



KONGSBERG

# THE MBR FAMILY

.....  
ENABLING OPERATIONAL EXCELLENCE



# MAXIMIZING PERFORMANCE BY PROVIDING THE FULL PICTURE

## OUR MISSION

We shall earn the respect and recognition for our dedication to provide innovative and reliable marine electronics that ensure optimal operation at sea. By utilising and integrating our technology, experience and competencies in positioning, hydroacoustics, communication, control, navigation, simulation, and automation, we aim to give our customers The Full Picture. The Full Picture yields professional solutions and global services that make a difference enabling you to stay ahead of the competition.

## OUR PHILOSOPHY

Our success depends on the success of our customers. Actively listening to our customers and truly understanding their needs, and then translating these needs into successful products and solutions is central to achieving our goal. Our people are the key to our success and we empower them to achieve. Working together in a global network of knowledge, guided by our values, engenders innovation and world class performance. Every day we have to think a little differently, because every client is unique. We aspire to translate the imagination and dedication of our staff into successful technologies and solutions. Our commitment is to add value to your operations by providing you with The Full Picture.

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# CONNECT, COMMUNICATE, EXCEL

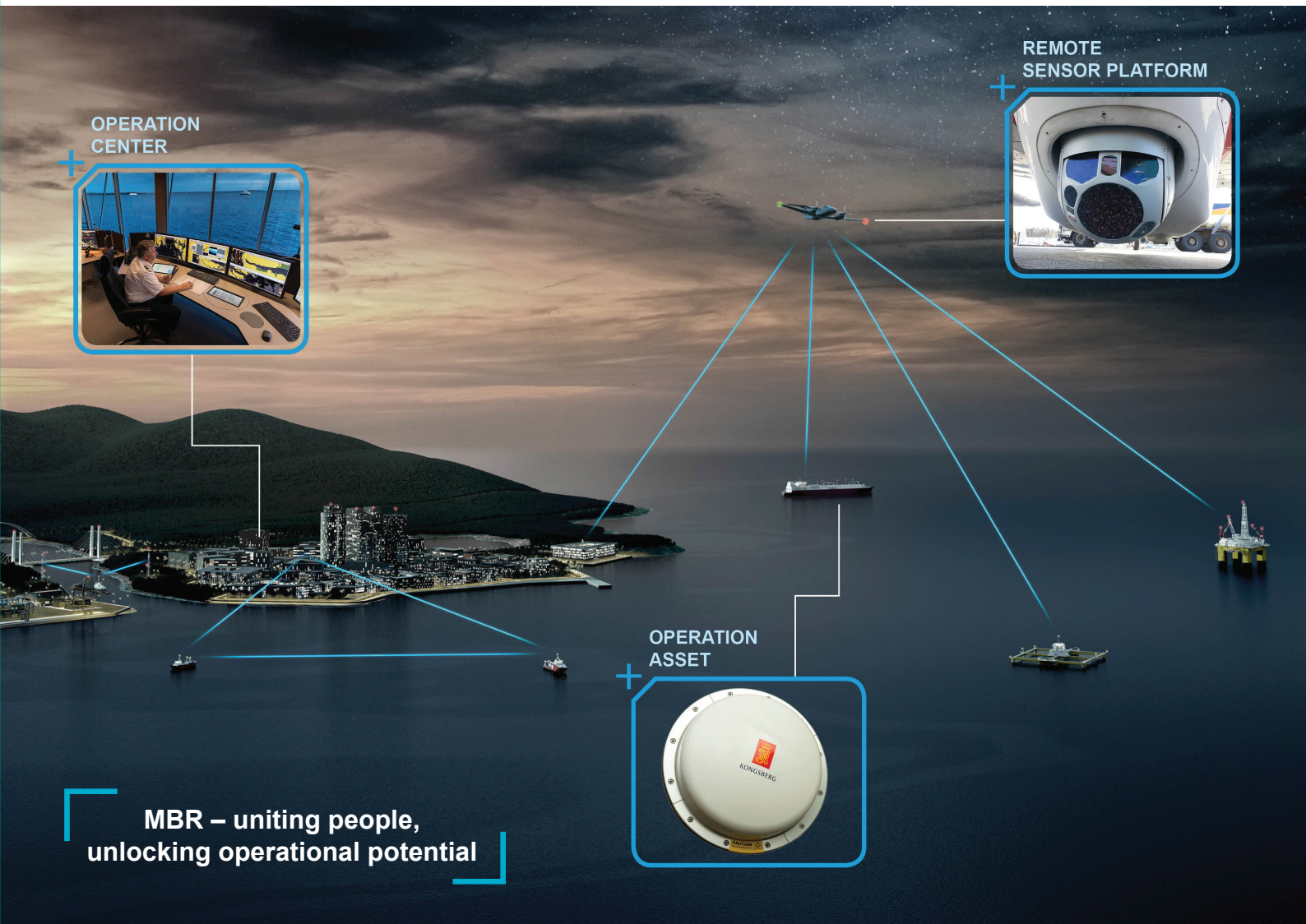
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Maritime Broadband Radio (MBR) connects operational assets and teams like never before. Delivering high performance, capacity and barrier-free communications, without the need for expensive infrastructure, MBR unlocks a new age of collaboration for complex operational tasks.

With reliable, durable and cost effective technology, MBR enables the sharing of data and HD video

streams between vehicles, vessels and aircrafts.

MBR channels high-speed digital communication and unites teams, across long ranges, ensuring that, no matter what the demands, you have the mission-critical connectivity required for success.



# COMMUNICATING SUCCESS

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Successful operations depend on effective communication. In a world of increasing complexity, with ever greater demands, the ability to see, hear and understand your team unlocks potential and mitigates risk.

MBR unites people, allowing them to work side by side, even when separated by long distances.

Objectives, expertise and real-time insights can be seamlessly shared, ensuring not only awareness and understanding, but also the best chances of operational success – every time, everywhere.

## MBR DELIVERS:

### PEERLESS PERFORMANCE

**High-capacity** – share HD video, images, maps, voice, and all vital operational data.

**Long range capability** - seamless digital communication across distances of up to 300 km\*

**Smart systems** – intelligent configurations delivering optimal bandwidth and low latency

### COMPLETE CONNECTIONS

**Barrier-free connectivity** – Bypassing steel structures and obstacles for reliable data exchange

**The power of precision** – fail-safe application, control and efficiency

**'Plug and play' simplicity** – secure, simple and strong networks without the need for internet connections

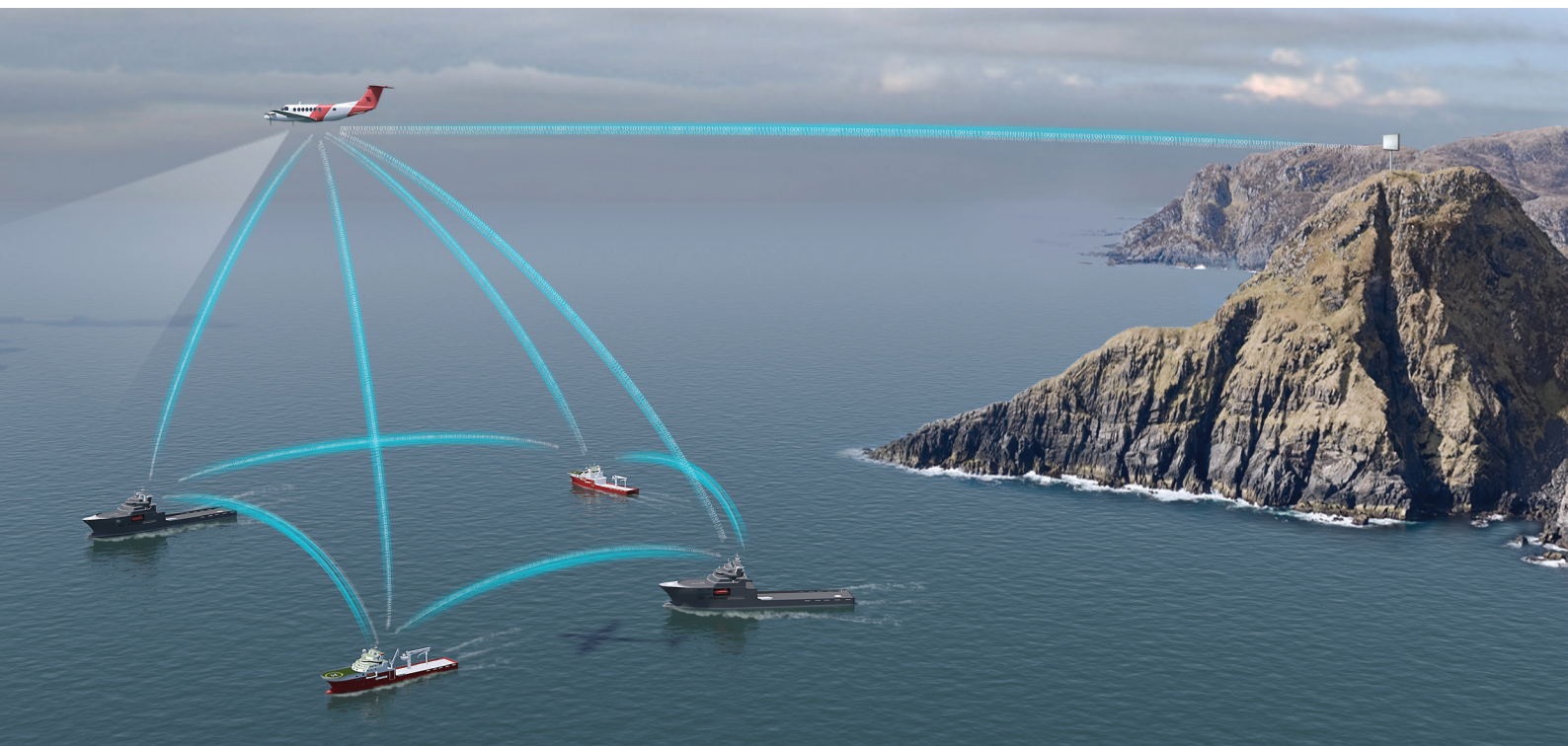
### Innovation you can trust

**Operational reliability** – engineered by KONGSBERG for long-term performance

**Extreme durability** – pure solid-state technology, high quality manufacturing, and no moving parts

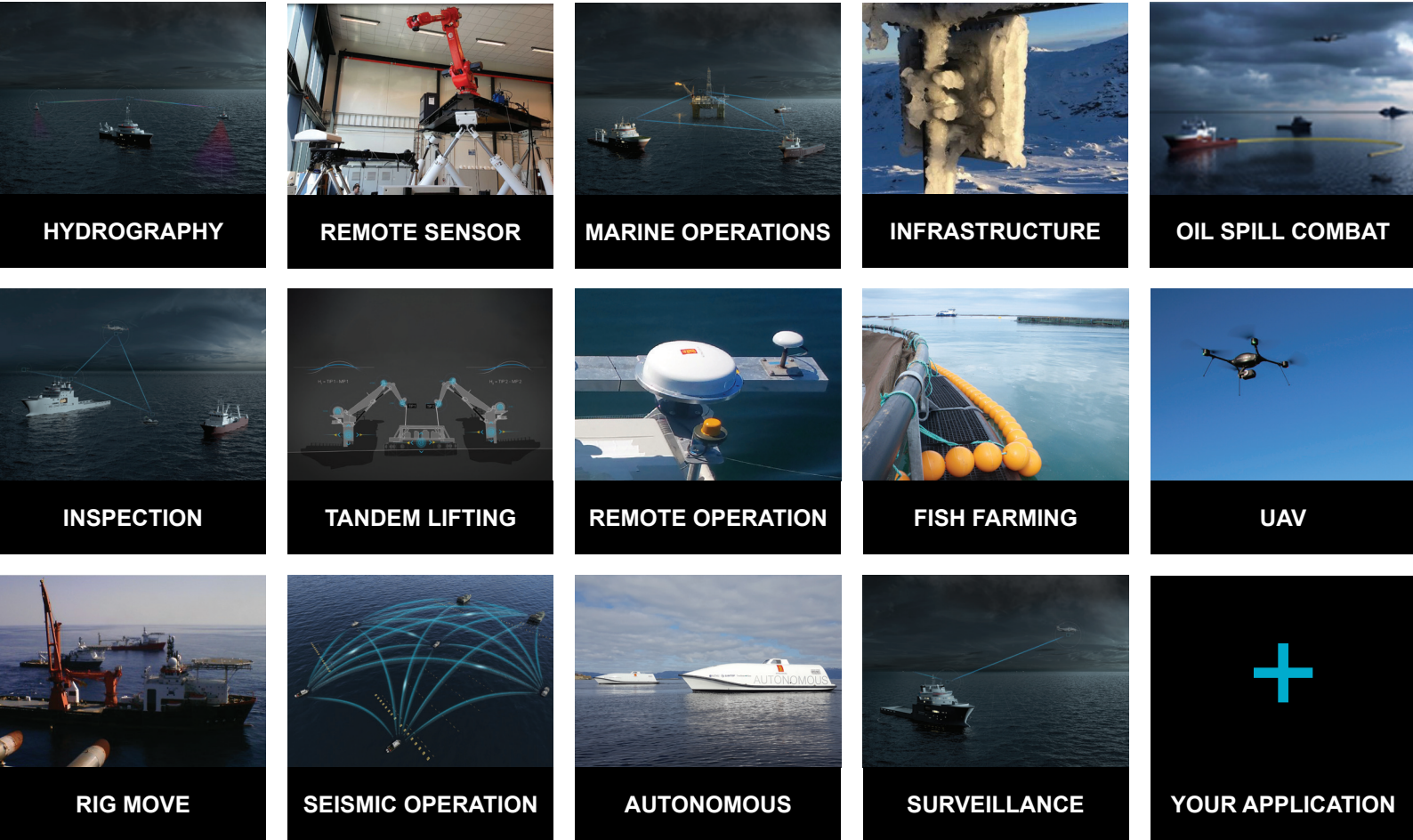
**Cost effective excellence** – easy to install, zero infrastructure and clear, predictable pricing

\*Operational range is dependent on antenna placement and height above sea level.



# APPLICATIONS

The MBR is suitable for a wide range of applications, including, but not limited to:



## MBR - OPERATIONAL EXCELLENCE THROUGH COMMUNICATION PERFORMANCE

### Game-changing communication

MBR is unique. There is no market equivalent enabling this degree of data transfer, without the need for internet connectivity, across long distances, in dynamic environments, between multiple operational assets.

It is simple and cost effective and requires absolutely no specialized infrastructure, unlike traditional data transfer solutions.

There are no subscriptions, no rental agreements and no complicated and costly data charges – just predictable pricing and reliable, high quality performance.

With real-time information, real-time awareness of complex situations can be achieved, empowering safer, more efficient and more successful decision making.

The benefits of MBR are as unique as the technology. Connect with new possibilities today.

# ENABLING COMPLEX OPERATIONS

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Whatever the task, whatever the challenges, whatever the assets and modes of operation are, MBR has the ability to connect diverse teams and help simplify the most complex of operations. If your people can communicate they can work together. MBR unites them.

Offering reliable beyond-line-of-sight operational range, MBR forms a high-capacity information highway that allows teams to share data from sensors, communicate seamlessly, and make decisions based on informed, common operational understanding.

It marks a new dawn of collaboration and coordination, paving the way for optimal performance, safety and operational success.



Foto: Espen Reite/Kystverket

### Safeguarding the seas with MBR

In 2016 Norway's Coastal Administration and NOFO (Norwegian Clean Seas Association for Operating Companies) fitted MBR units on all oil recovery vessels, and, together with the Norwegian Coast Guard, on the surveillance aircrafts LN-KYV and LN-TRG.

These diverse assets can now closely coordinate activities to enhance speed, efficiency and effectiveness in the event of critical oil spills. Together they exchange data with broadband capability, yet without internet connectivity, to gain shared understanding and make the right decisions, at the right times.



All MBR units offer:

- IP connectivity
- Near/far capability for multiple vessels
- High data through-put, whatever the conditions
- Real time data exchange
- Easy to install, configure and operate
- Reliable performance

# TAILORED FOR YOUR DEMANDS

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KONGSBERG understands the maritime environment and your operational objectives. We've tailored our MBR product range to ensure you have units that are optimised for your individual assets and purposes. Each one provides seamless, high capacity data exchange, reliable performance and durable construction, with no moving parts and no need for regular maintenance.

For any operation, in any environment, there's always a MBR

## MBR 189

- Sector Antenna
- High gain steerable in azimuth and elevation
- Relative and absolute positioning
- Built-in multi-sectoring functionality for expanding coverage
- Suitable for maritime land stations and UAV ground stations



## MBR 179

- Omnidirectional
- High gain steerable in azimuth
- Absolute positioning
- Suitable for medium to large vessels

## MBR 179 Portable

- Portable kit
- Omnidirectional
- High gain steerable in azimuth
- Absolute positioning
- Suitable for medium to large vessels
- Suitable for quick and temporary deployment



## MBR 169

- Cost-effective version
- Lower output power version of MBR 179



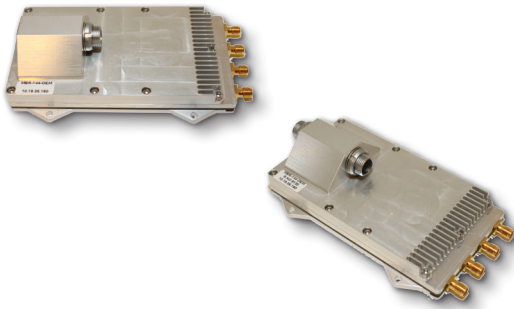
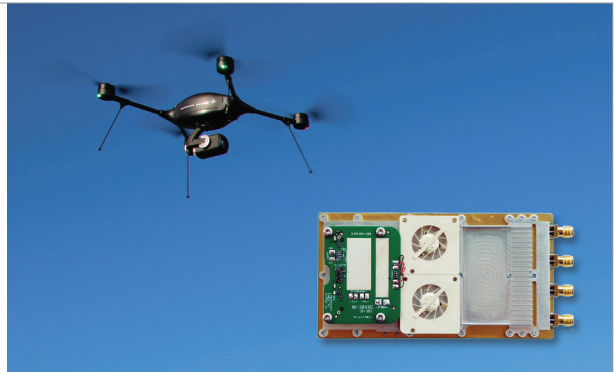


### MBR 144

- Compact MBR version
- Ingress protected
- Absolute positioning
- Suitable for small and unmanned vessel

### MBR 144 UAV

- Extreme lightweight version
- Suitable for medium and small UAV's for increasing operational range

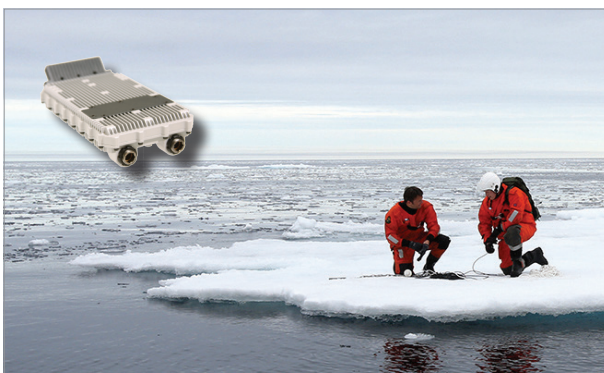


### MBR 144 OEM

- OEM unit for customer specific integration

### MBR 144 Submersible

- Submersible to 1000m
- Internal antenna elevated from radio unit
- Suitable for submersible vessels which require data link when surfaced



### MBR 144 Personal

- Body worn
- Absolute positioning

# LIFE CYCLE SUPPORT

## Designed to purpose – maintained to last

Our life cycle management service will assist our customers throughout all the phases, from design to commissioning and during the operational life time. Solid in-house competence, both in system design and user competence enables us to provide solutions that are fit to purpose and thus yields efficiency in operation.

Our common base technology provides robust designs, with few and reliable parts, an excellent foundation to maximise the output at competitive costs.

The distributed and open system design employs an industry standard communication network. Standard hardware components used for various applications and the open network approach results in:

- Increased reliability
- Competitive life-cycle support
- Easy up-grade solutions

## Evergreen

We offer continuous hardware and software upgrade to keep your vessel at maximum efficiency. Our system is designed with consistent boundaries between individual systems and control segments. This design strategy makes it easy to add new functionality or complete new control segments thus enable us to offer up-grades step by step to keep your system evergreen.

## Training

Qualified personnel are one of your major assets in efficient and safe operations. Thus, we offer modular training courses for all major subjects – from operator training to technical training that keeps your crew fit on the job.

PLANNING & DESIGN	PROJECT ENGINEERING & DEVELOPMENT	INSTALLATION & COMMISSIONING	OPERATION & MAINTENANCE	MODERNISATION
		On-line support »		
		Technical support »		
Technical consulting »				
	Design and software engineering »			
		Field service »		
		Repairs and spare parts »		
		Optimisation and modernisation »		



## Supported by professionals

*Our systems are easy to install and maintain – supported by professionals either on-site or through remote connectivity. They are designed for optimal operational availability and allow for favourable lifecycle expenditure*

# GLOBAL CUSTOMER SUPPORT

We are always there, wherever you need us. KONGSBERG customer services organisation is designed to provide high-quality, global support, whenever and wherever it is needed. We are committed to providing easy access to support and service, and to responding promptly to your needs. Support and service activities are supervised from our headquarters in Norway, with service and support centres at strategic locations around the globe – where you are and the action is.

As part of our commitment to total customer satisfaction, we offer a wide variety of services to meet individual customers' operational needs. KONGSBERG support 24 is a solution designed to give round-the-clock support. For mission-critical operations, KONGSBERG support 24 can be extended to include remote monitoring. We can adapt the level of support needs by offering service agreements, on-site spare part stocks and quick on-site response arrangements.



## Global and local support

We provide global support from local service and support facilities at strategic locations world wide. Service and support work is carried out under the supervision of your personal account manager, who will ensure that you receive high-quality service and support where and when you need it.

Your account manager will ensure continuity and work closely with your personnel to improve and optimise system availability and performance. Under the direction of your account manager, and with a local inventory of spare parts, our wellqualified field service engineers will be able to help you quickly and effectively.

## SUPPORT 24

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