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E-READI

EU-ASEAN HPC cooperation and the STI Policy Exchange Platform

Supported by the

Enhanced Regional EU-ASEAN Dialogue Instrument

(E-READI)

Dr Kostas Glinos, DG Research and Innovation

European Commission

13 March 2019, Singapore

EU policy premises

The idea of research commons

federating resources in Europe

From open access to open science

policy – infrastructure - services

Unifying e-infrastructure

networks – computing – data - communities

Global reach for global science

The European Open Science Cloud

EOSC 2019-2020: six action lines

Architecture	Architecture of the federated infrastructures as the solution to the current fragmentation in research data infrastructures which are insufficiently interoperable.
Data	FAIR data management and tools. A common data language to ensure data stewardship across borders/disciplines based on FAIR principles.
Services	Available services from a user perspective. A rich environment offering a wide range of services covering the needs of the users.
Access & Interface	Mechanisms/interfaces for accessing EOSC. A simple way for dealing with open data obligations or accessing research data across different disciplines.
Rules	Rules of participation for different EOSC actors. An opportunity to comply with existing legal and technical frameworks and increase legal certainty & trust.
Governance	Governance of the EOSC, aiming at ensuring EU leadership in data-driven science but requiring new governance frameworks.

Service dimension of the EOSC

The EOSC will provide researchers with:

- ✓ A catalogue of European research data funded with public money;
- ✓ A catalogue of services to re-use these data;
- ✓ Tools to make their own data open and FAIR;
- ✓ Advanced tools to merge and analyse the data in a secure environment;
- ✓ A simple access gateway to these services (EOSC Portal).

EOSC 2019-2020: governance

Advise on / inform the implementation

Steer the implementation

Contribute to the implementation

Stakeholder Forum

Users, Service Providers, Public sector, Industry, SMEs, etc.

Governance Board

MS/AC delegates and the European Commission

Proposes
Monitors
Reports

Reviews
Endorses
Orients

Working Groups

WG | WG | WG | WG

Executive Board

European stakeholder organisations and individual experts)

Interact

- EU-funded projects
- Nationally-funded projects and initiatives
- Other projects and initiatives
- Extended Coalition of Doers

Supports

Supports

Supports/ coordinates w.

EOSCSecretariat.eu
Coordination and Support Action

EOSC dedicated activities to prototype the EOSC

H2020 INFRAEOSC Calls

2018-2020

> 250 Mio €

Portal development

New services new users

Governance and policy

INFRAEOSC-06-2019
Enhancing the user experience

INFRAEOSC-03-2020
Portal integration & consolidation

INFRAEOSC-01-2018
Access to commercial services

INFRAEOSC-04-2018
Connecting ESFRI infrastructures

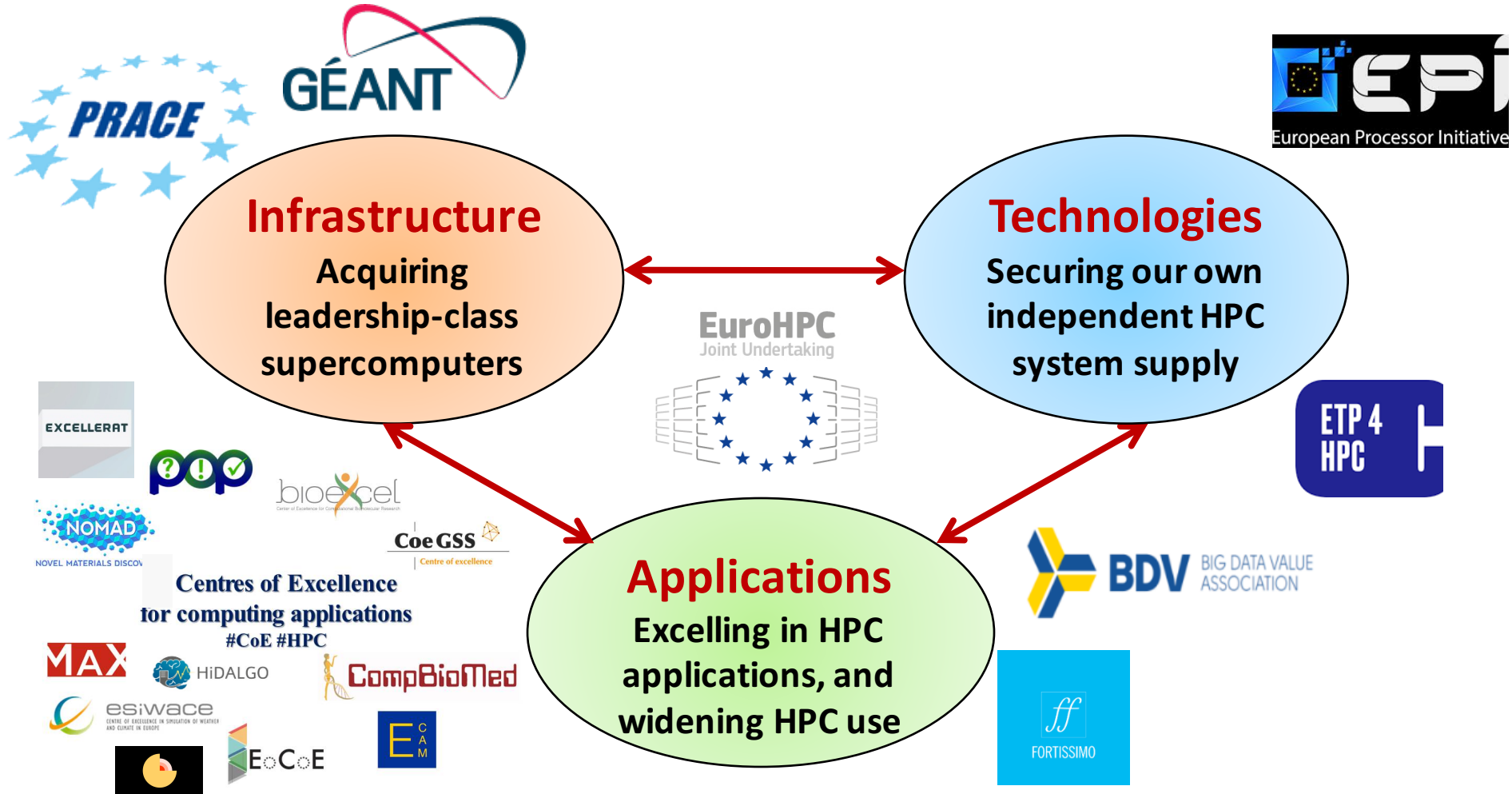
INFRAEOSC-05-b-2018-2019
Coordination of national initiatives

INFRAEOSC-02-2019
Prototyping new services for new users

INFRAEOSC-07-2020
Increasing the service offer

INFRAEOSC-05-a-c-2018
- EOSC coordination structure
- **FAIR Data uptake** and compliance

The European HPC Strategy



Build a thriving European HPC Ecosystem

(hardware, software, applications, skills, services…)

EuroHPC JU
The two pillars of activity

Infrastructure & Operations

R&I, Applications & Skills

HPC Ecosystem

2019-2020

1. Acquire an integrated world-class supercomputing infrastructure

EU budget ≥ 270 M€

- Pre-exascale & petascale machines

2. R&I for a competitive HPC/BD ecosystem

EU budget ≥ 180 M€

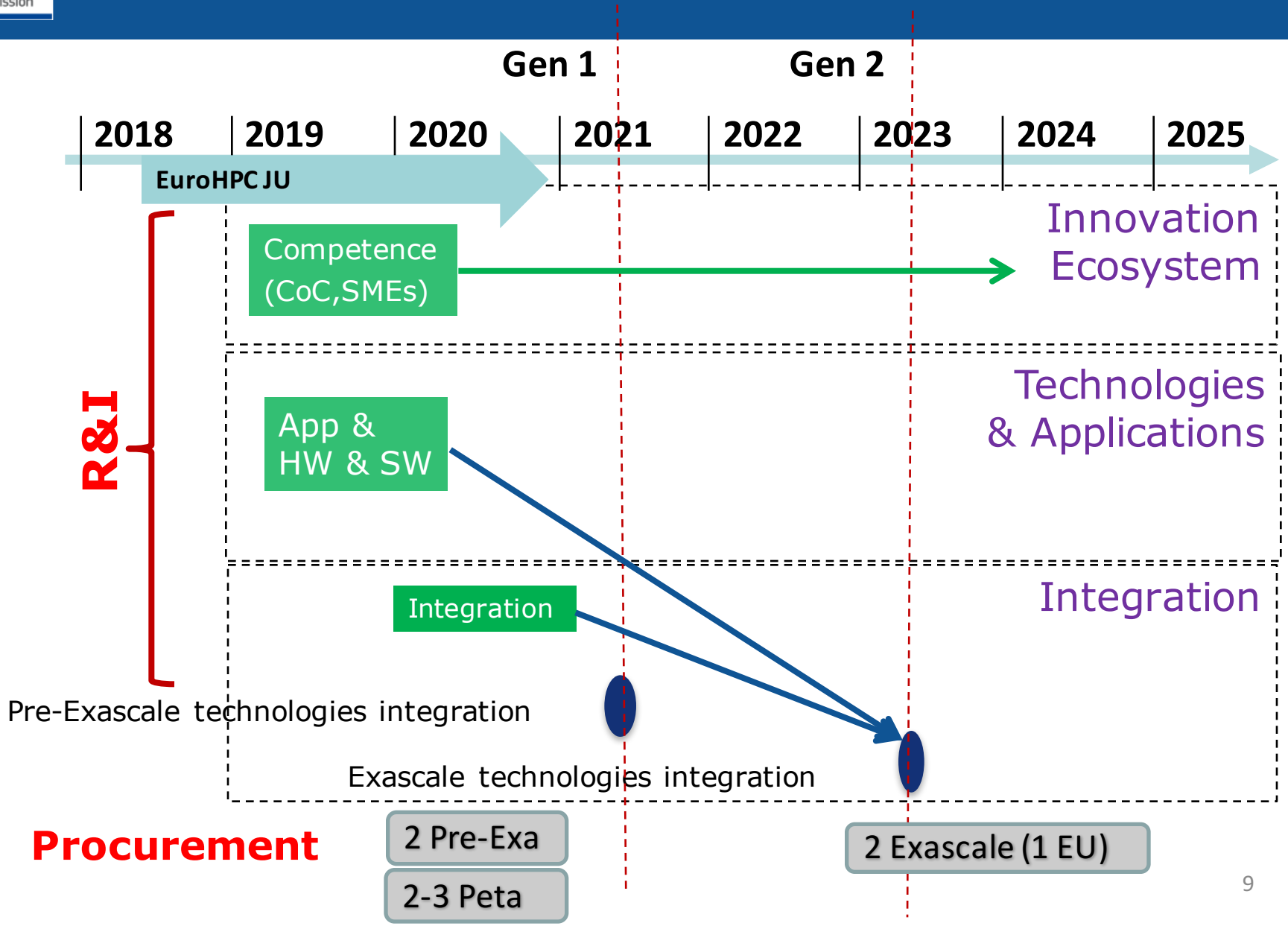
- Calls for R&I: exascale technologies and systems (incl. low-power processor); applications and use training and skills

2021-2028 (next financial framework)

1. Exascale and post-exascale infrastructure

2. R&I for the HPC/BD ecosystem

Actions in 2019-2020 and beyond



PRACE | members

Hosting Members

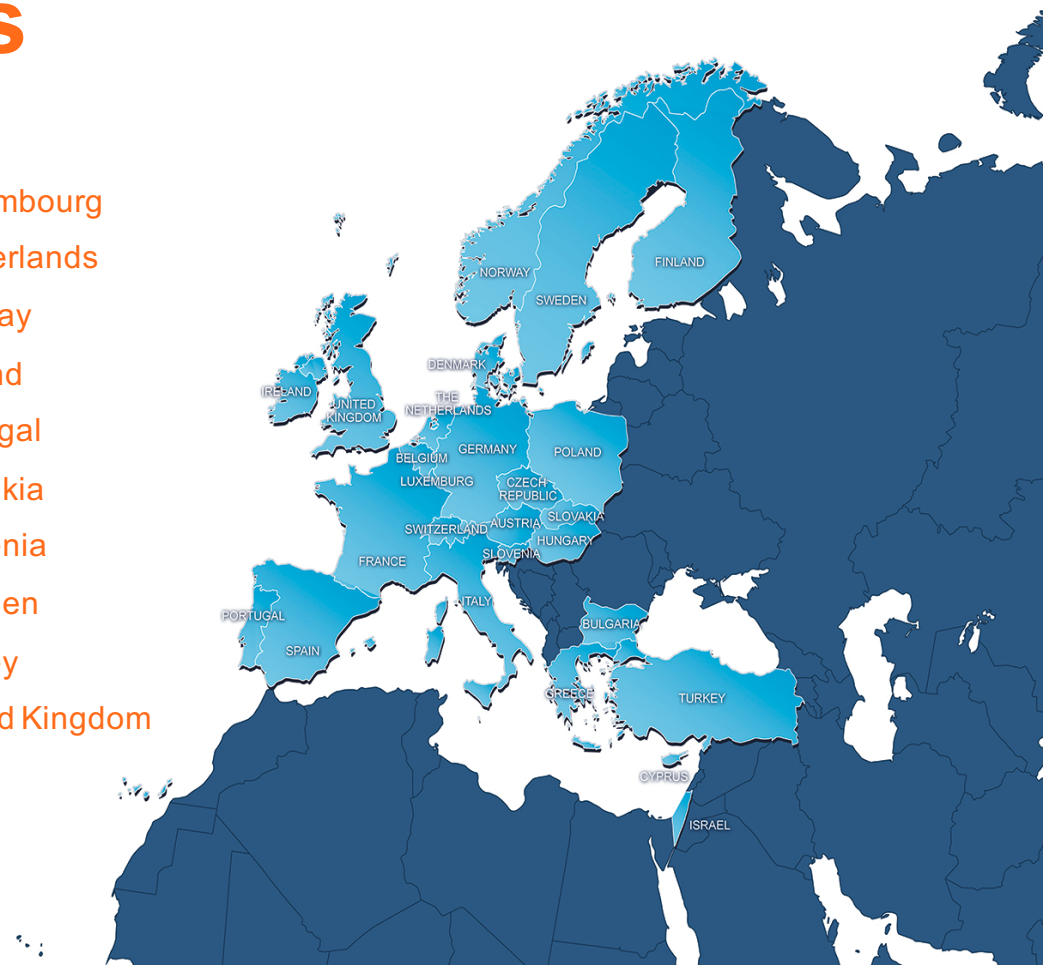
- France
- Germany
- Italy
- Spain
- Switzerland

General Partners (PRACE 2)

- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Finland
- Greece
- Hungary
- Ireland
- Israel
- Luxembourg
- Netherlands
- Norway
- Poland
- Portugal
- Slovakia
- Slovenia
- Sweden
- Turkey
- United Kingdom

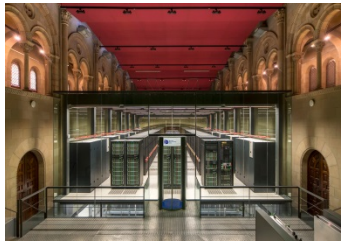
Observers

- Croatia
- Romania



PRACE | Tier-0 Systems in 2018

NEW ENTRY 2018
JUWELS (Module 1): Bull Sequana
GAUSS @ FZJ, Jülich, Germany
#23 Top 500



MareNostrum: IBM
BSC, Barcelona, Spain
#22 Top 500

Piz Daint: Cray XC50
CSCS, Lugano, Switzerland
#6 Top 500

SuperMUC : Lenovo cluster GAUSS @ LRZ, Garching, Germany #57 Top 500

NEW ENTRY soon SuperMUC NG

NEW ENTRY 2018
JOLIOT CURIE : Bull Sequana
GENCI/CEA, Bruyères-le-Châtel, France #34 Top 500

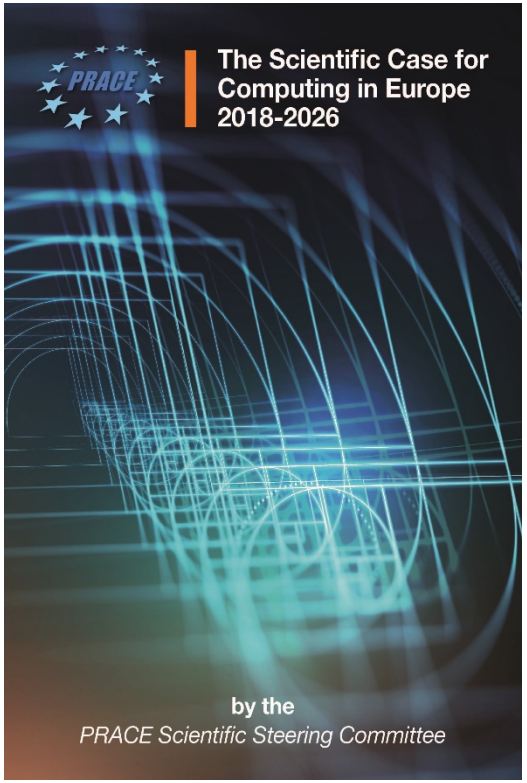
MARCONI: Lenovo
CINECA, Bologna, Italy
#18 Top 500

Hazel Hen: Cray
GAUSS/HLRS, Stuttgart, Germany
#27 Top 500

Close to 110 Petaflops cumulated peak performance

PRACE | scientific case

- First edition in 2012, update in 2018
- We cannot do it all
  - Which application domains to focus on?
  - Which technologies?
- Eternal struggle: heavenly Science vs mundane Economics
- Balance between traditional, disruptive and fundamental science



The EU-ASEAN Policy Exchange Platform (PEP)

Long-term and continuous support measure and activity planning tool for region-to-region cooperation on an **expert working level**, and exchange between **working and policy level**

In the first year of implementation of the PEP, studies and exchanges on **Talent Mobility, Regional Research Infrastructures** and on **HPC** are planned

Open to other priorities in later years

The E-READI framework

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E-READI

"ENHANCED REGIONAL EU ASEAN DIALOGUE INSTRUMENT"

Objectives:

- engage in dialogues in area of common policy interest
- lead to concrete deliverables and set programmatic consultations

DIALOGUES	Title
Human Rights and Gender Equality	Dialogue on Human Rights
	3rd Policy Dialogue on Human Rights
	Public Campaign and Dialogue on Safe Migration
	Policy Dialogue on Gender Equality and Empowerment of Women and Girls
Environment/Climate Change	Dialogue on Environment and Climate Change
	Circular Economy
	Natural Capital
	Climate Action: Science/Policy Interface
	Clean Energy Dialogue
	Fisheries Dialogue
Economic & trade connectivity/business environment	Trade Experts Dialogue
	Business Dialogues
	Road Transport Dialogue
	Cooperation Framework for Measuring Digital Economy & Society
Science and Research	The Research & Innovation Policy Exchange Platform
	Eurocodes

European Commission

Perspectives

Seamless access to knowledge

Shared resources

Start national and regional – go global

Why?

- Advance science
- Solve problems, get critical mass
- Build communities, networks
- Regional integration

Interplay of technology, infrastructure, policy, governance

- technology not the most difficult!

Contact E-READI

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E-READI

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