

# Terms of Reference

## **NRAC Study Status and Future of Naval R&D Enterprise**

### **Objective**

In the context of the Maritime Strategy, the NRAC shall study the Navy's technical competencies which reside primarily in the Naval Warfare Centers to develop an assessment of their "as is" capability to meet the technological needs of the Navy and in particular their ability to innovate in areas of anticipated Department of Navy technical need. This assessment should include consideration of the current technical workforce, physical infrastructure, and technical planning, as well as the strategic planning for future development and investment. Further, the NRAC should recommend what future technical core competencies will be required, and identify both "white space" in the current Warfare Center/ laboratory structure, as well as redundancies.

### **Background**

Since the formation of the Naval Warfare Centers, there have been significant pressures on their ability to sustain and develop the technical underpinnings that the Department of the Navy will need in the future. The elimination of "mission funding" in favor of the Navy Working Capital Fund, several rounds of Base Realignment and Closure, cost-cutting and headcount reduction, combined with emphasis on acquisition support as well as near-term support for current military operations may have taken a toll on laboratory personnel, physical infrastructure, and perhaps most importantly, the flexibility to effectively innovate for the future.

Because of the unique nature of their military customers, Naval Warfare Centers often support long-term research in which industry will not invest, because of probably low returns. Importantly, Warfare Centers must address the full spectrum of technologies (currently) required by DoN, including those that cannot be addressed by academia (or industry). In an era of technology globalization, there is significant risk that Naval forces could lose their technological edge against future adversaries if the Department does not maintain a robust, productive, and cutting-edge laboratory system that is capable of addressing not only technology needs "just in time," but also "just in case."

### **Specific Tasking**

- Assess the current technical core competencies of the Warfare Centers employed by the SYSCOMs and PEOs, as well as the stewardship provided for those competencies. Also assess the technical core competencies that are provided by the Navy UARCs. Consider technical quality of the workforce

and physical infrastructure. Specifically, the scope of the study should include:

- Warfare Centers and NRL in support of SYSCOMs, PEOs, and ONR
  - MCWL in support of MARCORSYSCOM
  - To the extent practical, Navy UARCs in support of SYSCOMs, PEOs and ONR
- Identify areas where the Department of the Navy holds a leadership role in science & technology, areas where it leverages other technologies in the US Government, the US commercial sector and throughout the world, and areas where it is deficient relative to the state-of-the-art.
  - Identify areas where the Department of the Navy will be required to provide technical leadership and competency in the future, within the context of the Maritime Strategy. and assess the likelihood that the Warfare Centers will be able to develop these competencies under the current structure.
  - Recommend approaches (within the context of constrained future budgets) to maximize the likelihood of achieving the required technical leadership and of leveraging global science and technologies.