

# CERN and WLCG input to HSF

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- Idea for software collaboration came up during preparation of Computing Model Update
  - [CERN-LHCC-2014-014](#)
  - Better commonality, roadmaps, framework for new collaborators, optimisation team, ...
- The issue of software efficiency/performance and whether LHC experiments make best use of modern CPU's has been raised in many review bodies:
  - LHCC (scientific review), C-RRB (funding agencies), SPC (Science Policy Committee of CERN Council)
  - They (all!) ask about how we will make better use of CPUs, and why we do not have more common software
- For WLCG: having a software forum to address the common problems is a strategic necessity

# HEP SW: Goals

From 2013



- Goals of the initiative are to:
  - better meet the rapidly growing needs for simulation, reconstruction and analysis of current and future HEP experiments,
  - further promote the maintenance and development of common software projects and components for use in current and future HEP experiments,
  - enable the emergence of new projects that aim to adapt to new technologies, improve the performance, provide innovative capabilities or reduce the maintenance effort
  - enable potential new collaborators to become involved
  - identify priorities and roadmaps
  - promote collaboration with other scientific and software domains.

# CERN

- Support from CERN management
  - Mandate given by Sergio Bertolucci (Director of Research and Computing)
  - Support from PH and IT Department heads
- Effort already engaged from both PH and IT departments
  - Members/lead of the startup team

# IT Department

- “Techlab” cluster of non-x86 architecture machines
  - For benchmarking, testing, etc
  - Together with tools (compilers, profilers, etc.)
  - And the support for this
- Would like to re-create a level of expertise that has gradually disappeared over last decade
  - Core team of experts capable of in-depth debugging, optimising, etc of complex code
  - Ready to start this now
- Openlab – collaborative vehicle to work with industry
  - interest expressed in our software problems (e.g. Intel, Oracle, HP, and others)
  - Opportunity for mutually beneficial projects – with funding