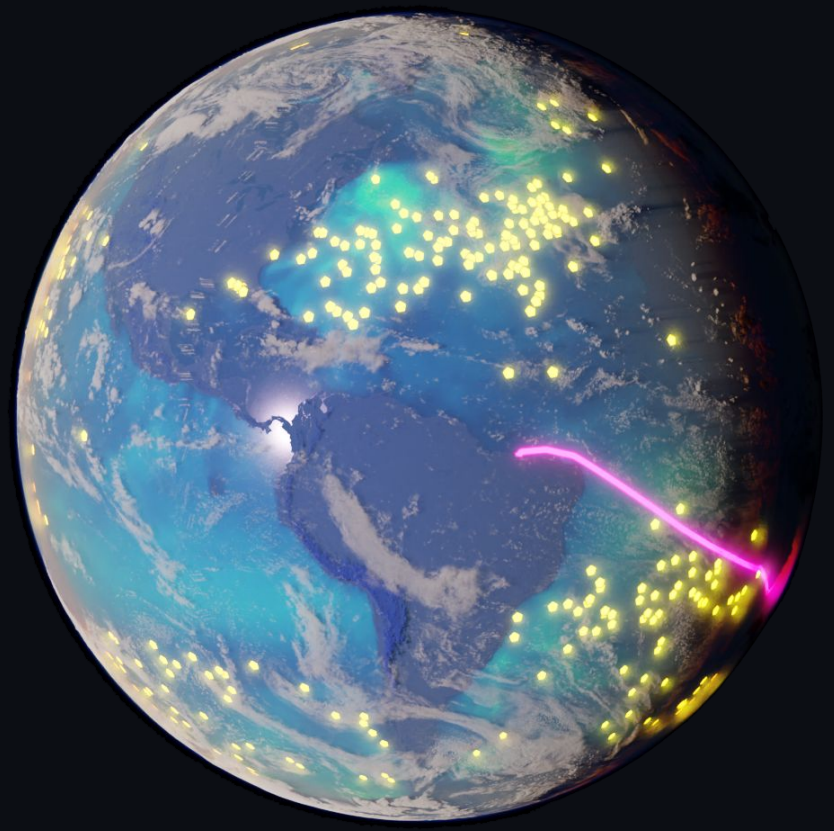
Partnering across boundaries

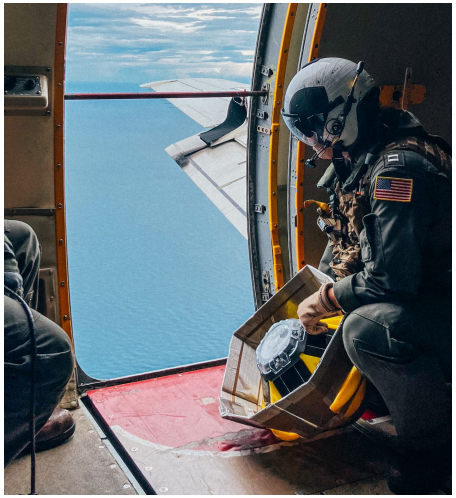
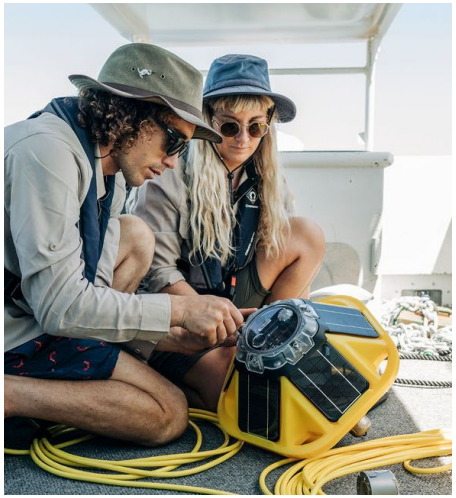
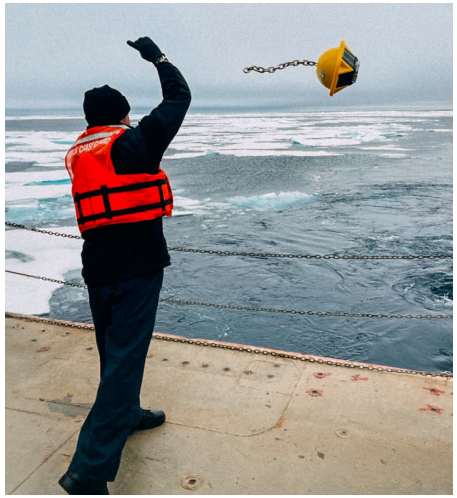
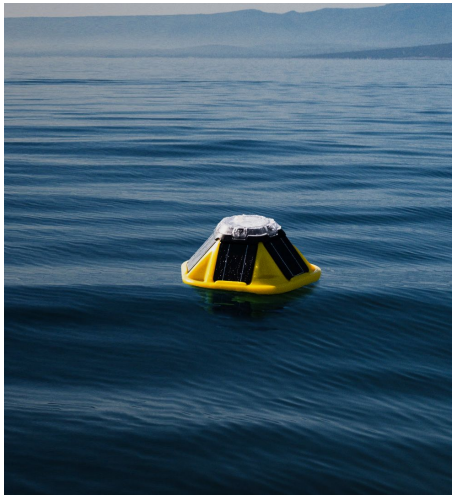
Successful partnerships across public and private organizations can drive rapid accelerations.



Tim Janssen, PhD
CEO & Cofounder
Sofar Ocean

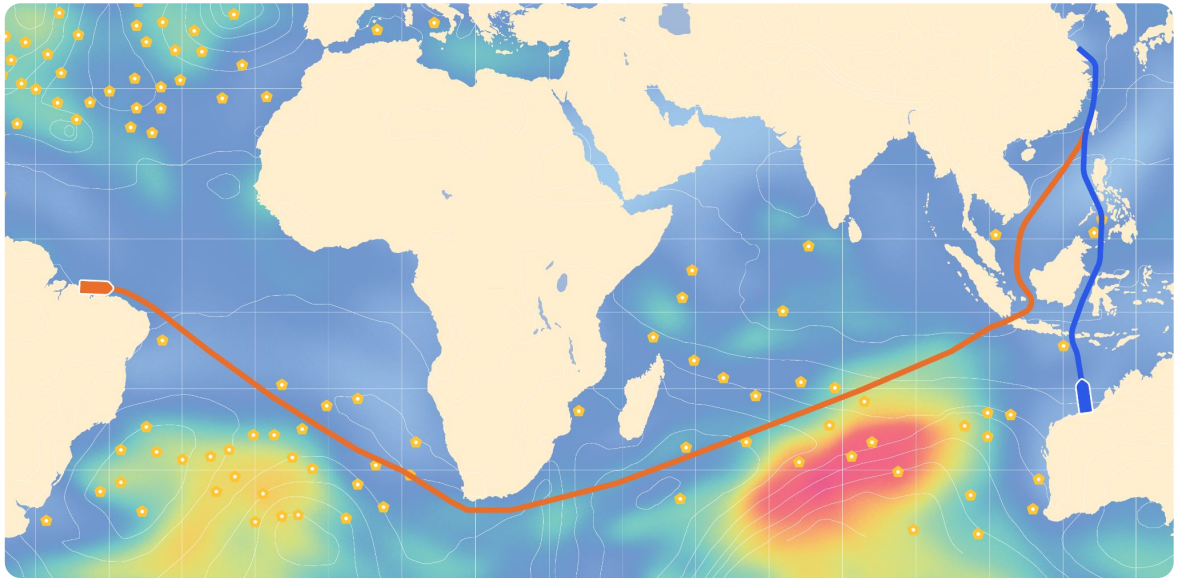
Scaling ocean information is much harder than it should be.

> The first 100 years of oceanography could well be called a century of under-sampling.
>
> – Walter Munk


Wayfinder Voyage Optimization delivers 5.1% average fuel savings

Wayfinder dynamic optimization across two key iron ore routes — C5 and C14



>5%

Average fuel savings and emission reduction

>$7.5B

Fuel savings possible

>100 Mt

CO2 emission reduction potential across maritime shipping fleet

Bristlemouth

The open universal connectivity standard for marine applications.

oceankind

Science & Technology

BUILDERS VISION

NOAA

SOFAR

MITRE

Aqualink

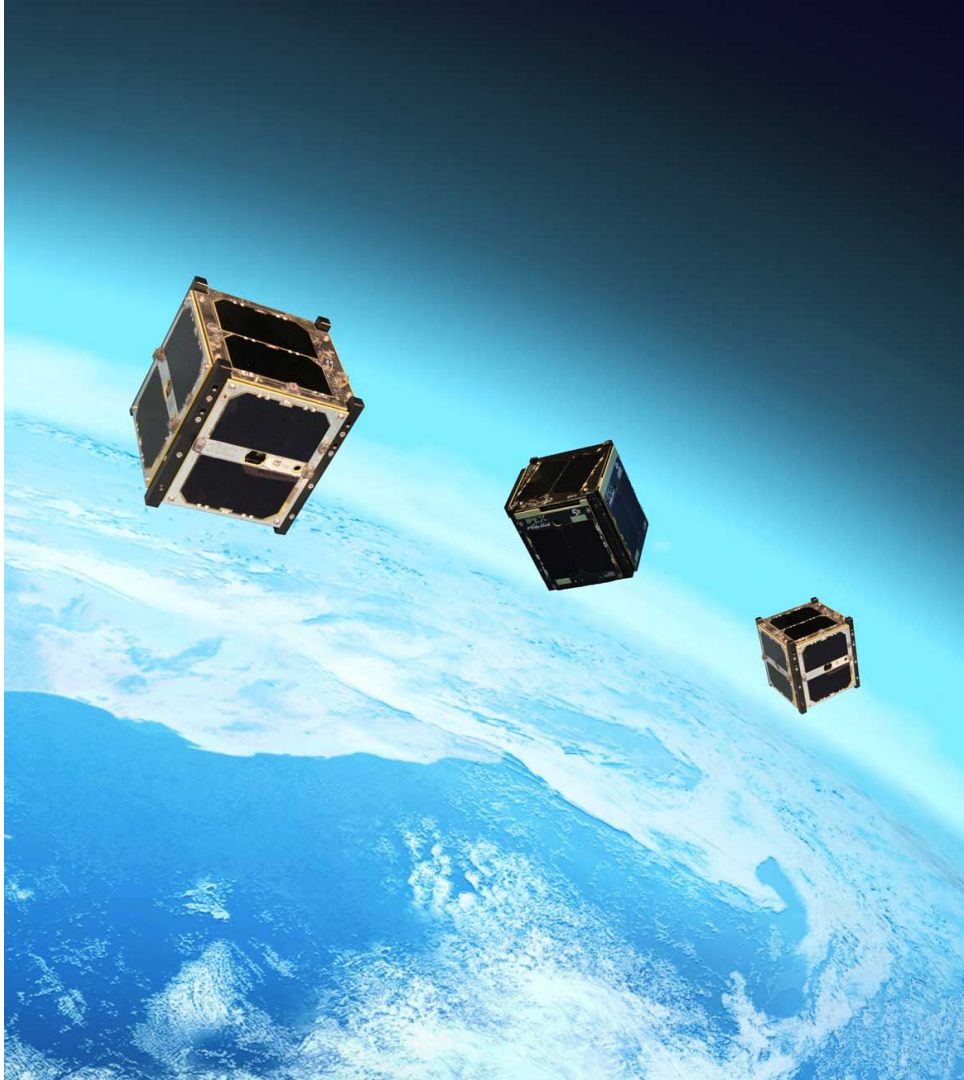
OCEAN DISCOVERY LEAGUE

Dalio Philanthropies

Schmidt Marine TECHNOLOGY PARTNERS

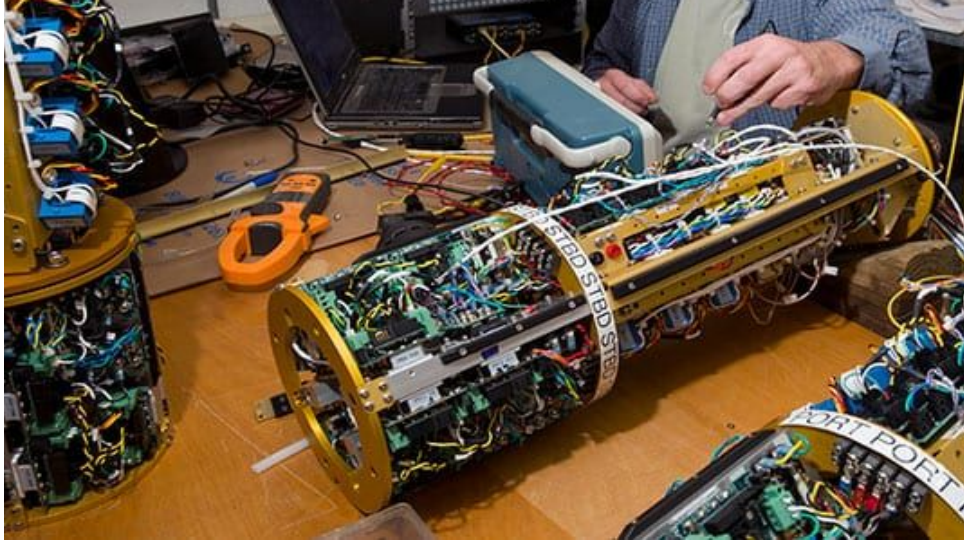
Analogues in Space Exploration: CubeSats

The CubeSat standard accelerated space exploration by creating modular payloads and platforms.



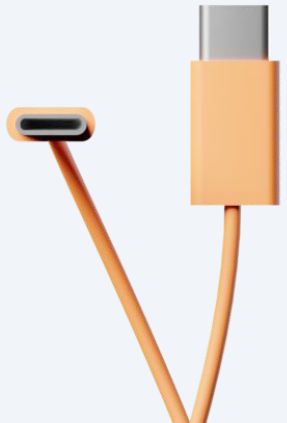
Integration of marine systems is complex and expensive.

This cripples scalability and innovation.



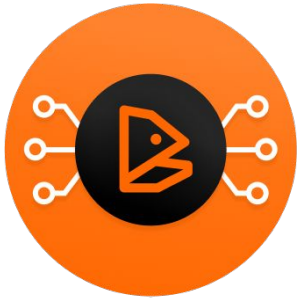
Why can’t it be this simple?

The marine environment desperately needs a standard to drive innovation and unlock scale.

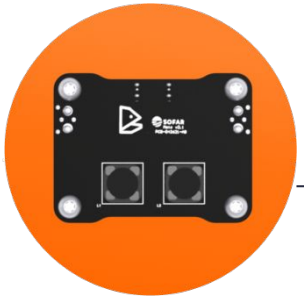


A modern (and open) hardware interface standard for the Ocean

Simple & Robust Connector



Protocol



Intelligent Nodes

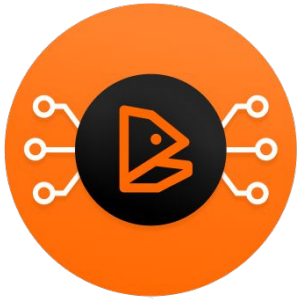
Learn from every other successful hardware connectivity standard:

Simple connector, distributed intelligence.

A modern (and open) hardware interface standard for the Ocean

Simple & Robust Connector

Intelligent Nodes



Protocol

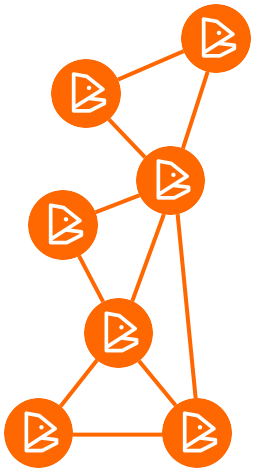
Bristlemouth Application Layer

Bristlemouth Middleware
pub-sub / req-rep

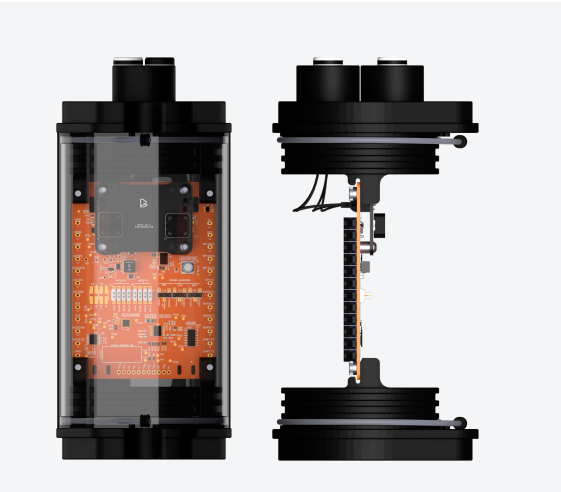
Birstlemouth Network Layer

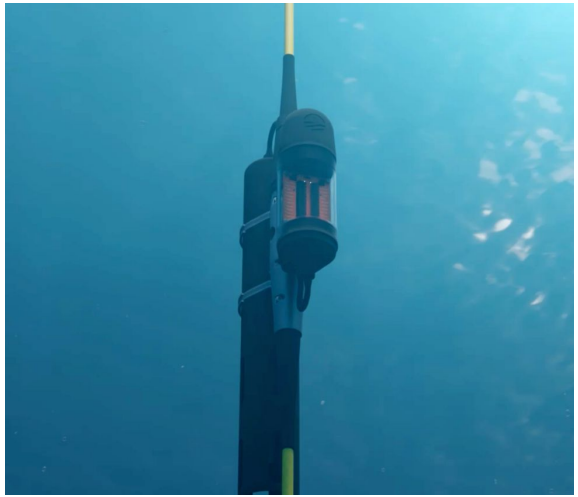
Bristlemouth Physical Layer

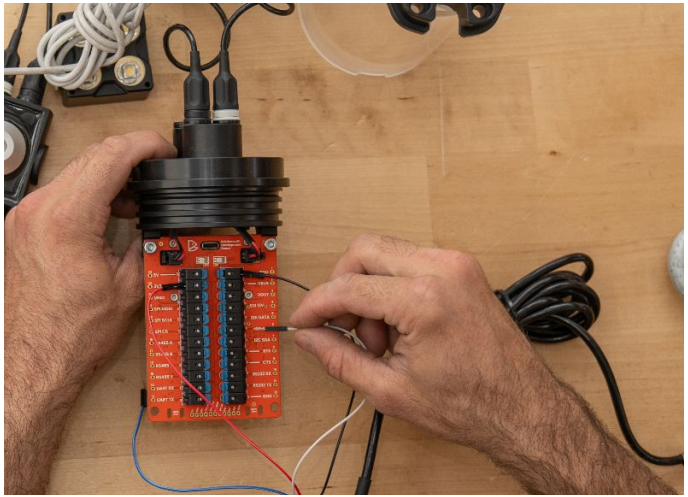
Bristlemouth Software stack

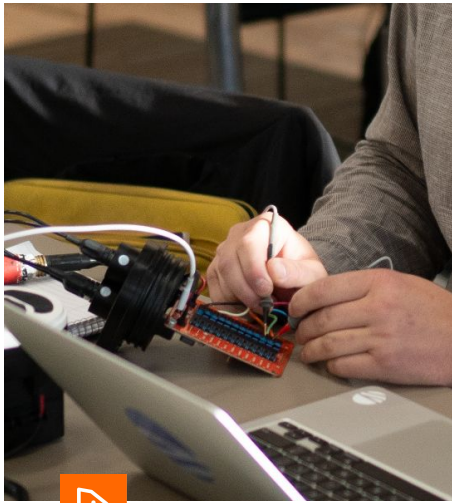


Ecosystem of Modular Building Blocks









For an open standard to have impact, we need to enable the community to engage and help build it.

We built and shipped the first Bristlemouth Development Kits (BDKs)!

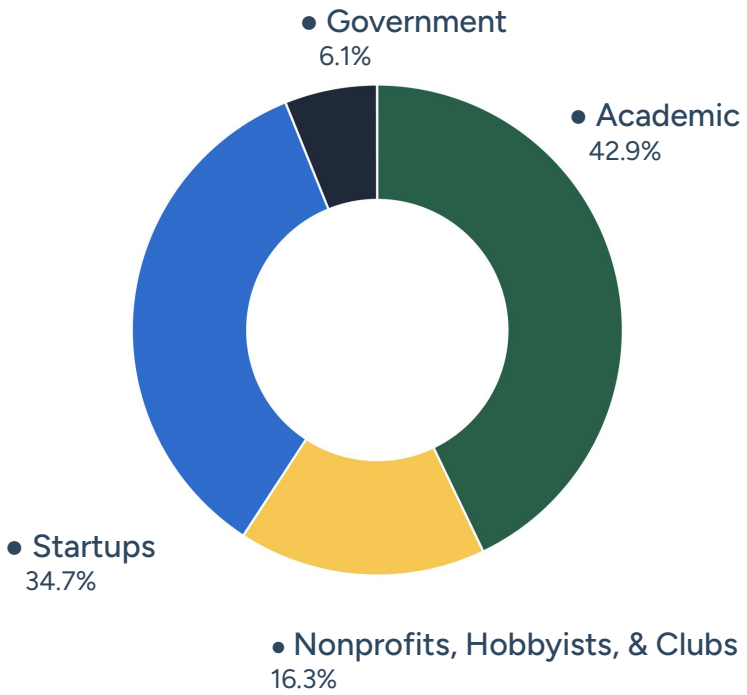
BDKs to the community!

100+
Dev Kits shipped

50/50
Public/private funding

Support for startups, universities, and nonprofits making accessible, scalable, and impactful contributions to ocean science, including:

- Affordable, long-dwell pH sensors
- Bioacoustic and vessel monitoring
- In-situ microscopy
- Hydrophones
- Affordable, optical DO sensors
- Ocean acidification monitoring



Building with a community

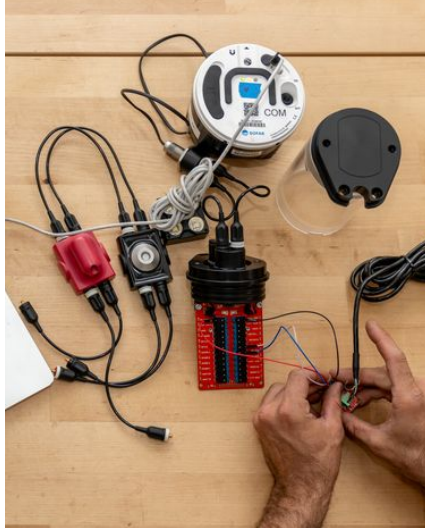
Organize in-person meetings and an online community to support developers, users, and OEMs

200+
forum users

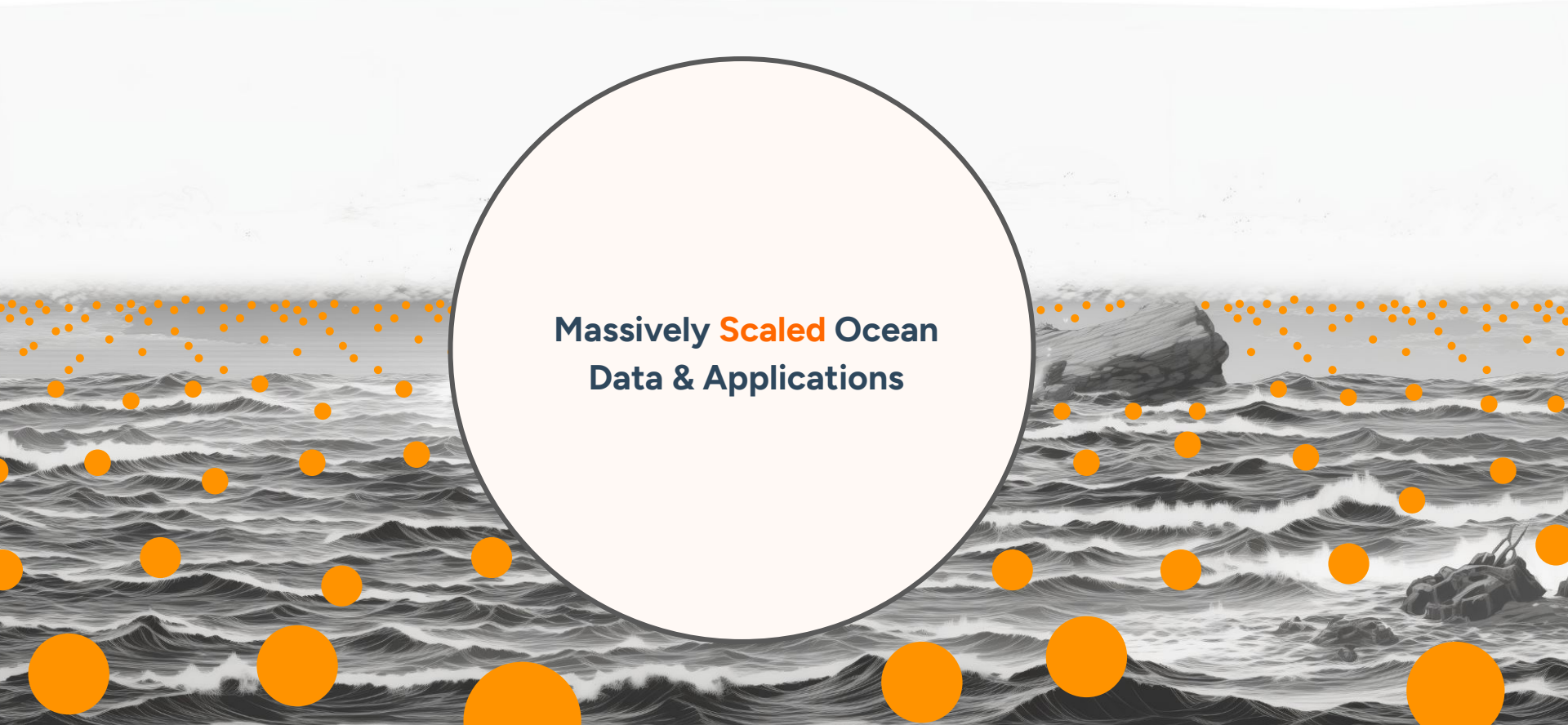
7K
monthly forum pageviews

5
Bristlemouth events

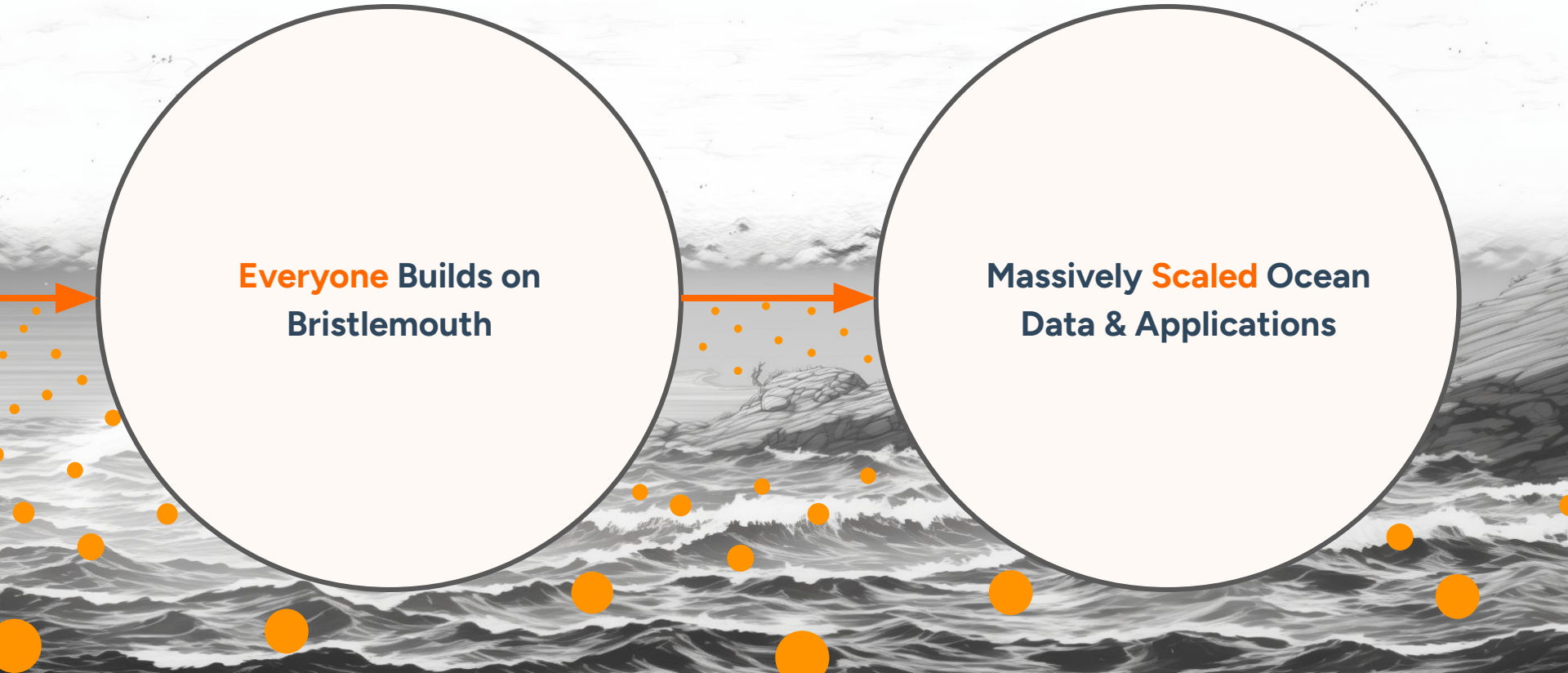
>190
BristleCon attendees



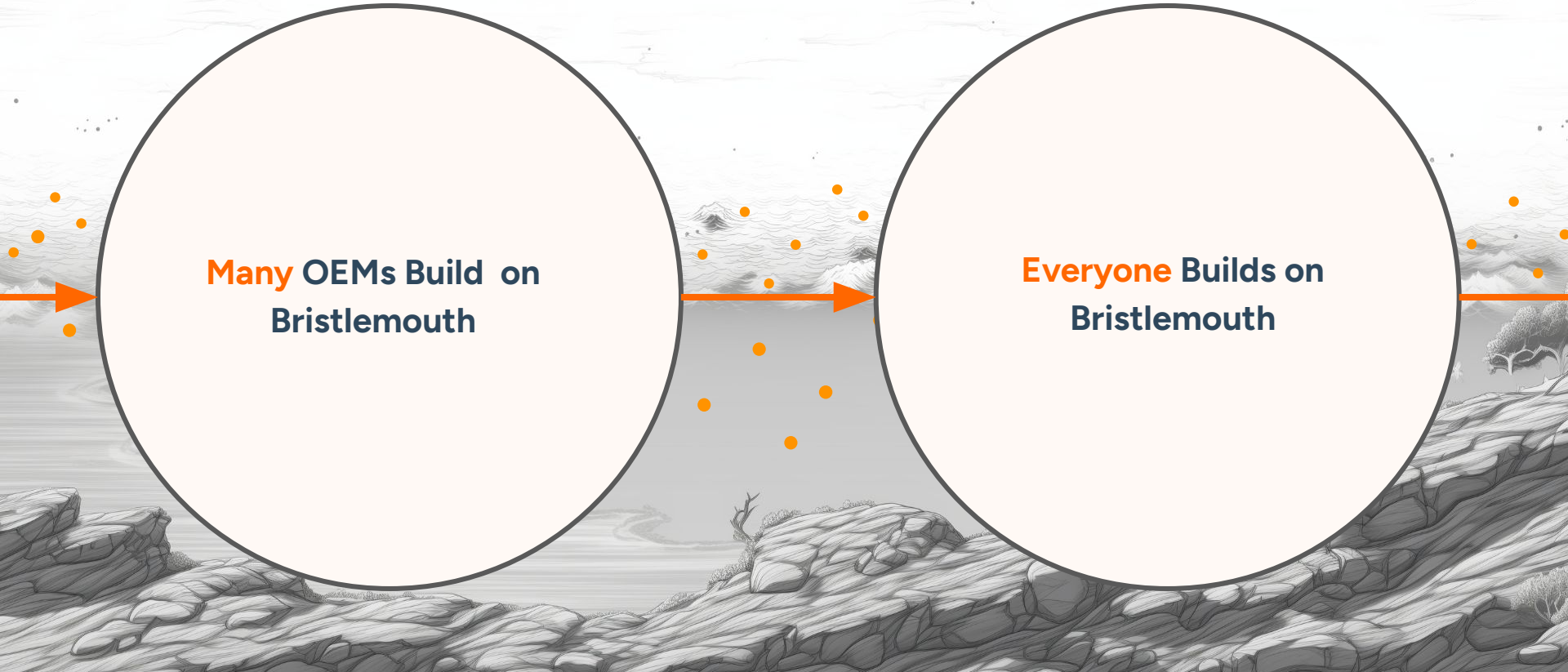
The Future We Want



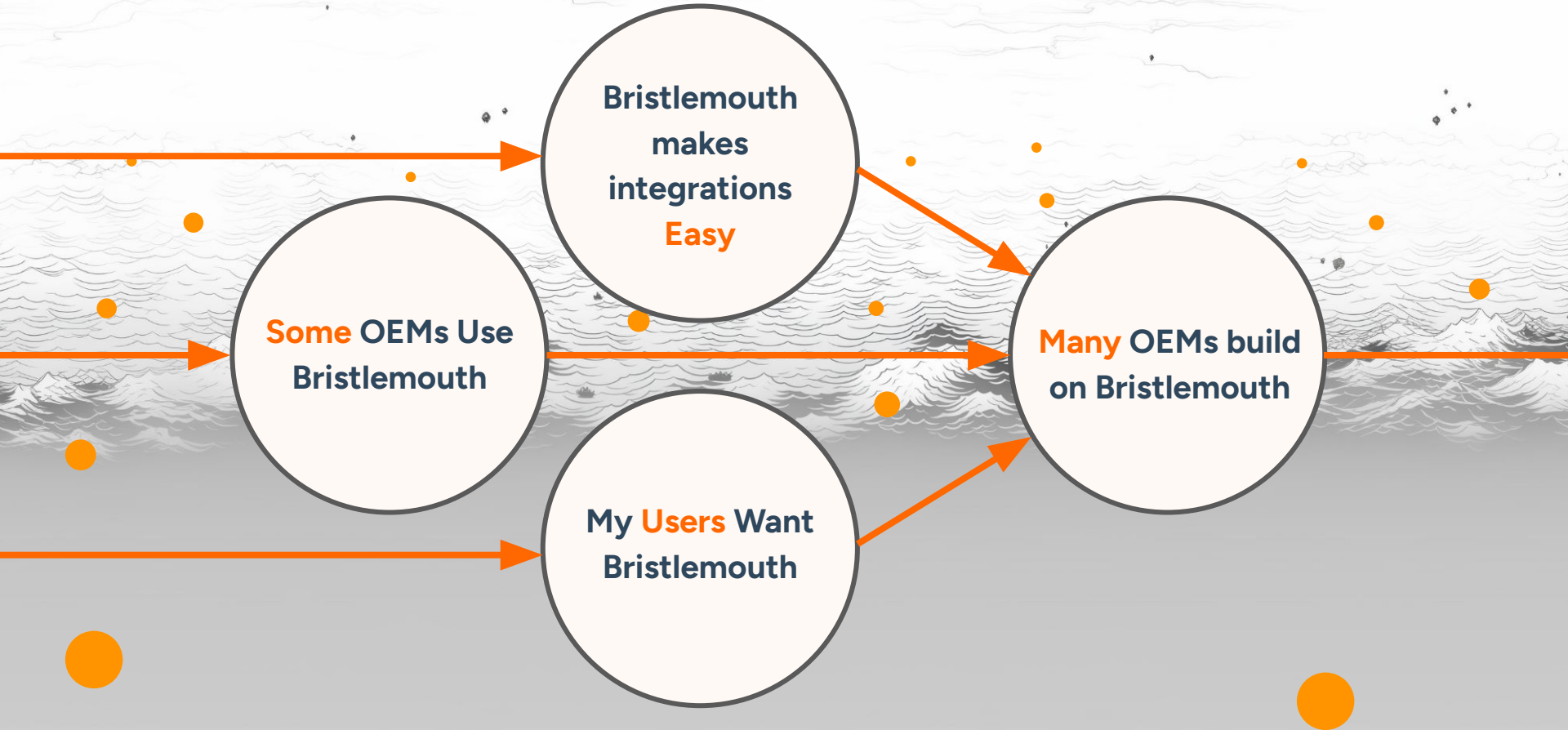
Adoption Is The Last Hurdle



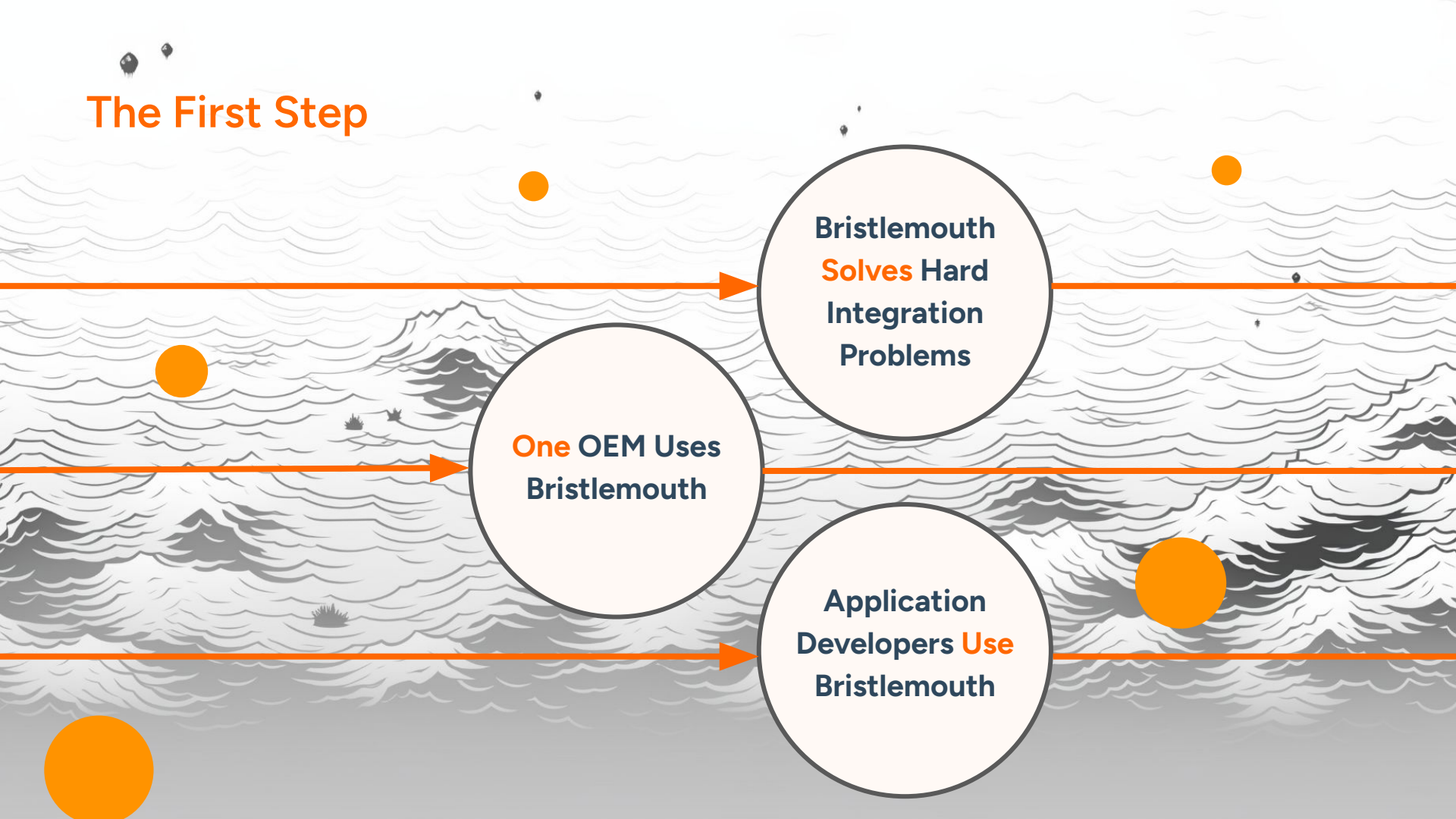
The Path To Adoption Is... Adoption



The Critical Threshold



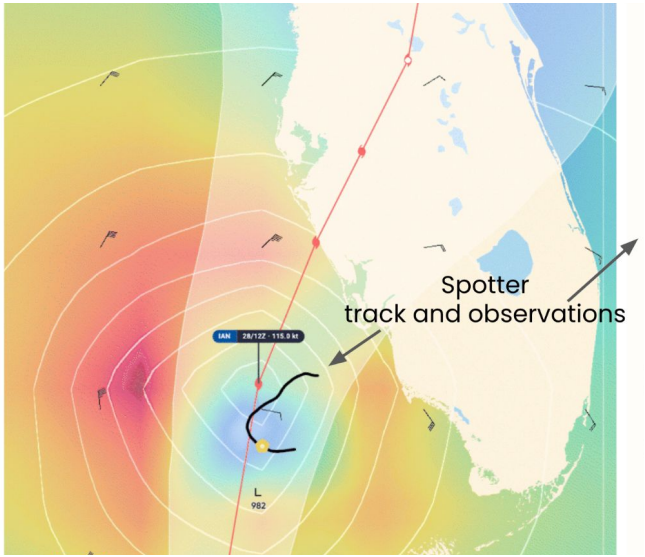
The First Step

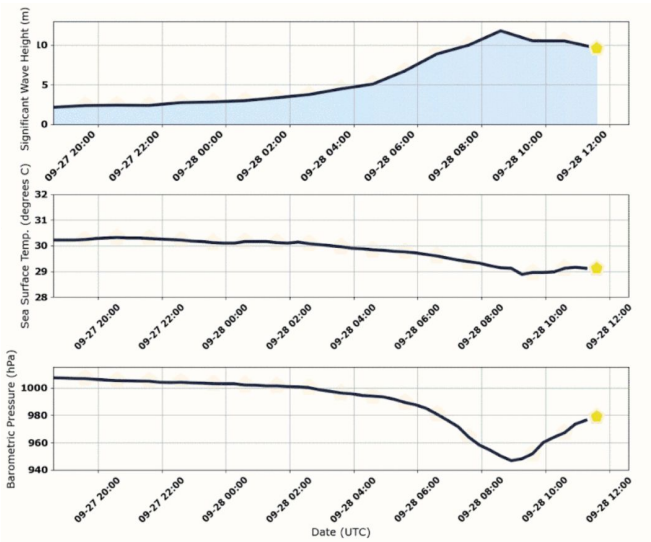


Working across boundaries toward the future we want!

NOPP Hurricane Coastal Impacts

Delivering scalable, real-time ocean-atmosphere observations for DA, model validation, and situational awareness.





Thanks!