

News and organisation

Frank Geurts
Thomas Hemmick
Roberto Preghenella

Goals, deliverables, work to be done

- **technology choices**

- identify technology options that are realistically on the table
- no more than two options, that can be costed and integrated in the full detector
- carry out key simulations to support the choice

- **estimate of services, supports and other passive material**

- work out details on required services, readout hardware, anything else
- together with mechanical supports and any crucial information for detector integration

- **implementation into the global experiment**

- there will be an integration group, we will identify a representative from our WG

- **simulation of performance in the global experiment**

- once everything is clear on paper, it has to be implemented in the simulation framework
- we will identify a person responsible to lead and ensure progress

- **cost estimates**

- we need to go to channel counting to get a handle on money
- develop credible cost estimates for the proposal
- there will be a “costing group” and training sessions, we will identify a representative from our WG

Meetings and organisation

- **every Monday at 12:00 EDT**
 - we meet regularly, on a weekly basis, no matter what
 - we hope the chosen slot is good for most, will be hard to find a different one
- **get a list of PID systems / efforts to be kept on the radar**
 - detector technologies that are well known (dRICH, DIRC, mRICH, ...)
 - newer ideas that are not-so-familiar
- **with a list of the corresponding reference persons**
 - who will be tasked for regular reports on the activity
- **regular weekly reports to update on progress**
 - everyone reports
 - “no progress” counts as a valid report

There is a lot to do in a short time

From the **detector working groups**, the proposal will need the following information and/or actions:

1. Technology choices

For many systems there are multiple technology choices on the table. Some decisions will need to be made to identify **no more than two options**, which can be **costed and integrated** into the full detector system.

While the **decisions should be made by the collaboration as a whole**, they will depend strongly upon scientific input and assessments of technical capabilities and available workforce. These will need to be provided by the relevant working group.

An important first step for each detector working group is **to identify the technology options that are realistically on the table**, and work out a process for deciding which of them to pursue further. **Identifying and carrying out key simulations to support choices** will need to be done quickly, in order to enable the collaboration to make well-informed decisions.

There is a lot to do in a short time

2. Estimate of services, supports + active materials

The **detector working groups are the home of expertise and experience** with fielding the chosen technologies. It is crucial that the experts within the working groups identify, and specify as much as possible, **the required services, readout hardware envisioned and its location, along with the mechanical supports** required for each detector system being considered. This information is crucial for integrating the various detector subsystems into an EIC@IP6 detector, and estimating the cost.

Many collaborators have ideas about how this might look, but it is **the experts** who **have the deepest knowledge**. We need them to work in the detector working groups to provide the needed information as soon as possible. That will allow us to focus our effort, and be be maximally productive. Furthermore, the required services, readout, and mechanical supports will likely be important ingredients in technology choices to be made.

There is a lot to do in a short time

3. Implementation into the global experiment model

We anticipate **forming an integration group**, consisting of a member from each detector working group, along with experts on the IR and physicists and engineers from the EIC Project. An important - and early - decision for each working group is to **identify their representative for this group**.

4. Simulation of subsystem performance in the global experiment

Once an integrated detector concept is determined, including non-active material inside the acceptance, **this needs to be implemented into the simulation framework**.

It may be wise for **each group to identify someone** to take the lead on ensuring that this is done accurately. Each working group will then be able to look at the performance of their subsystems together with all the rest of the EIC@IP6 subsystems. We know that the active and non-active material from one subsystem will affect the others, and must quantify this as quickly as possible. The results will likely impact technology choices, and must be in hand to allow production of the physics performance plots.

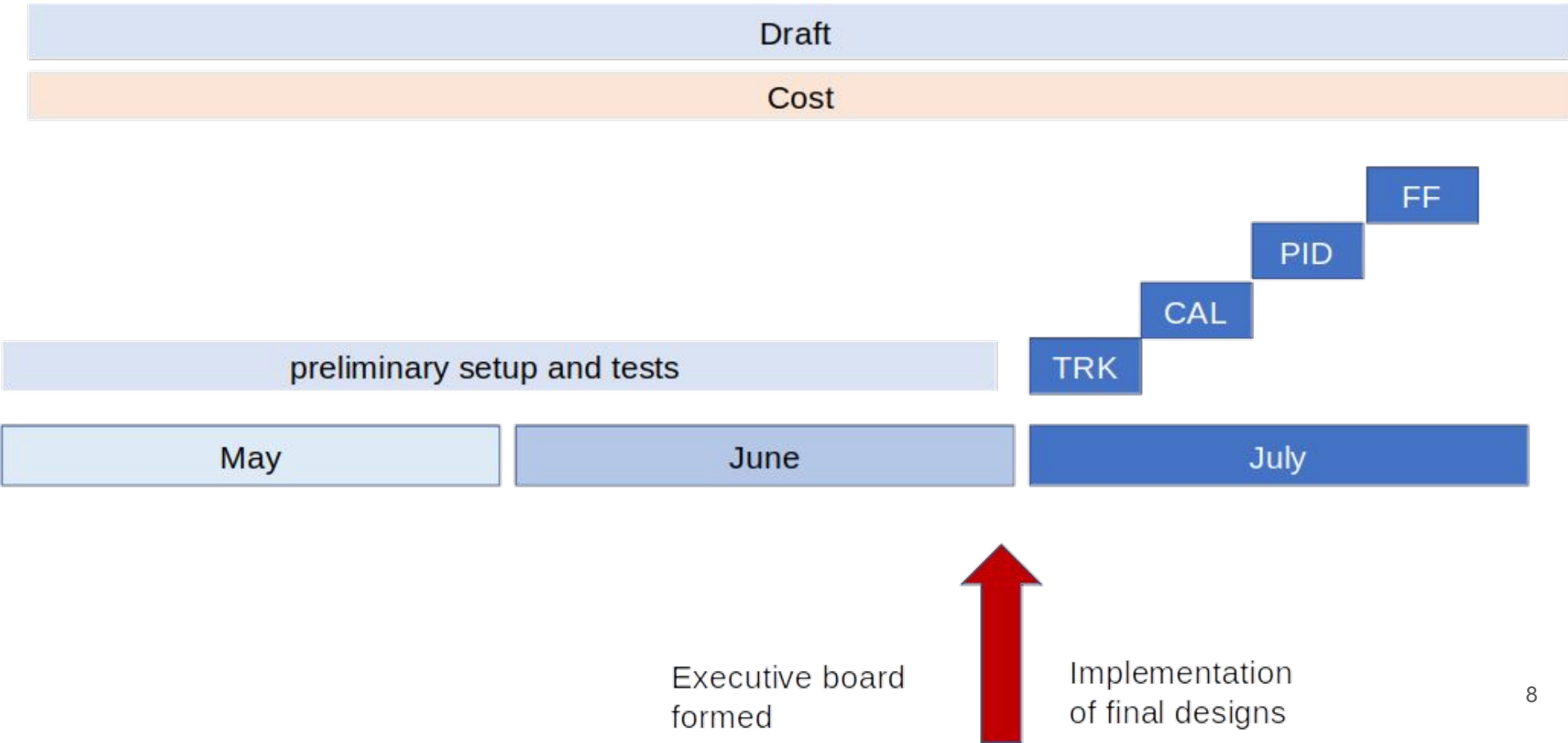
There is a lot to do in a short time

5. Costing of each subsystem

There will soon be a “training session” for the collaborations by the EIC Project group to enable us to develop credible cost estimates for the proposal. We anticipate formation of **a costing group** that will include one or more **members from each detector working group**, along with the costing experts who will be trained in the coming weeks. Each detector working group needs to identify their representative for the costing group.

6. Consider what else your group can contribute to help produce a winning proposal.
-identify readout-electronics (or indicate what needs to be developed), **total number of channels and data rate**

Timeline overview



Executive board formed

Implementation of final designs

Timeline overview

