



KEK, High Energy Accelerator  
Research Organization

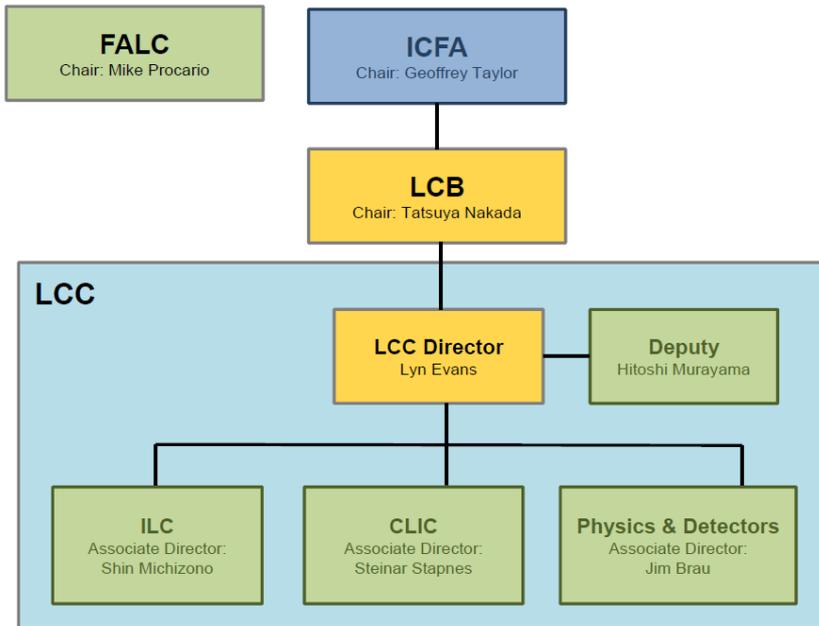
# **ILC Status in Japan and actions to be taken by MEXT and KEK**

**April 8, 2019  
LC Community Meeting**

**M.Yamauchi  
KEK**

- KEK and Japanese HEP community proposed to construct the ILC as a 250GeV Higgs factory in Japan.
- November 2017: LCB strongly supported this proposal, and encouraged Japanese Government to give this proposal serious consideration for a timely decision.
- July 2018: ILC Advisory panel of MEXT released its final report, where the panel recommended the ILC proposal be reviewed by the SCJ.
- December 2018: SCJ released its report.
- March 2019: MEXT presented its view with regard to the ILC project at the LCB meeting in Tokyo. Also, ILC Federation of Diet Members presented supplemental message to the LCB. According to them, MEXT and KEK released their action plans.

# LCB's requests to Japanese Government



- In the note released by LCB after the Ottawa meeting in November 2017, it defines the requests to the Japanese government in polite wording.

- “In recent examples of similar international projects, **the host country made the majority contribution**. A natural expectation would be that the cost for the civil construction and other infrastructure is the responsibility of the host country, while the accelerator construction should be shared appropriately. **A clear expression of interest to host the machine** under these principles would **enable Japan to start negotiations with international partners**. It would also allow members of the international community to initiate meaningful discussions with their own governments on possible contributions.”

# LCB and ICFA meetings in Tokyo



- Following the opinion of the SCJ, **MEXT has not yet reached declaration for hosting the ILC in Japan at this moment.** The ILC project requires further discussion in formal academic decision-making processes such as the SCJ Master Plan, where it has to be clarified whether the ILC project can gain **understanding and support from the domestic academic community.**
- MEXT will pay close attention to the progress of the discussions at the European Strategy for Particle Physics Update.
- The ILC project has certain scientific significance in particle physics particularly in the precision measurements of the Higgs boson, and also has possibility in the technological advancement and in its effect on the local community, although the SCJ pointed out some concerns with the ILC project. Therefore, considering the above points, **MEXT will continue to discuss the ILC project with other governments having an interest in the ILC project.**

- I believe the ILC should be realized through politically-led efforts, cutting across different ministries and agencies. As such, **we're proceeding to realize a budgeting as a national project with a separate budget outside of the regular science and technology budget.**
- **On the international cost sharing, we have to separate the infrastructure part of civil engineering and conventional equipment that is natural to be taken up by the host country and the apparatus part that is natural to be internationally cost-shared among technically competent countries.**
- As the environment has ripened socially, politically, and administratively, **the next mission for politics is to secure the budget for the construction.** In parallel, with the government's administrative process, we will begin in earnest from our role as political and legislative body to obtain the necessary budget for construction.

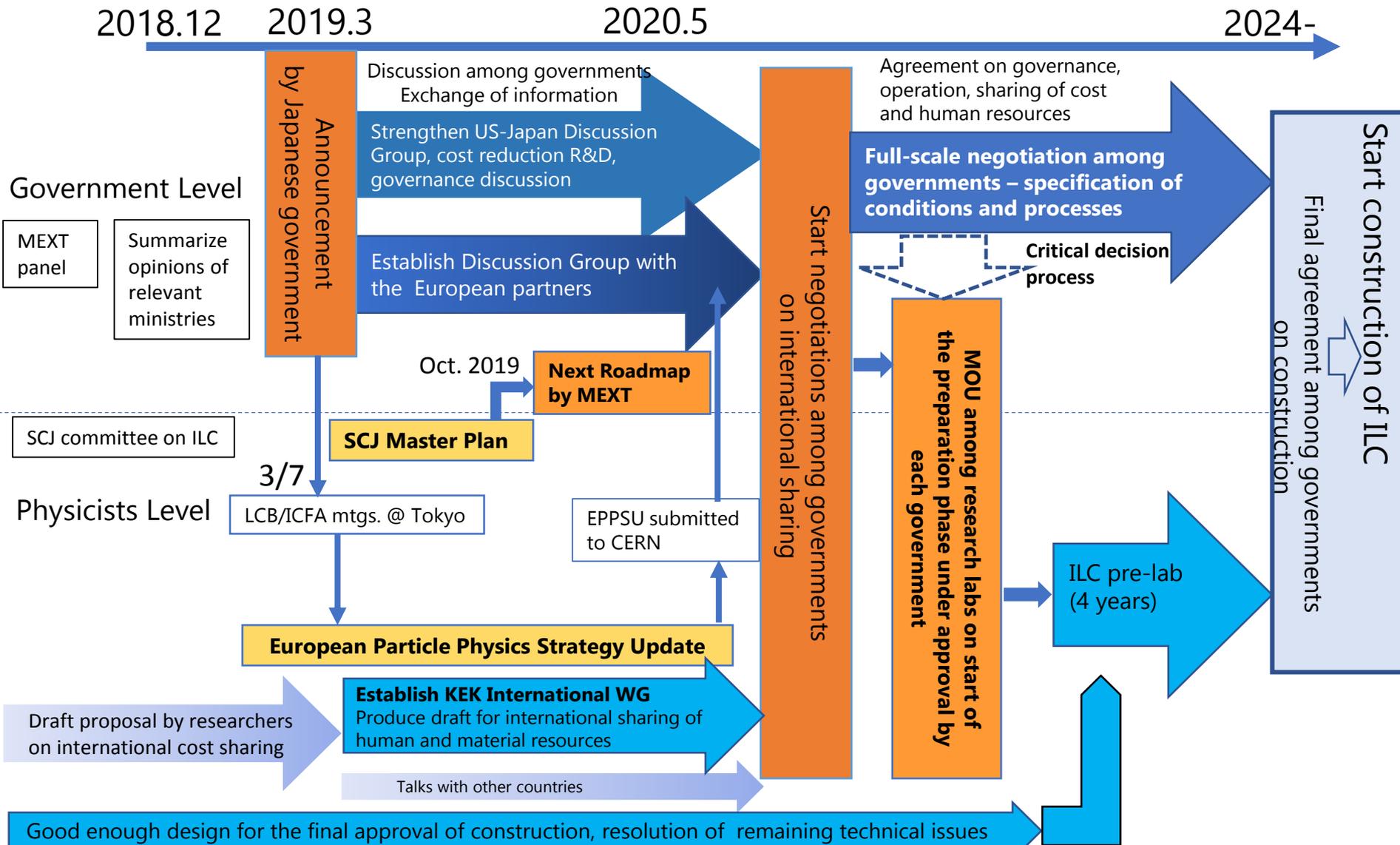
Answers given by MEXT at the Diet session on March 13, 2019.

- In the future, while paying close attention to the progress of discussions on the European Elementary Particle Physics Strategy, we would like to **deepen discussions with France and Germany at the governmental level**, by proposing, for instance, to establish a standing discussion group similar to the one with the US. (Mr.Isogai)
- So, also for the ILC project, we expect there will be **a working group set up in the High Energy Accelerator Research Organization, so-called KEK, and at its initiative**, discussions within the community of domestic and foreign researchers will proceed regarding international cost sharing, etc. (Mr.Isogai)
- As I mentioned earlier, I am also aware that this is a project of great significance both from the academic research point of view and from the perspective of regional revitalization. Therefore, I would like to **continue our investigations, closely collaborating with related communities while keeping an eye on the international situation**. (Minister Shibayama)

- Organize the international working group with close consultation with MEXT.
  
- Promote activities to gain a better understanding of the broader academic community in Japan.
  - ▶ Propose the ILC project to the SCJ Master Plan
  - ▶ Organize a symposium
  
- Cooperate MEXT to establish the governmental level discussion groups with France and Germany. Also, we need to strengthen the discussion group with the US DOE.
  
- Conducts R&D program at ATF, STF and CFF facilities collaborating with the international teams.
  
- ... and so on.

# Processes and Approximate Timelines Toward Realization of ILC (Physicists' view)

**Restricted**



\* ICFA: international organization of researchers consisting of directors of world's major accelerator labs and representatives of researchers

\* ILC pre-lab: International research organization for the preparation of ILC based on agreements among world's major accelerator labs such as KEK, CERN, FNAL, DESY etc.

- Science Council of Japan (SCJ) is an organization that represents the Japanese scientists. It has no policy-making or budgetary authority.
- SCJ calls for proposals of large-scale research projects every three years, and recommends “priority programs” to MEXT. In the latest one in 2017, 20 programs were selected from 200 proposals.
- MEXT Minister suggested the ILC to be evaluated in this process to provide an evidence of getting support by the broader academic community in Japan.
- Following this this suggestion, we submitted a proposal of ILC with a recommendation letter from Barry Barish.
- Results of this evaluation will be publicized officially in February 2020.

- As requested by MEXT, KEK will organize the international working group with close consultation with MEXT.
  - ▶ Members: 2 from Europe, 2 from North America, 2 from Asia (incl. Japan)
  - ▶ Update ILC-PIP to describe:
    - ✓ International share of the remaining technical development
    - ✓ Organization and governance of the ILC Laboratory
    - ✓ Model of international cost-sharing for construction and operation
  - ▶ The report will be submitted to MEXT and other governments as a recommendation from the international ILC community. Target date will be September 2019.
  - ▶ Draft report will be presented at the LCB meeting in August 2019. Input from LCB will be highly appreciated.
  - ▶ Also, a preparatory group will be organized to help discussions and report drafting at the working group.

- Japanese MEXT released its statement on March 7 at the LCB meeting in Tokyo.
  - ▶ MEXT has not yet reached declaration for hosting the ILC in Japan at this moment.
  - ▶ MEXT will continue to discuss the ILC project with other governments having an interest in the project.
  
- Supplemental message has been given by the ILC Federation of Diet Members
  - ▶ “we have to separate the infrastructure part that is natural to be taken up by the host country and the apparatus part that is natural to be internationally cost-shared among technically competent countries.”
  - ▶ “the next mission for politics is to secure the budget for the construction.”
  
- Actions to be taken in Japan:
  - ▶ International discussions at the government level ← MEXT
  - ▶ Funding plan ← Legislative sector + MEXT + other ministries
  - ▶ International working group ← KEK
  - ▶ Obtaining support from the broader academic community in Japan ← KEK and Japanese HEP community
  - ▶ European Strategy ← International ILC community
  
- Now MEXT is strongly involved in the ILC project.  
MEXT + legislative sector + KEK and physics community + industrial sector + local governments