



# Report from Governance Committee

---

PAC Meeting  
Orsay, 13/4/15

B. Foster  
University of Hamburg/DESY/Oxford



# Governance Committee Members

---

Neil Calder (OIST), Colin Carlile (ex ESS),  
Jonathan Dorfan (OIST), Dean Karlen (Uni. Victoria),  
Vera Luth (SLAC), Dinesh Srivastava (VECC India),  
Satoru Yamashita (ICEPP Tokyo),

Ex officio:

Sachio Komamiya (ICEPP Tokyo), Lyn Evans (CERN)

Meetings: 25/03/14; 15/05/14; 02/07/14; 29/09/14



# Road to the Draft Report

---

- The committee reviewed the work done and information collected for the PIP and identified subsequent developments.
- Substantial new information has been collected and discussed, particularly on European Spallation Source (ESS) and ITER.
- Okinawa Institute of Science and Technology Graduate University (OIST) has also been a very useful role model for an international organisation on a Japanese site.



# Draft report - timeline

---

- Between 2<sup>nd</sup> and 3<sup>rd</sup> meetings, various members of the committee drafted report for discussion at 3<sup>rd</sup> meeting.
- Interim discussion with LCB at Valencia, 7/14
- Draft for submission to FALC and then LCB discussed at 4<sup>th</sup> meeting:
- Table of contents:
  1. **Executive Summary**
  2. **Introduction and General Principles**
  3. **Governance**
  4. **Funding Models**
  5. **Host Responsibilities**
  6. **Project Schedule**
  7. **Intellectual Property**
  8. **Interface between ILC Laboratory & the Detectors**
  9. **Transitional arrangements**





# Main Issues

---

## 3. Governance

### - Mission:

“The ILC’s mission is to provide an accelerator and the infrastructure for experiments that can explore the structure of matter and the universe with unprecedented precision. The accelerator will collide electrons and positrons to produce a centre-of-mass energy in a first stage up to 500 GeV, with provision for an upgrade to reach energies of at least 1 TeV. The ILC will be a fully international organisation, with governance and structures that achieve its aims in the most cost effective, flexible and transparent way possible.”

### - “Limited liability Company” option discarded

### - More details on Council/Management structure

“The ILC Directorate should consist of a director of finance and administration ... and a number of directors to be determined by the DG with delegated powers to deal with the accelerator complex, the particle physics research activity and the overall computing and information technology policy of the laboratory. The members of the Directorate should be proposed to Council by the DG for Council ratification.”

### - Duration of agreement lengthened

“construction period of ~8 years plus at least 20 years of operation... extendable by agreement of Council for an indefinite number of fixed-term periods to be decided by the Council at least 2 years in advance of the end of the current agreement.”



# Main Issues

---

## 4. Funding Models

- Continue to assume a basic “in-kind” model
- Clearer statements of contingency & common fund

“DG, with the approval of Council, should have the authority to call on a central contingency budget which must be agreed at the start of the project and might perhaps be 10% of the total project cost”

Common fund used for “.. no member state wishing to bid to provide [items as] in-kind contributions...purchase of specialist management or engineering advice, for example seismic engineers .. personnel costs where such expertise is not readily available from partner states.. the salary and employment costs of the top management”

- Host state contribution
- Principles of operation cost attribution

Operation costs are “the total costs of running the laboratory, including all salaries of those directly employed at the ILC [except] the cost of replacements for the hardware of the accelerator and [associated] services”



## 4. Funding Models (continued)

### - 3 possible models for operation cost attribution

a) in proportion to the capital contributions of the partners;

b) in proportion to the capital contributions of the partners *excluding* the civil construction, land purchase costs, provision of laboratory buildings and road access that fall to the lot of the host state to provide;

c) in proportion to the number of PhD experimenters employed by each country and taking part in the activities of the laboratory.

### - recommendation:

”that operational costs from the start of accelerator commissioning are apportioned according to scheme a), transforming over 3 years to either scheme b) or c)”



# Main Issues

## 5. Host Responsibilities

- Provision of quality of life to attract staff

“The ILC laboratory must have a strong department whose task it is to facilitate the arrival of families at the ILC site, to introduce them to available facilities and help with matters such as finding suitable housing, dealing with landlords...”

- Provision of services: transport, power etc.

“Electrical power requirements for example will be a maximum of 210 MW for the 500 GeV machine and up to a maximum of 300 MW for the 1 TeV upgrade...”

- ILC Laboratory FTE

“The laboratory staff is estimated to reach around 1750, some of whom could be industrially based, with ~1,000 visiting scientists and users at any one time. (Based on experience at a laboratory of similar scope, Fermi National Laboratory (2014))”

## 6. Schedule

- Preparatory work: geological/environment survey, preparation for land acquisition etc.

“...providing a budget for the essential preparatory work is essential in advance of a decision by the Japanese government on proposing to host the ILC.”



# Main Issues

---

## 7. Intellectual Property - *Skeleton only*

## 8. Lab. & Experiments interface

- Organisation/governance of experiments

“ILC detector collaborations will be self-organising and governing, following current practice”

- Communication channels between Lab. & Experiments etc.

“Close communication and cooperation between the accelerator team and the collaborations is of vital importance for the ILC. To this end, the ILC lab will establish adequate links between them at a variety of different levels, from the agreement of the accelerator operating schedule and mode to the work of IR integration and/or operation.”

- Provision of IT, Offices, Meeting Rooms etc.

- “Indefinite contract” physicist staff

“It would be very beneficial for the experimental collaborations to have a number of experimental physicists and phenomenology theorists resident at the ILC-Lab”



## 9. Transition

### - ILC “pre-lab”

“The ILC pre-lab represents a qualitative advance on the structures existing during the TDP. The goal is to persuade the participating laboratories and other organisations to commit resources and staff in a more specific manner, with the very explicit goal of realising the ILC. For this purpose, the present LCB would be re-formulated as the council for the ILC pre-lab....”

### - Supervise birth of Experiment Collaborations

“...conduct a peer review process that could result in amicable agreement regarding formal collaborations to conduct experiments at the ILC ...”

### - Site

“As soon as practicable therefore, and well before the coming into operation of the final ILC organisation by international agreement, the pre-lab should relocate to the Kitakami site.”



# Reissue PIP report

---

• Note that it is intended to re-issue the original PIP with this document once approved by LCB, replacing relevant chapters as shown below & new chapters added (new sections in red):

- 1. Executive Summary** (*revised as indicated for PIP re-issue*)
- 2. Introduction and General Principles**
- 3. Governance**
- 4. Funding Models**
- 5. Project Management**
- 6. Host Responsibilities**
- 7. Siting Issues** (*slight revisions*)
- 8. Intellectual Property**
- 9. In-Kind Contribution Models**
- 10. Industrialisation and Mass Production of the SCRF Linac Components**
- 11. Project Schedule**
- 12. Future Technical Activities**
- 13. Interface between ILC Laboratory & the Detectors**
- 14. Transitional arrangements**  
(*Appendix A will be omitted*)



# Summary

---

- The purpose of the update is to report on changes since the original PIP document related to the possibility of a designated host site in Japan.
- In addition there have been developments in major projects such as ITER and ESS that have important implications for the ILC project.
- Input, comments etc. would be particularly welcome - the document is intended to be helpful to funding agencies & governments in highlighting issues and suggesting solutions.
- Following your comments, the document will be submitted to LCB for final approval and then published.