



Doing Business with CERN

INGOs

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7 February 2024

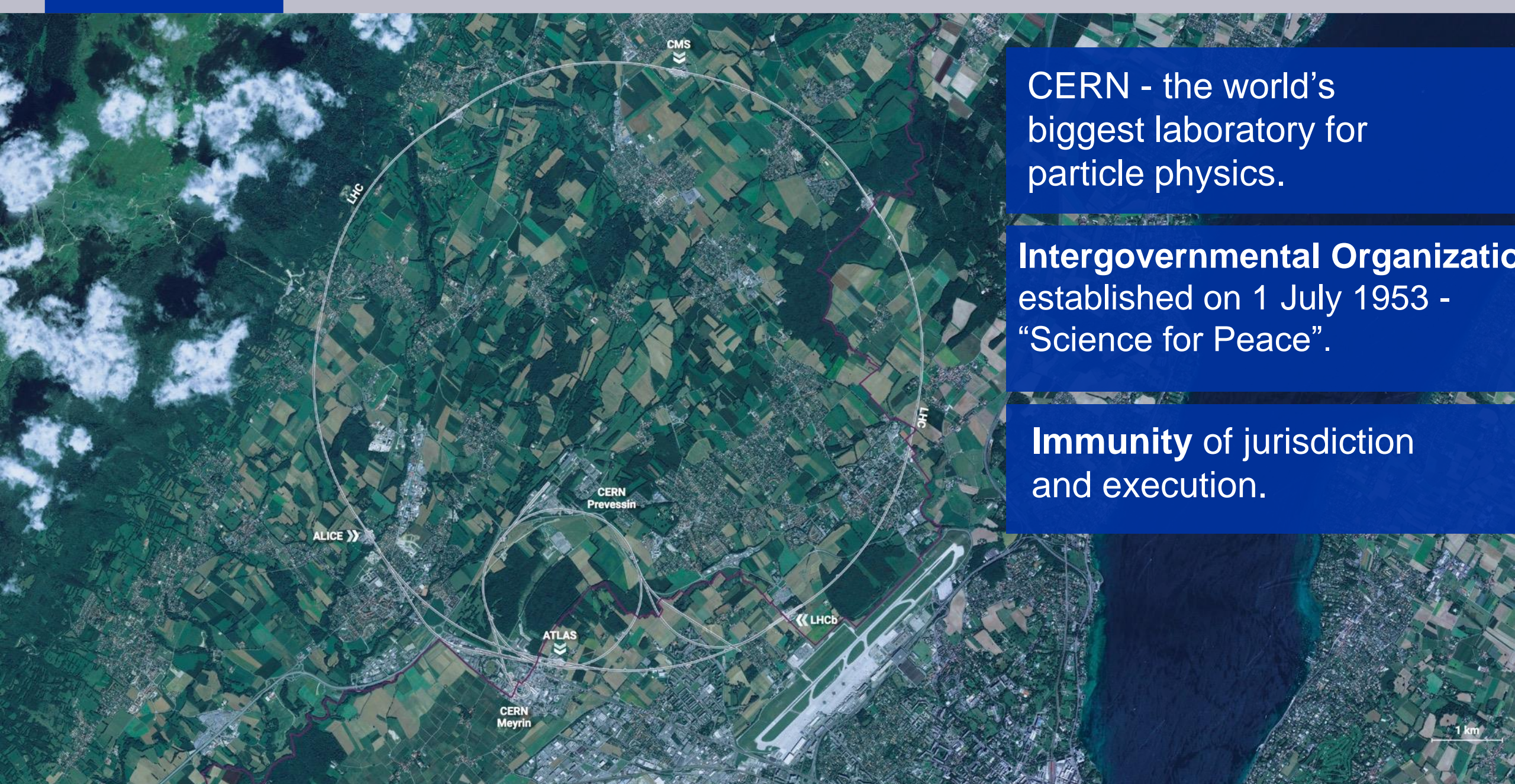


AGENDA

- Introduction
- What we buy
- Procurement @ CERN - the rules
- Impact of Doing business with CERN
- Procurement website



INTRODUCTION



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

Intergovernmental 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:

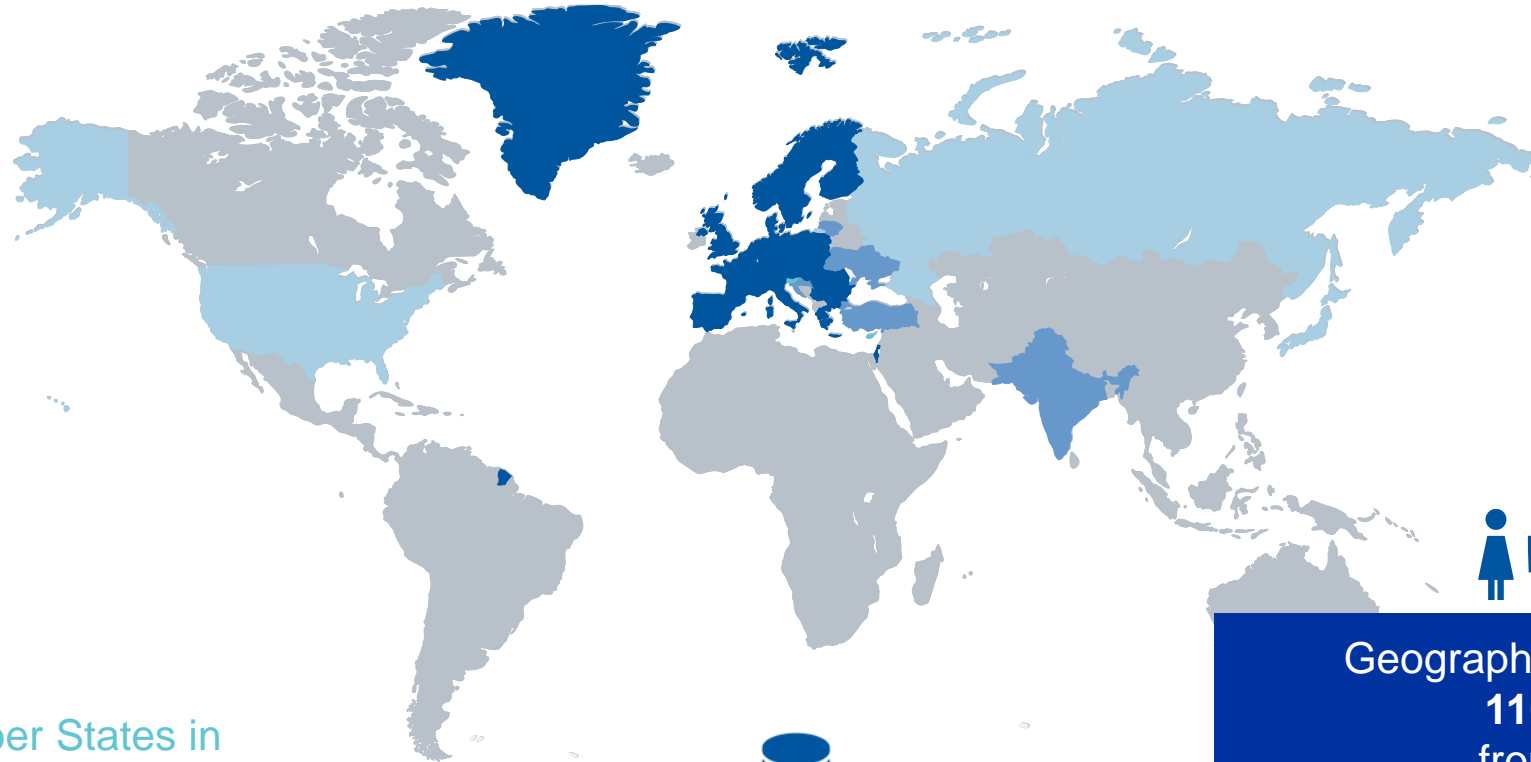


Procurement Rules

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

7 Associate Member States

6 Observers



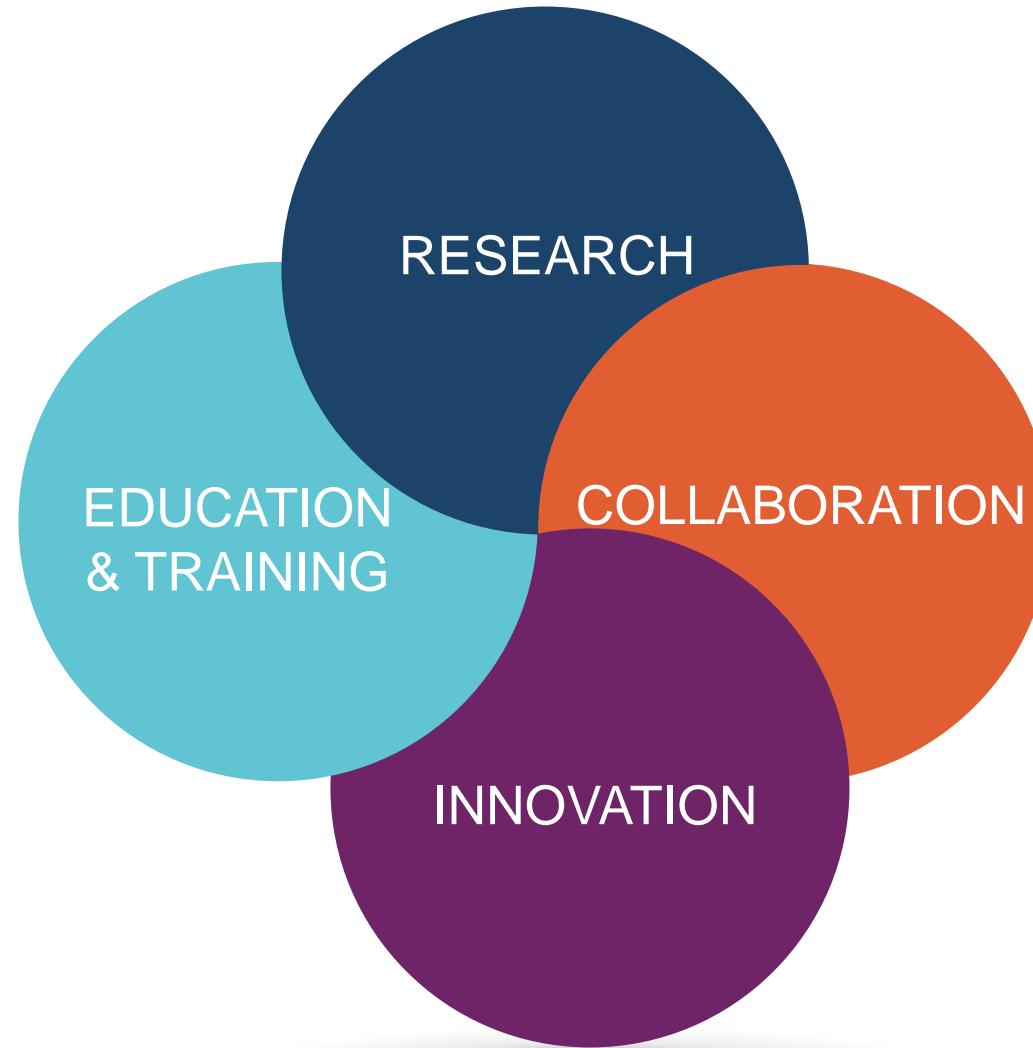
Yearly budget ~ 1350 MCHF































Geographical & cultural diversity
110 nationalities,
from 77 countries

~ **2676** Staff members
~ **2000** contractors' employees
~ **13000** physicists /users

Four pillars underpin CERN's mission



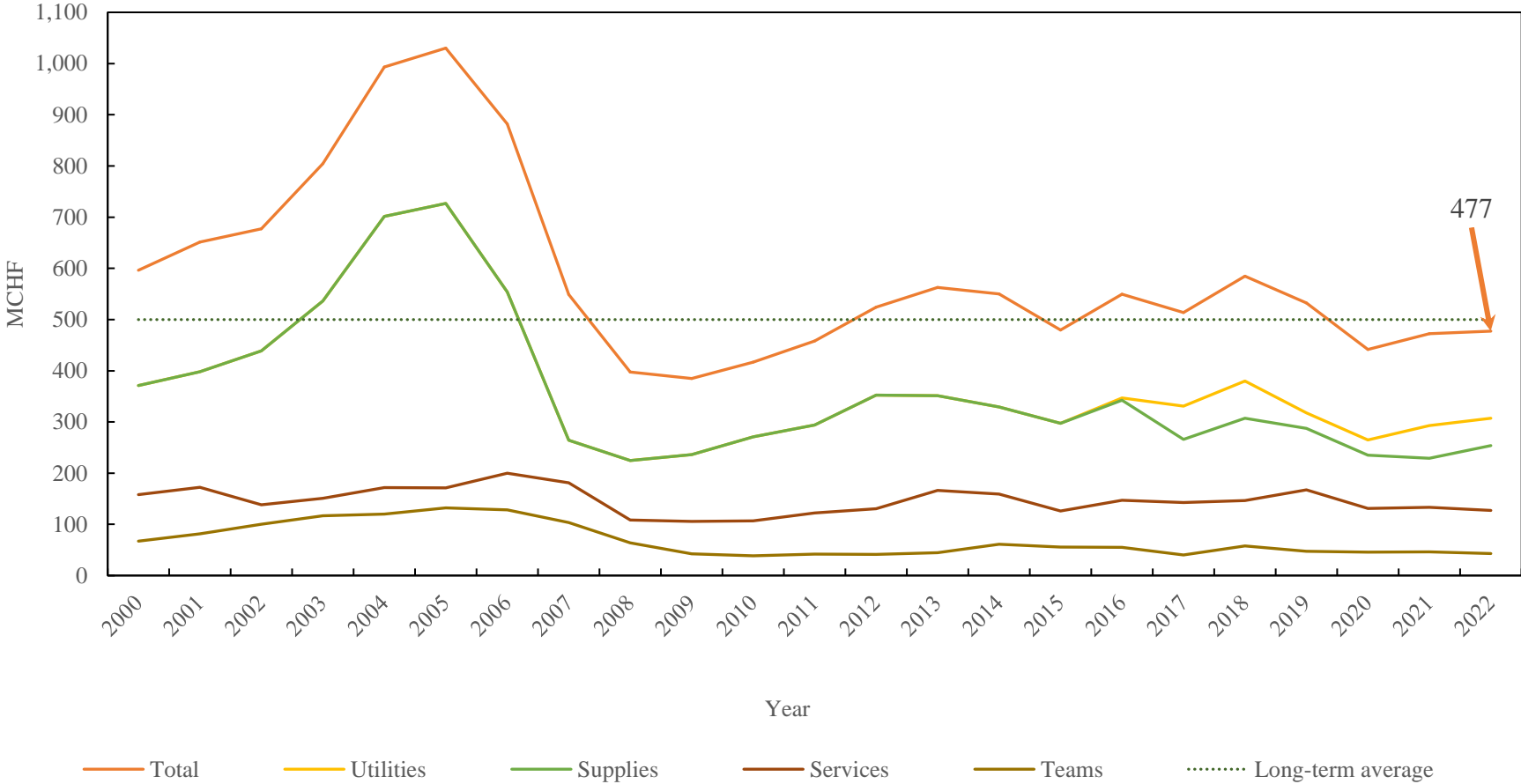
Yearly Budget (contributions 2024)

| 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 | | | |
| | | | Total | 100% | 1 255 461 050 |

What do we buy?

- **Recurrent supplies & services**
- **Accelerator technologies required for consolidation projects and new developments**
- **Detector technologies for experiments**

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



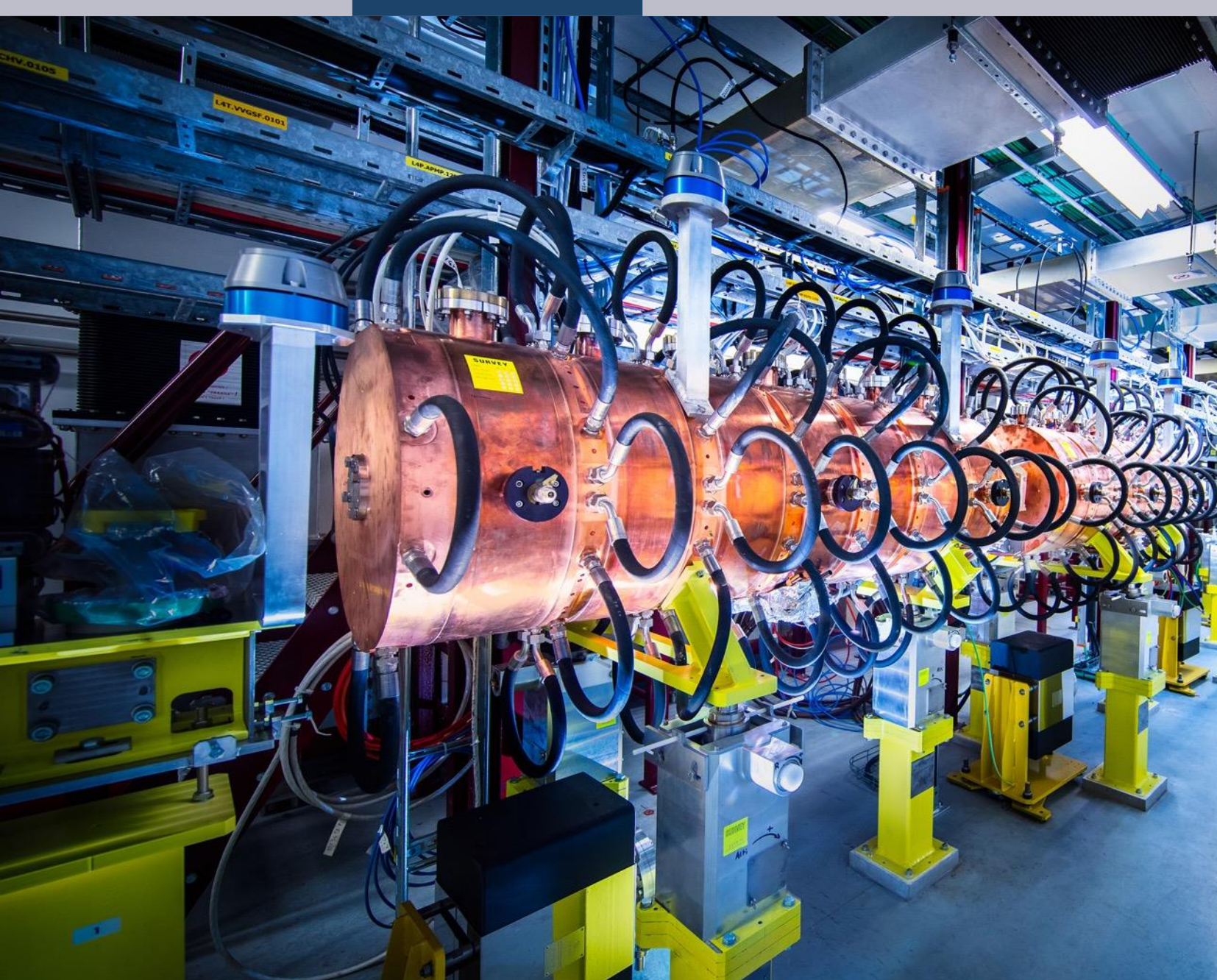
What do we buy:

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



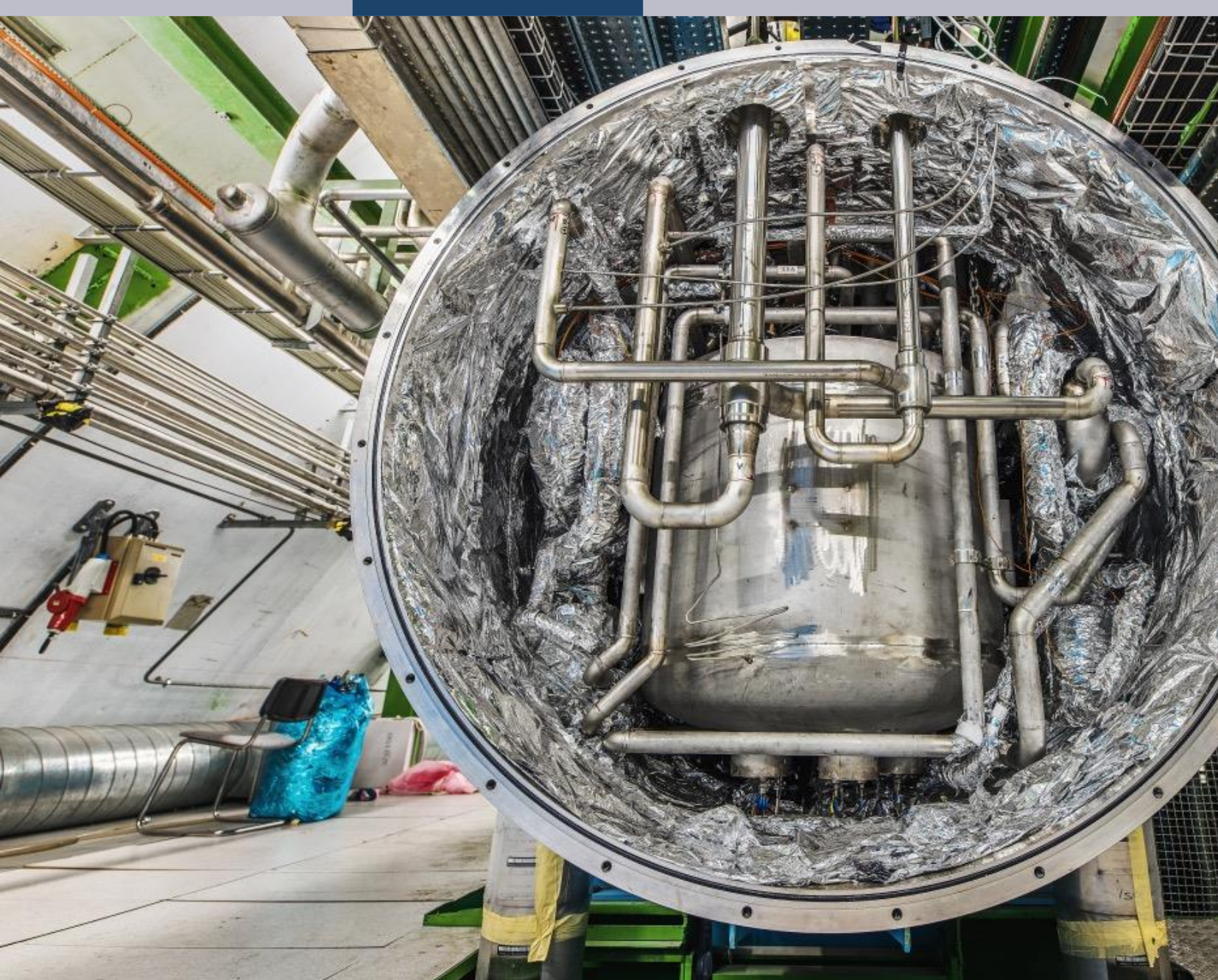
What do we buy?

- **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?

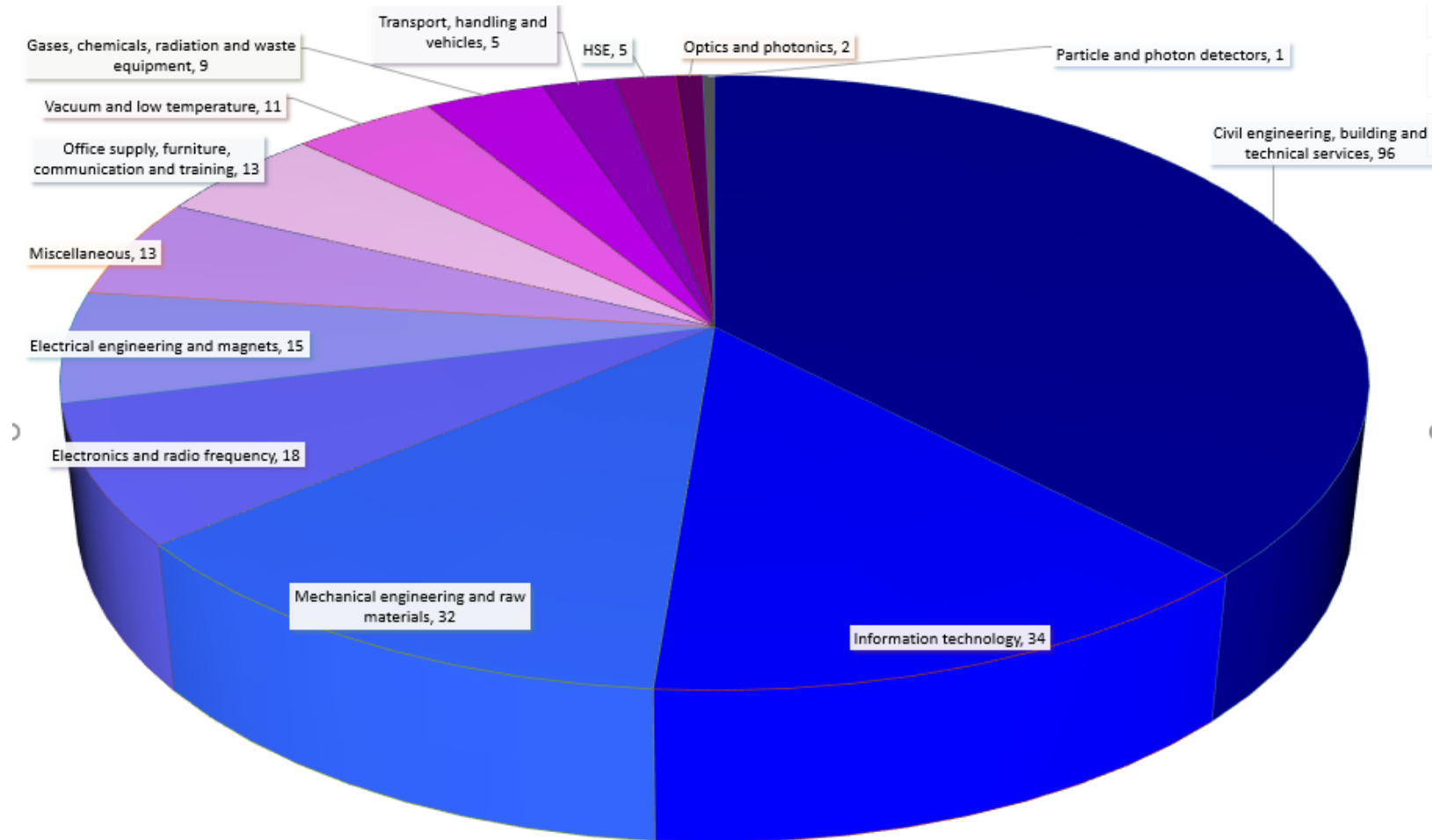
- **Electronics and radiofrequency:**
 - Electronic components (active, passive)
 - PCBs and assembled boards
 - LV and HV power supplies
 - Radiofrequency plants
 - Amplifiers



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 (254MCHF spent in 2022 – CERN budget only)



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)

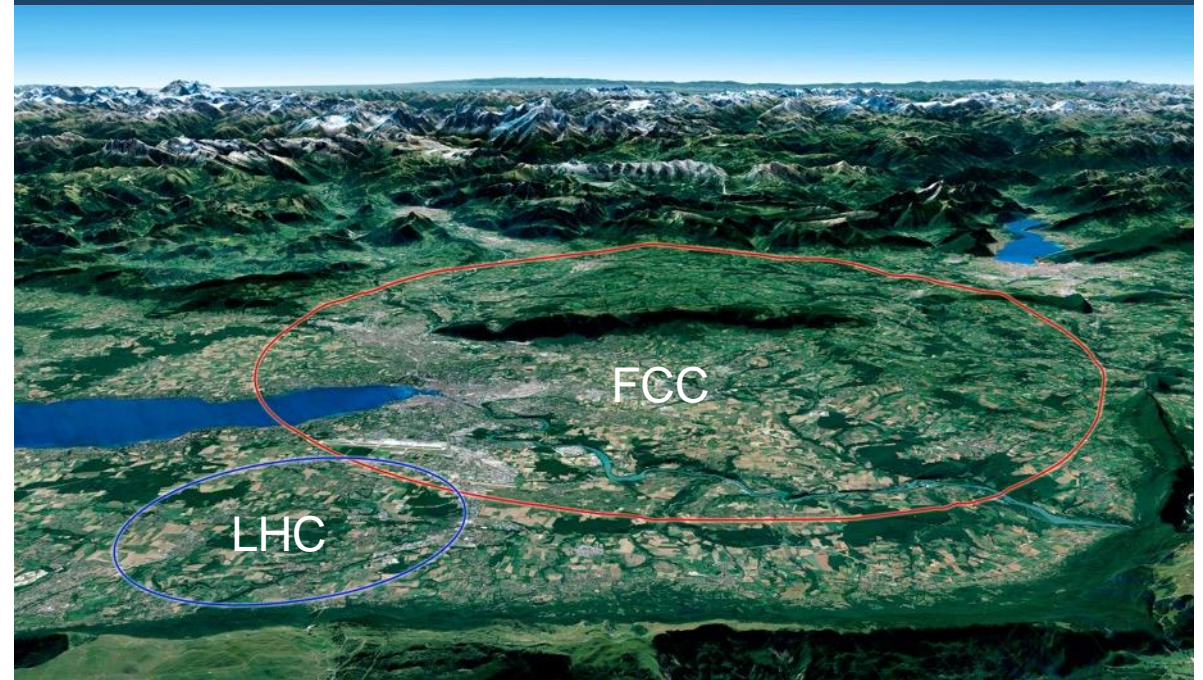
- Linear e^+e^- collider \sqrt{s} up to 3 TeV



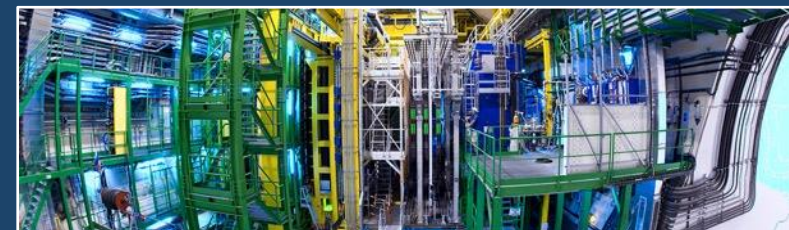
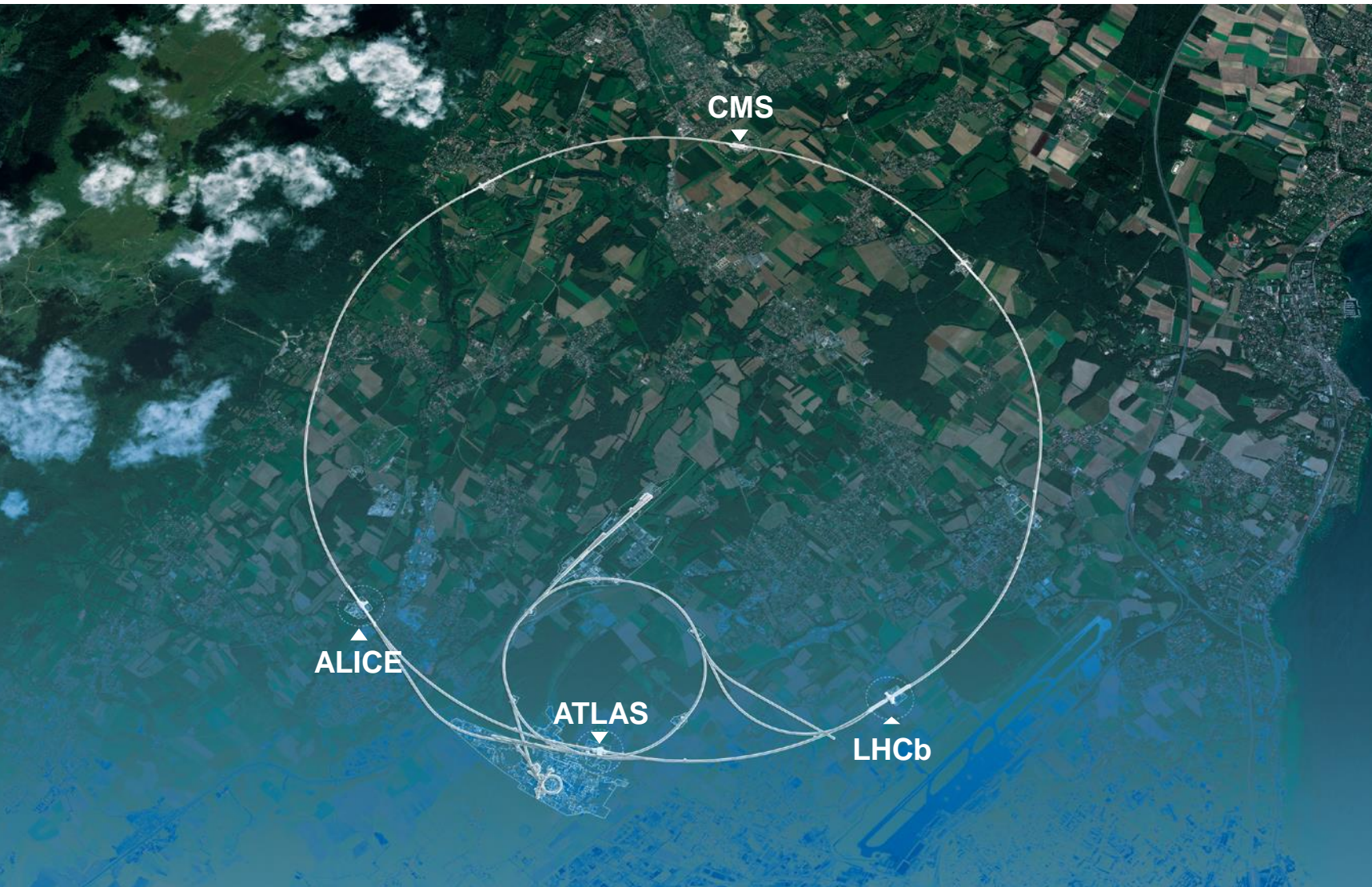
Future Circular Collider (FCC)



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



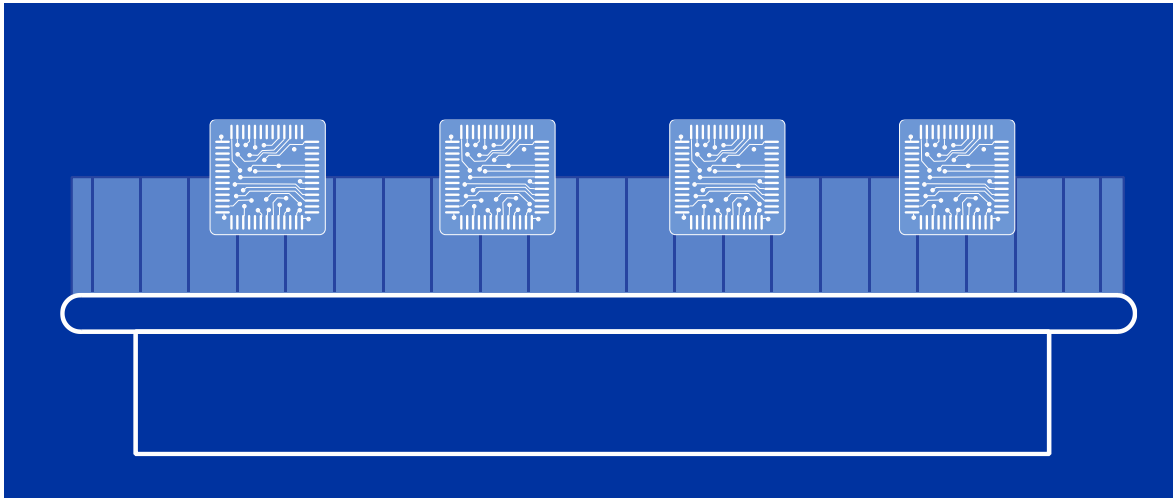
We also buy for the LHC experiments



How do we buy?

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

- **Functional specification**

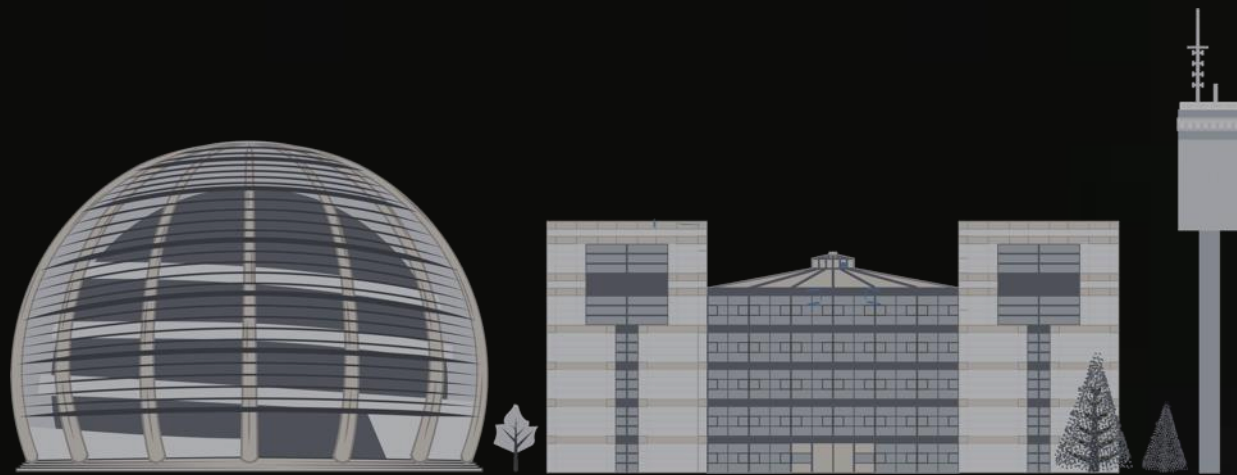


Non-standard products where industry has neither the required know-how nor the interest to develop and design the products:

- **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

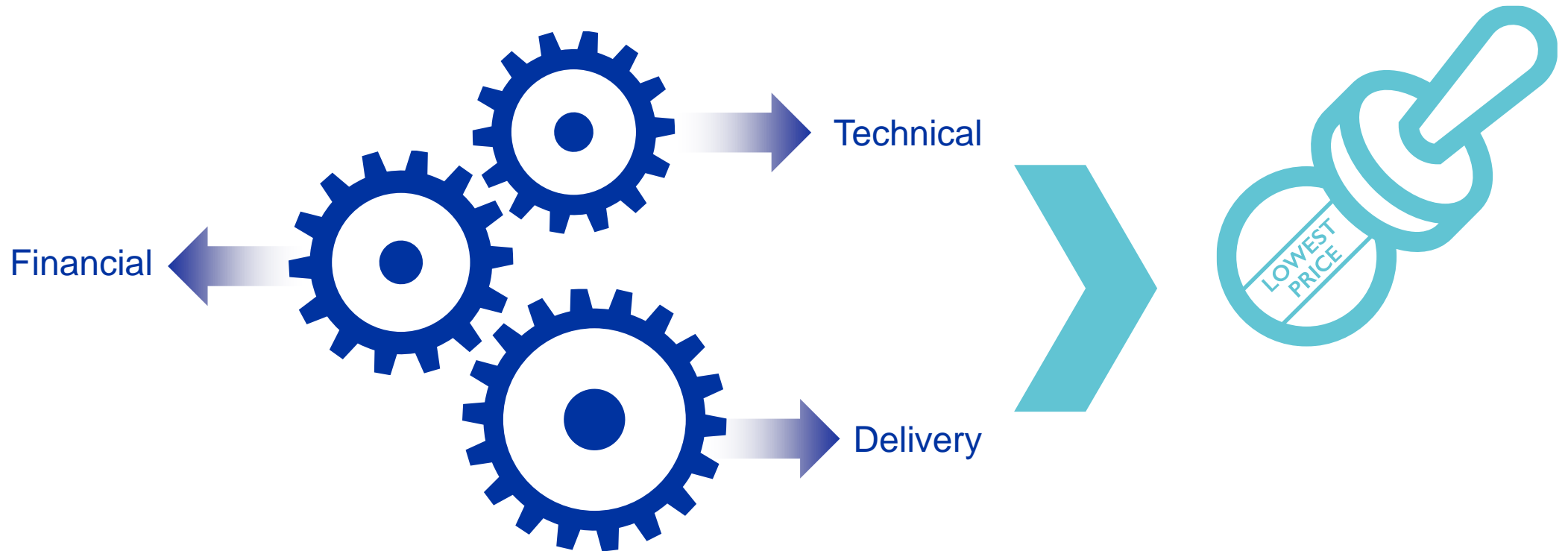
Principles of the Procurement Rules (2/4)

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

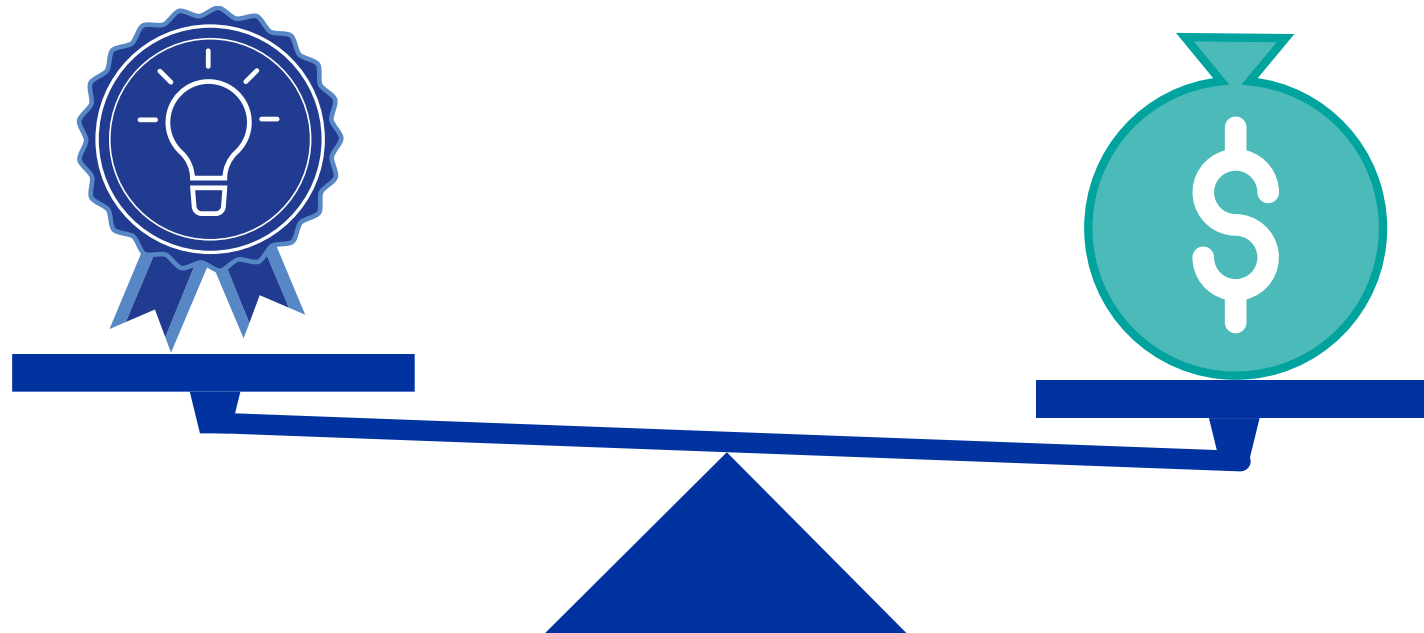
Principles of the Procurement Rules (3/4)

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)

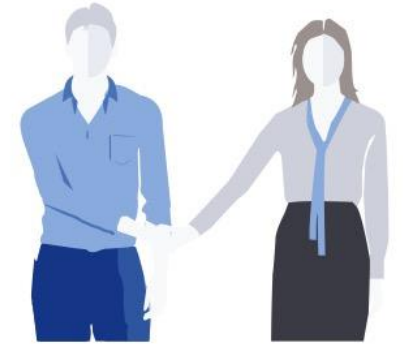
- **Submission deadline: 4 weeks from date of dispatch;**
- **All price enquiries above 50'000 CHF are also sent to the Industrial Liaison Officers (ILOs) for information;**
- **Price enquiries consist of:**
 - Technical specification and annexes;
 - Tender form (and a technical annex - optional);
 -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

Industrial return coefficient

Industrial return coefficient

For Supply contracts and for a 12-month period starting on 1st 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”.



Over a 4-year period:
Very poorly balanced : < 0.40
Poorly balanced (PB) : $0.40 \geq x < 1$
Well balanced (WB): ≥ 1

Status definition

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

Poorly balanced Member States (Supplies)

(1st March 2023 – 29 February 2024, based on the previous 4 calendar years):

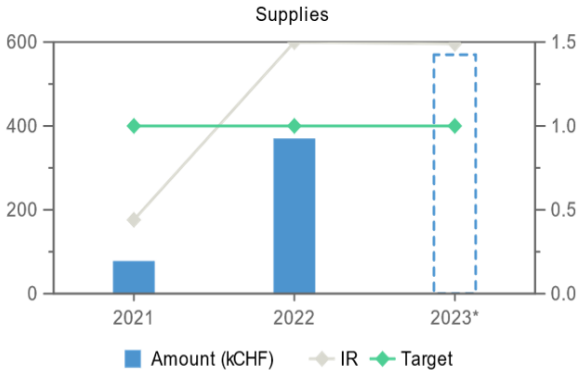


| Well Balanced (≥ 1) | Poorly Balanced ($0.40 \geq x < 1$) | Very Poorly Balanced (< 0.40) |
|---|---|---|
| Austria Estonia* France Hungary Italy Lithuania* Switzerland Türkiye | Belgium Croatia* Cyprus* Czech Republic Finland Germany Greece Netherlands Pakistan* Poland Portugal Romania Slovenia* Spain Sweden Ukraine* Latvia* Norway Serbia* United Kingdom | Bulgaria Denmark India* Israel Ukraine* |

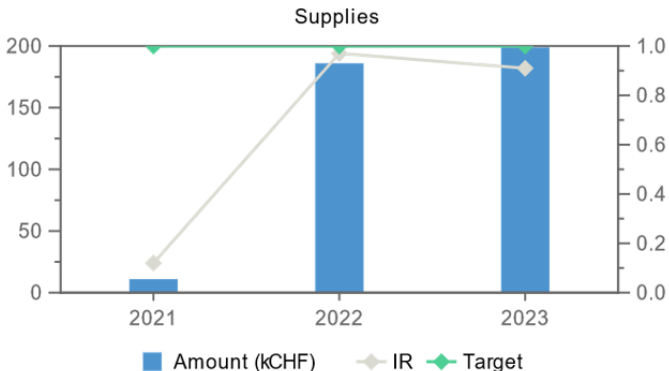
*Associate Member States

Industrial Return (supplies)

Estonia



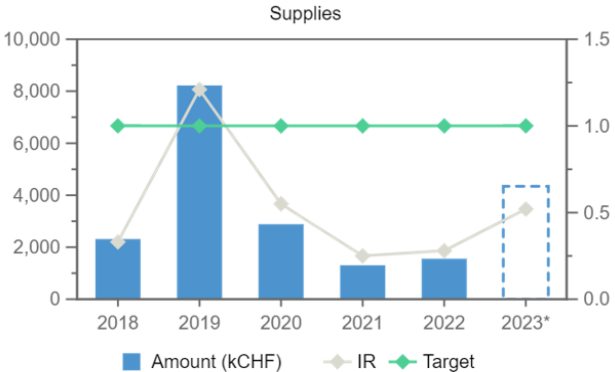
Latvia



Finland



Sweden



* 2023 FIGURES PROVISIONAL

Alignment rule

Applicable for:

1

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

2

With a total amount exceeding 100'000 CHF.

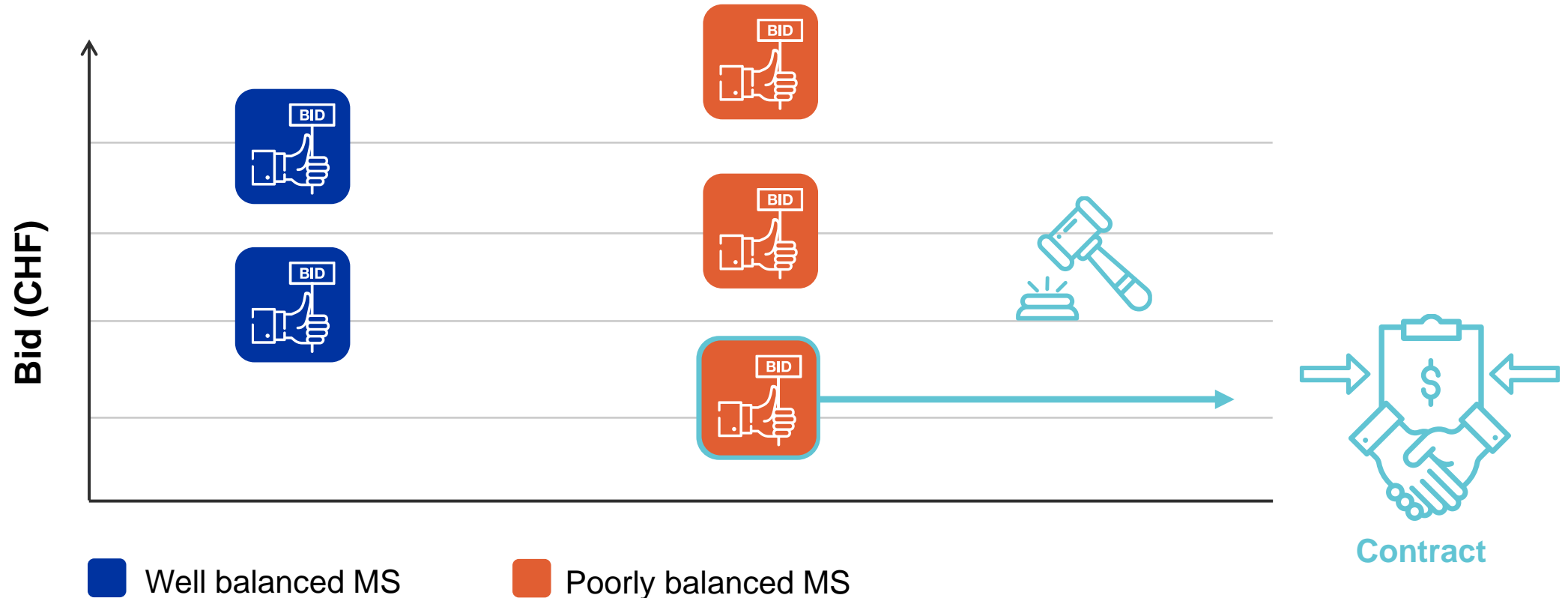
RULE

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.

Alignment rule (Scenario 1)

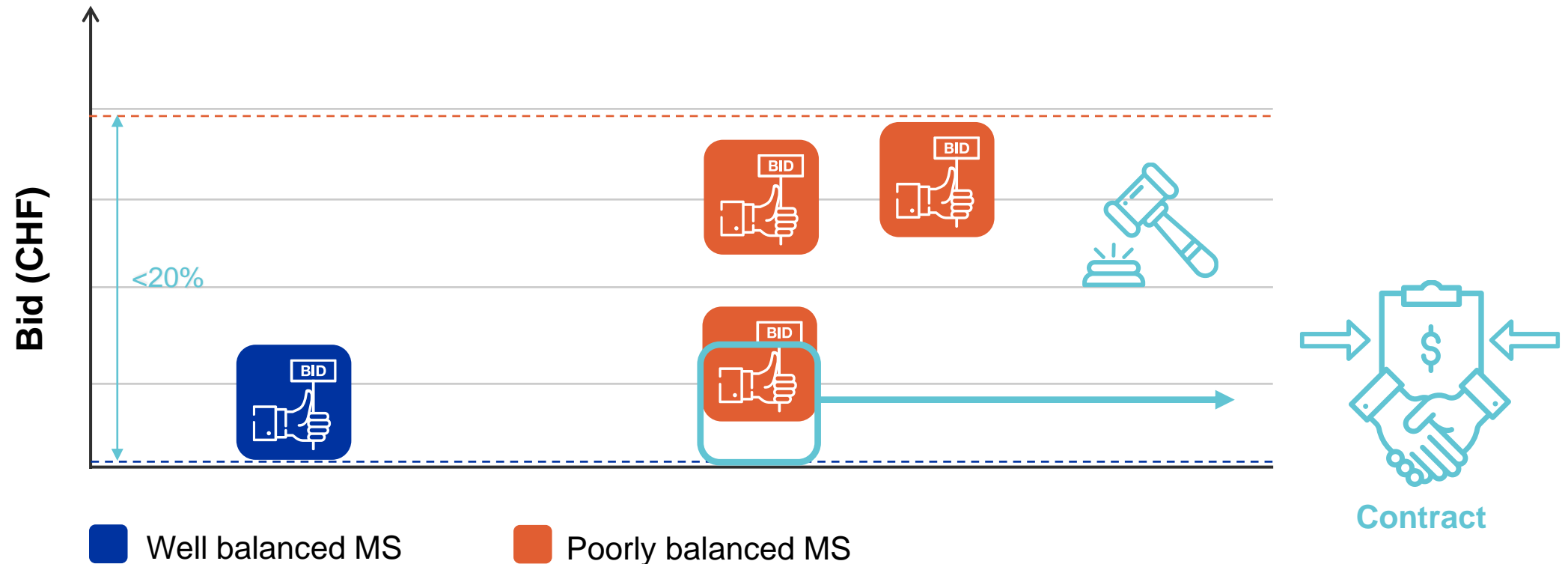
Lowest bid from a PB MS



Alignment rule (Scenario 2)

Lowest bid from a WB MS

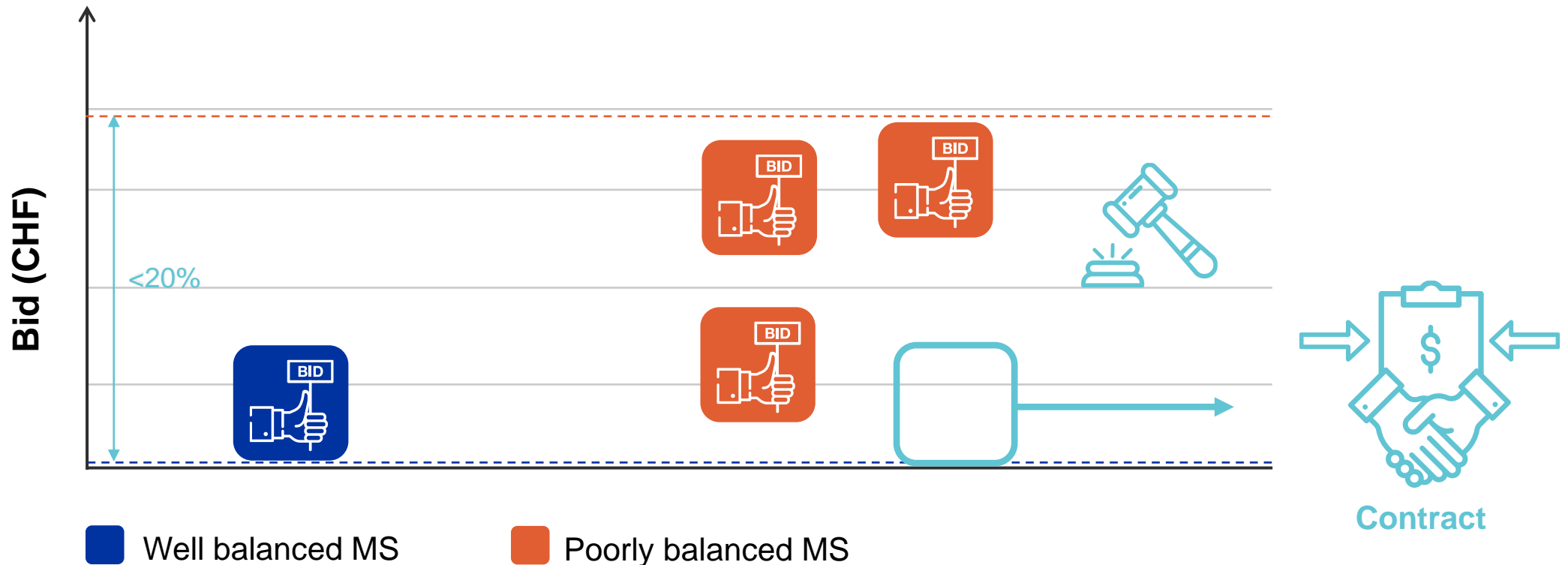
(a) 1st bidder from PB MS aligns



Alignment rule (Scenario 2)

Lowest bid from a WB MS

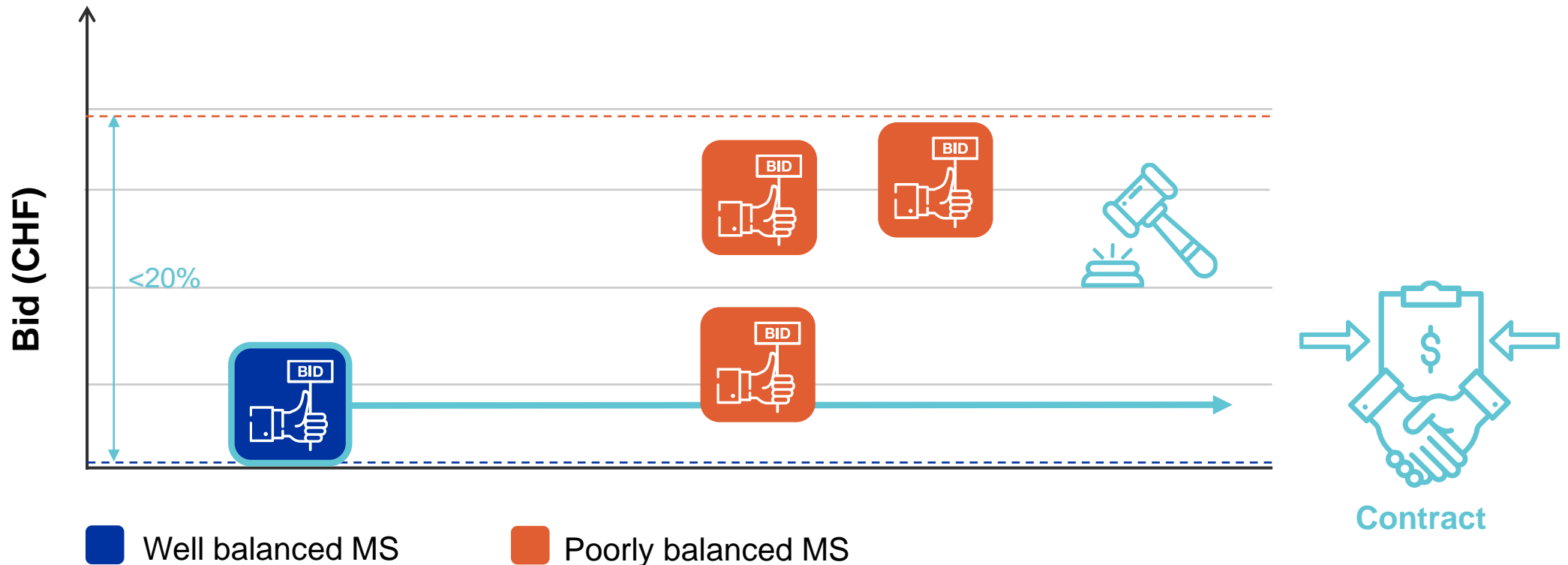
(b) if not, 2nd lowest bidder from PB MS aligns



Alignment rule (Scenario 2)

Lowest bid from a WB MS

(c) if no alignment of second two bids, contract placed with lowest bidder from WB MS



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.



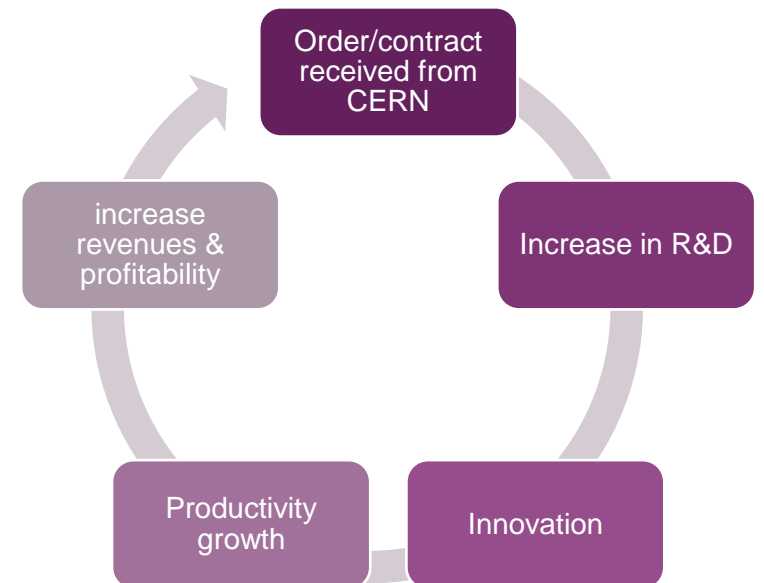
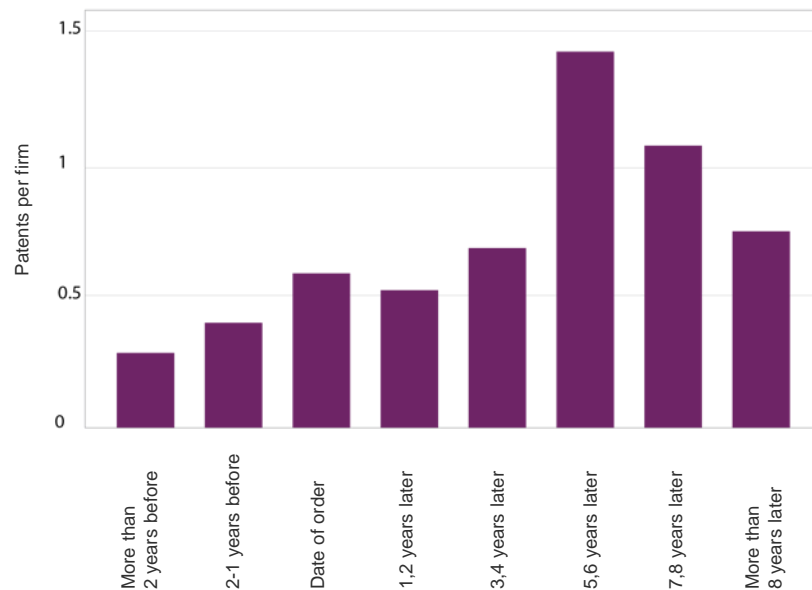
Impact of Doing business with CERN

The economical impact of CERN Procurement on supplier's performance (Castelnovo et al, 2018)

Empirical studies (by the analysis of financial data from 1995 to 2008 from 365 CERN suppliers for the LHC) show that after working with CERN on high-tech contracts, CERN suppliers out-perform their peers by:

Investing more in R&D and filing more patents

Higher productivity, revenue and profitability



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%

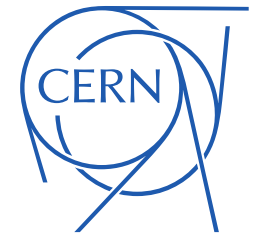
found or opened a new market to
address

62%

used CERN as a marketing reference

Most firms experienced
no financial loss.

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.).”

Procurement website



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>

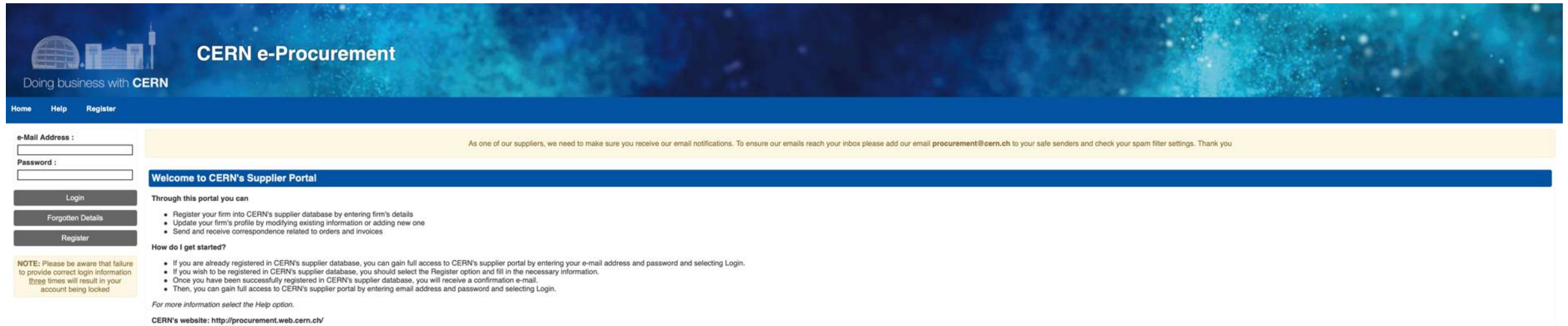
Using this platform, you will be able to receive orders, manage the delivery of supplies and send invoices for processing.

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.

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 to your safe senders and check your spam filter settings. Thank you". Below the banner is a blue header "Welcome to CERN's Supplier Portal". The main content area is divided into two columns. The left column contains a login form with fields for "e-Mail Address" and "Password", and buttons for "Login", "Forgotten Details", and "Register". Below the form is a yellow note: "NOTE: Please be aware that failure to provide correct login information three times will result in your account being locked". The right column contains a section "Through this portal you can" 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 section "How do I get started?" 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." At the bottom of the right column, it says "For more information select the Help option." and "CERN's website: <http://procurement.web.cern.ch/>".



To ensure our emails reach your inbox please add our email procurement@cern.ch to your safe senders and check your spam filter settings.

Contacts at CERN (Procurement and Technical)



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.

Estonia: Robert Aare

robert.aare@eas.ee

Finland: Sakari Karppinen

sakari.karppinen@businessfinland.fi

Latvia: Alise Pika-Ozola

Alise.Pika-Ozola@liaa.gov.lv

Sweden: Fredrik ENGELMARK

fredrik.engelmark@bigsciencesweden.se

Thank you



home.cern