

PORTXL 2026

INNOVATORS COHORT

FROM INNOVATION TO IMPACT

PORTXL



This booklet is your guide to the start-ups joining PortXL this year. Inside, you'll find what you need to know about the new cohort: who they are and what they're building.

Think of it as your introduction to the newest additions to our Rotterdam ecosystem. These are the pioneers we'll be supporting throughout the program, the ventures that will connect with organisations, investors, and mentors along the way.

Whether you're a partner, corporate, mentor, or fellow member of the community, start here to get to know the people and get inspired. And as you read, don't just ask yourself what they can do for you, **ask yourself what you can do for them. Who can you connect them to? What advice or opportunity can you offer?**

That's how we help this cohort make their mark in this industry.

The logo for PortXL, featuring the word "PORTXL" in a bold, sans-serif font. The letters are colored in a gradient: "P" is blue, "O" is orange, "R" is red, "T" is orange, "X" is red, and "L" is red.



Meet the
innovators

Aetherion (LU) develops a sovereign sensing mesh for low-altitude airspace. Drones fly low and close to structures, between cranes, roofs and hulls, there where conventional air surveillance struggles. Aetherion spreads detection across a mesh of distributed 77 GHz millimetre-wave radar nodes, paired with Vigil, a command-and-control layer that fuses the tracks into a single picture. The system is built for ports, airports, energy facilities and defence sites. The mesh, the orchestration and the software are built and held in the EU.

CHALLENGE
RESILIENCE
& SECURITY

COUNTRY
LUXEMBOURG



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► NOTES



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BioHalo (DK) is a biotechnology company developing biodegradable, PFAS-free ingredients for high-performance coatings. Using a microbial biohalogenation platform, BioHalo engineers microbes to place single fluorine atoms into organic molecules with precision, producing compounds that could not previously be synthesised chemically, at a fraction of the energy of conventional routes. For the maritime market this delivers a non-toxic, surface-modifying component for antifouling paint, at a moment when regulation on biocides and persistent chemicals keeps tightening. BioHalo is a spin-out of the Novo Nordisk Foundation Center for Biosustainability at the Technical University of Denmark.

CHALLENGE
CIRCULARITY
& MATERIALS

COUNTRY
DENMARK



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► NOTES



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Bluefins (FR) develops WaveDrive, an auxiliary propulsion system inspired by the tail fin of a whale. A hydrofoil is attached to the stern of the vessel through a set of mechanical arms. As the ship pitches in waves, that motion is converted into forward thrust — no fuel, no external energy source. The company targets a reduction of at least 20% in fuel consumption and greenhouse gas emissions. WaveDrive is designed first for retrofit and works across ocean-going vessel types, from container ships and tankers to bulk carriers and ro-ro. Developed with French research institute Ifremer, the system received Approval in Principle from Bureau Veritas.

CHALLENGE
MARITIME
& OFFSHORE

COUNTRY
FRANCE



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► **NOTES**



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CLHYNN (FR) has developed a green hydrogen fuel cell that carries its own hydrogen source. A solid, inert cartridge releases hydrogen from water on site, removing the need for pressurised tanks, refuelling stations and distribution infrastructure altogether. The cell uses a nickel catalyst instead of platinum and is free of PFAS and critical raw materials. Born out of CNRS research and based in Besançon, CLHYNN currently covers the 1 to 10 kW range for generators, small vessels and drones, with higher power classes in development

CHALLENGE
ENERGY &
HYDROGEN

COUNTRY
FRANCE



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Autonomous systems fail when their sensors go blind. ClearDrop (FR) keeps optical surfaces clear of rain, snow, ice, condensation, sand and mud using surface acoustic waves. A miniature device mounted behind the protective glass generates Rayleigh wave, vibrations of a few nanometres, millions of times per second, that lift contamination off the surface in seconds. No mechanical parts, no water, almost no power draw. Developed with the IEMN, the University of Lille and the CNRS, the technology applies wherever cameras and sensors have to keep working in exposed conditions.

CHALLENGE
RESILIENCE
& SECURITY

COUNTRY
FRANCE



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Copsys (CAN) calls it paint with feelings. Copsys Intelligent Digital Skin is a coating that senses its own condition. Applied to a hull, a pipeline or port infrastructure, it detects and locates coating damage in real time, reports it to a remote dashboard, and delivers additional electrochemical protection to the exposed metal underneath. It replaces periodic visual inspection with a continuous digital presence, and takes on corrosion and biofouling in one system. Copsys was selected for the Critical Infrastructure and Logistics cohort of NATO DIANA 2026.

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RESILIENCE
& SECURITY

COUNTRY
CANADA



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ELNAV.AI (HR) builds maritime AI for the point where on-board systems, operating procedures and professional judgement have to align. Aware Mate uses edge AI to detect patterns consistent with reduced alertness on the bridge and issues local alerts so the crew can intervene before risk escalates, processing happens on board, with no identity recognition and no video sent ashore. The Helm Order Monitor verifies spoken helm orders using speech recognition and ship sensor context. Founded by a master mariner with thirty years at sea, ELNAV.AI works from a simple principle: AI should assist the bridge, not audit it.

CHALLENGE
MARITIME
& OFFSHORE

COUNTRY
CROATIA



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MARINE WEATHER INTELLIGENCE



Marine Weather Intelligence (FR) is a next-generation weather routing and forecasting platform for offshore operations, shipping, heavy transport and towage, and yachting. MWI aggregates more than fifty ensemble weather models, applies AI-driven bias correction and delivers probabilistic routing, giving operators a confidence envelope instead of a single forecast line. Routes are calculated against each vessel's own polars, producing reliable ETAs, lower fuel consumption and fewer weather-driven surprises. Founded in 2023 by Christian Dumard, whose routing career spans three Vendée Globe campaigns, and AI engineer and fellow routing expert Basile Rochut. Ifremer is both a research partner and an investor.

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& OFFSHORE

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FRANCE



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METERS PER SECOND

MPS

Meterspersecond (NL) builds vertical axis wind turbines with roughly double the energy density of comparable systems, developed as an alternative to the diesel generators that power dockside operations. The company puts the savings at around 82 litres of diesel per unit per day. The turbines are aimed at sites where grid capacity is limited or absent, quaysides, terminals, construction sites and off-grid operations, and are paired with storage to smooth supply. Meterspersecond is in discussion on a first pilot in a Dutch port.

CHALLENGE
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HYDROGEN

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PointCanvas (UK) turns 3D scans of complex sites into usable digital twins within hours. Scanning a site takes a few days; converting the raw point cloud into a clean, accurate model routinely takes weeks or months of manual work, which is why most operators only ever model their largest assets. PointCanvas automates that step, delivering labelled point clouds ready for BIM and CAD workflows at around eight times the speed of conventional processing. A University of Edinburgh spin-out, the company has piloted its technology in the Scottish oil and gas sector.

CHALLENGE
DIGITAL
& AI

COUNTRY
UNITED KINGDOM



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Shipsonic (NL) develops, builds and installs ultrasonic anti-fouling systems for commercial shipping, offshore, fishery and industry. The principle is straightforward: larvae of fouling organisms do not settle on a surface vibrating in the ultrasonic range at sufficient sound pressure. The systems protect hulls, box coolers, sea chests and tanks without biocides, coatings or anodes, install without dry-docking and are maintenance free once commissioned. Despite peak ratings of 80 to 120 watts, a transducer draws around 8 watts in operation. Everything is developed and built in the Netherlands, with research partners including NIOZ and HZ University of Applied Sciences.

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MARITIME
& OFFSHORE

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NETHERLANDS



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