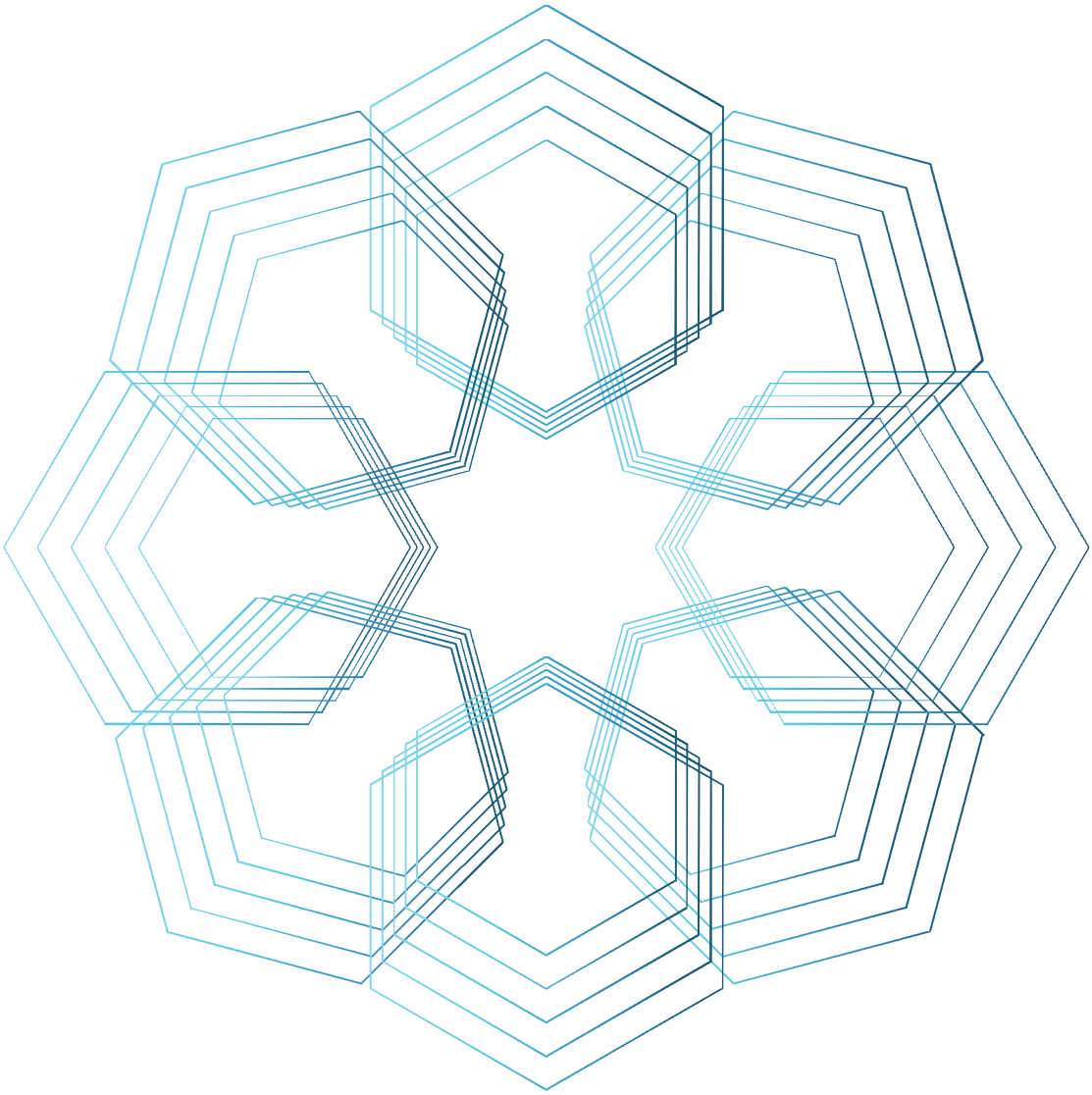
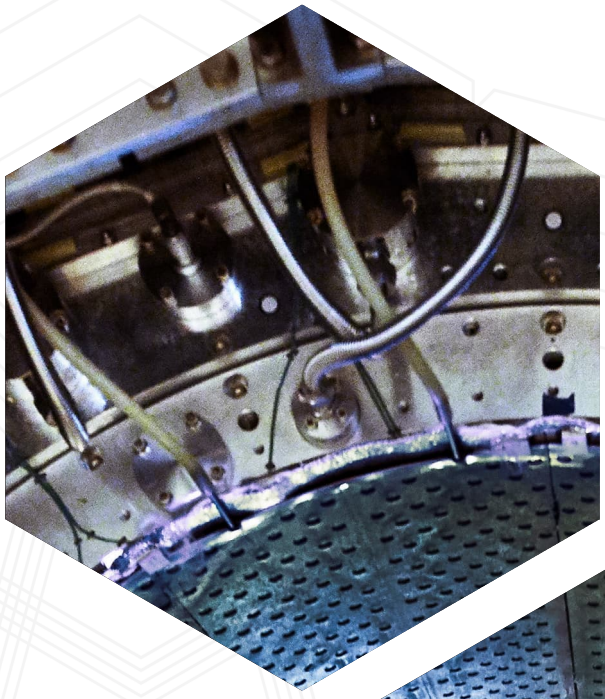
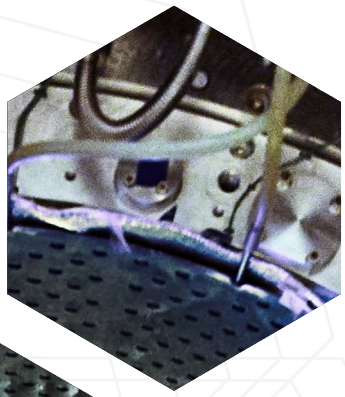


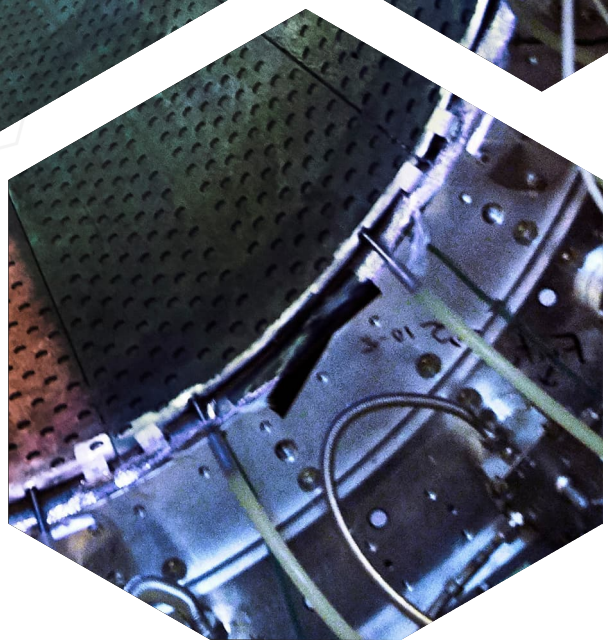
Annual Procurement Report

2024

CONTENTS







INTRODUCTION

The 2024 CERN Procurement Report provides a comprehensive overview of CERN's procurement activities and achievements during the year. It covers the approval and implementation of new procurement rules, the development of a refined procurement strategy, the significant progress made towards environmentally responsible procurement, the insights gained from an impact survey, and the industry events and other communication initiatives that were run in 2024.

The report highlights key invitations to tender launched and contracts signed in 2024. As in previous years, it includes comprehensive data on procurement activities and industrial return for all Member and Associate Member States. Notably, in 2024, CERN achieved the industrial return objective for the Member and Associate Member States set by the Management by having only two countries with an industrial return coefficient of less than 0.4 over the past four years.

The Procurement Service is proud of the progress made in 2024 and looks forward to continuing its efforts to enhance CERN's procurement impact in the coming years.

2024 IN NUMBERS

32 000
Suppliers

26 500
Orders placed

31 700
Orders placed
in the CERN stores

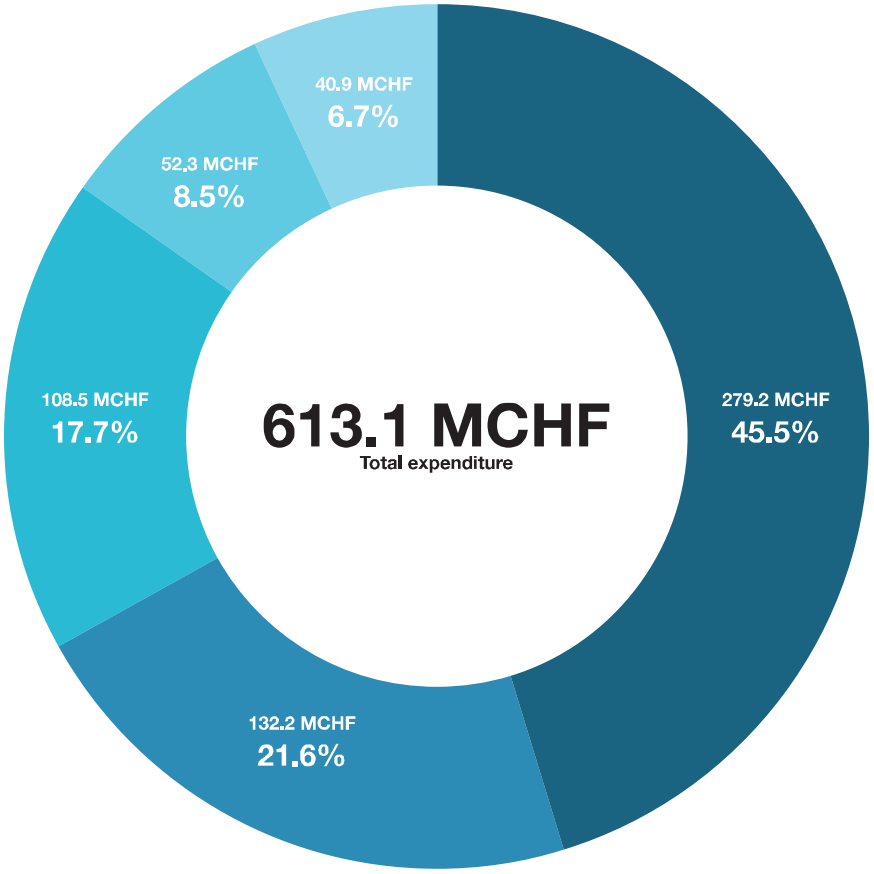
300
Contracts signed

53
R&D collaborations

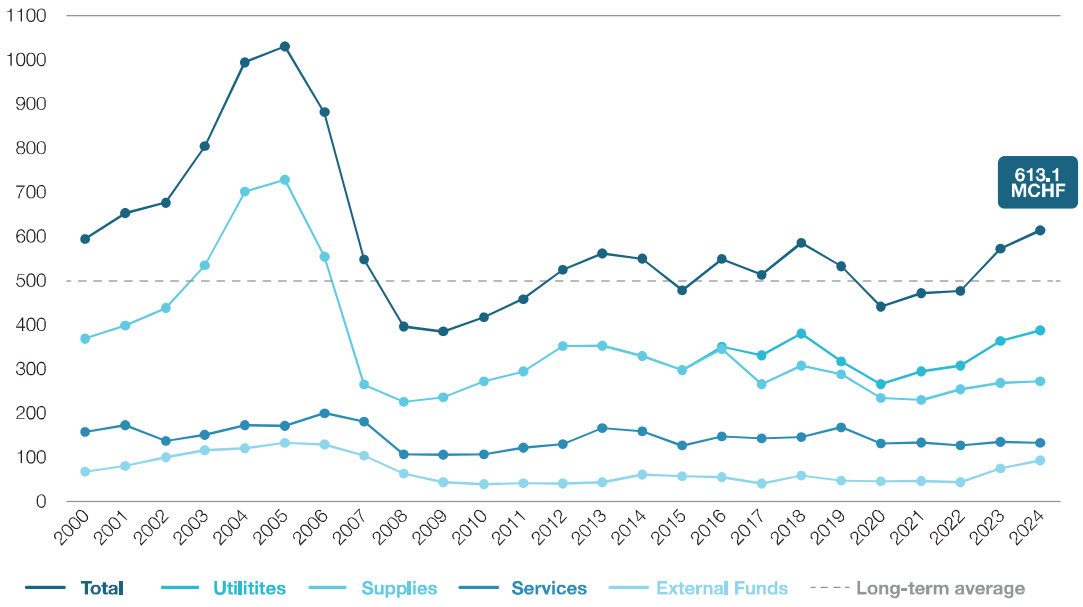
129
Price enquiries
above 50 kCHF

118
Invitations to tender

EXPENDITURE IN FIGURES



PROCUREMENT EXPENDITURE 2024



PROCUREMENT EXPENDITURE 2000-2024

PROCUREMENT HIGHLIGHTS

NEW PROCUREMENT RULES

The CERN Council unanimously approved changes to the Procurement Rules in June 2024. This was a significant achievement that impacts all stakeholders, from the Member and Associate Member States to the Procurement Service, the CERN departments and industry. Many aspects of the Procurement Rules had not been changed for a considerable period of time (the various thresholds had been in place since 1965).

The review of the Procurement Rules was launched in 2022. It began with a benchmarking exercise to compare CERN's Procurement Rules with those of other EIROforum organisations and the European Commission. Excellent collaboration between Procurement, Finance, the Legal Service and – crucially – the CERN Industrial Liaison Officers (ILO) Forum culminated in the Council's (CERN/3830/RA) unanimous approval of the proposed changes to the Rules in June 2024.

The benchmarking exercise revealed that CERN's financial thresholds for procurement procedures were much lower than those of any other organisation. As a result, all but one threshold have now been doubled (see the table below). This optimisation reduces paperwork, increases efficiency and flexibility for CERN and its suppliers, and ensures better allocated resources.

	Previous threshold in CHF	New threshold in CHF
CERN community can place their own orders	< 1000	< 2000
Price enquiry (DO) handled by Procurement Service as from:	5000	10 000
Three bids required as from:	5000	10 000
Single source procurement subject to Finance Committee approval	200 000	200 000
Market survey/invitation to tender required as from	200 000	400 000
Competitive tender subject to Finance Committee approval	750 000	1 500 000

In order to improve the industrial return of its Member and Associate Member States, CERN issues certain price enquiries and invitations to tender under a limited tendering mechanism. Previously, limited tendering was possible only if a country had an industrial return coefficient below 0.4. The mechanism was hardly ever used as the number of Member and Associate Member States with an industrial return coefficient below that figure had decreased in recent years.

In accordance with the modified Rules, CERN now has the possibility, if there is sufficient competition, to only contact firms proposing supplies and services originating in the 12 Member States with the lowest industrial return coefficient. The number of limited tendering procedures carried out since the approval of the new Procurement Rules has been low so far, but the mechanism will assist in the future in preventing Member States from oscillating around the threshold of 0.4. The table below shows the tendering procedures adjudicated in accordance with the limited tendering mechanism during the period concerned.

Reference	Description	Country of origin of the winning bid
IT-4996/IT/LT	Supply of storage Expansion units	Romania Sweden
DO-34317/T /HL/LHC/LT	Supply of stainless steel machined components	Romania
DO-34410/RC /DUNE/LBNF/LT	Supply of a welded steel support structure	Romania

Finally, the new Procurement Rules no longer require the Finance Committee's advance approval of whether a contract is to be awarded on a lowest-compliant basis or on a best-value-for-money (BVFM) basis. This saves time, encourages competition through broader selection criteria and enables environmental aspects to be part of the adjudication criteria. This important change also allows CERN's approach to environmentally responsible procurement to be taken into account while retaining a key focus on pricing and other requirements.

NEW PROCUREMENT STRATEGY

The Procurement Service finalised a document setting out the CERN procurement strategy for 2025-2030. This strategy is based on the views of the procurement team members and discussions with other key stakeholders. The development of this document started with several workshops, during which the participants defined the pillars of the strategy, the objectives for the coming years, and the actions needed to achieve them.

The strategy document defines the Procurement Service's mission as being a trusted partner for all its stakeholders. It also describes the three strategic objectives, outlining what needs to be done in order to achieve them and how.

To implement this vision, the Procurement Service commits to strive towards the following objectives:

Deliver a best-in-class Procurement Service

Promote fair competition and better-balanced industrial return to the Member and Associate Member States

Support the Organization in its sustainability objectives and initiatives

The strategy can be delivered only with the support of all stakeholders. In order to ensure its effective implementation, a detailed programme of projects has been announced, with a few examples provided below.

These objectives will be achieved through the following five pillars: hiring and retaining motivated procurement personnel, promoting innovation and excellence, managing CERN contracts and suppliers efficiently, developing responsible procurement and communicating effectively.

Values of the Procurement Service: PROCURE

RESPONSE RATE ANALYSIS

A key focus for 2024–2025 is the review and analysis of the rates of response to CERN's tendering procedures. The objective of this project is to understand the trends in response rates and the reasons why firms decide not to participate and to implement strategies geared to increasing the overall participation. The review and analysis covered nearly 4000 responses from firms over the past six years and categorised the reasons why firms declined to submit a bid. The reasons for declining were classified into three categories: generic, procedural and technical. A sub-categorisation exercise provided more detail of the factors motivating firms to decline.

Generic Decline

- Capacity
- Resources
- Competitiveness
- Location
- Language
- Supply chain
- Not interested in working with CERN

Procedural Decline

- Timescales
- Commercial conditions
- Tendering process complexity
- Country of origin
- Adjudication procedure
- Subcontracting restrictions
- Qualification requirements

Technical Decline

- Technical requirements
- Delivery schedule
- Location of the work
- Quantities / volume
- Out of scope of services / supplies

The data shows that, whilst response rates are not decreasing in proportion to the reduced number of procedures, there is room to improve processes to increase participation and overall competition. The Procurement Service presented the initial findings to the ILO Forum in September and committed to continue its analysis in order to understand which procedures and/or procurement categories need the most attention going forward. This project will continue into 2025 and its findings will be used to introduce changes in future tendering procedures.

SUPPLIER DATABASE

Since 2014, CERN's supplier database had not undergone any significant updates. During the summer of 2024, the Procurement Service conducted a data analysis and found that the database contained 6 000 firms (out of 38 000 suppliers) that had not been contacted by CERN for eight years. These firms were inactivated as a result.

To ensure the correctness of the data and continued quality management, which will be defined in the upcoming supplier management policy, it has been decided that this exercise will take place on an annual basis in the future.

Since 2017 firms have been able to register via the eProcurement platform directly, allowing them to keep their information and contact persons up to date.

During the analysis, all firms registered were classified as:

- **recent**: firm with which CERN has placed an order contract in the past eight years.
- **prospective**: firm contacted for a tendering procedure in the last eight years but for which no contract has been placed in the last eight years.
- **potential**: firm registered in the past five years but never contacted by CERN.
- **to be inactivated**: any firm not falling into the above categories.

In parallel, all ILOs received the list of firms established in their countries and are currently in the process of checking the accuracy of the information provided. This exercise has therefore yet to be finalised.

LINKEDIN CHANNEL

In its efforts to increase CERN's visibility and engagement with suppliers, the Procurement Service launched a LinkedIn channel called "Business with CERN" in September 2024. This channel, which has already gained over 2,500 followers, allows more effective reach of a targeted audience across all CERN Member States. It provides insights into the latest business opportunities and how to do business with CERN.

FIDIC AWARD

In 2024, CERN was honoured to receive an award in the "Client of the Year" category from FIDIC, the International Federation of Consulting Engineers. This recognition highlights CERN's successful use of the FIDIC forms of contract for a wide range of construction projects.

It reflects the close collaboration between the SCE department, the Legal Service and the Procurement Service, as well as CERN's engineering consultants and construction contractors across Member States, to deliver cutting-edge projects such as the Prévessin Data Centre (PDC) and the CERN Science Gateway.

FIDIC is the global representative body for national associations of consulting engineers and represents over one million engineering professionals and 40 000 firms in over 100 countries worldwide.

RESPONSIBLE PROCUREMENT

As part of the CERN Environmentally Responsible Procurement (CERP) project, several significant steps were taken in 2024 towards implementing CERN's environmentally responsible procurement policy, which embodies the Organization's commitment to becoming environmentally responsible. With the implementation review scheduled for the end of 2025, these initiatives will continue next year, and specific activities based on lessons learnt will be deployed in the coming years to further cement CERN's commitment to conduct environmentally responsible activities within its supply chain.

KEY ACHIEVEMENTS IN 2024

E-LEARNING FOR ENVIRONMENTALLY RESPONSIBLE PROCUREMENT AWARENESS

To raise awareness about environmentally responsible procurement, an e-learning module has been created and has been available on the CERN Learning Management System since November 2024. This module provides general information for internal stakeholders about the importance of environmentally responsible practices in procurement. It covers CERN's carbon footprint calculation and how best practices during the procurement lifecycle can mitigate CERN's indirect emissions.

FIRST WORKSHOP ON ENVIRONMENTALLY RESPONSIBLE PROCUREMENT

A first workshop on responsible procurement was held with the SCE Department. This workshop brought together key stakeholders to discuss best practices, challenges, and opportunities in environmentally responsible procurement related to the purchase of materials for campus, logistics, and supply chain services including CERN housing, catering, the Stores, mobility services, cleaning services and transportation.

The insights gained from this workshop will guide similar initiatives for other groups in the future and help to refine strategies and develop action plans towards sustainable procurement.

PILOT PROJECTS

The CERP project team is involved in pilot projects aimed at embedding environmentally responsible considerations throughout the entire procurement process for a selection of tendering procedures. This initiative aims at identifying best practices and defining processes that could be further deployed in the future.

- **Transport services**: One of the pilot projects included the procurement of transport services for the CERN community. Following a market maturity analysis and use of a best-value-for-money adjudication, the pilot project resulted in the selection of a new contractor who has committed to provide 100% electric shuttles from 2025.

- **New buildings**: Pilot projects for future buildings, such as B140 and B777, have also been initiated. These projects included the definition of environmental criteria for best-value-for-money adjudications for consultancy contracts (B140 and B777) and construction contracts (B777). For B777, the requirements included the use of a mass timber structure, sustainability accreditations, and use of specific materials.

SUPPLIER ENGAGEMENT SURVEY

A survey targeting the highest-emitting suppliers was launched to analyse the maturity level of their understanding of their environmental impact. The findings of this survey will help to develop a supplier engagement strategy for 2025. This initiative is crucial to understanding the current state of the supply chain's sustainability maturity and to identifying areas for improvement to help suppliers align themselves with CERN's environmental objectives.

SUPPLIER CODE OF CONDUCT

A Supplier Code of Conduct, which will apply to all contractors, was published in 2024. This document outlines the Organization's expectations and its commitment to fostering ethical, transparent, and responsible practices throughout its supply chain.

TENDERING PROCEDURE HIGHLIGHTS

HL-LHC PROCUREMENT

In 2024, the peak in procurement activities for the HL-LHC upgrade continued with a high volume of price enquiries and invitations to tender issued. Many contracts for equipment needed for the LS3 collimators were placed, including notably the critical production and assembly contract that was awarded in September 2024.

2024 also saw the tendering of various contracts for components of the upgraded power distribution system or new equipment including, for example, the power modules for the new 60A and 120A HL-LHC power converters.

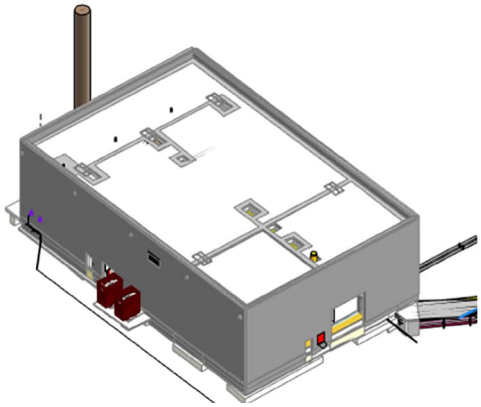
Finally, in late 2024 the Procurement Service started to work on the last major equipment purchases for the HL-LHC radiofrequency stations and the associated circulators and loads, the responsibility for which was taken over by CERN following the withdrawal of Russian contributions to the upgrade project.

Overall, the procurement activities for the HL-LHC project have so far been carried out in line with the project's schedule and budget. In 2025, the Procurement Service's efforts will be focused on following up on the many contracts to ensure on-time and high-quality deliveries.

NEW HEATING PLANTS

As part of CERN's strategy to reduce its carbon footprint and energy consumption, contracts were signed for construction work and for the supply, installation and commissioning of the heating, ventilation, air conditioning and electrical equipment (HVAC-E) needed for new centralised heating plants on both the Prévessin and Meyrin sites.

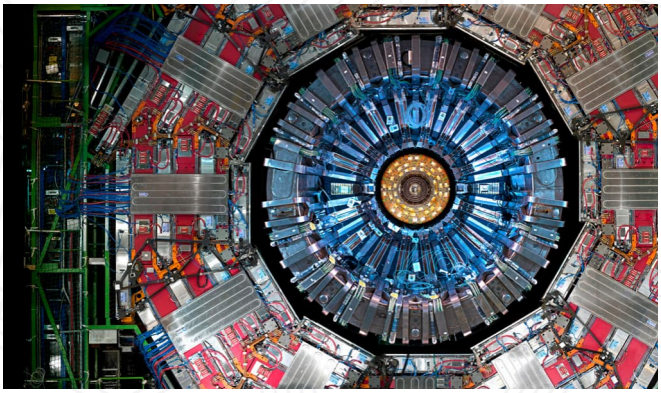
The new heating plant in Prévessin is designed to meet the needs of the Prévessin site by making use of heat recovered from the recently completed Prévessin Data Centre (PDC) nearby. The plant located in Meyrin will use heat recovered from the accelerator complex and will meet the needs of the entire Meyrin site.



CMS ENDCAPS REMOVAL AND HGCAL INSTALLATION

A critical contract was awarded for the removal of the existing CMS endcaps and the installation of the new HGCAL detectors as part of the LS3 upgrade. Each detector will be roughly five metres in diameter and will weigh about 250 tonnes.

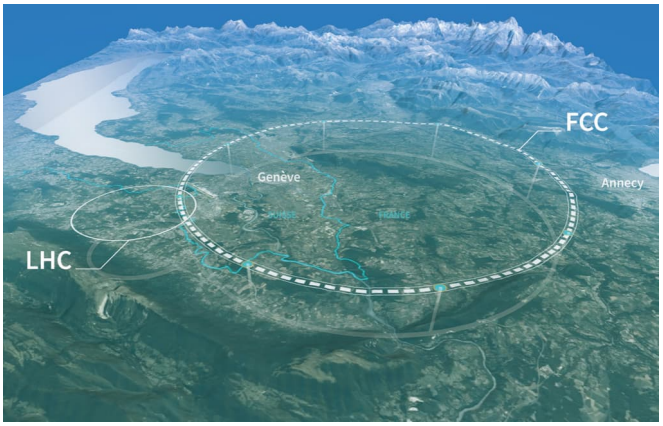
This contract therefore requires an expert company to design specialised tooling and set up a complex sequence of operations for both the removal and the installation processes within a limited time window, ensuring no disruption to other activities.



FCC SITE INVESTIGATION WORKS

In 2024, CERN also signed two contracts of strategic importance for the FCC Feasibility Study, namely for the site investigations needed to establish crucial information about the ground conditions in the areas of high geological uncertainty along the projected alignment of the FCC tunnel. These contracts were awarded to two international consortia and will continue into 2025 in order to have the resulting reports available for inclusion in the FCC Feasibility Study

report. The investigations involve drilling work carried out at depths of up to 300 metres and complementary seismic scanning of each associated area.



SOLAR POWER PURCHASE AGREEMENTS (PPAs)

CERN signed three power purchase agreements (PPAs) to secure the provision of electricity from solar panels, thus diversifying its energy supply mix with renewable sources.

These agreements will enable the production of up to 10% of the Organization's electricity needs during the operation of its accelerators and 30% during long shutdowns, contributing to its sustainability goals.

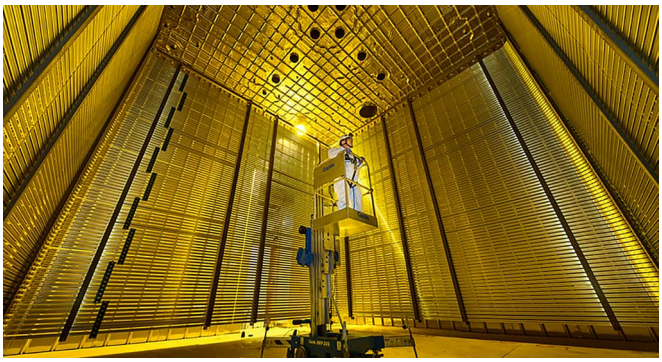
RETENDERING OF FSU CONTRACTS

The retendering of highly sensitive Field Support Unit (FSU) contracts was completed, resulting in the signature of three new framework service contracts, now called Technical Support Service (TSS) contracts. These contracts, which started in April 2024, involve approximately 100 missions dedicated to technical support work for the Organization's accelerator complex, test bench facilities, and technical infrastructure.

The new contracts successfully close a five-year cycle of rationalisation and reassignment of activities covered under the previous FSU contracts that supported the LHC construction phase, which at one point involved up to 450 contractors' personnel.

DUNE

Because of its extensive expertise in the design and development of cryostats, CERN has committed to constructing two cryostats for the LBNF-DUNE project. 2024 saw several major contracts awarded in relation to CERN's contribution to the project which is currently under construction in South Dakota, USA. The contracts included the supply of cold containment materials along with logistics for the shipment of the warm structure materials.



IT AGILE CONTRACTS

CERN signed five agile IT development contracts to reinforce and increase its business computing capabilities, allowing it to handle a significantly higher number of projects. These contracts enable the assignment and monitoring of tasks based on contractors' expertise and performance, ensuring a high service level and competitive prices.

POWER AND SIGNAL CABLES

Three major framework contracts were signed for the supply of 3500 kilometres of power and signal cables mainly used in radiation environments such as the HL-LHC and the SPS, as well as the ECN3 and the NA CONS projects.

IMPACT SURVEY

CERN'S IMPACT ON INDUSTRY

The Procurement Service conducted an impact survey and received positive responses from CERN's suppliers. 32% of the 1600 firms contacted replied to the survey.

★ ★ ★ ★ ½

4.5/5
Average Rating

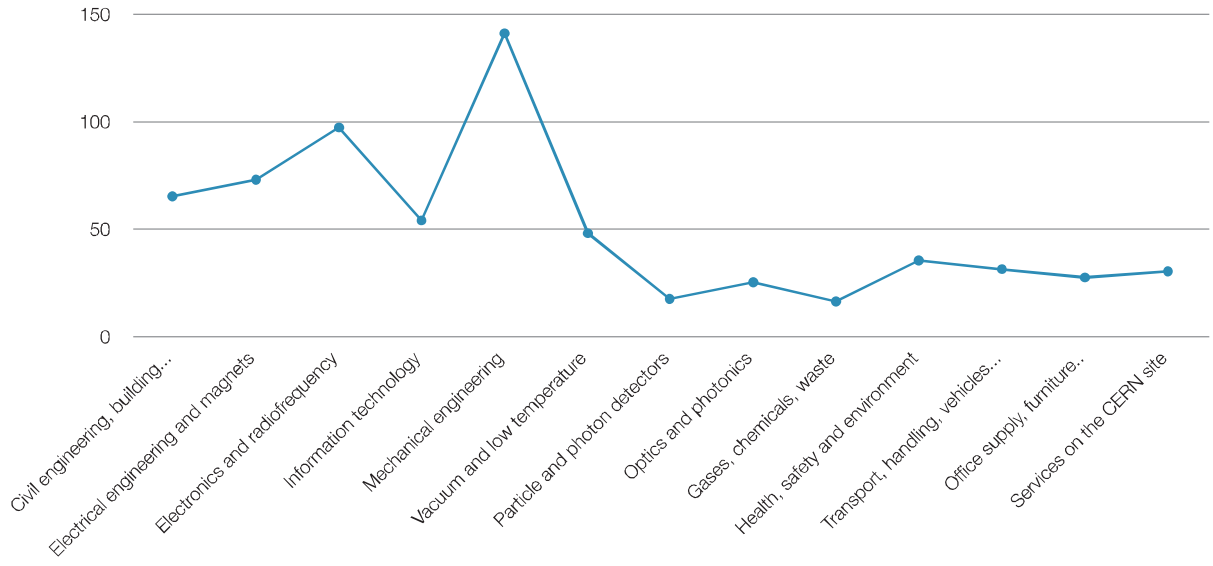
98%
would recommend CERN as a client

"While complex, CERN has a pragmatic approach to solving problems and is collaborative. Generally speaking, our team is extremely motivated working for CERN and with our key contacts at CERN. We notice an extremely high degree of professionalism from CERN employees that matches our enterprise values."

"Collaborating with CERN brings several positive aspects: prestige and credibility, access to cutting-edge technology, talent and expertise exchange, global exposure and networking opportunities, access to specialised equipment and knowledge."

Comments from impact survey

Compagny size (number of employees)	Responses
10-50	225
50-200	119
200-500	53
500-1000	23
1000-5000	31
5000-10000	8
10000+	29



SURVEY RESPONDENTS BY FAMILY CODE

47% **developed new products** by working with CERN

52% **found or opened new markets** by working with CERN

1 out of 4 **suppliers hired new personnel** through their collaboration with CERN

71% **enjoyed a positive impact on their sales** through their collaboration with CERN

84% **of IT suppliers improved their products** by working with CERN

compared to the overall average of **65%**

76% **of Electronics Suppliers improved Technical Knowledge** by working with CERN

compared to the overall average of **70%**

What did we do well?

40% of our suppliers enjoy working with us due to our "**good communication and reputation**"
33% of suppliers enjoyed the experience as it helped them "**learn, develop skills and face challenging projects**"

What do we need to improve?

By popular request, we are looking into hosting more **webinars** in order to meet the growing demand.

INDUSTRY EVENTS AND OUTREACH

22 JULY
International Cryogenics Engineering Conference

18 SEPTEMBER
First CERN industry webinar

1 OCTOBER
Big Science Business Forum in Trieste (IT)

15 NOVEMBER
Precision Fair in s-Hertogenbosch (NL)

19 NOVEMBER
Big Science and Nomaten Innovation Days in Otwock (PL)

22 NOVEMBER
Thematic Day - Precision Machining webinar

INDUSTRY EVENTS

2024 saw a series of events organised to support CERN's industrial return objectives through engagement with industrial partners across our Member States.

CERN has instituted thematic events that allow industry to interact with the Organization in technical fields directly related to upcoming opportunities.

INTERNATIONAL CRYOGENICS ENGINEERING CONFERENCE

Building on the success of previous thematic events on civil engineering and PCB supply and assembly, a thematic event on cryogenics took place in the centre of Geneva under the banner of the International Cryogenics Engineering Conference. The event, which spanned several days, included a wide range of contributions from CERN's technical teams and procurement representatives, along with visits of CERN site, in order to showcase several technical installations.

CERN INDUSTRY WEBINAR

In September, CERN held its inaugural industry webinar, which attracted over 400 participants. This event had a particular focus on companies that had not previously worked with CERN and presentations included aspects of CERN's procurement procedures, a walk-through of a typical tender process at CERN and details of specific tendering processes planned in the short to medium term.

PRECISION MACHINING THEMATIC EVENT

In November, an online thematic event on precision machining took place, attracting over 150 companies interested in learning more about doing business with CERN in this domain. The event included a variety of presentations on the procurement rules and the technical requirements of the Organization's engineering teams.

BIG SCIENCE BUSINESS FORUM (BSBF)

The Procurement Service was well represented in the large CERN delegation that attended this year's edition of the Big Science Business Forum (BSBF), held in Trieste, Italy. This event provided an opportunity to bring together a significant number of industrial partners and big science representatives under one roof, with many interesting conversations taking place and connections being made at CERN's booth.

Additionally, representatives of the Procurement Service supported events organised across a wide range of its Member and Associate Member States, including Latvia, the Netherlands, Poland, Slovenia, Sweden and the United Kingdom.

INDUSTRIAL RETURN COEFFICIENTS

The industrial return coefficient of a Member State for supply contracts, from 1 March 2025 to 28 February 2026, is the ratio between that Member State's percentage share of CERN's expenditure on all types of purchases excluding:

- purchases of on-site services for a multi-year period and on a continuous basis (MOCS);
- purchases of utilities;
- any part of the purchases funded by external funds;
- any part of the purchases whose country of origin is a non-Member State;
- individual purchase orders of an amount below 2000 CHF;

during the preceding four calendar years, on the one hand, and that Member State's percentage contribution to the budget over the same period on the other hand.

For supply contracts, a Member State is considered well balanced if the average return coefficient for supply contracts for the preceding four years is equal to or exceeds 1.0. An Associate Member State is considered well balanced once it reaches its "ceiling".

The industrial return coefficient of a Member State for service contracts, from 1 March 2025 to 28 February 2026, is defined as the ratio between that Member State's percentage share of CERN's expenditure on all purchases of MOCS, excluding:

- purchases of utilities;
- any part of the purchases funded by external funds;
- any part of the purchases whose country of origin is a non-Member State;

during the preceding four calendar years, on the one hand, and that Member State's percentage contribution to the Budget over the same period on the other hand.

For service contracts, a Member State is considered well balanced if the average return coefficient for service contracts for the preceding four years is equal to or exceeds 0.4; an Associate Member State is considered well balanced once it reaches its "ceiling".

In 2024, Croatia, Pakistan, Türkiye and Ukraine reached their ceilings and are therefore considered as well-balanced countries. The average return coefficient for the last four years for Brazil could not be calculated as Brazil joined CERN on 13 March 2024.

In conclusion, the Procurement Service is proud to announce that the Organization's objective[1] of reducing the number of very poorly balanced countries for supply contracts by the end of 2025 has been achieved a year earlier than initially anticipated. The number of countries with an average industrial return coefficient below 0.4 has decreased from six in 2021 to two in 2024, i.e. Cyprus and Israel, for the twelve-month period starting in March 2025. Moreover, the contributions from Member and Associate Member States with an average industrial return coefficient below 0.4 represented 21% of the total budget contributions to CERN in 2021, and this percentage has been reduced to 2.4% in 2024. The status of all Member and Associate Member States is provided in table 5 at the end of this document.

2021

21%
of contributions to the Budget came from Member and Associate Member States with an industrial return coefficient for supplies below 0.4

6 countries **< 0.4**

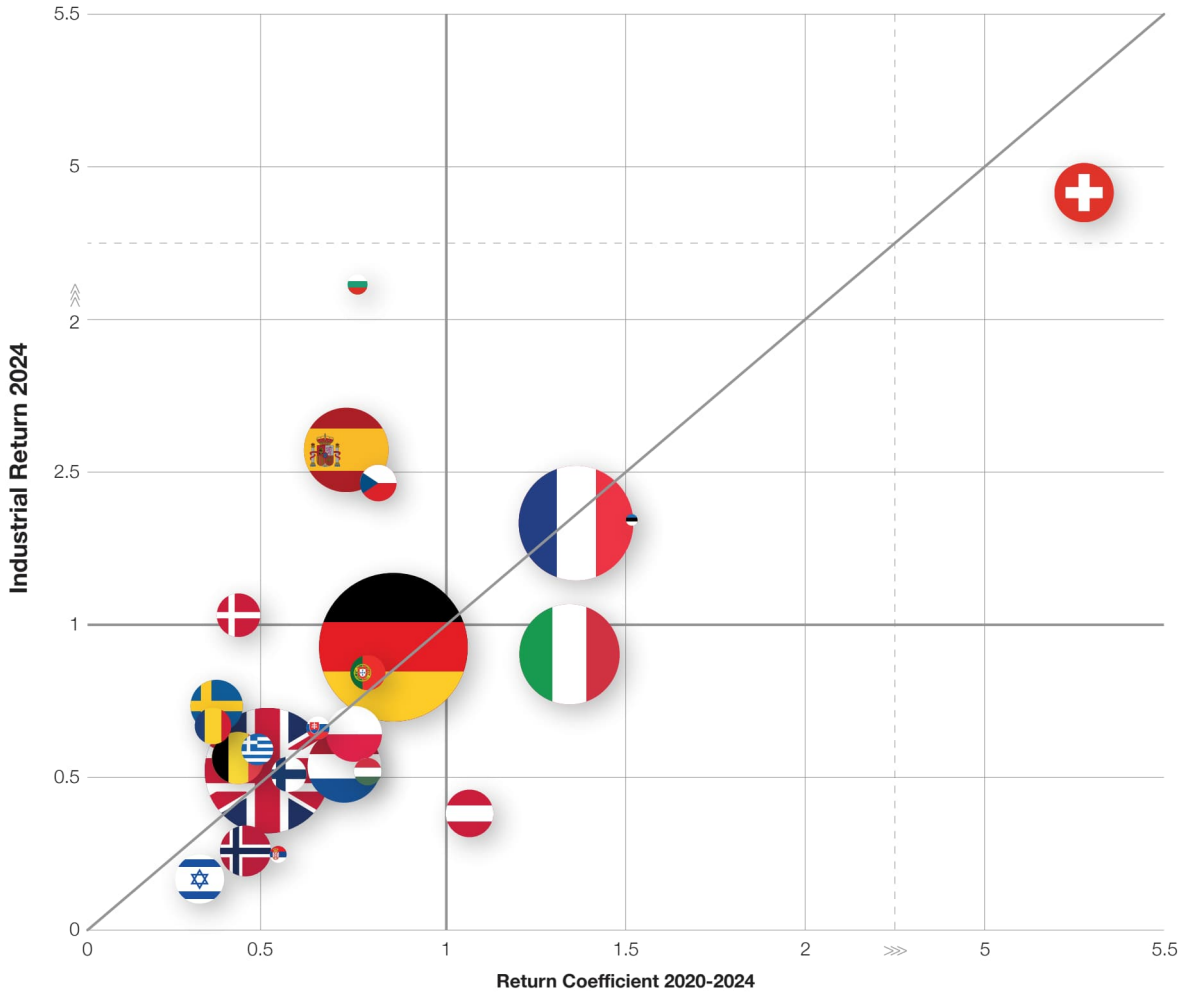
2024

2.4%
of contributions to the Budget came from Member and Associate Member States with an industrial return coefficient for supplies below 0.4

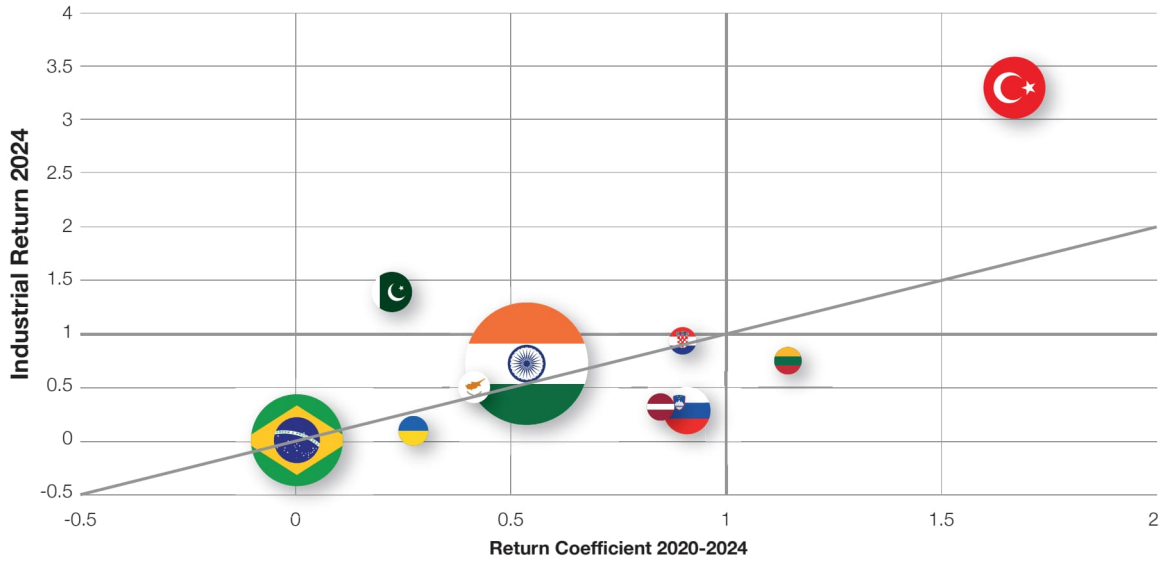
2 countries **< 0.4**

The following graphs show the actual industrial return coefficient of the Member and Associate Member States for 2024 only (vertical axis) and the return coefficient for 2021- 2024 (horizontal axis), which showcases the average industrial return over the last four year. Member and Associate Member States above the diagonal line have improved their industrial return compared to the previous years. It should be noted that the bubble size corresponds to the contribution from the Member State concerned.

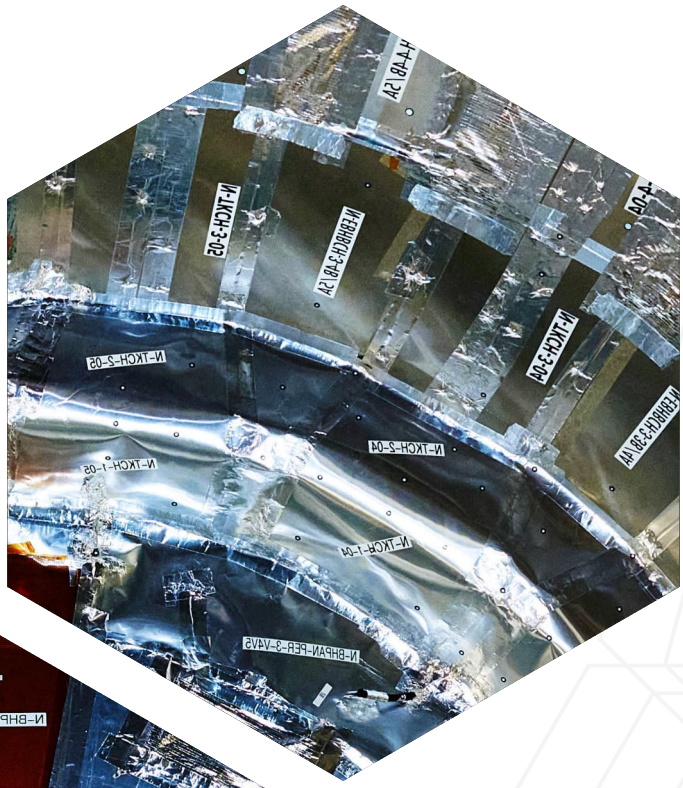
[1] https://home.cern/sites/default/files/2022-01/CERNS%20Main%20Objectives_0.pdf

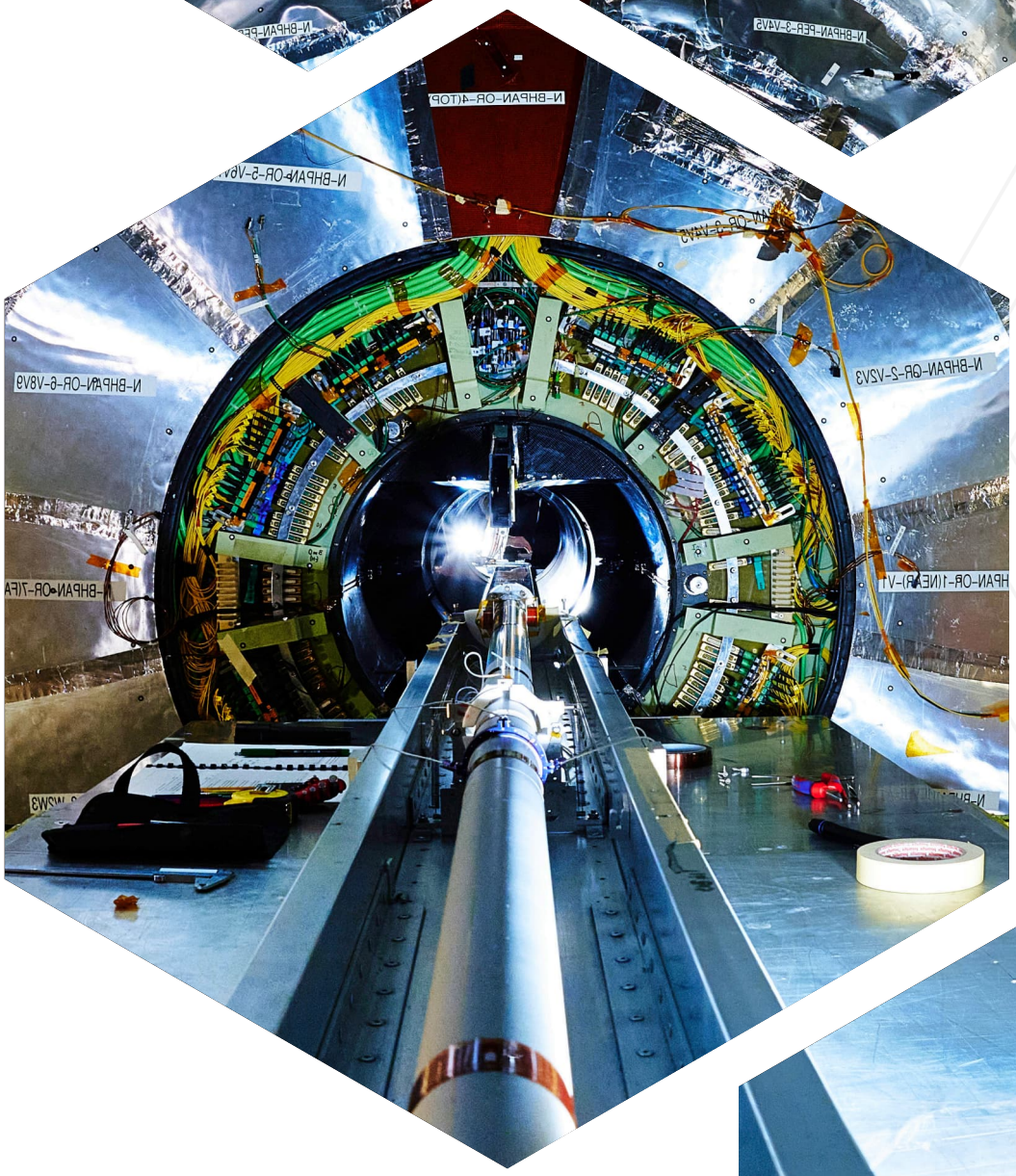


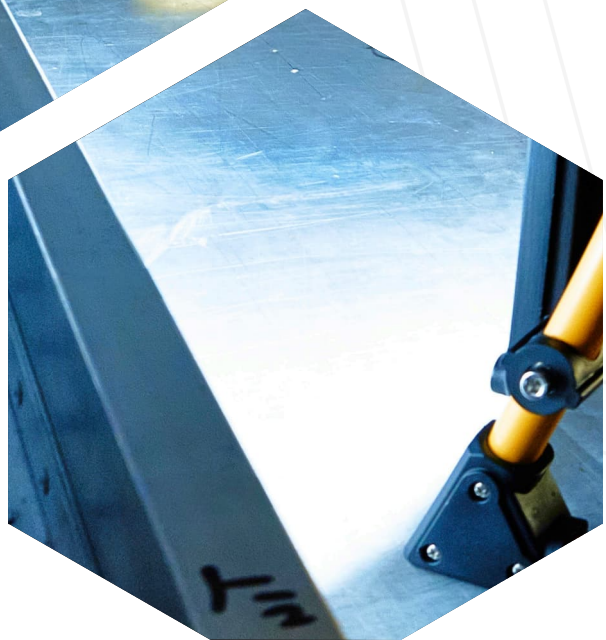
MEMBER STATES, 2024 INDUSTRIAL RETURN (IR), RETURN COEFFICIENT 2021-2024, BUBBLE SIZE REFLECTS SIZE OF CONTRIBUTION TO THE BUDGET

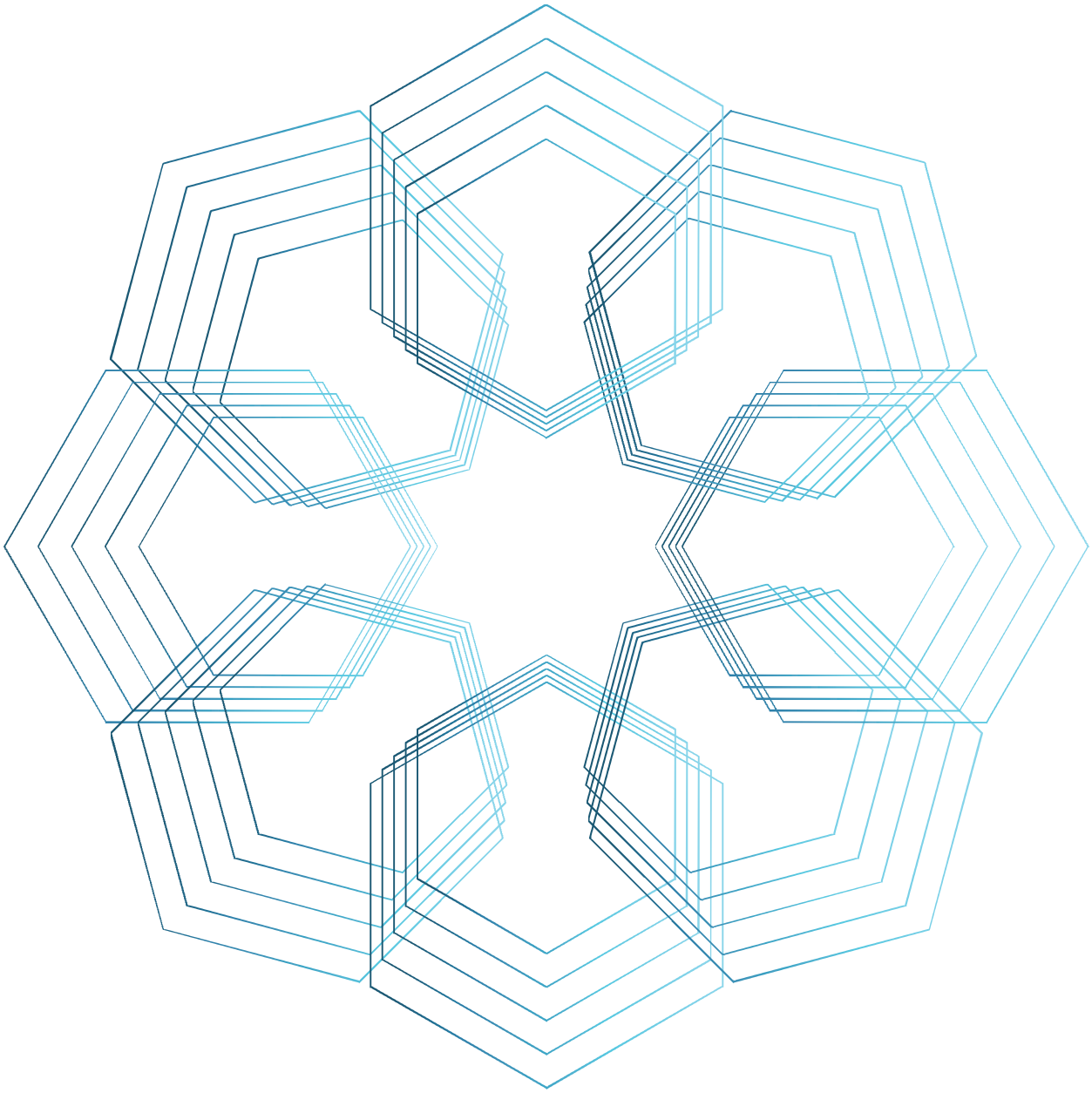


ASSOCIATE MEMBER STATES, 2024 INDUSTRIAL RETURN (IR), RETURN COEFFICIENT 2021-2024, BUBBLE SIZE REFLECTS SIZE OF CONTRIBUTION TO THE BUDGET







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