



@ Everywhere

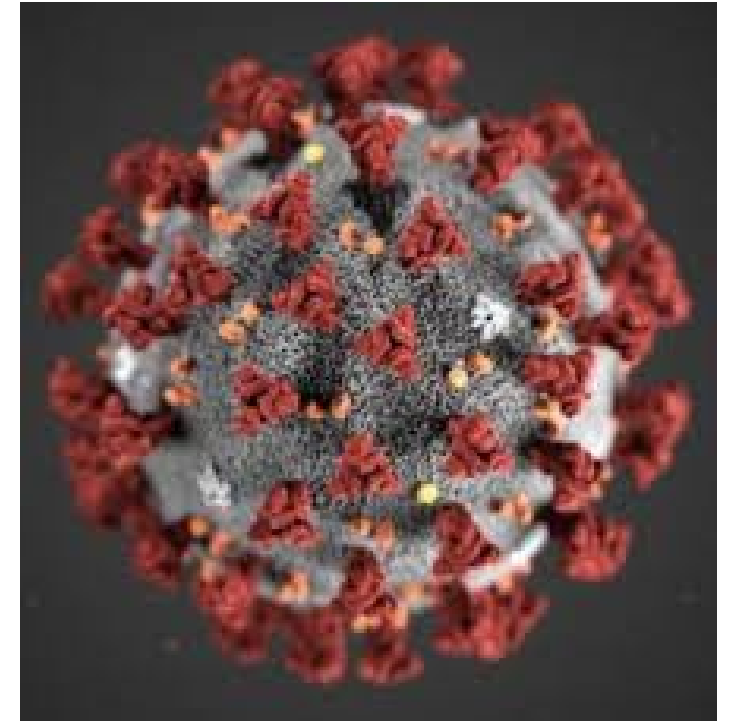
## Spokesperson's Welcome

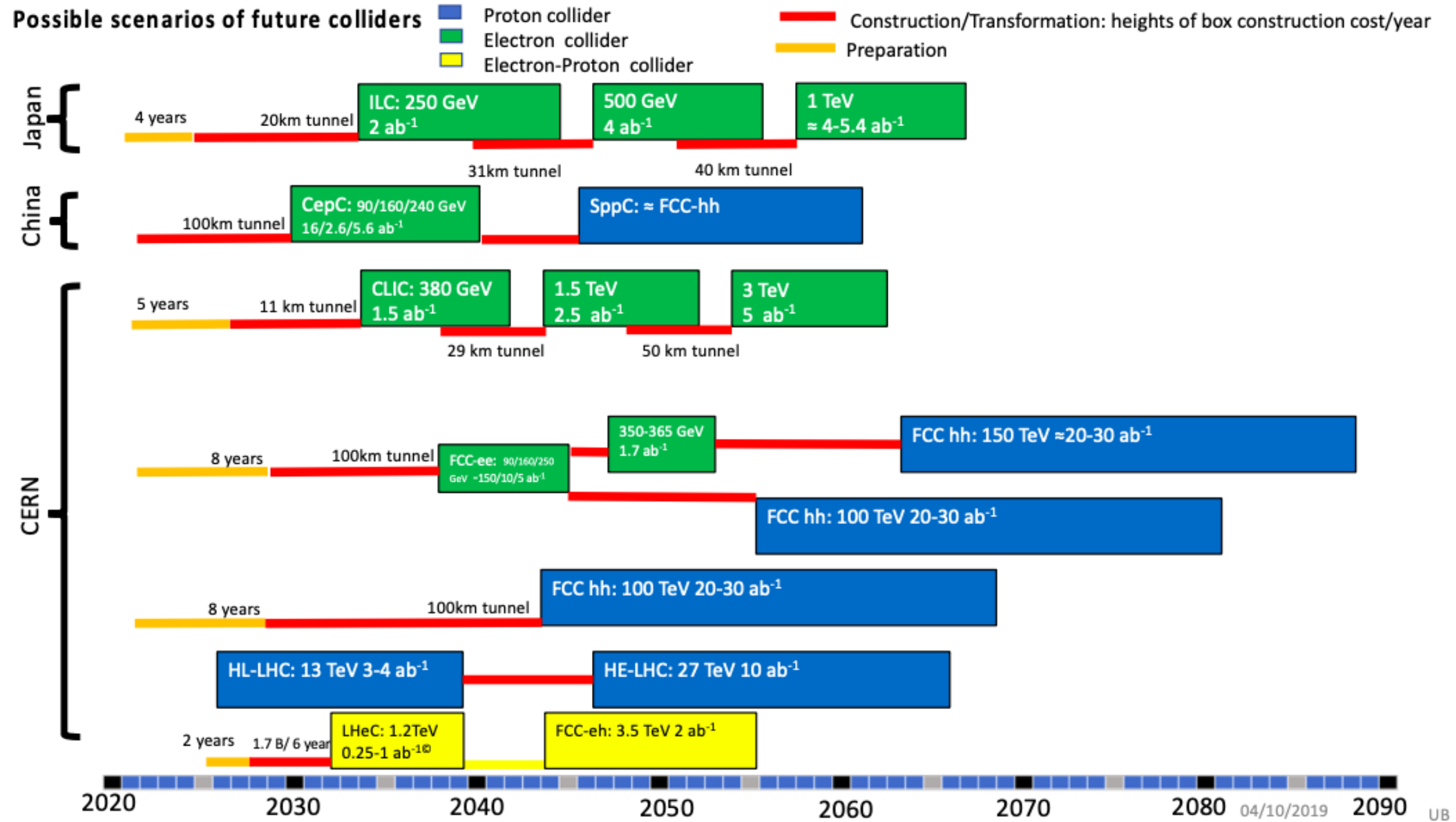
Roman Pöschl

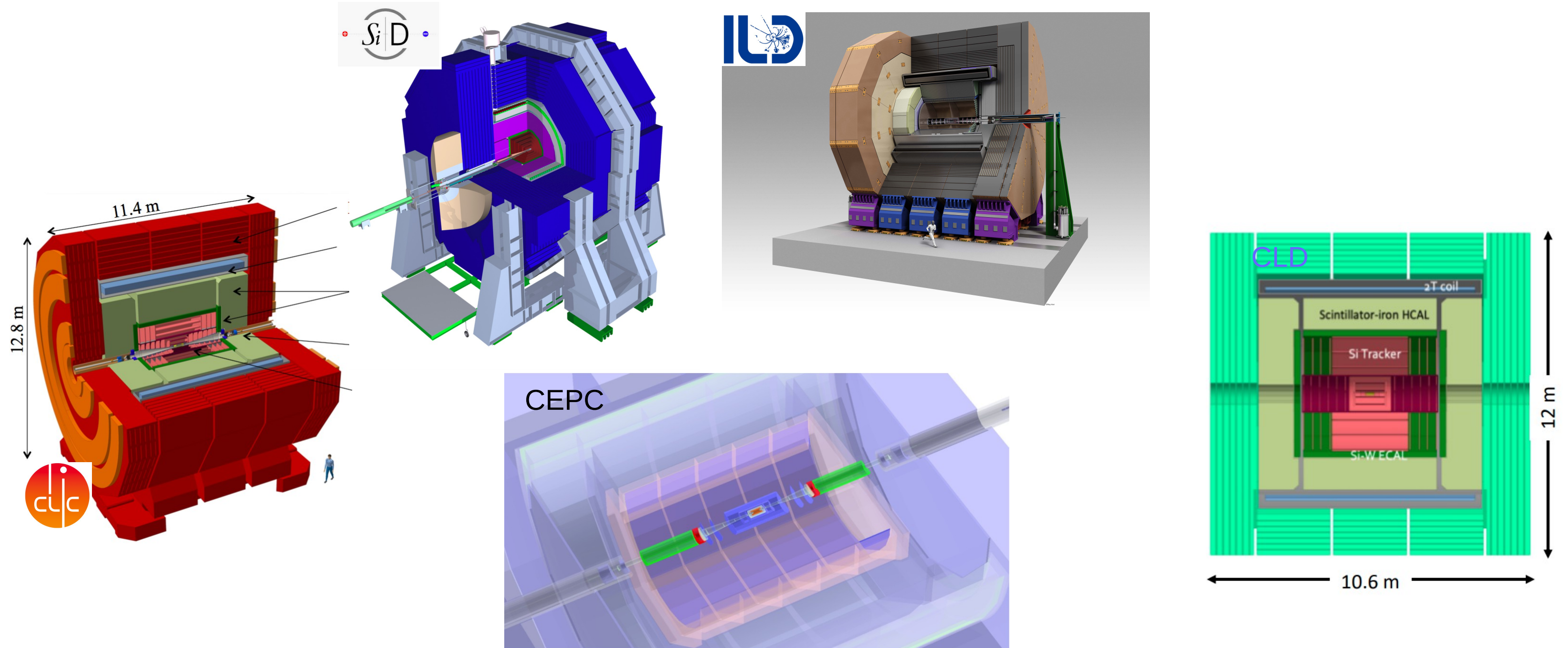


Virtual CALICE Collaboration Meeting – March 2021

- *First and above all I wish and hope that you, your Family, Colleagues and Friends are doing well*
- Good Morning, Good Afternoon, Good Evening ...
- ... to the 2<sup>nd</sup> virtual CALICE Meeting
  - ... with participants/connections from eight different time zones
  - CDT, EDT, BST, CET, TRT, MST, CST, JST
- The meeting will show that the pandemic may slow down but will not stop CALICE
- ... and we will see again remarkable progress despite the difficult circumstances!







All planned e+e- facilities feature at least one PFA detector with “CALICE Style” calorimeters

- PFA Calos also under discussion for EIC Detector(s)



## 2020 Strategy Statements

### 4. Other essential scientific activities for particle physics

#### Instrumentation R&D critical for present and future endeavours

- Delivering the near and long-term future research programme requires advances in instrumentation through focused and transformational R&D
- There is a clear need to strengthen existing R&D collaborative structures and to create new ones, and to foster an environment that stimulates innovation and collaboration with industry
- The National Laboratories and research institutes in Europe play a central role by providing access to dedicated infrastructures and test facilities, specialised expertise and user support
- A roadmap should be developed by the community (ECFA's role) taking into account progress with emerging technologies in adjacent fields

c) The success of particle physics experiments relies on innovative instrumentation and state-of-the-art infrastructures. To prepare and realise future experimental research programmes, the community must maintain a strong focus on instrumentation. *Detector R&D programmes and associated infrastructures should be supported at CERN, national institutes, laboratories and universities. Synergies between the needs of different scientific fields and industry should be identified and exploited to boost efficiency in the development process and increase opportunities for more technology transfer benefiting society at large. Collaborative platforms and consortia must be adequately supported to provide coherence in these R&D activities. The community should define a global detector R&D roadmap that should be used to support proposals at the European and national levels.*

19/06/2020

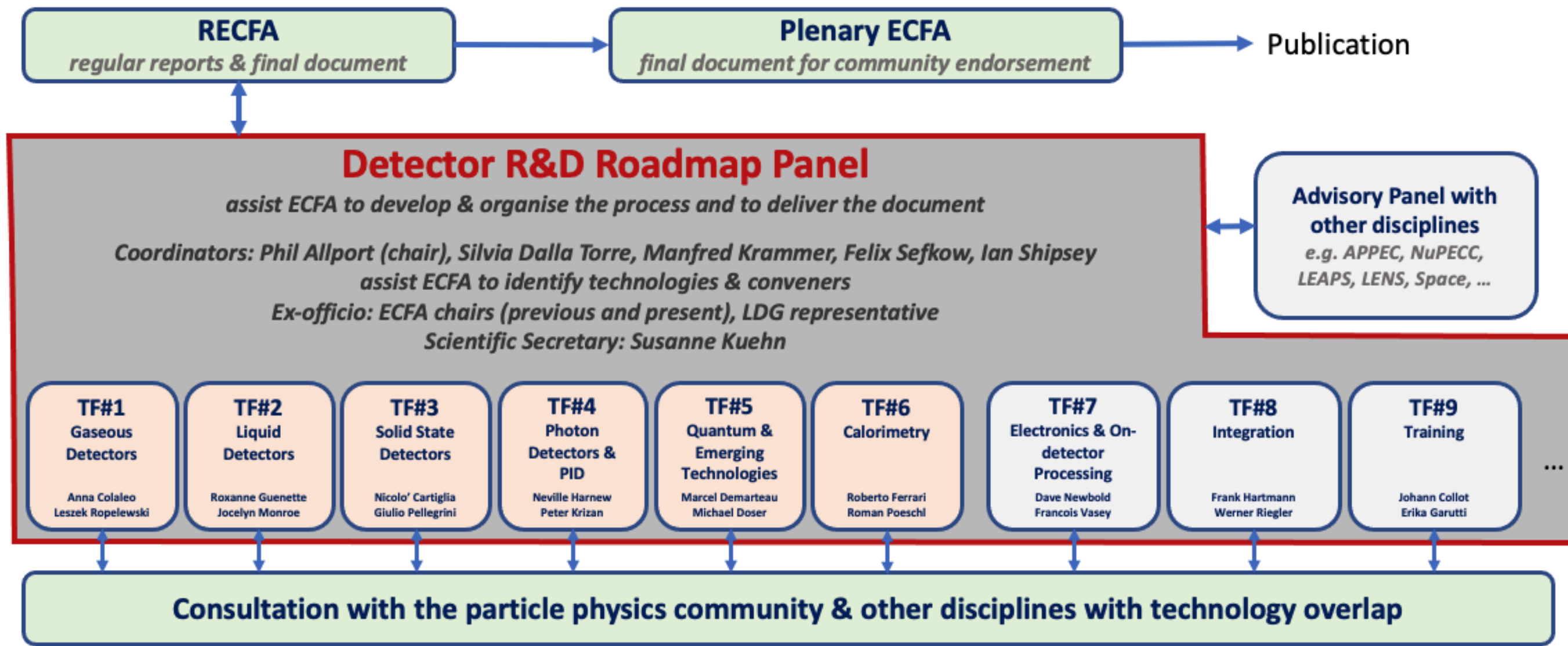
CERN Council Open Session

23

H. Abramowicz, Strategy Secretary

- Establishment of a Detector R&D Roadmap in reply to the update of the EPSSU
  - Roadmap should imagine detectors at future and “very future” (20+ years) projects
- Organised by ECFA
  - Creation after last CALICE Meeting (introduction by Phil Allport)
  - URL: <https://indico.cern.ch/event/957057/>
- Organisation chart see next slide
- Exchange with community through nine symposia (see url above for dates)
  - All are relevant for us since calorimetry fetches from many topics
  - Symposia will start tomorrow and run until the beginning of May
  - Symposium on Calorimetry on 7<sup>th</sup> of May 2021
- More details on Roadmap process by Felix on Wednesday

## Organization to structure the consultation with the community



CALICE well represented in panel



- Three working groups

**WG1: Prelab setup**  
 Chaired by T. Nakada

**WG2: Accelerator**  
 Chaired by S. Michizono

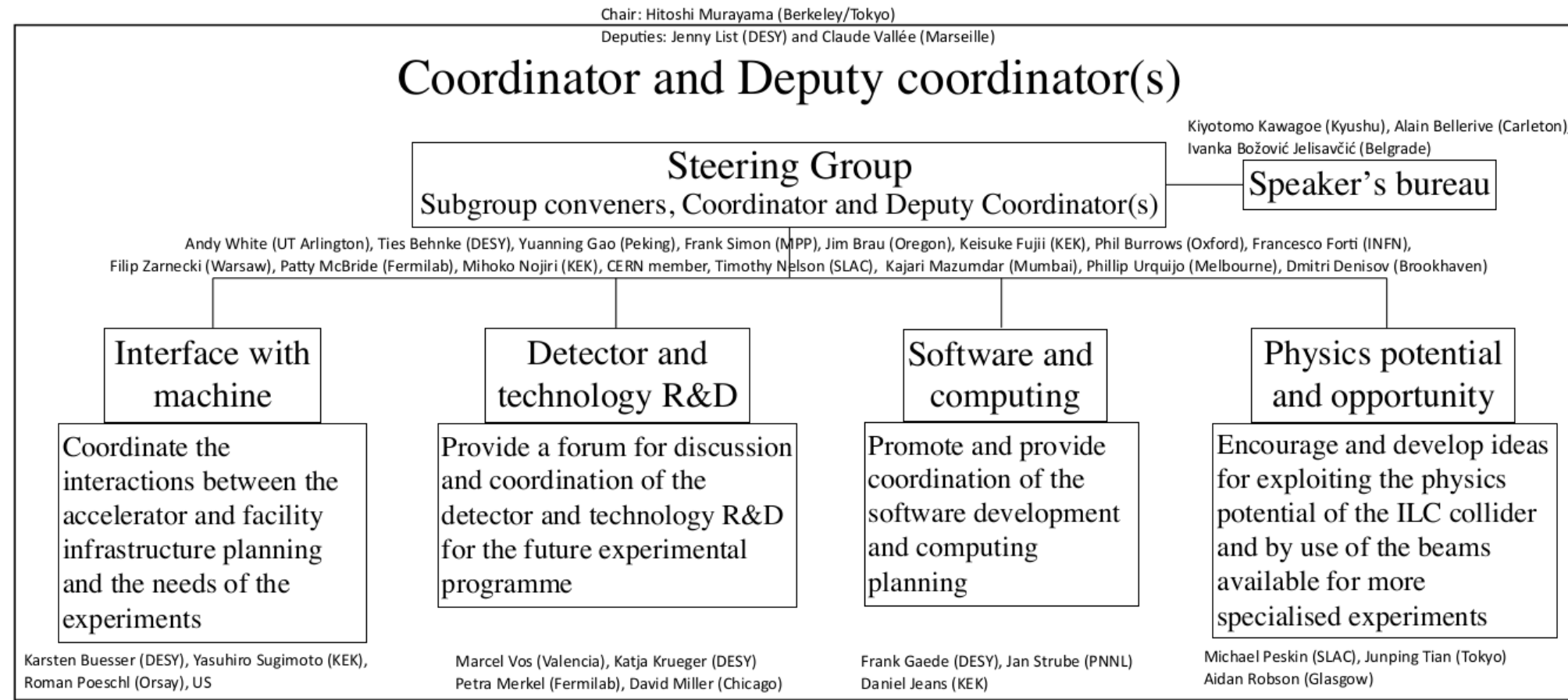
**WG 3: Physics and Detector**  
 Chaired by Hitoshi Murayama

- On Aug 2<sup>nd</sup> 2020 ICFA announces new phase towards Preparation of ILC
- Aug. 20<sup>th</sup> 2020 Formation of International Development Team
  - Under supervision of ICFA
  - Charge is to prepare the ILC Pre-lab

- url: <https://linearcollider.org/team/>



## WG3 Organisation and mandates



- **WG3 got organised over Autumn/Winter 2021**
- **Mandate:** <https://linearcollider.org/idt-wg3-mandate/>
  - In short (my) words: Take stock of what is there but in particular motivate newcomers and fresh ideas
- **Preparation of ILC Workshop on Potential Experiments (ILCX) in Autumn**
- **CALICE well represented in panel**
- **More details by Frank on Wednesday**

- Community study to prepare update of US Strategy on Particle Physics “P5 Process”
  - <https://snowmass21.org/start>
- (For us most relevant)
- Instrumentation Frontier Working Group 6 – Calorimetry
  - Co-chaired by Andy White
- Call for Letters of Interest until 31<sup>st</sup> of August
  - Letters submitted by CALICE
    - Organised through Technical Board
- CALICE got invited for an overview talk on 14<sup>th</sup> of August, talk given by Frank
- Snowmass process put into hibernation mode until Autumn 2021
  - Brief update by Andy on Wednesday



CALICE Letters of Interest submitted to US Snowmass 2021 Community Study (August 31, 2020) · ILC Agenda (Indico) 25/09/2020 23:08

### CALICE Letters of Interest submitted to US Snowmass 2021 Community Study

Monday Aug 31, 2020, 10:00 AM → 8:00 PM Europe/Zurich

10:00 AM → 10:10 AM	Physics potential and prototyping of technological solutions for timing layers in highly granular calorimeters	10m
Lol ID: SNOWMASS21-IFs_IFs_CALICE-038		
 SNOWMASS21-IFs...		
10:10 AM → 10:20 AM	Development of Highly Granular Scintillator Strip Electromagnetic Calorimeter	10m
Lol ID: SNOWMASS21-IFs_IFs_CALICE-058		
 SNOWMASS21-IFs...		
10:20 AM → 10:30 AM	CALICE R&D for a highly granular silicon tungsten electromagnetic calorimeter, SIW-ECAL	10m
Lol ID: SNOWMASS21-IFs_IFs_CALICE-077		
 SNOWMASS21-IFs...		
10:30 AM → 10:40 AM	CALICE R&D for compact readout systems for highly granular calorimeters	10m
SNOWMASS21-IFs_IFs_CALICE-082		
 SNOWMASS21-IFs...		
10:40 AM → 10:50 AM	Developments Towards a SiPM-on-Tile Based Analogue Hadron Calorimeter (AHCAL)	10m
Lol ID: SNOWMASS21-IFs_IFs_CALICE-099		
 SNOWMASS21-IFs...		
10:50 AM → 11:00 AM	Timing Semi-Digital Hadronic Calorimeter (T-SDHCAL)	10m
Lol ID: SNOWMASS21-IFs_IFs_Lokshch-Calice-050		
 SNOWMASS21-IFs...		
11:00 AM → 11:10 AM	High-Granularity Crystal Calorimetry Letter of Intent	10m
Lol ID: SNOWMASS21-IFs_IFs_Yeng_Lie-044		
 SNOWMASS21-IFs...		
11:10 AM → 11:20 AM	Digital Hadron Calorimetry	10m
Lol ID: SNOWMASS21-IFs_IFs_Yasar_Gul-048		
 SNOWMASS21-IFs...		
11:20 AM → 11:30 AM	Towards ultra-high granularity calorimetry	10m
Lol ID: SNOWMASS21-IFs_IFs-067		
 SNOWMASS21-IFs...		
11:30 AM → 11:40 AM	Novel silicon sensors for high-precision 5D calorimetry	10m
Lol ID: SNOWMASS21-IFs_IFs-078		
 SNOWMASS21-IFs...		

<https://agenda.linearcollider.org/event/8647/>

## EC-funded Detector R&D Projects

### PF6: EUDET: 2006-2010

- Detector development for linear collider

### FP7: AIDA: 2011-2014

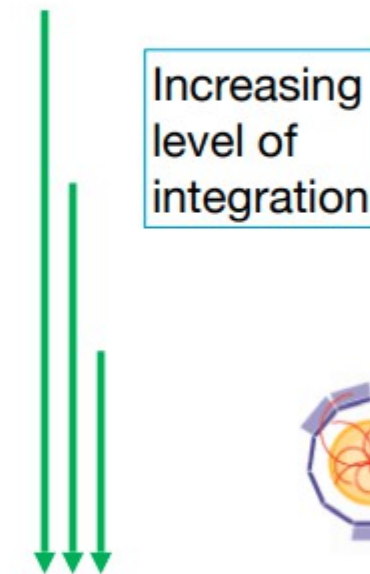
- Detector development for LHC upgrades and linear colliders
- Project-specific work packages

### FP8: AIDA-2020: 2015-2020

- Common LC and LHC work packages
- New communities: large cryogenic neutrino experiments, new topics
- New innovation measures, with industry

**All had a strong leverage on matching funds from national sources typically factor 3**

**There is no other mechanism to provide coherence on European level**



Increasing  
level of  
integration



- **European project AIDAInnova approved in November**
  - Action with 30 MEUR total budget out of which 10 MEUR EU funding
  - Targets advanced communities
  - Thanks to the Project Preparation Team lead by F. Sefkow
- **The plans for CALICE R&D are part of the proposal**
  - Among others ...
  - Workpackages on Gaseous Detectors, Microelectronics, DMAPS
  - **Workpackage on Calorimetry and Particle ID**
    - Lead by K. Kruger, R. Ferrari and R.P.
    - High level electronics integration including spin-offs
    - Large scale scintillator detectors
    - Future R&D on SiPMs
  - Workpackages on Testbeam infrastructure and software
- **Project will start on April 1<sup>st</sup> 2021 and will run for four years**
  - Kick-off meeting 13/4/21 – 16/4/21
  - <https://indico.cern.ch/event/1003419/overview>

- The CNRS/IN2P3 and the German Helmholtz Association are about to found a common research laboratory



**DMLAB CNRS HELMHOLTZ DARK MATTER LAB**

CNRS/IN2P3, DESY, FZ JÜLICH, GSI AND KIT

- DMLAB created technically by CNRS
- MOU under negotiation
- Particle Flow Calorimetry among scientific projects within this IRL
  - Topic carried by CALICE Members
- Kick-off planned 2021

- Reminder: CALICE got invited in 2020 to sign the Diversity Charter formulated by ECFA-NUPECC-APPEC
- Topic(s) has/have been discussed in meeting of CALICE ad-hoc panel on 7/1/21
  - General support to the actions expressed in the Charter
  - Independent of higher level action the topic should be followed up in CALICE  
e.g. formulation of own charter taking example of the ECFA-NUPECC-APPEC Charter
- Note, meanwhile ECFA-NUPECC-APPEC process is about to be revised (in contact with ECFA Chair, Karl Jakobs)
  - No need to sign whatsoever at this point
- Discussion at Institution Board
  - Report from IB tomorrow

- CALICE got invited to join the European ECFA-APPEC-NUPECC effort on recognition of individuals in big collaborations
  - Djamel Boumeddine is member of this working group for ECFA
  - R.P. Participated in meetings in July 2020 and October 2020
- For further information see also
  - <https://www.nikhef.nl/~i93/JENAS/RecognitionJENAS.pdf>
- CALICE Feedback to Questions by ECFA-APPEC-NUPECC Recognition Working Group (November 2020)
  - See: <https://twiki.cern.ch/twiki/pub/CALICE/WebHome/calice-recognition-nov2020.pdf>
- It's not exclusively about Early Career Researchers but we think that Early Career Researchers are most sensible to this topic
- Call for ECR Forum attached to this meeting
  - We have asked Adrian and Marisol to set up this first forum
- Discussion at Institution Board
  - Report from IB tomorrow

- 103 registered participants
  - Agenda organised by IB-Chair, TB-Chair, SpB-Chair and Spokesperson
  - Will go back to classical organisation upon next Face-to-Face Meeting (whenever this will be ...)
- 37 talks in total
  - 29 talks in Technical and Analysis Sessions
  - Strengthening/comeback of activities that were slowed down in recent years (e.g. DHCAL, DECAL)
  - Lots of new ideas/developments/extensions of existing technologies
- Again “Other Application” Session this time
  - LUXE and highly granular calorimeters
- ECR Forum attached to the meeting agenda
- International session on the wider context of our activities



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I wish us all a great CALICE Meeting even if virtual

Backup