



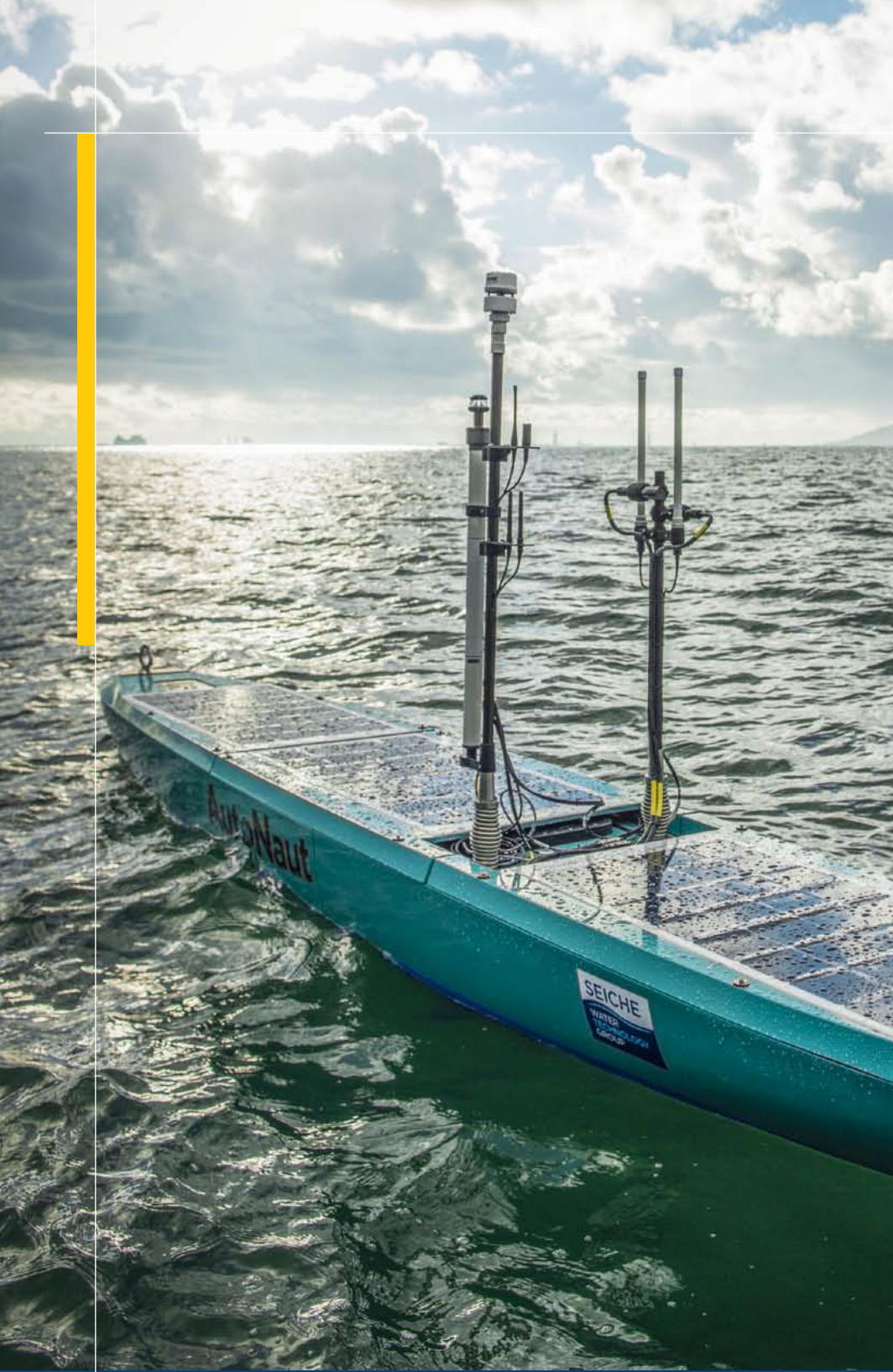
AutoNaut is part of Seiche Group with bases in the UK, Europe, USA and South Africa. Seiche Group specialises in technology solutions and environmental service provision to support the protection of the environment, with a particular emphasis on marine mammals and underwater noise.

Across the Group we provide specialised engineers, naval architects, marine acousticians, visual systems' experts, bioscientists and trainers as well as project management and operational services to ensure we deliver our clients the best solutions in the right place at the right time.

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SEICHE
GROUP



Passive Acoustic Monitoring



Marine life Monitoring



Marine Survey



Communications Gateway



MetOcean



Water Quality



Surveillance

AutoNaut

A Division of Seiche Ltd

Wave propelled uncrewed surface vessels

- Extreme range and endurance
- Zero carbon propulsion
- Silence and minimal visibility
- Persistent data gathering
- Scalable
- Remote guidance
- Station keeping within 25m





AutoNaut

A Division of Seiche Ltd

The AutoNaut is an uncrewed surface vessel (USV) propelled forward by the motion of the waves. Patented Wave Foil Technology enables long-term mission duration. Powered entirely by renewable energy and with no requirement for offshore personnel the AutoNaut significantly reduces costs and safety risks at sea. An extensive range of sensors and equipment can be powered by solar energy.

- Uncrewed operation: no offshore personnel at risk
- Simple deployment and recovery from vessel or slipway
- Powered by renewable energy: no emissions
- Mission duration of several months
- Station keeping within 25 metres
- Storm-proven robustness
- Flexible payload and sensor capacity
- Data transfer • Ambient sound measurement
- Sound source characterisation (SSC)



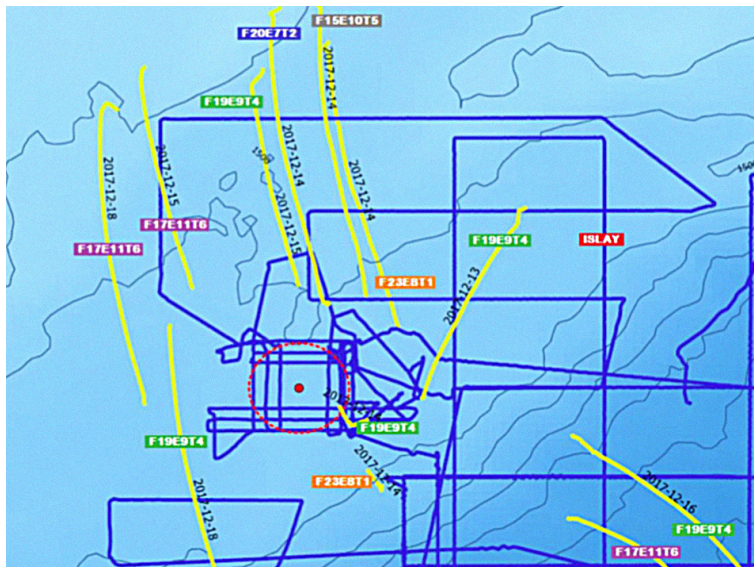
These capabilities enable AutoNaut to operate as a versatile data collection platform in oceanic environments, including hostile and remote areas. A wide range of scientific and survey tasks can be conducted cost-effectively and with significantly reduced safety risk

Remote operation

AutoNaut can be operated from anywhere in the world over an internet connection, permitting deployment in the most remote and hostile areas. Command and control information is continuously transmitted via satellite from the onboard system to highly experienced remote operators at our specialist facility, or we can provide training. AutoNaut has inbuilt AIS collision avoidance and will circumvent any active target. The organisation follows the Code of Conduct set out by the Marine Autonomous Systems Regulatory Working Group (MAS -RWG).

Wave propulsion

AutoNaut's unique Wave Foil Technology draws energy from the pitch and roll of the hull in waves. Through all wave directions the vessel is propelled forward by four keel-mounted foils fore and aft. In flat calm, the system can be assisted by an auxiliary propeller for a 1 to 3 knot speed. Extensive hydrodynamic testing has refined the technology and field trials have proven its robustness in stormy seas.



Applications

Passive Acoustic Monitoring

AutoNaut is a near silent vessel that provides both mobility and high signal-to-noise ratio.

- Marine mammal monitoring
- Ambient sound measurement
- Sound source characterisation (SSC)

Marine Life Monitoring

AutoNaut can unobtrusively monitor marine life such as seabirds, fish and marine mammals and help inform conservation management.

- Distribution surveys
- Population estimates
- Migration tracking

Marine Survey

AutoNaut's persistence and manoeuvrability make it an excellent low-cost alternative to conventional vessels.

- Nautical charting
- Pipeline inspection
- Cable survey

Communications Gateway

The AutoNaut operates as an at-sea information hub. It links sub-sea assets such as seafloor nodes via underwater an satellite communications.

- Data harvesting
- AUV coordination

Metocean

AutoNaut enables the acquisition of data in otherwise unobserved regions. It can both hold station (operating as a conventional weather buoy) and conduct survey transects

Water Quality

A range of water quality indicators help to ensure high environmental standards. AutoNaut acquires data for laboratory analysis and can act as an early warning system.

- Pollution monitoring
- Outflow monitorin
- Harmful algal blooms (HABs) detection

Surveillance

AutoNaut enables persistent monitoring in hostile seas and is able to provide ground-truthing of satellite remote sensing.

- Countering illegal, unregulated and unreported fishin
- Maritime border patrol
- Intelligence, surveillance and reconnaissance
- Coast guard operations

