



Enabling Grids for E-science

# Long-term Grid Sustainability

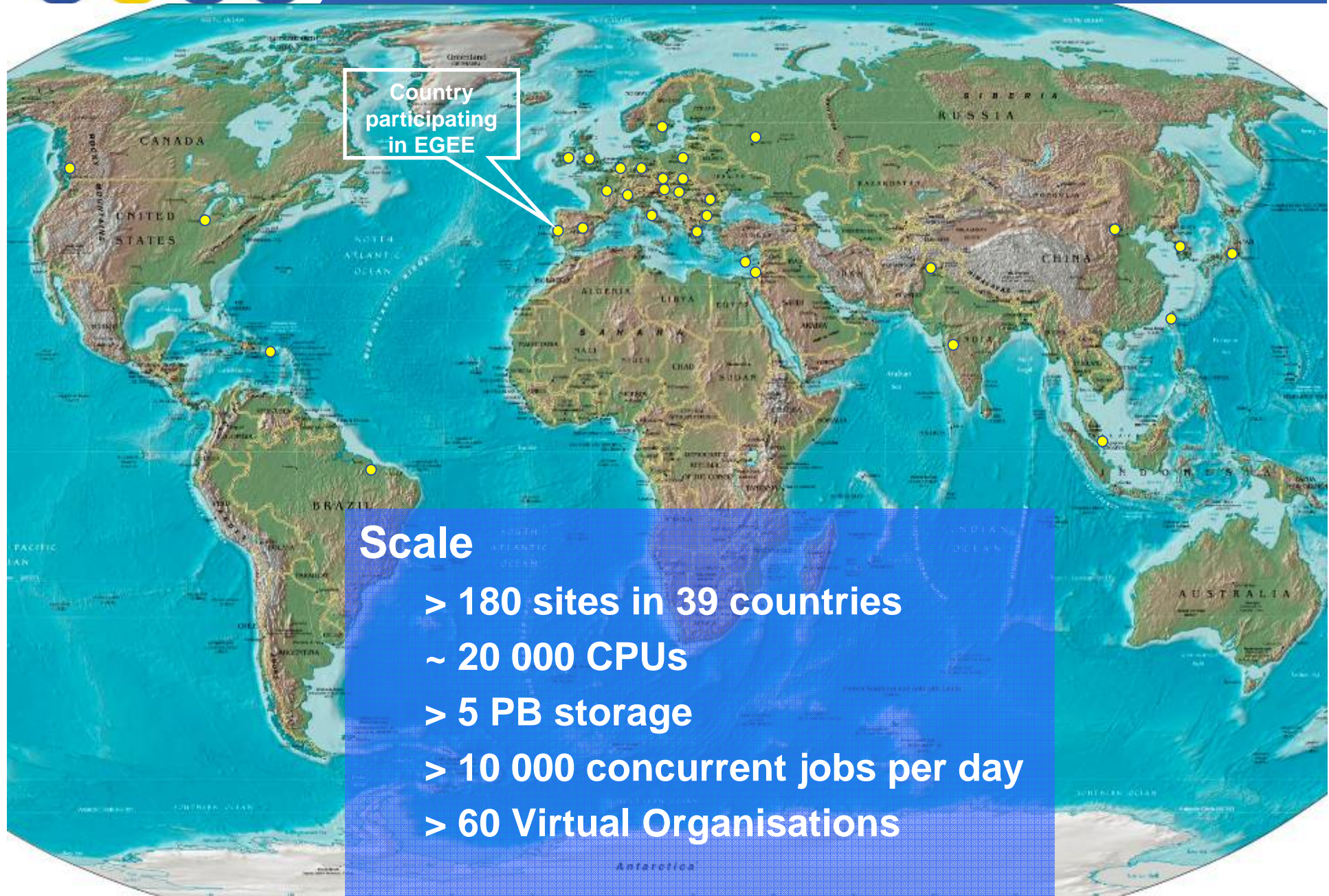
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**CERN**

EGEE User Forum  
1-3 March 2006

[www.eu-egee.org](http://www.eu-egee.org)









- Great investment in developing Grid technology
- Sample of National Grid projects:

- Austrian Grid Initiative
- DutchGrid
- France: e-Toile; ACI Grid
- Germany: D-Grid; Unicore
- Greece: HellasGrid
- Grid Ireland
- Italy: INFNGrid; GRID.IT
- NorduGrid
- UK e-Science: National Grid Service; OMII; GridPP



- EGEE provides framework for national, regional and thematic Grids

- **Ongoing collaborations**

- with other European projects

- GÉANT
    - DEISA
    - SEE-GRID

- with non-European projects

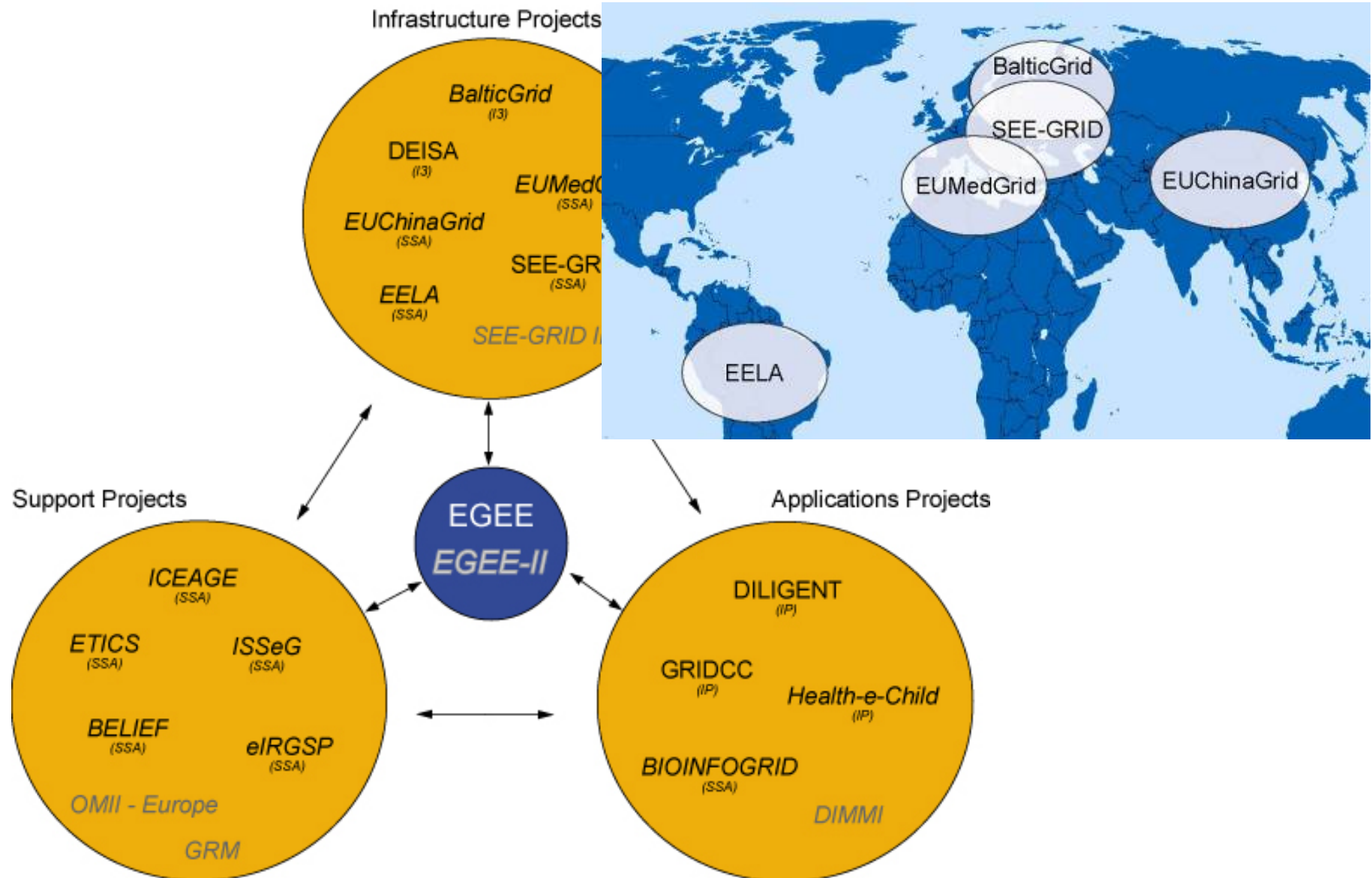
- OSG: OpenScienceGrid (USA)
    - NAREGI (Japan)

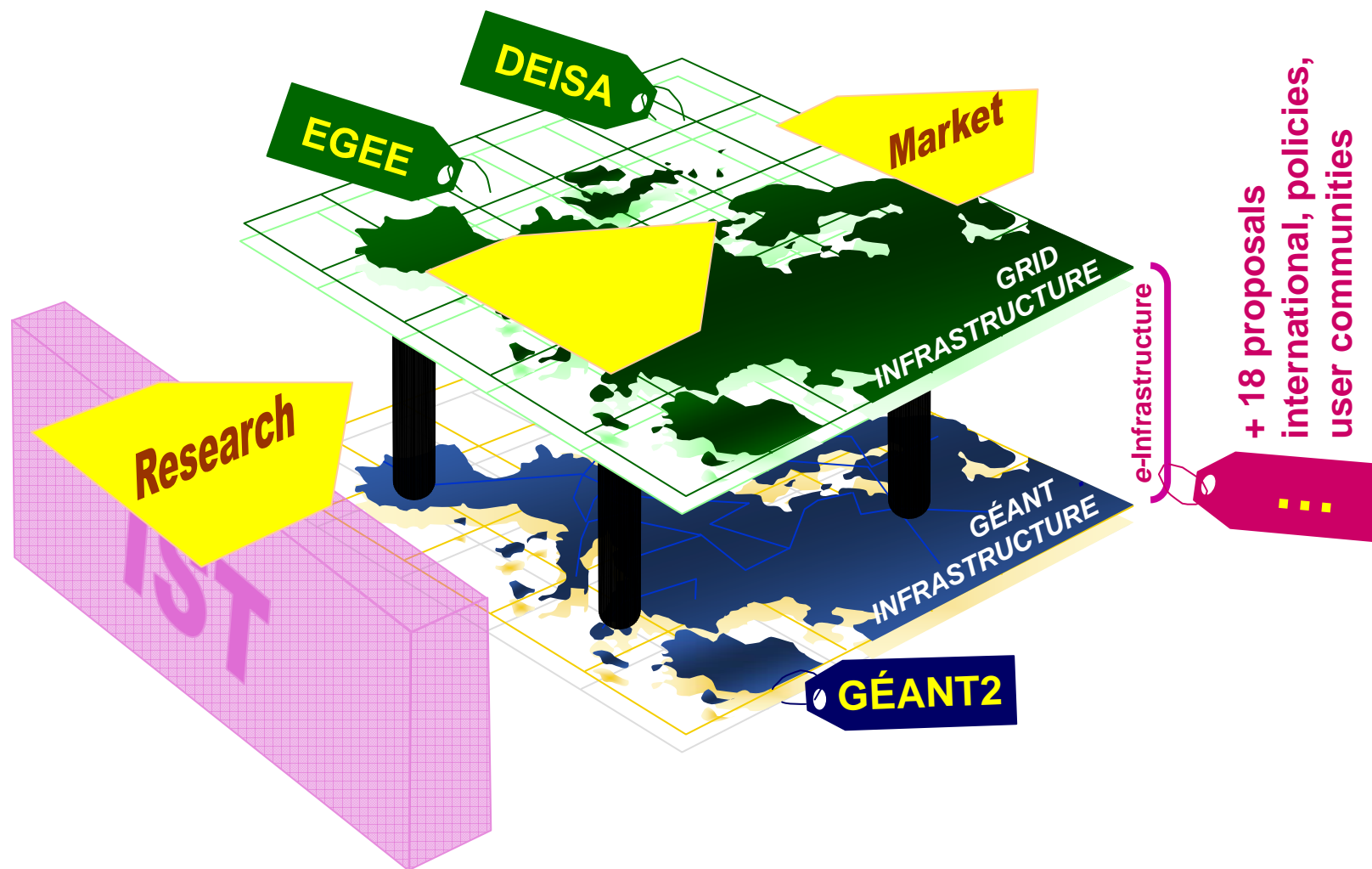
- with non EU partners in EGEE: US, Israel, Russia, Korea, Taiwan...



- **EGEE as incubator**

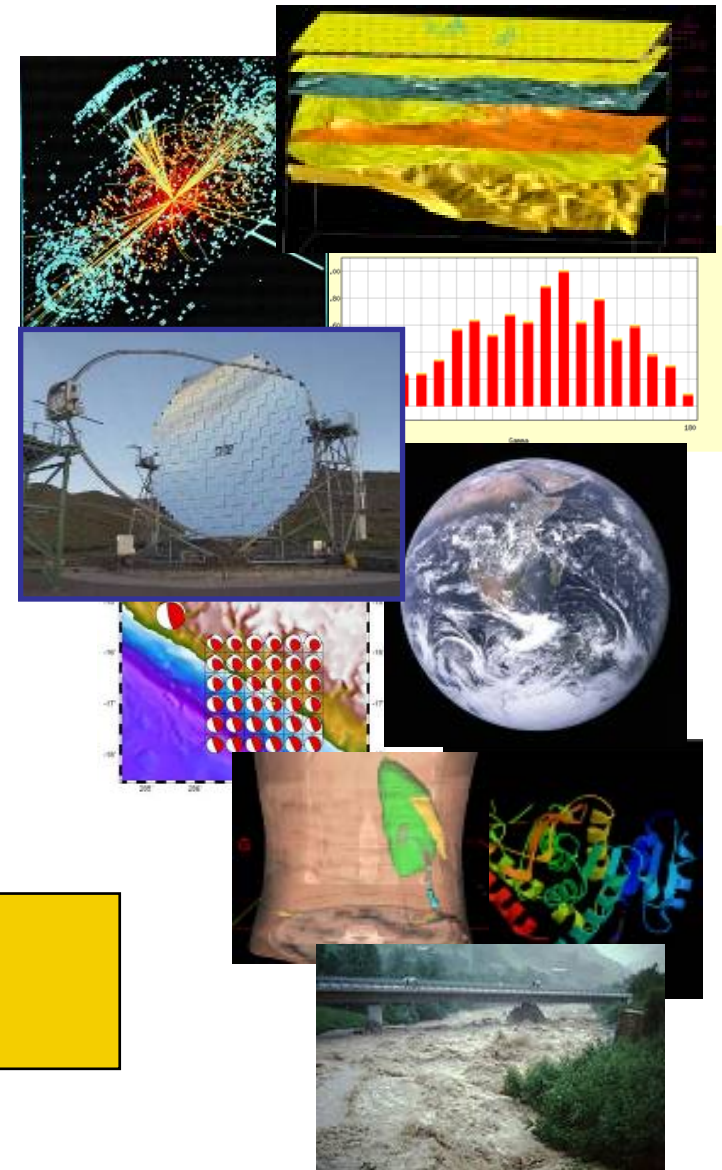
- >10 related projects have been created





Mario Campolargo, 4<sup>th</sup> EGEE conference, October 2005

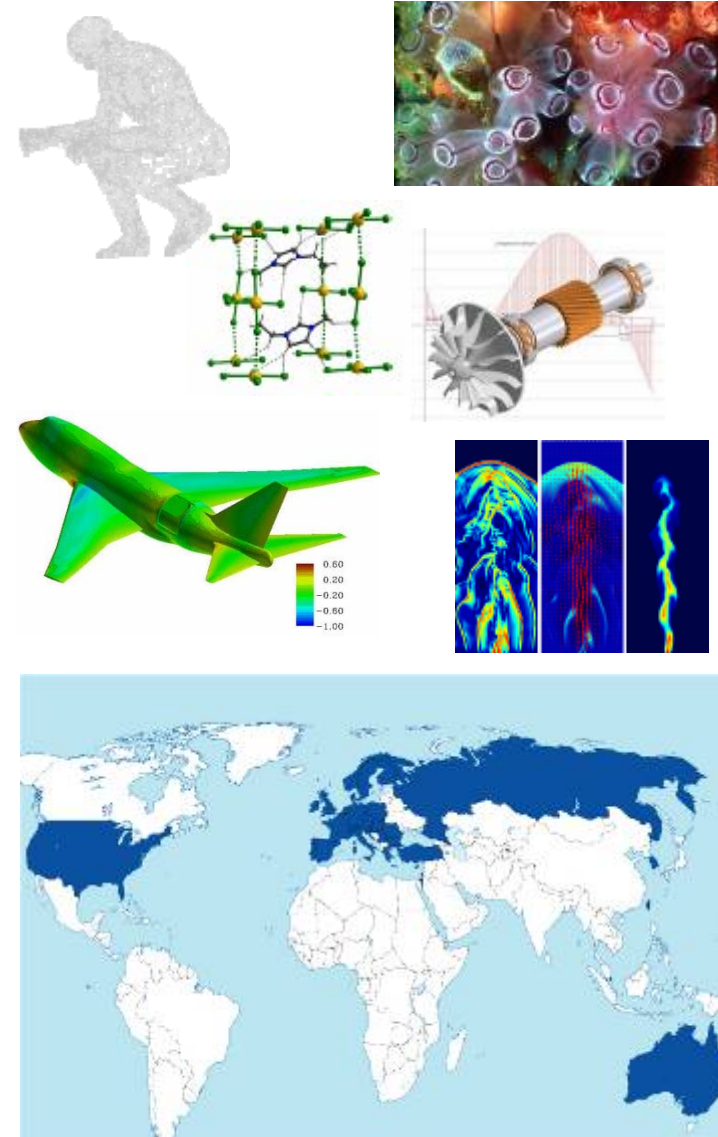
- **>20 applications from 7 domains**
  - High Energy Physics
  - Biomedicine
  - Earth Sciences
  - Computational Chemistry
  - Astronomy
  - Geo-Physics
  - Financial Simulation
- **Further applications in evaluation**



**Applications now moving from testing to routine and daily usage**

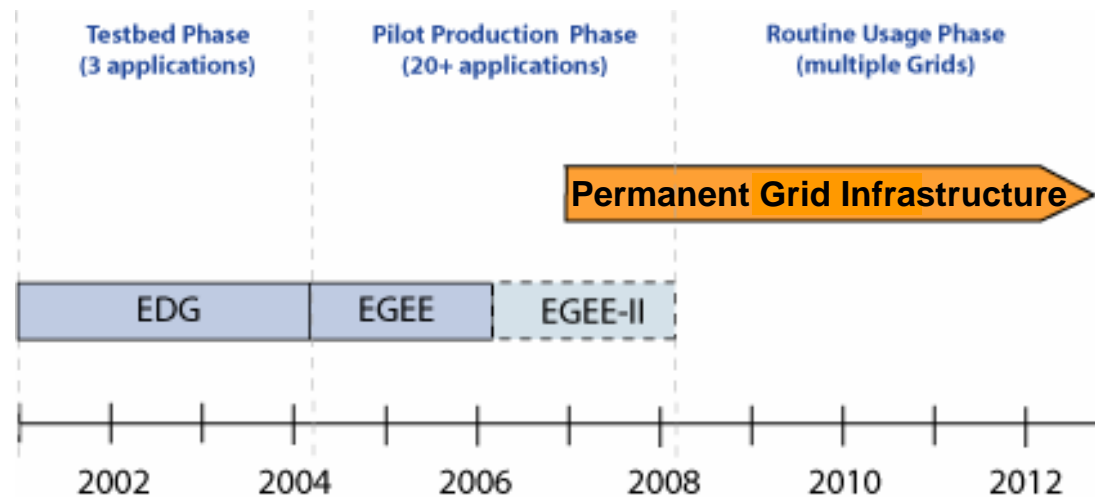


- **EGEE-II proposal submitted to the EU**
  - On 8 September 2005
  - Proposed start 1 April 2006
  
- **Natural continuation of EGEE**
  - Emphasis on providing an infrastructure for e-Science
    - increased support for applications
    - increased multidisciplinary Grid infrastructure
    - more involvement from Industry
  - Expanded consortium
    - > 90 partners in 32 countries (Non-European partners in USA, Korea and Taiwan)
    - Related projects
  
- **world-wide Grid infrastructure**
- **increased international collaboration**



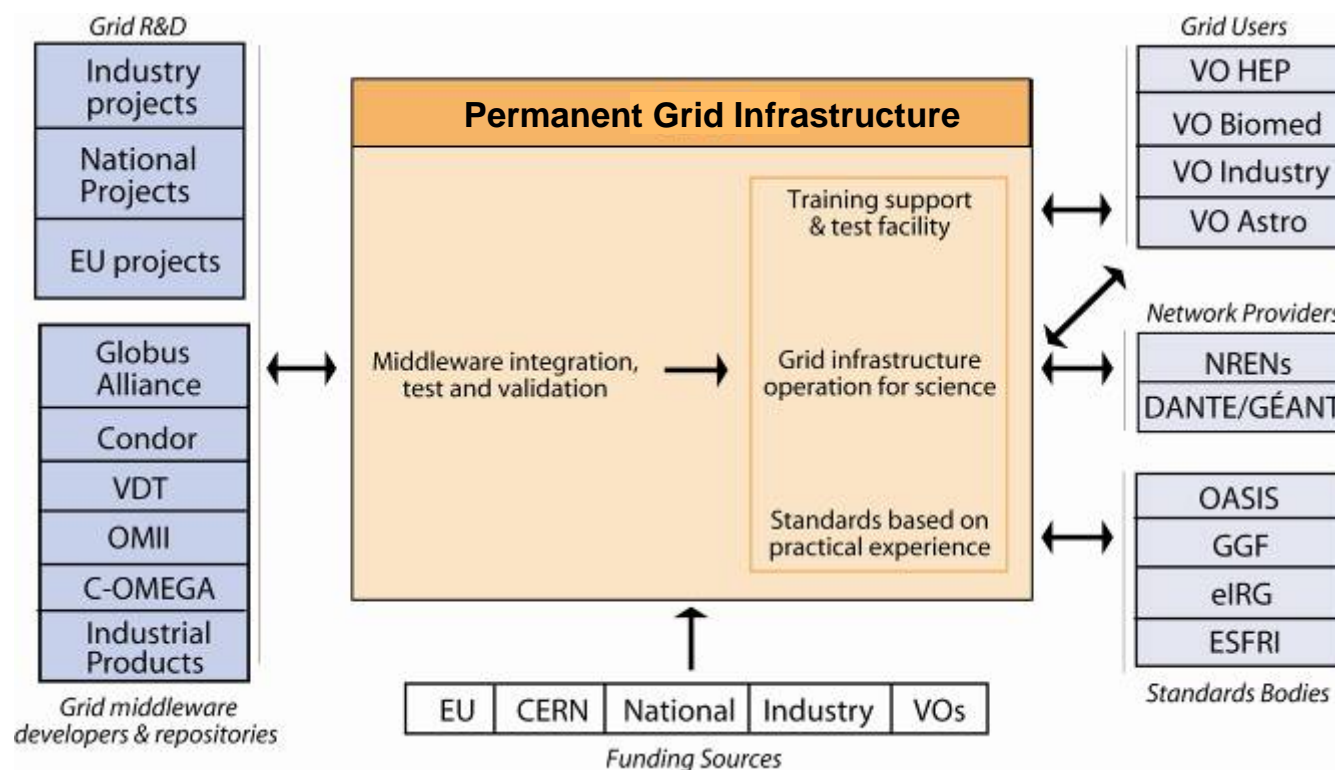


- **Need to prepare for permanent Grid infrastructure**
  - Maintain Europe’s leading position in global science Grids
  - Ensure a reliable and adaptive support for all sciences
  - Independent of project funding cycles
  - Modelled on success of GÉANT
    - Infrastructure managed centrally in collaboration with national bodies (in EGEE-II: **JRUs**)



## Objectives

- Operate production Grid infrastructures for all sciences
- Integrate, test, validate and package Grid middleware
- Provide advice, training and support to new user communities



- EGEE/EGEE-II marks the most significant move from **prototype testbeds to production grid environments**
  - Unprecedented scale of a world-wide grid infrastructure
  - Federated approach building on existing national grid initiatives
  - Proven working model for operations and deployment
  - ...
- **Next logical step:** towards **long-term sustainability**
  - Ensure that the grid infrastructure used for your work today will still be there tomorrow
  - Protect investments of application developers and users
- **Basic requirement:** a suitable funding mechanism and instrument for ensuring **sustainability**



## e-Infrastructures Reflection Group:



**e-IRG Mission:** ... to support on the **political, advisory and monitoring level**, the creation of a policy and administrative framework for the easy and cost-effective shared use of electronic resources in Europe (focusing on Grid-computing, data storage, and networking resources) across technological, administrative and national domains.

## e-IRG Open Workshop:

April 10-11, 2006, Linz, Austria

**→ Towards Sustainable e-Infrastructures**