

# PRESS RELEASE

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## **Barracuda Program: The start-up of the *Suffren* nuclear reactor**

**After the launch of the Suffren last 12 July in the presence of the President of the French Republic, Emmanuel Macron, a new milestone was reached with the divergence of the reactor, a prelude to its first sea acceptance tests prior to its delivery in 2020.**

The divergence of the Suffren's nuclear reactor has just been performed by the TechnicAtome and Naval Group teams on the Cherbourg site in accordance with the authorisations issued by the French Nuclear Safety Authority (*Autorité de Sûreté Nucléaire - ASN*) and the French Defence Procurement Agency (DGA).

Designed under the responsibility of the French Atomic Energy and Alternative Energies Agency (CEA), the nuclear reactor was built under the prime contracting of TechnicAtome, reactor designer, Naval Group being responsible for the production of the pressure equipments and the integration of the reactor on-board the Barracuda submarines.

One thousand employees from both companies are working full time in parallel on the six reactors of the Barracuda program.

**Loïc Rocard, Chairman and Chief Executive Officer of TechnicAtome,** declared *"the first divergence of the nuclear reactor is a privileged moment for all those who contributed to make this operational and technological success possible. From the designer to the operator, and including the fitters, testers, welders and so many other trades, this is a rare moment of collective achievement, the symbol of a sector that lives up to its ambitions in the service of the French Navy"*.

**Hervé Guillou, Chairman and Chief Executive Officer of Naval Group:** *"The start-up of the nuclear reactor on-board the Suffren submarine is a new demonstration of the know-how of the French nuclear industrial sector, with TechnicAtome and Naval Group in the forefront. This success gives the country an unequalled defence tool with a high degree of industrial autonomy benefitting the sovereignty of France"*.

### **About divergence**

Divergence is conducted from the Propulsion Control Station (PCS) of the Suffren. The operation consists in triggering a controlled nuclear reaction in the core for the first time. Lasting only a short time, this operation marks the beginning of the constant monitoring of the nuclear reactor by the operating teams. This operation will be continuous until the decommissioning of the submarine, planned for the 2050 decade.

## The Suffren

The Barracuda is the submarine of the 21<sup>st</sup> century, designed to meet the operational needs of the current and future navy. It features extensive operational capabilities and the latest technologies. More versatile, higher performing and better armed than its predecessors, the Suffren type SSN will go faster and further. It is designed to control all types of marine spaces, from the high seas to coastal areas.

Launched in 1998 by the French Defence Procurement Agency (DGA), the Barracuda program renews its Ship Subsurface Nuclear (SSN) component composed of six Rubis type SSNs commissioned at the start of eighties. The associated development contract was notified in December 2006.

The Suffren type SSN is equipped with a nuclear propulsion system which offers a remarkable action range and discretion. It also features communication means allowing its integration within a naval force.

### A few figures and key dates

This is a long-term program: more than ten years were necessary to study the feasibility of the project and lead to the definition of a submarine that meets the operational need expressed in the staff requirement file. The nuclear reactor components required the procurement of raw materials in the early 2000s.

- The delivery of the six submarines will span one decade beginning in 2020.
- Knowing that the lifespan of Suffren type SSNs will be more than 35 years, this program serves the submarine forces at least up to 2060, making it one of the major weapon systems of this century.
- Since the launch of the project, nearly 10,000 people from the program management and industrial subcontracting chain have worked for the Barracuda program.

The *Suffren*, the first of class, was launched 1<sup>st</sup> August 2019 and will begin its sea trials in the first quarter of 2020 to arrive in Toulon before the summer.

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## Press contacts:

### Technicatome

#### Anne Guichard-Grosnon

Tel.: +33 (0)1 69 33 82 48

Mob.: +33 (0)6 11 73 33 28

anne.guichard-grosnon@technicatome.com

### Naval Group

#### Emmanuel GAUDEZ

Tel.: +33 (0)1 40 59 55 69

Mob.: +33 (0)6 61 97 36 63

emmanuel.gaudez@naval-group.com

## About Naval Group

Naval Group is a European leader in naval defence. As an international high-tech company, Naval Group uses its extraordinary know-how, unique industrial resources and capacity to arrange innovative strategic partnerships to meet its customers' requirements. The group designs, builds and supports submarines and surface ships. It also supplies services to shipyards and naval bases. In addition, the group offers a wide range of marine renewable energy solutions. Attentive to corporate social responsibility, Naval Group adheres to the United Nations Global Compact. The group reports revenues of €3.6 billion and has a workforce of 14,860 (data for 2018).

[www.naval-group.com](http://www.naval-group.com)



## About TechnicAtome

TechnicAtome is specialised in design, construction, commissioning and operational maintenance of compact nuclear reactors. TechnicAtome employs approximately 1,600 employees working in the fields of naval propulsion, research and energy.

For over 45 years, it has been providing its nuclear engineering expertise for reactors, fuels and associated facilities, and offers its customers solutions and products that meet the highest standards of safety and availability.

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