



# Velo Motion Control

EP-DT-DI CONTRIBUTION



EP-DT  
Detector Technologies

# VELO POSITION CONTROL SYSTEM UPGRADE

WP: <https://edms.cern.ch/document/1739314/1>

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To upgrade the motion system used on LHC Run 1 and Run 2 developed by Nikhef to a new one similar to the LHC Roman Pots Position Control System as well Collimators position control (EN-SMM) and accepted by LHC Protection (TE-MPE)

The system is based on National Instruments PXI-FPGA technology

It will be made of the following parts :

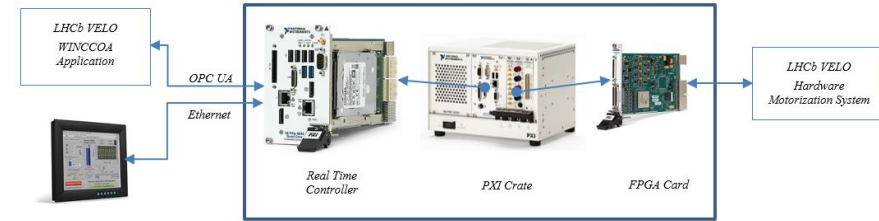
## Hardware

- Detector, stepper motors, mechanical structures (LHCb)
- Control Rack (EP-DT-DI)
- Interlock and LHC Signal exchange (EP-DT-DI & LHCb)

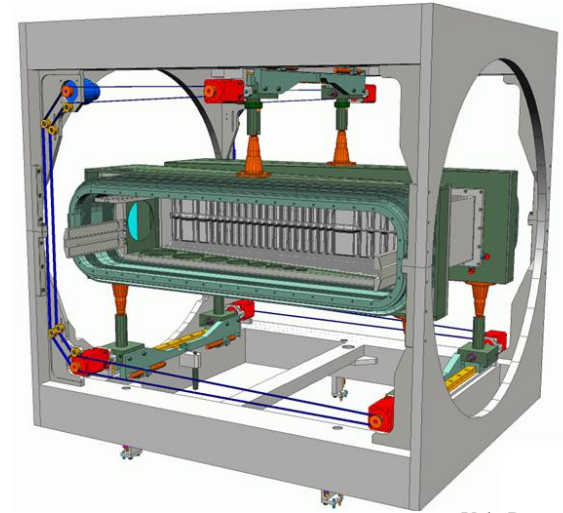
## Software:

- PXI FPGA Real-time control software (EP-DT-DI)
- WinCC OA application (LHCb)

The system should be ready by beginning of LS2 and the cost has been evaluated up to 26 kCHF



New LHCb Velo Control System



Velo Detector