Task(s) of the Integration / Magnet WG

- **Become a central place where the detector concepts "materialize"**

- **Work in close contact with the other subgroups, DWGs in particular**
- It is *desirable* that the other WG conveners (or their representatives) attend the meetings of this group on a regular basis (and the Complementarity group - where the conceptual part of the detector models is discussed - too)

- **Participate in working out the input formats & interfaces** …
- … **as well as in maintaining the detector model "database"**
  - Modular components (support a potential diversity of concepts) …
  - … but well-defined *releases* (facilitate the convergence at the end)

- **Provide the group's "native" deliverables: the straw man solenoid magnet design & engineering models of the selected setups (now the work will proceed under the umbrella of the OPC effort)**

Topical discussions / reviews?

- **Steered by Integration and Complementarity subgroup conveners**
- **Topics & priorities suggested by the community (examples follow)**

- **The outline**
  - Spend a fraction of time at every 12pm Wednesday meeting
  - Plan this part of the agenda well in advance
  - Invite experts and responsible people as the main contributors
  - Assume concise talks + a discussion + a summary (+ a few page memo?)

- **Options**
  - Routine sub-component progress “reviews”
  - “Inter-disciplinary” topics (with no single WG responsibility)
  - Generic topics, which may require a consensus community “decision”
  - Generic “issues”, which the community better be aware of (Q&A included)

A “3D view” of a particular problem, as seen from several perspectives

Example: sub-component review

- **Silicon trackers:**
  - Current status of the geometry description
  - Status of tracking performance modeling
  - Complementarity options and how they fit a particular IR design
  - Technology status overview if appropriate
  - Associated physics studies
  - Interplay with the other subsystems and/or WGs (ToF, MPGDs, …)
  - Timelines till the YR submission
  - Concrete requests to other WGs (e.g. software)

- **Solenoid modeling progress reports**

Example: topics outside of a single WG scope

- **Electron ID**
  - What is the interplay between tracker and EmCal performance?
  - Detector compositions vs η required to meet the suppression factors
  - Is microscopic modeling needed or fast smearing suffices?
  - Do we have enough technology options for two complementary detectors?

- **Space allocations**
  - How much space do we actually have for a forward RICH?..
  - … and / or for a forward HCal?
  - How do we balance the space / performance of the two endcaps?
  - What are the possible compromises?..
  - … also from the Complementarity point of view?

Example: “have you thought about this?” topics

- **Crossing angle:**
  - Kinematics
  - High $|\eta|$ acceptance asymmetry of the solenoid field
  - Fiducial volume cut close to the beam pipe

- **Time of Flight:**
  - t_0 counter needed?
  - *Combined* ToF detectors preferred (LGAD tracker, LAPPD mRICH, …)?
  - Finite bunch length effects: are they different at η~0 and for the RPs?

- **Detector projectivity of a 4π collider experiment**
  - Detector performance (mRICH, …)
  - Construction limitations (calorimetry, …)
  - Space limitations if “flat” and projective equipment is mixed in the endcaps

The actual topics and *priorities* should better be defined by the community!