

# CALICE in March 2008



## The collaboration has been created in 2002 for 5 years

- > Development of the software for PFA
- > Design, construction of prototype to test with beam the faisibility of ultra granular calorimeter
- > Cornerstones : 2003 (TESLA not financed ... GSI-Darmstadt)  
2006 : goal for first data goes beyond 2015

**2008 , we are still alive and working**

About 50 participants here, AFTER the “Black December” (US and UK funding cuts)

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- What to do with the pb of funding in UK ?? In USA ??

### Does we have to go beyond 2010

- What are the final goal of the collaboration (EDR2010 or our own goal dictated by our prototype) ?
- How to interact with the EDR 2010

### Do we continue with the same organisation/strucure

- Technical board, Editorial board, Steering Board
- Do we need another MOA for CALICE ?

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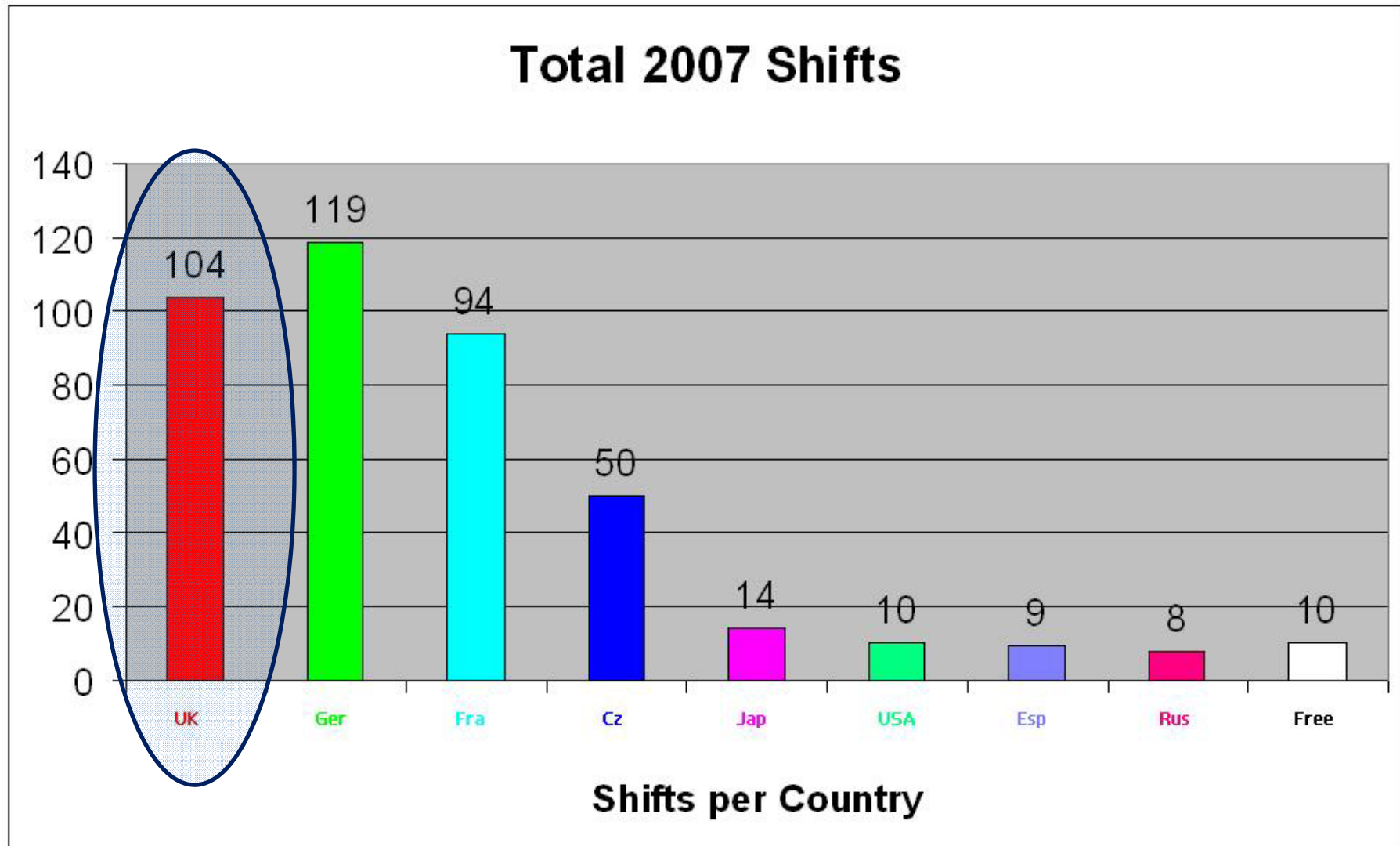
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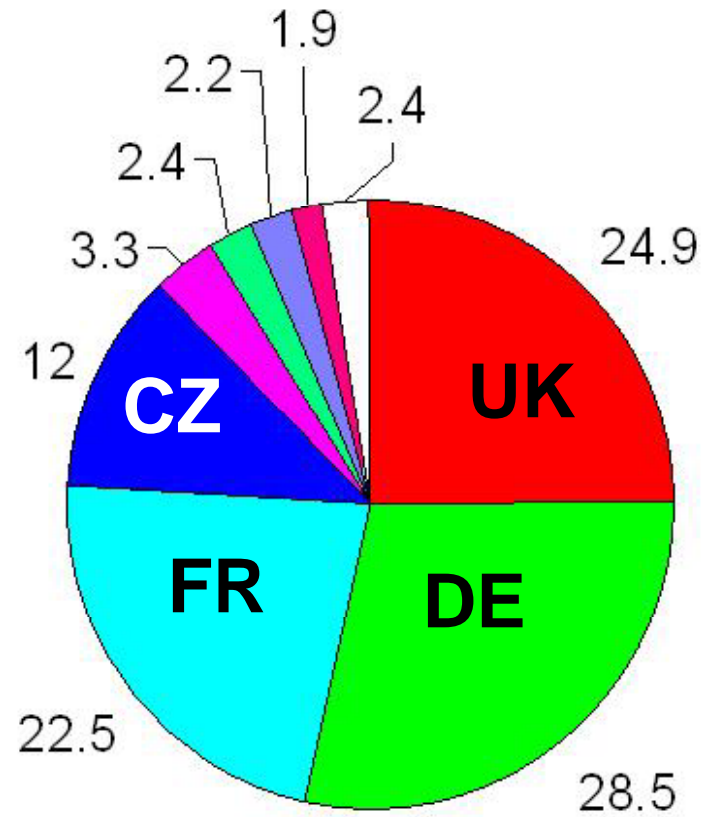
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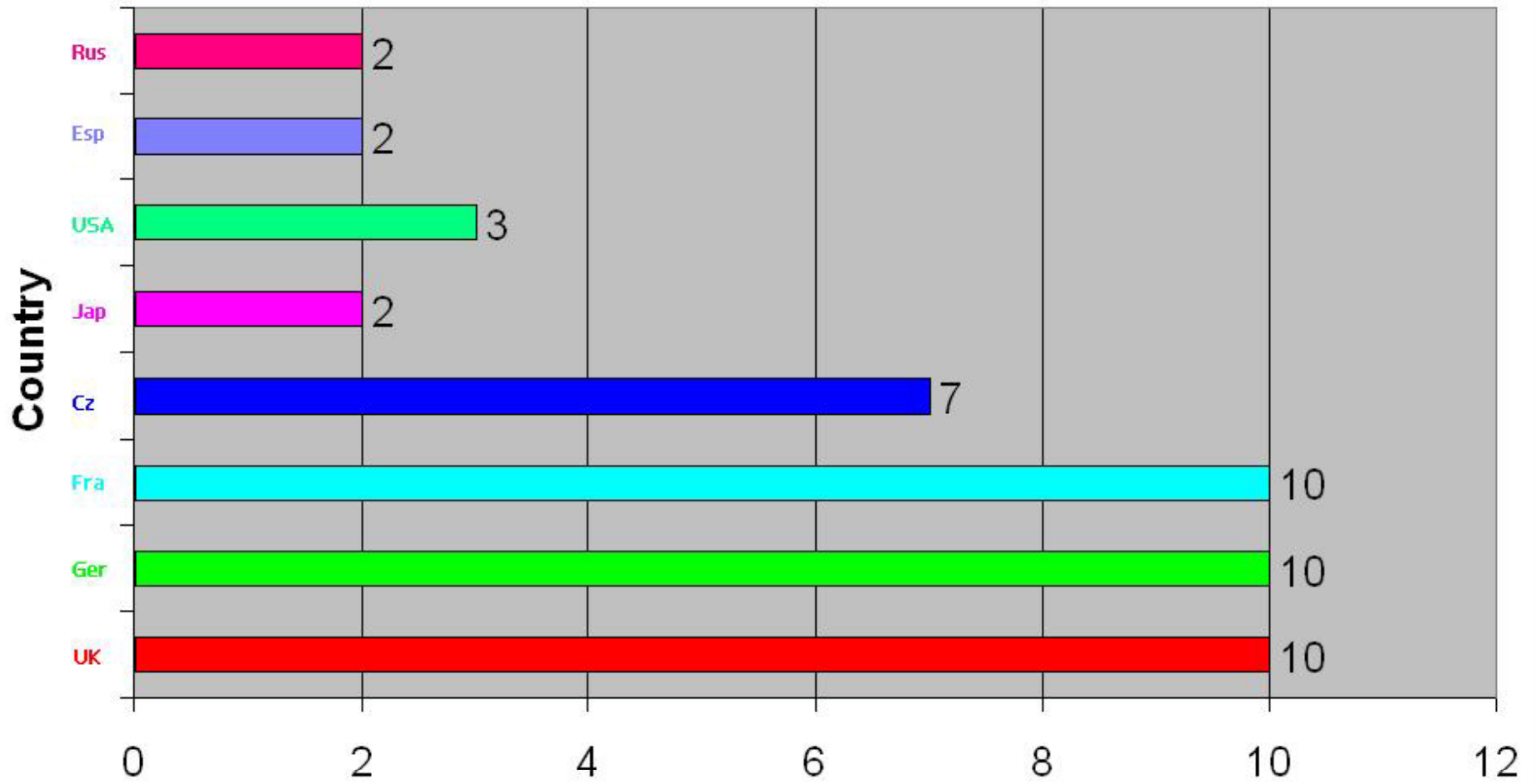


## Shifts per Country (%)



**46 people taking shifts !**

## People at CERN



What are the objective of the next 3 years ?

- WHO will perform the test beam (Run coordinator, Shifts, experts on-call)
- **WHO will do the analysis and goes to the MANDATORY papers**



Usual criticism about CALICE (i.e. the organizer of CALOR08)

***Where are the NIM papers !!***

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## What are the future for CALICE-UK ?

- ▶ Design , analysis , software , etc... does it continue ?  
the groups from UK made a fantastic job , what are their future contribution ?
- ▶ TEST BEAM : shifts , maintaining DAQ for FNAL TB
- ▶ Funds received within the EUDET contract !! DAQ R&D is supposed to be safe
- ▶ the STFC text spoke about 2008 – 2010 , does it means ILC is dead in UK for this period ?

## What are the future for CALICE- USA ?

- ▶ DHCAL - m3 in the middle of the river , hope it will be ok In 2009 !!!
- ▶ TEST BEAM at FNAL , does it depends on the DOE cuts ?
- ▶ Their was excellent job in structure and organisation made by Jae and José  
what are the future for this tasks ?
- ▶ Does 2009 could be a revival or just an improvement versus 2008 ?

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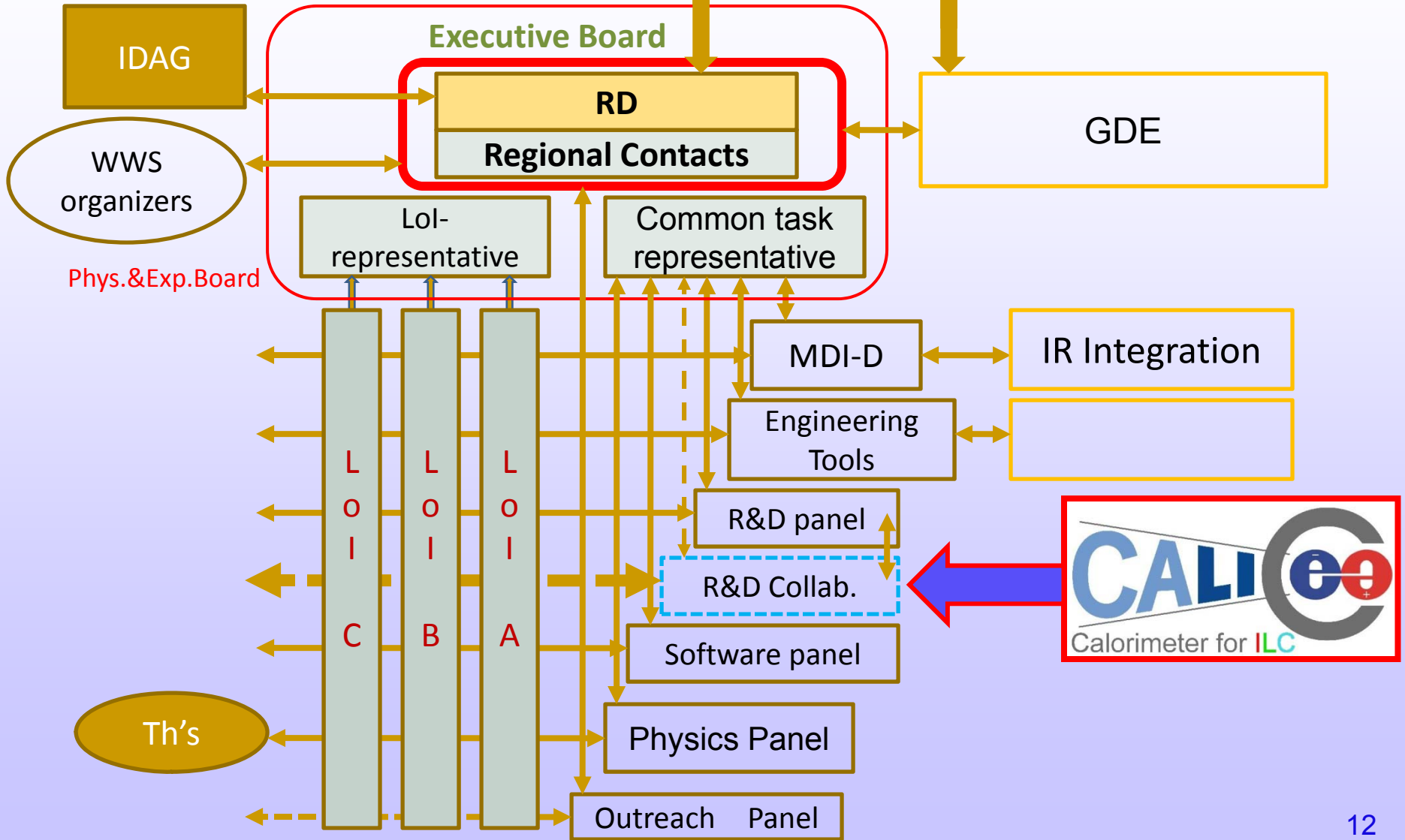
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# Detector Timeline



- Detector Design Phase I : 2010
  - Focus on critical R&Ds
  - LOI validation by IDAG  
(March 31 09 LOI deadline)
  - Update physics performance
  - MDI
  
- Detector Design Phase II : 2012
  - React to LHC results
  - Confirm physics performance
  - Complete necessary R&Ds
  - Complete technical designs
  - Cost (reliable)



**S.Yamada**

## Detector design phase I -- to 2010

- Focus R&D on prioritized area and critical elements
  - Complete validated detector specification and initiate technical design work
  - Update of physics performance
  - Detailed studies of machine-detector interfacing
- Phase I of MDI design

GDE-TDP- I

- Prioritized R&D for risk reduction And for final focus
- MDI

ILCSC suggests to make a more concrete list. Consult IDAG. Interim Report ?

## Issues to study

- Brush up component R&Ds  
e.g. Si detectors which are developing fast
- MDI issues  
Final focus, shielding  
Infrastructure: cooling, crane, installation of big items
- Push-Pull mechanism and alignment  
Position reproducibility  
How can we alignment the detector position after moving ?  
And how quickly and accurately?
- Details of various causes of performance deterioration  
dead material(cables, support),  
overlapping or connection of different elements,  
effect of malfunctioning elements

It is time that we explain to S.Yamada that the R&D do not concerns  
Only the Design of ILD or SID !! (Warsaw ECFA 2008 in June)

- It's really important not to weaken the detector R&D groups by excessive emphasis on LOI groups (just my opinion; some would like the LOI groups to take over the R&D)
- The LOI groups as in the past provide the overall frameworks **essential** for us to evaluate *any* detector systems – we cannot study any issue (PFA vs dual readout, long barrel VXD vs short barrel plus disks, etc) other than in **full MC simulation of an overall detector concept**

*Eminent Japanese accelerator physicist (not in ILC):* “The activity of the ILC seems to be much thicker in the head and thinner in the body. I mean there have been so many meetings and phone conferences. On the other hand quite a small number of people are doing the R&D”

- Given the stretched funding world-wide, we need to establish support for the most urgent R&D. Much of this easily passes the test of being **'generic'** – which in some countries helps to get the work funded
- Detector Directorate and IDAG might consider whether to invite R&D groups to form co-ordination groups

- Secure the funding .....  
**GENERIC R&D**
- Secure the position (manpower) .....  
**Good formation before 10 years of LHC analysis**
- Find alternate solution when one country has problems  
**solidarity inside the collaboration**

- DESIGN
- PROTOTYPE
- TEST BEAM
- **READY to proceed toward the ILC detector**  
(as said by Felix at the Calor. Review 2007)



## Established agenda (today)

- **ANALYSIS and PUBLISH !!!!!** **2008-2009**
  
- TEST BEAM at Fermilab and Elsewhere **2008**  
**2010-2011**
  
- **EUDET**
  - ECAL silicon prototype **end 2009**
  - Scintillator HCAL prototype **end 2009**
  - New generation DAQ for these proto **end 2009**
  
- **ANR** (French funding agency , different from CNRS)
  - DHCAL prototype ready for **2010**
  
- **US DHCAL ??**
  
- **Japan ECAL scintillator ??**

We have probably to see all over the world if Labs are interested to contribute to the DAQ , In collaboration with UK groups

Future Test Beam must be think in view of the restriction of manpower from UK

Analysis !!!!

How to find the manpower to analyse the data sample in a timely manner?

# Conclusion

- Our R&D program is clear
- Despite funding cuts in some countries (we hope not a final cut) we are still alive and making a lot of progress
- A lot of physics to do. illustrated by the position allocated to CALICE (even a permanent one at IPNL-Lyon )
- Groups from different country still continue to join !!!  
& the data for excellent thesis are still there





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