WP8 Collider-Experiments Interface

Contradictory Requirements

- Machine (Collider)
  - Keep it simple
  - Large aperture
  - Low impedance
  - Robust vacuum
  - Machine safety (protection)
  - Avoid moveable devices
  - Get inner triplet quads as close as possible
  - HOM heating

- Experiments
  - Get inner detector close to the beam
  - Complicated pipe
  - Very thin pipes using complicated materials
  - Experimental protection
  - TOTEM like detectors
  - Maximize the longitudinal space around the IP

In addition to LHC1

- Very high intensity beams
- Remote handling
- Lower margin for errors (machine protection)
- TAS ? TAN
- Expansion into LSSs

Need a Coherent Plan

- Strive to find solutions on contradictory requirements

- Be willing to compromise on both sides

- Avoid "last minute" changes (expensive and conflictual)

- Remote handling is almost certainly a necessity