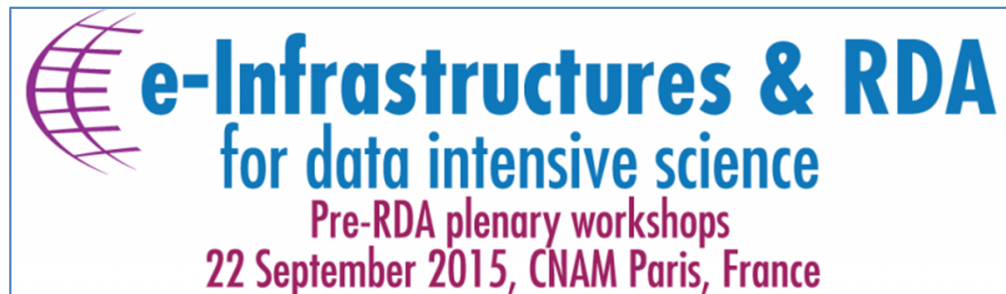# ETP 4 HPC

THE EUROPEAN TECHNOLOGY PLATFORM FOR HIGH PERFORMANCE COMPUTING

www.etp4hpc.eu

Cutting-edge Computing Technologies
and their contribution to Data and Compute Intensive
Science and e-Infrastructures

Dr. Jean-Philippe Nominé, ETP4HPC Office & CEA (FR)

e-Infrastructures & RDA
for data intensive science
Pre-RDA plenary workshops
22 September 2015, CNAM Paris, France

ETP 4 HPC

Who we are - Objectives – Members

- An industry-led forum (association)

- Founded by stakeholders of HPC technology supply and research...

- ...to build a European world-class HPC technology value chain that is globally competitive

~70 members (Q3 2015)
Technology providers
(EU-based and international)
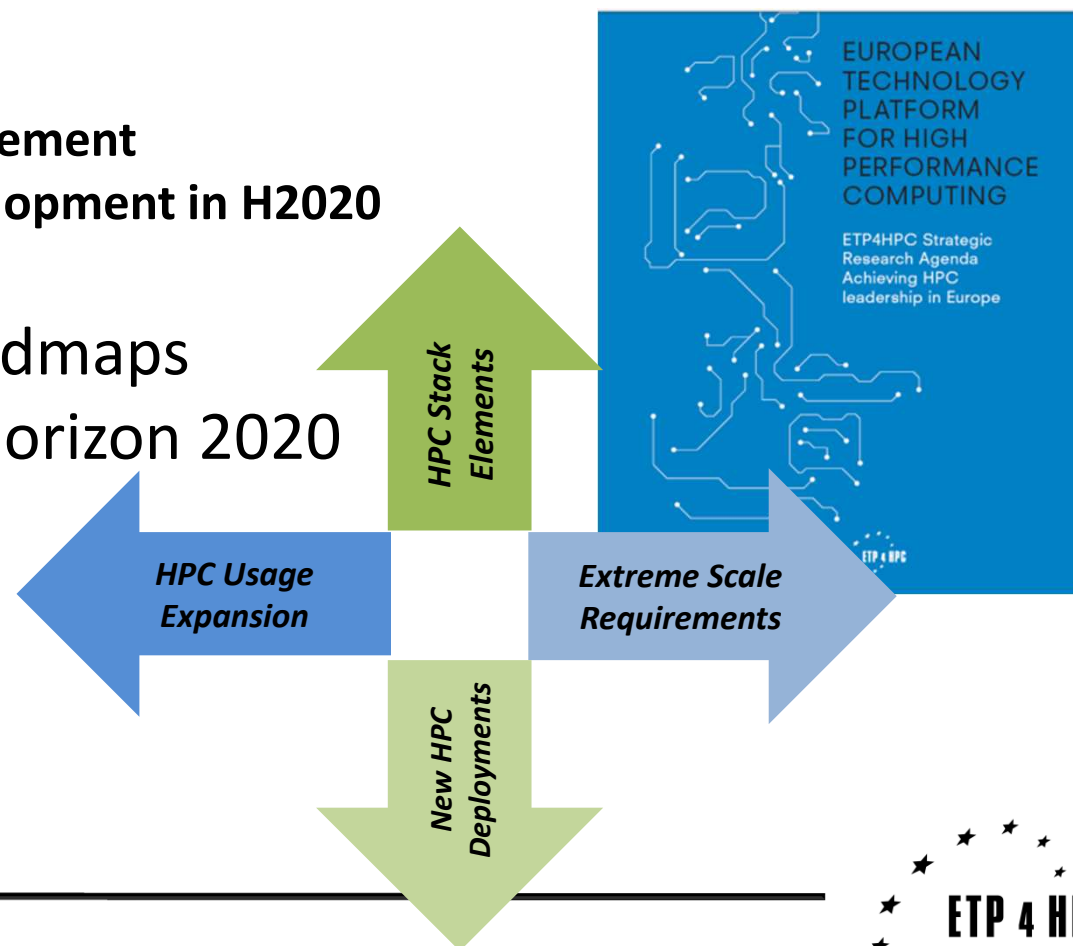*Research organisations*
~25 SMEs

HPC cPPP

- HPC contractual Public Private Partnership (cPPP) with the European Commission and Centres of Excellence for Computing Applications
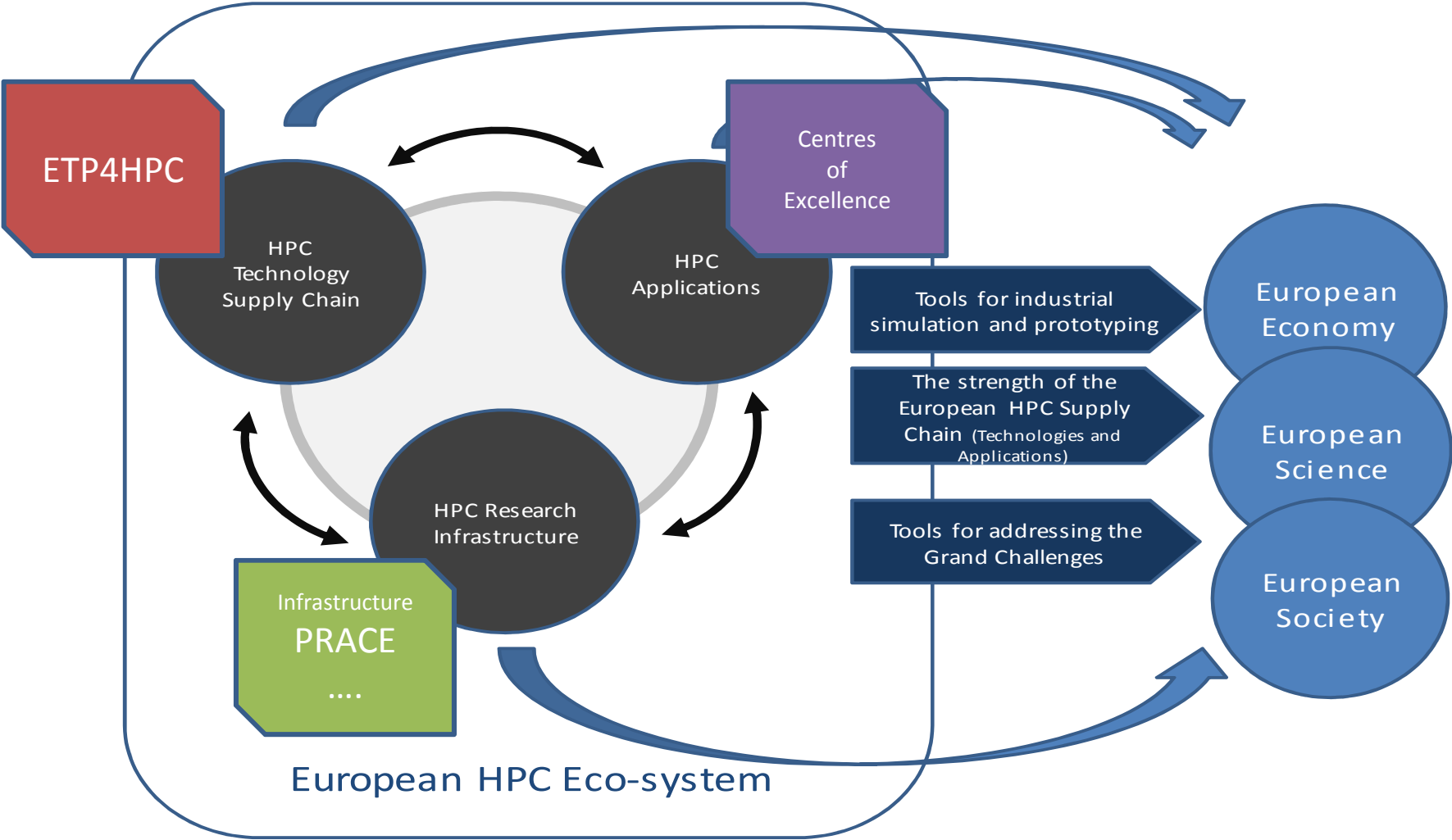
  Signed in December 2013
  700 M€ committed by EC to implement
  application and technology development in H2020

- ETP4HPC Multi-annual Roadmaps inspiring HPC calls within Horizon 2020
  - WP14-15 FETHPC (95 M€)
  - WP16-17 FETHPC (80 M€)

HPC Stack Elements

HPC Usage Expansion

Extreme Scale Requirements

New HPC Deployments

EUROPEAN
TECHNOLOGY
PLATFORM
FOR HIGH
PERFORMANCE
COMPUTING

ETP4HPC Strategic
Research Agenda
Achieving HPC
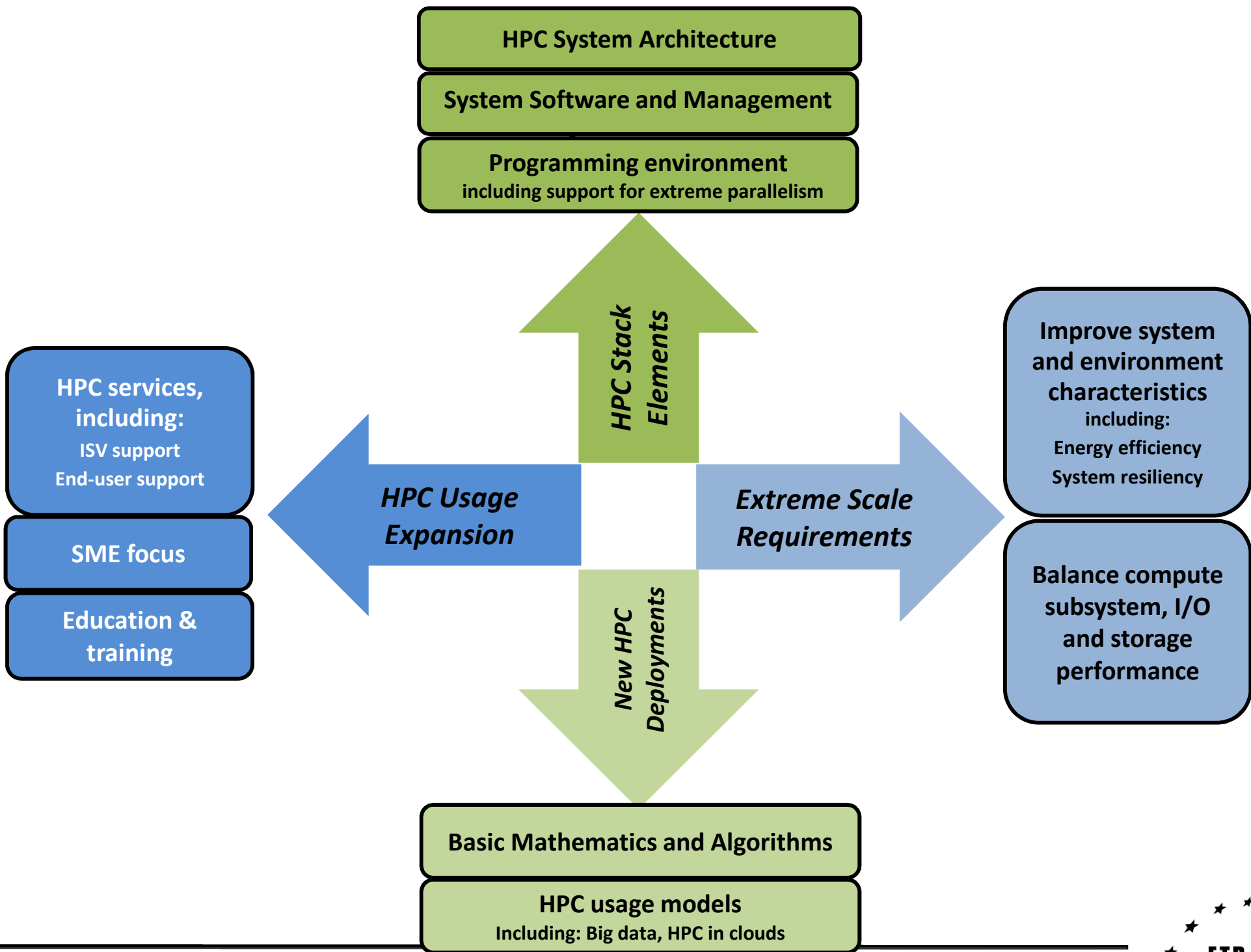leadership in Europe

ETP 4 HPC

Ecosystem vision – 3 pillars

Ecosystem role

- A joint coordination and support action with PRACE: European eXtreme Data and Compute Initiative – just starting
  - Key element for the animation of HPC ecosystem in Europe
  - Incl., but not limited to, synchronisation of roadmaps technology/applications
- Development of our relationship
  - Interlock already set up with other organizations : Big Data Value PPP, SKA… (technology roadmaps)
  - International contacts being developed

- Strongly committed to:
  - technology and service co-design
  - supporting the delivery of technologies and services useful to e-Infrastructures
  - holistic data + compute approach

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HPC System Architecture

System Software and Management

Programming environment
including support for extreme parallelism

HPC Stack Elements

HPC services, including:
ISV support
End-user support

SME focus

Education & training

HPC Usage Expansion

Extreme Scale Requirements

Improve system and environment characteristics
including:
Energy efficiency
System resiliency

Balance compute subsystem, I/O and storage performance

New HPC Deployments

Basic Mathematics and Algorithms

HPC usage models
Including: Big data, HPC in clouds

ETP 4 HPC

THANK YOU!

For more information visit
www.etp4hpc.eu
contact: office@etp4hpc.eu