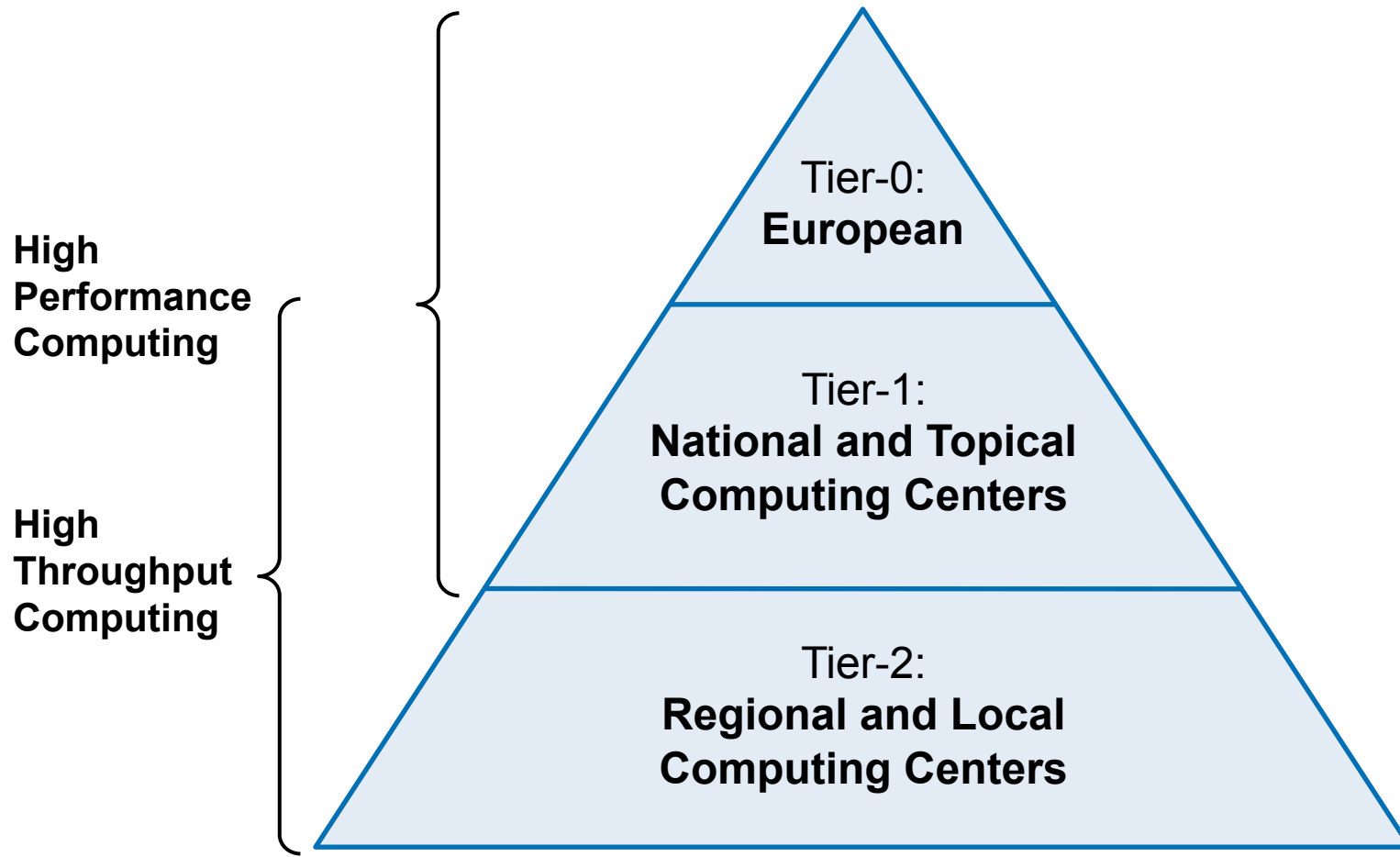# European
e-Infrastructures
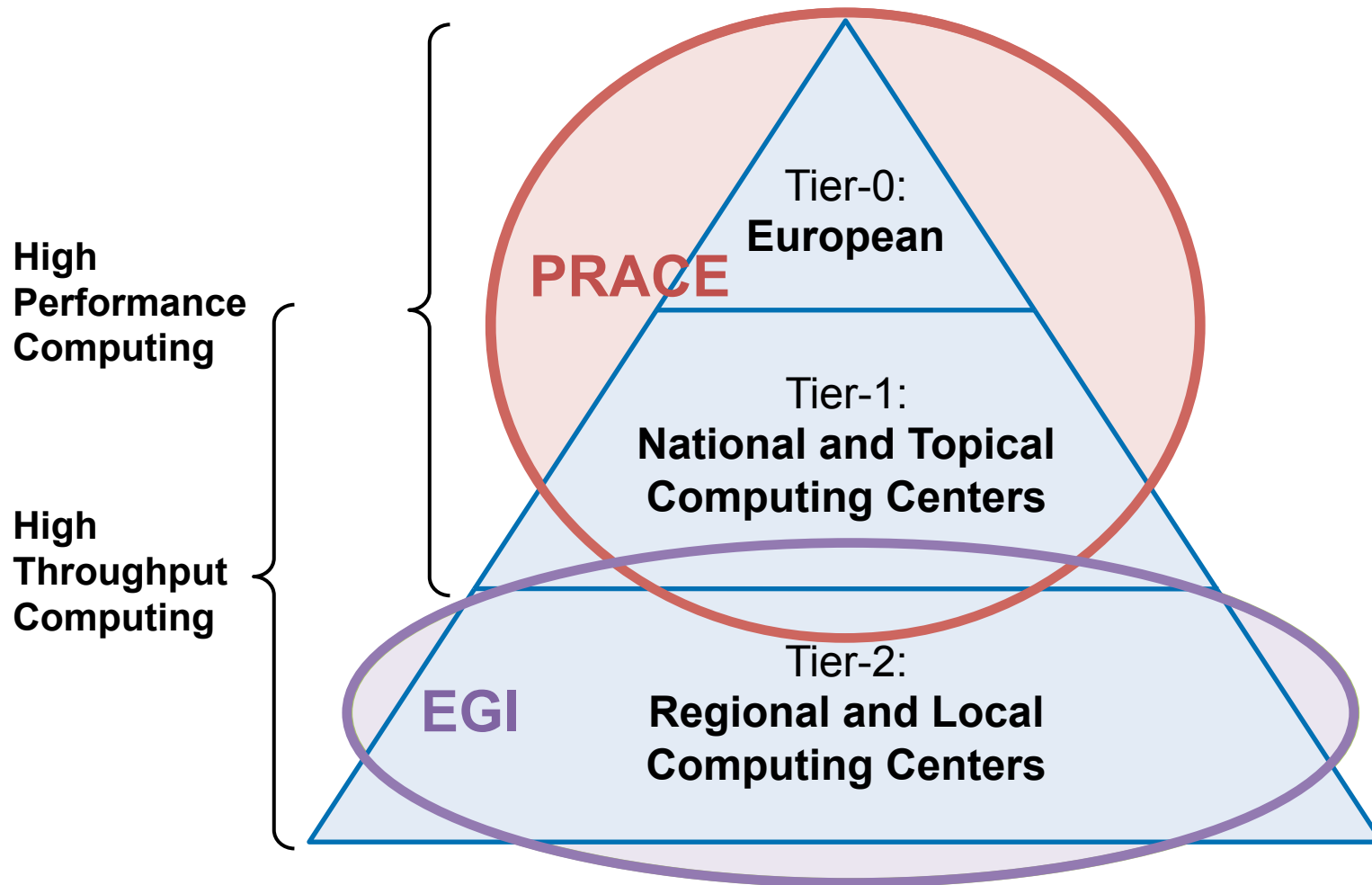
02/02/2012

Ilya Saverchenko

Outline

- European e-Infrastructure Ecosystem
- European e-Infrastructures
  - PRACE
  - EGI
- MAPPER e-Infrastructure
- MAPPER Vision

European e-Infrastructure Ecosystem

High Performance Computing

High Throughput Computing

Tier-0:
European

Tier-1:
National and Topical Computing Centers

Tier-2:
Regional and Local Computing Centers

European e-Infrastructure Ecosystem

High Performance Computing

High Throughput Computing

Tier-0: **European**

PRACE

Tier-1: **National and Topical Computing Centers**

EGI

Tier-2: **Regional and Local Computing Centers**

PRACE

- Partnership for Advanced Computing in Europe

   Enable and support European scientific discovery and engineering research and development across all disciplines to enhance European competitiveness for the benefit of society

- Legal entity: PRACE AISBL

PRACE RI

- European and national HPC resources
  - 24 member states
- PRACE Tier-0
  - CEA Curie, FZJ Jugene, HLRS Hermit
  - BSC, CINECA, LRZ later this year
- PRACE Tier-1
  - 18 resources

EGI

- European Grid Infrastructure

  Enables access to computing resources for European researchers from all fields of science, from High Energy Physics to Humanities

- Legal entity: EGI.eu

  - Coordinates NGIs

- National and regional resources

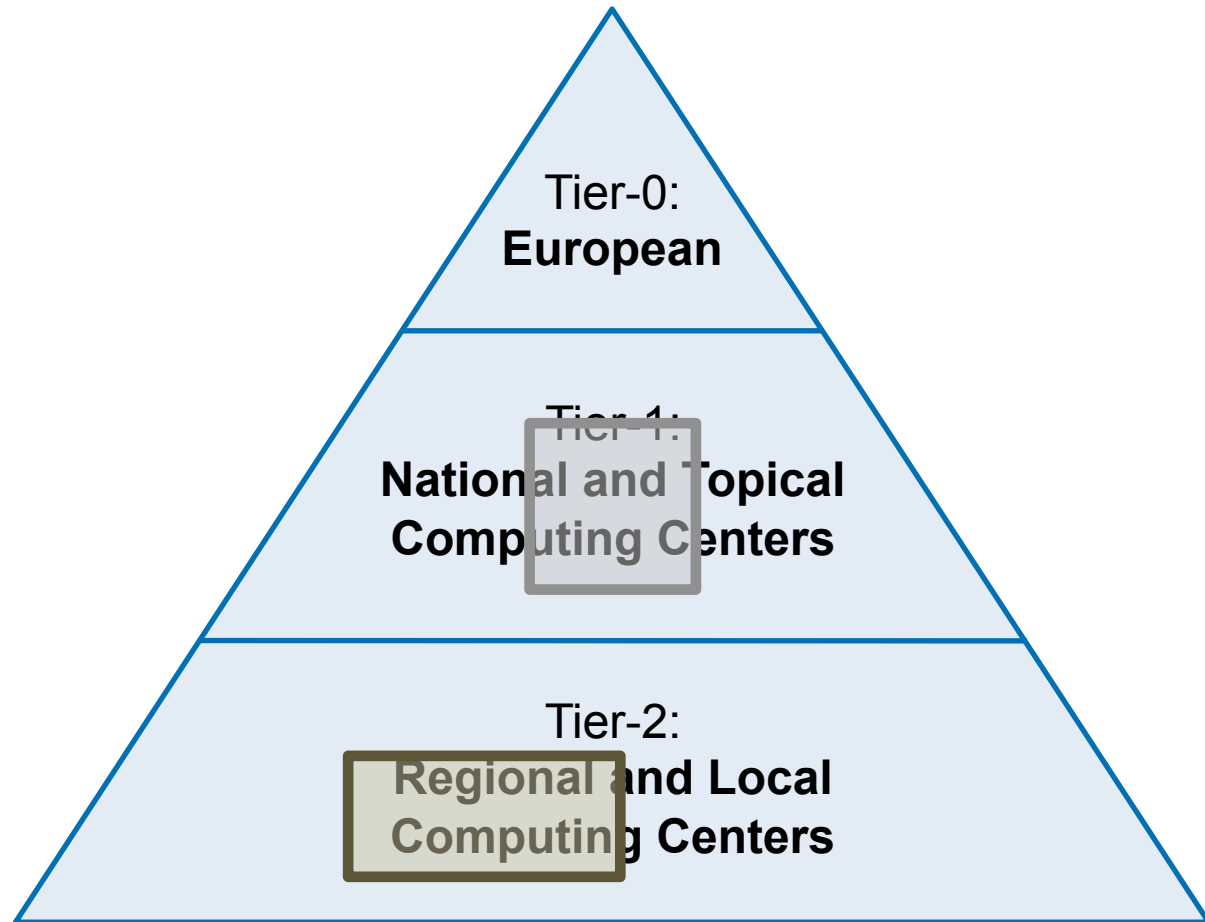 - ~600 resource providers

e-Infrastructures' Services

- Services and software stack inherited from DEISA and EGEE

- Services offered
  - Data management, compute, AAA, support

- Lacking functionality
  - Co-allocation, advance reservation, code coupling, workflow management
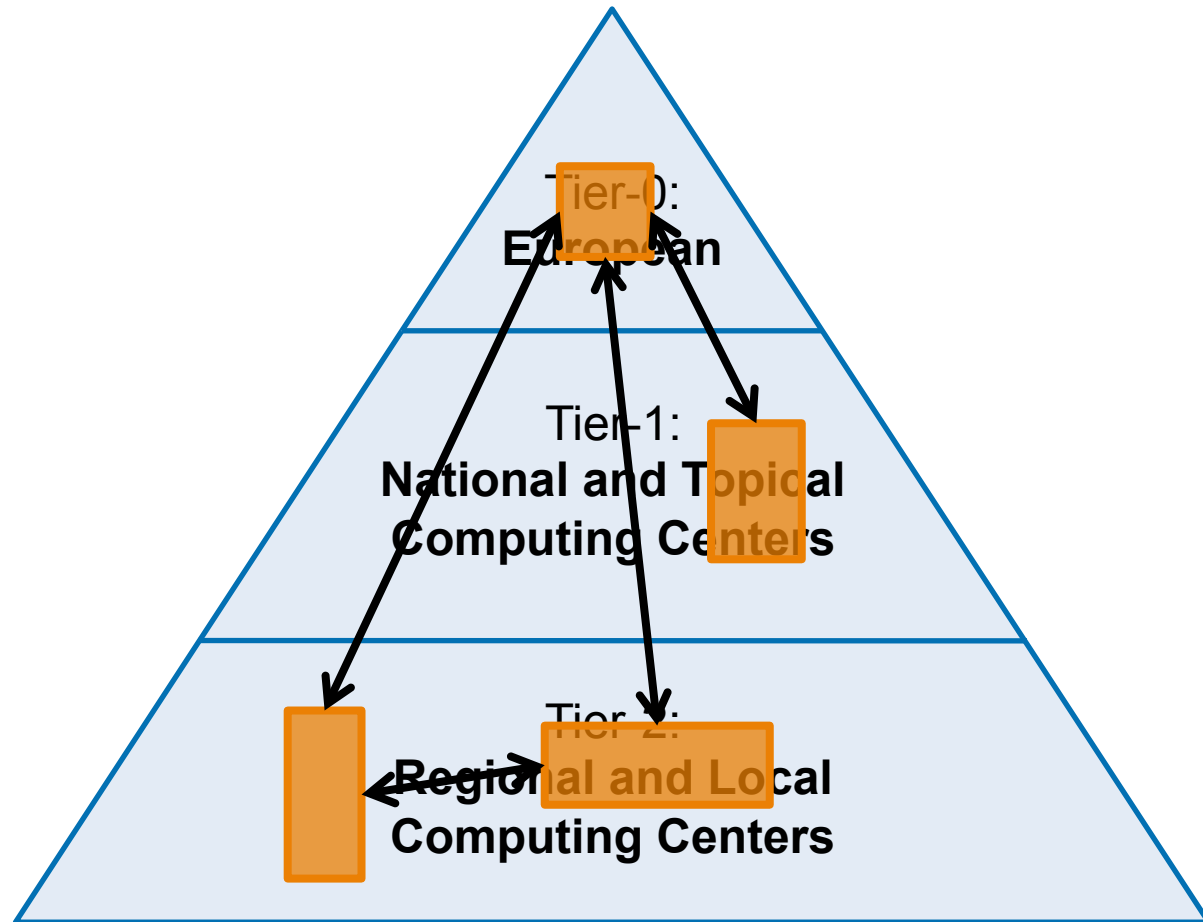
MAPPER e-Infrastructure

- MAPPER pre-production infrastructure
  - Cyfronet, LMU/LRZ, PSNC, TASK, UCL, WCSS
  - Environment for development, evaluation and deployment of MAPPER components
- Services
  - GridSpace, MAD, MaMe, QCG, MUSCLE

Common Usage Scenario

Tier-0:
European

Tier-1:
**National and Topical
Computing Centers**

Tier-2:
**Regional and Local
Computing Centers**

Multiscale Computing

Tier-0:
European

Tier-1:
National and Topical Computing Centers

Tier-2:
Regional and Local Computing Centers

MAPPER Vision

High Performance Computing

High Throughput Computing

Tier-0:
European

Tier-1:
National and Topical Computing Centers

Tier-2:
Regional and Local Computing Centers

MAPPER

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