

# ILC-HiGrade and EU News

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# ILC-HiGrade – Reminder

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- ILC-HiGrade is the Preparatory Phase project of the European Commission to work towards the realisation of the **International Linear Collider**.
- The project is one of 30+ projects on the ESFRI list (via C.E.R.N. Council strategy) technically mature to be constructed.
- It addresses
  - a key technical component that affects the cost, i.e. SRF gradient with a goal of running the ILC at 31.5 MV/m
  - the formation of governance and financial structures in Europe that enable the realisation of the project. The European Commission recognises that this is a process with global implications

# ILC-HiGrade – Brief Account of Reporting



- Start of project Feb 1, 2008
- Kick-off meeting, Aug 29, 2008
- End of 1<sup>st</sup> Reporting Period: Jan 31, 2009 ✓
- End of 2<sup>nd</sup> Reporting Period: Jan 31, 2010 ✓
- End of 3<sup>rd</sup> Reporting Period: Jan 31, 2011 ✓
  - Comments received from Financial Department (Audit for CERN)
  - DESY goes through formal EU audit in May 2012
- End of 4th and last Reporting Period **Jan 31, 2012**
- Final report during 2012
  - Performance report for cavities etc.



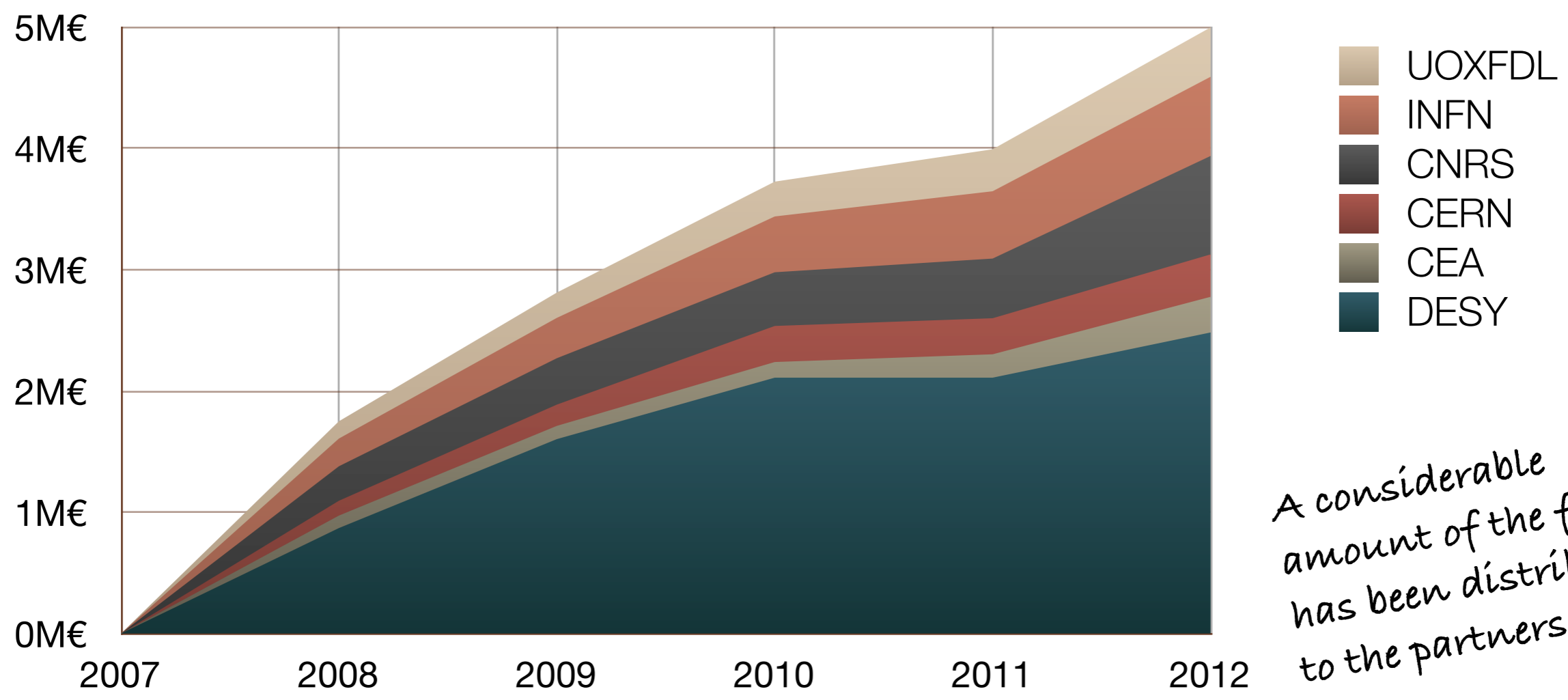
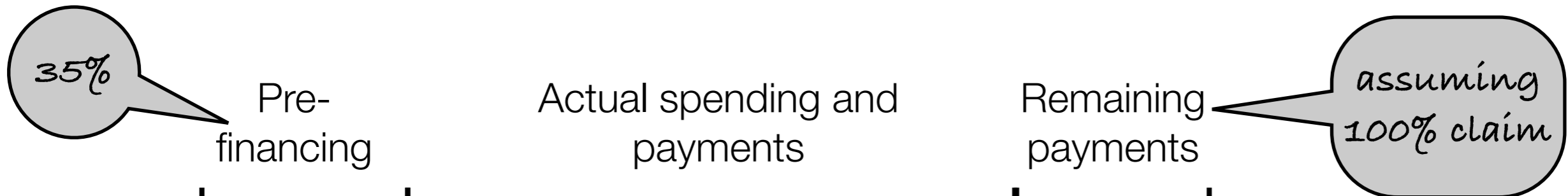
# ILC-HiGrade:Original Spending Profile

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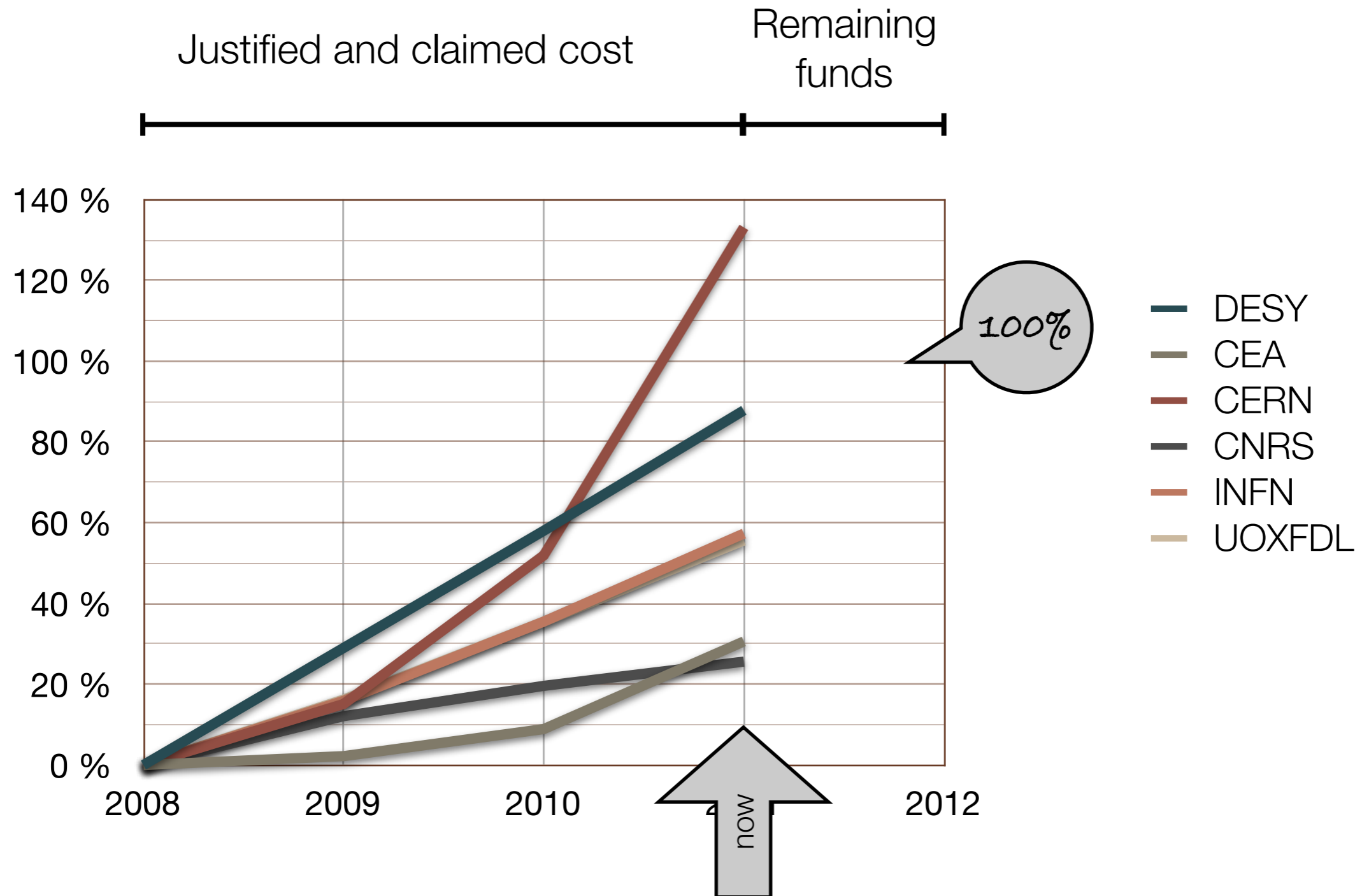
- Overall budget: 5 M€
  - Flat spending profile
  - Key investments in fully dressed cavities à la European XFEL
    - purchase only towards the end of the contract
  - Consequently most of the expenditure went into preparation for the cavity purchase and quality control – but not everywhere
- Have to make sure that we are ready for the arrival of the cavities and the funds are properly used

# Financing Profile

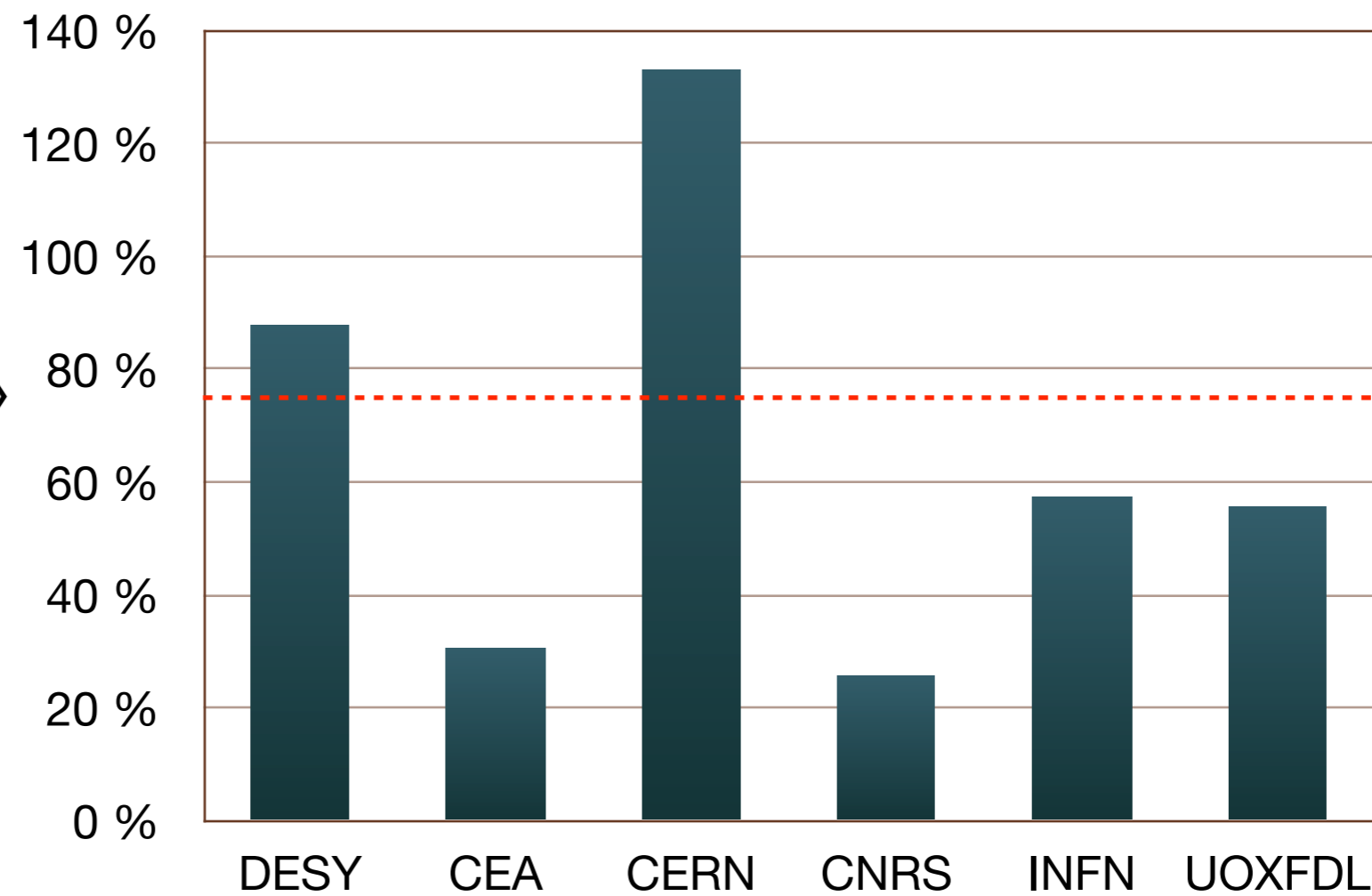
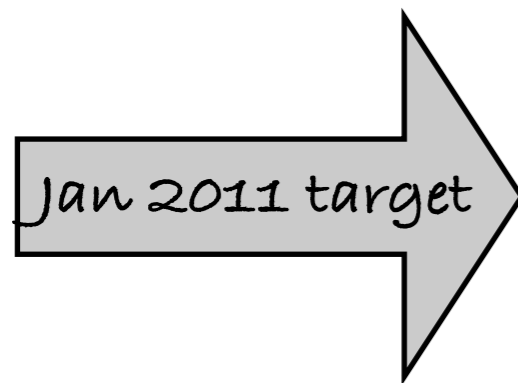


*A considerable amount of the funds has been distributed to the partners.*

# Fraction claimed by Institute



# Status after 3<sup>rd</sup> Reporting Period



# ILC-HiGrade Work Packages

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- WP1: Management of the Consortium
- WP2: Integration and optimization of the European contribution within the global GDE organization as the ILC project moves through the GDE Engineering Design Phase
- WP3: Ensure that the characteristics and importance of the ILC, and its place within the world of science and research, is widely disseminated to the peoples of the European Union, and their governments
- WP4: Investigate features and develop possible schemes of governance for the ILC, exploiting expertise of CERN (LHC) and DESY (HERA) in international projects
- WP5: Prepare and investigate possible European sites for ILC construction
- WP6: Investigate and monitor the production process that yields high-gradient cavities with high yield. Establish the process in industry
- WP7: Optimization of the coupler conditioning at reduced cost
- WP8: Demonstrate suitability of tuner design in tests. Establish a cost-effective tuner production



# Work Packages: Involvement of Institutes



Work Package No	Work package title	Type of activity	Lead beneficiary	Person months	Start month	End month	Coordinator
WP1	Management	MGT	1	48	1	48	DESY
WP2	Coordination of European GDE Activity	COORD	6	74	1	48	Oxford
WP3	Dissemination and Outreach	COORD	6	88	1	48	Oxford
WP4	Governance	SUPP	6	87	1	48	Oxford
WP5	ILC Siting in Europe	SUPP	1	42	1	48	DESY
WP6	Cavities	RTD	1	148	1	48	DESY
WP7	Couplers	RTD	4	54	1	48	LAL
WP8	Tuners	RTD	5	30	1	48	Milan
	Total			571			

Number will be larger

# Work Packages – Coordinators



Work Package	Title	Coordinator	Lead Institute
WP1	Management	<b>Elsen</b>	DESY
WP2	GDE Coordination	<b>Foster</b> <i>N.Walker</i>	UOXF.DL
WP3	Dissemination	<b>Foster</b> <i>P.Royole-Degjeux. &amp; B.Warmbein</i>	UOXF.DL
WP4	Governance	<b>Foster</b>	UOXF.DL
WP5	Siting	<b>Bialowons</b> <i>J Osborne</i>	DESY
WP6	Cavities	<b>Aderhold</b> <i>L. Lilje</i>	DESY
WP7	Couplers	<b>Lacroix</b>	LAL
WP8	Tuners	<b>Pagani</b>	INFN

# Deliverables accomplished and open



due report	Del. No.	Deliverable name	Status
1	1.1	Annual Report 1	1
	2.1	Organisation of GDE Mtg 1	1
	3.1	ILC-HiGrade Webpage	1
	4.1	Gov WG_1	1
2	1.2	Annual Report 2	1
	2.2	Organisation of GDE Mtg 2	1
	5.1	Siting Study	1
→	5.2	Site Selection Process	
	6.1	Cavity Process	1
	7.1	Coupler Report	1
	8.1	Tuner Report	1
3	1.3	Annual Report 3	1
	2.3	Organisation of GDE Mtg 3	1
	4.2	Gov WG_2	1
	4.3	Gov WG_3	1
	4.4	Gov WG_4	1
→	7.2	Coupler Fabrication	
→	4	1.4	Annual Report 4
→	2.4	Organisation of GDE Mtg 4	
	3.2	ILC Brochure & Documentation	1
→	6.2	Cavity Gradient	
→	6.3	Cavity Production	
→	8.2	Tuner Fabrication	

# Milestones



Milestone	Name	Work package	Expected date	Actual Date	Means of verification	Comment
1	GDE Project Management	WP2	3	3	GDE Project Manager and team in place and operating	Project management for the ILC. The structure will reflect how the goals of the Engineering & Design phase can be
2	MAC Report 1	WP2	6	6	Report in writing	Report from Machine Advisory Committee on progress of EDR
4	MAC Report 2	WP2	18	18	Report in writing	Report from Machine Advisory Committee on progress of EDR
6	MAC Report 3	WP2	30	30	Report in writing	Report from Machine Advisory Committee on completion of EDR
5	Development of new Governance Structures	WP4	18		Report in writing	Interim progress on new governance structures
7	Governance Structures	WP4	30		Structures in place	New governance structures
3	European Site Preparation	WP5	12		Report in writing	European site preparation – interim review on special properties and demands for European site
8	European Site Review	WP5	36		Report in writing	European site complete
9	Cavity Goal	WP6	36		Cavities available	Cavities have been produced and process under control

# Next Preparatory Phase

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- The call  
*Implementation of common solutions for a cluster of ESFRI infrastructures in the field of Physics and Analytical Facilities*
  - addresses primarily projects that are ready for implementation.
- led to **CRISP** proposal (coordinated by ESRF & ILL)
  - ILC-HiGrade enters
    - at a small scale (~100k€)
    - via synergy with XFEL cavity QA

# Conclusion

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- ILC-HiGrade plays a key role in preparing the ILC in Europe
  - Visibility in European Strategy which is to be revisited by 2012
  - ILC-HiGrade stands for the highest possible gradient in a cavity manufactured according to the European XFEL recipe
- This meeting will be the last scientific meeting before project conclusion in Jan 2012
  - the progress in governance and outreach and include the aspects of European siting
  - the progress in SRF
- We will have to establish the mechanisms of reaching that goal beyond the duration of ILC-HiGrade; the project ends in January 2012