Shipbuilding Affordability Technology Study Identifies Emerging Technologies for Shipbuilding Industry Application

**Objective**

Ship acquisition affordability is a primary strategic focus of the Navy ManTech Program. Navy ManTech typically makes investments in manufacturing technology development targeted to yield a measurable impact on the cost of ship construction and integration in the 2 to 5 year timeframe from initial investment. However, due to the long cycle of both ship design and construction, there is a need to look to the 5 to 10 year timeframe in terms of advanced technology investments and resulting roadmaps inside and outside the traditional shipbuilding industry. The objective of this Benchmarking and Best Practices Center of Excellence (B2PCOE) effort was to identify high priority, emerging technologies that have a high probability of being adopted as best practices within the shipbuilding industry in the 5 to 10 year timeframe.

**Payoff**

ManTech project selection can be improved by early identification of emerging technologies and tracking to the ManTech-ready stage. Cost avoidance can be achieved through improved timely insertion. Technologies that drive shipbuilding affordability are identified from a broad range of sources. Additionally, improved industry–DOD technology “cross-pollination” is facilitated through the improved understanding of emerging technologies potentially applicable to the defense industry in general and the shipbuilding industry in particular.

**Implementation**

Emerging technologies were surveyed that had potential application to shipbuilding affordability. A workshop was organized with the other ONR COEs to select potential emerging technologies. The subject matter experts attending the workshop established 7 target technology categories, developed a roadmap process, and established a pilot roadmapping team which established a pilot Materials and Materials Processes Roadmap. The recommendations for implementation were documented and submitted to ONR in a final report.

One of the findings outlined in the final report was that this roadmap would be redundant to others being generated within the DOD. A recommendation included that Shipyard technology scouts should track organizations that develop and facilitate emerging technologies. These would include DARPA and NASA.