

Alternative platforms for Ocean Exploration

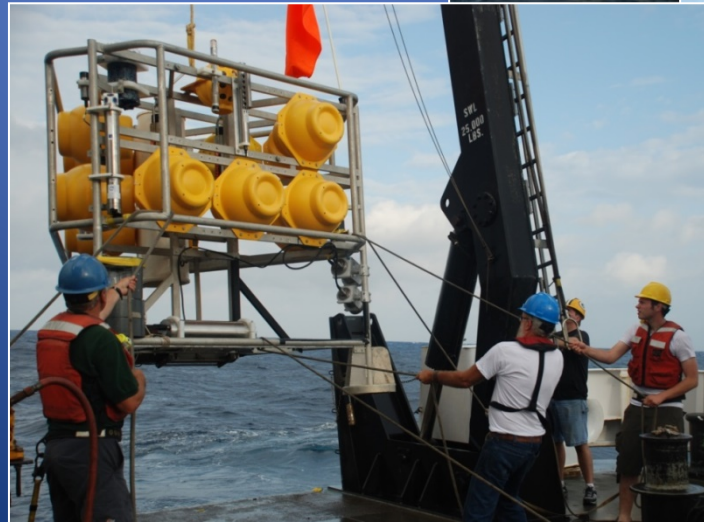
Current Status

- Dedicated ships
- Telepresence enabled
- Aging systems and infrastructure
- Limited capacity for scientists at sea
- Limited operation hours
- Time is right to develop new approaches to OE



Next Gen Ocean Exploration

- Integration of flyaway systems
 - Not a new idea
 - Provides flexibility in dynamic field
- Several current examples (pros/cons)
 - Industry
 - NDSF w/ UNOLS or NOAA
 - Private Foundations
- Next steps
 - Board input
 - Ongoing subcommittee activity



Industry

Benefits

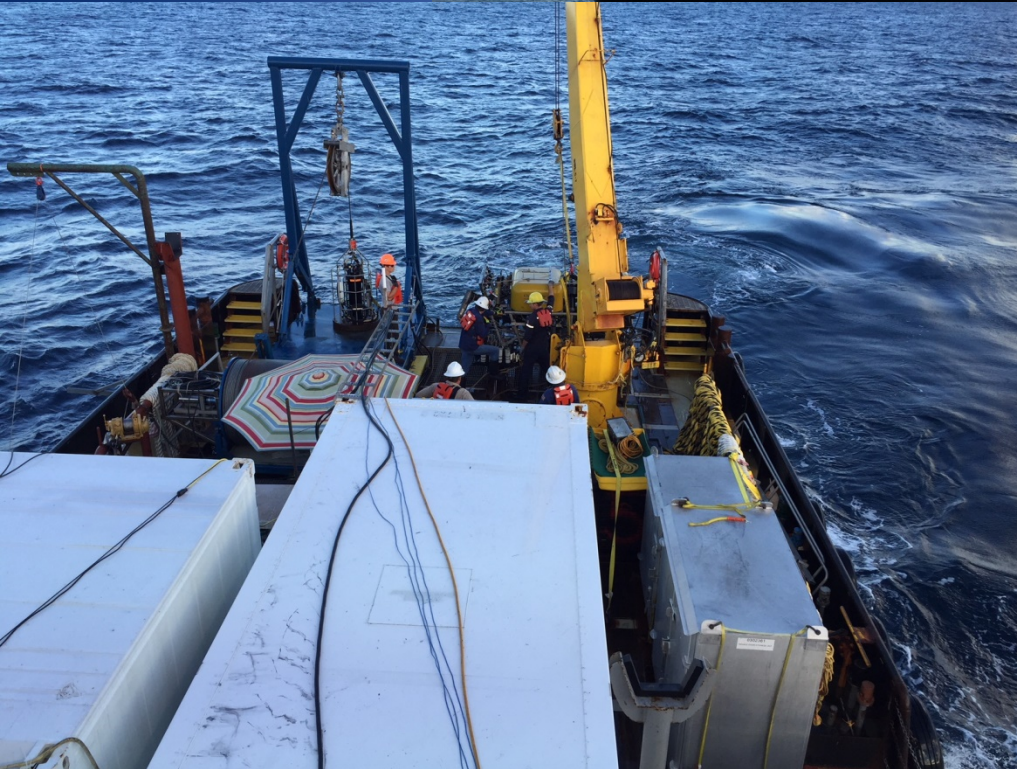
- Provide assets made to order
- Develop based on project need/duration
- Adapt to changes in priorities, trouble shoot issues seamlessly
- Increase diversity of scientists/technicians (next gen)
- Access to experienced operators (efficient ops)
- Telepresence already integrated

Challenges

- Contract process can be cumbersome
- Cost is variable
- Adapting to industry/science culture takes time (operation hours, chain of command)



Holiday Chouest-2011





NDSF w/UNOLS or NOAA

Benefits

- Already conducting OE
 - e.g., numerous NOPP studies, NSF projects... although they don't call it "exploration"
- Crew experienced with science culture
- Assets/lab space built for ocean science

Challenges

- Current ships have limitations
- Crew culture limited based on labor practices
- Limited access to scientists
- Operator pool often limited, sometimes collection of most experienced, or mixture, leading to various outcomes



Private Foundations (SOI, Dalio)

Current model

- Foundation develops a broad area of interest (e.g., region, tech development)
- Scientists submit proposals or ideas

Benefits

- Not hampered by NSF model of scientific process
- Not typically risk averse (within reason)
- Testing new technologies and outreach part of culture

Challenges

- Less federal oversight (could be considered a benefit)
- Less perceived coordination with other OE activities
- Aging ships



Next steps-help!

Goal: improve capacity to conduct ocean exploration as priorities change, technology improves, and community involvement expands

- Solicit board feedback on scope discussed
- Draw from the experts (industry, feds, private foundations, citizen scientists, other)
- Develop framework/guidance document that could be a living document for OE on alternative platforms
- Potential for NOAA to adopt, providing leadership for the next gen of OE

