



# Doing Business with CERN

## Industry Webinar

Adam Horridge

18 September 2024

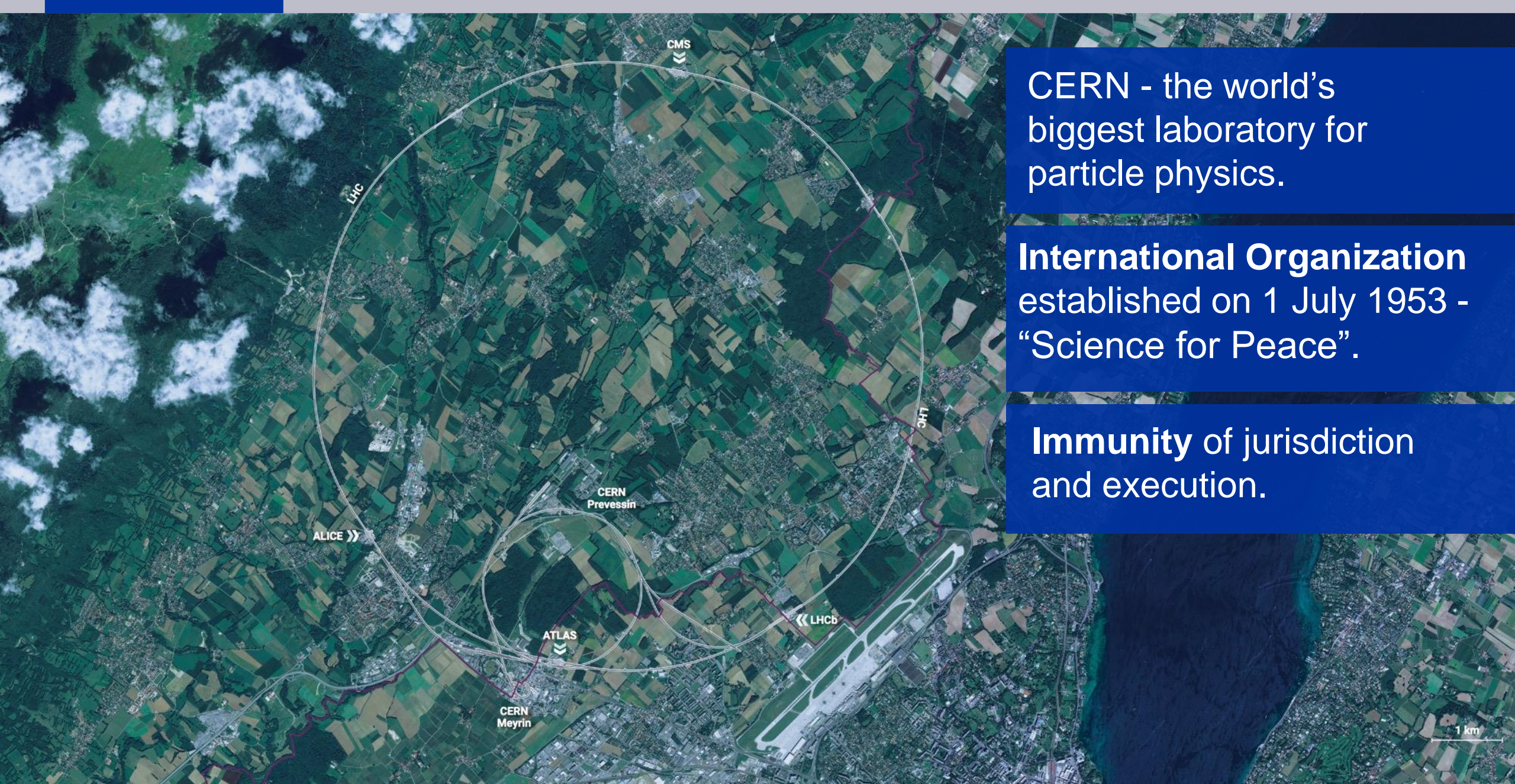


# AGENDA

- Introduction
- Statistics and What We Buy
- Procurement @ CERN - the rules
- Impact of Doing business with CERN
- Procurement website and Contacts



# INTRODUCTION



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

**International Organization** established on 1 July 1953 - "Science for Peace".

**Immunity of jurisdiction and execution.**

# CERN is entitled to establish its own internal rules necessary for its proper functioning, including:

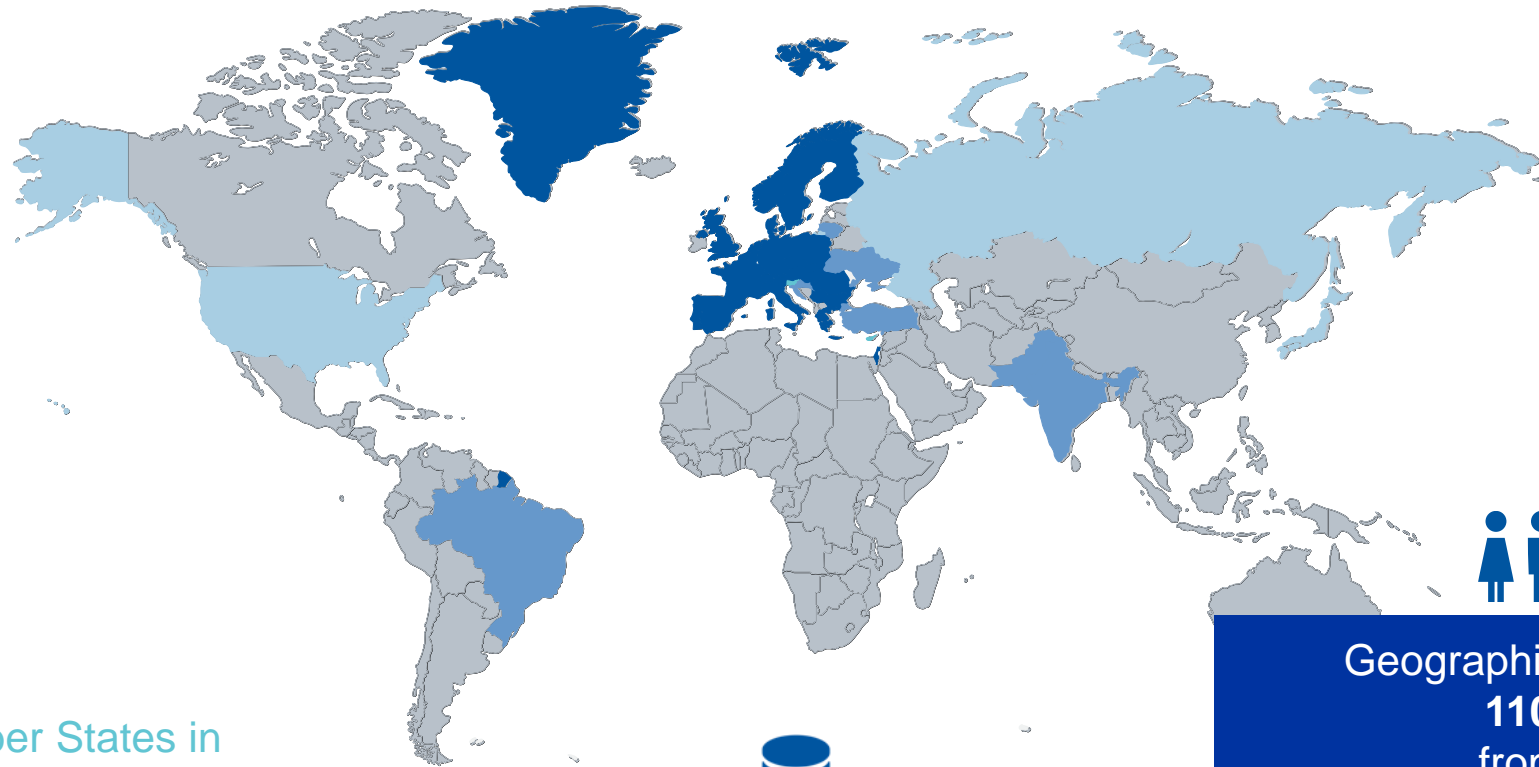


Procurement Rules

Safety Rules

Staff Regulation of its own  
personnel

# In 1954 CERN had 12 Member States Today CERN has 24 Member States



**24** Member States

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

**8** Associate Member States

**6** Observers (*Russia suspended*)

































**Yearly budget ~ 1300 MCHF**



**Geographical & cultural diversity**  
**110 nationalities,**  
**from 77 countries**

~ **2,676** Staff members  
~ **2,000** contractors' employees  
~ **13,000** physicists /users

# Yearly Budget (contributions 2024)\*

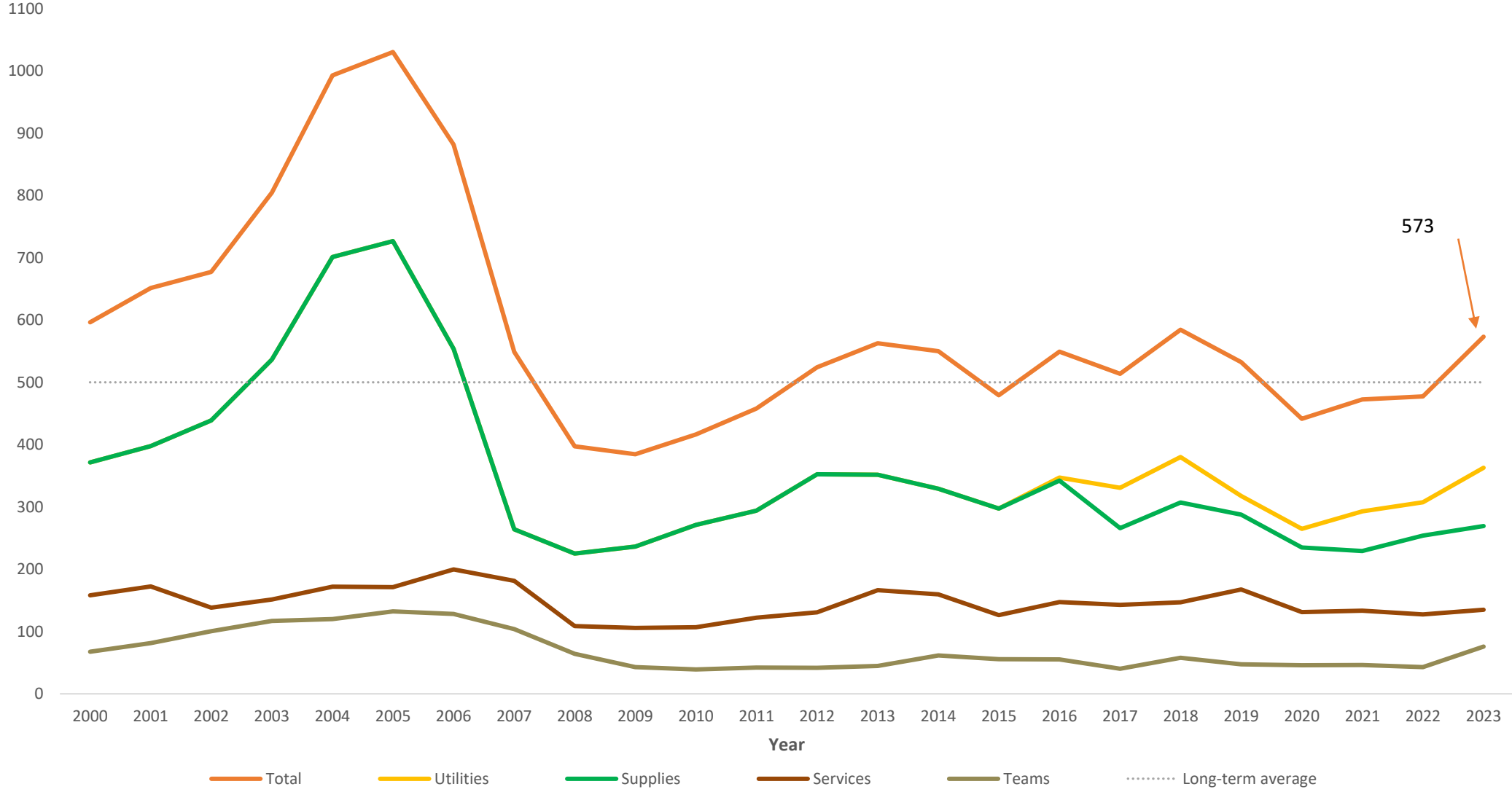
Country	Percentage of Total	Amount (CHF)	Country	Percentage of Total	Amount (CHF)
 Germany	20.57%	258 247 250	 Czech Republic	1.15%	14 469 200
 United Kingdom	14.69%	184 447 050	 Portugal	1.08%	13 515 450
 France	13.08%	164 153 900	 Greece	0.97%	12 181 000
 Italy	9.61%	120 700 800	 Hungary	0.73%	9 128 950
 Spain	6.83%	85 696 800	 Slovakia	0.52%	6 553 550
 Netherlands	4.56%	57 293 700	 Republic of türkiye*	0.38%	4 770 750
 Switzerland	3.65%	45 845 900	 Bulgaria	0.36%	4 580 000
 Poland	3.04%	38 196 850	 Serbia	0.27%	3 444 800
 Belgium	2.71%	34 052 750	 Slovenia**	0.19%	2 325 100
 Sweden	2.60%	32 589 450	 Pakistan*	0.16%	2 018 650
 Austria	2.18%	27 376 050	 Estonia	0.12%	1 462 050
 Israel	2.17%	27 209 350	 Cyprus**	0.09%	1 116 000
 Norway	2.14%	26 820 150	 Latvia*	0.08%	1 066 250
 Denmark	1.81%	22 730 650	 Ukraine*	0.08%	1 045 600
 India*	1.41%	17 709 200	 Croatia*	0.08%	1 000 000
 Finland	1.32%	16 541 250	 Lithuania*	0.08%	1 000 000
 Romania	1.29%	16 172 600			
			<b>Total</b>	<b>100%</b>	<b>1 255 461 050</b>

\*Brazil joined as an Associate Member State on 13 March 2024 (10.3M CHF)

# STATISTICS & WHAT WE BUY



# Procurement Expenditure





# What do we buy?

- **Civil engineering:**
  - Construction
  - Renovation of buildings
  - Metallic structures
  - Earthworks
  - Roads
- **Cooling and ventilation equipment**



# What do we buy?

- **Electrical engineering and magnets**
  - Transformers
  - Switchboards and switchgear
  - Cables
  - Automation
  - Power supplies
  - Magnets



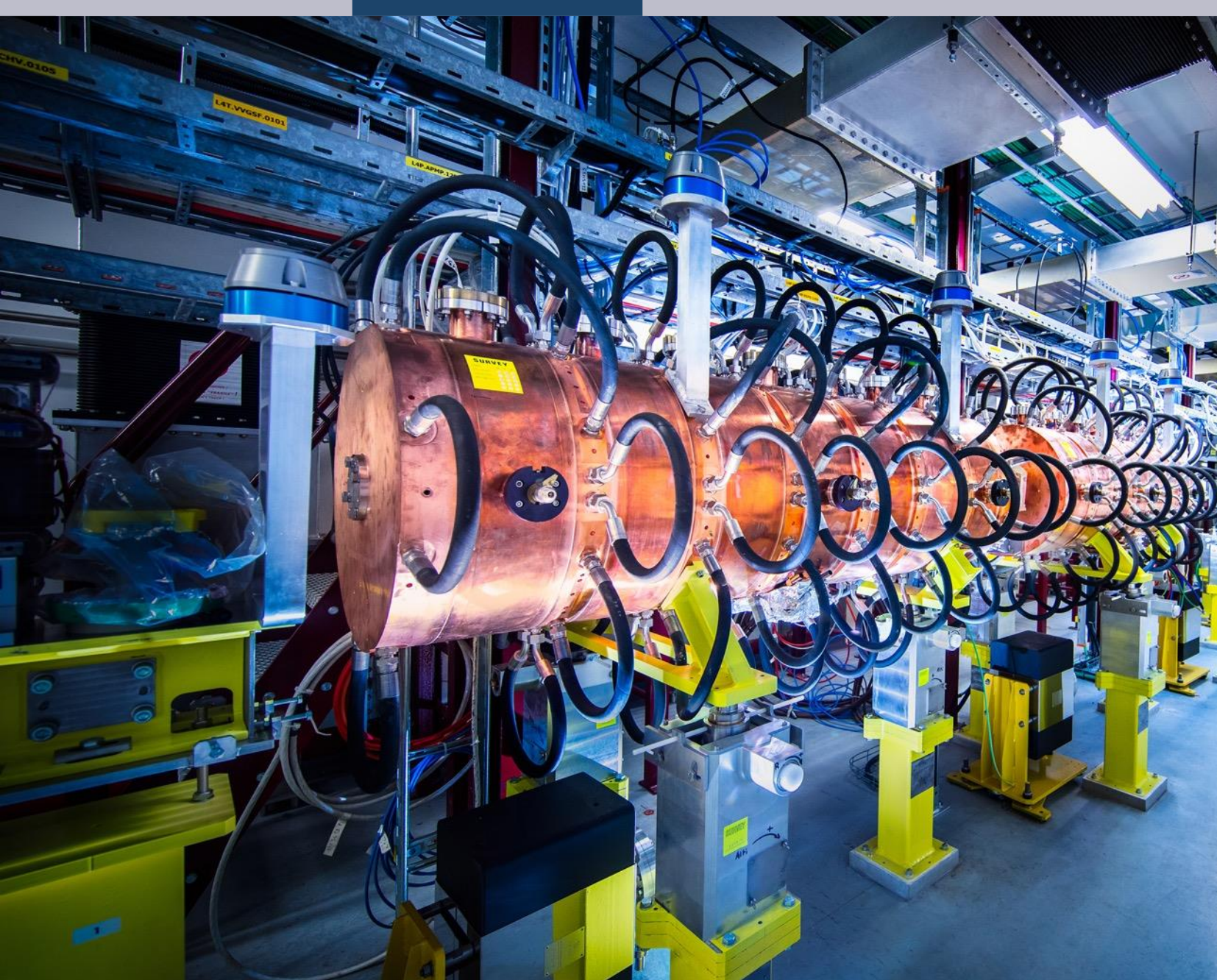
# What do we buy:

- **Information Technology**
  - Computing systems
  - Servers
  - Software
  - Network equipment
  - Personal computer equipment



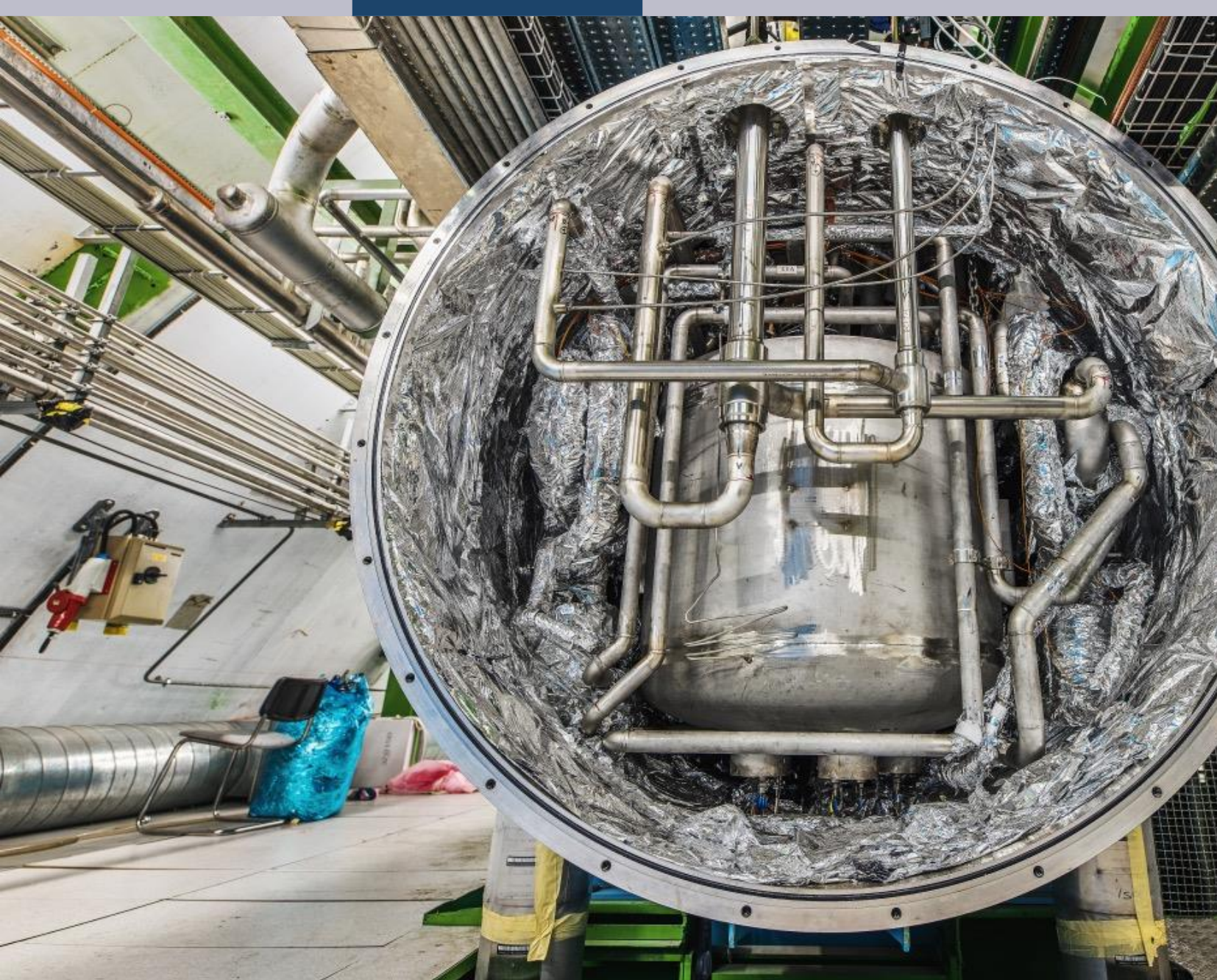
# What do we buy?

- **Mechanical engineering and raw materials:**
  - Machining
  - Sheet metal work and arc welding
  - Special fabrication techniques
  - Raw materials, finished and semi-finished products (plates, pipes, etc.)
  - Offsite engineering and testing



# What do we buy?

- **Electronics and radiofrequency:**
  - Electronic components (active, passive)
  - PCBs and assembled boards
  - LV and HV power supplies
  - Radiofrequency plants
  - Amplifiers



# What do we buy?

- **As well as:**
  - Cryogenic and vacuum equipment
  - Optics and photonics
  - Particle and photon detectors
  - Health and safety equipment,
  - Transport and handling equipment
  - Office supply, furniture
  - Industrial services on the CERN site

# Current project - upgrade of the LHC to High Luminosity



Hi-Lumi will provide greater precision and discovery potential

Hi-Lumi will start operating in 2029, and run until 2040

CERN is already looking beyond 2040, with several projects in R&D or study stages



# Two biggest projects for future of particle physics



## Compact Linear Collider (CLIC)

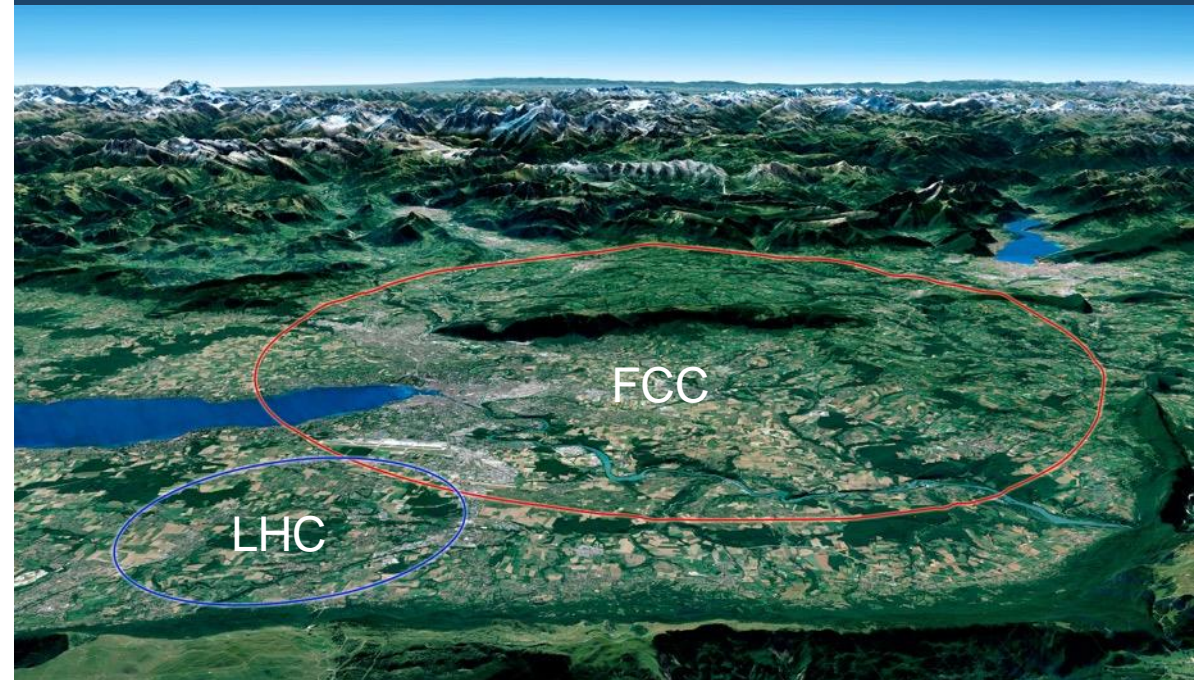
- Linear  $e^+e^-$  collider  $\sqrt{s}$  up to 3 TeV



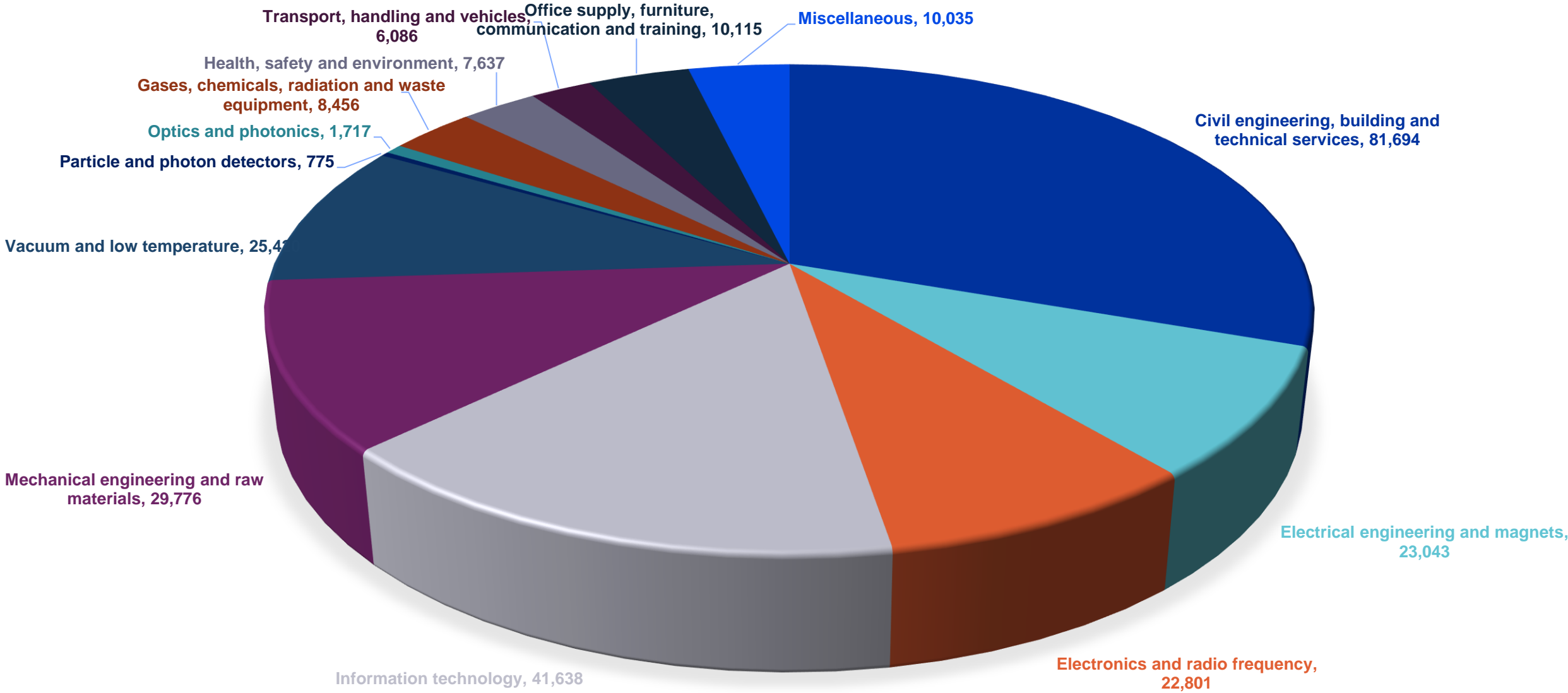
## Future Circular Collider (FCC)



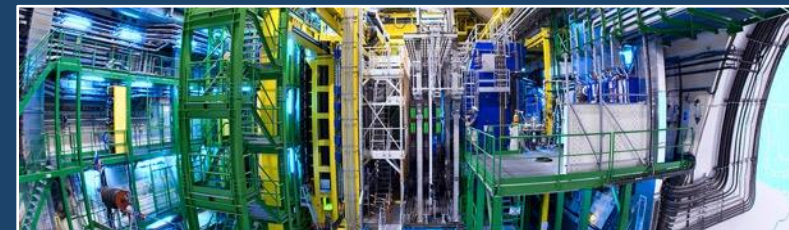
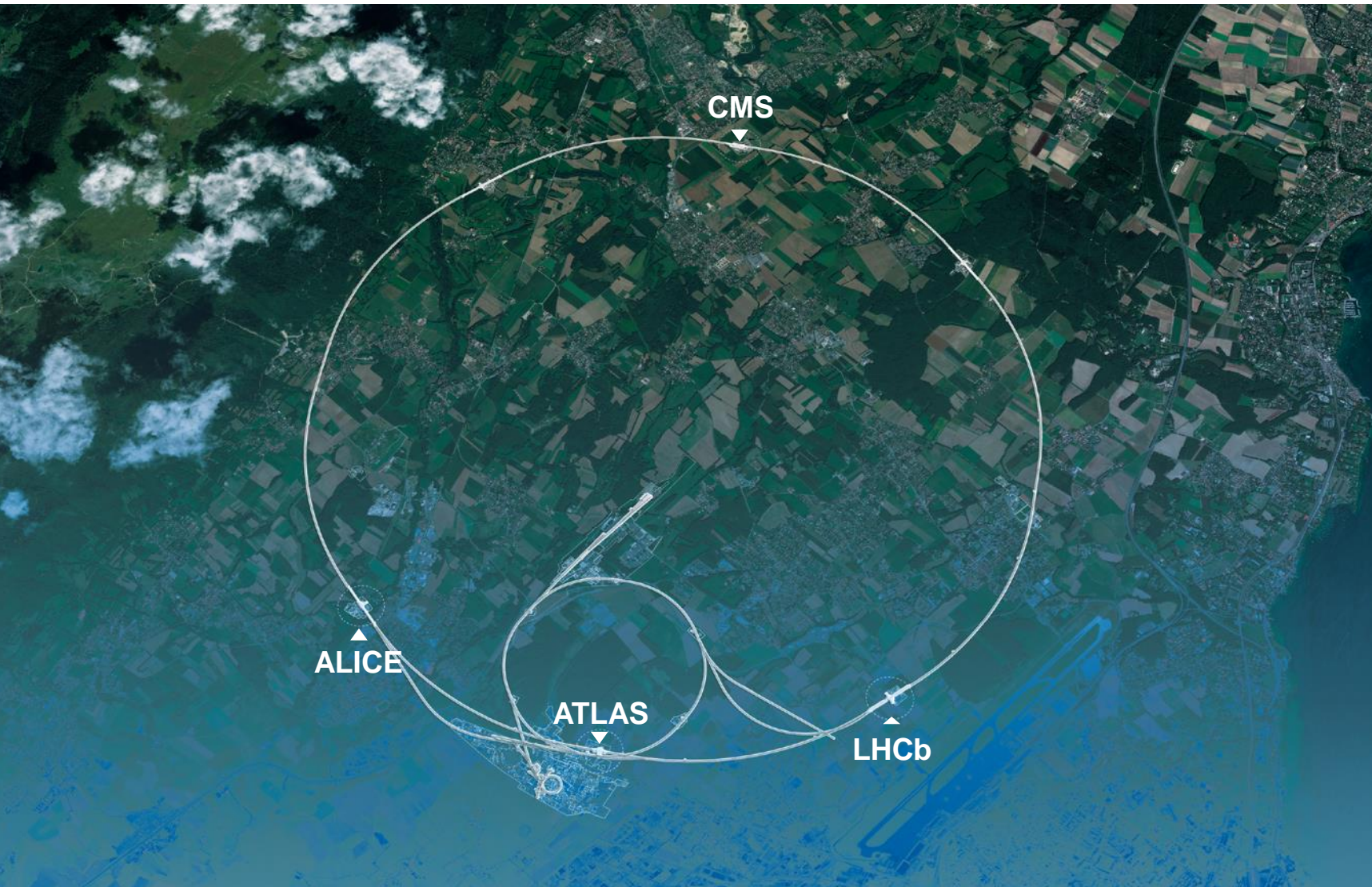
- New technology magnets  $\rightarrow$  100 TeV pp collisions in 100km ring
- $e^+e^-$  collider (FCC-ee) as 1<sup>st</sup> step?



# Supplies (254MCHF spent in 2023 – CERN budget only, kCHF)



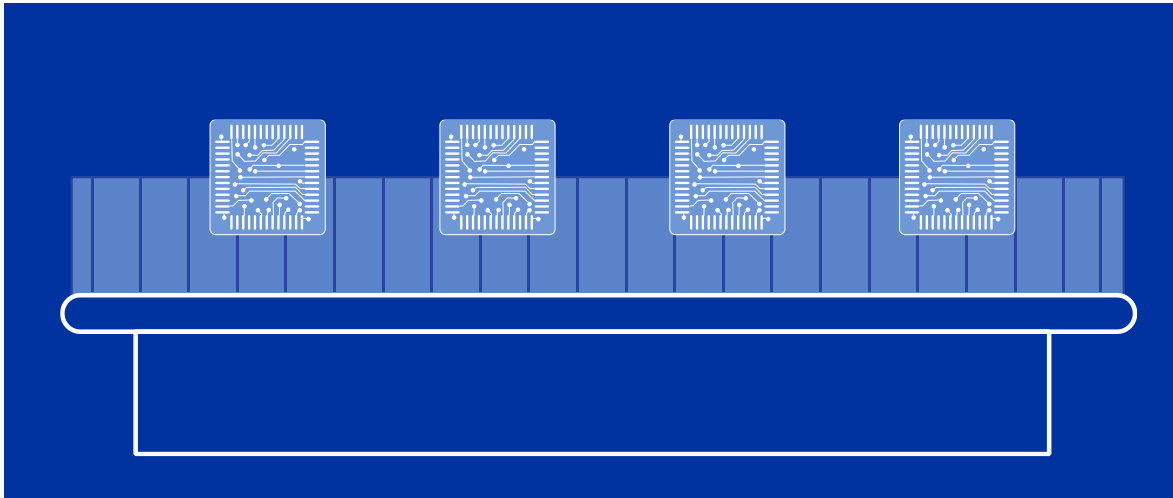
# We also buy for the LHC experiments



# How do we buy?

**Off-the shelf or non-standard products which can be produced with existing manufacturing techniques or technologies:**

- **Functional specification**

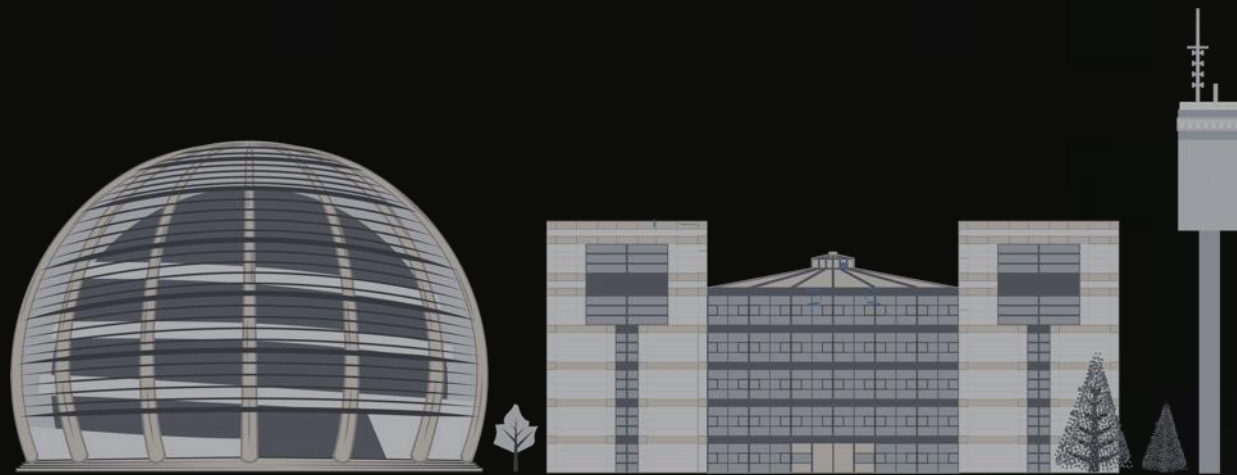


**Non-standard products where industry has neither the required know-how nor the interest to develop and design the products:**

- **Build-to-Print specification**

Prototypes and or Pre-series might be required.





# PROCUREMENT @CERN the rules

# The Procurement Service

## Mission

**The Procurement Service (PS) procures all supplies and services for CERN**

Meeting the specified and financial, technical, environmental and delivery requirements

Keep overall costs for CERN as low as possible and to ensure the most advantageous use of CERN's resources

While achieving balanced industrial return for CERN Member States

Respecting CERN Procurement Rules

# Principles of the Procurement Rules (1/4)

1

**Transparency and Impartiality**

2

**Tenders open to Member States only**

3

**Objectivity and equal treatment:** tendering packages are objective and impartial

# Principles of the Procurement Rules (2/4)

**Selective tendering procedures:**  
CERN's tendering procedures are not open to any interested firms

**Confidentiality:** Opening and evaluation of bids as well as negotiations are not public



# Changes to our rules in June 2024

For those of you who may have worked with us before, in **June 2024, several updates to CERN's Procurement Rules** were approved by CERN's Council

These are explained in further detail in subsequent slides

1

**Update to approval and DO / MS / IT Thresholds**

2

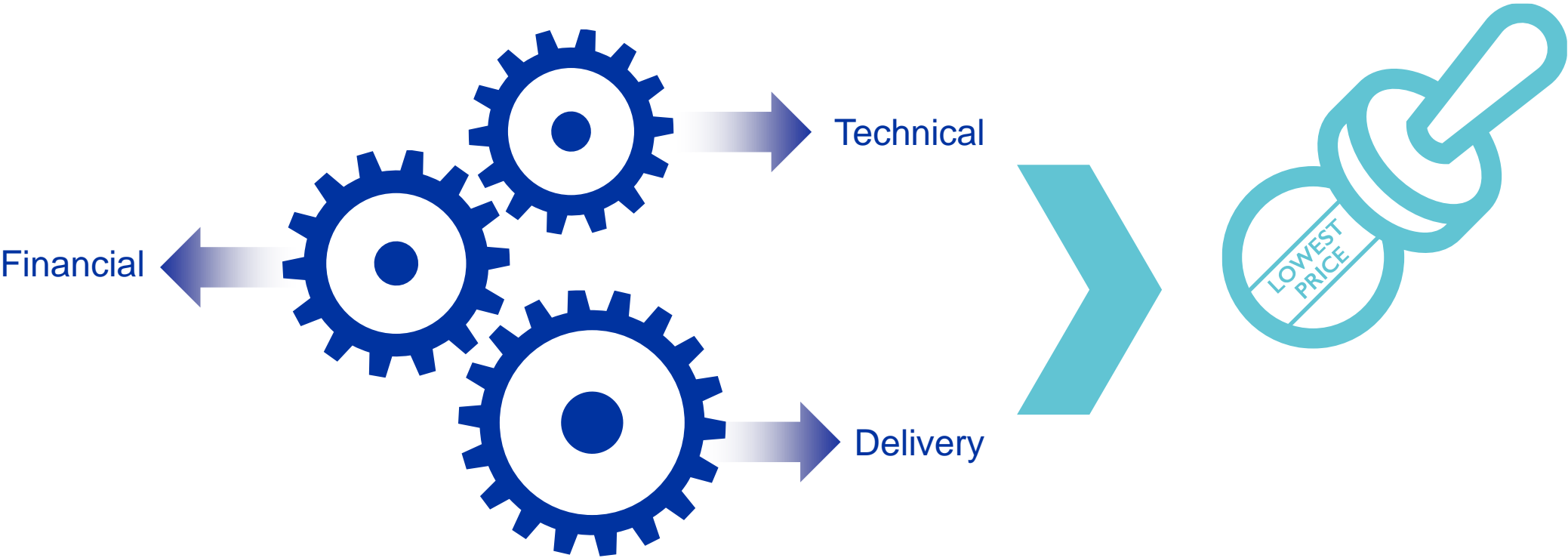
**Use of BVFM for supply contracts**

3

**Changes to our 'Limited Tendering' procedure**

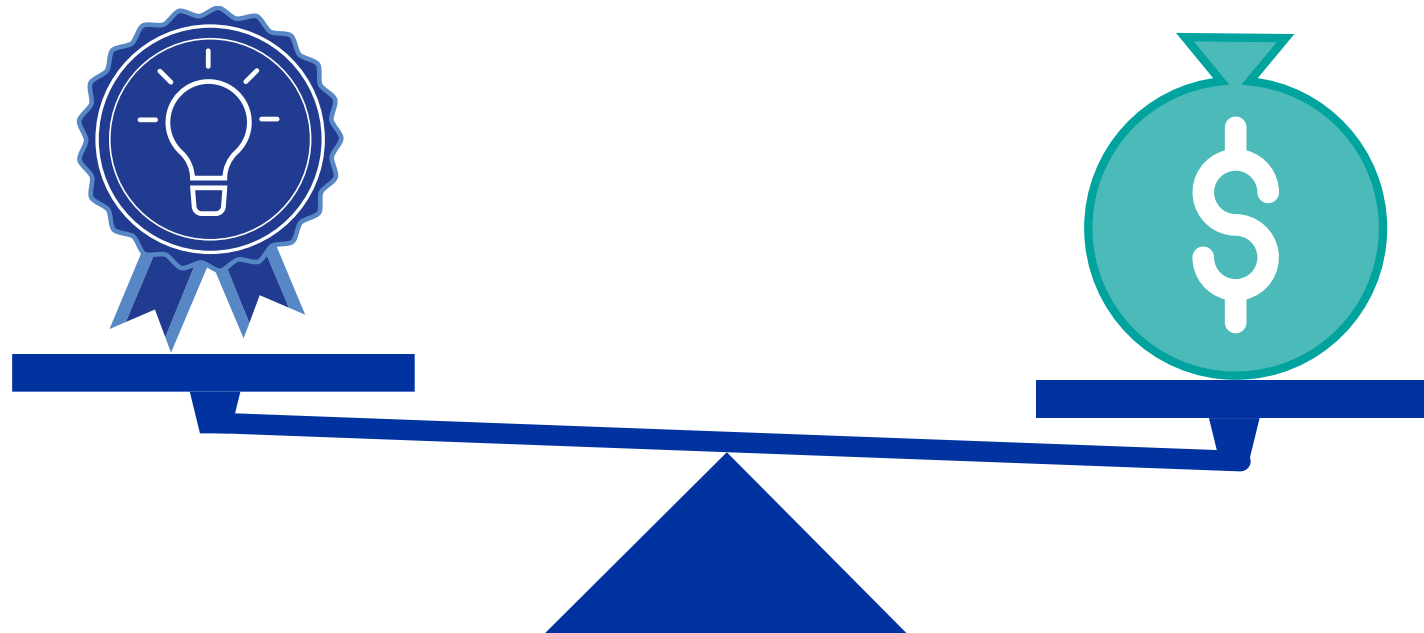
# Principles of the Procurement Rules (3/4)

Award on Lowest compliant bid basis  
Most commonly for Supply contracts



# Principles of the Procurement Rules (4/4)

Award on Best Value For Money basis  
Most commonly used for industrial service contracts



! No alignment rule

# Requirements between 10,000 and 400,000 CHF

## “Price enquiry” (Demande d’Offre - DO)

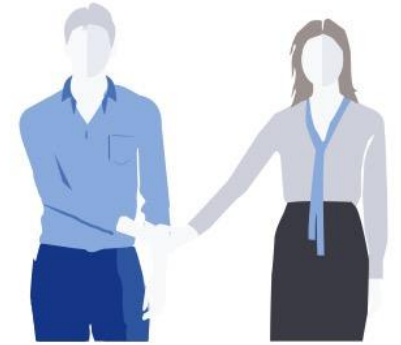
- **Submission deadline: 4-6 weeks from date of dispatch;**
- **All price enquiries above 50,000 CHF are also sent to the Industrial Liaison Officers (ILOs) for information;**
- **Price enquiries consist of:**
  - Technical specification and annexes;
  - Tender form (and a technical annex - optional);
  - CERN’s General Conditions (contracts, invitations to tender, safety, etc.)
- **Price enquiries between 200,000 – 400,000 CHF announced on CERN’s procurement website, see “Business Opportunities”**



# Requirements exceeding 400'000 CHF (1/2)

## “Market Survey” (MS)

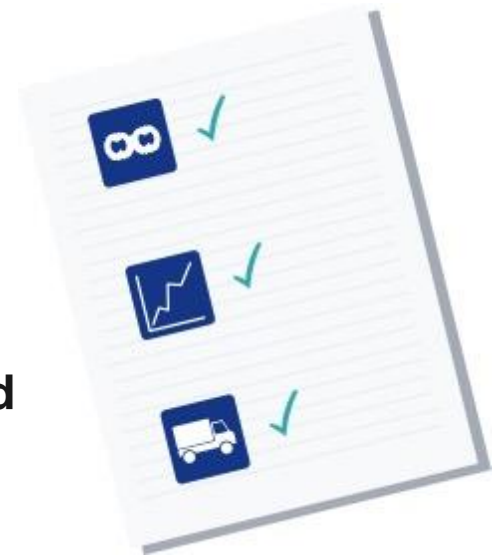
- **Prior announcement on CERN’s procurement website, see “Business Opportunities”**
  - At this stage, interested firms are encouraged to contact CERN in order to have a clear understanding of the requirement, allowing them to begin their organization ahead of the tendering process.
- **Market surveys consist of:**
  - “Technical Description” and;
  - “Qualification Questionnaire” (financial and technical).
- **Submission deadline: 4 weeks, or more if the MS is still online.**



# Requirements exceeding 400'000 CHF (2/2)

## “Invitation to tender” (IT)

- **Sent to qualified and selected firms only;**
- **Submission deadline: 4 weeks from date of dispatch (with a longer period for more complex requirements);**
- **Firms shall ask all necessary questions in writing to understand all requirements and prepare a bid that best matches CERN’s needs;**
- **All invitations to tender are sent to the Industrial Liaison Officers (ILOs) for information;**
- **Bids shall be submitted via CERN’s e-tendering application.**



# Country of origin

*“Country(ies) in which the bidder is established.”*

**SERVICES**

**SUPPLIES**

*“Country(ies) where the **supplies** (including their components and sub-assemblies) are manufactured or undergo the last major transformation by the contractor or its sub-contractor”*

# Country of origin – Why do we need to know?

## RETURN TO THE MEMBER AND ASSOCIATE MEMBER STATES

*CERN's 67-year history and extraordinary record of scientific and technological accomplishments would not have been possible without the sustained support of its Member States. To ensure that this support continues, it is imperative that CERN constantly expands the benefits it brings to the Member and Associate Member States through all dimensions of its work. Therefore, over the coming five-year period the Management will ramp up its efforts to improve these benefits in all their facets, through a number of targeted actions.*



The support from Member and Associate Member States underpins CERN's extraordinary record of scientific and technological achievements. (Image: CERN)

Industrial Return to our Member States and Associate Member States is a key organisational objective and therefore we need to record this in order to better manage our efforts to achieve our goals in this respect



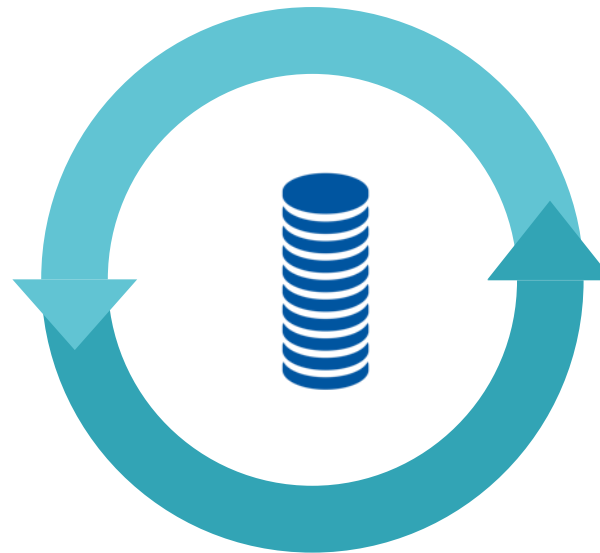
# Industrial return coefficient

## Industrial return coefficient

For Supply contracts and for a 12-month period starting on 1<sup>st</sup> March, defined as:

*“The ratio between a Member State's percentage share of the value of all Supply contracts and that Member State's percentage contribution to the CERN Budget over the same period”.*

$$\text{Return Coef.} = \frac{\% \text{ expenditure in the MS}}{\% \text{ contribution to CERN budget for this MS}}$$



Over a 4-year period:  
Poorly balanced (PB) :  $< 1$   
Well balanced (WB):  $\geq 1$

## Status definition

# Alignment rule

## Applicable for:

1

**Contracts awarded on the lowest compliant basis (mainly supply contracts)**

2

**With a total amount exceeding 100'000 CHF.**

## RULE

Under certain conditions as defined in CERN Procurement Rules, a bidder offering goods originating\* in poorly balanced Member States is allowed to align its price to that of the lowest bidder and thereby be awarded the contract.

*\* At least 60% for supply contracts*

# Limited tendering

« *Limited tendering is foreseen by the CERN Procurement Rules to improve the industrial return of very poorly balanced Member States.* »

## Conditions

Twelve Member States with the lowest industrial Return Coefficient for Supply Contracts

Used in case where there is sufficient competition;

ILO can ask to add firms, provided the supplies originate in these twelve Member States.

*Bids shall only be considered where a minimum of 60% of their value originates in any combination of the twelve Member States communicated by CERN*

# Poorly balanced Member States (Supplies)

(1st March 2024 – 28 February 2025, based on the previous 4 calendar years):



Well Balanced ( $\geq 1$ )	Poorly Balanced ( $< 1$ )	
Austria Estonia France Italy Lithuania* Switzerland Türkiye*	<b>Belgium</b> <b>Brazil*</b> Bulgaria Croatia* <b>Cyprus*</b> Czech Republic <b>Denmark</b> Finland Germany <b>Greece</b> Hungary <b>India</b> <b>Israel</b> Latvia* Netherlands <b>Norway</b> Pakistan* Poland Portugal <b>Romania</b> <b>Serbia*</b>	Slovak Republic Slovenia* Spain <b>Sweden</b> <b>Ukraine*</b> <b>United Kingdom</b>

Currently eligible for Limited Tendering

\*Associate Member States



# Impact of Doing business with CERN

# Doing business with CERN: the facts

supplier survey (669 suppliers in 33 countries, 2017):

48%

improved products and services

42%

developed new products

55%

improved technical knowledge  
in their field



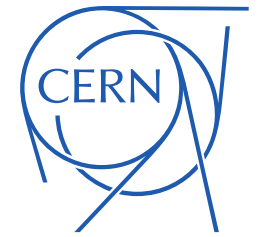
18%

found or opened a new market to  
address

62%

used CERN as a marketing reference

# Doing business with CERN: the facts



Using CERN as a marketing reference improves reputation as suppliers

*supplier*





# Social Cost-Benefit Analysis (CBA) calculated by the University of Milan

*“Each CHF invested in HL-LHC project pays back approximately 1.8 CHF on societal benefits, including scientific, economic and cultural value (development of innovative technologies, industrial spillovers, skills acquired by students, etc.).”*



# Procurement Website & Contacts



# Website of the Procurement Service

<http://procurement.web.cern.ch>

Procurement and Industrial Services Group

[HOME](#) - [CERN PERSONNEL](#) - [INDUSTRIAL LIAISON OFFICERS](#) - [GROUP MEMBERS](#)

## › Doing Business with CERN

- Doing Business with CERN [edit](#)
- Running a Contract with CERN [edit](#)
- Procurement Process [edit](#)
- Law applicable to contractors' personnel [edit](#)



## › Business Opportunities



## › Supplier Portal



## › Key Reference Documents



## › List of Poorly and Well Balanced Member State...

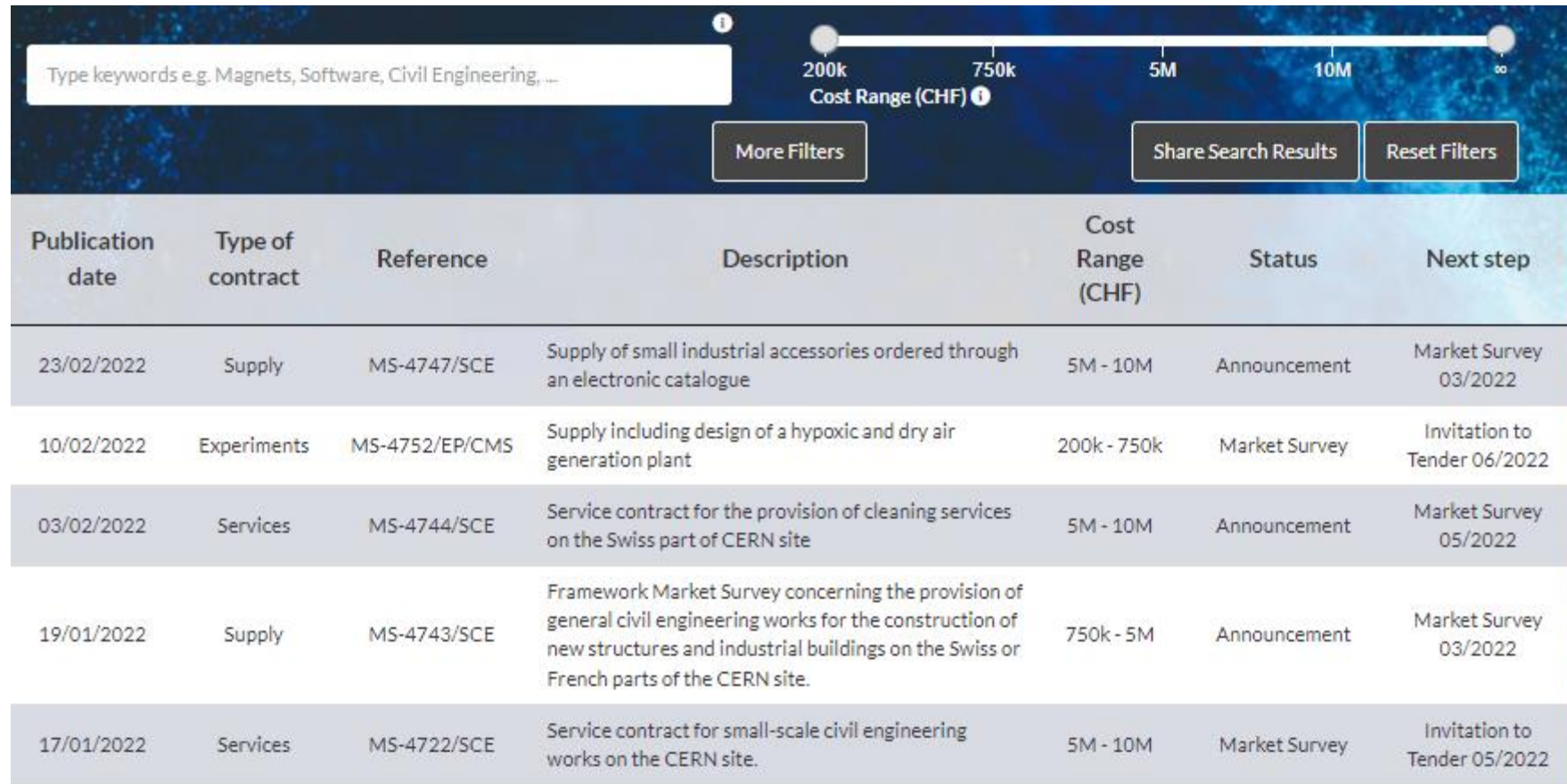


## › Procurement strategy and policy



# CERN Shopping List

<https://forthcoming-ms.app.cern.ch/#/>



Publication date	Type of contract	Reference	Description	Cost Range (CHF)	Status	Next step
23/02/2022	Supply	MS-4747/SCE	Supply of small industrial accessories ordered through an electronic catalogue	5M - 10M	Announcement	Market Survey 03/2022
10/02/2022	Experiments	MS-4752/EP/CMS	Supply including design of a hypoxic and dry air generation plant	200k - 750k	Market Survey	Invitation to Tender 06/2022
03/02/2022	Services	MS-4744/SCE	Service contract for the provision of cleaning services on the Swiss part of CERN site	5M - 10M	Announcement	Market Survey 05/2022
19/01/2022	Supply	MS-4743/SCE	Framework Market Survey concerning the provision of general civil engineering works for the construction of new structures and industrial buildings on the Swiss or French parts of the CERN site.	750k - 5M	Announcement	Market Survey 03/2022
17/01/2022	Services	MS-4722/SCE	Service contract for small-scale civil engineering works on the CERN site.	5M - 10M	Market Survey	Invitation to Tender 05/2022

# Register in the Suppliers Portal

**MANDATORY**

**for all exchanges with CERN, in particular to:**

- Be visible for future opportunities (with the procurement codes you have indicated),
- Receive and follow-up orders,
- Send invoices.

## Suppliers Portal

Welcome to CERN's eProcurement platform

<https://procurement.cern.ch/asp/Home>

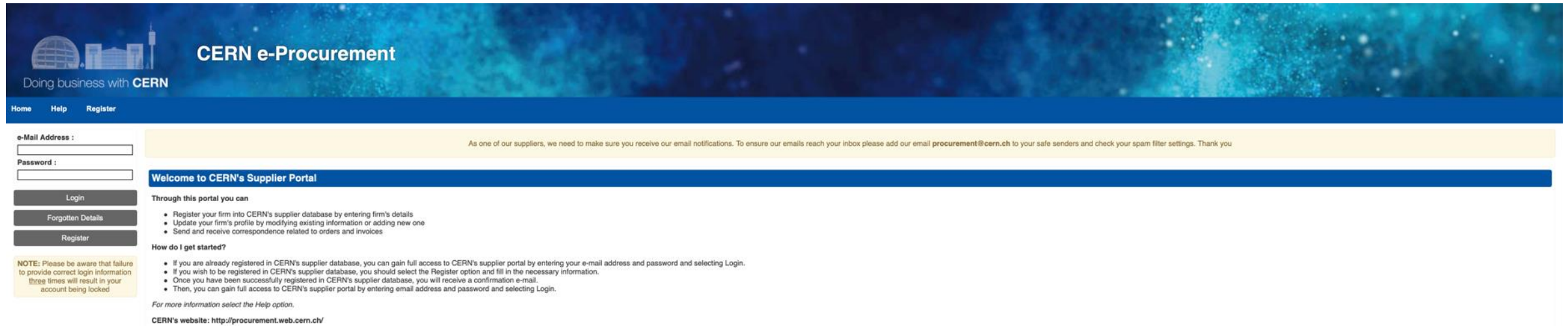
Using this platform, you will be able to receive orders, manage the delivery of supplies and send invoices for processing.

If you are having trouble registering your firm, please consult this [video tutorial](#) or the French version under [tutoriel](#).

Once you have registered your firm, you will be able to log on to the platform to manage your firm's profile and contact details.

If you have any further questions, please contact CERN's eProcurement platform support team at [Supplierdb.Support@cern.ch](mailto:Supplierdb.Support@cern.ch).

# CERN e-Procurement



The screenshot shows the CERN e-Procurement Supplier Portal. At the top left is the CERN logo and the text "Doing business with CERN". Below this is a navigation bar with "Home", "Help", and "Register" links. A yellow banner contains the text: "As one of our suppliers, we need to make sure you receive our email notifications. To ensure our emails reach your inbox please add our email [procurement@cern.ch](mailto:procurement@cern.ch) to your safe senders and check your spam filter settings. Thank you". The main content area is titled "Welcome to CERN's Supplier Portal" and includes a "Through this portal you can" section with a bulleted list: "Register your firm into CERN's supplier database by entering firm's details", "Update your firm's profile by modifying existing information or adding new one", and "Send and receive correspondence related to orders and invoices". Below this is a "How do I get started?" section with a bulleted list: "If you are already registered in CERN's supplier database, you can gain full access to CERN's supplier portal by entering your e-mail address and password and selecting Login.", "If you wish to be registered in CERN's supplier database, you should select the Register option and fill in the necessary information.", "Once you have been successfully registered in CERN's supplier database, you will receive a confirmation e-mail.", and "Then, you can gain full access to CERN's supplier portal by entering email address and password and selecting Login." A "NOTE" box states: "Please be aware that failure to provide correct login information three times will result in your account being locked". At the bottom, it says "For more information select the Help option." and "CERN's website: <http://procurement.web.cern.ch/>". On the left side, there are input fields for "e-Mail Address" and "Password", and buttons for "Login", "Forgotten Details", and "Register".



To ensure our emails reach your inbox please add our email [procurement@cern.ch](mailto:procurement@cern.ch) to your safe senders and check your spam filter settings.

# Procurement Contacts at CERN



# Contact in your country

## ILO: Industrial Liaison Officer

- Who to contact in your Country

Industrial Liaison Officers (ILO's) are appointed by CERN's Member States to facilitate the flow of communication between CERN and its suppliers. ILO's can provide advice on the opportunities available for doing business with CERN and the support available to firms in their local regions.

### Who to Contact in Your Country

Full Name



Country

- Any -

Apply

NEWS CONTACT

Who to Contact at CERN

Who to Contact In Your Country

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### Austria



Mr Patrick Sagmeister

**Role**  
Trade Counsellor

**Organization**  
Österreichische Botschaft



Dr Georg Weingartner

**Role**  
Head International Technology Cooperation

**Organization**  
Wirtschaftskammer Österreich (WKO)

# Big Science Business Forum 2024

<https://www.bsbf2024.org/>

Meet Europe's largest Big Science Organizations



# Big Science Business Forum 2024

TRIESTE  
1-4 OCTOBER 2024

GCC – Generali Convention Center



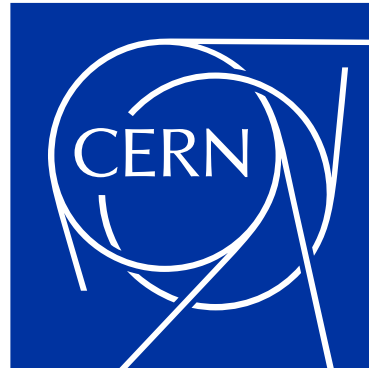


# Last but not least – CERN Procurement on LinkedIn

Recently launched – Follow us for news and information on key procurement processes and activities at CERN



Thank you



[home.cern](http://home.cern)