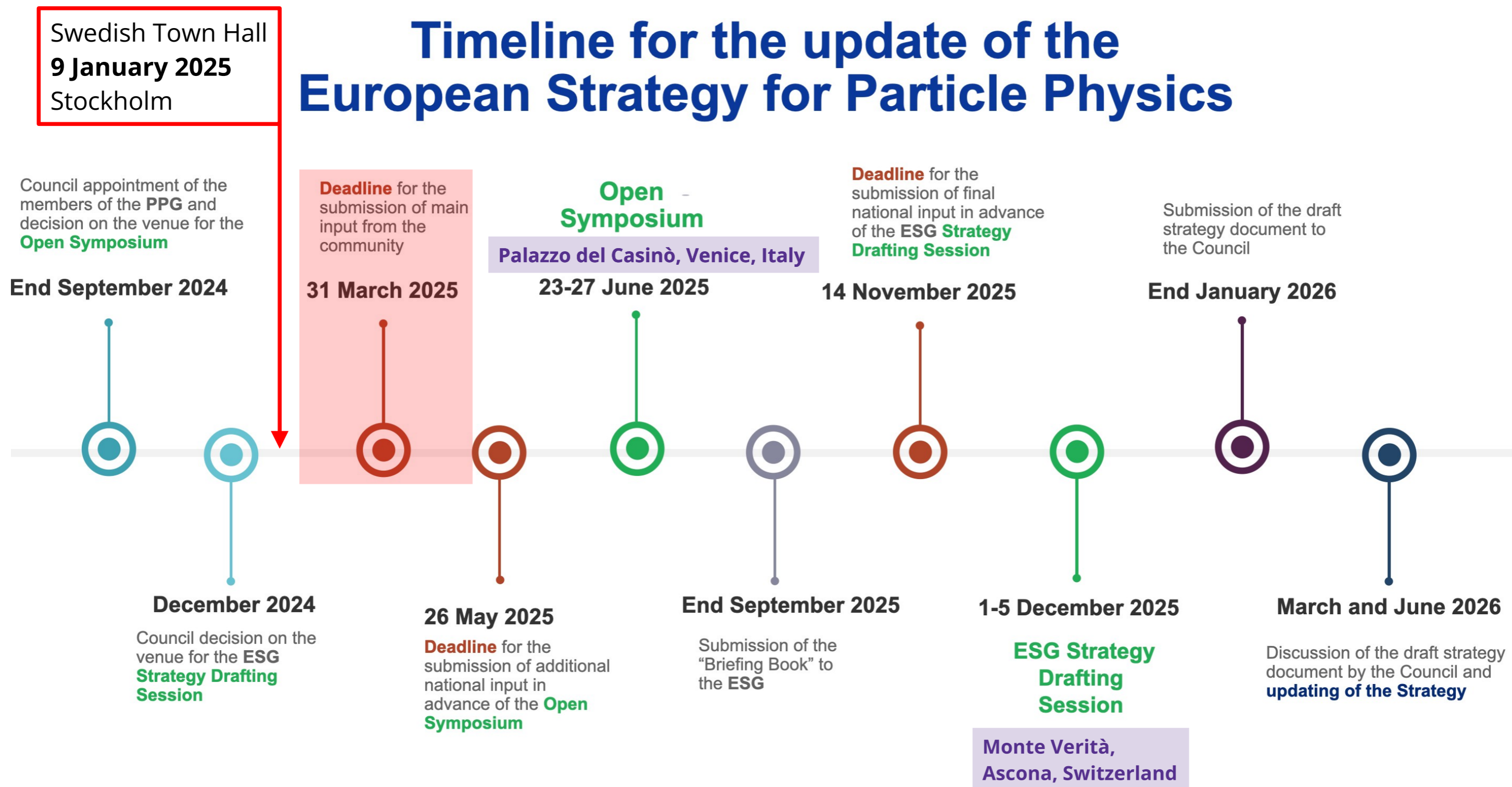


Timeline for the update of the European Strategy for Particle Physics



European Strategy Group (ESG)

- Task of the European Strategy Group (ESG) to establish a proposal for the update of the ESPP and submit it to the CERN Council for approval.
- Assisted by the Physics Preparatory Group (PPG) that will write the Physics Briefing Book.

Member States	
Austria	Prof. Jochen Schieck
Belgium	Prof. Pierre Van Mechelen
Bulgaria	Prof. Venelin Kozhuharov
Czech Republic	Prof. Rupert Leitner
Denmark	Prof. Jens-Jørgen Gaardhøje
Estonia	Prof. Martti Raidal
Finland	Prof. Katri Huitu
France	Dr Christelle Roy
Germany	Prof. Klaus Desch
Greece	Prof. Costas Fountas
Hungary	Prof. Dezső Varga
Israel	Prof. Marek Karliner
Italy	Prof. Antonio Zoccoli
Netherlands	Prof. Eric Laenen
Norway	Prof. Heidi Sandaker
Poland	Prof. Tadeusz Lesiak
Portugal	Prof. Mário Pimenta
Romania	Dr Calin Alexa
Serbia	Dr Lidija Zivkovic
Slovakia	Dr Marek Bombara
Spain	Dr Maria Jose Costa
Sweden	Prof. Richard Brenner
Switzerland	Prof. Ben Kilminster
United Kingdom	Prof. Mark Lancaster

CERN Director-General	Dr Fabiola Gianotti
CERN Director-General-Elect	Prof. Mark Thomson

Major European National Labs	
CIEMAT	Dr Nicanor Colino
DESY	Prof. Beate Heinemann
IJCLab	Prof. Achille Stocchi
IRFU	Prof. Franck Sabatié
LNF	Dr Sandra Malvezzi
LNGS	Prof. Ezio Previtali
NIKHEF	Prof. Jorgen D'Hondt
PSI	Prof. Klaus Kirch
STFC-RAL	Prof. Dave Newbold
STFC-Daresbury Lab.	Prof. Jim Clarke

Strategy Secretariat Members	
Strategy Secretary (ESG Chair)	Prof. Karl Jakobs
SPC Chair	Dr Hugh Montgomery
LDG Chair	Prof. Dave Newbold
ECFA Chair	Prof. Paris Sphicas

ESG INVITEES

President of the CERN Council	Prof. Eliezer Rabinovici
Associate Member States in the pre-stage to Membership	
Cyprus	Prof. Panos Razis
Slovenia	Prof. Borut Paul Kerševan
Associate Member States	
Brazil	Prof. Leandro Salazar de Paula
Croatia	Dr Budimir Kliček
India	tbc
Latvia	Ms Antra Gaile
Lithuania	Dr Andrius Juodagalvis
Pakistan	Dr Masood Iqbal/Dr Zafar Yasin
Türkiye	Dr Bahadır Saygı
Ukraine	Prof. Borys Grynyov
Observer States	
Japan	Dr Kazunori Hanagaki
United States of America	Prof. Michael Tuts
Organisations with Observer status	
European Commission	Ms Patricia Postigo McLaughlin
Other invitees	
Chair APPEC	Prof. Carlos Peña Garay
Chair NuPECC	Prof. Eberhard Widmann
Chair ESFRI	Prof. José Luis Martínez
Other members of the PPG (in addition to the Strategy Secretariat)	

- The Strategy Secretariat has also launched nine working groups.

Working Group	Co-convener (PPG member)	Co-convener	Scientific Secretary
Electroweak physics	Monica Dunford (DE, exp)	Jorge de Blas (ES, theory)	Emanuele Bagnaschi (IT)
Strong interaction	Cristinel Diaconu (FR, exp)	Andrea Dainese (IT, exp, HI)	Chiara Signorile-Signorile (DE)
Flavour physics	Gino Isidori (CH, theory)	Marie-Hélène Schune (FR, exp)	Maria Piscopo (NL)
BSM physics	Fabio Maltoni (BE/IT, theory)	Rebeca Gonzalez Suarez (SE, exp)	Benedikt Maier (UK)
Neutrino physics and cosmic messengers	Pilar Hernandez (ES, theory)	Sara Bolognesi (FR, exp)	Ivan Esteban (ES)
Dark matter and dark sector	Jocelyn Monroe (UK, exp)	Matthew McCullough (CERN, theory)	Yohei Ema (CERN)
Accelerator science and technology	Gianluigi Arduini (CERN, acc)	Phil Burrows (UK, exp, acc)	Jacqueline Keintzel (CERN)
Detector instrumentation	Thomas Bergauer (AT, exp)	Ulrich Husemann (DE, exp)	Dorothea vom Bruch (FR)
Computing	Tommaso Boccali (IT, exp, comp)	Borut Kersevan (SL, exp, comp)	Daniel Thomas Murnane (DK)

- **National inputs to the ESPP update can be sent at different points in time: prior to the deadline of 31 March 2025 for the submission of input to the ESPP; after the March 2025 deadline and by 26 May at the latest, so it can be analysed by the ESG in time for the Open Symposium; after the Briefing Book has been released, in time for the Strategy Drafting Session from 1-5 December 2025. The final deadline for input to be considered by the ESG at its Drafting Session is 14 November 2025.**

- **1) Organization of national and/or regional meetings**

- a) It is suggested that two national ("town-hall" or similar) meetings be organised (clearly, each country/region remains at liberty to decide on the number):
 - i) one meeting between the end of March 2025 and the Open Symposium at the end of June, with a deadline for comments by 26 May, and
 - ii) a second one after the release of the Briefing Book around the end of September 2025, with a deadline of 14 November 2025.
- b) The meeting(s) could/should be co-organised by the Restricted ECFA delegate and the country's representative on the ESG (for some countries this is the same person).
- c) The meeting(s) should be guided by a set of "standard questions" to be considered.
- d) Potentially, and if deemed useful, the November 2024 Plenary ECFA meeting could be used to further guide and assist with this process.

- **2) The ESG's remit explicitly states that "The Strategy update should include the preferred option for the next collider at CERN and prioritised alternative options to be pursued if the chosen preferred plan turns out not to be feasible or competitive".**

- It is imperative that the European HEP community should provide explicit feedback on both the preferred and alternative options for this "next collider at CERN", which will be the Laboratory's next flagship project, and an explanation of any specific prioritisation.

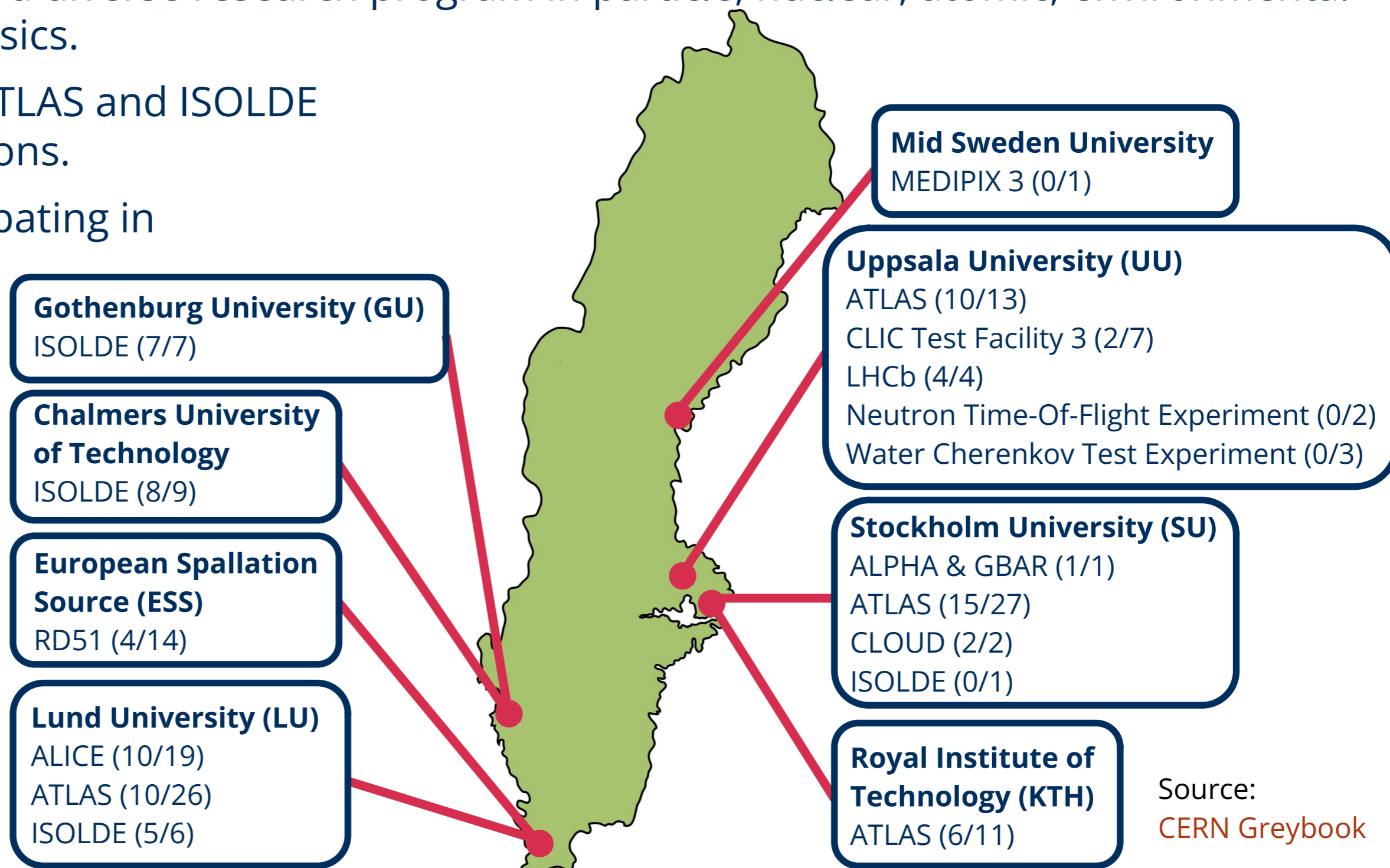
- **3) Questions to be considered by countries/regions when forming and submitting their “national input” to the ESPP:**
 - a) Which is the preferred next major/flagship collider project for CERN?
 - b) What are the most important elements in the response to 3a)?
 - i) Physics potential
 - ii) Long-term perspective
 - iii) Financial and human resources: requirements and effect on other projects
 - iv) Timing
 - v) Careers and training
 - vi) Sustainability
 - c) Should CERN/Europe proceed with the preferred option set out in 3a) or should alternative options be considered:
 - i) if Japan proceeds with the ILC in a timely way?
 - ii) if China proceeds with the CEPC on the announced timescale?
 - iii) if the US proceeds with a muon collider?
 - iv) if there are major new (unexpected) results from the HL-LHC or other HEP experiments?
 - d) Beyond the preferred option in 3a), what other accelerator R&D topics (e.g. highfield magnets, RF technology, alternative accelerators/colliders) should be pursued in parallel?
 - e) What is the prioritised list of alternative options if the preferred option set out in 3a) is not feasible (due to cost, timing, international developments, or for other reasons)?
 - f) What are the most important elements in the response to 3e)? (The set of considerations in 3b should be used).

National Input - Non-Collider Program

- **4) The remit given to the ESG also specifies that “The Strategy update should also indicate areas of priority for exploration complementary to colliders and for other experiments to be considered at CERN and at other laboratories in Europe, as well as for participation in projects outside Europe.” It would thus be most useful if the national inputs explicitly included the preferred prioritisation for non-collider projects. Specific questions to address:**
 - a) What other areas of physics should be pursued, and with what relative priority?
 - b) What are the most important elements in the response to 4a)? (The set of considerations in 3b should be used).
 - c) To what extent should CERN participate in nuclear physics, astroparticle physics or other areas of science, while keeping in mind and adhering to the CERN Convention? Please use the current level and form of activity as the baseline for comparisons.



- CERN founded in 1954. Sweden is one of the 12 founding members of CERN.
- Swedish groups run a diverse research program in particle, nuclear, atomic, environmental and accelerator physics.
- Involved in ALICE, ATLAS and ISOLDE since their foundations.
- Sweden also participating in ALPHA, AWAKE, CLIC, CLOUD, GBAR, HL-LHC and LHCb.



Source:
CERN Greybook