LHCb Upgrade Timeline

- The big upgrade of LHCb will happen with Run 3
- For the computing currently investigating different scenarios
  - Major architectural and technical decisions to be taken ~ 2017
  - No further changes foreseen in this big scale between Run 3 and 4
- In the process of preparing a “Technical Design Report” for the computing project, due by Q4/17
- LHCb provides its input for today’s discussion in this context

LHCb roadmap*

* http://cern.ch/go/H76H
Top concerns

• Software
  • Increased signal yield (online calibration & alignment), increased trigger rate, software only trigger as of Run 3
    --> By far not enough hardware resources to do all the necessary work – especially for simulation

• Distributed Computing
  • With only signal events further offline selection and streaming not effective due to high retention
    --> Change the data processing workflow --> indexing and selection of individual events instead of files

• Data Preservation
  • Several incompatible changes for Run3 (detector description, conditions) possible
    --> Clear slate between Run1/2 and later --> need to preserve analysis