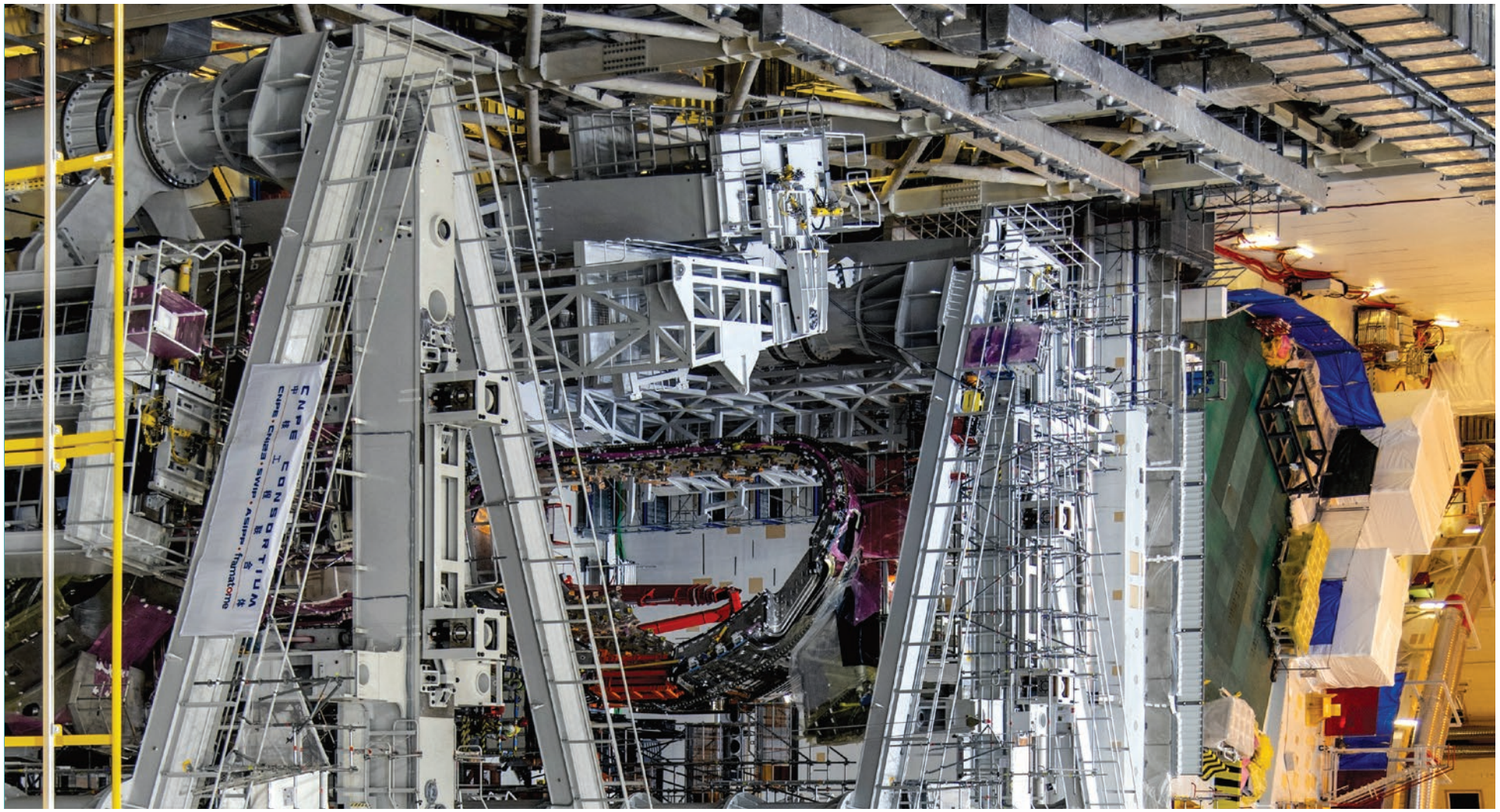
ITER ORGANIZATION

china eu india japan korea russia usa

ANNUAL REPORT 2025









WHAT IS ITER?

iter
china eu india japan korea russia usa

WHAT IS ITER?

Recent advances in fusion research have accelerated interest in the field worldwide. Experimental facilities have achieved record plasma performances, new technologies have expanded the range of possible reactor designs, and private-sector investment in fusion has grown rapidly.

As the first fusion device designed to produce a burning plasma at reactor scale, ITER will bring together, in a single integrated machine, the technologies and operating conditions required for future fusion power plants. The knowledge generated through ITER will help determine how fusion systems behave when all critical subsystems operate simultaneously and at full scale. The path beyond lies in leveraging the lessons and experience gained through ITER to reduce the costs for future reactor prototypes and address the remaining technical challenges on the road to commercial fusion power.

The ITER project brings together China, the European Union, India, Japan, Korea, Russia, and the United States in a shared effort to establish the scientific and technological foundation for fusion energy.



Vacuum vessel sub-assembly: progressing at an industrial pace.

ITER
An "international project that aims to demonstrate the scientific and technological feasibility of fusion energy for peaceful purposes, an essential feature of which would be achieving sustained fusion power generation." (From Article 2 of the ITER Agreement)

Q ≥ 10
ITER's programmatic goal, signifying that fusion output of at least 500 MW is produced in the machine from 50 MW of injected heating power.

PROJECT MEMBERS
The People's Republic of China, the European Atomic Energy Community (Euratom), the Republic of India, Japan, the Republic of Korea, the Russian Federation, and the United States of America are the seven signatories to the ITER Agreement.

THE ITER AGREEMENT
Signed by all Members in November 2006, the ITER Agreement establishes the ITER Organization and defines the joint implementation of the ITER project.

ITER ORGANIZATION
Established to construct, operate, exploit and de-activate the ITER facilities in accordance with project objectives; encourage the exploitation of the ITER facilities by the laboratories, other institutions and personnel participating in fusion energy research and development programs of the Members; and promote public understanding and acceptance of fusion energy (Article 3). The ITER Organization is licensed as a nuclear operator under French law.

ITER COUNCIL
The governing body of the ITER Organization. The Council is responsible for the promotion and overall direction of the ITER Organization and has the authority to appoint the Director-General; to approve the total budget for various phases of the project, the annual updates of the Project Plan and Resource Estimates and (correspondingly,) the annual budget of the ITER Organization; and to decide on the participation of additional states or organizations in the project. (Article 6)

DOMESTIC AGENCIES
Each Member has created a Domestic Agency to fulfil its procurement responsibilities to ITER. These agencies employ their own staff, have their own budget, and contract directly with industry.

STAC
The Science and Technology Advisory Committee (STAC) advises the ITER Council on science and technology issues that arise during the course of ITER construction and operation.

MAC
The Management Advisory Committee (MAC) advises the ITER Council on management and administrative issues arising during the implementation of the ITER Project.

FAB
The Financial Audit Board (FAB) undertakes the audit of the annual accounts of the ITER Organization. (Article 17)

MANAGEMENT ASSESSOR
A Management Assessor is appointed every two years by the ITER Council to assess the management of ITER Organization activities. (Article 18)



The ITER scientific installation in southern France.



iter
china eu india japan korea russia usa

ANNUAL REPORT 2025

CONTENTS

Foreword from the Chair of the ITER Council 5

Foreword from the Director-General 7

SUMMARY 2025 ..... **8**

CONSTRUCTION UPDATE **10**

> Buildings 12

> Assembling the Machine and Plant 14

> Machine Infographic 17

> Component Engineering and Manufacturing 18

SCIENCE & INTEGRATION **28**

CORPORATE HIGHLIGHTS **36**

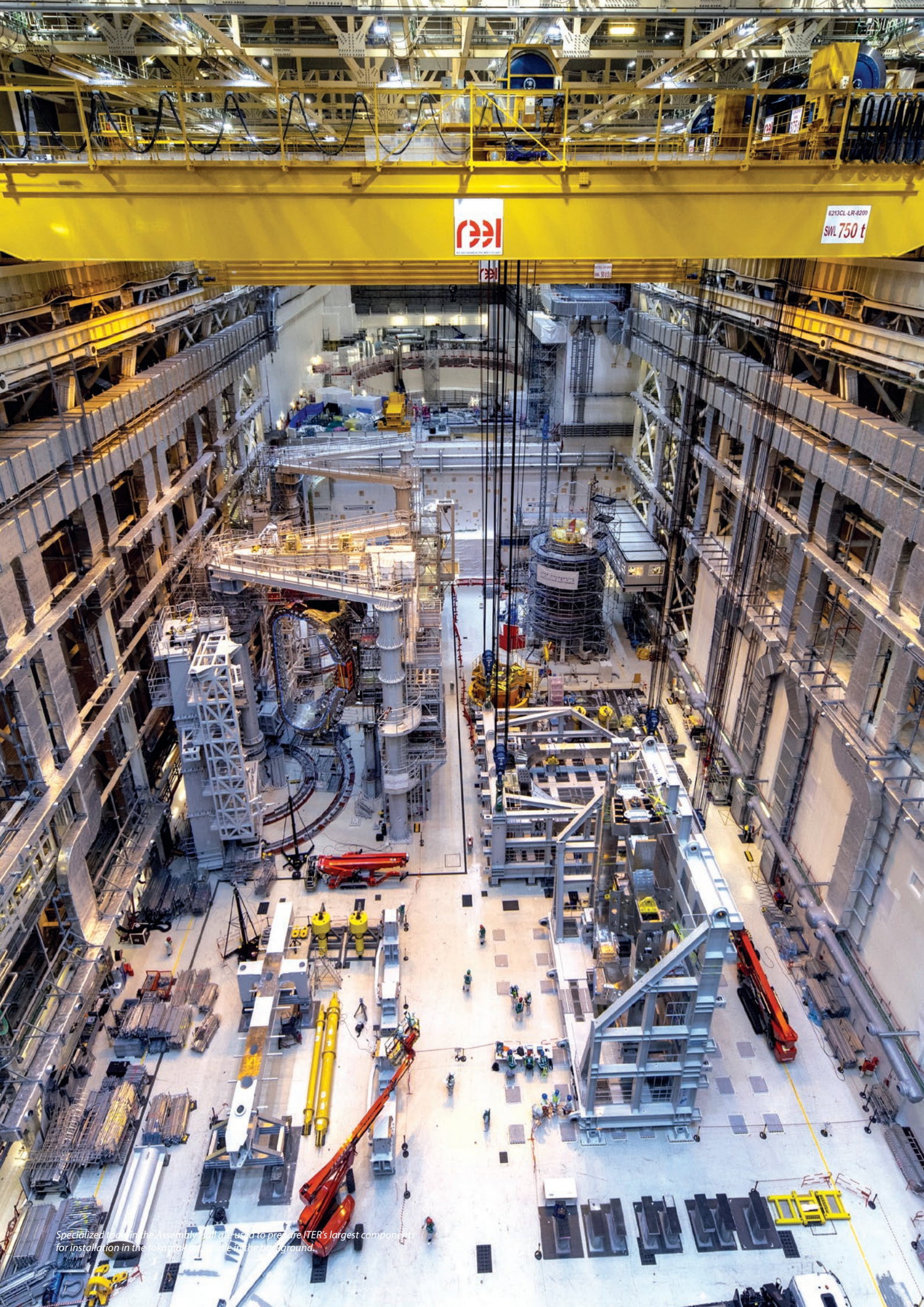
STAFFING AND FINANCIAL DATA **42**

DOMESTIC AGENCY PROCUREMENT HIGHLIGHTS **46**

INTERNATIONAL COOPERATION **56**

ORGANIZATION CHART **58**

LOOKING AHEAD 2026 ..... **61**



Specialized tooling in the Assembly Hall are used to prepare ITER's largest components for installation in the tokamak complex in the background.

Foreword from the Chair of the ITER Council



As the ITER project progresses from component manufacturing to machine assembly, systems integration, and commissioning activities, Baseline 2024 continues to provide a robust framework for project implementation. Since the ITER Council endorsed its overall approach in November 2024, project performance has remained aligned with baseline objectives, and schedule and cost performance indicators are demonstrating continued progress. The ITER Council welcomes the performance of the ITER Organization and Domestic Agencies and appreciates the transparent reporting provided through earned-value management and milestone-trend analyses.

Significant progress has been achieved in the assembly of the tokamak. Vacuum vessel sector module assembly and installation activities have advanced steadily, with six sector modules installed in the tokamak pit and two others in sub-assembly tooling at the time of writing. The Council also welcomes the completion of the vacuum vessel thermal shield refurbishment program and the repair program for the vacuum vessel sector bevel joints, both of which were essential prerequisites for the continuation of assembly activities.

The ITER Council notes the continued strengthening of project management and planning processes within the ITER Organization. Improvements to project controls, schedule integration, and performance monitoring are supporting more effective management of project risks and resources. The ongoing migration to a cloud-based planning environment is expected to further enhance project coordination and execution.

The Council also welcomes the constructive engagement between the ITER Organization and the French nuclear regulator, ASNR. Continued dialogue with regulatory authorities remains essential as the project advances through the successive stages of construction, commissioning, and licensing.

Important procurement programs reached major milestones during the year. The delivery of the final central solenoid module marked the completion of ITER's principal superconducting magnet systems, while the expected delivery of the final vacuum vessel sector in the coming months will similarly conclude one of the largest procurement efforts of the project. At the ITER site, the cryoplant is already supporting risk-mitigation activities under Baseline 2024, while commissioning activities have commenced for the first gyrotron system.

As instructed by the ITER Council during its thirty-eighth meeting in June 2026, the ITER Organization is prioritizing activities that are critical to the closure of the cryostat and the objectives of ITER's first scientific phase. The Council emphasizes that continued project progress depends on the timely delivery of in-kind components and the predictable payment of in-cash contributions by all Members. Sustained financial stability and funding visibility will remain important to maintaining project momentum and achieving baseline objectives.

Strong collaboration among all ITER Members continues to be essential to the success of the project. As I conclude my term as Chair of the ITER Council, I am confident that the Council will continue supervising and steering the activities of the ITER Organization to ensure that ITER fulfils its mission and advances the scientific and technological foundations of fusion energy.

MASSIMO GARRIBBA,
Luxembourg
September 2026



In November, sector module #5 makes its slow descent into the tokamak pit, taking its place alongside sector module #7 (left) and sector module #6 (centre).



Foreword from the Director-General

As I look back on 2025, and at the progress achieved through the first months of 2026, I can state that the ITER project is now demonstrating the benefits of the reforms undertaken since 2023 and of the disciplined execution framework established through Baseline 2024. Since the beginning of 2024, these measures have delivered sustained levels of schedule performance and cost efficiency while strengthening confidence in the project's delivery trajectory. As manufacturing activities draw toward completion, the focus is increasingly shifting to integration, commissioning, and preparation for future operation.

The most visible evidence of this progress can be seen in the machine assembly program. The repair program for key tokamak components has been completed, retiring major technical risks and strengthening confidence in the assembly schedule. Three vacuum vessel sector modules were assembled and installed in the tokamak pit in 2025 and another three during the first seven months of 2026, bringing the project into a new phase of industrial execution. ITER has gained several months on the machine-assembly critical path and is positioned to maintain a sustained pace of installation in the years ahead.

Significant progress has also been made in regulatory engagement with the French nuclear safety authority, ASNR, as the ITER Organization continues to address the numerous technical prescriptions and requests related to Baseline 2024's phased approach to the ITER safety demonstration. In April 2026, the ASNR accepted our request to exempt the vacuum vessel from French and European Pressure Equipment Directive (PED) legislation. The decision recognizes that this classification, established for fission devices, is not appropriate for fusion and opens the way to a more fit-for-purpose fusion regulatory approach.

Baseline 2024 also included a number of targeted risk-mitigation measures designed to strengthen confidence in future machine performance and operational readiness. The activities that have begun on the new ITER magnet cold test facility are not only validating critical hardware but also providing valuable experience that will support future commissioning and operation. Together with improvements in the approach to vacuum vessel sector welding, a strengthened nuclear quality culture, and a phased and structured strategy for executing the highly complex in-vessel assembly program, these measures are reducing risk while building capability for the next phase of the project.

At the same time, developments following the 38th ITER Council in June 2026 (IC-38) have required the ITER Organization and Domestic Agencies to respond to tighter resource constraints through coordinated cost-containment and schedule-optimization measures, concentrating available resources on activities that protect safety, nuclear quality and critical-path execution. Sustained and predictable support from all Members through this challenging period is essential to preserving this progress.

Alongside the complementary research and technology development still necessary to the realization of commercial fusion energy, the role of ITER remains clear: to deliver the science of long-pulse burning plasmas at scale, demonstrate the integration of complex fusion technologies, and generate knowledge and experience that future fusion programs can build upon.

PIETRO BARABASCHI,
St. Paul-lez-Durance
August 2026


SAFELY
ASSEMBLING ITER
FOR A FUTURE WITH
FUSION ENERGY
iter



SUMMARY 2025

EXECUTIVE SUMMARY

EXECUTING CONSTRUCTION AHEAD OF BASELINE TARGETS

The ITER Construction Project maintained schedule and cost performance above baseline targets throughout 2025. Vacuum vessel assembly regained momentum, with work executed ahead of the schedule and under the base estimate cost of Baseline 2024.

FROM RECOVERY TO PREDICTABLE DELIVERY

The project continued its transition from recovery to controlled execution, supported by enhanced project controls, integrated planning, and transparent performance monitoring. These capabilities are improving predictability and supporting informed decision-making across the ITER partnership.

SAFETY, QUALITY AND REGULATORY READINESS

Safety, quality, and regulatory readiness remained central to project delivery in 2025. Continued engagement with nuclear authorities, strengthened nuclear quality practices, and expanded risk-mitigation testing helped reinforce confidence that progress on assembly is being matched by disciplined oversight and preparation for future operation.

ONE-THIRD OF THE VACUUM VESSEL IN PLACE

ITER gained several months on the machine-assembly critical path in 2025. Three vacuum vessel sector modules were installed in the tokamak pit, bringing one-third of the torus into position and advancing the project toward the completion of the torus and the start of vacuum vessel welding.

A CLEAR ROADMAP TO FUSION PERFORMANCE

ITER refined and advanced its scientific strategy through the maturation of the ITER Research Plan and the identification of priority R&D needs. This work aligns the international fusion community around a shared roadmap toward ITER's scientific objectives.

BUILDING THE DIGITAL FOUNDATIONS OF FUTURE OPERATIONS

Digital technologies—including artificial intelligence, advanced modelling, and digital-twin capabilities—are becoming integral to project delivery and operational preparedness. These investments are helping to improve efficiency, preserve knowledge, and prepare ITER for decades of scientific exploitation.

STRENGTHENING FUSION'S GLOBAL ECOSYSTEM

ITER expanded knowledge-sharing with research institutions, industry, and emerging fusion companies through the Private Sector Fusion Engagement initiative. New pathways for collaboration, technology transfer, and access to ITER expertise reinforced the project's role as a catalyst for the fusion ecosystem.



CONSTRUCTION UPDATE

▲
A fifth magnet module is added to the central solenoid stack in 2025. Only the sixth remains.

iter
china eu india japan korea russia usa

CONSTRUCTION UPDATE

BUILDINGS



Civil structures and building services are constructed by the European Domestic Agency, Fusion for Energy, in conjunction with its Architect Engineer. Each area or building is handed over to the ITER Organization at an agreed level-of-completion milestone. Overall platform coordination is managed by the ITER Organization.

Buildings in place

Buildings in progress

Buildings to come

Site image courtesy of Fusion for Energy.



A TOKAMAK COMPLEX

- All gallery components installed for magnet feeder system
- All bioshield penetrations completed in Tokamak Building
- Jungle gym structures installed for tokamak cooling water
- Shielding of rooms with safety-important components
- Installation of X,Y cryo and warmlines completed
- Temporary propping system active under tokamak pit

B ASSEMBLY HALL

- Second upending tool delivered and installed

C CRYOPLANT

- All X,Y cryo and warmlines installed in cryobridge
- Supporting cryopump test facility
- Supporting magnet cold test facility

D MAGNET POWER CONVERSION

- Static magnetic field test facility operating
- Busbar bridges and cladding completed

E MAINTENANCE TEST FACILITY

(FORMER CRYOSTAT WORKSHOP)

- Installing in-vessel assembly Trial, Test and Training Facility
- Building extension underway
- Hosting vacuum vessel bevel remediation and sector preparation activities

F RADIOFREQUENCY HEATING

- First gyrotron installed
- Connection with power supplies ongoing
- Two new heating and current drive buildings planned

G STORAGE

H SITE SERVICES BUILDING

- Distributing cooling water and compressed air

I COOLING TOWER ZONE

- Heat rejection system in routine operation

J ELECTRICAL SWITCHYARD

- Reactive power compensation: commissioning and site acceptance tests completed

K FORMER WINDING FACILITY

- Magnet cold test facility in commissioning; first coil installed in cryochamber
- Installing port plug test facility
- Activities started on port integration facility
- Hosting some thermal shield repair

L ITER HEADQUARTERS

M EMERGENCY POWER SUPPLY

- Handover of Fast Discharge and Switching Network Resistor buildings
- Ready for equipment in 2026

N NEUTRAL BEAM POWER SUPPLY

- Buildings completed
- Handover to the ITER Organization (North Building) in December

O CONTROL BUILDING

- Handover to the ITER Organization in September
- Plant operation monitoring from the control room established
- Electrical installation in main server room

BUILDINGS TO COME

1 HOT CELL COMPLEX

ASSEMBLING THE MACHINE AND PLANT



The ITER Construction Project continued to make strong progress against the machine-assembly critical path in 2025, gaining several months against the schedule for vacuum vessel assembly. Building on the successful completion of key repair activities, vacuum vessel sub-assembly is now progressing at an industrial rhythm. One-third of the torus has been installed in the tokamak pit and contractors are working inside the sectors to prepare for the installation of in-vessel components. Plant installation and commissioning activities continue to advance operational capability across the worksite. Important progress was also made on facilities supporting risk mitigation, including the magnet cold test facility and cryopump test bench.

MACHINE ASSEMBLY – With the successful remediation of key machine components, teams are executing the work planned in Baseline 2024. Optimized procedures and tools, as well as lessons learned from activities carried out to build successive sector modules, are helping to accelerate vacuum vessel assembly activities—from the preparation of sectors before they are handled in tooling to in-vessel work in the tokamak pit. During the repair of bevel joints, an innovative handling approach was devised that employed an outdoor gantry crane to rotate the sectors and expose previously inaccessible surfaces, thereby reducing demands on the main crane and Assembly Hall tooling. A second upending tool installed in April is also helping to save time in the assembly process schedule. One-third of the ITER vacuum vessel is now in place. The first vacuum vessel sector module—sector module #7—was lowered into the tokamak pit in April, followed by sector module #6 in June and sector module #5 in November, with each lift operation preceded by weeks of preparation, verification, and rehearsal to ensure safe execution.



▲ *Pipe bundles have to be routed through ITER's thick concrete bioshield to reach the machine.*

For sector modules installed in the assembly pit, modular platforms are installed to provide access to all inner vacuum vessel surfaces, where approximately 1,200 diagnostic supports, or "bosses," must be welded onto each sector. Intercoil structures must also be attached between the modules—structural elements that mechanically connect adjacent toroidal field coils to contribute to creating a unified magnet structure capable of withstanding the extreme electromagnetic forces generated during operation. The first intercoil structures have been installed between sector modules #7 and #6. The next critical assembly phase—in-pit welding—will begin after the installation of the final element of the vacuum vessel in 2027. The ITER Organization has awarded the principal contract for production welding of the vacuum vessel, as well as a complementary contract covering process engineering, qualification activities, and the development of specialized tooling required for the simultaneous nine-sector welding strategy.

Progress was also achieved in 2025 on the recovery of the cryostat thermal shield. The replacement of cooling pipes on two equatorial sectors was underway by year-end, while a repair strategy was finalized for the lower cryostat thermal shield cylinder that must be repaired directly in the tokamak pit. The fifth central solenoid module was lifted into position in November and preparations for installation of the sixth and final module are underway. Once the stack is completed in 2026, teams will begin assembly of the vertical precompression support structure—the final phase of central solenoid integration to be performed outside of the machine.

Fourteen port plugs at the equatorial level and 16 at the upper level will host diagnostics, elements of the ion and electron cyclotron heating systems, and test blanket modules. These 30 plugs—designed to be removed for maintenance—are subject to stringent availability targets. ITER engineers plan to test port plug performance on site before installation in the machine. The first vacuum tank of the ITER port plug test facility arrived in December and qualification tests are planned on the facility in 2026. A port integration facility is also planned, where tenant systems will be assembled onto tested port plugs and port cell support structures before installation. Contracts for the required tooling were signed and implementation activities have commenced.

PLANT ASSEMBLY AND COMMISSIONING – In parallel to progress in machine assembly, installation, integration, and commissioning activities expanded across the site. The liquid helium plant is supporting two onsite facilities for the testing of superconducting magnets and ITER cryopumps. Commissioning activities are underway for major liquid nitrogen equipment in the cryoplant, including compressors, refrigerators, cold helium storage tanks, and associated auxiliaries. Significant progress was achieved in the cryogenic distribution network, with the totality of cryolines and warmlines installed, and all five auxiliary cold boxes positioned at Level 3 of the Tokamak Building. The partial cold commissioning of the cryoplant termination cold box was also completed through integration with the liquid helium plant.

In the area of radiofrequency heating, the first high-voltage power supply unit for the electron cyclotron resonance heating system was successfully connected to the ITER electrical network and energized—a milestone that clears the way for integration with the gyrotron systems that will generate high-power microwave beams for plasma heating. The first gyrotron has been installed in the Radiofrequency Building and is ready for commissioning; others will follow next year.

The handover of the Control Building from the European Domestic Agency to the ITER Organization marked another important milestone. Cubicles have been installed in the server room and shift operators have begun working from the main control room, marking an important step in the transition from construction to operations. Teams have begun integrating the first high-performance data acquisition systems that will demonstrate the readiness of ITER's central communication and computing infrastructure for future commissioning activities.

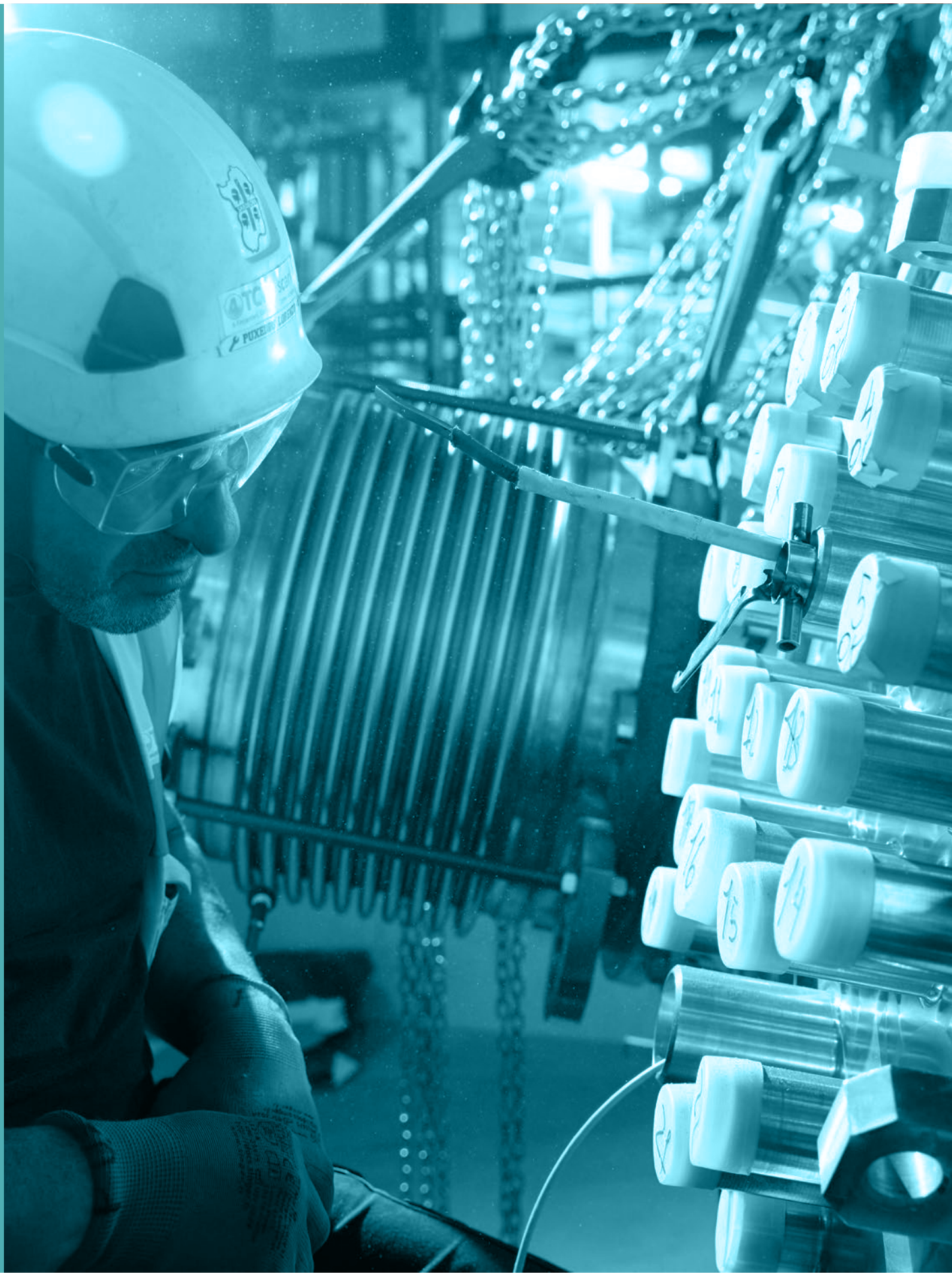
In support of future assembly operations, ITER also established a Trial, Test and Training Facility on site. This representative structure reproduces, in skeletal form, the volume of approximately one-third of the ITER vacuum vessel and will be used both to validate in-vessel assembly tooling and to train operators in a realistic working environment.

FACILITIES FOR RISK MITIGATION – Two strategic test benches are designed to reduce technical risk before machine operation. The magnet cold test facility will enable selected superconducting magnets to be tested at their operating temperature of 4 K, providing valuable information on magnet behaviour, cryogenic performance, electrical interfaces, instrumentation systems, and the critical joints connecting the superconducting windings. The first toroidal field coil, TF07, has been installed in the facility's cryostat and cooldown will begin next year. The cryopump test bench replicates ITER operating conditions for torus and cryostat cryopumps, making use of the project's cryogenic infrastructure to have a supply of cryogens at both 80 K and 4.2 K. In 2025, the cryopump test bench was commissioned with a pre-production cryopump that was successfully cooled to approximately 5 K and operated under representative conditions through controlled gas injection and pumping sequences. A second test campaign using a production unit is planned for next year.



A central solenoid module is loaded at the port of Houston, Texas.

MAJOR COMPONENT DELIVERIES – The Domestic Agencies of Europe, Japan and Russia are shipping prototypes of ITER divertor elements (cassette body, inner and outer vertical targets, dome) to the divertor integration facility in China for the purposes of commissioning the integration line and processes. The shipment of series production elements will follow. The United States delivered the final two central solenoid modules required for assembly at ITER, together with all elements of the central solenoid support structure; a spare central solenoid module is also en route to the ITER site. Europe delivered a second vacuum vessel sector, sector #4, and completed the delivery of all torus and cryostat cryopumps. China delivered two side correction coils; the delivery of four others next year will complete the correction coil procurement package.



Deep inside the Tokamak Complex, contractors are installing the arteries—pipes, cables, ducts—that are critical to machine operation.



MACHINE INFOGRAPHIC

January

15 Last elements of central solenoid structure (United States)

22 Contract kick-off for divertor integration

April

20 Second upending tool installed and tested

10 First vacuum vessel sector module (#7) installed (post repair campaign)

15 All torus and cryostat cryopumps now at ITER

June

17 Outdoor rotation of two vacuum vessel sectors to proceed with repairs on second side

18 Second vacuum vessel sector module (#6) installed

27 Fifth central solenoid module (United States)

August

1 Cryopump test facility: commissioning completed

October

4 Magnet cold test facility: cryostat delivered

10 In-vessel assembly: Trial, Test and Training Facility in progress

17 Support thermal shield reinstalled after repair

December

15 Magnet cold test facility: first magnet inserted for testing (TF07)

19 Intercoil structures completed between sector modules #7 and #6

March

28 Sub-assembly of sector module #7 completed (first sector after repair campaign)

May

9 Vacuum vessel sector #4 (Europe)

July

25 Two side correction coils (China)

September

11 Sector module welding contract signed

19 Sixth central solenoid module (United States) – all modules for stack now on site

November

4 Fifth central solenoid module lifted onto stack

11 Magnet cold test facility: commissioning underway

17 Port plug test facility: first vacuum tank delivered (Russia)

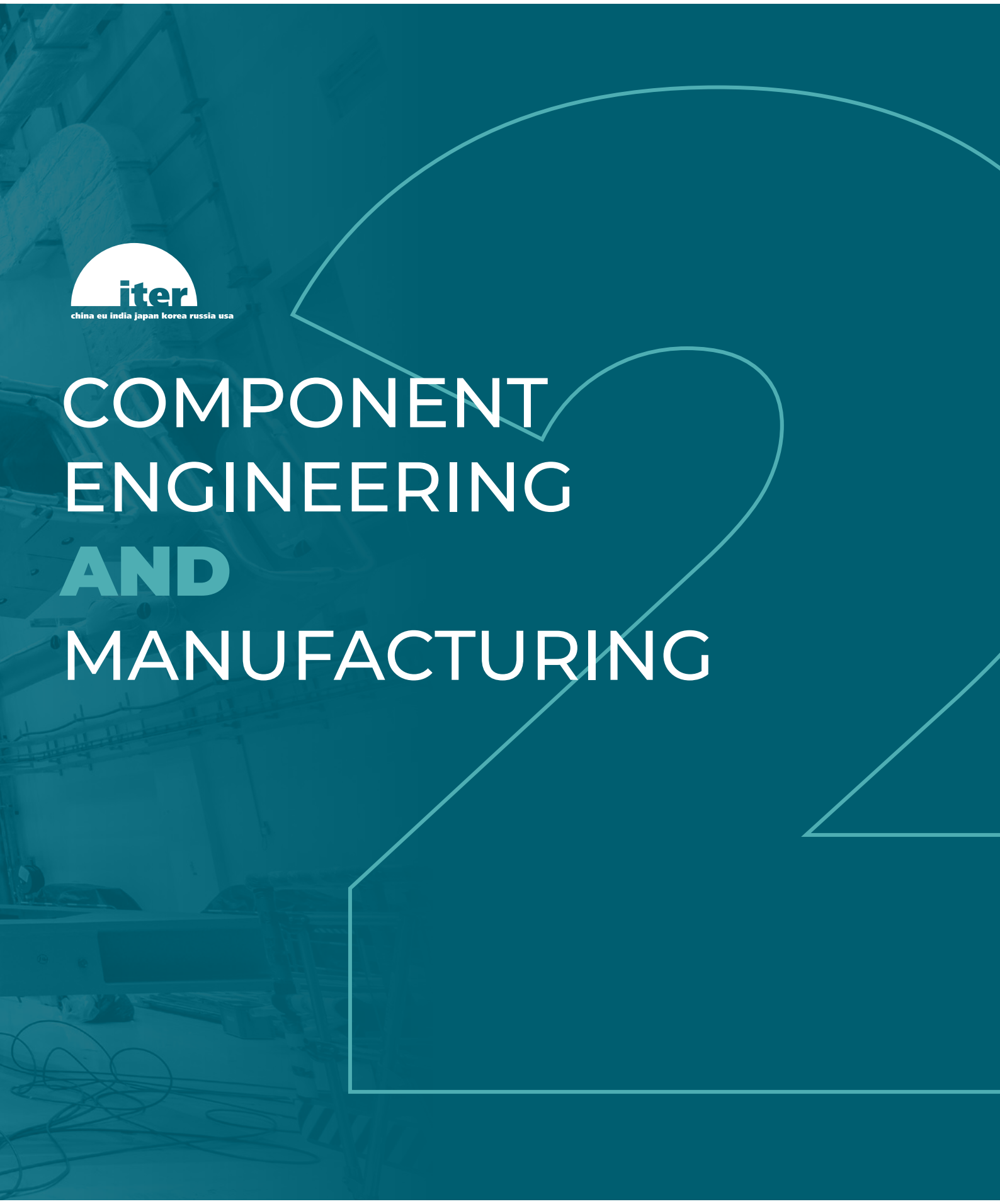
25 Third vacuum vessel sector module (#5) installed

28 Neutral beam cryopumps delivered (Europe)

Arrivals | Assembly preparation/pre-assembly | Assembly in pit



Once in the Assembly Hall, 440-tonne vacuum vessel sectors are surveyed and prepared for upending to vertical.



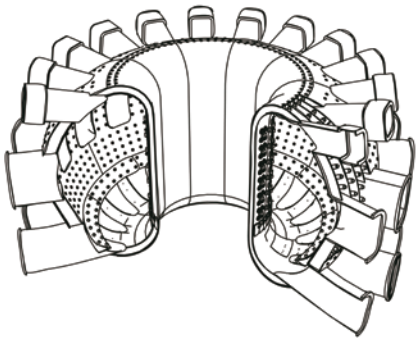
iter
china eu india japan korea russia usa

COMPONENT ENGINEERING AND MANUFACTURING

KEY COMPONENTS

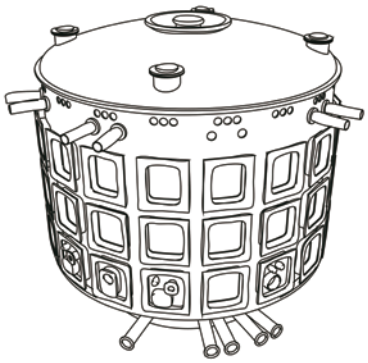


A second upending tool in the Assembly Hall is facilitating sub-component handling, while revised workflows and lessons learned are increasing efficiency across the sector module production line. In 2025, three modules—representing one-third of the vacuum vessel—were completed and installed, with four scheduled for installation in the tokamak pit in 2026. Manufacturing is advancing on key in-vessel components including the ITER divertor, which is required for first-phase operation, and the blanket. The final elements of the central solenoid are now on site. Following the final deliveries for the toroidal and poloidal magnet systems in 2023 and 2024, this latest milestone marks the completion of procurement for ITER's 10,000-tonne magnet system, the largest and most powerful pulsed superconducting electromagnet system ever manufactured.



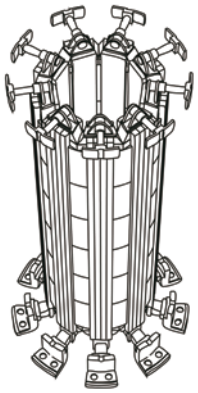
A. VACUUM VESSEL

A "sector module" is built from three key machine components—a vacuum vessel sector, its thermal shield, and two toroidal field coils. These modules are assembled vertically in one of two identical tools in the ITER Assembly Hall before being transferred by overhead crane to the machine assembly pit. The first completed element of the ITER plasma chamber, sector module #7, was installed in the tokamak pit in April, followed by modules #6 and #5 in June and November. Ongoing repair and sub-assembly work on other sectors at ITER, together with the planned delivery in 2026 of the final three sectors by Europe, will support the schedule goal of having all nine modules in the assembly pit by mid-2027. In parallel, a major contract for vacuum vessel welding was signed in September, and preparatory work is now underway.



B. CRYOSTAT

Cryostat manufacturing and delivery was completed in 2022. Of the four major cryostat sections supplied by India, two—the base and the lower cylinder—have been installed in the tokamak pit and welded together, while the upper cylinder and top lid will remain in protected storage on the ITER platform until needed. Replacement of two critical pipe sets on the 530-tonne cryostat thermal shield is currently underway as part of the campaign to address corrosion-induced cracking on all elements of the ITER thermal shield. The first torus cryopump housings, providing the primary vacuum boundary for the torus cryopumps, and the first port bellows, used as expansion joints between the vacuum vessel, the cryostat and the walls of the Tokamak Building, were delivered by India this year.



C. CENTRAL SOLENOID

With the delivery by the United States of two production modules and the final components of the central solenoid support structure in 2025, all elements of ITER's 10,000-tonne superconducting magnet system (including toroidal field, poloidal field, and central solenoid magnets) are now on site. Five of the six superconducting modules forming the central solenoid have already been stacked in the Assembly Hall, with installation of the final module scheduled for next year. This milestone will enable assembly teams to begin installing the exoskeleton—a specialized structure that secures the central solenoid within strict tolerances and allows it to withstand the extreme forces generated during operation. A seventh central solenoid module, a spare, is currently travelling to ITER from the United States.



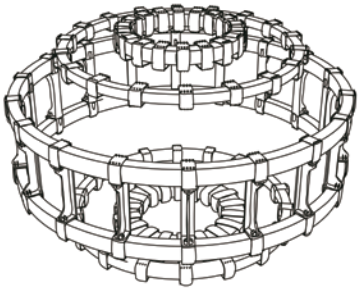
D. TOROIDAL FIELD MAGNETS

Procurement of the ITER toroidal field magnets concluded in 2023 with the delivery of the final coils from Europe and Japan. Following the resumption of vacuum vessel sector sub-assembly last year, pairs of toroidal field coils are now regularly brought into the Assembly Hall and upended for integration with each vacuum vessel sector. As the coils are rotated in tooling to close around the sector, their superstructures are connected through intercoil links—a process that begins in the Assembly Hall and continues after the sector modules are lowered into the pit. As part of risk mitigation included in the new baseline, the project will test several coils manufactured by different suppliers in the ITER magnet cold test facility, currently under commissioning. Toroidal field coil #7 (TF07)—the first to be tested—was installed in the cryostat of the test facility in December.



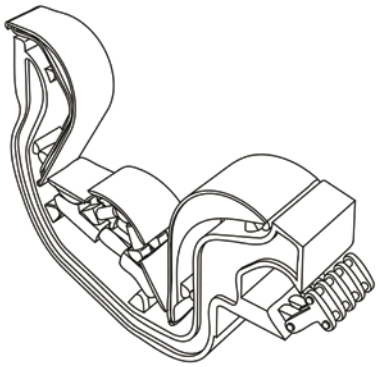
E. POLOIDAL FIELD MAGNETS

With the delivery of the last coil in 2024 by Europe, procurement of the ITER poloidal field magnets was brought to a close. Two of the six poloidal field coils have been installed at the bottom of the tokamak pit; the remaining four will be installed after completion of the torus-shaped plasma chamber. The top coil, PF1 supplied by Russia, will be tested in the ITER magnet cold test facility at 4 K (−269 °C) prior to installation.



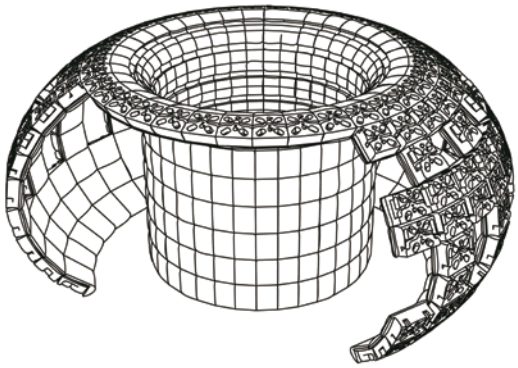
F. DIVERTOR

Following the selection of a divertor integration site, where plasma-facing targets will be integrated onto divertor cassette bodies, the first prototype component—an outer vertical target—arrived from Japan for testing. Prototypes of all other elements are in transit. In Europe, the first four production cassette bodies successfully passed factory acceptance tests in 2025, and series production of inner vertical targets is progressing under two contracts. In Japan, one supplier has completed the first two outer vertical targets for the ITER divertor and is ready to ship them to the integration site, while a second supplier is finalizing a prototype ahead of series manufacturing. In Russia, welding, machining, and brazing activities are underway for the divertor dome.



G. BLANKET

Series production of blanket shield modules is underway in China and Korea, with total production surpassing 70%. These massive stainless-steel blocks provide nuclear shielding for the vacuum vessel and magnet systems and serve as the structural support for the blanket first wall panels. Qualification of the different types of piping bundles, or “manifolds,” that will transport cooling water through the modules is progressing in Europe, and raw material for this system has been procured. The Domestic Agencies responsible for the blanket first wall panels—China, Europe, and Russia—are advancing panel structure manufacturing and testing prototypes of the plasma-facing tungsten armour tiles. In parallel, R&D activities continue to explore optimized first wall designs that could reduce manufacturing time and costs. The actively cooled first wall will be required for second-phase ITER operation only. For the Start of Research Operation, the machine will be equipped with a temporary blanket first wall.



HIGHLIGHTS 2025

The effort to procure the ITER machine and plant is increasingly moving from factory production and delivery by the ITER Members to integration, testing and commissioning at ITER.



> The final gallery component of the magnet feeder system has been delivered by China and installed in the Tokamak Building, where specialized teams are working to complete the superconducting joints that connect the feeder segments into feeder lines. **[1]**

> Korea is responsible for the procurement of 17 equatorial and 9 lower ports for the ITER vacuum vessel. All lower ports have been delivered to ITER, and the remaining equatorial ports are expected in 2026/2027.

> Since 2023, ITER has been testing samples of every type of electronic and electromechanical component on a static magnetic field test installation that exposes them to the magnetic field they can expect to receive during operation plus 40% for ageing. Industry has expressed interest in this unique facility, and the ITER Organization is currently undergoing an accreditation process to certify the facility for outside users.

> The first four divertor cassette bodies produced in Europe have passed hydraulic pressure and hot helium leak final acceptance tests. Following some additional machining and dimensional verifications the components will be ready for shipment to the divertor integration site in China. ©F4E **[2]**





> The United States has completed a 15-year project to procure the central solenoid magnets plus structural components and tooling—delivering the final two modules and all required structural elements this year to ITER, where the central solenoid tower is being assembled. A spare module is also on its way. © General Atomics **[3]**



> Russia has delivered the handling system and the first vacuum tank for the ITER port plug test facility. In its final configuration, three test benches will be used to verify that port plugs meet all requirements before installation. The first test bench will verify the 16 diagnostic port plugs needed for ITER's initial phase of operation. **[4]**

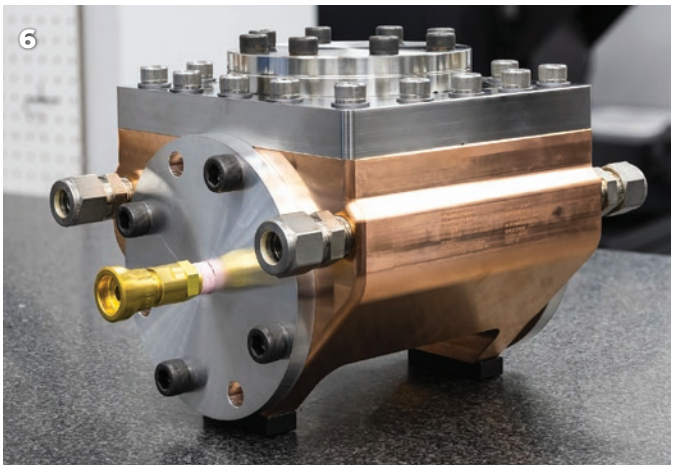
> The program to procure 18 correction coils is ending in China. The final batch—four side correction coils—is expected on site early next year. Two of the top correction coils received last year have successfully passed site acceptance tests.

> The ITER Organization and the European Domestic Agency have a new joint approach to procuring the ITER Hot Cell Facility. An integrated team is finalizing technical specifications to support the start of the competitive dialogue phase with industry.

> The blanket manifold system feeds cooling water to the blanket modules through pipes arranged in bundles and routed throughout the vacuum vessel. Europe has procured the raw material for the entire system and different European contractors are competing to qualify bundle prototypes.



> All eight torus and cryostat cryopumps are now on site. Cryopumps play a crucial role in ITER's vacuum system, ensuring that the ultra-high vacuum conditions necessary for plasma confinement are maintained. The delivery of the final three production units in 2025 is the culmination of a multi-decade project in Europe. ©RI / Inga Geiser **[5]**



> Electron cyclotron transmission lines—built from 10 main components including waveguides, switches, bends, couplings and bellows—will carry the high-intensity beams of the electron cyclotron resonance heating system hundreds of metres between the radiofrequency sources and the launcher. The first system components have been delivered by the United States. © US ITER/ORNL **[6]**

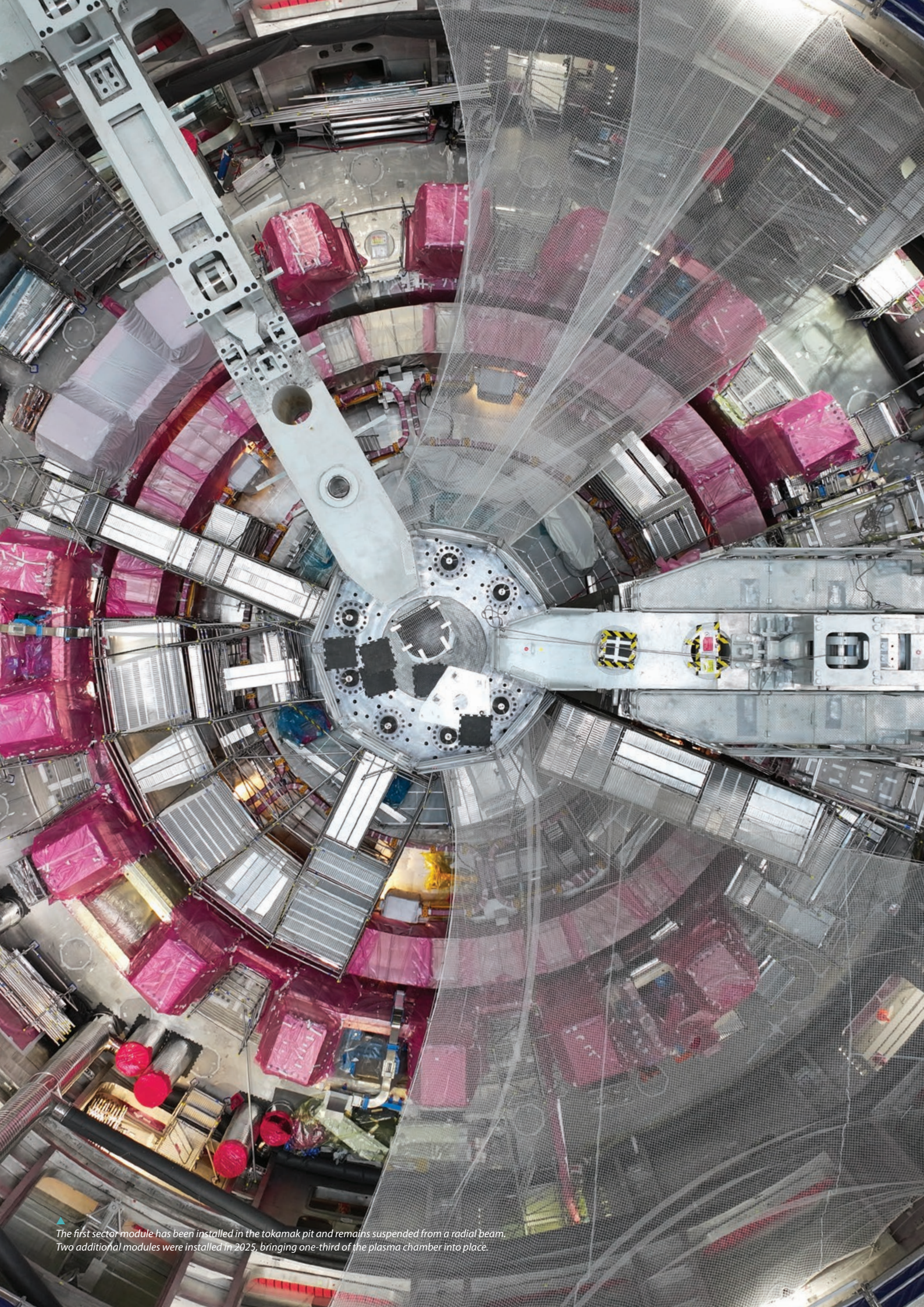
> Teams have completed the installation of the first ITER gyrotron—a device manufactured and delivered by Japan—and commissioning is underway in the Radiofrequency Building. One of the highlights of commissioning will be the generation of the first radiofrequency waves. **[7]**



> A full-size neutral beam injector prototype, MITICA, is being assembled at the ITER Neutral Beam Test Facility in Italy. After installation of the MITICA cryopump (photo) in July, the cryogenic infrastructure was successfully tested, with the pump reaching nominal temperature and completing a controlled warm-up. High-voltage holding tests in vacuum also confirmed readiness for further testing, with results exceeding the voltage required for full-performance hydrogen operation.©F4E **[8]**



> The Domestic Agencies responsible for procuring the actively cooled ITER blanket first wall—China, Europe, and Russia—are working with suppliers to qualify prototypes of both the stainless steel/copper alloy panel structure and the tungsten plasma-facing armour. The water-cooled first wall is required for ITER's second operational phase.

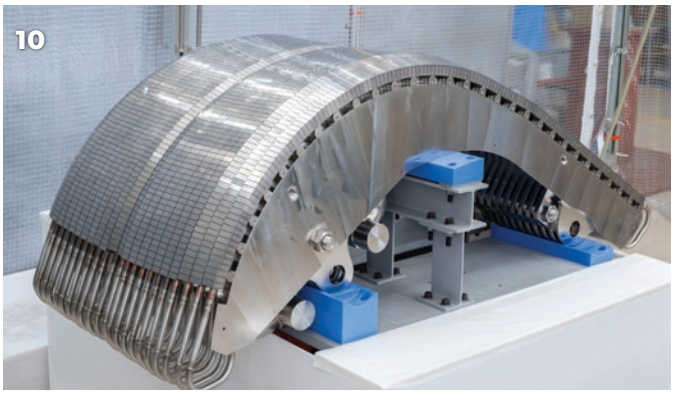


The first sector module has been installed in the tokamak pit and remains suspended from a radial beam. Two additional modules were installed in 2025, bringing one-third of the plasma chamber into place.

> To reduce the demands on the main crane and tooling in the Assembly Hall, the ITER Construction Project implemented an innovative solution for rotating vacuum vessel sectors from one side to another. Two sectors needing bevel repair on their inaccessible side were rotated under a gantry crane set up on the worksite in an operation that freed Assembly Hall tooling for other purposes and saved time. **[9]**



> Series production of the divertor outer vertical target is underway in Japan. A full-size prototype has been shipped to the integration site in China for assembly trials and the first two series elements will follow in 2026. Each divertor cassette body must be assembled with three plasma-facing targets—an inner and outer vertical target and divertor dome. ©MHI **[10]**



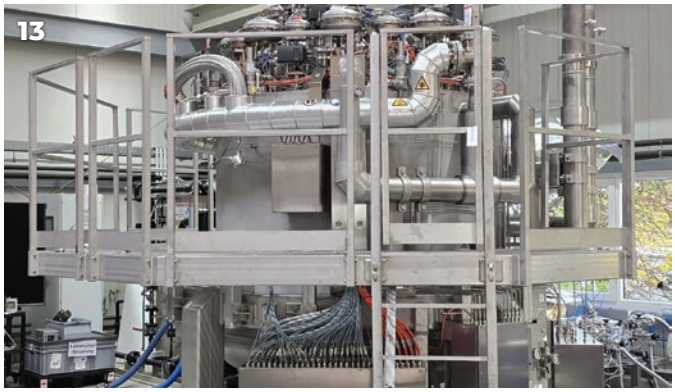
> Eight high-voltage power supply units delivered by Europe for the electron cyclotron resonance heating system will feed precise voltage to 16 wave-generating gyrotrons. In 2025, the first of these units passed all tests and was integrated with the first gyrotron installed in the Radiofrequency Building for the commissioning phase ahead. **[11]**





> In August, the vacuum team completes the commissioning of the cryopump test facility with the pre-production cryopump unit. The facility, which creates vacuum and cold conditions representative of ITER operation, will allow teams to test the pumps under a range of operating scenarios. At least four production cryopumps will be tested. **[12]**

> Cold valve boxes are compact but complex assemblies that control the flow of supercritical helium to the ITER cryopumps. After delivering eight units in 2023 for the torus and cryostat cryopumps, Europe completes the full set in 2025 by delivering three cold valve boxes for the neutral beam cryopumps. ©RI **[13]**



> In India, the final design of the ion cyclotron radiofrequency power supply has been completed. Manufacturing has started for the power supply and various elements of the power sources such as high-power amplifiers and controllers.

> In Europe, a framework contract has been signed with five suppliers for the design and manufacture of the remote handling tools needed for initial machine assembly (non-nuclear environment). The contract will help Europe deliver on three systems under its procurement responsibility—the divertor, cask and plug, and ex-vessel neutral beam remote handling systems.

> The ITER Organization is collaborating closely with Europe, Japan, Korea, and the United States on the procurement of the tritium plant. All preliminary designs have been completed and one system—tokamak exhaust processing—has passed final design. A Tritium Summit is planned in 2026 to coordinate efforts and exchange best practices.

> Teams onsite have completed the repair and in-pit reinstallation of 18 support thermal shields—small panels erecting a thermal barrier between the vacuum vessel and toroidal field gravity supports. Two other projects are progressing on site to repair the 18 main panels of the equatorial cryostat thermal shield as well as the lower cryostat thermal shield cylinder.

> A large cryostat will be used to test selected ITER superconducting magnets at −269 °C (4 K). The 11 × 22 metre cryostat, including its lid (photo), was the last major component delivered for the ITER magnet cold test facility in 2025. The first toroidal field coil has been placed in the cryostat and testing will begin next year. **[14]**


14

> The design of four tritium test blanket systems and associated infrastructure is progressing in line with planned preliminary design reviews in 2026. The Test Blanket Module Research Plan (Level 1) was endorsed by the ITER Council's Science and Technology Advisory Committee as part of the updated ITER Research Plan.

> The cryogenics team completes the successful integration in the Tokamak Building of five massive auxiliary cold boxes delivered by India. Weighing approximately 28 tonnes each, the cold boxes receive cryogenic helium from the cryoplant and distribute it to core tokamak components such as the superconducting magnets and cryopumps. **[15]**


15

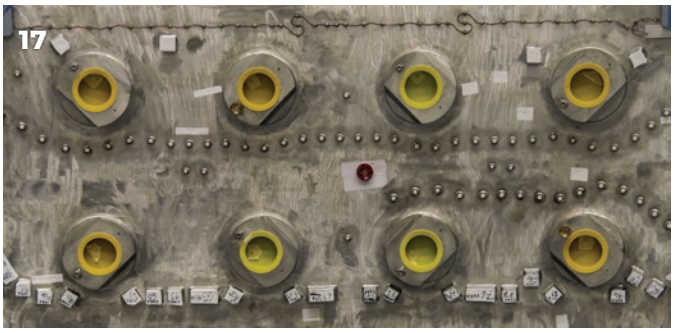
> In ITER's twin Magnet Power Conversion buildings, integrated testing will start next year for power converters from China and Korea and switches and busbars from Russia. Forty-four AC/DC power converter units—comprising a transformer, a converter and a busbar section—are needed for first-phase operations. Thirty-two of these are already undergoing commissioning; Task Agreements have been concluded with China and Korea for the remaining (stage 2) equipment. **[16]**


16

> A temporary propping system beneath the Tokamak Complex basemat slab supports the machine assembly zone, which is subject to increased loads due to the configuration of assembly tooling. The 16 massive "stools" that make up the propping system are continuously monitored.

> Large "bellows" procured by India will be installed between the ITER vacuum vessel, the cryostat, and the Tokamak Building walls to maintain the ultra-high vacuum inside the cryostat and to accommodate relative movement during operation. Lower cell bellows have been delivered to ITER, and the upper and equatorial bellows are ready for shipment.

> On the inner surface of each vacuum vessel sector, assembly teams are welding more than 2,000 bosses (or anchors) to support in-vessel magnetic sensors and cabling. Laser templating is used to position each support precisely, with CAD coordinates projected onto the vessel surface by laser pointer. **[17]**

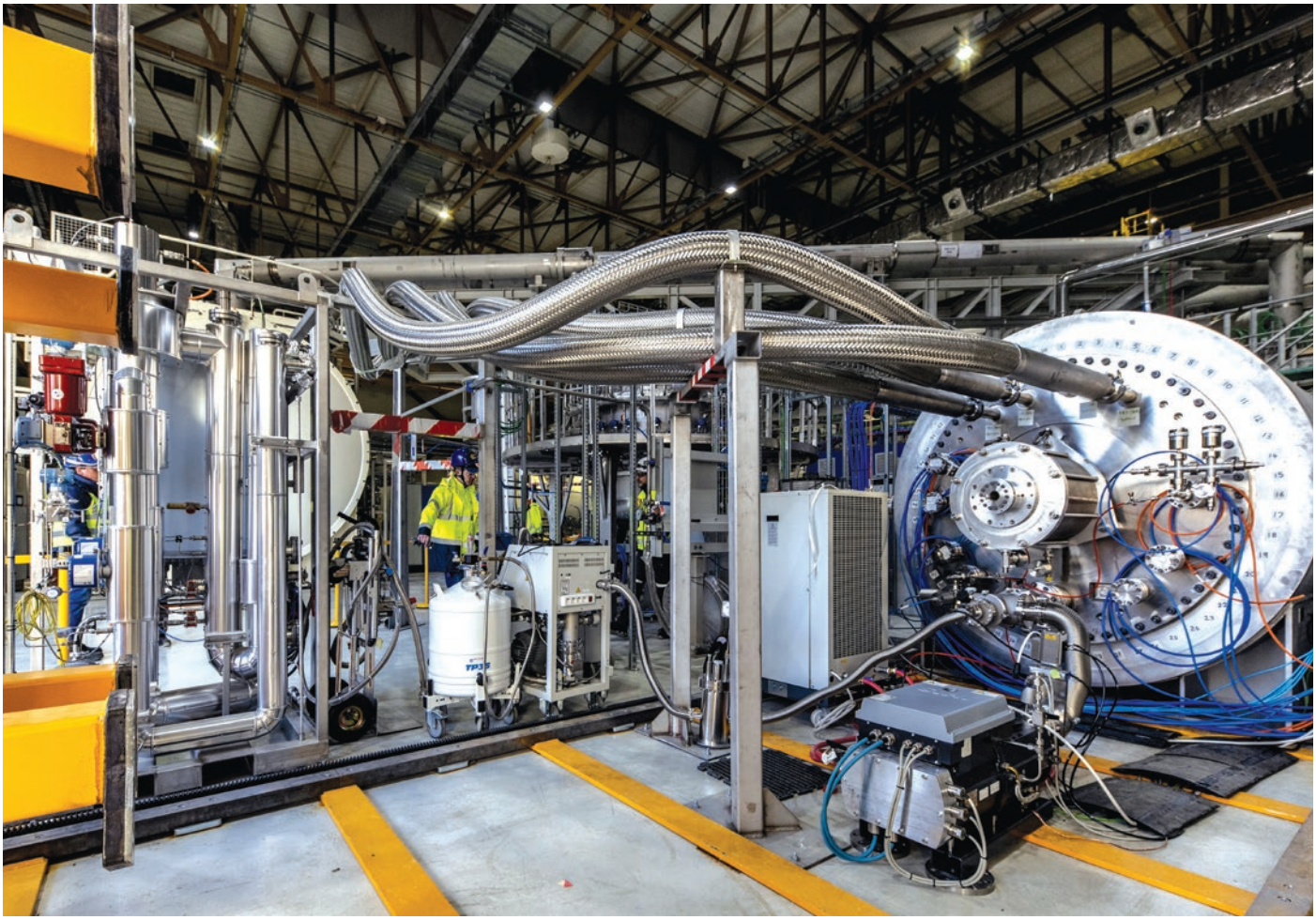


> Nine gravity supports under the vacuum vessel sector modules in the tokamak pit are designed to allow radial movement for thermal expansion while maintaining rigidity in the toroidal and vertical directions to withstand weight, thermal and electromagnetic loads, plasma disruptions, and seismic events. The first gravity support was installed this year. Early next year, the teams will carry out the first load transfer of a sector to its gravity support.

> The commissioning and site acceptance testing of the reactive power compensation and harmonic filtering system delivered by China have been successfully completed. This equipment provides or absorbs reactive power as needed, smoothing the flow of AC current and eliminating harmonics.

> A trial, training and test facility going up on site reproduces the volume of three sectors of the vacuum vessel and one access port. When completed, it will be used to trial tools and train operators for the many types of activities required during the assembly of components on the inner walls of the vacuum vessel. **[18]**



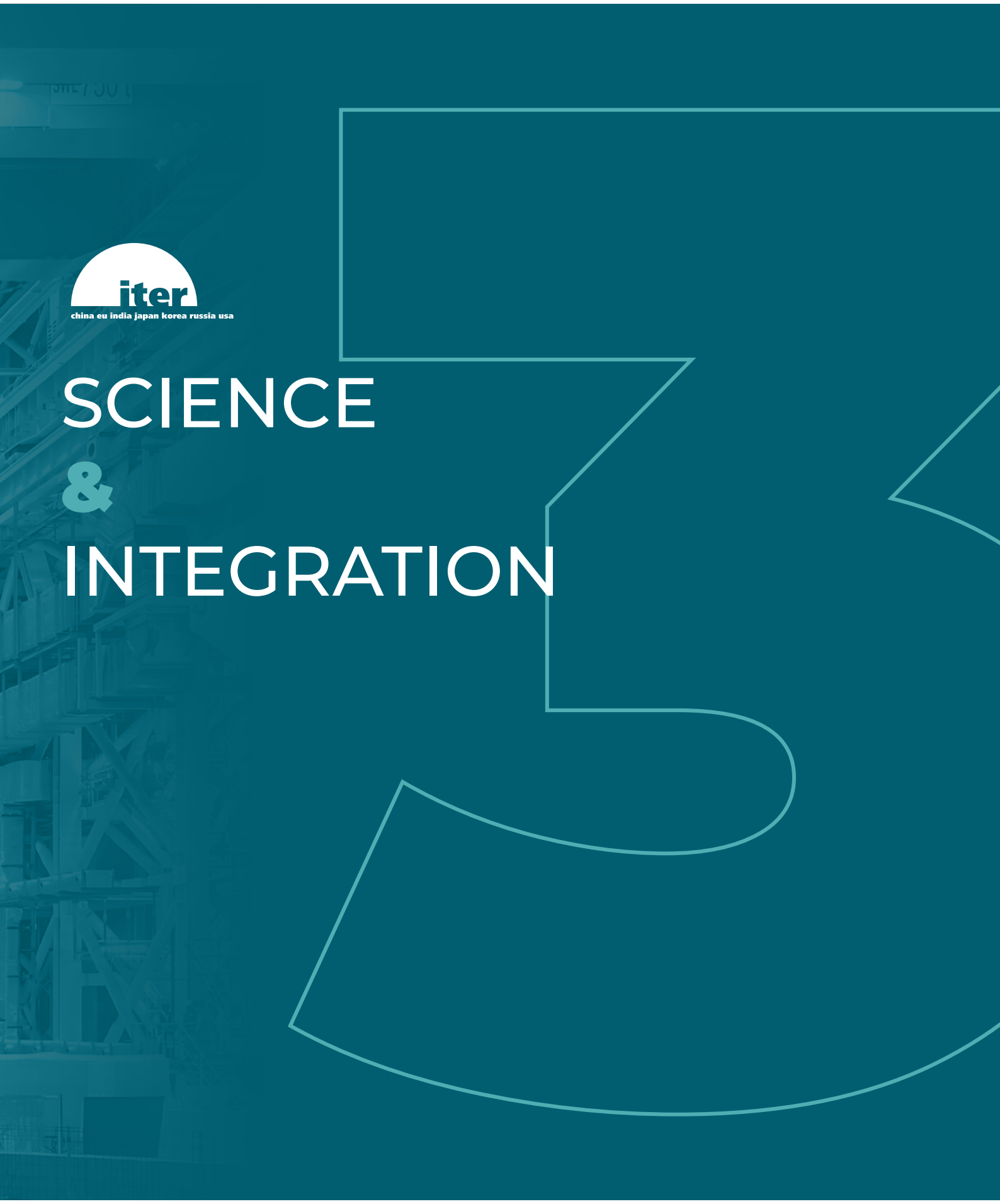


▲
At ITER's cryopump test facility, cryopump units can be tested in vacuum and cold conditions representative of ITER operation and in a range of operating scenarios. The facility is successfully commissioned in August.



SCIENCE & INTEGRATION

Each vacuum vessel sector is assembled with its thermal shield and two toroidal field coils before being transferred as a sector module over the bioshield wall and into the tokamak pit. Clearance above the wall is approximately 20 cm.



iter
china eu india japan korea russia usa

SCIENCE & INTEGRATION

SCIENCE & INTEGRATION



Operators will pilot the ITER machine and plant from the Control Building (foreground), which was fully turned over to the ITER Organization in 2025.

While construction remains its most visible achievement, ITER is increasingly serving as the hub of a worldwide fusion knowledge ecosystem. New digital infrastructure, open scientific frameworks, international research coordination, and knowledge-sharing initiatives are transforming ITER into an important platform for global fusion innovation.

ITER RESEARCH PLAN: FURTHER REFINEMENT AND PUBLICATION OF PRIORITY R&D NEEDS – The ITER Organization is making progress toward a mature, technically robust research blueprint while also reinforcing the collaborative international R&D framework needed for its successful implementation.

The top-level ITER Research Plan (Level 1), adopted as part of Baseline 2024, sets out the main experimental steps to achieving the project's scientific goals as well as the hardware capabilities that will be needed at each stage.

Levels 2 and 3 provide additional detail on the experimental strategies and timelines underpinning ITER's scientific roadmap. Level 2 describes impacts on machine and plant systems under configuration control, meaning that they require evaluation by the ITER Organization and the Domestic Agencies, while Level 3 identifies areas of the new plan with no impact on configuration control.

At its 32nd meeting in May, the ITER Council Science and Technology Advisory Committee (STAC) reviewed and endorsed Levels 2 and 3 of the ITER Research Plan, together with associated blueprints for magnet coil testing, neutral beam injection heating, and test breeding blanket systems. The Committee also commended the considerable progress made in the ITER Organization's and ITER Members' experimental, theoretical, and modelling programs that have helped the Research Plan to mature.

Contributions from ITER Member fusion research institutes remain essential to the continued refinement of the ITER Research Plan. Following STAC's endorsement, the ITER Organization published a consolidated ITER Technical Report (ITR-25-005) identifying priority research and development needs for the new baseline Research Plan. Developed in collaboration with the International Tokamak Physics and Engineering Activity (ITPEA*) and expert contributors from the ITER Members, the report lays out a selection of issues related to the completion of system designs, specific options and approaches to be explored in the ITER Research Plan, and assumptions guiding the development of the experimental program towards high-Q operation.

ITER and ITPEA representatives also shared the latest iteration of the ITER Research Plan widely at the Fusion Energy Conference (IAEA FEC 2025) in October.

*The International Tokamak Physics Activity (ITPA) became the International Tokamak Physics and Engineering Activity (ITPEA) in December 2025.

DEMONSTRATING FAST DATA TRANSFER – As part of preparations for future research activities, the ITER Organization is developing the advanced digital infrastructure needed to make scientific data widely accessible to researchers around the world. While Member scientists will not be able to operate the installation remotely, they will be able to analyze data within seconds of an experiment and provide feedback to operators.

ITER experiments are expected to generate extremely large volumes of diagnostic and operational data during each plasma pulse. Although machine control systems will remain securely managed onsite, scientists at remote research centres across the ITER Members will require rapid access to experimental data in order to analyze plasma behaviour, compare results with predictive models, and contribute to experiment planning and interpretation. The ability to transfer and synchronize these datasets efficiently across continents is therefore essential to ITER's role as a shared international research facility.

In 2025, ITER successfully demonstrated ultra-high-speed international data transfers between Europe, Japan, and the United States, validating key capabilities required for near-real-time scientific collaboration during future experimental campaigns.

The demonstrations relied on ITER's onsite Scientific Data and Computing Centre and its associated backup and distribution centre in Marseille. These facilities are connected through redundant dedicated 400 Gbps links and integrated with major international research and education networks, including RENATER in France, GÉANT in Europe, ESnet in the United States, and SINET in Japan. Together, these systems form the backbone of ITER's future distributed scientific computing environment.

A central element of the program is the continued development of ITER.sync, a high-performance data replication framework created by ITER engineers to optimize transfers across long-distance scientific networks. Designed according to open-source principles, ITER.sync automatically parallelizes data flows, adapts dynamically to changing network conditions, and maintains near-maximum throughput even over high-latency international connections. The framework has also been engineered to interoperate with heterogeneous computing environments and high-speed transfer protocols used by ITER Members and partner laboratories.

During dedicated transfer campaigns this year, ITER and Japanese partners achieved two simultaneous 100 Gbps transcontinental links between France and Japan, representing a major increase in performance compared with previous demonstrations. Additional tests with the DIII-D National Fusion Facility in the United States confirmed sustained high-speed transfers approaching theoretical network limits over trans-Atlantic distances. The campaigns also validated the resilience of the infrastructure under simulated network interruptions and demonstrated the reliable synchronization of very large scientific datasets between geographically distributed facilities.

These achievements represent an important step in preparing the digital ecosystem that will support ITER's future experimental program. By strengthening the infrastructure for rapid international data exchange and collaborative scientific analysis, ITER is reinforcing the global integration that underpins the project's scientific mission.



This toroidal field coil has been "upended" to vertical and will soon join vacuum vessel sector sub-assembly tooling.

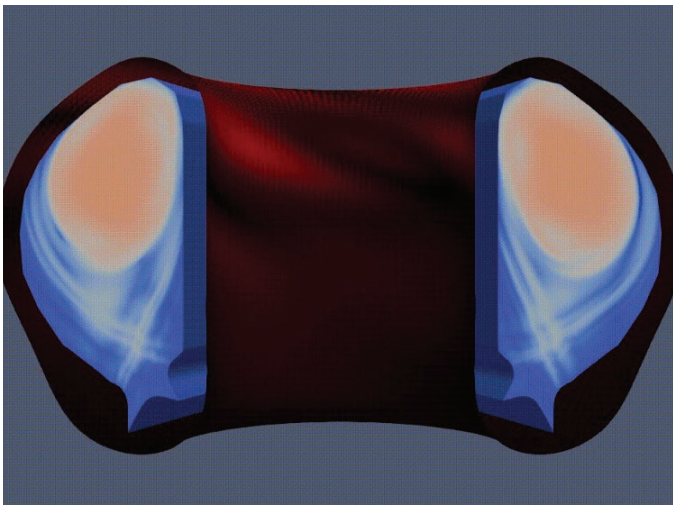
SCIENCE & INTEGRATION

SUPPORTING THE GLOBAL EFFORT FOR FUSION – In response to the ITER Council's request in late 2023 to engage with private-sector fusion initiatives, the ITER Organization and the ITER Members worked this year to open two frameworks that had previously been restricted to publicly funded research institutes in the ITER Members, making the necessary statutory adjustments.

First, the ITER Organization released its Integrated Modelling & Analysis Suite (IMAS), including key infrastructure and physics models, under open-source licences. Developed in close collaboration with the ITER Members' fusion communities, IMAS serves as a central framework for plasma modelling and data analysis, built on standardized, device-independent data structures that enable consistent representation of experimental and simulation results. By making this platform openly accessible, ITER is reducing barriers to participation, enhancing reproducibility, and promoting the IMAS data model as a global standard for fusion research. In addition to releasing the IMAS infrastructure, a wide range of physics models used extensively in the fusion modelling community has also been made openly available with the generous support of the research institutes that own the intellectual property.

In parallel, the Coordinating Committee of the International Tokamak Physics Activity (ITPA) voted in 2025 to open its coordinated physics research activities to privately funded initiatives. The ITPA has provided a framework for internationally coordinated fusion research activities in the ITER Members since 2001, and its work has resulted in the achievement of the broad physics basis essential for the design of ITER and for experimental planning. Modifications implemented in the ITPA Charter and in the International Energy Agency (IEA) Technology Collaboration Programme on Tokamak Programmes (CTP-TCP), which provides the legal basis for the implementation of ITPA activities, now permit privately funded companies to apply to participate in Topical Physics Group activities. The first private sector fusion company joined the ITPA physics activities in 2025: Commonwealth Fusion Systems (United States). Later in 2025, the ITPA Charter was further updated in order to extend the scope of the ITPA to include engineering activities. The updated Charter was approved by the International Tokamak Physics and Engineering Activity (ITPEA) Coordinating Committee on 5 December 2025.

The evolution of these two frameworks to accommodate private-sector participation reflects broader recognition of the growing role of private investment and innovation in fusion development. By integrating private actors into established international research structures, ITER is fostering stronger public–private collaboration, enabling knowledge sharing, and supporting coordinated progress across multiple scientific and technological domains.



▲ *Visualization with IMAS-ParaView of induced currents in vacuum vessel and plasma electron temperature during disruption in ITER simulated with JOREK code.*

ENGINEERING ITER: SHARING LESSONS LEARNED – In 2025, ITER advanced an important knowledge-management initiative aimed at preserving the technical, scientific, and regulatory foundations of the project through development of the ITER Engineering Basis Handbook. Conceived as a comprehensive reference work, the handbook documents the design principles, engineering methodologies, and major technical decisions that have shaped ITER from its earliest conceptual studies through construction.

The initiative responds to the recognition that ITER has accumulated unprecedented engineering experience over decades of development. Yet much of this knowledge—when it has been formally documented—is dispersed across multiple platforms and formats, while some insights remain accessible only through the engineers and scientists who participated in successive phases of the project. By consolidating this information into a structured and accessible publication, ITER aims to preserve lessons learned for future fusion programs and for the broader scientific and engineering communities.

Prepared under the editorial leadership of the European Consortium for the Development of Fusion Energy (EUROfusion) and coordinated with contributions from ITER Organization experts, Domestic Agencies, and senior retired specialists, the Handbook captures not only the rationale behind key design choices but also the alternative solutions that were evaluated throughout nearly four decades of project activities. The publication addresses domains including engineering integration, safety, licensing, fabrication, assembly, and systems qualification.

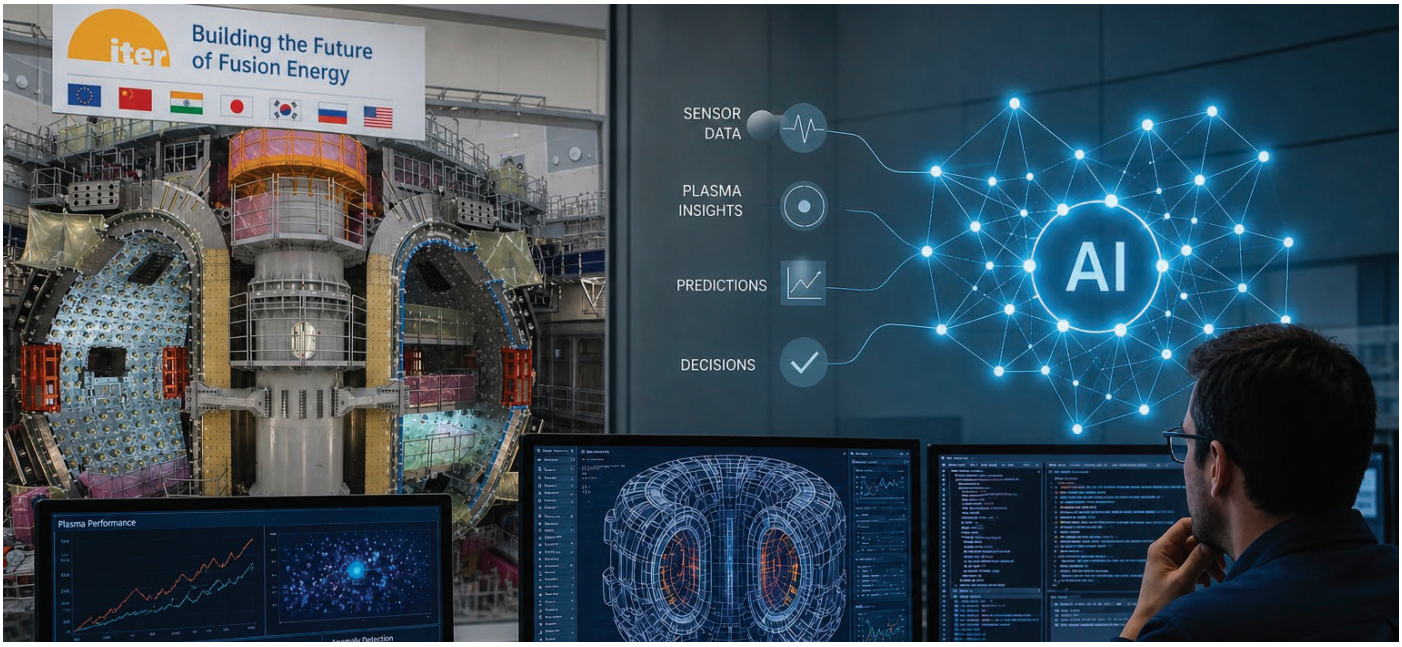
In 2025, the first chapters of Volume 1, "Genesis, Design and Evolution," were released through the ITER Technical Reports platform on the ITER website. A second volume, "Anatomy of the Plant," is under development and will provide detailed documentation of ITER's systems and plant architecture.



The ITER Scientific Data and Computing Centre is a purpose-built digital engine room that combines cutting-edge computation with industrial-scale storage to support ITER's scientific mission by enabling large-scale simulations, managing vast volumes of data, and ensuring the long-term preservation of research and engineering records.



In June, two vacuum vessel sectors are side-by-side in the tokamak pit.



▲ *ITER is not merely adopting off-the-shelf artificial intelligence tools; it is confronting some of the hardest questions in industrial AI: how to learn from scarce data, unify fragmented archives, predict complex physical systems, and act in real time when mistakes are costly.*

PUBLICATION OF A SPECIAL ISSUE OF "NUCLEAR FUSION" – In 2025, the International Atomic Energy Agency's (IAEA) *Nuclear Fusion* journal published a collection of special papers prepared by the Topical Physics Groups of the International Tokamak Physics and Engineering Activity (ITPEA) reviewing progress in the development of the physics basis for burning plasma operation.

The collection, "On the Path to Tokamak Burning Plasma Operation," describes the extensive physics R&D activities conducted under the ITPEA between 2007 and 2025 in support of ITER and fusion energy development. It addresses a broad range of topics, including plasma confinement, fast particles, plasma control, power fluxes on plasma-facing components, mitigation of power transients, and diagnostics.

The special issue follows earlier landmark editions of *Nuclear Fusion*: the 1999 volume on the ITER physics basis and the 2007 volume titled "Progress in the ITER Physics Basis," both of which summarized ITPEA R&D contributions supporting ITER development.

The 2025 special issue includes topics directly relevant to ITER, as well as to tokamak burning plasmas more broadly. Its editors highlight advances that have established a reliable foundation for the operation of burning plasma experiments and strengthened preparations for ITER and future fusion devices.

DIGITAL TRANSFORMATION OF THE ITER PROJECT – Emerging digital technologies, including artificial intelligence (AI), are being progressively deployed to enhance reliability, safety, efficiency, and knowledge continuity across all phases of the ITER project. Expected benefits include streamlined engineering and construction workflows; enhanced support for safety and licensing; improved efficiency across corporate functions; accelerated readiness for physics operations; strengthened knowledge preservation, transfer, and training; and more effective performance monitoring.

This transformation must remain carefully aligned with the 2024 cost and schedule baseline and be implemented within existing resource constraints. A layered cybersecurity and intellectual property governance framework is also essential to ensuring operational integrity and data protection.

The multiyear effort to manage all project engineering data through a single platform—the ITER Collaborative Platform (ICP)—is now well advanced. AI tools are being used to facilitate information retrieval and summarization, while Microsoft Office 365 Copilot has been widely deployed across the organization to streamline corporate processes. Usage continues to expand, and an in-house AI project group has developed a dozen dedicated Copilot-based applications and agents addressing priority business cases.

Extended reality and digital twin technologies are also supporting installation sequencing, interface validation, clash detection and labelling, and training activities.

Over the longer term, the ITER Organization is pursuing more predictive and autonomous capabilities, including AI-assisted project performance monitoring, predictive maintenance and reliability modelling, and preparation for operation via AI-orchestrated simulation workflows. ITER is also working toward continuous improvement of fusion science models, supported by sustained knowledge continuity efforts and, ultimately, by the development of AI-based knowledge agents capable of preserving and operationalizing expert knowhow.

Advanced innovation in these domains requires a broad, collaborative effort. The ITER Organization has invited all ITER Members and Domestic Agencies to actively contribute to this transformation by sharing expertise, supporting tool development, and leveraging digital innovation to strengthen project execution, preserve ITER's legacy, and advance the global fusion endeavour. The effort is also supported by strategic partnerships with industry leaders and academic institutions.



History is made on 12 February 2025, as French President Emmanuel Macron and Indian Prime Minister Narendra Modi are welcomed on site for a joint visit celebrating scientific and technological collaboration.

iter
china eu india japan korea russia usa

CORPORATE HIGHLIGHTS

AT A GLANCE 2025

JANUARY
> Switzerland resumes participation in ITER through the European Joint Undertaking for ITER (Fusion for Energy, F4E)

FEBRUARY
> President Emmanuel Macron of France and Prime Minister Narendra Modi of India visit the ITER worksite

MARCH
> The ITER booth opens at the Osaka World Fair (13 April–13 October)
> Memorandum of Understanding signed with Microsoft for collaboration on AI and other digital technology tools

APRIL
> Second Private/Public Fusion Workshop
> ITER Business Forum (IBF/25) in Marseille, France
> Vacuum vessel assembly resumes in the tokamak pit
> The physics activities of the ITPEA (International Tokamak Physics and Engineering Activity) open to private sector fusion initiatives

MAY
> Public Open Doors Day
> ITER's Research Plan R&D needs are published as an ITER Technical Report

JUNE
> 36th Meeting of the ITER Council
> Contract awarded for the in-pit welding of the ITER vacuum vessel
> First private sector fusion initiative joins the ITPA
> ITER and Kazakhstan renew scientific and technical cooperation

JULY
> Fusion Day at the World Expo in Osaka, Japan
> ITER International School #14 held in Aix-en-Provence, France

SEPTEMBER
> 5th Safety Day: rollout of ITER's 9 Life-Saving Rules
> Director-General Pietro Barabaschi addresses the IAEA General Conference plenary session
> ITER Games, 2025 edition

OCTOBER
> Cooperation Agreement signed with the European Consortium for the Development of Fusion Energy (EUROfusion)
> India Fusion Day is held at ITER
> Pietro Barabaschi addresses the second ministerial meeting of the IAEA World Fusion Energy Group (WFEG)

NOVEMBER
> 37th Meeting of the ITER Council
> Visit of Rafael Grossi, Director General of the International Atomic Energy Agency (IAEA)
> FuseNet PhD Event held at ITER
> National Geographic chooses the ITER project for its cover story
> Public Open Doors Day

DECEMBER
> First chapters of the ITER Design Handbook published
> Release of IMAS infrastructure and physics models as open source
> Sixth annual ITER Awards
> 19,444 people visit ITER in 2025 (cumulative since 2007 = 259,335)

CORPORATE HIGHLIGHTS 2025





▲
Sunday 13 July is Fusion Energy Day at the Osaka World Expo.

In 2025, ITER demonstrated renewed execution discipline, strengthened its safety and quality foundations, expanded its role as a global fusion knowledge platform, and deepened stakeholder confidence in the project's direction.

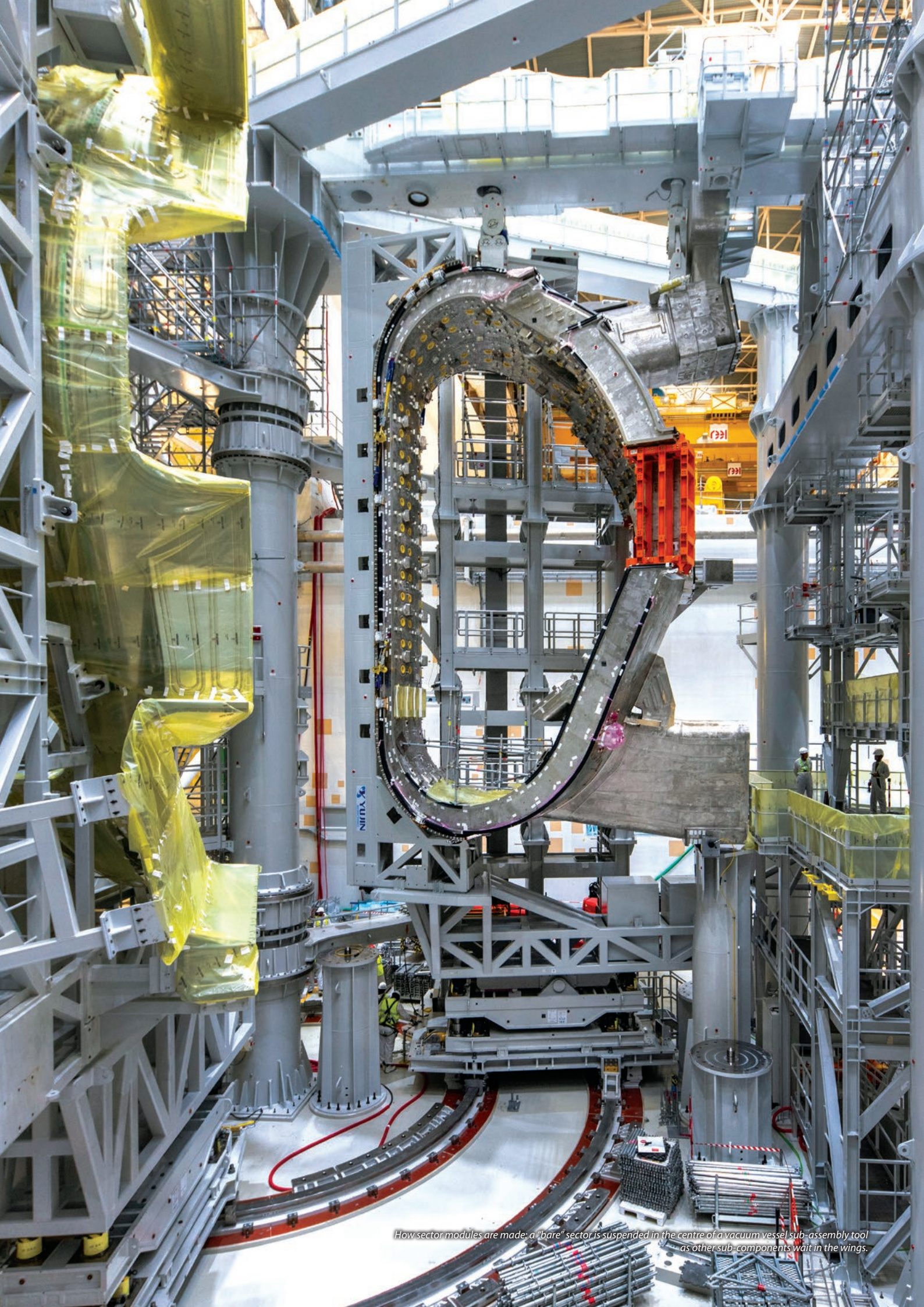
LANDMARK VISIT AMID STRONG PROJECT MOMENTUM – On 12 February 2025, the ITER Organization welcomed President Emmanuel Macron of France and Prime Minister Narendra Modi of India to the ITER worksite. This landmark visit took place against a backdrop of strong project momentum, with repairs successfully progressing on key vacuum vessel components, the restart of vacuum vessel assembly, and overall schedule and cost performance indicators for ITER construction above 1.0 since tracking began at the start of 2024. These positive indicators remained strong throughout the year, reflecting not only continued physical progress on the site—with work executed on or slightly ahead of schedule and under base estimate cost—but also increasingly disciplined construction project management.

BASELINE IMPLEMENTATION – The ITER Organization and the Domestic Agencies continue to make strong progress in the implementation of Baseline 2024, maintaining the project on track for cryostat closure in 2033. Construction performance is reviewed monthly by the Construction Project Steering Board and shared with ITER Members through a project dashboard, supporting transparency and data-driven decision-making. Schedule integration for improved project control is also advancing. The integrated baseline schedule now comprises more than 60 projects and 60,000 construction activities, complemented by a further 170,000 activities managed by the Domestic Agencies. During 2025, the first phase of the migration from Oracle Primavera P6 Professional to Primavera Cloud was completed successfully, with migration of all remaining Domestic Agency schedules on track for completion in 2026. By year-end, more than 600 personnel had been trained in the new environment and associated best practices.

REGULATORY ENVIRONMENT – The ITER Organization's engagement with the French Authority for Nuclear Safety and Radiation Protection (ASNR*) continued to progress constructively throughout 2025. All planned safety files were submitted, demonstrating the Organization's commitment to the licensing roadmap and phased safety demonstration approach. Key submissions included the safety file for vacuum vessel welding in the tokamak pit, requests for regulatory updates, and a proposal to exclude the vacuum vessel from French and European pressure equipment regulations. Discussions also advanced on aligning regulatory requirements and project hold points with Baseline 2024 while ensuring the submission of technically mature safety files.

The ITER Organization is also making significant progress toward strengthening its nuclear quality culture. Building on recommendations from a 2024 workshop, efforts in 2025 focused on enhancing upstream quality assurance and supervision of technical items before delivery to site. New measures for off-site and on-site oversight, reinforced inspections and audits, and the creation of a quality support service desk improved transparency and responsiveness.

*On 1 January 2025, the French nuclear safety authority, ASN, and the French Radioprotection and Nuclear Safety Institute, IRSN, merged into a single entity, the Authority for Nuclear Safety and Radiation Protection, ASNR.



How sector modules are made: a "bare" sector is suspended in the centre of a vacuum vessel sub-assembly tool as other sub-components wait in the wings.



The space in the foreground is reserved for the ITER Hot Cell Facility, the last major building to be constructed on the ITER site. An integrated ITER Organization–European Domestic Agency team is advancing procurement preparations.

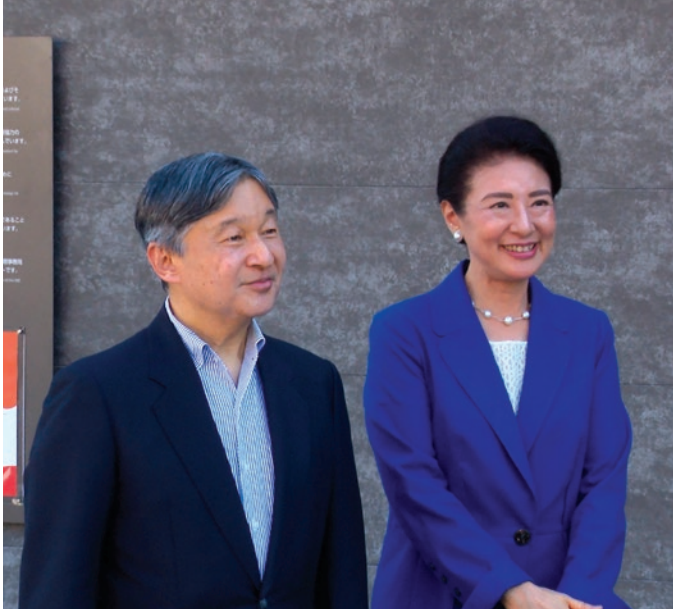
CORPORATE HIGHLIGHTS 2025

Training in non-destructive testing and root cause analysis was expanded, and development began on a centralized measurement and test equipment database to improve traceability and equipment management. These initiatives support risk mitigation, enhance defect detection, and strengthen quality assurance and quality supervision.

REORGANIZATION – On 1 January 2025, the new matrix organization was fully implemented, anchored by the Engineering Services Department, launched in 2024 as the primary provider of skilled engineering resources and services essential to the project. Because the project's progress ultimately depends on the people who deliver it, the Department's focus in 2025 was consolidating this new structure: clarifying management roles and responsibilities, establishing departmental governance, and defining a clear way of working to meet the project's resource needs.

Approximately 30% of Department personnel are "matrixed," or assigned to more than one technical unit, a proportion that will evolve according to operational needs. Framework contracts for engineering services complement ITER Organization engineering staff. Working closely with other ITER departments to break down silos, the Engineering Services Department standardized job descriptions and harmonized job titles for greater transparency and consistency, developed online tools for more flexible and effective resource management, and enhanced monitoring of telework, leave, and resource use—while dedicated teams advanced recruitment, mobility, and competency development across the organization.

PUBLIC/PRIVATE COLLABORATION – The ITER Organization is sharing its accumulated knowledge with startups from the ITER Members, drawing on its decades of experience in designing and building a fusion reactor. The program, called the Private Sector Fusion Engagement (PSFE) project, was launched with the support of the ITER Council in November 2024. Under the PSFE program, private sector initiatives may apply to participate in the physics topical groups of the International Tokamak Physics and Engineering Activity (ITPEA), access to ITER's simulation software (the Integrated Modelling & Analysis Suite (IMAS) and Plasma Control System Simulation Platform (PCSSP)) has become possible through open-source licenses, and the initial chapters of the ITER Engineering Basis Handbook have been produced under the editorial lead of EUROfusion (the European Consortium for the Development of Fusion Energy) and are available for download on the ITER website. Other knowledge-transfer mechanisms available under the PSFE program include access to ITER technical documentation through appropriate IP-protective User Agreements, collaboration agreements, expert exchanges, and site visits. Following the success of the inaugural workshop in 2024, a second ITER Public-Private Fusion Workshop was held in April, sequenced with the ITER Business Forum.



▲ *Their Imperial Majesties Emperor Naruhito and Empress Masako of Japan visit the Osaka World Expo and the ITER exhibition in October.*

STAFFING – Concrete actions set into motion since 2022 to attract and retain underrepresented talent and broaden development opportunities for staff are showing results. The percentage of applicants and newcomers from underrepresented Members is rising, leading to an increase in overall non-European representation of six points (30.8% to 36.7%) and an increase in the representation of women from 18.6% to 20.4% over the same period. The ITER New Talent Program, launched in December, is designed to provide early career opportunities for post-graduates and post-doctoral researchers through two-year structured assignments. The first campaign will be launched in 2026. Staff numbers at the ITER Organization remained stable in 2025, at 1,092 staff members. Contributions to the project were also made by 219 ITER Project Associates, 148 interns, 87 interims, 29 experts, and 4 visiting researchers.

OCCUPATIONAL SAFETY – Key performance indicators for occupational health and safety remained within targets during the reporting period. Key to maintaining these positive results are the regular awareness campaigns that reinforce the message that safety is a core value and not just a compliance requirement. In 2025, the ITER Organization rolled out a program of Nine Life-Saving Rules—precepts that are easy to understand and to apply day-to-day on the worksite—as part of broader efforts to enhance safety culture. Targeted actions for worker safety were also introduced to reduce the risk of high-potential events—serious incidents with the potential for serious injury. Efforts to instill a safety culture mindset will continue next year.

OSAKA WORLD FAIR – The ITER Organization maintained a dedicated exhibition on ITER and fusion energy throughout the six-month World Expo in Osaka, Japan. In July, in collaboration with ITER Japan and with the financial and logistical support of the Japanese Government and the National Institutes for Quantum Science and Technology (QST), it organized Fusion Energy Day, bringing together representatives of government, industry, academia, and the public. Their Imperial Majesties Emperor Naruhito and Empress Masako of Japan visited the exhibition in October. Over the six-month duration of the Expo, the ITER stand welcomed more than two million visitors.



For every assembly operation, a bespoke assembly tool.

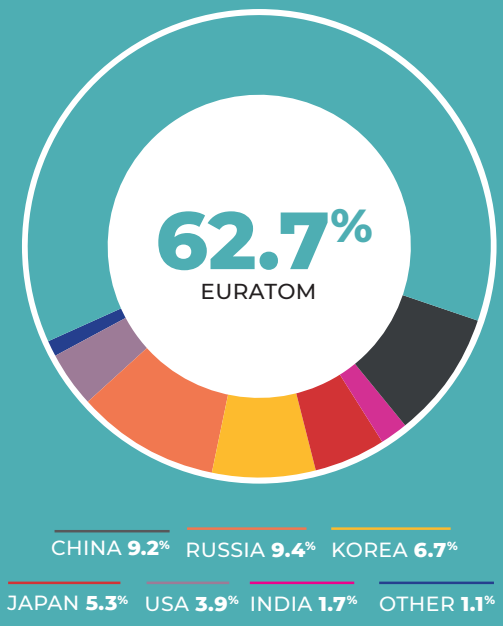
STAFFING AND FINANCIAL DATA

iter
china eu india japan korea russia usa

STAFFING AND FINANCIAL DATA

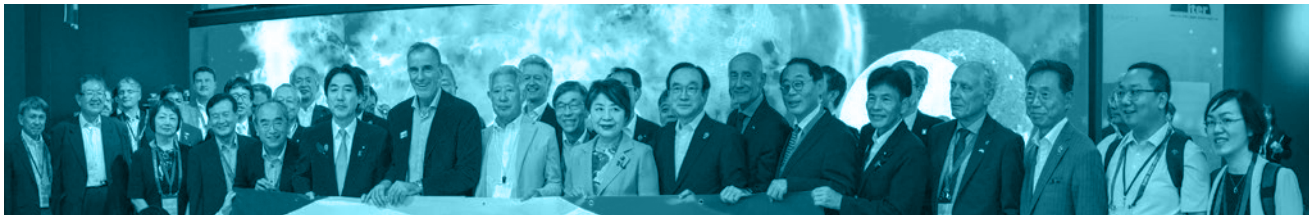
STAFFING AND FINANCIAL DATA
STAFFING TABLES

STAFF BY MEMBER



	31/12 2021	31/12 2022	31/12 2023	31/12 2024	31/12 2025
CHINA	88	87	96	97	100
EURATOM	719	738	712	699	685
INDIA	22	26	27	24	19
JAPAN	37	38	44	50	58
KOREA	55	65	68	70	73
RUSSIA	68	77	87	93	103
USA	46	36	42	41	42
OTHER*		2	26	18	12
TOTAL	**1,035[2]**	**1,069[3]**	**1,102[4]**	**1,092[5]**	**1,092[5]**

*(1) Includes 7 Monaco Postdoctoral Fellows and staff funded for work on the tokamak cooling water system (TCWS, 27), the vacuum auxiliary system (VAS, 2) and the safety control system for nuclear (SCS-N, 2). (2) Includes 5 Monaco Postdoctoral Fellows and staff funded for work on the TCWS (25), VAS (2) and SCS-N (2). (3) Includes 9 Postdoctoral Fellows (6 Monaco and 3 KO) and staff funded for work on the TCWS (19), VAS (2) and SCS-N (2). (4) Includes 18 Postdoctoral Fellows (4 Monaco, 6 KO, 8 IO) and staff funded for work on the TCWS (15), VAS (2) and SCS-N (1). (5) Includes 21 Postdoctoral Fellows (5 Monaco, 6 KO, 10 IO) and staff funded for work on the TCWS (12), VAS (1) and SCS-N (1). * "Other" refers to staff members from Switzerland, Ukraine and, from 2023, the United Kingdom (following ITER Council consultation and approval).*



STAFF BY ORGANIZATIONAL UNIT*

	PROFESSIONAL & HIGHER	SUPPORT	TOTAL
DG + CORP + ST	6	25	31
ODG	13	2	15
SQD	44	12	56
ADM	66	33	99
ESD	600	145	745
SID	70	11	81
CP	65	0	65
TOTAL	**864**	**228**	**1,092**

** For the full names of units, see the Organization Chart on page 58.*
***Includes the Director-General, the Deputy Directors-General of Science & Technology and Corporate, and their offices.*

STAFFING AND FINANCIAL DATA
MAIN FINANCIAL DATA

COMMITMENTS EXECUTION *Amounts in thousands of Euro*	TOTAL COMMITMENTS APPROPRIATIONS 2025	TOTAL ACTUAL COMMITMENTS 2025	UNUSED COMMITMENTS APPROPRIATIONS CARRIED FORWARD TO 2026
Budget Headings	**a**	**b**	**c = a - b**
TITLE I: DIRECT INVESTMENT (FUND)	1,247,846	1,184,582	63,265
TITLE II: R&D EXPENDITURE	-	-	-
TITLE III: DIRECT EXPENDITURE	383,710	383,710	-
TOTAL COMMITMENTS	**1,631,557**	**1,568,292**	**63,265**

PAYMENTS EXECUTION *Amounts in thousands of Euro*	TOTAL PAYMENTS APPROPRIATIONS 2025	TOTAL ACTUAL PAYMENTS 2025	UNUSED PAYMENTS APPROPRIATIONS CARRIED FORWARD TO 2026
Budget Headings	**a**	**b**	**c = a - b**
TITLE I: DIRECT INVESTMENT (FUND)	554,573	446,826	107,747
TITLE II: R&D EXPENDITURE	-	-	-
TITLE III: DIRECT EXPENDITURE	381,223	381,223	-
TOTAL PAYMENTS	**935,796**	**828,049**	**107,747**

CONTRIBUTIONS RECEIVED FROM MEMBERS IN CASH *Amounts in thousands of Euro*		
Members	2025	CUMULATIVE
EURATOM	363,679	2,724,688
PEOPLE'S REPUBLIC OF CHINA	14,317	519,056
REPUBLIC OF INDIA	53,000	548,922
JAPAN	54,617	495,309
REPUBLIC OF KOREA	34,956	527,656
RUSSIAN FEDERATION	55,273	530,474
UNITED STATES OF AMERICA	54,309	635,312
TOTAL CONTRIBUTIONS	**630,150**	**5,981,417**

CUMULATIVE IN-KIND CONTRIBUTIONS BY MEMBERS *Amounts in ITER Unit of Account (IUA)*			
Members	CUMULATIVE 31/12/2024	2025	CUMULATIVE 31/12/2025
EURATOM	656,887	28,336	685,223
PEOPLE'S REPUBLIC OF CHINA	190,038	4,500	194,538
REPUBLIC OF INDIA	184,840	6,807	191,647
JAPAN	357,598	3,116	360,714
REPUBLIC OF KOREA	174,171	14,172	188,342
RUSSIAN FEDERATION	132,995	4,152	137,147
UNITED STATES OF AMERICA	110,427	14,556	124,983
TOTAL CONTRIBUTIONS	**1,806,956**	**75,639**	**1,882,595**



▲
A wave-generating device, a gyrotron, is unpacked for the electron cyclotron resonance heating system.

iter
china eu india japan korea russia usa

DOMESTIC AGENCY PROCUREMENT HIGHLIGHTS

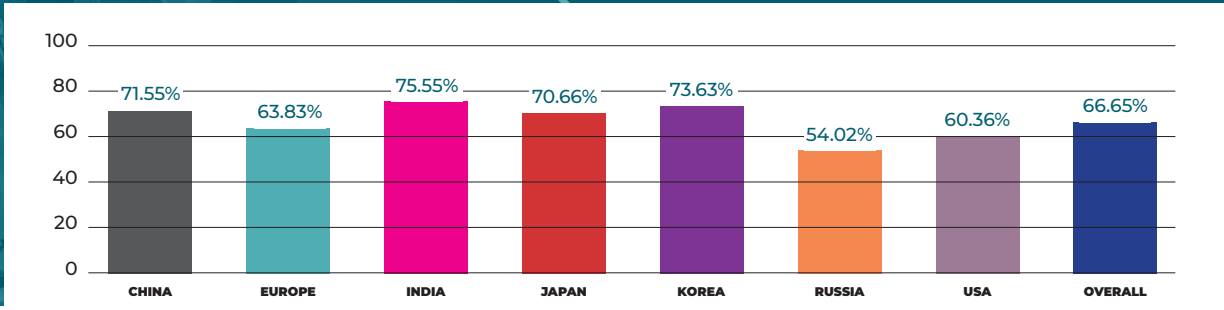
PROCUREMENT HIGHLIGHTS KEY

- R&D MANUFACTURING MILESTONES
- MAJOR CONTRACTS
- ITER ORGANIZATION / DOMESTIC AGENCY MILESTONES
- COMPLETED PACKAGE

The figures on the following pages are adjusted annually for changes in credit value due to Procurement Arrangement Refinements (PAR) and Additional Direct Investment (ADI) related to Project Change Requests. Please note that the 2025 figures supersede all previously published figures.

Packages allocated to the ITER Organization (some cryogenics, heating, tooling, tritium plant, and diagnostics) are not represented in these pages.

% CREDIT RELEASED (OF SIGNED PROCUREMENT ARRANGEMENTS)



ITER
CHINA (CN-DA)

www.iterchina.cn

PROCUREMENT ARRANGEMENTS
Fourteen PAs signed since 2007 representing:

100% of the total value of CN-DA in-kind contributions.

Over 93 design or fabrication contracts related to ITER procurement have been signed with laboratories and industry.

Chinese procurement highlights in 2025	% of ITER system procured by China	% Credit released out of allocation
MAGNET SYSTEMS		
TOROIDAL FIELD CONDUCTOR	7.5%	100%
All conductor unit lengths delivered		
POLOIDAL FIELD CONDUCTOR	65.2%	100%
All conductor unit lengths delivered		
MAGNET SUPPORTS	100%	74.2%
FEEDERS	100%	26.9%
Last coil termination box (STR02) delivered with structure cooling valve box		
CORRECTION COILS	100%	19.4%
SAT passed for top correction coils TCC1 and TCC2		
Last side correction coils shipped to IO		
CORRECTION COIL AND FEEDER CONDUCTORS	100%	100%
All correction coil and feeder conductors delivered		
POWER SYSTEMS		
PULSED POWER ELECTRICAL NETWORK (PPEN)	100%	100%
All components of PPEN sub-package delivered		
AC/DC CONVERTERS	53.2%	100%
All AC/DC delivered		
Task Agreement signed for Stage-2 power converters		
REACTIVE POWER COMPENSATION	100%	96.6%
Commissioning and SAT test of reactive power compensation and harmonic filtering system completed		
BLANKET		
BLANKET FIRST WALL	12.7%	12.2%
Contract signed for enhanced heat flux first wall series production		
BLANKET SHIELD BLOCKS	50.2%	10.7%
A total of 162 shield blocks manufactured		
FUEL CYCLE		
GAS INJECTION SYSTEM	100%	35%
Kick-off meeting held for gas valve box and injection line production and manufacturing		
GLOW DISCHARGE CLEANING	100%	7.9%
FDR#2 held for permanent electrode equatorial port #12 (EP12)		
Permanent electrode for other ports at FDR level		
DIAGNOSTICS		
DIAGNOSTICS	3.8%	13.9%
FDR held for neutron flux monitor instrumentation and control (I&C)		
FDR#1 held for divertor Langmuir probe sensors, electronics, and I&C		
X-ray camera: supporting flange, slits, and external pipes delivered to port integrator #12 (PI#12)		
PI#12 MRR4-A for lid welding approved		

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.

ITER INDIA (IN-DA)

www.iter-india.org

PROCUREMENT ARRANGEMENTS
Fourteen PAs signed since 2007 representing:

100% of the total value of IN-DA in-kind contributions.

50 design or fabrication contracts related to ITER procurement have been signed with industry and R&D organizations.

Indian procurement highlights in 2025	% of ITER system procured by India	% Credit released out of allocation
CRYOSTAT		
CRYOSTAT	100%	96%
Optical and electrical sensors and in-cryostat cables are being tested at IO		
SAT passed for six units of torus cryopump housing		
CRYOGENIC SYSTEMS		
CRYOLINES	100%	95.4%
Lower pipe chase cryolines completed		
Installation of cryolines and warmlines completed at IO		
CRYODISTRIBUTION	100%	71.6%
All five auxiliary cold boxes (ACBs) positioned; installation ongoing		
Test cold valve box (TCVB) delivered to IO		
Warm panels (safety valve trees) delivered to protect ACB/TCVB internal cryogenic circuits; ACB warm panels positioned on IO maintenance platforms		
TCVB and ACB electrical and control cabinets delivered		
Cold commissioning of the cryoplant termination cold box (CTCB) partially completed by integration with liquid helium (LHe) plant		
HEATING & CURRENT DRIVE SYSTEMS		
DIAGNOSTIC NEUTRAL BEAM (DNB) POWER SUPPLY	100%	31.1%
Manufacturing completed of 200kW 1MHz solid-state radiofrequency generator, FAT ongoing		
DNB BEAM LINE	100%	13.4%
Recent changes have been incorporated in beam source manufacturing; FAT preparation ongoing		
High-voltage bushing required for Indian Test Facility (INTF) integrated and tested successfully		
Manufacturing of DNB vessel ongoing		
NBTF COMPONENTS (BEAM DUMP & 100 KV POWER SUPPLY)	3.4%	100%
All NBTF components have been delivered		
Support provided for SPIDER operations		
ION CYCLOTRON RADIO FREQUENCY (RF) POWER SOURCES	100%	5.6%
Tendering initiated for the procurement and supply of ion cyclotron resonance heating sources (2 X 3 MW)		
ION CYCLOTRON RF POWER SUPPLY	100%	11.9%
Tendering initiated for the procurement and supply of 8 X 3 MW ion cyclotron high-voltage power supply		
ELECTRON CYCLOTRON HIGH-VOLTAGE POWER SUPPLY	25%	18.2%
Tendering initiated for the procurement and supply of 4 X 6 MW electron cyclotron main high-voltage power supply		
ELECTRON CYCLOTRON RF GYROTRON POWER SOURCES (2 GYROTRONS OUT OF 24)	7.7%	0%
Gyrotron operated at 500 kW for 1000s and at 850 kW for 100s to gain operation experience		
Final design activities ongoing		
COOLING WATER SYSTEMS		
HEAT REJECTION, COMPONENT COOLING AND CHILLED WATER SYSTEMS	100%	94.9%
MRR completed for prototype safety-important-class valves		
VACUUM VESSEL		
IN-WALL SHIELDING (IWS) BLOCK ASSEMBLIES	100%	100%
All in-wall shielding block assemblies have been delivered		
DIAGNOSTICS		
DIAGNOSTICS	3.9%	1.7%
X-ray crystal spectroscopy survey spectrometer: I&C preliminary design done; detector latency experiments performed as part of prototyping		
Electron cyclotron emission: transmission line loss estimated after calibration and transmission loss measurements; I&C PDR completed		
Charge exchange recombination spectroscopy/pedestal: prototype misalignment compensator developed and tested to ITER-relevant parameters		
Upper port 09: preliminary neutronics analysis and optimization of shielding requirement completed		

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.

ITER
JAPAN (JA-DA)

www.fusion.qst.go.jp/ITER/english/iter.html

PROCUREMENT ARRANGEMENTS
Fifteen PAs signed since 2007 representing:

98% of the total value of JA-DA in-kind contributions.

More than 800 design or fabrication contracts related to ITER procurement have been signed with industry since 2007.

Japanese procurement highlights in 2025	% of ITER system procured by Japan	% Credit released out of allocation
MAGNET SYSTEMS		
TOROIDAL FIELD CONDUCTOR	25%	100%
All conductor unit lengths delivered		
TOROIDAL FIELD MAGNET WINDINGS (9 OUT OF 19)	49.1%	100%
All toroidal field magnet windings delivered		
TOROIDAL FIELD MAGNET STRUCTURES	100%	100%
All toroidal field magnet structures delivered		
CENTRAL SOLENOID CONDUCTOR	100%	100%
All conductor unit lengths delivered		
HEATING & CURRENT DRIVE SYSTEMS		
HIGH VOLTAGE BUSHING (MITICA)	100%	100%
Procurement of high-voltage bushing completed		
NEUTRAL BEAM HIGH VOLTAGE BUSHINGS	100%	0%
ITER Task Agreements underway for FDR		
NEUTRAL BEAM BEAMSOURCE (HNB2 ACCELERATOR)	100%	0%
High-voltage test underway		
NEUTRAL BEAM POWER SUPPLY	66%	36.8%
FDR for 1MV insulating transformer held		
Manufacturing underway on DC generator (DCG) step-up transformers and insulating transformers		
Final design and analysis for outdoor components underway for FDR		
ELECTRON CYCLOTRON RADIO FREQUENCY POWER SOURCES (8 GYROTRONS OUT OF 24)	36.2%	53.1%
First gyrotron installed; second ready for installation		
Commissioning of the first auxiliary power supply/body power supply completed		
Preparation for gyrotron commissioning progressing		
ELECTRON CYCLOTRON EQUATORIAL LAUNCHER	100%	0%
Final design and analysis progressing for FDR		
REMOTE HANDLING		
BLANKET REMOTE HANDLING SYSTEM	100%	8%
PA amended to include contribution for initial assembly; some prototype fabrication contracts awarded		
Final design for main blanket remote handling system continuing; prototype test for design verification ongoing		
DIVERTOR		
OUTER VERTICAL TARGETS	100%	14.2%
Manufacturing of outer target prototype completed by second supplier		
Final acceptance document for full-scale tungsten outer target prototype approved		
Half outer target prototype delivered to China for assembly tests		
Outer targets #1&2 completed		
Series manufacturing underway for outer targets #3-39		
TRITIUM PLANT		
ATMOSPHERE DETRITIATION SYSTEM	100%	3%
JA-DA/IO procurement activities proceeding		
DIAGNOSTICS		
DIAGNOSTICS	20.8%	5.7%
Microfission chamber: final design and analysis progressing for FDR		
Edge Thomson scattering: FDR for in-port-plug components conducted		
Poloidal polarimeter: FAT of retroreflector installed on first wall completed		
Infrared thermography: FDR for in-vessel components conducted		
Divertor impurity monitor: final design and analysis progressing for FDR		
Lower port #2 integration: In cooperation with KO-DA, installation of front rack into the lower ports demonstrated using a full-scale mockup; design verification completed		

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.

ITER
KOREA (KO-DA)

https://www.kfe.re.kr/

PROCUREMENT ARRANGEMENTS
Nine PAs signed since 2007 representing:

100% of the total value of KO-DA in-kind contributions.

Over 300 design or fabrication contracts related to ITER procurement have been signed with universities, laboratories and industry since 2007.

Korean procurement highlights in 2025

	% of ITER system procured by Korea	% Credit released out of allocation
VACUUM VESSEL		
MAIN VESSEL (4 OF 9 SECTORS)	44%	100%
Procurement Arrangement scope completed (S#6 and S#7 delivered)		
Delegation Agreement scope under direct IO contract completed (S#1 and S#8 delivered)		
EQUATORIAL PORTS AND LOWER PORTS	100%	55.6%
Threaded insert manufacturing completed		
Neutral beam port: heating neutral beam connecting duct #5 and diagnostic neutral beam connecting duct #4 delivered to IO		
First set of superbolts delivered to IO		
Activities progressing on remaining ports, superbolts, and sealing flange		
BLANKET		
BLANKET SHIELD BLOCKS	49.8%	16%
Completion of blanket standard parts (central bolt inserts and electrical strap inserts)		
Series production underway: 142 of 220 blocks completed		
POWER SYSTEMS		
AC/DC CONVERTERS	46.8%	89.7%
Completion of low-voltage legal inspection and low-voltage energization		
Low-voltage commissioning of 18 AC/DC converters completed		
Task Agreement signed for Stage-2 power converters		
MAGNET SYSTEMS		
TOROIDAL FIELD CONDUCTOR	20.2%	100%
All conductor unit lengths delivered		
THERMAL SHIELD		
VACUUM VESSEL THERMAL SHIELD AND CRYOSTAT THERMAL SHIELD	100%	98.2%
All of the main components of the thermal shields delivered		
ASSEMBLY TOOLING		
MACHINE ASSEMBLY TOOLING	100%	100%
All machine assembly tools delivered		
TRITIUM PLANT		
TRITIUM STORAGE & DELIVERY	100%	0%
PA signed for the Tritium Plant Storage and Delivery System (SDS) in March		
Contract for SDS process system design and manufacture under call for tender		
DIAGNOSTICS		
DIAGNOSTICS	4.3%	7.1%
Upper port #18: FDR held for ex-vessel components		
Neutron activation system: MRR held for equatorial port plug #11		
Final design in progress for neutron activation system, vacuum ultraviolet (VUV) divertor spectrometer and VUV edge imaging spectrometer		

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.

ITER
RUSSIA (RF-DA)

www.iterrf.ru

PROCUREMENT ARRANGEMENTS
Twelve PAs signed since 2007 representing:

100% of the total value of RF-DA in-kind contributions.

800 design or fabrication contracts related to ITER procurement have been signed with industry since 2007.

Russian procurement highlights in 2025	% of ITER system procured by Russia	% Credit released out of allocation
POWER SYSTEMS		
SWITCHING NETWORK, FAST DISCHARGE UNITS, DC BUSBAR AND INSTRUMENTATION	100%	65.8%
Set of busbar elements fabricated and tested		
Fast discharge units: devices and components manufactured and tested		
Components fabricated and tested for fast discharge resistors		
Components of switching network resistors prepared for delivery		
MAGNET SYSTEMS		
TOROIDAL FIELD CONDUCTOR	19.3%	100%
All conductor unit lengths delivered		
POLOIDAL FIELD CONDUCTOR	21%	100%
All conductor unit lengths delivered		
POLOIDAL FIELD MAGNET NO.1	100%	100%
Poloidal field magnet No. 1 delivered		
Preliminary program and methodology for PF1 cold testing developed		
BLANKET		
BLANKET FIRST WALL	39.7%	0.6%
Control and tests of first-wall panels/elements completed (stage 2025)		
Manufacturing of first-wall panels completed (stage 2025) including beam, finger, standard parts		
Manufacturing of semi-finished components for the first-wall panels completed (stage 2025)		
BLANKET MODULE CONNECTORS	100%	7.7%
Stage 2025 components manufactured (including elements for electrical straps, flexible cartridge, and pad assembly)		
Semifinished blank materials for blanket module connections manufactured (stage 2025), including CuCrZr		
DIVERTOR		
DOME	100%	15%
Plasma-facing components fabricated, including 12 elements of outer dome target		
Laser welding of 10 inner target basements and 35 outer target basements		
PLASMA-FACING COMPONENT TESTS	100%	20.6%
High-heat flux tests of 12 dome plasma-facing elements carried out		
Divertor outer vertical target tested		
VACUUM VESSEL		
UPPER PORTS	100%	81%
Experimental batch of double flanges (inner and outer) manufactured for upper port extensions		
PORT PLUG TEST FACILITY (PPTF)	100%	6%
Vacuum test tank for PPTF #4 delivered to IO; manufacturing started for PPTF #3 vacuum test tank		
Handling, vacuum, heating systems delivered; common frame for PPTF #4 delivered		
DIAGNOSTICS		
DIAGNOSTICS	19.5%	9.5%
Port plug engineering: welding qualification for diagnostic shield module assembly completed; manufacturing progressing on elements for upper port #02, #07. #08 port plugs including mockups and auxiliary handling equipment		
Divertor neutron flux monitor: in-vessel elements manufactured, preliminary factory tests performed on diagnostic detector unit		
Vertical neutron camera: 6 diamond detectors and 3 fast neutron detection units manufactured		
Development and manufacturing progressing for CXRS spectroscopy, reflectometry, neutral particle analyzer, and divertor Thomson scattering		
HEATING & CURRENT DRIVE SYSTEMS		
ELECTRON CYCLOTRON RADIO FREQUENCY POWER SOURCES (8 GYROTRONS OUT OF 24)	31%	59.9%
Control units for gyrotron sets 3&4 prepared for delivery		
Gyrotron set 1&2 equipment prepared for testing at IO		
Support structure for gyrotron sets installed in Radiofrequency Building (south)		

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.



US ITER (US-DA)

www.usiter.org

PROCUREMENT ARRANGEMENTS
Seventeen PAs signed since 2007 representing:

100% of the total value of US-DA in-kind contributions

The US has awarded more than 1,000 design or fabrication contracts to US industry, universities, and national laboratories in 46 states plus the District of Columbia since 2007.

US procurement highlights in 2025	% of ITER system procured by the US	% Credit released out of allocation
COOLING WATER SYSTEM		
TOKAMAK COOLING WATER SYSTEM	100%	56.4%
Vacuum vessel primary heat transfer system: primary heat exchanger delivered		
MAGNET SYSTEMS		
CENTRAL SOLENOID MODULES, STRUCTURE AND ASSEMBLY TOOLING	100%	95.8%
Six of seven modules delivered		
Structure and assembly tooling deliveries complete		
TOROIDAL FIELD CONDUCTOR	7.8%	100%
All conductor unit lengths delivered		
DIAGNOSTICS		
DIAGNOSTICS	14.7%	7.3%
Electron cyclotron emission PDR1/2 completed		
Toroidal interferometer polarimeter PDR completed		
X-ray crystal spectroscopy core agreement signed with IO for final design support		
Equatorial port 09 PDR completed		
Low-field-side reflectometer antenna pre-weld machining completed		
HEATING & CURRENT DRIVE SYSTEMS		
ION CYCLOTRON TRANSMISSION LINES	100%	4.3%
Prototype fabrication continues		
ELECTRON CYCLOTRON TRANSMISSION LINES	100%	17.7%
Waveguide contract awarded		
Production expansion units in fabrication		
H3 Xylem pump delivered		
First miter bends and expansion units delivered		
FUEL CYCLE		
VACUUM AUXILIARY SYSTEMS	100%	28%
FDR completed (02 scope)		
Contracts and shipments continue		
Electron cyclotron heating valves: fabrication complete		
VACUUM SYSTEM ROUGHING PUMPS	100%	0%
Non-active pump skids delivered		
PELLET INJECTION SYSTEM	100%	2.7%
Ex-vessel flight tubes contract awarded		
FDR2 completed for cask		
PDR3 completed for cask internals		
DISRUPTION MITIGATION SYSTEM UP TO A CAPPED VALUE		
TRITIUM PLANT		
TOKAMAK EXHAUST PROCESSING SYSTEM	100%	5.3%
FDR completed		
POWER SYSTEMS		
STEADY STATE ELECTRICAL NETWORK	75%	100%
All components delivered		

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.

FUSION FOR ENERGY (EU-DA)

https://fusionforenergy.europa.eu/

PROCUREMENT ARRANGEMENTS
42 PAs signed since 2007 representing:

98% of the total value of EU in-kind contributions.

The EU has awarded 725 design or fabrication contracts related to ITER procurement to universities, laboratories and industry since 2007.

EU procurement highlights in 2025	% of ITER system procured by the EU	% Credit released out of allocation
BUILDINGS		
TOKAMAK PIT EXCAVATION AND GROUND SUPPORT STRUCTURE, ANTI-SEISMIC BEARINGS (2 PAS)	100%	100%
Excavation and ground support completed; Anti-seismic bearings completed		
ITER HEADQUARTERS	100%	100%
Headquarters building completed		
POLOIDAL FIELD (PF) COILS WINDING FACILITY	100%	100%
PF Winding Facility completed		
BUILDING CONSTRUCTION	100%	61.1%
North Control Building, Fast Discharge & Switching Network Resistor Building, and busbar bridges completed		
Neutral Beam Power Supply Building, Neutral Beam High Voltage Power Supply Building completed		
Medium voltage transformer installation completed for medium voltage load centres 04,05,06		
Nuclear door delivery started for Tritium Building		
Hot Cell: joint IO and EU-DA procurement launched		
ARCHITECT ENGINEER SERVICES	100%	74.8%
Final design for new heating buildings B18 and B20 delivered and approved		
MAGNET SYSTEMS		
TOROIDAL FIELD CONDUCTOR	20.2%	100%
All conductor unit lengths completed		
TOROIDAL FIELD MAGNET WINDINGS (10 OUT OF 19)	50.9%	100%
All toroidal field magnet windings delivered		
PRE-COMPRESSION RINGS	100%	100%
All pre-compression rings completed		
POLOIDAL FIELD CONDUCTOR	13.9%	100%
All conductor unit lengths completed		
POLOIDAL FIELD MAGNETS NO. 2-6	100%	100%
Poloidal field magnets 2,3,4,5 and 6 delivered		
HEATING & CURRENT DRIVE SYSTEMS		
NEUTRAL BEAM (NB) POWER SUPPLY	34%	46.5%
NB TEST FACILITY (NBTF) COMPONENTS	96.6%	89%
MITICA cryopump installed		
MITICA beam source: ion source assembly completed and FAT ongoing		
NB ASSEMBLY AND TESTING	100%	0%
HNB1 BEAM SOURCE AND HNB2 ION SOURCE	100%	0%
NB BEAMLINE COMPONENTS	100%	0%
NB CONFINEMENT AND SHIELD COMPONENTS	100%	3.6%
NB MAGNETIC SHIELDING	100%	0%
PA for NB Magnetic Shielding, Active Correction + Compensation Coils & Passive Magnetic Shield signed in May		
ELECTRON CYCLOTRON HIGH VOLTAGE POWER SUPPLY	75%	84.8%
SAT completed for first unit of electron cyclotron power supplies		
ELECTRON CYCLOTRON UPPER LAUNCHERS, EX-VESSEL WAVEGUIDES AND CONTROL	100%	12.1%
Electron cyclotron upper launchers FDR close-out plan agreed		
Task Orders signed to deliver complete upper launcher scope and ex-vessel waveguides for Start of Research Operation		
Procurement completed for the first batch of stainless steel (316-LN/IG) for launchers		
ELECTRON CYCLOTRON RADIO FREQUENCY POWER SOURCES (6 GYROTRONS OUT OF 24)	25.1%	0%
Gyrotron commissioning components delivered to IO		
Gyrotron FDR completed; manufacturing to start		
VACUUM VESSEL		
MAIN VESSEL (5 OF 9 SECTORS)	56%	81%
Vacuum vessel sector #4 completed and delivered		
Sectors #9, #3 and #2 in final assembly phase		

	% of ITER system procured by the EU	% Credit released out of allocation
DIVERTOR		
INNER VERTICAL TARGETS	100%	15.8%
Supplier #1: approval of reports for first plasma-facing unit, first stainless-steel structure welding, and non-destructive examination of cover plates		
Supplier #1: first high-heat-flux plasma-facing unit test(s) completed; MRR approved		
Several options released for high-heat-flux testing		
IO approval received for conformity of all pre-series materials (IVT-01, IVT-02, IVT-03)		
Supplier #2: approval received for preliminary welding data packages (stainless-steel structure and plasma-facing units) and engineering and quality documentation (IVT XM-19 forgings production)		
CASSETTE BODY	100%	8.8%
Supplier #1: completion of first cassette body structure; remedial and correction actions on numerous cassette bodies		
Supplier #2: completed first cassette body hot helium leak test(s), first knuckle functional test(s), first FATs		
Pins, links and sleeves: approval of the conformity of first batch of aluminium bronze rods		
DIVERTOR RAIL	100%	0%
Divertor Rail PA scope transferred to IO		
BLANKET		
BLANKET FIRST WALL	47.6%	0.4%
Pre-series panel FAT completed; pre-production readiness review documentation for panel structures		
MRR approved for Task 3/Standard Parts (MS#05)		
Production Readiness Review approved for multiple panel variants		
Signature of multiple Task Orders for first wall series fabrication		
Contracts signed for the manufacturing of small-scale mockups for tungsten armour qualification		
BLANKET COOLING MANIFOLDS	100%	4.5%
Supplier #1 and supplier #2: prototype bundle assembly T1A and final documentation completed; first MRR meeting for pipe bundles		
Task T1B: material (forgings and pipes) ready for delivery		
Chimney pipes: pipe bending qualification plan completed		
Support to IO PDR—blanket cooling manifolds redesign		
REMOTE HANDLING		
Framework contract signed with five suppliers for design and manufacture of remote handling systems under EU-DA scope		
IN-VESSEL DIVERTOR REMOTE HANDLING SYSTEM	100%	0%
CASK AND PLUG REMOTE HANDLING SYSTEM	100%	4.6%
EX-VESSEL NEUTRAL BEAM REMOTE HANDLING SYSTEM	100%	4.8%
IN-VESSEL VIEWING SYSTEM (IVVS)	100%	26.7%
POWER SYSTEMS		
STEADY STATE ELECTRICAL NETWORK (SSEN) AND PULSED POWER ELECTRICAL NETWORK (PPEN):		
DETAILED SYSTEM ENGINEERING DESIGN	100%	70.6%
SSEN AND PPEN INSTALLATION AND COMMISSIONING	100%	46.2%
EMERGENCY POWER SUPPLY	100%	0%
SSEN COMPONENTS	25%	58.2%
FUEL CYCLE		
FRONT END CRYO-DISTRIBUTION: WARM REGENERATION LINES	100%	100%
Warm generation line package completed		
FRONT END CRYO-DISTRIBUTION: FRONT END CRYOPUMP DISTRIBUTION	100%	81.3%
CRYOPUMPS, TORUS (6) AND CRYOSTAT (2)	100%	100%
All torus and cryostat cryopumps delivered		
CRYOPUMPS, NEUTRAL BEAM	100%	32.8%
Delivery of neutral beam cold valve boxes		
LEAK DETECTION	100%	0%
Leak detection final design completed		
TRITIUM PLANT		
WATER DETRITIATION SYSTEM: WATER HOLDING TANKS AND EMERGENCY TANKS	100%	100%
Water holding tanks and emergency tanks completed		
WATER DETRITIATION SYSTEM: TANKS, MAIN SYSTEM, AND WATER DETRITIATION	100%	0%
HYDROGEN ISOTOPE SEPARATION SYSTEM	100%	0%
PDR held for isotope separation system; PA under preparation		
CRYOPLANT		
CRYOPLANT: LN2 PLANT AND AUXILIARY SYSTEMS	100%	88.5%
Liquid nitrogen plant refrigerator cold box 1 and 2 ready for operation		
Commissioning recovery compressor test completed		
DIAGNOSTICS		
DIAGNOSTICS	33%	22.2%
Magnetics sensors scope completed; magnetics electronics and software scope completed		
In-vessel support systems scope completed		
Manufacturing contracts signed for collective Thomson scattering-front end; equatorial visible/infrared wide-angle viewing system; and radion neutron cameras (gamma spectrometer)		
Tender launched for the manufacturing of 6 European diagnostics ports		
New technical baseline for the 6 EU diagnostics ports agreed and formalized		
RADIOACTIVE MATERIALS		
WASTE TREATMENT AND STORAGE	100%	0%
Waste Treatment and Storage PA scope transferred to IO		
RADIOLOGICAL PROTECTION	100%	0%

Abbreviations : **CDR** Conceptual Design Review; **DA** Domestic Agency; **FDR** Final Design Review; **I&C** Instrumentation & Control; **IO** ITER Organization; **IC** ITER Council; **FAT** Factory Acceptance Tests; **MIP** Manufacturing & Inspection Plan; **MRR** Manufacturing Readiness Review; **PA** Procurement Arrangement; **PDR** Preliminary Design Review; **SAT** Site Acceptance Tests.

INTERNATIONAL COOPERATION

The ITER Organization maintains cooperation agreements with the laboratories and educational establishments of the ITER Members as well as international organizations and non-Member states.

INTERNATIONAL ORGANIZATIONS

International Atomic Energy Agency (IAEA)
International Energy Agency (IEA)
CERN (European Organization for Nuclear Research)

NATIONAL LABORATORIES

Belgian Nuclear Research Centre (SCK-CEN)	BELGIUM
Laboratory for Plasma Physics, École Royale Militaire/Koninklijke Militaire School (LPP-ERM/KMS)	BELGIUM
Ministry of Science and Technology (MOST)	CHINA
Southwestern Institute of Physics (SWIP)	CHINA
Institute of Plasma Physics of the Academy of Science of the Czech Republic (IPP-Prague)	CZECH REPUBLIC
Centre National de la Recherche Scientifique (CNRS)	FRANCE
Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA)	FRANCE
Société Française de Physique	FRANCE
Forschungszentrum Jülich Gmbh	GERMANY
Max-Planck-Institut für Plasmaphysik (IPP)	GERMANY
Centre for Energy Research Eötvös Loránd Research Network (EK-CER)	HUNGARY
Institute for Plasma Research (IPR)	INDIA
Centro Nazionale Analisi Fotogrammi (CNAF - Italian National Center for Frame Analysis)	ITALY
Italian Institute for Nuclear Physics (INFN)	ITALY
National Institute for Fusion Science (NIFS)	JAPAN
National Institutes for Quantum Science and Technology (QST)	JAPAN
National Fusion Research Institute (NFRI), Korea Institute of Fusion Energy (KFE)	KOREA
Dutch Institute for Fundamental Energy Research (DIFFER)	NETHERLANDS
Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences (IFJ PAN)	POLAND
Instituto Superior Técnico (IST)	PORTUGAL
Moscow Engineering Physics Institute (MEPhI)	RUSSIAN FEDERATION
Barcelona Supercomputing Center (BSC-CNS)	SPAIN
Centro de Investigaciones Energéticas Medioambientales y Technológicas (CIEMAT)	SPAIN

UNIVERSITIES AND NATIONAL SCHOOLS

Katholieke Universiteit Leuven (KU Leuven)	BELGIUM
Anhui University	CHINA
Beihang University (BUAA)	CHINA
Dalian University of Technology (DLUT)	CHINA
Harbin Institute of Technology (HIT)	CHINA
Huazhong University of Science and Technology (HUST)	CHINA
IHEP-Chinese Academy of Sciences	CHINA
Institute of Materials China Academy of Engineering Physics (CAEP)	CHINA
Institute of Plasma Physics Chinese Academy of Sciences (ASIPP)	CHINA
Shenzhen University	CHINA
University of Science and Technology of China (USTC)	CHINA
Xi'an Jiaotong University	CHINA
Research and Innovation Centre for Electrical Engineering (RICE) of the University of West Bohemia	CZECH REPUBLIC
Aalto University	FINLAND
University of Helsinki	FINLAND
Ecole Nationale Supérieure d'Électrotechnique, d'Électronique, d'Informatique, d'Hydraulique et des Télécommunications - Toulouse INP – ENSEEIHT "N7"	FRANCE
Université Aix-Marseille	FRANCE
Université Grenoble Alpes – Institut Polytechnique de Grenoble (UGA-INP)	FRANCE
Université Sorbonne Paris Nord	FRANCE
Institut fur Technische Optik (ITO)	GERMANY
Budapest University of Technology and Economics (BME)	HUNGARY
Politecnico di Torino	ITALY
Università degli studi di Brescia	ITALY
Università degli studi di Palermo	ITALY
University of Bologna - Department of Electronic and Information Engineering (DEI)	ITALY
University of Genoa	ITALY
University of Milano – Bicocca	ITALY
University of Padua	ITALY
University of Rome Tor Vergata (URTV)	ITALY
University of Tuscia	ITALY
Osaka University	JAPAN
Tohoku University	JAPAN

Kyoto University	JAPAN
Kyushu University, Research Institute for Applied Mechanics (RIAM)	JAPAN
University of Tokyo	JAPAN
Korean Advanced Institute of Science and Technology (KAIST)	KOREA
Pohang University of Science and Technology (POSTECH)	KOREA
Seoul National University (SNU)	KOREA
Eindhoven University of Technology (TU/e)	NETHERLANDS
Technical University of Lodz	POLAND
Peter the Great St. Petersburg Polytechnic University (SPbPU)	RUSSIAN FEDERATION
University of Ljubljana	SLOVENIA
Fundación de Investigación de la Universidad de Sevilla	SPAIN
Universidad Carlos III de Madrid	SPAIN
Universidad Politecnica de Madrid	SPAIN
Chalmers University of Technology	SWEDEN
The Royal Institute of Technology (KTH) - KTH (Kungliga Tekniska Högskolan)	SWEDEN
Uppsala University	SWEDEN
Lehigh University	UNITED STATES OF AMERICA

OTHERS

China Association for International S&T Cooperation (CAISTC)	CHINA
China National Nuclear Corporation (CNNC)	CHINA
Hefei Rongke Hengyang Power Technology	CHINA
Jiangsu Xinchang Alloy Technology Co Ltd	CHINA
Shanghai Eidos Technology Consulting Co. Ltd	CHINA
Shenzhen Rongke Hengyang Rectification Technology Co., Ltd (RHR)	CHINA
Broader Approach Activities [EU/Fusion for Energy + JA/QST]	EUROPE/JAPAN
Alierys Engineering	FRANCE
Ametra Engineering	FRANCE
Arkadia Group	FRANCE
AXONE	FRANCE
BCF Solutions France SARL	FRANCE
Capgemini DEMS France SAS	FRANCE
Development of Advanced Engineering Solutions (DAES France SAS)	FRANCE
Électricité de France	FRANCE
Epsyl SAS	FRANCE
Institut de Soudure Industrie	FRANCE
NOVA SAS	FRANCE
Renaissance Fusion SAS	FRANCE
Tunnel Euralpin Lyon Turin	FRANCE
EUROfusion	GERMANY
Altair Engineering India Pvt. Ltd	INDIA
Atini Management & Engineering Services	INDIA
DesignTech Systems Private Ltd	INDIA
Fusinix Technologies Private Ltd	INDIA
Indian Dispute Resolution Centre (IDRC)	INDIA
Larsen & Toubro Technology Services Limited	INDIA
Pioneer Business Solutions	INDIA
Tata Consulting Engineers Ltd	INDIA
Google Ireland Ltd	IRELAND
Consorzio RFX	ITALY
DTT S.C.A.R.L.	ITALY
Italian National Agency for new Technologies, Energy and Sustainable Economic Development (ENEA)	ITALY
National Research Council of Italy	ITALY
Japan Association for the 2025 World Exposition	JAPAN
Nippon Telegraph and Telephone (NTT)	JAPAN
Haneul Engineering	KOREA
JHENG Co. Ltd.	KOREA
Korea Hydro-Nuclear Power Company (KHNP)	KOREA
Korea Institute of Energy Technology (KENTECH)	KOREA
Korea Electric Power Corporation (KEPCO) Engineering and Construction	KOREA
ULP Co. Ltd	KOREA
Consortium constituted by TNO, DIFFER, AST and Chromodynamics	NETHERLANDS
Spectral Tech	RUSSIAN FEDERATION
Rosatom Western Europe SARL	RUSSIAN FEDERATION
General Atomics	UNITED STATES OF AMERICA
Lawrence Livermore National Security, LLC	UNITED STATES OF AMERICA
Microsoft Corporation	UNITED STATES OF AMERICA
NVIDIA Corporation	UNITED STATES OF AMERICA
TAE Technologies	UNITED STATES OF AMERICA
United States Department of Energy (DOE)	UNITED STATES OF AMERICA
UT-BATELLE	UNITED STATES OF AMERICA

ORGANIZATION CHART



Clockwise from the top: the central solenoid assembly area, a toroidal field coil waiting to be upended, and a vacuum vessel sector module in construction.



The first toroidal field coil to be tested is lowered into the cryostat of the magnet cold test facility in December.

LOOKING AHEAD: 2026



Building on the progress achieved in 2025, ITER will continue advancing the machine-assembly critical path while bringing major plant systems closer to commissioning. Key priorities include completing major tokamak assembly milestones, commissioning critical magnet, power, and heating systems, advancing technologies required for future plasma operation, and maturing designs for systems required in later operational phases.

- > Complete four vacuum vessel sector module assemblies; transfer into pit
- > Complete the stacking of the central solenoid magnet
- > Begin magnet cold testing in facility on site
- > Begin gyrotron commissioning
- > First port integration activities at ITER
- > Commence integrated commissioning of magnet power converters
- > Complete magnet feeder installation in galleries
- > MITICA beam source delivered to ITER Neutral Beam Test Facility
- > First production elements of the ITER divertor delivered to integration site
- > Hold preliminary design reviews for test blanket module concepts
- > Complete final design of tritium plant
- > Begin manufacturing ion cyclotron antenna
- > Pursue R&D/time and cost optimization strategies for tungsten first wall
- > Start disruption control mitigation technology manufacturing (ex-vessel)
- > Organize a third private/public fusion workshop at ITER
- > Receive last three vacuum vessel sectors from Europe

china eu india japan korea russia usa

ITER ORGANIZATION Headquarters
Route de Vinon-sur-Verdon - CS 90 046
13067 St. Paul-lez-Durance Cedex

France

© ITER ORGANIZATION, August 2026

www.iter.org

Design and Production: Arc en Ciel Marseille