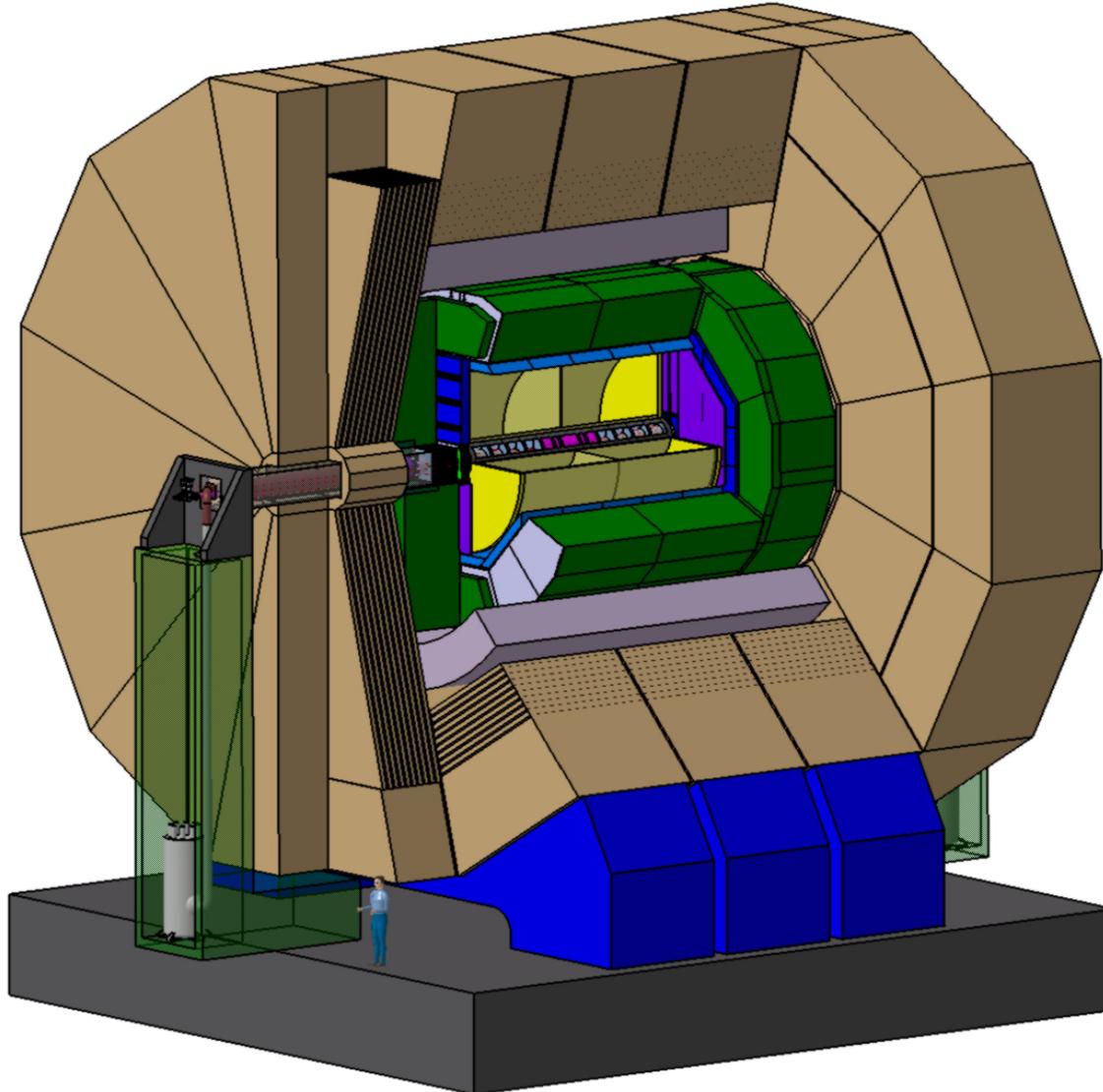


# ILD: Plans



Report given to the  
CALICE meeting  
in Arlington,  
March 11, 2010

Ties Behnke, for the  
ILD concept group

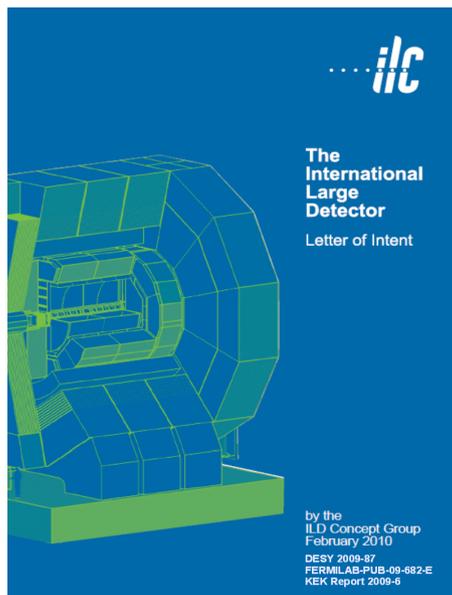
# Goals

Solid, stable and reliable design for ILD at the end of 2012

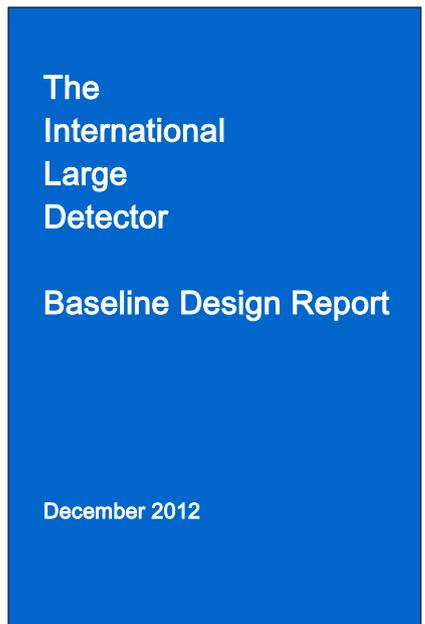
Basis for extensive performance studies

Basis for reliable costing

Basis for evaluation of technologies



Starting point is the ILD LOI



# ILD planning

Planning in ILD for the time until end of 2012:

- Plans have been discussed at Paris intensely, further discussion will take place in Beijing end of March
- ILD relies heavily on the work of the R&D collaborations for the detector R&D
- R&D timelines are driven by two things:
  - Plans, timelines and funds for the R&D collaborations
  - Needs by ILD

Since R&D progress is largely funding driven ILD “control” is small

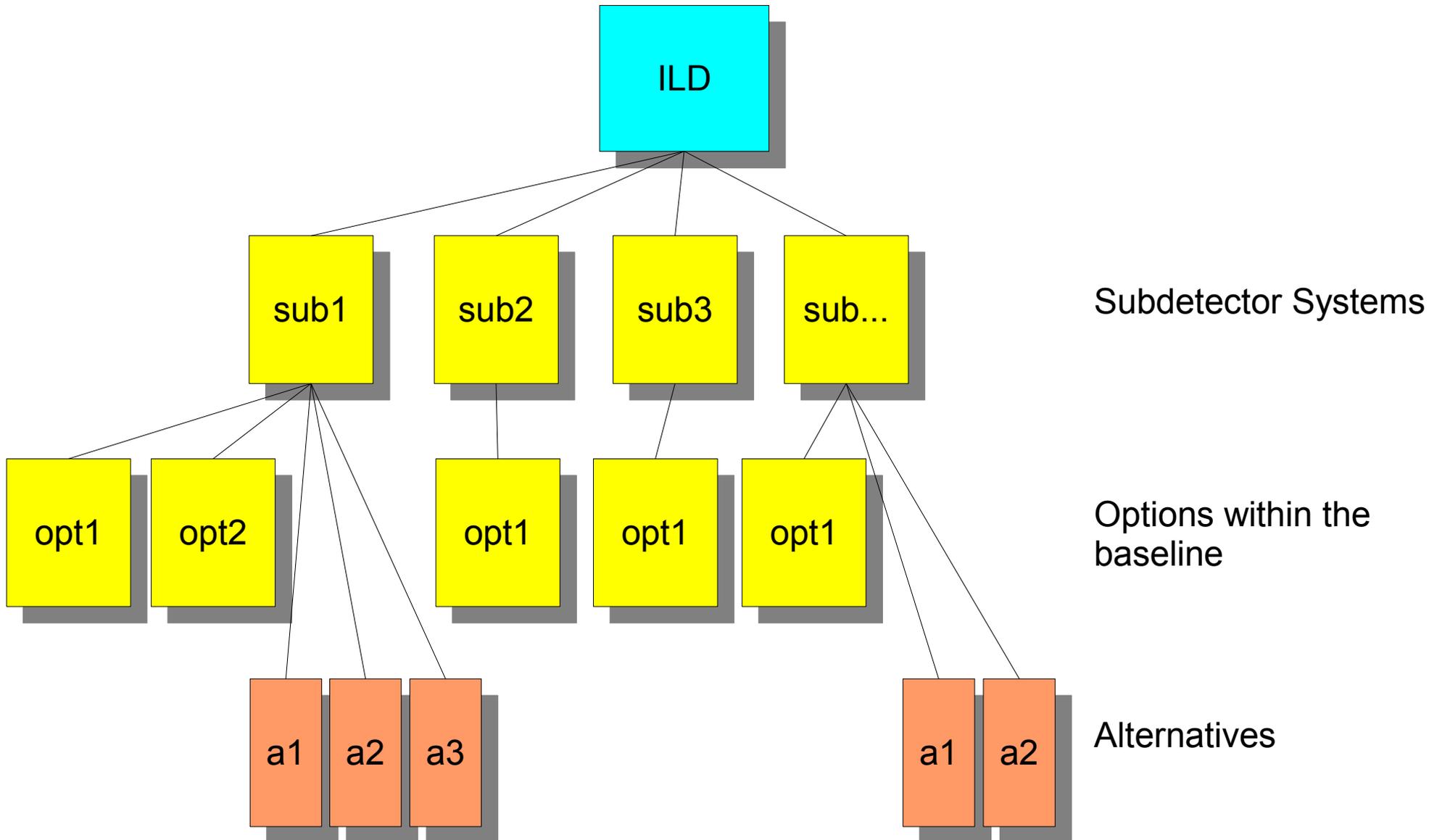
Main goal for the DBD (end 2012):

Define a detector with options, which are considered “ready” by the R&D groups and ILD

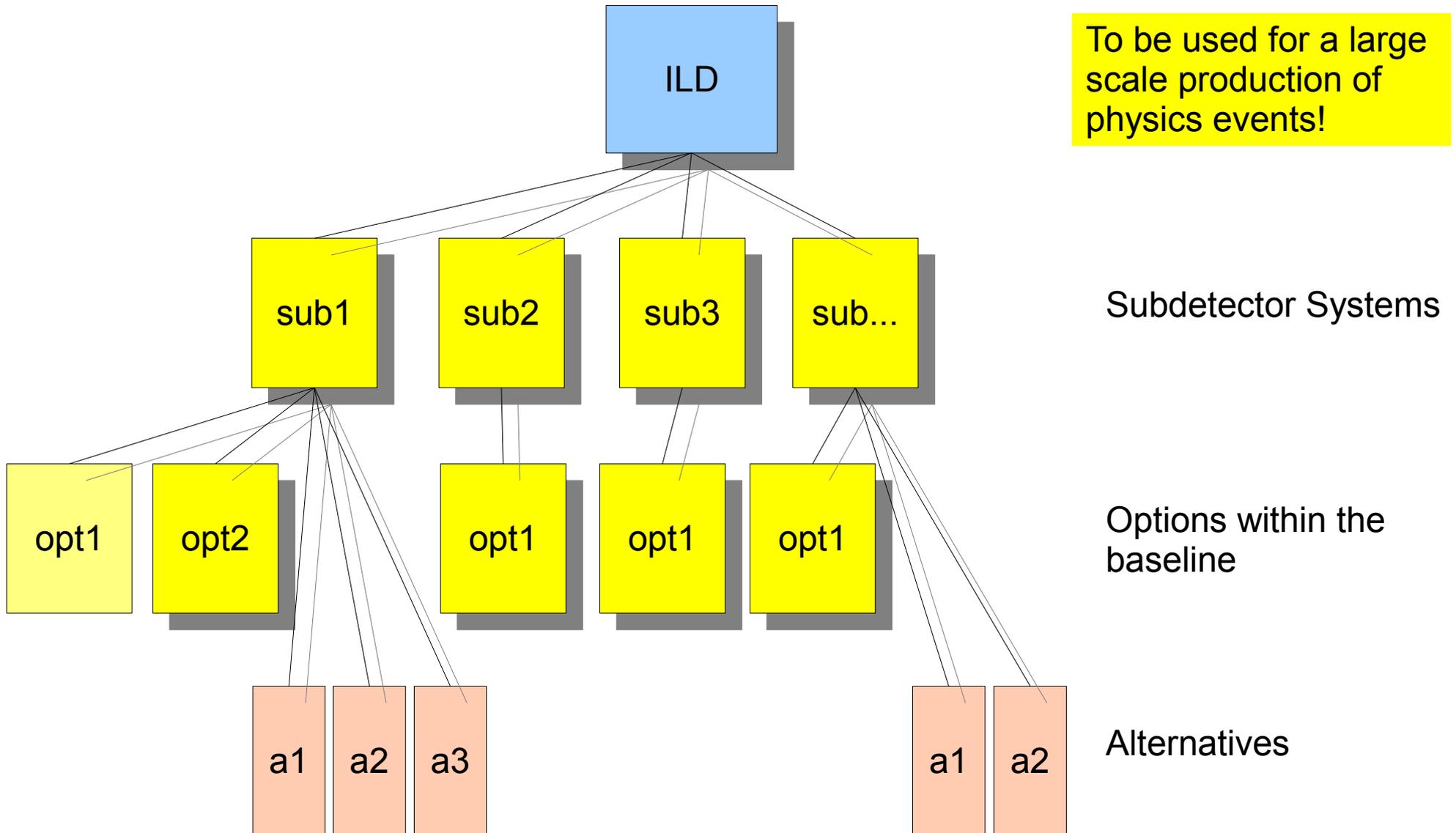
Include list of Alternatives which are less advanced, but are promising candidates

Improve based on real engineering the integration of the detector and its overall realism

# ILD baseline



# ILD: simulation baseline



# Some Remarks

- We want to define the hardware baseline detector as late as possible:
  - Need to define a simulation/ software baseline much earlier:  
will have two different baselines
- Any large scale production (e.g. 1.TeV events etc.) will be done in a slightly simplified version, and not for all options.
- Detector integration, including design of push-pull, suffers from lack of engineering support: only limited detailed engineering for push pull will be possible.
- Overall funding situation of R&D is critical, and decreasing:  
ILD needs to very carefully align its goals and the goals of the R&D collaborations to optimally use the scarce funds available.

# Technologies

- Option: a technology which is considered “ready”

we will need to define a multi-stage process:

- 1) within the R&D collaborations, review the technologies and agree on performance measures
- 2) within ILD based on the results from the R&D collaborations decide which technology is considered an option, and which one is not.

Close cooperation between R&D groups and ILD is needed  
(in many cases this will be the same people...)

- Alternatives:

define which technologies might be interesting in the future, but are not yet “ready”

This will need to be done mostly by the R&D groups, though the final decision will be with ILD.

# Software driven schedule

5 month	Analysis and Writing	13 month
t0 - 5m	Monte Carlo production finished	
5 month	Grid Production	
t0 - 10m	start Monte Carlo production	
3 month	Test, Debug and release ILDsoft	
t0-13m	freeze ILDsoft development	
>1 month	implement baseline in simulation	~20 month
t0-x	ILD baseline defined	
	evaluate technology options develop tracking package develop geometry LCIOv2 improve simulation realism improve reconstruction study machine backgrounds	

December 2012



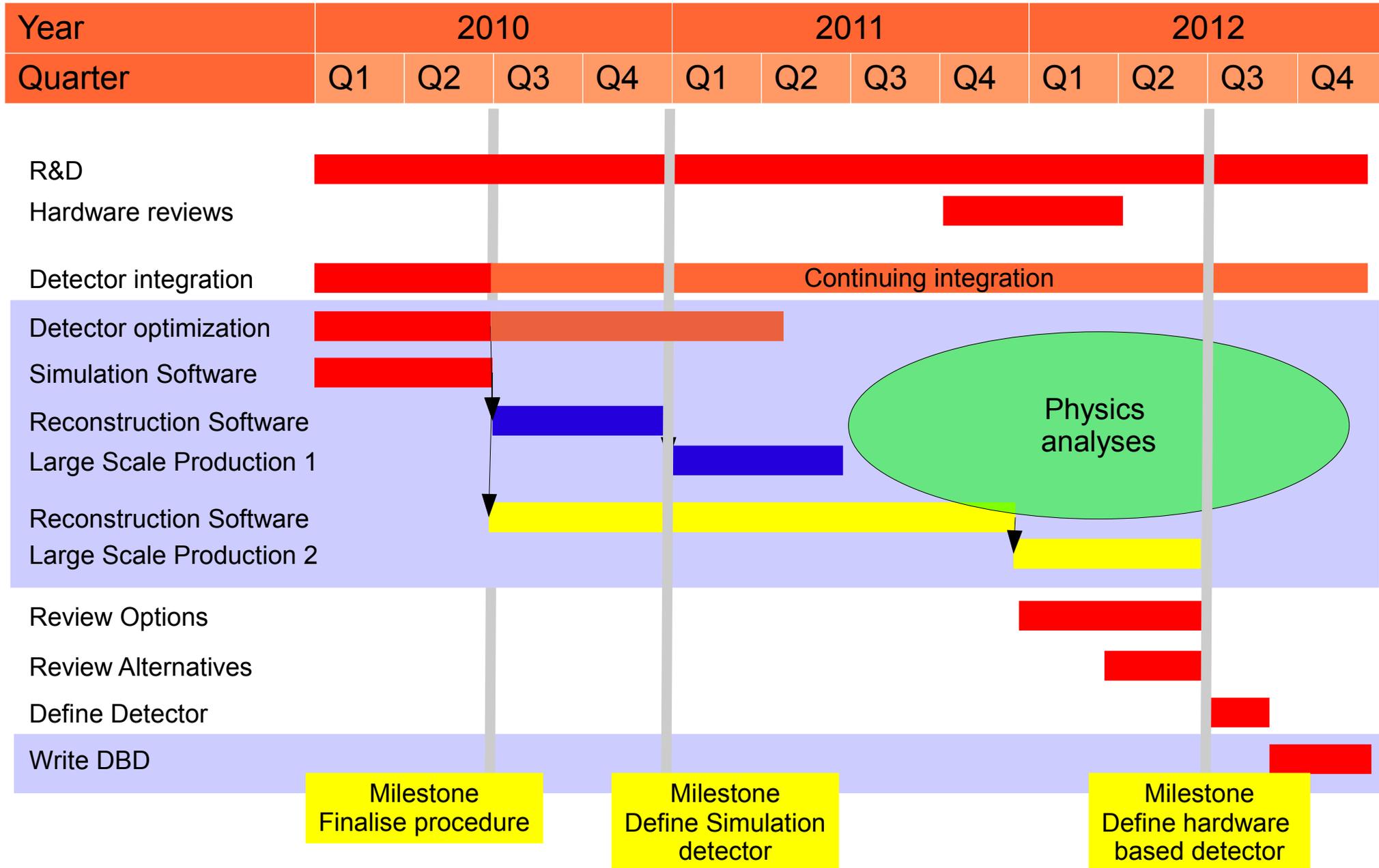
November 2011

Define simulation baseline (need subdetector drivers!)

Summer 2010

Date to define the simulation baseline: September 2011?

# Main Milestones



# Technologies

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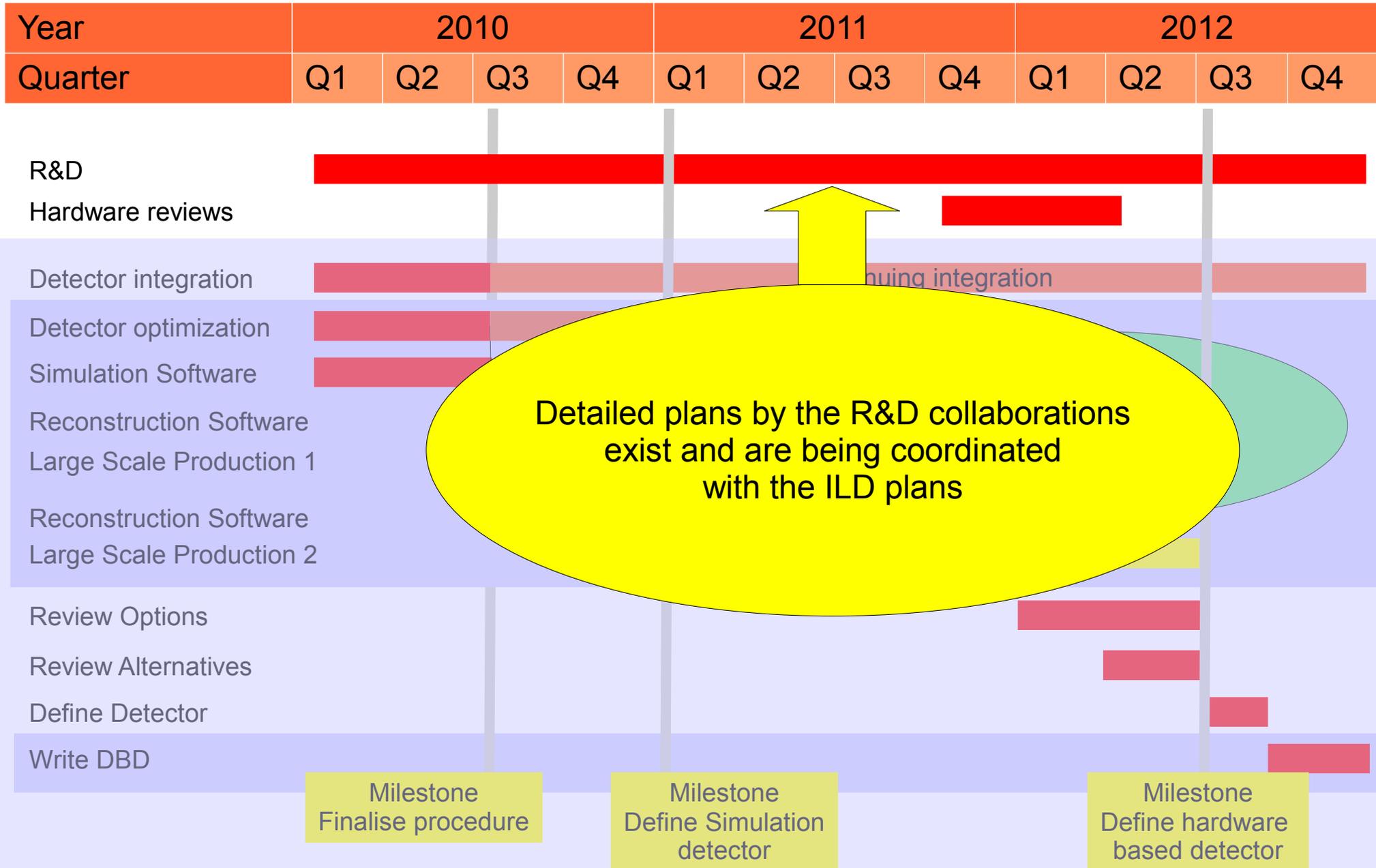
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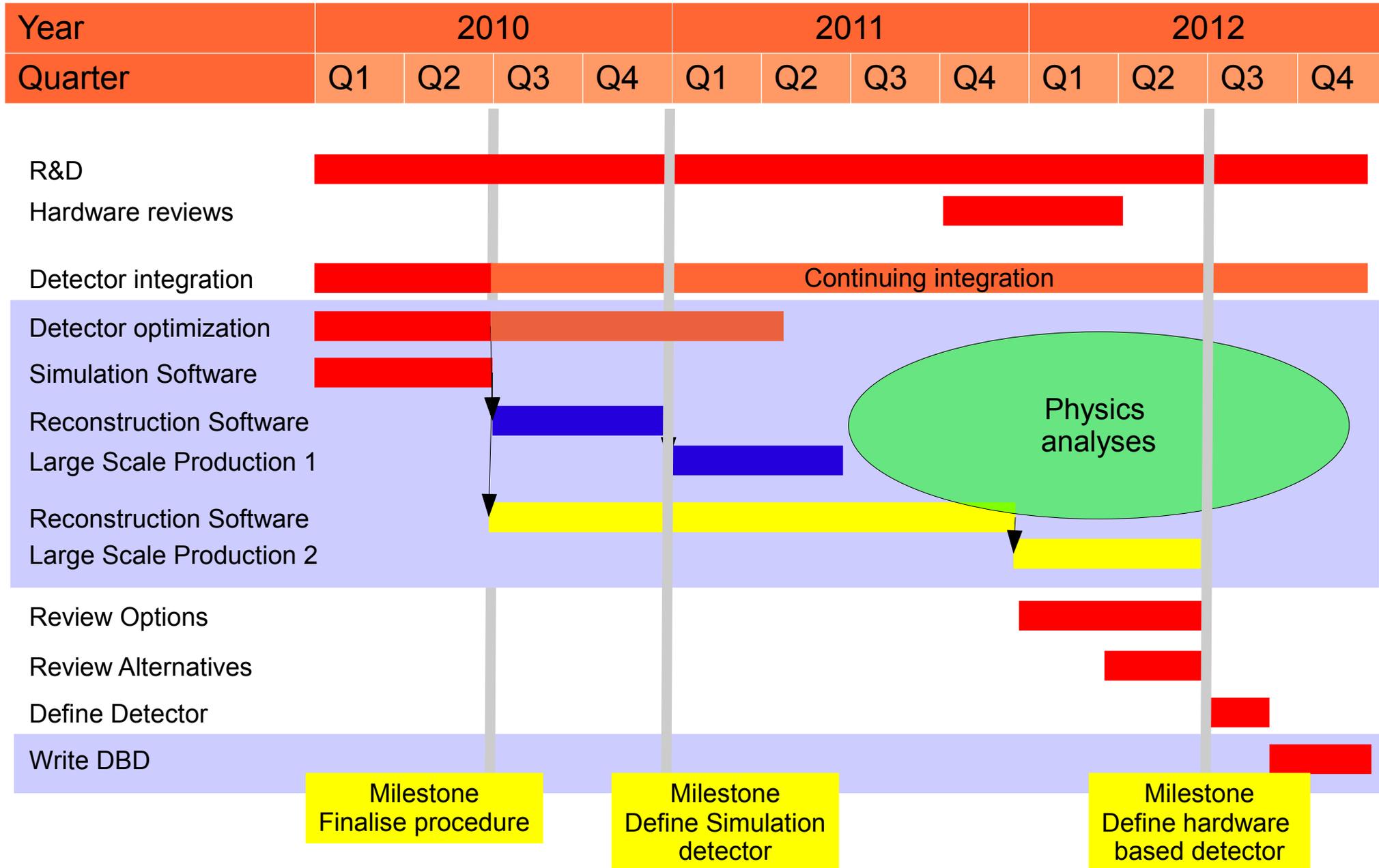
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# Main Milestones



# Main Milestones



# Conclusion

ILD has prepared a first version of a plan towards 20120

The ILD planning relies heavily on R&D collaborations, and is funding limited

We are looking forward to work out together with CALICE how to achieve these goals over the next few years.

We are confident that we can advance the ILD design until 2012 significantly to present a technology-ready baseline design with options at this time.