

SECURUS
APTOMAR.COM

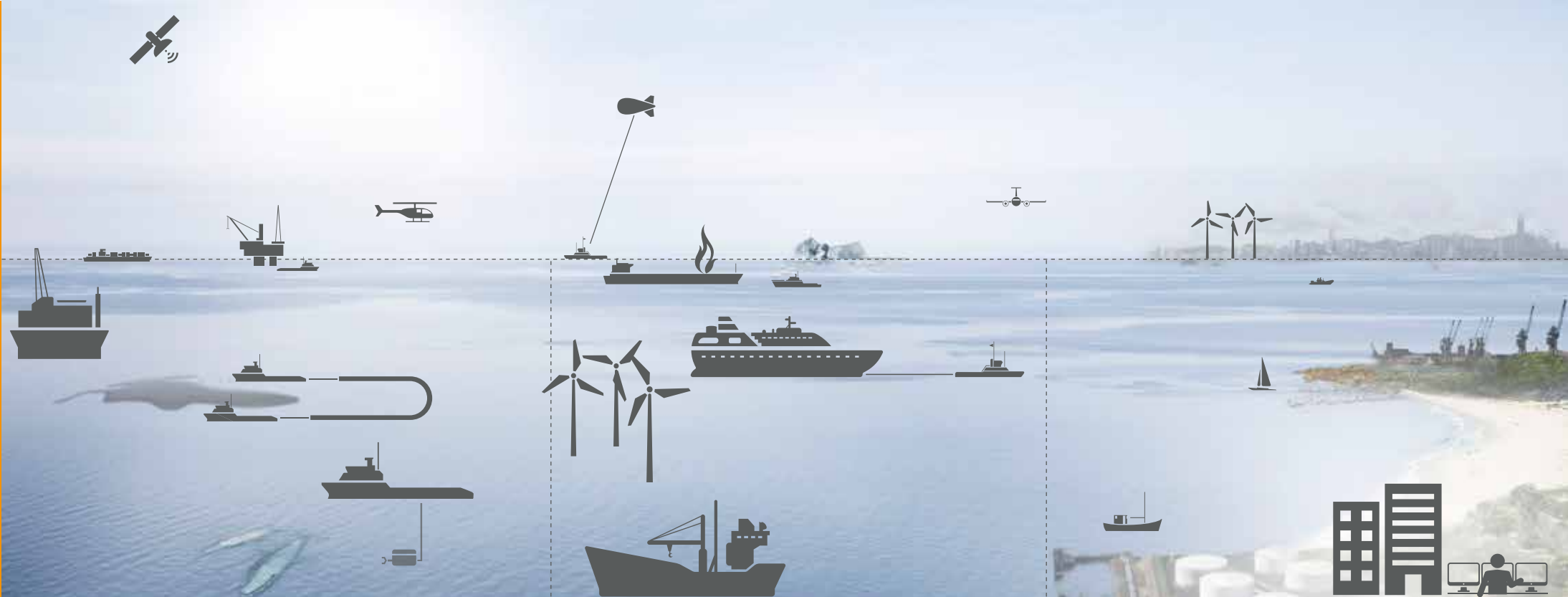


SECURUS



aptomar
SAFETY AT YOUR FINGERTIPS

AIRBORNE

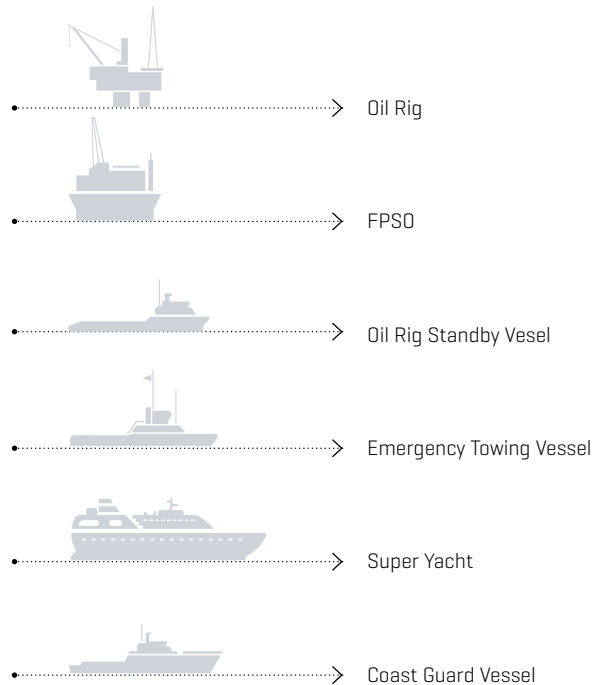


OFFSHORE

NEAR SHORE

ONSHORE

SECurus is usually fitted on the following:



SECURUS SYSTEM

Aptomar's SECurus sensor is a high specification EO sensor designed specifically for the maritime environment. It features an HD day and lowlight video camera, an advanced actively cooled Infrared camera, both with high levels of magnification, and a powerful xenon searchlight.

SECurus is stabilised to very high degree, giving a stable image in all conditions, as well as enabling SECurus's unique ability to geo reference the video images.

SECurus is able to share its images, as well as other information, in real time with a TCMS network.



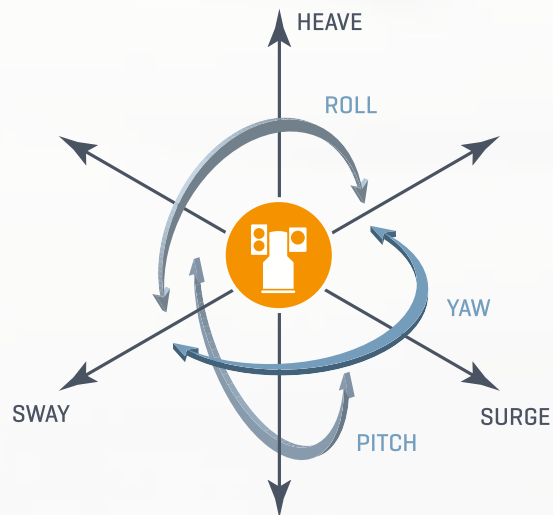
The SECurus is to-date the only equipment available to estimate the thickness and volume of an oil slick from a distance. But the technology is also very useful in search & rescue missions and other work where vision is crucial.



SECURUS POINTING UNIT

SECurus Pointing Unit is a ruggedized and marinised high specification EO sensor for the maritime environment. It houses high specification daylight and infrared cameras, and is stabilized to a level not seen anywhere else in the commercial market.

- HD Day and Lowlight Camera
- Actively Cooled IR Camera
- Powerful Stabilized Search Light
- High sensitivity stabilisation in 6 degrees of freedom



ACTIVELY COOLED IR CAMERA

Controlled experiments have shown that while uncooled IR sensors can detect oil on water in favourable conditions, only an actively cooled IR sensor is capable of detecting oil on water in all weather and light conditions. Additionally, it requires the high level of sensitivity that an actively cooled IR sensor provides to be able to 'see' the relative thickness of an oil spill. No uncooled IR sensor is sensitive enough to be able to provide this information.

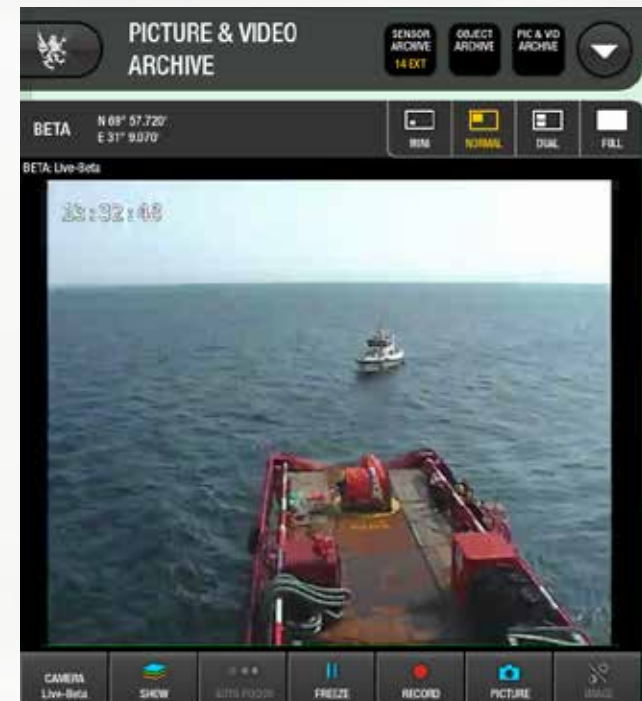
- High sensitivity Actively cooled IR sensor
- Essential for detecting thickest part of oil spill
- Provides superior detection range performance

SEARCH LIGHT

- 300W xenon Search Light
- Slaved to camera movements
- Search Light can be focused for a narrow beam for long range, or a wide beam for area illumination
- Stabilisation allows illuminating a point regardless of the movement of the vessel
- Can also be locked to follow an AIS or ARPA target, just as it can be locked to be fixed on a certain point.

HD DAY & LOWLIGHT CAMERA / SEARCH LIGHT

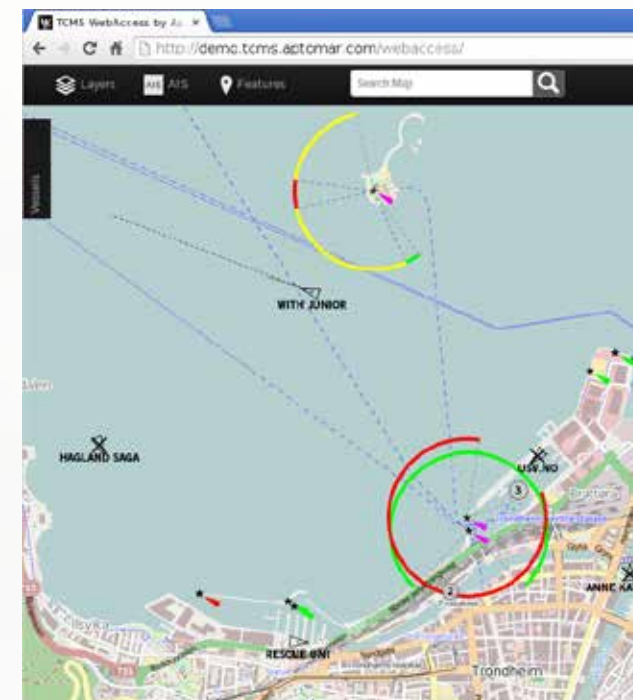
- High resolution for range and detail performance



SECURUS WORKSTATION

SECurus Workstation is the user interface of the SECurus system. It consists simply of a marine touch screen and a Joystick.

- Intuitive and easy to use touchscreen user interface
- The images from the day and lowlight camera and Cooled IR camera are displayed in a window of the maritime chart based display.
- All data is geo referenced and displayed in correct location on maritime chart
- Unique ability to geo-reference the video images and display as PIP or overlaid on the chart.





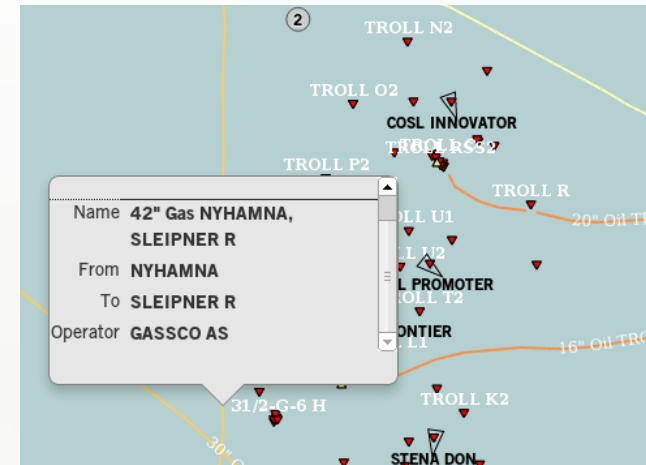
Touchscreen User Interface

- No keyboard or mouse required for operation.
- Simple and intuitive touchscreen interface
- Quick and intuitive operation, no long menu structures or proprietary keyboards to learn.



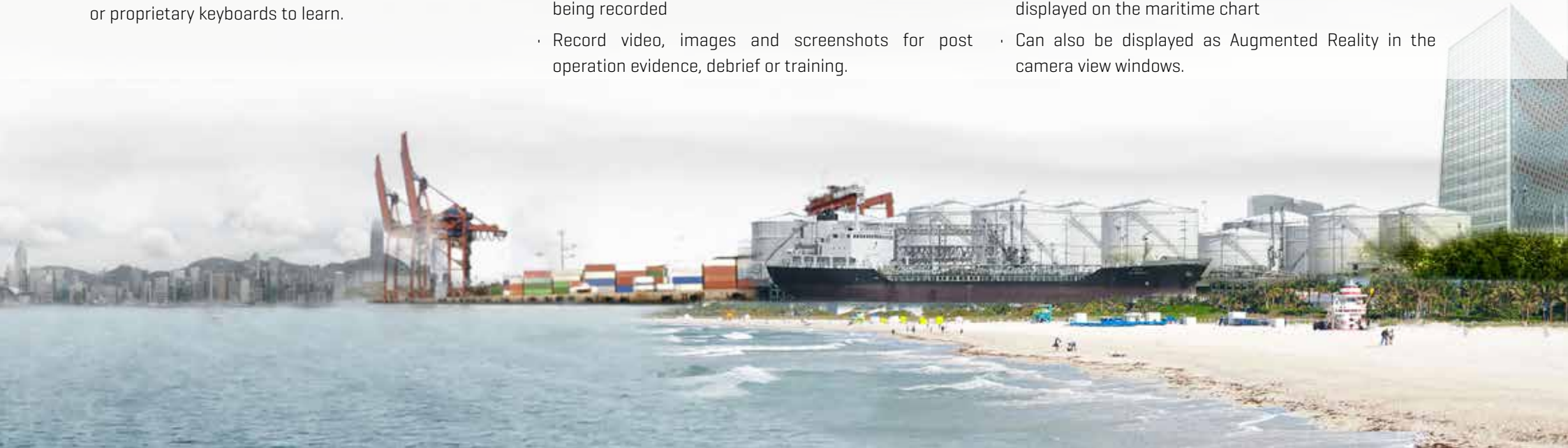
Recording and Storage

- SECurus System can record and store many hours of video and still images.
- Recordings can also be live streamed in addition to being recorded
- Record video, images and screenshots for post operation evidence, debrief or training.



GIS Information

- GIS information can be stored to create user specific maps, e.g. underwater fixtures and assets
- Points, areas and routes can be created by users and displayed on the maritime chart
- Can also be displayed as Augmented Reality in the camera view windows.



OIL SPILL DETECTION & COMBAT MANAGEMENT

Integrate SECurus System with Radar OSD to provide the most complete and reliable oil spill detection system available.

- Automatic detection with Radar OSD.
- Verify or Reject alarms quickly with Actively Cooled IR sensor.
- Detect and locate thickest part of the oil spill.
- Only SECurus with its actively cooled IR sensor has the sensitivity to be able to detect the combatable part of an oil spill in all light conditions.
- Decision support tool for choosing the most appropriate method to combat the oil.
- Create the Common Operating Picture by networking SECurus Systems together to form the most comprehensive situation overview available.



SEARCH & RESCUE

Long range sensors and accurate stabilization combine to produce one of the most powerful EO sensors available for maritime Search & Rescue.

- Detect person in water at up to 3 km.
- Geo referencing provides location and range and bearing of casualty.
- Quickly and Simply share survivor location with shore and other vessels.
- Built in search patterns with integrated current compensation.
- User specified area sweep of the SECurus sensor enables a large area of sea to be searched.
- Illuminate casualty with Powerful Searchlight to assist other units to locate the person.
- Searchlight also informs the casualty that they have been seen, and that rescue is on the way.



FIREFIGHTING

- Sees through smoke to identify the flames.
- Enables accurate use of firefighting canon.
- Live streaming to Emergency Response Room for incident management to know severity of situation.

TOWING

- Monitor the towed vessel from the bridge day and night.
- Monitor towline identify friction to avoid breakage.
- Share real-time video of tow to onshore control room for constant status updates.



MARITIME SURVEILLANCE

- Detect a large vessel at ranges up to 20 km, and a standing person at up to 10 km. No uncooled IR sensor can come near in range performance.
- HD digital day and lowlight camera is capable of up to 30X zoom level.
- Monitor a large area of sea from a single location.
- Integrate with Small Target Radar processor to visually identify targets detected by the radar.
- Highly accurate stabilization makes long zoom levels usable, even with vessel moving.
- Powerful xenon searchlight used to illuminate targets to provide a steady illumination of the target vessel during boarding operations by daughter craft.
- Use of Searchlight lets the target know they have been detected.
- Record and Share video and images for debrief and evidence.



COMMON OPERATING PICTURE

When connected to an Aptomar TCMS Network SECurus System can share all information.

- Share videos, still images, GIS data, Screenshots with Operations Rooms and other vessels.
- Sharing all the data from a number of individual SECurus System installations can provide the ultimate in situational overview of a maritime operation.
- Sharing combined data with all parties in real-time creates the Common Operating Picture.
- More efficient and speedier decisions can be achieved.
- Save Time, Save Money.



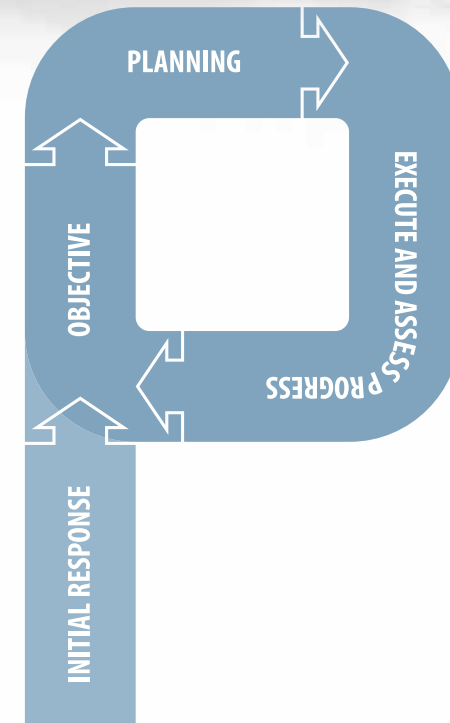
SECURUS TRAINING

No emergency response system is going to be effective without those using the system being thoroughly trained in its use. Aptomar provides regular new user, and refresher training for SECurus users. Aptomar SECurus training encompasses theory and best practice of oil spill combatting, as well as the features and use of SECurus.

- Goals of courses;
 - To ensure an understanding of the SECurus system's functionality & possibilities.
 - How SECurus can be used in a variety of emergency situations.
 - How SECurus fits in the complete Tactical Oil Spill Management system to ensure Common Operating Picture.
- Essential operational knowledge for operators/end users, as well as for onshore oil spill response management.

Courses consist of presentations and exercises with main focus on oil spill, and how the SECurus is used to verify and monitor oil spill. This information is critical for choosing the most efficient methods during and after an accidental spill, in addition to document the events and the processes.

Training courses are arranged at Aptomar facilities, but can also be conducted at customer locations.



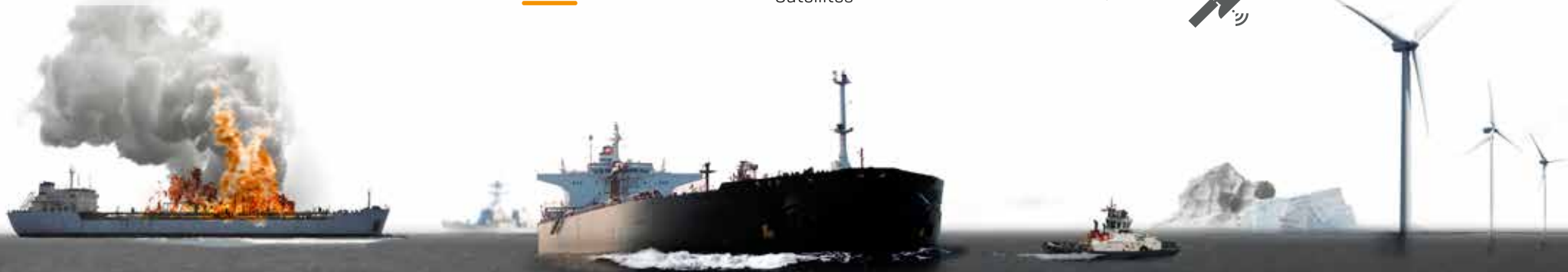
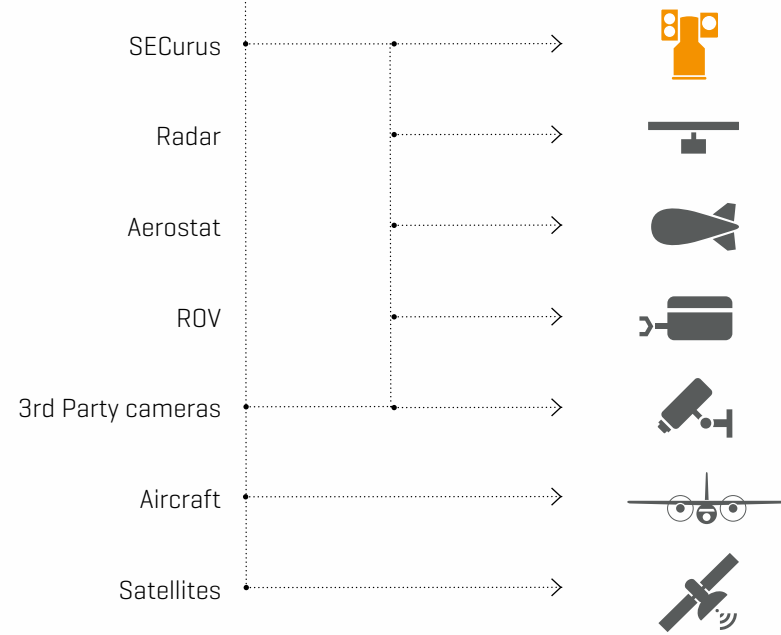
Aptomar's sensors and networking technology combine to create one of the most comprehensive and accessible maritime domain awareness systems available. Designed around a work process to create the ultimate in oil spill detection and spill response management, SECurus and TCMS are also widely deployed to provide situational awareness and decision support tools for Search & Rescue, Emergency Towing, Fire Fighting. In addition they are ideal for Maritime Surveillance missions such as Fishing Area Enforcement, Boarder Patrol and Smuggling Interdiction.

TCMS is the backbone of the system that provides the network to create the Common Operating Picture. SECurus is the ship or platform mounted system that gives local situation awareness by combining all available sensors and presenting them in the context of a maritime chart.

This brochure is about SECurus. Please see www.aptomar.com to find out about other components in the network, and to contact Aptomar for more information.

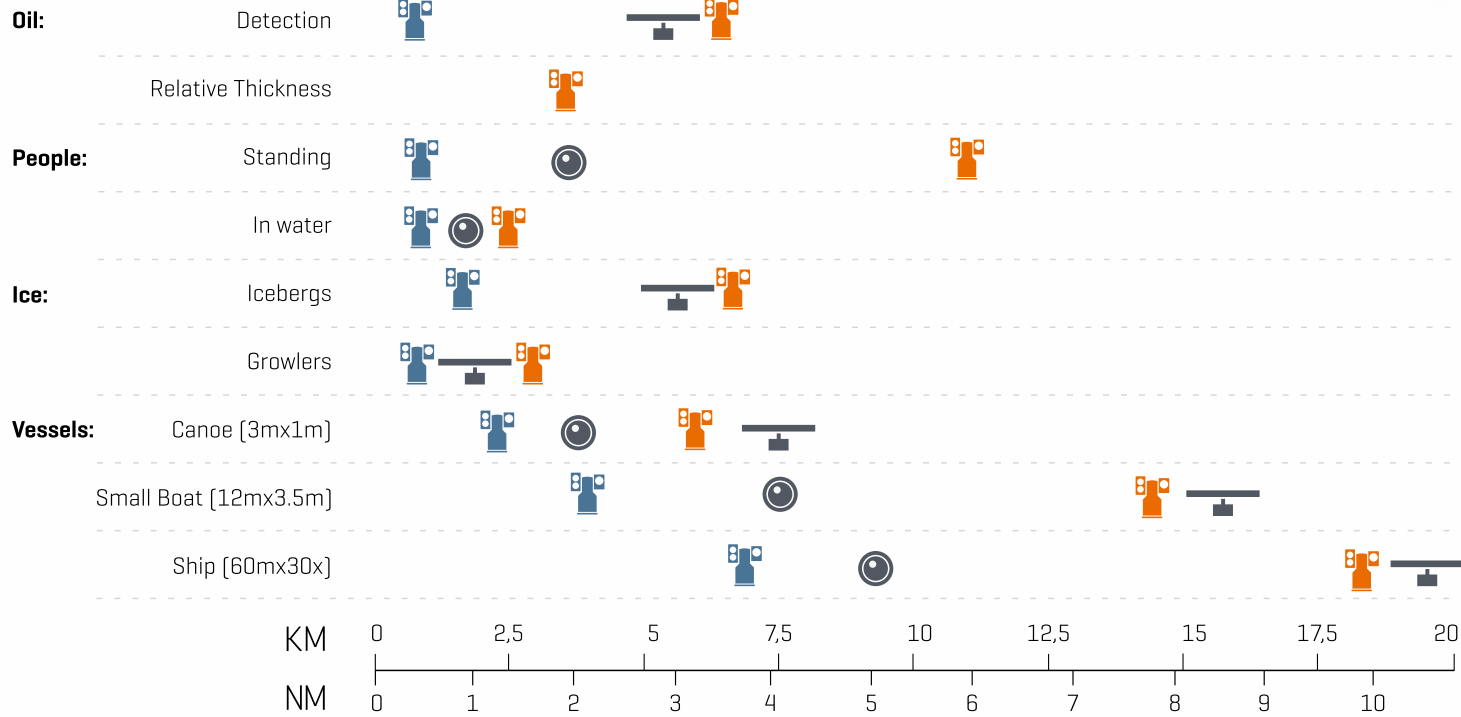


Sensor/component connects to e.g.
TCMS







RANGE CHART

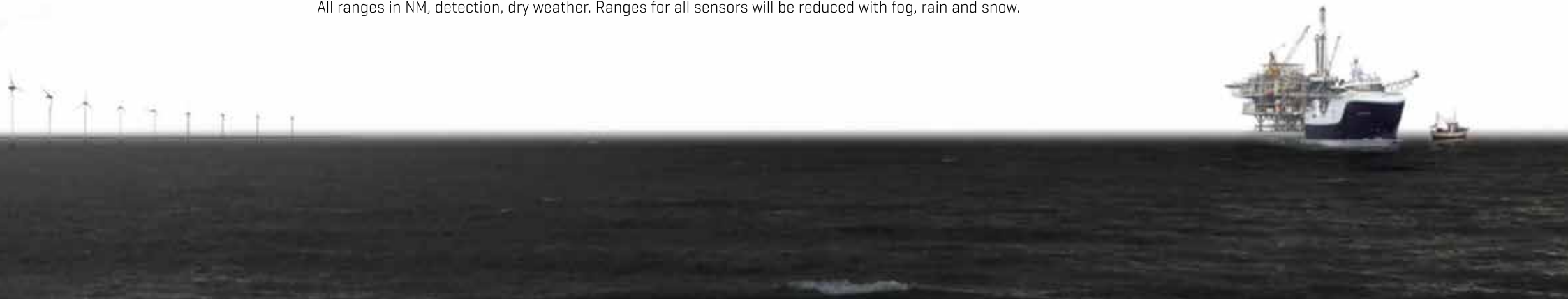
SUBJECT



KEY

-  HD Daylight Camera
-  Passive IR
-  Active IR
-  Radar

All ranges in NM, detection, dry weather. Ranges for all sensors will be reduced with fog, rain and snow.



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