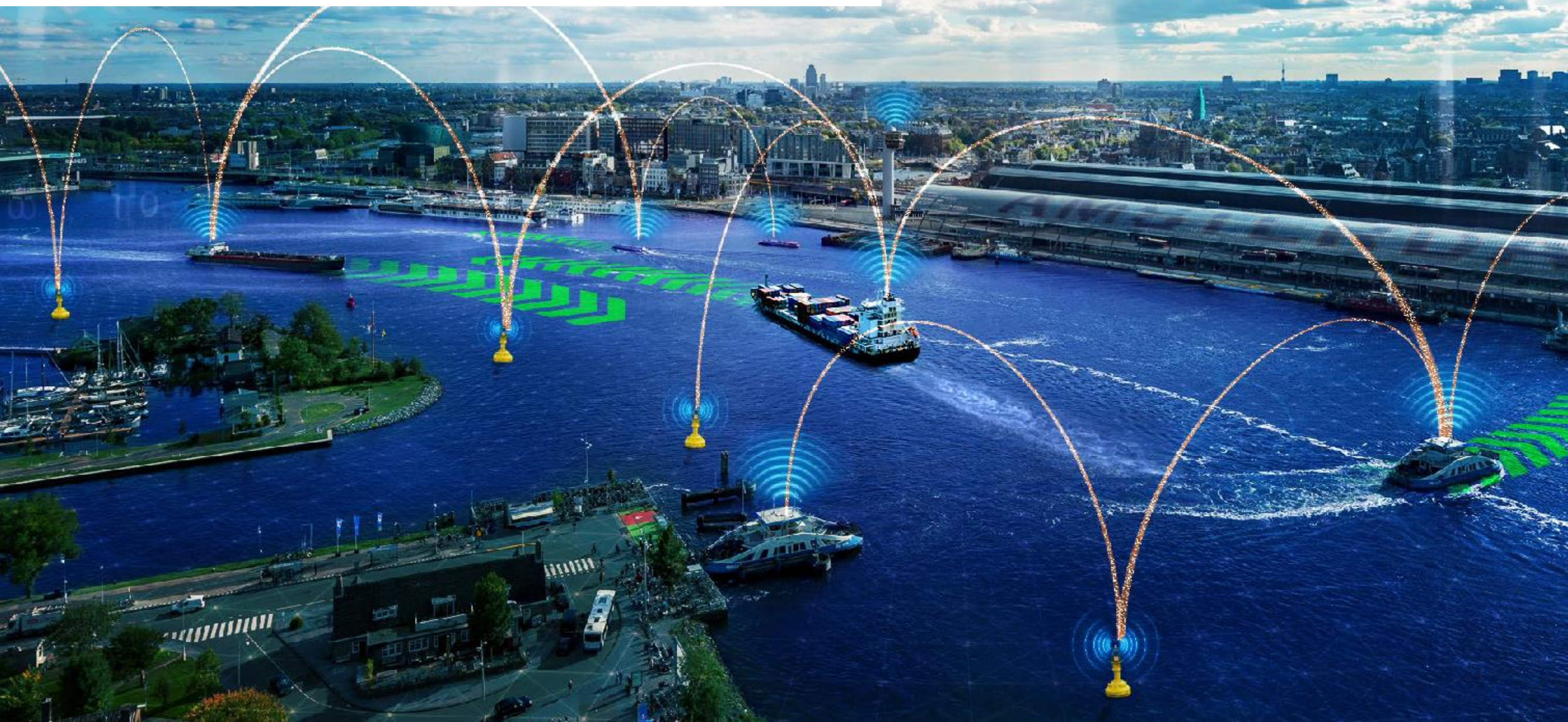
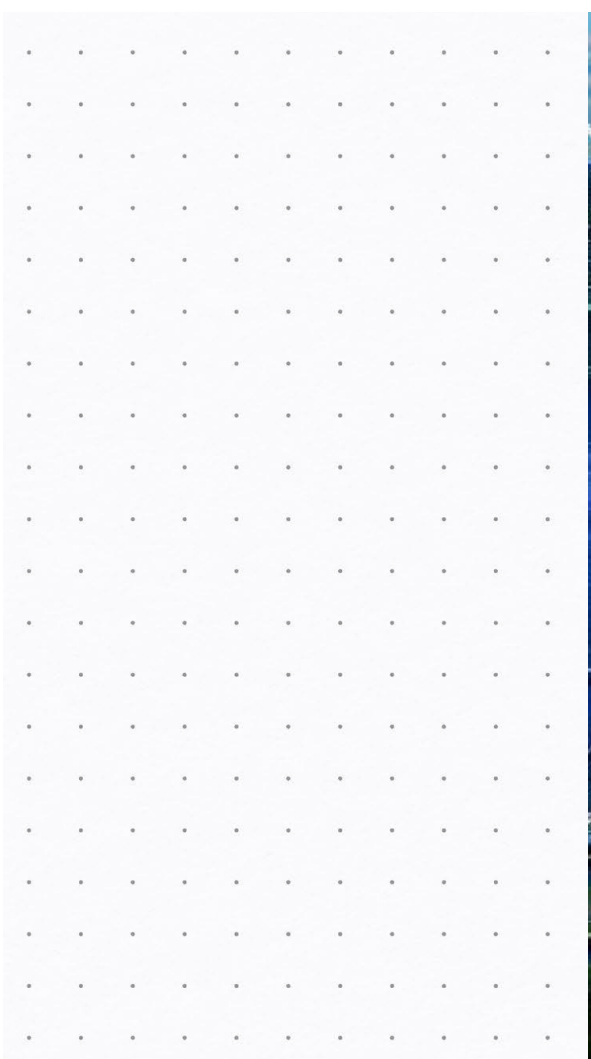


Digital Aids to Navigation Systems

A new generation of digital navigation safety & efficiency for ports and waterways



About SRT

The global leaders in next generation digital navigation aids

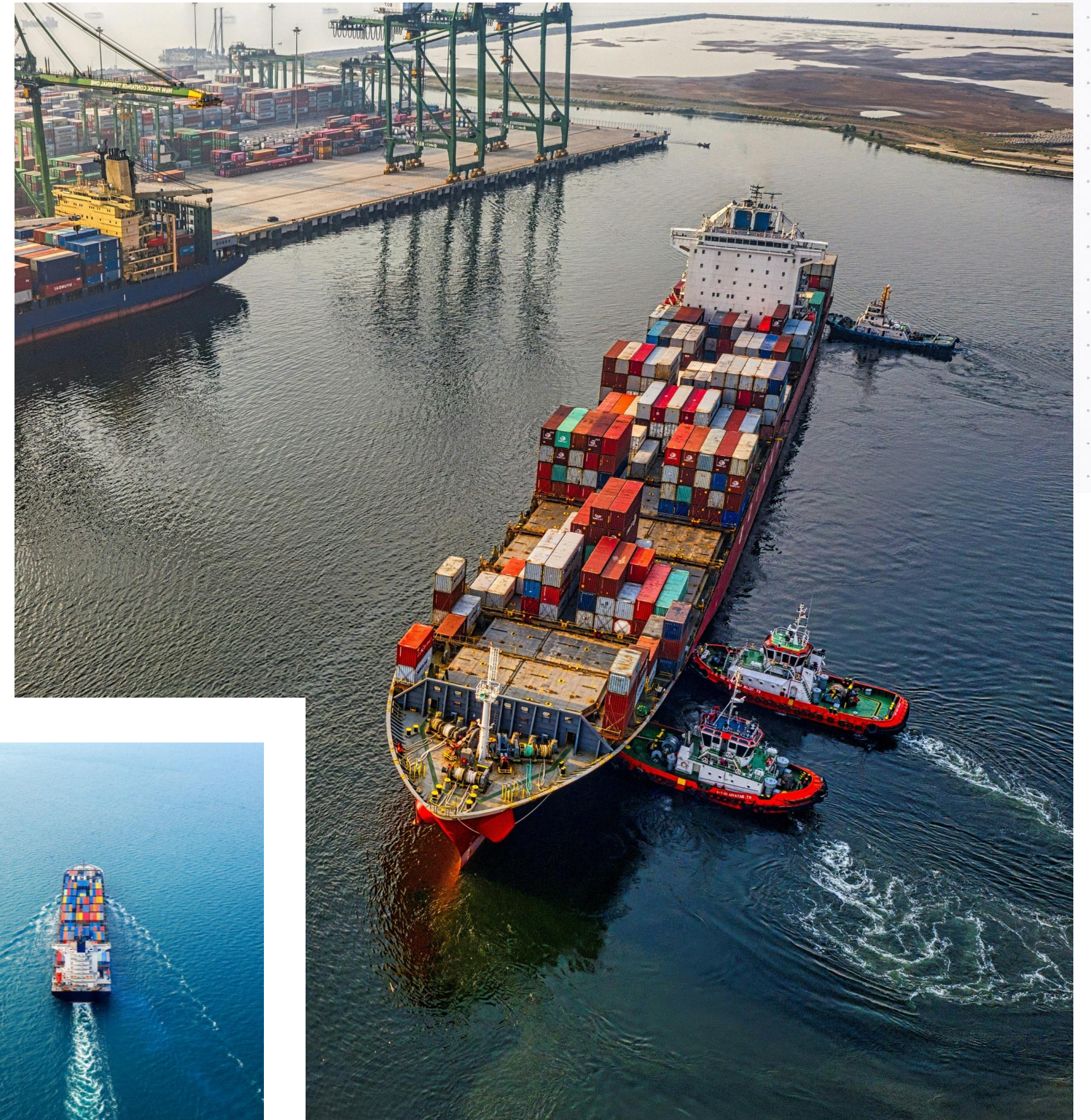
The global leader in digital navigation aids for over 20 years supplying customers around the world.

Specialists in the development of advanced digital aids to navigation technologies and solutions.

We work and consult with customers to deliver both standard and customised quality solutions.

SRT digital navigation aids are the preferred choice of professional and national agencies worldwide

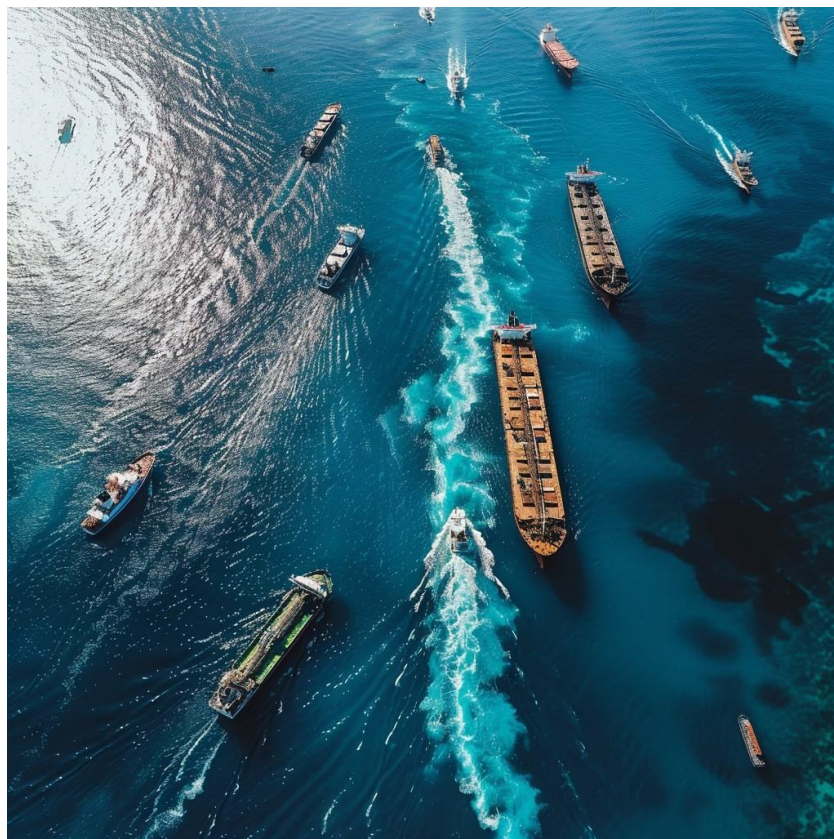
Our products are proven to deliver superlative performance and functionality with unmatched reliability





What are Digital Aids to Navigation Solutions? (DAS)

Real-time navigation information that improves navigation safety and efficiency.



DAS systems use AIS to stream live real-time navigation information to vessels, VTS centres and authorities. Utilising VHF transmission this enables both the VTS and Vessels to see the same information

DAS delivers vital navigation information that significantly enhances vessel and infrastructure safety and efficiency.

DAS systems are easily fitted onto new and existing physical infrastructure, such as buoys, to provide a seamless digital information overlay.

Main benefits and uses of DAS

Utilising digital aids to navigation systems technology, we're creating safer waterways by clearly identifying safe navigation lanes. This reduces risks, costs, and liability and improves safety.

SAFETY

Digital marking of safe sea lanes and waterways for navigation, indication of potential hazards and information on infrastructure status

ENVIRONMENT

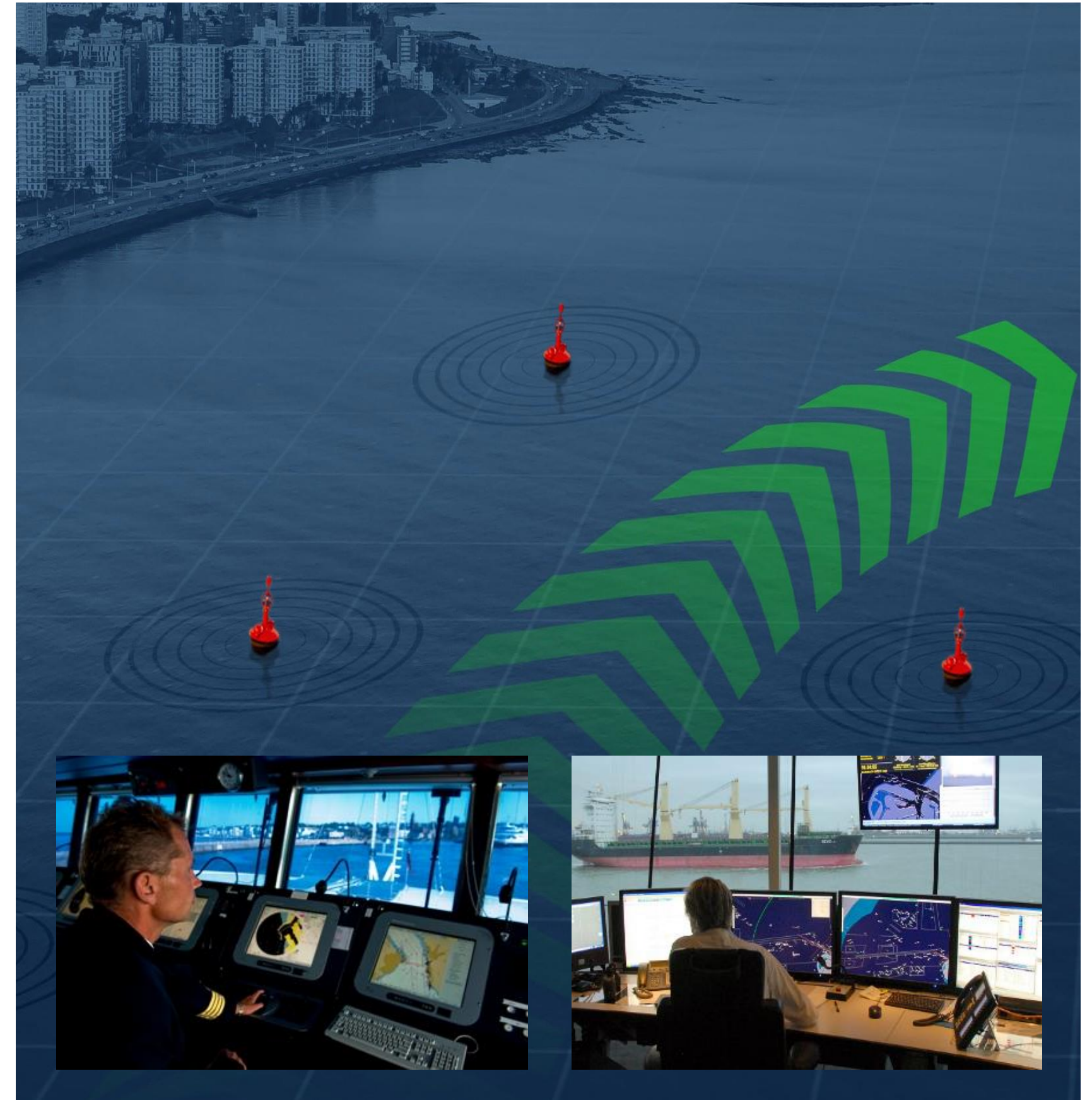
Reduced accidents combined with active pollution & emissions monitoring and identification help protect the environment.

EFFICIENCY

Improved vessel routing, met/hydro data, and information on the status of relevant infrastructure such as tidal bridge clearances status all improve operational efficiencies.

RISK

The availability of high-quality, real-time, reliable navigation information significantly reduces risk and associated liabilities.



Benefits of DAS in Sea Lane Management for Ports and Harbours

Improved navigation safety entering and exiting Ports and Harbours reduces risk, costs and liability.

CONFLICT AVOIDANCE

Separating different types of maritime activities helps prevent conflicts and collisions between vessels with varied purposes.

EFFICIENCY

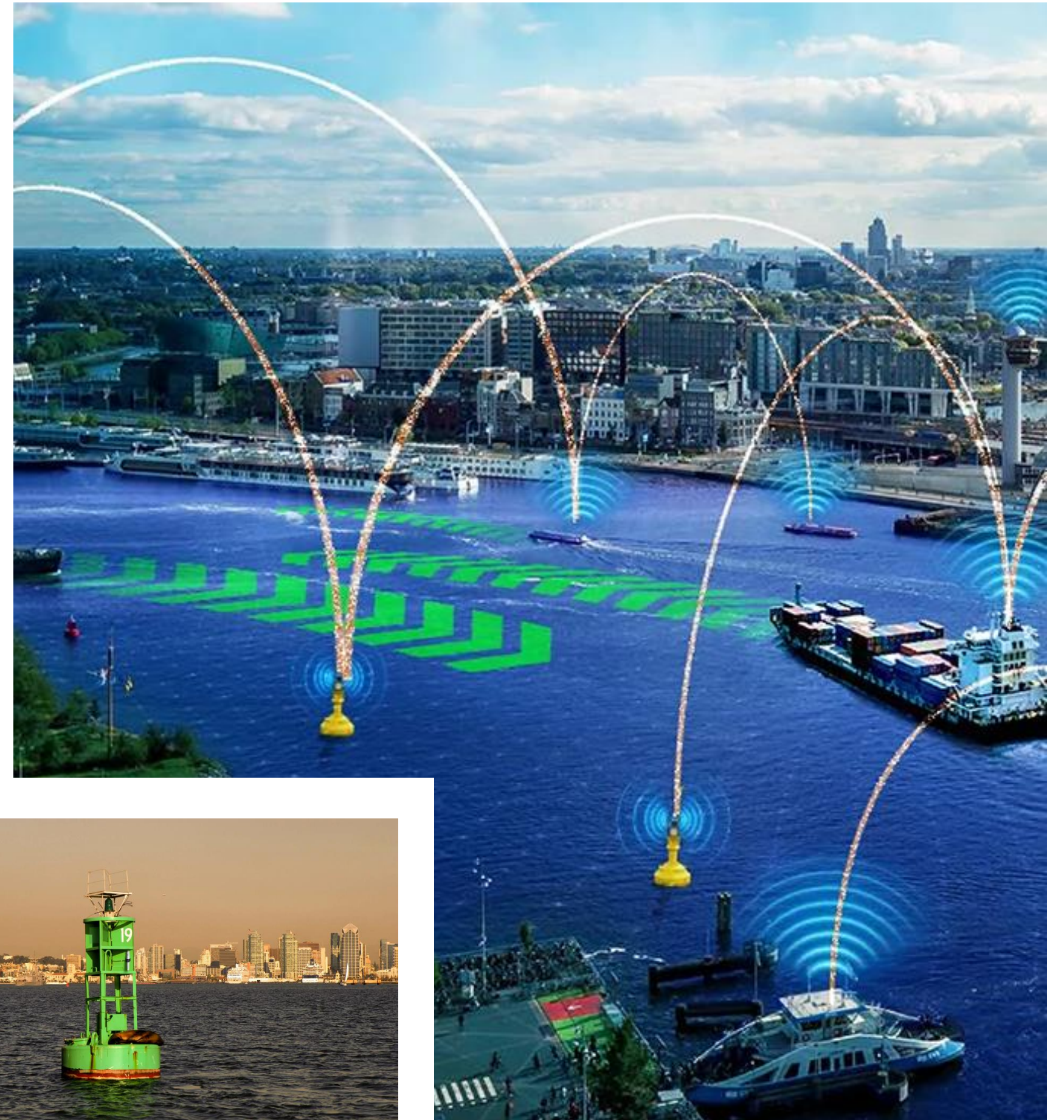
Improved vessel routing, for entry and exit of the Ports, by providing up-to date safe navigational information, improving traffic flow and optimising Port operations.

RISK

The availability of high-quality reliable, real-time navigation information significantly reduces risk and associated liabilities.

COST EFFECTIVNESS

DAS solutions require less maintenance than traditional AtoN's thereby reducing costs. Easily updated and scalable the DAS solution is expandable with no ongoing cost required after installation.



Benefits of DAS in navigating coastal waters

Improved navigation safety around coastal waters improves vessel routing efficiency reduces risk, costs and liability.

COLLISION PREVENTION

Utilising digital aids to navigation on buoys and beacons around the coastal waterways clearly marks the safe channels, identifies hazards reducing the risk of collision or grounding.

PROMOTES SPECIALISED SAFETY MEASURES

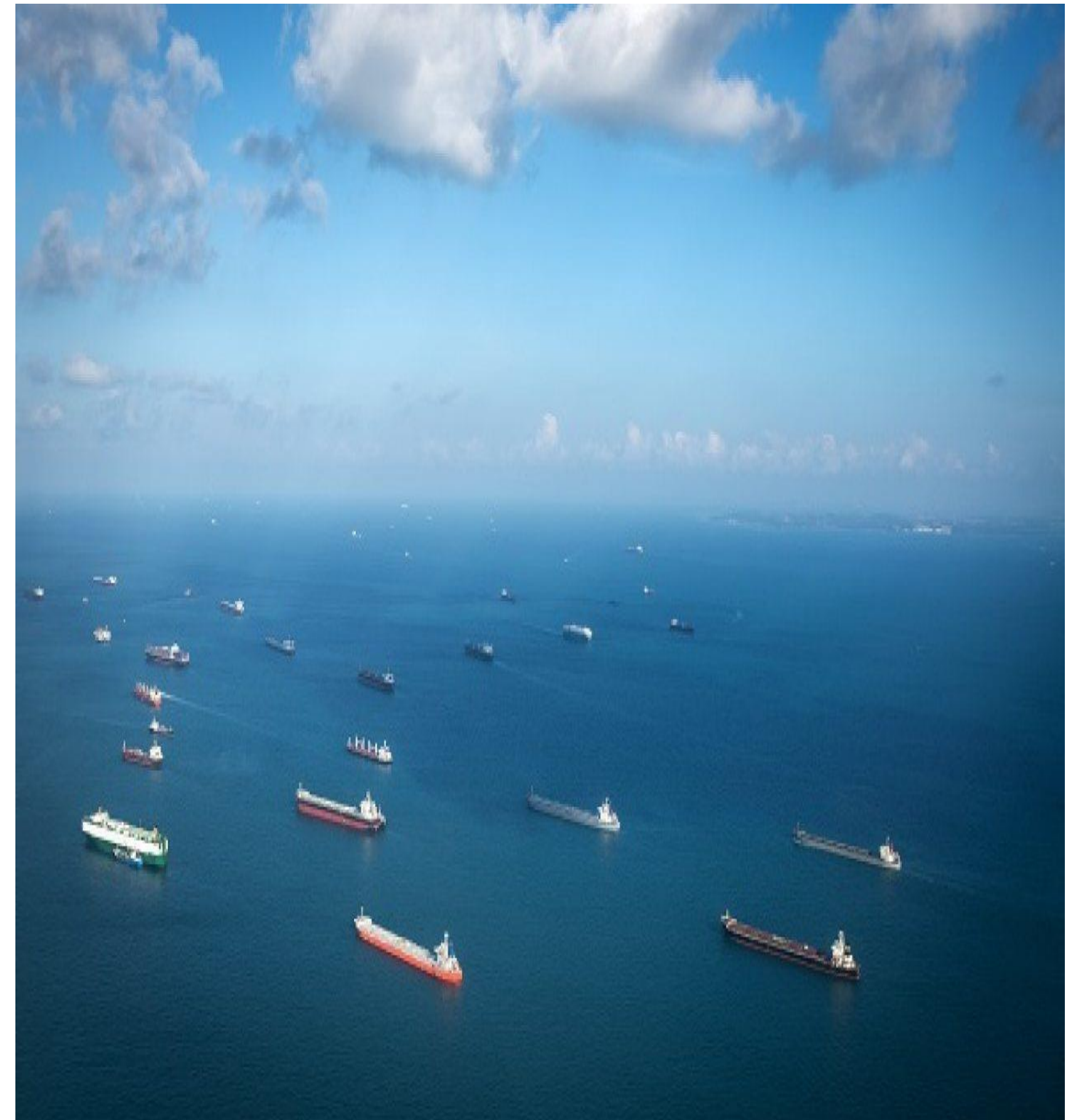
Allows tailored safe sea channels, considering the unique requirements and risks associated with fishing, leisure and commercial shipping

RESOURCE CONSERVATION

Protects marine resources by minimizing interference with fishing activities and sensitive marine ecosystems.

RISK

The availability of high-quality reliable navigation information significantly reduces risk as well as associated liabilities.



Benefits of DAS for safe navigation in Inland waterways

Navigating inland waterways presents unique challenges compared to open ocean or coastal waters.

CONFINED SPACES

Limited Manoeuvrability: Inland waterways often have narrower channels and multiple bridges, making it difficult for larger vessels to navigate safely.

CHANGING WATER LEVELS

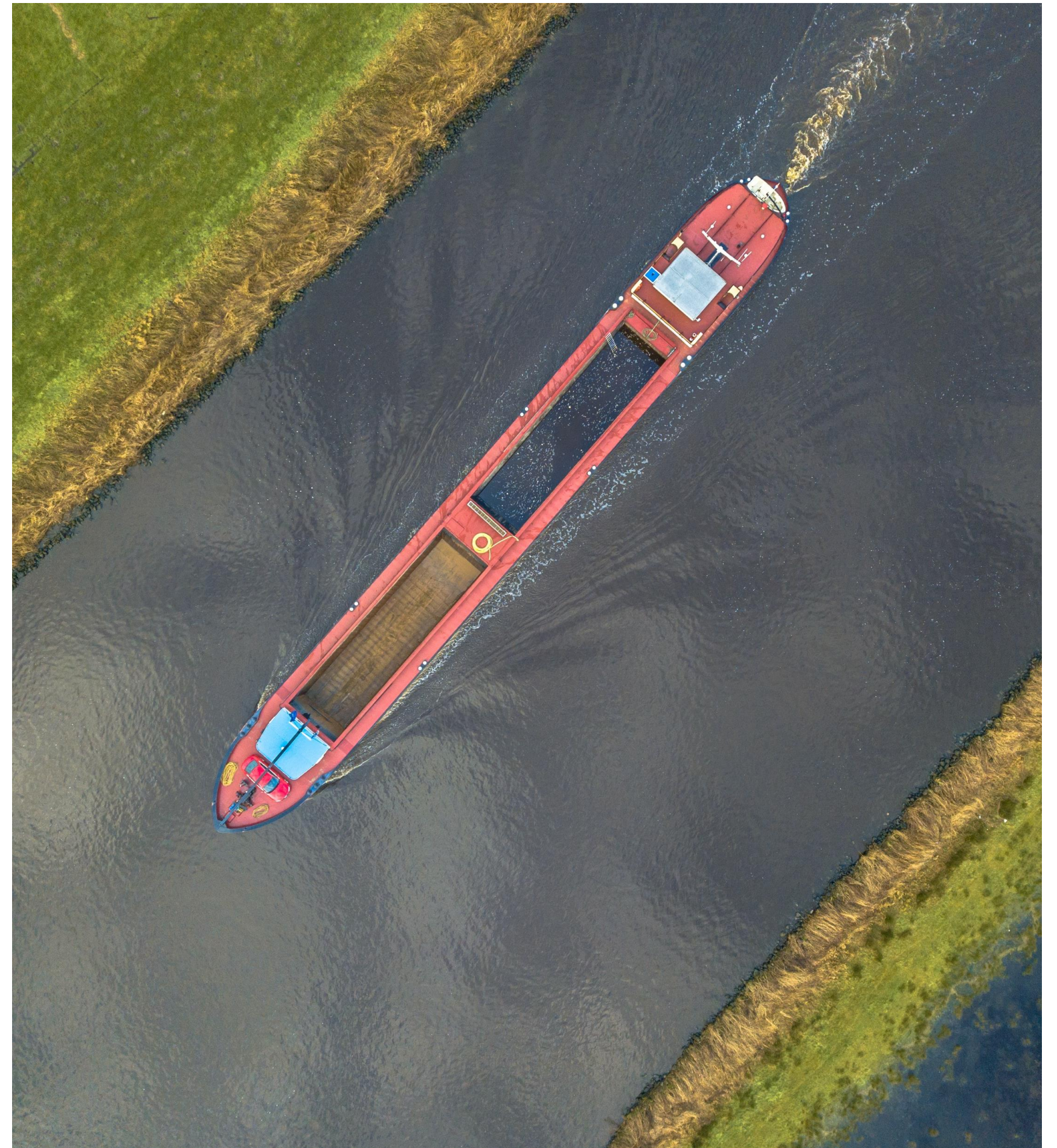
Fluctuations in water levels can create shallow areas that may be difficult to navigate, especially during dry seasons, exposing submerged objects that may pose a hazard to navigation.

RESOURCE CONSERVATION

Inland waterways often pass through ecologically sensitive areas, requiring careful navigation to minimise environmental impact.

WEATHER CONDITIONS

Fog and low visibility can significantly impair visibility for traditional navigation methods increasing the risk of an accident.



Other applications of DAS PRODUCTS

DAS products have multiple uses and can be deployed in other marine sectors



WIND FARM MARKING

Wind Turbines are typically very large with towering masts and rotating blades, which can create a significant obstacle for navigation. Identifiable safe distances must be clearly marked to avoid collisions and potential large-scale damage.



METEOROLOGICAL DATA COLLECTION & HYDROGRAPHIC RESEARCH

Utilising a Type 3 Digital AtoN, Sensors can be added to collect vital data on wind/weather conditions, Tide/ Current Flows and Water quality. Enabling important data to be collected in real-time

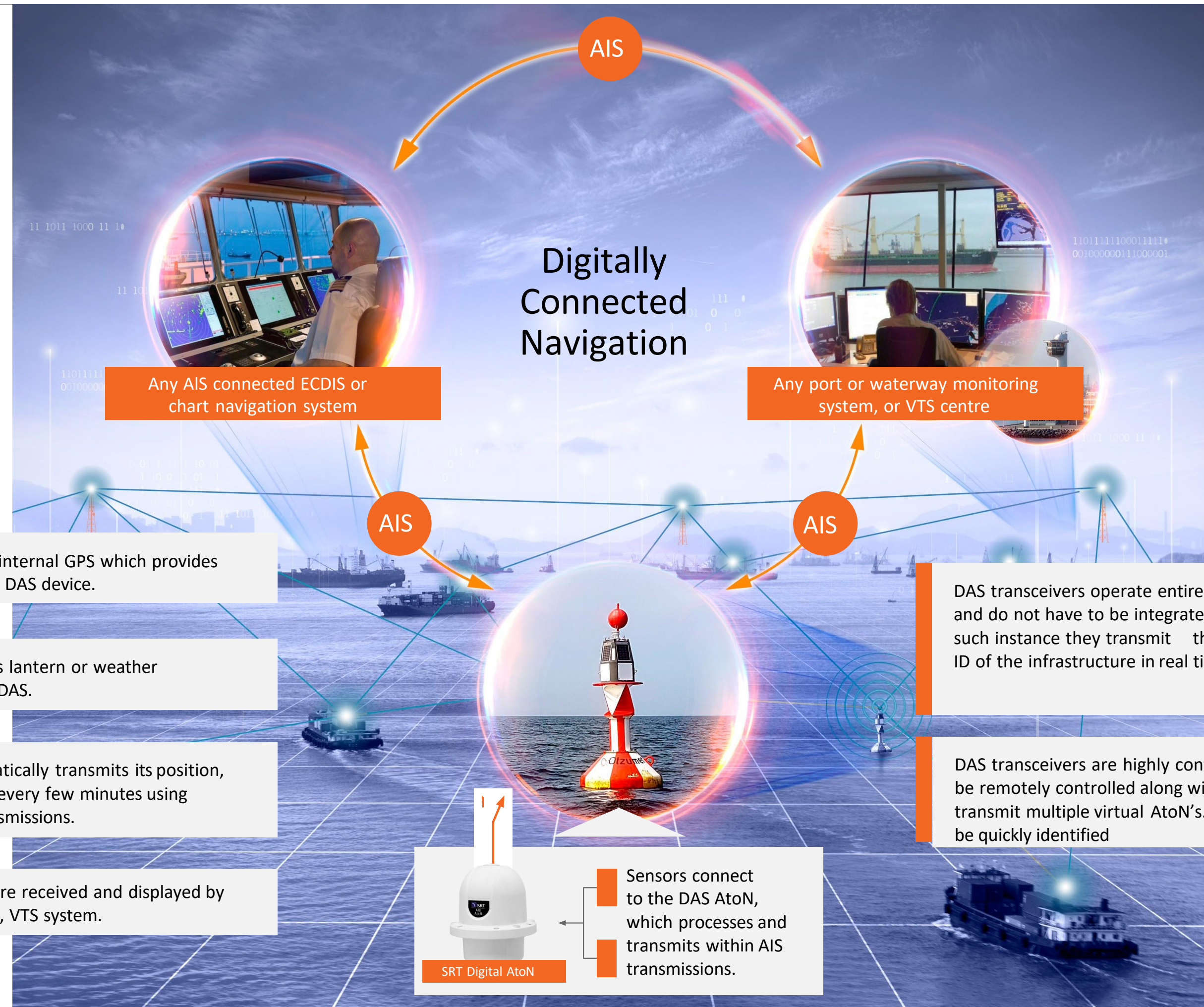


AQUACULTURE/ECOLOGICAL

Utilising Digital AtoN's to identify and highlight the farm areas to protect the fish stocks and breeding from vessels Protect marine environments from damage by vessels and aid protection of the habitats of endangered or threatened species.

How DAS Works

DAS uses certified AIS transceivers connected to sensor systems to share real-time information with vessels, VTS centres, etc.



All DAS have their own internal GPS which provides accurate position of the DAS device.

External sensors such as lantern or weather sensors connect to the DAS.

DAS transceiver automatically transmits its position, status and sensor data every few minutes using specialist AIS-AtoN transmissions.

DAS AIS transmissions are received and displayed by any ECDIS, chart plotter, VTS system.

DAS transceivers operate entirely autonomously and do not have to be integrated with sensors. In such instance they transmit the GPS location and ID of the infrastructure in real time.

DAS transceivers are highly configurable and can be remotely controlled along with being able to transmit multiple virtual AtoN's. Enabling hazards to be quickly identified

Sensors connect to the DAS AtoN, which processes and transmits within AIS transmissions.

DAS - Solutions that Enhance Navigation Safety and Efficiency

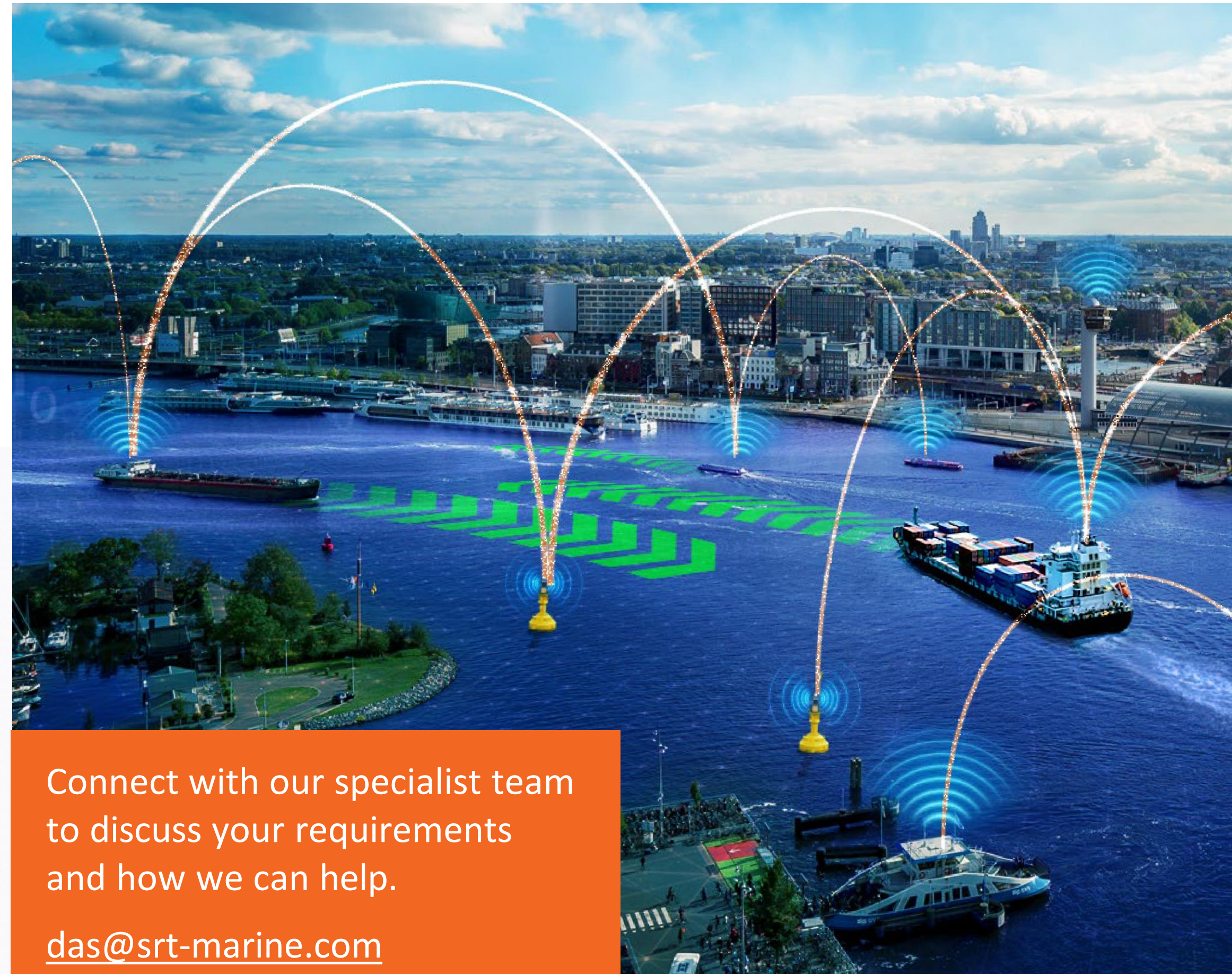
Proven proprietary technology powering a full range of products, solutions and consultancy services that enables any port, infrastructure owner, or waterway authority to digitise navigation aids and improve navigation safety, efficiency, costs and remote monitoring.

VERSATILE AND ADAPTABLE

SRT AIS AtoN products offer the most expandable solution and flexibility to be integrated into any navigation system from the smallest to largest. Lowest cost option to mark a buoy location and visible to the VTS and Vessel ECDIS in real-time.

RELIABILITY AND DURABILITY

SRT AIS AtoN products are proven in the field to provide a long lasting, low maintenance solution in the most extreme, exposed conditions



Connect with our specialist team to discuss your requirements and how we can help.

das@srt-marine.com