Project title	BigHPC - A Management Framework for Consolidated Big Data and HPC
Project code	POCI-01-0247-FEDER-045924 LISBOA-01-0247-FEDER-045924
Project reference	45924
Main objective	To improve research, technological development and innovation
Intervention regions	Center, North and Lisbon
Beneficiary entities	Wavecom - Soluções Rádio, SA (leader) INESC TEC - Institute for Systems and Computer Engineering, Technology and Science LIP - Laboratory of Instrumentation and Experimental Particle Physics - Association for Research and Development

Approval date	11/02/2020
Start date	31/03/2020
End date	31/03/2023
Total eligible cost	€1,183,532.05
European Union's financial support	€748,060.27 - through the European Regional Development Fund

Objectives, activities and expected results

High-performance Computing (HPC) provides better performance than ordinary computers, which allows solving complex engineering and science problems, while contributing to technological progress in several areas. However, the heterogeneous hardware of these large-scale infrastructures and the different requirements for scientific and Big Data applications create new management and maintenance challenges.

The BigHPC project will address these challenges, creating an integrated platform that will improve the management of advanced computing centers, regarding the support to Big Data and/or scientific applications. More specifically, the project will explore, develop and integrate new monitoring, visualization and storage management components capable of dealing with the scale and heterogeneity of these infrastructures and applications.

In addition to the national co-promoters, the project includes as international partner the University of Texas at Austin, within the scope of the UTA - Portugal Program, thus consolidating the intergovernmental initiative "Atlantic Interactions"

The proposed technology will be validated through real cases and a pilot, which will be implemented in the advanced computing centers of the MACC, and in the TACC - Texas Advanced Computing Center (Austin), one of the largest supercomputing centers worldwide in the academy sector. In addition, the results of the project will be explored commercially by the company Wavecom, which will provide the platform, developed in the project, as a service for companies and institutions that require their own infrastructures to support Big Data applications and advanced computing.

Partners