AWARION™
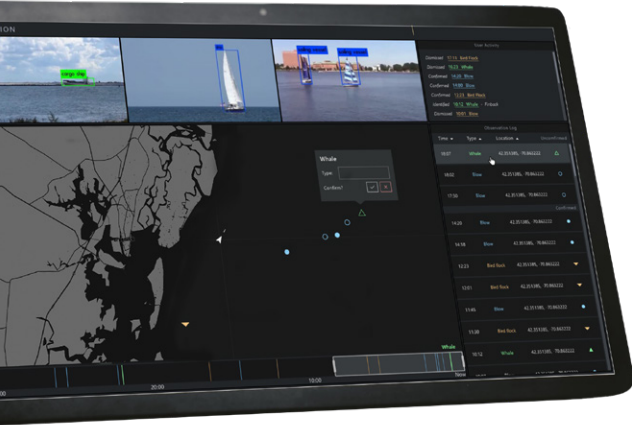## Autonomous Lookout System

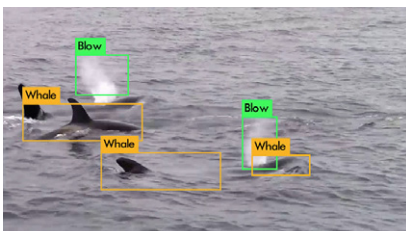Ship | Ship | Ship | Ship | Ship | Ship

Autonomous Lookout System

Maintaining proper lookout is essential for ships and uncrewed surface vehicles (USVs). Operational safety and regulations demand it.

Awarion is an AI and computer vision system that complements and supports human lookouts and marine radar systems. Awarion uses electro-optical and infrared video streams to detect, analyze, and report on the presence of whales, ships, and other objects, including fishing buoys and equipment.

Sensing for situational awareness

Human lookouts can suffer from fatigue and distraction. They require accommodations and resources.

Awarion's algorithms never tire. They perform advanced analyses, including trajectory modeling and threat assessment. They transfer lookout duties from scattered watchpoints directly to the bridge.
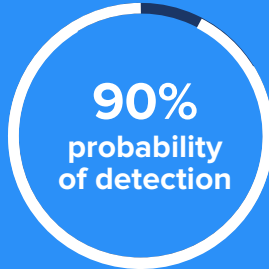
Seeing what radar can't see

Electro-optical and infrared (EO/IR) methods provide much greater detail and resolution than radar. With EO/IR, Awarion can see what radar can't see, such as a whale blow or surfacing, and can perform object classification. These capabilities are critical to enabling true USV autonomy.
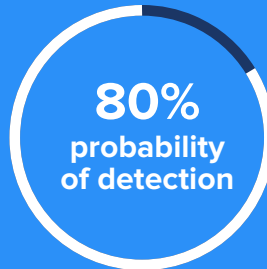
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Performance Metrics
In testing on real-world data with targets
at ranges up to 3 km

Ships
90%
probability
of detection

Whales
80%
probability
of detection

Ship Classification
90%
accuracy

Flexible configuration

Situational Awareness Analytics Software
The Awarion product consists of a core software component, which can be delivered as a standalone product or as part of an integrated camera system.
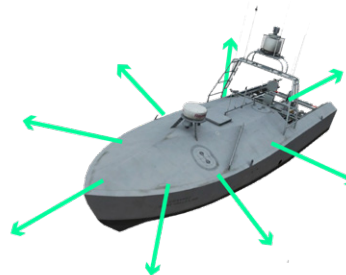
Smart Camera with Optional Pointable Mount
Single, pointable camera designed to regularly sweep 360 degrees and autonomously deliver follow-up observations.

Processing Hardware
You can connect your own camera(s) to our processing hardware.

Fixed Camera Array
Multiple cameras with fixed views can have their output combined to form a 360-degree view.

System Requirements
Awarion hardware supports standard Ethernet connections. Awarion software runs in Docker containers with Robot Operating System (ROS) and RabbitMQ messaging.

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Autonomy you can trust

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