Operational Challenge
Remote maritime monitoring is difficult due to limited deployable sensing and constrained communications.

Key challenges include:
- Limited ability to rapidly deploy sensing systems across wide ocean areas
- Subsea monitoring often requires fixed infrastructure or complex deployment
- Remote maritime environments lack reliable communications
- High-volume sensor data is difficult to transmit from remote ocean sensors

Defence requires deployable sensing systems capable of delivering real-time environmental and acoustic intelligence from remote ocean environments.

Technical Approach
Fastwave systems combine three key technical elements:

Deployable Surface Platform
Voyager drifter buoy platform
GPS positioning and environmental sensing
Satellite telemetry via Iridium

Subsea Acoustic Monitoring
Integration of digital hydrophone systems
Underwater acoustic sensing capability

Data Processing Architecture
Remote telemetry and data integration
Potential edge processing to reduce satellite message size

Together these technologies support **distributed sensing architectures for maritime monitoring and subsea awareness.**

Fastwave

Deployable Ocean Sensing Systems

Fastwave Capability
Fastwave develops **deployable ocean sensing systems** using maritime sensors & satellite communications to deliver real-time intelligence from remote maritime environments.

Core elements include:
- **Voyager deployable surface sensing platform**
- **Subsea acoustic sensing** (eg Ocean Sonics hydrophones)
- **Satellite communications integration**

Result:
Rapidly deployable sensing nodes combining surface & subsea monitoring with satellite data delivery.

Applications
Fastwave technologies support maritime sensing applications including:

- Maritime domain awareness
- Subsea acoustic monitoring
- Search and rescue drift modelling
- Environmental intelligence for maritime operations
- Oceanographic monitoring in remote maritime environments

Organisation
Fastwave – Australian maritime sensing technology SME
Western Australia

Specialising in deployable ocean monitoring and sensing systems integrating maritime sensors with satellite communications.