



# HL-LHC FP7 DS

## Status of the proposal

Lucio Rossi - CERN

3rd General Meeting for application  
preparation – CERN 20 October

# HL-LHC project structure (very preliminary)

<b>HL-LHC Design Study</b>		
<b>WP #</b>	<b>Title</b>	
<b>1</b>	<b>Project Management (incl. Safety)</b>	<b>FP7 Desing Study</b>
<b>2</b>	<b>Accelerator Physics and Performance</b>	
<b>3</b>	<b>Magnets Design for IPs</b>	
<b>4</b>	<b>Crab Cavities</b>	
<b>5</b>	<b>Collimation</b>	
<b>6</b>	<b>Cold Powering</b>	
<b>7</b>	<b>Machine Protection</b>	<b>non-included in FP7 Design Study</b>
<b>8</b>	<b>Collider-Experiments interface</b>	
<b>9</b>	<b>Cryogenics</b>	
<b>10</b>	<b>Energy deposition</b>	
<b>11</b>	<b>11 tesla dipole two-in-one</b>	
<b>12</b>	<b>Integration and (de-)Installation</b>	
<b>13</b>	<b>Hardware Commissioning</b>	

# Activities beyond the Design

**(NOT complete and subject to change)**

<b>HL-LHC R&amp;D prototyping and construction</b>	
<b>a</b>	<b>Collimation upgrade phase 2 (to be decided)</b>
<b>b</b>	<b>High Field Magnets R&amp;D</b>
<b>c</b>	<b>11 tesla dipole for DS (for collimation)</b>
<b>d</b>	<b>Nb-Ti large apertures Magnets</b>
<b>e</b>	<b>SC link short demos (also for R2E)</b>
<b>f</b>	<b>Crab Cavities proto and machine tests</b>
<b>g</b>	<b>Cryogenics Point 4 (also as consolidation)</b>
<b>h</b>	<b>Cryogenics IP1-IP5</b>

# Governance

- Collaboration Board (1 representative per institutes). Decision by vote, but CERN-DG may veto critical decision. PC + deputy ex-officio (no vote).
- Scientific Advisory Board (appointed by CB)
- Project Coordinator (PC) and Deputy(ies), supported by an agile Coordination Office
- Steering Committee (SC): WP coordinators and deputies. All WP, also the one non-FP7.
- WP coordinators and deputies. Appointed by the CB under proposal of PC (by PC the first time)

# Partners

<b>Participant no. *</b>	<b>Participant organisation name</b>	<b>Short name</b>	<b>Country</b>
1 (Coordinator)	European Organization for Nuclear Research	CERN	IEIO
2	Commissariat à l'Énergie Atomique et aux énergies alternatives	CEA	France
3	Centre National de la Recherche Scientifique	CNRS	France
4	Stiftung Deutsches Elektronen-Synchrotron	DESY	Germany
5	Istituto Nazionale di Fisica Nucleare	INFN	Italy
6	Budker Institute of Nuclear Physics	BINP	Russia
7	Consejo Superior de Investigaciones Científicas	CSIC	Spain
8	École Polytechnique Fédérale de Lausanne	EPFL	Switzerland
9	Royal Holloway, University of London	RHUL	UK
10	University of Southampton	SOTON	UK
11	Science & Technology Facilities Council	STFC	UK
12	University of Lancaster	ULANC	UK
13	University of Liverpool	UNILIV	UK
14	University of Manchester	UNIMAN	UK
15	High Energy Accelerator Research Organization	KEK	Japan
16	Brookhaven National Laboratory	BNL	USA
17	Fermi National Accelerator Laboratory (Fermilab)	FNAL	USA
18	Thomas Jefferson Lab National Accelerator Facility	JLAB	USA
19	Lawrence Berkeley National Laboratory	LBNL	USA
20	SLAC National Accelerator Laboratory	SLAC	USA

# New deadlines

- Writing general part (Lucio) : 29 October
- Final text of various WPs: 29 October (WP1 and WP5 !)
- **First budget: 22 October**
- First iteration on budget closed: 5 November
- **Given to CERN Directorate for approval: 5 November**
- Letter sent to Directors for engagement: 5 November
- Final iteration on content and budget : 10 November
- Final text of application for last reading: 18 November
- Application 23 November (**deadline 25 November**)

# Preliminary committment (not binding, just a moral one)

Dear *Director*,

In order to consolidate the FP7 HL-LHC proposal on High Luminosity LHC Design Study, I wish to ask you the commitment of *your lab* to include in its work programme the activities as planned with the scientists of your laboratory, to commit to the estimate of the matching funds and deliverables.

Please find attached a bread-down of the costs, EU-funding and matching costs, together with an estimate of the manpower needed.

For more information on the work package contents, the HL-LHC web site offers a description of each tasks and of its deliverables ( <https://eucard.web.cern.ch/EuCARD/> -> **Works Packages**), the IA structure with the names of the coordinators ( -> IA Structure) and miscellaneous information that may be useful.

The deadline for submitting the proposal being on November 25<sup>th</sup> , we kindly ask you to give us an answer by email before November 22<sup>th</sup> at the latest. Whenever possible, earlier answers will be very helpful to consolidate in time the application.

With best regards,  
FP7HL-LHC DS coordinator  
Lucio Rossi

ps: the formal and binding commitments shall be made at signature of the Consortium Agreement, if the proposal is accepted.

**Different format from US and J labs (no money from EU): what type?**