

Executive Summary

The Big Data and Extreme-scale Computing (BDEC) community addresses the subject of HPC and Big Data convergence with a global prospective view. Taking part in the BDEC workshops series represents a unique opportunity for Europe to participate in and contribute to the global definition of the future of HPC, based on a shaping strategy approach, which aims to affirm the European engagement in providing strategic directions for the profitable use of HPC in the context of HPDA and Big Data in general.

Since 2003, BDEC workshops are organized as a world-wide international coordination between the HPC ecosystem and the Big Data community. Europe is part of BDEC since its inception, and the European participation in the BDEC meeting has been supported by EESI, EESI2 and EXDCI, and now, EXDCI-2 projects. From the 14th to the 16th of May 2019, a workshop was organized in Poznań (Poland) under the supervision of the EXDCI-2 project and in the framework of the EuroHPC Summit Week. The event gathered 51 participants from 15 countries.

Through global and inspirational talks (keynotes), state-of-the-art presentations (demonstrators on scientific cases, roadmaps on policies) and collective thinking (brainstorming and breakout sessions), the meeting achieved the following objectives: giving an overview of the current status of the convergence between HPC and Big Data, studying Machine Learning and Artificial Intelligence as key drivers for the convergence between HPC and Big Data, determining the next challenges for BDEC demonstrators (a *proof-of-concept* platform designed to demonstrate some common capabilities- see Section 2) to tackle.

The major outcome of the workshop was the choice of 2 initial demonstrators that will pave the way for more numerous application-specific exemplars. These will be further elaborated in the upcoming BDEC workshop, to be held in October 2019 in the US.