

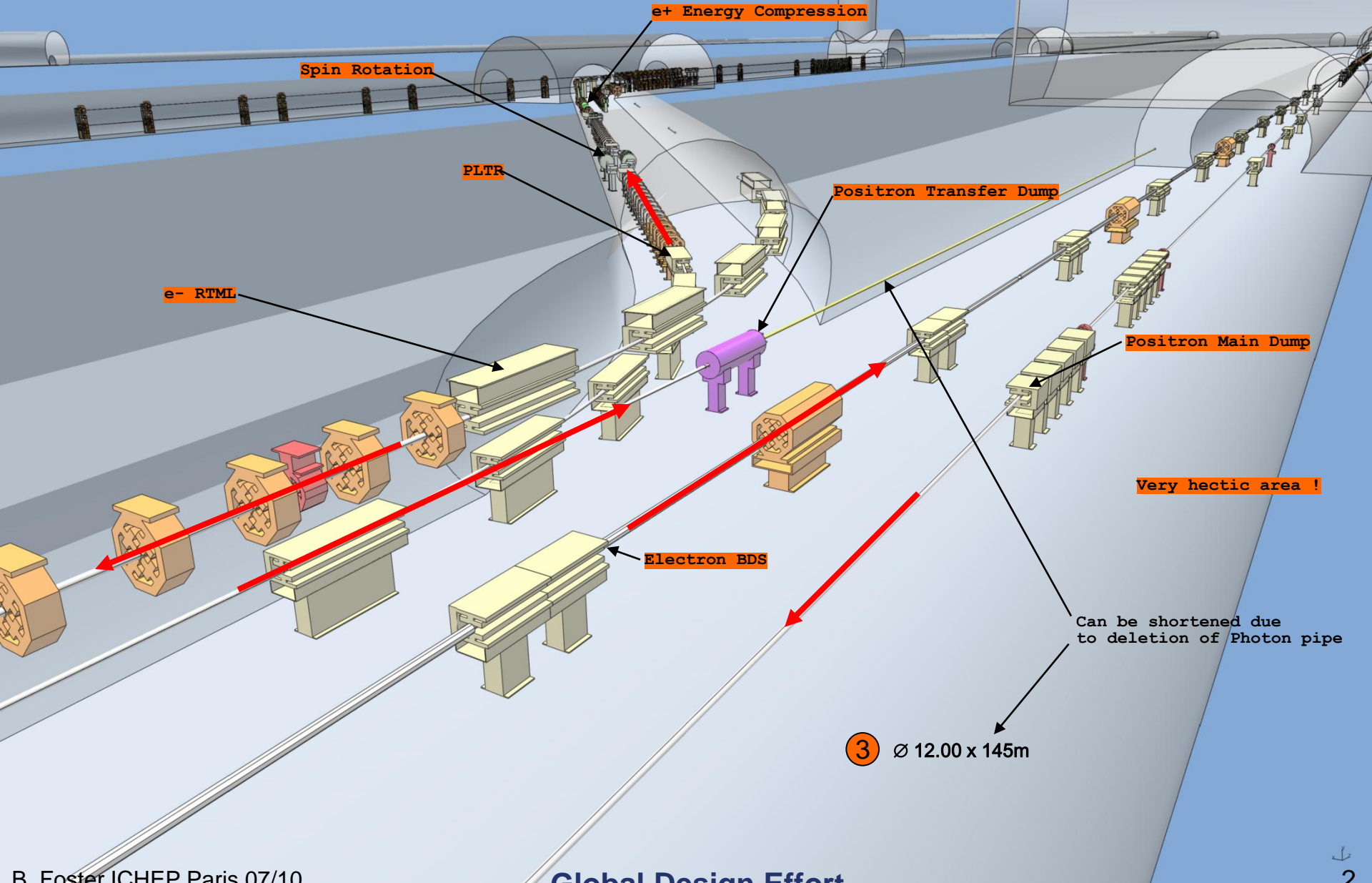


Governance of the International Linear Collider

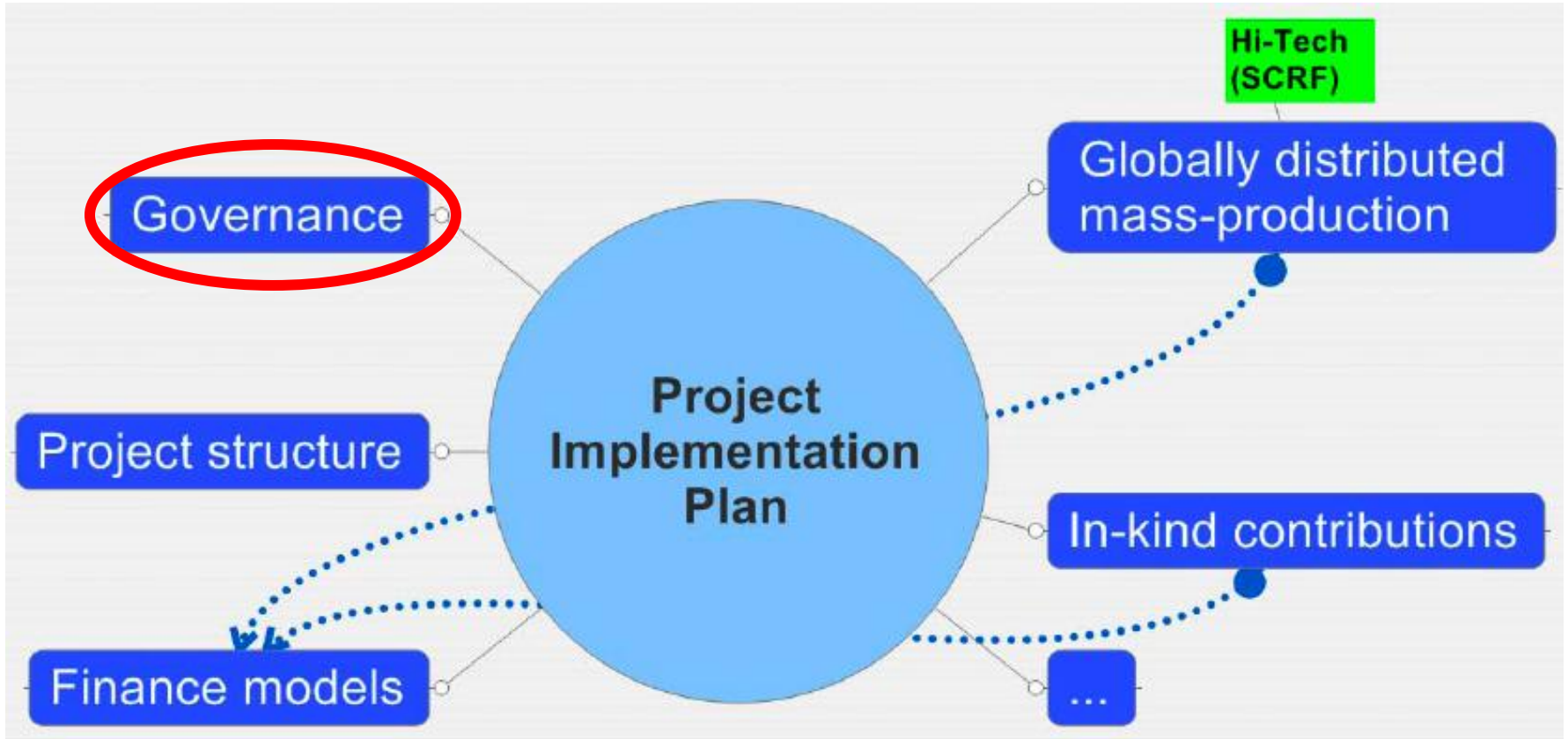
Brian Foster (Oxford & GDE)

ICHEP Paris 24/7/10

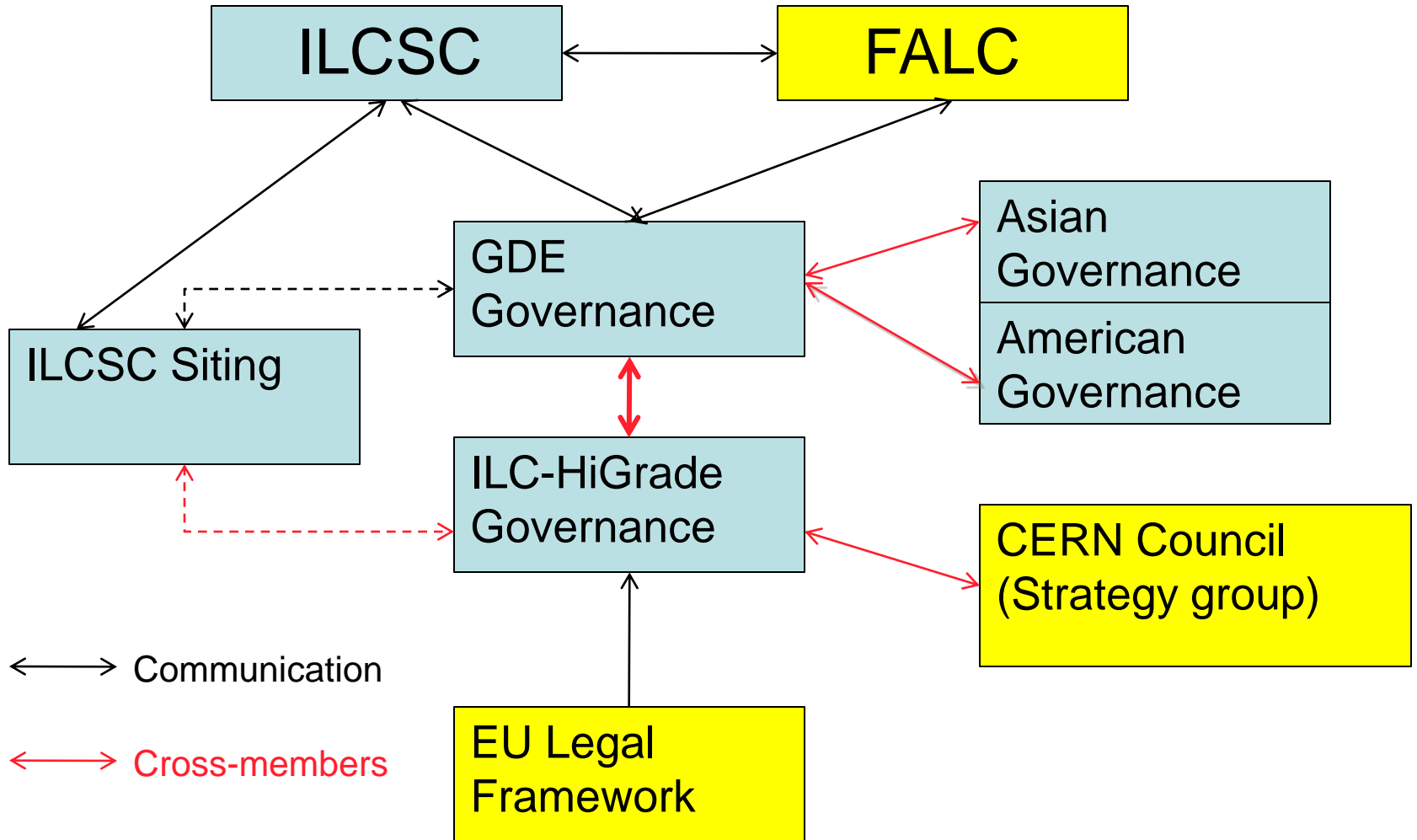
Virtual ILC



Making the ILC a reality



Governance Activity





Overview of Governance activity

Over last 18 months have gathered information from “cognate projects”. First we produced “1-page summaries” of the projects to gather together the important facts and the open questions or issues that each project raised.

This then led to discussions, further fact gathering etc.

Cognate projects include: ALMA, ESS, FAIR, ITER, SKA, XFEL.

We have also examined initiatives from Brussels, such as ERIC framework and whether they can be applied to our problems.



1-page summary - e.g. ALMA

Complex agreement – ALMA is not a legal entity.

Host (Chile – special position) + regional membership (Americas (=US/Canada (+ Taiwan!)), Europe (=ESO), Asia (=Japan – with link with Taiwan). No clear leading region; Japan joined late, leading to “de-descoping”. All partners involved in ~ all aspects of project.

Each region carried out separate procurement for WBS items for which it took responsibility; Common fund does not exist. Total cost ~ \$1.25 billion (2008\$)

Host provides site only; present in Board but does not vote on many things. EU +Americas 50:50 before Japan; Japan then 25% of enlarged project => EU:Am:Asia 3/8:3/8:1/4

Project reports to ALMA Board which meets 3 times per year with extra telecons.

Issues

- ALMA’s lack of legal standing is problem; staff employed by two different bodies;
- Procurement led to 3 different designs of antennae – although there are positive aspects of this (risk reduction) it is a problem;
- Partners joining (and leaving) not properly catered for;
- Management control weak – multiple paths of reporting to regional funding agencies;
- Council subordinate to regional interests and did not become robust;
- Ownership of assets, pensions fund etc. needed earlier clarification.



Pro Formas

In order to get information into a common format that facilitates comparison and deduction, have completed “pro-formas” for representative subset of projects. Pro-forma headings are:

- 1) Legal Status of project
- 2) Management Structure
- 3) Representation and voting structure in governing body
- 4) Duration of agreement
- 5) Attribution of in-kind contributions, value engineering etc
- 6) Running costs
- 7) Budgetary control



Example Pro Forma - ITER

1) Legal Status of project

ITER has a legal personality and as such can make contracts, licenses, legal proceedings and agreements. The ITER Organisation (IO) employs the core ITER organisation and project personnel. In addition to the IO there is a local Host Organisation operated by CEA which is responsible for the non-project related activities which are typically related to site support such as services to the site boundary, land, transport, telecommunications and other such things. There is also site support staff employed in medical, emergency services, cafeteria, and environmental activities.

An ITER Agreement consisting of 29 articles, common understandings and annexes supports ITER. These documents were generated and signed serially over a two-year period by all seven collaboration members. The agreements are quasi-legal in nature and cover such items as intellectual property, privileges and immunities, and the umbrella agreement. Common understandings cover more project related issues such as cost sharing, schedule, operations, procurement practices, and cost estimates. In addition the IO has some bilateral agreements such as one with CERN.

“The ITER Organization shall have international legal personality, including the capacity to conclude agreements with States and/or international organizations.

The ITER Organization shall have legal personality and enjoy, in the territories of the Members, the legal capacity it requires, including to:

- a) conclude contracts;
- b) acquire, hold and dispose of property;
- c) obtain licenses; and
- d) institute legal proceedings.”

Decommissioning is by building up a fund during operation (presumably as an additional charge on top of full operations cost) which is then handed over to host state who then deal with any shortfall and decommission, issuing bulletins to member states as they progress.

In addition to the construction project the agreements cover operations and deactivation.



Recommendations

a) Legal Status

- ILC should be set up as an international treaty organization similar to ITER, taking advantage of zero VAT rating and similar privileges.

b) Management Structure

- ILC should have a strong Council as the ultimate governance body. Council delegates should be of sufficient standing to make decisions in a timely fashion. The ILC should have a Director General and a Directorate, proposed for Council ratification by the DG. The DG should have significant delegated authority from the Council, allowing him or her to act decisively without continual need to refer back to Council.

c) Representation and voting structure in governing body

- Each Council “member state” should have 2 official delegates and a maximum of 2 advisors. One of the two delegates should be a particle physicist. There should be the option, every few years, of Ministerial Council Meetings in which delegates are the relevant government minister.
- Council should decide questions not of a financial nature by simple majority; financial questions should be decided by a qualified majority voting decided by a majority of financial contributions plus a majority of individual member states.



Recommendations

d) Duration of ILC Agreement

- **The ILC agreement should be fixed term – a construction period of ~9 years plus 20 years of operation; it should be extendable by agreement of Council in periods of 5 years. Withdrawal would not be allowed until a minimum of 10 years after the agreement comes into force and then only after 1 full year after notice of withdrawal.**



Recommendations

- e) **Attribution of in-kind contributions, value engineering, etc.**
- **The ILC construction project should be based on a Work Breakdown Structure (WBS) system. In-kind contributions will be likely to form the majority of contributions to the project's infrastructure. An agreed register of WBS items should be set up and a committee constituted to consider bids for WBS items from member states. Value engineering should be used in defining the "value" of each WBS item. There should be an adequate Common Fund (of at least 20%) in order to give management enough flexibility. There should be no strict "juste retour".**

f) Contingency

- **If and when needed, the Council should have the authority to call on a central contingency budget with a maximum of 10% of the total project cost and to allocate it as appropriate. Increases in costs to produce a WBS item smaller than 25% or some other agreed ceiling in cash should be borne by the country with responsibility for that item; they are recommended to have appropriate internal contingency. It is important to avoid double counting between the central contingency and a country's internal contingency in arriving at the overall project costing. If costs for a WBS item increase beyond the agreed ceiling, the case could be referred to and considered by a standing Board and either referred back to the submitting country or referred to Council for release of central contingency, as appropriate.**



Recommendations

f) Contingency (contd.)

- Exhaustion of the central contingency should lead to appropriate descoping of the project to be decided by management with Council's agreement.

g) Running costs & decommissioning

- Running costs should be evaluated at the time of setting up the organization and a suitable algorithm agreed to. A commonly chosen algorithm is that running costs should be distributed roughly proportional to capital contributions.
- Decommissioning should be the responsibility of the state that provided that WBS item; the Host State should have residual responsibility.



Summary

- Emphasise that this is an interim report and a call for comments. Also incomplete – e.g. siting issues currently being addressed.
- Has been presented to community in various venues at CERN, DESY, ECFA. Presented to FALC last month. Reaction positive and constructive.
- Feedback & ideas from community very welcome. Plan to build on this work and integrate into full Project Implementation Plan for the TDR report in 2012.