

# The Future Circular Collider – A View from CERN Council

- The CERN family will soon include its 25<sup>th</sup> member, Slovenia.
- Two new countries, Chile and Ireland joined Cyprus, Turkije, Pakistan, India, Croatia, Latvia, Lithuania, Brazil and Ukraine as associate members.
- US and Japan continue to contribute significantly in CERN projects and have been awarded the observer status at the council.
- The council convenes four times a year (March, June, September and December) and it is normally with physical presence of the delegations.
- Additional council meetings may be dedicated to important topics (FCC midterm review in Nov. 2023, FCC Feasibility study in Nov. 2025, Update of the ESPP in May 2026).
- The council is aided by its subordinate committees (Science Policy Committee, Finance Committee, Audit Committee).
- New chairs of the Finance and Science Policy Committees will be elected this year to start their term in January 2026 along with the new Director General.

# Strategic Vision Uniting the CERN Council

- Over the past fifty years CERN has established itself as the leading laboratory for fundamental research in High Energy Physics, the primary goal of the lab.
- CERN is also playing a key role in introducing and promoting high technology techniques and designs in the EU industry and society. This is recognized by the member states which generously maintain the CERN funding but also in EU strategy papers ( Draghi report etc).
- The CERN council is united in the vision to maintain the leading role of CERN also in the future.
- The CERN council is also united to maintain the European character of CERN.

# European Strategy for Particle Physics 2020

- An electron-positron Higgs factory is the highest-priority next collider. For the longer term, the European particle physics community has the ambition to operate a proton-proton collider at the highest achievable energy. Accomplishing these compelling goals will require innovation and cutting-edge technology.
- ***Europe, together with its international partners, should investigate the technical and financial feasibility of a future hadron collider at CERN with a centre-of-mass energy of at least 100 TeV and with an electron-positron Higgs and electroweak factory as a possible first stage. Such a feasibility study of the colliders and related infrastructure should be established as a global endeavour and be completed on the timescale of the next Strategy update.***
- Based on this the council approved the FCC feasibility study with an initial budget of 100 MCHF for 5 years and on behalf of the council I would like to congratulate you for completing it earlier than in 5 years and thus providing an important input to the ESPP but also to the council deliberations in a timely way.

# The Council Follows Closely the Progress FCC Feasibility Study

- In every council meeting since the start of the feasibility study we were happy to receive detailed presentations on the progress of the project.
- The council also received regular presentations by the management regarding possible governance models as well as possible funding models for FCC.
- Two council retreat meetings (2023, 2024) were dedicated to governance and finance models.
- The FCC midterm review was presented in a dedicated council in November 2023 and the council was impressed by the demonstrated progress and the positive reports from the scientific and financial review panels.
- The final results will be shown in a dedicated council in November 2025.
- Further funding for the project as well as decisions milestones will be discussed in the June 2025 council along with the CERN Medium Term Plan.

# European Strategy for Particle Physics 2025

- It was launched by the council aiming to update the ESPP and asked the community to present hierarchically their preferred options for the next collider.
- The High Energy Physics community has been very active submitting many contributions.
- They will be discussed in meeting in Venice during the last week in June 2025.
- A drafting session has been scheduled for December 2025 in Monte Verita Ascona where process will be concluded.
- A dedicated council meeting has been planned for May 2026 in Budapest to update the European Strategy.
- The FCC proposal will be a major contribution.

# The Role of FCC in the ESPP

- As stated the council is united both in maintaining the leading role of CERN worldwide and preserving the European character of CERN.
- The FCC design which combines of  $e^+e^-$  and pp collider modes is certainly the best way in making CERN the center of HEP in the 21<sup>st</sup> century.
- It is not an exaggeration that your group is writing history and can potentially influence and future of all HEP (if at the end the FCC is approved).
- Such an outcome will maintain the role of CERN as the magnet for ambitious persons who are highly skilled and motivated. The contribution of such as center in the European technological independence is incalculable.

# Next Two Years

- The next two years are critical for FCC and the ESPP in general.
- It is well known that there is no consensus in the council for going ahead with FCC and there is not yet consensus in the community.
- The main issue is related to the affordability of the FCC.
- Two critical steps will point to the way forward
  - The results of the feasibility study along with the associated panel reports will be presented to the council in November 2025
  - The council meeting in May 2026 with topic the update of the ESPP.
- Thereafter the ability of the CERN management to attract external collaborators who could provide significant contributions to the FCC project is critical.
- This is closely related to the governance question of the next flagship project of CERN and clearly it involves negotiations between CERN potential contributors which may be states or private entities.
- Throughout this time the CERN council will be closely involved in defining the terms of the negotiations and intervening as needed to express the will of the member states.

On behalf of the CERN Council I would like to congratulate you for the high quality R&D you have done towards an FCC at CERN.

Your input is defining for our future.

I wish you a very productive FCC meeting here in Vienna.