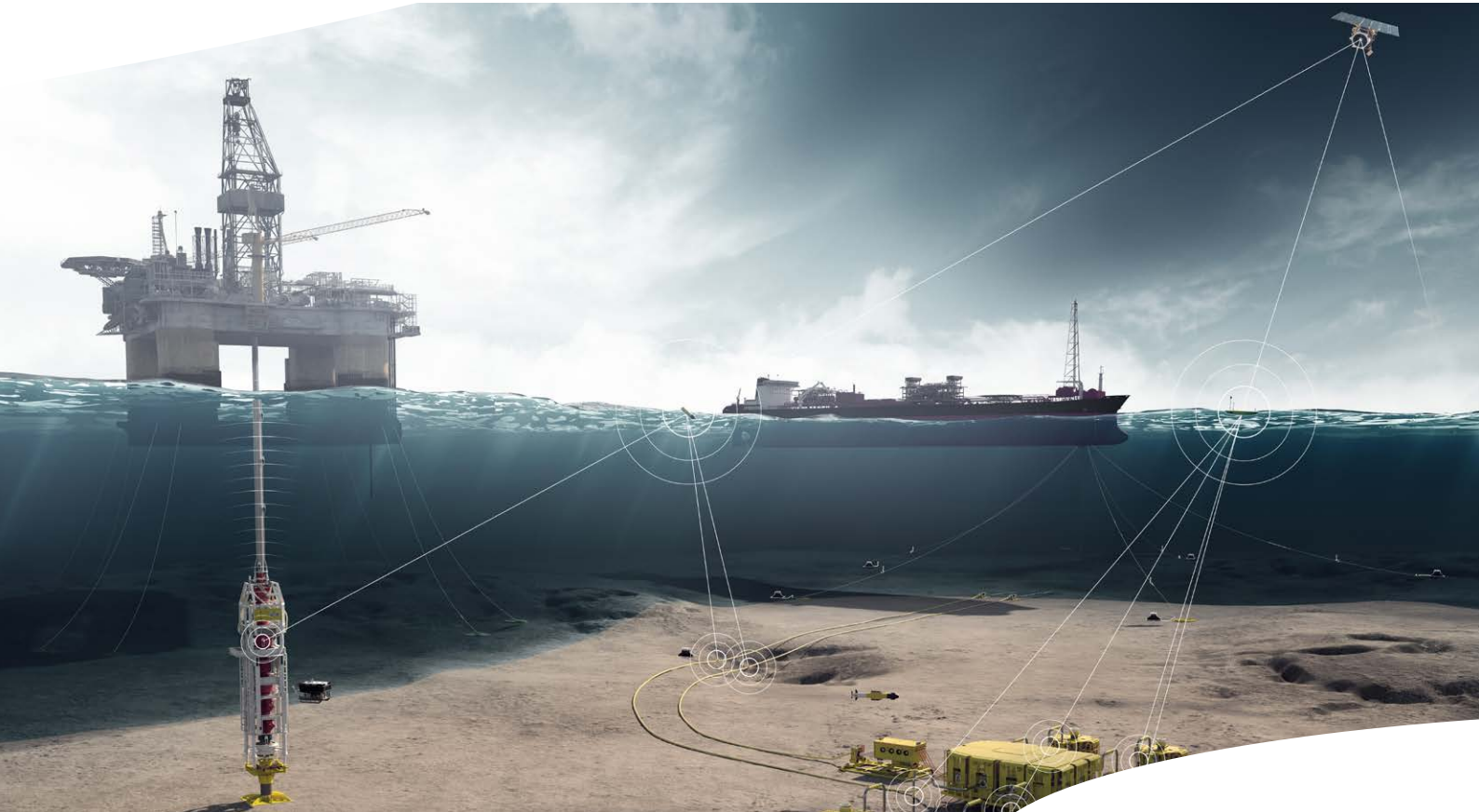


Subsea Integrity Monitoring

For improved integrity control and cost reduction



4Subsea's autonomous monitoring solutions allow for continuous integrity monitoring of subsea assets, enabling increased ROV inspection intervals up to 5 years. Our sensor solutions are "set and forget" systems that help operators reduce the need for costly inspections.

4Subsea helps operators reduce operational cost and maximise life of assets using autonomous sensors in combination with data analytics and specialist engineering competence. Products in the Smart Monitoring Sensors (SMS) range are **SMS Gyro™**, **SMS Vibration™**, **SMS Strain™**, **SMS Magic Hand™**, **SMS Gateway™**, **SMS Pressure™**, and **SMS Satellite™**. Technological applications include monitoring of wellhead integrity, risers, mooring lines, subsea spools and manifolds, as well as monitoring of pipelines and subsea structures.

KEY BENEFITS

- Reduces cost of ROV inspections
- Improves integrity control
- Allows for integrated operations on brownfield assets
- Sensors are autonomous, robust, and field proven with 5-year battery life
- Enables continuous monitoring at up to 10 Hz for 5 years
- Includes data processing within sensors to assess integrity status
- Allows for wireless data transfer from subsea to shore



Sensor Technologies

- Defense grade gyro measuring motions
- Strain and curvature (<math><1\mu</math>)
- Pressure
- Temperature
- Leak detection (liquids and gas)

Sensor Communication Alternatives

- Satellite communication (float up device)
- Acoustics to installation, surface buoy, or surface AV
- High bandwidth wireless ROV communication
- Cables and plug-in to any existing infrastructure

Sensor Specifications

- Modular and highly customizable design
- Typical dimensions: Height: <math><500\text{mm}</math> - Diameter: $\approx 130\text{mm}</math> - Weight: $\approx 12\text{kg}</math>$$
- Pressure rating 3000m water depth
- ROV installable and retrievable
- Designed for retrofit installation on subsea assets
- Design life: 25 years
- Operational life: 5 years continuous operation
- Field proven concept $\approx 100\,000$ hours of monitoring



4Subsea is a leading provider of technology and services that help operators maintain production from subsea oil and gas fields and offshore wind farms. By combining expert engineering competence, practical experience and a digital service, we ensure the integrity of assets all the way from reservoir to deck.

We deliver solutions on a unique digital platform, aiming to be in the forefront of digitising oil, gas and offshore wind operations worldwide. The company was established in 2007, and clients include all the major oil and gas operators as well as the large suppliers of subsea equipment.

Click [here](#) to view a short video of our solutions and offerings.

4Subsea - Share ideas, move forward

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