



# Re-Organisation of SiW ECAL

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***ILD ECAL meeting  
Tokyo U.  
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# Why a re-organisation ?

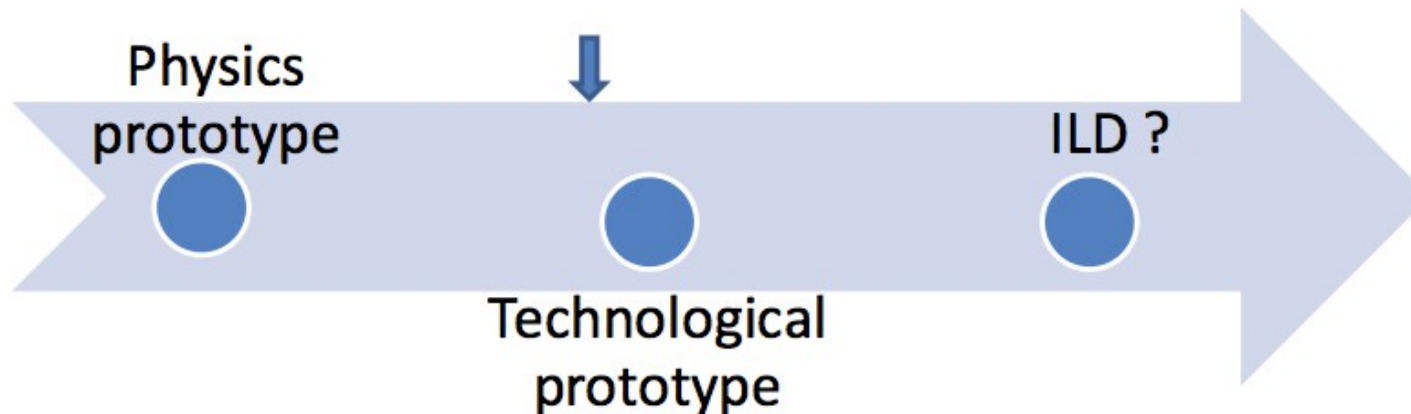
*Short answer : get ready...*

- « Pure » R&D period → TDR/EDR end of 2015 (16?)
  - ▶ Depending on political movement : **get ready** or **save your work**
  - ▶ Re-organisation of LC community
  - ▶ Re-organisation of ILD
- ⇒ Move to a project management (incl. review, documentation, reporting, ...)
  - ▶ ILD Si-ECAL most advanced in planning (Cost, PBS)
    - ◆ Review all tasks for the DBD : **M. Anduze, S. Pavy**
  - ▶ Clarify the organisation
    - ◆ No task forgotten
    - ◆ No task duplicated unporposely
    - ◆ Share responsibilities & duties
      - Opening for new groups

## **Important remarks :**

- Si W ECAL only today
- Ongoing work meant for reflexion
- All mentioned resp. reflect the current status.
- To have a “final” version ≤ 4 wks.

# Time line



## Proof of concept

- Linearity
- Resolution
- Sensors
- Very front-end



## Feasibility of design options

- Compactness
- Granularity
- Front-end
- Power pulsing
- Long SLAB



## Construction

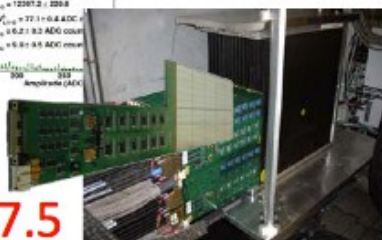
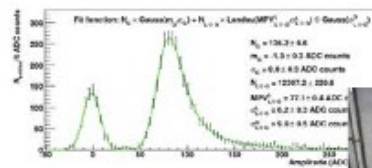
- Integration
- Environment
- Services
- Industrialization
- Tooling
- Project org.

2004-2008  
30 layers  
4000 channels

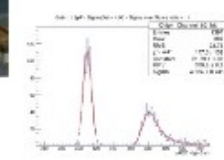
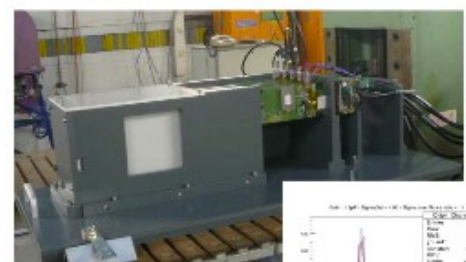
1500 channels/dm<sup>3</sup>

4000 channels/dm<sup>3</sup>

4000..10000 channels/dm<sup>3</sup>

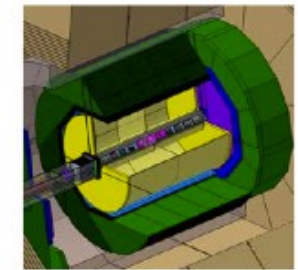


S/N ~ 7.5



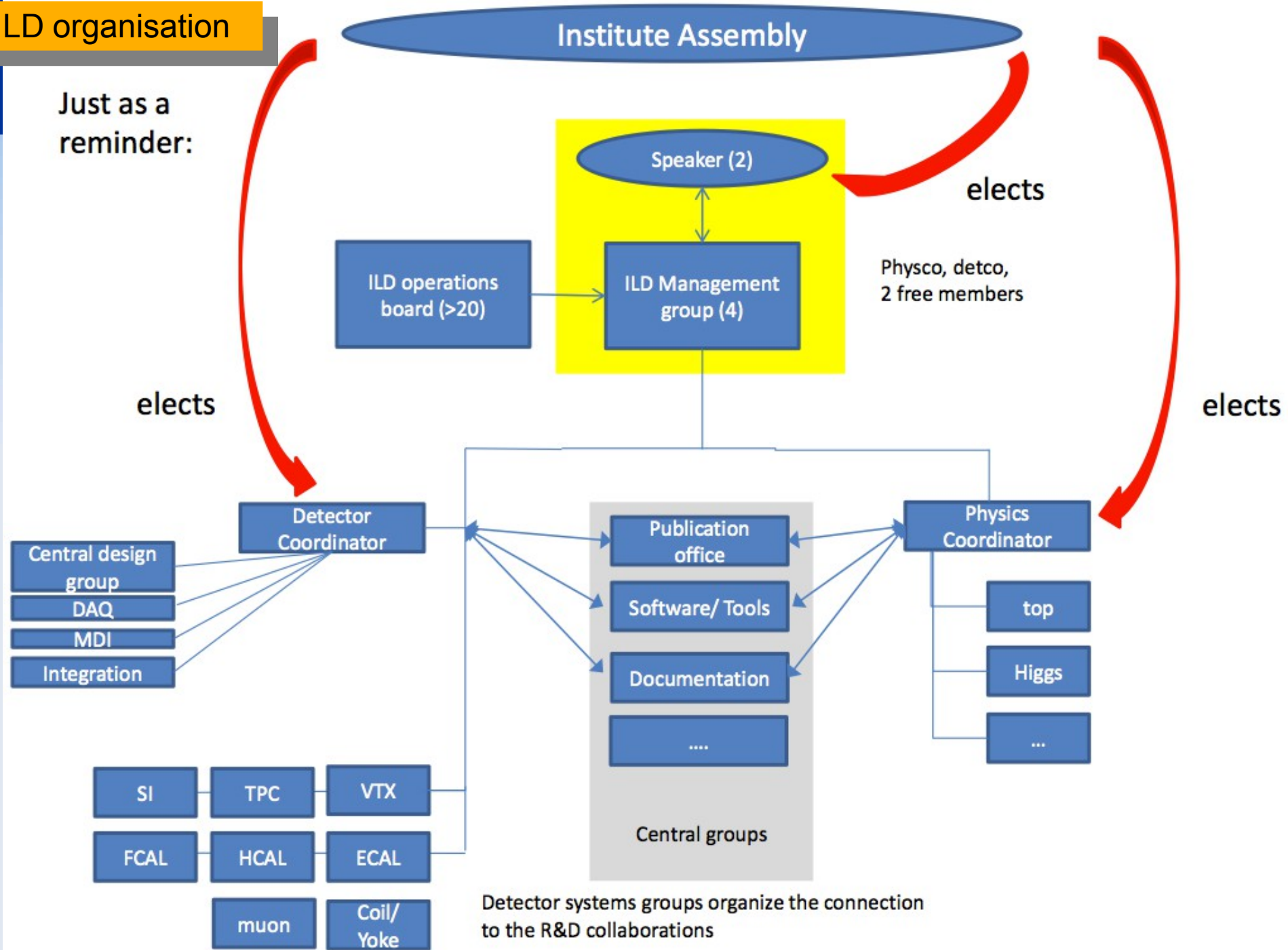
S/N ~ 15

~24 X0, 20 cm thick  
~2500 m<sup>2</sup> active detectors  
~100M readout channels



# ILD organisation

Just as a reminder:



Preliminary version  
for Discussion

Coordination  
Detector

Single of Duet ?

Version 2013-11-15

Contact ILD ECAL (needed ?)

Steering Board

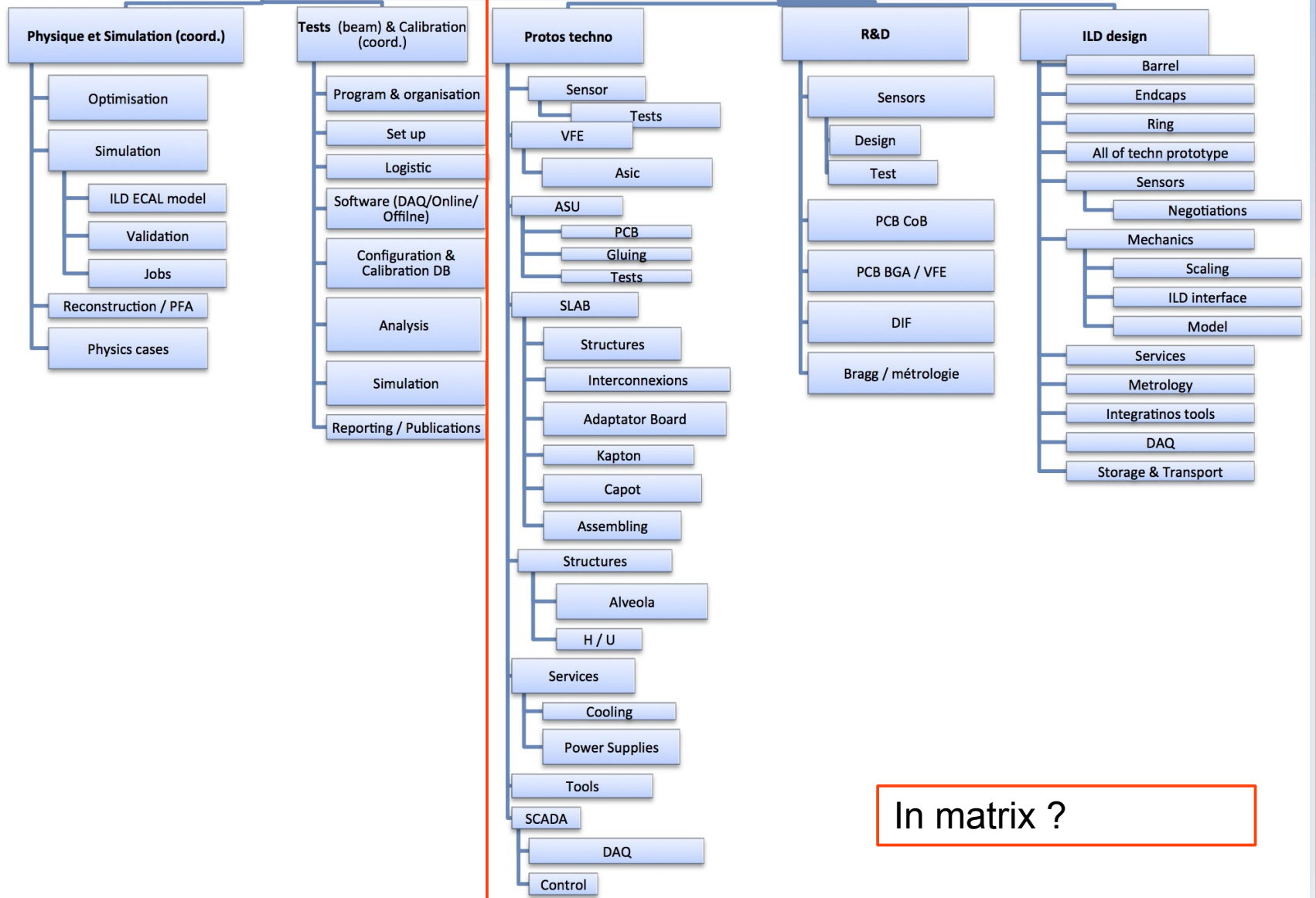
Executive Board

SIW ECAL Project Leader

Budget / planning / qualité

Scientific coordin.

Technical coordinauteur



In matrix ?

| Topic   | project<br>resp/coord<br><b>(Present status)</b> | Prototype<br>LLR                              | R&D<br>??   | ILD<br>(almost) Everything × 3<br>BARREL / ENDCAP / RING | Industrialisation ?                             |
|---|--|---|---|--|---|
| Mechanical Model  | (LLR)  | LLR   |   | Scaling<br>LLR / LPSC / ??<br>ILD interface<br>??        |   |
| Sensors Design<br>Electric test<br>Laser test<br>Beam tests   | (LLR/Kyushu/Tokyo/LPNHE)                         | x<br><br>PHIL<br>LLR                          | several options<br>LLR / TU / Kyushu<br><br>Rad<br>Kyushu<br>Kyushu / Tokyo ? | Final Design   |   |
| VFE Test  | (Omega)  | SK2<br>Omega<br>LAL / LLR                     | SK2B<br>ADC<br>Omega<br>LPSC  | SK3<br>Omega   |   |
| ASU PCB<br><br>Gluing<br>Tests (electric, cosmic, aging)<br>Transport<br>Final DIF/ASU  | (LPNHE)  | LLR<br>LLR/Tokyo<br><br>LPNHE<br>LLR          | PCB_COB<br>PCB_BGA<br>LAL<br>LLR / TU   | PCB (design, prod, test, aging)<br>?<br>?<br>?<br>?      |   |
| SLAB<br>Structure (U)<br>Interconnection<br>Adapt Board<br>Kapton<br>Shielding<br>Assembly<br>Cosmic tests<br>Rad test<br>Storage/Transport | (LAL)  | LLR<br>LAL<br>LLR<br>LAL<br>LLR<br>LAL<br>LAL | →<br>→<br>x<br>→<br>→<br>→<br>→<br>Glue                                       | LLR<br>LAL<br>LAL<br>?<br>LAL                            | ? / ? / ?<br>?<br>?<br>?<br>?<br>?<br>? / ? / ? |
| Modules<br>Structure<br>Metrology (FBG)   | (LLR)  | LLR<br>LLR                                    | LLR<br>LLR  | ? / ? / ?<br>? / ? / ?                                   |   |
| Services<br>PS (PP)   | (LPSC)   |   | Power-Pulsing   | Cooling<br>LV<br>HV<br>LPSC<br>??<br>??                  |   |
| Tooling   | (???)  |   |   | Module mounting?<br>Module rotation ?                    |   |
| SCADA<br>DAQ<br>DIF<br>Online Data quality<br>Control   | (LLR)  | LLR<br>MAN/LLR<br>LLR/LAL                     | DIF<br>?<br>?<br>?  | DIF<br>?<br>?<br>?                                       |   |

**1 Coord per Project**

Needed ?

Missing now

1 supervisor per topic

- ~ Existing structure
- ⊕ Ensures continuity of R&D and knowledge
- ⊖ Can generate conflicts