Navantia, SAES, Perseo to develop a line of unmanned underwater vehicles

Madrid, 19th May 2023.- Navantia, SAES, and Perseo have announced during the FEINDEF (defence and security exhibition) their intention to develop a line of unmanned underwater vehicles equipped with state-of-the-art sensors to deploy exploration and surveillance capabilities in increasingly demanding operational theatres.

Navantia has launched a roadmap to incorporate a range of solutions based on unmanned vehicles (UXV) into its product catalogue, aiming to cover the full spectrum of missions to be executed in different domains: naval, aerial, and land, where these platforms provide tactical superiority. This roadmap is part of the company's Horizon 5.0, a long-term plan through which Navantia aims to strengthen its systems business as a core activity alongside shipbuilding, intelligent services, and green energies.

In the submarine domain, SAES, a leading company in underwater acoustics and electronics with nearly 35 years of experience in developing technologies in this field, positions itself as one of the main national players to provide tactical and mission capabilities to unmanned vehicles (UXVs) based on its expertise in sonar technology, underwater communications, and operational concepts for various missions. SAES, whose essence and strategy are summarised in its new brand "innovate, develop, and protect", approaches this field from two perspectives: collaborating in their development to make them truly autonomous and using them in conjunction with other proprietary systems to provide submarine defence solutions within the scope of its business lines.

Perseo Techworks, a Spanish company specialising in UXV, numerical simulation, onboard electronics, rapid prototyping, additive manufacturing, IoT, and artificial intelligence, has extensive knowledge and experience in the sector, participating in various European projects and R&D+i at the national level.

SAES and Perseo, together with Abance Ingeniería y Servicios, Arisnova, and Eolos Floating Lidar Solutions, participate in the E-PARK+ project, led by Navantia, which seeks to develop solutions for digitising the operation and maintenance of offshore wind farms using unmanned vehicles alongside other industry companies.

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At FEINDEF, a UUV prototype with distinctive features that would allow it to cover a multitude of missions has been exhibited. This first approach is focused on its use in mine countermeasure (MCM) missions, although its possible application as an advanced sensor or loitering munition is being studied based on the same development and with few modifications. Donato Martínez Pérez de Rojas, Technologies and Digital Transformation Director and Systems and Services Director at Navantia, Joaquín López Pagán, President and CEO of SAES, and Sergio Olmos Guío, CEO of Perseo Techworks, have expressed their commitment to collaborate in promoting innovation in the field of autonomous underwater vehicles. "Unmanned vehicles are an asset of growing importance for the armed forces and civilian applications. Navantia already has experience in the development of unmanned surface vessels (USV), and together with SAES and Perseo, we want to expand our catalogue to those intended for the submarine domain," said Donato Martínez.

According to SAES President Joaquín López Pagán, "at SAES, we are committed to the development of sustainable technologies in the naval sector. Our experience in underwater acoustics and electronics positions us as one of the main players in providing autonomy to unmanned vehicles and collaborating in their development to make them truly autonomous. Moreover, as they do not require human crew members, these vehicles are a safer and more economical option for carrying out defence missions and civilian applications."

"The development of unmanned systems requires specific technologies and working methodologies for competitive developments. Perseo Techworks works on these enabling technologies within a work scheme that allows for rapid iterations, in which simulation, rapid prototyping, and testing and trial capabilities are intertwined to create products with very short development times and adaptable to a constantly changing market," says Sergio Olmos Guío.

About Navantia:

With a history of over 300 years linked to shipbuilding for the Navy, Navantia is a public and strategic technology company for Spain's defence. Its areas of specialisation range from shipbuilding (surface and submarine) to the design and integration of high-tech systems and support for the life cycle and high value-added services. Additionally, with its Navantia Seanergies brand, it is a global provider for the development of offshore wind energy and other green energies such as hydrogen.

Navantia employs around 4,000 people directly in Spain, mainly at its sites in Ferrol and Fene (A Coruña), Puerto Real, San Fernando, Cádiz and Rota (Cádiz), Cartagena (Region of Murcia), and Madrid. Committed to building a secure and sustainable future through technological excellence and industrial collaboration, Navantia has contracts with governments and companies worldwide and links with universities and technological and academic centres. Due to its social responsibility as a public company and as a driving force for an entire industrial ecosystem, it contributes to sustainability and innovation

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with its daily commitment to people and the planet, with responsible practices from a labour, environmental, and economic and technological development perspective, viable regionally, nationally, and internationally. It is 100% owned by the Spanish Society of Industrial Participations (SEPI, attached to the Ministry of Finance and Public Function of Spain).

About SAES

SAES is a cutting-edge international technology company specialising in the development of underwater acoustic and electronic intelligence projects, with the highest standards of creativity, innovation, exclusivity, and mastery beneath the sea. We provide solutions in the naval sector for over 40 different countries, always faithful to the belief that our daily work is to create security, common well-being, responsibility, and trust. For more than 30 years, we have been focused on customer orientation, technological leadership, continuous improvement, renewed environmental sensitivity, and ethical commitment. Today, we are also innovation for a safer world.

About Perseo

Perseo Techworks carries out developments of autonomous unmanned vehicles, as well as specific developments in inertial navigation systems, AI and computer vision, onboard computers with highly compact and powerful GPUs, underwater actuators, communication and IoT systems, ground stations, and propulsion and battery systems, all essential for competitive developments of autonomous unmanned products. The company also has a group of experts with over 10 years of experience in simulation and finite elements, both for mechanical engineering and SRS calculations, orthotropic, anisotropic and hyperelastic materials, viscous CFDs, potentials and CHTs, thermal analysis of components and obtaining behavioural functions, primarily applied to the naval and defence sector.

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