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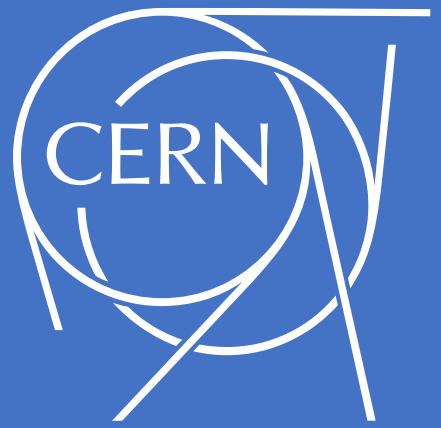
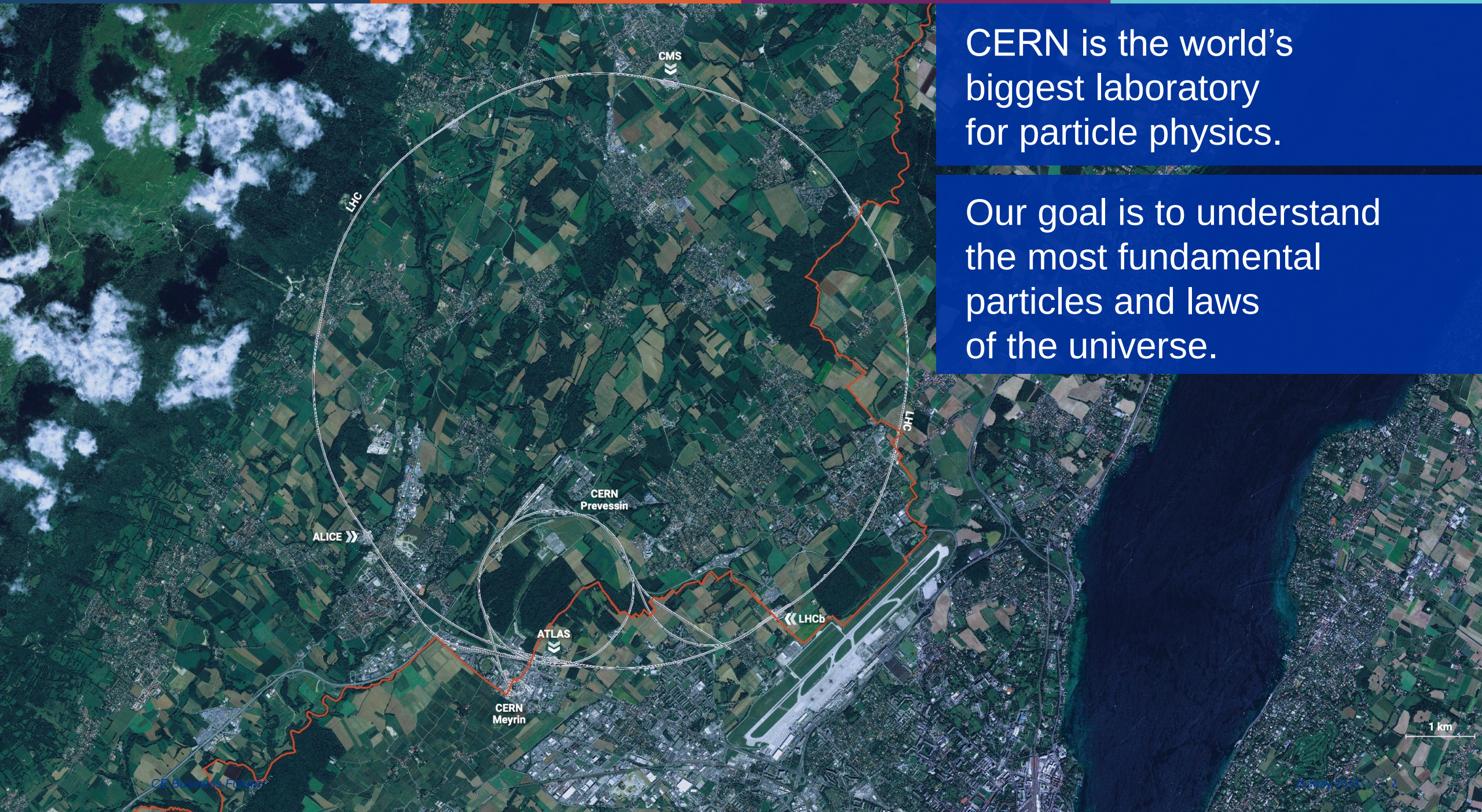


Site and Civil Engineering Department

CERN Civil Engineering Business Forum on 25-26 May 2023

Dr Mar Capeans



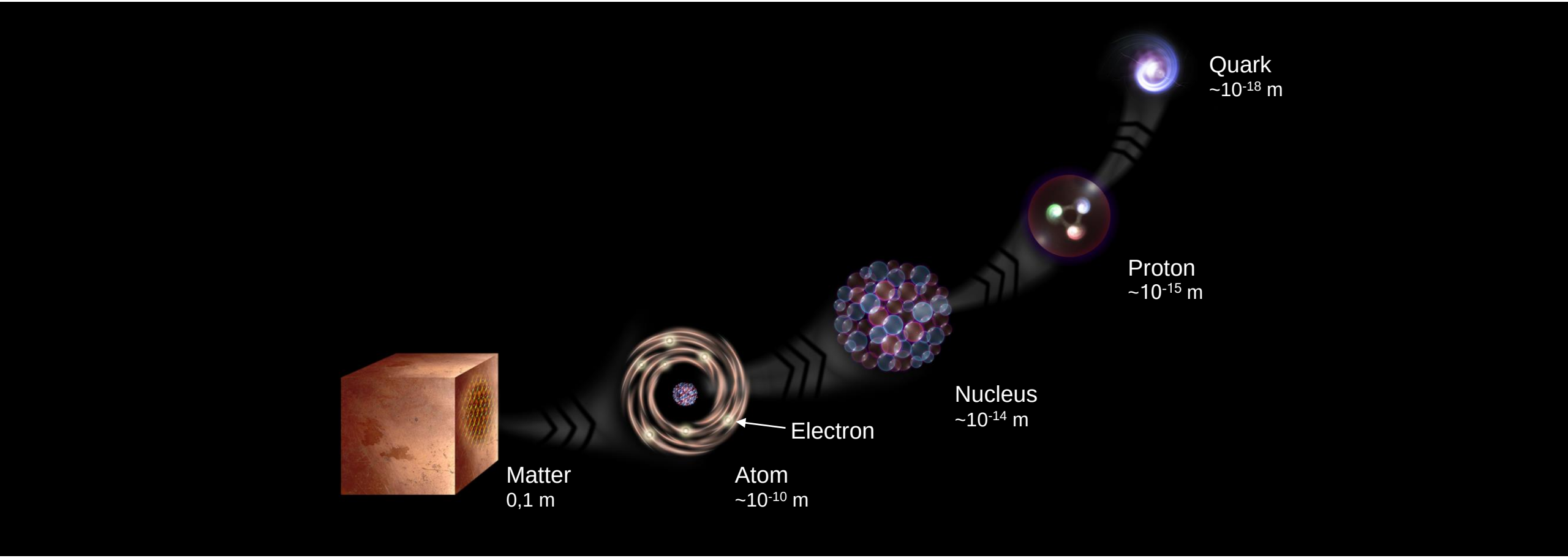
CERN is the world's biggest laboratory for particle physics.

Our goal is to understand the most fundamental particles and laws of the universe.

Four pillars underpin CERN's mission

What is the universe made of?

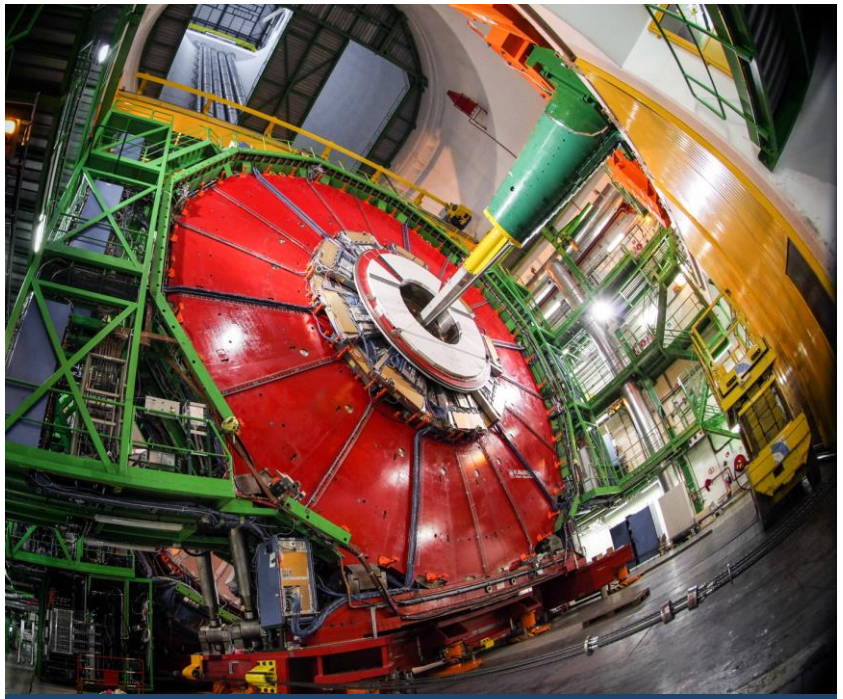
We study the elementary building blocks of matter and the forces that control their behaviour



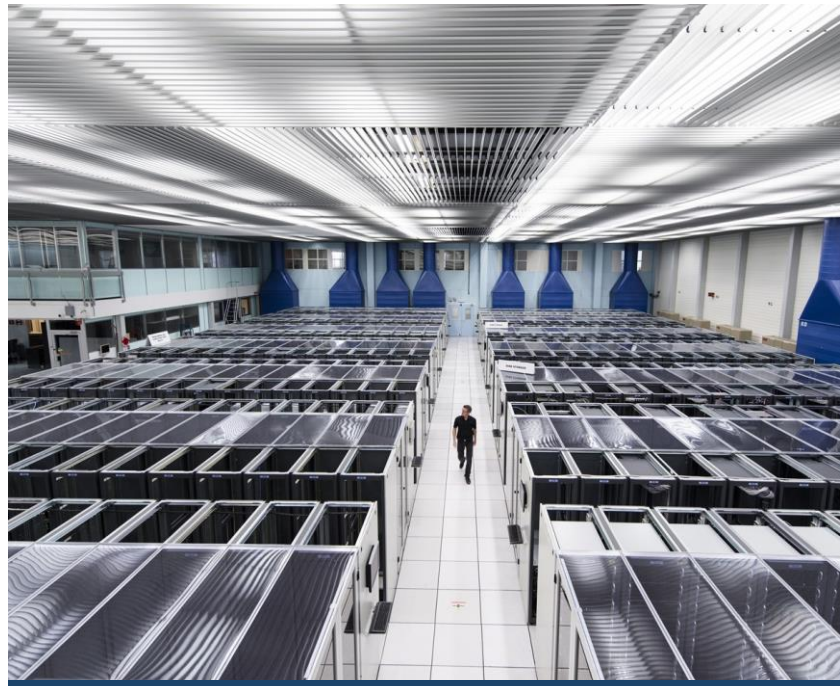
How do we do it?

- We build the largest machines to study the smallest particles in the universe
- We develop technology to advance the limits of what is possible

ACCELERATORS



DETECTORS



COMPUTING

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 Associate Member States in the pre-stage to membership

Cyprus – Estonia – Slovenia

7 Associate Member States

Croatia – India – Latvia – Lithuania – Pakistan
Türkiye – Ukraine

6 Observers

Japan – Russia (suspended) – USA
European Union – JINR (suspended) – UNESCO

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

As of 31 December 2022
Employees:
2658 staff, **900** fellows

Associates:
11 860 users, **1516** others

Around 50 Cooperation Agreements with non-Member States and Territories

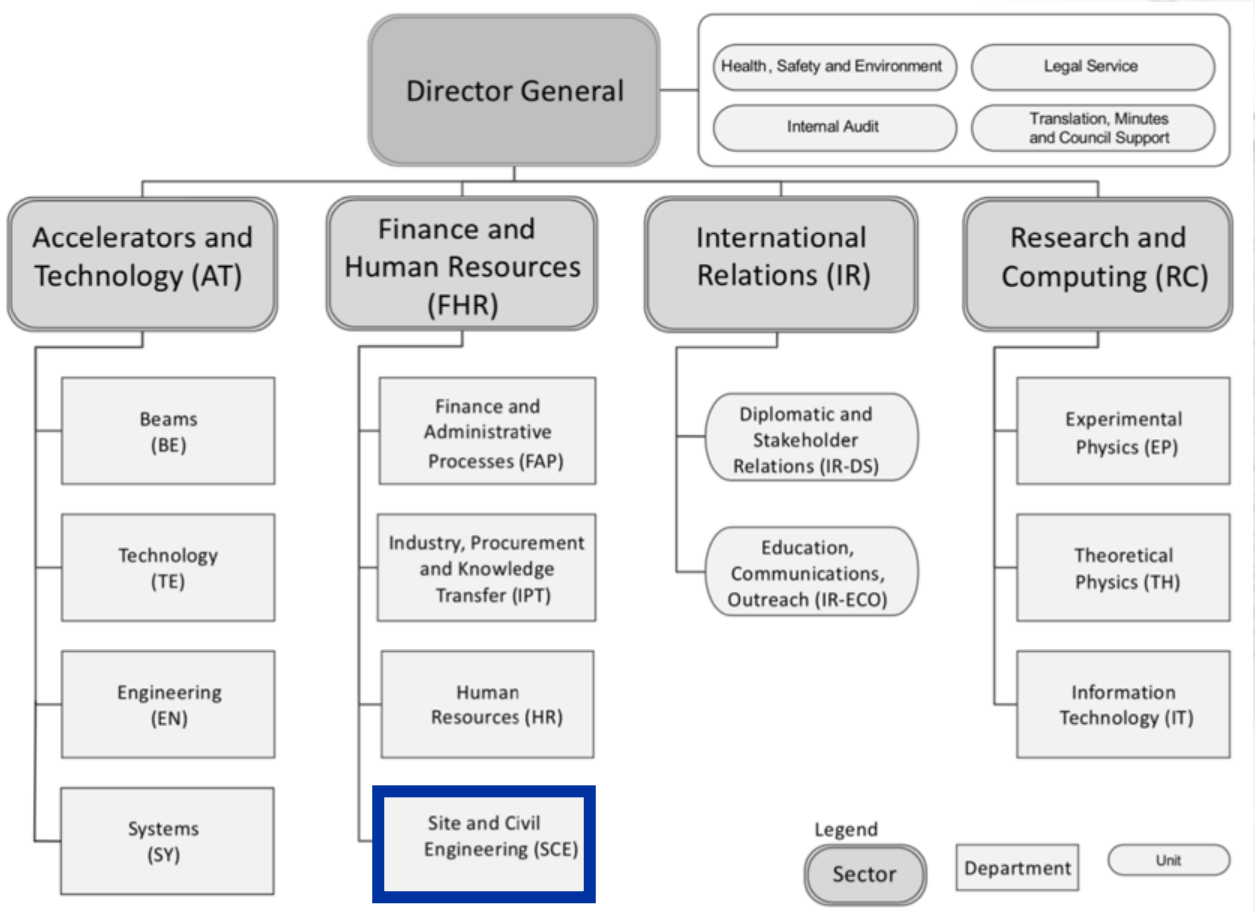
Albania – Algeria – Argentina – Armenia – Australia – Azerbaijan – Bangladesh – Belarus – Bolivia
Bosnia and Herzegovina – Brazil – Canada – Chile – Colombia – Costa Rica – Ecuador – Egypt – Georgia – Honduras
Iceland – Iran – Jordan – Kazakhstan – Lebanon – Malta – Mexico – Mongolia – Montenegro – Morocco – 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

Site Figures

- 620 ha of which 210 fenced with 110 ha green, 57 ha roads and P, 39 ha built
- 2 main sites (FR & CH) and 15 satellite sites
- 670 building from 10 m^2 to 20.000 m^2
- 65% built before the 70s
- 70 km tunnels and 80 caverns
- 30 km roads
- 1000 km technical galleries and trenches

- 7000 to 9000 persons daily
- 490 hostel rooms
- 8500 working places
- 4300 parking places in Meyrin, 1400 in Prevessin
- 25000 daily movements to- and inter-sites
- Public transport links in CH, not in FR

Site and Civil Engineering (SCE) Department



The Site and Civil Engineering (SCE) Department manages and develops CERN's real estate assets and infrastructures in agreement with CERN's scientific strategy, as well as all the services related to the caretaking and operation of the CERN site.

SCE Mission and Values

Create an inspiring and welcoming environment for CERN's scientific community now and in the future

- Manage site assets and services in a **transparent** way
- **Cooperate** with other CERN Departments, the Experiments and the Host States
- Plan at long-term, **regularly updating** and aligning to evolutions in CERN's scientific program and future projects
- Protect the site by a **reflected** interplay between preservation and modernization
- Ensure working conditions at the site providing a **high level** of safety, reliability and security
- Implement **coherent** service management
- Plan and **prioritize** projects according to strategic importance, urgency, financial viability and **within environmental and mobility objectives.**

SCE Scope of Action

Roads

Buildings

Housing

Catering

Mobility

Cleaning & Waste

Electricity

Shipping

Goods reception

Civil engineering projects

Storage

Service desk

Reporting solutions

HVAC & fluids

Internal distribution

Galleries

Metallic structures

Infrastructures

Energy management

Architectural

Building shell

Building technology

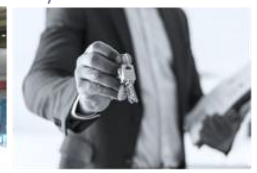
Landscaping

Installation

Maintenance

Raw materials

Keys



Accesses

Site security

Mail

and so many others ...

Site and Civil Engineering [SCE]

SCE
Site and Civil Engineering

2023

DH: Mar Capeans
DDH: Cedric Garino

Departmental Operation and Development [DOD]

Site Asset Management [SAM]
GL: Pierre Cardon
DGL: Michael Poehler

Project Portfolio Management [PPM]
GL: Natacha Lopez
DGL: Pieter Mattelaer

Service Management and Support [SMS]
GL: Gyorgy Balazs
DGL: Isabel Fernandez

Services and Supply Chain [SSC]
GL: Cedric Garino
DGL: Laetitia Lejeune

Technical Office and Geomatics [TG]
SL: Michael Poehler
DSL: Youri Robert

Civil Engineering [CE]
SL: Pierre Cardon
DSL: Alejandro Martinez

Infrastructure [IN]
SL: Christophe Martel
DSL: Guillaume Rouge

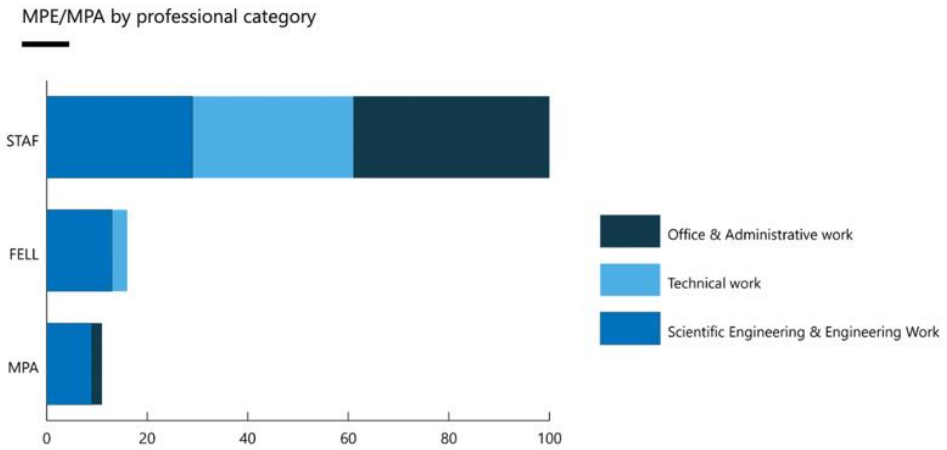
Future Studies [FS]
SL: John Osborne

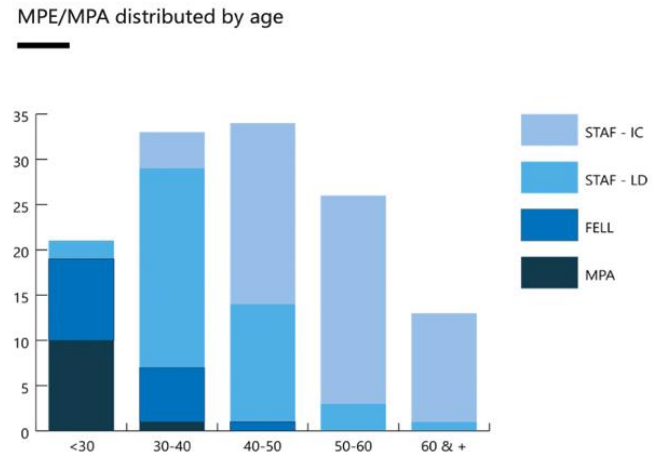
Campus services [CS]
SL: Gilles Bollinger
DSL: Gregoire Mathias

Logistics [LS]
SL: Patrick Muffat
DSL: Claudia Bruggmann

Supply Chain [SC]
SL: David Challoin
DSL: Magdolna Pierre

SCE Profile and Activities





25 M

SITE OPERATION

60% Services
25% Assets
5% IT Services (SNow)

16 M

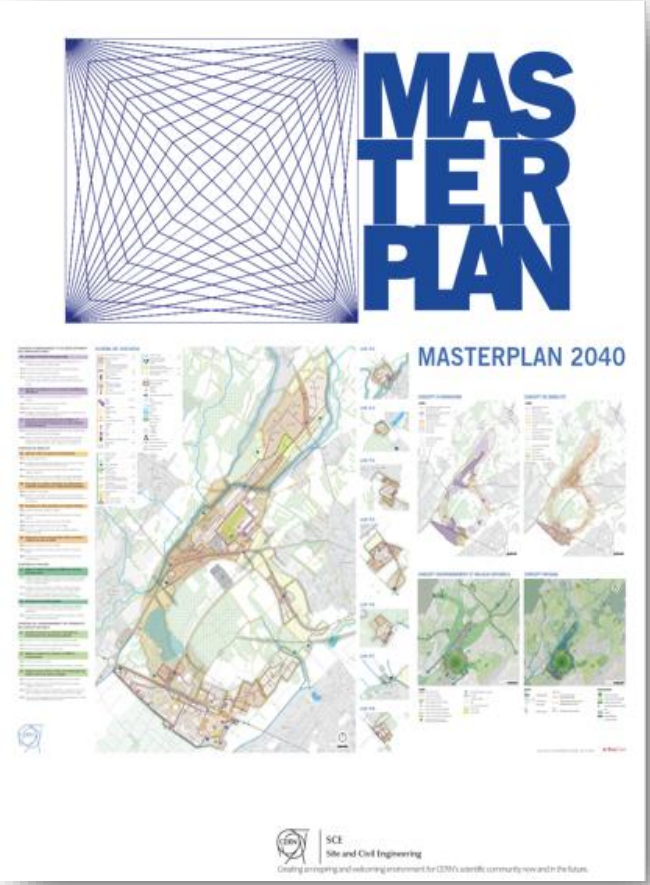
SITE CONSOLIDATION

43 M

PROJECTS

CERN Masterplan 2040

It is a document to inform and inspire a reasoned and meaningful dialogue about the management and update of CERN's site.



https://cds.cern.ch/record/2792532?ln=en

The **Masterplan** will be used in a variety of practical ways such as:

- To deliver better on **CERN's environmental objectives**;
- To support decisions in the **approval process of infrastructure projects**;
- To **reveal trends and analyse** effectiveness of land planning;
- To connect spatial and infrastructure **planning with budgeting**;
- To optimize the existing space;
- To favour Project Proposals initiated by a high-level objective;
- To **plan better services** for the Organization and its scientific community.

CERN Masterplan 2040

Renovations, Consolidation, Demolitions

Plan for a Sector of the Meyrin Site

New construction

Renovation

Demolition

Plan for the site of Prévessin

Summary

Site Development Strategy

- It is aligned with the scientific objectives of the Organization
- Transforms CERN into a greener lab
- Protects the site by a reflected interplay between preservation and modernization

Execution is based on

- Pluri-annual Site Consolidation programme (~15 MCHF/y)
- Dedicated MTP allocations for large construction projects
- Bottom-up requests of technical facilities

Impact

- Investments to minimize the impact on environment within the site consolidation programme: 6 MCHF/y
- 21.5 MCHF over 5y to severely reduce gas consumption to heat the site (450,000 m^2) by 2027
- Expected 15% reduction of buildings M&O costs for 90,000 m^2 by 2026 (130,000 m^2 by 2029)

https://sce-dep.web.cern.ch

CERN | SCE
Site and Civil Engineering