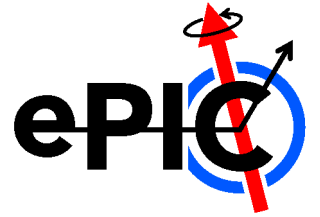


# ePIC Management Plan for the Next 2-Year Term



## General Meeting Presentation III

John Lajoie and Silvia Dalla Torre

Revised: 3/3/2023

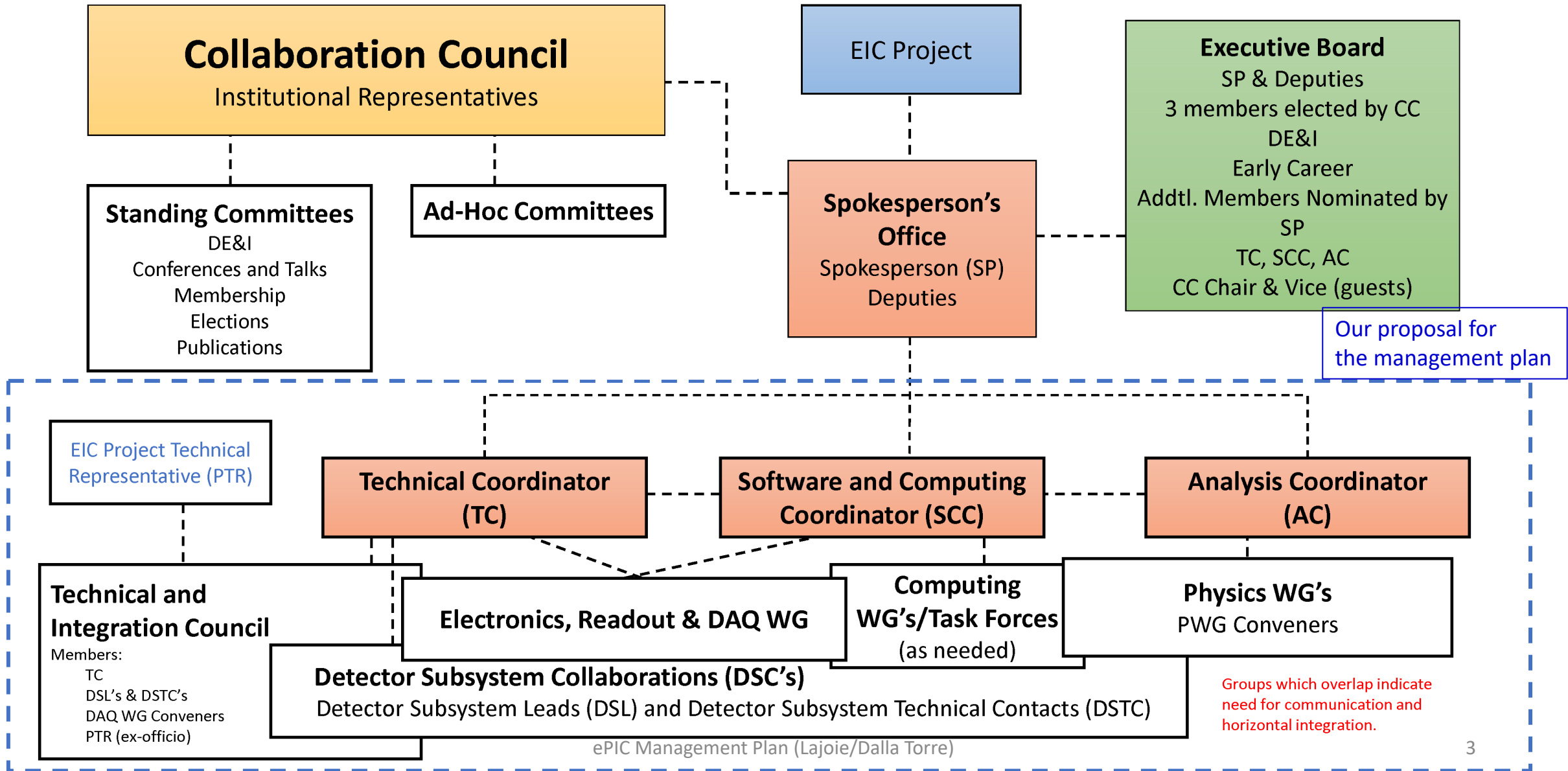


# Meetings/Timeline

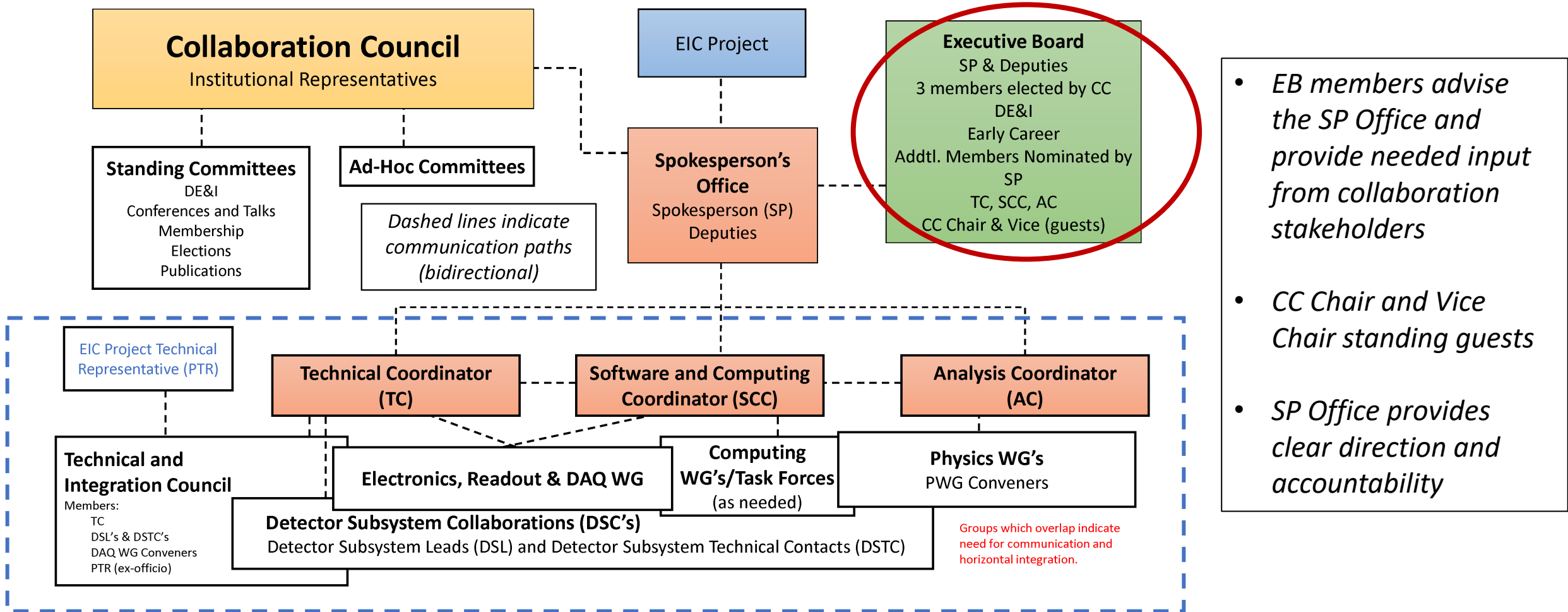
- Comp/SW and DWG/PWG Conveners
  - Wednesday, Feb. 15<sup>th</sup> and Friday, Feb. 17<sup>th</sup>
- Collaboration Discussion on Detector Subsystem Collaborations:
  - Friday February 24<sup>th</sup>, 10:30AM EST
- Collaboration Discussion on Detector Subsystem Collaborations and Physics Working Group Organization:
  - Thursday March 2<sup>nd</sup>, 9:30PM EST
- Collaboration Discussion on Physics Working Group Organization:
  - Friday March 3<sup>rd</sup>, 10:30AM EST
- Planning for CC Meeting in Near Future
  - TBD in conjunction by CC Chair/Vice-Chair
  - Approval of Management Plan and Coordinators, followed by implementation

# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term

**Black dashed lines indicate communication paths (bidirectional)**

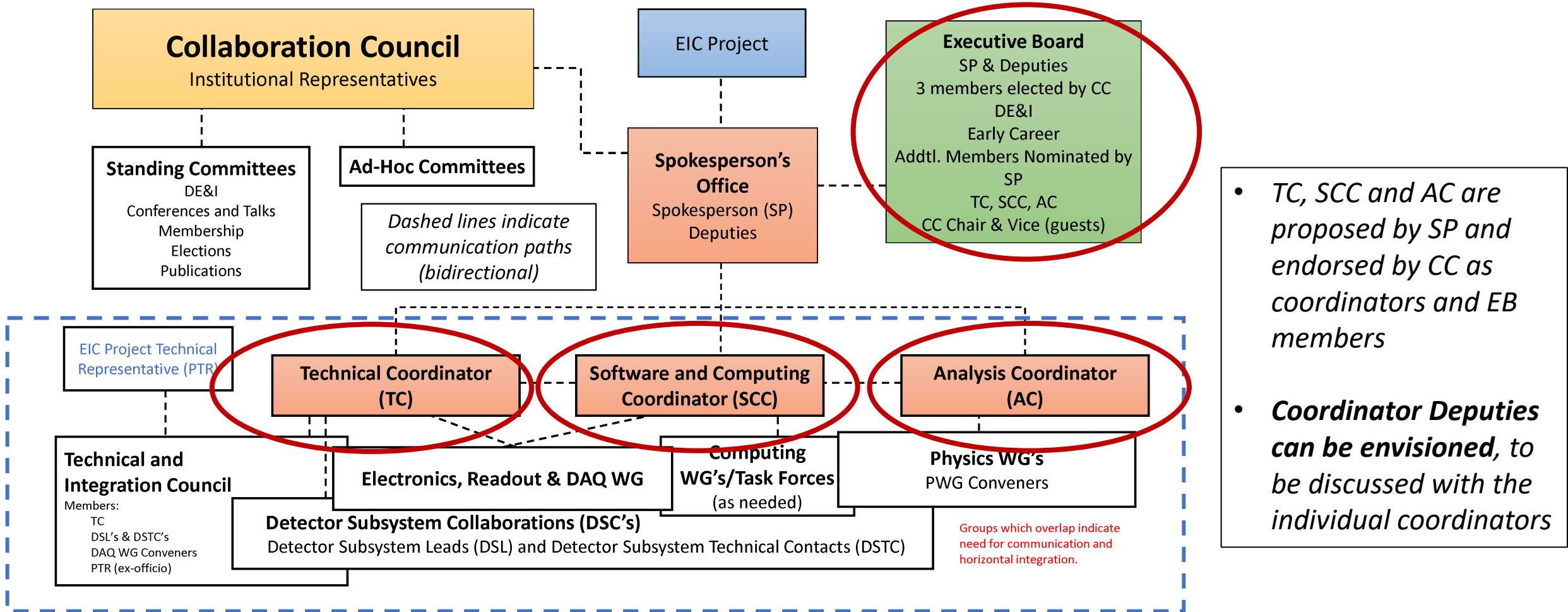


# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



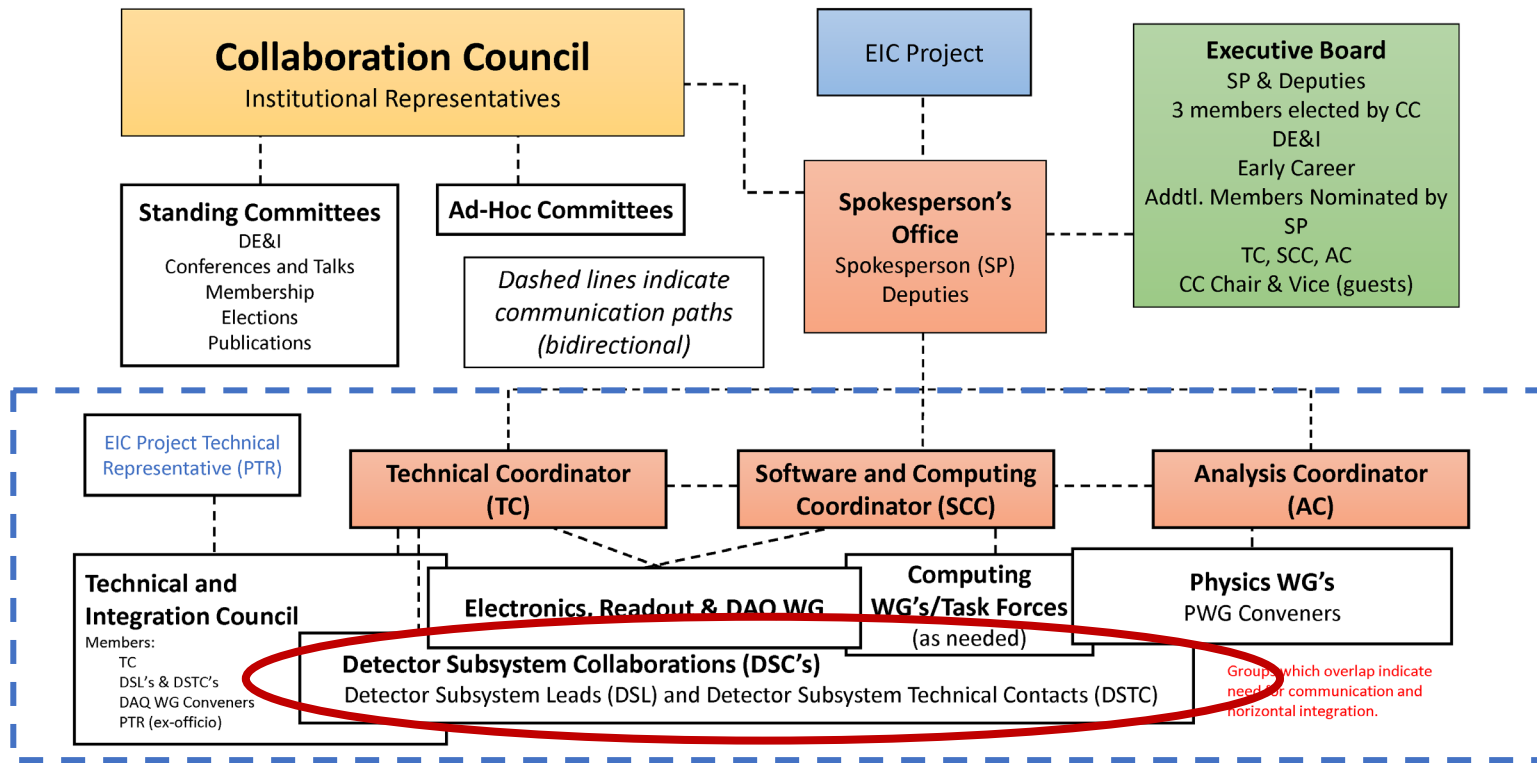
- *EB members advise the SP Office and provide needed input from collaboration stakeholders*
- *CC Chair and Vice Chair standing guests*
- *SP Office provides clear direction and accountability*

# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



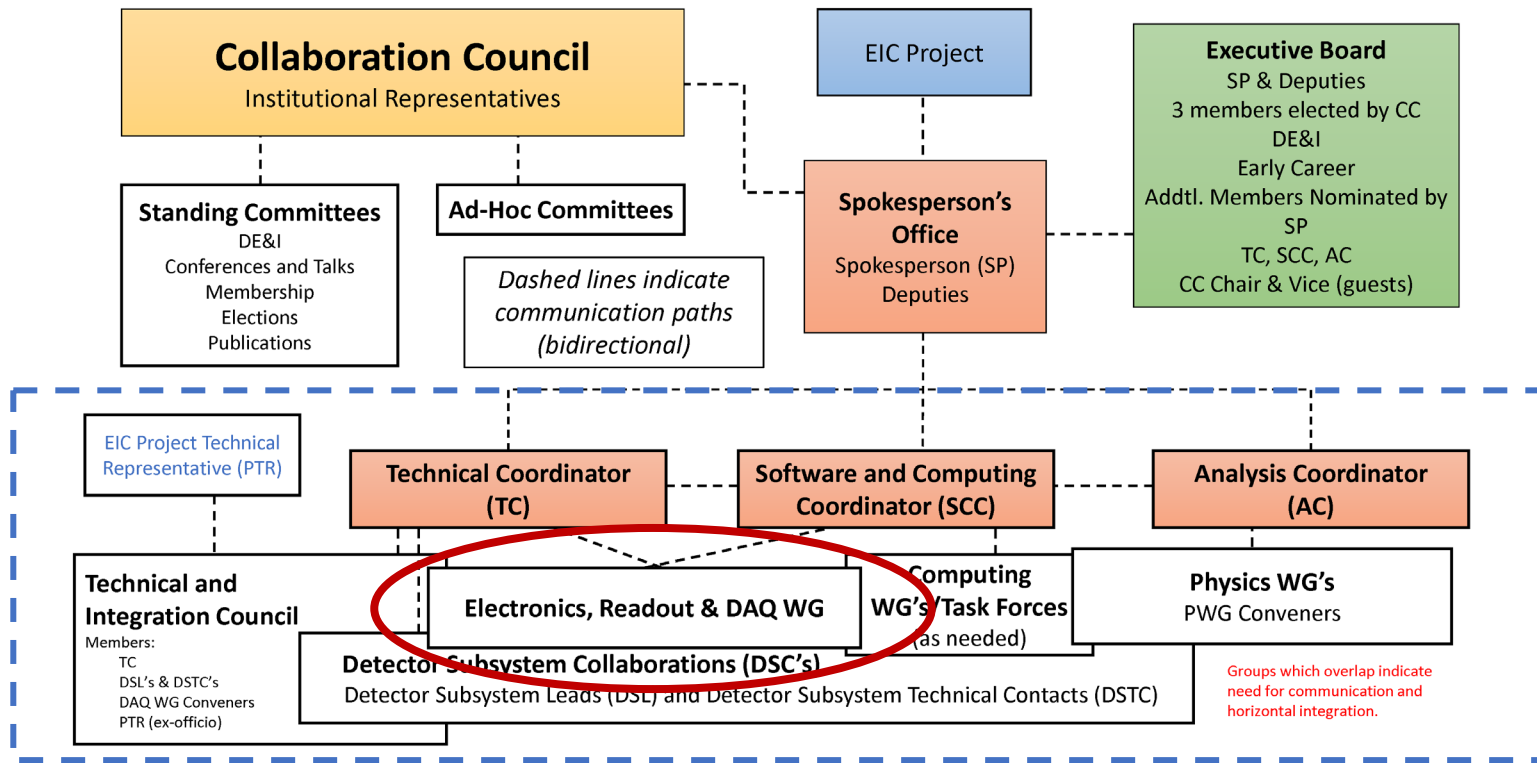
- *TC, SCC and AC are proposed by SP and endorsed by CC as coordinators and EB members*
- *Coordinator Deputies can be envisioned, to be discussed with the individual coordinators*

# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



- Need to **evolve DWGs** to a structure more appropriate to the (pre-)TDR/construction phase: **WGs → Detector Subsystems**
- Each project corresponds to a subdetector built by a **Detector Subsystem Collaboration (DSC)** of the groups and institutions contributing to it
- Each project collaboration will choose its **Detector Subsystem Lead (DSL)** and **Detector Subsystem Technical Contact (DSTC)**
- DSL/DSTC (Collab.) <-> L4 Tech. Contacts (Project)

# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



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- DSL/DSTC (Collab.) <-> L4 Tech. Contacts (Project)

- **RO and DAQ**, which is transversal to sub-detectors, remains a separate WG with ~2-4 conveners

# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term

**Collaboration Council**

Institutional Representatives

EIC Project

**Executive Board**

SP & Deputies

- *Need to evolve DWGs to a*

**Update on DSC's and TIC  
will be the focus of  
Silvia's presentation  
(next).**

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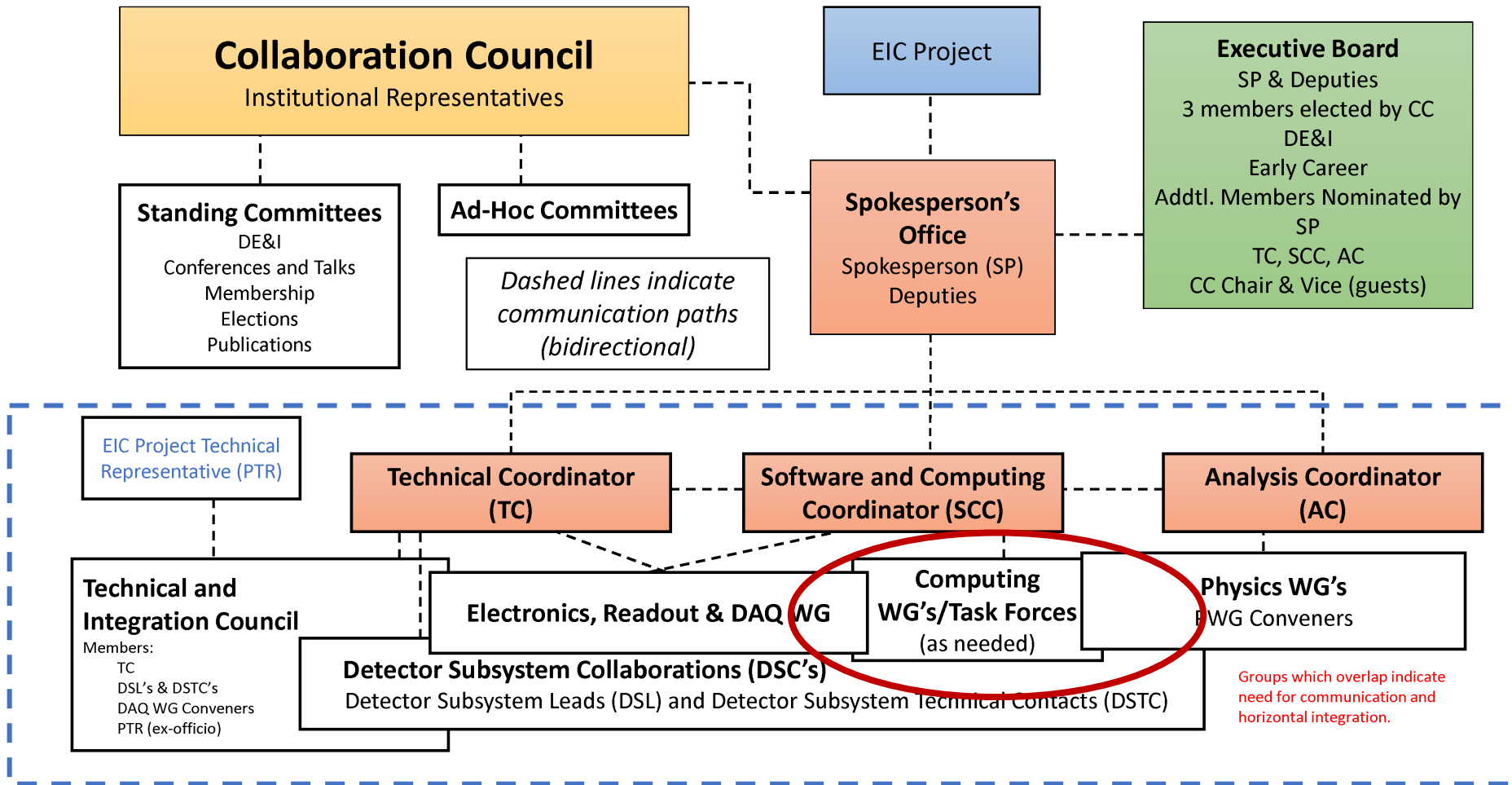
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- *DAQ WG conveners*
- *EIC PTR (ex-officio)*

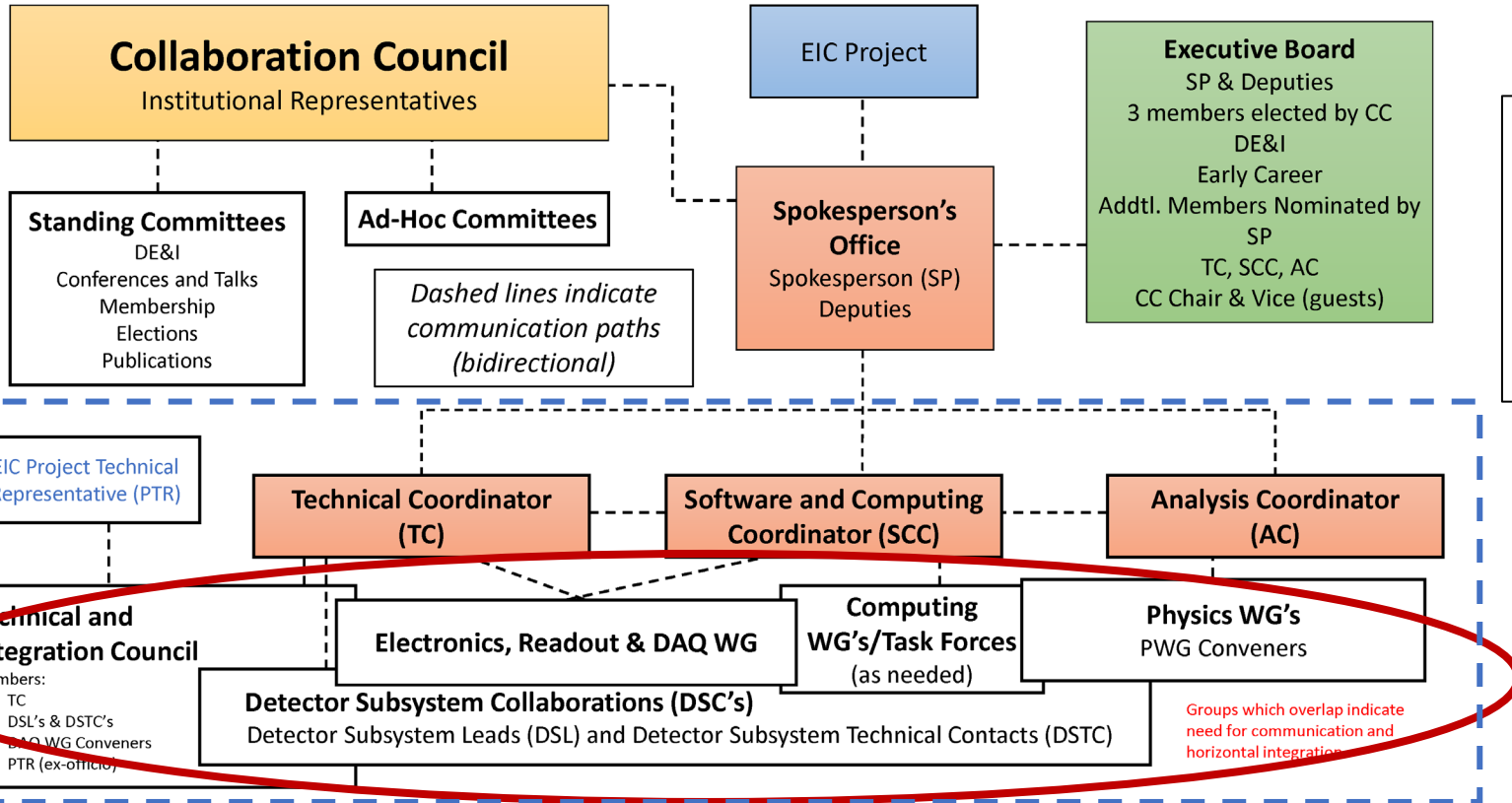


# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



- *Software and Computing Coordinator*
  - *Interface with labs*
  - *Coordinates collaboration activity*
- *Computing WG/Task Forces:*
  - *Software architecture*
  - *Simulations*
  - *Computing resources*
  - *Advanced algorithms & AI*
  - *Documentation and User Support*
  - ...
- *A dedicated WG and flexible structure of subgroups*

# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



**Transversal Task Forces**

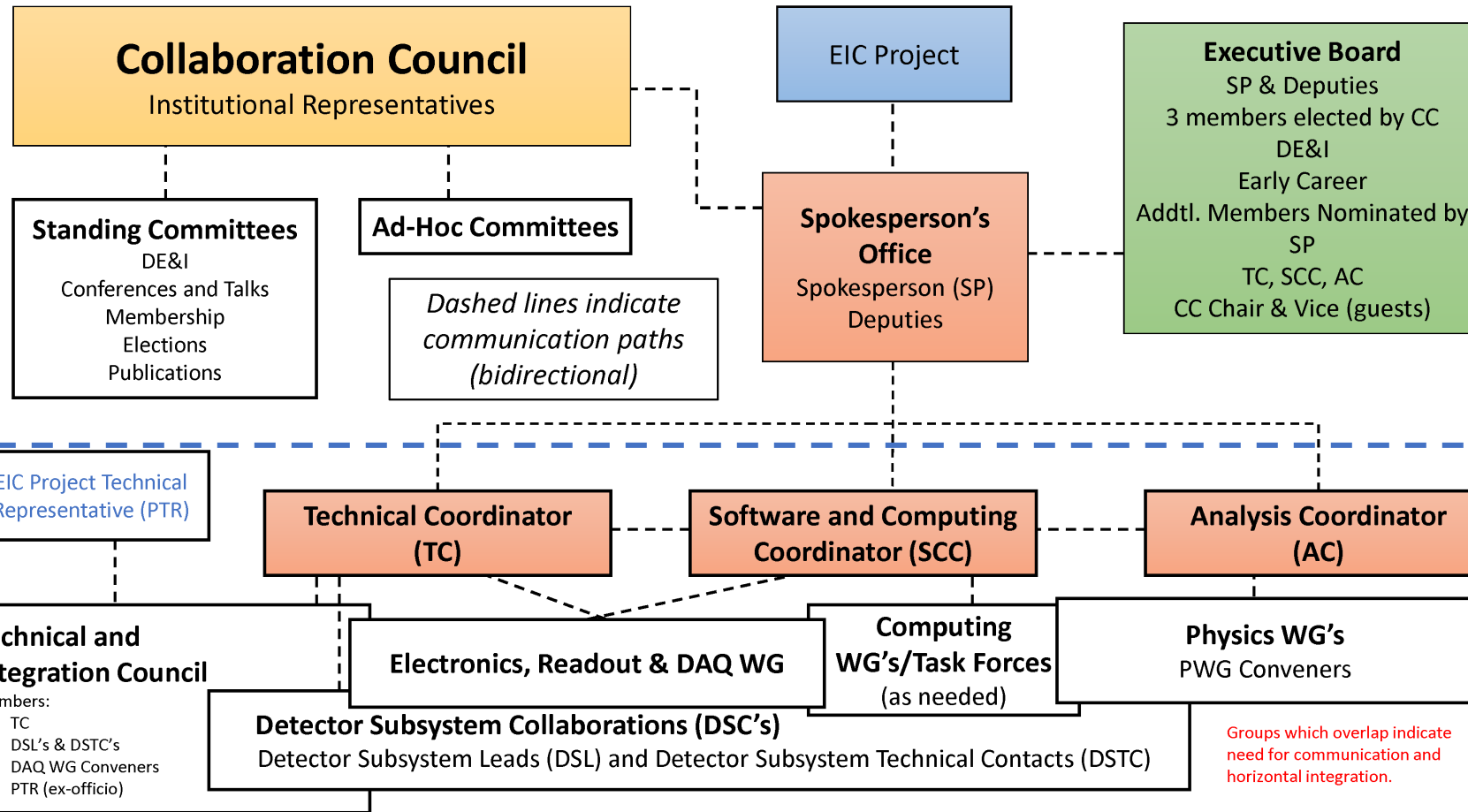
- *Proposed by coordinators (TC, SCC, AC)*
- *Formed as needed to address critical issues, or issues that require coordination between efforts*

**Task forces and transversal WG's provide the bridge between disparate efforts!**

**Examples:**

- *Background Task Force (formed by Project)*
- *Potential TF's: ACTS/Tracking TF, Global Event Kinematics, etc.*

# Detector Decision Flow



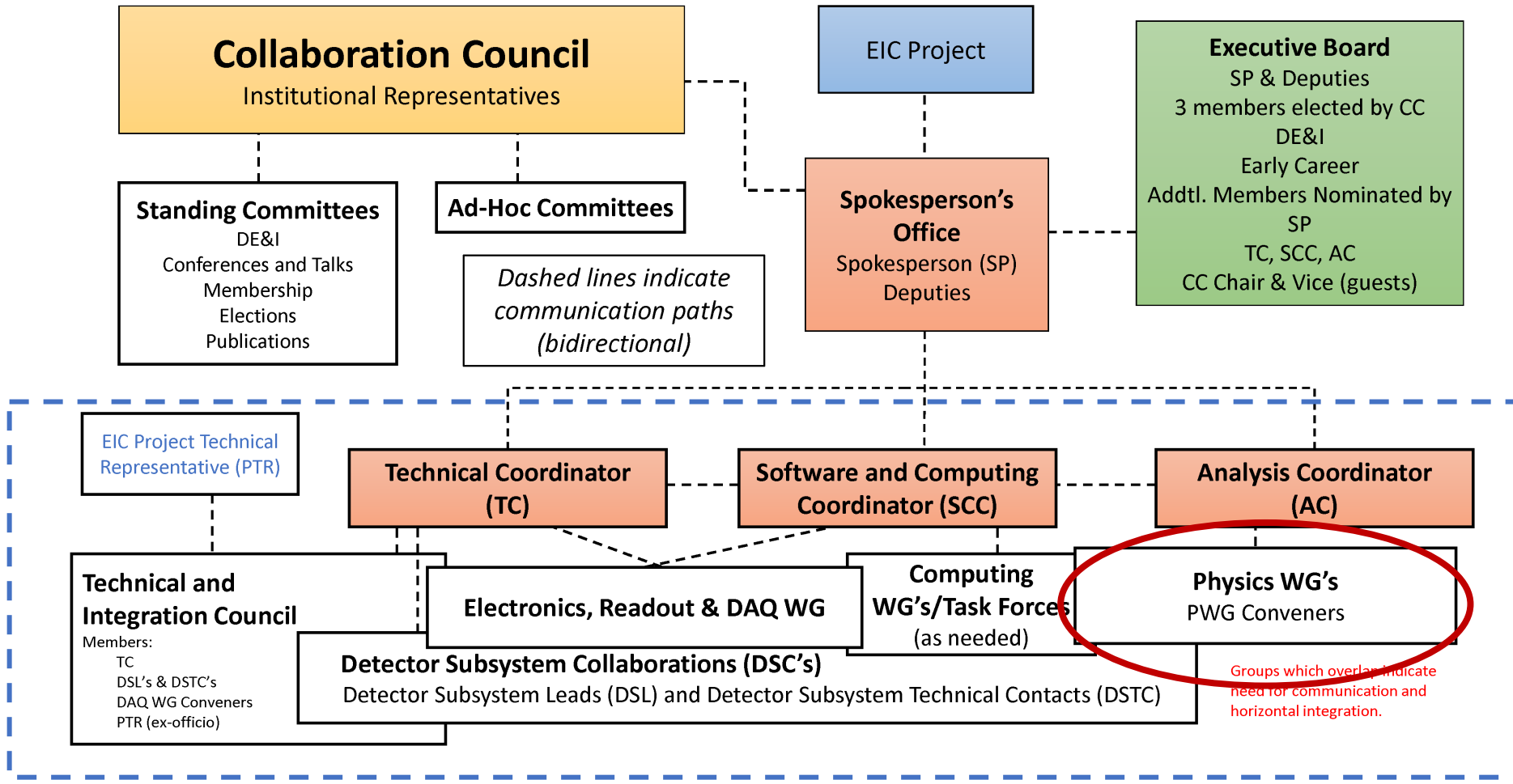
- *Review, analysis and report by TIC*
- *Recommendation formulated by SP Office in consultation with EB*
- *SP Office ensures communication with EIC Project and CC, consistent with ePIC charter*

ePIC Charter lines 66-70:

"Whenever unforeseen constraints identified by the EIC Project require substantial modifications to the detector design, the Collaboration will work with the EIC Project on related technical proposals, will assess the impact on physics capabilities of EPIC and will report their findings to the EIC project. In cases of particular relevance, this may even necessitate the Spokesperson to call for a Collaboration Council vote on the proposed changes."

# Analysis/Physics Working Group Organization

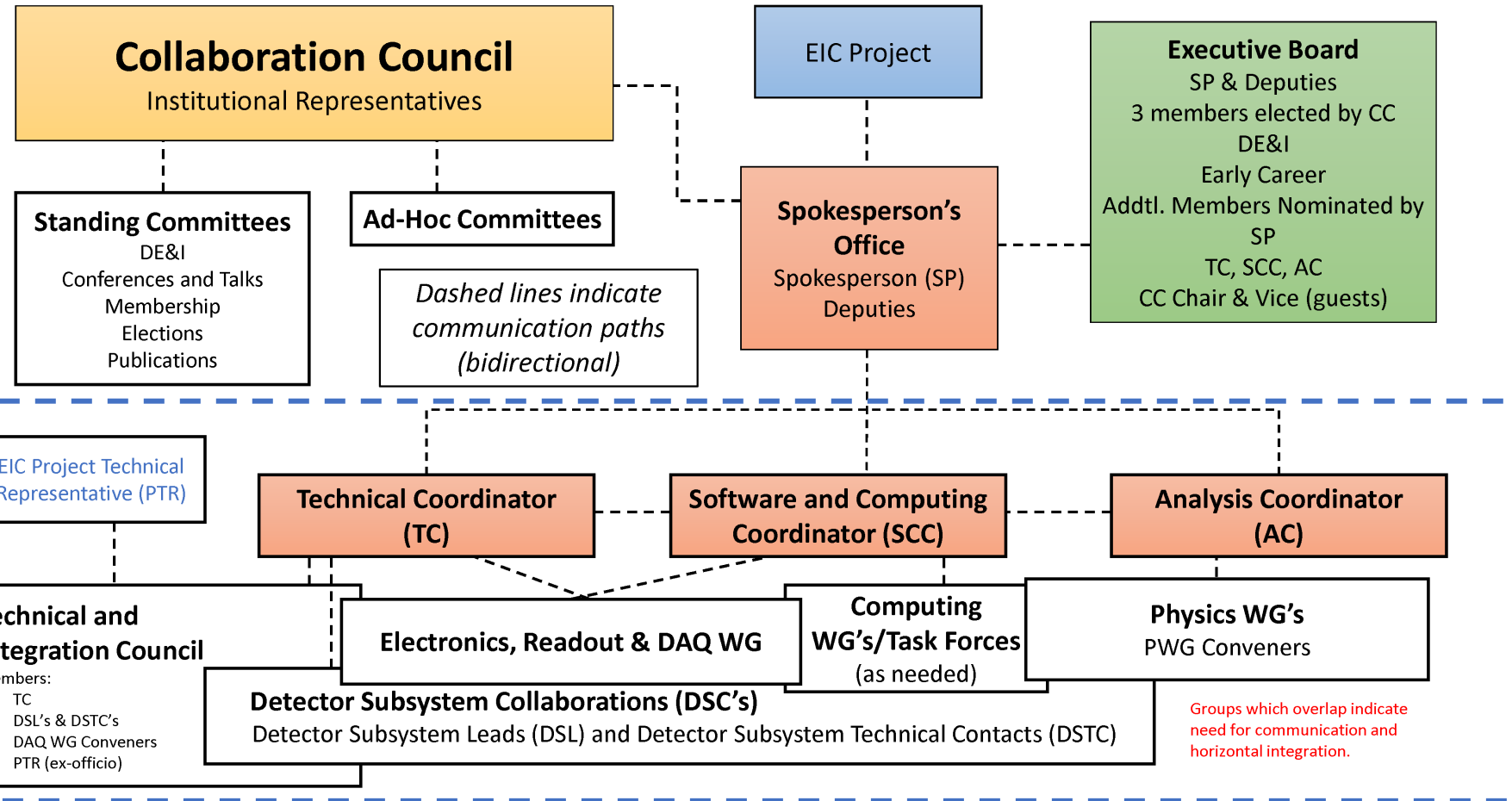
# Collaboration Structure Including the Scientific Structure for the Next Two-Year Term



- **Primary Goal: To use physics performance as a tool to guide the technical design**
- *WG structure provides a clear entry point for new collaborators*
- *Physics WGs with ~ 2 conveners*
- *Number and domain of WGs to be discussed with the present WGs/collaboration*
- *Enhance flexibility and communication with short-term task forces*

# ePIC Official meetings

Goal: each meeting has a clear purpose, reduce redundancy in meetings

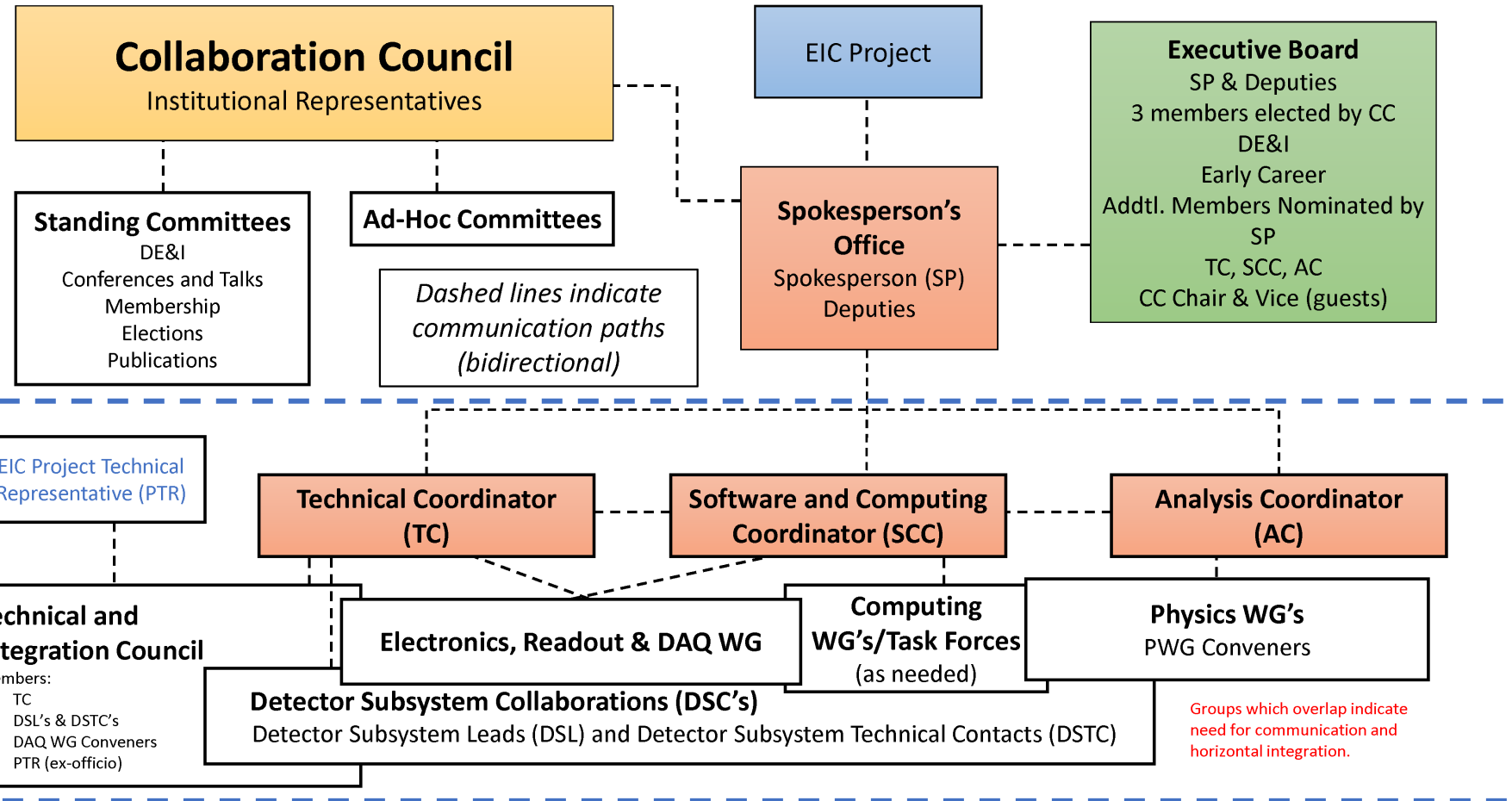


## WG/TF/DSC MEETINGS:

- *Detector Subsystems, RO and DAQ WG, computing WGs/Task Forces, PWGs will organize their agendas as they see fit*
- *Open to collaboration (publicly announced in the collaboration calendar)*

# ePIC Official meetings

Goal: each meeting has a clear purpose, reduce redundancy in meetings



## TIC, Software and Computing, Analysis Meetings:

1. Bi-weekly

### Attendance:

- TIC, Computing WG/Task Force Leaders, PWG Conveners (respectively)
- Open to collaboration (publicly announced in the collaboration calendar)

# Questions for Discussion

- Is the current structure of PWG's appropriate to the task?

## Physics-Oriented:

- Inclusive
- Semi-Inclusive
- Exclusive, Diffraction and Tagging
- Jets and Heavy Flavor
- BSM & Precision EW
- Merge some of these groups?  
Joint WG meetings?

## Technically-Oriented:

- Kinematics Reconstruction
- Electron ID
- PID
- Jets/Particle Flow
- ...

- How do we focus the PWG's and engage the collaboration?
- How do we make effective use of TF's? What TF's should we set up immediately?
- How do we use the PWG's to help foster new members?
- What are the requirements for the Analysis Coordinator(s)?

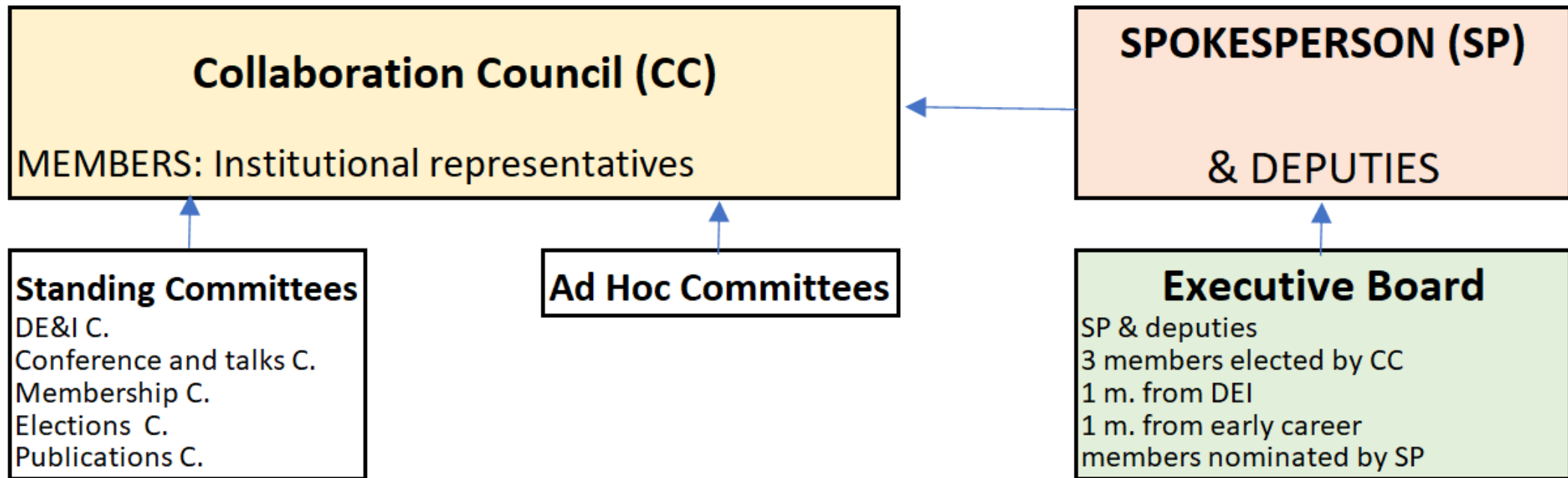


# Next...

- Update on organization of the detector effort in the management plan
  - Presentation by Silvia
- Discussion



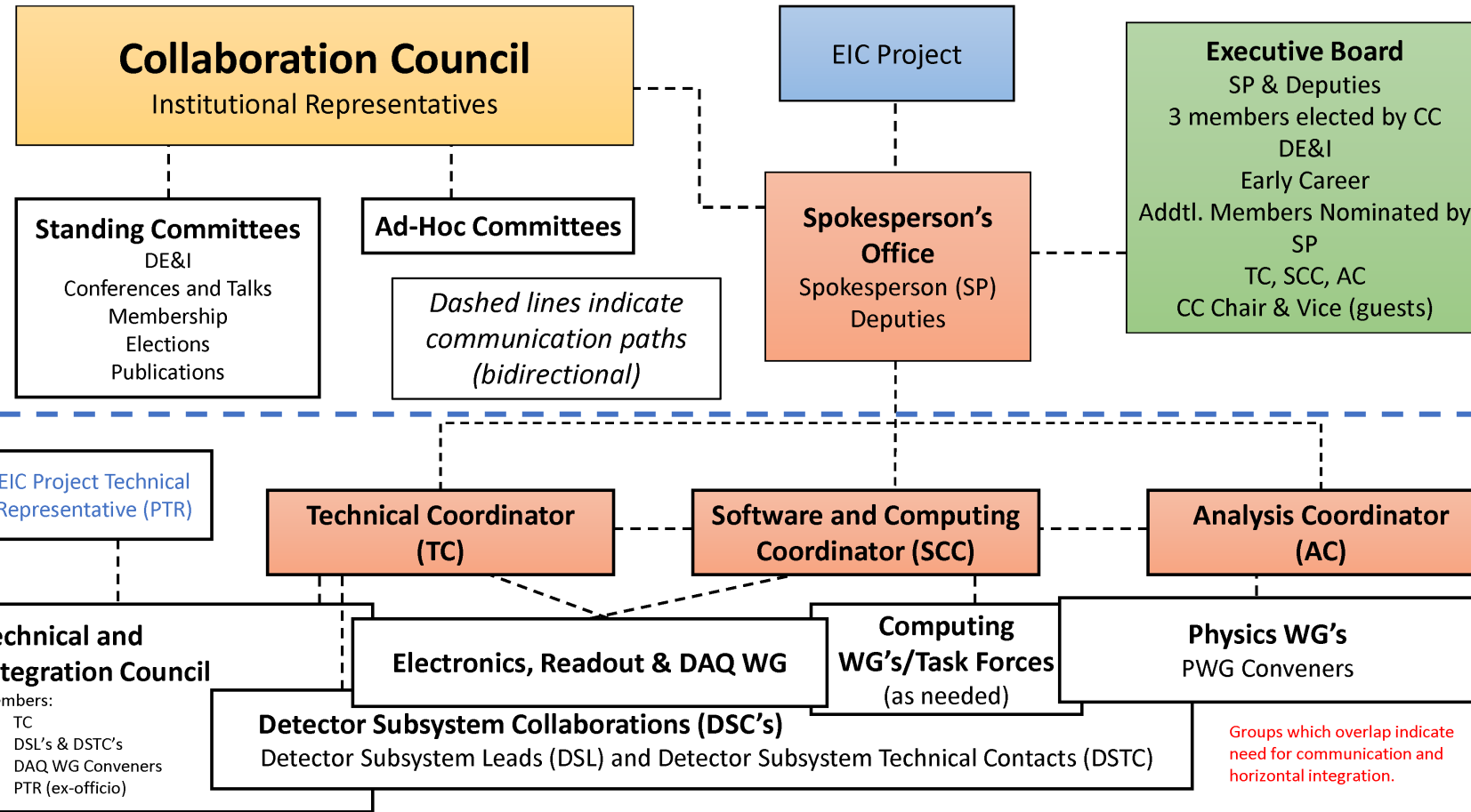
# Collaboration structure from the Charter



The high-level management structure, as set by the charter.

# ePIC Official meetings

Goal: each meeting has a clear purpose, reduce redundancy in meetings



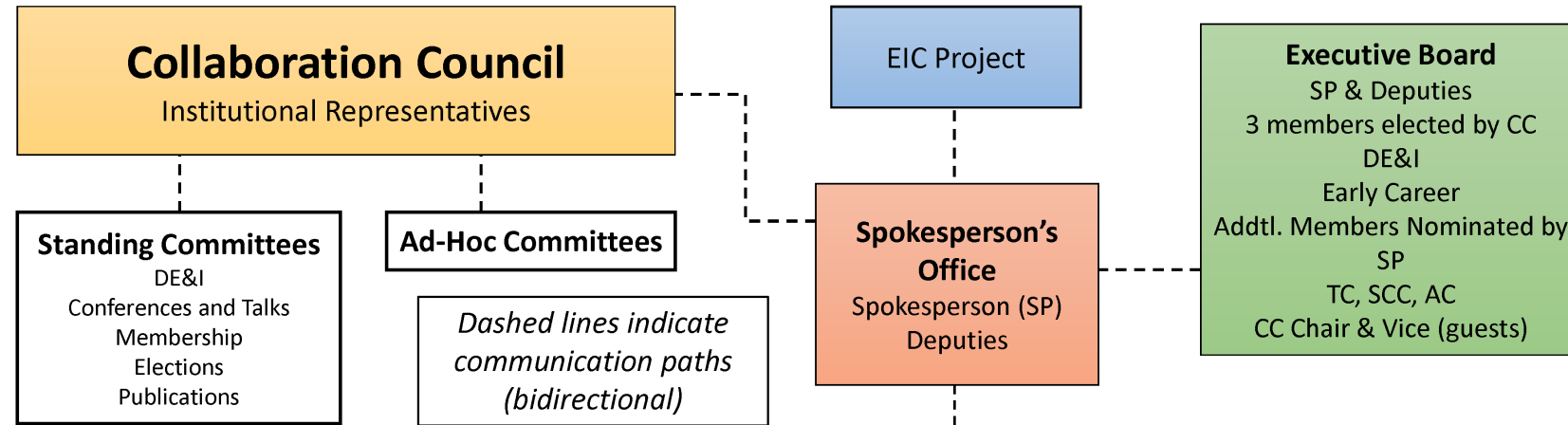
## ePIC General Meetings:

1. Monthly (held at two times?)
2. Twice per year in-person (hybrid)
  - One per year outside US

**Attendance:** the whole collaboration

# ePIC Official meetings

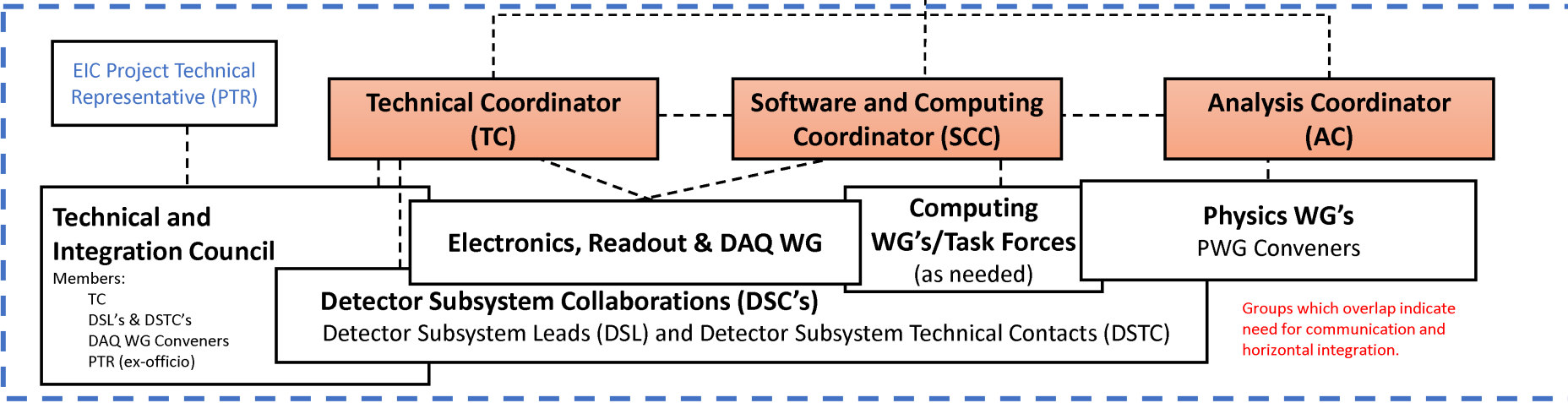
Goal: each meeting has a clear purpose, reduce redundancy in meetings



**EB Meetings:**

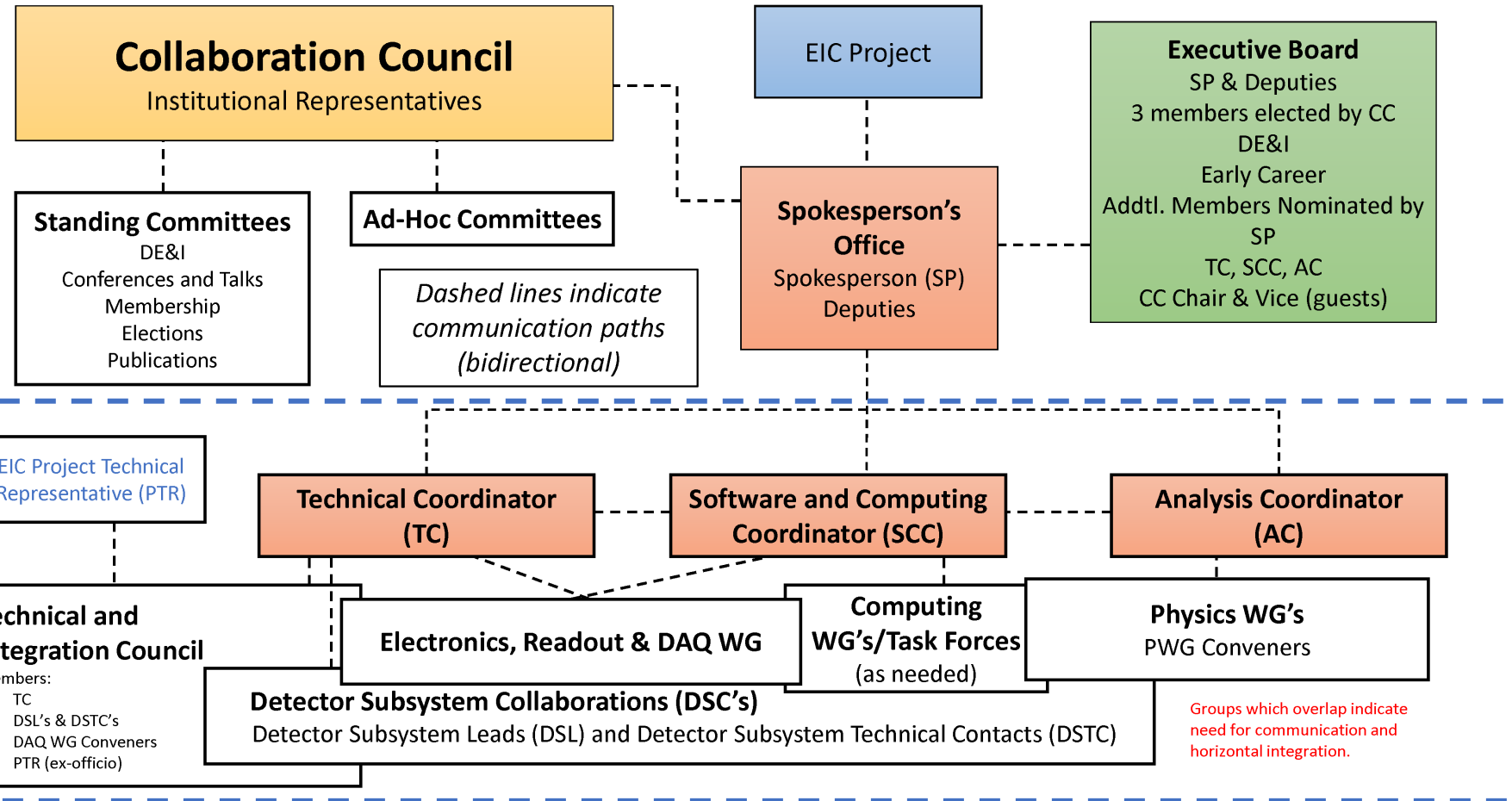
1. Bi-weekly
2. Additional meetings as needed

**Attendance:** the EB members and invited guests



# ePIC Official meetings

Goal: each meeting has a clear purpose, reduce redundancy in meetings



## TIC, Software and Computing, Analysis Meetings:

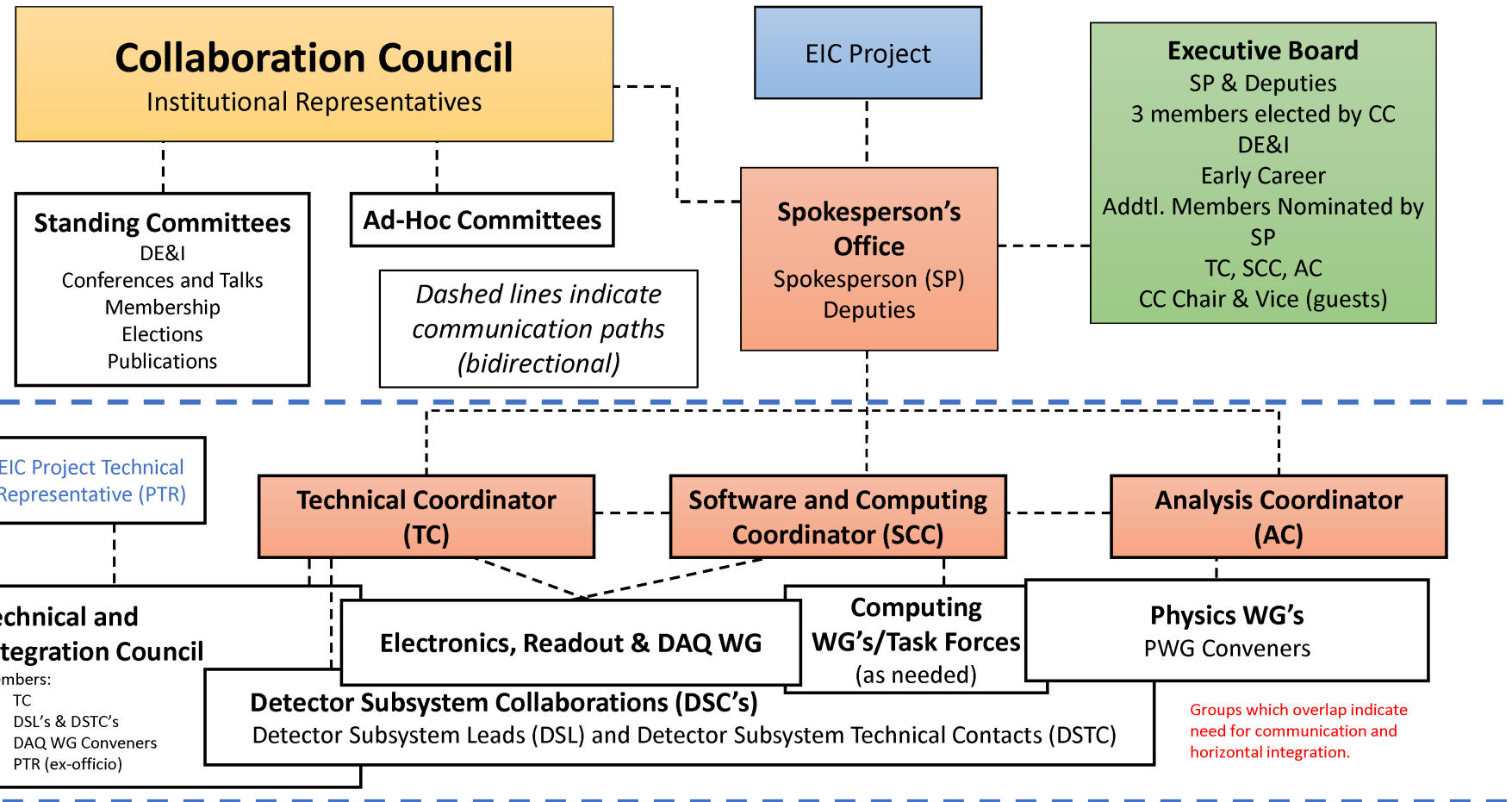
1. Bi-weekly

### Attendance:

- TIC, Computing WG/Task Force Leaders, PWG Conveners (respectively)
- Open to collaboration (publicly announced in the collaboration calendar)

# ePIC Official meetings

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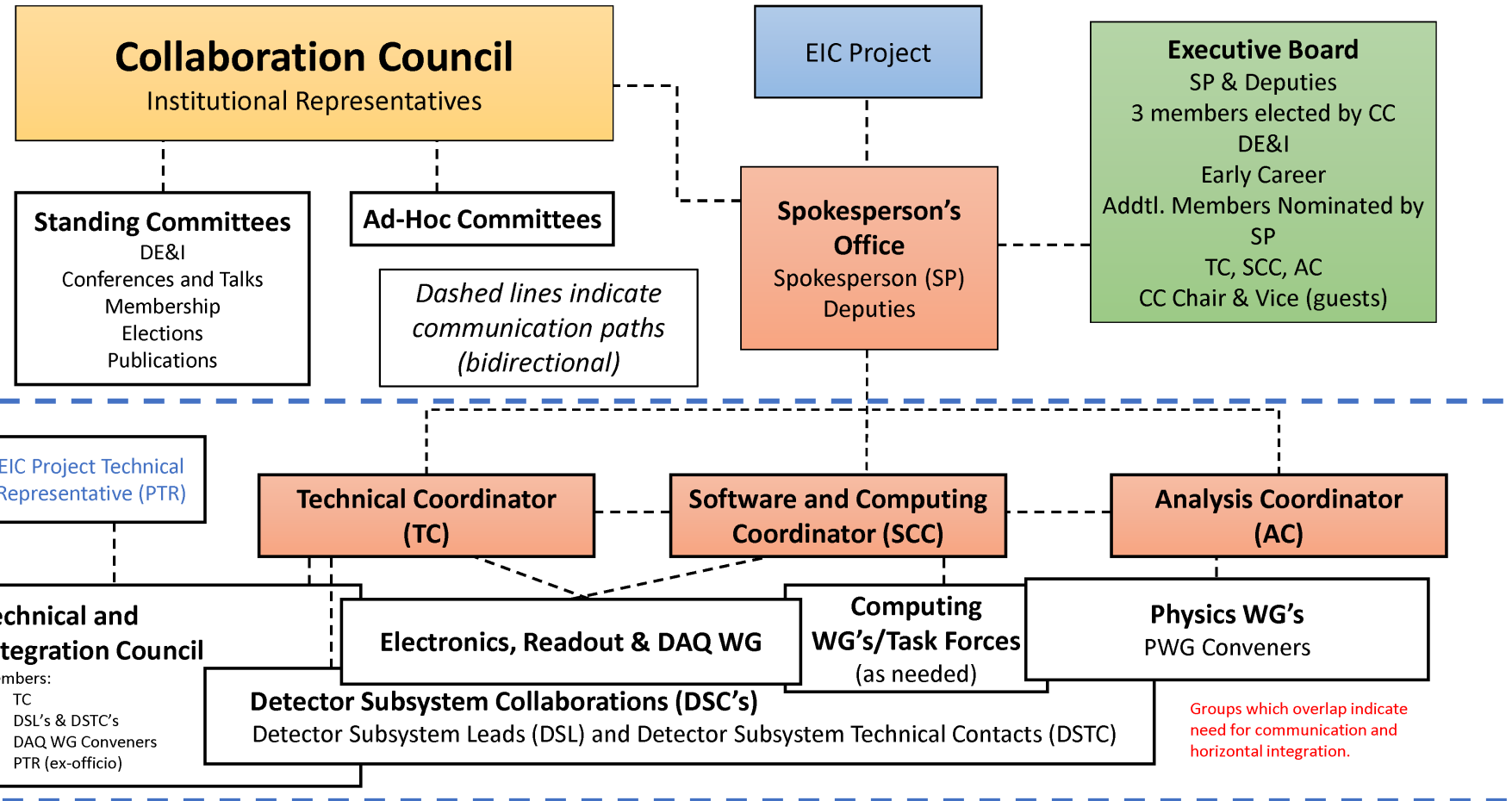


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- *Open to collaboration (publicly announced in the collaboration calendar)*

# ePIC Official meetings

Goal: each meeting has a clear purpose, reduce redundancy in meetings



## CC Meetings

(TBD by CC):

1. SP-office would suggest meetings every few (~3) months

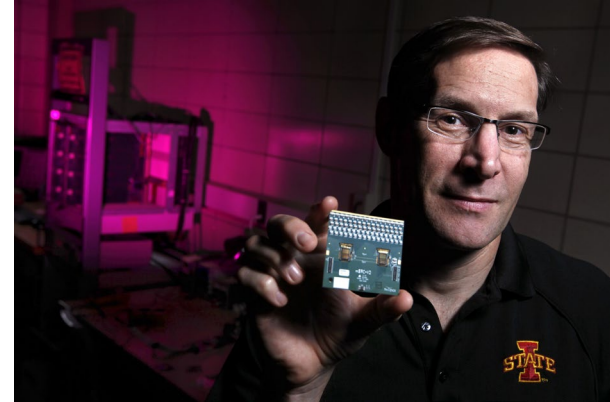
- In-person meetings should include CC meeting

**Attendance:** the whole collaboration



# The SP Office

- SP: **John Lajoie**
- Deputy SP: **Silvia Dalla Torre**



- Both SP and Deputy SP will dedicate to ePIC > 80% of their professional time
- Well defined distribution of responsibilities

# The SP-Office and Responsibilities

## **SP:**

- Represents the Collaboration in all circumstances
- Overall responsibility for ePIC scientific management
- Relationship and communication with EB, PM, CC and its Committees
- Relationship with BNL, JLab and laboratory user groups, university groups
- Raising the visibility of ePIC/EIC worldwide

## **Deputy SP:**

- Communication with the coordinators (TC, PC, CoC) and the corresponding board (TIC)
- Managing the detector technology and integration decision process
- Relationship with RRB
- Relationships with Institutes/Groups concerning effective FTE and in-kind

## **Joint Responsibilities:**

- We plan to work as a collegial team. The areas above are intended as guidelines to make the work efficient.

# Increasing International Engagement

- ePIC will need strong international engagement in order to succeed!
- Role of the Spokesperson's Office:
  - Outreach/encourage participation in ePIC
  - Help nuclear physics communities raise EIC visibility in their home countries
  - Support international groups by helping them engage with ePIC, match their talents and capabilities to work that need to be done
    - Provide assistance/training to students and postdocs integrating into WG's
    - Help with laboratory appointments, access to resources
  - Assist Project with coordinating planning for international contributions
    - Especially workforce in international groups
  - Support the efforts of the Project in the RRB

# Community

- To be successful we will not only need to grow the ePIC Collaboration but take full advantage of the skills, talents, and capabilities of all our collaborators
  - Silvia and I are dedicated to making ePIC a collegial, friendly, safe, and welcoming environment for everyone
  - It is critical to build this into ePIC culture from the very beginning!
- Support the CC in developing a strong Code of Conduct
  - The ePIC charter includes concrete provisions to address misconduct
  - Code of Conduct should be developed quickly as a policy document
- Support the CC in appointing a Talks Committee
  - Track assignment of talks, ensure an equitable distribution across all groups
- Support the professional development of junior scientists
  - Provide opportunities for leadership and recognition
- Facilitate participation in ePIC
  - While some can dedicate all their time to ePIC, many will have to balance ongoing commitments. Make sure that everyone can contribute to the best of their ability.

# ePIC Relationship with PM (via SP supported by CC)

## Major Guidelines:

- Work with EIC PM to ensure the realization of the full EIC science program in the ePIC detector
  - PTR an ex-officio member of the TIC
  - Detector Subsystem Collaborations work in concert with EIC CAMs
- Facilitate communication to ensure transparency in project decisions and the prompt exchange of information
- Ensure that ePIC responds in a timely and complete manner to EIC PM requests
- Provide the link between the collaboration and EIC PM to guarantee a constructive and friendly environment for ePIC
- Support collaboration proposals to PM
- Maintain a constructive and cooperative attitude

# Transition of the Scientific Structure (1)

## General considerations :

- The transition of the high-level Collaboration management structure will follow the path indicated in the charter
- The transition of the scientific structure is proposed in the next slides and follows the guiding principles:
  - Complete the transition in a reasonable time, but avoid disruption due to unnecessarily sharp transitions
  - Work as much as possible in consultation with the community
  - Truly dedicated WG conveners, DSL's and DSTC's

# Transition of the Scientific Structure (2)

- PWGs:
  - Presently 5 WGs with 4 conveners each
  - Model to be discussed with the community: 5 or 6 PWGs with 2 conveners each
  - Look at ways to maintain contact between PWG's, make it possible for people to be active in multiple PWG's
- Computing:
  - Areas of Responsibility:
    - *Software architecture; Simulations; Computing resources; Advanced algorithms and AI; Documentation; User Support; ....*
  - Presently: 2 WGs with 4 conveners each (condensed to one group)
  - Possible model:
    - Flexible subgroups and task forces
  - To be determined in consultation with the community

# Transition of the Scientific Structure (3)

- R-O & DAQ:
  - Connections to all detector projects
  - Presently 1 WG with 4 conveners
  - Model proposed: 1 WG with 2-4 conveners
- Subdetectors:
  - Presently: 6 WGs with 4 conveners each
  - Proposed model:
    - Detector Subsystem Collaborations (DSC's) each building a well-defined subdetector
    - Each DSC determines its Detector Subsystem Leader (DSL) and Detector Subsystem Technical Contact (DSTC)
    - The breakdown in projects to be discussed/optimized with the collaboration



# The Ongoing GD/I Review Process (BECal/backwards RICH)

- Review process is already underway:
  - The review committee is GD/I with external reviewers
  - External reviewers contacted, dates set, charge discussed with proponents
- GD/I remains in charge of the process as a review committee
  - No change to current plans
  - GD/I will provide a report to the EB
  - GD/I will be terminated after the completions of these reviews
- The TIC will be set up in parallel to this process

# Introductory Notes (1/2)

- This ePIC management plan is proposed with a focus on the next two years
- It has been developed by the SP/Deputy SP candidates jointly
- It includes contributions from the ePIC SC based on the experience gained together
- We consider this a Work-In-Progress and look forward to feedback and suggestions!

# Introductory Notes (2/2)

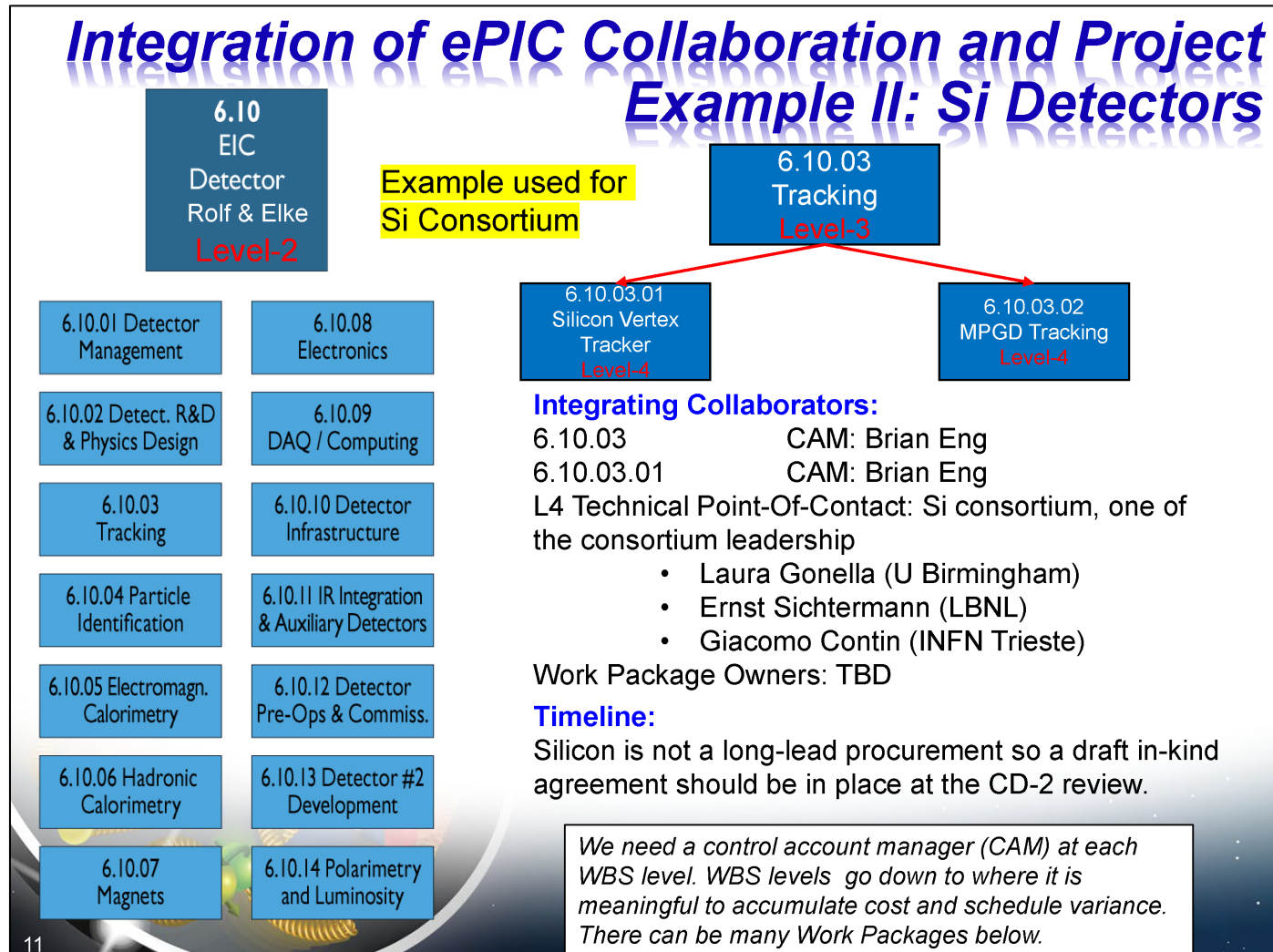
- The Charter establishes the high-level managerial structure, while the scientific management structure is not depicted in the document
- Our focus: present our model for the ePIC scientific management structure
  - We expect this structure will evolve as the Collaboration evolves, according to the needs in the different phases
  - Emphasis here is on the structure needed to support CD-2/3

# DSC scheme *(draft for discussion)*

DWG (now)	DSC (in management plan)	Notes
Tracking	Si Tracker (barrel and discs) Gaseous Trackers	build on EICSC
Calorimetry	Backwards ECAL Backwards HCAL Barrel ECAL Barrel HCAL Forward ECAL Forward HCAL For. HCAL insert	build on EEMCal consortium      (currently not in reference)
Cherenkov PID	Backward RICH hpDIRC dRICH	
TOF	Barrel AC-LGAD Forward AC-LGAD	
FFWD	RP's + OMD B0 Tracker ZDC	
FBKWD	Lumi. Monitor Low-Q <sup>2</sup> tagger	

# Integration with EIC Project (I)

Slide from Elke and Rolf



For Si Tracker, seems logical that DSL/DSTC can be drawn from EICSC, and overlap with L4 Technical Contacts

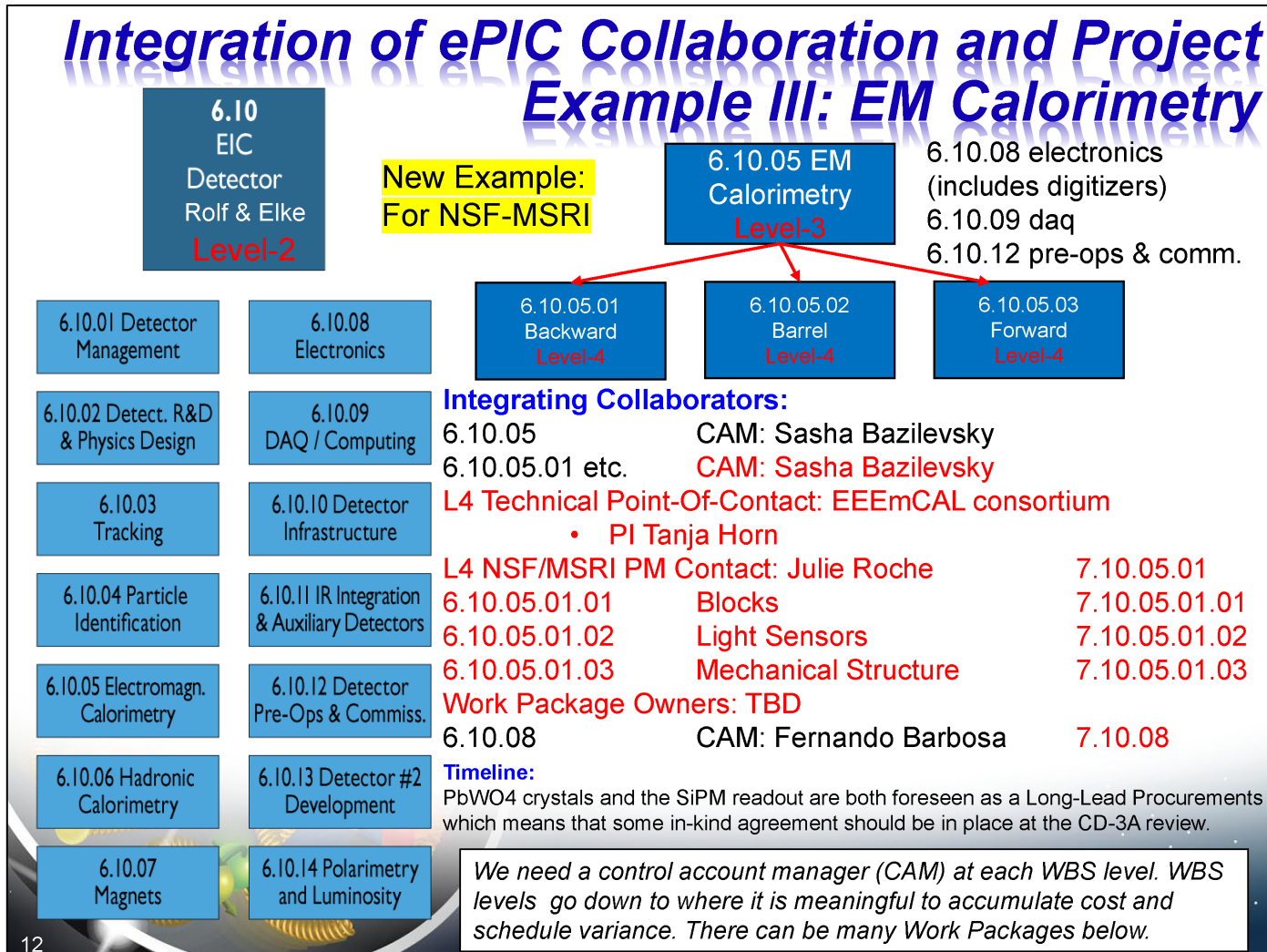
MPGD tracking may be broken down further to  $\mu$ RWell and  $\mu$ Megas at the DSL/DSTC level.

Work Package Owners can also be drawn from the collaboration.

*The goal is a tight integration between the project and the collaboration at a technical level.*

# Integration with EIC Project (II)

Slide from Elke and Rolf



This example looks at how things might be structured for a potential in-kind contribution.

Again, DSL/DSTC connected with project as L4 Technical Contact. Work Package Owners can also be drawn from the collaboration (examples shown).

*The goal is a tight integration between the project and the collaboration at a technical level.*

# Thank You

We want to thank all of the conveners and WG members for all their hard work over the past *more than two years* to chart a path to realizing the EIC science program. You have all been **incredible**, and all your hard work is appreciated.

The coming weeks will include a lot of change. Some people in convenor positions may continue, some may not – that should **not** be construed as a lack of confidence in any of the current conveners!