



REPORT FROM CERN

Latest Developments and Prospects

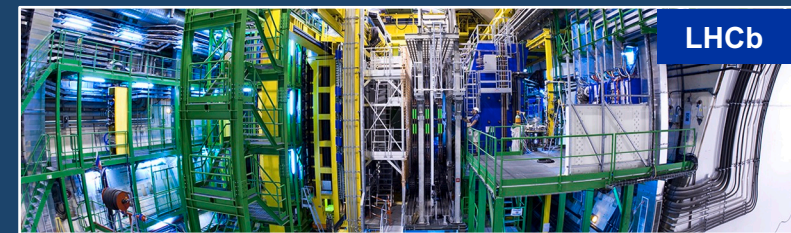
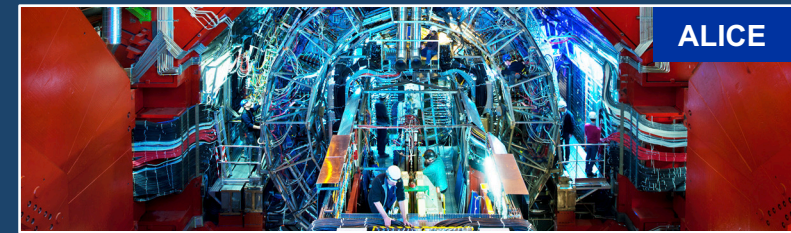
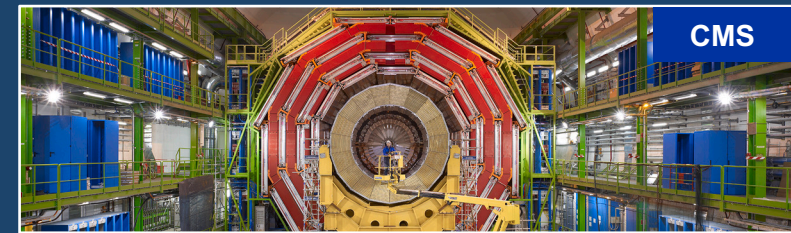
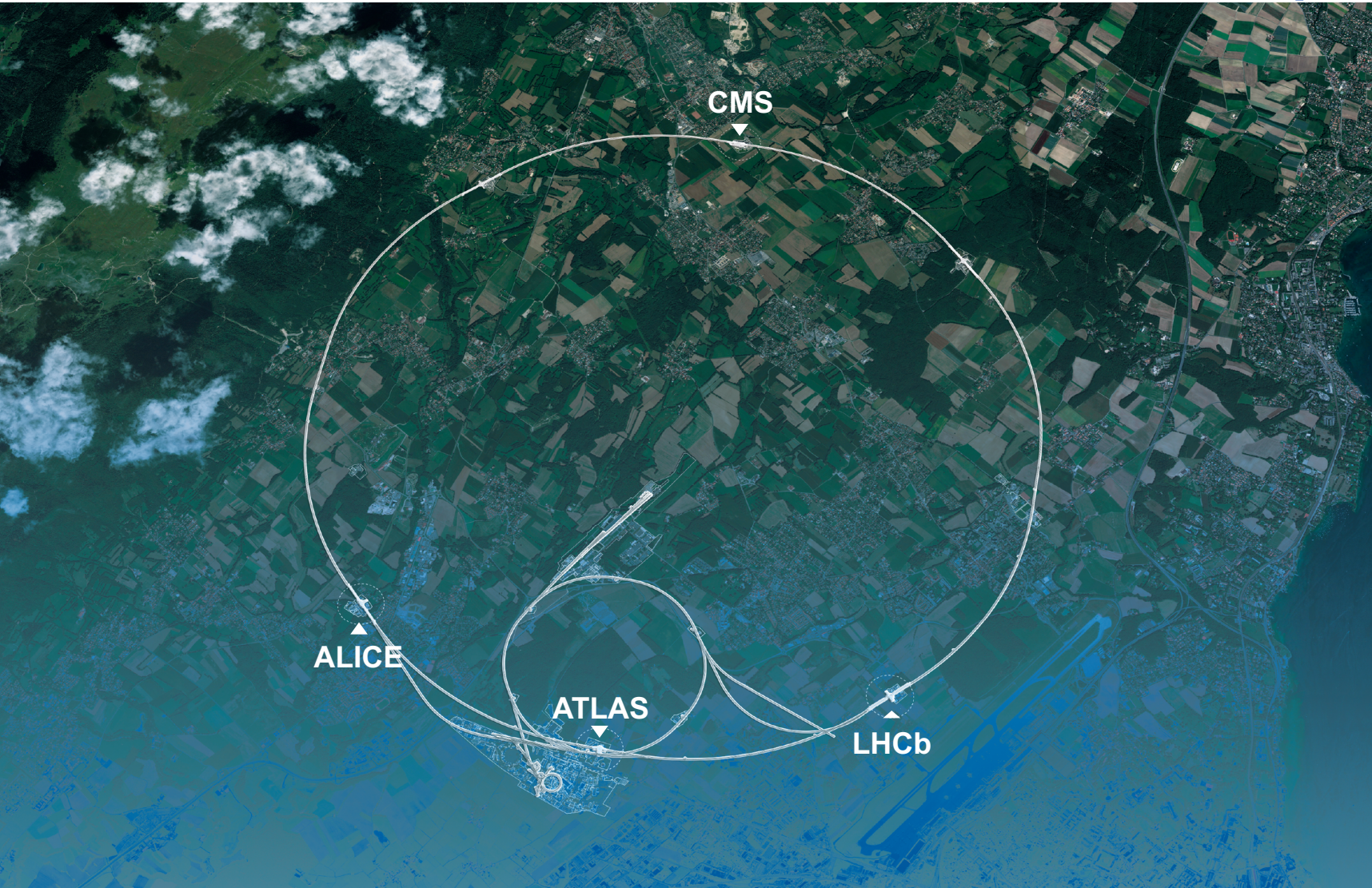
Emmanuel Tsesmelis

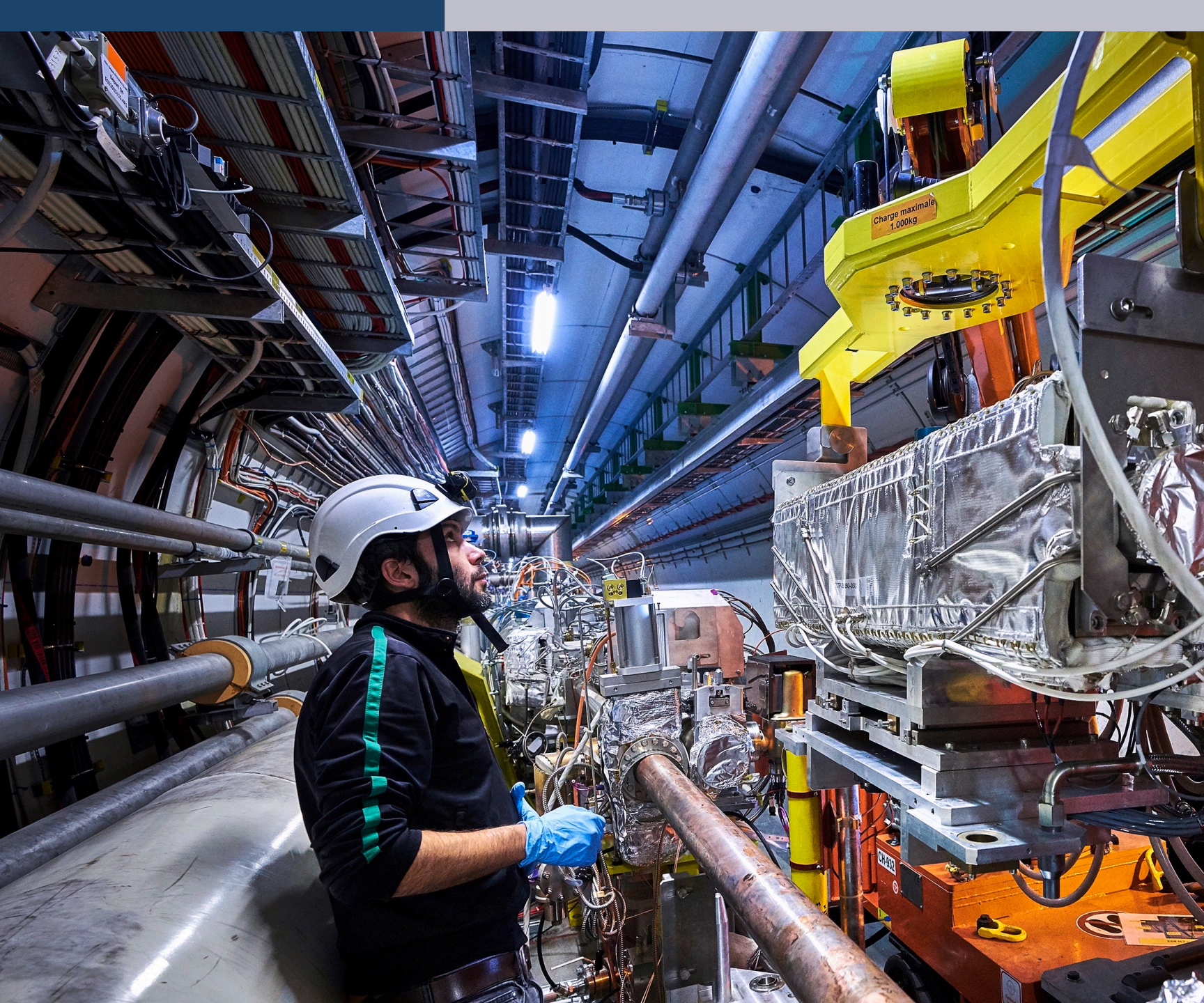
Head of Associate Member and Non-Member State Relations

9th Joint CERN-Cyprus Committee

3 June 2021

Giant detectors record the particles produced at the four collision points





Upgrade to the High-Luminosity LHC is under way

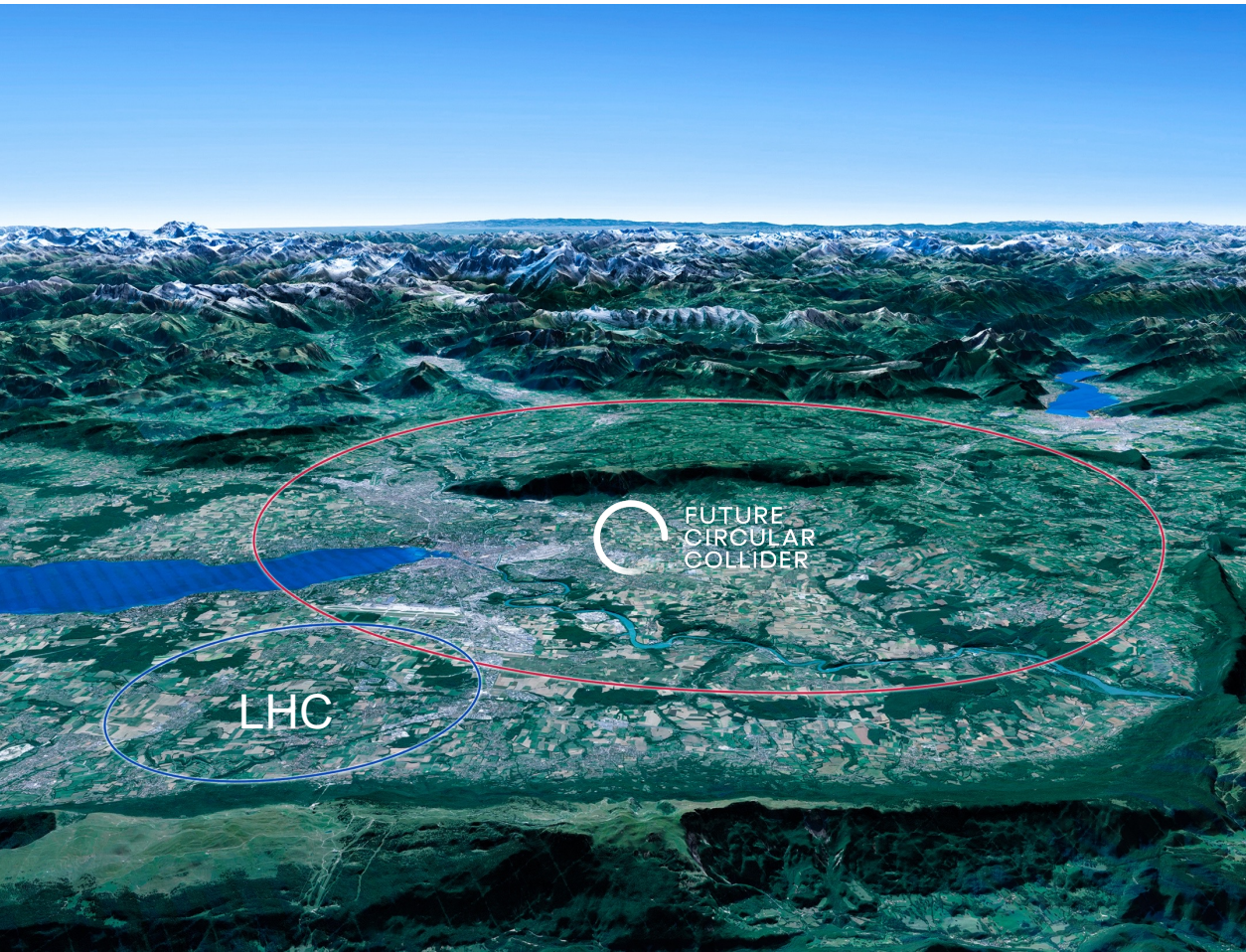
- The HL-LHC will use new technologies to provide 10 times more collisions than the LHC.
- It will provide greater precision and discovery potential.
- It will start operating in 2027 and run until 2040.



Scientific priorities for the future

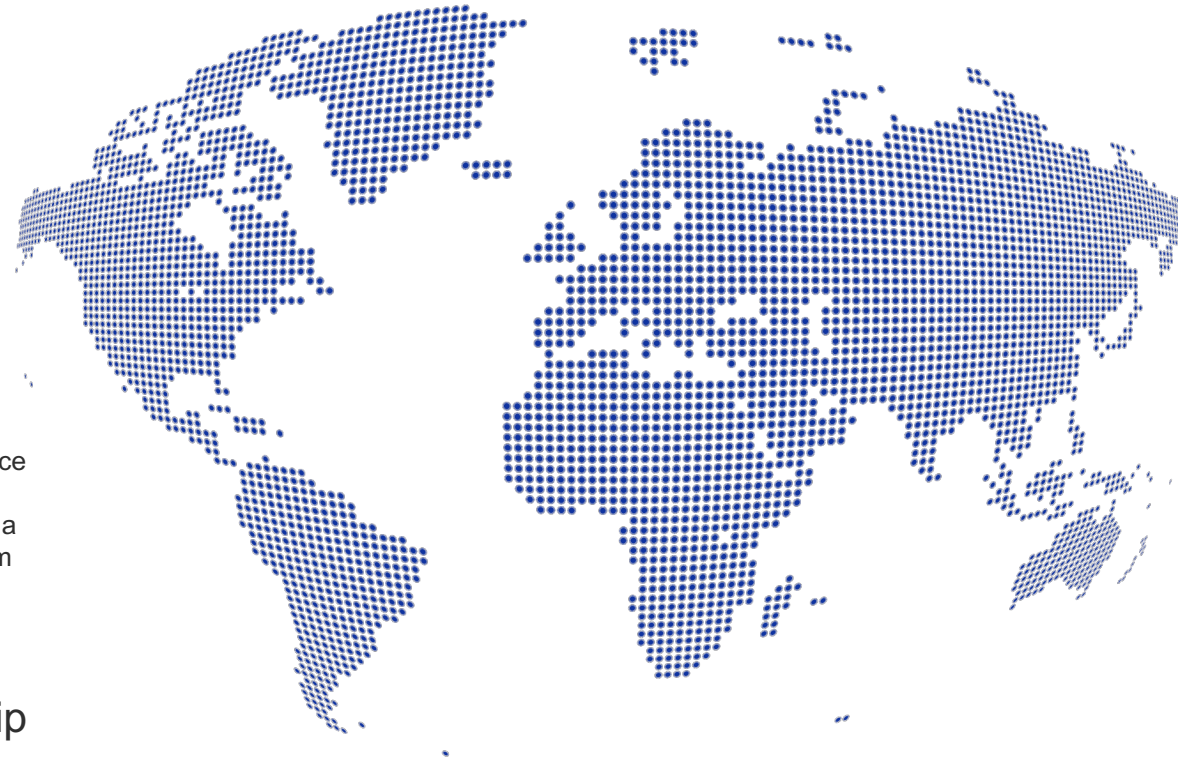
Implementation of the recommendations
of the **2020 Update of the European Strategy
for Particle Physics:**

- Fully exploit the HL-LHC
- Build a Higgs factory to further understand this unique particle
- Investigate the technical and financial feasibility of a future energy-frontier 100 km collider at CERN
- Ramp up relevant R&D
- Continue supporting other projects around the world



Science for peace

CERN was founded in 1954 with 12 European Member States



23 Member States

Austria – Belgium – Bulgaria – Czech Republic
Denmark – Finland – France – Germany – Greece
Hungary – Israel – Italy – Netherlands – Norway
Poland – Portugal – Romania – Serbia – Slovakia
Spain – Sweden – Switzerland – United Kingdom

3 Associates Member States in the pre-stage to membership

Cyprus – Estonia – Slovenia

6 Associate Member States

Croatia – India – Lithuania – Pakistan – Turkey – Ukraine

6 Observers

Japan – Russia – USA
European Union – JINR – UNESCO

More than 50 Cooperation Agreements with non-Member States and Territories

Albania – Algeria – Argentina – Armenia – Australia – Azerbaijan – Bangladesh – Belarus – Bolivia
Bosnia and Herzegovina – Brazil – Canada – Chile – Colombia – Costa Rica – Ecuador – Egypt – Georgia – Iceland
Iran – Jordan – Kazakhstan – Latvia – Lebanon – Malta – Mexico – Mongolia – Montenegro – Morocco – Nepal
New Zealand – North Macedonia – Palestine – Paraguay – People's Republic of China – Peru – Philippines – Qatar
Republic of Korea – Saudi Arabia – Sri Lanka – South Africa – Thailand – Tunisia – United Arab Emirates – Vietnam

CERN's annual budget
is 1200 MCHF (equivalent
to a medium-sized European
university)

As of 31 December 2020
Employees:
2635 staff, **756** fellows

Associates:
11 399 users, **1687** others

A laboratory for people around the world

Distribution of all CERN Users by the country of their home institutes as of 31 December 2020



Geographical & cultural diversity
Users of **110 nationalities**
~ 23% women

Member States **6632**

Austria 82 – Belgium 122 – Bulgaria 37 – Czech Republic 221
Denmark 35 – Finland 79 – France 794 – Germany 1185
Greece 138 – Hungary 67 – Israel 63 – Italy 1388
Netherlands 166 – Norway 78 – Poland 272 – Portugal 80
Romania 99 – Serbia 35 – Slovakia 66 – Spain 325
Sweden 96 – Switzerland 329 – United Kingdom 875

Associate Member States **27** in the pre-stage to membership

Cyprus 11 – Estonia 26 – Slovenia 16

Associate Member States **390**

Croatia 38 – India 151 – Lithuania 13 – Pakistan 35
Turkey 124 – Ukraine 29

Observers **3071**

Japan 211 – Russia 1021 – United States of America 1839



Other countries **1279**

Algeria 2 – Argentina 15 – Armenia 10 – Australia 23 – Azerbaijan 2 – Bahrain 2 – Belarus 26 – Brazil 108
Canada 196 – Chile 22 – Colombia 15 – Cuba 3 – Ecuador 4 – Egypt 14 – Georgia 35
Hong Kong 20 – Iceland 3 – Indonesia 7 – Iran 13 – Ireland 6 – Kuwait 2 – Latvia 6 – Lebanon 17
Malaysia 4 – Malta 3 – Mexico 49 – Montenegro 5 – Morocco 18 – New Zealand 11 – Oman 1
People's Republic of China 334 – Peru 2 – Puerto Rico 2 – Republic of Korea 132 – Singapore 3
South Africa 57 – Sri Lanka 8 – Taiwan 50 Thailand 16 – United Arab Emirates 2

Membership

Estonia

- On 19 June 2020 the DG and the Prime Minister of Estonia **signed an agreement** admitting Estonia as an Associate Member State in the pre-stage to Membership.
- The agreement entered into force on **1 February 2021**.
- Expect Estonia to accede to Membership in about **two years** (minimum period stipulated by CERN's geographical enlargement policy).



On the occasion of the notification of Associate Membership to CERN, the **Estonian Permanent Representative** Ms Katrin Saarsalu-Layachi visited CERN on 1 February 2021.

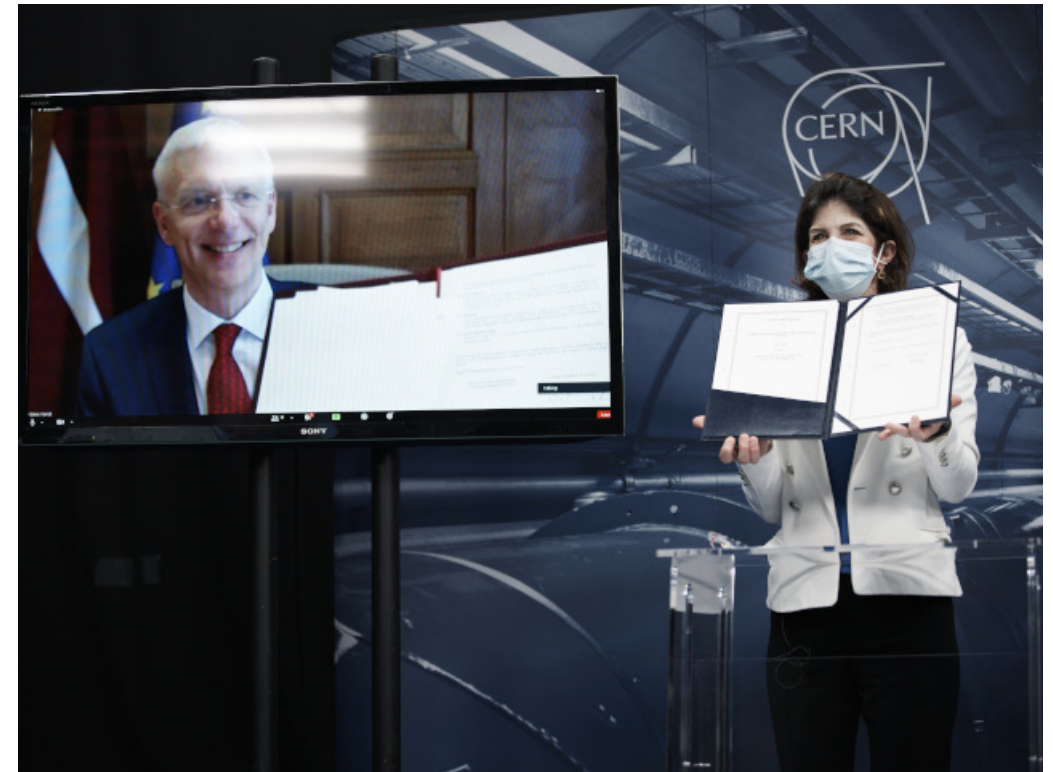
Associate Membership

Latvia

- **Associate Membership Agreement signed on 14 April 2021.**
- Associate Membership will **enter into force** once CERN has been informed officially that all the necessary accession and ratification processes have been completed by Latvia. Expected in **2021, most likely Q3/Q4.**

CERN is continuing to engage in discussions with **Brazil** for Associate Membership as a high priority.

Egypt has expressed interest in Associate Membership of CERN.



HE Arturs Krišjānis Kariņš **Prime Minister of Latvia**, on the occasion of the remote signature of the agreement between Latvia and CERN concerning the granting of the status of Associate Member State (**14 April 2021**).

Observer Status for States

CERN's **geographical enlargement policy** stipulates that Observer status retained for States making '**substantial contributions**' to major CERN projects.

Informed **Japan, Russian Federation and USA**, which currently hold Observer status with special attendance rights in recognition of their substantial financial contributions to the LHC.

In September 2020, Council **granted the USA Observer status** in respect of the **HL-LHC**, for the duration of its construction & operation, in addition to the Observer status that the USA already holds in respect of the LHC.

International Cooperation Agreements (ICAs)

Bosnia & Herzegovina

- **ICA signed** with Bosnia & Herzegovina concerning scientific and technical cooperation in high-energy physics on 16 February 2021.

Bahrain, Honduras, Sudan

ICAs are under consideration.



HE Ankica Gudeljević, **Minister of Civil Affairs** of Bosnia and Herzegovina, signed the ICA