NGS

National Grid Service

EGI report for UKI Fed

David Fergusson

EGEE 08

26th Sept 2008

EGI Istanbul Workshop

EGI Istanbul Workshop

14:00-15:30 **Transition** Workshop Part 1

16:00-17:30 **Transition** Workshop Part 2

17:30-19:00 **4. EGI Policy Board Meeting**

EGI Istanbul Workshop

14:00-15:30 **Transition** Workshop Part 1

16:00-17:30 **Transition** Workshop Part 2

17:30-19:00 **4. EGI Policy Board Meeting**

- Chairman Election
  - Caspar re-elected by a majority

EGI Istanbul Workshop

14:00-15:30 **Transition** Workshop Part 1

16:00-17:30 **Transition** Workshop Part 2

17:30-19:00 **4. EGI Policy Board Meeting**

- Chairman Election
  - Caspar re-elected by a majority
- Location Bidding
  - next slide

EGI Istanbul Workshop

14:00-15:30 **Transition** Workshop Part 1

16:00-17:30 **Transition** Workshop Part 2

17:30-19:00 **4. EGI Policy Board Meeting**

- Chairman Election
  - Caspar re-elected by a majority
- Location Bidding
  - next slide
- EGI Blueprint Proposal

Location bidding

- Process to open 1st Oct
- May be multiple bids per country
- Bidders need to present a legal framework
  - EGI must be legal entity
- Evaluation committee
  - nominations required
  - cannot be from bidder
  - bidders may veto committee/members

Today's Challenges

Today's Challenges

- **Project-based funding**: Typical funding cycles of today's grid infrastructures => 2-4 years

Today's Challenges

- **Project-based funding**: Typical funding cycles of today's grid infrastructures => 2-4 years
- **Protection of Investment**: Investments in grids, both from funding organizations and from users, need to be protected

Today's Challenges

- **Project-based funding**: Typical funding cycles of today's grid infrastructures => 2-4 years
- **Protection of Investment**: Investments in grids, both from funding organizations and from users, need to be protected
- **Dependency**: Some application domains depend on production grids already today

Today's Challenges

- **Project-based funding**: Typical funding cycles of today's grid infrastructures => 2-4 years
- **Protection of Investment**: Investments in grids, both from funding organizations and from users, need to be protected
- **Dependency**: Some application domains depend on production grids already today
- **Long-term perspective**: Grid users ask for a longer term perspective

How to build EGI?

- Bottom up approach
- NGIs – the basic building "bricks"
  - NGIs are in many respects just EGI at national level
  - Recursive buildup
- A whole is larger than its parts
  - However, some coordination is needed to create a whole from parts – **role for EGI.org**

NGI

- National Grid Initiatives to take care of ***National Grid Infrastructures***
- The basic hypothesis:

  Each country is interested in organizing its compute and data resources in a Grid
- The EGI concept is valid only if this hypothesis is valid, too
  - This is implication, not equivalence

National Implications

- There is or will be a national grid infrastructure is each country
- Each such infrastructure has to have some functions and has to provide some services
  - This is independent of the structure or even an existence of any European organization, i.e. the EGI
- Coordination of players at national level

Grids in Europe

www.eu-egi.eu

Grids in Europe

www.eu-egi.eu

Each NGI

… should be a recognized national body

with a **single point-of-contact**

… should mobilize national funding and resources

… should ensure the operation of a national e-Infrastructure

… should support user communities

… should contribute and adhere to intl. standards and policies

EGI Grid Infrastructure

… should be

- a large-scale, **production Grid** infrastructure
- built on national grids that **interoperate** seamlessly at many levels,
- offering **reliable and predictable services** to a **wide range of applications**

EGI Tasks

EGI Tasks

- Authentication of users

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …
- Distribution and scheduling of jobs, …

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …
- Distribution and scheduling of jobs, …
- Monitoring of submitted jobs, …

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …
- Distribution and scheduling of jobs, …
- Monitoring of submitted jobs, …
- Accounting of users and VOs

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …
- Distribution and scheduling of jobs, …
- Monitoring of submitted jobs, …
- Accounting of users and VOs
- Reporting usage allocation to NGIs

EGI Tasks

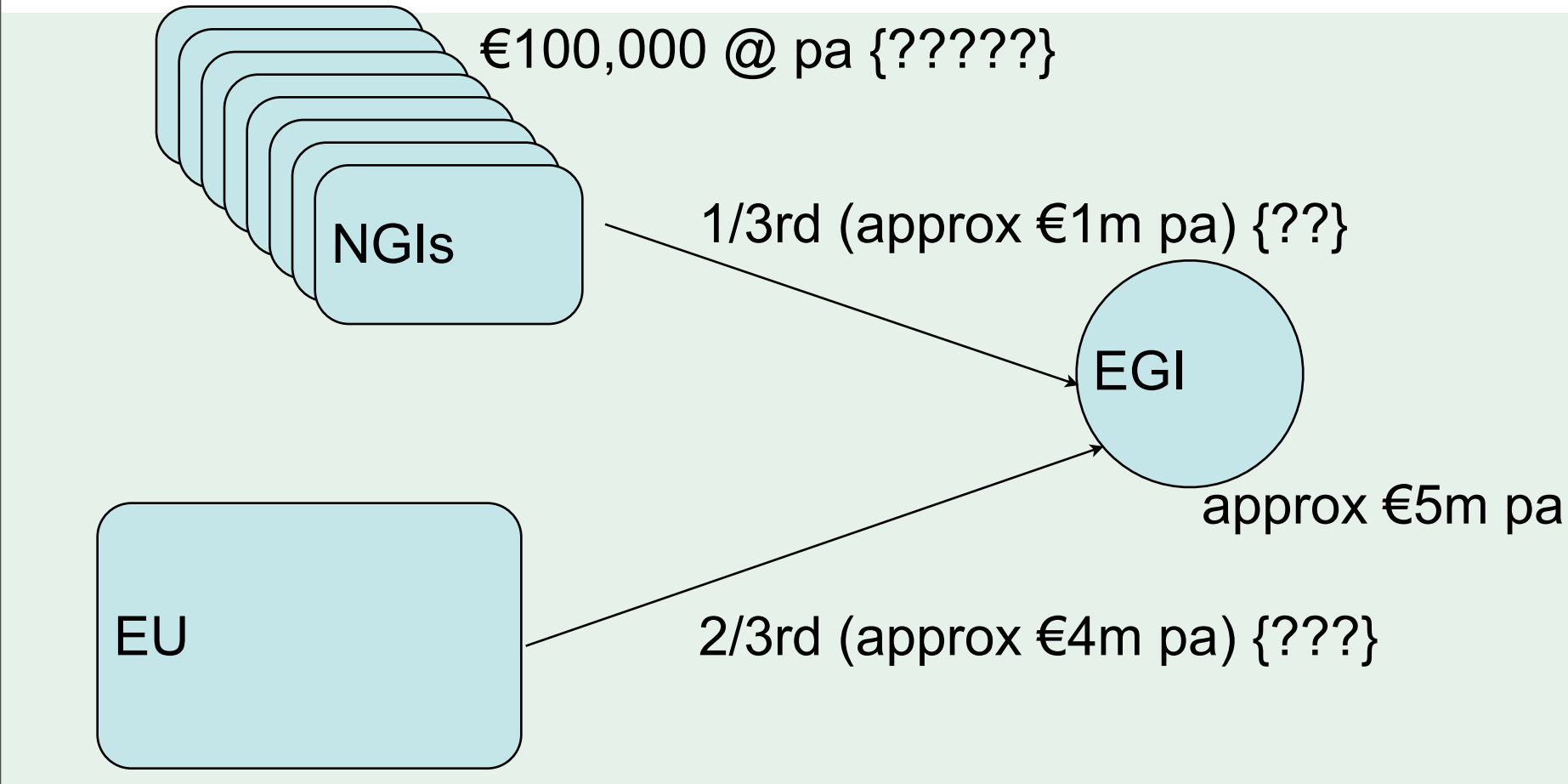
- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …
- Distribution and scheduling of jobs, …
- Monitoring of submitted jobs, …
- Accounting of users and VOs
- Reporting usage allocation to NGIs
- Other centrally coordinated functions

EGI Tasks

- Authentication of users
- Allocation of users to virtual organizations
- Allocation of computing resources
- Authorization of VOs to run jobs, …
- Distribution and scheduling of jobs, …
- Monitoring of submitted jobs, …
- Accounting of users and VOs
- Reporting usage allocation to NGIs
- Other centrally coordinated functions

NGS
National Grid Service

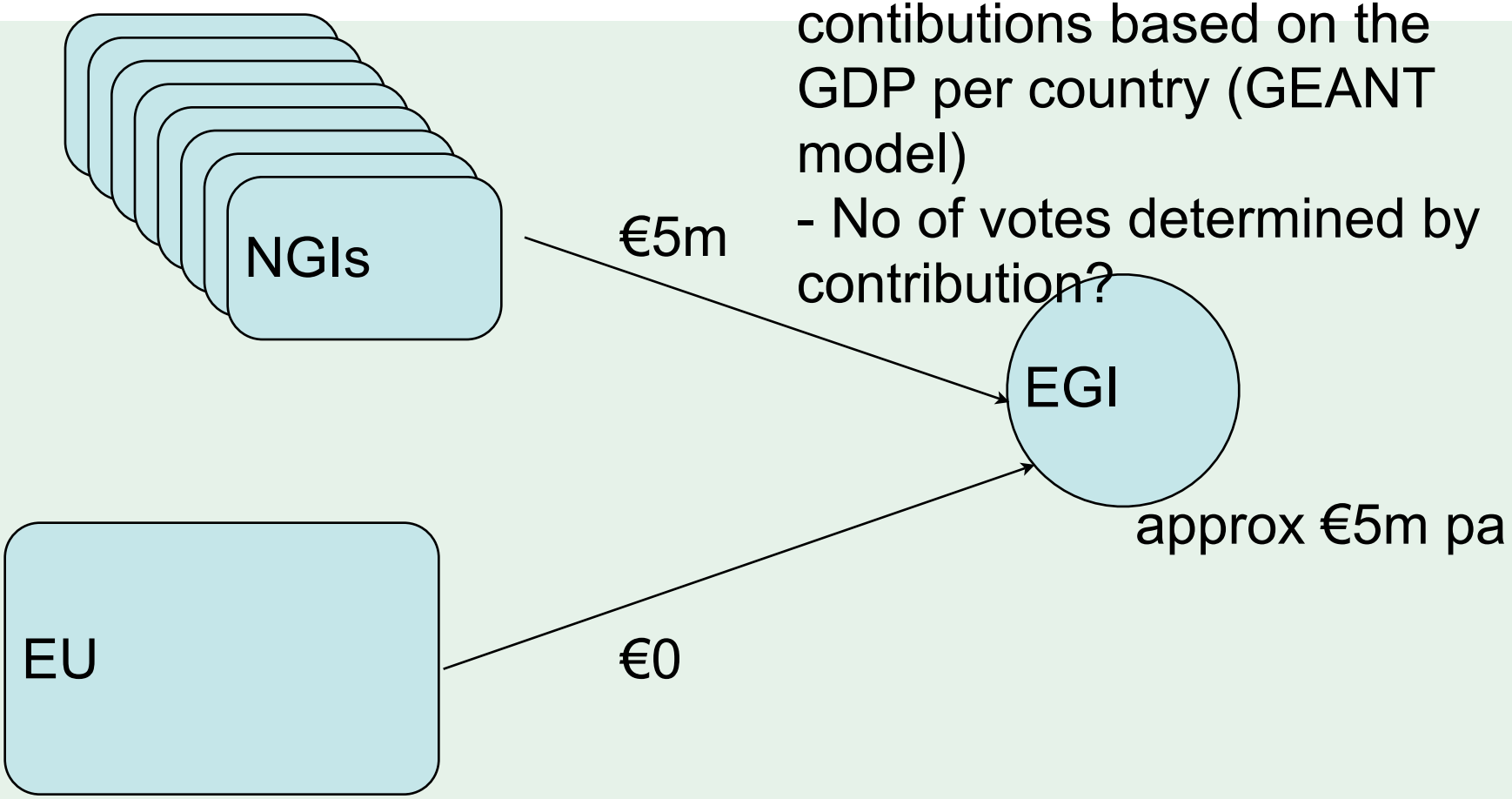
Startup



NGS
National Grid Service

Long Term

Moving towards a system of contibutions based on the GDP per country (GEANT model)
- No of votes determined by contribution?



NGS

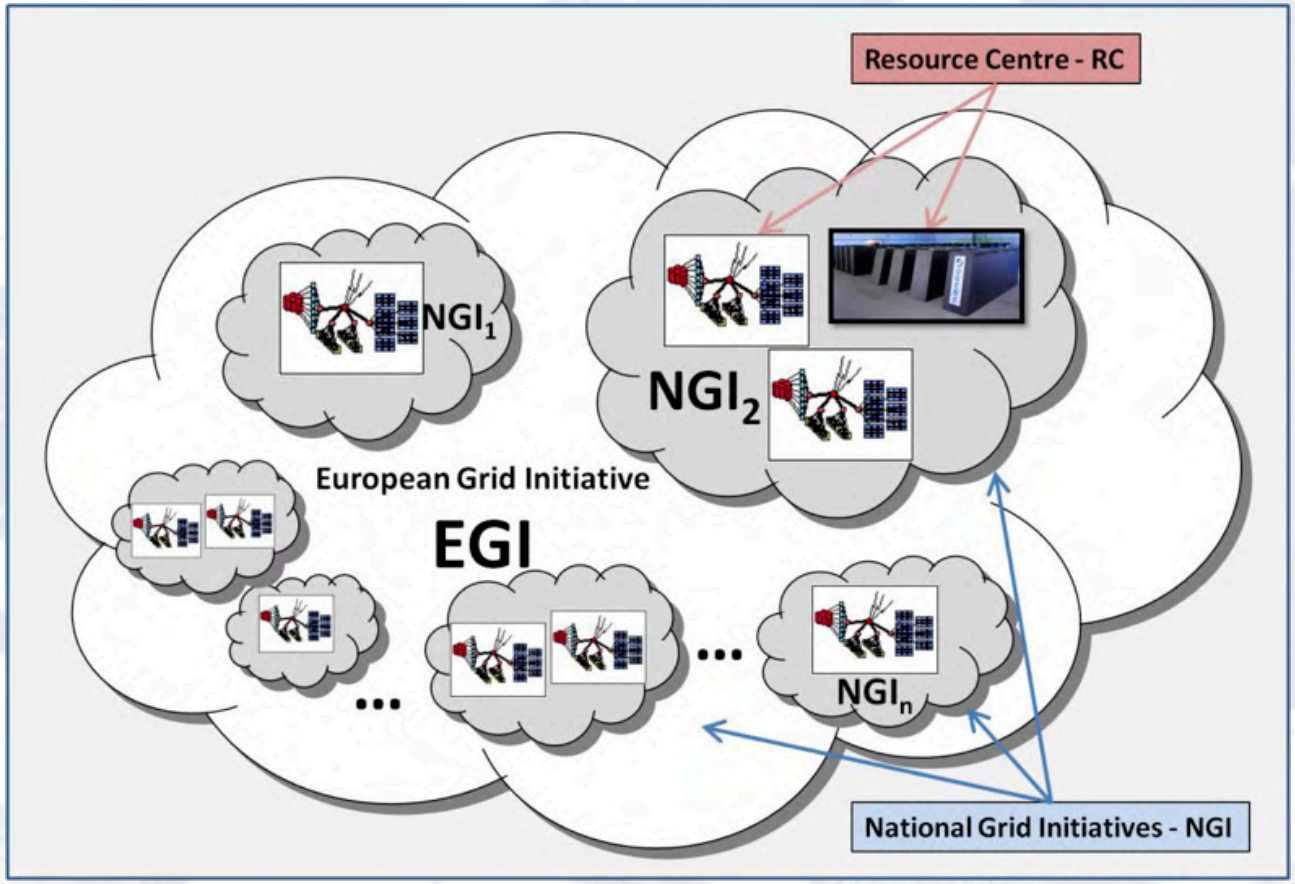
National Grid Service

- **EGI.org will not directly own any grid infrastructure.**

- **It is important to note that EGI is composed of NGIs and EGI.org and the relation between EGI.org and the NGIs is not a hierachical one. EGI.org is rather seen as the “glue” enabling coherence between the NGIs for the benefit of their user communities.**

- It is necessary that the underlying middleware for the European grid be further developed. This development will continue to take place in the ―middleware consortia‖ and is not part of the EGI funding model. EGI will foster middleware commonality and interoperability wherever possible. A common European middleware distribution (UMD) is strongly supported.

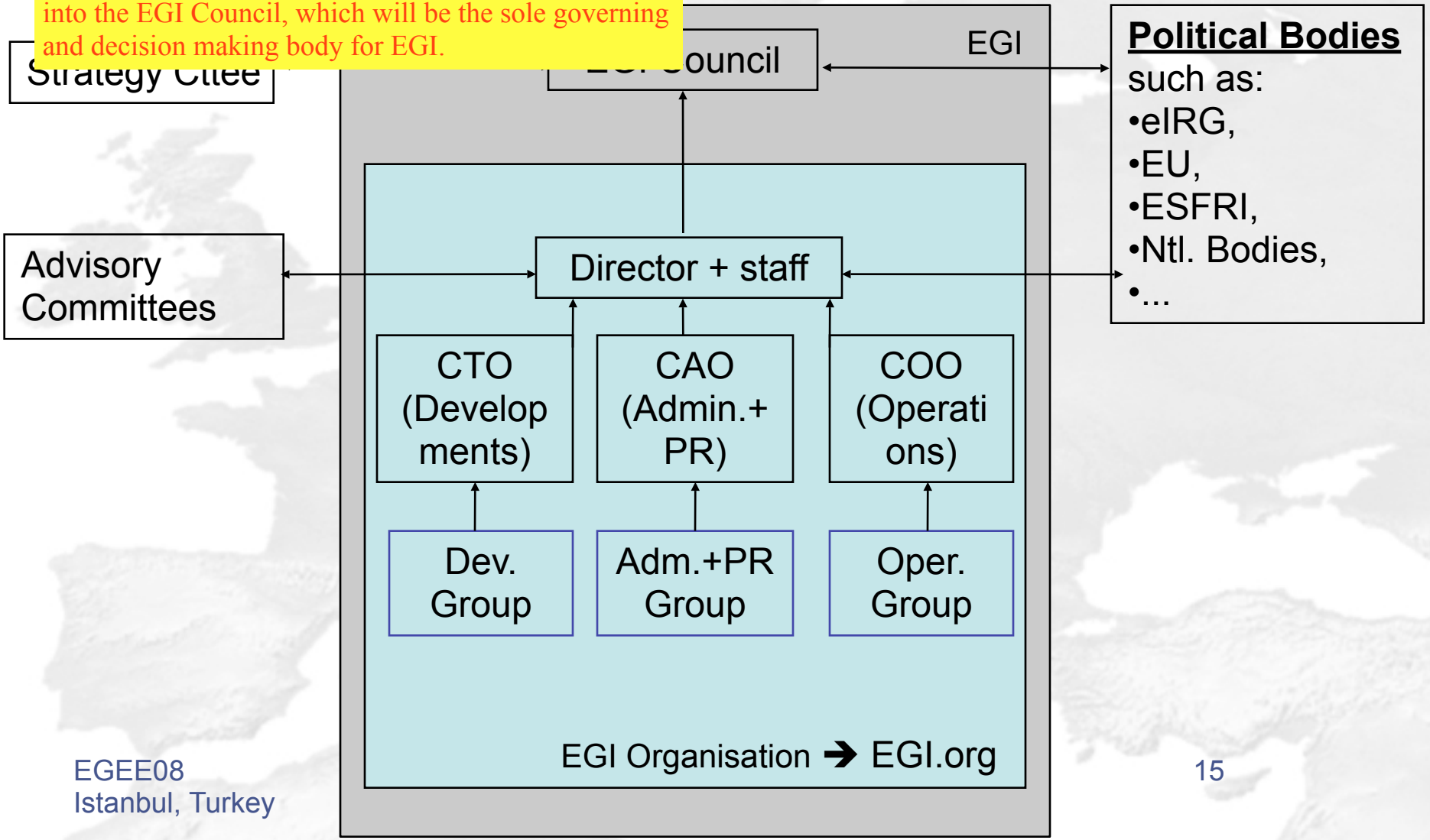
NGI - EGI vision



Continuing the ROCs - generally 1 per country already except SEE & CE - continue extra level (SEEGrid etc)

EGI Management Structure

Upon installing the EGI model and instantiating EGI.org, the EGI Policy Board is expected to transfer into the EGI Council, which will be the sole governing and decision making body for EGI.



Middleware consortium

- To guarantee the continuity of the grid infrastructures in Europe, the natural partners for EGI are the Middleware Consortia around the most largely used European middleware stacks: gLite, ARC, and UNICORE. EGI sees further evolution in the form of an EGI Unified Middleware Distribution (UMD), which does not constitute the development of a new middleware stack but implements a unified distribution of certified components of the current stacks which are currently deployed in the European e-Infrastructure