

# CLIC vertex/tracking-detector activities



- Sensors & Readout:
  - Hybrid approach:
    - Thin-sensors: Micron, CNM, Liverpool
    - Timepix3, Smallpix, CLICpix (prototype): Medipix collab.
    - Timepix-assemblies: IZM, VTT
    - TSV, fine-pitch interconnect (Medipix collab., CEA Leti)
  - **Alternative approaches? (SOI, HV-CMOS, ...)**
  - Readout/DAQ: CERN, NIKHEF, Medipix collab.
  - Lab testing, calibration: CERN
  - Test-beams: CERN, DESY, Bristol, Aarhus
  - Simulation/Digitization: CERN
- Power-delivery / power pulsing: CERN
- Mechanical integration, air-cooling: CERN, IFIC
- **alternative cooling? (micro-channels, ...)**
- design (re-)optimization:
  - physics-performance (flavor tagging): CERN
  - improved simulations, more realistic material: CERN, IFIC
  - forward-vertex/tracking region: CERN, IFIC
- **interface engineering/simulation, new detector model (DD4HEP)**
- Other Silicon tracking:
  - **hardware-R&D: short strips / elongated pixels / fast readout?**
  - **design (re-)optimization**

- Participation in any of the above and other areas is very welcome
- WG on vertex-detector technology: <http://indico.cern.ch/categoryDisplay.py?categId=2843>