SECURUS

aptomar
SAFETY AT YOUR FINGERTIPS

SECURUS

AIRBORNE
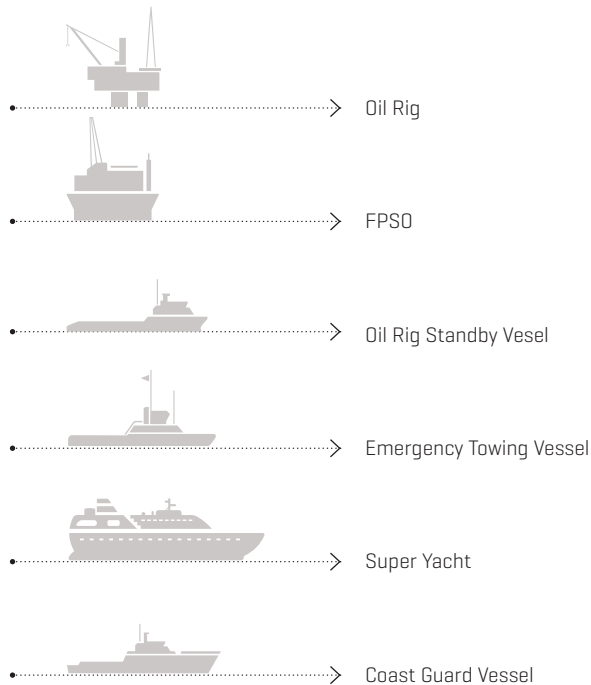
OFFSHORE

NEAR SHORE

ONSHORE

Oil Rig

FPSO

Oil Rig Standby Vesel

Emergency Towing Vessel

Super Yacht

Coast Guard Vessel

SECᴜʀᴜs 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 SeaCOP 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 and para-military market.

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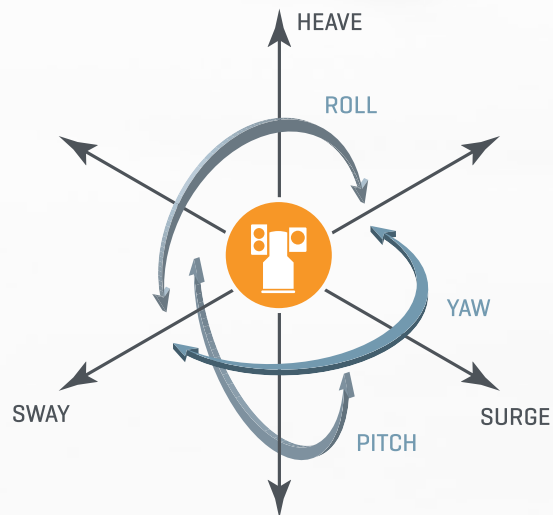
ACTIVELY COOLED IR CAMERA

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.
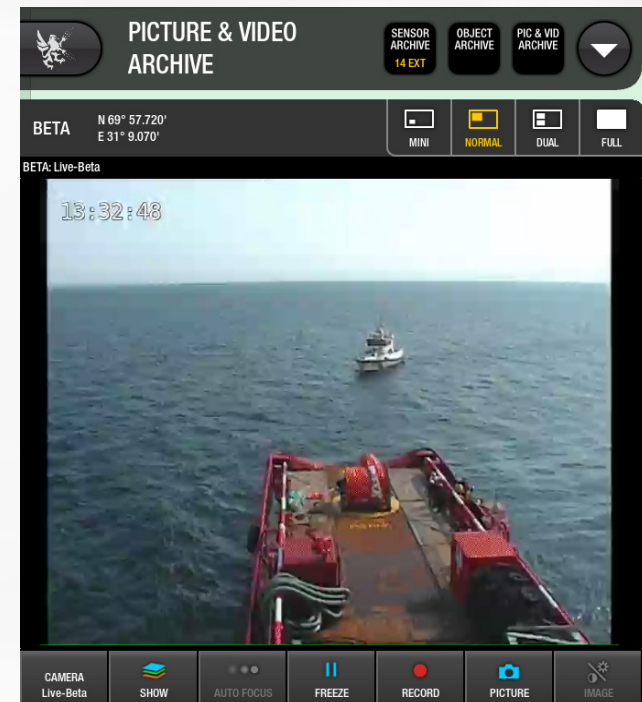
· High sensitivity Actively cooled IR sensor

· 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

PICTURE & VIDEO ARCHIVE

SENSOR ARCHIVE 14 EXT · OBJECT ARCHIVE · PIC & VID ARCHIVE

BETA   N 69° 57.720'   E 31° 9.070'   MINI · NORMAL · DUAL · FULL

BETA: Live-Beta

13:32:48

CAMERA Live-Beta · SHOW · AUTO FOCUS · FREEZE · RECORD · PICTURE · IMAGE

SEACOP SECURUS WORKSTATION

SeaCOP 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 an displayed in correct location on maritime chart

· Unique ability to geo-reference the video images and display as PIP or overlayed on the chart.
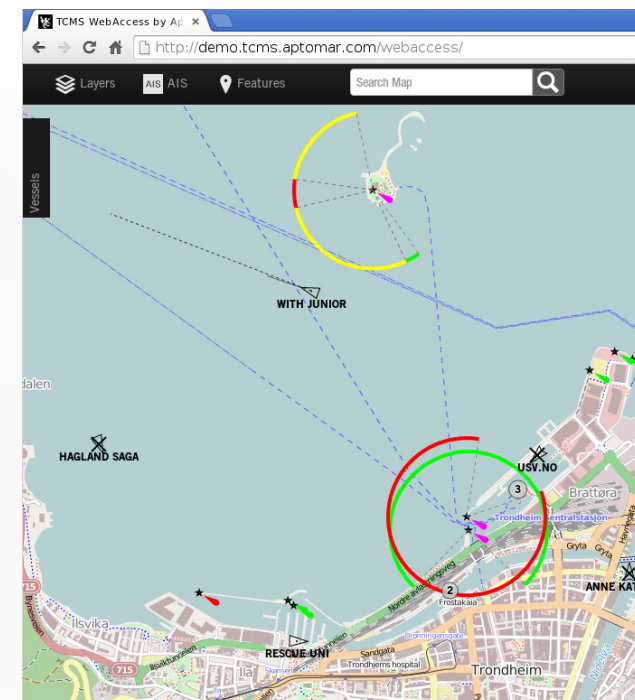
Touchscreen User Interface

· 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.
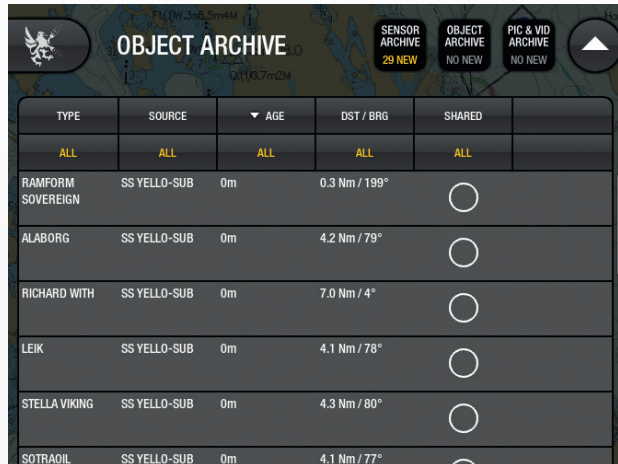
Recording and Storage

· 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.
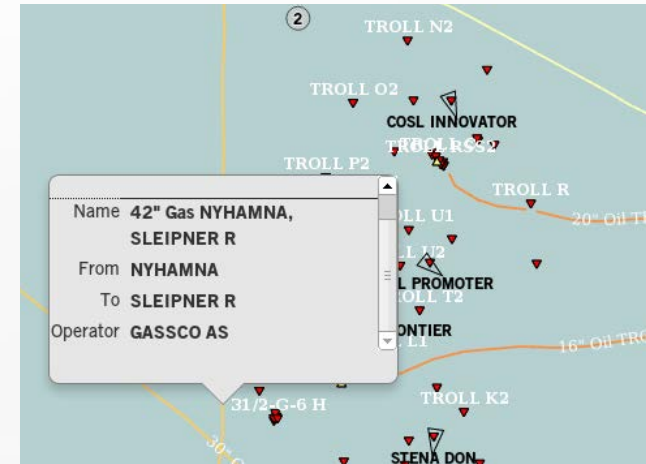
GIS Information

· 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.
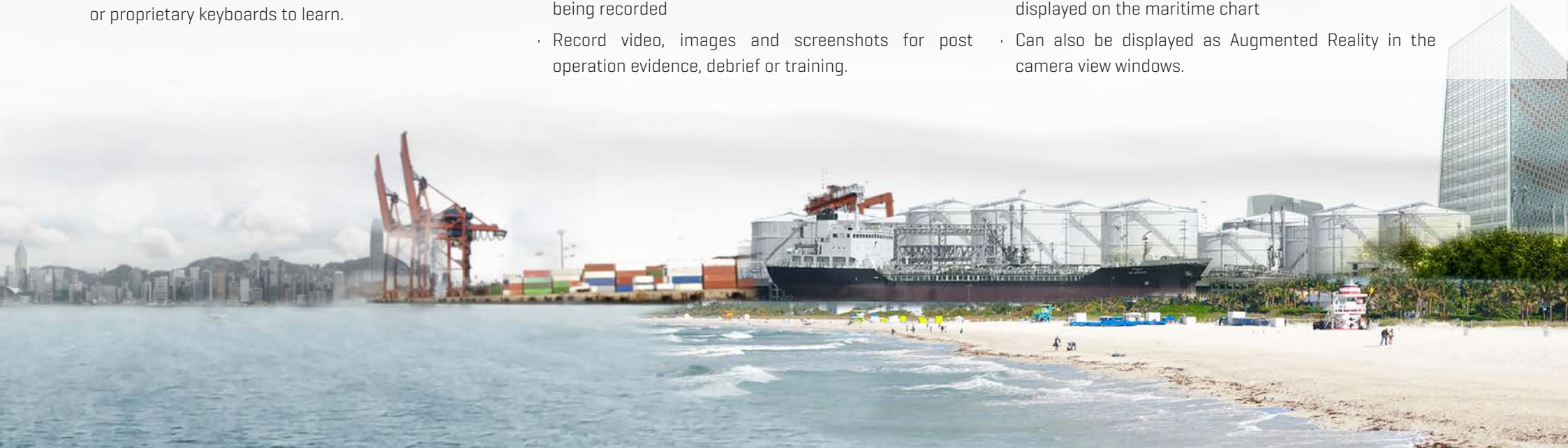
OIL SPILL DETECTION & COMBAT MANAGEMENT

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 SeaCOP 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 surveillance, security and emergency response system is going to be effective without those using the system being thoroughly trained in its use. Aptomar provides regular new user training, and refresher training for SECurus operators. Aptomar SECurus training encompasses theory and best practice for marine operations, 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 surveillance, security, SAR and oil spill management,

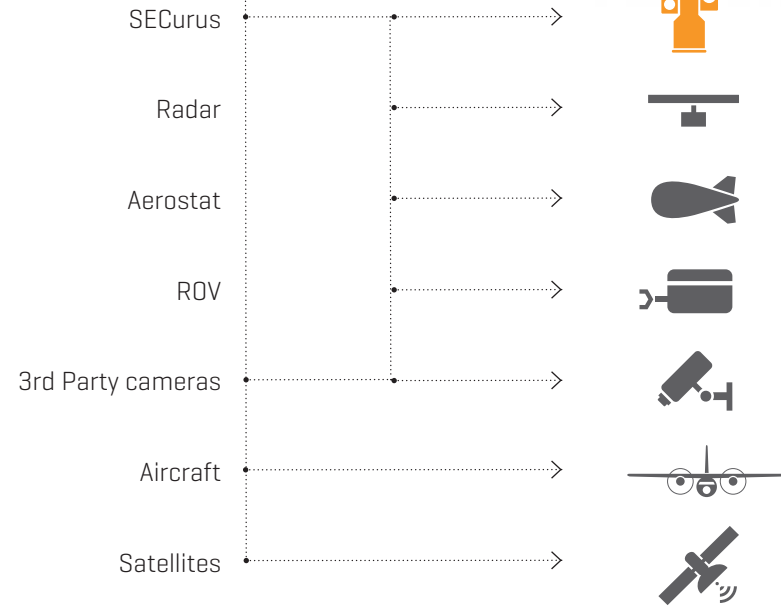Training courses are arranged at Aptomar facilities, but can also be conducted at customer locations.

NORBIT Aptomar's software, sensors and networking technology create one the most comprehensive and accessible maritime domain awareness systems available today. As the challenges and operations of our clients change, the SECurus and SeaCOP system is under continuous develpment.

The SeaCOP TCMS and all available add-on moduels are designed and improved over the last decade based on thousands of small and large operations, incidents and operations. Our customers during Maritime Surveillance missions such as Vessel traffic management, Fishing Area Enforcement, Boarder Patrol, oil and gas asset protection and environmental monitoring and detection.

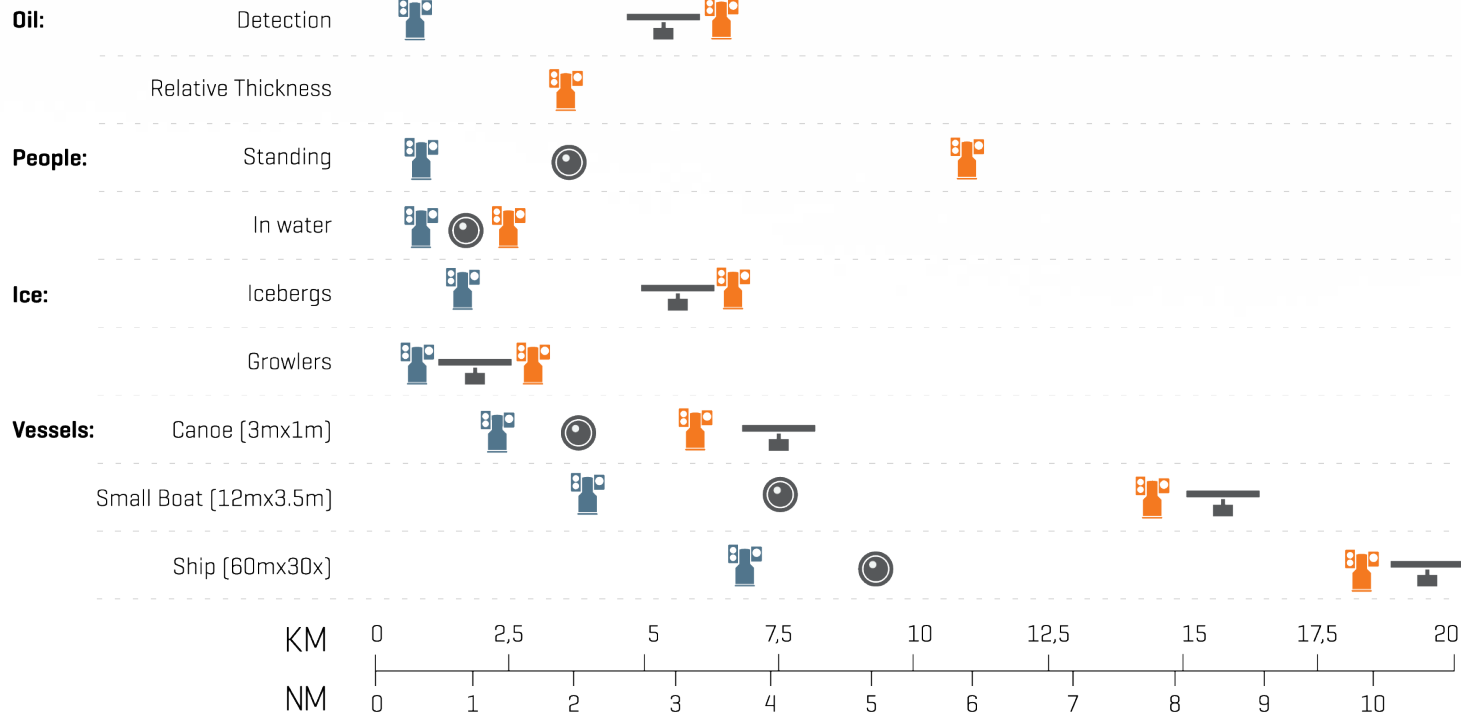Together well ensure the safety and integrity of our people, the environment and our assets

Sensor/componet connects to e.g.
SeaCOP TCMS

SECurus

Radar

Aerostat

ROV

3rd Party cameras

Aircraft

Satellites

RANGE CHART

SUBJECT

Category	Subject
Oil:	Detection
	Relative Thickness
People:	Standing
	In water
Ice:	Icebergs
	Growlers
Vessels:	Canoe (3mx1m)
	Small Boat (12mx3.5m)
	Ship (60mx30x)

KM: 0   2,5   5   7,5   10   12,5   15   17,5   20

NM: 0   1   2   3   4   5   6   7   8   9   10

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

KEY

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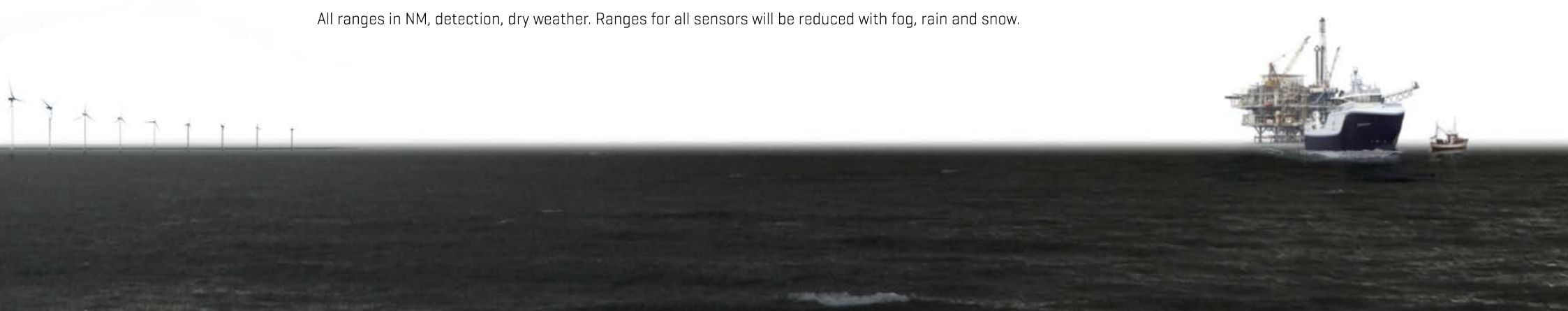
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