

# Scientific Policy Committee overview report 2020

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Lenny Rivkin, PSI, EPFL and UniGE

**EPFL**



**UNIVERSITÉ  
DE GENÈVE**



# Advisory body to the CERN Council: the tasks

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|----|--|--------------------|
| 1. | to make recommendations to the Council on the priorities of research programmes and the allocation of research effort both within the Laboratories of the Organization and extramurally;   | MTP                |
| 2. | to examine and make recommendations to the Council on the annual goals of the various scientific activities of the Organization;   | MTP                |
| 3. | to annually assess the achievements of the Organization with regard to the past year annual goals of the various scientific activities;  | APR                |
| 4. | to advise the Council from the point of view of scientific policy on the management and staffing of the Organization, including the visitors programme and the nomination of senior staff; | MTP                |
| 5. | to advise the Council on any other matters which affect the scientific activities of the Organization.   | Future<br>planning |

# SPC Composition 2020

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❖ Hiroaki Aihara (JP)	❖ Pilar Hernandez (ES)	<b>Ex officio</b>
❖ Laura Baudis (CH)	❖ Guido Martinelli (IT)	❖ Jorgen d'Hondt (BE) ECFA
❖ Caterina Biscari (ES)	❖ Hugh E. Montgomery (US)	❖ Frank Simon (DE) LHCC
❖ Klaus Blaum (DE)	❖ Yosef Nir (IL)	❖ Norbert Holtkamp (US) CMAC
❖ Reinhard Brinkmann (DE)	❖ Lenny Rivkin (CH), chair	❖ Jordan Nash (Australia) SPSC
❖ Robert Cousins (US)	❖ Heidi Schellman (US)	❖ Marek Pfützner (PL) INTC
❖ Nigel Glover (UK)	❖ Marie-Hélène Schune (FR)	
❖ Beate Heinemann (DE)	❖ Johannes Peter Wessels (DE)	

# Membership change



Heidi Schellman (US)



Guido Martinelli (IT)

With many thanks for their contributions to the work of the SPC



Kate Scholberg (US): Experiments with neutrinos from accelerators and supernovas



Akira Yamamoto (JP): Accelerators, applied superconductivity, magnets, RF structures



Gino Isidori (CH): Theory, phenomenology, Higgs, Flavor, BSM

# SPC Composition 2021

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❖ Pilar Hernandez (ES)

**Ex officio**

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❖ Gino Isidori (CH)

❖ Karl Jakobs (DE) ECFA

❖ Caterina Biscari (ES)

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❖ Beate Heinemann (DE)

❖ Johannes Peter Wessels (DE)

❖ Akira Yamamoto (JP)

# Physics and Technology Reports 2020

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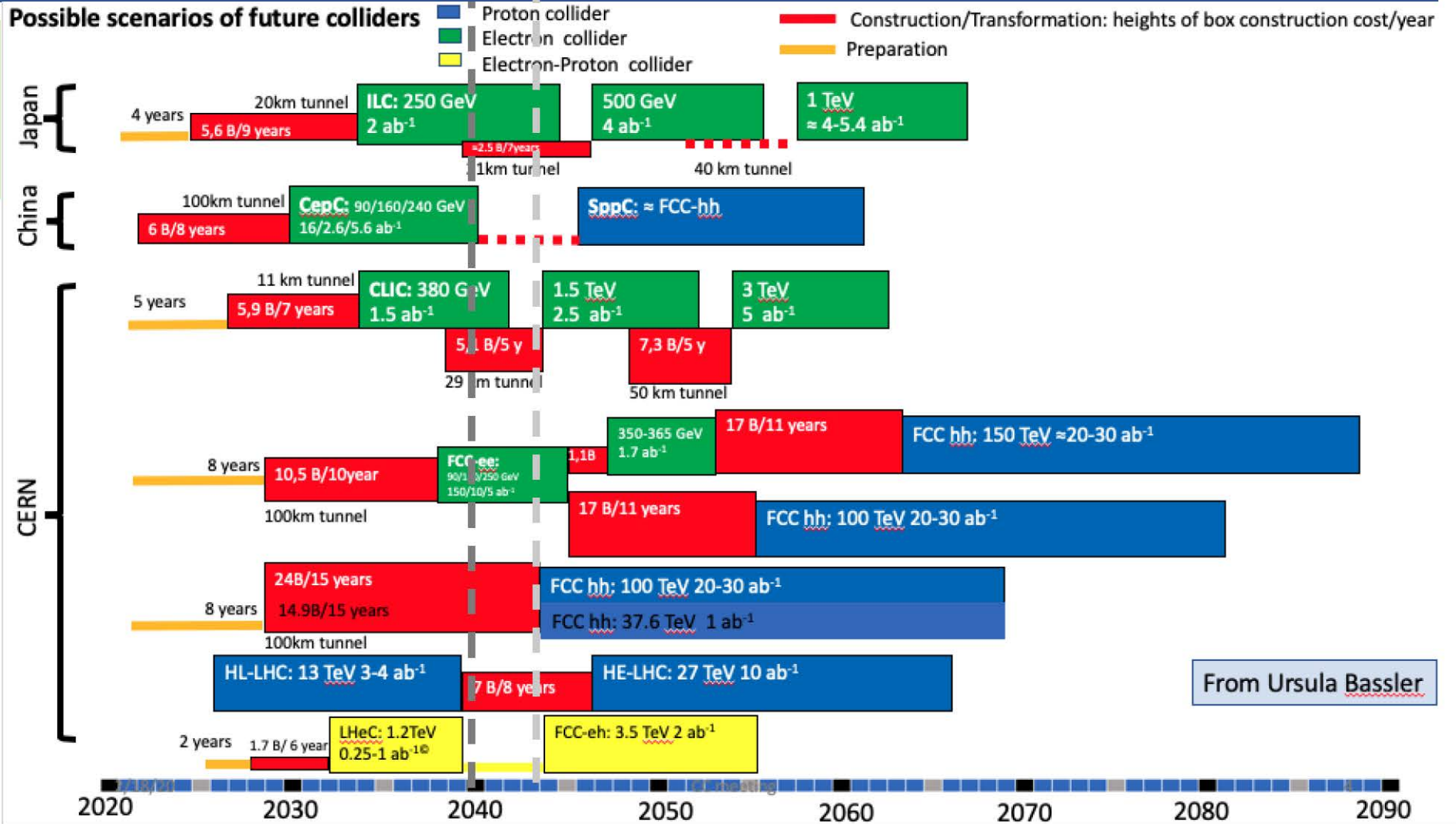
March	2020 Update of European Strategy for Particle Physics, H. Abramowitz
June	Quantum Technology Initiative at CERN, A. Di Meglio
September	ALICE, L. Musa
September	ATLAS, K. Jakobs
September	CMS, L. Malgeri
September	LHCb, C. Parkes
September	ASIC activities, F. Vasey
September	Magnet R&D at CERN, L. Bottura
September	Neutrino Platform, M. Nessi

## European perspective on next priorities

- Should not commit to a detailed roadmap beyond 2060
- Next facility after LHC should be an  $e^+e^-$  collider (Higgs factory - precision frontier)
- Europe should lead the energy frontier (pretty much unanimous)
  - ❖ Japan and US voiced support
  - ❖ If  $e^+e^-$  collider in Asia, next facility for Europe FCC hh
  - ❖ HE-LHC has no traction
- Strong support for broad R&D in accelerator technologies (magnets including HTS, plasma wakefield, ERL) and projects (muon collider) by CERN in cooperation with National Labs and Research Institutes
- High priority for “diversity” programme with no explicit ranking

## 3. High-priority future initiatives

Map of possible future facilities submitted as input to the Strategy Update

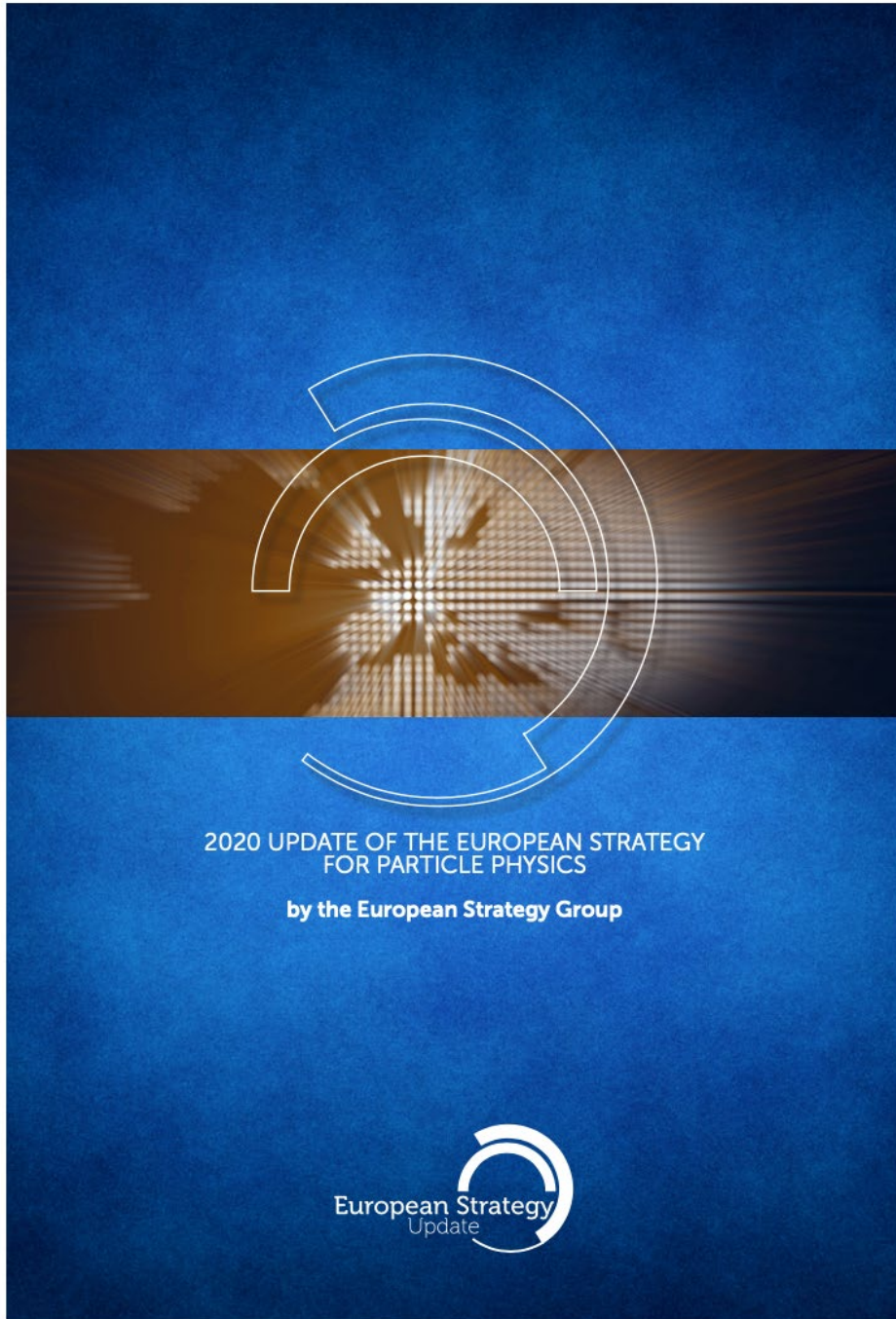


From Ursula Bassler



# Roadmaps to the future

- Accelerator R&D (LDG)
- Detector R&D (ECFA)



# Roadmap to the future



The yellow brick road, The Wizard of Oz by L. Frank Baum

Isabelle



... strewn with dead projects

SSC



UNK



# First informal session of SPC (members + Council scientific delegates)\*

## Finding the optimal workforce distribution and maximizing physics output: LHC Run3 – LHC Upgrades – future project(s). Introduced by G. Dissertori, CH Delegate

- Pileup of several major projects – the same time frame
  - LHC Runs 3 operations and data analysis, Phase 2 upgrades
  - FCC feasibility study, linear colliders studies
  - Neutrino projects in the US, Japan
  - Physics beyond colliders
  - ...
- Community has not grown significantly...

Lively discussion ensued, goal was to further raise awareness, possibly a question from Council for SPC to tackle  
A suivre...

\* Proposed by Keith Ellis, previous SPC Chair