ENGLISH SUMMARY FOR WEB PUBLICATION

ELNAV.AI Is Building an Early-Warning System for Oil Pollution in the Adriatic

Hrvoje Mihovilović

Founder & CEO

A detailed English summary prepared by ELNAV.AI from a Croatian-language interview with founder and CEO Hrvoje Mihovilović, published by Financije.hr on 18 September 2025. This document is intended for partners, media, and international stakeholders and is not a line-by-line translation of the original article.

Source interview: Financije.hr, 18 September 2025. Visual context for the SAR section is based on the source cited in the article: Morović et al., Acta Adriatica (2015), © SCANEX.

ELNAV.AI is presented in the interview as a Croatian maritime technology company working on two problems that are often handled too late: human-factor risk on the bridge and pollution in coastal waters. The Adriatic is framed as a practical proving ground for systems that can later scale internationally.

The company says it is combining AI, maritime robotics, and operational experience at sea to build products that are usable in real conditions - not only in research settings. The stated objective is practical and measurable: fewer incidents, earlier pollution detection, and more reliable support for crews and institutions responsible for marine safety.

> *"AI in shipping should act as a copilot, not an autopilot."*

Three development tracks

Helm Order Monitor
Bridge speech and helm-command analysis.

Aware Mate
Situational awareness and real-time safety alerts.

Project Sentinel
AI-assisted underwater sensing for pollution detection.

01. COMPANY OVERVIEW

A maritime safety company built around operational reality

ELNAV.AI is positioning itself at the intersection of bridge safety, situational awareness, and marine environmental protection. In the interview, Mihovilović described the company as applying artificial intelligence and maritime robotics to problems that remain operationally important, commercially relevant, and too often addressed only after an incident or pollution event has already occurred.

That positioning is rooted in lived maritime experience. After more than thirty years at sea, he argues that the human factor remains decisive in safe navigation, while many monitoring tools have changed far more slowly than the environments in which crews now work. ELNAV.AI was founded to move practical AI and autonomous systems out of the lab and into real navigation and monitoring workflows.

02. PRODUCT PORTFOLIO

Three product lines, plus a service layer

Product line	What it is designed to do	Primary users
Helm Order Monitor	Analyzes helm commands and bridge speech to identify early signs of misunderstanding, and human-factor risk.	Bridge teams
Aware Mate	Acts as a digital companion for situational awareness and real-time safety alerts during operations.	Crew
Project Sentinel	Uses an autonomous underwater glider with AI analytics to detect pollution and monitor the marine environment over time.	Ports and regulators
Service layer	Supports integrations, pilot deployments, and data analytics for operators, ports, and public institutions.	Commercial and public bodies

Taken together, the portfolio shows a company trying to solve adjacent problems with a shared logic: detect risk earlier, package information in a form crews or authorities can act on, and make the technology useful enough to fit into day-to-day work. The business also includes integration work, pilot deployments, and data analytics for commercial operators, ports, and public institutions.

03. PROJECT SENTINEL

Early warning for pollution in busy shipping corridors

The environmental side of the strategy is most visible in Project Sentinel. In the interview, Mihovilović described it as an autonomous underwater glider able to patrol shipping routes quietly and for months at a time. The concept pairs endurance with sensing: the platform is intended to carry instruments for petroleum hydrocarbons, turbidity, oxygen, and other indicators that can reveal illegal wastewater discharges or oil pollution while an event is still actionable.

Operationally, the model is straightforward. The glider monitors in silence below the surface, identifies a suspicious signal, then surfaces and transmits the location and relevant data to the competent authorities. That creates three forms of value at once: earlier warning, more useful evidence, and a stronger deterrent effect. If monitoring becomes persistent and mobile, a vessel can no longer assume that distance from shore, darkness, or the absence of a nearby patrol will prevent detection.

Persistent monitoring

The glider patrols quietly below the surface for long-duration sensing.

Detect suspicious signal

Sensors surface a pattern consistent with oil or wastewater discharge.

Surface and notify

The platform transmits location and supporting data to authorities.

WHY IT MATTERS

Project Sentinel is framed as an early-warning and accountability tool at the same time: faster alerts, better evidence, and a stronger deterrent effect.

03. PROJECT SENTINEL - VISUAL CONTEXT

Regional pollution is not theoretical

Oil slicks in the Adriatic detected using SAR imagery. The original article credits Morović et al. (2015), Acta Adriatica, and SCANEX; preparation: ELNAV.AI.

The image used in the original article reinforces the point that regional pollution is not theoretical. The Adriatic is a compact and economically important sea basin with dense traffic, tourism exposure, fishing activity, and sensitive coastal ecosystems. In that setting, the case for earlier detection is unusually strong: faster intervention can reduce environmental damage, improve accountability, and support a more credible enforcement posture.

Dense traffic

Busy shipping corridors increase both exposure and the value of early detection.

Sensitive coastline

Tourism, fisheries, and coastal ecosystems raise the cost of delayed response.

Actionable evidence

Earlier intervention can strengthen accountability and enforcement.

04. FUNDING AND COMMERCIALIZATION

A capital-intensive system with a staged route to market

ELNAV.AI is explicit that Sentinel is not a lightweight software project. It combines development of the underwater platform itself, sensor integration, offshore testing, and a data layer that turns raw measurements into useful alerts and reports. To support that work, the company said it applied to the European Commission's EIC Pathfinder program through a consortium including the University of Trieste, the Institute of Oceanography and Fisheries in Split, and the Albanian Institute of Geosciences. The interview also points to industrial support from Alcen, which brings experience in underwater platforms.

The commercial model described in the interview aims to lower the entry barrier for customers. Rather than pushing ports or public authorities toward heavy upfront hardware purchases, ELNAV.AI wants to deliver monitoring as a service - providing data, alarms, and reporting without requiring major initial capital expenditure from the end user. That service model sits alongside a broader financing mix that includes European and national grants, international innovation awards, a private investor from the United States, and applied technology partnerships.

Build stack

Underwater platform, sensor integration, offshore testing, and a data-to-alerts layer.

Funding mix

European and national grants, innovation awards, a US private investor, and applied technology partnerships.

Delivery model

Monitoring as a service, with data, alarms, and reporting instead of large upfront hardware spend.

05. MARKET FOCUS

Adriatic first, global markets next

Croatia is presented as a natural proving ground rather than the limit of the addressable market. The Adriatic offers a compact sea area, a high concentration of ports, and operating conditions that allow solutions to be validated quickly in realistic settings.

The interview notes that ELNAV.AI is already working with European partners while building international sales and service channels in parallel. The target customers are broader than a local pilot market: shipping companies, port systems, and regulatory institutions responsible for marine operations and environmental protection.

06. HUMAN-CENTERED AI

Co-pilot logic, explainability, and data restraint

A consistent theme throughout the interview is that AI should function as a co-pilot, not an autopilot. The technology is meant to combine sensor feeds, chart information, and environmental data, recognize patterns that a human may miss under pressure, and generate warnings early enough for people to act. But final authority should remain with officers and other accountable professionals.

That philosophy shapes both product design and data governance. ELNAV.AI says it builds with seafarers rather than around them, with the goal of making systems unobtrusive, understandable, and operationally useful. The interview also emphasizes alignment with European AI rules and GDPR, with a preference for on-device processing, minimal data collection, and transparent algorithms. In maritime settings, trust from crews and operators is a deployment requirement, not a branding exercise.

Decision support, not replacement

AI is meant to surface risks sooner while final authority remains with trained professionals.

Built with seafarers

Operational usefulness matters more than technical novelty or lab-only performance.

On-device processing preferred

The interview points to architecture choices that support privacy and practical deployment.

Minimal and transparent data use

Alignment with GDPR and transparent algorithms is positioned as a deployment requirement.

CLOSING NOTE

The destination described in the interview is concrete: fewer bridge-related incidents, faster response to pollution, and cleaner, safer seas - starting in the Adriatic, but built with wider deployment in mind.

Prepared by ELNAV.AI for web publication
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