



EuroHPC  
Summit Week 2022



## PRACE PEER-REVIEW

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From 22 to 24 March 2022 | Paris, France

#EHPCSW #PRACEdays



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**Summit Week 2022**



## OVERVIEW

- PRACE Peer-Review
- PRACE calls + Project Access statistics
- EuroHPC & PRACE Peer-Review
- EuroHPC calls
- PRACE & EuroHPC Peer-Review process differences review
- Advice to applicants
- Peer-Review platform



The EuroHPC Summit Week conference series receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 823767 (PRACE-6IP), 824151 (HPC-GIG).

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## PRACE & PRACE PEER-REVIEW

- PRACE facilitates the access to computing and data management resources and services intended to promote scientific and industrial research.



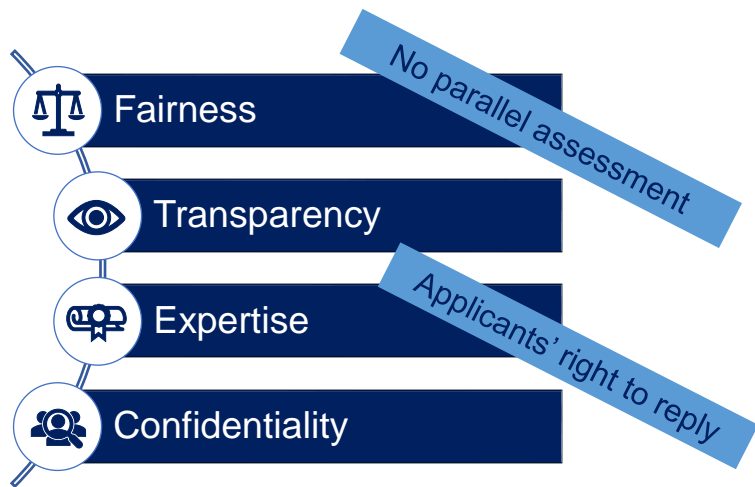
- In order to be fair and transparent to all applications, proposals requesting High Performance Computing (HPC) resources via PRACE undergo a **Peer-Review process** that is specific **per call type**.





# PRACE PEER-REVIEW

## Peer-Review Principles



## Conflict-of-Interest Policy\*

Applied to both PRACE members and reviewers with conditions:

- No previous collaborations with PI and/or Team Members in the last 10 years
- Not affiliated with the same institution as the PI and/or Team Members in the last 3 years
- No family connection to PI and/or Team Members

*\*Current version - published 26 March 2020*





# PRACE CALLS FOR PROPOSALS

Access to Tier-0 systems – very large projects

Access to Tier-0 and Tier-1 resources, interactive computing services, VM services, archival and active data repository

Code scalability testing on Tier-0 machines

Code and algorithm development and optimization on Tier-0 machines

Access to Tier-0 and Tier-1 resources intended for SMEs

Access to Tier-1 resources

Fast access to Tier-0 resources

PROJECT ACCESS CALL

ICEI CALL

BENCHMARK CALL

DEVELOPMENT CALL

SHAPE CALL

DECI CALL

COVID-19 FAST TRACK CALL





# PROJECT ACCESS CALL

## GENERAL OVERVIEW

Project Access call enables access to **Tier-0** world class HPC resources.



### 2 calls per year:

- **March** call – allocation in **October**
- **September** call – allocation in **April**

### Projects duration:

- Single-year projects - 12 months
- Multi-year projects - 24 or 36 months\*

*\*Multi-year projects are granted resources for 1 year only, allocations for the 2<sup>nd</sup> and the 3<sup>rd</sup> are tentative*



### Type of submission:

- First submission
- Resubmission
- Continuation\*

*\*Mandatory Progress/Final Report at the time of submission*





# PROJECT ACCESS CALL

## ELIGIBILITY

### Scientists and researchers from academia and industry.

- The project leader/principal investigator must have an employment contract valid at least **3 months** after the end of the allocation period
- Company has its head office or substantial R&D activity in Europe

**Only research proposals of a civilian (non-military) nature are eligible.**

**Double-granting is not permitted - projects awarded by any other PRACE HPC program will be rejected.**

### Who can apply?







## PROJECT ACCESS CALL

### HPC SYSTEMS – 23<sup>rd</sup> call

#### 2 partitions - JUWELS

- JUWELS Cluster
- JUWELS Booster

#### 3 partitions – JOLIOT-CURIE

- Joliot-Curie Rome
- Joliot-Curie KNL
- Joliot-Curie SKL

JUWELS  
GSC@FZJ

SUPERMUC-NG  
GSC@LRZ

HAWK  
HCS@HLRS

JOLIOT-CURIE  
GENCI/CEA

PIZ DAINT  
ETH Zurich/CSCS

MARCONI 100  
CINECA

MARENOSTRUM 4  
BSC

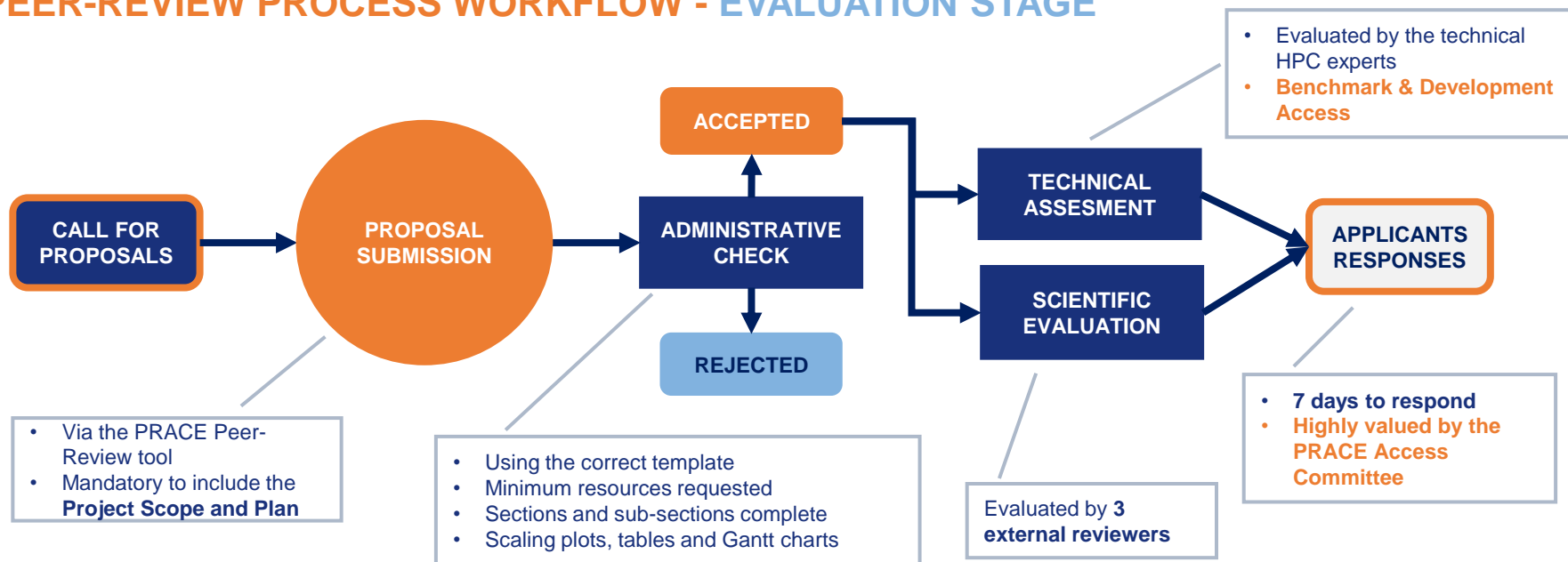






# PROJECT ACCESS CALL

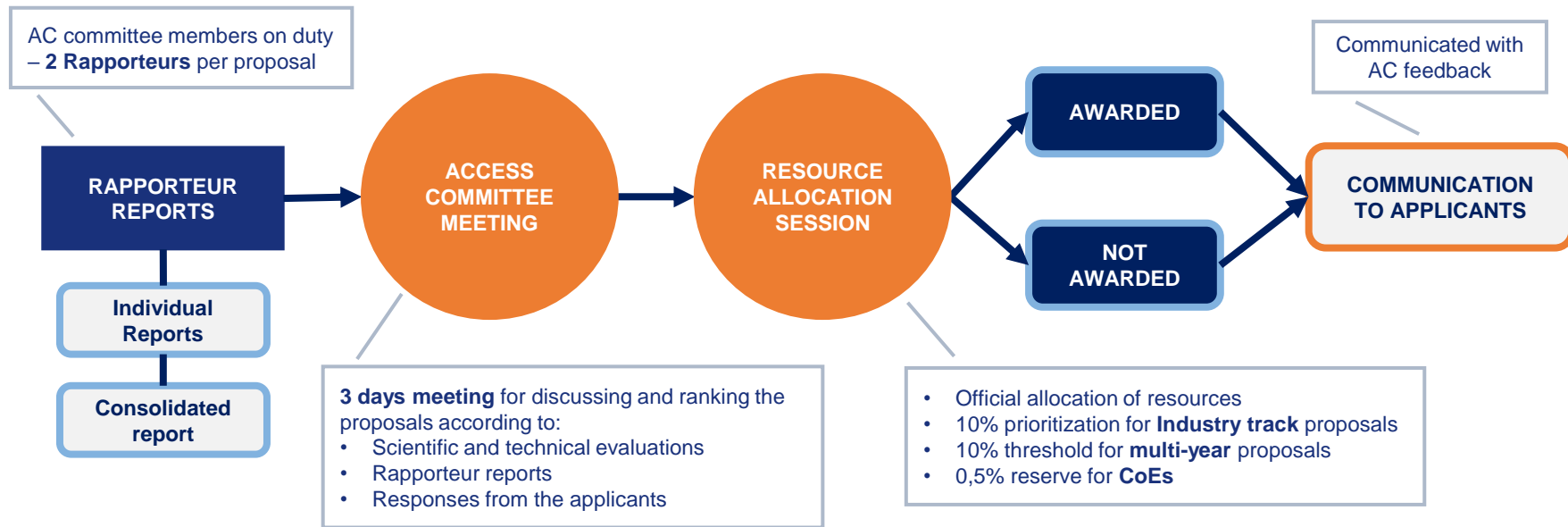
## PEER-REVIEW PROCESS WORKFLOW - EVALUATION STAGE





# PROJECT ACCESS CALL

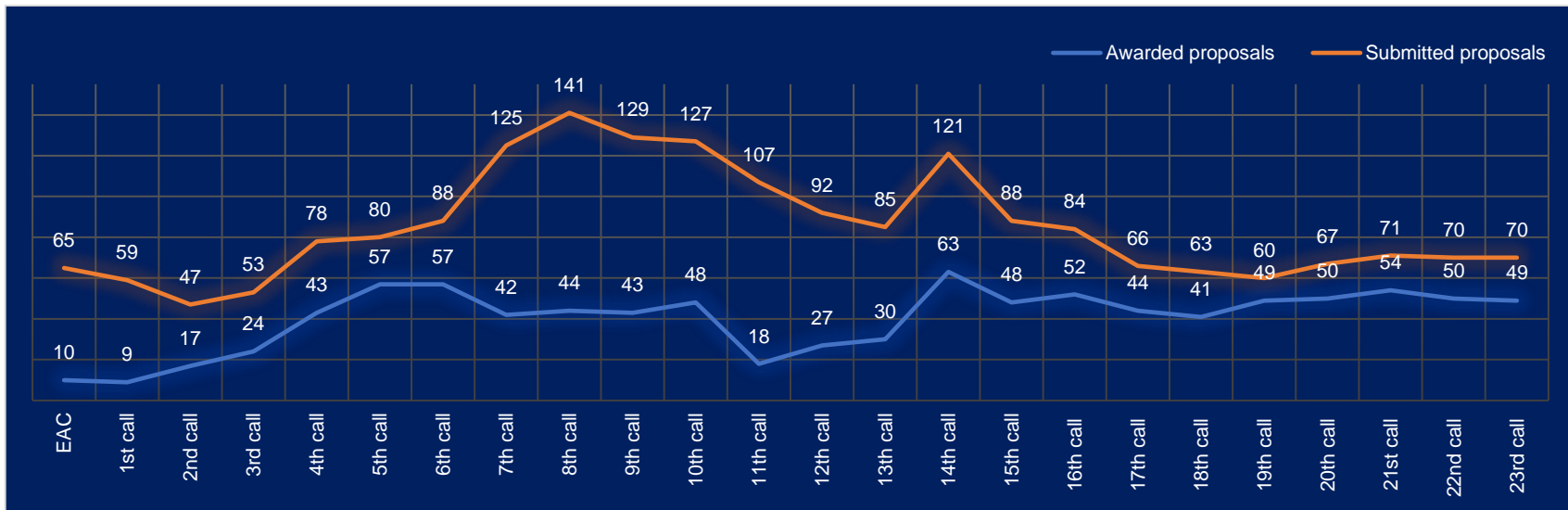
## PEER-REVIEW PROCESS WORKFLOW - RESOURCE ALLOCATION STAGE





# PROJECT ACCESS CALL

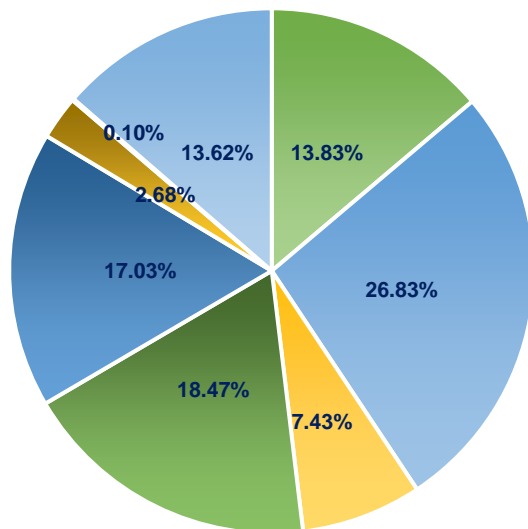
## STATISTICS – Submitted and awarded proposals EAC – 23<sup>rd</sup> call





# PROJECT ACCESS CALL

## STATISTICS – Awarded proposals EAC – 23<sup>rd</sup> call – research fields distribution



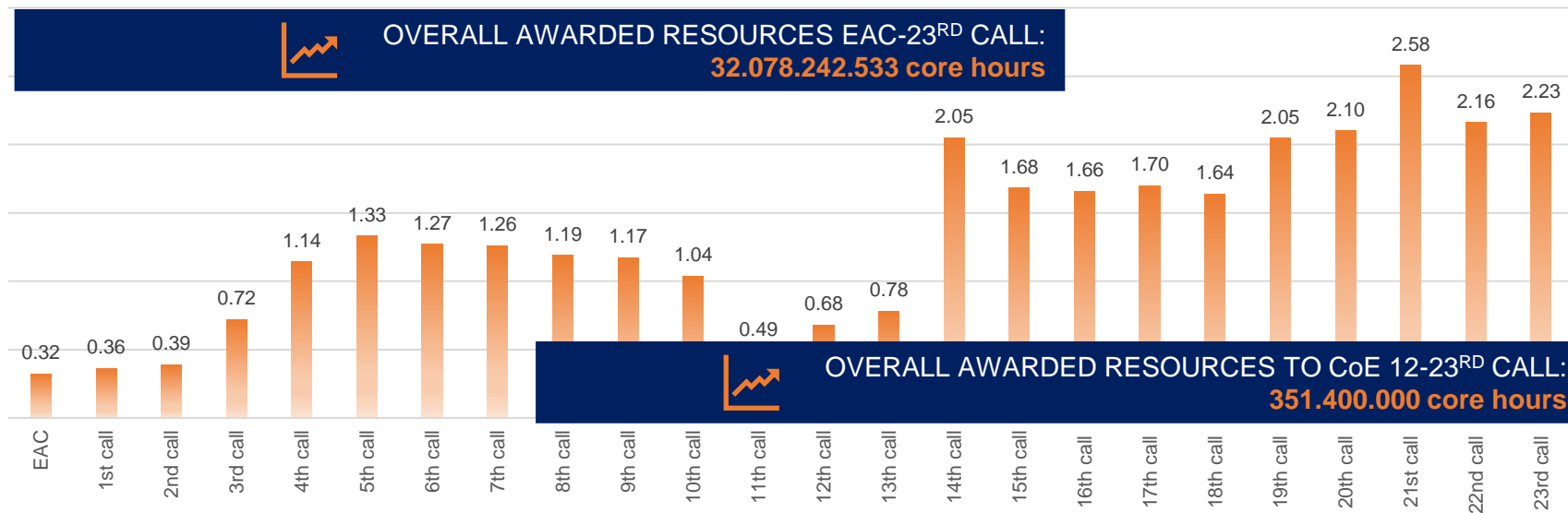
- Biochemistry, Bioinformatics and Life sciences - 13,83%
- Chemical Sciences and Materials - 26,83%
- Earth System Sciences - 7,43%
- Engineering - 18,47%
- Fundamental Constituents of Matter - 17,03%
- Mathematics and Computer Sciences - 2,68%
- Physiology and Medicine - 0,10%
- Universe Sciences - 13,62%





# PROJECT ACCESS CALL

## STATISTICS – Awarded resources EAC – 23<sup>rd</sup> call in billion core hours





## ICEI CALL GENERAL OVERVIEW



ICEI call enables access to **Tier-0** and to **Tier-1** HPC resources.

Applicants can request resources: interactive computing services, VM services, archival and active data repository.

Funded by the **FENIX Research Infrastructure**.



**3-4 calls per year**

**Projects duration:**

- Single-year projects - 12 months



**Type of submission:**

- First submission
- Resubmission
- Continuation





# ICEI CALL

## PEER-REVIEW PROCESS



**Submission period** - proposals are submitted via email



**Technical Assessment** - proposals are forwarded to the respective HPC Centres



**Scientific Evaluation** - proposals are scientifically reviewed by the ICEI Panel members (2 Rapporteurs per proposal)



**ICEI panel meeting** – all proposals are discussed:

- **Accepted**
- **Conditionally accepted** – further clarification needed from the PI
- **Rejected**



**Results communication**







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## **ICEI CALL** **PLANNED CALLS 2022**

Call No.	Call opening date	Call closing date	Allocation start
Call #8	10 January 2022	05 February 2022	April 2022
Call #9	21 March 2022	22 April 2022	July 2022
Call #10	20 June 2022	18 July 2022	October 2022
Call #11	26 September 2022	24 October 2022	January 2023



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# BENCHMARK AND DEVELOPMENT CALLS

## GENERAL OVERVIEW

**Benchmark call** – code scalability testing

**Development call** – code development and optimization

**Intended for proposal preparation for the Project Access call.**

**Not intended for production runs nor research activities.**



### Continuously open calls

#### Projects duration:

- Benchmark call – 2 months
- Development call – 6 months



### Previously known as Preparatory Access call

- Types A & B are available as Benchmark and Development calls
- Types C & D are no longer available





# BENCHMARK AND DEVELOPMENT CALLS

## PEER-REVIEW PROCESS



**Submission period** - proposals are submitted via the online platform



**Technical Assessment** - proposals are forwarded to the respective HPC Centres

- **Accepted**
- **Rejected**



**Communication to applicants** – HPC centres contact the applicants





# BENCHMARK AND DEVELOPMENT CALLS

## AVAILABLE RESOURCES IN CORE HOURS

CENTRE	PARTITION	FIXED RESOURCES BENCHMARK	FIXED RESOURCES DEVELOPMENT
GCS@FZJ	JUWELS Cluster	20.000	50.000
GCS@FZJ	JUWELS Booster	10.000	25.000
GSC@LRZ	SUPERMUC-NG	50.000	100.000
GSC@HLRS	HAWK	50.000	250.000
GENCI/CEA	Joliot-Curie Rome	50.000	200.000
GENCI/CEA	Joliot-Curie KNL	50.000	200.000
GENCI/CEA	Joliot-Curie SKL	50.000	200.000
ETH Zurich/CSCS	Piz Daint	100.000	100.000
CINECA	Marconi100	12.500	25.000
BSC	MareNostrum4	50.000	100.000





# EUROHPC & PRACE PEER-REVIEW

## EuroHPC JU

- Provides access to HPC resources via different access modes
- Peer-Review process managed by PRACE
- Calls procedures and the Peer-Review process follow the [Access Policy v 1.1](#).

## Conflict-of-Interest Policy

- Currently following the [PRACE Conflict-of-Interest and Confidentiality Policy](#)
- Applied to EuroHPC members and reviewers

## Peer-Review Principles

- All PRACE Peer-Review Principles are applied: Fairness, Transparency, Expertise & Confidentiality





## EUROHPC ACCESS MODES

For access to extremely large allocations in EuroHPC JU (pre) exascale systems

For access to large allocations in EuroHPC JU petascale systems

To collect performance data on a target system

For code and algorithm development

For academic users that have a track record of a successful application to other access modes

For applicants from a commercial entity to run a proof of concept in a very short time

**EXTREME SCALE ACCESS CALL**

**REGULAR ACCESS CALL**

**BENCHMARK CALL**

**DEVELOPMENT CALL**

**FAST TRACK ACCESS ACADEMIA**

**FAST TRACK ACCESS INDUSTRY**





# EUROHPC ACCESS MODES

## ELIGIBILITY

Researchers from academia, research institutes, public authorities and industry established or located in a Member State or in a country associated to **Horizon 2020**.

**Regular Access call** – **Principal Investigators** can only have one Regular Access allocation awarded per call.

**Extreme Scale Access call** – **Principal Investigators** or **Co-Investigators** can only have one Extreme Scale Access allocation awarded per call.

Who can apply?





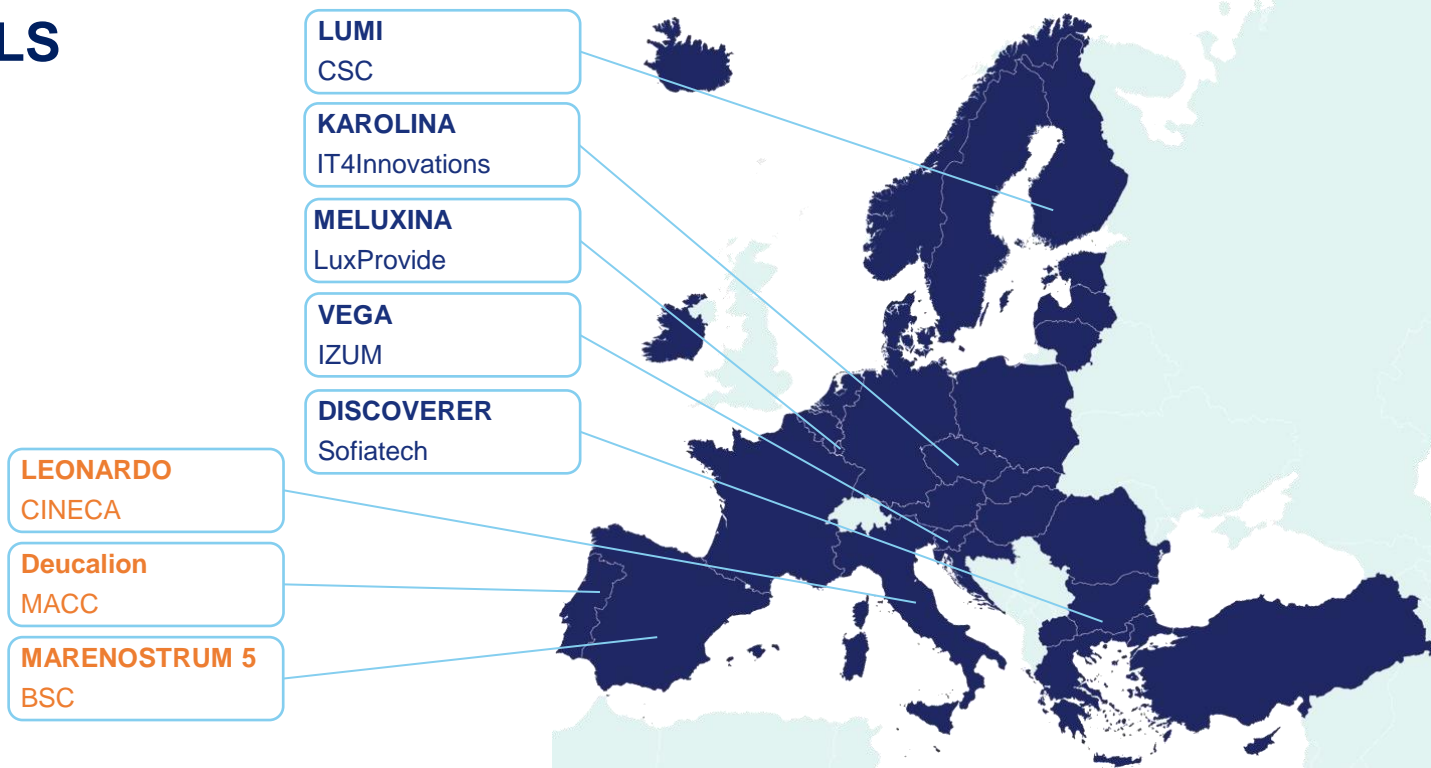


# EUROHPC CALLS

## HPC SYSTEMS

### 2 partitions – LUMI

- LUMI-C
- LUMI-G





## REGULAR ACCESS CALL

### GENERAL OVERVIEW

Intended to serve research domains or communities that require large-scale HPC resources.

Open to all fields of science, industry, and the public sector.



**Continuously open call** with 3 cut-off dates per year

**Projects duration:**

- Single-year projects – 12 months\*

*\*Option to apply for 1 additional year for continuation*



**First cut-off – December 2021**

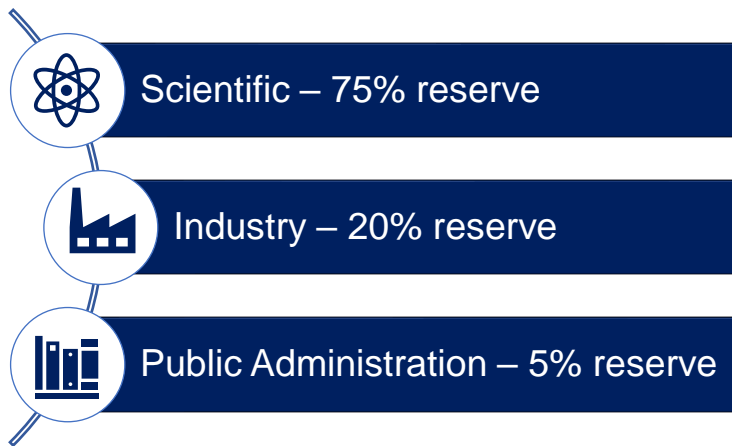




# REGULAR ACCESS CALL

## ACCESS TRACKS AND EVALUATION CRITERIONS

### 3 access tracks:



### 3 evaluation criterions:

- Excellence
- Innovation and Impact
- Quality and Efficiency of the Implementation





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# **REGULAR ACCESS CALL**

## **RESEARCH DOMAINS**



**Biochemistry, Bioinformatics, Life Sciences, Physiology and Medicine**



**Chemical Sciences and Materials, Solid State Physics**



**Computational Physics: Universe Sciences, Fundamental Constituents of Matter**



**Earth System Sciences & Environmental Studies**



**Engineering, Mathematics and Computer Sciences**



**Socio-Economic Sciences and Humanities: Economics, Finance and Management,  
Linguistics, Cognition and Culture**



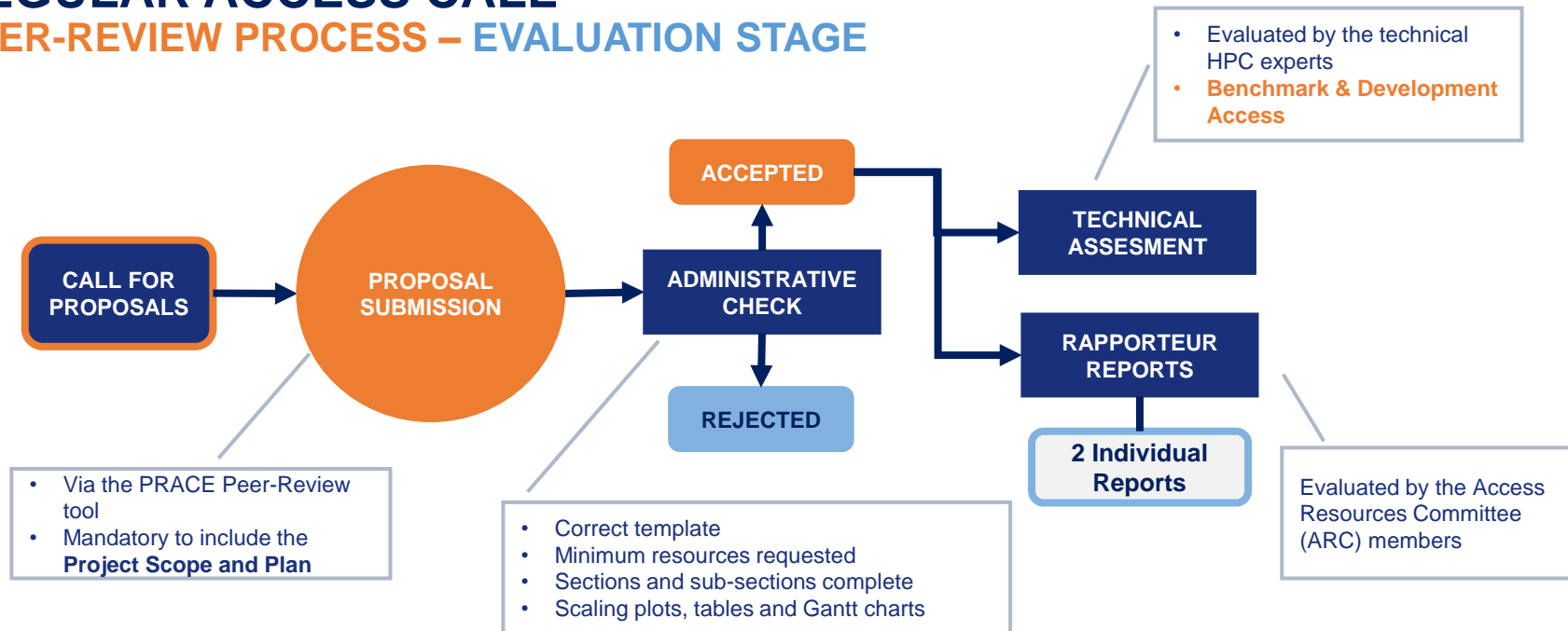
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# REGULAR ACCESS CALL

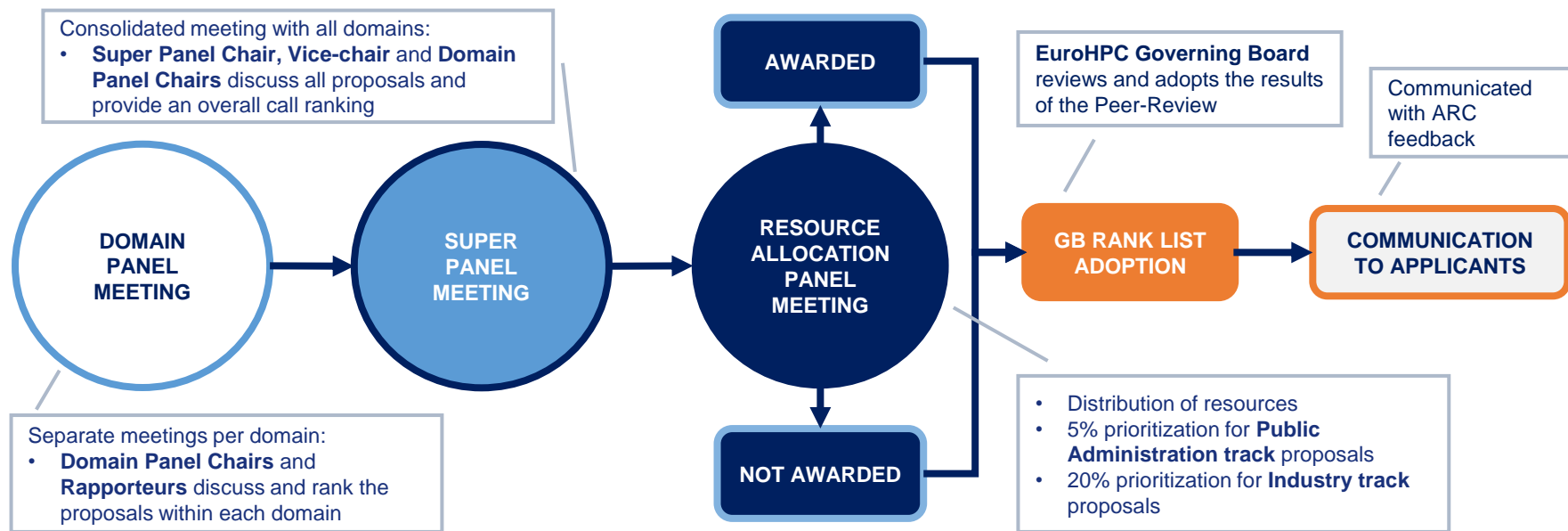
## PEER-REVIEW PROCESS – EVALUATION STAGE





# REGULAR ACCESS CALL

## PEER-REVIEW PROCESS – RESOURCE ALLOCATION STAGE





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# **REGULAR ACCESS CALL**

## **CUT-OFF DATES 2022**

<b>Cut-off name</b>	<b>Cut-off date</b>	<b>Allocation start</b>	<b>Allocation end</b>
<b>March 2022</b>	04 March 2022	01 July 2022	30 June 2023
<b>July 2022</b>	01 July 2022	01 November 2022	31 October 2023
<b>November 2022</b>	04 November 2022	01 March 2023	29 February 2024



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# EXTREME SCALE ACCESS CALL

## GENERAL OVERVIEW

Intended for applications with high-impact, high-gain innovative research.

Open to all fields of science, industry, and the public sector.



3 access tracks available:

- Scientific
- Industry
- Public Administration



Continuously open call with 2 cut-off dates per year

Projects duration:

- Single-year\*\* projects – 12 months\*

*\*Option to apply for 1 additional year for continuation*

*\*\*Initial allocations of up to two (2) years are possible in order to support long-term, high-demanding applications*





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# EXTREME SCALE ACCESS CALL

## PEER-REVIEW PROCESS – EVALUATION STAGE



**Submission period** – proposals are submitted via the PRACE Peer-Review Platform



**Administrative check** – proposals are evaluated by the PRACE Peer-Review officers



**Technical Assessment** – proposals are forwarded to the respective HPC Centres



**Scientific Evaluation** – proposals are scientifically reviewed by 3 external scientific reviewers



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# EXTREME SCALE ACCESS CALL

## PEER-REVIEW PROCESS – RESOURCE ALLOCATION STAGE



**Rapporteur reports** – all proposals are evaluated by **2 Rapporteurs** (2 Individual Reports + Consolidated Report)



**ARC meeting** – all proposals are discussed and ranked



**RAP meeting** – distribution of resources



**GB ranking list adoption** – EuroHPC Governing Board reviews and adopts the ranking list



**Results communication** – the applicants are notified about the results by the PRACE Peer-Review officers





# BENCHMARK AND DEVELOPMENT CALLS

## GENERAL OVERVIEW

**Benchmark call** – for collecting performance data on a targeted system

**Development call** – for code and algorithm development



**Continuously open calls with monthly cut-offs (12 per year)**

**Projects duration:**

- Benchmark call – 2-3 months
- Development call – up to 1 year\*

*\*renewable up to 2 times (max of 3 years for a project)*

**Intended for proposal preparation for Extreme Scale and Regular Access calls.**





# BENCHMARK AND DEVELOPMENT CALLS

## PEER-REVIEW PROCESS



**Submission period** – proposals are submitted via the online platform



**Technical Assessment** – proposals are forwarded to the respective HPC Centres after the cut-off date

- **Accepted**
- **Rejected**



**Communication to applicants** – HPC centres contact the applicants





## PRACE & EUROHPC PEER-REVIEW PROCESS MAIN DIFFERENCES

TOPIC	PRACE	EUROHPC
<b>ELIGIBILITY</b>	PI can be affiliated to any organization in the world	PI needs to be affiliated with an organization from a Horizon 2020 countries list
<b>ACCESS TRACKS</b>	Scientific and Industry tracks	Scientific, Industry and Public Administration tracks
<b>PROJECTS DURATION</b>	Single-year projects Multi-year projects (2-3 years)	Single-year projects only
<b>CONTINUATION PROPOSALS</b>	New proposal that continues research previously done on one of the PRACE systems	An existing proposal requesting additional resources for an additional year
<b>SCIENTIFIC PANELS</b>	Access Committee (AC), no Domain Panels	Access Resource Committee (ARC) for Regular Access call is divided per Domain, for Extreme Scale no domains
<b>EVALUATION SCORES</b>	Scoring from 1-6 as integer numbers, providing only the final grade	Scoring from 0-5 per criterion, the final grade is a sum 0-15 (half-point included)
<b>EVALUATION CRITERIONS</b>	The reviewers assess the proposal content, scientific merit and impact, PI and team members, resource management	3 criterions: excellence, innovation and impact, quality and efficiency of the implementation





## ADVICE TO APPLICANTS

- **Benchmark & Development calls** – perform scalability tests on a desired system before applying to production calls
- **Proposal templates** – use correct, updated templates available on the PRACE website (<https://prace-ri.eu/>) per call
  - Fill in all sections and sub-sections of a template and include mandatory plots, tables and charts
- **Resources requested** – justify the requested amount and respect the minimum resources requests posed by the centres
- **Call documentation** – carefully study the documentation per call published on the PRACE website – **Terms of Reference & Technical Guidelines**
- **Communication** – contact the Peer-Review office and HPC centres concerning any doubts or questions
- **AC/ARC feedback** – take the AC/ARC qualitative comments into consideration
- **Final Reports** – send the Final Reports 6 months after the project completion







## APPLYING TO PRACE & EUROHPC CALLS PEER-REVIEW PLATFORM

Proposal submission via the PRACE Peer-Review Platform available at <https://praccalls.eu>

### Available calls on the platform:

- PRACE Project Access
- PRACE Benchmark Access
- PRACE Development Access
- EuroHPC Regular Access
- EuroHPC Benchmark Access
- EuroHPC Development Access

PRACE Access Calls

Open Calls for Proposals

- EuroHPC Regular Access (Open)
- PRACE Development Access (Open)
- EuroHPC Development Access (Open)
- PRACE Benchmark Access (Open)
- EuroHPC Benchmark Access (Open)

Browse through all Calls

- EuroHPC Regular Access (Open)
- PRACE Development Access (Open)
- EuroHPC Development Access (Open)
- PRACE Benchmark Access (Open)
- EuroHPC Benchmark Access (Open)
- EuroHPC Regular Access (Closed)
- PRACE 24th Call for Proposals for Project Access (Closed)
- PRACE 23rd Call for Proposals for Project Access (Closed)



# Thank you for your attention!

Contact the PRACE Peer-Review team:

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Andreia Meireles: [a.meireles@staff.prace-ri.eu](mailto:a.meireles@staff.prace-ri.eu)



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