

numurus

SMART SYSTEM SOLUTIONS



CaseStudy

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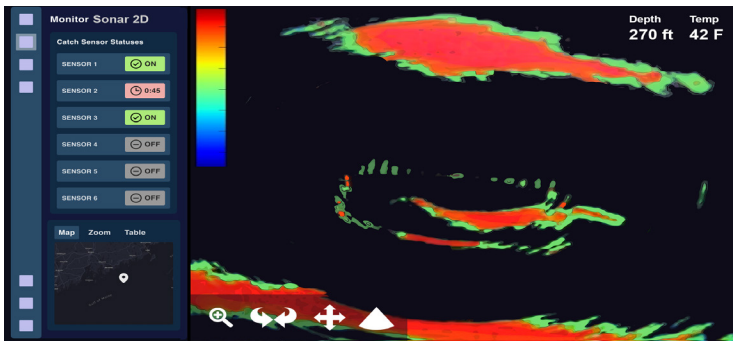
How WESMAR Developed Its Next-Gen Smart Sonar Product in Just 5 Months

“Both the NEPI software and Numurus team have gone above and beyond our expectations, and we are thrilled to have them as a partner as we look to apply NEPI across our entire product line.”

ROGER FELLOWS | PRESIDENT, INNOV8V MARINE GROUP

THE PROJECT

WESMAR, a leading provider of commercial fishing sensors and propulsion products, launched an internal development effort to modernize its product with emerging industrial automation technologies such as Artificial Intelligence (AI), Robotics, and the Internet of Things (IoT). The vision for all their sensing and propulsion products was to create a common interface and processing platform that supported advanced features such as plug-and-play camera drivers, 3D data visualization, real-time AI-driven analytics, modern distributed user interfaces, and cloud-based fleet management portals.



THE CHALLENGE

WESMAR faced major challenges to achieve the product vision provided by management. To start, their small engineering group was already stretched thin with ongoing manufacturing support and part obsolescence issues for their current products, and the in-house team’s experience lacked several key technical areas such as GPU operating systems, AI, user interface design, and cloud-based IoT solutions. With a limited budget, WESMAR didn’t want to hire more engineers to fill all the technical gap areas that they needed to complete the project.

Another project challenge was that WESMAR only had 6 months to go from a concept to a production-ready solution to meet the customer’s requirement.

THE SOLUTION

After surveying the market for technologies that would accelerate their product modernization efforts and reduce their need to hire deep technical experience across the disparate technologies, WESMAR ultimately turned to Numurus for help. Numurus’ AI and automation design services team work closely with the WESMAR product team to quickly deliver a turnkey edge-compute hardware solution preinstalled with Numurus’ NEPI AI and automation software, and customized for their product vision. With Numurus’ NEPI software, WESMAR gained access to all of the middleware software they needed to support plug-and-play sonar and camera sensor interfaces, AI management tools, network-based remote user interfaces, communication drivers, ROS-based connectivity and more.

WESMAR also chose to leverage Numurus’ NEPI professional services team with its deep specialization in embedded GPU hardware and software, to provide complementary sprint capability to WESMAR’s in-house sensor application team.



WESMAR, part of the Innov8v Marine Group, offers a portfolio of sensor and propulsion products that help commercial fishing vessels scan, identify and catch more fish.

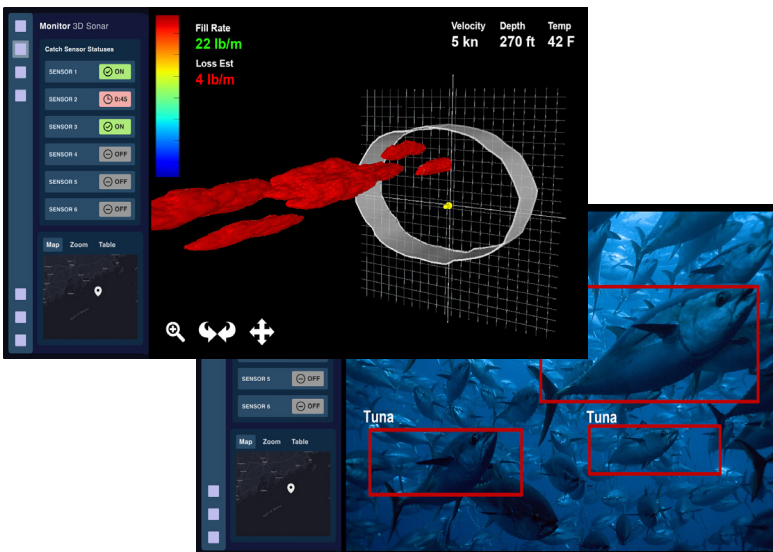
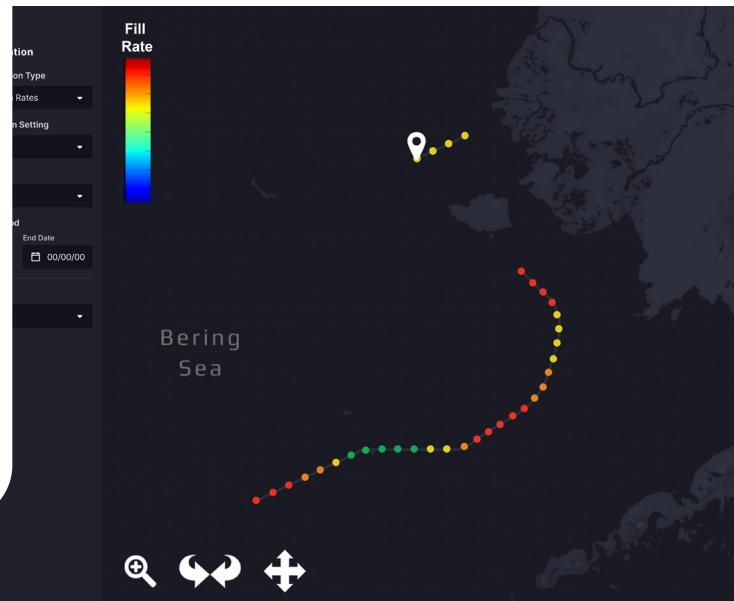
THE PROCESS

Once WESMAR decided to move forward with NEPI as the key driver for their product modernization effort, Numurus' professional services team established and hosted weekly project meetings with WESMAR's engineering, production, sales, and marketing teams to ensure all stakeholders were involved throughout the effort. The Numurus development team provided project management and design services through all stages of the project including:

- Solution Requirements Development
- Budget and Schedule Development
- Sensor Driver and User Interface Customization
- Hardware Prototype Design, Build, and Testing

THE RESULTS

Within 5 months of kicking off their NEPI-enabled sonar modernization project with the support of Numurus' NEPI professional services team, WESMAR successfully demonstrated its next-generation smart sonar product to customers and ready-to-ship production systems were on the shelf.



THE FUTURE

While Numurus' NEPI smart system software allowed WESMAR to quickly develop and launch the first version of their smart sonar product concept, NEPI is also providing software hooks for future capabilities. With NEPI's open-source baseline, capabilities such as camera integration, real-time AI-based analytics, 3D visualization solutions, and remote IoT-based fleet monitoring and support features, will be rolled out over the next year through regular customer software updates. At the same time, WESMAR plans to migrate NEPI smart system software across their entire line of sensing and propulsion products to connect them all through a common ROS-based API backbone.

Kickstart your next robotic, smart sensing, or Edge-AI project with NEPI Smart System Software. Contact Numurus at: info@numurus.com

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