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RECAS: COMPUTING RESOURCE FOR SCIENCE AND FOR THE TERRITORY

On 12 July, the second “Meeting with the users” of the Bari ReCaS DataCenter took place at the INFN division in Bari and the University of Bari Aldo Moro’s Department of Physics. The event involved wide participation from the entire, multidisciplinary community that revolves around the Bari data centre. This community includes high energy experimental physicists – the centre’s principal users – users who work in the field of environmental and regional monitoring through the use of data from satellites or sensors, and those who work in the field of life sciences as well as in research and teaching activities within the university community.

The Bari ReCaS DataCenter, inaugurated at the Department of Physics in July 2015, was established by the University of Bari Aldo Moro and INFN within the context of the ReCaS project (PON [National Operational Programme] “Research and Competitiveness” 2007-2013 funding programme). The project aimed to strengthen the southern regions’ computing infrastructure, in order to assure there were adequate scientific computing resources for big subnuclear physics and astrophysics experiments, with data coming from CERN and from satellites. It also aimed to undertake the High Performance Computing required by other communities of researchers, such as biologists, doctors, engineers and geologists. Overall, ReCaS involves data centres in Apulia, Campania, Sicily and Calabria, where the INFN divisions in Bari, Catania and Naples respectively are involved, and the associated group in Cosenza, together with the University of Bari Aldo Moro and the University of Naples Federico II.

ReCaS-Bari today represents one of the most powerful and versatile data centres in the national landscape: it is a piece of infrastructure that is mainly dedicated to scientific computing, but which also has a multidisciplinary vocation, and is, therefore, open to the needs of a wide and diversified community that also includes the public administration and regional businesses.

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The data centre is currently equipped with more than 12,000 processors, has a storage capacity of around 7,000 terabytes between magnetic disks and supports (tape library) and is capable of exchanging data externally at a speed of 20 gigabytes per second. The centre is integrated, at a national and international level, with the Italian Grid Infrastructure (IGI), the Worldwide LHC Computing GRID (WLGC), the European GRID Infrastructure (EGI), and the EGI Federated Cloud.

After its first four years of activity, ReCaS-Bari is moving towards a phase of profound renewal and development. The centre will, in fact, benefit from funding from the PON "Research and Innovation" 2014-2020 programme, totalling more than 8 million Euros, which will be distributed across three distinct projects. The most significant project is IBiSCo (“Infrastructure for Big data and Scientific Computing”), which is associated with the IPCEI-HPC-BDA (“Important Project of Common European Interest on High Performance Computing and Big Data enabled Applications”) infrastructure within the context of the European research strategy’s “Pillar 2 Infrastructure”. ReCaS also participates in LifewatchPlus projects (associated with the Lifewatch infrastructure that is dedicated to the study of biodiversity) and CNRBiOmics (associated with the ELIXIR infrastructure that is dedicated to genomics research). ■