**ASSYSTEM** 

AND

NUCLEAR

IN SUPPORT OF THE ENERGY TRANSITION

assystem

## ABOUT ASSYSTEM

An independent international leader in nuclear

Assystem is an international, independent engineering company. Founded in France in 1966 to commission the French nuclear power fleet, we provide our customers with a wealth of engineering and project management expertise combined with our mastery of digital solutions. Assystem is:

- Ranked in the TOP

   3 international
   nuclear engineering
   companies
   worldwide, with
   significant expertise
   in all stages of the
   nuclear lifecycle and
   all types of nuclear
   facilities.
- Committed to making nuclear energy safer and more competitive.
- Able to draw on the expertise of more than 5,000 nuclear experts spread across our 13 countries of operation to support low-carbon energy projects across

the entire value chain, from site characterisation to commissioning and decommissioning.

An experienced and

established nuclear leader, allowing us to provide a holistic approach to complex projects. Using proven engineering methods enhanced by digital technologies, we provide 'augmented' engineering services and solutions tailored to critical and complex infrastructures.



Switching to low-carbon sources of electricity production will be vital if we are to meet the rising demand for energy and mitigate the climate crisis.

Nuclear must be part of the solution as one of the only ways to produce abundant low-carbon electricity at a competitive price.

At Assystem, we are committed to what we believe in: nuclear, combined with other low-carbon energy sources, is crucial for the energy transition and the fight against climate change.

#### **DOMINIQUE LOUIS**

Chairman
Chief Executive Officer

### **OUR VISION**



Assystem's mission is to help accelerate the energy transition throughout the world. We devote all of our energy to this task, combining our historical expertise in engineering and project management with digital technologies to create a reliable and sustainable energy future for all.

Today, our teams are supporting EDF in France, the UK, and across all its nuclear projects worldwide. Assystem is also helping countries looking to launch new nuclear programmes to accelerate their energy transition in Europe, Türkiye, Saudi Arabia, the United Arab Emirates, Uzbekistan, Kazakhstan, and India.

STÉPHANE AUBARBIER
Deputy Chief Executive Officer



As Owner Engineer or Architect Engineer, our mission is to ensure the success of nuclear projects, from design to construction and commissioning, in terms of quality, safety, cost and schedule. This applies to all reactor technologies (large power, SMR or fusion), the nuclear lifecycle, waste management, decommissioning and research and development (R&D).

With our historical knowledge of the nuclear sector and our technological independence, we are able to develop long-term local employment, encouraging the emergence of internal talent by promoting competence, commitment, loyalty, a sense of common interest and customer satisfaction wherever we operate.

#### THOMAS BRANCHE

Executive Senior Vice President - France



Today, nuclear energy is all about innovation and being open to cutting-edge digital technologies. Digital twins make it easier to find optimal solutions in complex situations and provide new opportunities for training the new generation of nuclear experts.

For new projects, we combine our information system and business process services with our unrivalled experience in the nuclear sector.

During the manufacturing and construction phases, we use digital technologies to reflect the reality of progress and compliance, while ensuring our clients can maintain responsibility and control over their projects.

#### **CHRISTIAN JEANNEAU**

Executive Senior Vice President International & Digital





#### Owner Engineer

For governments or public organisations in charge of developing nuclear facilities, we act as an independent design authority for the entire project lifecycle (site surveys, design, construction supervision, commissioning), to ensure facilities are safe, efficient, on time, and within budget. We provide global programme management and contractor supervision.

#### Architect Engineer

As architect engineer or when supporting the architect engineer, we provide independent engineering and project management services for project development and success: design work packages, project control services, construction management and commissioning.

#### Operator engineer

We support operators to ensure the safe assessment and implementation of modifications and maintenance activities; we also provide modifications and life extension studies, as well as maintenance planning and outage execution support.

#### **Digital transformation consulting**

Our approach models and optimises engineering and project management processes. We ensure the success of change management from the scoping, development, and integration phases through to application maintenance in operational conditions. Our information systems urbanisation services are complemented by services for managing and leveraging engineering and operational data.

## **OUR GLOBAL OFFER**

We provide engineering, project management, and digital services and solutions to optimise the performance of complex infrastructure projects throughout their lifecycle.

#### PROJECT MANAGEMENT

#### **CONSULTING**

Organisation, delivery strategy, consents management, lender technical advisor, ...

#### **PROJECT MANAGEMENT**

PMC, PMO (cost, scheduling, contract management, digital PMO), configuration management, ...

#### **ENGINEERING**



- Siting
- Impact assessment Grid, environmental, social, ...
- Licensing & permitting

#### **DESIGN**

- Masterplanning
- Studies & Design Feasibility, conceptual to tender design, design review, detailed design, ...
- System engineering

#### **CONSTRUCTION MANAGEMENT**

**Construction management** 

Testing & commissioning

- **Control & inspection**
- Outage & shut-down supervision
- Decommissioning planning & supervision

#### **COMPLIANCE & SAFETY**

- **Compliance & quality**
- Risk monitoring & safety

#### **DIGITAL**

- Digitalisation of engineering and project management processes
- Digital engineering platforms & industrial operation and maintenance systems
- Data & cloud
- Visualisation & simulation
- **Consulting & change management**

## OUR **EXPERTISE**

We support our customers across all types of nuclear facilities and projects.





We help our customers overcome the challenges of their new-build programmes by controlling costs and delivery times, guaranteeing safety, and ensuring environmental compliance. Our global presence and close-client proximity around the word enables us to work on all types of reactors, irrespective of their technology type:

- EPR / EPR 2
- VVER
- PWR, all energies
- Generation 4

We also support governments and operators in integrating new power generation capacity into their national electricity grid.

#### **OUR REFERENCES**

- · Site studies, permit management, environmental analyses, and digitalised site inspections
- AKKUYU NUCLEAR POWER PLANT Türkiye
- Siting for the construction of the 1st nuclear power plant in Saudi Arabia K.A.CARE - Saudi Arabia
- · Design, PMO, instrumentation and control, and systems engineering for the

- commissioning of EPR fleet EDF - France, United Kingdom, Finland and China
- System engineering and industrial control system specifications **HINKLEY POINT C - United Kingdom**
- Engineering support, PMO and construction management for the future nuclear power plant in Kazakhstan GOVERNMENT OF KAZAKHSTAN - Kazakhstan



Assystem is also supporting the next generation of nuclear power technologies. We are providing and developing our engineering and project management services to support the technological and commercial development of Small Modular Reactor (SMR) and Advanced Modular Reactor (AMR) projects in France, the UK and around the world. We are already participating in several programmes:

- ROLLS ROYCE SMR
- EDF NUWARD
- NAAREA XAMR
- NEWCLEO AMR

We support technology suppliers, end users, vendors, safety authorities and governments in their SMR and/or AMR projects.

#### **OUR REFERENCES**

- Support from feasibility studies to basic design: development of systems engineering processes, safety and radiological protection studies, nuclear fuel cycle analysis, cost estimation. Support for PLM deployment.
  - Newcleo France

 Feasibility study and design of the turbine island, cooling water island and BOP (Balance of Plant), simulation and analysis of safety systems, verification and validation support, and system engineering

**ROLLS ROYCE - United Kingdom** 

## OUR **EXPERTISE**





Assystem is an engineering pioneer with a 20-year commitment to the development of fusion power. Since 2005, we have provided engineering services for the ITER project, as architect engineer for the ENGAGE consortium and for the Momentum joint venture, which will assemble the tokamak systems and components.

In the UK, we are working on the United Kingdom Atomic Authority's fusion programme including the STEP project, and also support private fusion customers such as Tokamak Energy.

In France, we are involved with Renaissance Fusion on their innovative fusion project, the stellarator, a compact 1,000 MWe reactor.

#### **OUR REFERENCES**

- · Engineering, project management, construction management and 4D planning for the ITER fusion research reactor ITER (ENGAGE and MOMENTUM) - France
- Concept design developments for the STEP project including the central column inboard shielding

UKAEA - United Kingdom

• ITER Divertor Remote Handling System

Fusion for Energy (F4E) - European Union



Our teams are involved in projects to extend the lifetime of existing facilities or to build new fuel production units, such as the "Aval du Futur" programme with Orano. To address the scientific and technological challenges of research facilities, we provide:

- Facility design
- Construction management to ensure reliability and compliance with the requirements
- Nuclear risk management and optimal safety conditions guarantee
- Anticipation and control of safety and industrial cybersecurity risks.

#### **OUR REFERENCES**

 Construction and testing management (works supervision, planning, control and coordination, etc.) for the construction of Georges Besse 2, CX2 and RECII

**ORANO - France** 

· Testing, inspection operations and site monitoring for the NCPF project at La Hague, using an augmented reality application

**ORANO - France** 

Design and systems engineering for the construction of the NZU building (specifications, development, deployment of IS processes/PLM solutions, etc.)

FRAMATOME - France

 Virtual reality training application for responding to failures in storage pool facilities

ORANO - France

 Management of the overhaul of the Jules Horowitz Reactor (RJH) information system, including agile governance and supervision of the various IT projects, functional management and change management.

**CEA - France** 

 Systems engineering and digitalisation of field operations for research facilities, in operation or being dismantled (SITJ)

**CEA - France** 

# OUREXPERTISE



Historically focused on supporting the commissioning and start-up of the French nuclear fleet in 1966, Assystem is among the top three nuclear engineering companies in the world.

With extensive experience in the operation, maintenance, life extension and upgrading of nuclear facilities, we provide customers with a comprehensive multi-business offering.

In 2025, EDF recognised Assystem for its innovative approach in enhancing the performance of the French nuclear fleet and for the implementation of Competence and Service Centres on the NPPs.

#### **OUR REFERENCES**

- Supervision of shutdowns and maintenance works for a nuclear power plant NPP TRICASTIN – France
- Studies for the life extension of the Kozloduy nuclear site, Unit 5
   KOZLODUY NPP PLC – Bulgaria
- Installation and maintenance for protection systems of nuclear sites
   EDF'S COMPLETE NUCLEAR FLEET - France
- Guidelines on export control information NAWAH ENERGY COMPANY – United Arab Emirates

- Cybersecurity of industrial systems for tertiary nuclear sites
   EDF - France
- Production of safety cases and technical reports, updating of plant documentation and risk studies
   United Kingdom
- Probabilistic safety assessments of internal fire and flood risks for several nuclear power plants
   Belgium



Whatever the type of facility to be dismantled or the type of waste to be managed, we help our customers to overcome any major industrial, technical, economic and safety challenges they face. Our added value in this field comes from our proven expertise in:

- Shut-down of facilities
- · Decommissioning scenarios
- Definition of appropriate waste streams
- Integration of remote robotic handling solutions
- Design and delivery of support facilities to support decommissioning and waste management operations
- Management of projects and on-site activities to reduce shorten delivery times and reduce costs while ensuring optimum management of waste volumes and radiological exposure

#### **OUR REFERENCES**

- Design support for dismantling SELLAFIELD LTD - United Kingdom
- BIM model for the dismantling of a reactor building

EDF - France

- Removal and reconditioning of nuclear waste UKAEA – United Kingdom
- Design of nuclear waste storage systems ANDRA - France
- Modelling the life extension of a waste treatment site (digital twin of safety systems, etc.)
   CEA - France

- Technical supervision of radioactive waste management studies
   ONDRAF - Belgium
- Definition of the nuclear waste management strategy for Saudi Arabia
   K.A.CARE – Saudi Arabia
- Post defueling support to develop the site safety cases for Hunterston B and Hinkley Point B power plants, following fuel-free verification EDF ENERGY - United-Kingdom

## OUR COMMITMENT TO NUCLEAR QUALITY

We consider quality and nuclear safety as the pillars of responsible engineering, driven by excellence, client trust and long-term efficiency. This commitment is supported by a deeply rooted culture, enhanced by digital tools, to ensure that every project meets the expected standards of rigour,

transparency and performance.

YOANN BLONDIN Nuclear Quality Director

Facing growing expectations from clients and regulators, Assystem has implemented a proactive nuclear risk management policy. This approach is fully aligned with our continuous improvement strategy, already rigorously applied in the areas of quality, health and safety, and information security.

At Assystem, quality is more than a requirement: it is a key driver of performance, reliability, and trust. We are committed to delivering exemplary services to our clients, partners, and the entire nuclear ecosystem.

Aware of the specific constraints faced by international operators and leveraging extensive experience with complex supply chains, we have deployed an integrated management system fully certified to ISO 19443 standards. This system also draws on international safety standards (IAEA GS-R), insights from leading industry players, and global best practices such as the NQA-1 framework.

## IN 2019, ASSYSTEM JOINED NQSA.

Assystem is an active member of the NQSA (Nuclear Quality Standard Association), helping to promote a shared culture of quality and safety across nuclear supply chains.

Alongside operators and equipment manufacturers, we are involved in the implementation and structuring of an industry-led certification framework based on the international standard ISO 19443:2018.

Our commitment to quality is also reflected in the trust of our clients. Global satisfaction surveys show an 89% satisfaction rate and a Net Promoter Score (NPS) of 26 — a strong indicator of the lasting confidence our partners place in us.

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## OUR COMMITMENT TO NUCLEAR SAFETY

As a major partner of nuclear stakeholders worldwide, Assystem is engaged in a proactive policy of nuclear risk management.

#### Assystem is committed to:



prioritising nuclear safety as a paramount issue for the company



ensuring strong management involvement, focused on rigour, checking, and vigilance

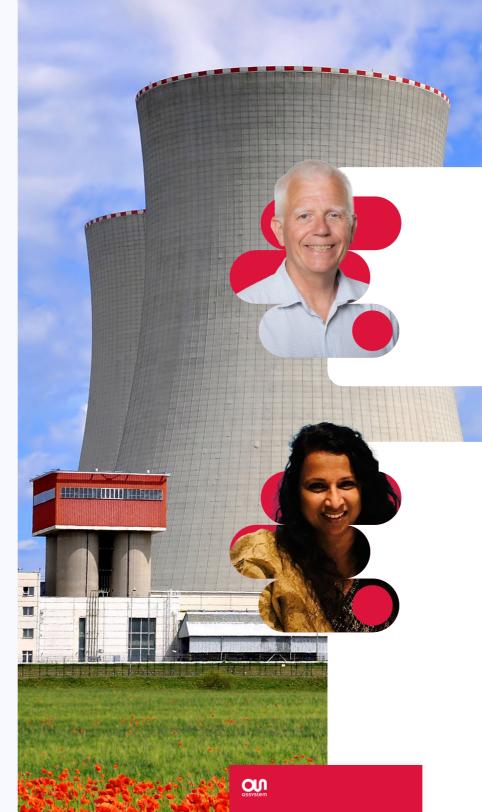


promoting development of a common nuclear safety culture



developing a continuous improvement culture

Nuclear safety remains central to the engineering process, as the requirements brought by nuclear safety analysis have an impact on all the disciplines at stake in a nuclear facility. In this context, Assystem's nuclear safety experts play a key role in all of our nuclear projects. Our approach to nuclear safety extends worldwide, particularly in countries developing new nuclear power programmes.



The safety of people, the challenges of nuclear safety, and the quality of our projects are the foundations of our success and the key factors in our customers' satisfaction.

#### **MICHEL DUGUEY**

**Director of Nuclear Risk Management** 

Safety assessments, as mandated by regulatory authorities, are imperative for demonstrating the safe operation of nuclear facilities. Nuclear safety experts at Assystem develop high standard safety assessments that not only comply with these regulations but are up to date with international state-of-the-art techniques and methodological advancements (from IAEA, USNRC, EPRI, ASME, ANSI, CSNI, WENRA, EUR etc). We endeavour to provide a diverse range of safety studies for operating high-power reactors & new builds and licensing of advanced technologies like SMRs.

#### **DEVI KOMPELLA**

Nuclear safety expert & founder of Relsafe, an Assystem company



NUCLEAR RISK MANAGEMENT REPORT Every year, Assystem publishes its Nuclear Risk Management report. This report is addressed to our partners and customers and highlights our commitments, results and improvement perspectives in nuclear safety and radiation protection.

## OUR INITIATIVES TO FOSTER SKILLS AND DIVERSITY

Assystem's responsibility, as a leading engineering company dedicated to the global energy transition, is to modernise the way engineering, project management and digital services will be developed in the future through innovation and knowledge development. This has driven the creation of our programme: Switch and Act for Knowledge.

**SWITCH & ACT** 

FOR KNOWLEDGE

At Assystem, we place a high priority on developing scientific skills and knowledge. A wide range of varied learning pathways are available to employees in the areas of:

- Nuclear: nuclear safety, design, fuel cycle and decommissioning,
- **Digital:** PLM architecture, transformation of engineering processes, cybersecurity, hypervision,
- Project management: finance, legal and contractual,
   PMO and associated tools, delivery excellence.

Our training centre, the Assystem Nuclear Institute, brings together 180 in-house experts and trainers, offers over 300 courses, and trains around 1,300 employees each year.



## SWITCH

ON )

ENGINEERING & DIGITAL FOR ENERGY TRANSITION

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