



On-Board Ship 3D Environment (Digital Twins - capabilities to extend the Virtual Product Model)



Team: HII-Newport News Shipbuilding | SIEMENS | eQube Technologic | GDEB | Navsea 06 | Navsea 08 | Navsea 05 | PEO Carriers

Problem Statement Need accurate 3D information for Maintenance & Repair

Current state of the art; for on-board ship data systems, uses a range of technology from "decades-old" 2D drawings and publication & management systems to manage critical ship information. These systems lack integration and visualization interfaces with the 3D product models and the ship configuration.

Solution/ Approach

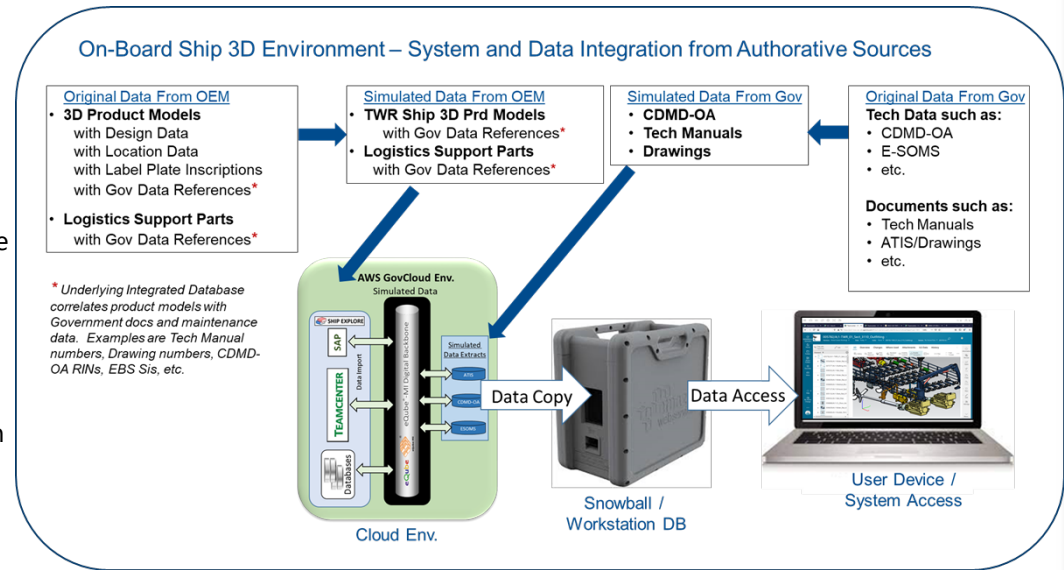
Provide the Navy a viable, and operationally capable Commercial-Off-The-Shelf (COTS) solution for an "On-Board Ship 3D Environment" based on a direct copy from the Hull Planning Yard (HPY) digital product model. We will provide the Ship's Force access to the most current ship configuration data by integrating multiple systems.

Project Benefits

- 3D product model ship configuration
- Easy access to information compiled from multiple data sources
- Cost reduction for logistics data management (Single source access)
- Reduced data duplication
- Shortened cycle time to prepare logistics information
- Risk mitigation for moving 2D to 3D
- New technology advancements
- Extended to multiple Navy ship platforms

Project Status

- Finalizing End-User Evaluation & Implementation Plans



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ROI: The Navy will spend ~\$1.4 Billion on maintenance for CVN 78 the first of the Ford Class Aircraft carriers, and will be spending an estimated \$2.8 Billion on D-Level (Depot) and I-Level (Intermediate) on CVN 79 & CVN 80 follow ships lifecycles. NNS expects quantifiable realized savings with the system integration and implementation of a 3D On-Board Ship Environment.

