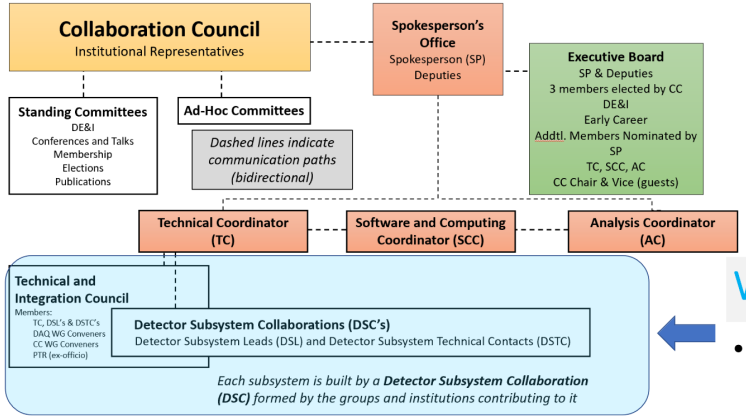
ePIC TIC & DSC structure

Technical and Integration Council and Detector Subsystem Collaborations



DSCs are the basis of ePIC structure in the detector construction area

Each DSC has:
1 DSC Leader (DSCL)
1 SSC Technical Contact/Coordinator

[can be the same person]

WHY DSCs

- Functional to:
  - Finalize the detector sub-systems for the **TDR** (CD2&3)
  - **Prepare the construction period**
    - *Please, note that the present 2-y term coincides with period of preparation of the TDR !*
  - All large-size collaborations have similar structures
- Groups involved in the Detector Sub-Systems:
  - Make their **responsibility explicit**
  - Support their engagement and enthusiasm
  - **Clarify the communication cha**in in matter of Detector Sub-Systems
- Collaboration community:
  - **Support the aggregation** of different groups within the same Detector Sub-System
  - Offer an **opportunity of enlargement of the collaboration** also via the direct efforts of the groups in a Detector Sub-System to encourage partners, who are presently not ePIC members
- Financial Aspects
  - The **explicit links of groups in a Detector Sub-System** to their Detector Sub-System realization supports **actions** (by PM, ePIC management and Detector Sub-Systems members) **for in-kind contributions**
- Project progress:
  - Establish **direct links between the Detector Sub-Systems and the EIC Project CAMs**
  - **DSL and Task responsibles can integrated in the Project at level 4 and 5**

ePIC Backward RICH DSC formation

- Technically, we are still in a “mRICH -> pfRICH transition state”:
  - ePIC EB recommendation to choose pfRICH as a baseline announced on April 14th
  - ePIC CC discussed the topic last Friday; vote closes today
  - If approved, the ball is in the EIC project court, to start a formal change control process

- Groups
  - Brookhaven
  - Stony Brook
  - Yale
  - Temple
  - JLAB
  - Duke
  - MSU
  - Glasgow
  - INFN (Trieste, Genova, Ferrara?)
  - Ljubljana
  - Chiba University

  - GSU (?)

- Alex
- Alexander
- Bob
- Brian
- Craig
- Daniel
- Jan
- Jamie
- Kong
- Prashanth
- Thomas
- Zhengqiao

ePIC Backward RICH DSC formation

- Current status
  - Have a strong group of institutions behind this proposal
  - A sufficiently detailed design exists, with most of the subsystems defined
  - A detailed P6-friendly costing sheet is composed (mostly based on quotes and vendor feedback)
  - A standalone modeling / reconstruction suite exists
  - A draft CDR is available
  - Will be presented as such in the first ePIC TIC meeting tomorrow

ePIC Backward RICH DSC formation

- Next week: a first ePIC Backward RICH DSC meeting
  - Proceed with a re-branding (new name, mailing list, weekly meeting time, Wiki page, etc)
  - Nominate a DSC Leader and a Technical Contact
  - Discuss the organization (see next slide)
  - Discuss the institutional commitments
  - Discuss the near term and the long term (up to CD-3) planning
  - Re-assess the available workforce
  - Resume the pre-review activities
  - Discuss shaping up the CDR as a JINST paper

ePIC Backward RICH DSC formation

Questions:

- Do we want a (Mini-)Charter?
  - Define how we operate and make decisions
- Do we need an IB Board?
  - to select DSCL and DSCTC
  - to admit new members
  - to resolve conflicts
- How are commitments expressed?
  - Handshake, MOU, or not at all
- Do we want to stay flat or less flat structured?
  - DSCL and DSCTC
  - DSCL and DSCTC + Coordinators (Electronic, Software, Performance, …)
- Name?
  - suggested to drop pfRICH in favor of <?>RICH

As presented by Thomas at the pfRICH meeting last week

Possible commitments: every contribution counts!

- Software & Computing
  - Detector geometry implementation in dd4hep
  - Interface the existing reconstruction codes to a unified ePIC PID scheme
  - AI/ML-based reconstruction

  - Wiki page, etc

- Modeling
  - Either standalone detector optimization or work in ePIC framework
  - Physics modeling

- Hardware
  - HRPPD test stand work; test beam data analysis
  - Detector (sub)subsystem development
  - Small scale prototype design & construction
  - Test beam & magnetic field measurement campaigns
  - Frontend interface & Co

- Other