

TRANSFLYTOR Press Release

A 20m Fast Vessel with retractable hydrofoils: Troop Transportation Flying Vector

On the occasion of EURONAVAL 2022, SEAir will present the TRANSFLYTOR, a fast surface vessel with military capability in the 20-metre range. The complete design and engineering studies behind this ambitious French-led project are fully funded by the European E-DIDP program and will be delivered at the end of 2023.

SEAir is the technical leader, while the DGA ensure the good operational and technological suitability of the vessel, coordinating exchanges with their Danish and Spanish counterparts.

TRANSFLYTOR aims to open up *new options for engagement* in maritime defense and special naval operations in the face of the challenges posed by the extension of national security threats in our continental approaches (clandestine aggression against offshore installations, terrorism, disaster at sea, etc.) and by hostile access conditions, approaches and coastlines ("Anti Access/Area Denial").

Our ship is conceived to operate at high speed (on foils), with multi-missions capability (special forces, drones, ...), while being discreet (reduced signature), and capable of ocean operation (long range, launch from amphibious vessel) and highly militarized (armament, sensors, C2I).

In addition, will lead a conference on Friday, October 21th, from 11:30 to 12:00: [Tomorrow's hydrofoil-equipped defence vessels: strong international interest | WORKSHOP AREA](#).

In an ever-changing geopolitical context, defence and security capacities are challenged. Interventions at seas require to transport few specialized people, far away, at a maximal speed. TRANSFLYTOR aims to design a disruptive high-speed 20m long vessel, using ground-breaking retractable hydrofoil systems. The vessel will be able to navigate using hydrofoils on deep sea during transit phases, and without hydrofoils in shallow water or during approach phases.

Hydrofoils will be automatically regulated to get more stability (shocks reduced by up to 50%), increase the average speed and reach a max speed (45 kts), while decreasing a lot fuel consumption (-30%). Specific propulsion systems, compatible with the hydrofoils, will ensure both to reach high speeds and to discretely approach the operational point. The general arrangement and deck equipment will allow long range navigations, furtivity, and versatility of the boat.

The project will use an innovative approach based on cutting-edge simulation tools, which will enable to by-pass prototype stage and tank tests: i) accelerate time-to-market (commercialisation planned as of 2028); ii) dramatically reduce development costs. This boat will be designed to specifically meet European Special Forces needs, complying with Navies, naval and NATO standards. In the future, the core design will ease further development of large high-speed boats for other military or civilian applications (rescue, environment, wind farm, CTV...).

The project gathers three European SMEs and an academic laboratory:

- [SEAir \(FR\)](#), coordinator of the project, has proven experience with hydrofoil and regulation systems. **Contact:** richard@seair.fr
- [Tuco Marine \(DK\)](#) is a renowned boat builder experienced in military patrol boats. **Contact:** jonas@tuco.dk
- [D3 Applied Technologies \(SP\)](#) has specific expertise in the design of high-performance boats (profiles, seakeeping, and stability behaviour). **Contact:** gonzaloredondo@d3atech.com

SEAir

SAS au capital de 544.876 € - RCS de Lorient : 819 778 838

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- Ecole Navale-IRENAV (FR) is a renowned naval academic laboratory with expertise in hydrodynamics and fluid structure interactions. **Contact:** jacques-andre.astolfi@ecole-navale.fr

The TRANSFLYTOR project has received funding from the European Defence Industrial Development Programme (EDIDP) under grant agreement EDIDP-SME-2020-055-TRANSFLYTOR.

SEAir – Exhibitor

HALL 2 – BOOTH A28 – B39



European Defence Industrial Development Programme

TRANSFLYTOR

Project delivered by:

- SEAir, leader
- Tuco Marine
- D3 Applied Technologies
- Ecole Navale, academic partner

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SEAir
FLYING BOAT

European Defence Industrial Development Programme

TRANSFLYTOR

FLYING ARMED MULTI-MISSION OCEAN-GOING UNDETECTABLE SOLUTION

A NEW GENERATION OF VESSEL WITH HYDROFOILS
Providing extended capabilities for Naval Special Operations and Maritime Defence

<p>SPEED</p> <p>AUTONOMY</p> <p>FURTIVITY</p>	<ul style="list-style-type: none"> MEDIUM RANGE MISSILE REMOVEDLY CONTROLLED MACHINE GUN LPD DEPLOYABLE UAV/USV/UUV LAUNCH/RECOVERY SILENCE/ERGONOMY REDUCED RADAR/IR/OPTRONIC SIGNATURE COMMAND CONTROL INFORMATION TACTICAL EFFICIENCY LONG RANGE 	<p>20 meters</p> <p>45+ kts</p> <p>800^{Nm} range</p> <p>12 operators</p> <p>+ 1T TACTICAL payload</p>
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SEAir
FLYING BOAT

European
Defence
Industrial
Development
Programme

TRANSFLYTOR

**FLYING
ARMED
MULTI-MISSION
OCEAN-GOING
UNDETECTABLE
SOLUTION**

A NEW GENERATION OF VESSEL WITH HYDROFOILS
Providing extended capabilities for Naval Special Operations and Maritime Defence

SPEED

AUTONOMY

FURTIVITY

- MEDIUM RANGE MISSILE
- REMOTELY CONTROLLED MACHINE GUN
- LPD DEPLOYABLE
- UAV/USV/UUV LAUNCH/RECOVERY
- SILENCE/ERGONOMY
- REDUCED RADAR/IR/OPTRONIC SIGNATURE
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- TACTICAL EFFICIENCY
- LONG RANGE

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