a topological classification of surfaces.



# Overview of the Evaluation

## (now in negotiation phase)

<b>Topic:</b>	Scientific Digital Repositories
<b>Instrument:</b>	Integrated Infrastructure Initiative I3 <i>(implemented as a Combination of Collaborative Projects &amp; Coordination and Support Actions)</i>
<b>Indicative Budget:</b>	15 M€
<b>Proposals received:</b>	30 eligible proposals
<b>Total funding requested:</b>	92 M€
<b>Oversubscription:</b>	6:1



# Areas covered by submitted proposals

- The proposals tackle the increasing challenge of managing massive amounts of experimental data.
- Repositories are used to manage harvested data and metadata, simulation models, software, experimental outputs and published papers by peers, to strengthen existing and formulate new hypotheses.
- Digital repositories are used to make this wealth of information useful and re-usable for scientists and researchers in various communities.
- The proposals covered a large set of scientific domains.



# Top ranked proposals

IMPACT unifies data from 10 major databases related to protein families.

Recommended funding: 3 M€

Consortium: 8 partners coordinated by EMBL

Scientific area: bio-informatics

NMDB establishes a digital repository for cosmic-ray data, and develop a real-time database from many neutron monitoring stations.

Recommended funding: 0,5 M€

Consortium: 12 partners coordinated by Christian-Albrechts Universität zu Kiel

Scientific area: space physics



# Top ranked proposals

DRIVER II federates scientific repositories based on open standards, supporting complex information objects, cross-discipline.

Recommended funding: 2,7 M€

Consortium: 13 partners coordinated by National and Kapodistrian University of Athens

Scientific area: federated digital repositories

METAFOR defines a Common Information Model (CIM) for climate data handling heterogeneous metadata standards. Recommended funding: 2,2 M€

Consortium: 11 partners coordinated by Univ. Reading

Scientific area: climatology



# Top ranked proposals

**EuroVO-AIDA** unifies digital data collections of astronomy, integrating European data centres into a global Virtual Observatory.

Recommended funding: 2,7 M€

Consortium: 8 partners coordinated by CNRS

Scientific area: astronomy

**GENESI-DR** provides access to Earth Science Digital Repository (data from space, airborne, in-situ sensors) for scientists.

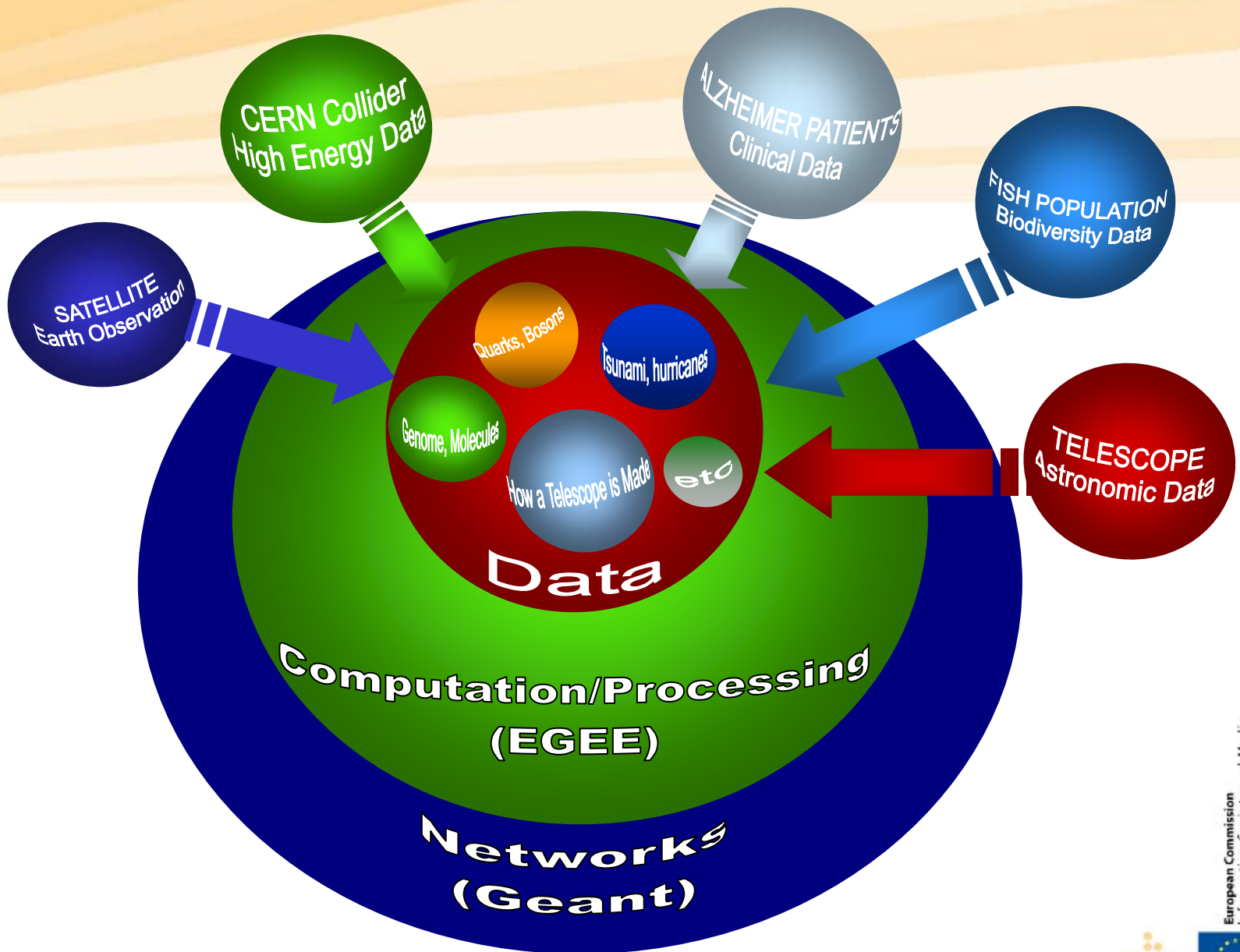
Recommended funding: 4,4 M€

Consortium: 13 partners coordinated by ESA

Scientific area: geosciences



# Capturing Reality: scientific data becomes infrastructure



## Further Information & Contact

- Contact and Further Information:

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**Further information**

*<http://cordis.europa.eu/ist/rn/>*