

# EGI Federated Cloud

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The EGI Federated Cloud is federation of institutional private Clouds, offering Cloud Infrastructure as a Service to scientists in Europe and worldwide.

EGI Federated Cloud is based on:

- **Standards and validation:** federation is based on common **Open-Standards** – OCCI, CDMI, OVF, GLUE, etc...
- **Heterogeneous implementation:** no mandate on the cloud technology, the only condition is to expose the chosen interfaces and services.



Our user communities:



Cyfronet

CNRS

KTH

FCTSG

CETA

IGI

ISRGrid

STFC

BSC

BIFI

LMU

FZJ

SCI-BUS

CLARIN  
Common Language Resources and Technology Infrastructure

IPHC

OeRC

esa

**Members**

- ~70 individuals
- ~40 institutions
- >13 countries

**Stakeholders**

- 23 Resource Providers
  - 10 production
- 10 Technology Providers
- 8 User Communities
- 4 Liaisons

EGI.eu

CESNET

GWDG

we-nmr

INFN-BARI

IN2P3

Masaryk

INFN-CNAF

CESGA

SARA

IFCA

SZTAKI

GRNET

DANTE

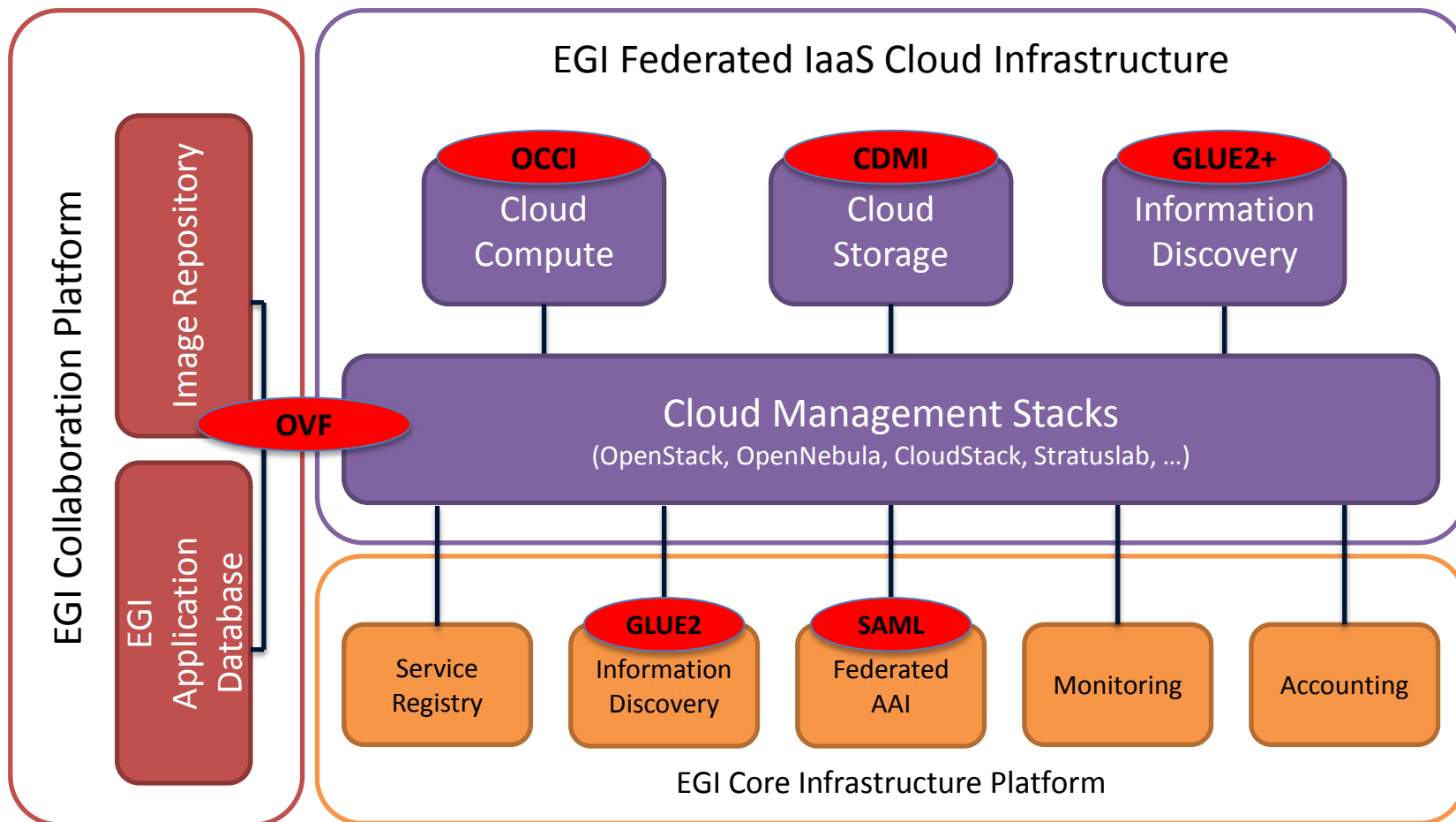
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SixSq

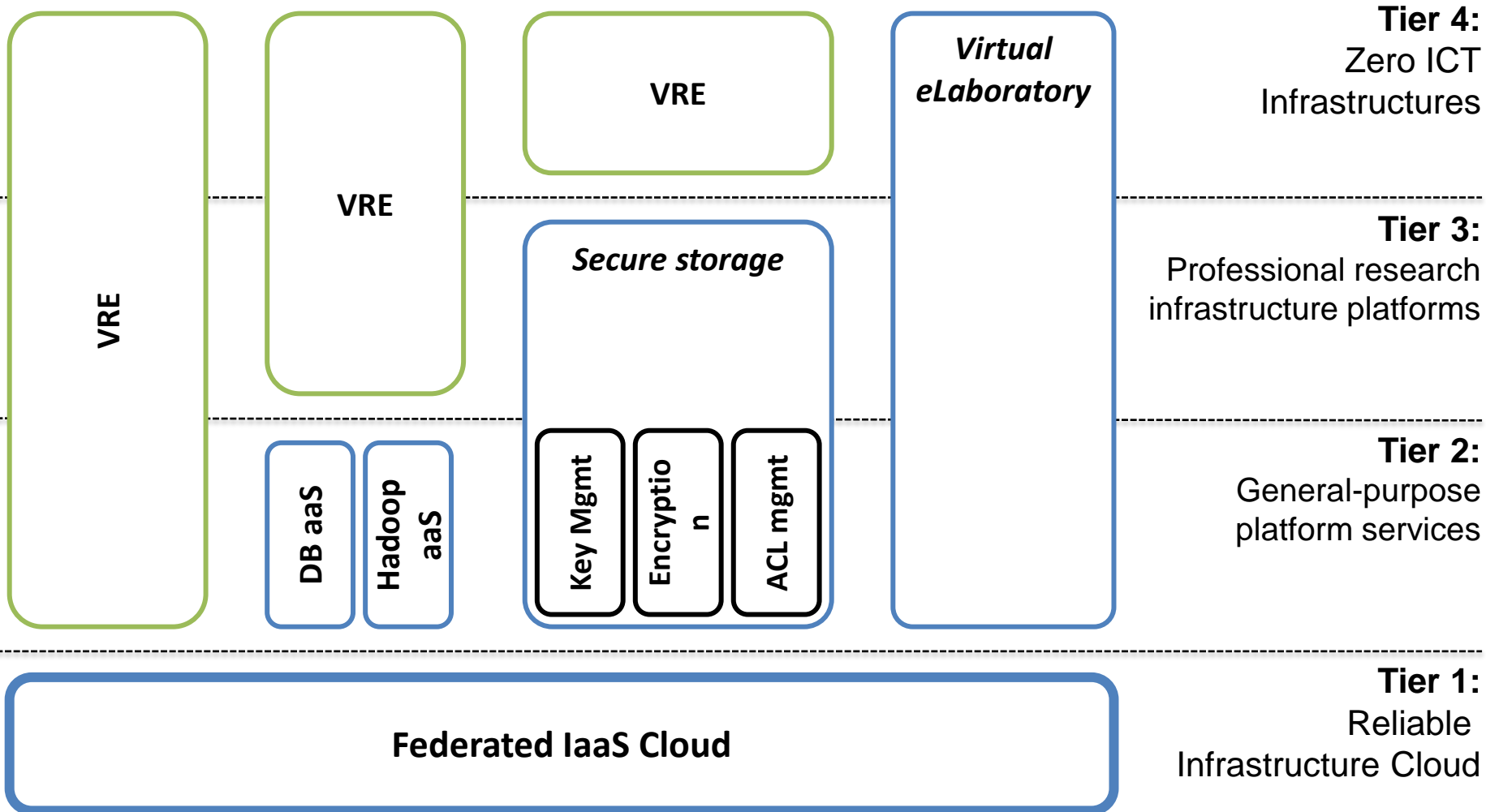
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CSC

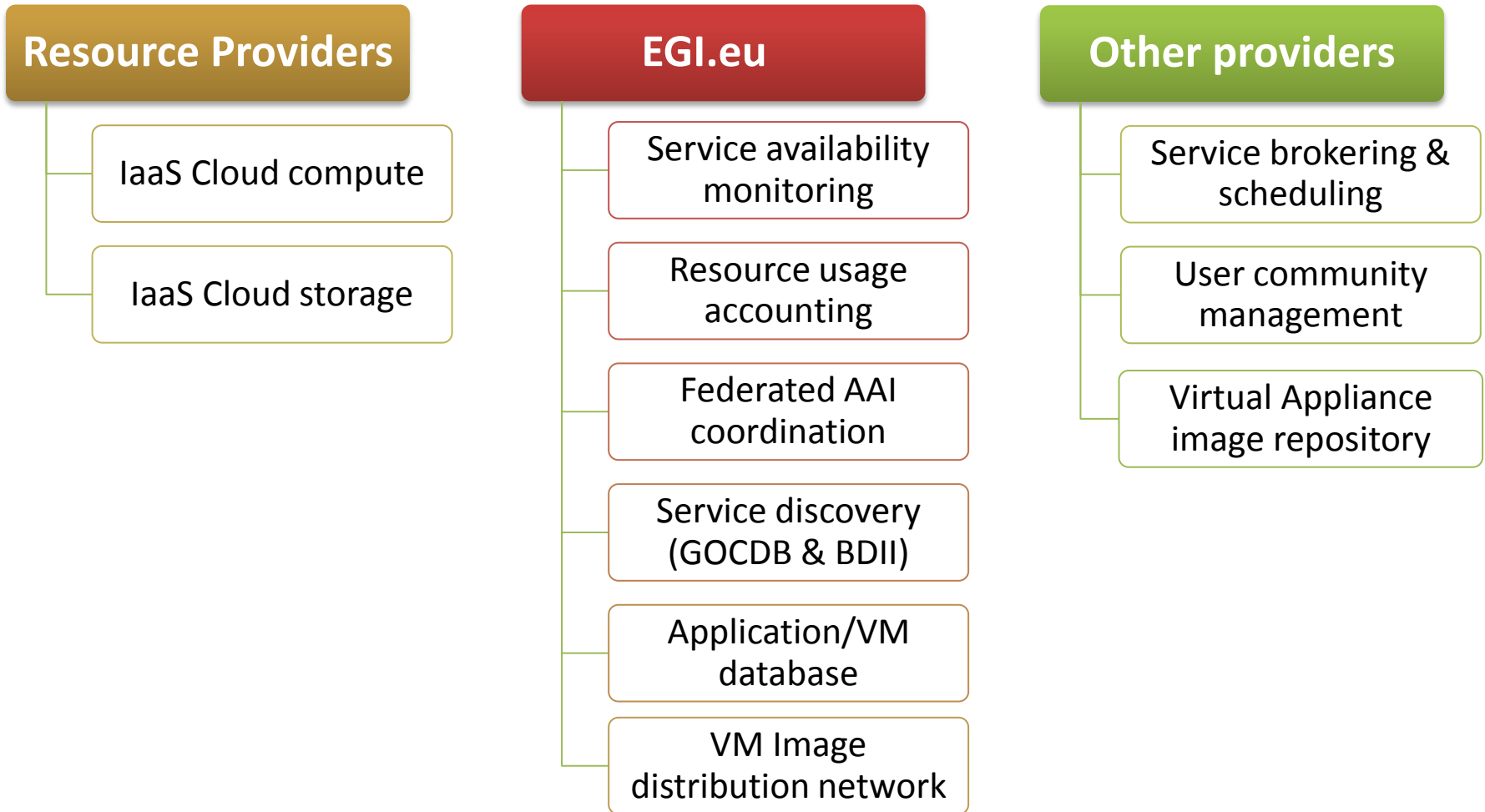
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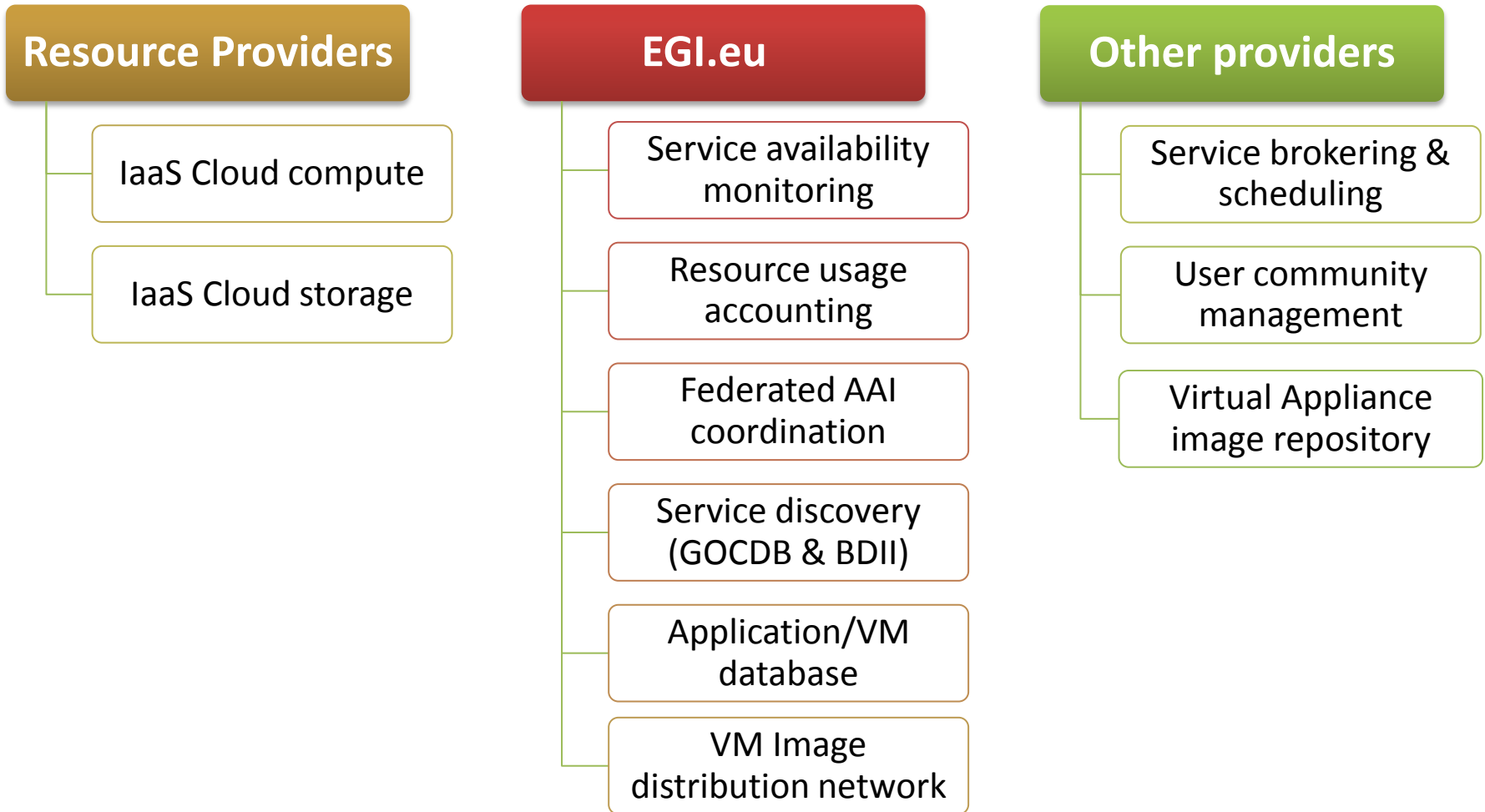
# Federated Cloud service tiers



# Tier 1: Reliable Infrastructure Cloud



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# Tier 2: General purpose services

## Resource Providers

Hadoop cell

Key management

File format  
conversion

Data integrity  
checking

...

## EGI.eu

Service availability  
monitoring

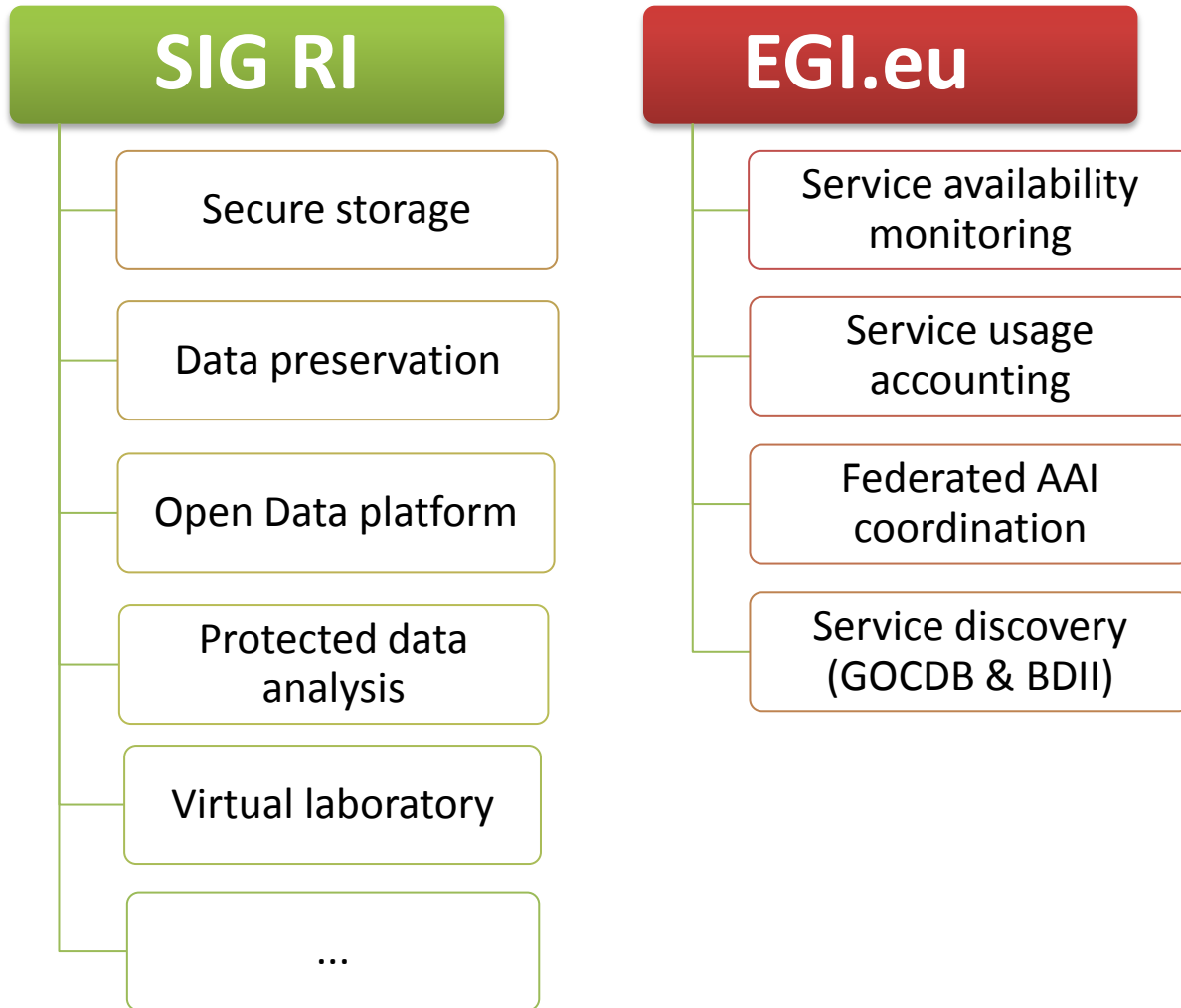
Service usage  
accounting

Federated AAI  
coordination

Service discovery  
(GOADB & BDII)



# Tier 3: Research infra. platforms



- **Basic**
  - Managed through EGI OLA framework
  - Available at all Cloud service providers
  - “Free at the point of use” billing plan and higher
- **Advanced**
  - Available on all Cloud service providers
  - “Pay-as-you-go” plan or higher
- **Custom/Premier**
  - Tailored to community requirements
  - Advanced SLAs subject to research and innovation
  - Applicable to subset of providers

- **Open standards, open technologies**
  - Use of Open Standards is key to the establishment of an effective, fair and transparent cloud market in Europe
  - Open Source components raise the barrier for hidden backdoors, thus lead to more trusted services
- **Firmly rooted in Europe**
  - Strong public sector involvement through NRENs, NGIs, EIROs are EGI's members
  - European commercial Cloud resource providers, including SME
- **A single cross-border market**
  - Reaching out for research, government & business sectors
  - Level playing field for innovation and services on multi-service tiers

- **EGI:** Community of resource providers with long-term tradition in providing federated ICT services for research
- **EGI Federated Cloud:** Paving the way for a federated cloud in Europe
  - Open standards, open technology
  - Open membership, open processes
- **Driver for innovation in Europe**
- **International perspective:** Although EGI activity, a global federation is in scope, with global concrete interest
  - **Korea, South Africa, Canada, Taiwan, Australia**
  - **large public Cloud providers**