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Naval Review

WE DELIVER POWER AT SEA

NAVAL GROUP

TITANS DES MERS

The *Titans des mers* (Sea Titans) exhibition presents about twenty large-format photographs by Ewan Lebourdais, a maritime photographer and official artist of the French Navy, to whom Naval Group gave carte blanche in its shipyards and onboard ships and submarines. After touring the main cities in France in which Naval Group is present, the exhibition ended its journey in May in Paris, at the musée national de la Marine. As the first company to join the ranks of the Circle of Major Patrons (*Cercle des mécènes bâtisseurs*), Naval Group is proud to have contributed to the renovation of the museum, an exceptional venue for showcasing nearly four hundred years of naval innovation to a wide audience.

Discover the musée national de la Marine

n.2 Naval Review

WE DELIVER POWER AT SEA

PIERRE ÉRIC POMMELLET

Chairman and Chief Executive Officer of Naval Group

Dear readers,

In this ever-accelerating world, what is true today may not be true tomorrow and all naval defence manufacturers face the same challenge: offering innovative solutions adapted to the operational needs of naval forces.

What are the impacts of this acceleration on our activities, our customers, our partners and suppliers? How can we organise ourselves to be prepared and endure? What is the source of our strength?
You will find our responses in this second issue of *Naval Review*, our quarterly magazine. At Naval Group, our collective spirit is the source of our strength. Every day in the field, our teams interact with our customers, our suppliers and our partners. It is these exchanges, at every level, that forge our most valuable assets: a deep knowledge of every player's challenges, an ability to unite multidisciplinary teams around the same objective, innovation enhanced thanks to sharing across borders, and a firm commitment to making our industry an inclusive sector open to all talents.

Naval Review aims to enrich our knowledge of our environment and strengthen our ties. Feel free to share a copy of this review with your customers, suppliers, partners and colleagues.

Enjoy your reading and we look forward to sharing the third issue with you this winter!]

Trends in action

HOW CAN WE PREPARE IN THE FACE OF ACCELERATING GEOPOLITICAL UPHEAVALS? OUR ANALYSIS ON PAGE 6. FOR AN IMMERSION INTO THE HEART OF THE BARRACUDA PROGRAM, SEE PAGE 10. CYBERSECURITY AND REGULATIONS: OUR EXPERTS' INSIGHTS, SEE PAGE 16. SAFE, VERSATILE AND STURDY: DISCOVER THE F21 TORPEDO, PAGE 21.

The *De Grasse* nuclear attack submarine (SSN) was transferred to its launching facility in Cherbourg in May 2025.

INTERVIEW WITH S**TANISLAS GOURLEZ DE LA MOTTE,**
NAVAL ADVISOR TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER OF NAVAL GROUP

THE EUROPEAN CHALLENGE

SOVEREIGNTY, INDUSTRIAL STRATEGY AND INNOVATION

GEOPOLITICAL UPHEAVALS ARE ACCELERATING, AS SEEN IN THE UNPRECEDENTED ABUNDANCE OF STRATEGIC THINKING REFLECTING THE MAGNITUDE OF THE PROFOUND CHANGES WE ARE UNDERGOING. IN THIS CONTEXT, EUROPE MUST PLAY A LEADING ROLE AND ESTABLISH ITS SOVEREIGNTY. WHAT WILL THE IMPACT BE ON NAVIES AND NAVAL DEFENCE MANUFACTURERS SUCH AS NAVAL GROUP? HOW CAN WE PREPARE FOR THE CHALLENGES OF TOMORROW?

While our world is changing, the threats we face today are not new. This is true of Russia, which continues to respond aggressively to what it perceives as isolation or an external threat; China, which seeks to transform its wealth into military power; and also terrorism, which continues to take on new faces.
Added to this are non-military threats such as drugs, mafias and trafficking, which must also be combatted with determination and resolve. Could it be that the real change lies in the challenge facing Europe to establish its sovereignty?
Because that is the goal, and defence sovereignty has become a real watchword in Europe today in response to global upheavals. Europe must pursue three strategic objectives to achieve sovereignty: deterrence, protection and intervention. Simply put, we must acquire the means to prohibit any existential threat, protect our territories and our allies against aggression, and intervene when other methods of conflict resolution are exhausted.

UNLEASHING ENERGY: EUROPE IN POLE POSITION

European sovereignty involves strong cooperation between States and requires everyone to contribute effectively to this end. “In the naval field, this presupposes autonomy in the missions and means of patrols of nuclear ballistic missile submarines, underwater warfare, mine warfare, naval aviation operations and anti-air warfare. This calls for first-rate scientific, technical and industrial expertise, right from the platform to the combat system”, explains Stanislas Gourlez de La Motte.
It is up to Europe to unleash the energy required: budgetary energy, with programs such as SAFE and ReArm EU; industrial energy, thanks to a “Defence Omnibus” (June 2025); and intellectual energy, to boost R&D and innovation thanks in particular to the European Defence Fund (EDF), launched in 2021 with an annual budget of around 1.2 billion euros. Together, these initiatives will enable Europe to establish a common base to build a solid and credible defence.

INNOVATING: A FINE LINE

Unleashing energy for innovation is one of the keys to the future. Upheavals, whether geopolitical (adversaries and allies), political (sovereignty and cooperation), operational (lessons learned from recent conflicts) or technological (R&D), are impacting our societies and reshaping the future of navies in France and around the world. We must guard against a twofold danger.
“Failing to evolve by choosing to prioritise only the continuation of long-term naval programs to which we are committed, or investing exclusively in existing technologies and solutions, running the risk that they will soon be obsolete”, says Stanislas Gourlez de La Motte.

> **Unleashing energy for innovation is one of the keys to the future.**

This obliges navies to tread a fine line in order to make the right choices. They must reconcile standard and emerging capacities and, above all, make the most of their complementarity. As electronic warfare and cybernetics multiply both the power and sources of threats, navies must prevent their opponents from acting and reacting, and thus from ▸

STANISLAS GOURLEZ DE LA MOTTE

On 1 July 2023, after forty years of service with the French Navy, Stanislas Gourlez de La Motte joined Naval Group as Naval Advisor to Pierre Éric Pommellet, Chairman and Chief Executive Officer of Naval Group. A former student of École navale (French Naval Academy), this submariner and atomic scientist served on the *Casabianca* and *Perle* nuclear attack submarines (SSN), on the *Le Foudroyant* nuclear ballistic missile submarine (SSBN) and on the *Charles de Gaulle* aircraft carrier. In 2017, he joined the Navy Headquarters as the coordinating authority for nuclear contracts, before being promoted to Vice Admiral at the end of 2018. In 2022, he was appointed Inspector General of the Armed Forces with the rank of Admiral.

seeing, hearing and communicating. They must also rely on non-military means to respond to hybrid threats, such as operations to destroy gas pipelines or submarine cables, with the potential to destabilise the functioning of society. Finally, navies must integrate drones into their thinking on capabilities (now used widely in the Black Sea and Red Sea), as their impact is all the more decisive when integrated into a unity of doctrine and actions.

AIMING FOR FOUR TYPES OF SUPERIORITY

In order to stay on course while adapting to new challenges, navies must continue to aim for four types of superiority: informational (obtaining knowledge earlier and faster than the opponent), kinetic (striking and destroying first), temporal (being present in the theatre, enduring and remaining steadfast) and volumetric (having several platforms, covering a wider zone than the opponent, and thus offering more tactical options). In addition to incorporating traditional capabilities, such an approach also makes it possible to accommodate new objects such as drones and transformative technologies such as artificial intelligence (AI) and quantum technology, real power boosters. To achieve the unchanging objective of delivering a weapon of destruction (missile or torpedo), regardless of the theatre (including in the middle of the ocean), regardless of the target (including submarines and aircraft carriers) and regardless of the quality of communications (including in a completely jammed environment), it is also imperative that we act within a network in order to effectively orchestrate capabilities as disparate as an aircraft carrier and a Parot drone.

RECONCILING LONG- AND SHORT-TERM TIMEFRAMES

According to Stanislas Gourlez de La Motte, Naval Group's potential is increased tenfold by the fact that its actions fall within four distinct timeframes: "The long timeframe of programs (Barracuda SSN), the short timeframe of operations (operations in the Red Sea in 2024), the future timeframe of innovation (deployment of new anti-drone capabilities) and the day-to-day timeframe of operational readiness (mid-life refit of Horizon frigates)". Each timeframe presents its own challenges, requiring exceptional flexibility and adaptability, combined with enormous infrastructure power and unparalleled skills in order to adhere to schedules while at the same time accelerating production or reacting to unforeseen events which might occur on a platform in operation.
Naval Group meets these challenges thanks to three fundamental skills that make it the prime contractor for highly complex objects: that of project architect, able to converge a multitude of physical parameters to offer viable and efficient equipment; that of project manager, with a command of various schedules allowing delivery on time; and that of program manager, familiar with its suppliers and knowledge of where to find the specific skills needed to deliver a piece of a humungous puzzle. All of these skills, along with its ability to design the key systems on board (combat management systems, in particular), give Naval Group its unique role as master of schedules.
This reality is reflected in the group's strategic plan, broken down into its various areas of expertise and product lines and guided at all times by four principles: delivering to navies the means of power they need (in phase with the fleets), maintaining the capabilities already delivered (in phase with operations), adapting the tools (in phase with the nature of the conflict) and innovating (in phase with emerging threats).
European sovereignty, the transformation of naval defence strategies, industrial cooperation and innovation must move forward together to respond forcefully and effectively to the challenges of a de-hierarchised and deregulated world that is now more complex than ever.]

[Navies must integrate drones into their thinking on capabilities.

BARRACUDA

A concentration of expertise at the service of French sovereignty

Hervé Glandais,
Barracuda Program Director
at Naval Group

Alexandre Nioré,
Director of the in-service support (ISS) Program for Nuclear Attack Submarines (SSN) and Missiessy infrastructures at Naval Group

Florence Cochet,
Barracuda Program Manager
at TechnicAtome

THANKS TO THE MANY TECHNICAL FEATS THEY SHOWCASE, THE RESULT OF RARE AND ADVANCED EXPERTISE, THE SUFFREN-CLASS NUCLEAR ATTACK SUBMARINES (SSN) PRODUCED UNDER THE BARRACUDA PROGRAM ARE NOW AN INTEGRAL PART OF FRENCH NAVAL POWER. NAVAL GROUP COMBINES KNOW-HOW CULTIVATED OVER DECADES AND THE CAPACITY FOR INNOVATION, ENSURING THE HIGHEST STANDARDS FOR THE FRENCH NAVY.

Launched in October 1998, the Barracuda program followed on from upstream study phases that took place from 1992 to 1994 and the future attack submarine (SMAF) program, in order to renew the Rubis-class SSNs. These studies led to the definition of an SSN nearly 100 metres long and 8.80 metres in diameter, with more than 5,000 tonnes of displacement, incorporating safety requirements resulting from lessons learned from the first-generation SSNs and a nuclear reactor derived from the K15 program conducted to equip the Le Triomphant-class nuclear ballistic missile submarines (SSBN) and the *Charles de Gaulle* aircraft carrier.
After the summarised preliminary project phase, a first proposal was submitted by Naval Group and TechnicAtome in 2003. From 2003 to 2006, the safety authority examined the preliminary safety report, based on which the State ordered the construction of the first vessel in 2007, after signing a contract for the delivery of six units on 27 December 2006. Finalisation of the contract continued until 2019, when the State set a delivery schedule running until 2030.

NEW CAPABILITIES, IMPROVED COMFORT

"Unlike the previous generation, the SSNs in the Barracuda program can fire naval cruise missiles and implement special forces", says Hervé Glandais, Program Director. Their weapon-carrying capacity has been doubled and their invulnerability increased, as has their availability at sea, amounting to 270 days per year. They can accommodate a crew of 75 sailors and assault troops, whose conditions of life on board have been significantly improved. Finally, ship control has been highly automated to take into account a smaller crew and more complex systems."

INSTRUMENTS OF POWER

Barracuda SSNs can strike land from an increased depth and attack surface vessels and other submarines. They protect the SSBNs as well as the air-sea group and amphibious groups. They conduct surveillance and tracking missions thanks to their underwater and surface intervention capabilities. They can prevent access to certain zones or block ports through coercive measures. They also conduct intelligence missions and are equipped with capabilities for transmission to other ships or allied forces.
They thus contribute to France's status as a great power and establish its capacity to implement SSBNs, training their future commanding officers, providing deterrence and serving as the visible face of the expertise acquired by our submarine forces.

INNOVATIONS AND SCALABILITY

Equipment from all the group's sites, in conjunction with the Systems, Equipment and Propulsion (SEP) Department, is built into the vessels. "We collaborate particularly with the Drones, Autonomous Systems and Underwater Weapons Department (DSA), which supplies the F21 heavyweight torpedoes and their launch system", says Hervé Glandais. "The Barracuda SSNs have been designed to serve for more than thirty years and receive new systems and capabilities in order to comply with changes in standards and the needs expressed by the French Navy. Studies on the integration of aerial and underwater drones have, for example, been launched at the Navy's request. We are, furthermore, in constant dialogue with the in-service support (ISS) teams to integrate lessons learned from the operation of SSNs in service into vessels under construction. Lessons learned from the *Suffren* have led to slight modifications to submarines 2 and 3. More significant changes are being made to submarines 4, 5 and 6. Finally, the SSN EVOL program has been set up to maintain SSNs at the best possible operational level in an ever-changing world."

ISS IN WORKING ORDER

"Each time we deliver, we are in contact with the as-built teams, who send us the ship's configuration file to enable us to carry out maintenance", says Alexandre Nioré, Director of the SSN ISS Program. In-service support of the SSNs currently forms part of a transition phase between the gradual removal from active service of Rubis-class SSNs and the arrival of Suffren-class SSNs. Our teams carry out maintenance operations on these two ►

KEY DATES

- **1998:** launch of the Barracuda program.
- **19 December 2007:** first cut-out of sheet metal at the site of Cherbourg.
- **6 November 2020:** acceptance of the *Suffren*.
- **1 June 2022:** official commissioning into the Navy of the *Suffren*.
- **28 July 2023:** acceptance of the *Duguay-Trouin*.
- **4 April 2024:** official commissioning into the Navy of the *Duguay-Trouin*.
- **16 November 2024:** acceptance of the *Tourville*.
- **2026:** delivery of the *De Grasse*.
- **2028:** delivery of the *Rubis*.
- **2030:** delivery of the *Casabianca*.

“We are halfway through the delivery schedule and more than 85% through the program.”
HERVÉ GLANDAIS

In the “Barracuda” family, ask for… the Blacksword® Barracuda.

Inspired by the concepts and working methods developed for the Suffren-class, this line of conventionally propelled ocean submarines is a concentration of stealth and technology. Extremely silent, powerful, versatile and enduring, this 3,000-tonne attack submarine has already won over the Dutch Navy.

ACOUSTIC SUPERIORITY AND TACTICAL POWER

Like its French predecessor, the Blacksword® Barracuda will be among the most discreet submarines in the world and will be equipped with exceptional detection capabilities.
With the capacity to carry close to thirty heavy weapons, it will have the capacity to operate underwater for several days and at high speeds, thanks to its latest generation lithium-ion batteries. Its intuitive combat system incorporates the latest innovations and optimisations inherited from the work carried out on the Suffren-class.
Finally, its crews will benefit from improved conditions of life on board to enable longer missions

AN ADAPTABLE SUBMARINE AND A GREATER VALUE PROPOSAL

To meet the multiple needs of navies, the Blacksword® Barracuda will be able to integrate particular weapons and equipment such as drones. Required to navigate in various operational environments, it will be able to carry out surveillance missions in wide areas, land strikes and special operations. It will be able to deploy with a naval air force and cooperate within coalitions.
Another advantage: Naval Group’s proposal includes training, practice on simulators and industrial technology transfer and in-service support.

FIRST INTERNATIONAL SUCCESS

The Netherlands has chosen Naval Group to reinforce the strategic capabilities of the Dutch Navy (*see* Naval Review *No. 1, page 6*): four conventional submarines from the Barracuda family, the first two of which will be delivered by 2034 following the signing of the delivery agreement for the Dutch submarine replacement program (RNSC) on 30 September 2024.
Because of their characteristics, these expeditionary submarines could also appeal to other navies wishing to navigate over long distances and for long periods, over large areas.

COOPERATION BETWEEN PARTNERS

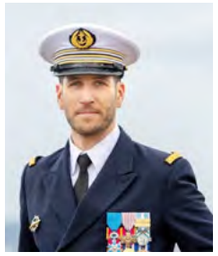
The Barracuda program SSNs are also the result of cooperation between industrial partners, including TechnicAtome, designer and prime contractor of the onboard nuclear reactors powering the SSNs.
“Few nations have mastered nuclear propulsion. This technology gives the French Navy great flexibility of use”, says Florence Cochet, Barracuda Program Manager at TechnicAtome. “We work in partnership with Naval Group, responsible for integrating the reactors. As the design and construction phases of the reactors are completely intertwined with those of the vessels, our teams have been in constant contact since the start of the program. They were present at the Naval Group site in Nantes-Indret for the workshop pre-assembly of the modules of each reactor, the main components of which were produced by Naval Group. This phase is now complete. Our employees are also present in Cherbourg to carry out the completion and entry into service of the reactors. Once the vessel is transferred to its launching facility, TechnicAtome teams load the fuel to provide the energy needed to propel the vessel.”

In spring 2026, the TechnicAtome and Naval Group teams will jointly check the performance of the propulsion system of SSN *De Grasse* during sea acceptance tests (SAT). Once the vessel is delivered to the Navy, TechnicAtome will stand alongside Naval Group throughout the life cycle of its reactor.

generations with different technologies and needs. At the same time, major infrastructure works are being carried out to adapt the Missiessy area that accommodates them at the Toulon naval base (*see our article on page 34*). Our mission is to guarantee the French Navy the best availability for its vessels. To this end, the platform and combat system teams, and those of the nuclear department, are organised on a dedicated worksite. They have expertise in all fields and can intervene anywhere in the world, and in operation if necessary. Thanks to our infrastructure teams maintaining the Missiessy area, we stand ready to receive vessels at any given time. This complementarity enables us to guarantee the French Navy a high level of safety and security and a strong technical support capability. The lessons we have learned have led us to adapt our tools to optimise the preparation of vessels in order to carry out preventive and corrective work within ten weeks, and make any capability changes to Barracuda SSNs each year during their mid-cycle docking (MCD) period. The next major challenge for our teams is to be prepared for the first full cycle docking (FCD) of the *Suffren*, which will take place in 2030”.

“Our missions and skills, complementary to those of Naval Group, are at the service of the supremacy of the French Navy.”
FLORENCE COCHET

With the *Tourville*, three of the six Suffren-class nuclear attack submarines intended for the French Navy have now been delivered by Naval Group to the DGA in the space of four years.



FRIGATE CAPITAINE GUILLAUME EGRET

Commanding Officer (CO) of the *Tourville*, shares his experience of the intense and challenging period preceding the delivery of the third Suffren-class SSN in November 2024.

"As soon as our crew arrived in Cherbourg in February 2024, everything possible was done to facilitate our integration into the site. A special seminar organised by Naval Group allowed us to quickly establish close links with the industrial teams, laying a solid foundation for effective collaboration. The following months involved close cooperation around the state of the facilities. The first divergence of the reactor, on 24 April, was a key step, followed by machine tests and the careful preparation of sea acceptance tests (SAT). From mid-June, the crew took full responsibility for the safety and control of the submarine's systems. From my point of view, the collaboration with Naval Group was exemplary: the constructive dialogue established between our teams and a good understanding of our mutual constraints made it possible to effectively reconcile our respective missions and swiftly resolve any differences encountered. We had a clear common goal with the program director: to deliver and receive a submarine on time, without compromising on quality and safety. A special effort was made to enhance the skills of the crew, a third of whom had never sailed before and another third of whom had been trained solely on Rubis-class SSNs. Specific training was put in place onboard the *Suffren* and the *Duguay-Trouin* in order to prepare them to operate the complex systems specific to the Suffren-class SSNs. Their presence in Cherbourg, the birthplace of French submarine construction, also offered them a precious opportunity to discover and better understand the trades essential to the completion of such a project. In the critical phase preceding the release of the submarine from its launching facility on 12 July, I was particularly proud of the synergy that naturally developed between the crew and Naval Group. Despite the pressure related to the many finishing touches to be performed by the manufacturers and the heavy workload involved in monitoring the work related to crew safety, the support and active involvement of Naval Group employees were essential to ensuring the ship's full availability for its first trials. To strengthen this cohesion, Naval Group teams were invited to participate in several important events. These included major ceremonies, notably the delivery and commissioning ceremony for trials in mid-March and when trials were resumed on 31 August, where they had the opportunity to discover the completed submarine along with their families. During the sea trials carried out in July 2024, and from September to November, the expertise and reactivity of the industrial specialists on board were decisive. Available day and night, they allowed us to quickly find effective solutions to the problems encountered. These were ultimately few in number, a sign of the high quality of implementation and the effective consideration of lessons learned from previous submarines. This resounding success was the result of a collective effort by the French submarine construction team, composed of the French National Defence Procurement Agency (DGA), Navy Headquarters, the French Atomic Energy Agency (CEA), TechnicAtome, Naval Group and, of course, the crew. It was crowned by the final acceptance of the *Tourville* by the Navy on 16 November 2024, followed by our arrival in Toulon on 27 November, a symbolic date as it coincided with the historic anniversary of the heroic escape of the submarine *Casabianca* in 1942 when it refused a scuttling order and joined the allied forces. In conclusion, this year 2024 spent in Cherbourg represented a formidable personal and collective challenge. Through a shared passion and unwavering commitment, we transformed an ambitious project into an operational success.
The *Tourville* has arrived at its home port with a particularly proud crew, ready to enter a decades-long operational life".

"WE SHARE THE SAME ATTACHMENT TO OUR SHIP, ALONGSIDE THE NAVAL GROUP TEAMS."

CYBERSECURITY

A strategic priority for the maritime sector

What is the impact of regulatory developments on the maritime sector? Specialists in our ecosystem decipher the question.

Philippe Coste,
Director of Cyber Governance
at Naval Group

Marc Jacquement,
System Engineering Leader for Control Systems and Cyber Champion Auditor
at Naval Group

Frédéric Caro,
rMCM Program Cybersecurity Architect

DISORGANISATION OF LOGISTICS FLOWS, PARALYSED STRATEGIC INFRASTRUCTURE, RANSOM DEMANDS: NOT ONLY ARE ACTS OF CYBER PIRACY INCREASING ALL OVER THE WORLD, BUT THEY ARE INTENSIFYING WITH THE EXACERBATION OF GEOPOLITICAL TENSIONS. THE MARITIME SECTOR, WHICH ACCOUNTS FOR 8 TO 10% OF GLOBAL ATTACKS, THEREFORE CONSIDERS CYBERSECURITY AS A STRATEGIC PRIORITY AND IS STRENGTHENING ITS REGULATIONS IN THIS AREA. READ ON TO FIND OUT MORE…

« In accordance with the resolution of the International Maritime Organization (IMO), the International Association of Classification Societies (IACS) has published new cyber requirements for shipowners, shipyards and ship suppliers from the design stage and throughout their life cycle, in order to increase their resilience, explains Philippe Coste, Director of Cyber Governance at Naval Group. "Without a certificate attesting to their compliance with these new requirements (UR E26 for the vessel and UR E27 for its systems and equipment), new vessels will not be able to operate."

This reinforcement of the legislative and regulatory framework in the face of cyber threats can also be found at the European level. While the first Network and Information Security (NIS) directive aimed to protect major economic players in the European Union, NIS 2 broadens the scope of the entities and sectors concerned (15,000 compared to 300 today) and introduces more adapted requirements and new requirements to anticipate the increasing integration of artificial intelligence and the emergence of autonomous ships. "A paradigm shift", according to the French National Agency for the Security of Information Systems (ANSSI), responsible for steering the transposition of the directive into French law and ensuring its implementation for the nation. Another piece of legislation, the Cyber Resilience Act (CRA), aims to strengthen the cybersecurity of digital products sold in the European Union.

Naval Group had already made the cybersecurity of its products a strategic priority even before these regulatory changes came into effect. For nearly a decade, the group's cyber technical and standard reference (TSR) has been aligned with the main international standards (IEC 62443, the Cybersecurity Framework of the NIST) also adopted today by industrial automation and control systems (IACS) for civilian vessels. "In other words, Naval Group does not have any catching up to do, but rather the civilian maritime cyber movement is now catching up to us", says Philippe Coste, initiator of the Cyber Champions network and program. "Each month, the Cyber Champion scheme organises a videoconference whose format, combining technical subjects and cyber issues, effectively increases the skills of members of our internal network and their teams. These conferences also open a window onto other sectors exposed to risks other than our own: it is very rewarding", explains Marc Jacquement, System Engineering Leader for Control Systems and Cyber Champion Auditor at Naval Group. Other initiatives are also carried out by Naval Group in connection with its ecosystem, such as the Cyber On Board conference (*see page 20*).

This lead, and this ability to meet cyber requirements at the highest level of maturity, are a differentiating asset for Naval Group, which enabled it to secure a contract for twelve Belgian-Dutch minehunters in 2019. "The contractual requirements for cybersecurity were among the strongest we had received in recent years", recalls Frédéric Caro, Cybersecurity Architect for the program. "The head start we have acquired by anticipating such requirements for a number of years already enables us to respond favourably to our customer's demand for compliance with the latest regulations promulgated by Det Norske Veritas (DNV), the Norwegian equivalent of Bureau Veritas, both affiliated with the IACS."]

"The challenge of NIS2 is not just compliance with regulatory standards but above all protection against the threat of cybercrime."

Three questions for Vincent Loriot, Assistant Deputy Director of Strategy at the French National Agency for the Security of Information Systems (ANSSI).

How do cyber regulations take into account the specific characteristics of the naval sector?
The NIS 2 directive is not intended to be sector specific, but rather a "horizontal" regulation. It defines the fundamentals for all sectors of activity, with sectoral specificities to be added by regulatory supplements. These are currently in the hands of the sectoral regulatory bodies. What we at ANSSI encourage a regulatory simplification project so that NIS 2 becomes the cross-functional cybersecurity base for all public and private actors.

What is the best strategy to adopt?
I would advise beginning compliance work without waiting for finalisation of the transposition of NIS 2 into French law. There must be a clear understanding that the challenge is not simply to comply with regulatory standards but to protect against the threat of cybercrime. The most important, essential entities will have to map the critical players in their subcontracting chain and have them contractually commit to the cybersecurity provisions to be taken.

What are the main difficulties in remaining in compliance faced with the regulatory changes?
ANSSI ensures that the entities concerned by NIS 2 are as fully informed as possible about the arrival of the directive. Players already regulated by NIS 1 will not have a significant amount of changes to make with NIS 2, because many of the measures are already in place within their information systems. This is the case for essential entities that require robust and efficient protection. For large entities, generally targeted by smurf attacks or by the effect of opportunity, our objective is to raise them to a level of security capable of effectively protecting them. Remember that the ratio between investing to protect oneself and the cost of an attack is 1 to 10.

WHO ARE THE VICTIMS OF RANSOMWARE?

37%
are small-and medium-sized enterprises (SMEs), very small enterprises (VSEs) and mid-cap companies (mid-caps).

17%
are local authorities.

12%
are strategic businesses.

12%
are higher education institutions.

Source: ANSSI, 2024 figures.

CYBER RESILIENCE OF SMES: AN INVESTMENT THAT PAYS

Interview with Henri Le Gallais, Chairman of Enag, a Naval Group partner company based in Quimper, specialising in the design and manufacturing of electrical equipment used in harsh environments (defence, offshore, maritime, rail and aviation).

When did you create the cyber initiative at Enag?
We took this initiative after the 2020 health crisis. At that time, the increase in this kind of threat was palpable. I witnessed the collapse of one of our following a cyber attack. At the same time, I understood from contact with certain customers that taking up this subject and addressing it adequately would help us to stand out.

What did you put in place?
Treating cybersecurity as a priority was the first step. We then deployed a set of very pragmatic actions within the company, such as the systematic use of a VPN, installing a USB key sanitisation station, etc. Finally, we defined a medium-term roadmap, led by an Information System Security Manager, accompanied by regular audits.

This approach earned you the Cyber trophy at the Naval Partners Meeting organised by Naval Group in 2023. Did this make you proud?
Yes, very proud! It was great for an SME like ours to be given such recognition by a large group. It is, however, important to remain very modest on the subject of cybersecurity because our work is never done. We need to constantly improve, work on and test our ability to face threats that are constantly evolving.

How are you preparing for the arrival of the new NIS 2 regulation?
Thanks to our approach, we are prepared and can therefore consider it with serenity and with confidence. Once again, our customers have helped us in this and we have not been alone in preparing for this.

Henri Le Gallais,
Auditor of the French Institute of Advanced National Defence Studies (IHEDN), was recently elected treasurer of GICAN (French maritime industry group)

TRENDS IN ACTION_CYBERSECURITY

"AN INCREASINGLY SOPHISTICATED THREAT"

Three questions for Thérèse Fili, Cybersecurity Engineer at Naval Group's Computer Emergency Response Team (CERT).

What is the current threat environment?
We currently identify three main categories of attackers: State-sponsored, mainly conducting espionage and sabotage campaigns; cybercriminal groups, whose aims are resolutely financial; and hacktivist groups, with political demands. For some time now, we have seen an increasingly sophisticated threat, first and foremost within State entities, which are able to develop techniques and tools very quickly and to multiply campaigns at an unprecedented rate, suggesting a form of industrialisation for the most advanced groups. Other groups are no exception to this growing sophistication. The various categories of attackers are also becoming more porous. Identifying the actions of one type or another is becoming more difficult. What we can say is that the use of cyber weapons is becoming increasingly uninhibited. The sabotaging of communication systems, power cuts and the infiltration of critical networks have, for example, preceded physical offensives. Their use is omnipresent.

How do these assessments inform Naval Group's cyber strategy?
The aim of my work in monitoring and assessing the cyber threat is to produce indicators for the Naval Group CERT teams responsible for detection. They then guide the detection strategy to protect the group and its subsidiaries worldwide. This detailed study of the evolution of each identified actor, as well as its tools and operating methods, also enables us to anticipate its movements, future campaigns and any new targets in their sights.

What is the most urgent issue?
Maximum surveillance! Without surveillance we don't know who our enemy is and how they operate, and we can neither detect them nor defend ourselves. The other challenge, internally, is to adequately communicate on this threat, enabling everyone to fully appreciate its magnitude. It is not always easy for an employee with no involvement in cybersecurity to understand that they could potentially be targeted by phishing and that they could compromise the security of the company simply by double-clicking on a link.

More information about the Naval Group CERT can be found on our website.

CYBERSECURITY IN FIGURES

4,368
identified cyberattacks in 2024, i.e.

15%
more than in 2023

Source: ANSSI, 2024 figures.

612
cybersecurity incidents identified in 2023 impacting the global maritime sector, of which

108
targeting shipbuilding and maintenance: the maritime sector is affected but not prioritised by cybercriminal movements.

Source: M-CERT.

CYBER ON BOARD: A PROMISING RENDEZ-VOUS IN FRANCE FOR THE SECURITY OF ONBOARD SYSTEMS

Benjamin Morin,
National Cybersecurity Strategy Coordinator
at the General Secretariat for Investment (SGPI)

Between 13 and 15 May, the city of Hyères hosted the second edition of Cyber On Board, the annual conference dedicated to the cybersecurity of onboard systems, organised jointly by Naval Group and Neverhack. A look back at this event with Benjamin Morin, National Cybersecurity Strategy Coordinator at the General Secretariat for Investment (SGPI).

What is the prevailing feeling following the second edition of Cyber On Board?
Organising a conference dedicated to the cybersecurity of on-board systems is a relevant and promising initiative. Bringing together industry, start-ups and researchers in the same place promotes the sharing of expertise, constructive exchanges and stimulates the creation of collaborative projects. It provides fertile ground for innovation and reinforcing our technological sovereignty.

Why do you think this conference is important?
Onboard systems lie at the crossroads between the physical and digital worlds. Damage to the integrity or availability of these systems can have major consequences on goods and people, especially in critical sectors such as defence, energy, health and transport. Cases of deaths caused by the unavailability of emergency services in hospitals subject to ransomware have already been recorded. In the field of defence, Bruno Marescaux, Digital and Cyber Deputy at the French National Defence Procurement Agency (DGA), gave the fictitious example of a cyber attack preventing the triggering of a defence system on a ship. The repercussions could be dramatic. We therefore urgently need to harden our overall stance when it comes to onboard systems security. Cyber On Board contributes to this.

Why is there an urgent need to act?
There are three major reasons for urgent action. First of all, the conflictual and unpredictable nature of the current geopolitical situation is forces us to secure our critical systems and guarantee their sovereignty. France's recent public attribution of cyber attacks to States like Russia underscores rising tensions and the need for heightened vigilance.
Next, the regulatory context: the Cyber Resilience Act, which came into force in December, requires digital system manufacturers to secure their products by default and by design, and now imposing security assessments. This is a major development, which was highlighted by the Deputy Director General of ANSSI. The third reason is technological: the rise of artificial intelligence (AI), the transition to post-quantum cryptography and the dependence of onboard systems on complex and poorly controlled cloud infrastructure all present challenges that must be overcome. Added to this is the transverse issue of securing the supply chain, in particular software, which has now become very fragmented, with many external dependencies.
This complexity makes global security more difficult, but it is also an area in which France can assert its strengths, by guaranteeing a high level of security for its products and turning this requirement into a competitive advantage. This is supported by the national cybersecurity strategy and the France 2030 agenda.

XXL TRADE

International maritime activity accounts for 90% of global trade in terms of volume and 80% in terms of value.
In 2022, about 11 billion tonnes of goods were transported by sea, and projections indicate an increase of 35 to 40% in this volume of goods by 2050.

Source: 2024 review of maritime transport, United Nations (UN).

F21

The F21 heavyweight torpedo gives Naval Group's naval customers a clear tactical advantage in submarine combat, offering a much wider field of use than its competitors while guaranteeing very high efficiency.

10

The number of prospective naval customers identified to date for the F21, the reference weapon for Naval Group's armed submarines in France and internationally. The F21 is compatible with French and foreign submarine combat systems and can be installed on board throughout the operational life of the vessel. Today, the F21 torpedo is qualified, sea-proven and integrated on all French Navy submarines – Rubis-class nuclear attack submarines (SSN), Barracuda-class SSNs and the Le Triomphant-class nuclear ballistic missile submarine (SSBN) - as well as on Brazilian Scorpène®-class conventional attack submarines.

SAFE, VERSATILE AND STURDY

The F21 is the safest heavyweight torpedo in the world. Highly versatile, it is capable of handling a wide variety of targets (submarines, frigates, large surface vessels and coastal patrol boats), including in very complex physical and tactical environments: very shallow water, presence of obstacles, civilian traffic, countermeasures, etc.
The F21 is the first torpedo in the world natively designed for long-range engagement (> 50 km). Its endurance allows it to carry out longer and more far-reaching missions than its competitors. The performance of its sonar coupled with its processing capabilities gives it the ability to establish a complete tactical situation, in complete autonomy.
The tactical situation established by the F21 is further enriched by information from the submarine's sensors. Its onboard intelligence allows it to make a large number of basic decisions during the mission and to let the operator focus on tasks with high added value. To this end, the crew is assisted by human-machine interfaces (HMI) providing relevant information at the right time to make the best decisions. Its numerous software and hardware security systems comply with the strictest cybersecurity standards.

Alongside sailors and partner companies, Naval Group teams are adapting the infrastructure necessary for the maintenance of new generations of vessels.

Innovations

AT NAVAL GROUP, WE INNOVATE COLLECTIVELY AND AROUND THE WORLD. READ OUR REPORT ON PAGE 24. SELLING EQUIPMENT AND SYSTEMS WITHOUT BUILDING THE REST OF THE BOAT: AN ACTIVITY TO DISCOVER ON PAGE 30. BOUGAINVILLE: FIRST AN EXPLORER, NOW A MISSION. READ ALL ABOUT IT ON PAGE 33. ACCOMMODATING THE SHIPS OF TODAY AND THOSE OF TOMORROW: THIS IS THE CHALLENGE FOR THE TOULON NAVAL BASE, WHICH YOU CAN DISCOVER ON PAGE 34.

R&D

INNOVATING TOGETHER, BEYOND BORDERS

TO INNOVATE, NAVAL GROUP IMPLEMENTS A TECHNOLOGICAL STRATEGIC PLAN THAT FEEDS INTO ALL ITS TECHNOLOGICAL AND INDUSTRIAL FIELDS AND SHAPES THE FUTURE CAPABILITIES OF NAVAL FORCES. THE GROUP CULTIVATES WORLD-CLASS SCIENTIFIC AND ACADEMIC PARTNERSHIPS INTERNATIONALLY, ACCELERATING RESEARCH AND THE INNOVATION CYCLE.

Emerging threats, rapid technological developments and the evolving expectations of navies are leading Naval Group R&D teams to increase their agility, not only to innovate but also to reduce the innovation maturation cycle. "This is all the more important given that technologies such as artificial intelligence and quantum computing are rapidly evolving, while the lifespan of armed vessels ranges from thirty to forty years", says Thibaut Farineau, Director of Strategy and Innovation Management at Naval Group. To ensure that naval forces maintain the highest level of performance and superiority at all times, Naval Group innovates continuously and in a targeted manner to help them optimise their operational performance today and meet the challenges of tomorrow. In an uncertain geopolitical and economic context (*see our article on page 6*), and as operational contexts constantly evolve, agility and the ability to design and develop scalable solutions are essential.

Underlying this, the ability to harness the collaborative potential of the best talents is vital. The philosophy of Naval Group, based on resolutely open research, is to seek out excellence by prioritising cutting-edge academic and scientific partnerships internationally and cooperating with countries to develop R&D projects. From Norway to Belgium, through Indonesia and Australia, R&D projects are multiplying with the aim of collaborative and shared innovation, driven by a rich dialogue with the naval forces and in line with the innovation roadmaps of Naval Group's product lines.]

Exchanges with international naval forces enrich our thinking.

On 21 and 22 May, Naval Group brought together more than 75 Greek companies, academies and research centres in Athens and Thessaloniki for the fifth edition of the R&D Partners Days. This annual event aims to promote cooperation with Greek partners and strengthen partnerships in the field of R&D and innovation.

GREECE

SHARED INNOVATION IN ACTION

In Greece, Naval Group relies on local academic and research ecosystems to meet the needs of its customers today and design the naval defence solutions of tomorrow.

Naval Group is now very well-established in Greece, a country that is home to many innovative small-and medium-sized enterprises (SMEs). The group creates ties, thereby facilitating their access to major European projects. For example, thanks to the support of Naval Group, the Demokritos research centre is now the coordinator of the European Calypso project on the fuels of the future.

Relations with Demokritos were established during the R&D Partners Days, the first edition of which took place in 2021, before the signing of the defence and intervention frigate (FDI) program for the Greek Navy.

Now a major event for research in Greece, the event held its fifth edition on 21 and 22 May. In Athens, exchanges focused on composite materials, while in Thessaloniki, cybersecurity was at the heart of discussions.

Naval Group's commitment also includes academic cooperation with Polytech Athens* and the University of Patras, as well as the implementation of a Memorandum of Understanding (MoU) with the Greek Naval Academy aimed at supporting the training of Greek cadets by following their projects and organising themed workshops, the latest of which was on the use of drones

* National Polytechnic University of Athens.

BELGIUM

FROM R&D TO PRODUCT, IN A SHORT CYCLE!

Naval Group Belgium is a partner of the Mine Counter Measures Laboratory (MCM Lab), an accelerating ecosystem for the development, prototyping and production engineering of incremental capability increases as part of the Belgian-Dutch replacement Mine Counter Measures (rMCM) program. From R&D to product, the MCM Lab works in a short cycle and in constant collaboration with Belgian Defence. "Naval Group's R&D centre of excellence in mine warfare is an entity of the Belgian subsidiary and partner of the MCM Lab", explains Christian Laine, Chief Technical Officer and Director of the MCM Lab. "In this context, industrialists and academics collaborate to conduct R&D projects with sailors to design and implement additional solutions to the rMCM program, through a short cycle approach. This flexibility is made possible by multiple interactions within a team on a human scale. Naval Group thus supports the ambitions of Belgium, which is the reference country of the North Atlantic Treaty Organization (NATO) in the field of naval innovations to combat mines. Sailors are constantly invited to refocus developments on operational needs. This method enables projects to progress quickly towards an operational product adapted to the field. Momentum remains high, with new projects in the making."

"The MCM Lab is innovatively developing future Belgian and European mine action capabilities, in cooperation with industry and academia."

AMIRAL TANGUY BOTMAN,
Commanding Officer (CO) of the Belgian Navy

MCM LAB

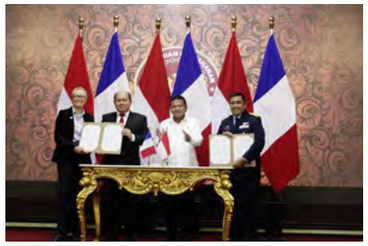
Discover four examples of innovations led by the MCM Lab on our website.

INDONESIA

AN ENTIRE ECOSYSTEM AT THE SERVICE OF INNOVATION

In Indonesia, Naval Group has begun an exploratory phase to identify the best partners. Supported by the French academic and scientific network (ENSTA Bretagne, the Institut Mines-Télécom, the National Centre for Scientific Research [CNRS] and the Institut polytechnique de Paris) and with the support of the Scientific Attaché of the French Embassy in Jakarta, the group has already identified key partners such as the Indonesian National Agency for Research and Innovation (BRIN) and is in discussion with leading institutes such as ITS Surabaya and the Teknologi Bandung Institute. Following the visit by the President of the Republic at the end of May, a bilateral maritime roadmap is being developed with the CNRS, the BRIN and the French National Research Institute for Sustainable Development (IRD). Partnerships make it possible to forge relationships with local naval defence players based on a long-term vision, while preparing the innovative solutions of tomorrow along with local research ecosystems. The celebration of 75 years of Franco-Indonesian cooperation and 60 years of relations with Singapore makes 2025 a strategic year for affirming Naval Group's role as an integrator and innovator in these two geographical areas.

On 28 March 2024, Indonesia chose Naval Group and PT PAL to strengthen the Indonesian Navy's capabilities with two Scorpène® Evolved submarines equipped with lithium-ion (LiB) batteries, to be built in Indonesia at PT PAL's shipyard, thanks to a transfer of technology led by Naval Group.



NORWAY

COLLECTIVE INTELLIGENCE FOR EXCELLENCE IN R&D

The NORCE, SINTEF Ocean and Simula research institutes, along with the Norwegian University of Science and Technology (NTNU), are major references in the areas of maritime technologies and underwater communications, energy, AI, big data and cybersecurity, on a global scale. Naval Group is partnering with these leading players to meet the future requirements of the Norwegian Navy while paving the way for broad areas of application.

With 2.3% of its gross domestic product (GDP) invested in R&D, nearly 80% of the young accessing higher education and one of the highest levels of investment per student in the Organisation for Economic Co-operation and Development (OECD), Norway is among the twenty most innovative countries in the world. Naval Group develops high-level academic and scientific partnerships to conduct "dual-use" collaborative research projects, whose applications go beyond the military and extend to industry and civilian life.

LOCAL PARTNERSHIPS, A PREREQUISITE

In return for conducting major industrial programs, and like most countries in the world, Norway invites foreign entities to collaborate with its academic, scientific and industrial ecosystems in projects of common interest. Naval Group has developed a dedicated R&D plan in the context of potentially supporting the future defence and intervention frigates (FDI) of the Norwegian Navy, as their capabilities evolve from 2034. In order to be ready to deploy this plan and accelerate innovation, the group is now forging collaborative research partnerships with local players.

"We have designed an R&D plan to be ready to develop the innovations necessary to accompany the evolution of Norwegian frigates over their entire life cycle with the Norwegian research ecosystem if we are chosen", explains Emmanuel Brochard, Head of European R&D Partnerships. Regardless of the outcome of the Norwegian tender, Naval Group is committed to developing long-term research projects in key areas for French and Norwegian naval defence.

Discover more information about our partnerships in Norway on our website.

Rising tensions are accelerating the drive for innovation, reinforcing the advantages of collaborative R&D.

SINGAPORE

SERVING THE NAVY AND RESEARCH

Alain Pagès,
Director of the Singapore Centre of Excellence

Naval Group's Centre of Excellence (CoE) in Singapore was inaugurated in 2019, a strong sign of France's commitment to supporting innovation in defence. As head of a multi-project team, Alain Pagès explains the role of the CoE and reveals the strength of the academic and scientific partnerships at work to bring many R&D projects to maturity.

"The primary role of the CoE is to contribute to the Naval Group's technical and technological strategic plan, while offering development prospects to its subsidiary Naval Group Far East, whose activity is focused on the maintenance and upgrading of Singapore's Formidable frigates. Conducting R&D in Singapore allows us both to strengthen our relationship with the Singapore Navy and to showcase our ability to innovate in key areas for naval defence in the broader sense.
We have the opportunity to work at the heart of a world-class research ecosystem, in an environment conducive to innovation both in terms of public funding and academic excellence, which supports open innovation through collaborative projects. In particular, we have a special relationship with Nanyang Technological University (NTU), ranked among the world's top twenty universities in science and engineering, as well as the National University of Singapore (NUS), ranked among the best in the world. We also collaborate with the CNRS subsidiary in Singapore.
Our areas of excellence include underwater drone swarm navigation with the NavSync project, adaptive human-machine interfaces (HMI) (taking into account operator behaviour) and hybrid digital twins applied to marine structures, with the DesCartes program conducted in partnership with the CNRS. Among our other fields of research are generative AI for onboard sound and image processing. Worth mentioning with regard to AI is our contribution to the Seanergy project, which aims to upgrade Naval Group's software development resources via a secure cloud. For this, the attractiveness of our establishment in Singapore and access to local talent enable us to reinforce the project team, especially for the digital continuity functions of software development using artificial intelligence, which offers the productivity gains required for naval programs. Our team is engaged with the Singaporean Navy on various projects, including additive manufacturing, which secures the supply of certain spare parts, and the integration of solutions enabling the integration of onboard data from Shipmaster®, the platform management system of Formidable frigates, to the Navy's fleet land-based management system."

AUSTRALIA

FOCUS ON COLLABORATIVE COMBAT

Collaborative combat requires understanding the interactions between operators and autonomous systems. This is the purpose of the Learning from Operational Teaming with Unmanned Systems simulation (LOTUSim) platform, developed by Naval Group thanks to an excellent collaboration with the Franco-Australian laboratory Collaborative Robotics and Intelligent Systems in Next Generation (Crossing). At a time when collaborative combat is redefining military strategies, interactions between multiple agents, operators and autonomous and multimedia systems (air, surface and submarine), and cooperation between humans and autonomous systems, are at the heart of Naval Group's work. To address these issues, the group relies on Crossing's unique expertise in Adelaide, Australia, in maturing transformative R&D projects for naval defence. "Autonomous underwater drones and decision-making aids using augmented reality are among the future technologies we are currently working on", says Cédric Buche, our Scientific Director in Australia *(opposite)*.

Discover more information about Crossing on our website.

In order to collaborate with the best talents, Naval Group has been working since 2021 with the ecosystem forged by Crossing, a leading player bringing together leading research institutes, universities and manufacturers.

STANDALONE

A lever for growth and a catalyst for innovation

**The Naval Group sites of Ollioules and Angoulême-Ruelle specialise in systems and equipment, two activities also developed on a standalone basis for our customers.
Read on to find out more…**

Élisabeth Raynaud,
Director of Programs and Development of Systems, Equipment and Propulsion (SEP)

THE DIRECT SALE OF EQUIPMENT OR SYSTEMS TO EXTERNAL CUSTOMERS, I.E. ON A STANDALONE BASIS, IS GROWING AT NAVAL GROUP. THE PURPOSE OF THE PROGRAMS AND DEVELOPMENT DEPARTMENT FOR SYSTEMS, EQUIPMENT AND PROPULSION IS TO SUPPORT THE GROUP'S AMBITIONS WITH RESPECT TO THESE PRODUCTS AND POSITION THE COMPANY AS AN ORIGINAL EQUIPMENT MANUFACTURER AND SYSTEM ENGINEERING LEADER FOR NAVAL DEFENCE.

What does the standalone activity at Naval Group consist of? What is the group's strategy?
This involves marketing our equipment and systems for all our programs. Naval Group's ambition is to accelerate the development of this activity, one that is complementary to major programs and a lever for business and innovation. The group is positioning itself as a partner and original equipment manufacturer to external shipyards and offering an ever-growing catalogue, organised into product lines. Among the flagship references are the Sylver® vertical launcher, the Samahé® helicopter handling systems and propulsion system shaft lines. Added to this are landing grids, weapon launch tubes, reducers, heat exchangers, etc. Our offering has diversified in recent years with the listing of new equipment and systems in the catalogue, such as combat systems, communication systems and the new multipurpose and modular launching system (MPLS) that helps combat asymmetric and multi-media threats.

Discover our products in our *Naval Book* institutional brochure, available for download on our website.

Who are the existing and prospective customers?
Shipyards like BAE Systems, of course, to which we supply shaft lines, thereby equipping British, Australian and Canadian T26 frigates. Also our industrial partners, such as MBDA, a buyer of our Sylver® launchers. We also sell directly to navies and State organisations such as the Tawazun Council of the United Arab Emirates, with whom we are going to co-develop a national combat management system: the NCMS. Our reputation is growing in Europe and an increasing number of navies are interested in our products. Our portfolio contains around fifty naval customers, with contracts of up to tens of millions of euros. The strength of Naval Group also lies in offering its customers the integration of equipment and systems on board vessels, whether or not they were built by Naval Group.

How is standalone an asset?
It drives business in several respects. On the one hand, because it is a gateway to new markets, and on the other, because the activity requires thinking on strategies of potential interest to shipbuilders, and understanding navies' needs. We therefore carry out market and competition studies in order to identify needs and prospective customers and adapt our developments accordingly. We involve our partners in our thinking. With BAE Systems, for example, we have identified market opportunities in which one could be the customer of the other. When it comes to innovation, as the stand-alone market is very competitive, it is essential that we stand out from the crowd and demonstrate our added value. We must constantly reinvent ourselves, propose new technologies and prove our agility: this is why it is a real catalyst for innovation: an opportunity both for the group and its customers!

Naval Group has retained the production of strategic equipment which others no longer know how to manufacture.

Setis®: the combat system for high-intensity naval operations.

"A NEW PARADIGM: THE STANDALONE SALE OF COMBAT SYSTEMS"

Vanessa Cauvin,
Director of International Sales of Naval Equipment, Services and Systems

"Naval Group markets its equipment in countries across five continents: an international presence that is a gateway to new construction contracts. The relationships we have with different navies stimulate our ability to understand needs, guide our processes and innovation efforts and make us more competitive. Additional orders are a testament to our customers' satisfaction. A new direction was taken in 2023 with the group's decision to market its combat systems: the latest-generation systems, with a high preponderance of software, are now offered to our customers for integration into vessels either under new construction or during upgrading, whether or not the platform was built by Naval Group.
Montenegro bought the Polaris version of the CMS Setis® for its two offshore OPV 60 M patrol boats built by Kership, the Montenegrin Navy thus becoming our first standalone combat system customer. With the United Arab Emirates we are going even further, with a contract to co-develop the future national combat command system of the Emirati Navy. The group is now positioned as a system engineering leader and key export partner for its customers".

THE STANDALONE ACTIVITY IN FIGURES

x 2
The order intake has doubled in two years (2024 vs 2022)

50
The number of naval customers

BOUGAIN-VILLE

The Bougainville mission aims to study plankton in the Indian and Pacific Oceans. The data collected is made available to scientists around the world. They make it possible to monitor the health of marine ecosystems and their evolution in the face of global warming.

1 year PATRON AND PARTNER

Ten Sorbonne University students embarked as volunteer midshipmen [*volontaires officers aspirants*, or "VOA"] for one year on a French Navy overseas support and assistance vessel (BSAOM). Their mission: to study invisible marine biodiversity on a global scale, as part of the Bougainville mission, launched on 26 September 2023 at the biological station in Roscoff.
The Bougainville mission came about as a result of a meeting between Colomban de Vargas, Director of Research at the National Centre for Scientific Research, and Admiral Christophe Prazuck, Director of the Ocean Institute of the Sorbonne University Alliance, on the subject of an ambitious idea: to carry out a planetary and continuous measurement of the ocean microbiome. "Frugal" tools, relatively simple to implement and inexpensive, have been developed for the Bougainville mission, which forms part of a larger program, Plankton Planet, also led by Colomban de Vargas.

"Naval Group is a logical partner", says Colomban de Vargas. "Given role as shipbuilder, it is actively involved in the protection of France, the largest maritime country in the world. This desire for geostrategic but also environmental protection connects us all: the CNRS, the French Navy, Sorbonne University and Naval Group. Prospects for cooperation with other navies are open and we can promote such collaboration thanks to the internationalisation of the group".

Discover our series of articles on the Bougainville mission on our website.

INFRASTRUCTURES

A change of face for Toulon

SUFFREN IN 2020, *DUGUAY-TROUIN* IN 2023, *TOURVILLE* IN 2024, *DE GRASSE* NEXT YEAR: AT THE TOULON NAVAL BASE, BARRACUDA NUCLEAR ATTACK SUBMARINES (SSN) ARE GRADUALLY REPLACING THOSE OF THE RUBIS CLASS. A GENERATIONAL SHIFT, REQUIRING THE TRANSFORMATION OF THE ENTIRE AREA DEDICATED TO THE SERVICING OF SSNS IN ORDER TO ADAPT TO NEW NORMS AND STANDARDS. THIS UPGRADE PROJECT IS LED BY THE SERVICES DEPARTMENT, HAND IN HAND WITH ITS CUSTOMER, THE MEDITERRANEAN DEFENCE INFRASTRUCTURE DEPARTMENT (SID MED).

Toulon, a military port with more than four hundred years of history and now the most important defence base in France, is home to 70% of the national war fleet. Its dockyard is a real city within the city, extending over 268 hectares. Its docks are home to some thirty Naval Action Forces vessels, including the *Charles de Gaulle* aircraft carrier, multimission frigates (FREMM) and SSNs. Every day, 24,000 people pass through its doors, making this naval base the largest industrial site in the Var department. At the heart of this defence base, the Naval Group site specialises in in-service support (ISS) for ships and their equipment, as well as the operation, servicing and upgrading of support infrastructure. "As heir to the dockyards of the French Royal Navy, Naval Group is the company with the strongest historical footprint on the naval base. Alongside the sailors and partner companies, the employees of the Services department ensure the maintenance of the vessels and carry out large-scale upgrade works as part of certain programs. They also adapt the infrastructure for the maintenance of new-generations vessels, including docks, quays, technical galleries, workshops, ship power supply systems and handling equipment", explains Pierrick Etiemble, Director of Services Programs.

CONSTANTLY EVOLVING INFRASTRUCTURE

Launched in 2012, the Barracuda Docking Support (ASB) program oversees the transformation of the Missiessy protected area for its adaptation to the new generation of submarines. The Missiessy area forms a secure enclave within the naval base and houses the infrastructure dedicated to the routine maintenance of SSNs, as well as major maintenance. It includes three docks, redesigned one by one to adapt to the Barracuda interfaces and meet new safety and environmental standards. In service since 2020, the MY01 dock has since accommodated the *Suffren* and the *Duguay-Trouin*, as well as the *Améthyste* and the *Perle*, the last Rubis-class SSNs in service. MY02, the second dock dedicated to routine maintenance, has just obtained its authorisation for entry into service, while MY03, intended for major maintenance, will be operational for the first major careening of the *Suffren*, scheduled for 2030. "Naval Group is also responsible for carrying out studies and drafting nuclear safety reports on the infrastructure. These include evidence of compliance and require careful work in order to present them in committees to the State bodies that issue the operating authorisations", adds Pierrick.

KNOW-HOW EXPORTED ON AN INTERNATIONAL SCALE

Engineering and works management, chemistry and radiation protection, mechanics, facility management, methods and tools, handling: the complexity of upgrading work on the naval base involves a wide range of cutting-edge expertise, deployed by Naval Group teams. Apart from the Var dockyard, various projects concern the group's other French sites: by adapting its industrial facilities to the extraordinary dimensions of the future new-generation aircraft carrier (PA-NG), the site of Nantes-Indret been upgraded and that of Cherbourg is making a technological leap forward to accommodate the construction of third-generation nuclear ballistic missile submarines (SSBN 3G). Naval Group also offers this unique expertise on complex maritime infrastructure to its customers for the design of their shipyards, as well as the infrastructure necessary for the construction and maintenance of conventional and nuclear submarines.

About Toulon

More than

1,000

tools have been specifically designed and installed for Barracuda ISS.

2,400

employees of the Services department work at the Toulon Naval Base.

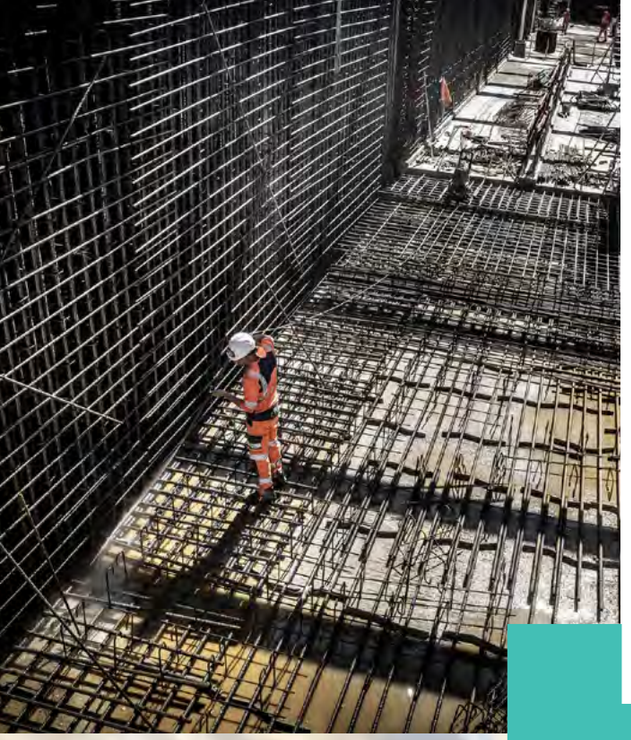
MY

This is the code name of the docks of the Missiessy area, so named after Édouard Thomas Burgues de Missiessy (1756-1837), a French Vice Admiral who was born and died in Toulon.

1881

Year in which the first historic Missiessy dock was commissioned.

Naval Group has developed unique expertise in the design and operation of complex maritime infrastructure.



"THE TRANSFORMATION OF THE MISSIESSY AREA, CARRIED OUT WITH NAVAL GROUP, IS THE DEFENCE INFRASTRUCTURE DEPARTMENT'S LARGEST PROJECT."

The inflow of water to dock no. 2 of the Missiessy area during its qualification tests in January 2025.

Interview with General Pierre-Jean Rondeau, Director of the Mediterranean Defence Infrastructure Department (SID MED).

GENERAL PIERRE-JEAN RONDEAU

The Defence Infrastructure Department (SID) is the Ministry of the Armed Forces' expert in infrastructure and energy. Its role is to meet the infrastructure needs of the forces at all times and in all places.
It manages the construction, renovation and maintenance of the facilities. As project owner of the Missiessy project, SID MED placed its trust in Naval Group.

What is the role of SID MED?
SID MED is responsible for the outfitting and maintenance of infrastructure on military sites located within a 30-kilometre radius around Toulon. The establishment therefore not only manages the naval base, but is also responsible for the Pôle Écoles Méditerranée in Saint-Mandrier, the naval air base in Hyères and all military infrastructure up to Levant Island. We focus on a limited area with a unique fleet of facilities in France: both conventional civil engineering infrastructure (offices, housing, etc.) and military support infrastructure (command centres, a nuclear deterrence centre, a hospital, etc.), including complex port infrastructure, in particular that providing a connection to ships (docks, quays, cranes, etc.), and nuclear facilities such as those in the Missiessy area. Our work also covers State management, project management for the maintenance of all facilities and the definition of investment plans. SID MED employs 630 people, engineers and technicians, covering a wide range of skills addressing all the missions within its scope.

Why was work needed on the Missiessy area? What did it entail?
The technological gap from one generation of SSNs to the next – forty years – is such that shore installations had to be adapted: the equipment and supply interfaces (air, fluids and electricity) are no longer the same, nor are nuclear safety requirements and seismic and environmental standards. It should be noted that the program began in 2012 in a post-Fukushima context. Finally, the same standards of dimensions no longer apply, as we have progressed from a Rubis measuring 73 metres in length with a diving displacement of 2,700 tonnes to a Barracuda measuring 100 metres in length with a displacement of 5,300 tonnes. The Missiessy area is home to three docks, five quays and galleries, as well as the secret basic nuclear installation (SBNI), which includes the workshops reserved for maintenance of the vessels' nuclear reactor compartments.
To enable the SSN squadron to carry out its missions, we need to make the support facilities available, in line with the annual maintenance plan, and functional for both classes of submarines in service.
Quite a challenge!
For this reason, the Missiessy project was divided into three phases.
Phase 1 (2016-2020) saw the adaptation of the first MY01 dock and the two east-side quays. Phase 2, which began in 2021, includes the adaptation of the MY02 dock (delivered in May 2025) and three other quays on the west side with deliveries staggered from 2026 to 2029. Launched in 2022, phase 3 runs until 2030 and concerns the adaptation of shore installations for major maintenance: the adaptation of the final dock and the upgrading of the SBNI facilities. On the SID side, a hundred people are involved in this exceptional project due to the technical complexity of the structures, including many prototypes.

How are SID MED and Naval Group collaborating on this project?
SID has entrusted Naval Group with various assignments depending on the progress of the overall project. Industrial assembly and the organisation of tasks have evolved with the project: phase 1 was very demanding in terms of personnel on the Naval Group side, involving employees for the studies and then for implementation of the works.
In phase 2, Naval Group is the prime contractor for dock 2. Naval Group has also carried out part of the design studies for dock 3. Phase 1, the launch and development phase of an extremely complex project, was naturally the most difficult phase: in 2012, Naval Group's level of expertise in infrastructure was not the same as it is now. We also had to get to know each other and to speak the same language. Adjustments were made – in particular on the technical input – with visible benefits felt in phase 2. We saw a real increase in skills, boosted by the unwavering commitment of Naval Group's teams. Together, we have achieved a higher level of trust. What binds us above all is the common goal that drives us every day: to ensure the availability of the SSNs at all costs by completing this extraordinary project.

Team spirit

PRESENTING OUR PROFESSIONS TO GIRLS TO SHOW THEM THE RANGE OF POSSIBILITIES: THIS IS THE ROLE OF OUR ELLES BOUGENT "GODMOTHERS" AND LIAISON OFFICERS. REPORT ON PAGE 40. NAVAL GROUP IS RECRUITING! MORE INFORMATION ON PAGE 49. ON THE FDI PROGRAM, OUR TEAMS WORK TOGETHER, FROM ATHENS TO LORIENT. PORTRAIT ON PAGE 50.

TEAM SPIRIT_ELLES BOUGENT

ELLES BOUGENT

CONCRETE ACTION!

IN JANUARY 2025, PIERRE ÉRIC POMMELLET, CHAIRMAN AND CHIEF EXECUTIVE OFFICER OF NAVAL GROUP, TOOK UP HONORARY PRESIDENCY OF ELLES BOUGENT, AN ASSOCIATION THAT HAS BEEN WORKING FOR TWENTY YEARS TO FOSTER DIVERSITY IN COMPANIES IN THE INDUSTRIAL AND TECHNOLOGICAL SECTORS. WHAT ACTIONS HAVE OUR "GODMOTHERS" AND LIAISON OFFICERS CARRIED OUT IN RECENT MONTHS? REPORT.

In April 2025, the Naval Group site in Nantes-Indret welcomed female high school pupils to promote the role of women in the maritime sector and raise their awareness of career opportunities in naval defence.

Science and technology are not gender-specific. However, since the reform of high school education, there has been a drop in the pool of young girls entering the scientific and technical fields has tended to shrink.

The Gender Scan 2023 survey even revealed a 6% drop in the proportion of women among graduates of science, technology, engineering and mathematics (vocational training certificates, undergraduate diplomas and masters) between 2013 and 2020 in France, while elsewhere in Europe this figure increased by 19%. As for engineering schools, the proportion of female graduates has been relatively stable for ten years at 29%. No great progress here either. How about approaching the topic from a different angle? At the end of the day, does striving for greater diversity have any effect? The studies are unanimous: companies with the highest gender parity are also the most profitable. BlackRock, one of the largest US asset management companies, looked at the workforces of 1,200 listed companies from 23 different countries. From 2013 to 2022, those with the most balanced gender ratio had a return on investment of 7.7% per year on average, 2 points higher than those with a significant imbalance in favour of men (5.6% on average) or those with a significant imbalance in favour of women (6.1%).

Gender parity is not only an ethical issue, but also a strategic lever. Since January 2025 and for the whole year, Pierre Éric Pommellet has been honorary president of the Elles bougent association. This appointment is the continuation of a partnership with the association that began in 2014, with the aim of promoting the engineering and technical professions in naval defence and the defence industry in general. This is also the purpose of his honorary presidency. More than 400 employees of Naval Group, both godmothers and liaison officers, have understood the importance of going out into the field and addressing female middle and high school pupils and engineering students to highlight the range of professions available in the shipbuilding industry and promote a greater inclusion of women in this fast-changing sector. A number of actions supported by the Elles bougent network are carried out throughout the year. Here are some examples.]

Océane Chalmeton,
Onboard Software Designer
at Naval Group

“I hope to be an inspiring encounter for young women”

“During my studies – a degree in mathematics followed by Polytech Clermont, an engineering school – I was often the only girl. At best, there were four of us in a class of thirty. Once I graduated, I was the only one to go into software development, the others turned to statistics and data science. When I carried out my work-study placement with Thales, I was again the only girl and today, in my department of about thirty employees, there are only three of us, including my boss. It’s not a problem for me, but I don’t understand why girls don’t choose these careers and what prevents them from doing so. I wanted to join Elles bougent to share my personal experience and, if possible, inspire the careers of other young women. I grew up in La-Londe-les-Maures, a town where becoming an engineer is not straightforward. However, the future centre of excellence for drones and underwater weapons that Naval Group is building there (*see our article in* Naval Review *No. 1*) promises some great careers, which we need to talk about. Personally, it was an encounter with an IT instructor during an internship in one of the French Navy’s colleges that opened up the field of possibilities for me. Without him, I would never have gone to engineering school. I thought my grades were not good enough, which turned out to be wrong. So now, I hope to be that encounter for other girls, whether middle or high school pupils or engineering school students considering their career options. I try to convey my passion for my job to them and explain the concrete realities of my day-to-day work, as well as that of the defence sector, which can scare people off. On a more personal note, the partnership with Elles bougent also gives me the opportunity to meet really inspiring women with an infinite variety of backgrounds. I’m thinking in particular of a researcher at the French National Centre for Scientific Research (CNRS), an organisation I used to dream about when I was little. I’m only 25 and on continue to be on the lookout for inspiration for my professional future!”

14 young women from the Lycée Jean-Perrin in Rezé discovered our activities through round tables in small groups with our godmothers and female employees.

Lionel Poleska,
Aviation installation job-instruction technician on the *Charles de Gaulle* aircraft carrier at the Naval Group site in Toulon

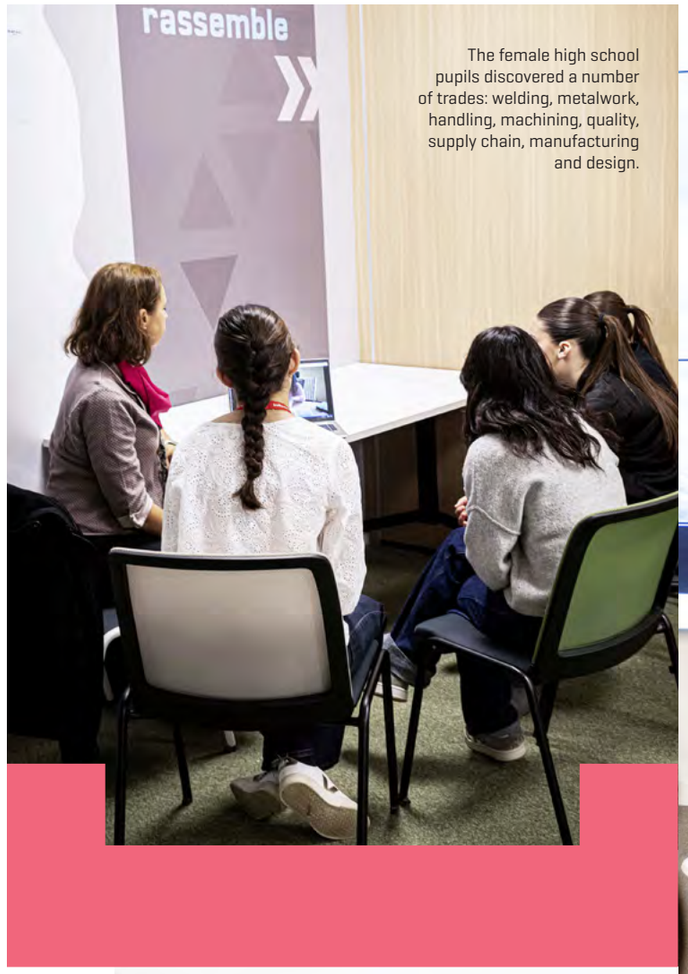
"The industry has everything to gain from gender parity"

What is your role as a representative of the Elles bougent association?
This is all very new to me. I wasn't aware of the association at all before meeting their representatives, including my boss, who set up a stand on the site a few weeks ago. They explained their approach to me and I was motivated to join them.

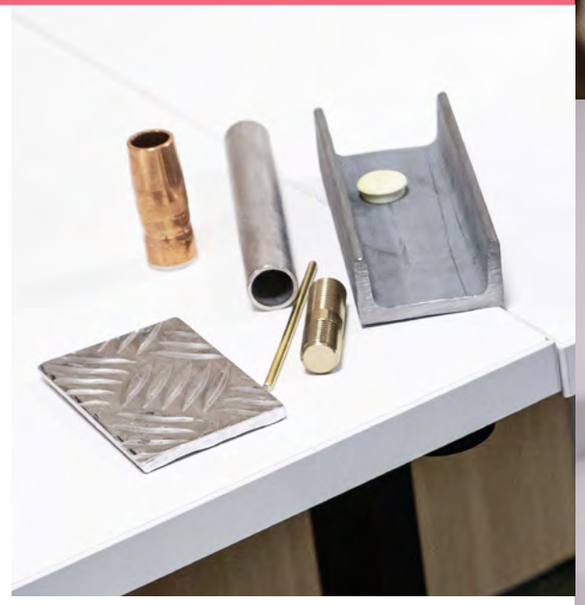
What convinced you to get involved?
I want to help promote the industry and its trades to women, at a time when they are still perceived as reserved for men. It's 2025, mentalities have changed, and I see no obstacle to women being even more widely represented in the shipbuilding industry.

What do you want to convey?
I want to tell them to go for it and not to be intimidated by the industry, which has greatly evolved in recent years, and that naval defence is a world that is as complex as it is fascinating. I simply want to present the reality of my profession as a job-instruction technician, a role which can be carried out by both men and women. I would like to share my pride in contributing to the maintenance of vessels such as the *Charles de Gaulle*, enabling the French Navy to accomplish its missions.

Do you believe in gender parity?
Yes, I strongly believe in it and I'm convinced of its advantages! I compared my department, which is 90% male, and the municipality where I live and where I am an elected official. Gender parity has become the rule in municipal councils. I notice that women can have a different perspective from men, and that it is precisely this diversity that is interesting and complementary. The industry has everything to gain from new and differing perspectives on our methods, our processes and our habits.



The female high school pupils discovered a number of trades: welding, metalwork, handling, machining, quality, supply chain, manufacturing and design.



Created in 2006, the Elles bougent association has 12,370 godmothers, 3,060 liaison officers, 357 partners, 12,570 students and 2,039 middle schools and high schools, 49 of which are international.
At Naval Group, more than 400 female employees of the group, all engineers or technicians, contribute to the association as godmothers, and are regularly involved in helping and guiding students.

IMPACTFUL ENCOUNTERS

Ingrid de Dompsure, a history and geography teacher at the Lycée Les Rimains in Saint-Malo, discovered Elles bougent last January at the 10th edition of the Innovatech© Challenge, one of the association's major events organised throughout France. In Brest, she accompanied a dozen high school pupils from Les Rimains who competed, in teams of six (two godmothers, two students and two high school pupils), to come up with the best industry project of the future. "I met some really enthusiastic godmothers there", Ingrid recalls. "Their fulfilment was palpable, taking on a job in a world reputed as masculine and proving themselves competent and in their rightful place. We know very well that if a young woman, just like a young man, has the opportunity to meet a fulfilled, passionate engineer, he or she will ask themselves, why not me? I quickly made the connection with our Women's Science Day, held in October each year. Until now, we have relied on our network of alumni, but the presence of godmothers will further give weight to the credibility of our work in the Saint-Malo and Rennes employment basin. Our goal is to offer students in year 10, who are starting to think about career choices, the opportunity to meet and talk to female engineers and scientists at the high school. We hope that by doing this, we will encourage them to remain with general and technological subjects in their final three years at school. Since we launched these days four years ago, the number of girls has risen from one to two girls per class to seven or eight, and remains stable. The pupils are motivated because they can project themselves further than just the following year, as we work with them on their career prospects. To do this, we provide them with several opportunities for visits and meetings to expose them to a broad range of sectors and possible career paths, across all our courses: both the engineering, digital and technological sciences and the technical sciences of industry (digital technology, innovation, ecodesign, energy and the environment). For example, since I told them about Naval Group, I know that some students are interested in it for work-study placements. Our role as teachers is also to describe in concrete terms this industrial world that is difficult to picture at the age of 15".

Ingrid de Dompsure,
history and geography teacher at the Lycée Les Rimains in Saint-Malo

SHORT BIO

Before entering the teaching profession as a history and geography teacher, Ingrid de Dompsure had another professional life focused on international relations, national defence and the operational reserve (*see our article* in Naval Review *No. 1*). This helped her forge a solid culture of openness, with a certain affinity for science and technology.

Our goal is to offer year 10 pupils the opportunity to meet and talk to female engineers and scientists at the high school.

ELLES BOUGENT: JULIE GETS ON BOARD!

Julie Berlivet, a first-year student at EPF, a general engineering school recently opened in Saint-Nazaire, participated last February on the invitation of the school's director, in the InnovaTech© Challenge, a 100% female and intergenerational competition organised by the Elles bougent association in Nantes.

Julie Berlivet,
a first-year student at EPF, a general engineering school in Saint-Nazaire

"As a team, we imagined a rainwater collection system designed with mesh panels made from recycled textile fibres from fast fashion. This project made it through to the final round and we presented it in mid-May in Paris. What I liked was that we all came from different disciplines: our varied points of view really enriched the project", she explains. Convinced by the values promoted by Elles bougent, Julie plans to join the association at the end of her course. "I was lucky to have a mother who had a scientific background and worked as a professor of toxicology. I loved the physical sciences and I never encountered any obstacle in following a scientific path. However, women are still under-represented, which is unfortunate. In my class, there are only two girls for eleven boys. The campus here has only just opened, so these figures are not yet representative. It's not a problem for me though as the ambiance is great".]

Created in 2016 in partnership with the Directorate General for Enterprises (DGE), the InnovaTech© challenge is one of the Elles bougent association's major events, an intergenerational and 100% female competition to promote entrepreneurship and technological innovation for high school and university students, in teams with the Elles bougent godmothers. It immerses high school students in the role of an engineer or technician and allows them to discover the wide variety of professions within the industry.

Discover our "Diversity and inclusion" special feature in *Naval Review* No. 1, available on our website.

TALENTS

4,500

The number of talents who have joined Naval Group over the past three years. Naval Group continues to grow and pursue its recruitment and skills transfer policy. Joining Naval Group means working on high-tech products and services based on excellence. It also means adhering to values that contribute to collective intelligence and fuel our spirit of conquest: collaboration, initiative, innovation, passion and a taste for challenge.

UPSTREAM AND DOWNSTREAM NEEDS

Naval Group is recruiting in the fields of design, shipbuilding and fleet services. In addition to recruitment needs for engineering profiles, particularly in the digital and cybersecurity professions, the group also needs technicians and workers. The current programs will generate thousands of new jobs in France and abroad. At the same time, a robust maintenance and upgrade activity for existing fleets will also require a multitude of skills. In order to attract the best talents, the group is very present in targeted schools and on job forums, social networks and recruitment sites, as well as at recruitment events. The company is refining and improving its compensation and professional development policy, optimising the quality of life at work and reinforcing its societal commitments, to attract and retain its employees.

Diversity, synonymous with richness, is reflected in a number of actions to promote gender parity, the employment of people with disabilities, the inclusion of experienced seniors and people with difficulties finding employment, and the training of the younger generation. The group also supports the professional retraining of those wishing to change careers.

Discover more information in the Careers section of our website, and follow our news on our social networks.

INTERVIEW WITH **ALIKI LAMPRINOUDAKI,** SENIOR PURCHASING OFFICER AT NAVAL GROUP HELLAS

FROM ATHENS TO LORIENT

NAVAL GROUP CREATED ITS GREEK SUBSIDIARY NAVAL GROUP HELLAS IN 2023, BUILDING ON FIFTEEN YEARS OF COMMERCIAL AND INSTITUTIONAL RELATIONS FORGED WITHIN THE COUNTRY. ITS AIM? TO DEEPEN COOPERATION WITH THE GREEK DEFENCE INDUSTRIAL AND TECHNOLOGICAL BASE AND PROVIDE THE GREEK NAVY WITH IN-SERVICE SUPPORT FOR DEFENCE AND INTERVENTION FRIGATES (FDI). THE SUBSIDIARY HAS SINCE CONTINUED TO GROW AND HAS RECRUITED ITS FIRST GREEK EMPLOYEES, INCLUDING ALIKI LAMPRINOUDAKI, SENIOR PURCHASING OFFICER, WHO WORKS CLOSELY WITH THE TEAMS IN FRANCE, PARTICULARLY AT THE SITE IN LORIENT.

You have just joined Naval Group Hellas. Looking back on your career, what led you to this change?
I began my career after graduating with a degree in Business Economics from Manchester Metropolitan University and an MBA from Cardiff University. I first worked for an Australian company involved in organising the Athens 2004 Olympic Games, which was a source of great pride, both professionally and personally. This first position confirmed my decision to pursue a career in purchasing and supply management. I then worked with major international industrial manufacturing players based in Greece, developing my skills in procurement, strategic sourcing, operations and tender management.es.

Can you give us a few examples of highlights or particularly projects in your career?
Several experiences have shaped my procurement philosophy, which is to believe that proactive collaboration, open communication (even with competitors) and stable and structured partnerships are the keys to success. For example, faced with shortages of raw materials that threatened the flow of production, I contacted a competitor to arrange a one-off purchase and avoid supply disruptions. Generally speaking, each project has shown me that it is only by collaborating in a consistent and structured way with our suppliers that we can make progress, and not only when problems arise.

What inspired you to join Naval Group?
Serving the sovereignty of the State drives Naval Group's mission as an industrial group. I was drawn to the group's level of excellence, passion for innovation and commitment to technology, exemplary governance, sustainability and respect for people and all stakeholders. My decision to join Naval Group was motivated by three aspects that seemed essential to me:

In the spring of 2025, Aliki visited his colleagues in Lorient, allowing him to discover the construction site of the defence and intervention frigates (FDI).

people, the project to ensure in-service support for defence and intervention frigates (FDI), and career opportunities. I am proud to be part of the most ambitious FDI maintenance project in Greece, working alongside a team of top-notch engineers and experts, all motivated to succeed.

What is your current role?
I am responsible for all procurement activities at Naval Group Hellas, covering contracts (equipment and services) for FDI, as well as other Naval Group programs and R&D projects. For the FDI program in particular, we have implemented subsidiary-specific procurement procedures, while remaining fully aligned with group standards. We are actively identifying new local partners to optimise quality and delivery through transparent benchmarking and robust negotiations. We want to improve local performance, increase our industrial participation in Greece, improve maintenance efficiency and develop key skills for the future of Greece.

How was the meeting with the French procurement team in Lorient?
I have very special memories of this meeting with the international procurement team, whose passion, dedication and strong team spirit that characterise us were tangible. Each ▸

discussion reinforced my desire, my motivation and my pride in being part of the adventure. In addition, the visit to the shipyard was an unforgettable experience: nearly four hundred years of history and still at the forefront of technology, with health and safety as top priorities. The visit on-board the Greek frigates *Kimon* and *Nearchos* was a real moment of pride that I won't forget in a hurry.

What are your main challenges for 2025?
This year, it is important for us to reinforce partnerships with Greek companies for the FDI program and other naval projects, provide in-service support for FDI frigates and French navy vessels operating in the Mediterranean region, and develop R&D projects with Greek partners to foster innovation and engagement at a local level.

How do you see your future?
I see it as an opportunity to add even more value by identifying key areas of spending, optimising procurement processes and following market trends to introduce the latest innovations and technologies. I also hope to grow by contributing to future submarine and shipbuilding projects here in Greece.]

Formion, the third defence and intervention frigate (FDI) for the Greek Navy, launched on 28 May at the Naval Group site in Lorient.

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As an international naval defence player, Naval Group is a partner for countries seeking to maintain control of their maritime sovereignty. Naval Group uses its extraordinary know-how, unique industrial resources and ability to establish transfers of technology and strategic partnerships. The group designs, builds, integrates, provides in-service support, deconstructs and dismantles submarines and surface ships. As an industrial prime contractor, equipment supplier, designer and integrator of whole warships and combat systems, Naval Group is innovating in the domains of autonomous systems, underwater weapons and drones. The group also offers services for naval shipyards and bases. Ever mindful of the issues of corporate social responsibility, Naval Group is a signatory to the United Nations Global Compact.

For further information:
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