Helmholtz VI-503 Annual Meeting, Elba

B. Foster
Uni-HH/DESY/JAI-Oxford

AGENDA

Introduction	B. Foster	
9:30 – 9:45		
Status of FLASHForward Project	R. D'Arcy	
9:45 – 10:15		
FLASHForward Laser Lab Developments	K. Poder	10:15 – 10:30
Report from WGI	J. Vieira	10:30 – 10:45
Report from WGII	V. Libov	10:45 – 11:00
* * * COFFEE * * *		
Report from WGIII	L. Schaper	
11:15 – 11:30		
Report from WGIV	P. Niknejadi	
11:30 – 11:45		
Report from participating institutes on VI-related work (10' each)		
CERN	E. Gschwendtner	
INFN Frascati	R. Pompili	
IST Lisbon	J. Vieira	

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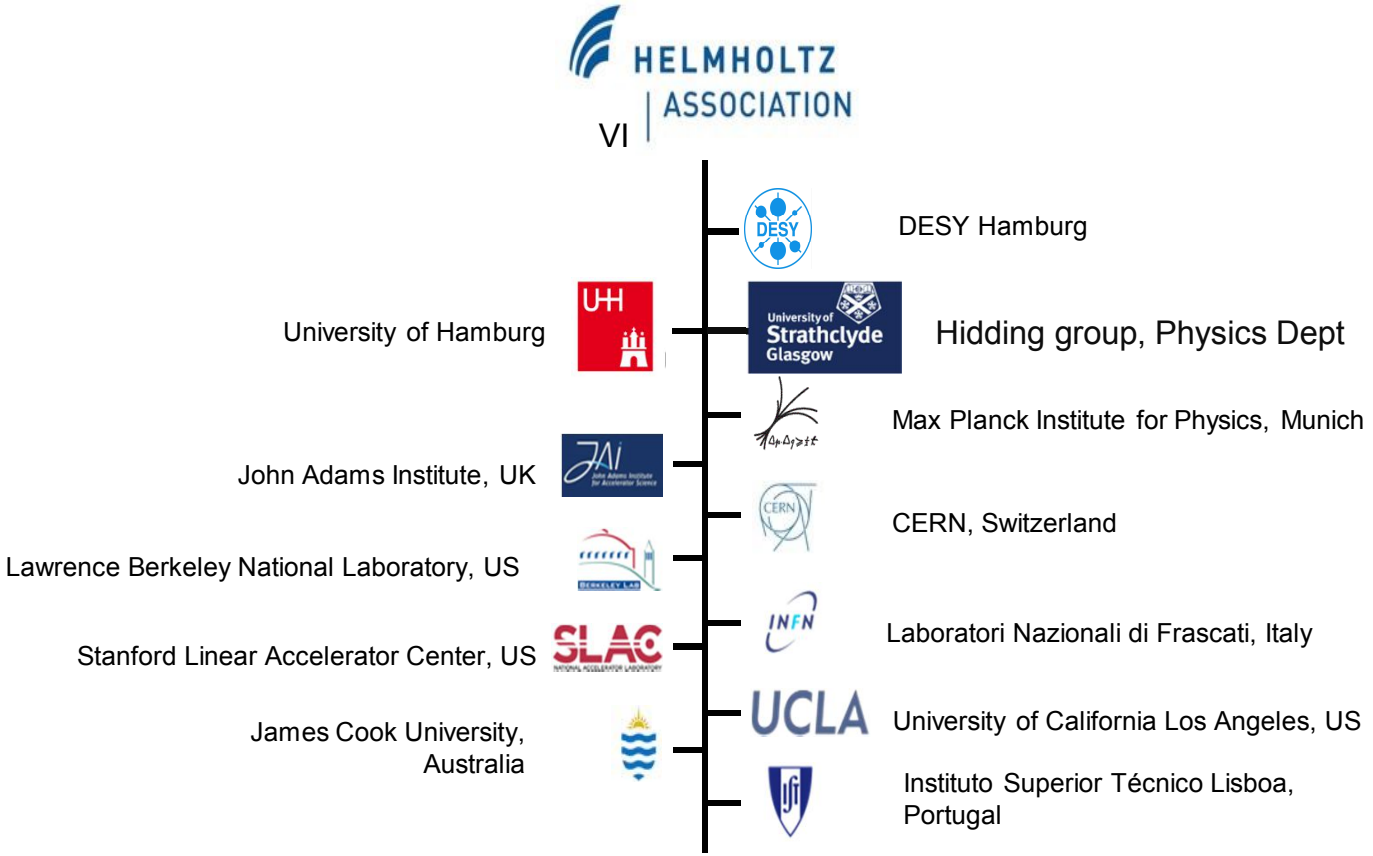
AGENDA – Part II

Proposal for post-VI era	B. Foster	14:15 – 14:30
Discussion	All	14:30 – 15:00
Collaboration Council	A. Seryi	15:00 – 16:00

The VI-503 collaboration network



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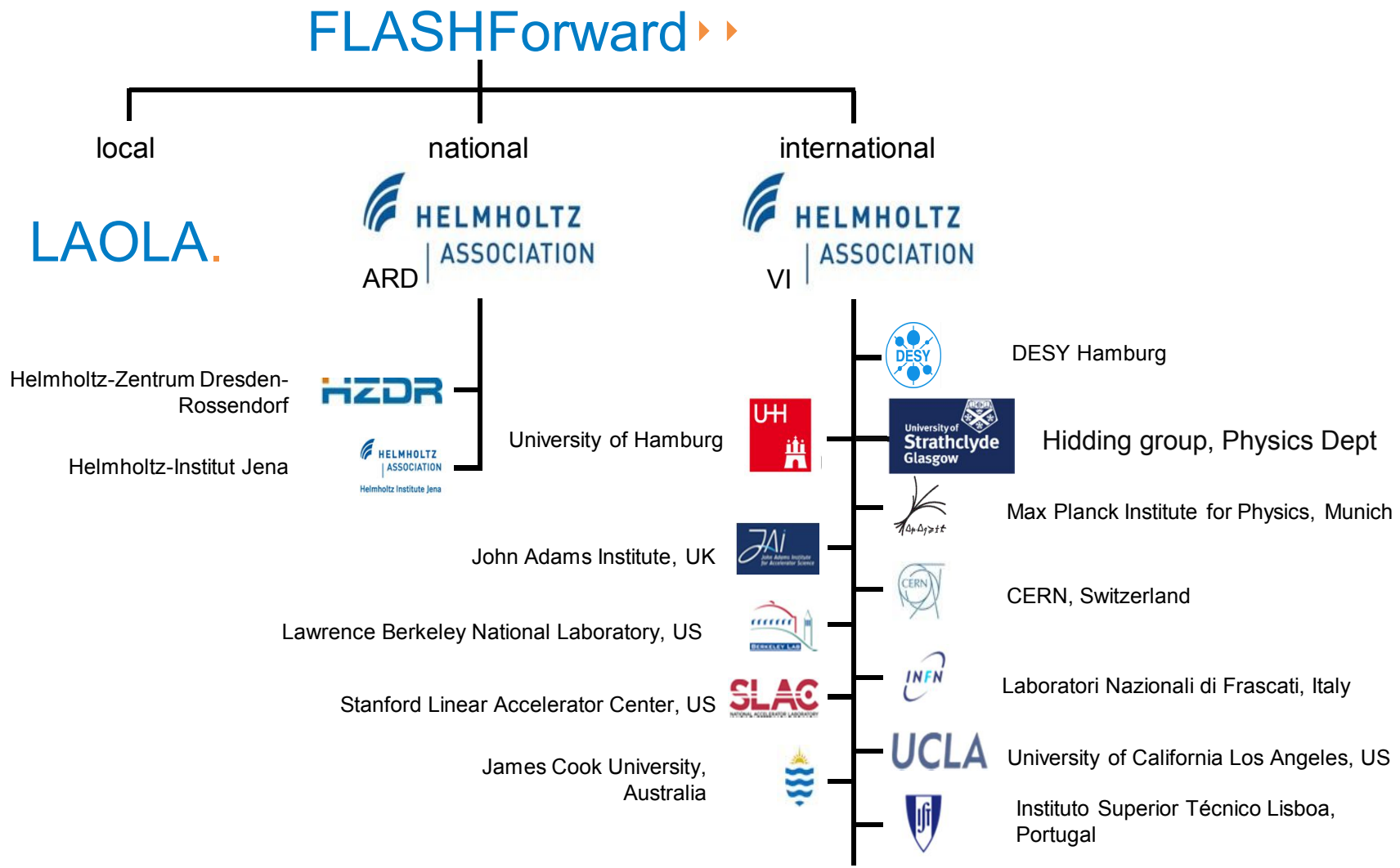
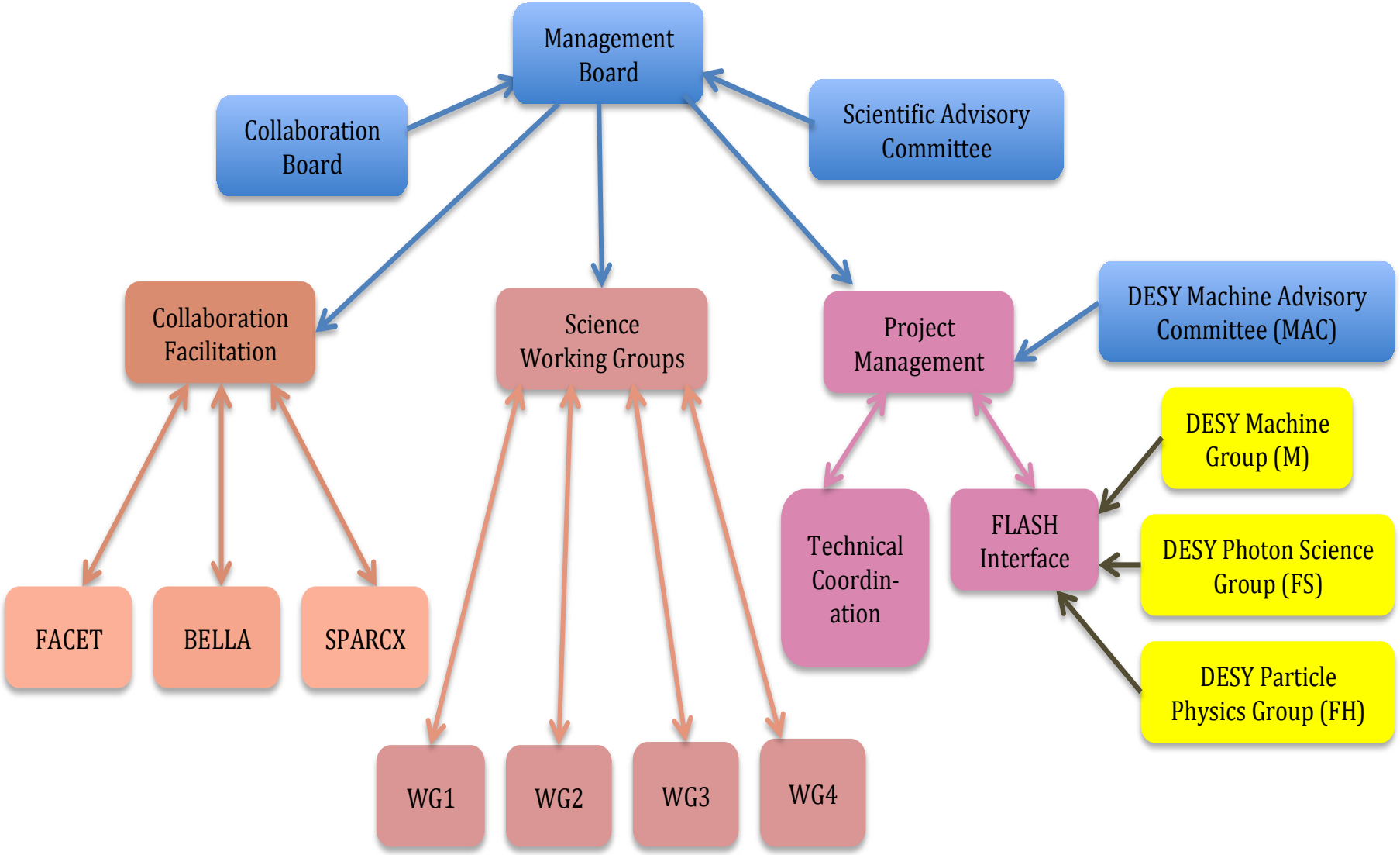


Virtual Institute on Plasma Wakefield Acceleration Structure



Advice & Oversight

Scientific Advisory Committee :

Chair: I. Ben-Zvi (Brookhaven National Lab., USA)
Brigitte Cros (Saclay, France)
Stefan Karsch (Max Planck Institute, Munich)
Phillipe Piot (Northern Illinois University, USA)
Mitsuhiro Yoshida (KEK, Japan)

Met on March 23-24 by video link

Charge to the SAC

- to investigate the extent to which the VI is fulfilling the aims set out by the Helmholtz Association as set out in Annex I below and to make suggestions to improve its efficacy;
- to evaluate the effectiveness and promise of the scientific programmes and priorities of the VI;
- to give advice on the management and implementation of the projects carried out in the context of the VI;
- to make other suggestions in the general area of plasma-wave acceleration that may be relevant to the work of the VI.

Specific charge elements for 2017 meeting:

- Advise on potential directions for the organization when the HVI grant ends in 2018

I will comment on the advice re the future of the VI

Additional Charge element: Observations

- The SAC notes that the HVI is playing a significant role in the scientific agenda of the FLASHForward facility,
  - Participation of a strong international collaboration
  - Additional resources and funding
- The SAC observes that there is already an organization in place under the VI, which can be the basis for the new organization.
  - The HVI is led by the University of Hamburg, PI Prof. Foster.
  - The HVI has a Collaboration Board (currently chaired by Prof Andrei Seryi) which meets once a year.
  - The HVI is issuing a quarterly newsletter to inform members on the recent developments.
  - The HVI is advised by an external, international Science Advisory Committee.

Additional Charge element: Observations (continued)

- The SAC has been informed that the DESY base budget will allow to run and maintain the Flash II accelerator and the FLASHForward (FF) beam line.
- DESY also provides a significant number of students and postdocs, so that a reasonable scientific program will have a steady state.
- However, the role of the organization, currently the HVI, is significant and must be maintained for the success of the FF development, the scientific program in plasma acceleration and generation of radiation .

Additional Charge element: Recommendations

- The HVI may be replaced by a formal collaboration aiming at a strong beam physics research program and the best utilization of the unique resource that is FLASHForward.
- The collaboration should have a formal set of bylaws that establishes the work relations of the network members.
- Formal MOUs perhaps can be avoided to allow groups from the US to join.
- The collaboration could form sub-groups, each led by a PI, to obtain funds and execute a particular capability development or science experiment.
- Common funding, such as travel funds or major equipment with common utility can be pursued by the collaboration.

Additional Charge element: Recommendations (continued)

- The aim of the collaboration would be the coordination of the efforts led by the groups aimed at particular tasks / experiments, including sharing of resources, equipment and expertise.
- The collaboration should organize a “community workshop” at DESY to advertise the available infrastructure to inform its members, attract new members and establish groups with particular objectives.
- The organization of the collaboration (presented on later slides) will be presented to the workshop participants.
- A high-level, independent Scientific Program Committee should advise FLASHForward and the collaboration on approval of new groups / experiments and termination of such at a proper time.

Additional Charge element: Recommendations (continued)

- Given that the FLASHForward DESY covers the machine operations and maintenance, the aim of the new collaboration should be the development of special capabilities and experiments carried out at the facility.
- The DFG (Deutsche Forschungsgemeinschaft) can be a good source for funds in Germany.
- PIs / institutions from other countries can seek funds offered by their own local agencies.
- Broad European Union sources (see next slide) can be proposed.

Additional Charge element: Recommendations (continued)

- European funded programs could in principle cover some aspects of collaborative work but they should be integrated in broader projects (Research Infrastructure, Marie Curie), and they are usually time consuming.
- Bi-lateral MoU between institutes may be the most efficient tools, accompanied (or not) by national bi-lateral funding depending on each case.
- Research Infrastructure, Marie Curie options are collaborative research tool programs from the EU.
- Research Infrastructure programs bring together large (30 to 40 partners) consortia of institutes for joint R&D, networking and access to infrastructures; the amount is 10 M Euros for 4 years. They require heavy management (reporting, meetings, coordination).
- At the moment there are two of these in relation with new techniques of acceleration: LASERLAB (consortium of laser facilities), and ARIES (just starting, consortium of accelerators facilities).

Additional Charge element: Recommendations (continued)

- Marie Curie programs are a bit lighter (a few partners, or even individuals) and provide funding for people to move around at the PhD or Post-doc level.
- All these programs are extremely competitive (success rate between 10% and 30% at most)
- Academic partners of European projects are institutes or universities (legal bodies) and cannot be consortia. Therefore it is important that the new organization is let formally by a particular institute.
- The collaboration should establish a convincing management structure and the coordinating institution has to accept the work load and responsibility, and be able to deliver.
- So generally speaking it requires a large, strong institution to manage the collaboration.

Additional Charge element: Recommendations (continued)

- A good name should be chosen for the organization. For the purpose of this report, we will use a place holder name - “FLASHForward Accelerator Science Partnership” (FASP).
- The FASP should have a single person to lead it, assume this job is “Partnership Science Director” (PSD).
- For continuity, the inaugural PSD should be the PI of the HVI.
- The PSD and the head of the FLASHForward facility will be advised by a Scientific Advisory Committee (SAC).
- The role of the SAC would be to advise the FASP on accepting and re-approving members of the FASP, based on the scientific merit of the proposed program and how does it fit into the FF experimental program and facility capabilities.
- Another role would be to advise the head of the FF facility on directions of development.

SAC Summary

- We note excellent progress in FLASHForward and all the Working Groups.
- Cutting edge accelerator physics is being carried out.
- The HVI is fulfilling its charter extremely well.
- The SAC provided some consideration for the future beyond the scope of the HVI.
- The machine schedule is maintained.
- We made recommendations concerning the additional charge element.
- We are looking forward to the start of plasma acceleration experiments!