

LCB Report

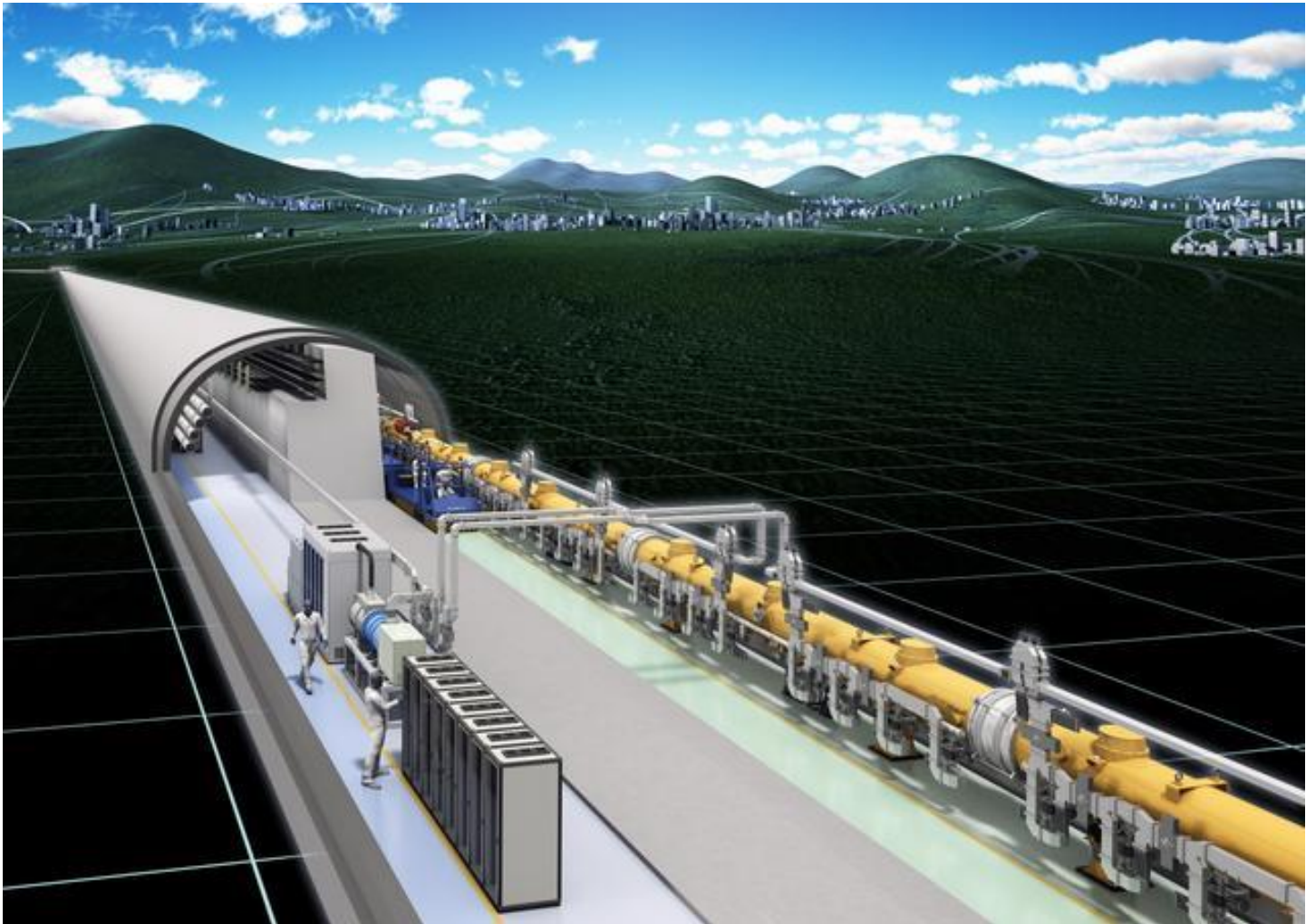
6th October 2014

LCWS@Belgrade

LCB Chair

The University of Tokyo

Sachio Komamiya



LCB members

5 members X 3 regions + chair = 16 members + secretary

Chair Sachio Komamiya (The University of Tokyo)

Americas Jonathan Bagger (TRIUMF)
Nigel Lockyer (Fermilab Director)
David MacFarlane (SLAC)
Lia Merminga (TRIUMF)
Hugh Montgomery (Jefferson Lab)

Asia Jie Gao (IHEP, Beijing)
Rohini Godbole (Indian Institute of Science)
Sunkee Kim (RISP)
Atsuto Suzuki (KEK Director)
Yifang Wang (IHEP Director)

Europe Rolf Heuer (CERN Director-General)
Joachim Mnich (DESY Director of Particle Physics)
Francois Le Diberder (IN2P3)
Victor Mateev (JINR Director)
Lenny Rivkin (PSI)

Secretary Roy Rubinstein

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- Unofficial international negotiations on ILC were started this year. The first meeting was at CERN. MEXT Vice Minister (2nd bureaucratic position) , CERN-DG, several officials from European countries + DoE (HEP director) are attended.
- A delegate of the Japanese Diet members supporting ILC visited Washington.
- Follow up of these activities by LCB is needed.
- Since CERN-DG and KEK-DG will be soon replaced, we need continuous support from new DGs.
- To answer the homework requested by SCJ, MEXT sets up “Academic Expert Committee”.
LCC + Physics WG are helping for this process.
- LCB Face-to-face meetings are twice/year.
Phone meetings are set up once/month.

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Clean up the issues pointed out by the Science Council of Japan (SCJ).

SCJ Recommendation

- A more precise research strategy for the ILC in view of the LHC upgrade path;
- The funding framework that does not affect the broader field of science or other critical national priorities;
- Detailed plan of international cost-sharing;
- A domestic organization to implement the project consisting of the High Energy Accelerator Research Organization (KEK) and universities;
- Human resources required during construction and operation, in particular, for leadership positions.

Current ILC Activities in Japan

Japanese government wants to understand and convince themselves that about the ILC project, before engaging the international community.

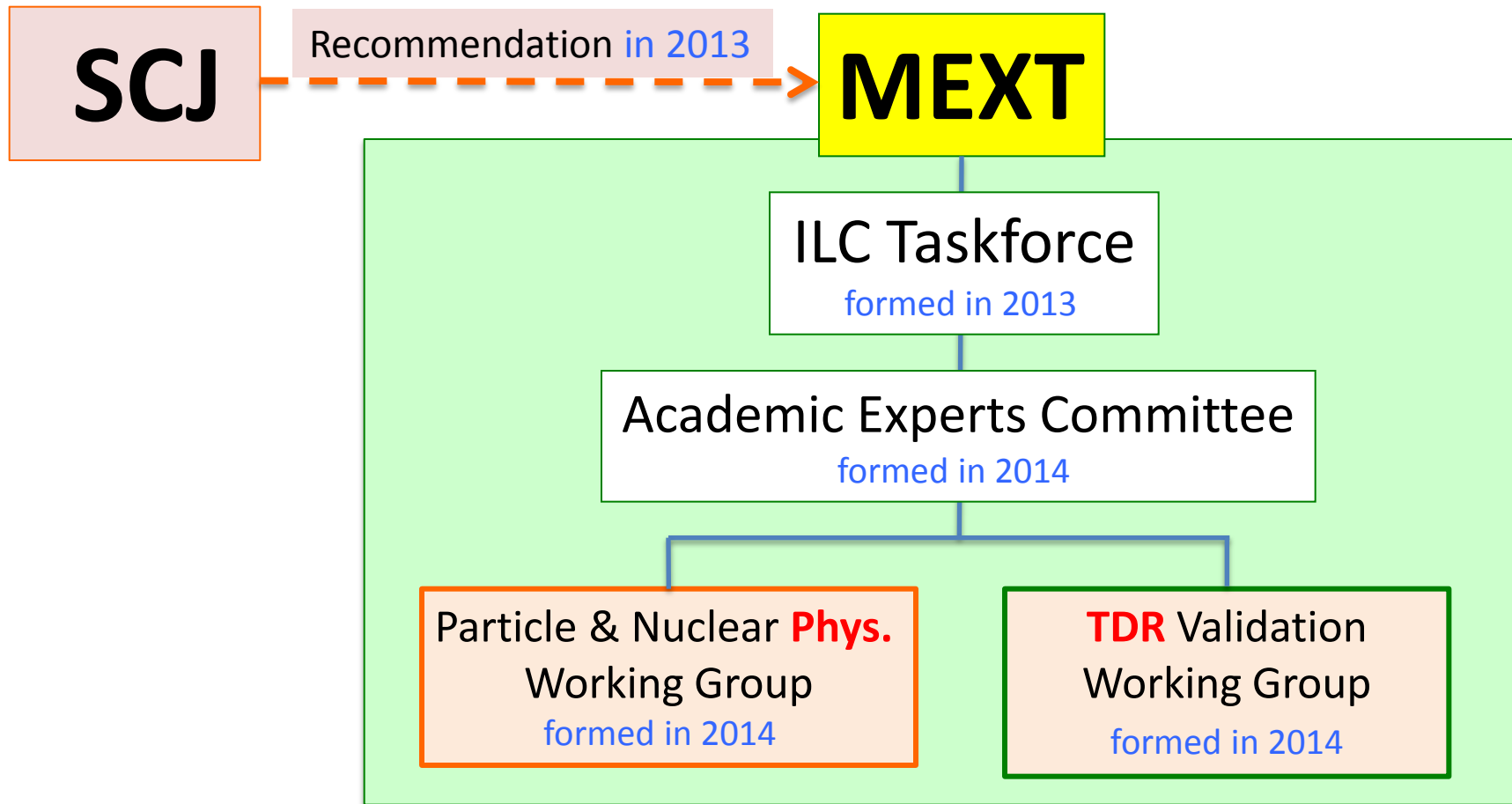
“Academic Expert Committee” to have meetings to the public and to produce a report by 31 March 2016.

This group is not international.

This committee is studying total ILC cost, human resources, the Japanese domestic ILC organization, and social and economical impact of the project of the ILC in Japan.

MEXT's Organization for Studying ILC

based on SCJ's Recommendation



Schedule for Committee and WGs

Experts committee	
	date
1	5/8
2	11/14

Physics WG		
	date	Subject
1	6/24	Status of Particle Physics and ILC physics overview
2	7/29	Future prospect in the US and in Europe
3	8/27	Cosmic-ray and Astrophysics, and ILC
4	9/22	Flavor and Neutrino physics, and ILC
5	10/21	Interim summary to be input to the Experts Committee

TDR Validation WG		
	date	Subjects
1	6/30	Overview
2		ML and SRF
3		SRF Q&A,, CFS
4		Schedule and Project Management including Cost and Human Resource

Japanese Diet members to support ILC (~150 members)

Delegates are visited Washington for ILC in July.

7/22 Round Table Discussions with
米OSTP, DOE and Physicists



7/23 Discussions with
Holdren大統領科学補佐官他



7/23 シンシア・ルミス
下院議員の補佐官



7/23 ランディー・ホルトグレイ
下院議員



7/23 ラッシュ・ホルト
下院議員



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LCB in Valencia:

Since there is no initial condition of the budget share, it is necessary to be discussed among scientists.

LCC was assuming the following.

- Japan will provide 50% of the TDR value. This includes all of the conventional construction and includes 1/3 of the SCRF.**
- The remaining 50% of the value will come from the remainder of the world, and will all be items constructed in the regions.**

This initial assumption was endorsed by LCB.

ICFA at Valencia

ICFA Statement on its Support of the ILC, its Endorsement of the Strategic Plans of Europe, Asia and the United States, and its Encouragement of International Studies of Future Circular Colliders

ICFA endorses the particle physics strategic plans produced in Europe, Asia and the United States and the globally aligned priorities contained therein. Here, ICFA reaffirms its support of the ILC, which is in a mature state of technical development and offers unprecedented opportunities for precision studies of the newly discovered Higgs boson. In addition, ICFA continues to encourage international studies of circular colliders, with an ultimate goal of proton-proton collisions at energies much higher than those of the LHC.

LCB set up two Subcommittees

1) Subcommittee to study and produce recommendation of the structure of the ILC Lab (Governance, Project Management etc.)

Members are selected by Laboratory directors or 'vice directors'

CERN, DESY, IHEP, KEK, SLAC, Fermilab

Brian Foster	Oxford University / DESY
Satoru Yamashita	ICEPP, the University of Tokyo
Dean Karlen	University of Victoria
D. K. Srivastava	Variable Energy Cyclotron Centre, Kolkata
Colin Carlile.	ESS in Sweden
Jonathan Dorfan and Neil Calder	OIST
Vera Luth	SLAC
Exofficio	Sachio Komamiya (LCB), Lyn Evans (LCC)

The first face-to-face meeting was at the Fermilab AWLC.

Most of the meetings are remote.

The first draft document is almost ready for FALC after LCWS.

2) Subcommittee to propose an international agreement for the ILC project

Exchange information on political developments impacting the ILC project in order to move the project forward.

Propose arrangements to lead towards international approval of the ILC project by considering the specific circumstances in each region/country.

KEK-DG distributes updated information of the ILC project in Japan for every month, and the discussion will be over telephones.

Members: Laboratory directors or members of directorate

Atsuto Suzuki

Yifang Wang

Rolf Heuer

Joachim Mnich

Nigel Lockyer

Jonathan Bagger

Exofficio: LCC director Lyn Evans

PAC (Project Advisory Committee)

The PAC will assess and / or comment (for ILC and CLIC):

- The overall physics, technical design, cost, and schedule
 - The detector progress
 - Civil construction and the preparatory activities
 - The financial contributions and management as far as accelerator/detector design, R&D and the site preparation activities
-
- Schedule

The first PAC meeting will be held in **April 2015 at LAL Orsay.**

PAC (Project Advisory Committee)

Members

LCC requested to postpone the First meeting.

The first meeting PAC Meeting will be held in April 2015 at LAL Orsay.

Chair	Norbert Holtkamp	
Deputy Chair	Michel Davier	
Accelerator and Project		
	Hans Weise (DESY)	Linac Construction
	Robert Orr (Tronto)	Cavity R&D
	Mark Palmer (FNAL)	Large Science Facilities
	Philippe Lebrun (CERN)	PM / Cost
	Osamu Kamigaito (RFBF Riken)	Facility construction
	Moo Hyun Cho (PAL Korea)	Linac Technology
	Eisuke Tada (JAEA/ITER)	PM / Integration
	Shinichi Akutagawa (Kobe University)	Construction Management
	Norihito Ohuchi (KEK)	SC-RF/ Cryomodule product.
	NOT AVAILABLE	
Experiments		
	Joe Lykken (FNAL)	Physics
	Peter Jenni (CERN/ATLAS)	Detector/Physics
	Tomio Kobayashi (ICEPP,Tokyo)	Detector/ Experiments
	Hesheng Chen (IHEP, Beijing)	Detector/Experiemnts

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A few comments to LCC.

- (1) The MEXT is asking the total budget of the project, including the budget before the construction, budget for detectors and operation of the project. This should be carefully discussed within LCC. Specially the maintenance of the accelerator is an important issue. Stability of the cost is essential to convince the financial agencies.
- (2) The **cost reduction** should be seriously discussed and planned. It is only possible by technological innovation and simplification of the design. Obviously, this needs some budget and human resources. This should also be a buffer for the cost stabilization against cost escalation.
- (3) We need to keep showing the consistent picture of the project within and outside of our community.

MEXT Budget FY 2014 and FY2015 unit [10⁸yen~1M\$]

Grant for national university operating expenses		FY2013	10791	FY2014	11122
Bringing on global talents and globalization of universities		FY2013	432	FY2014	482
Enforcement of globalization of university education		FY2013	97	FY2014	127
Enforcement of university reform		FY2013	185	FY2014	186
Science Technology	(Total)	FY2013	9873	FY2014	9713
Grant-in aid for scientific researches		FY2013	3196	FY2014	3086
Japanese version of NIH		FY2013	447	FY2014	570
Clean and Economical Energy System		FY2013	379	FY2014	442
	(ITER	FY2013	168+60	FY2014	247)
Nuclear Energy		FY2013	1424	FY2014	1436
	(Fast-breeder reactor Monju	FY2013	174	FY2014	199)
Space development		FY2013	1632	FY2014	1552
	(ISS	FY2013	380	FY2014	357)

Summary

Since three regions have the common strategy for the ILC,
now preparations for launching the project has the highest priority.

Unofficial international negotiations are started by MEXT.
The Diet members

Two subcommittees:

- (1) LCB Subcommittee on ILC Laboratory Organization and Management
- (2) Subcommittee to propose an international agreement for the ILC project (Major Lab directors)

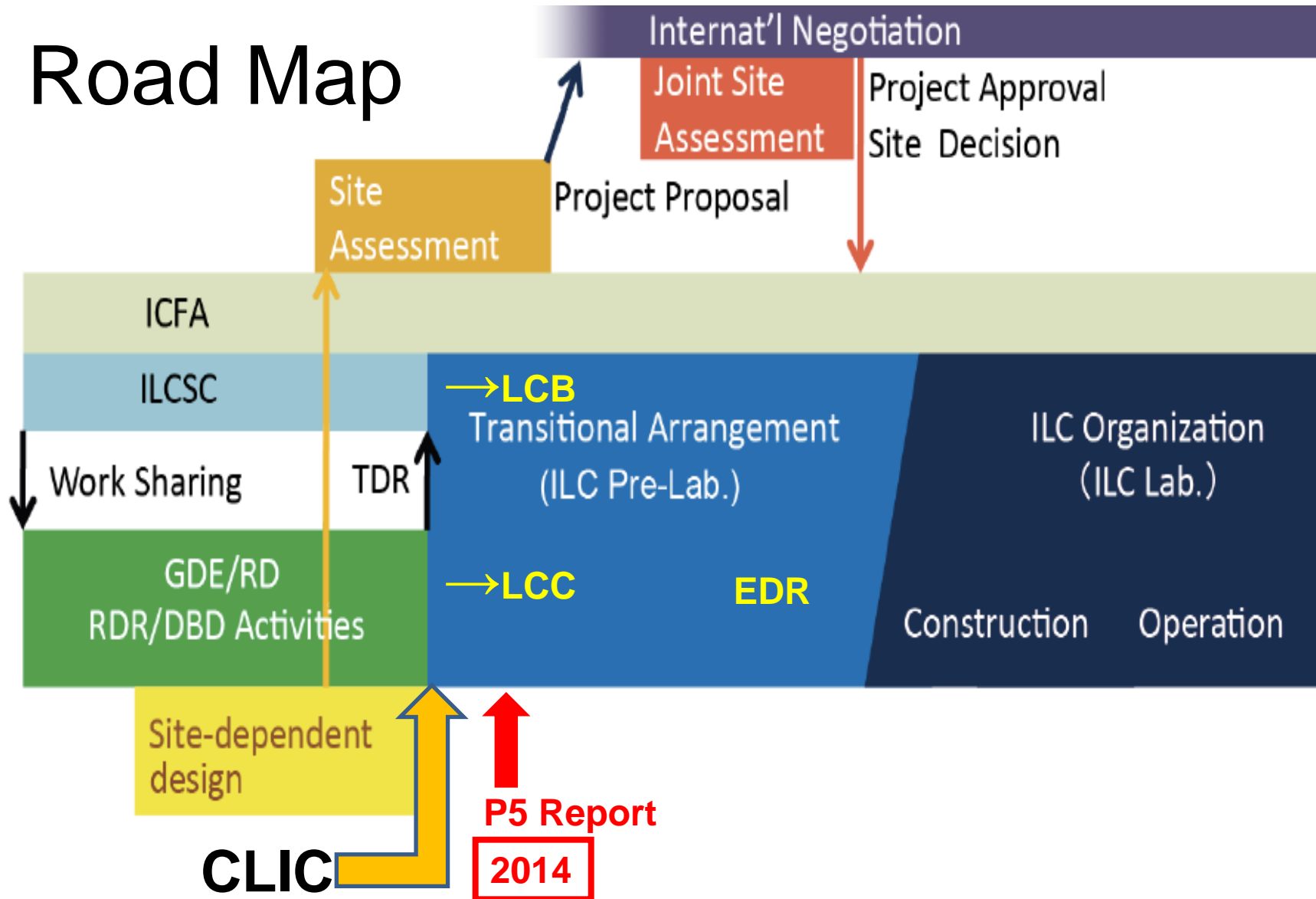
Draft document is almost ready from the Subcommittee (1) for the FALC meeting just after LCWS

PAC will be held in April 2015 at LAL Orsay.

The community has to have a coherent view on LC.

We are enduring the pains of childbirth to launch the project
We need to see more clear vision towards the construction

Road Map



ILC TDR Verification WG Membership

H. Yokomizo	Chair, Former Deputy Director for JPARC Center – Accelerator Science
T. Koseki	KEK, Head of JPARC Linear Accelerator --- Accelerator Science
T. Kato	JAEA, Deputy Director for JPARC Center --- Cryogenics
S. Kamigaito	RIKEN, Head of Accelerators – Accelerator Science
T. Kumagai	JASRI, Trustee – Accelerator Science
H. Koiso	KEK, Head of KEK-B Accelerator – Accelerator Science
S. Sasaki	Hiroshima U. --- Accelerator Science and Photon Science
H. Tanaka	RIKEN, Spring-8 --- Accelerator Science
F. Naito	KEK, Head of JPARC Linear Accelerators – Accelerator Science
K. Noda	NIRM – Accelerator Science and Medical Application

MEXT, ILC Physics WG Members

- T.Kajita : Chair, Director of Institute of Cosmic Ray Research, Univ. Tokyo – Cosmic-ray physics,
- S. Okamura: Hosei Univ., (former Professor of Univ. Tokyo) -- Astrophysics
- H. Koiso: Head for KEK-B Accelerator of KEK -- Accelerator
- S. Komamiya: Chair, HEP Committee of Japan, University of Tokyo – Particle physics
- H. Sakai: RIKEN, and former Prof. of Univ. of Tokyo. – Nuclear physics
- H. Shimizu: Tohoku University – Nuclear Physics
- S. Tanahashi: Nagoya University -- Particle Physics (theory)
- K. Tokushuku: Deputy Director of IPNS (physics), KEK, Particle physics
- T. Nakano: Osaka University, Director of RCNP – Nuclear physics,
- T. Nakaya : Kyoto University – Particle physics (neutrino),
- T. Hatsuta: RIKEN -- Nuclear and Hadron Physics (Theory),
- S. Matsumoto: IPMU, University of Tokyo, Particle physics (Theory),
- M. Yamauchi, Director of IPNS (Physics), KEK – Particle physics,
- T. Yamanaka ; Osaka University, -- Particle physics (rare K decay),
- H. Yokoyama, University of Tokyo – Science literacy, public relation in S&T

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Why we (the Japanese HEP society) proposed the staging scenario ?

If $\frac{1}{2}$ of the total budget is paid by Japan and even if the other $\frac{1}{2}$ cannot be fully paid by the other countries/regions, we thought ILC project can still be launched. The initial cost of the staged 250 GeV machine can be $\sim 70\%$ of the 500 GeV one.

This strategy is not internationally agreed one. We understand that the ILC is defined to be operated at 500 GeV. The operation scenario should be considered based on physics outcome and the budget.

The economical and social benefits obtained by hosting such an international big science projects have to be advertised by the experienced regions/countries.