

# e-IRG White Paper Recommendations in the context of EGI - Governance models paradigms

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# Outline

- e-IRG White paper recommendations in the context of EGI
  - Governance and funding recommendations
  - Recommendations on the cooperation with the supercomputing e-Infrastructure towards a unified e-Infrastructure environment
- Governance model paradigms for European and national e-Infrastructures
  - Research networking and Grid paradigms

# Disclaimers

- The views expressed in this talk reflect the opinions of the author and not necessarily of the referred organisations and bodies
- ***e-IRG White paper disclaimer: The e-IRG supports the production of the White Paper as a mechanism that raises new potential policy areas in e-Infrastructures. In this context the material of the White Paper is to be understood as work in progress and the views presented as reflecting in general those of the e-Infrastructure communities working on the relevant topics (which are clearly mentioned in the document) and not necessarily those of the e-IRG. The e-IRG views are reflected as such in the so-called policy recommendations document.***



# Background:

## What is e-IRG and e-IRGSP2



- **e-Infrastructure Reflection Group** [www.e-irg.eu](http://www.e-irg.eu) :
  - A policy committee of national delegates appointed by the ministries of research (or similar) from more than 30 European Countries + European Commission representatives
  - The e-IRG **mission** is to *“pave the way towards a general-purpose European e-Infrastructure”* (e-Infrastructure includes networks, distributed computing and data layers)
  - *“The **vision** for the future is an open e-Infrastructure enabling flexible cooperation and optimal use of all electronically available resources”*
- **e-IRGSP2**: an EC-funded project supporting the work of the e-IRG

- One of e-IRG's main publications dealing with e-Infrastructure technologies and projects ***requiring policy-level actions***
- A collection of independent and self-sustained topics from different e-Infrastructure areas; Examples:
  - **Grid and Cloud computing**
  - A “holistic” approach to **Security** (seen “as a whole”)
  - **Sustainability** of the computing related e-Infrastructure
- Topics selected and content produced by e-IRG delegates and experts in a multi-stage consultation process (with e-IRGSP2 support)
- Studying technological, economical, societal and policy developments and limitations requiring appropriate actions
- Targeting different audiences:
  - Policy makers, e-Infrastructure providers and users

<http://www.e-irg.eu/> -->  
**Publications**



# e-IRG recommendations

- **Separate document** with distilled output from the White paper sections:
  - Short -to medium- term scope
  - Fostering sustainability and innovation of the European e-Infra
  - “Paving the way towards a general-purpose European e-Infrastructure”
  - Reflects official e-IRG views
  - Recommendations are promoted to EC and Member States



**e-IRG recommendations 2009**  
Based on the  
e-IRG White paper 2009

[http://www.e-irg.eu/index.php?option=com\\_content&task=view&id=37&Itemid=36](http://www.e-irg.eu/index.php?option=com_content&task=view&id=37&Itemid=36)

## e-IRG recommendation 7/7

### *Sustainability of the computing-related e-Infrastructure*

#### **Background:**

*One of the key issues in ensuring broad cross-disciplinary adoption and use of the e-Infrastructure by user communities is confidence that the e-Infrastructure services will be reliably available and stable for the estimated duration of their current and planned collaborative projects. This requires a common perception and implementation of cost-sharing models and related policies across national borders. The necessary steps in this regard are being investigated by the EGI and PRACE initiatives. Moreover, the smooth interaction and interoperation of all existing components of e-Infrastructure services in Europe are vital to the generation of this confidence. It is anticipated that most future users of the common European e-Infrastructure will lack a thorough education in computer science or computer engineering; they will, therefore, need to be supported in using the infrastructure. To this end, we need to establish support for user communities that provide applications, appropriate user interfaces, training and support in case of problems. This support structure is ultimately just as important as the hardware infrastructure.*

- *The e-IRG notes the importance of the steps undertaken by the EGI and PRACE initiatives to promote sustainability of the computing-related e-Infrastructure, such as the development of policies, business models and funding schemes for the new required structures. The e-IRG recommends that adequate levels of funding should be granted by the EC and Member States for the development of the new structures both on the national and European levels.*
- *The e-IRG recommends that major e-Infrastructure initiatives such as EGI and PRACE cooperate closely in order to define complementary and interoperable environments for the benefit of European researchers. This environment should ensure that access to resources in Europe is granted through an open and transparent process, based on international standards and interoperable middleware.*
- *The e-IRG recommends the funding of activities that help national user communities to cooperate with corresponding user communities in other countries, in order to foster the European research activities in using the e-Infrastructure.*

#### **e-IRG commitment required**

- *Participate actively in the discussions among the governments of the EC Member States on the development of a sustainable computing ecosystem*
- *Help to establish the regulations for ensuring fair access to and the integration of the distributed e-Infrastructure*
- *Advise Member States and EC on policy actions to be taken and funding to be allocated*

Background

Recommendations itself

e-IRG role and actions

# Sustainability of the computing related e-Infrastructure Background

- Main issue: confidence that e-Infra services “*will be reliably available and stable*” in the future
- “Smooth interaction and interoperation of all existing components of e-Infrastructure services in Europe are vital to the generation of this confidence”
- Training and education also key factors



# Recommendations

- The e-IRG notes the importance of the steps undertaken by the EGI and PRACE initiatives to promote sustainability of the computing-related e-Infrastructure, such as the development of policies, business models and funding schemes for the new required structures. The e-IRG recommends that adequate levels of funding should be granted by the EC and Member States for the development of the new structures both on the national and European levels.
- The e-IRG recommends that major e-Infrastructures initiatives such as EGI and PRACE cooperate closely in order to define complementary and interoperable environments for the benefit of European researchers. This environment should ensure that access to resources in Europe is granted through an open and transparent process, based on international standards and interoperable middleware.
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## e-IRG commitment required

- Participate actively in the discussions among the governments of the EC Member States on the development of a sustainable computing ecosystem.
- Help to establish the regulations for ensuring fair access to and the integration of the distributed e-Infrastructure.
- Advise Member States and EC on policy actions to be taken and funding to be allocated.



# EGI-related governance model paradigms



- Governance models issues and approaches
- Of European e-Infrastructures
  - Pan-European Research Network (GEANT)
  - European Grid Initiative (EGI)
- Of National e-Infrastructures
  - Germany, Greece, The Netherlands



# Governance model issues and approaches

- e-Infrastructures currently realised in multiple (separate) layers (networks, computing, data, etc.) and distributed over multiple administrative entities (hierarchical/federated approach):
  - campus, (regional), national, regional, European, international
- Governance approaches:
  - What are the boundaries of different e-Infrastructures layers? Integrate or keep separated?
  - Centralised or de-centralised governance? And how much (de)centralised?
  - What is the representation of the different layers/entities?
  - Federated vs. new approaches?
  - Side issues: Funding and business models (service fees?) and promoting innovation and industrial involvement
    - Private Public Partnerships (PPPs), Joint Technology Initiatives ([JTIs](#))

- **NREN Policy Committee**

- 34 NRENs\* plus DANTE and TERENA as non-voting partners and 4 associate members (Belarus, Moldova, Russia, Ukraine) and 4 observers (including CERN) \*including NORDUNET regional network (5 countries)

- **DANTE:** A not-for-profit organisation (Company Limited by Shares) owned by NRENs\* coordinating the GN2 project and running the network (run by a Board of Directors)

\*not all NRENs currently included- It is planned that DANTE becomes a Company Limited by Guarantee with all the NRENs

- An Executive Committee (**Exec**): Chair, 8 voting members + ex-officio non-voting members (NREN PC Chair, DANTE and TERENA\* chairs, DANTE GM and CFO, TERENA General Secretary). More for running the GN2 project matters requiring high-level action \*TERENA: The association of NRENs – Human networking + running a series of Task Forces (more application-oriented)

- It is currently foreseen to migrate some of the structures to the new DANTE scheme (NREN PC vs. DANTE Assembly) And the TERENA voting scheme (GDP-based) is currently being considered

**Thanks to Vasilis Maglaris, NREN PC Chair**

# EGI (foreseen) governance model

- **EGI Council** (based currently on the EGI MoU) <--> NREN PC
  - 29NGIs + CERN+EMBL full members and 13 Observers. Membership rules to be further (re)considered
  - EGI collaboration agreement: It is proposed that the current MoU collaboration is undertaken by the FP7 project consortium agreements
- **EGI.eu** <--> DANTE: A Foundation (Dutch law) run by a Board
  - Considering the ERIC new legal entity for Research Infrastructures
- **An Executive Board** (<--> GEANT Exec): Possibly identical to the EGI.eu foundation Board
  - Currently following the EGEE regional representation model (interim solution). Discussions currently taking place! Regional representation will most probably be abandoned
- Voting scheme already follows an (older) TERENA model (GDP-based)
- Users and other related providers (e.g. m/w or applications) are part of the foreseen models

- New legal entity among major resource providers: Gauß-Allianz (GA)\*
    - association of IT centers who have a role in Grid Computing in Germany
    - GA carries political responsibility of the German NGI
    - Operational responsibility lies with a consortium of a subset of GA members (KIT Karlsruhe, LRZ Munich, FZ-Jülich and DESY)
    - Primarily support HEP while being open for others
    - Supported by the federal ministry BMBF
- \*not created specifically for the NGI but to resolve wider resource provision issues

**Thanks to Klaus Ullmann**

- An existing legal entity – the NREN (GRNET)- has expanded its activities to cover the computing and software infrastructure
  - Top-down approach
- An MoU (HellasGrid) between GRNET and 25 institutes with related expertise governs the cooperation
  - The MoU plans for common actions and user involvement (bottom up approach)
  - The MoU foresees Policy and Scientific committees



# NGI paradigms- The Netherlands

- Directions towards better coordinated and coherent e-Infrastructures
  - Position all e-infrastructures under the SURF umbrella (General Board of SURF)
    - Creation of an entity SURF computing and data facilities, next to SURFnet
      - Integrating NCF and SARA within SURF
    - Form a strategic board for policy decisions on e-Infras within SURF staffed from all participating organisations
      - Participation of users and their organisations
      - Industry is not involved in the board but only through a tendering process
  - [http://www.ictregie.nl/publicaties/nl\\_08-NROI-258\\_Advies\\_ICT\\_infrastructuur\\_vdef.pdf](http://www.ictregie.nl/publicaties/nl_08-NROI-258_Advies_ICT_infrastructuur_vdef.pdf)

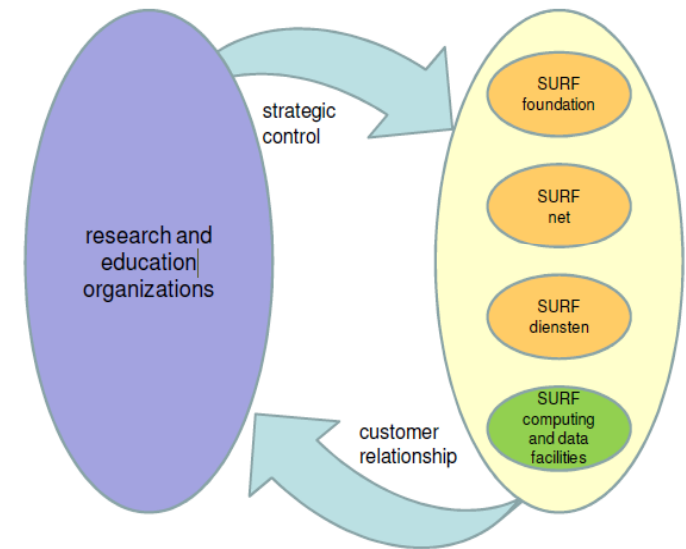


Figure 3 Proposed SURF organization

**Thanks to Arjen Van Rijn**

Thank you!