

Framatome joins with academia and industry partners to develop nuclear reactor digital twins

September 22, 2020 – Framatome recently partnered with the EDF Group, French Alternative Energies and Atomic Energy Commission (CEA) and six additional organizations from academia and the French nuclear sector to pool research and development (R&D) related to nuclear reactor digital twins. As part of this four-year, digital reactor structuring project (le Projet Structurant Pour la Compétitivité, PSPC), more than 100 experts from these organizations will work together to digitally clone each reactor in the French nuclear fleet. These cloned reactors will serve as a training simulator for the new generation of operators and a simulation environment for engineering studies.

The PSPC combines CEA's scientific leadership in reactor physics, EDF's knowledge in the design and operation of electricity production plants, and Framatome's expertise in nuclear engineering design and services.

“Collaborating with accomplished and experienced industry leaders and academic partners on this project will contribute to the development of new engineering services for our customers worldwide, and it will enrich the skills of our people now and into the future,” said Stéphane Bugat, director of research and development at Framatome. “This long-term alliance complements Framatome’s [portfolio](#) of digital solutions for safe, reliable and clean energy generation.”

This project contributes directly to the [Strategic Contract of the Nuclear Sector](#), which aims to guarantee the maintenance of skills and expertise in the nuclear sector and to structure the innovation process through digital technology.

The digital twins will be representative of each reactor in the French nuclear fleet and will evolve in line with the design and modifications of each plant. The project will be integrated at the EDF Lab Paris Saclay R&D site.



Photo courtesy of EDF (pre-COVID-19)

“EDF's R&D teams are committed to providing skills and expertise for the benefit of this essential project for the nuclear industry,” said Bernard Salha, director of R&D and CTO at EDF and chairman of the Innovation and R&D Commission of the French Nuclear Energy Industrialists Group (GIFEN). “Together with Framatome, collaborating with this expert team is a unique opportunity to show the collective strength of the nuclear sector in research and development, with great commercial opportunities in France and abroad.”

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The PSPC provides a competitive advantage for the French nuclear industry in digital simulation and provides new product and service offerings for operators worldwide.

Project partners include EDF, CEA, Framatome, ESI Group, CORYS, Aneo, Axone, Boost-Conseil et le CNRS (laboratoire CRAN de Nancy).

Learn more about PSPC [here](#).

About Framatome

Framatome is an international leader in nuclear energy recognized for its innovative solutions and value added technologies for the global nuclear fleet. With worldwide expertise and a proven track record for reliability and performance, the company designs, services and installs components, fuel, and instrumentation and control systems for nuclear power plants. Its more than 14,000 employees work every day to help Framatome's customers supply ever cleaner, safer and more economical low-carbon energy. Visit us at: www.framatome.com, and follow us on Twitter: [@Framatome](https://twitter.com/Framatome) and LinkedIn: [Framatome](https://www.linkedin.com/company/framatome). Framatome is owned by the EDF Group (75.5%), Mitsubishi Heavy Industries (MHI – 19.5%) and Assystem (5%).

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