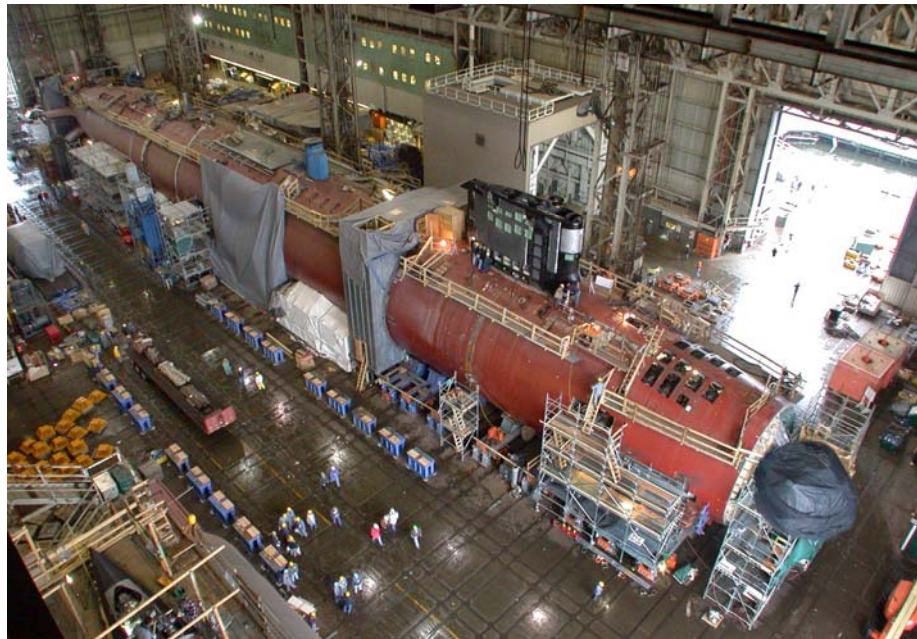


## **Project Awarded to Electric Boat for Improved Production Engineering Management Tools**

CNST is pleased to announce the recently awarded General Dynamics Electric Boat (EB) *Improved Production Engineering Management Tools* project. The CNST team includes EB and the Institute for Manufacturing and Sustainment Technologies (iMAST) working together to execute this 24- month effort aimed at improving the scheduling and planning processes for the VIRGINIA Class Submarine.

To successfully meet aggressive production and cost schedules, EB identified a need to improve upon legacy planning and scheduling systems for construction of the VIRGINIA Class Submarine (VCS). To achieve these goals they plan to develop tools that can collect manufacturing data from several sources and integrate the information in order to point out obstacles and identify best solutions for manufacturing processes based on critical and often



limited resources. Previous systems would allow planners to schedule resources, work sites, and even additional personnel, but these systems lacked the capability to digest the multiple planning efforts in such a way that could point out possible overburdening or unavailability of those resources. The resources in question could be certain cranes or forklifts, special tools, or perhaps a limited number of facilities that can accommodate the nature of certain tasks (e.g. high bays). The objective of this project is to give planners a complete picture when scheduling their efforts so that they have visibility of not only their projects, but also of the resources they will have to use to complete those projects.

The project team will define the necessary requirements for the improved management system, investigate and attempt to leverage any existing commercial off-the-shelf capabilities, and will then begin to develop the backbone of the system. Once the build plan has been defined and developed, the team will then develop a series of additional software releases, each adding a new variable that increases the level of complexity and system capability. The team's ultimate goal is to develop a system that will give the user (the planner), the ability to optimize the build plan by considering what is available and when. Additionally, the user will have the ability to create "what-if" scenarios by adding or removing resources and immediately realizing the impact of such changes. Changes such as these, while never intended, are all too common in the production environment and the ripple effects of such changes can have drastic consequences for several different projects. Once the innovative planning system is implemented, the project team anticipates savings of over \$500K per VCS hull.

### **About CNST**

CNST is a Navy ManTech Center of Excellence, chartered by the Office of Naval Research (ONR) to identify, develop and deploy, in U.S. shipyards, advanced manufacturing technologies that will reduce the cost and time to build and repair Navy ships. For additional information on this and other CNST projects, please visit [www.cnst.us](http://www.cnst.us).

