Platforms & Technology for Ocean Exploration

Whitepaper Discussion

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Reimagining Exploration
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- Exploring the Ocean means Exploring the Ocean Floor AND Exploring the Water Column
Reimagining Exploration

- Exploring the Ocean means
  Exploring the Ocean Floor
  AND
  Exploring the Water Column

- Challenge: Dynamic in space and time
  Across many scales
  Current tools are ill-suited
Reimagining Sensing
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- We need a new generation of tools for exploring the water column
Reimagining Sensing

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• Scale: Changes what is possible eg the supercomputer in your pocket
Reimagining Sensing

- We need a new generation of tools for exploring the water column
- Scale: Changes what is possible eg the supercomputer in your pocket
- Actionable: Monitoring that can inform Science, Regulation, and Industry
Scaling the Connected Ocean

Tim Janssen, Ph.D.
Sofar Ocean Technologies

Drew Stephens
Cardinal Point Captains

March 29, 2022
National Ocean Exploration Forum: Blueprint 2032
How to scale toward a connected ocean

**THE CHALLENGES**

- Creating the data value chain
- Cost of platform integration and hardware interfaces
- Scaling public-private partnerships

**THE OPPORTUNITIES**

- Invest in a data-first strategy
- Drive hardware interface standardization to remove barriers to scale
- Build effective public-private partnerships around **dual-use** technologies
1-, 5-, and 10-Year Vision

2023
A path to standardization

- Select and encourage open standards for hardware interfaces and data formats/APIs.
- Announce data-first strategy focused on acquisition, standardization, and dissemination of ocean information.

2027
A robust Ocean Internet of Things (OIoT)

- USG projects use widely adopted standards for hardware interfaces and data formats/APIs.
- Low-friction contract vehicles to purchase commercially available data fuel data acquisition at scale.
- Public-private partnership program focuses on dual-use technologies.

2032
Ocean parity with space and land sensing

- Large, heterogeneous, autonomous, dual-use sensor fleet collects unprecedented density of ocean data.
- Centralized data discoverability democratizes data access and powers the ocean economy.
- Ocean Parity.