

# Research Networking - the Next Steps

Probably copyright  
protected image of  
footprints in the sand  
leading over a dune towards  
a nice blue horizon

**Bernhard FABIANEK**

[Bernhard.Fabianek@cec.eu.int](mailto:Bernhard.Fabianek@cec.eu.int)

**European Commission, Information Society and Media Directorate-General**

"The views expressed in this presentation are those of the author and do not necessarily reflect the views of the European Commission"

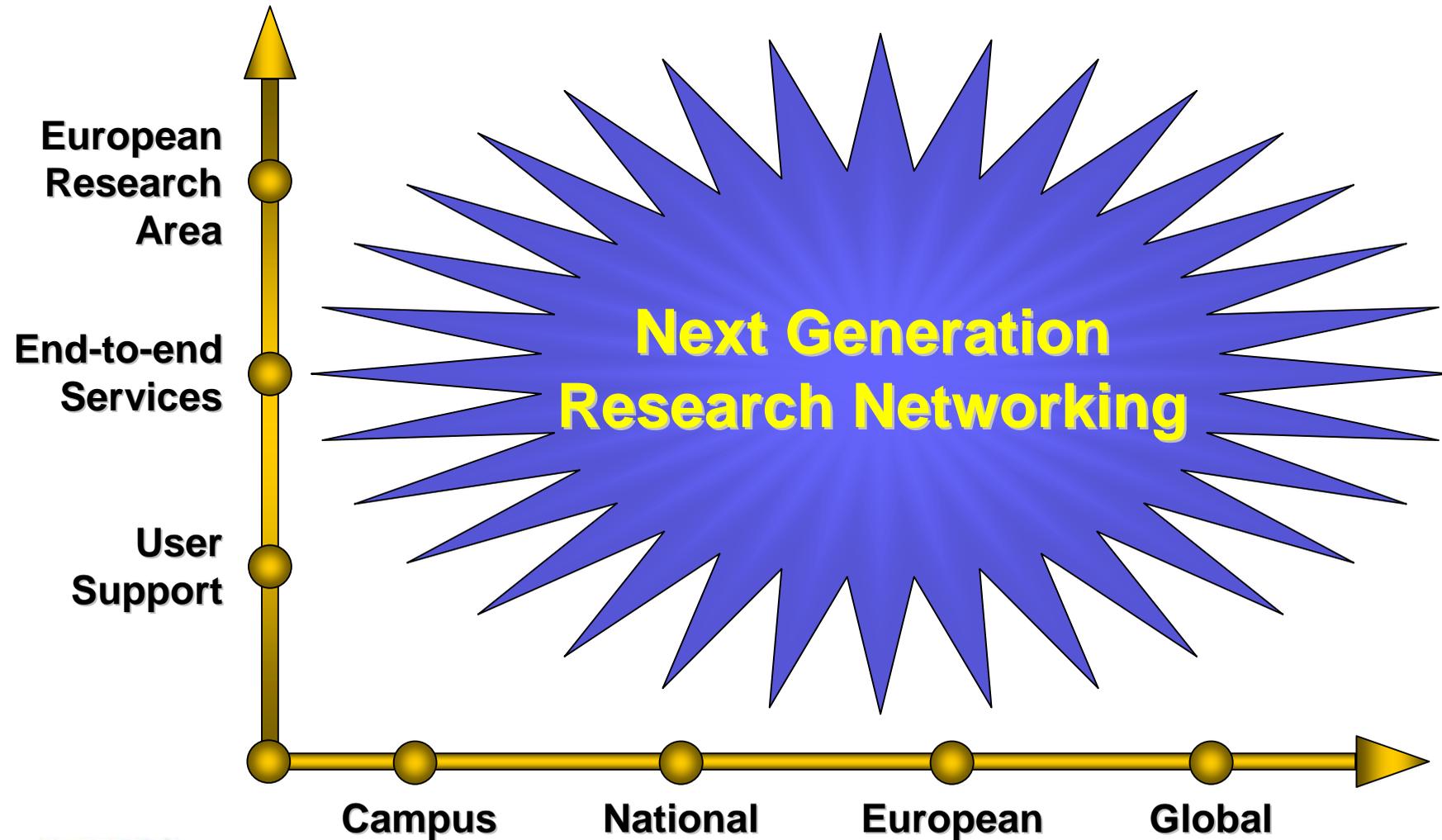


European Commission



Information Society

# Research Networking Challenges



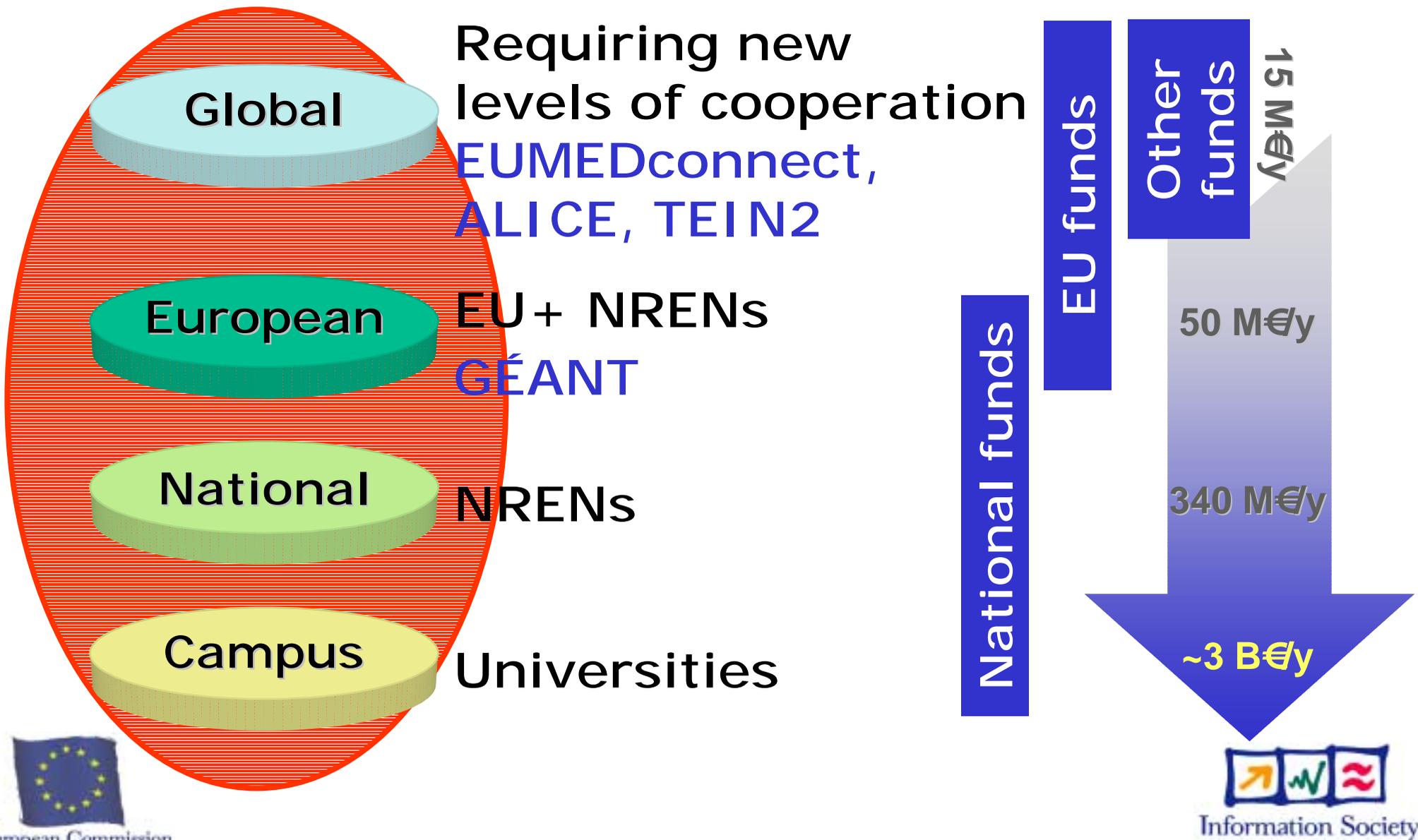
# The Researcher is at the Center!



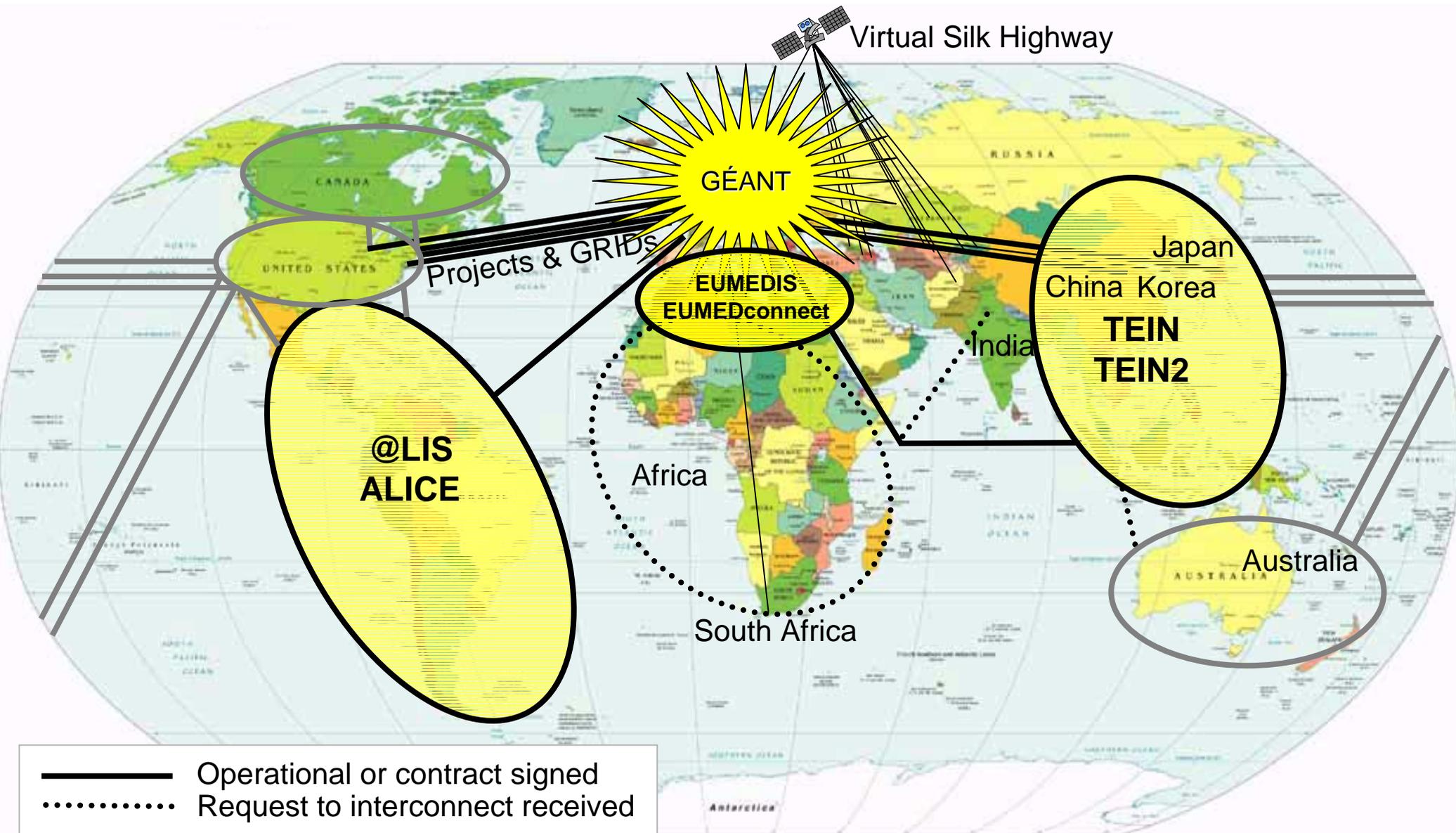
***Researcher: the most precious capital and the centre of all developments!***



# Research Networking: The Current Model



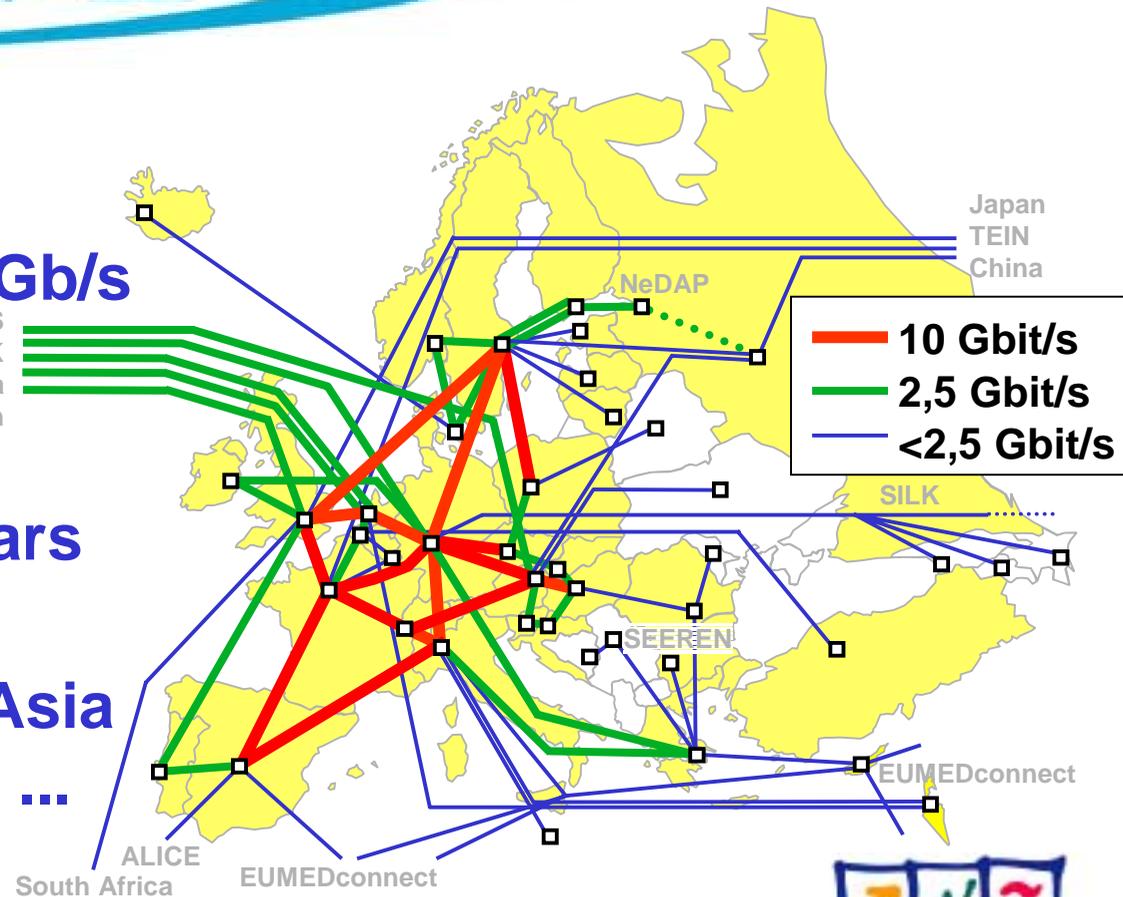
# Global Reach and Services



# Research Networking



- Pan-European coverage (42 Countries/NRENs)
- Gigabit connectivity at 10 Gb/s
- Linking more than 3900 Universities
- Total 200 MEuro over 4 years (93 MEuro from EU)
- Extend to Mediterranean, Asia Pacific Rim, Latin America ...



# End-to-End Services

Flexible control and sharing of distributed resources



Resources can be distributed world-wide

Resources can be of any information type (storage, computing, networking, instrumentation, etc)

Access to them is provided in a secure, coordinated, seamless, dynamic and inexpensive way



European Commission

*Virtual Research Organisations*



Information Society

# Vision: Create an eInfrastructure

Global knowledge infrastructure

e-Science  
e-Health  
e-Learning  
e-Business  
aeronautics  
genomics  
environment  
astronomy

**eInfrastructure**  
(Grids empowered)

security

semantic  
web.

broadband

Grid

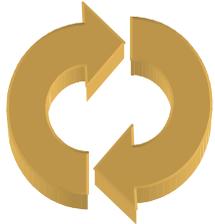
automatic  
management

mobility

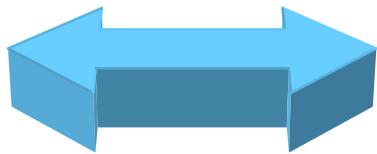


# eInfrastructures: The Model

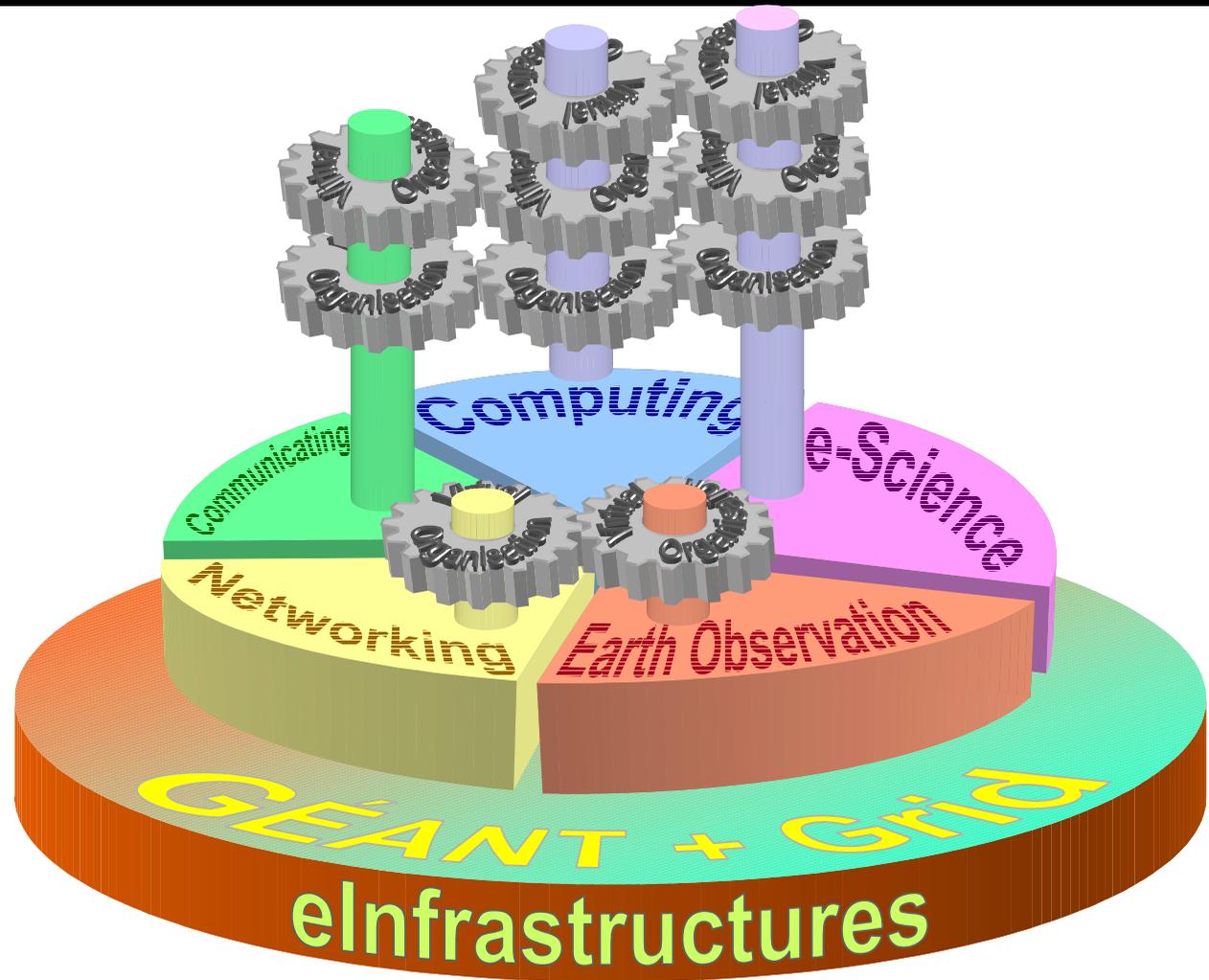
Testbeds use  
eInfrastructure



eInfrastructure profits from  
technological innovation



International  
Dimension



# eInfrastructures – Linking Policies

## Research e-Infrastructures:

- ⇒ “corner-stone” of the European Research Area (ERA)
- ⇒ “spear-head” of an “eEurope Infrastructure” (e.g. broadband plus)
- ⇒ “integrator” of National Infrastructures
- ⇒ powerful “instrument” for International Cooperation
- ⇒ ... cohesion, cooperation, standards, industry, etc...



# Research Networking – The Goal to Reach



**Next Generation  
Research Networking**

Campus

National

European

Global

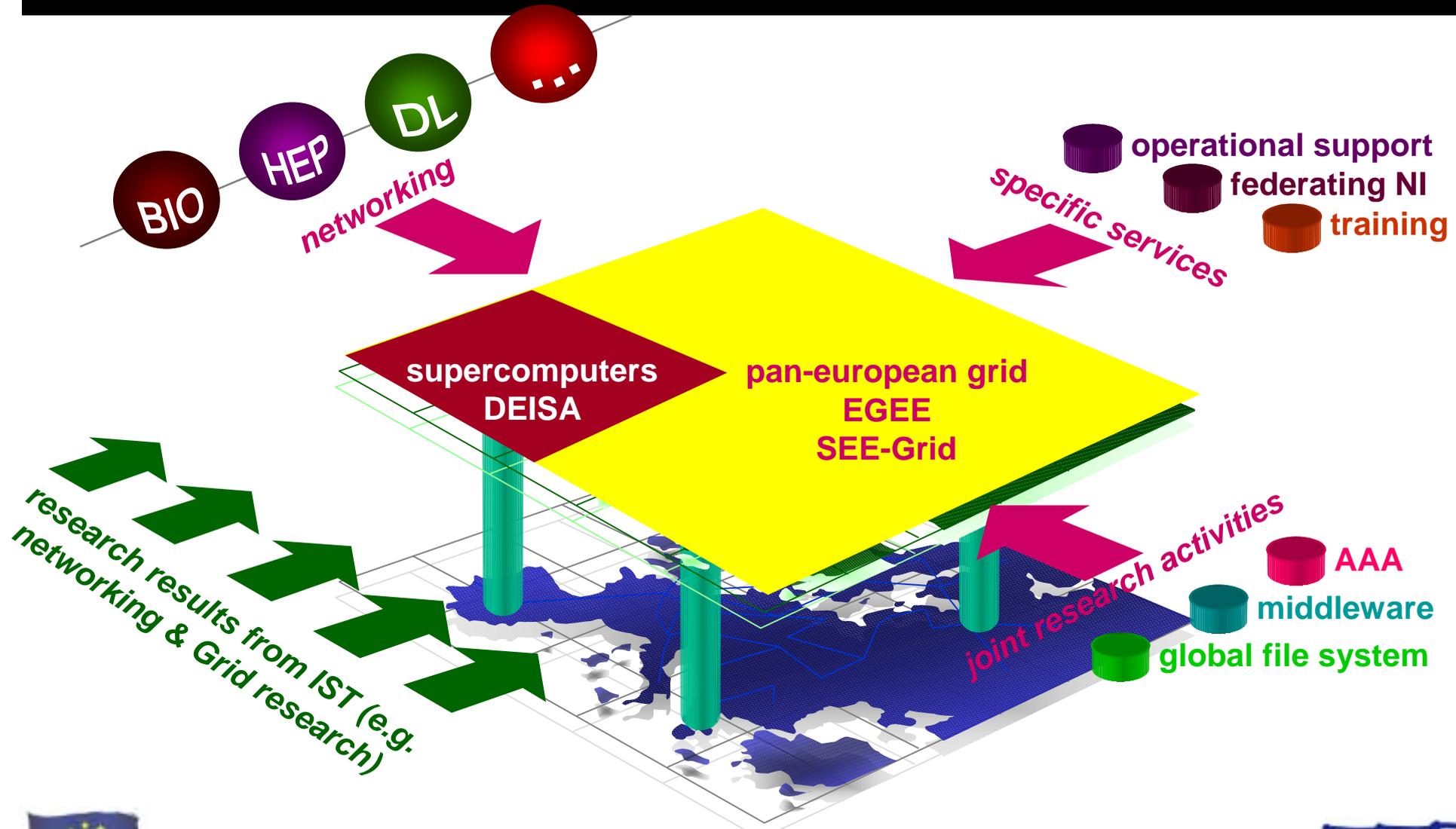


European Commission



Information Society

# First Steps towards an e-Infrastructure

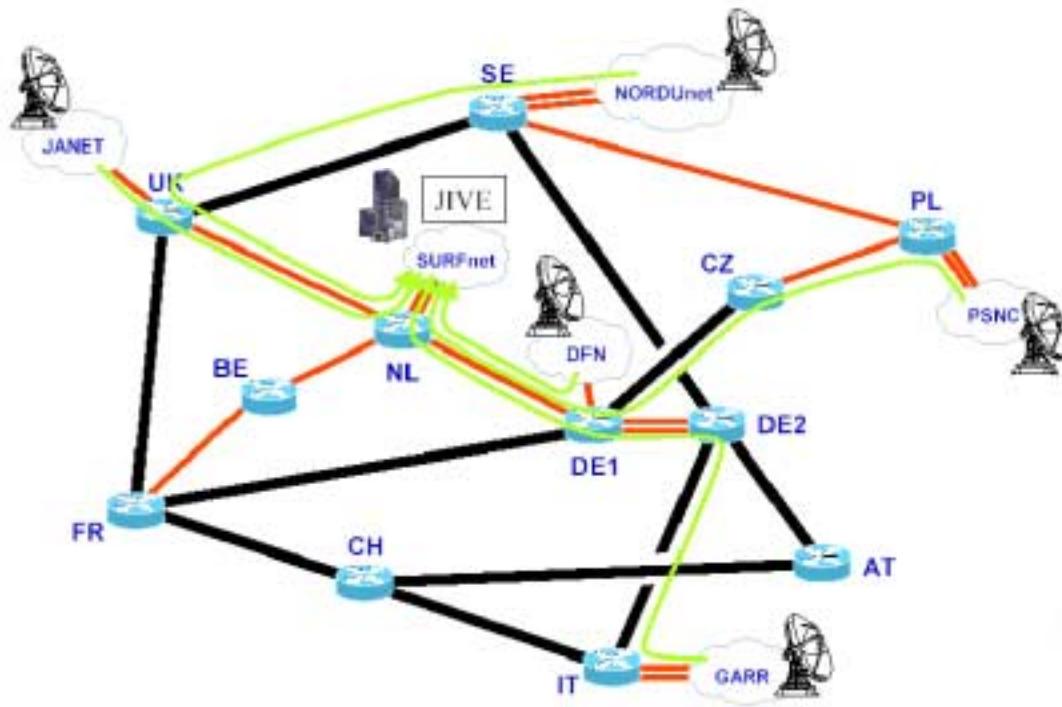


international dimension intrinsic from the start



# Change the Way Research is Done!

**Example of an eInfrastructure:**  
**eVLBI Radio-Telescopes interconnected by**  
**lambdas provided by the NRENs and GÉANT**



# Conclusions

- ➔ With the support of the of the European Union's R&D Programmes a new generation of infrastructures for research (GÉANT and Grids) has been launched - **eInfrastructures**
- ➔ The individual researcher is at the center of our attention
- ➔ eInfrastructures are changing the way research is done

**The provision of an eInfrastructure is fundamental for the realisation of the European Research Area (ERA)**

