

R/V Marcus G. Langseth



Langseth Replacement Planning – December 11, 2022
L-DEO Office of Marine Operations

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

LDEO Future Ship Planning

Langseth Replacement

- 1) In 2020, the Columbia University Purchase of the Langseth, LDEO proposed that ship to be retired in Fall 2024.
- 2) Rationale behind retirement date was driven by potential additional ship investment being prohibitive for a full mid-life and end-of-life issues on critical systems
- 3) CU-LDEO goal is still targeting ~2025 for a replacement global class vessel that maintains a significant seismic capability but is more general purpose oriented to support a broader array of oceanographic projects more easily

PROJECT STATUS

- 1) Working with LDEO Directorate, Climate School and University on funding for various ship planning phases.
- 2) Starting work with Glosten on developing concept model now
- 3) Talking with ship brokers worldwide on possible vessels of interest
- 4) Talking with potential shipyards

General Vessel Characteristics:

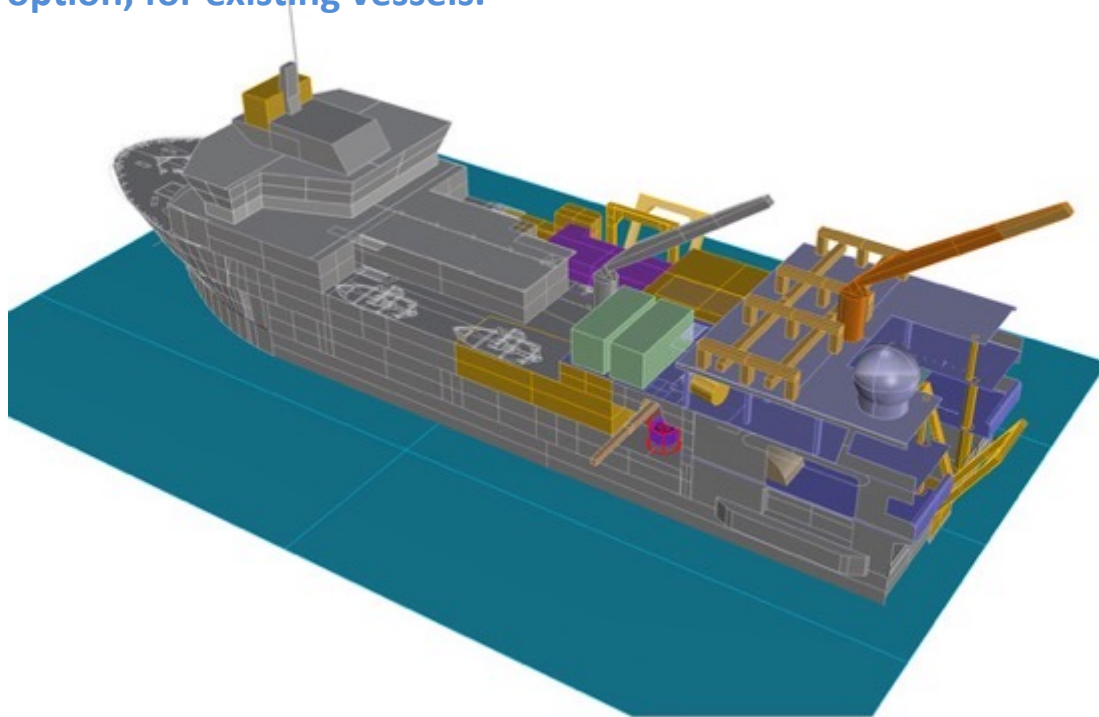
- 80-90m in length
- ~60+ berths
- < ~10 years in age
- Either conversion of an existing seismic vessel (ala Langseth) or Conversion of SOV, PSV, OSV workboat to support seismic and other General Purpose work.

OSV/PSV Conversion of Existing Vessel

Why an OSV or PSV for Conversion?

Current Ship Market has effectively no seismic vessels available. During period of 2013 to now, ~ 100 vessels left that market with downturn of O&G. Only recent rebound of prices has more ships active but only 15-25 are working.

Overall workboat market is tight as well due to windfarm construction all over the world being a big driver. Big change in this part of market over the last 2-3 years but OSV/PSV the most likely, if not only option, for existing vessels.



Seismic Conversion of Existing PSV

Can it be done ?

- PSV –REM Andes converted to seismic vessel by BGP in ~6 months
- Capabilities are fairly comparable to *Langseth*.



~88m vessel, 65 berths, 2010 build -

Another Example: R/V Karme-i-JAMSTEC



JAMSTEC's R/V Karme-i – 100m vessel with 2D/3D seismic capabilities , coring, ROV support, 65 berths, 2016 build.

New Vessel Planning

Concept Model Purpose:

Merging seismic and general purpose capabilities for global class research vessel.



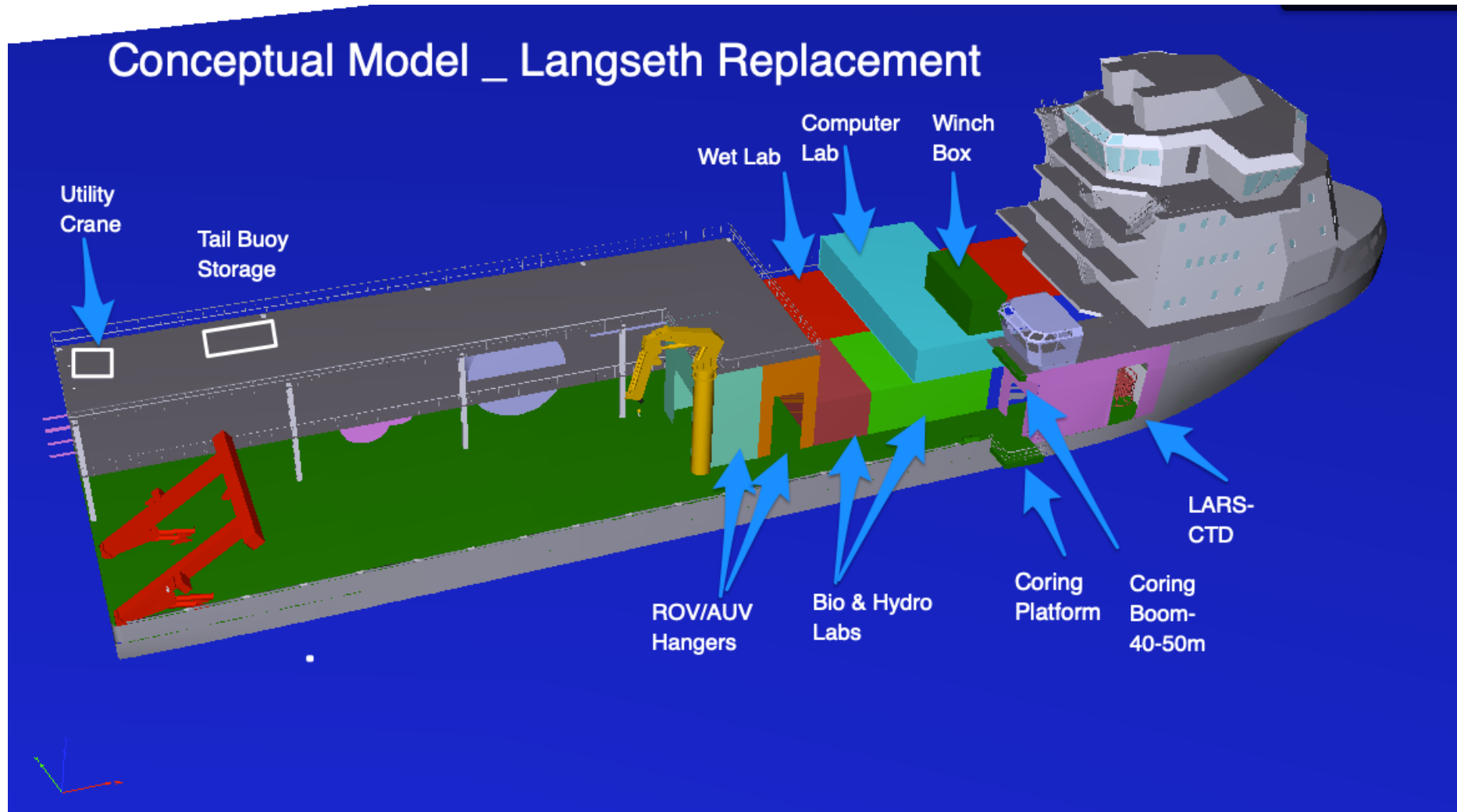
R/V Roger Revelle



Baseline PSV



CONCEPT MODELING DRAFT - GLOSTEN



Coring System- R/V Porquois Pas

