OpenGridForum

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Utilizing Grid in the Next Generation Data Center

Next Generation Data Center Conference

San Francisco
August 2007

Grids

Narrow

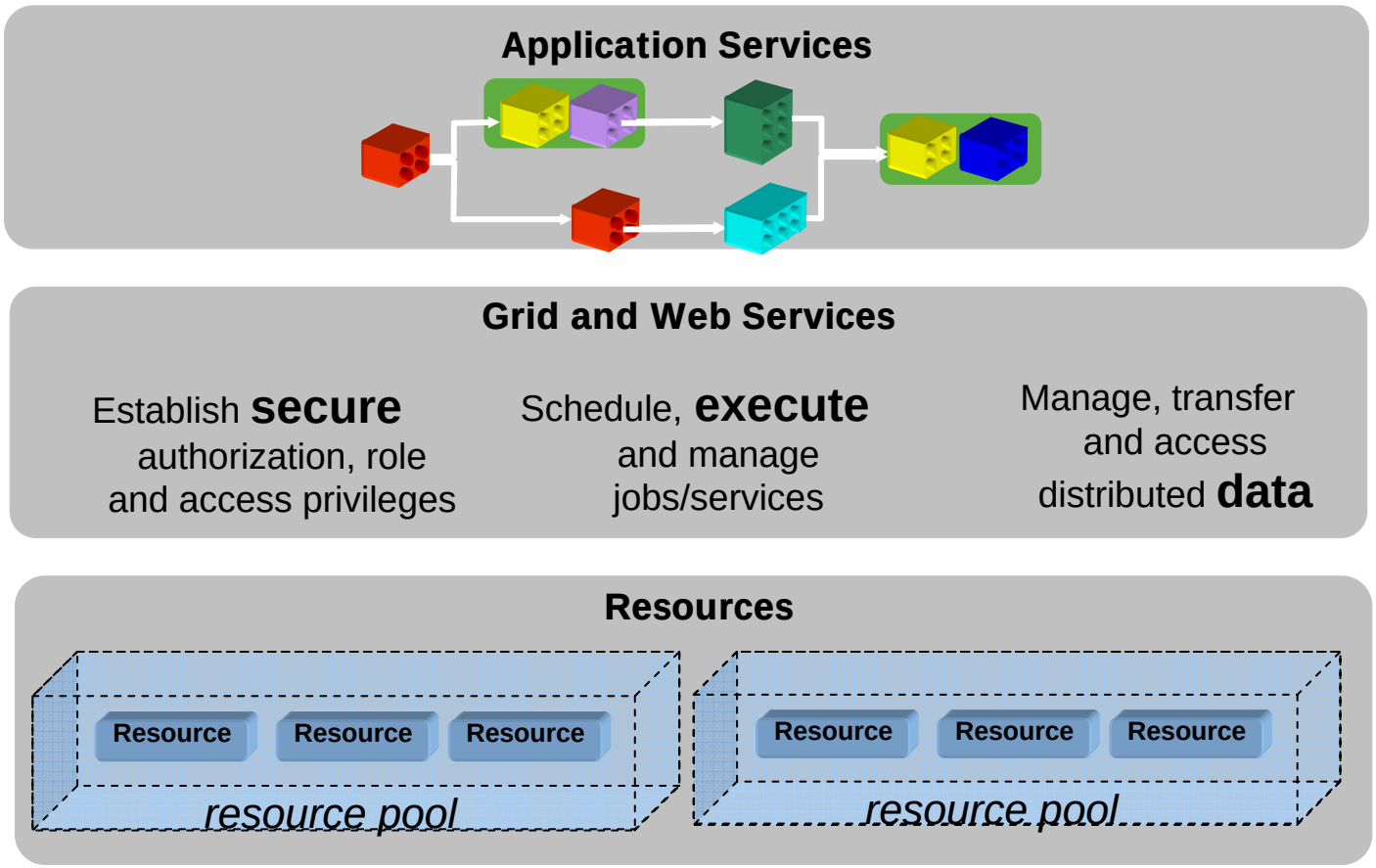
Grids as application-specific deployments

Broad

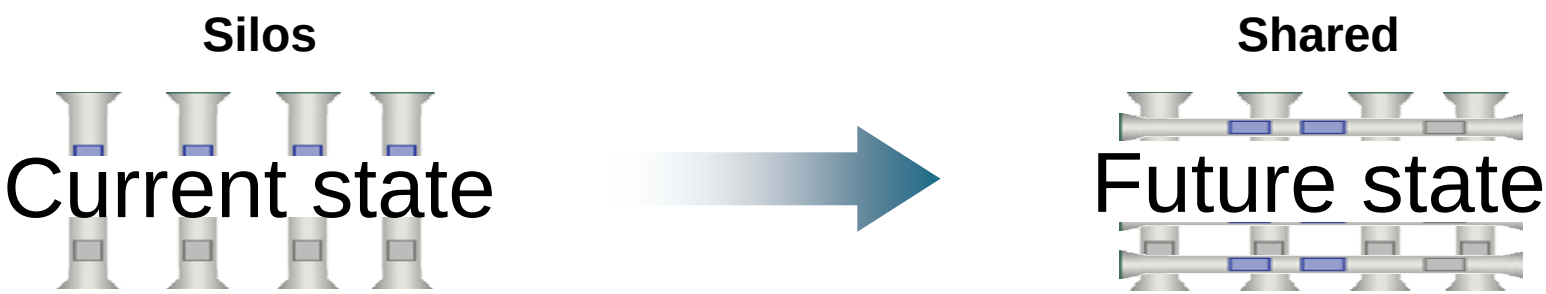
Grids as application-agnostic infrastructure

The “broad” interpretation of Grid is realized through …

… a horizontal layer of integration software that aggregates a network of resources into a system on which to run applications services



Grids and Next Generation Data Centers

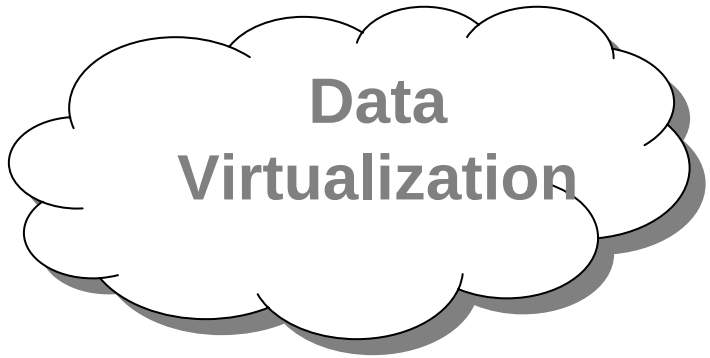


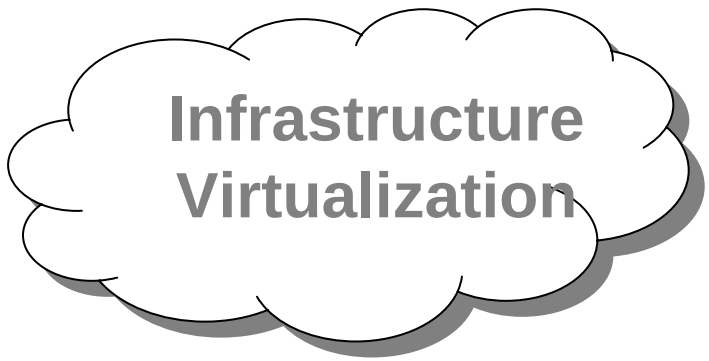
- **Break the static links** between applications, data and the underlying infrastructure
- **Manage resources and relationships** based on workload, automated processes, and policies
- **Move toward enterprise-wide shared services** that support multiple lines-of-business & partners

Break the static links …

Match applications to available resources

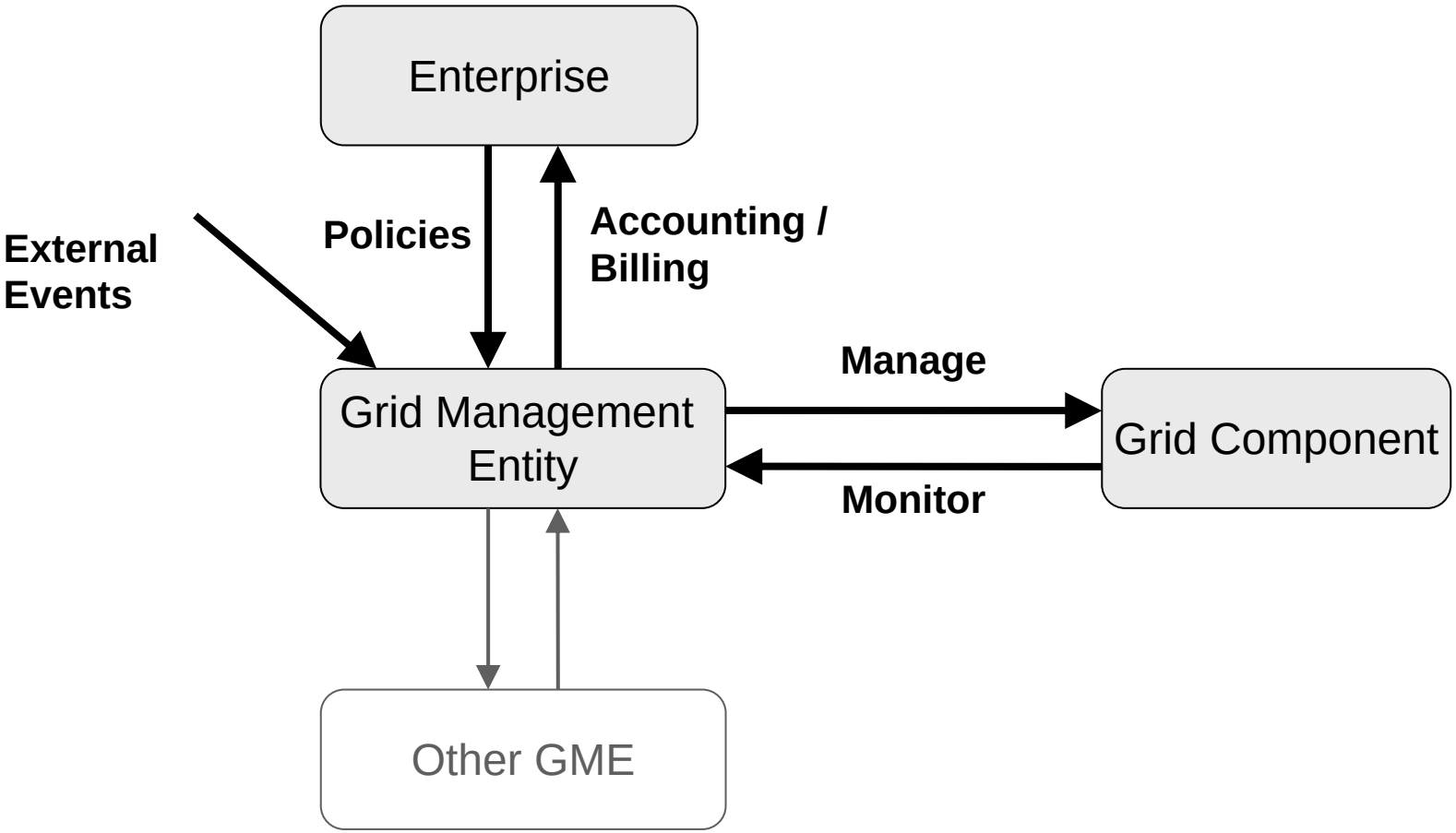
Access data at any location, in any format



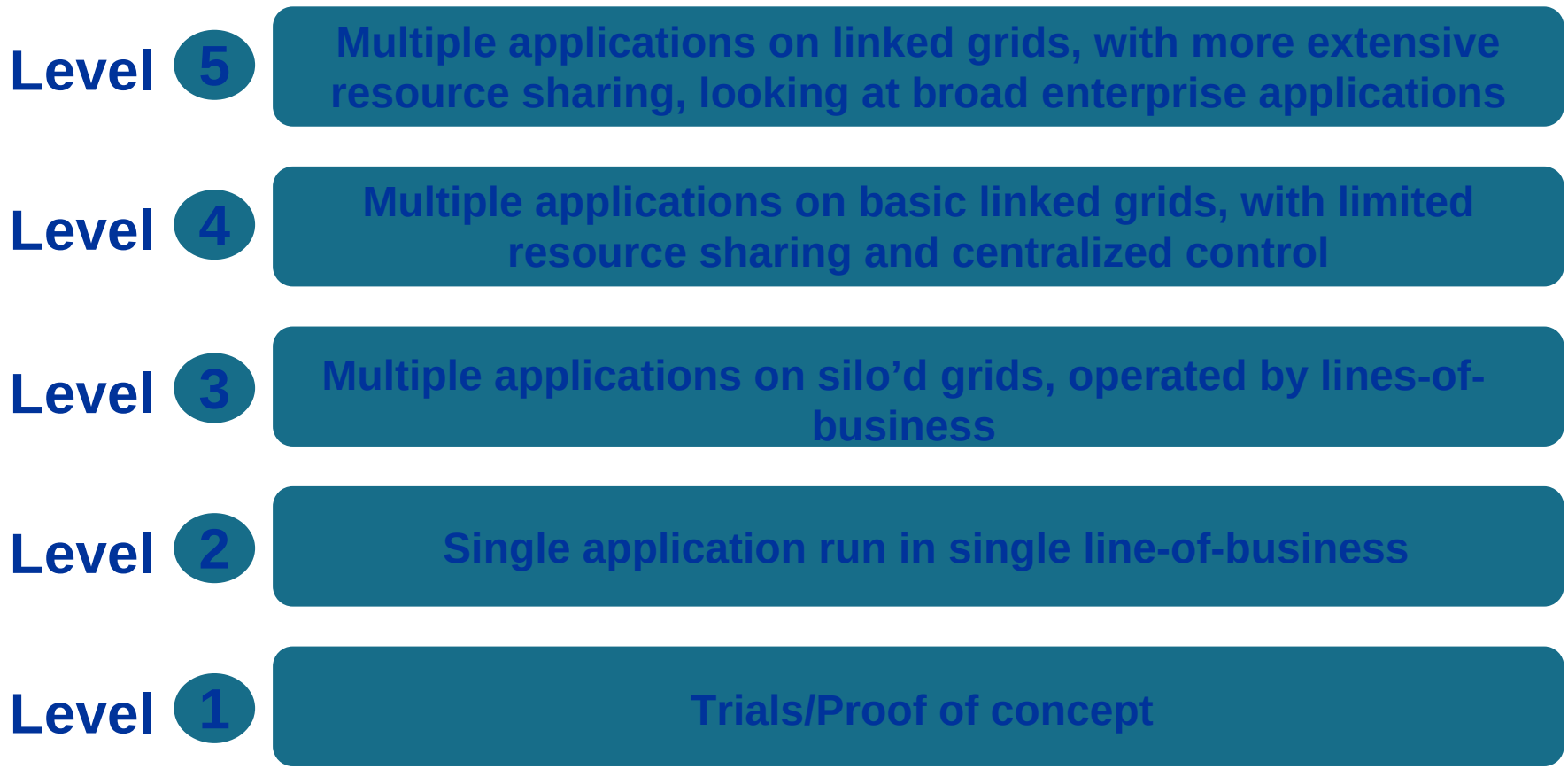


Pool, share and aggregated resources

Manage resources and relationships …



Move toward enterprise – wide shared services …



Source: 451 Group, January 2007

Grid Computing - The State of the Market

OGF Focus in the Data Center Example – Reference Model

OGF Reference Model

- Describe the services and resources that comprise a data center grid environment
  - Common language, glossary, taxonomy, ontology and formal model to describe Grids, what they are, how they are composed, managed etc.–
  - Basis for architecture, interface design/specification
  - Foundation for defining integrated management services

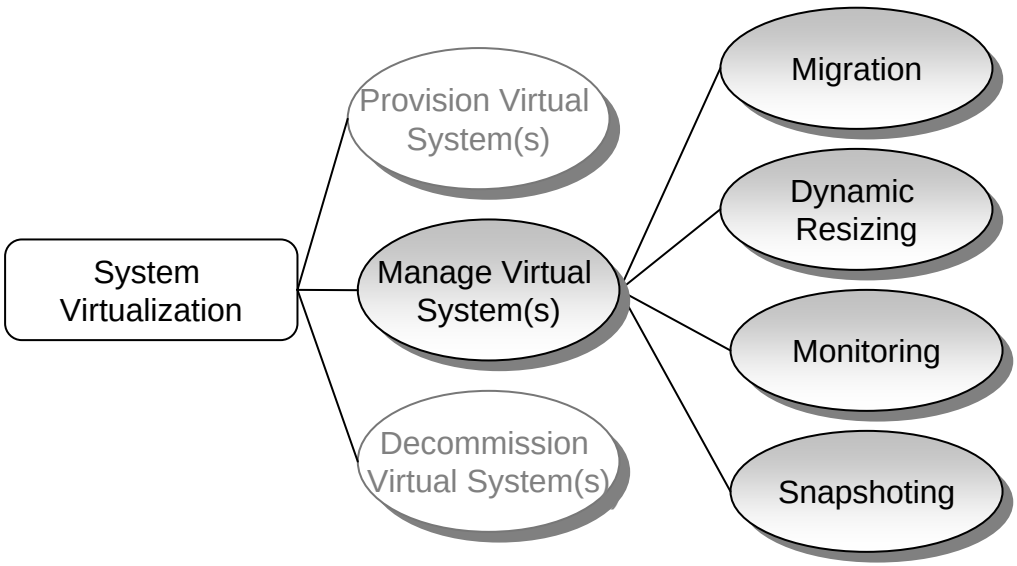
OGF Focus in the Data Center Example –Information Models

Information Models

- Facilitate interoperability between Grid infrastructures via common information models and reference implementations
- Collaborate with DTMF to insure Grid requirements comprehended in CIM

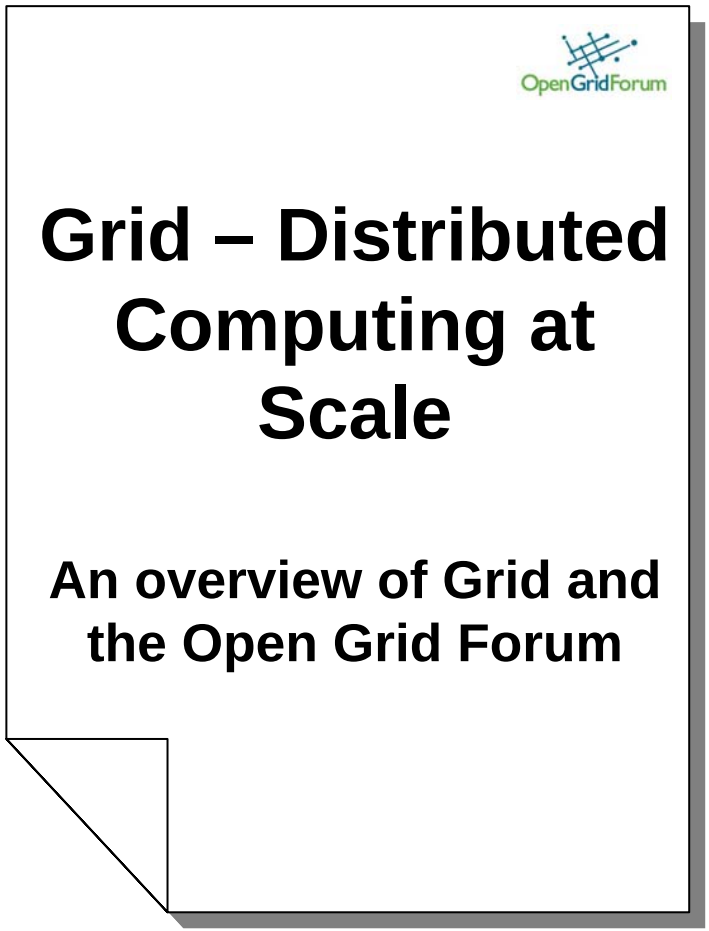
OGF Focus in the Data Center Example – Grid & Virtualization

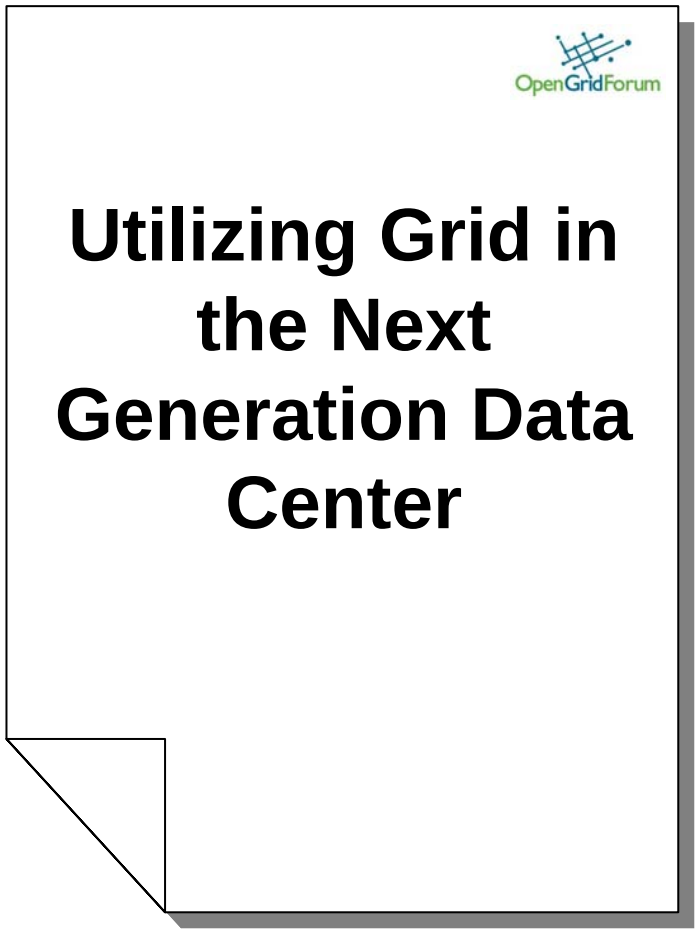
Grids & Server Virtualization



- Identifying the synergies between Grid and server virtualization - documenting the specific use cases and virtualization integration profiles for grid infrastructure.

For more information ….





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Summary

Grid : An integrated infrastructure for NGDCs

- Integrated architecture for application, data and infrastructure abstraction and management
- Matching and sharing application workloads (batch, services, transactional) with infrastructure based on policy, demand and load
- Supporting multiple applications on shared and service oriented infrastructure for greater utilization
- Integrating and federating diverse, large scale data resources including static and streaming data
- Managing the dynamics of change as the infrastructure grows, shrinks and changes
- Solving problems limited only by the resources you and your collaborators can connect together as a system and manage

Thank You!

OpenGridForum

Open Forum for grid innovation and outreach

Open Standards for grid software interoperability

OGF welcomes your questions and further engagement:

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