



PRACE

Alison Kennedy
Member of the Board of Directors

www.prace-ri.eu



PARTNERSHIP FOR ADVANCED COMPUTING IN EUROPE

**PRACE aisbl, a persistent pan-European
supercomputing infrastructure**

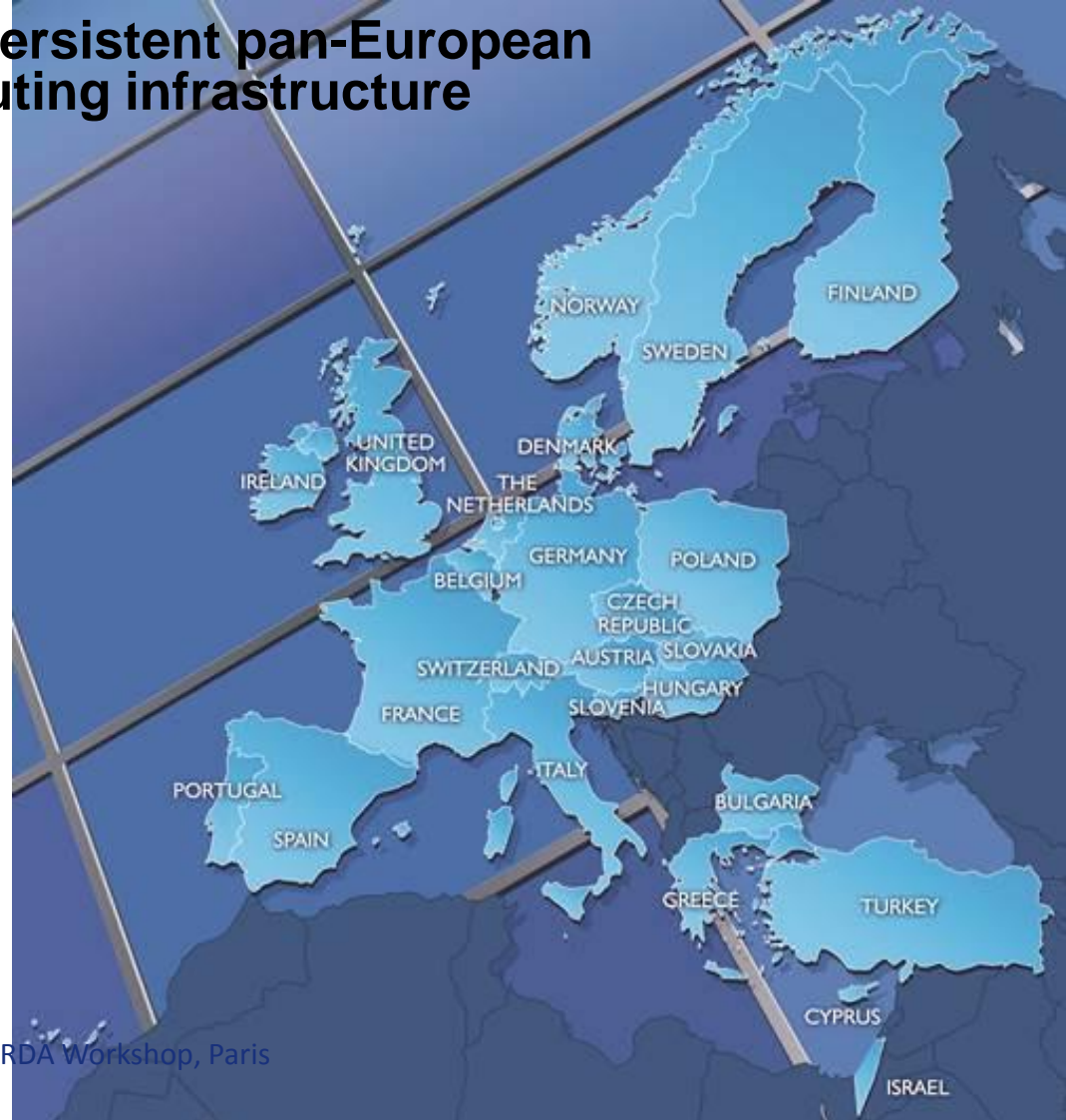
25 members

4 hosting members: France,
Germany, Italy and Spain

Enables world-class science
through **large scale simulations**

Offers HPC services on
leading edge capability systems

Awards its resources through a
single and **fair** pan-European
**peer review process for
open research**



PRACE's achievements in 5 years



412 scientific projects **enabled**



10.7 thousand million core hours awarded since 2010 with peer review, main criterion is **scientific excellence**. **Open R&D** access for **industrial users** with **>50 companies** supported



~5000 people trained by **6 PRACE Advanced Training Centers** and others events



18 Pflop/s of peak performance on **6 world-class systems**



530 M€ of funding for **2010-2015**, access **free at the point of usage**



25 members, including **4 Hosting Members** (France, Germany, Italy, Spain with a global funding of **400M€**)



Service Catalogue

Three categories of services (by availability not service level):

Core (all PRACE Tier 0 and Tier 1 sites) - e.g. GridFTP
(for Tier 1, where the PRACE dedicated network is available),
LDAP (user administration)

Additional (may be limits caused by technical, legal, financial or
policy limitations) e.g. - UNICORE

Optional (case by case basis) – e.g. MC-GPFS, Gtransfer
(depends on GridFTP)



Collaborations

- With national Tier-1 centres (e.g. PRACE projects)
- With ETP4HPC (e.g. EXDCI project)
- With EUDAT and EGI (various pilot calls)
- With the science community – Scientific Steering Committee and Science Case (future: Centres of Excellence)
- With industry – Industrial Advisory Committee, SHAPE programme
- With international HPC organisations – XSEDE, Compute Canada, RIKEN etc.



Challenges - HPC and Data

- Current PRACE users are computational scientists
- Typically output data is generated BY the user and is moved elsewhere for analysis (e.g. “home” site of the researchers)
- To date, it has not been customary to request a PRACE allocation for large scale data analysis but we foresee this change
- Very large HPC facilities as a tool for data generation AND for data analysis e.g.from large scale instruments
- Major challenge is integrating capability and capacity to facilitate data analysis in a complex environment