

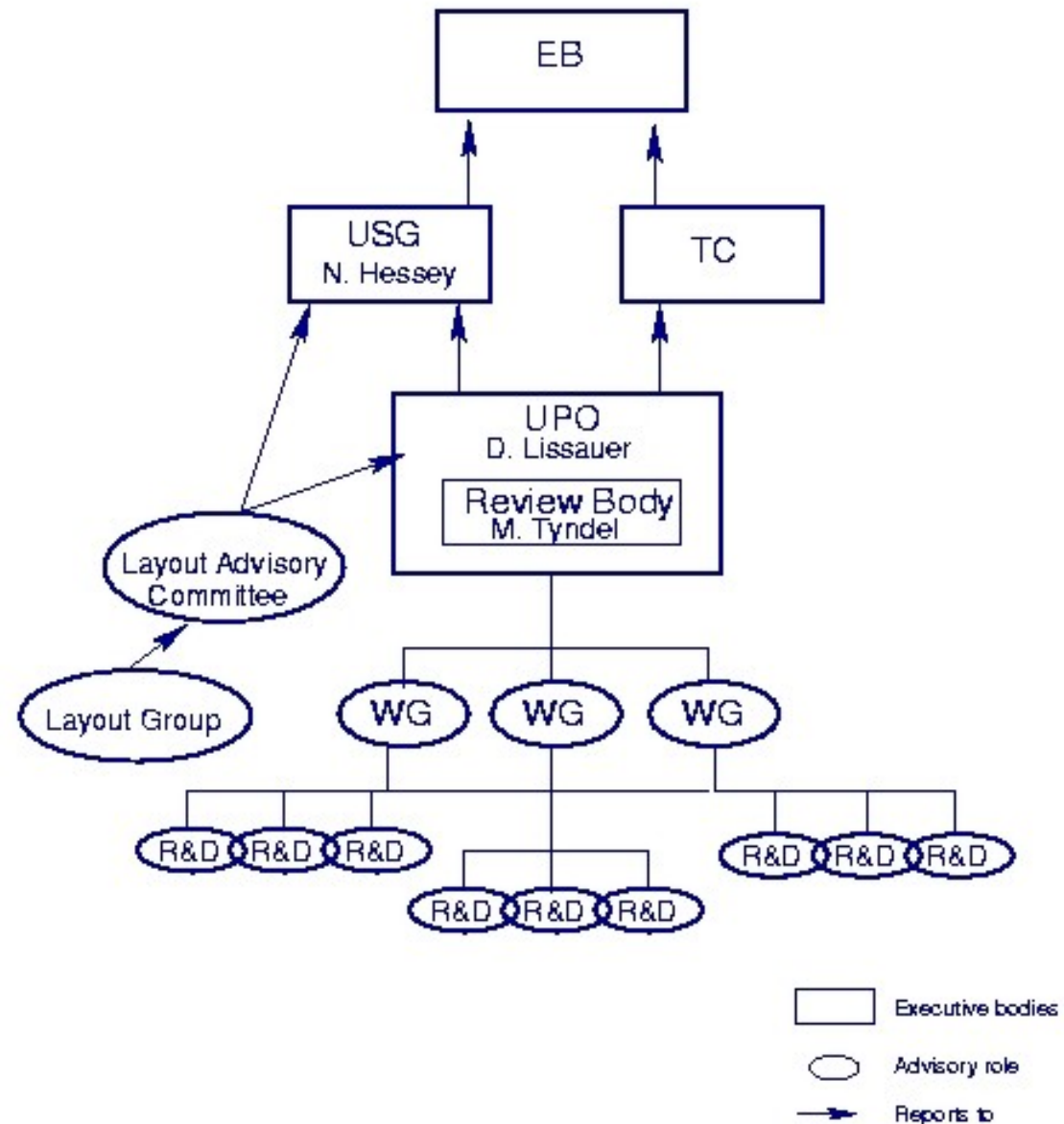
ATLAS sLHC Upgrade

Organisation/Participants
R&D Topics
Infrastructure Needs

Organisation

- Two main bodies:
 - Steering Group & Project Office
 - USG: Reps from ATLAS systems
 - PO: Part of Technical Management
- R&D Project Approval System
 - Groups submit proposals
 - Other groups join
 - Proposal approved (or not) as "ATLAS Relevant"
 - So far 22 proposals received
 - Works well:
 - Avoid overlap
 - Can see (and plug) gaps
 - No resources from ATLAS!
 - Groups find their own

ATLAS Upgrade Organisation



Major R&D Topics

- ◆ Sensors:
 - ◆ Si Strips and Pixels
- ◆ FE Electronics
 - ◆ ABCNext: Strip readout DMILL --> 250 nm --> 130 nm
 - ◆ Pixel readout chip: smaller pixel size, higher rate, lower power, 130 nm
- ◆ Module/services integration
 - ◆ Staves/super-modules; powering
- ◆ New sensors/detectors:
 - ◆ 3D, Diamond, Thin-Si, Gossip, Warm FCAL, large Micromegas for Muons
- ◆ Cooling: control and distribution of CO₂/C₂F₆
- ◆ Readout: high speed data transmission, electrical and optical
- ◆ LAr high rate

Infrastructure Items

- ◆ PO to document “As Built”
 - ◆ Collect/keep accessible engineering drawings and documents
 - ◆ Unified Catia
 - ◆ Needs engineers
 - ◆ Important for re-use of services, envelopes for upgraded detectors...
- ◆ GIF++
 - ◆ Higher rate replacement for Gamma Irradiation Facility
- ◆ Testbeams
 - ◆ Magnet(s)
 - ◆ Pixel beam telescope
- ◆ Cooling plant
- ◆ Clean rooms (SR1), bonding facilities, robotic precision assembly