



PRACE Community Access WG

Lattice QCD Community Meeting 5 Mar 2020

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PRACE WG Scope

- ▶ **Background**
 - ▶ Large scale facilities and other large pan-European initiatives attract attention
 - ▶ Communities feel neglected & decreasing number of submissions to regular calls
 - ▶ Need input from prominent scientists from large scientific organisations
 - ▶ AI getting more attention
- ▶ **WG on Community Access established by PRACE Council aiming**
 - ▶ Characterisation of communities (how are they defined or acknowledged)
 - ▶ Identification of the needs of communities
 - ▶ Identification of adapted access modes
 - ▶ Preparation of a white paper describing the needs and the possible ways to address these



PRACE WG Members

- ▶ 2 SSC members
 - ▶ Núria López – Chair of the WG
 - ▶ Matej Praprotnik
- ▶ 2 eminent external scientists from communities
 - ▶ Peter Bauer
 - ▶ Nicola Marzari
- ▶ 2 Council members
 - ▶ Constantia Alexandrou
 - ▶ Thomas Schulthess
- ▶ 1 PRACE aisbl representative
 - ▶ Serge Bogaerts
- ▶ 1 PRACE-IP representative
 - ▶ Cédric Jourdain
- ▶ 1 IAC observer
 - ▶ Lee Margetts



Consultation of communities

▶ Sampling communities

- ▶ Weather and Climate
- ▶ Material Science
- ▶ Experimental High Energy Physics
- ▶ Lattice QCD
- ▶ European Spallation Source (ESS)
- ▶ European Synchrotron Radiation Facility (ESRF)
- ▶ Neuroscience (HBP)

▶ Survey

- ▶ Who represents the community?
- ▶ What is their scientific case? (with sharp goals)
- ▶ What resources can they use now? And what would they need to reach their goal?
- ▶ What is their portfolio or type of projects (specific exploration vs longer-term target)?
- ▶ What is their level of readiness for exascale? And what do they need to be ready for that?
- ▶ What is the potential of the ML and DNN for their applications?



Main findings and ongoing action

- ▶ Opportunity in exascale era
 - ▶ Very substantial increase of resources with pre-exascale and multi-petascale EuroHPC systems opens new perspectives to support Science efficiently
 - ▶ Next to excellence-driven projects
 - ▶ Support of long-term community-driven objective(s) via a European version of US Programmatic Access → to be decided at the highest political level (strategic access)

- ▶ Communities are very diverse
 - ▶ Diverse structuring (or absence of structure)
 - ▶ Heterogeneous needs

- ▶ Compiling expressions of concrete (quantitative) needs

- ▶ Paper recording the WG findings



Thank you for your attention
