

# Future Directions

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*EGEE-III Final Review, 23-24 June, 2010*

- **Transitioning to a sustainable infrastructure**
  - Always part of the EGEE-III objectives
  - EGI model defined during EGEE-III Y1 in EGI\_DS project
  - EGEE-III Y2 workplan transitions to this model
- **Thanks to the work done in EGEE-III...**
  - The gLite middleware teams are working as product teams
  - New software releases are using a staged rollout model
  - Modular operational tools architecture deployed
    - Use of open source products (e.g, ActiveMQ,, Nagios)
  - Some operation tools have been refactored to national models
    - Not complete and the work will continue
  - Move to national based operational models
    - Being adopted and will be completed after EGEE-III

- **Activity within EGEE-III would carry on in EC projects:**
  - EGI-InSPIRE: Operation of the infrastructure
  - EMI: Maintenance and development of gLite and others
  - ROSCOE & SAFE: Continuation of application community
  - CUE: Provide business outreach and training
  - TAPAS: Application porting support centre
  
- **However...**
  - Only EGI-InSPIRE and EMI funded
  - Other projects not retained for funding
    - How will the gLite user communities be supported...?

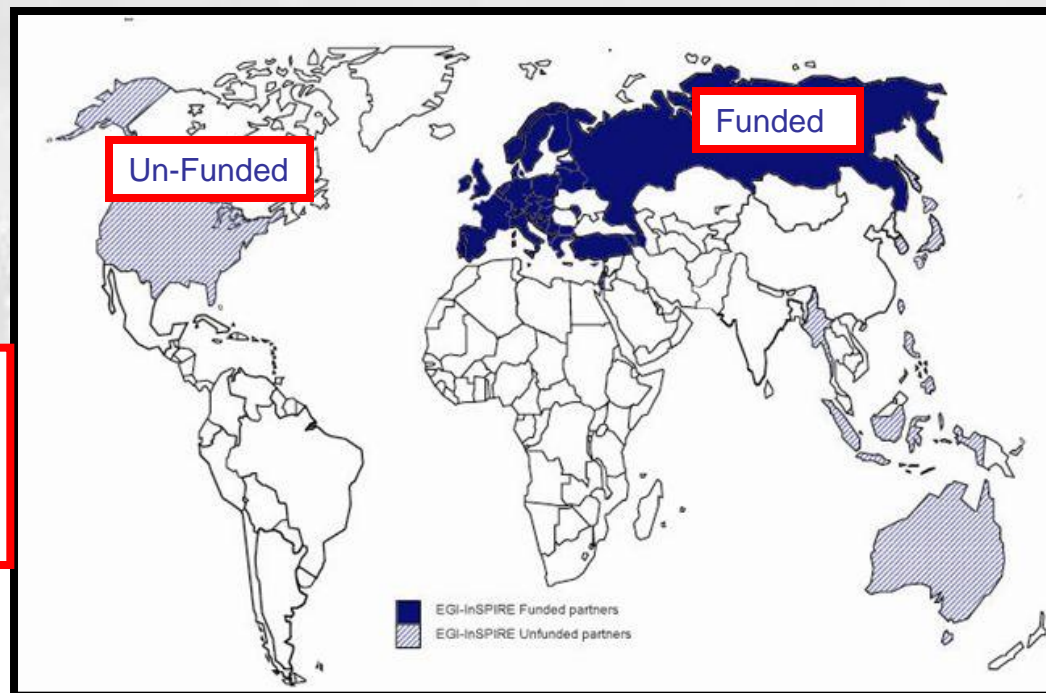
# The EGI-InSPIRE Project

**I**ntegrated **S**ustainable **P**an-European  
**I**nfrastructure for **R**esearchers in **E**urope

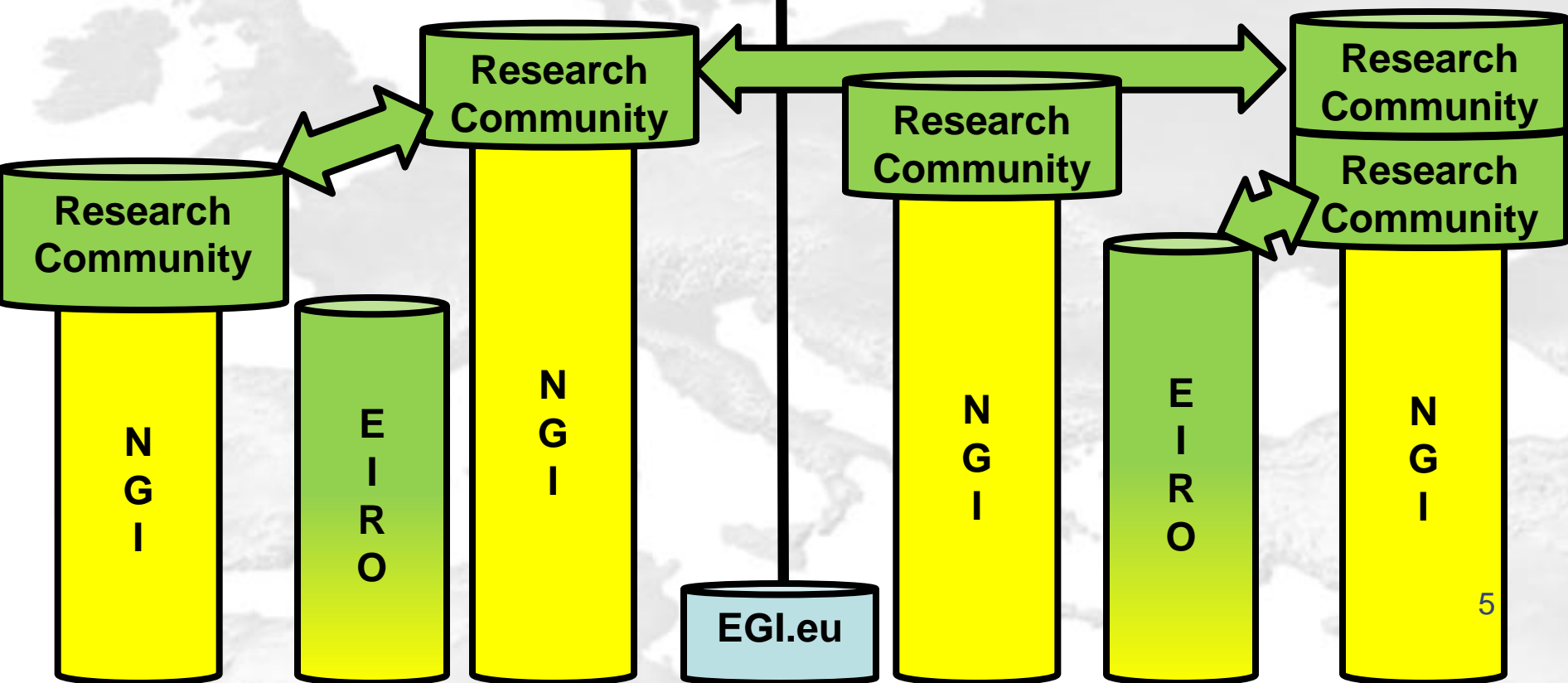
- A 4 year project with €25M EC contribution
  - Project cost €72M
  - Total Effort ~€330M
  - Effort: 9261

## Project Partners (51)

- EGI.eu, 40 NGIs, 2 EIROs
- Asia Pacific (8 partners)



# EGI Collaboration



# EGI.eu

- **Coordination for European Grid resources**
  - Established February 8<sup>th</sup> 2010
  - Roadmap to integrate HTC, HPC, Data, Instruments, ...
  - Policy & services needed to run a grid
- **Governance & ownership by its stakeholders**
  - EGI Council votes proportional to GDP
  - EGI Council fees proportional to votes
  - Sustainable small coordinating organisation (EGI.eu)
  - Builds on resources from within its stakeholders
- **Location selected to be Amsterdam**
  - Distributed staff with a core (~50%) in Amsterdam
  - Approximately 40 staff, €3.5M/year

# EGI means Innovation

- **Deploy Technology Innovation**
  - Distributed Computing continues to evolve
    - **Grids → Desktops → Virtualisation → Clouds → ?**
- **Enable Software Innovation**
  - Provide reliable persistent technology platform
    - **Today: Tools built on gLite/UNICORE/ARC**
- **Support Research Innovation**
  - Infrastructure for data driven research
    - **Support for international research (e.g. ESFRI)**

# User Support & Services

- Support User Communities
  - Researchers in International Collaborations
  - Scale up from the single VO to a community
- Provide a federated Helpdesk linking:
  - Discipline specific support (e.g. Bio Apps)
  - National infrastructure support (e.g. NGS)
  - Generic services (e.g. Training)
- Provide core services to support users
  - Manage VOs, Application DB, Training DB



# Other Activities

- **Dissemination**
  - With NGIs, VRCs, SSCs and other projects
- **Support for Heavy User Communities**
  - General & community specific services
- **Events**
  - Two Annual meetings: Users & Technology
- **Technology**
  - Liaison with software providers
  - Definition and verification of requirements
- **Provide core services to support users**
  - Manage VOs, Application DB, Training DB

# European Middleware Initiative

FP7 Capacities Work Programme 2010: Infrastructures

Call **FP7-INFRASTRUCTURES-2010-2**

Sub-topic: 1.2.1.3 – Middleware and repositories

Develop middleware that strengthens European presence by consolidating or even going beyond existing DCIs (e.g. exploiting emerging developments like virtualisation), while improving their stability, reliability, usability, functionality, interoperability, security, management, monitoring and accounting, measurable quality of service, and energy efficiency

Starting date: May 1<sup>st</sup>

Duration: 3 years

Total budget: 23M € (12M € from EC + 11M € from partners)

Effort: 64 FTEs/year (88% for technical activities)

# Primary Objectives

## Consolidate

Consolidate the existing middleware distribution simplifying services and components to make them more sustainable (including use of off-the-shelf and commercial components whenever possible)

## Evolve

Evolve the middleware services/functionality following the requirement of infrastructure and communities, mainly focusing on operational, standardization and interoperability aspects

## Support

Reactively and proactively maintain the middleware distribution to keep it in line with the growing infrastructure usage

# Partners (26)



# *Towards interoperable Distributed Computing Infrastructures for Europe*

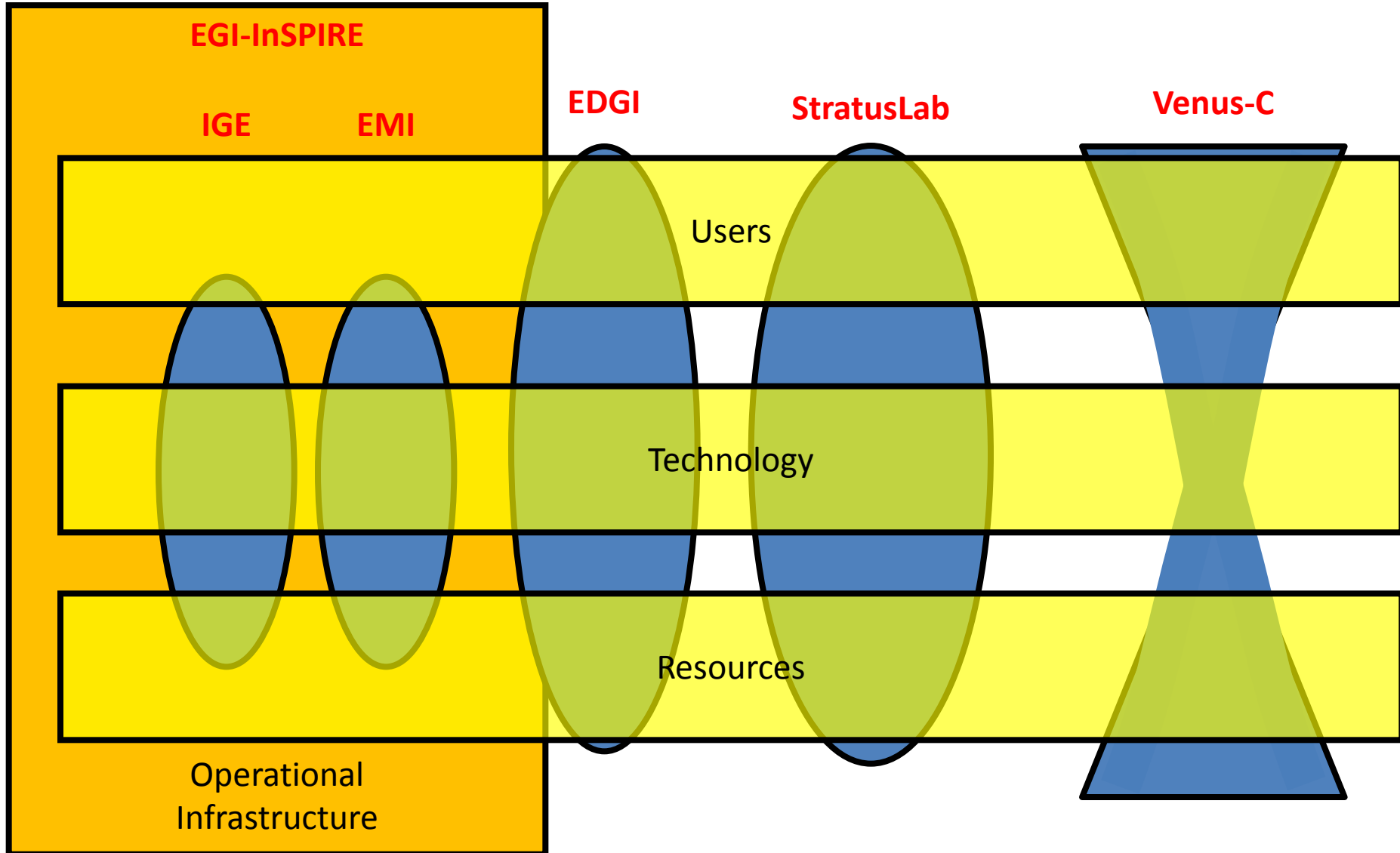


# The DCI Projects



Project	EDGI	EGI-InSPIRE	EMI	IGE	StratusLab	VENUS-C
Start Date	01/06/2010	01/05/2010	01/05/2010	01/10/2010	01/06/2010	01/06/2010
Duration (months)	24	48	36	30	24	24
Total Budget	2,436,000 €	72,000,000 €	23,000,000 €	3,693,000 €	3,137,221 €	8,803,046 €
Funding from the EC	2,150,000 €	25,000,000 €	12,000,000 €	2,350,000 €	2,300,000 €	4,500,000 €
Total effort in person-month	281	9241	1115	277	340	639

# DCI Projects - Taxonomy



- **Virtual Research Communities call**
  - 10 projects finishing negotiations
  - Covering: Medical (x2), Biodiversity (x2), Earth Science, ...
  - Two projects providing HPC infrastructure for end-users
- **ESFRI projects**
  - EGEE (& EGI) participating in European E-Infrastructure Forum
  - Focused engagement with ESFRI projects
  - Public report providing analysis of common core functionality
    - Across e-infrastructures (HPC, HTC & networking)
    - Across ESFRI projects



- **EGI-InSPIRE has some support for specialised services**
  - Shared Services:
    - Dashboards
    - Applications & Tools (GANGA & DIANE)
    - Services (GReIC & HYDRA)
    - Workflows & Schedulers
    - MPI
  - Dedicated Support: HEP, LS, A&A, ES
  - Refined following failure of SAFE & ROSCOE
- **EMI provides some support for critical software components**
- **EGI-InSPIRE will support annual ‘EGI User Forum’**
  - Provide some central community coordination
  - Some limited funds to support continued community building

- **EGEE-III has come to an end**
  - Successfully completed a complex programme of work
  - Built a European community and is a recognised global leader
  - Provided a foundation for EGI to build upon and sustain
- **EGI.eu: coordination for the production infrastructure**
  - Established in Amsterdam in February 2010
  - ‘Owned’ by the signed up NGIs and EIROs
  - Coordinator of the EGI-InSPIRE proposal
- **EGI-InSPIRE project**
  - Continues the transition towards sustainable national operations
  - Migration of operational tools and ROCs → NGIs continues