

Robotics Week Workshops

Executive Summary

The intent of Robotics Week was to connect the oil and gas industry with robotics experts and academia to explore and accelerate the use of robotics offshore.

Two-day workshop to identify how air, land and sea robots could solve specific oil and gas industry challenges, and the gaps with current robots to addressing these challenges.

66 workshop participants included:

- Oil and gas specialists
- Robotics experts from a range of industries
- Robotics academia

Next steps

We are reviewing the output of the technology gap analysis to identify potential themes for a future 'Call for Ideas' and future projects for co-funding and support with industry partners. The technology gaps will also inform ORCA Hub research programmes.



Air

Capability requirement

Fully autonomous drones that can plan and navigate their own flight path

Technology gaps

- Launch and recovery
- Situational awareness
- Power
- Diagnostics
- Communications and system integration
- Verification and validation
- Regulator(s) acceptance

Potential benefits

- Improve efficiency and productivity
- Enhanced and higher frequency data collection
- Reduce PoB requirement

Land

Capability requirement

Small, highly agile robots that can autonomously, climb, navigate and perform inspections, with little or no human intervention or support

Technology gaps

- Locomotion system
- Localisation and navigation
- Power
- Weather proof
- ATEX compliant
- Communications and system integration

Potential benefits

- Improve efficiency and productivity
- Enhanced and higher frequency data collection
- Reduce risk for operatives
- Reduce PoB requirement

Sea

Capability requirement

A pig that is autonomous, adaptable, reliable, multifunctional and capable of working in challenging, harsh environments

Technology gaps

- Motion strategies
- Power
- Sensing capabilities

Potential benefits

- Improve efficiency and productivity
- Enhanced and higher frequency data collection