



The Maritime Traffic Surveillance Solution for Wind Farm Operations



SECURE **in** SIGHT



What is inVTSoffshore?

inVTSoffshore is an advanced maritime traffic monitoring system tailored to the unique needs of offshore wind farms. Designed to enhance safety, efficiency, and operational transparency, it provides seamless integration of traffic, personnel, and environmental data into one unified platform. Whether tracking vessels, ensuring workforce safety, mitigating collision risks or preventing unlawful intrusions or even sabotage, inVTSoffshore is your trusted solution for offshore operations.

Why choose inVTSoffshore?

Flexible and adaptable system architecture

Designed to meet unique operational needs, our system offers customer-oriented configurations for applications ranging from perimeter surveillance to anchor plan management. A modular software approach enables tailor-made solutions ensuring all of the essential tools for the operator are available without an overload of unnecessary functionalities.

Effective security measures and monitoring

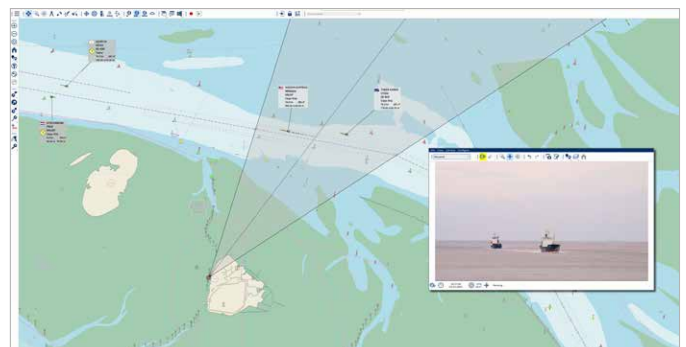
Our inVTSoffshore enables the seamless integration of multiple data sources - from AIS and radar to CCTV and ADS-B, as well as other third-party information. This creates a comprehensive traffic situation monitoring system that helps you to identify hazards in good time and initiate appropriate measures.

Protection of your employees

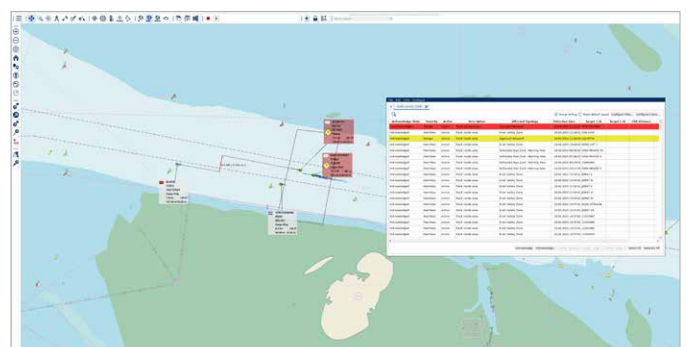
Enhanced situational awareness through advanced personnel tracking ensures full visibility of all movements within the wind farm. Using a range of manual and automated tracking technologies, the system enables real-time monitoring and immediate response in emergency situations - such as locating individuals in distress during a 'man overboard' incident.

Key features

- **Integrated Traffic Management:**
 - Combines AIS, radar, CCTV and ADS-B data for a comprehensive traffic overview
 - Intuitive user interface enhanced with AR and AI technologies
- **People Tracking:**
 - Tracks workforce activity using different technologies (such as RFID, SART...), enabling continuous people tracking options as well as instant detection of man-overboard situations.
- **Dynamic Alerts and Warnings:**
 - Highly configurable alarm and event notification management (such as alarm zones, anchor watches CPA/TCPA calculations, 'special event' notifications, etc.) that are tailored to the individual needs of the operators.
- **Environmental Adaptability:**
 - Supports a wide range of sensors, including sonar, Met/Hydro and GPS, to adapt to changing maritime conditions.
- **Advanced Surveillance Capabilities:**
 - Monitors high-traffic and high-risk areas with non-cooperative target detection using advanced technology e.g. detection of unauthorised foreign drones.



Sensor Integration (CCTV)



Traffic Analysis System



inVTSoffshore provides comprehensive monitoring and security solutions for offshore wind farms. It integrates various technologies to detect threats, monitor vessel traffic, protect personnel and the environment, as well as optimise emergency response – all within an intuitive user interface.

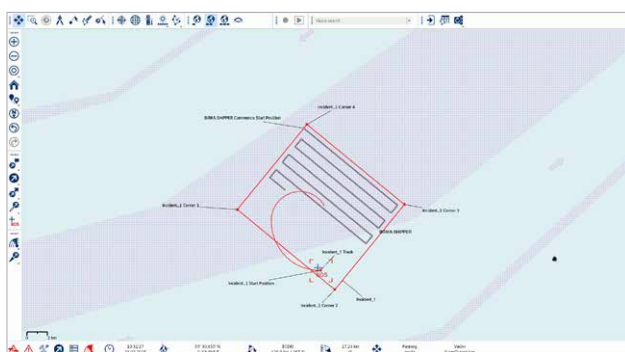
How does inVTSoffshore work?

Our system integrates various data sources to provide a complete picture of activities within and around the wind farm, offering you seamless monitoring and control:

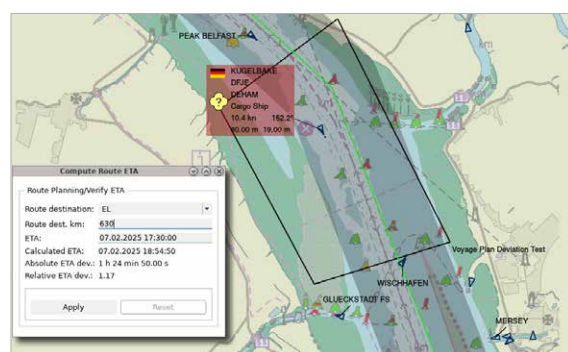
- **Traffic Analysis System (TAS):** The TAS analyses traffic data in real time and automatically detects critical events. With configurable warning zones, anchor monitoring and customisable filters, you can maintain an overview at all times.
- **Sensor integration:** Our systems enable seamless integration of various sensors like CCTV, radar, AIS, RFID, RDF, etc. so you can visually track critical events.
- **Search and Rescue Functionalities:** Our advanced search and rescue (SAR) model uses a particle-based drift system to predict search areas and optimise rescue operations.

It integrates hydrodynamic data and real-time traffic to generate precise search patterns for each unit, ensuring efficient SAR planning from any vessel position.

- **Anomaly detection:** Our advanced Anomaly Detection Services continuously monitor vessel movements, identifying and alerting operators to any deviations from expected behaviour. This cutting-edge system enhances maritime security and situational awareness by detecting unusual activities such as:
 - AIS Ghost Ship Spoofing
 - Identity Changes
 - Suspicious AIS Signaling
 - Meeting at sea or prolonged parallel travel (Suspicious Meeting)
 - Sudden acceleration to quickly exit an area (Suspicious Movement)



Search and Rescue



Anomaly Detection

Why in-innovative navigation GmbH?

With over 25 years of expertise in traffic monitoring systems, in-innovative navigation GmbH combines cutting-edge technology with deep industry knowledge. Since 1999, we have successfully implemented customised solutions for maritime operations, consistently delivering on time and within budget. Our software solutions are trusted across various sectors, including ports, coastal protection, offshore operations and River Information Services (RIS).

Our Certifications

We adhere to the highest standards of quality, security, and environmental responsibility:

- **ISO 9001:2015** (Quality Management)
- **ISO/IEC 27001:2013** (Information Security Management)
- **ISO 14001:2015** (Environmental Management)

Did you know?

- Started as a spin-off project of the University of Stuttgart, Germany
- IN is a proud WAB, IALA and GMT member
- With our Bespoke Programming and flexibility, we are glad to be your partner for your tailor-made solution



Contact us today to learn how inVTSoffshore can optimise your offshore wind farm operations and ensure safety and efficiency in every aspect.

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