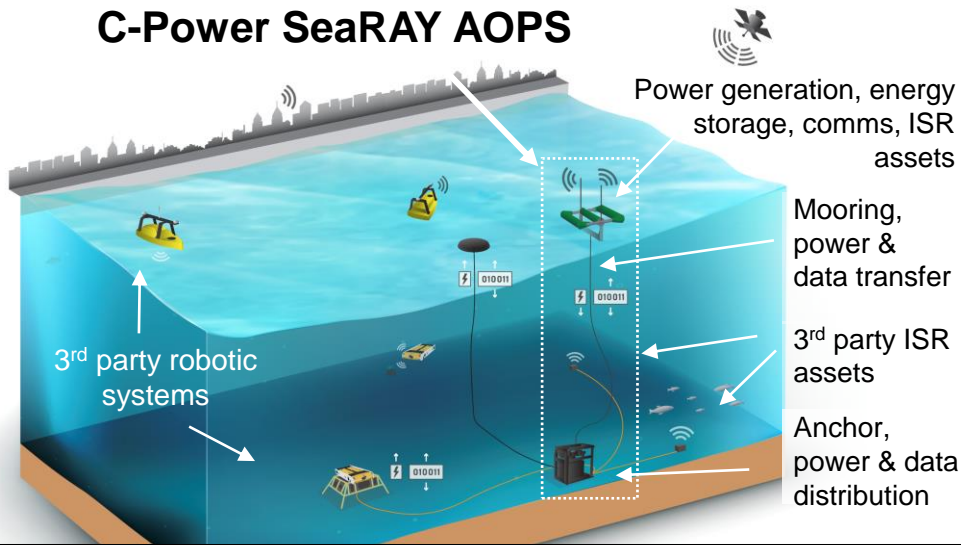


C-Power SeaRAY Autonomous Offshore Power System (AOPS)

Remote power and communications platform for enhanced Maritime Domain Awareness

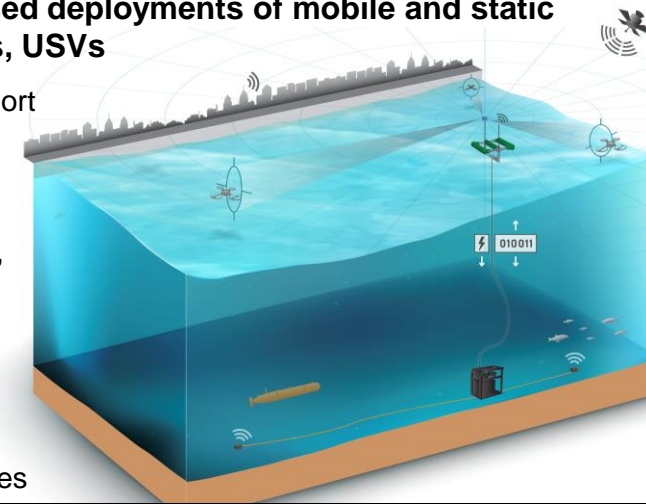


An AOPS is a platform technology that enables ISR and other data-gathering and interventional activities not possible or cost-effective today. It provides uncrewed, persistent power generation and communications support for robotic and static assets located on or below the surface and/or on the seafloor.



Persistent, uncrewed, at-sea, self-contained and self-powered system for support of resident and campaign-based deployments of mobile and static marine assets, such as sensors, UUVs, USVs

- Open platform and interface, able to support multiple assets from multiple suppliers
- Dual-use technology
- SeaRAY AOPS enables customers to:
 - Enhance Maritime Domain Awareness, e.g., C5ISR, MCM, bottom change detection, swimmer detection, counter UAS, fisheries, port, and infrastructure protection
 - Reduce operational costs, complexity, and carbon-intensity of offshore activities



Upcoming Demonstration Projects:

Hawai'i – Summer 2024

- Successful Phase 1 demonstration off MCBH October 2023
- Phase 2 deployment as part of RIMPAC / Trident Warrior 2024
- Mobile and static assets: Saab Sabertooth AUV and BioSonics intrusion detection system

Oregon – 2024/2025

- 18-month demonstration off Oregon coast
- C4ISR mobile and static assets: Sonardyne ADCP, Wavefront Sentinel IDS, Fugro seafloor lander, OOR USV, Subsea7 simulated command & control load



SeaRAY AOPS Phase 1 deployment off MCBH

SeaRAY AOPS Technical Description:

- 2023 TRL: 5/6, 2024 TRL: 7/8
- The combined AOPS and inspection/monitoring assets can be permanently or campaign-based resident, as needed.
- Other capabilities:
 - Moored or drifting capabilities
 - Scalable, sustainable power generation capacity from 50W to 20kW
 - Scalable energy storage capacity up to 100s of kW
 - Bi-directional data transfer between seafloor and secure cloud
 - Easy to transport, deploy and operate. 2 kW system fits in 1 x40' standard conex box and can be deployed with lightly crewed vessel

Design attributes

- Survivable
- Reliable
- Scalable
- Sustainable
- Autonomous control
- Non-complex logistics
- High power to weight
- Low observability
- Deep-water capable mooring system