

# Summary from MDI meeting First part, 9-11 September, mechanical design

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First comments from the discussion regarding mechanical design  
(Monday 9 - Wednesday 11)

# Necessary ingredients to start with a CAD design

- Update 2d mechanical design started by S. Pivovarov taking into account our discussions during the workshop
- Need budget of weights: solenoids, quadrupoles, cryostats, lumical,...
- Cryostat dimension definition
- Thermal power budget in the IR (HOM, RW, e-cloud)
  
- Common repository

# Mechanical design tasks

- Pre-dimensioning of the support structures (important also for space allocation in the MDI area)
- Pre-dimensioning of the cooling system
- First draft of 3D CAD model
- Verification of the space to be allocated for MDI for a negotiation with detector experts

# Further steps

- Mechanical tolerances definition
- Alignment strategies
- Vibration control and stability
- Vacuum chamber details: flanges, BPM, bellows, joints, material
- Magnet quench management: forces, gas venting, ..
- Coolant choice