



# CERN ILO Training 2021

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**15 March 2021**



## AGENDA FOR THE SESSION

- **14h00 - 15h30**

Introduction, rules, procedures and the procurement service

- **15h30 – 16h00**

The ILO Info Tool

- **16h00 – 16h30**

Website & Other Resources

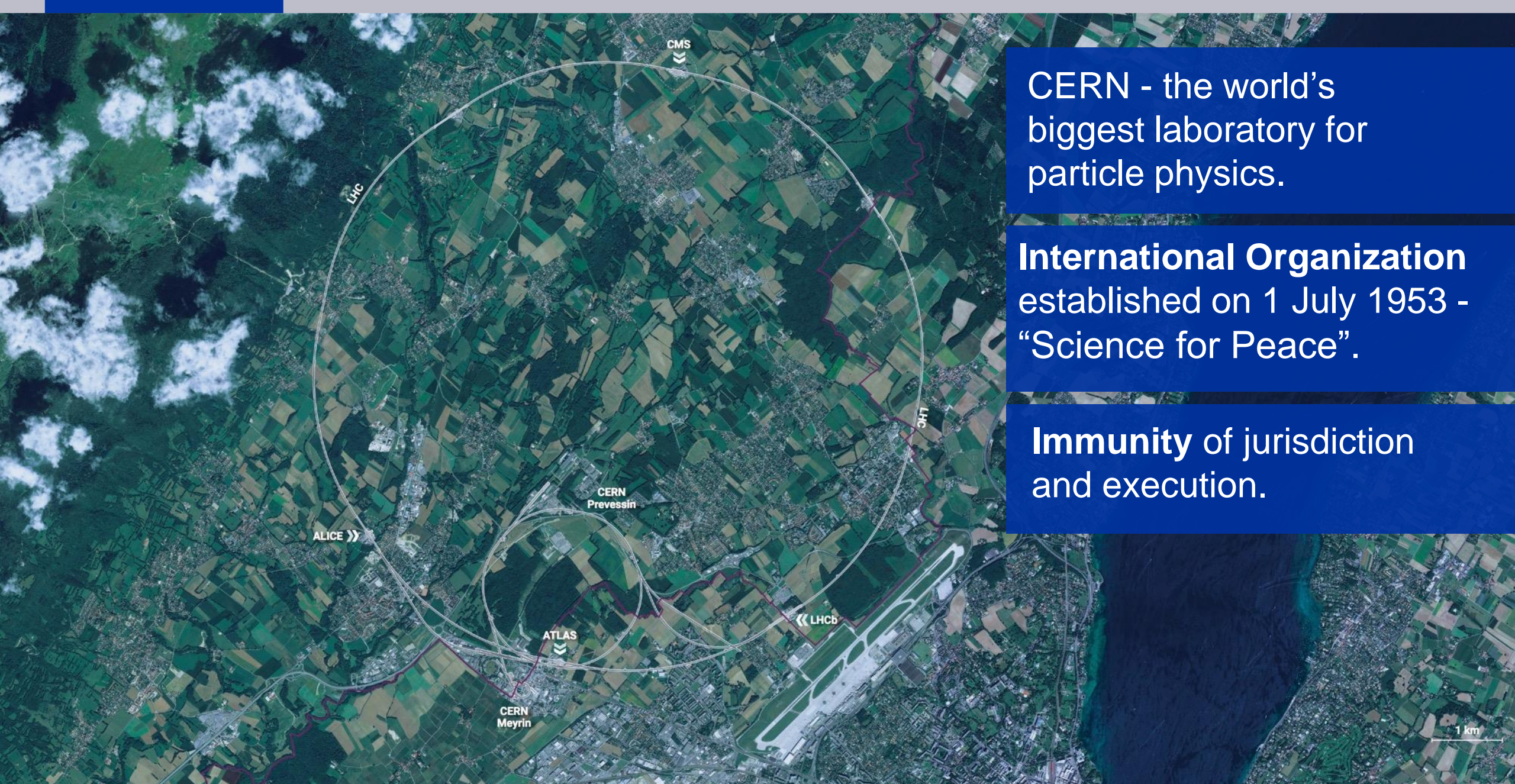


# AGENDA

- Introduction & The ILO Role
- Statistics & What We Buy
- Procurement @ CERN - the rules – Supplies and Services
- Impact of Doing business with CERN
- Improving Industrial Return



# INTRODUCTION & THE ILO ROLE



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:

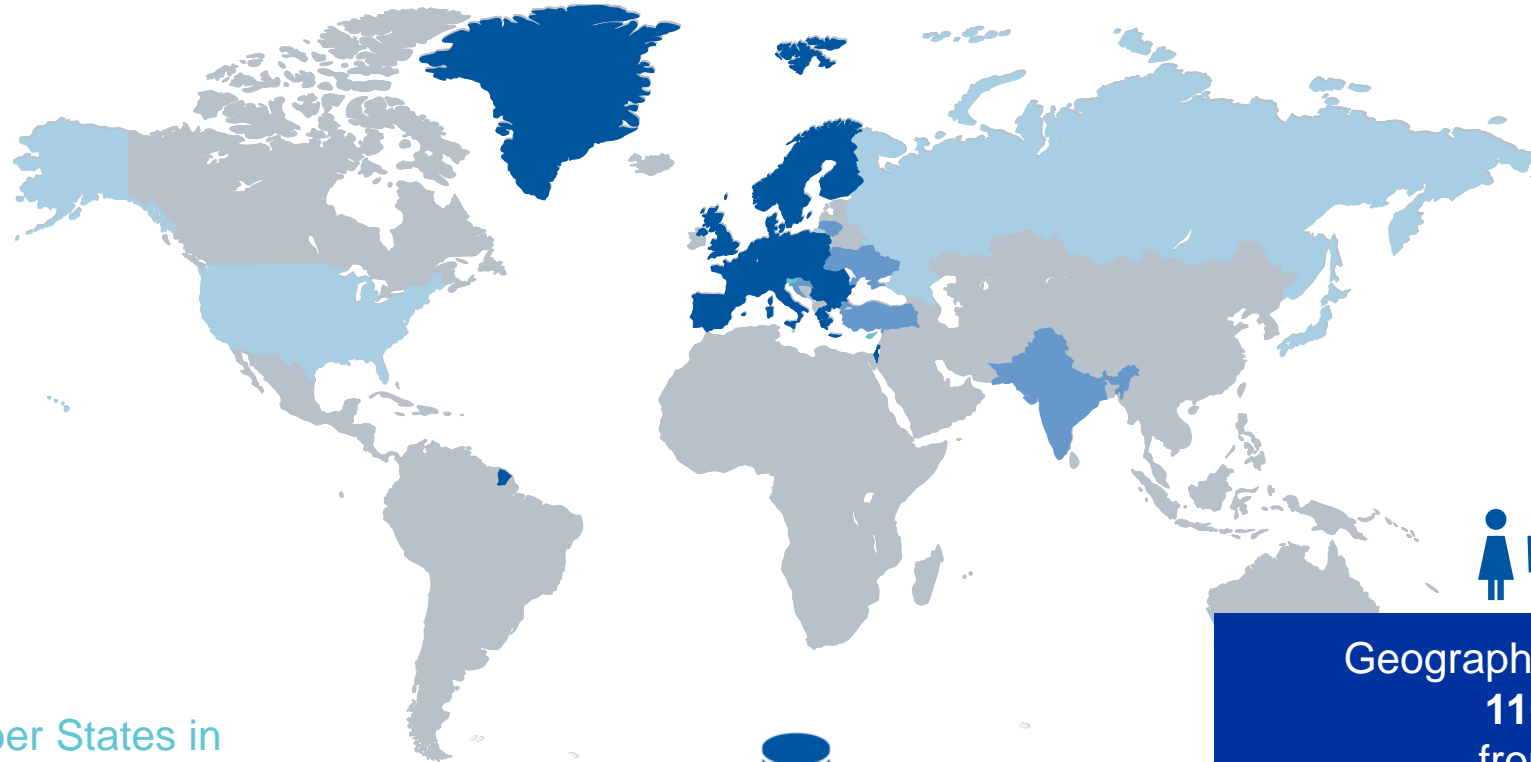


Procurement Rules

Safety Rules

Staff Regulation of its own  
personnel

# In 1954 CERN had 12 Member States Today CERN has 23 Member States



**23** Member States

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

**6** Associate Member States

**6** Observers



**Yearly budget ~ 1100 MCHF**



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

- ~ 2500** Staff members
- ~ 2000** contractors' employees
- ~ 13000** physicists /users

# The role of the ILO – ‘What?’

## CERN Financial Rules:

*“The term '**Industrial Liaison Officer**' (ILO) means a representative of a CERN Member state responsible, inter alia, for ensuring the proper contacts and flow of information between CERN and the firms in the Member State concerned”.*

The ILO shall comply with the CERN code of conduct ..[...] and shall endeavour to act objectively and impartially.

ILOs shall support and work in accordance with CERN’s Procurement Rules.

See CERN Procurement Website:



## Practical info for ILOs

### Contents

1. [Role](#)
2. [Statute](#)
3. [Appointment](#)
4. [Tasks](#)
5. [Facilities](#)
6. [Further information](#)



# The role of the ILO – ‘Why?’

Impossible for CERN to know all relevant industries and companies in all Member States and Associate Member States.

ILOs help is therefore essential in order to:

- Increase competition in bidding
- Reduce cost for CERN
- Help improve the distribution of industrial return



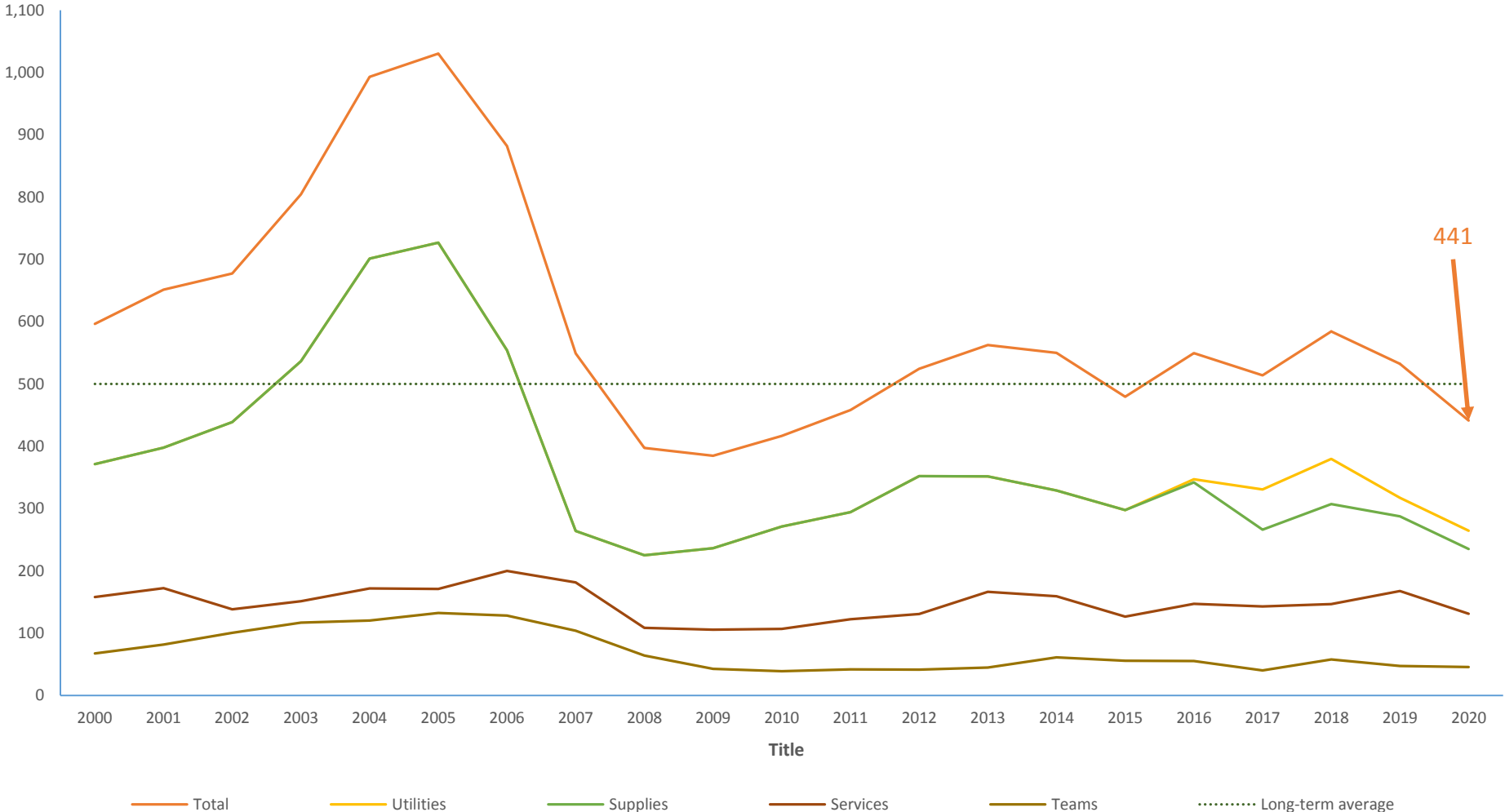
# The role of the ILO – ‘How?’

In particular, ILOs shall:

- **Raise awareness** and transmit information to potential suppliers;
- **Advise CERN** about potential suppliers and contractors in their countries;
- **Keep themselves informed** about CERN’s procurement rules;
- **Advise potential suppliers and contractors** on any general technical, organisational and procedural aspects of CERN;
- **Promote the registration** of potential suppliers in CERN’s supplier data base;
- **Promote exchange** of information and meetings;
- **Encourage long-term participation** of industry in CERN’s mission.

# STATISTICS

# 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:

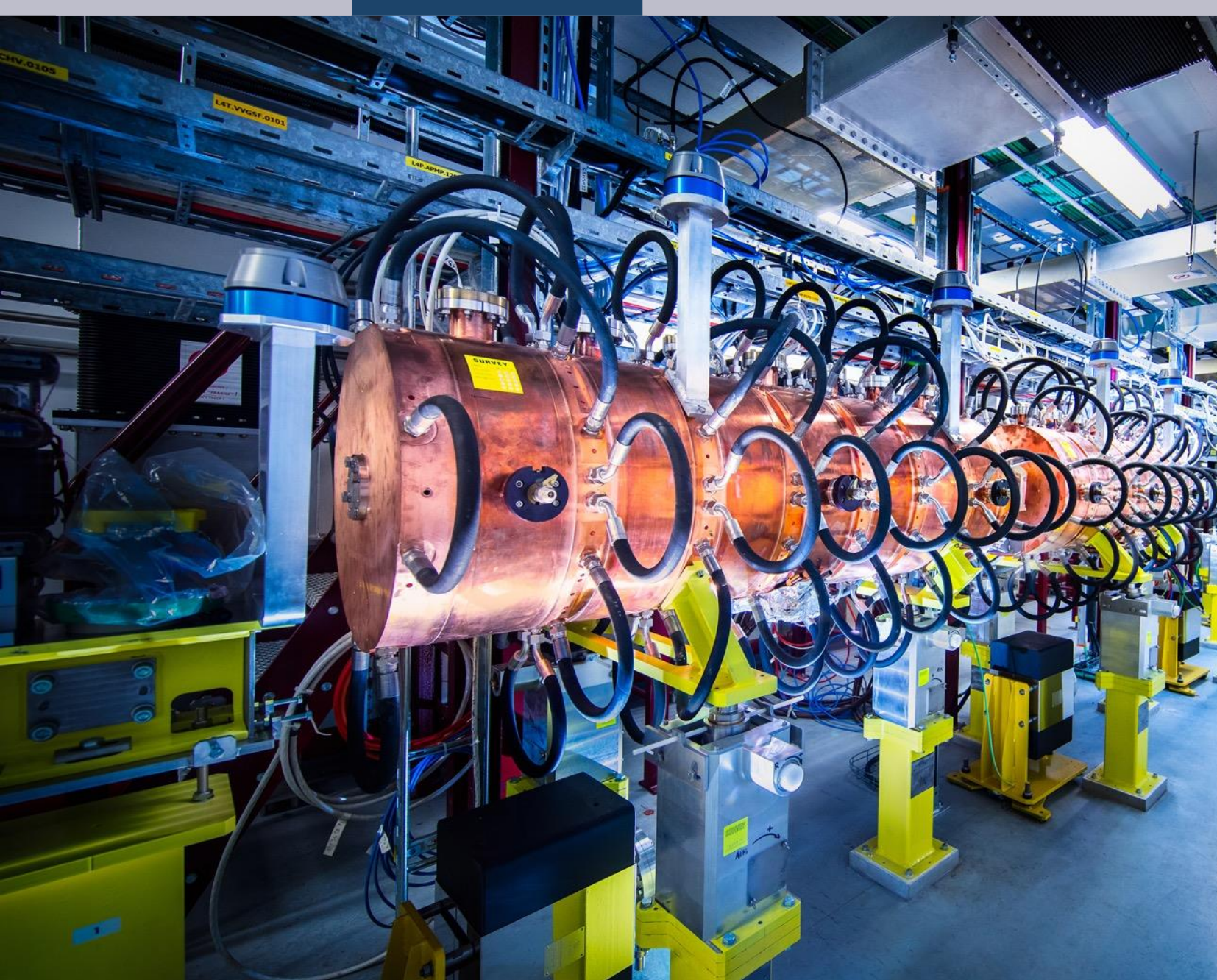
- **Information Technology**
  - Computing systems
  - Servers
  - Software
  - Network equipment
  - Personal computer equipment



# What do we buy?

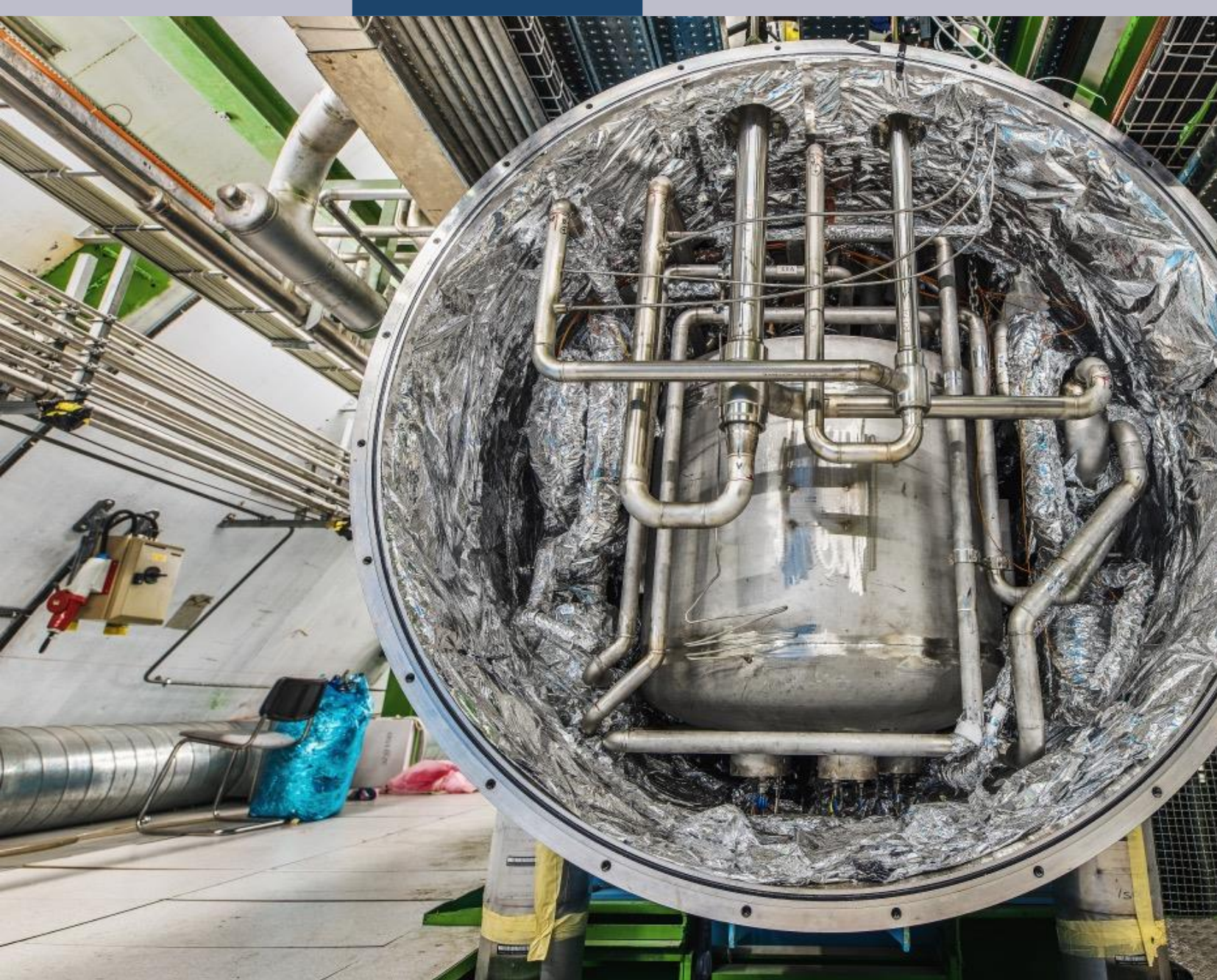
- **Mechanical engineering and raw materials:**
  - Machining
  - Sheet metal work and arc welding
  - Special fabrication techniques
  - Raw materials, finished and semi-finished products (plates, pipes, etc.)
  - Offsite engineering and testing





# What do we buy?

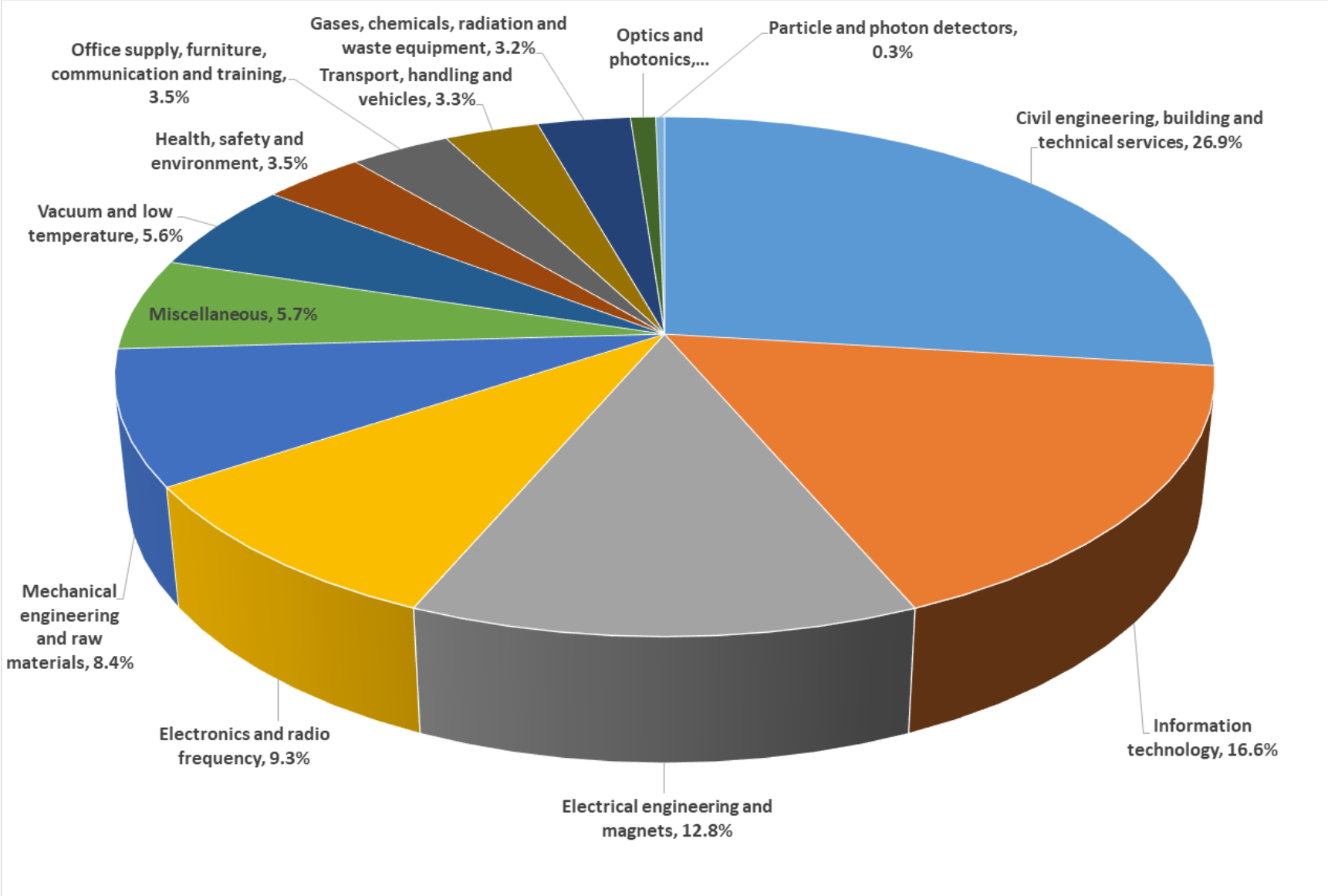
- **Electronics and radiofrequency:**
  - Electronic components (active, passive)
  - PCBs and assembled boards
  - LV and HV power supplies
  - Radiofrequency plants
  - Amplifiers



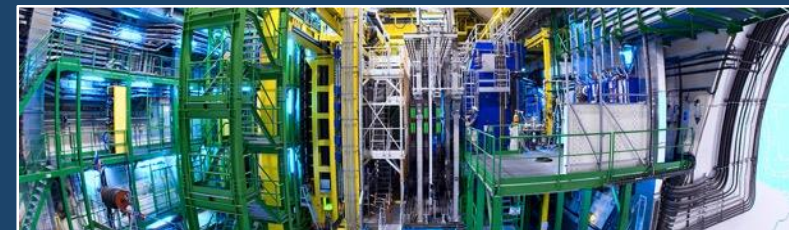
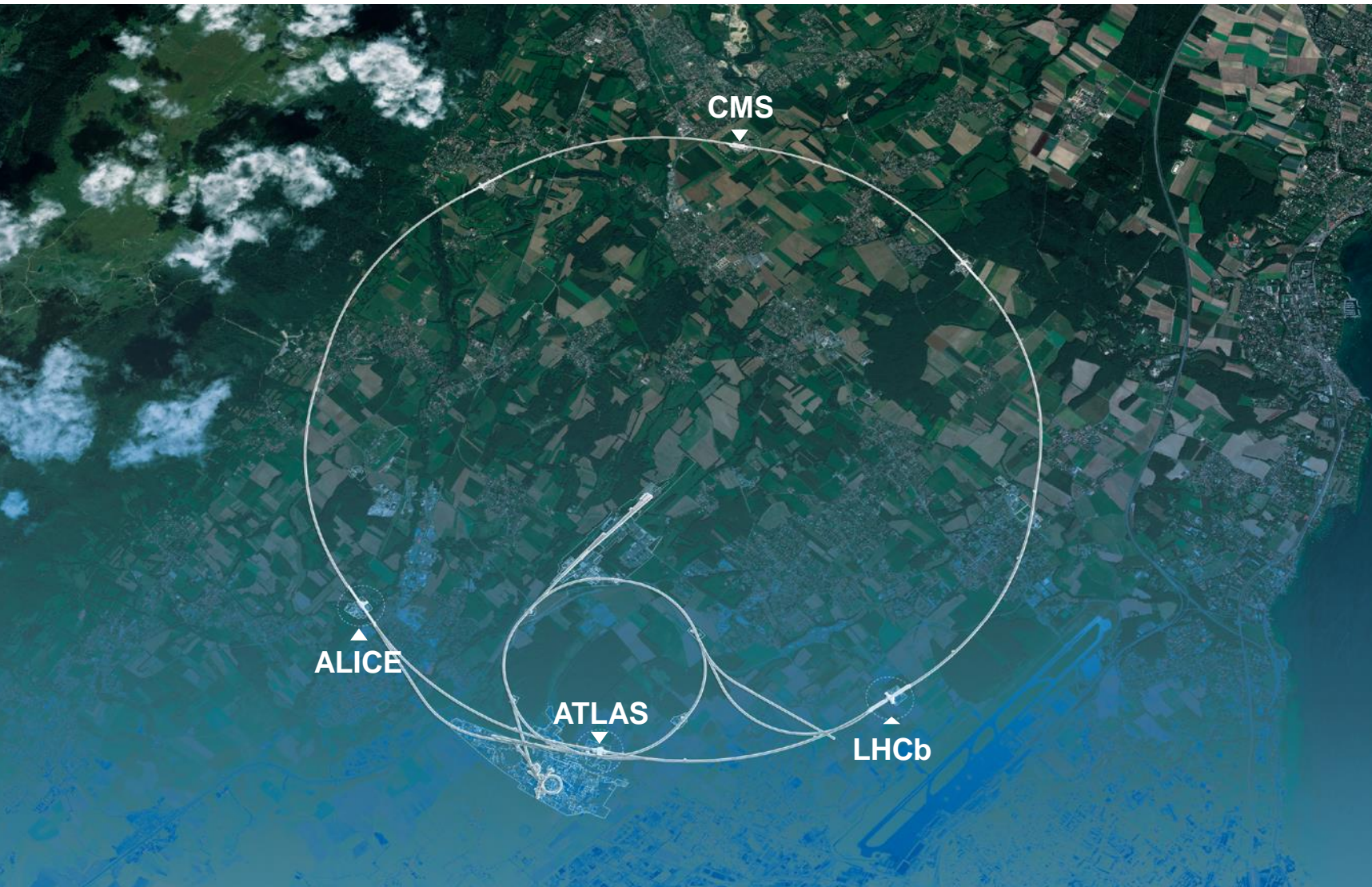
# What do we buy?

- **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

# Supplies - (207MCHF spent in 2020 – CERN budget only)



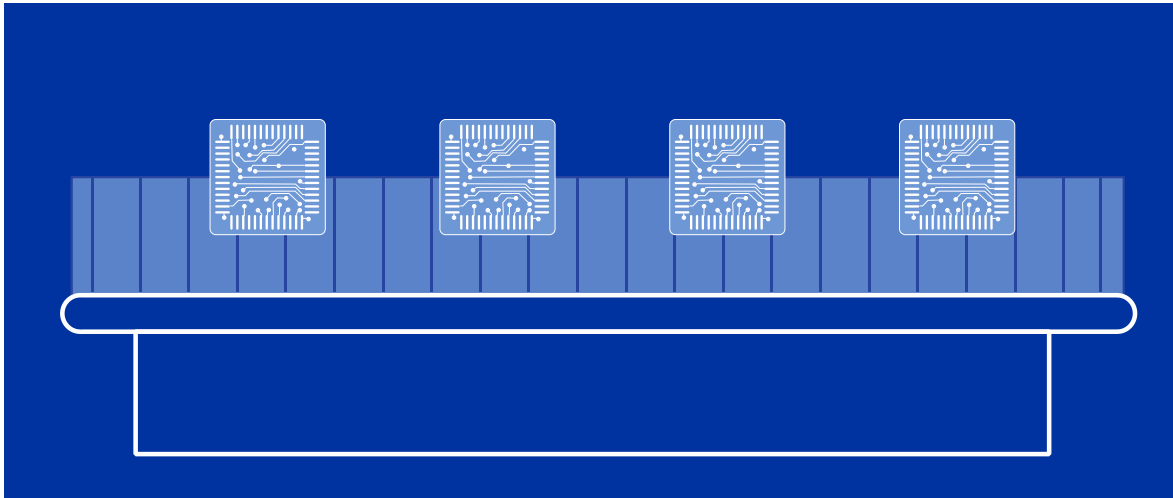
# We also buy for the LHC experiments



# How do we buy?

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

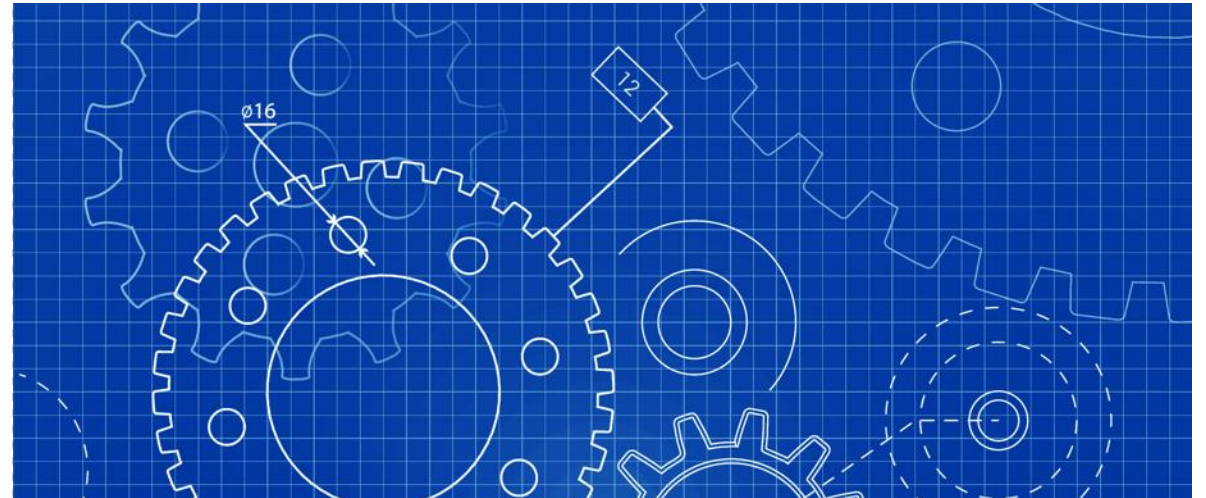
- **Functional specification**

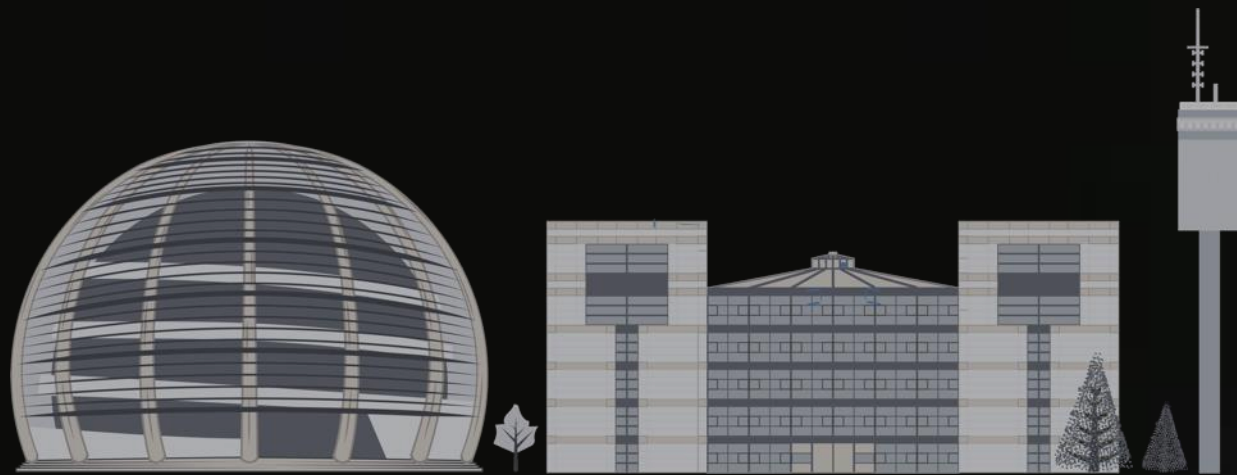


**Non-standard products where industry has neither the required know-how nor the interest to develop and design the products:**

- **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 contractual technical, delivery and performance requirements

At the lowest possible overall cost

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



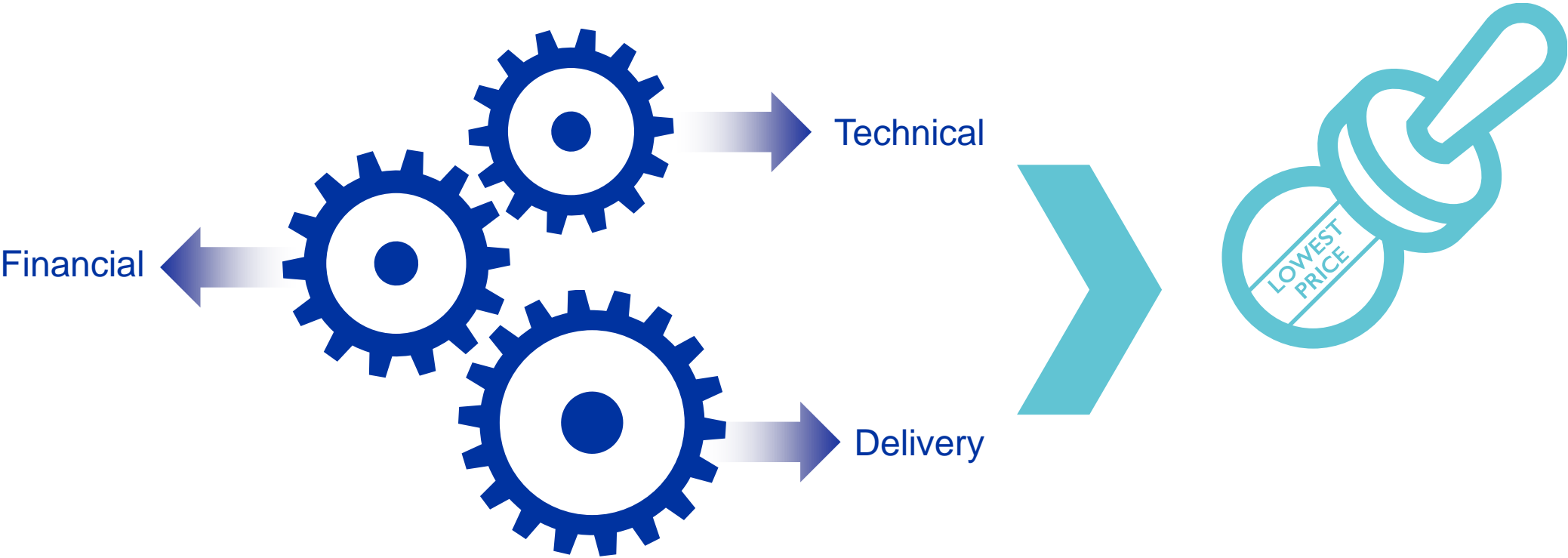
# Principles of the Procurement Rules (2/4)

**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

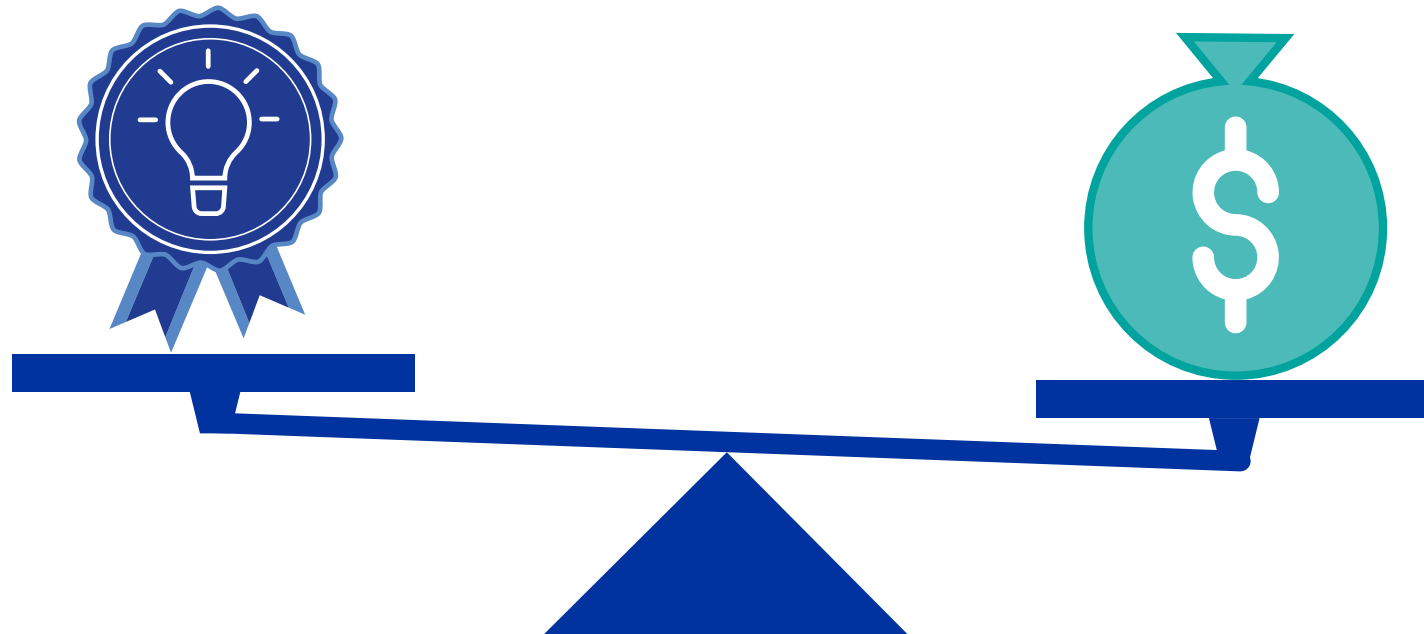
# Principles of the Procurement Rules (3/4)

Award for supplies (and services, exceptionally) based on:  
Lowest compliant bid



# Principles of the Procurement Rules (4/4)

Award for industrial services based on:  
Best Value For Money



 No alignment rule

# Enquiries between 10'000 and 200'000 CHF

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

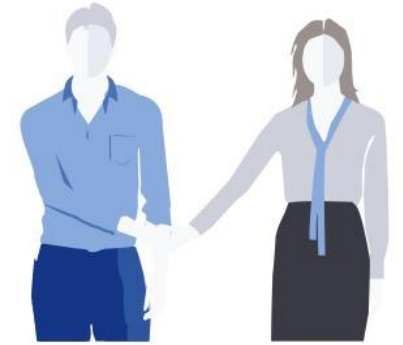
- **Submission deadline: 4 weeks from date of dispatch;**
- **All price enquiries above 50'000 CHF are also sent to the Industrial Liaison Officers (ILOs) for information;**
- **Price enquiries consist of:**
  - Technical specification and annexes;
  - Tender form (and a technical annex - optional);
  - CERN’s General Conditions (contracts, invitations to tender, safety, etc.)



# Enquiries exceeding 200'000 CHF (1/2)

## “Market Survey” (MS)

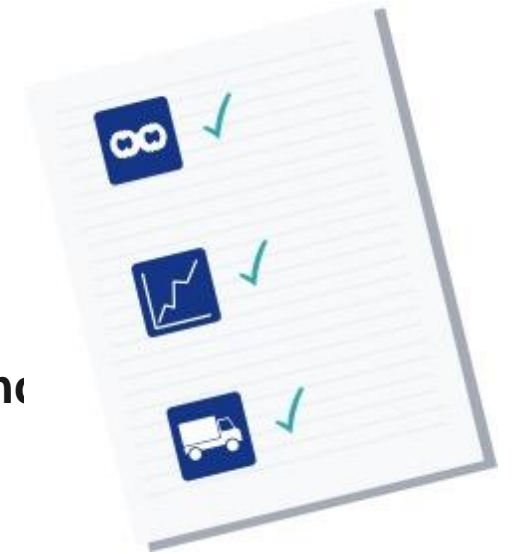
- **Prior announcement in CERN’s procurement website, see “Business Opportunities”**
  - At this stage, interested firms are encouraged to contact CERN in order to have a clear understanding of the requirement, allowing them to begin their organization ahead of the tendering process.
- **Market surveys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



# Enquiries exceeding 200'000 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.”*

If at least **40%** of the total amount of the bid comes from a poorly balanced MS, then the **whole bid** will be treated as that from a bidder in a poorly balanced MS.



*“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”*

If at least **60%** of the total amount of the bid comes from a poorly balanced MS, then the **whole bid** will be treated as that from a bidder in a poorly balanced MS.

# 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 his price to that of the lowest bidder and thereby be awarded the contract.

\* At least 60% for supply contracts or; at least 40% for service contracts awarded on the lowest compliant basis.



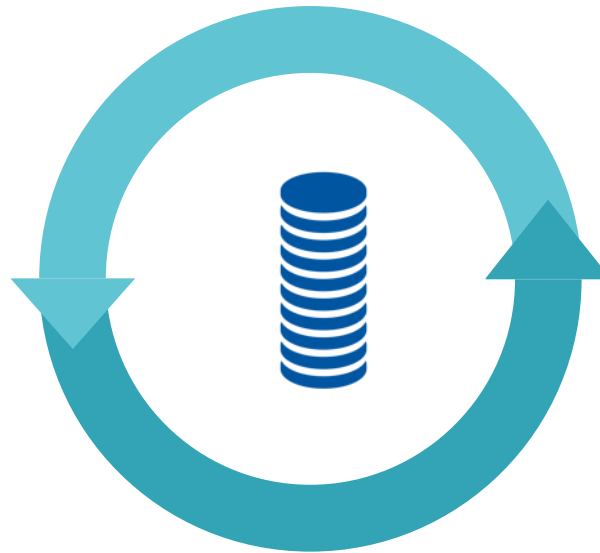
# Industrial return coefficient

## 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:

Very poorly balanced :  $< 0.40$

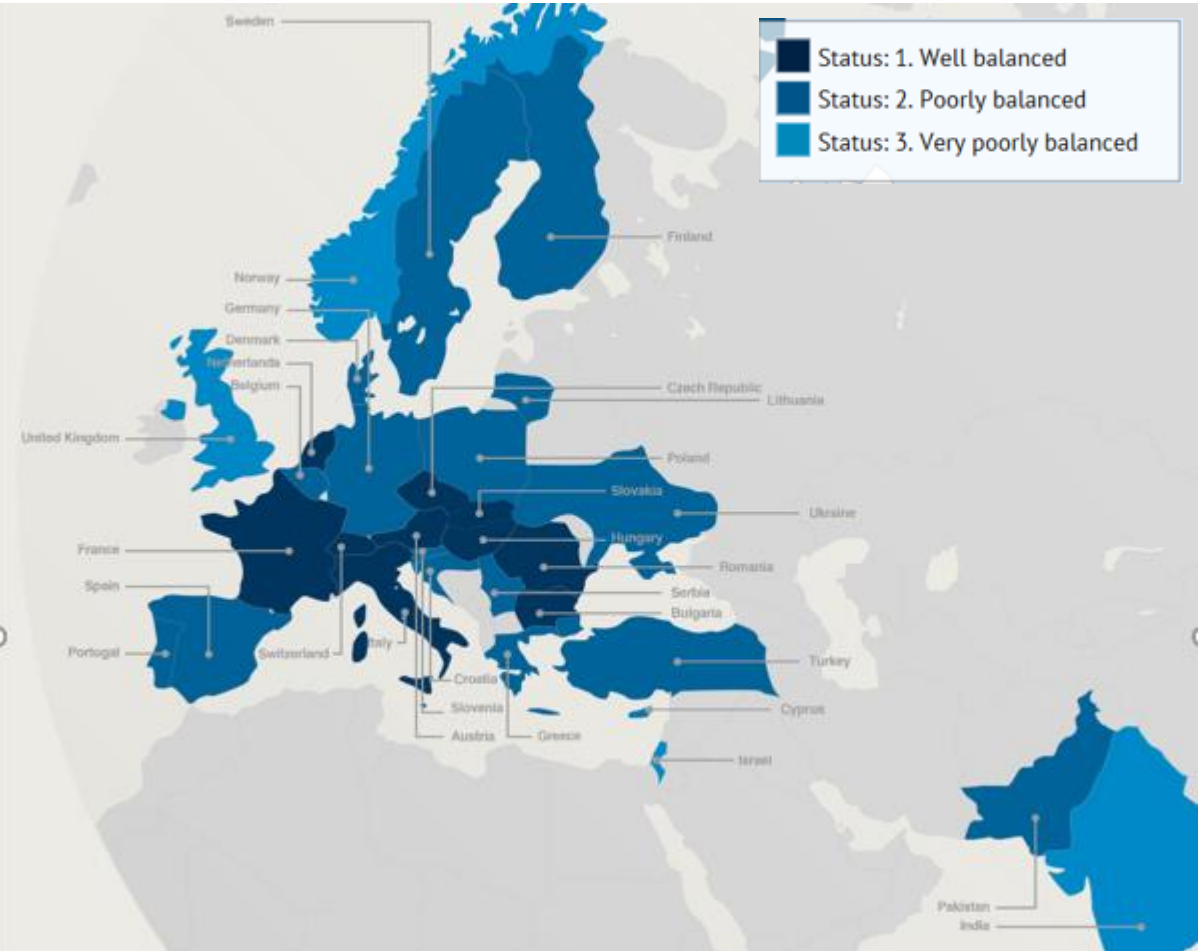
Poorly balanced (PB) :  $0.40 \geq x < 1$

Well balanced (WB):  $\geq 1$

## Status definition

# Member State Balancing (Supplies)

(1st March 2021 – 28 February 2022, based on the previous 4 calendar years):



Well Balanced	Poorly Balanced	Very Poorly Balanced
Austria Bulgaria Czech Republic France Hungary Italy Netherlands Romania Slovakia Switzerland	Belgium Croatia* Cyprus* Denmark Finland Germany Greece Lithuania* Pakistan* Poland Portugal Serbia* Slovenia* Spain Sweden Turkey* Ukraine*	India* Israel Norway United Kingdom

\*Associate Member States

# Limited tendering

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

## Conditions

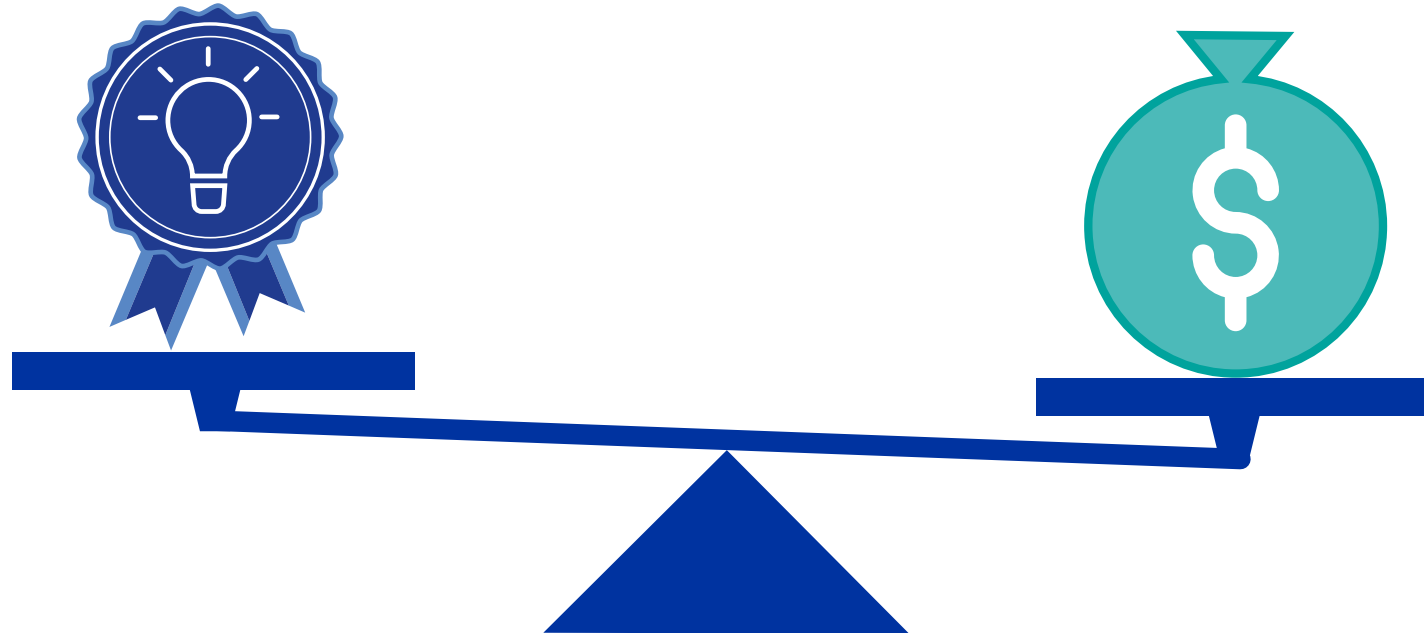
Firms established in very poorly balanced Member States only (industrial return  $<0.4$ );

Used in case where there is sufficient competition;

ILO can ask to add firms, provided they are established in very poorly Member States.

# Reminder - Principles of the Procurement Rules

Award for industrial services\* based on:  
**Best Value For Money (BVFM)**



\*Performed on the CERN site, on a permanent basis, for an amount >200kCHF

# Best-value-for-money (BVFM) awards

The following criteria and weights are applied by CERN to evaluate the bids for Service contracts:

Criterion	Weight
<b>Price</b> (inc. all relevant costs)	<b>XX</b>
<b>Quality</b>	<b>XX</b>
<ul style="list-style-type: none"><li>▪ Experience of the key personnel</li><li>▪ Stability of the personnel</li><li>▪ External references</li><li>▪ Technical know-how</li><li>▪ Technical training</li><li>▪ Quality of the bid</li><li>▪ Tests</li><li>▪ Etc.</li></ul>	
<b>TOTAL</b>	<b>100</b>

# Particularities of service contracts

- ✓ **3-year contracts (renewable for 4 one-year periods).**
- ✓ **Specifications often defined through SLAs and KPIs.**
- ✓ **Prices requested for services, not persons. Usual remuneration mechanisms:**
  - ✓ Time spent – hourly rates (engineering design services, ...)
  - ✓ Unit price list and measurement of quantities really installed, with volume discounts (minor electrical work, ...)
  - ✓ Lump sum prices. In case of important volume variations, prices may be readjusted (cleaning services, maintenance services, ...).

# Examples of service contracts



Welding and  
electromechanical  
work



# Examples of service contracts



HVAC  
maintenance,  
piping works





# Examples of service contracts



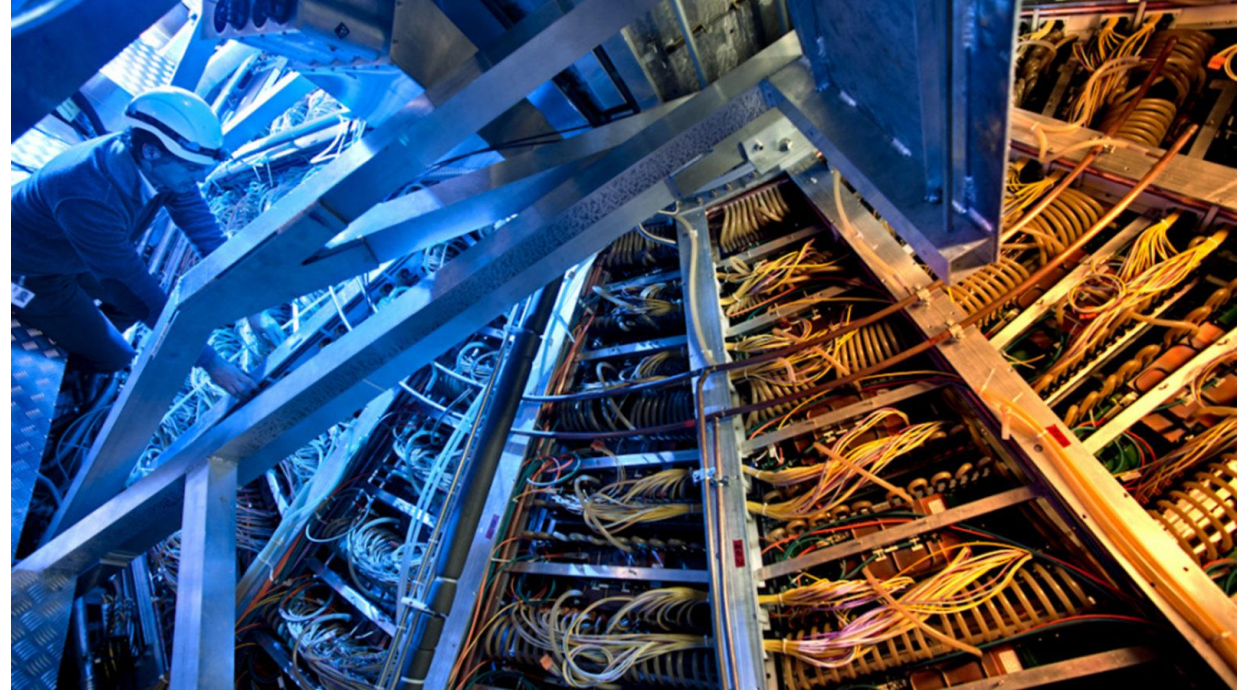
Transport and handling



# Examples of service contracts

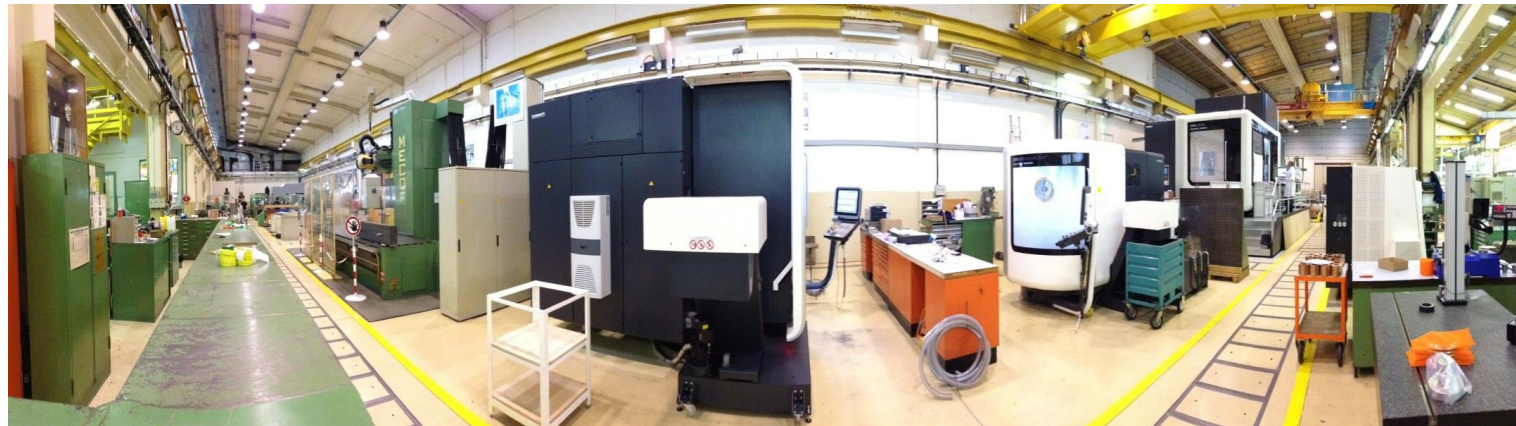


Cabling, electrical works



# Examples of service contracts

Mechanical  
workshop



# Examples of service contracts

Facilities  
management



# Country of origin (reminder)

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

If at least **40%** of the total amount of the bid comes from a poorly balanced MS, then the **whole bid** will be treated as that from a bidder in a poorly balanced MS.

**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”*

If at least **60%** of the total amount of the bid comes from a poorly balanced MS, then the **whole bid** will be treated as that from a bidder in a poorly balanced MS.



# 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



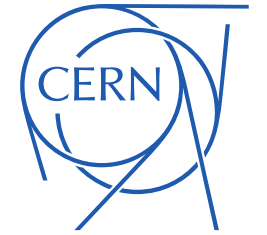
18%

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 improve the reputation as suppliers

*supplier*



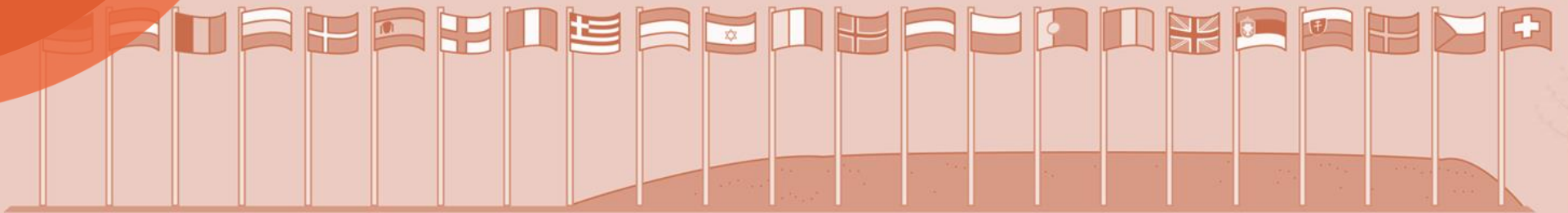




# Social Cost-Benefit Analysis (CBA) calculated by the University of Milan

*“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.).”*

**And you as an  
ILO?**



# Improving Industrial Return

Proposing suitable firms from  
your networks

Maintaining regular contacts with  
CERN technical personnel (and  
anticipating forthcoming needs)

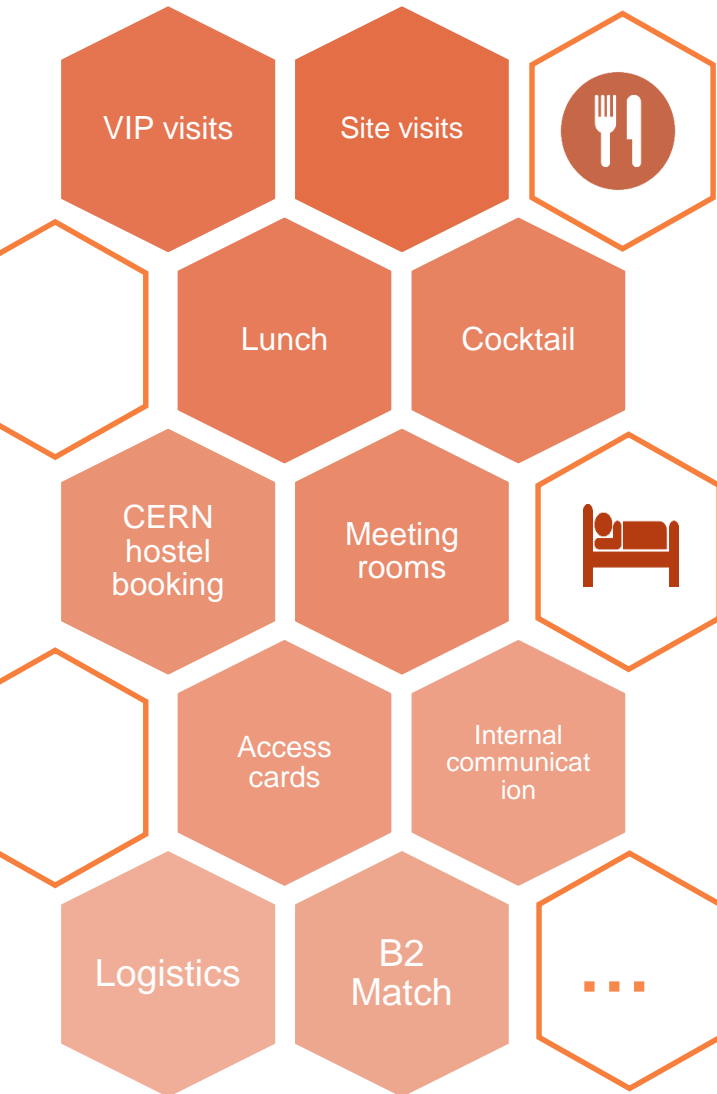
Organizing visits in your country  
and at CERN

Help the industry organise as  
groups of firms

Help promote opportunities at  
(and demystify) CERN

Others?  
Let us know your ideas

# Organising Industrial Exhibitions @CERN



## CERN can coordinate:

- For official opening: VIP, Protocol office, booking of conference rooms.
- Site visits
- Cocktail, lunch...with NOVAE
- Stands, information about safety rules
- Reservation at CERN hostel
- Access cards
- Internal communication (press office, technical departments, etc..)
- Delivery of material sent by companies to the area of the exhibition
- B2 Match IT tool, match making between companies and CERN staff
- ...

# Successful Bidders & Contractors

- ✓ Often small – medium sized and flexible firms
- ✓ Ensure full understanding of specifications – exceeded specifications may be too expensive
- ✓ Communicate proactively and constructively (problems, issues, alternatives, etc.)
- ✓ Ensure good working relationship with partners and sub-contractors
- ✓ Consider test and documentation requirements
- ✓ Make best offer directly



# Final thought...



Thank you



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