Naval Shipbuilding & Advanced Manufacturing Center

Reducing the Cost and Time to Build and Repair Navy Platforms

National Scope

Platform Focused

Industry Identified Issues

Rapid Implementation

TECHNOLOGY Development and Deployment

Sponsored by

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The **Naval Shipbuilding and Advanced Manufacturing Center (NSAM)** is a Navy ManTech Center of Excellence, chartered by the Office of Naval Research (ONR) to develop advanced manufacturing technologies and deploy them in the U.S. defense industrial base. **NSAM**'s primary goal is to drive manufacturing improvements and ultimately reduce the cost and time required to build and repair Navy platforms.

KEY ATTRIBUTES

- National in Scope
- Focused on Navy Platforms
- Projects are identified through industry pull
- Projects are selected after obtaining input from Navy Program Offices
- Employs a contracting process that is quick and flexible
- Rapid Implementation

PROJECTS

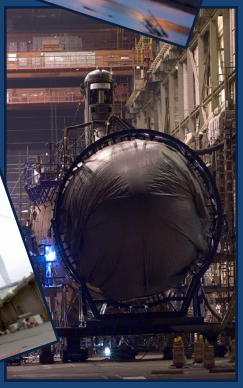
NSAM works closely with the Navy's acquisition community and the defense industry to identify manufacturing technology issues that negatively impact efficiency, both with respect to cost and time cycle. Through an efficient and effective process the Center solicits, selects, and awards projects to address these critical costly issues. These projects are focused on improving major construction and repair processes, such as predicting and reducing weld distortion, developing more efficient structural fabrication product lines, streamlining outfitting operations, and eliminating inefficiencies in training, material inspections and supply chain procedures.

PROJECT SELECTION

Project selection is the key process for the Center, which begins when ONR consults with the Navy's acquisition community to determine which DoD construction programs will be the focus of NSAM projects for the coming year. NSAM contacts the platform builders to identify the manufacturing technology issues that most affect them, which are then analyzed by industry consultants, ONR and the appropriate Program Executive Offices (PEOs). This downselect process determines which projects best serve the program objectives and promise to deliver the best "bang-for-the-buck: within available funding.

PROGRAM MANAGEMENT

The NSAM Center is managed by a small staff that relies on a core group of professionals to provide focused expertise to help identify potential solutions, compare proposed projects with state-of-the-art/industry and validate the technology's return on investment. The Center pursues technologies focused on improving the affordability of current Navy acquisition programs and in-service platforms. An extensive network of 'on-demand' industry, laboratory, academia and manufacturers supplements the NSAM staff and is called upon as necessary to provide additional, specific expertise.



To date, NSAM project efforts have led to nearly $700M in total savings, measured as "per hull" cost reductions across several U.S. Navy platforms.

Payoff:	Projects:
VCS: $230K; CVN: $691K	Non Contact Metrology
CVN: $3.08M	Synch Mat'l Logistics with CVN Pier & Dry Dock Build Strategy
VCS: $274K; CLB $2.7M	Improved Cable Lay & Sequencing Tool
DDG-51: $3.3M; LHA: $2.3M	Dynamic Change Awareness
DDG-51: $849K; LHA: $557K; LPD: $421K; NSC: $113K	Resource Availability
DDG-51: $731K; LHA: $2.98M; LPD: $1.99M; NSC: $575K	Enhanced Trades Assignment Progressing
DDG-51: $270K; LHA: $675K; LPD: $900K; NSC: $157K	Automated Part Detail Extraction
VCS: $318K; CLB: $476K	Advanced UT Methods of NDT of Hull Welds
LHA: $780K	Temporary Services-Improve Plans and Equipment
DDG-51: $2.8M	Machine Readable Material Transactions
DDG-51: $4.2M; LHA: $2.3M; NSC: $200K	Modular Outfitting/ Packaged Units
DDG-51: $125K	Mobile Yard Inspector
CLB: $2.1M	CAD/CAM Interface for Steel Shape Processing
DDG-51: $675K	DDG Digital Storyboarding
$1.01M per year	Work Flow Tracking System
$1.3M per year	Capacity Planning Automation
VCS: $860K; CLB: $860K	Trade Friendly Locating Dimensional Techniques
VCS: $1.3M; CLB: $1.3M	Robotic Welding of VCS Interim Products
DDG-51: $534K	Structural Fairing Process Improvement
$1.8M per CVN event	CVN Reality Capture
CVN: $1.5M	Digital Radiography Transition for Inspection
LCS (FREEDOM): $213K	LCS Producability Optimization Handbook
VCS: $330K	Lead Installation Process Improvement
VCS: $2.5M	Improved Welder Productivity
DDG-51: $2.86M	Improved Stud Fixturing Processes
DDG-51: $2.82M	Technical Requirements for Mobile Supervisor
VCS: $730K	VCS Outfitting Tools and Processes
VCS: $200K	Measurement Technology System
VCS: $5.4M	VCS Material Management System
VCS: $5.4M	Design for Production Initiatives
VCS: $2.54M	VCS Supply Chain Technology Review
VCS: $2M	Outfitting Process Improvements
VCS: $1.86M	VCS Shipyard Material Flow Processes & Technology
VCS: $1.4M	Pipe Shop Process Engineering

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