

# **e-Infrastructure in FP7: *HPC related aspects***

**Mme Catherine Rivière  
(on behalf of DG INFSO/F03)**

**IESP Workshop  
Santa Fe, 7-8 April 2009**

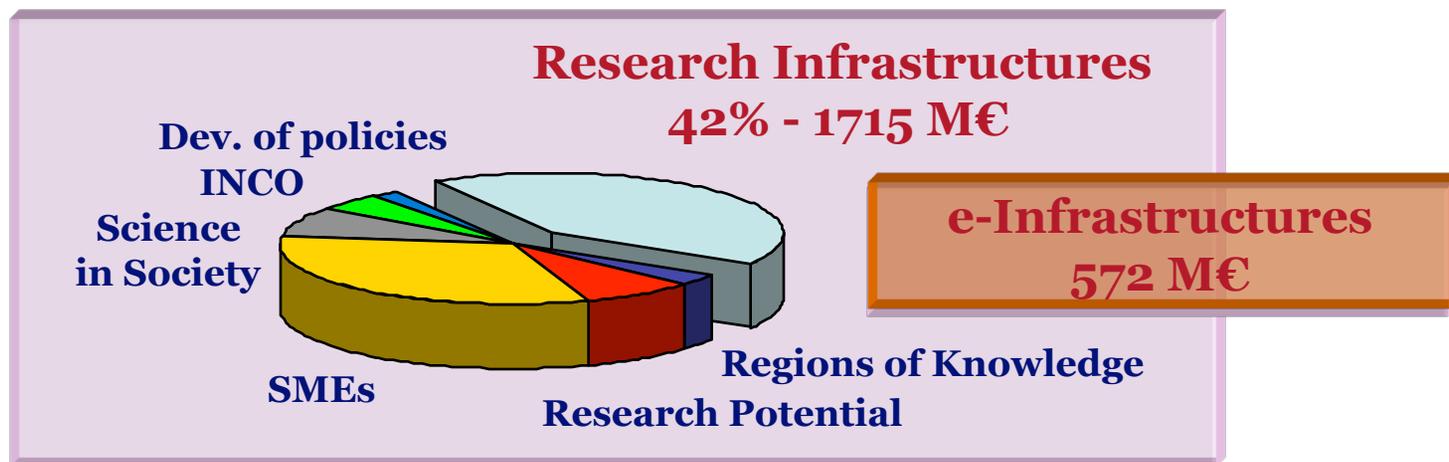
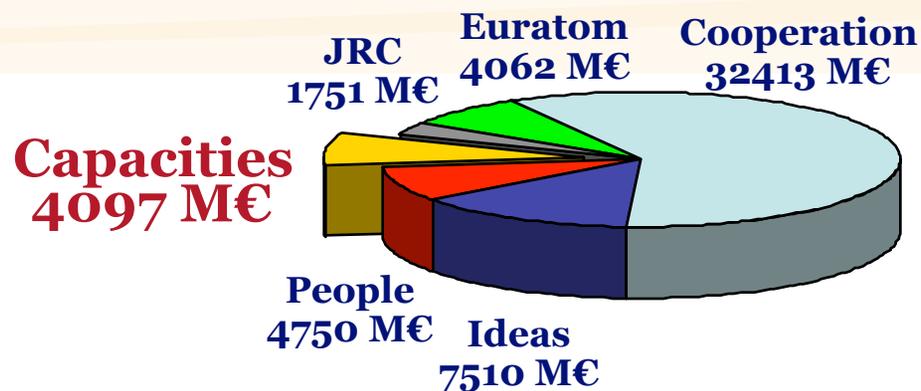
## Main contents:

- e-Infrastructure: the mission
- Framework Programme 7
- Main flagship projects
  - GÉANT
  - EGEE
  - DEISA & PRACE
  - ... and scientific data repositories
- FP7 'Capacities': RI Call 7 topics

## e-Infrastructure: the mission!

**e-Infrastructure** refers to the creation of a new research environment in which all European researchers have shared access to **unique** or **distributed** scientific facilities (including data, instruments, computing and communications), regardless of their type and location in the world.

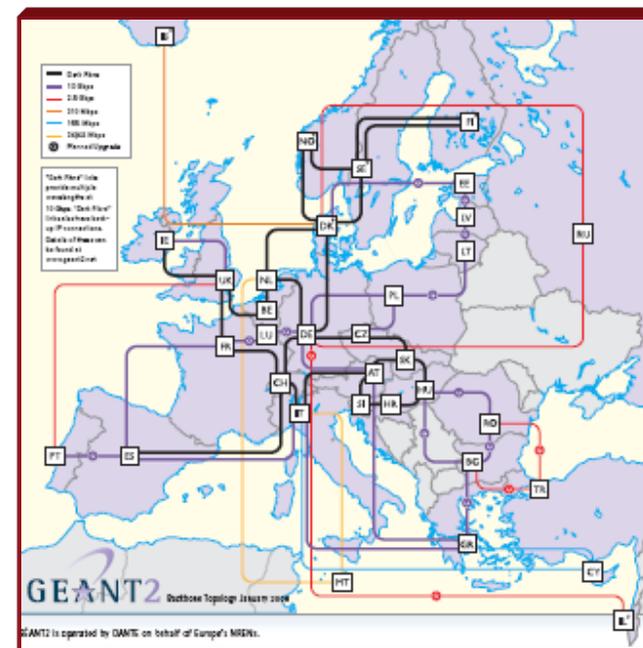
# Framework Programme 7: 2007 to 2013



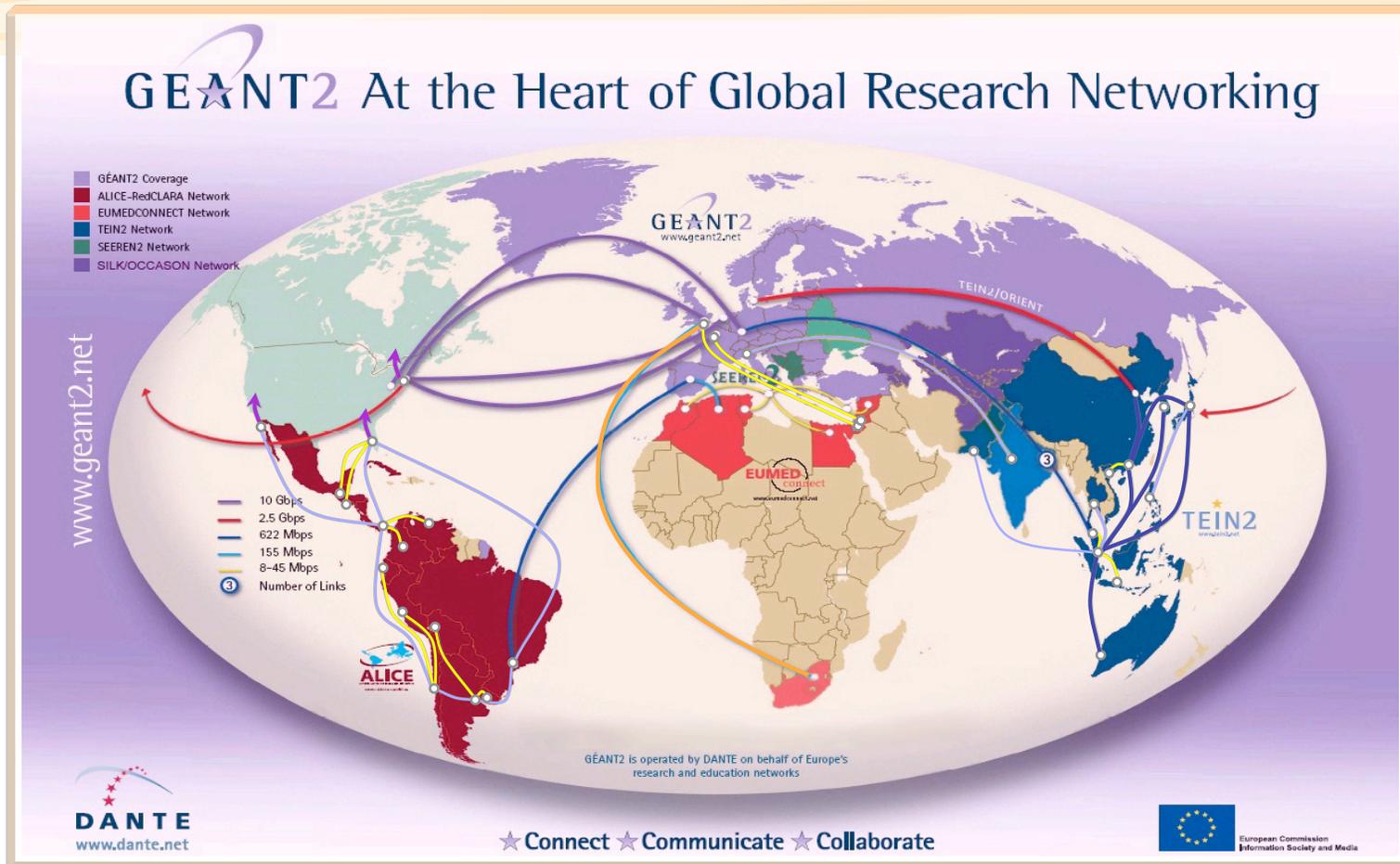
**~55B€**

# GÉANT: connecting Europe

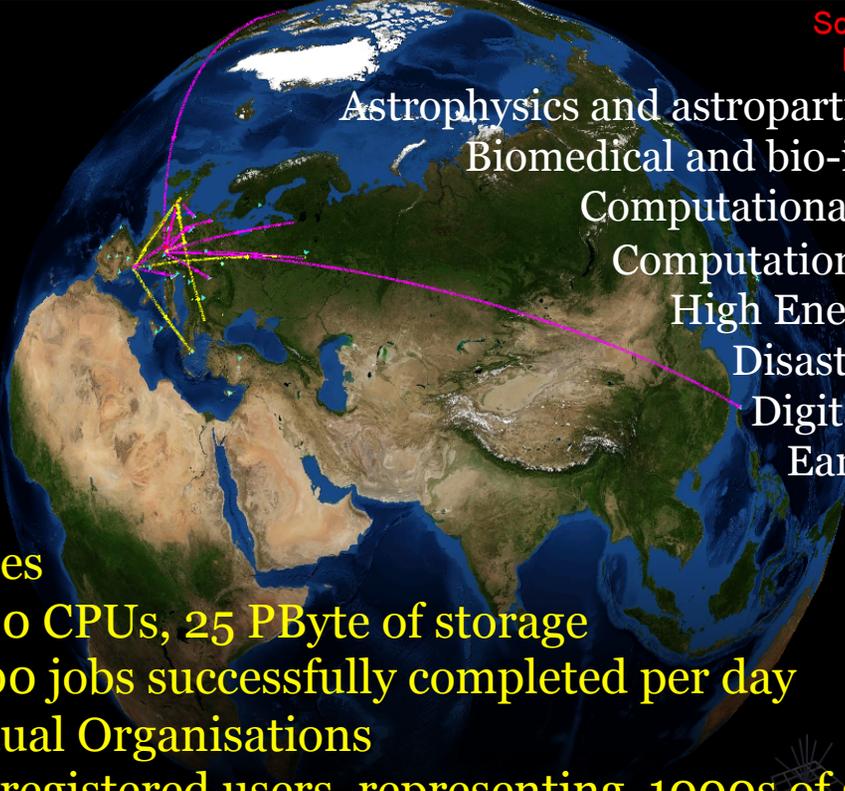
- Pan-European coverage  
(40+ countries / 3900 universities / 30+ million students)
- Hybrid architecture:
  - connectivity at 10 Gb/s  
(aggregated traffic)
  - dark fiber wavelengths  
(demanding communities)



# Global dimension of GÉANT



# EGEE: Tackling Global Challenges



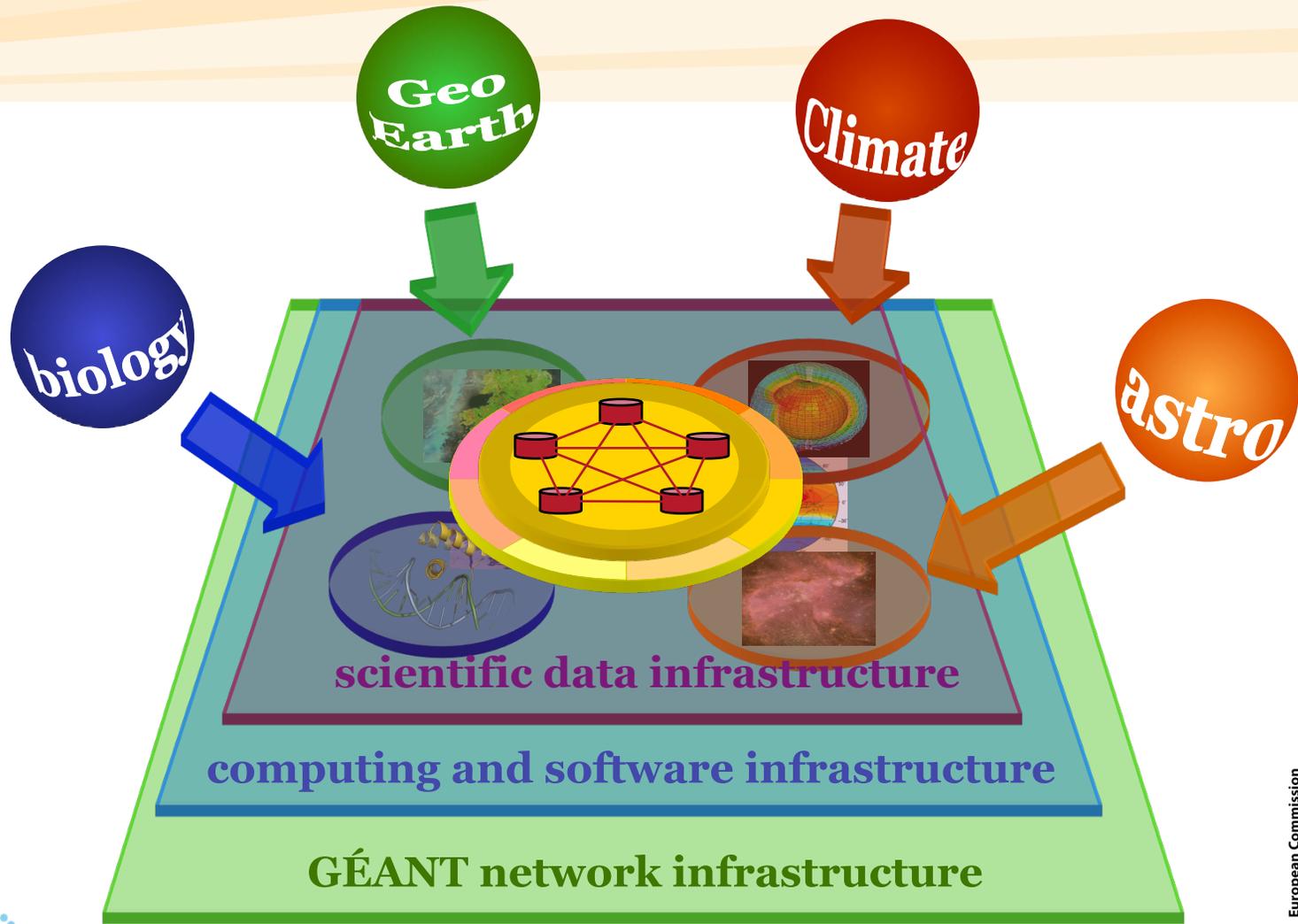
**EGEE**  
Enabling Grids  
for E-science

Scheduled = 17356  
Running = 18359

- Astrophysics and astroparticle physics
- Biomedical and bio-informatics
- Computational chemistry
- Computational sciences
- High Energy Physics
- Disaster recovery
- Digital Libraries
- Earth sciences
- Geophysics
- Finance
- Fusion

- >300 sites
- >100 000 CPUs, 25 PByte of storage
- ~300 000 jobs successfully completed per day
- 200 Virtual Organisations
- >16000 registered users, representing 1000s of scientists

# Scientific Data Infrastructure



# DEISA: 'virtual' HPC services



- **12 sites in 7 countries connected at 10 Gb/s**
- **Over 22,000 CPUs with an aggregated peak performance of close to 1 Peta flops**
- **Running larger parallel applications in individual sites**
- **Enabling workflow applications with grid technologies (UNICORE)**
- **Providing a global data management service**
- **Extreme Computing Initiative**



# PRACE: the preparatory phase



**18 European countries signed the PRACE MoU !!**

**Draft WP2010 topics:**  
**RI Call 7: Open 30.07.09; close 24.11.09**



- **INFRA-2010-1.2.1: Distributed computing infrastructure (DCI)**
- **INFRA-2010-1.2.2: Simulation software and services**
- **INFRA-2010-1.2.3: Virtual Research Communities**
- **INFRA-2010-2.3.1: First implementation phase of the European HPC service**
- **INFRA-2010-3.3: Coordination actions, conferences and studies supporting policy development, incl. international cooperation**

**TOTAL Indicative budget: 115 Million Euro**



# further information

[www.cordis.europa.eu/fp7/ict/e-infrastructure/](http://www.cordis.europa.eu/fp7/ict/e-infrastructure/)



[Konstantinos.Glinos@ec.europa.eu](mailto:Konstantinos.Glinos@ec.europa.eu)