Fourth EGEE Conference

Pisa, 24th October 2005

e-Infrastructure
▪
EU strategy and plans for FP7

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DG INFSO F3
Research Infrastructure

European Commission

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

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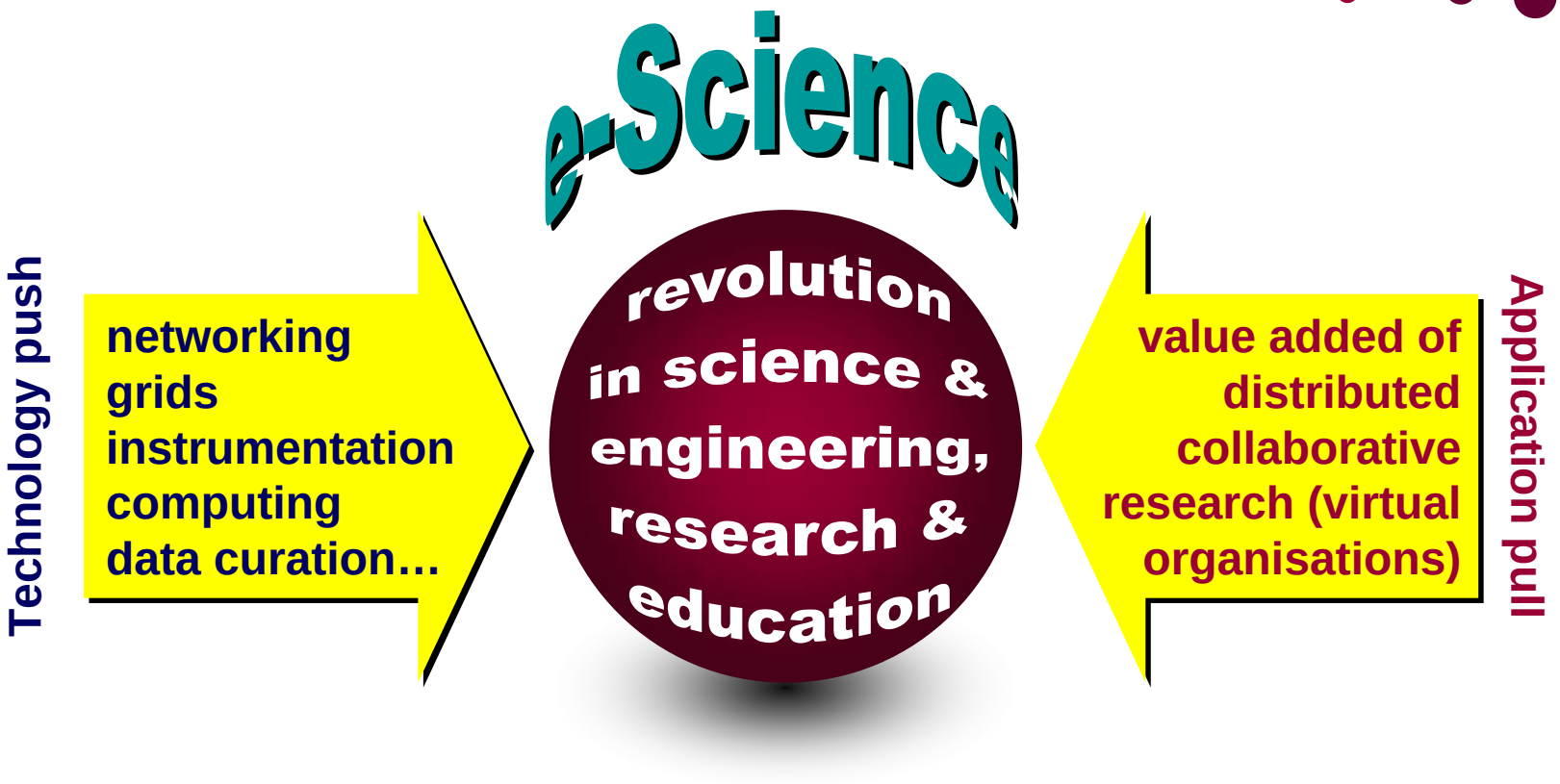
A new way of doing Science



a new way for all scientists to work on research challenges that would otherwise be difficult to address

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Global collaboration in Science

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Sharing of resources

e-Infrastructure

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Virtual research organisations

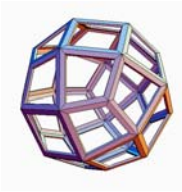
Advanced Grid infrastructures

Human Society | **Grid system**

Sharing of resources, production efficiency

Basic elements

repeated assembling of basic elements into organisations



people / computers

environment resources / ICT based resources

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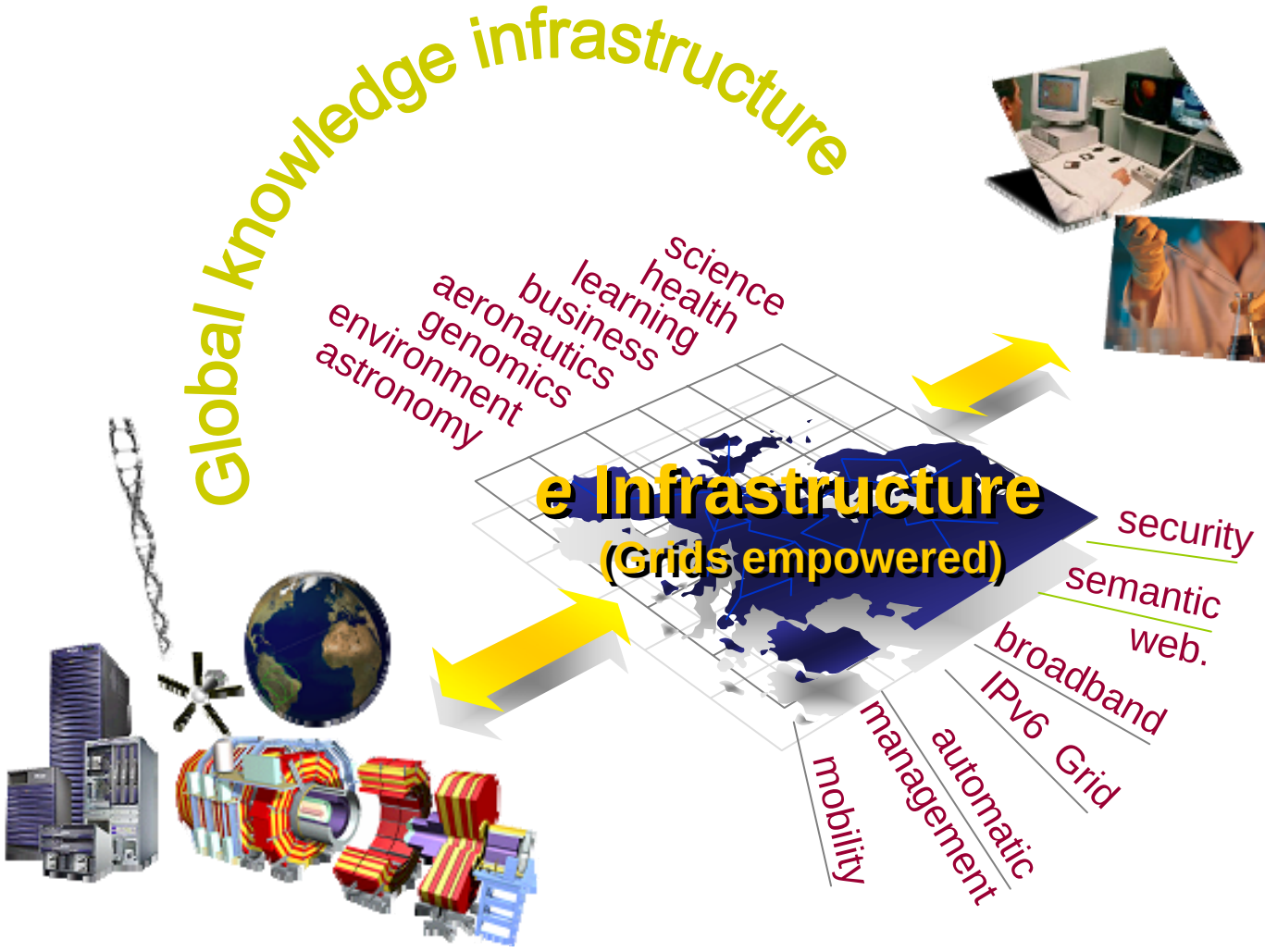
e-Infrastructure - essential for Europe



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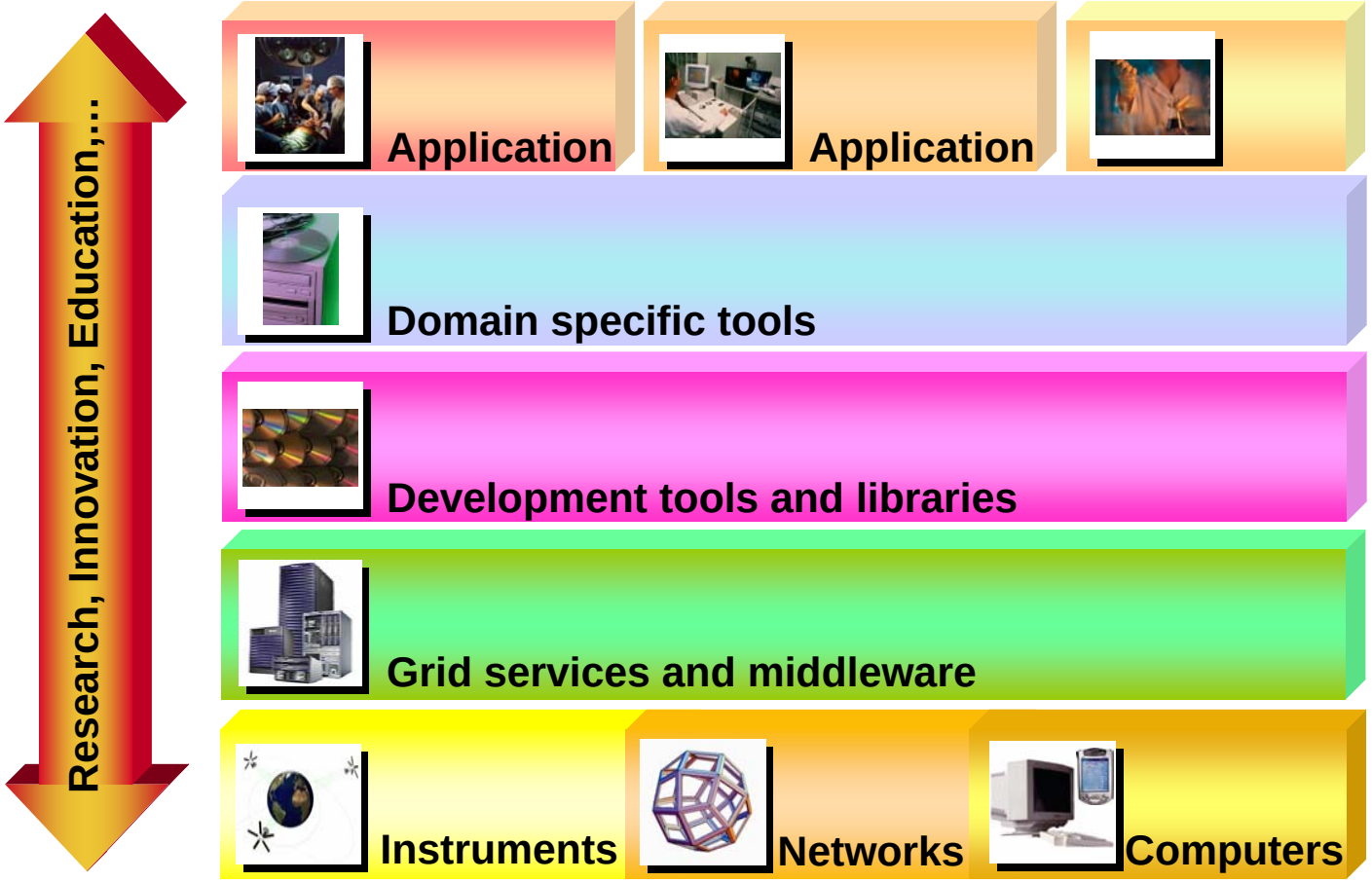
e-Infrastructure

set of persistent services and processes bringing the power of distributed ICT based resources to a virtual community



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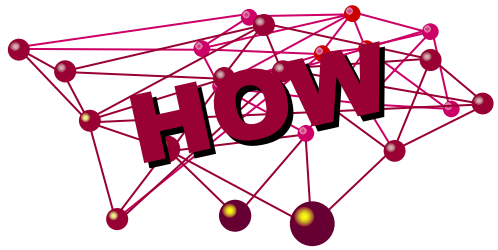
How to address e-Infrastructures



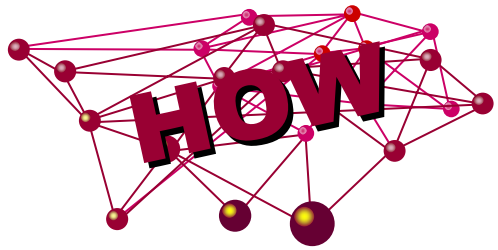
Fostering communities of practice which lead to evolution, shaping and stabilisation of new scientific and technological paradigms (virtuous cycle of innovation)

Exploiting mutual benefits: research organisations shape technology, as much as technology shapes research organisations and research practices

Addressing the (re)structuring aspects to exploit new opportunities for Europe

Engagement of research communities
***e*-IRG – Reflection Group, policy body with Member states**

How to address e-Infrastructures



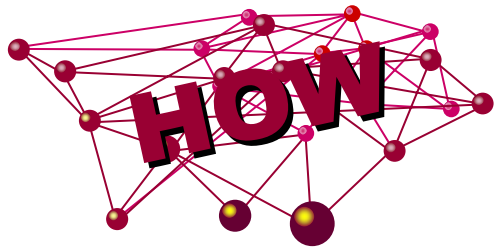
Fostering coordination and synergies with national initiatives, fighting digital divide

As *e*-Science is a global endeavour, building on a global perspective to rationalise investments in expensive resources

Thinking global to ensure maximum European value-added

Subsidiarity principle, European dimension, collaboration with other continents initiatives, bring remote facilities closer to European researchers

How to address e-Infrastructures



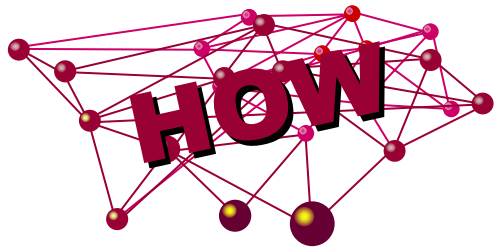
Articulating user driven requirements with technology innovation

Catalysing on the results of IST research (national/EU)

Building an ambitious evolutionary approach

Testbed mechanism for early validation of disruptive technologies, researchers in direct contact with technologists, training and operational support, long term sustainability

How to address e-Infrastructures



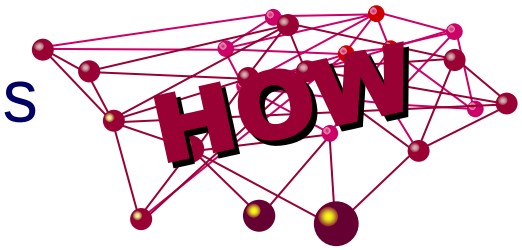
Promoting stability and operational nature of infrastructures, looking ahead for long term sustainability

Emphasising cross disciplinary and distributed nature of modern infrastructures

Focussing on *e*-Science, supporting an industrial policy and ensuring an enduring impact on society

Reliability, common elements, standards and technology layers, common services to users, federated organisations, self sustainability, involvement of industry

World leading GÉANT / Grid infrastructures



Striving for world leadership

"Five-Year Assessment: 1999-2003 – Research and Technology Development in Information Society Technologies"

GÉANT is acknowledged as leading the world.

Europe is a pioneer in Grid empowered infrastructures.

ICT based infrastructure, namely GÉANT and GRID, need reinforcement and expansion in FP7.

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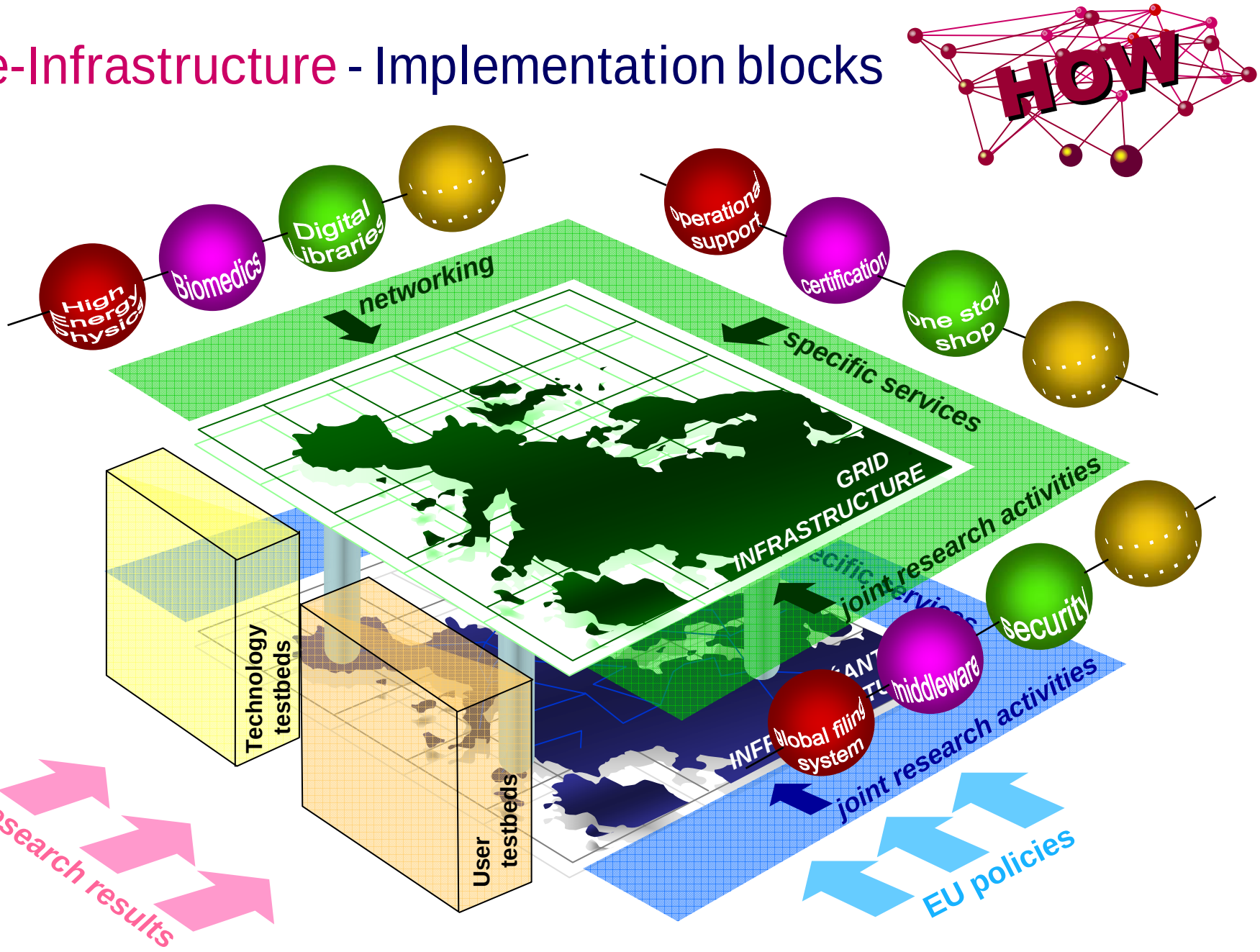
e-Infrastructure - Implementation blocks



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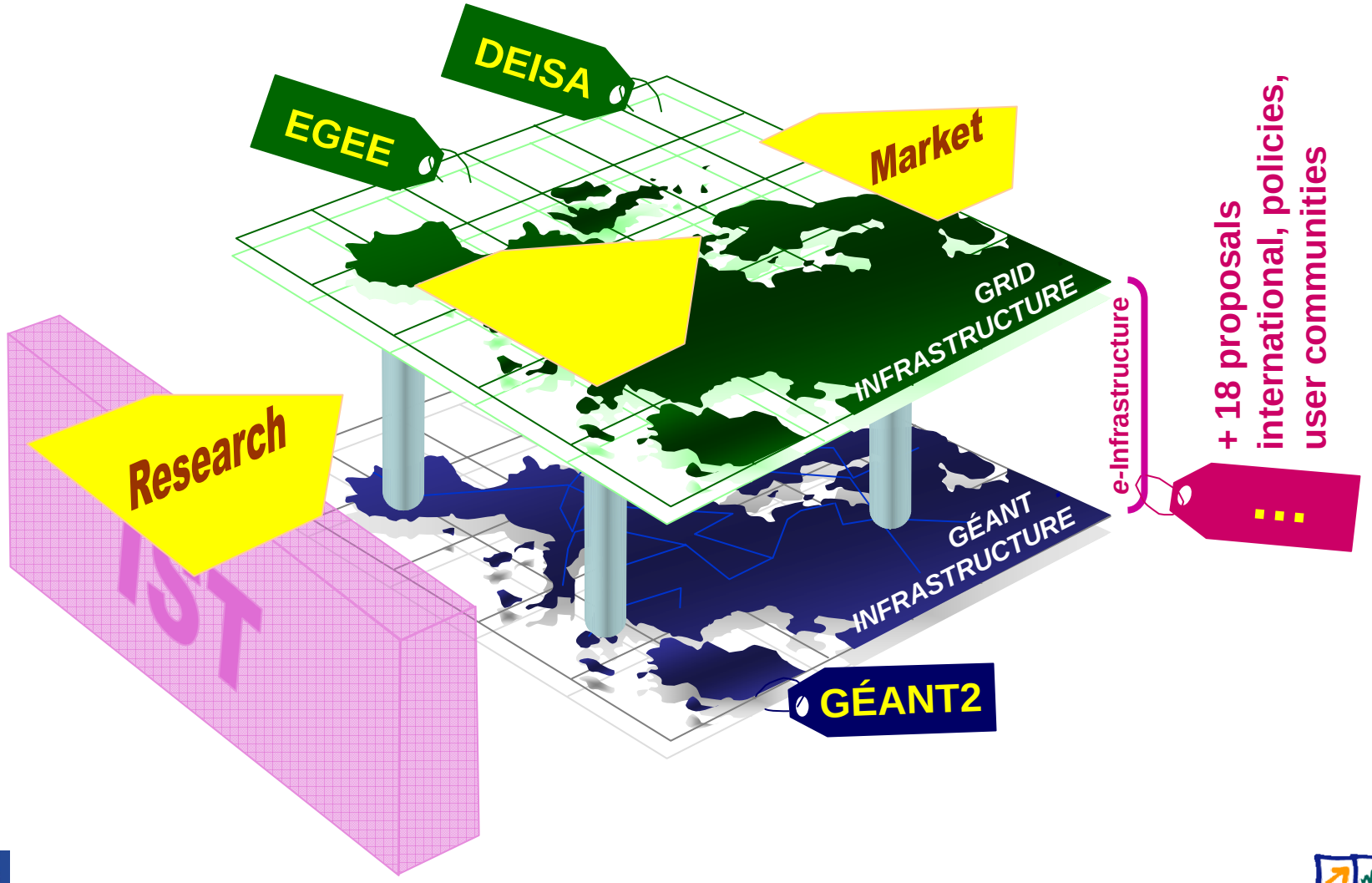
e-Infrastructure - Strategic building blocks



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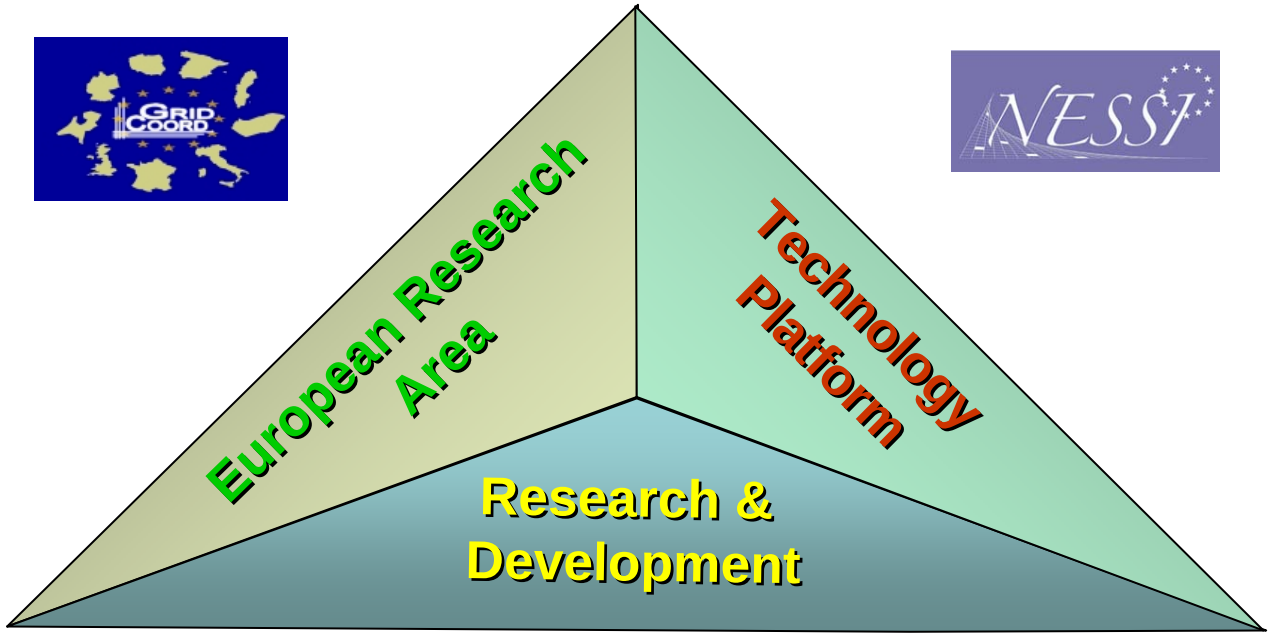
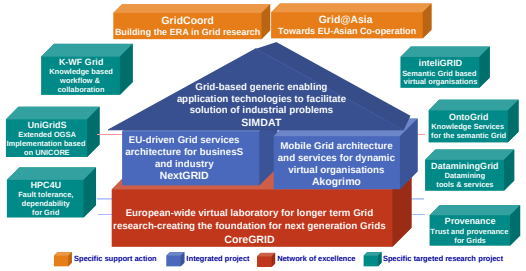
Grid research - towards Lisbon Objectives





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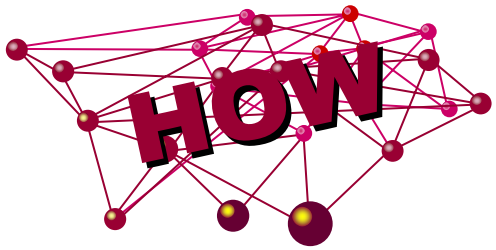
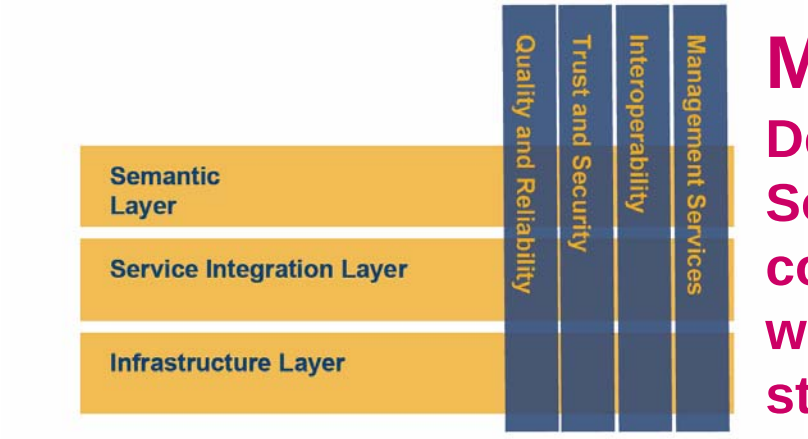
Grid Research – Technology Platform



A European Technology Platform for Software, Grids & e-Services



Mission:

Develop a visionary strategy for Software and Services driven by a common European Research Agenda where innovation and business strengths are reinforced

Atos Origin · BT · Engineering Ingegneria Informatica · hp invent · IBM · Nokia Connecting People · ObjectWeb Open Source Middleware · SAP · Siemens · Software AG The XML Company · Telecom Italia · Telefónica · Thales

www.nessi-europe.com

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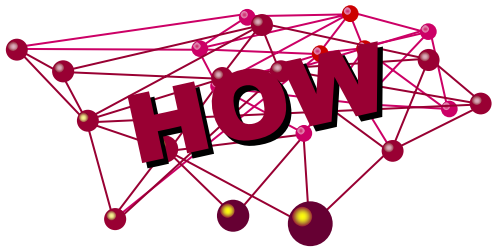
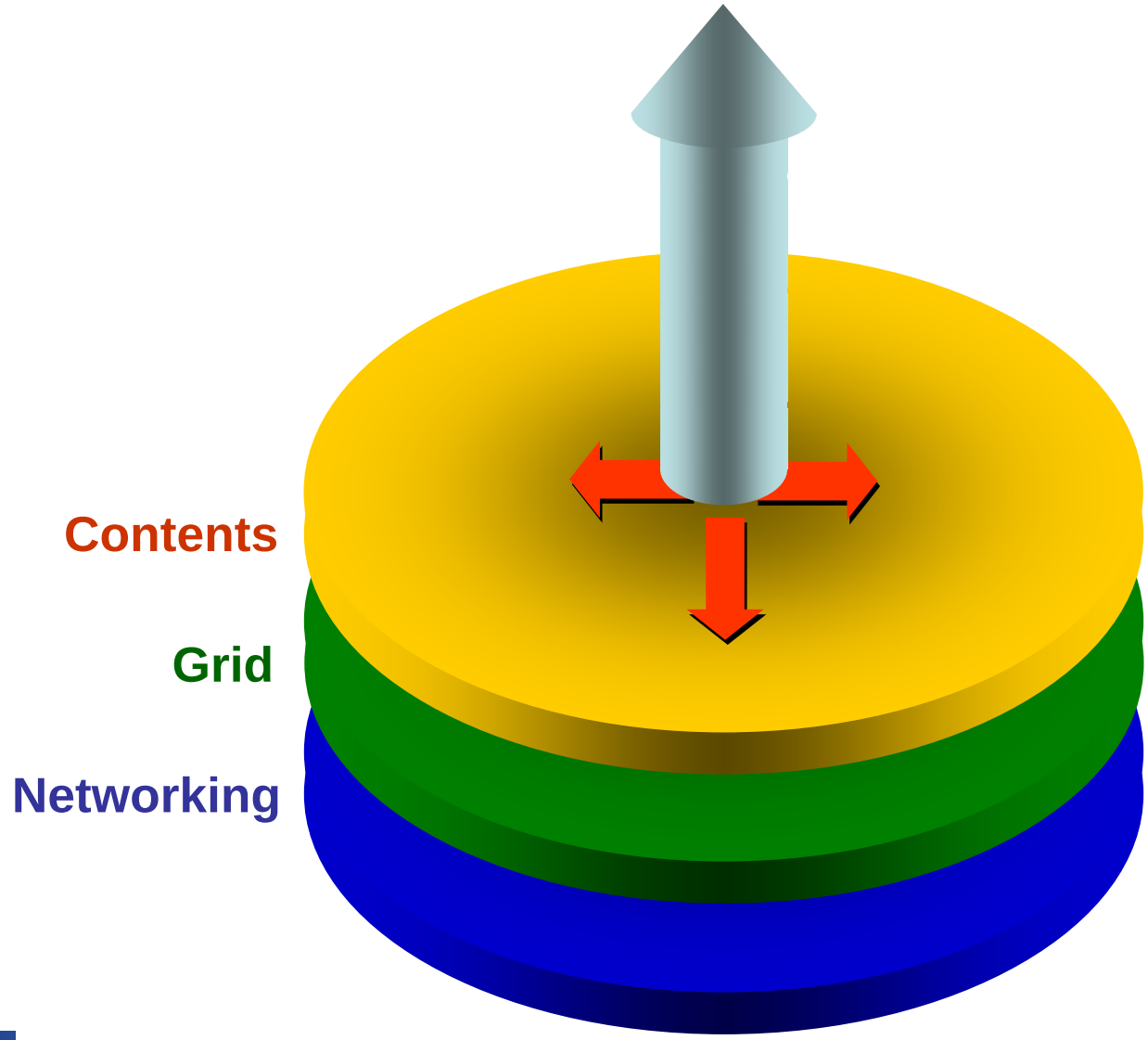
e-Infrastructure - Future strategic axis



- **Achieving**
- **Enlarging**
- **Deepning**



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An evolutionary path

Grid
IPv6

GÉANT

FP5

Testbeds

Network Infrastructure

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An evolutionary path

2005

DL, Opt, QoS, Sec.

EGEE,SEEGRID,DEISA

GÉANT2

FP5

FP6

Policy - eIRG

Testbeds

Grid Infrastructures

Network Infrastructure

Testbeds

Network Infrastructure

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An evolutionary path

2005

Trust, Testbeds, Policy

Storage, DL, Data curation

High end computing

Grid Infrastructure

Network Infrastructure

FP5

FP6

Policy - eIRG

Testbeds

Grid Infrastructures

Network Infrastructure

FP7

Testbeds

Network Infrastructure

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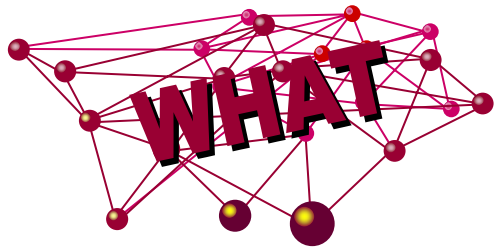
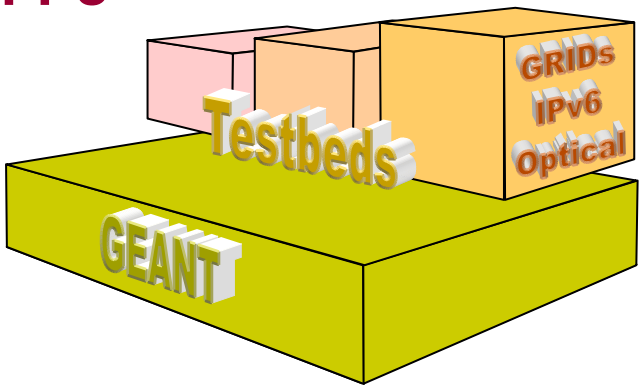
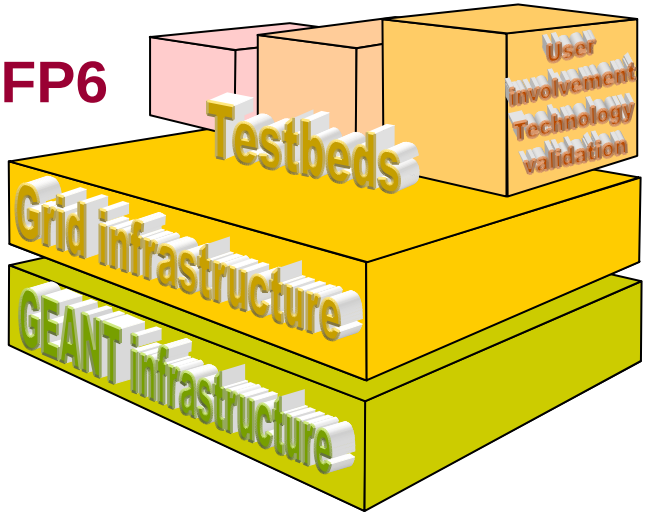
From FP5 to FP7 in e-Infrastructures



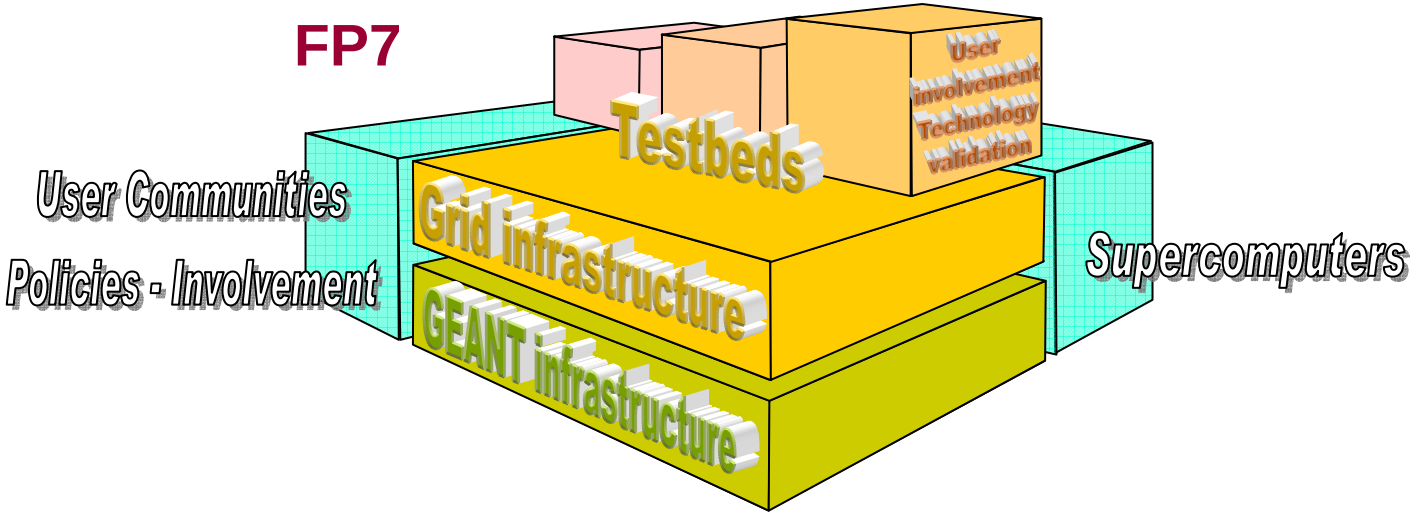
FP5



FP6



FP7



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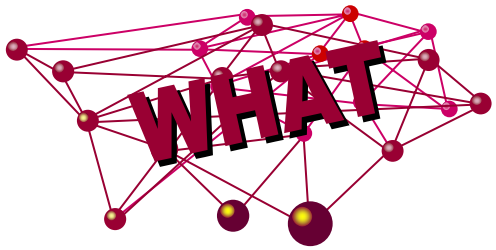
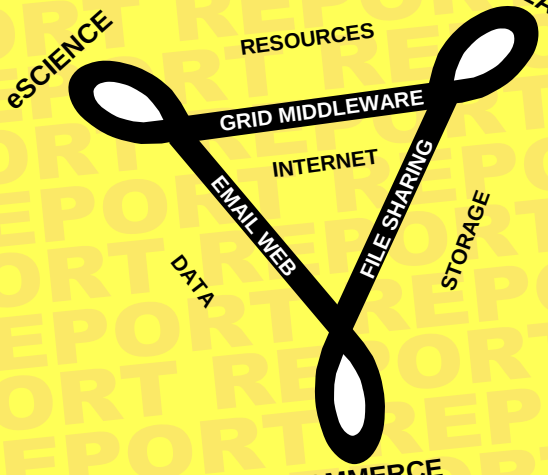
Further challenges



eIRG White Paper
… grids and e-matter…
The ´´World Wide Grid´´ and the need to progressively support networking, grids and resources



The HPCN ESFRI report

…For many scientific applications, there is not doubt that the GRID infrastructure will help improving the lack of resources, by making a better use of distributed systems. However, GRID is unlikely to solve all scientific problems, and there are classes of scientific domains, which will always require very large centralised computing resources.

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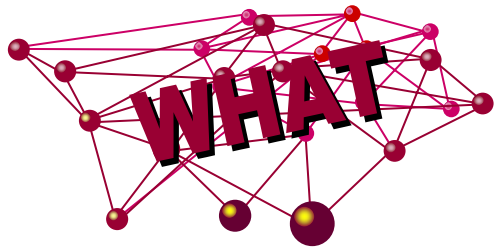
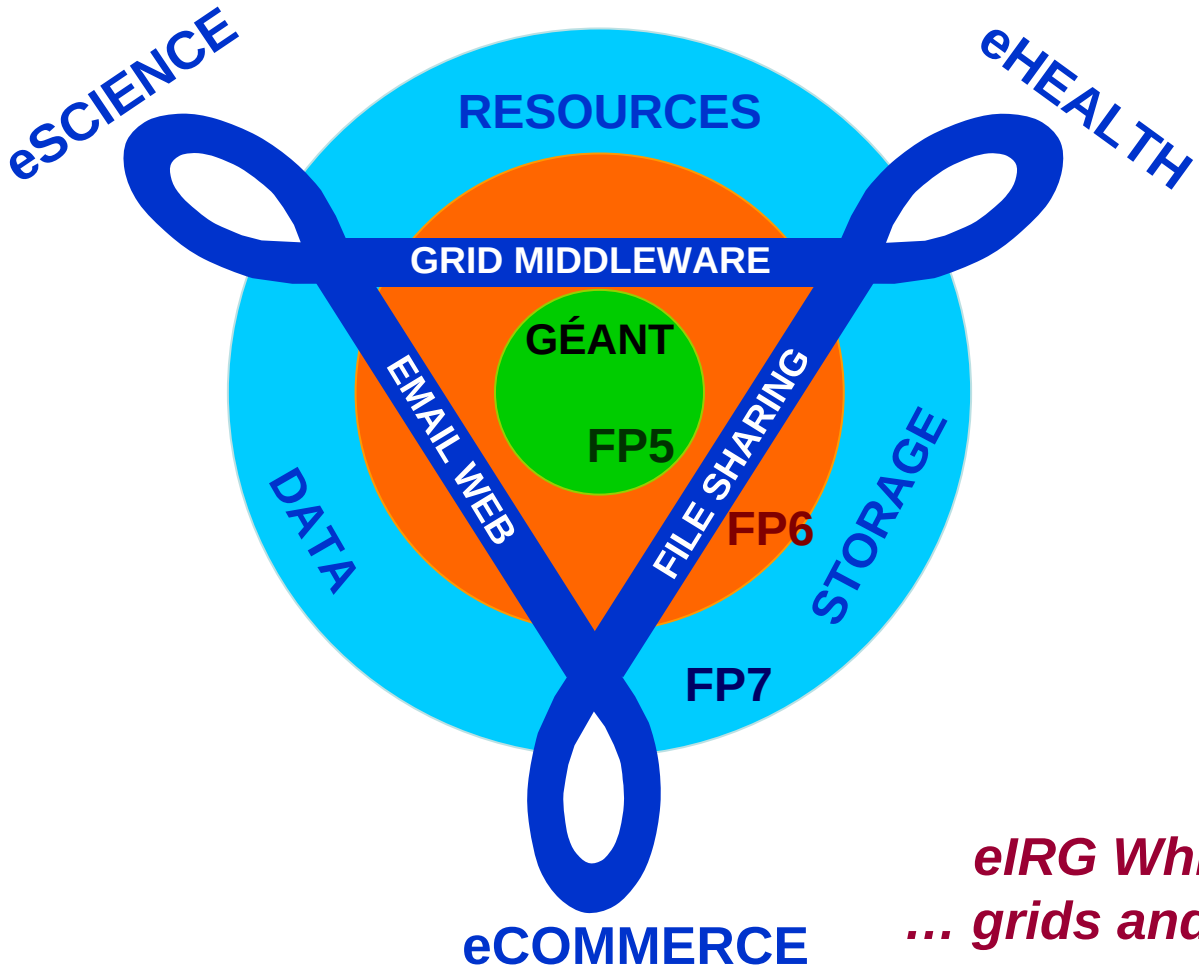
e-Infrastructure in FP7





eIRG White Paper
… grids and e-matter…

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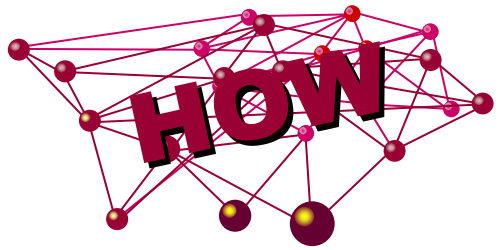
FP7 plans



- **Continuation and further development of current actions** → **Current Instruments**

GÉANT

Grid infrastructures

Supercomputing

- **New Infrastructures** → **New instruments**, **Strategic roadmaps**

ESFRI

Reinforce the budget for Research Infrastructures !
Reinforce liaison with Thematic Priorities !

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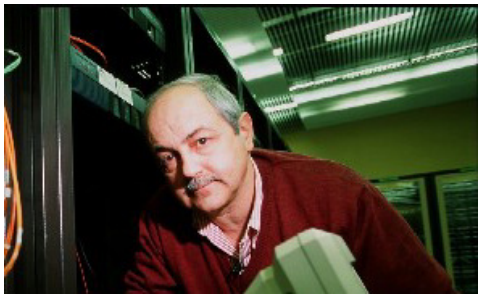
EGEE – a success story

Excellent achievements - Congratulations

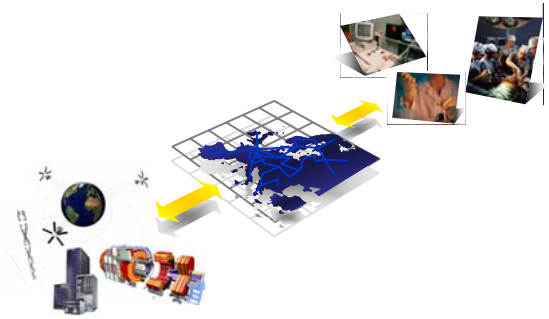


Thanks for the leadership and vision

Further info on e-Infrastructures

Web page
www.cordis.lu/ist/rn/

Newsletter



Brochures

Workshops

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Thank you !

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