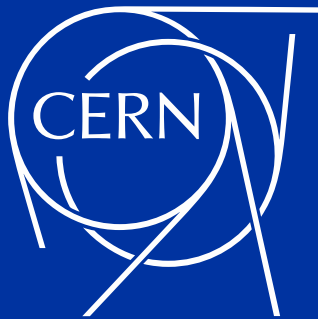




Listening to the Universe: Civil Engineering for the Einstein Telescope

John Osborne – CERN

30th September 2026

Meet the presenters



**John
Osborne**

**Fellow ICE
ICE Switzerland
Country Rep
Senior Civil
Engineer at CERN**



**Patrick
Werneke**

**Senior Engineer at
Nikhef, dedicated to
the design and
development of the
Einstein Telescope**



**Tamara
Bud**

**Chartered Civil
Engineer at CERN
involved in the
development and
planning of the
Einstein Telescope**

What is CERN?

CERN sits on the border of France and Switzerland

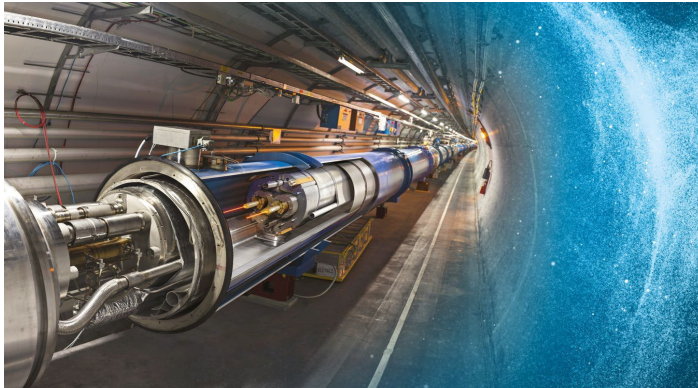
For 70+ years it has been the foremost experimental facility for particle physics in the world

CERN is made up of 25 member states, 2676 staff members and 11,175 users

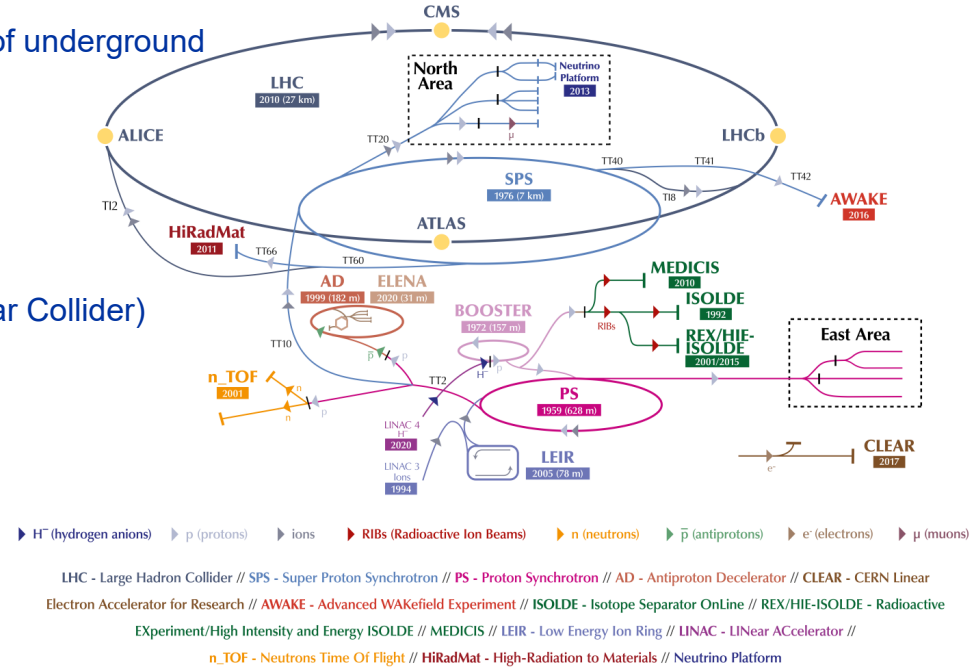


Why CERN?

- The CERN accelerator complex is composed of over 70km of underground tunnels.
- Most recently constructed, the LEP now LHC tunnel.
 - 27km circumference
 - 50-175m depth
 - 3.8m $\varnothing$ tunnels
 - Constructed through Molasse and Limestone
- Advanced planning for new 91km accelerator (Future Circular Collider)



The CERN accelerator complex
Complexe des accélérateurs du CERN



This all makes CERN the perfect civil engineering advisor for future experimental facilities

CERN and Einstein Telescope

- CERN **provides support** in the civil engineering activities required for the **design development** of ET (Vacuum, Mechanical, Safety Systems, CE) etc
- **Site independent**
- **Support** for the ET **Engineering Department**
- Advice on **shared design platforms**
- **Technical reviews** of civil engineering **reports**
- **Technical input** where appropriate

