EGI Overview

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Technical Outreach Manager
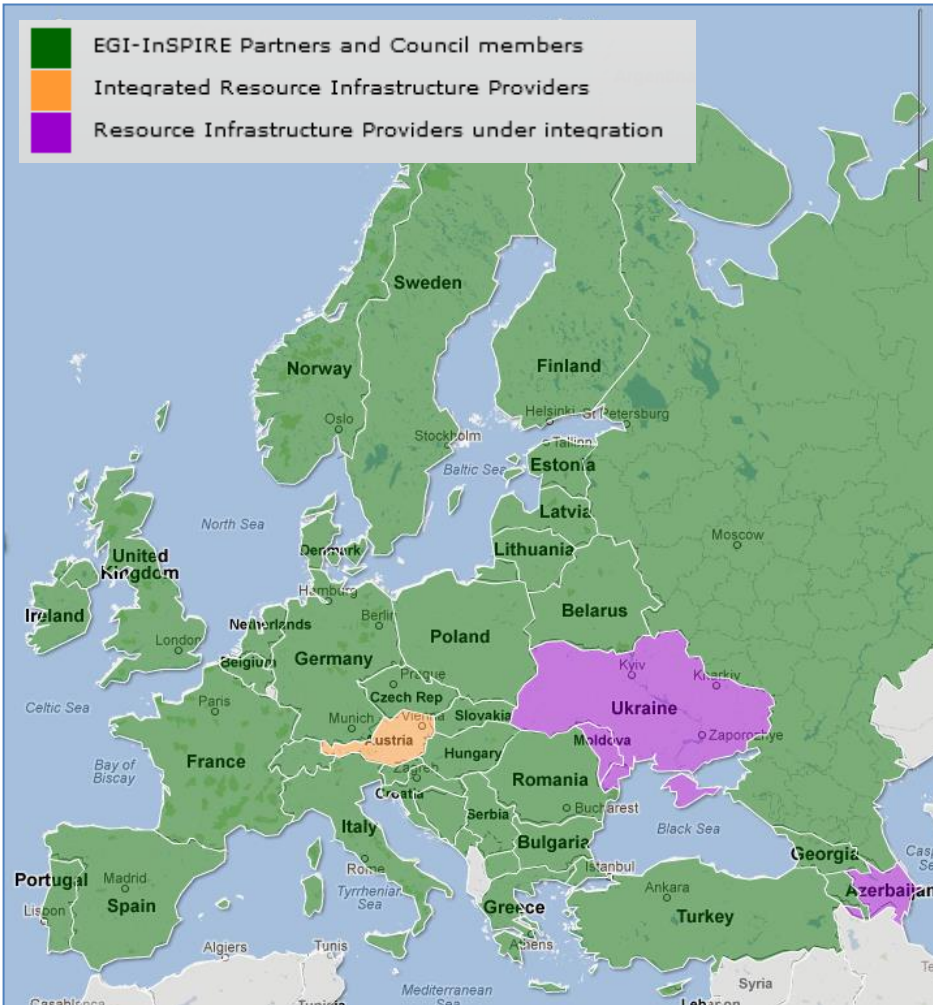
User Community Support Team (UCST)

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e-infrastructure

- **E**uropean
  - Over 35 countries
- **G**rid
  - Secure sharing
- **I**nfrastructure
  - Computers
  - Data
  - Instruments
  - …. and beyond!!

EGI-InSPIRE Partners and Council members
Integrated Resource Infrastructure Providers
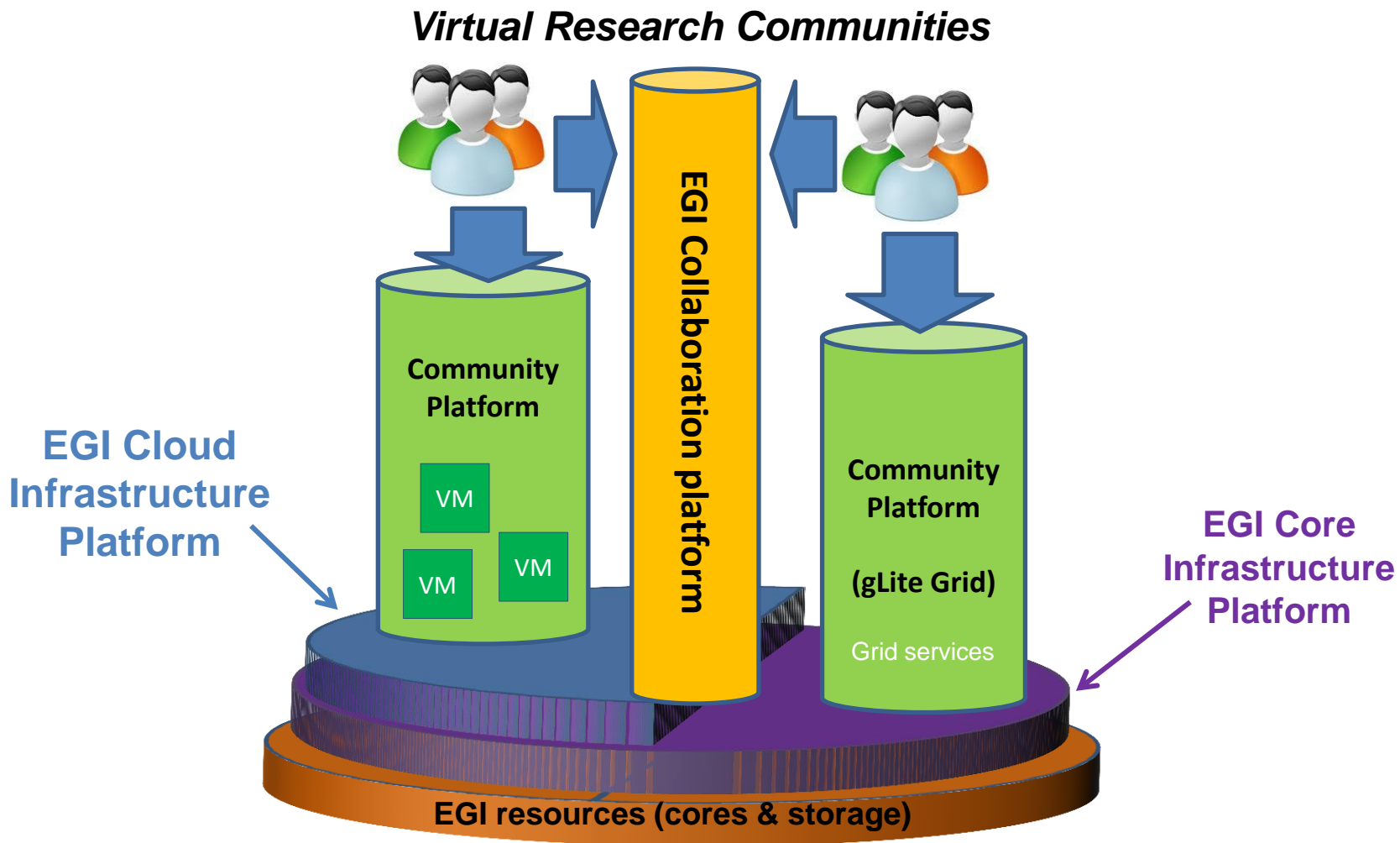Resource Infrastructure Providers under integration

(Snapshot: April 2012)

EGI, EGI.eu, EGI-InSPIRE

- EGI – an open collaboration
  - To support the digital European Research Area through a pan-European research infrastructure based on services federed from the NGIs
- EGI.eu – a Dutch fundation owned by the NGIs
  - To coordinate the work of EGI (operations, technology, user support, policy, community & communications, administration)
  - Sustainable small coordinating organisation
- EGI-InSPIRE – an FP7 project
  - Supports EGI.eu and EGI to transition to sustainable operational model

EGI's Strategic Focus

- Community & Coordination
  - Community building through events.
    - Next event: EGI Community Forum Manchester April 2013. http://cf2013.egi.eu
  - Community networking, marketing and outreach through the NGIs

- Operational Infrastructure
  - Operate a European wide infrastructure
  - Offer its use to other research infrastructures
  - Build a federated cloud environment

- Virtual Research Environments
 - Enable 3rd party integration & operation of VREs

http://go.egi.eu/EGI2020

- Be a neutral resource provider
  - Any application, any domain, any technology
  - A platform for domain specific innovation & use
  - Integration of any compliant resource
- End-user needs and technologies change
  - Allow communities to deploy their own services
  - Give communities the power to meet their own needs

EGI platforms

Virtual Research Communities

EGI Collaboration platform

Community Platform

VM
VM
VM

Community Platform

(gLite Grid)

Grid services

EGI Cloud Infrastructure Platform

EGI Core Infrastructure Platform

EGI resources (cores & storage)

- Service monitoring
- Service useage accounting
- Security (Auth, Auth)
- Staged rollout of services
- ...

The current community platform: UMD

- External technology providers: EMI (ARC, gLite, UNICORE, dCACHE), IGE (Globus), EDGI (desktop grids), SAGA, …

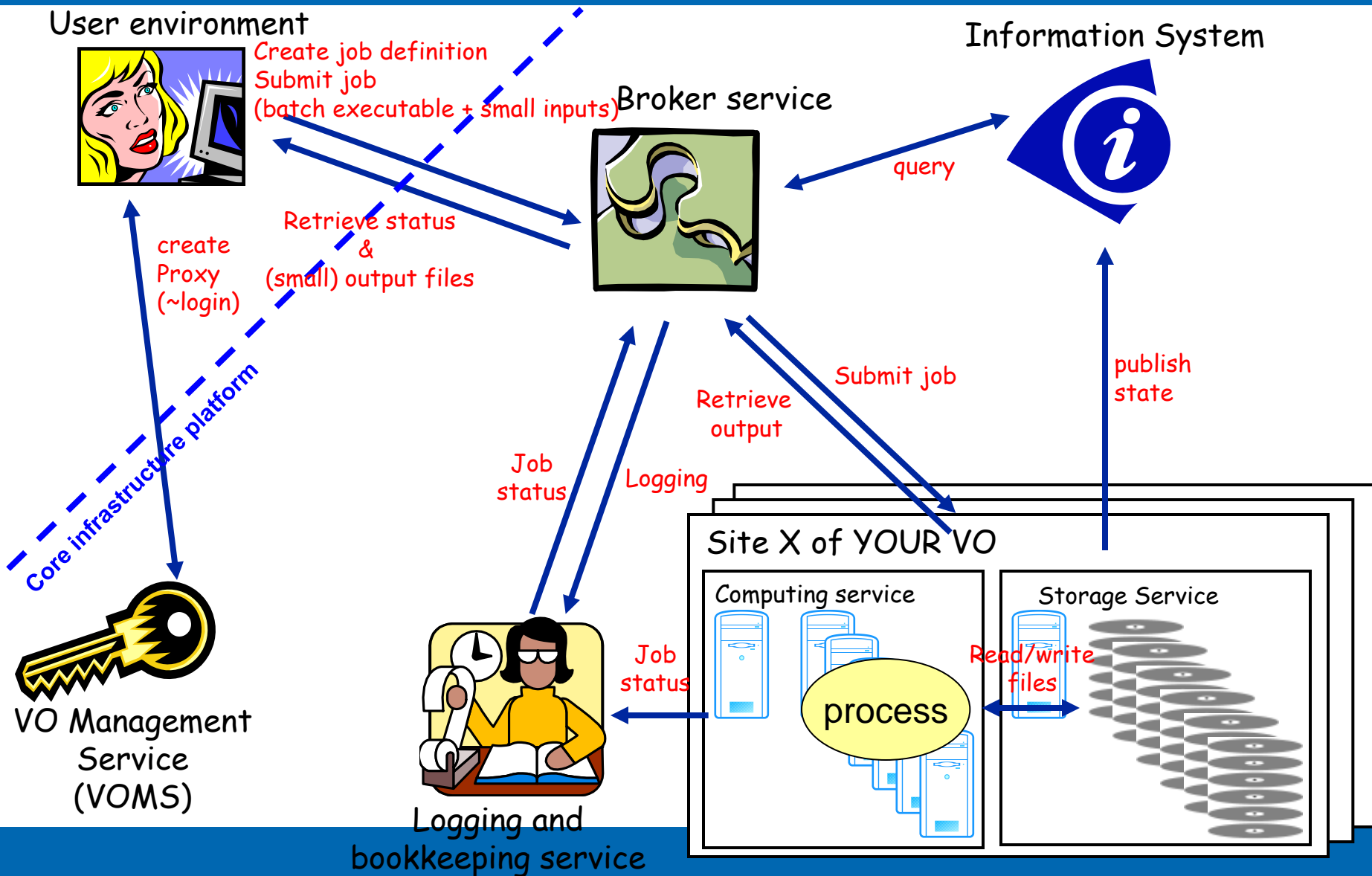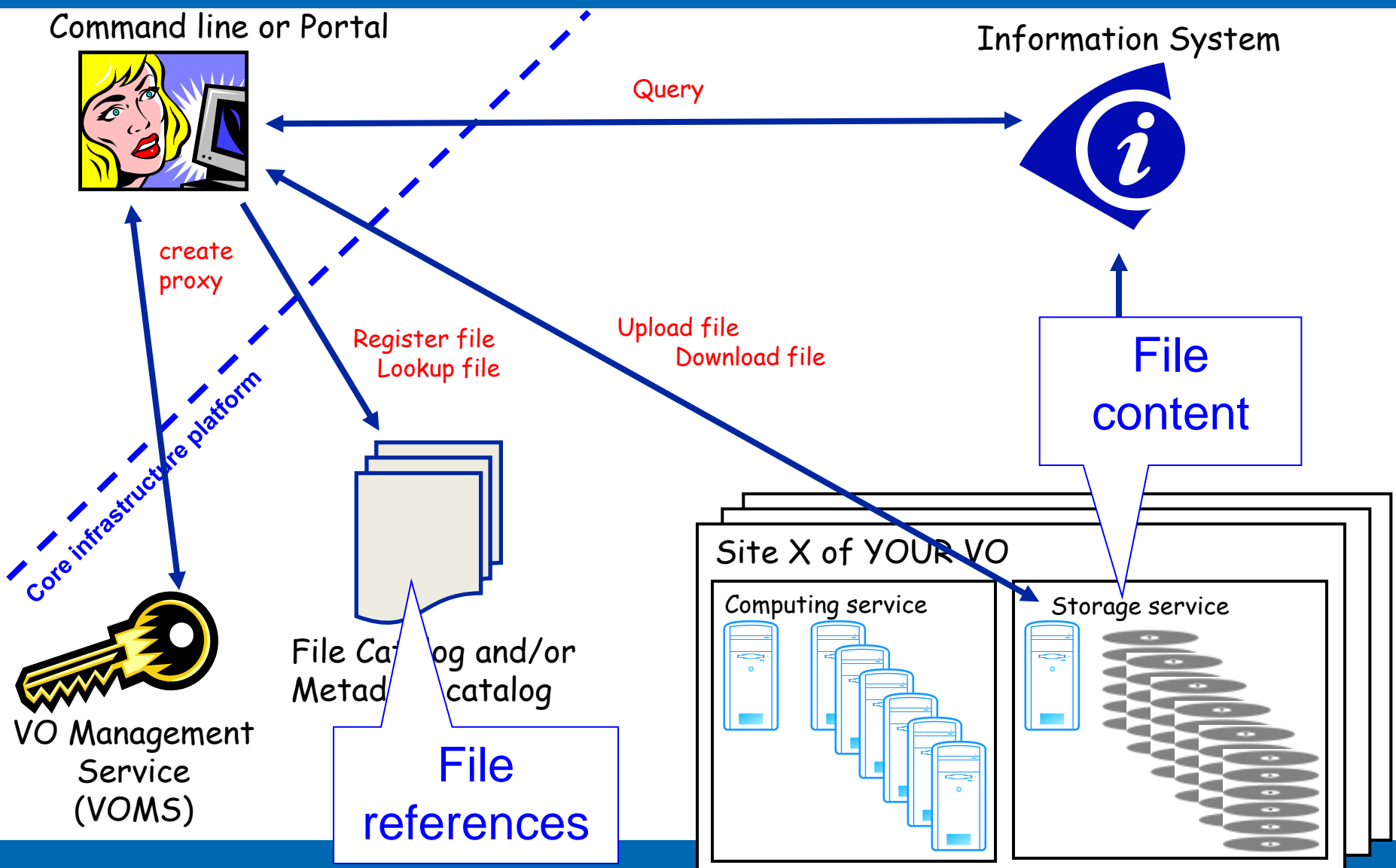- UMD capabilities captured in UMD roadmap
  (last version 2012 May: https://documents.egi.eu/document/612)
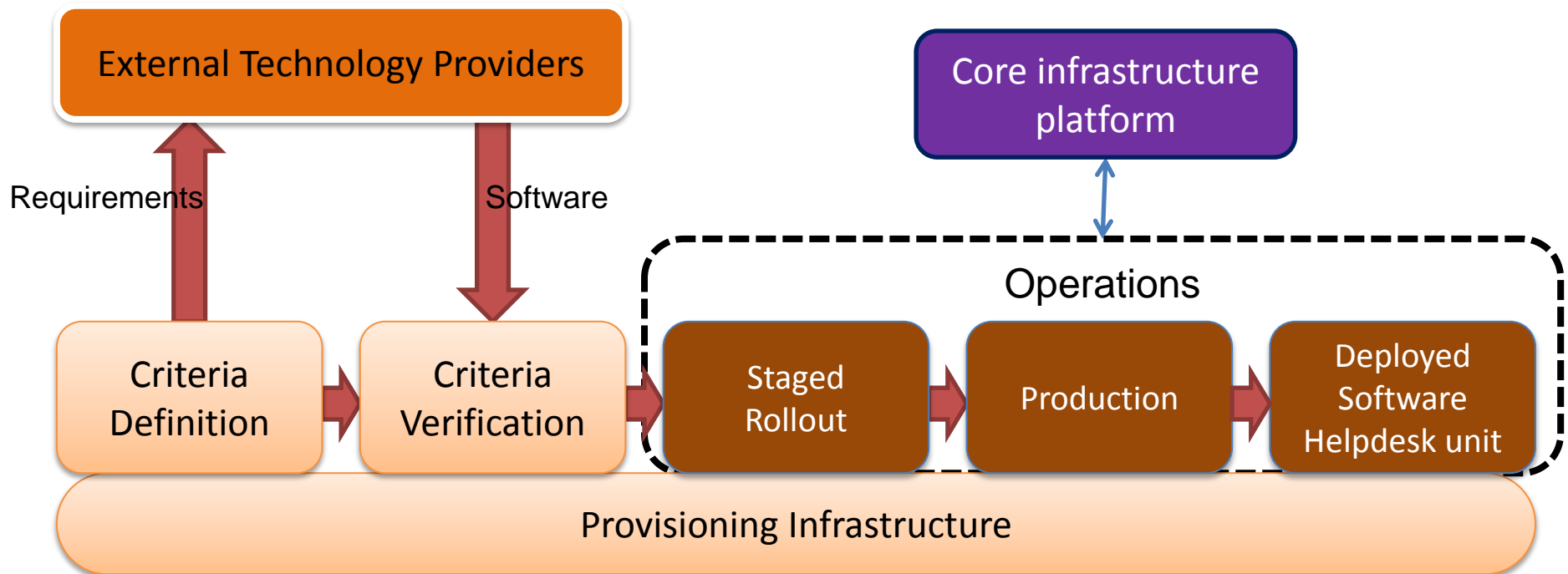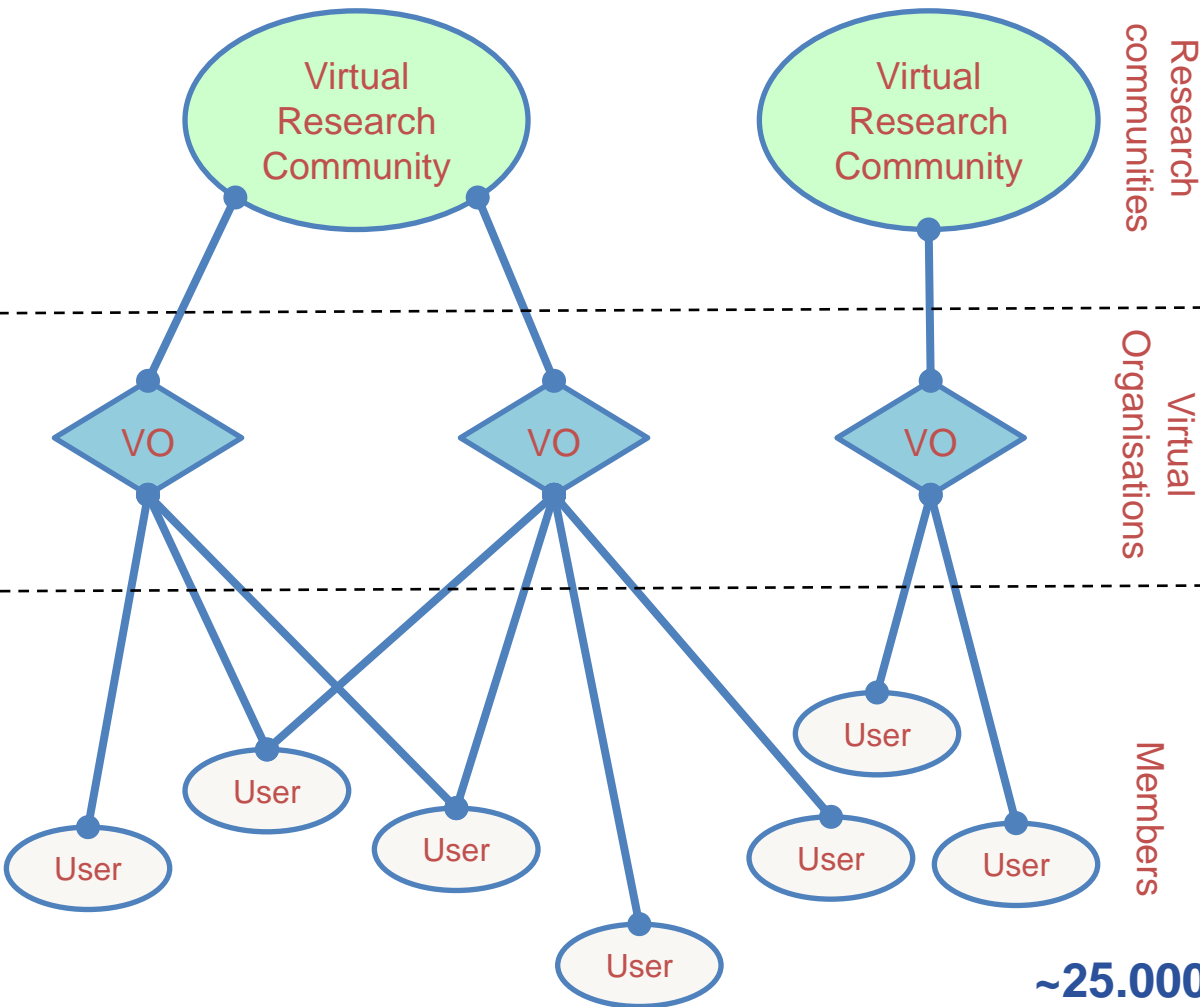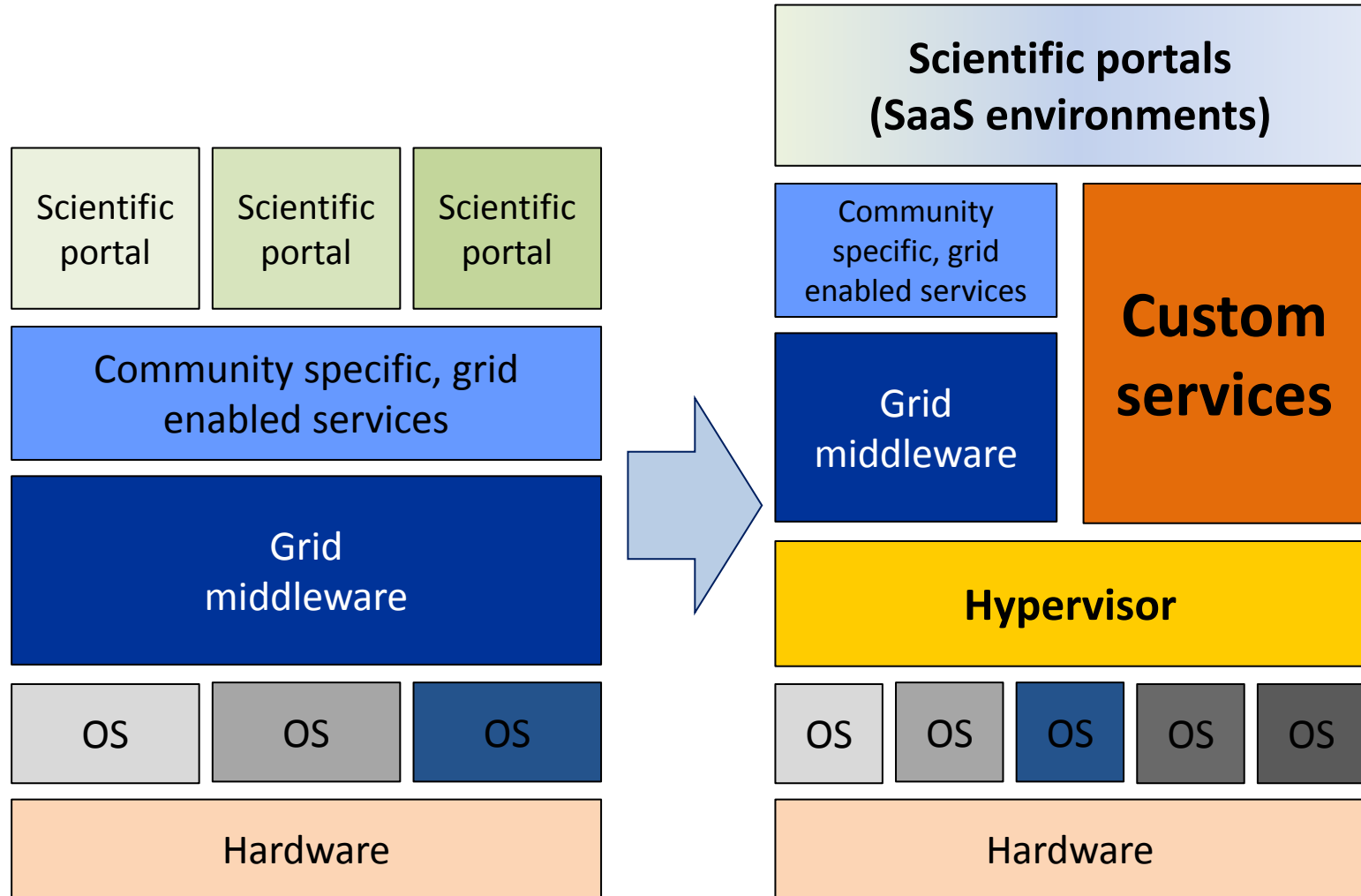
Largest user communities:

- High Energy Physics
- Astronomy & Astrophysics
- Life Sciences
- Earth Sciences
- Computational Chemistry
- Fusion
- …

~25.000 users in ~200 Registered VOs

http://operations-portal.egi.eu/vo

User environment

Create job definition
Submit job
(batch executable + small inputs)

Information System

Broker service

query

Retrieve status
&
(small) output files

create
Proxy
(~login)

Core infrastructure platform

VO Management
Service
(VOMS)

Submit job

Retrieve
output

publish
state

Job
status

Logging

Site X of YOUR VO

Computing service

Storage Service

Job
status

process

Read/write
files

Logging and
bookkeeping service

Command line or Portal

Information System

Query

create proxy

Core infrastructure platform

Register file
Lookup file

Upload file
Download file

File content

File Catalog and/or Metadata catalog

Site X of YOUR VO

Computing service

Storage service

VO Management Service (VOMS)

File references

Cloud infrastructure platform

- Sept 2011 – March 2013: Federated Cloud Task Force
    - Identify open source technologies (OpenStack, OpenNebula,...) and open standard (OCCI, CDMI, GLUE2,...)
    - Deploy a testbed
    - Write blueprint for resource centres
    - Identify issues from non-technical areas (policy, dissemination)
- August 2012 – March 2013: Pilot use cases
    - Support early adopters
    - Collect and feedback requirements
    - Establish user-facing services

- **Structural biology** – We-NMR project: Gromacs training environments

- **Ecology** – BioVel project: Remote hosting of OpenModeller service

- **Linguistics** – CLARIN project: Scalable 'British National Corpus' service (BNCWeb)

- **Software development** – SCI-BUS project: Simulated environments for portal testing

- **Space science** – ASTRA-GAIA project: Data integration with scalable workflows

Join as pilot use case, or as provider of high level service on top of the EGI Cloud!
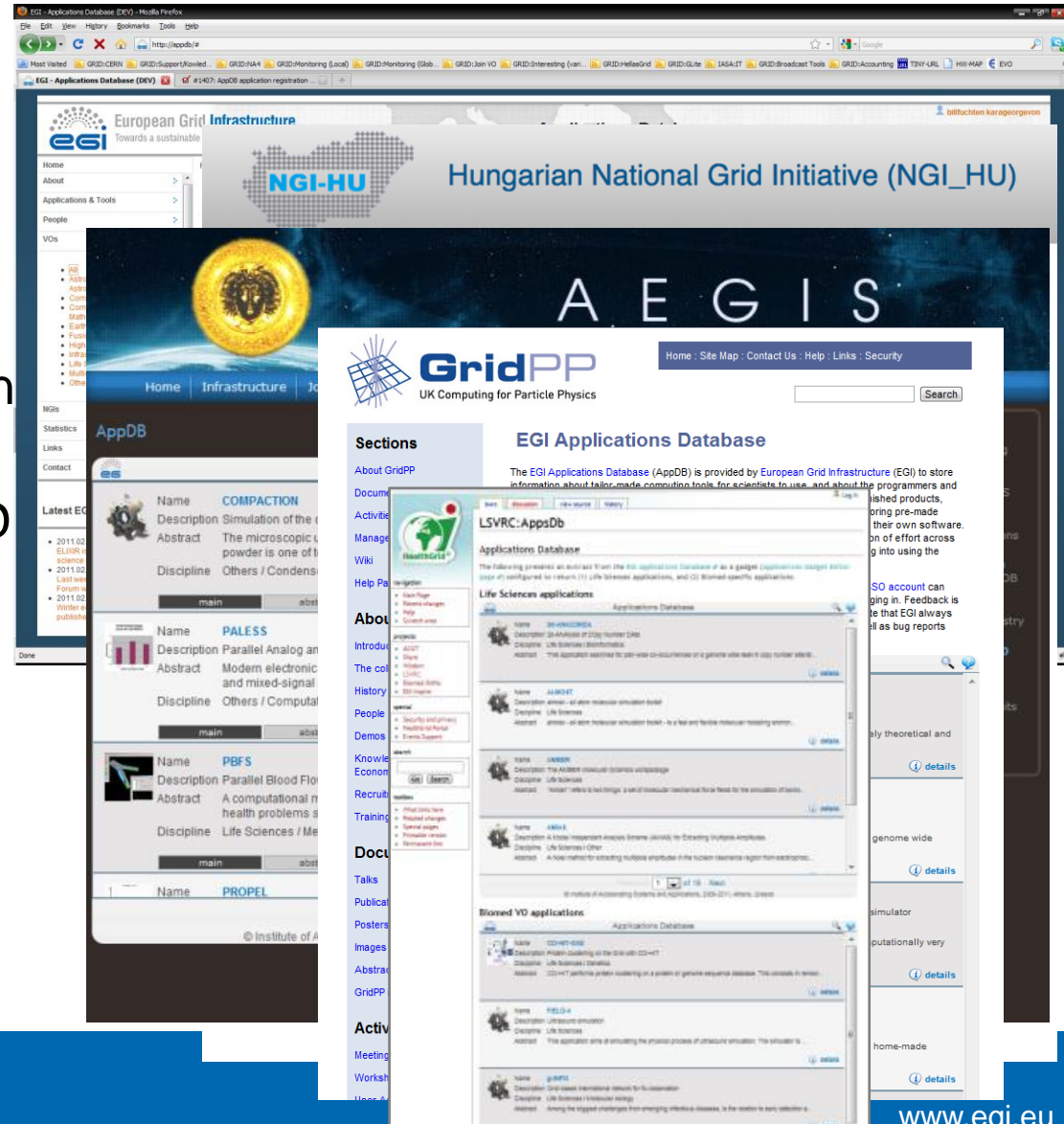
Europen level coordination and support to enable research communities to evolve into routine EGI users

- – Knowing and driving technical activities (Virtual Team projects)
- – Knowing and responding to technical needs

- • Support the development and deployment of innovative, collaborative VREs
  - – Integrating applications with EGI platforms
  - – Training and consultancy
  - – Facilitate the reuse of services across communities
  - – Provide services for the EGI Collaboration Platform
    - • Applications Database, Training Marketplace, Requirements tracker, CRM

Benefits:

- Gives recognition to reusable scientific applications, application developer tools, portals, workflow systems, etc.

- Gives recognition to application developers (people profiles)

- Access through web page AND web gadget

- Community features such as commenting, rating, tag-based groupings

http://appdb.egi.eu

Benefits:

- Register & share
  - training events, expertise, services, materials, resources, online courses, university courses
- Browse and search items
- Community features such as commenting, rating
- Access through web page and web gadget

http://training.egi.eu

- To capture leads and needs of scientific communities

- EGI CRM – main capabilities (based on vTiger CRM):
  - Register projects/communities
  - Register personal leads
  - Register details about 'Potential for EGI use' and 'Interest in e-infrastructures'

- Available to NGI International Liaisons and their collaborators at http://crm.egi.eu

http://go.egi.eu/requirements
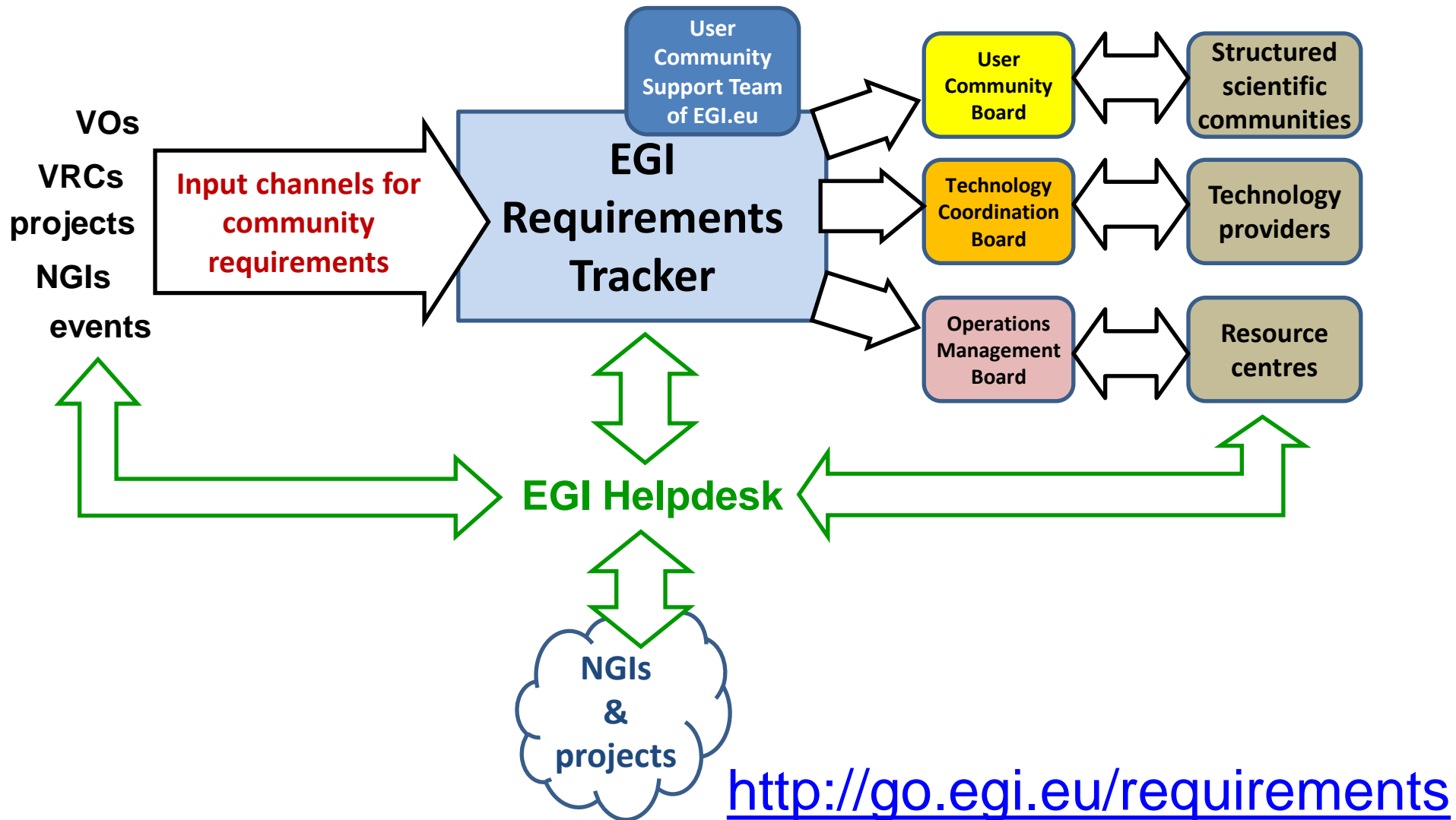
- The simplest way to reuse EGI services: embed EGI gadgets into your website
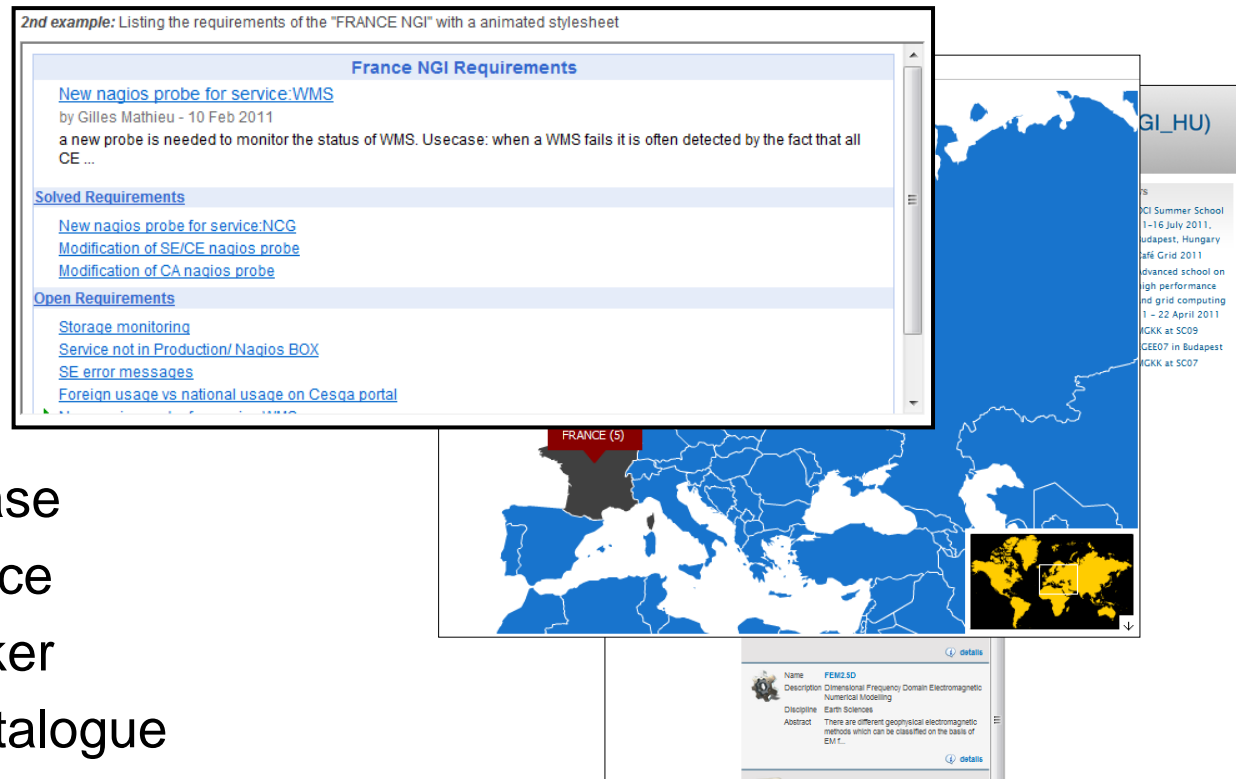
- Benefits
  - Customisability
  - Reusability
  - Compatibility

- Existing gadgets:
  - Application Database
  - Training Marketplace
  - Requirement Tracker
  - Grid Relational Catalogue

- Use and develop gadgets & share them through EGI:

  www.egi.eu/user-support/gadgets

EGI Virtual Team projects

- NGI International Liaisons
    - Single point of contact in NGIs for various activities, including Technical Outreach
- Virtual Team projects: https://wiki.egi.eu/wiki/Virtual_Team_Projects
    - Short (1-6 month) project with multiple NGIs involved
    - Setup through NILs
    - Help EGI enlarge its user base
- Active VT projects with UCST's involvement:
    - Science Gateway Primer (Final editing of the Primer document)
    - NGI-ELIXIR ESFRI collaboration (Since October)
    - Technology study for CTA ESFRI (Since January)
    - Towards a Chemistry, Molecular & Materials Science and Technology Virtual Research Community (In setup)

- Science Gateway primer & toolkit
- Expand AppDB with support for "Community Platform" developers, integrators
- Technical collaboration with ESFRI projects and communities
  - CTA, ELIXIR – VTs
  - ENVRI, BioVel – project involvement
  - DHRIM, VERCE – via the ER-flow project
- Establish support processes and tools for users of the EGI Cloud Platform
- Two EGI Forums & planning meetings for post-EGI-InSPIRE era

- EGI.eu established in Amsterdam
  - Supported through EGI-InSPIRE project
- EGI operates as a federation of national resource providers
- EGI works with technology providers on an open standards based grid and cloud architecture
- UCST supports the uptake of the grid and cloud services for VREs