

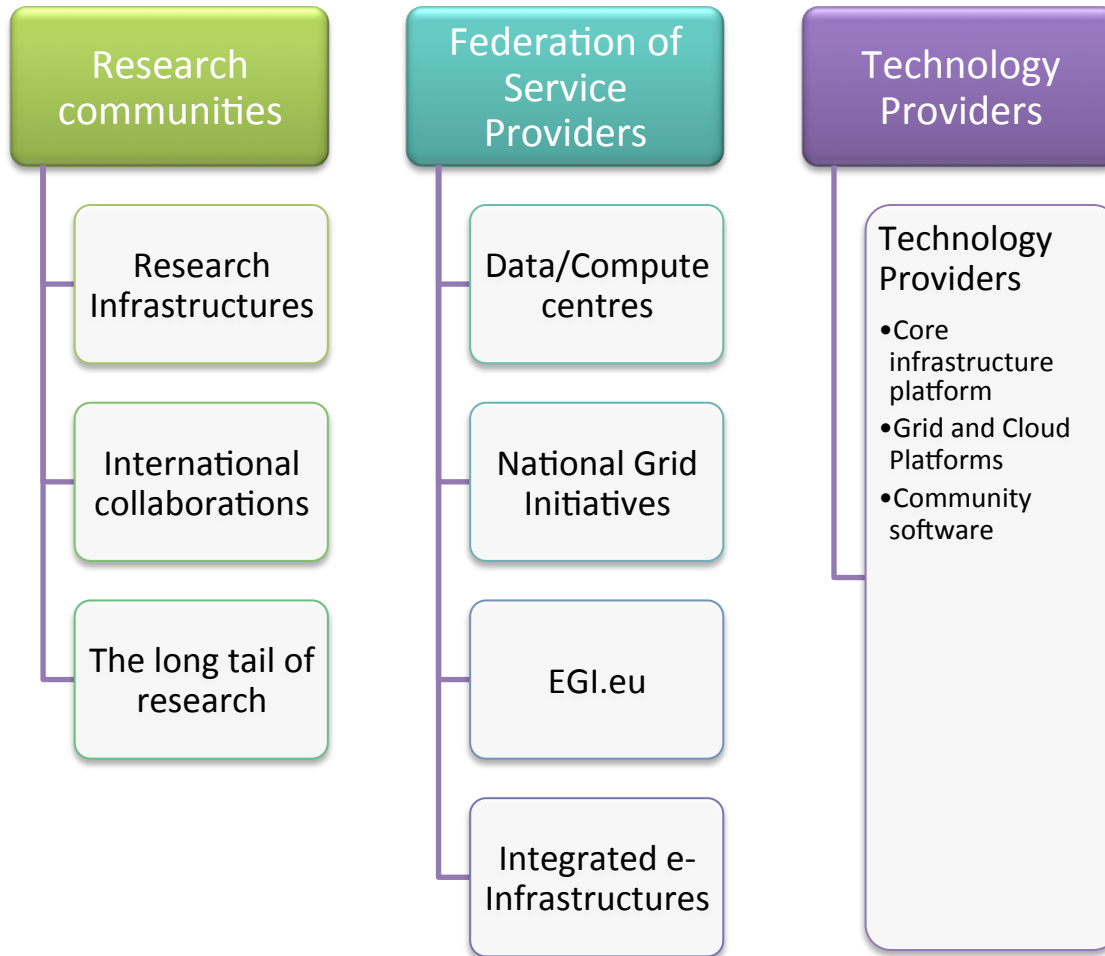
# European Grid Infrastructure Services and Business Models

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# Who is EGI?



**EGI.eu**

EGI core services  
for federating  
Coordination  
Communications  
Strategy and policy  
development

# How are services offered?

- Combination of different business models depending on the Service Provider
  - Best-effort sharing of compute and storage resources (medium-term storage) → free, depending on local policies of service providers and availability of capacity
  - Guaranteed capacity
    - Free access to national resources: national grants for research communities with national footprint
    - Free access to distributed pool of resources, EGI.eu as broker, SLA Customer  $\leftrightarrow$  EGI.eu, EGI.eu establishes OLAs with Service Providers
    - Free at point of use/Pay per use: SLA Customer  $\leftrightarrow$  Service Provider
  - Federation of own ICT services
    - EGI.eu offers the services for the federation, sustained by national member fees → future: also user community fees and EC support

# For which customer segment?

**Long tail** → national grants and voluntary computing (sharing of resources, desktop grids/IDGF)

**International collaborations** → central access to distributed resource pool with EGI.eu brokering, e-GRANT portal (<https://e-grant.egi.eu/>)

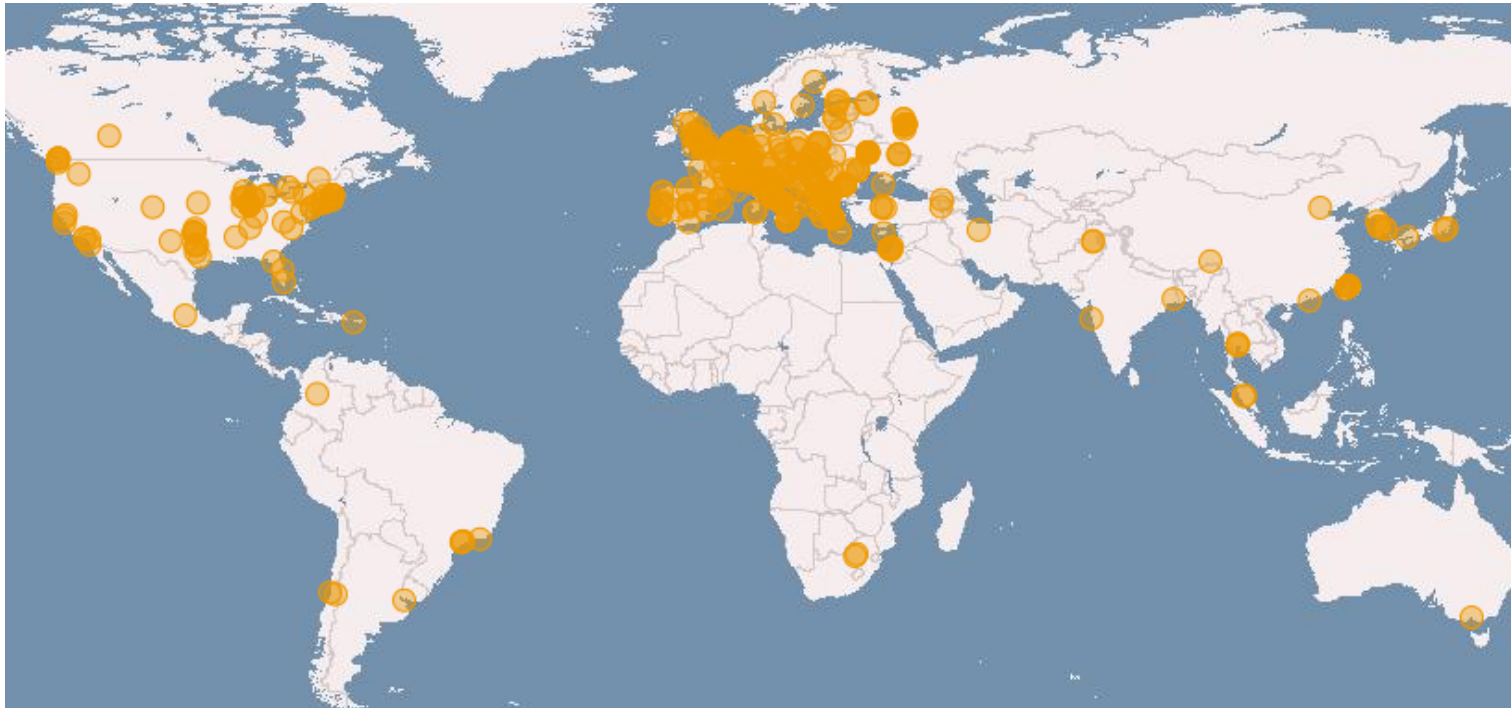
**Research Infrastructures** →

- I. EGI services for the federation of own data/compute centres,
- II. procurement and marketplace (future, both publicly-funded and commercial providers)

**EGI Service Providers**

- A decade long experience in federating services **secure shared data access and processing**
  - Distributed platform for **HTC** and data management
  - Distributed federated **cloud** based on open standards (<http://go.egi.eu/cloud>) **NEW!**
  - Tools for federated service operation
- Based on GEANT/NREN connectivity 10 international and 7 national Virtual Organisations for Life Sciences

# Current capacity (Grid)



Distributed and federated data and computing facilities  
Grid and Cloud compute platform  
340 data centres in 34 National Grid Initiatives/EIROs  
404,000 logical CPU cores

10 years of support to science  
> 200 research projects  
190 PB disk, 180 PB tape  
1.6 M job/day  
> 99.6% reliability

- Cloud IaaS
  - Storage
    - 6 PB
  - Computing
    - 18,000 cores on cloud (IaaS)
    - National grants for user communities
    - Various National Grid Initiatives have service agreements in place for BMB RIs

- AAI services, X.509 ID federation, extensions for integration of other IM federations
- Storage management (srm, CDMI) (short, medium term)
- Data management
- Data transfer and replication (gridftp, http, WebDAV)
- High throughput computing (serial, parallel jobs)
- Cloud IaaS for custom services (future: PaaS and SaaS)
- Service registry and discovery
- Workload management, gateways, workflow engines



- RI and e-Infrastructure sustainability
  - Coordinated procurement of resources/ services at European scale?
  - Sharing of costs of operations?
  - Common backbone of ICT services for RIs with EC support for procurement and operations?