

Review Summary

The review panel was charged with evaluating the past performance of the NOAA Office of Ocean Exploration and Research (OER) and with providing recommendations for its future. Note that the panel was not charged with arriving at consensus for its review of the OER program. Individual reviews capture each reviewer's opinions, and each should be considered independently in their entirety. This summary briefly and generally highlights several of the common elements found in the panel's individual reviews.

Common Themes and Elements

The OER program is congratulated and commended for the work over the past five years, taking the program through challenging circumstances to a well-run, successful program.

Given past performance, the OER program should be considered to be very successful, and in many cases it has exceeded expectations.

OER should "reimagine" the future for national ocean exploration, as it has an opportunity to make ocean exploration matter in a very human way to the American public as well as the research community.

OER should immediately begin to think beyond the *Okeanos Explorer* and beyond direct involvement in marine operations. OER is encouraged to evaluate a systemwide approach to managing a suite of observational assets that may include significant non-NOAA-owned assets.

The program should be bold in its vision for the future, taking on risks, and capitalize on the confidence from the community that OER and its director have earned over the past five years.

OER should not limit itself to only being a producer of data, but must also be a data consumer, for multiple benefits to data users, science, and ocean exploration.

Data governance and usage rights, especially with respect to the cooperative institute (CI), should be firmly established, as the data (including video data) are the program's most important products.

Video and telepresence are significant assets that should be advanced further and made even more widely accessible.

The program should invest in data science (including artificial intelligence/machine learning, video annotation, and related technology) to fully exploit the value of its collected data assets and make them more usable by a wider community.

The new CI is recognized as a significant advantage to the program, and OER should fully engage to realize the full benefit to ocean exploration.