A European Vision and Plan for a Common Grid Infrastructure

European Grid Initiative

www.eu–egi.org

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Why Sustainability?

- Scientific applications start to depend on Grid infrastructures (EGEE, DEISA, …)
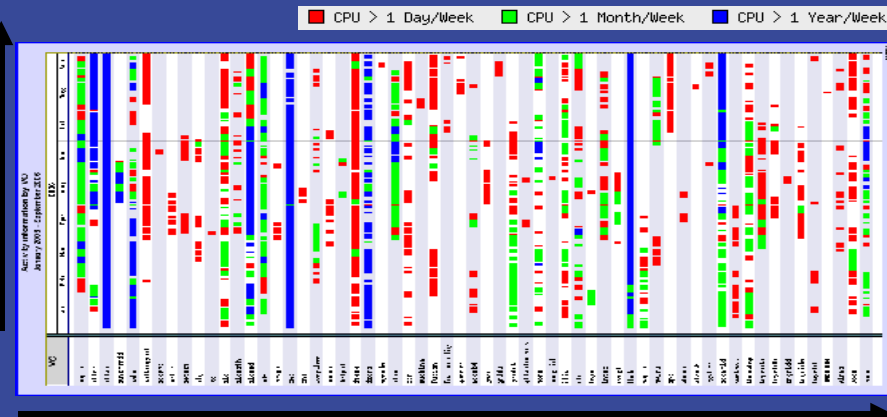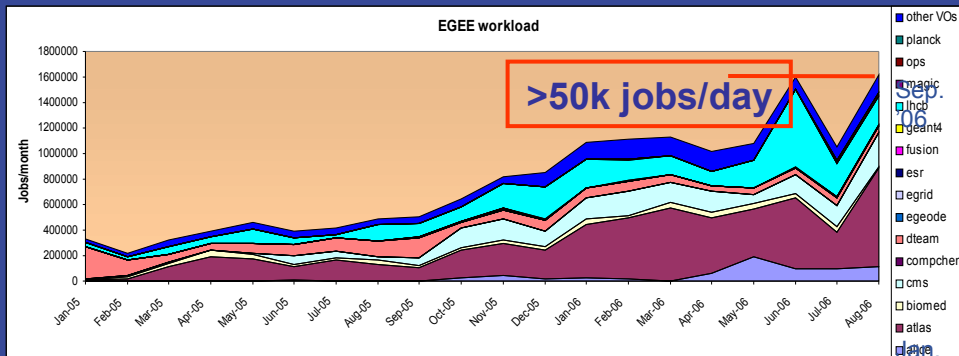
- New scientific collaborations have been formed thanks to the Grid infrastructure
- Business and Industry are getting very interested but need a long term perspective

Sustainability

Need to prepare permanent **Common Grid infrastructure**

- High quality of service for all user communities
- Independent of short project funding cycles
- Managed in collaboration with National Grid Initiatives (NGIs)
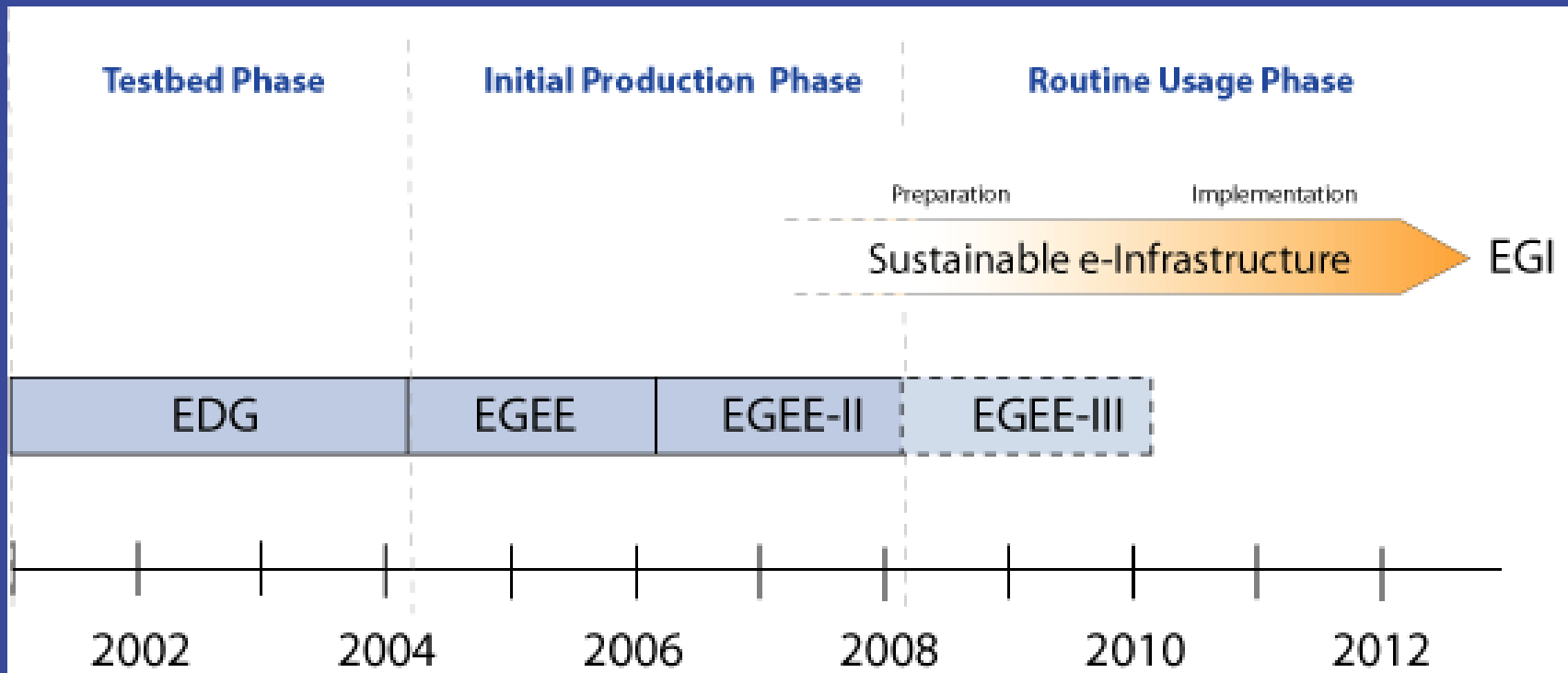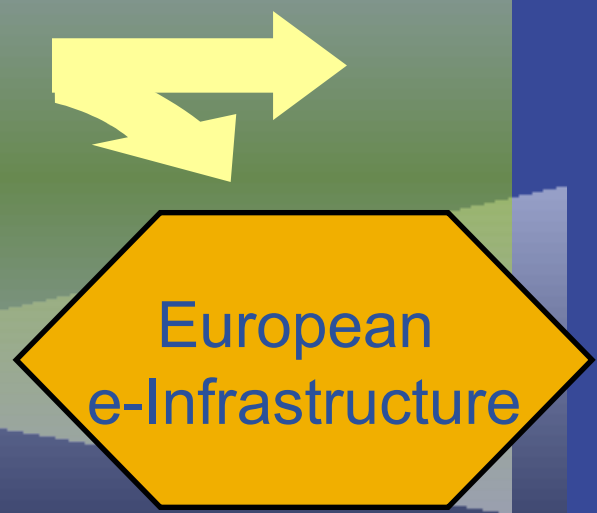
Grids in Europe

- Examples of **National Grid** projects:
  - Austrian Grid Initiative
  - Belgium: BEgrid
  - DutchGrid
  - France: Grid'5000
  - Germany: D-Grid; Unicore
  - Greece: HellasGrid
  - Grid Ireland
  - Italy: INFNGrid; GRID.IT
  - NDGF
  - Portuguese Grid
  - Swiss Grid
  - UK e-Science: National Grid Service; OMII; GridPP
  - …

Evolution

A European Vision …

- for a universal e-Infrastructure for research[1]

  "An environment where research resources (H/W, S/W & content) can be readily shared and accessed wherever this is necessary to promote better and more effective research"

  (1) Malcolm Read (Ed.)
  http://www.e-irg.org/meetings/2005-UK/A_European_vision_for_a_Universal

e-IRG Recommendations on Sustainable e-Infrastructures

I: governments and the Commission should develop policies and mechanisms to encourage increased investment in a **more coherent and interoperable way** across Europe

II: the existing e-Infrastructure projects must be superseded by **integrated sustainable services** at national and European levels

III: e-Infrastructures must be **application-neutral and open to all user communities and resource providers**. National funding agencies should be encouraged to fund multi-disciplinary and inclusive infrastructures rather than disciplinary-specific alternatives

e-IRG Recommendations on Sustainable e-Infrastructures

*IV: e-Infrastructures must **inter-operate and adopt international standard services and protocols** in order to qualify for funding*

*V: the Commission should, within the seventh Framework Programme, develop a pan-European e-Infrastructure which **explicitly encourages the further integration of national e-Infrastructure initiatives***

e-IRG Task Force on Sustainable e-Infrastructures (SeI)

http://www.e-irg.org/publ/2006-Report_e-IRG_TF-SEI.pdf

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European Commission

"…for Grids we would like to see the move towards long-term sustainable initiatives less dependent upon EU-funded project cycles"

- Viviane Reding, Commissioner, European Commission, at the EGEE'06 Conference, September 25, 2006

Towards sustainable grid-empowered e-Infrastructures

Sustainable grid/data-based e-Infrastructures (utility model)

FP7

Production quality facilities

FP6

Broad scale test-beds

FP5

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Slide courtesy of Kyriakos Baxevanidis, EC

DRA
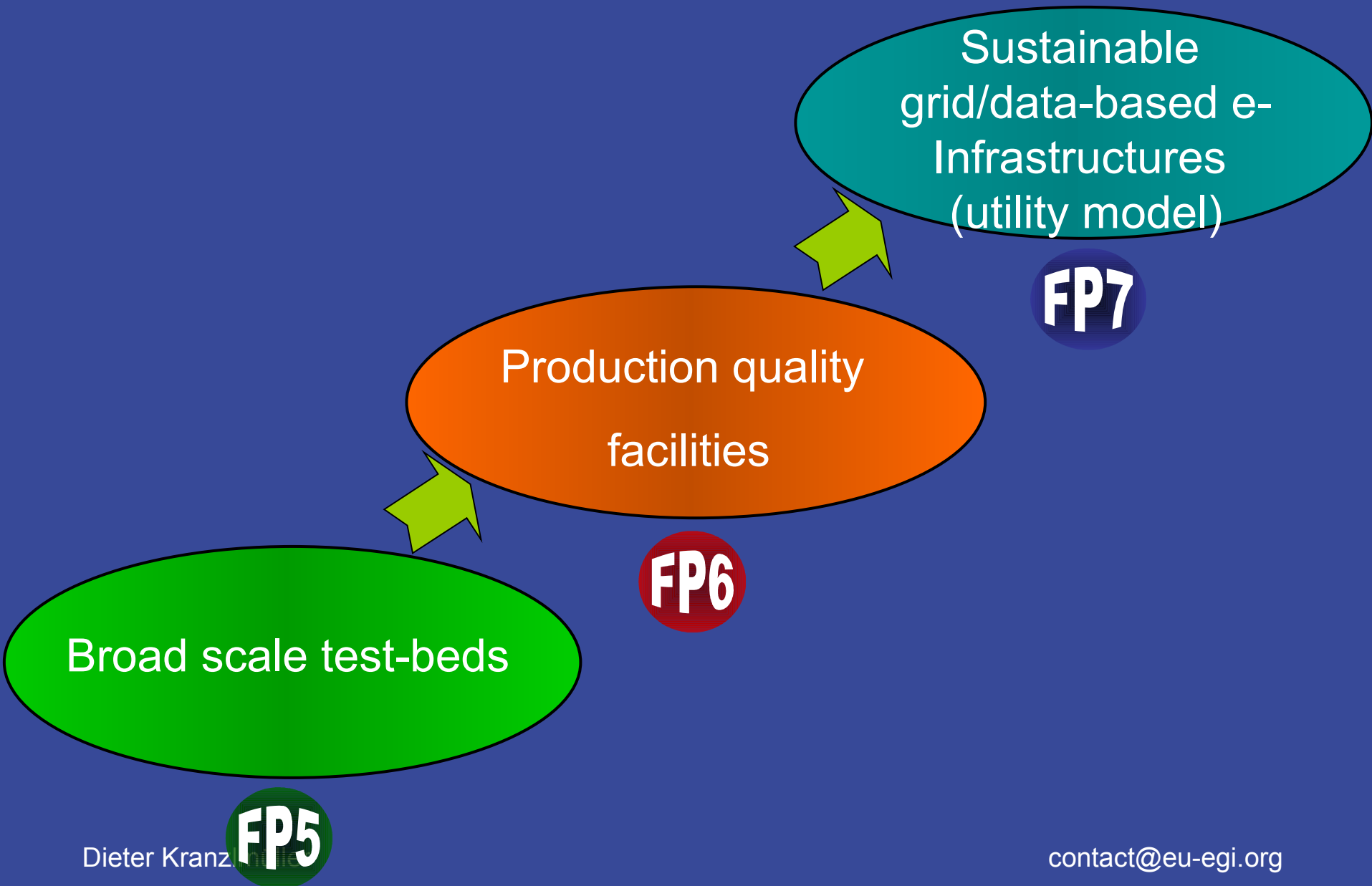
Year 2007

Publication: early 2007
Closure: spring 2007

- Support conceptual design studies for new RI (or major upgrades of existing ones) of clear European dimension and interest; such studies will help to assess technical and financial feasibility of proposed new RI
- *Action should also foster emergence of new organisational models to consolidate a sustainable approach to e-Infrastructures, in particular in the domain of grids and data repositories*
- *New service provisioning schemes to be more neutral and open to all user communities and resource providers*

1. e-Science Grid Infra
2. Scientific Digital Re
3. Deployment of e-In Scientific Communi
5. New Research Infrastructures – Design studies
6. New Research Infrastructures – Preparatory phase
7. Support measures (studies, policy initiatives, international co-operation,…)

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Slide courtesy of Kyriakos Baxevanidis, EC

EGI Design Study

- Project Proposal to be submitted to the European Commission for funding within **FP7-INFRASTRUCTURES-2007-1**, 1.2.1 Design Studies (May 2, 2007)

- EGI Preparation Team:

Participant no.	Participant organisation name	Short name	Country
1 (Coordinator)	Institut für Graphische und Parallele Datenverarbeitung der Johannes Kepler Universität Linz	GUP	A
2	Greek Research and Technology Network – GRNET S.A.	GRNET	GR
3	Istituto Nazionale di Fisica Nucleare	INFN	I
4	CSC – Scientific Computing Ltd.	CSC	FI
5	CESNET, z.s.p.o.	CESNET	CZ
6	European Organization for Nuclear Research	CERN	CH
7	Verein zur Förderung eines Deutschen Foschungsnet- zen – DFN-Verein	DFN	D
8	Science & Technology Facilities Council	STFC	UK
9	Centre National de la Recherche Scientifique	CNRS	F

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European Grid Initiative

EGI Workshop
February 26-27, 2007, Munich, Germany

Goals:

- to inform interested parties (NGIs) about the planned **EGI Design Study** proposal
- to discuss the status of the different NGIs in Europe with respect of their involvement in EGI
- to ask the NGIs for their support in the EGI efforts

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European Grid Initiative

- Federated model bringing together NGIs to build a European organisation
- Main goal: to coordinate the operation of a common multi-national, multi-disciplinary Grid infrastructure
  - Enables and supports international Grid-based collaboration
  - Provides support and adds value to NGIs
  - Liaises with corresponding infrastructures outside Europe
- Responsibilities between NGIs and EGI are split to be federated and complimentary

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Characteristics of NGIs

Each NGI

- … should be a recognized national body with a **single point-of-contact**

- … should mobilise national funding and resources

- … should operate the national e-Infrastructure

- … should supports user communities (application independent, and open to new user communities and resource providers)

- … should contribute and adhere to international standards and policies

Getting Involved

- EGI Advisory Board (AB):

  - The AB Consists of representatives from the National Grid Initiatives (NGIs) of the EU27 and other eligible countries—one NGI/representative per country.

  - The AB is the formal forum for the NGIs to guide the EGI Design Study.

  - The AB and the involvement of the NGIs are essential for the project, since the outcome of the EGI Design Study, the proposed EGI organization, must be established and governed by the NGIs.

  - The whole work of the EGI Design Study is dedicated to this goal and as much as possible consensus with AB members has to be achieved in all steps necessary to design and later establish the EGI.

Getting Involved

- **EGI Advisory Board (AB)**: (continued)
  - The AB is created before the start of the project to accompany the preparation of EGI Design, providing in-formation, feedback and advice for the achievement of the overall project goals.

  - Participating NGIs formally appoint their representatives in the EGI Design Project AB as soon as possible.

  - The project will organize a series of at least four workshops, where interaction between the AB and the project partners will be enabled.

  - A mailing list for internal AB communication will be set up and all relevant material on the project will be available on the EGI web page, thus allowing contributions from the NGI representatives.

Getting Involved

- **EGI Advisory Board**: NGI Representatives
- **EGI Workshops**:
  - 10/07: Requirements Consolidation & Use Case Def.
  - 03/08: Discussion of Interim Papers of WP3, 4, 5
  - 07/08: Draft final Papers on EGI Structure
  - 03/09: Transition of EGEE3 to EGI like Structure
  - 10/09: EGI Launch Workshop
- **NGI Mailinglist**: ngi-rep@eu-egi.org
- **EGI Webpage**: www.eu-egi.org

Schedule

Submission of EGEE-III

Start of EGEE-III

Start of EGI Design Study

EGEE-III transition to EGI-like structure

Develop EGI Proposal   Final Draft of EGI Blueprint Proposal

EGI Blueprint endorsed by NGIs

NGIs signing proposal   EU Call Deadline for EGI Proposal

EGI Entity in place

| EGEE-II (2 year) | EGEE-III (2 year) | EGI operational |

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2008   2009   2010

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