

ECAL project in the future 2-3 years

End of 2012 is the end of an era... R&D era . DBD delivery is done.
Now What ?

If we believe in the **FAST TRACK scenario**.

ACCELERATOR

Decision <2015

Start Construction = 2017

DETECTOR (ECAL)

Techno. Choice < 2015

TDR 2017

Start construction =2018/2019 ?

From the R&D phase to pre-production phase. The work is not the same.

In the new era, we need take into account

- The cost, organisation, steering of the project
- The industrial aspects (production, quality test, minimizing transport cost,etc...)
- The performances for \sqrt{s} going from 90 GeV to 250-600 GeV

For this scenario

The TODO list for 2013-2014

- optimise the detector for \sqrt{s} going from 90 GeV to 250-600 GeV (internal radius ecal entrance, pixel size, number of layers, acceptable guardring zone, etc...)

THEN

- Mechanical study of module Barrel and Endcap
- PCB with cost effective performances (thickness, flatness, etc...)
- VFE packaging must be studied , without stopping R&D for embedded VFE
- SLAB in real life (HV, LV, ASU connexion, etc...)
- ECAL DAQ specific card
- Etc...

A different structure and organisation is mandatory !!!
to discuss with industry, with funding agency, with ILC board ...

ORGANISATION

The electromagnetic calorimeter is

The most expensive

The most difficult technically (Silicon, strip, VFE, ultra thin PCB, etc...)

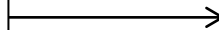
The most difficult to organise and build



The ECAL is project by itself

We need meeting for ECAL... no more time to spend to calibration of the LED system for AHCAL(CALICE) ... it is more important to have interaction with people like Miyamoto-san working on detector optimisation

International
Collider
Ecal
Project
Phase -1



ICEPP-1

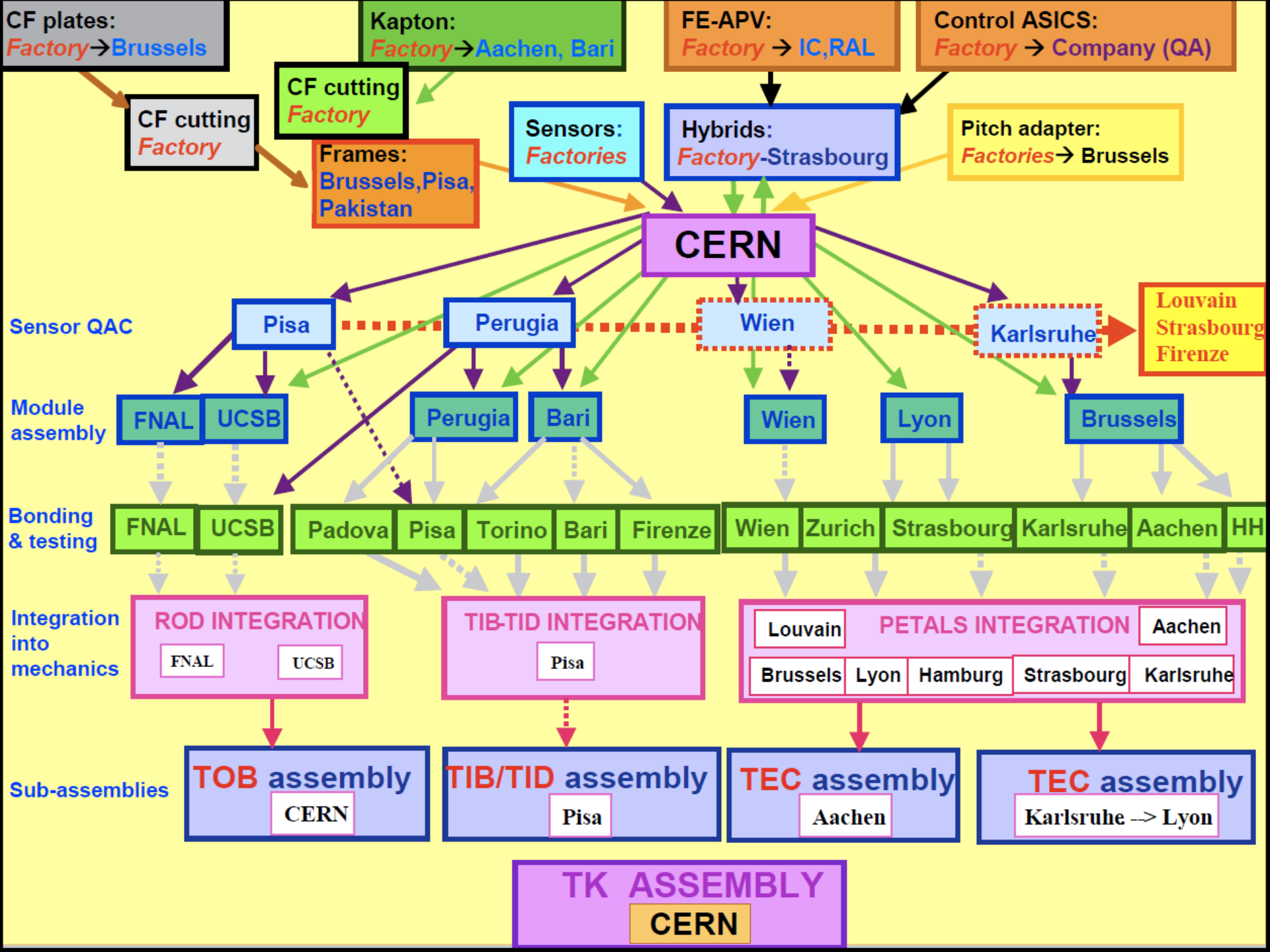


Organisation

Multipolar organisation
For the production of
one detector

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Example of CMS tracker



POSSIBLE ORGANISATION

2 Project Leaders
(Japan, France)

ILD board

Steering board

TECHNICAL BOARD

RESSOURCE BOARD

FINANCE Board

Manpower Board

Reporting to FA

PHYSICS &
SOFTWARE GROUP

Technical R&D
GROUP

Production
GROUP

Commissioning
GROUP

SI. Wafers
design
Impact on
performances

Event
reconstruction

Guardring,
Cuting,
matrices
size...

Silicon
Production

Silicon wafers
QT

Gluing
Production

SLAB assembly
Production

SLAB group

Gluing on
ASU

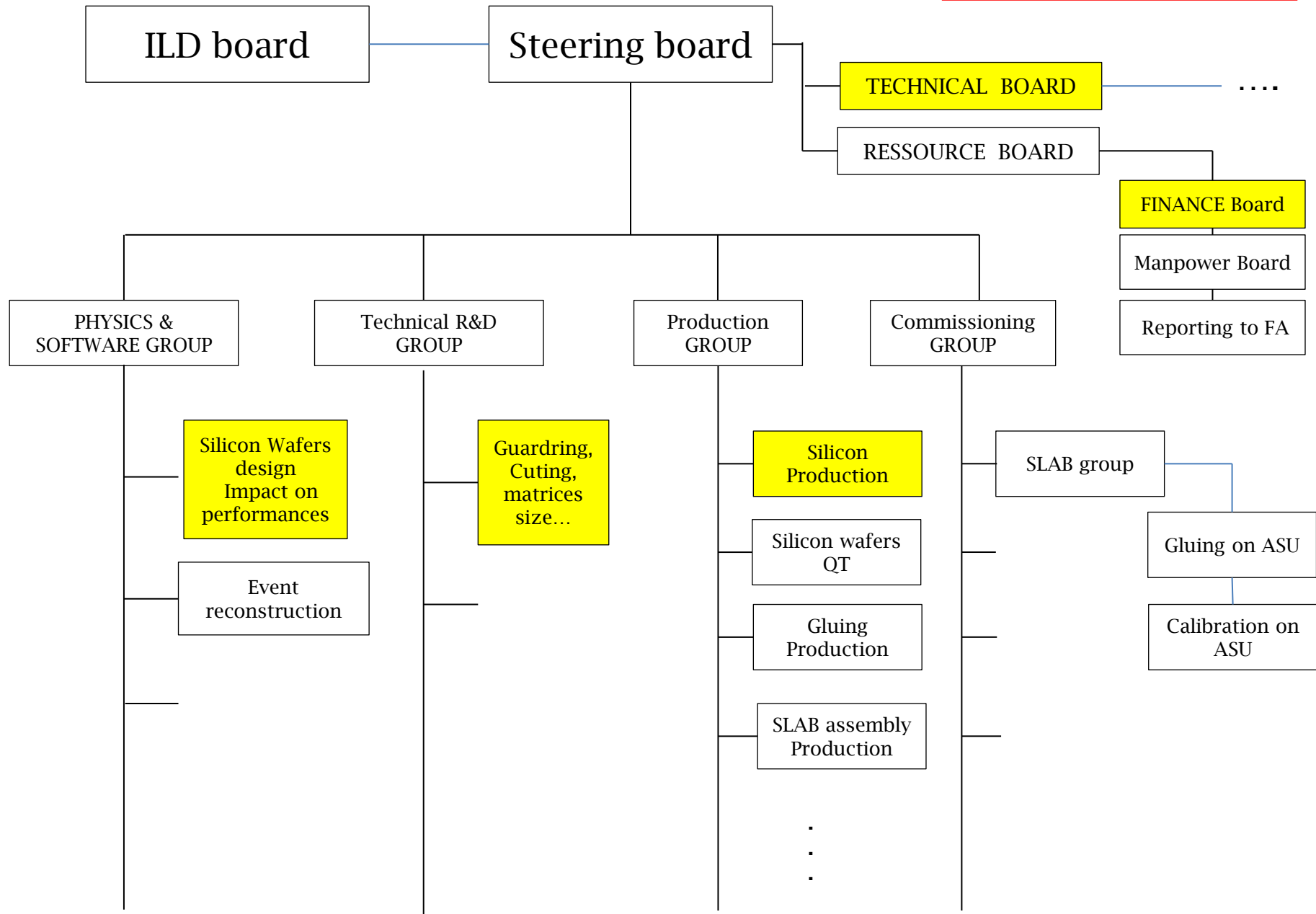
Calibration on
ASU

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POSSIBLE ORGANISATION

2 Project Leaders
(Japan, France)

VISITING
SILICON PRODUCERS



ECAL project collaboration could be

- open to US -SID group (SLAC, Oregon Univ.)
- embedded in ILD and SID (groups remains member of)
- not embedded in CALICE (but some groups could be part of it)
- the structure which will be discussed with funding agency, with PAC, etc.. and with the ILD/SID and ILC detector board
- the collaboration which will give information to ILD board for the technology choice and report to ILC Board
- the organization which will fund and test a prototype for FINAL PROJECT
- Act as a collaboration (review of papers, reports, speakers bureau, etc...)

SUMMARY

- We are entering in phase transition
- CALICE was the good tools for prototype R&D
It is not the optimum for the new phase
- I propose to all people working on ECAL for ILC
To collaborate within a new organisation .
This structure will be part of ILD(SID if US join)
- This structure will be dedicated to ECAL only

Declaration of intent (or express of interest)
For the design, construction, commissioning
of ECAL for ILC - ACTION in 2013