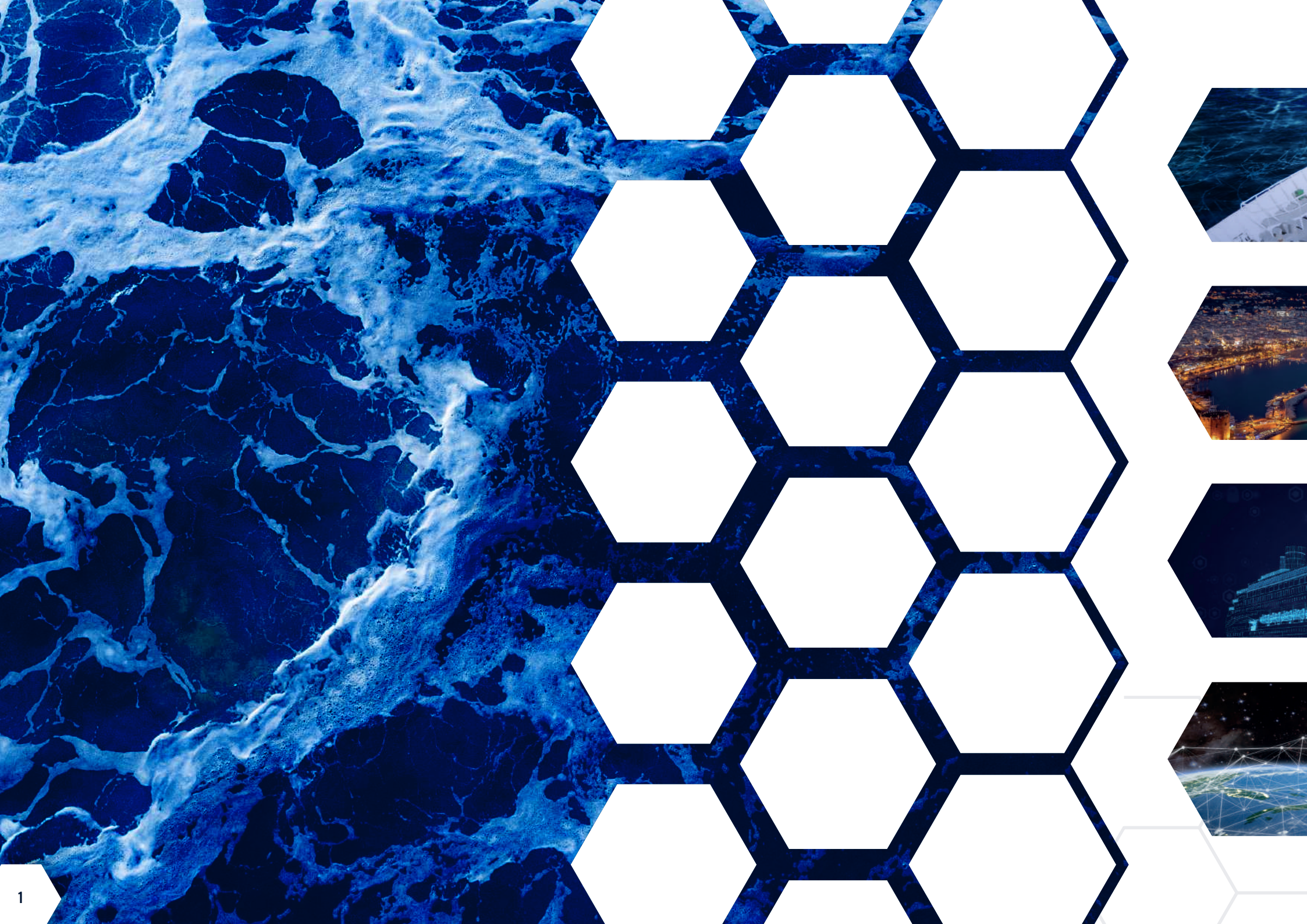


# SATSTREAM





# SATSTREAM

Satellite operational centers in the Maritime industry represent an essential element for communication and safety on board ships. Thanks to satellites, ships can communicate with the outside world, send data and information, and remain constantly connected to the onshore base.

The satellite operational center on board ships is responsible for ensuring the proper management and optimization of satellite communications on board. This center

is responsible for monitoring satellite performance, managing satellite antennas and communication equipment, managing data and information sent and received, as well as ensuring communication safety.

SatStream is the Sync Lab Maritime Satcomm Operation Center (MSOC). Based on a cloud application platform, it can be used by personnel to monitor on-board satellite communication systems.

# RouteCoverage

Route Coverage is the application that implements a tool for creating and sharing ship routes. Combined with the Trackbeam module, it allows for the reconstruction of routes followed by on-board satellite terminals and their operation within coverage maps.



# Report

Report is the SatStream application that generates reports and statistical analysis of data collected from mobile satellite terminals. This information can be collected from a variety of sensors on board the ship and transmitted to shore through various satellite technologies, such as the Global Positioning System (GPS), satellite communication system (SatCom), and Automatic Identification System (AIS).



# Spektrum

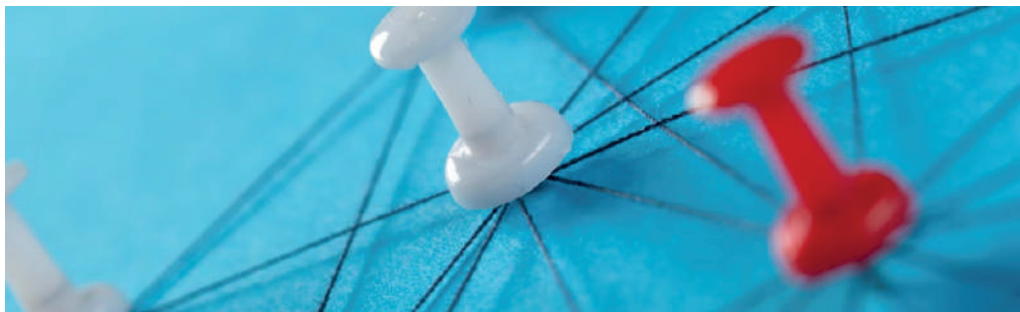
Spektrum is the telemetry application that allows for storage and near-real-time monitoring of data contained in sat-reports from on-board satellite communication systems, providing users with tools to build reports, historical series, and statistics.



# TrackBeam

Trackbeam is the SatStream application that implements Fleet (satcom) Tracking & Monitoring functionalities for near-real-time monitoring of operational mobile satellite terminals on board ships, allowing ship owners and operators to track the location and activities of their fleets at sea.





# RouteCoverage

In the satellite field, Route Management through the use of satellites in the maritime sector can be essential to ensure the safety of ships and cargo on board. Satellites can provide information on weather conditions, ocean currents, maritime traffic, and other important information to help captains make informed decisions on the best route to take.

## Satellite level Route management

Route Management activities for managing the routes followed by on-board satellite terminals and their operability within coverage maps can be carried out using a combination of GPS data and satellite communication.

Through the RouteCoverage module, a series of key functionalities are implemented:

- Building a route by entering way points;
- Modifying and deleting a created route;
- Importing a route from external sources (ECDIS and third-party software) and modifying it;
- Exporting a created or modified route;
- Building a line (service) as a sum of sections;
- Creating, modifying, and deleting areas of interest (ECA, SECA) and POI;
- Controls and notifications to be associated with the constructed routes.



# Active Routes



# Sat Route coverage



# SATSTREAM

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# Report

Thanks to the use of advanced satellite technologies, fleet's ships can be monitored and managed remotely in real-time. Satellite management reports may include information on the ship's position, speed, route, weather conditions, cargo and fuel consumption, engine efficiency, preventive maintenance, safety, and much more.

## Satellitar Report Management System

Satellite management reports on ships are an important source of information for ship owners, fleet managers, and navigation professionals. With this information, it is possible to improve operational efficiency,

reduce costs, and ensure the safety of the ship and crew.

Within the SatStream Suite, the Report application allows for the processing of a variety of data:

- latency download and upload speeds;
- total download and upload separated by protocol—Report Management application, which allows for the safe and efficient management of daily ship-to-shore report exchange.

Report data is stored and managed by a Data Analytics module.





# Report List



# Historical Data





# Spektrum

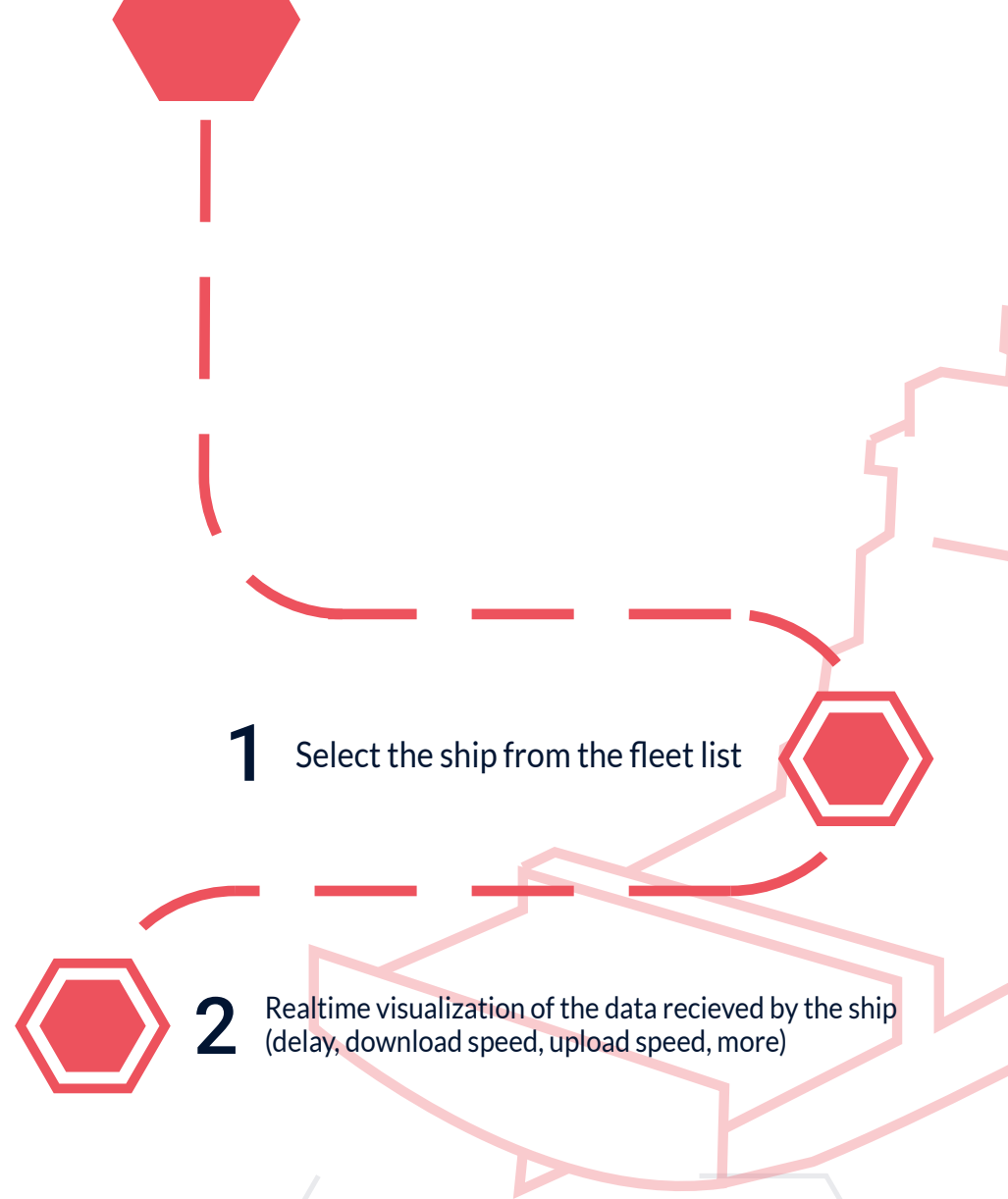
Spektrum is the efficient and flexible solution for collecting and analyzing data from onboard satellite communication systems. As a system capable of collecting and monitoring onboard satellite communication system data in real-time and archiving it for later analysis, Spektrum provides users with tools to build reports, historical series, and statistics based on the collected data.

Telemetry Tools to increase performances Using telemetry systems, Maritime companies can collect and analyze a wide range of data on their vessels, including data on weather conditions, engine

performance, speed, position, fuel consumption, and navigation. This data can be used to monitor and optimize navigation, improve fuel efficiency, prevent mechanical failures, and work in terms of safety.

Spektrum works in this direction. As a vendor-free application that allows real-time monitoring and storage of onboard data, which can be used for reports or statistics, through specific ad hoc dashboards, it allows to visualize:

- latency values;
- download speed;
- upload speed.



# Real time Data



# Satellite details





# Trackbeam

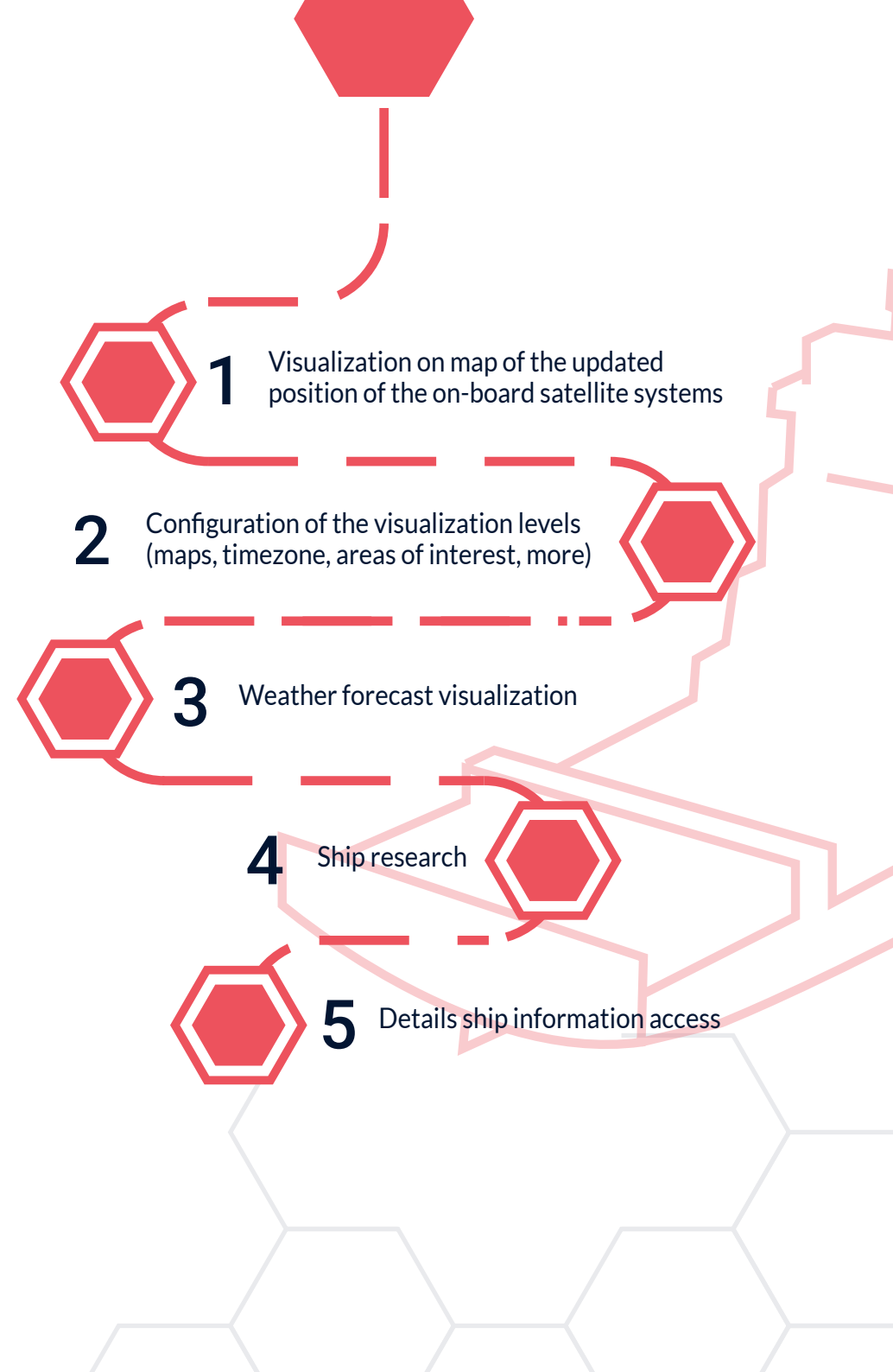
As a real-time monitoring technology for operational mobile satellite terminals on board ships, on-board satcom systems allow for staying connected with the outside world even when in open sea, enabling ship owners and operators to track the location and activities of their fleets at sea.

## Fleet Satellar Tracking & Monitoring

The Fleet Tracking & Monitoring technology is particularly useful for fleets of ships operating in remote areas or in open seas where ground communications may be limited or non-existent. Satellite technology allows ships to maintain a connection with the Fleet Tracking & Monitoring system anywhere in the world.

Trackbeam is a SatStream module that performs the following functionalities:

- real-time and worldwide localization of fleet ships;
- position information can be acquired directly on board, from navigation instruments such as GPS and AIS, or from satellite terminals on land;
- reconstruction of the route taken by a ship (mobile terminal) within a time interval that can be defined based on needs;
- immediate highlighting of some important indicators (traffic lights) of the navigation status and satellite terminal, such as instant and average speed, current route, and more;
- weather forecasts.

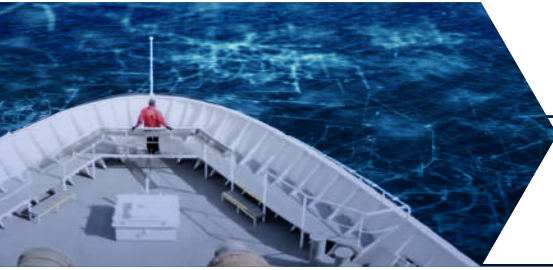


## Nautical map



## Meteo Forecast

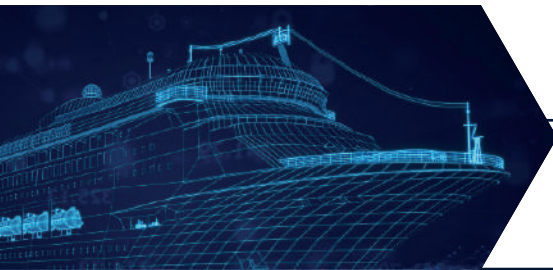




**SEASTREAM**



**PORTSTREAM**



**SHIPBOOK**



**SATSTREAM**

# Master your fleet with our advanced Maritime solutions

With the Fifth Industrial Revolution looming, Sync Lab meets the needs of the Maritime Market by leveraging the over twenty years of experience as a System Integrator and operating in the sector through a specialized Division with a decade of expertise that offers advanced solutions for the Maritime industry.

Sync Lab solutions lead towards the adoption of new technologies and are designed to transform production systems and guide industry companies towards Digital Transformation. Through the use of network data and analytics, we support maximum efficiency for administrative, logistics, naval, terminal and port operations.