## Platforms & Technology for Ocean Exploration

## **Whitepaper Discussion**

Kasey Cantwell, Dr. Allan Adams, Tosca Lichtenheld, Drew Stephens



## **Reimagining Exploration**



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



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 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





• We need a new generation of tools for exploring the water column

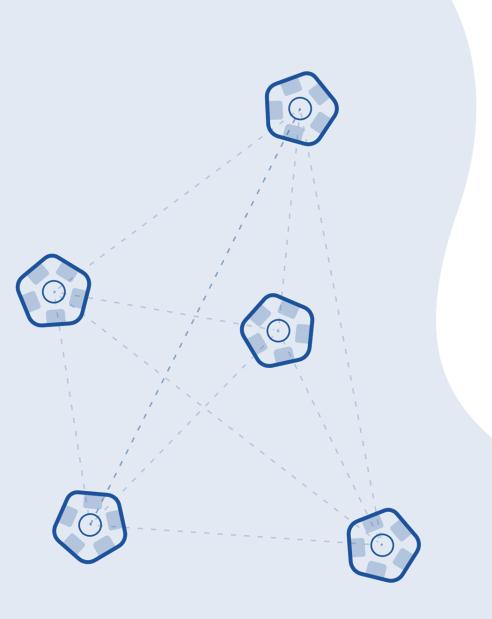


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- Scale: Changes what is possible eg the supercomputer in your pocket



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- Scale: Changes what is possible eg the supercomputer in your pocket
- Actionable: Monitoring that can inform Science, Regulation, and Industry





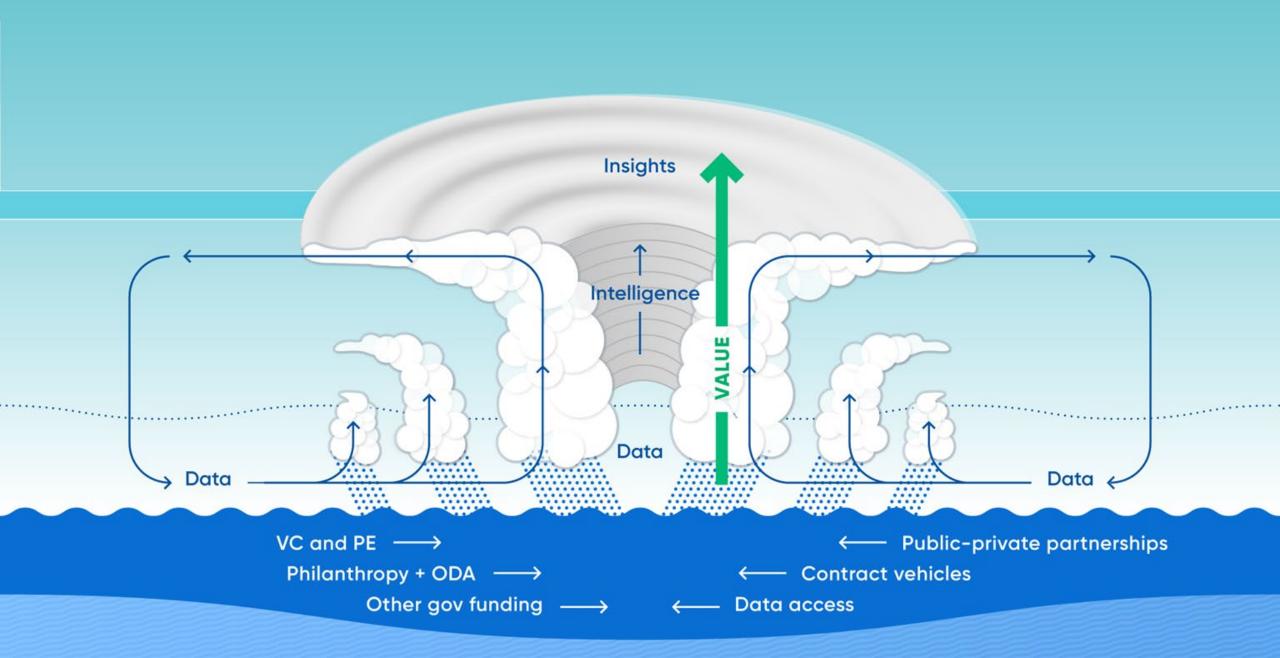
### Scaling the Connected Ocean

**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

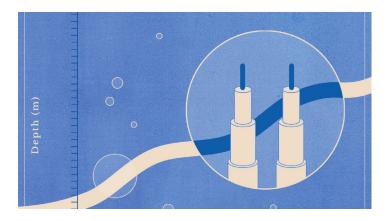
### THE CHALLENGES

- 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

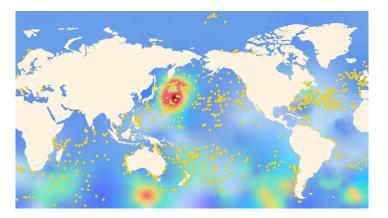
- Select and encourage open standards for hardware interfaces and data formats/APIs.
- Announce data-first strategy focused on acquisition, standardization, and dissemination of ocean information.



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.

