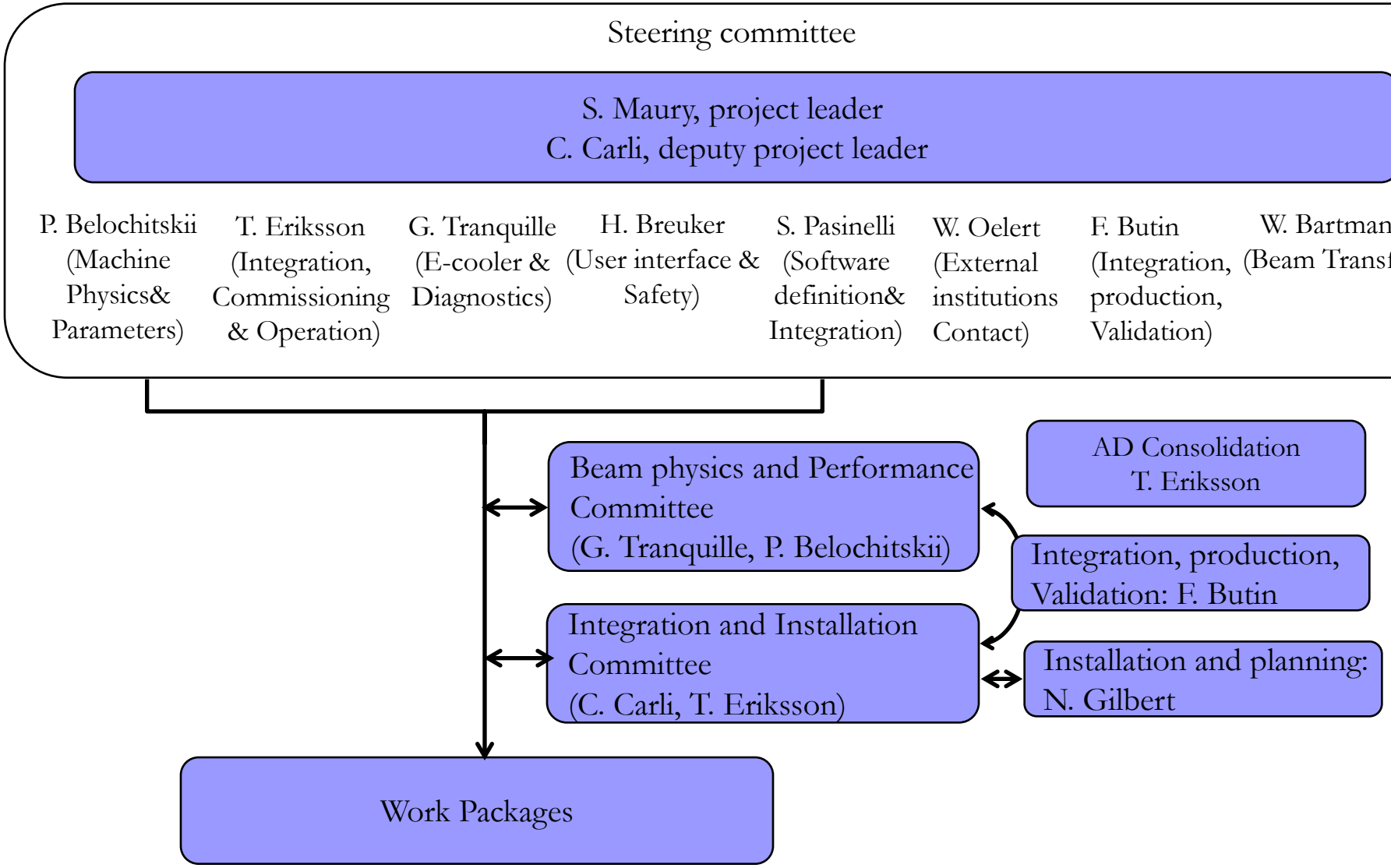
ELENA Project Structure



ELENA Committees and Meetings

- **Beam Physics and Performance Committee (BPPC)**
  - Define the parameters of the ELENA ring and the transfer lines to ensure that they fit the physics requirements (Ring optics, electron cooling, instrumentation, injection & ejection, ion source ….).
  - Chaired by Gerard Tranquille and Pavel Belochitskii with Olav Berrig scientific secretary

- **ELENA Installation and Integration Committee (IIC)**
  - Practical Implementation of the machine and lines discussed in the BPPC (space available/required for equipment, general infrastructure, civil engineering ….)
  - Chaired by Christian Carli and Tommy Eriksson with Bertrand Lefort scientific secretary

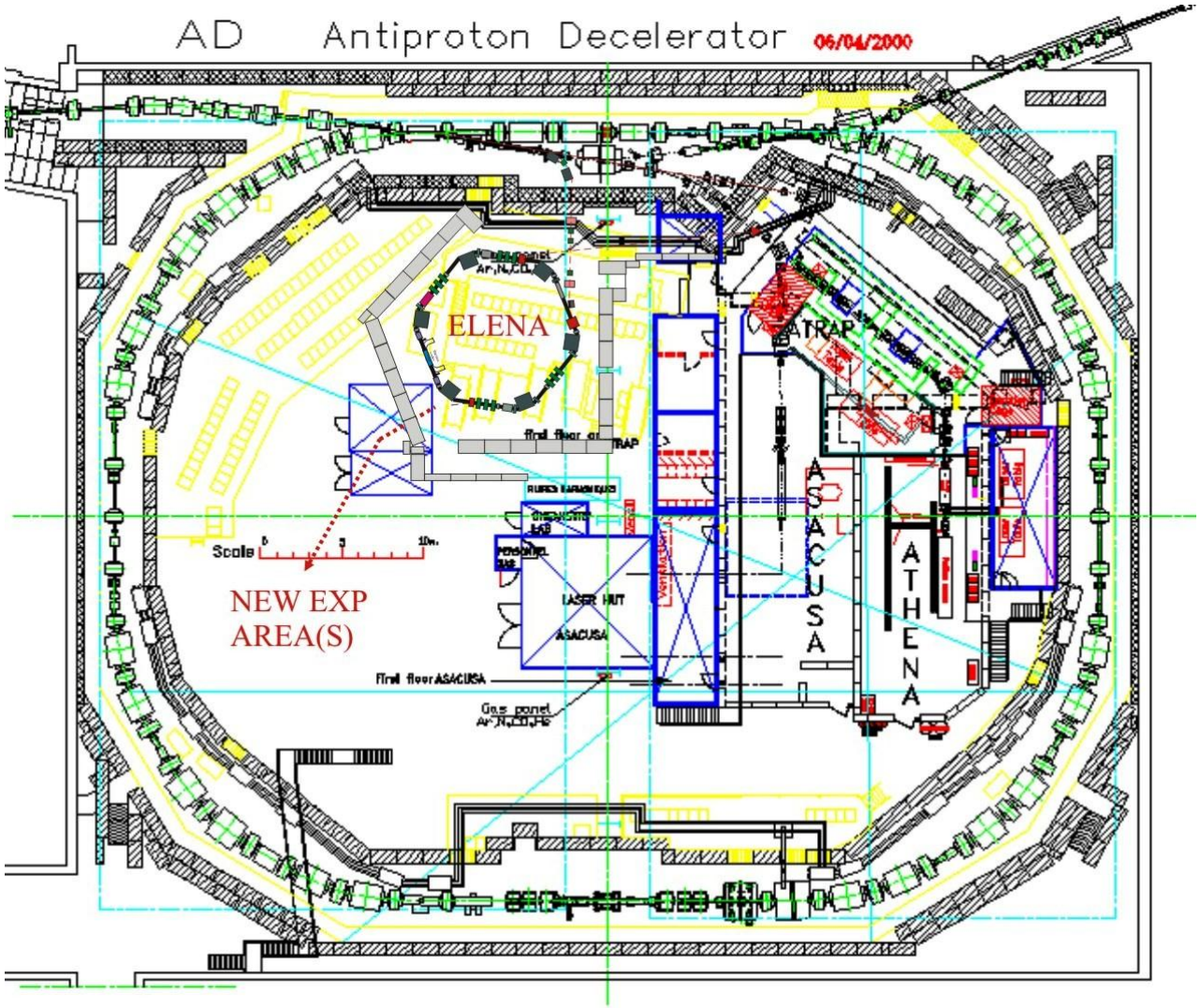
- **Meetings of both committees on Thursdays**
  - Frequency of Installation and Integration Committee: maximum every second week alternating with BPPC … depending on needs (open issues)

ELENA Committees and Meetings

- **Communication between committees:** issues identified in Installation and Integration Committee may be trigger re-discussion in BPPC

- **Invitations to both committees and project meetings to one and the same mailing list**
  - Keep everybody possibly interested informed,
  - People should not feel obliged to attend meetings in case they are convinced that they are not needed
  - If some people concerned are not invited, please inform us (and feel free to forward invitations)

ELENA – Present Layout in AD/ELENA Hall



PROPOSAL TO MEASURE THE GRAVITATIONAL BEHAVIOUR OF ANTIHYDROGEN AT REST (SPSC-P-342)

- From the SPSC meeting (17th and 18th of January 2012)

- The SPSC **further reviewed** the proposal to measure the gravitational behaviour of antihydrogen at rest, SPSC-P-342.
- The Committee **appreciates** the carefully worked out proposal and acknowledges the elegance of the proposed methods as well as the interest of the physics addressed.
  The Committee **received** additional information satisfactorily answering the points raised in the review process.

- In the light of this the Committee **recommends approval** of the experiment.

- The committee **advises** the collaboration to proceed towards an MOU with a detailed schedule and defined commitments of the partners.

ELENA Workpackages

		2012	2013	2014	2015	Budget code
1 Project Management	S.Maury	1.35	1.45	0.7	0.7	
Budget		50	50	50	50	Bc1
2.1 Optics and Machine Parameters	P.Beloshitskii	0.5	0.7	0.4	0.7	
External manpower		0.8	0.2			
Budget		30				Bc2
2.2 Integration Commissioning and Operation	T.Eriksson	0.4	0.6	0.6	0.6	
Budget						Bc3
2.3 Mechanical Design and Construction	D.Perini	0.2	0.2	0.2	0.2	
External manpower		2.8	4.8	2.8	0.3	
Budget						Bc4
2.4 Software Definition and Integration	S.Pasinelli	0.2	0.6	0.6	0.3	
Budget						Bc5

Just an example: all names and numbers are pure fictive !

Contributions from outside Institutes

A	B	C	D	E	F	G	H	I
Institution	**lable contribution**		**To be applied for**		**Work Package - Comments**			
	Manpower	**Financial**	**Manpower**	**Financial**				
Univ. Tokyo & MPQ-MPI	7 FTE.Y	2 MCHF			Micro-wire monitor, E-cooling?			
Cockcroft Institute & Univ's			6 FTE.Y	1 MCHF	Life-time and other beam dynamics studies,			
					equipments, prototyping ..			
Triumf	0.1 FTE.Y		?	?	Design (conceptual) of 100 keV lines			
Univ. Brescia		50 kEUR						
CEA-IRFU Saclay			2 FTE.Y	300 kEUR	Magnet construction at Sigmaphi (& follow-up?)			
Denmark			6 FTE.Y	800 kCHF	Magnet (main) construction plus manpower @CERN			
IKP - FZ Julich	3 FTE.Y				H- source (if not other contrib's to be discussed)			
US (Berkeley)			3 FTE.Y		Beam dynamics, LLRF Schottky (to be defined by us)			
HIM/MAM			3 FTE.Y	150 kCHF	Workshop (support, vacuum equipment ...)			
MSL Stockholm	0.5 FTE.Y		1 FTE.Y		Beam line design, ... commissioning (partly financed)			
Total	10.6 FTE	2.06 MCHF	21 FTE	2.35MCHF				
Promises in Feasibility report	11.5 FTE	2.00 MCHF	17 FTE	4.05 FTE				

Some preliminary milestones

- Ring optics and layout: Spring/2012
- Transfer lines: Mai/2012 (?)
- TDR: October/2012 (Review of the project?)
- Manpower/budget profiles and schedule: March/2012
- Magnets design: December/2012 (?)
- AD Hall preparations: 01/2013-03/2014
- ELENA Installation: 01/2014-03/2015
- ELENA commissioning: from 04/2015
- p or H- or no source: 12/2011

- Design of the new building: 10/2011-04/2012 (Discussions started !)
- Delivery of the new building: 10/2013
- Moving the kicker platform: 10/2013-03/2014
- AD Start-up: 05/2014

Transfer lines WS

- In the ELENA Project transfer lines are very important with a need to build electrostatic transfer lines for the experimental areas and to do so we need first to learn about that.
- Experts are invited (ISOLDE, COCKROFT, ASACUSA, …)
- Have a nice discussion, definition and convergence to our needs.

Have a nice meeting !