

# Terms of Reference

## Optimizing Surface Ship Manning

### Objectives

Review and assess the impact of previous studies to optimize ship manning, personnel effectiveness, and life quality, and review the status of current Department of the Navy (DON) programs and plans. Identify technology opportunities and policy implications for increasing the effectiveness of ship's personnel without sacrificing readiness or mission capability.

### Background

Reduced manning levels can result in significant financial savings for the Navy, as well as enhanced quality of life for the Sailor, thus helping meet the Navy's challenges of more missions, less money, and increased competition for qualified people. The rapid development of automated systems, coupled with human performance models of increasing fidelity, should combine to enable ships to meet their missions with fewer people provided the Navy's culture, policy and shore infrastructure are properly inclined.

Aggressive steps to reduce manning were undertaken in 1996 in the Smart Ship program, with the goal of demonstrating innovative methods for reducing manning and life cycle costs without jeopardizing mission readiness or safety. We now have three years of experience with Smart Ship and other similar initiatives. The present study is aimed at examining the effectiveness of the technology, and extent of the process change that has been demonstrated, and to recommend further actions to optimize ship manning, especially in future ships.

### Specific Tasking

- Review and assess past and present programs for engineering process change and technology development to optimize manning, and enhance personnel effectiveness and retention. Examples include:
  - Smart Ship;
  - Foreign Navies;
  - U.S. Coast Guard;
  - Commercial vessels.
  
- Survey emerging technological opportunities and organizational changes that have the potential to regain or improve overall fighting effectiveness while optimizing crew size. Assess the impact on:
  - The use of personnel and technology in ship operation and maintenance including fighting and damage control;
  - Personnel recruiting, assignment, career development and retention;
  - Shore and ship-based training, including innovative technologies.

- Recommend changes to policies, procedures and doctrines that block cultural change and thus the adoption of technologies and processes that would retain or improve overall fighting effectiveness, while optimizing manning levels, improving training, and improving quality of life. Consider for example:
  - DD-21 and other ship design and construction efforts;
  - On-ship training and personnel development;
  - Use of personnel and work groups on ship.

Points Of Contact: Rear Admiral Michael G. Mullen, USN  
Director, Surface Warfare Division, N86  
Office of the Chief of Naval Operations

Captain Lloyd Swift, USN  
Head, Readiness, Training and Manpower  
Branch, N869  
703/604-7646