

# NAVY SHIPBUILDING

## Significant Investments in the Littoral Combat Ship Continue Amid Substantial Unknowns about Capabilities, Use, and Cost

### Why GAO Did This Study

The Navy's LCS consists of the ship—called a seaframe—and mission packages, which provide combat capability. LCS is intended to be reconfigurable to perform three primary missions: surface warfare; mine countermeasures; and anti-submarine warfare. The Navy currently plans to buy 52 seaframes, including two variants being constructed at two U.S. shipyards, and 64 mission packages. The total estimated acquisition cost is about \$40 billion in 2010 dollars.

GAO was asked to assess the status of the LCS program. This report examines (1) the progress and challenges associated with seaframe and mission module production, development, and testing; and (2) the soundness of the Navy's business case for the integrated LCS program. GAO analyzed Navy and contractor documents, toured shipyards and LCS ships, and interviewed DOD and Navy officials and contractor representatives.

### What GAO Recommends

To ensure that LCS investments are informed by key information, Congress should consider restricting funding for further ships until the Navy completes several studies about future LCS designs and capabilities. GAO is also making several recommendations, including that DOD limit future seaframe and mission package purchases until it achieves key acquisition and testing milestones. DOD disagreed with these recommendations, stating that slowing seaframe purchases would cause prices to rise and mission package purchases are needed to equip operational ships. GAO believes the Navy does not have adequate knowledge about LCS capabilities to support the planned procurement rate.

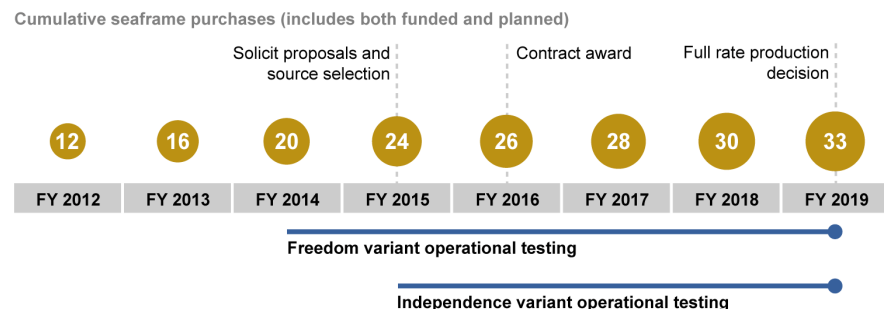
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### What GAO Found

The Littoral Combat Ship (LCS) seaframe program continues to face challenges stemming from concurrent design, production, and testing activities. The Navy has taken steps to resolve problems with the lead ships, and the shipyards are beginning to realize benefits from facility improvements and experience. However, testing remains to be completed and the Navy is currently studying potentially significant design changes, such as increasing the commonality of systems between the two ship variants and changing ship capabilities. Changes at this point can compromise the positive impacts of shipyard learning, increase costs, and prolong schedules. The mission module program also has concurrency issues, and testing to date has shown considerable limitations in capabilities. The Navy is pursuing an incremental approach to fielding mission packages, but it has yet to finalize the requirements for each increment and does not plan to achieve the minimum performance requirements for the mine countermeasures and surface warfare packages until the final increments are fielded in 2017 and 2019, respectively.

The Navy continues to buy LCS seaframes and modules even as significant questions remain about the program and its underlying business case. Elements of the LCS business case, including its cost, the time needed to develop and field the system, and its anticipated capabilities have degraded over time. There are also significant unknowns related to key LCS operations and support concepts and the relative advantages and disadvantages of the two seaframe variants. The potential effect of these unknowns on the program is compounded by the Navy's aggressive acquisition strategy. By the time key tests of integrated LCS capability are completed in several years, the Navy will have procured or have under contract more than half of the planned number of seaframes. Almost half of the planned seaframes are already under contract, and the Navy plans to award further contracts in 2016, before the Department of Defense (DOD) makes a decision about full rate production of the ships. The Navy will not be able to demonstrate that mission packages integrated with the seaframes can meet the minimum performance requirements until operational testing for both variants (*Freedom* and *Independence*) is completed, currently planned for 2019.

### Alignment of Planned Littoral Combat Ship Seaframe Contract and Test Activities



Source: GAO analysis of Navy data.

The Navy has also essentially bypassed two major acquisition reviews for mission modules, purchasing 8 of the 64 planned mission packages before gaining approval to enter the system development and initial production phases.