



European Grid Initiative



# EGGI – the next evolutionary step in Grid infrastructures

Luděk Matyska  
CESNET  
Czech Republic  
([Ludek.Matyska@cesnet.cz](mailto:Ludek.Matyska@cesnet.cz))

# EGI vision

- Join efforts currently fragmented in different Grid infrastructure projects
- To create a shared (common) European Grid Infrastructure
- That connects all actors – users and resource providers and their institutions
- In a sustainable way

# EGI building blocks

- National Grid Initiatives (NGIs)
- EGI.org as a coordinating body
- With the explicit involvement of
  - International organizations
  - Users
- And with support of
  - National funding agencies
  - European Commission

# National Grid Initiatives

- Taking care of national Grid infrastructure in each particular country
- Different organizational models
- Sustainable business models that guarantee long term financial stability
  - As do have NRENs currently
- A legal body, one per country
  - To guarantee the coordination of efforts within a country

# EGL.org

- The coordinating body at the European level
- Medium sized organization, “**owned**” by NGIs
- Guarantees the coherent setup and operations of the European Grid infrastructure

# The road towards EGI

- EGI Design Study
  - An EU project (September 2007, December 2009)
- Goals
  - Design of a new organizational model of a sustainable pan-European Grid infrastructure
  - Securing the endorsement of the proposed design
  - Preparation and setup of the new organization (both the EGI as a whole and EGI.org in particular)
- The EGI must start before end of the current largest Grid infrastructure project, the EGEE III

# Past Milestones

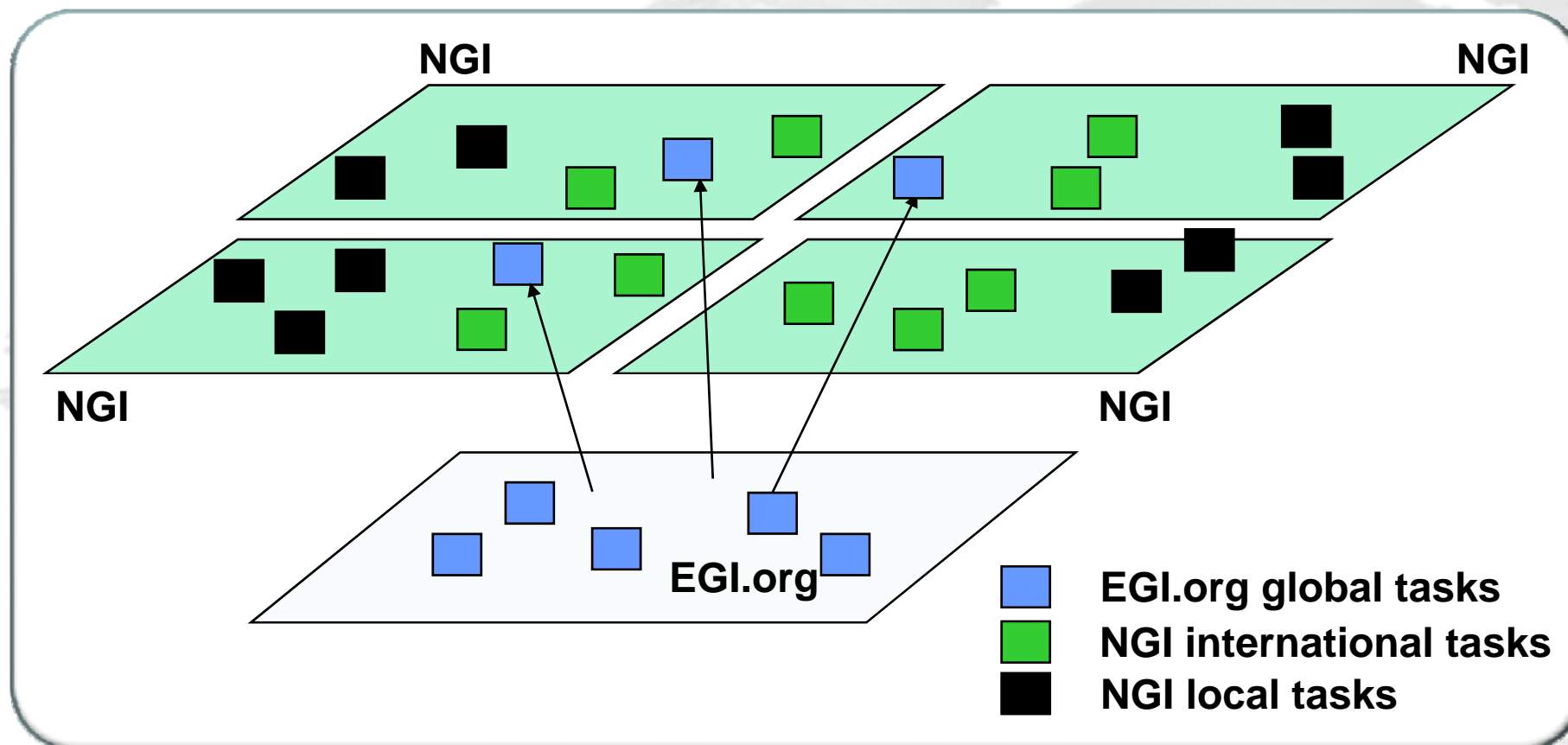
- Use case collection and analysis
  - To get clear understanding of needs and expectations of all actors
- EGI Functions: First definition
  - The synthesis of needs and expectations, a first picture of what EGI should do and how these functions are distributed among EGI.org and NGIs
- NGI Guidelines
  - To precise framework each NGI must fit in
- The Blueprint
- EGI.org location – Amsterdam

# The Blueprint

- General framework for the EGI
- Defines role of
  - EGI.org and its global tasks
  - NGI international tasks
    - Operations
    - User and application support
    - Middleware maintenance
- Business model
- Financial framework



# EGI.org and NGI Tasks



# EGI.org Global Tasks

- Operations and security services
- Middleware services
- User community services
- External Liaison services

# EGI.org Operations and Security

- EGI operations portal
- EGI configuration repositories
- EGI monitoring data repositories
- EGI accounting repositories
- EGI central ticket handling system
- EGI security policies and coordination
- EGI global incident response coordination
- Middleware deployment and rollout
- Interoperations with non-EU grids
- EGI resource allocation and brokerage
- EGI catch-all core services

# EGI.org Middleware Services

- Quality and conformance criteria for UMD components
- A repository of certified UMD components
- Tools to enable and support the processes
  
- UMD – Universal Middleware Distribution
  - Best interoperable components from different current middleware stacks
  - Production level quality

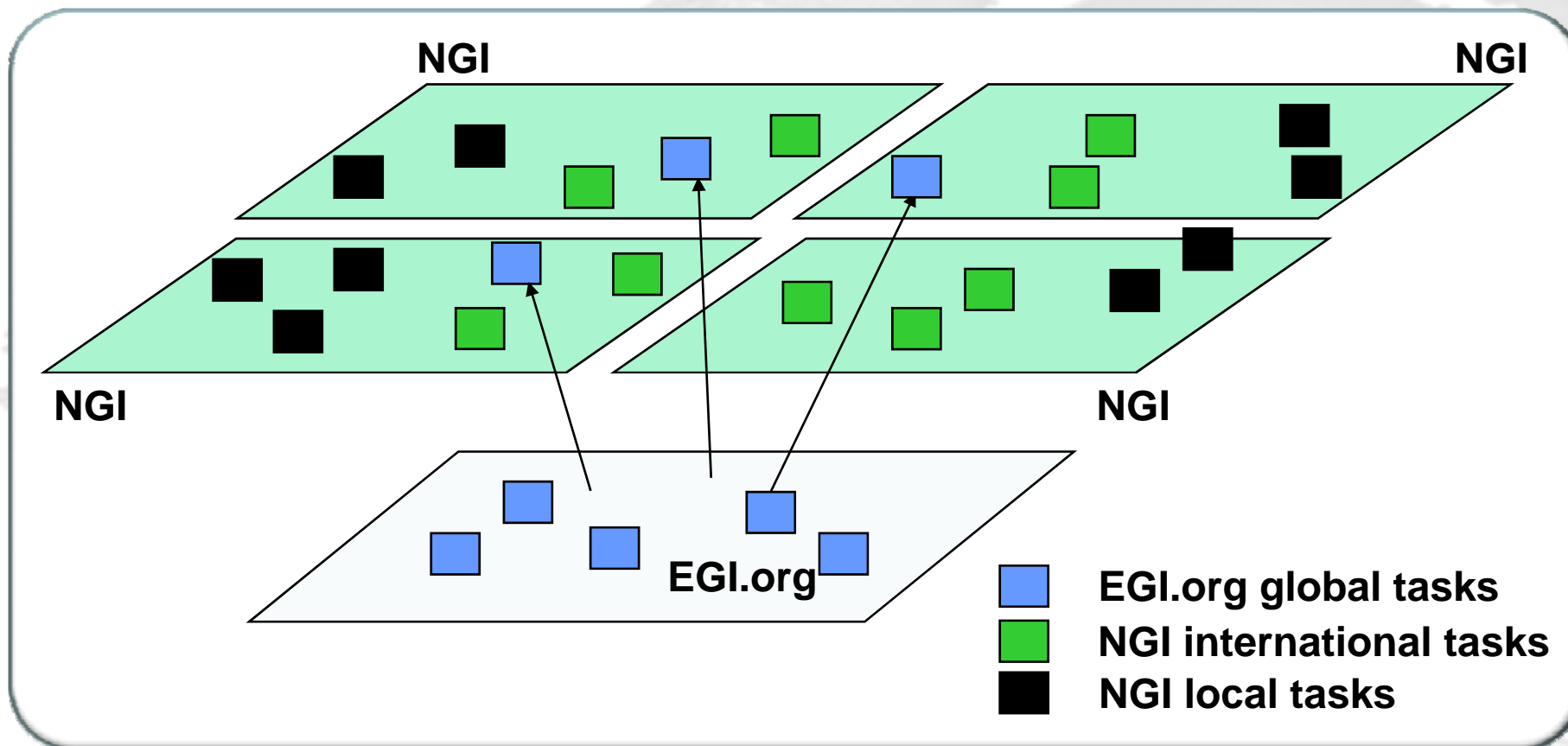
# EGI.org User Community Services

- Services for new and small communities
- Front desk operation
- Coordination of SSC
- Coordination of training effort
- Repository of training materials
- Event organization
- Grid planning and technical coordination

# EGI.org External Liaison Services

- Dissemination
- Central EGI Web maintenance
- Policy and external liaisons
- Standardization bodies liaison

# EGI.org and NGI Tasks



# NGI International Tasks

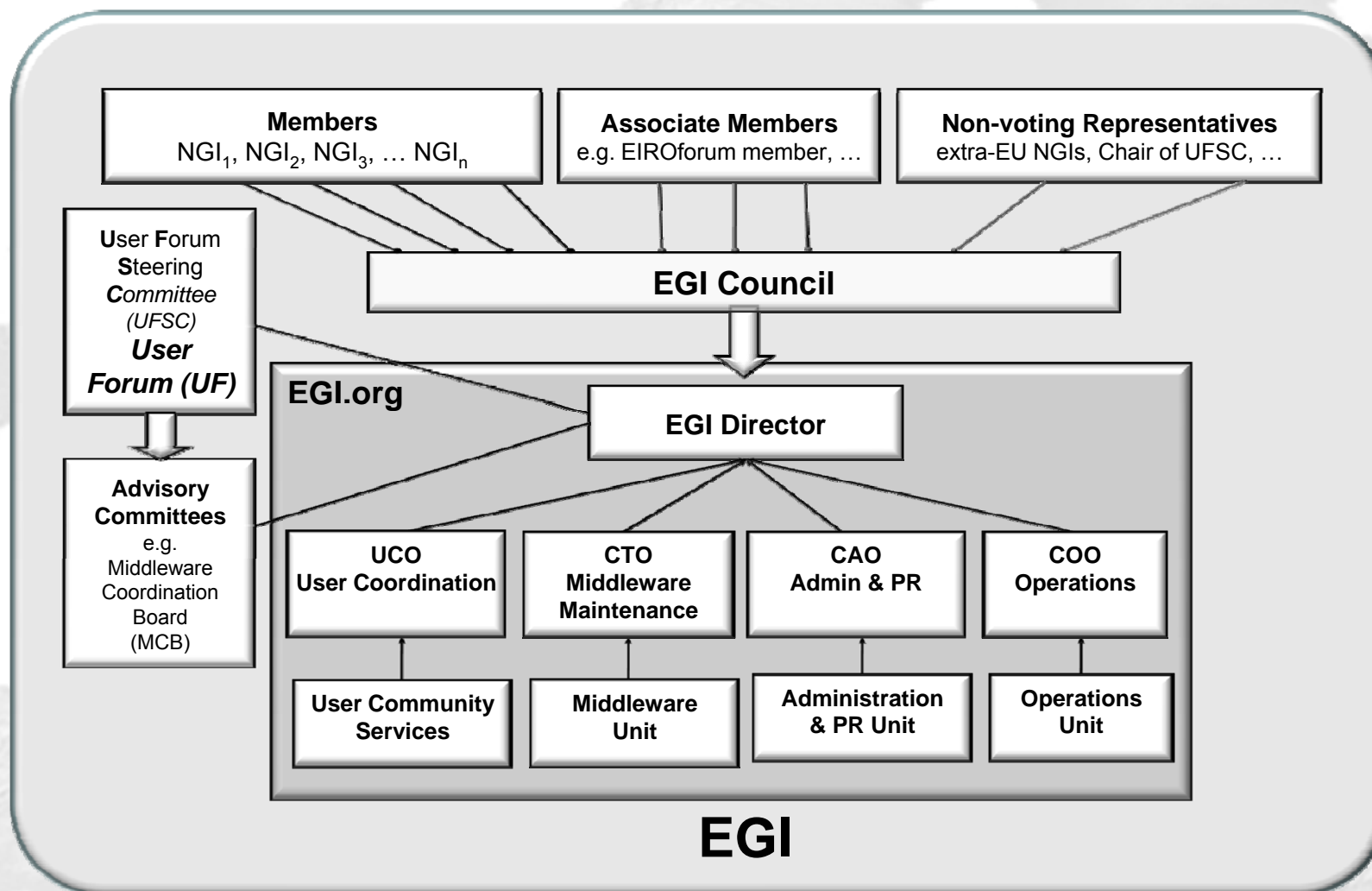
- Tasks that must be run by each NGI to create a truly international EGI
  - Cover the responsibilities stemming from international collaboration
  - Reflects same or similar tasks at the national level
- Different size of NGI teams responsible for these tasks
  - Reflects NGI size and also its involvement in the international collaboration



# NGI International Tasks II

- Corresponds to the EGI.org coordination tasks
  - Operations and security services
  - Middleware services
  - User community services
- “Nationalization” of these services
  - In fact interface between national and international service
  - The man power needed “just because” of EGI just of small fraction of all the man power needed to operate national Grid infrastructure

# EGI Management/Governance



# Funding

- National and Institutional funding for research infrastructures – NGI Grids
- EC funding
  - International coordination
    - EGI.org global tasks
  - International activities
  - Innovation
  - Start up phase
- National co-funding of all these activities

# Resources for EGI.org

<b>Costs for</b>	<b>EGI.org Costs (in FTE/a)</b>
<b>Operations</b>	17
<b>Middleware interfaces and final certification</b>	8
<b>User Community Services</b>	11
<b>External Liaison Functions</b>	4
<b>EGI.org Management and Administration</b>	11
<b>Total</b>	<b>51</b>

# Resources in NGIs

Task	Small NGI	Medium NGI	Large NGI	“Sum”
<b>Operations and Security</b>	2-4 FTE	5-10 FTE	14-22 FTE	225 FTE
<b>International User Community Services</b>	0.5-1.7 FTE	1-2.5 FTE	1.5-4 FTE	60 FTE
<b>Specialised Support Centres</b>				50 FTE

**Based on current experience  
These resources exist in countries with operational grid  
infrastructure**

# EGI Financial Reference Model

	NGI International tasks		Middleware maintenance	EGI.org	Total
	Operations	User services			
<b>Costs</b>					
EGI Effort (FTEs)	225	110	70	51	
EGI costs (M€/year)	20.25	9.90	6.30	4.59	41
<b>Income</b>					
NGI membership fees (M€/year)				1,0	1
EC Contribution (M€/year)	10.125	4.95	3.15	1.80	20
NGI, Middleware consortia and EIRO/ESFRI co-funding Contribution (M€/year)	10.125	4.95	3.15	1.80	20

# Universal Middleware Distribution

- Production level middleware components
- Specifically tailored for EGI
- Coming from different sources
  - The middleware consortia
  - VOs and their middleware developers
  - Eventually commercial middleware adoption
- Process strictly in hands of EGI
  - Inclusion of components, conformance testing and certification

# Transition towards EGI

- Major concerns for large European Grid infrastructure projects, esp. EGEE
  - Need to keep users “happy”
  - Need to keep resource providers “happy”, too
  - No visible gap in operations
  - Any necessary changes announced in advance and clearly described and explained
- All this implies rather strict constraints



# Transition towards EGI II

- Major issues
  - NGIs maturity level
    - The EGEE JRUs not always identical with the proto-NGI
    - NGI not fully affiliated with EGEE (or similar projects)
    - Representing/working with different user communities
    - Different approaches toward national infrastructures
  - EGI.org
    - Key personnel identification

# Further steps

- NGI assessment
  - Requirement from the review
    - To identify status of preparedness
  - To confirm
    - Acceptance the EGI framework as described in the Blueprint
    - Commitment to the EGI.org fees
    - Commitment to the NGI international tasks and their co-funding
  - MoU to define the EGI Council membership
    - Preceded by Letter of Intent to speed up the process

# Securing EGI funding

- Targeting EC call in Autumn this year
- A “Transition towards EGI” project
  - To setup all the components
  - To take over EGEE and other Grid infrastructure projects (esp. operations)
  - To initiate and check (by implementing) all the processes described in the Blueprint
- UMD development project(s)
- User communities support

# Expected further events/processes

- For EC co-funding, target the EC call this Autumn
- Identification of project partners
  - Loi and MoU, Establish the EGI Council in May
- Confirmation of project editorial board
  - By NGIs who signed the MoU (the EGI Council)
  - In parallel with EGI.org setup and key personnel identification
- Writing the project
  - Since July/August 2009

# Transition Milestones

- March 12: Deadline for technical persons from NGIs
  - Will work on transition document (which will also be a core of future project)
- Early April: MoU and Lol available
- End April: Lol signed by interested NGIs
- May 6: (proto)EGI Council established
  - NGIs signing Lol are constituents
  - The EGI Project(s) team confirmed; this includes the project director(s) identification/confirmation (the person who will lead the team(s))
- June: MoU signed, (full)EGI Council setup
  - The *Transition towards EGI* Deliverable published
- March—May: EGI.org setup preparation
  - Includes search for EGI.org director and identification of EGI.org key personnel
- June: EGI.org director appointed/identified
- September: EGI.org setup at the latest (one month before the call closure)
- July—December: EGI Project(s) preparation and submission
  
- The MoU signing will continue after June, but the “latecomers” may not have direct influence on the composition of project preparation team nor on the selection of EGI.org director

# Summary

- EGI represents the future of European Grid Infrastructure
- First step successfully completed
  - The Blueprint
    - Provides necessary framework definition
  - The EGI.org location known
- Need for finalization of initiated processes
  - Most notably NGIs final establishment
  - EGI.org foundation
  - SSC setup
  - Clear definition of the transition path for all EU and national Grid infrastructures
- EGI preparation in good shape, but still a long way to go



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<http://www.eu-egi.eu>  
[contact@eu-egi.eu](mailto:contact@eu-egi.eu)