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Littoral Combat Ship: Capability, Capacity and Long-Term Affordability

"LCS is a revolutionary, cutting-edge weapons system created to deliver improved warfighting readiness and capacity to today's fleet. Incorporating new technologies, rotational crewing, focused training, inter-changeable mission packages, modularity and open systems architecture, LCS will be the platform that helps us to realize the 313-ship Navy."

– Vice Adm. D.C. Curtis, Commander, Naval Surface Forces / Commander, Naval Surface Force, U.S. Pacific Fleet

LCS is a fast, agile, mission-focused ship designed to operate in near-shore environments

- **Modularity and open systems architecture:** These design features facilitate rapid and cost-effective modernization. Avoiding lengthy shipyard periods reduces installation and life cycle costs while increasing the ship's operational availability.
- **Focused Mission:** LCS will deploy with capabilities tailored to the needs of the fleet commander. For example, rather than building, manning and equipping an MCM for 30 years, LCS will deploy with MCM capability when needed. The re-configurability of LCS allows in-theater flexibility to rapidly switch mission capabilities as the tactical or operational situation changes.
- **Reduced manpower:** The ships are being manned with 40 core crew members, 15 mission package team members and a 23-person aviation detachment.
- **Rotational Crewing:** The ships will have four crews for every three ships, which will deliver approximately 50 percent more deployed time on station.

Keys to cost reduction in LCS lifecycle

To realize cost reductions over the long-term requires investment in the short-term, primarily in training and shore-based sustainment.

- **Training:** LCS uses a new construct called Train-to-Qualify (T2Q). Sailors arrive onboard ready to stand watch and perform their tasks. This will require a more thorough training pipeline than we've ever had for surface ships, but the result will be manpower savings over the lifetimes of the ships.
- **Shore-based sustainment:** Processes and investments are being made to conduct the majority of maintenance using contractor support. With the rotational crews, maintenance and material management will be conducted centrally ashore, vice by the crews themselves. The LCS CLASSRON is key to this sustainment, and it will be more robust than other CLASSRONS.
- **Technology:** Remote monitoring and electronic food service management are two examples of how technology is making our support processes more efficient. Remote monitoring allows status of equipment temperatures, pressures or faults to be monitored ashore, assisting with the scheduling of condition-based maintenance. Electronic food service management (EFSM) program pushes food service accounting and inventory management information ashore using information technology. Eliminating shipboard paperwork, a handheld device with bar code reader is utilized onboard ships allowing one person ashore to inventory several ships. Such economies of scale reduce overall manpower costs. Pushing administrative functions ashore using web-based distance support tools is one way that 21st century information technologies are being tapped to remove workload from small crews.

Key Messages

- LCS is designed from the keel up to deliver efficient capability, capacity, and flexibility to the war-fighter.
- To gain savings over the lifetime of the program requires investment in new technology, processes and shore infrastructure.
- With the start of dock trials on 9 July, LCS 1 is progressing toward the final stage before delivery to the fleet, with acceptance sea trials planned for this summer.

Facts & Figures

- 55 ships, 24 SUW mission packages (MP), 24 MCM MPs and 16 ASW MPs planned.
- Ship crews consist of 40 Sailors. MPs will have 15, and aviation detachments will have 23.
- LCS 1, USS Freedom, will be commissioned in fall 2008. LCS 2, USS Independence, will be commissioned summer 2009.
- Currently 80 Sailors are assigned to LCS 1 and 80 to LCS 2 (two crews for each hull).