

# Engaging Industry for Innovation in the LHC run3-4 R&D program: CERN openlab

*Thursday 13 October 2016 16:30 (15 minutes)*

LHC Run3 and Run4 represent an unprecedented challenge for HEP computing in terms of both data volume and complexity. New approaches are needed for how data is collected and filtered, processed, moved, stored and analyzed if these challenges are to be met with a realistic budget. To develop innovative techniques we are fostering relationships with industry leaders. CERN openlab is a unique resource for public-private partnership between CERN and leading Information Communication and Technology (ICT) companies. Its mission is to accelerate the development of cutting-edge solutions to be used by the worldwide HEP community. In 2015, CERN openlab started its phase V with a strong focus on tackling the upcoming LHC challenges. Several R&D programs are ongoing in the areas of data acquisition, networks and connectivity, data storage architectures, computing provisioning, computing platforms and code optimisation and data analytics. In this presentation I will give an overview of the different and innovative technologies that are being explored by CERN openlab V and discusses the long-term strategies that are pursued by the LHC communities with the help of industry in closing the technological gap in processing and storage needs expected in Run3 and Run4.

## **Tertiary Keyword (Optional)**

DAQ

## **Secondary Keyword (Optional)**

Artificial intelligence/Machine learning

## **Primary Keyword (Mandatory)**

Parallelization

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