



AIS-based Surveillance Solutions -
More Than Just Data

Enhanced Maritime Awareness

through Tailor-Made Software and Turnkey Solutions



SECURE **in** SIGHT



Beyond Basic AIS - Software that Makes a Difference

While many providers offer simple AIS data streams, our system goes far beyond. We use AIS data and take it a step further by merging it with S-100 format nautical charts to provide a clear, modern visual context for vessel movements. But it is not just about looks, it is also about situational awareness.

With integrated traffic analysis tools, our software can detect unusual patterns, identify anomalies, and support smarter decisions. Whether used on its own or embedded into existing systems, it adds a new layer of control and clarity to maritime operations.

Enhanced Visualisation and Context

Unlike basic AIS displays, our solution offers dynamic, context-rich situational awareness through:

- Nautical charts (ENC) in S-100 format
- Support for **custom data layers**, topologies and virtual buoys (AtoNs)
- Tools for **geofencing**, route planning and verification
- Integrated **CPA/TCPA assessment**, **advanced measurement tools**

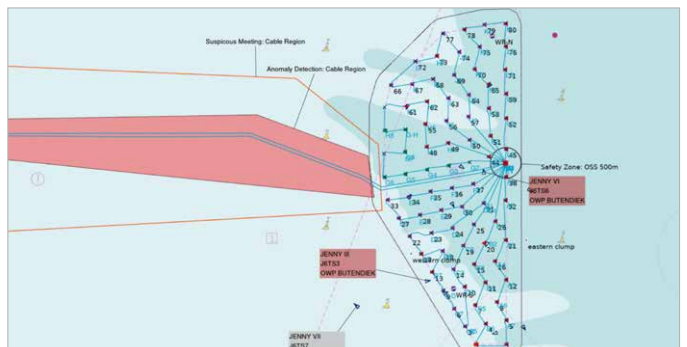


ENC in S-100 format

Event Detection and Response/ Incident Management

Operators gain control over vessel behaviour and event response:

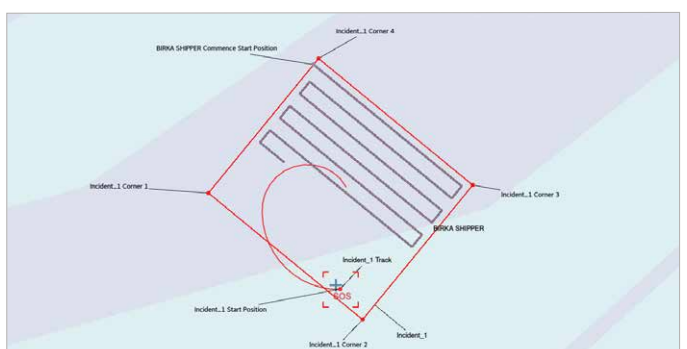
- **Custom alarms** for defined zones, traffic behaviour, anchor watches, etc.
- **Fully integrated Search and Rescue (SAR)** functionality with real-time drift modelling and task planning
- Comprehensive **logbook functionality** for traceability and subsequent documentation/incident management
- Event playback for immediate analysis of recorded incidents



Alarm Zones

Did you know?

If requested, we can extend our systems by combining it with a range of additional sensors and powerful software tools to deliver an even more comprehensive, accurate and actionable maritime picture - tailored precisely to your operational needs.



Search and Rescue



What is AIS and Why It Matters

The Automatic Identification System is a fundamental tool for maritime safety and vessel tracking.

It transmits key information such as a ship's identity, position, course and speed - enabling greater visibility and coordination at sea. Used worldwide, AIS data forms the basis for route planning, collision avoidance, port logistics and operational transparency.

But while AIS is essential, raw AIS data alone is often not enough. Incomplete transmissions or deliberate interference like jamming and spoofing can lead to confusion or false assumptions. Basic AIS tools may show you the "what" and "where", but not the "why," "how," or "what's next."

That's where our solution comes in. We transform AIS from a stream of raw data into meaningful insights. With intuitive visualisations, intelligent filtering, smart alerts and contextual awareness, we turn complexity into clarity, so you always stay one step ahead.

Why Our AIS Solution is Different

- Enhanced System Features - Alarming, playback, recording, replay, etc.
- Real-time Visualisation – Not just data feeds, but clear, actionable interfaces
- Flexible System Design – Modular architecture built to match your use case
- Wide Applicability – For small harbours, offshore platforms or large-scale national systems
- Seamless GMDSS Integration – Compatible and tested with Danphone's GMDSS and other partners
- Responsive Support – Direct access to our team when you need help
- Ongoing support & maintenance (Further development of the system if desired, etc.)

*AIS is only as good
as the data it carries.*

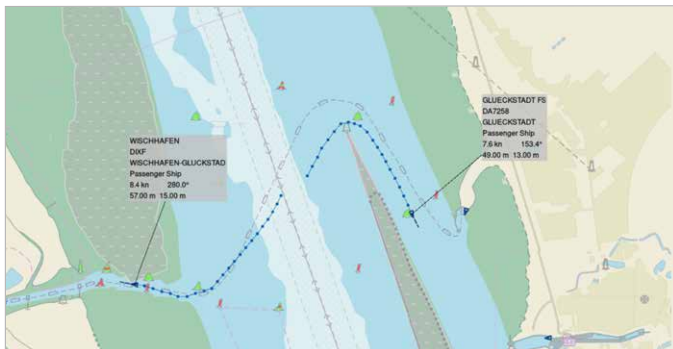
We take it further.

Instant Replay and Route Visualisation

Operators can instantly replay any past scenario with full visibility of vessel movements and interactions.

This feature supports:

- Route reconstruction for individual vessels
- Visual analysis of past events, traffic patterns and operational decisions
- Improved coordination and training

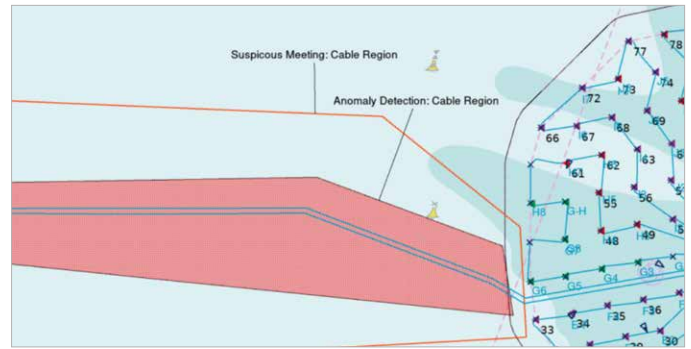


Path History

Anomaly Detection and Spoofing Alerts

Our system identifies suspicious or irregular vessel activity with:

- Spoofing detection and automatic alerts on identity manipulation
- Behavioural anomaly detection, such as course deviations, unusual rendezvous or identity changes



Warning Area

Communication and Control

From daily monitoring to emergency operations, our system enables proactive communication:

- Send and manage **Safety-Related Messages (SRMs)** and **Application-Specific Messages (ASMs)**
- Integrate seamlessly with **GMDSS/VHF** systems for broader control
- Future-proof systems due to compatibility with upcoming **VDES** standard

*From first consultation
to long-term service – we
are your partner, not just
your provider*

The result

A maritime traffic monitoring solution that goes far beyond dots on a map. You get a reliable, intelligent and situationally aware platform that supports smarter decisions - no matter your operational scale.

Did you know?

Our system also works with integrated sensor fusion. It merges data from multiple sources to detect, track and verify maritime activity in real time – ensuring higher accuracy and minimising blind spots:

Radar:

Detects non-cooperative targets
(e.g. vessels with AIS turned off)

CCTV:

Provides visual verification and live monitoring

Other sensors:

ADS-B, sonar, RDF, met/hydro data, etc.



Functionality	AIS Data Provider	inAIS
Display of AIS targets (incl. labels with vessel's data)	✓	✓
Display of AIS track list	✓	✓
Display of vessel database	✓	✓
Display of nautical charts (ENC)	✓	✓
Display of charts in S-100 format (e.g. bathymetry charts in S-102)	✗	✓
Display of additional chart data or chart layers (WMS, TMS, etc.)	✗	✓
Geofencing (e.g. creation of alarm zones, limit lines, etc.)	✗	✓
Alarm/traffic event management	✗	✓
Vessel behaviour Anomaly detection	✗	✓
Setting up and managing virtual buoys (AtoNs) – if applicable	✗	✓
Integration of DSC distress calls received by GMDSS – if applicable	✗	✓
CPA/TCPA measurement/calculations	✗	✓
Advanced chart measurement functions	✗	✓
Integrated Search and Rescue (SAR) tool	✗	✓
Logbook functionality for incident management	✗	✓
Create, manage and send of Safety Related Messages (SRM) or Application Specific Messages (ASM) – if applicable	✗	✓
Instant Playback	✗	✓
Recording and Replay/Replay Mode	✗	✓
Route planning and verification	✗	✓

We Don't Just Deliver Soft-ware. We Deliver Solutions.

Every client has different requirements – port authorities, offshore platforms, coast guards, etc.

We start by listening: what is your use case, pain point, goal?

- System design phase with the customer
- System preparation, configuration and factory acceptance testing
- On-site installation
- Integration with existing systems (e.g. GMDSS or VHF systems)
- Commissioning of the system
- Maintenance Phase
- If needed: custom development to match individual needs



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 27001:2022** (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 inAIS can optimise your operations and ensure safety and efficiency in every aspect.

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