Executive Summary

This Naval Research Advisory Committee report on the *Status and Future of the Naval R&D Establishment* was first proposed as a study topic in late 2009 by Mr. Sean Stackley, Assistant Secretary of the Navy (Research, Development and Acquisition.) Because its scope was broader than typical NRAC studies, the Panel was expanded by seven consultants to ensure a broad range of expertise was available to obtain and interpret the data – and ultimately to deliberate the findings and recommendations. Over 60 site visits and more than 600 man-days were logged to ensure a comprehensive review of the Naval Research and Development Establishment (NRDE).

The context for the study is one of mixed messages. The Secretary of the Navy (SECNAV) goals of "acquisition excellence" and enlargement of the acquisition workforce play against the assumed downward trend of DoD budgets for the foreseeable future. Also, U.S. dominance in S&T – including its application to modern warfare – is quickly dissipating, as other countries grow their own technology workforce. Never has there been a time when our Naval Forces have relied as much on technology which will be developed offshore.

The Panel was very impressed with the manner in which the entire NRDE continues to perform the critical work of supporting the Force during a critical time of two wars and an agile enemy. Broad use of the Navy Capital Working Fund provides excellent customer-performer feedback in a competition-based environment. A highly motivated workforce furnishes high-quality in-service engineering and program acquisition support.

But, the Panel is very concerned with the long-term viability of the workforce in replenishing critical technical personnel while maintaining the highest quality scientists and engineers. Also, there is concern that the mid and long-term planning, research, and development are less optimized for leveraging global technology options – as well as a lack of organizational directives for harnessing the entire NRDE in collaborative ways to carry out these tasks.

The NRAC panel has developed a set of recommendations in various areas of Technical Competency, Stewardship, Navy-After-Next, and Best Business Practices.

Technical Competency:

- Provide additional meaningful "hands on" work,
- Commit to the National Defense Authorization Act for Fiscal Year 2009 Section 219 funding to the limit authorized by law to provide discretionary funding to be applied via disciplined process,

- Provide greater incentives for both military and civilians to achieve technical expertise,
- Allocate a greater number of technical Senior Executive Service (SES) and Senior Technologist (ST) billets to the warfare centers,
- Increase number of military billets in the NRDE,
- Conduct periodic, independent assessment of the NRDE technical capabilities led at the ASN (RDA) level.
- Widen the aperture of the Technical Community
    - Establish the Naval Research Laboratory (NRL) as a venue for development and experimentation of the methods to scout, shape and exploit global technology,
    - Enhance tools and techniques to expand global technology awareness,
    - Emphasize workforce mobility, agile adoption,
    - Develop a pilot program to exchange personnel among industry, academia and the NRDE,
    - Influence external research agendas & standards to narrow gaps, prepare Warfare Centers (WCs) to close gaps and engage Navy.

Stewardship:

- Strengthen ASN (RDA) stewardship of the NRDE
    - ASN(RDA) designate a *Director of Naval Research and Development Establishment (DNRDE)* responsible for aligning investments across the DON, under the direction of the ASN(RDA):
        - Represent the ASN (RDA) in supervising CNR investments of BA1–3 across Navy & Marine Corps. Provide ASN (RDA) input and oversight in the allocation and execution of all BA-4 accounts across Navy & Marine Corps,

        - Support the ASN(RDA) in prioritization issues across BA 1-4 investments among the Chief of Naval Operations (CNO), Commandant of the Marine Corps (CMC), and Chief of Naval Research (CNR),
        - Coordinate with Office of the Chief of Naval Operations (OPNAV) to ensure relevance of the Office Naval Research (ONR) investment to Navy-After-Next needs,
        - Provide continuity in stewardship of NRDE.
    - Establish a Science Advisor to the CNO
        - Also serve as liaison to ASN (RDA).

- Strengthen ASN (RDA) stewardship of the NRDE (2)
    - Update/reinstate SECNAV Instructions for governance of NRDE (including the Navy Laboratory/Center Coordinating Group-NLCCG) and Technical Authority,
    - Assign technical authority for systems that cut across systems commands (SYSCOMs) and platforms,
    - Increase coordination of the research and development (R&D) activities that support the Navy-After-Next,
    - Establish a process to implement and integrate science and technology (S&T) strategy across the NRDE and SYSCOMs,
    - Create planning, processing, and governance instructions to increase the transition of NRL technology and capability into the Warfare Centers and industry.

Navy-After-Next:

- Establish an office of primary responsibility for the management of the necessary competition of ideas attendant to the confluence of concepts with S&T for the Navy-After-Next.
    - Empower that office to create and implement a process that incubates and assesses promising concepts across DoN. (Further refine the implementation of OPNAVINST 5401.9)

- Assign to CNO-N00X,
    - Ensure NRDE active participation in concept generation and Concept Development Teams,
    - Identify and, where appropriate, champion concepts from other agencies (e.g., the Defense Advanced Research Projects Agency),

Best Business Practices:

- Accelerate physical infrastructure modernization or recapitalization,
- Consolidate NRDE Human Resources, military construction (MILCON), and maintenance responsibilities for NRL and Warfare Centers under a single Regional Commander for MILCON & maintenance, and a single Regional Human Resources (HR) Office for HR,
    - Both must be attuned to needs of R&D organizations,
- Streamline the hiring process for technical personnel and restore local hiring authority.

The Panel summarized recommended actions as follows:

Chief of Naval Operations:

- Work with the stakeholders to develop a process to coordinate concepts and technology for Navy-After-Next,
- Establish a Science Advisor to the CNO,
- Support the consolidation of management for Warfare Center-focused Human Resources, Military Construction, and facility maintenance offices.

Assistant Secretary of the Navy (Manpower and Reserve Affairs):

- Consolidate NRDE HR responsibilities

Assistant Secretary of the Navy (Installations and Environment)

- Consolidate NRDE MILCON and facility maintenance responsibilities

ASN (RDA):

- Designate a *Director of Naval Research & Development Establishment,*
- Ensure the NRDE is investing in Navy technology leadership areas and that future needs are reflected in BA1-4 investments, commit to maximum NDAA 2009 Section 219 funding,
- Update/reinstate NRDE-applicable SECNAV Instructions,
- Conduct biennial assessment of the NRDE technical capabilities,
- Allocate a greater number of technical SES and ST billets to WCs,
- Coordinate with ASN (I&E) to accelerate physical infrastructure modernization or recapitalization.

CNR:

- Enhance tools and techniques to expand global technology awareness.