



Workshop Wrap-up

CERN openlab technical workshop

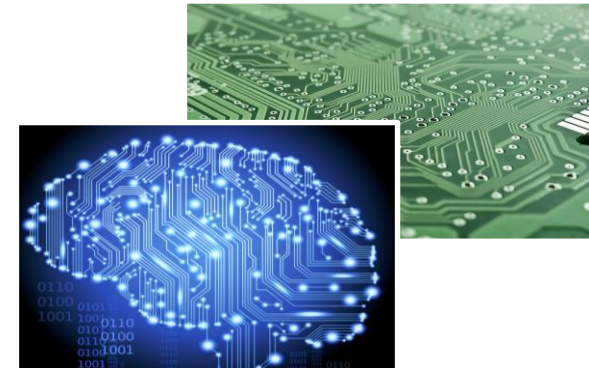
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Bridging Science and Industry

- More than 20 projects have been presented
 - new industry collaborations
 - new projects in the exploitation of new HPC architectures (FPGAs, GPUs) and new technologies

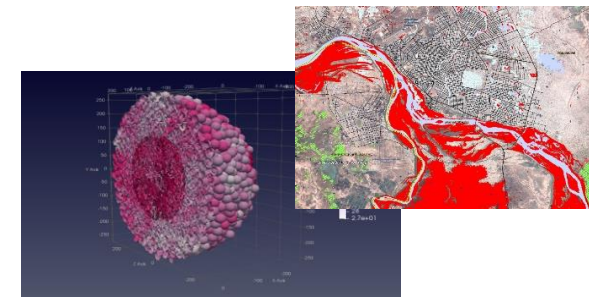
Computing architectures for machine learning, data acquisition and processing



Data Center Technologies



Multidisciplinary Knowledge Sharing Platforms



Quantum Computing



PARTNERS



CONTRIBUTORS



ASSOCIATES



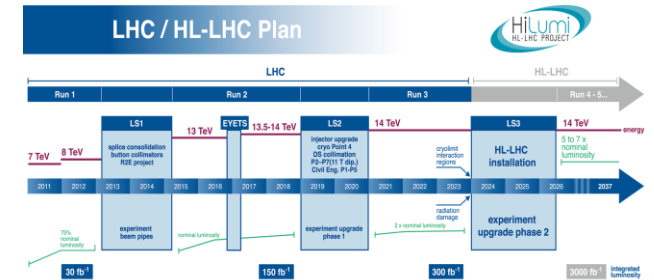
RESEARCH



Key messages from the Workshop

- **Main focus: advancing computing solutions for the LHC experiment upgrades and the HL-LHC**
 - **Transforming** the techniques and technologies used in data processing and data analysis will be key
 - Investigating **machine learning** and deep-learning techniques for many applications
 - Exploring **heterogeneous computing**
- Optimizing and enhancing the **computing infrastructure** will be essential to achieve required performance
- Sharing computing solutions in a **multi-disciplinary** approach is an explicit objective
- Investigating **disruptive technologies** is in our mandate
 - Big interest in the community in exploring **Neuromorphic** and **Quantum Computing**

Strategy for 2019 and 2020



- Embracing the shift towards heterogeneous architectures and software performance will continue to be our main objective
- As a part of scaling-out to new computing resources, exploiting commercial clouds and HPC facilities is a key objective
 - We would like to explore collaborations with HPC centres and technology providers
 - Ongoing discussions with commercial cloud providers on hybrid architectures /infrastructures
- Engaging with our industry members and the community to build the necessary software skills
 - Hand-on trainings, hackathons, roadmaps, ...
- Establishing explorative projects in innovative and disruptive technologies
 - Many ideas outlined in ATTRACT projects proposals. Feedback expected by February 2019
 - Define unique and innovative approaches with other sciences



**Many thanks for your
participation!**