

[Agreement to coordinate the development of the HPC technology value chain in Europe](#)

BSC, CINECA, CEA and FZJ have agreed to coordinate themselves in order to continue the implementation of the HPC strategy through technology development as proposed in Horizon 2020.



Barcelona Supercomputing Center (BSC), Cineca Consorzio interuniversitario (CINECA), Commissariat à l'énergie atomique et aux énergies alternatives (CEA) and Forschungszentrum Jülich (FZJ) have agreed to coordinate themselves in order to continue the implementation of the European High Performance Computing (HPC) strategy through technology development as proposed in Horizon 2020. The objectives of the agreement are to coordinate HPC R&D and Innovation efforts of the partners, leveraging joint efforts for better effectiveness; to help building a globally competitive value chain and HPC flagship industry from hardware to applications; to support the EU HPC strategy defined at the level of the European Commission, and collaborate in alignment with it.

Together with HPC industrials, the partners are active members of the [European Technology Platform for High Performance Computing](#) (ETP4HPC). They design and operate world-class computing infrastructures and systems for the Partnership for Advanced Computing in Europe (PRACE) and as national platforms. Their skills in specifying HPC technology for future challenges, deploying and evaluating HPC systems as well as providing user support are strong assets in the co-design of efficient high-end computing systems for science and industry. The partners will bring the experience of sites already hosting unique large-scale systems along with exceptional research teams and strong HPC partnerships. This will provide a favorable environment for collaborative test-beds for hardware and software prototypes to be developed as part of research and development (R&D) projects, such as those which respond to Horizon 2020 calls, as well as facilitating the early deployment of fully fledged systems which may result from such projects. These systems promise to spearhead a profound shift towards new approaches to high-end simulation, working towards objectives established in Horizon 2020 such as helping address societal challenges, strengthening industrial leadership and the EU's position in science and research.

The agreement, open to further participation, emphasises the strategic importance of HPC and of its development at European level all along the value chain, from hardware and software technologies to infrastructures and services, through to computing and data intensive applications in key areas of interest for science, industry and society.

About Barcelona Supercomputing Center (BSC)

Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) - serves as the National Supercomputing Facility in Spain. The centre hosts MareNostrum, one of the most powerful supercomputers in Europe. The mission of the BSC-CNS is to research, develop and manage information technologies with the larger goal of facilitating scientific innovation. It strives to attain these goals by focusing on technology and innovation in the areas of Computational Sciences, Life Sciences and Earth Sciences. The Computer Science Department focuses on adapting both currently available and cutting-edge hardware and software technologies to supercomputing infrastructures. The Earth Sciences Department carries out research in earth systems modelling, focusing on atmospheric physics and chemistry. The Life Sciences Department integrates a broad range of interconnected research areas in computational biology, from genomics to computational biochemistry.

About Cineca Consorzio interuniversitario (CINECA)

CINECA, established in 1969, is the Italian supercomputing facility, one of the largest in Europe; its HPC infrastructure is equipped with cutting-edge technology and it offers highly-qualified personnel which cooperates with researchers and customers for the most effective exploitation of the HPC systems, in both the academic and industrial fields.

SCAI (SuperComputing Applications and Innovation) is the CINECA HPC department. The mission of SCAI is to accelerate the scientific discovery by providing HPC resources, data management and storage systems and tools and HPC services and expertise at large, aiming to develop and promote technical and scientific services related to high-performance computing for the Italian and European research community.

The current HPC infrastructure offers, as main system, a Tier-0 IBM BG/Q, FERMI, (10 Frames, 163840 cores with 1GB RAM per core and a peak performance of 2 PFlop/s).

About Commissariat à l'énergie atomique et aux énergies alternatives (CEA)

CEA is a major player all along the value chain of HPC from R&D - development of silicon technology, architecture of processors, system integration, software environments and tools – to usages of numerical simulation in many different areas, corresponding to the missions of CEA and its more than 16 000 staff members in the development of low carbon energies, technologies for health, information technology, defence and global security, and underlying fundamental research for all these objectives.

CEA also owns and operates two world-class computing infrastructures (TERA and TGCC), and deploys related HPC services, for the benefit of national and European research, industry and defence - access to HPC for industry has been developed for 10 years at CEA “CCRT”, Computing Centre for Research and Technology.

About Forschungszentrum Jülich GmbH (FZJ)

The Forschungszentrum Jülich – a member of the Helmholtz Association – is one of the largest research centres in Europe. It pursues cutting-edge interdisciplinary research addressing the challenges facing society in the fields of health, energy and the environment, and information technologies. Within the Forschungszentrum, the Jülich Supercomputing Centre (JSC) is one of the three national supercomputing centres in Germany as part of the Gauss Centre for Supercomputing (GCS). Presently, JSC operates a European Tier-0 system “Juqueen“ at 5.9 Petaflop/s peak performance. JSC has over 50 years of expertise in providing supercomputer services to national and international user communities, in HPC related research in selected fields of physics and other natural sciences, in support of users, education and training.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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