CERN openlab IT Challenges Workshop

Alberto Di Meglio

CERN openlab CTO office

CERNopenlab

CERN: A UNIQUE ENVIRONMENT TO PUSH TECHNOLOGIES TO THEIR LIMITS

CERN openlab in a nutshell

- A science – industry partnership to drive R&D and innovation with over a decade of success

- Evaluate state-of-the-art technologies in a challenging environment and improve them

- Test in a research environment today what will be used in many business sectors tomorrow

- Train next generation of engineers/employees

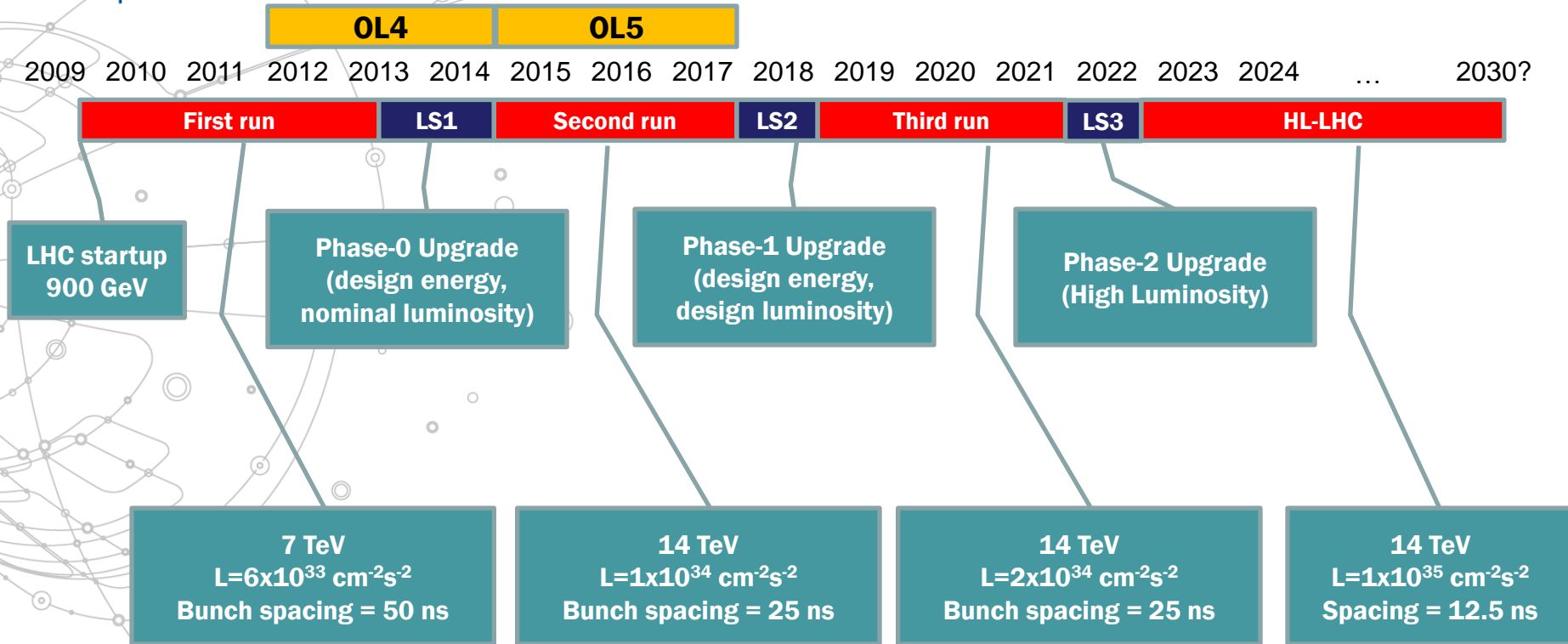- Disseminate results and outreach to new audiences

PARTNERS

hp

HUAWEI

intel

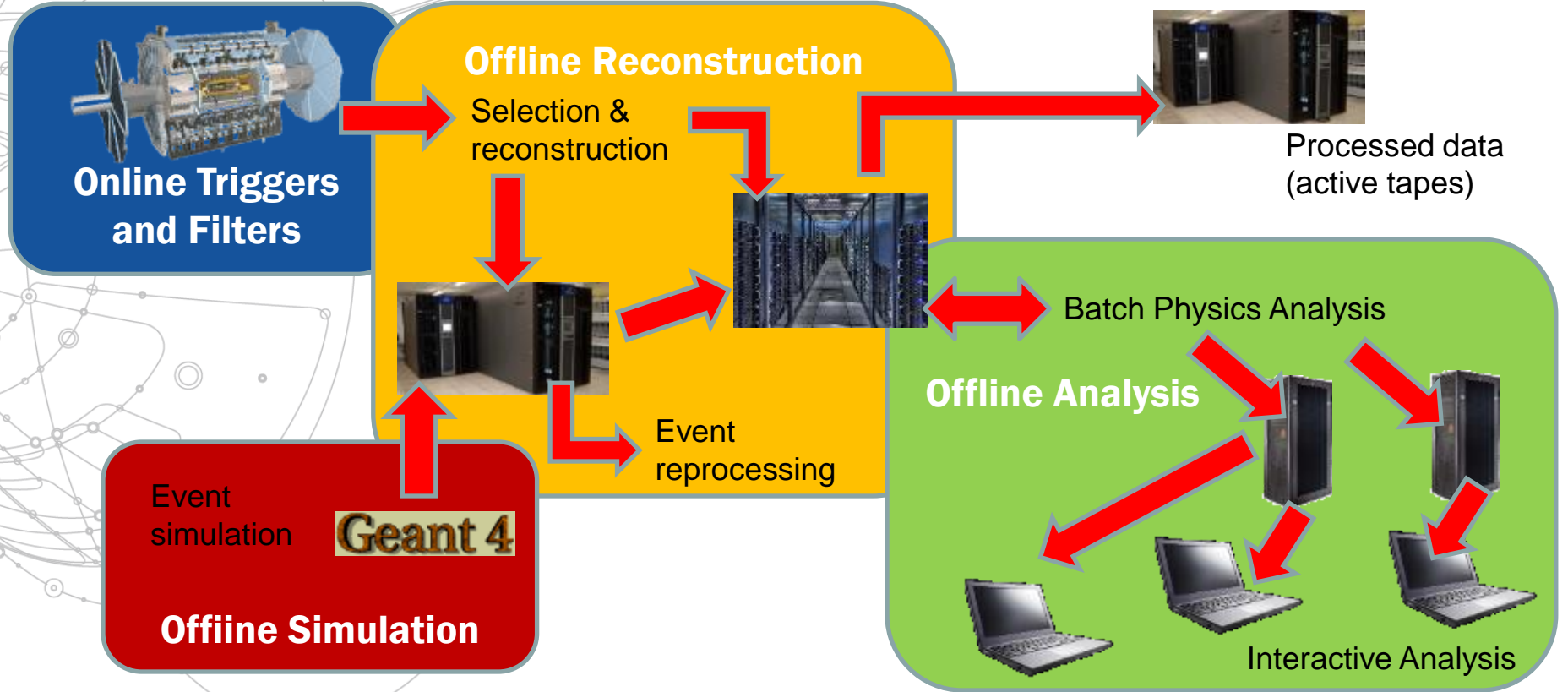ORACLE

SIEMENS

CONTRIBUTOR

rackspace
the open cloud company

ASSOCIATE

Yandex

LHC Schedule

Data Handling and Computation

Online Triggers and Filters

Offline Reconstruction
Selection & reconstruction

Event reprocessing

Processed data (active tapes)

Batch Physics Analysis

Offline Analysis

Offline Simulation
Event simulation

Geant 4

Interactive Analysis
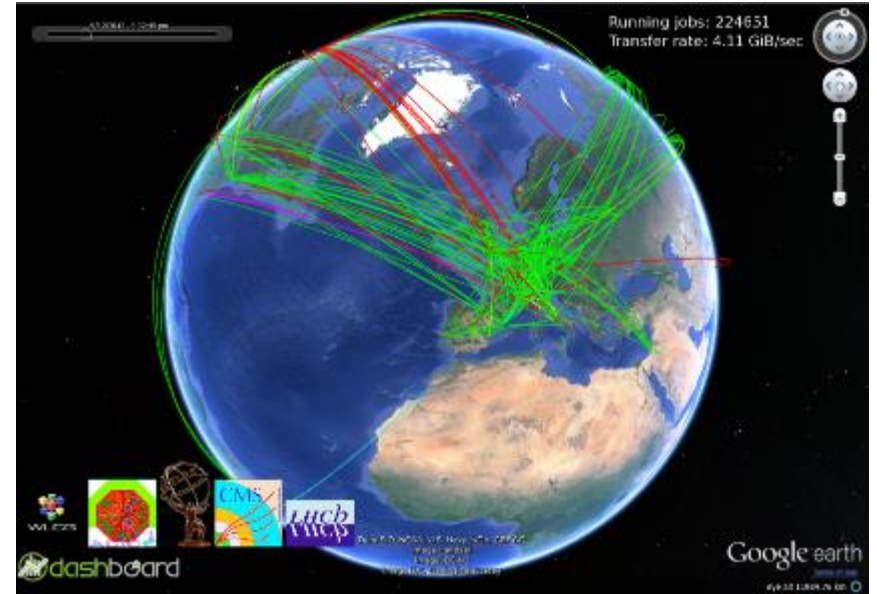
ICT Infrastructure
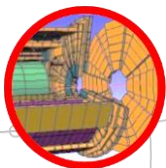
Technical Challenges and Use Cases

- A set of ambitious challenges with a 5-year time scope

- A practical set of use cases for each challenge

- Based on LHC and experiment requirements, but open to general needs of other research organizations in terms of large-scale computing and data services

Challenges

Online triggers and DAQ

Offline simulation and processing

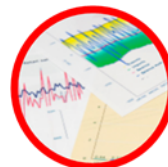Data storage architectures

Resource management and provisioning

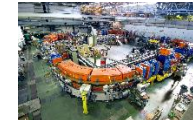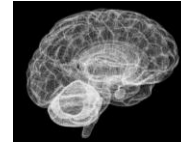Networks and connectivity

Data analytics

Who we are involving

How we are going to do this

Rapporteur working session	
Holiday Inn Hotel, Thoiry	09:00 - 09:30

Challenges Rapporteurs Summaries	
Holiday Inn Hotel, Thoiry	09:30 - 11:00

Coffee	
Holiday Inn Hotel, Thoiry	11:00 - 11:30

Next steps and timeline	*Dr. Alberto DI MEGLIO*
Holiday Inn Hotel, Thoiry	11:30 - 11:50

Governance and relationships with other initiatives	*Bob JONES*
Holiday Inn Hotel, Thoiry	11:50 - 12:10

General feedback on the event	
Holiday Inn Hotel, Thoiry	12:10 - 12:30

Logistics and organization

- Three rooms
  - **Alpes** (Plenaries, Data Architectures, Data Analytics)
  - **Leman-Geneve** (Compute Provisioning and Management, Networks and Connectivity, Cocktail)
  - **Rhone** (Online, Offline)
- Let us know if you need to print boarding passes, need taxis, additional stickers, etc.
- For any additional information or logistics support ask:
  - Me (Alberto Di Meglio)
  - Kristina Gunne

GET IN TOUCH www.cern.ch/openlab

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