

**Big Ocean Exploration Questions**  
**OEAB Brainstorming**  
**12 July 2017**

***Ocean Systems and Processes***

- How do humans depend on the ocean? What does humanity need from the oceans in the future? How have humans consumed the ocean in the past, and what might be different in the future (fauna, flora, seawater, land reclamation,...).
- How will climate change affect ocean environments? What is the climate/ocean feedback model? What is the resulting impact to humans?
- Can we use technology to create a planetary nervous system to provide data we need to make better decisions about managing the environment on which we depend?
- Can we save coral reefs? How?
- What establishes global patterns of marine life? What influences migratory species and determines where they go? What is the connection between shallow water systems and deep water systems?
- How do plate tectonics and events related to the movement of plates (like volcanoes, earthquakes, and tsunamis) influence the functioning of oceans and ocean life?
- What can we learn about planetary ocean world environments from our own oceans?

***Oceans and Humanity***

- What is the psychology and social science behind how people relate to ocean exploration/oceans? How can we understand the “Real Reasons” for ocean exploration, not just the “Acceptable Reasons” for why we invest?
- How do people understand and react to the oceans? How do we present oceans to the public in a more meaningful way? How can we connect people and oceans in the way we are connected to our great national parks and protected areas on land? What visualization techniques are most effective for communicating information about the deep ocean?
- How have oceans and humanity interacted over time and what evidence have humans left behind to tell the story (marine archeology)?
- World War II shipwrecks are rich sources of information about our heritage, monuments to those who gave their lives, but also potential sources of pollution as they continue to degrade. How can we learn more, protect these sites, and manage the risk of harm to the undersea environment?
- How can we visualize and appreciate human impacts on oceans like plastics, ocean noise, and ocean acidification?