



**NATIONAL SHIPBUILDING RESEARCH PROGRAM**  
**ADVANCED SHIPBUILDING ENTERPRISE**

*Reducing Naval Ship Construction & Repair Costs*

**Planning, Production Processes and  
Facilities; Information Technologies  
and Business Processes  
Joint Panel Meeting  
Program Update**

New Orleans, LA

December 7-9, 2010

# Funding

- \$15M for FY11 – sources:
  - PEOs (Ships, Subs, Carriers)
  - NAVSEA 05
- FY 12 funding dependent on proven program value delivered by FY10 and FY11 activities
  - Primary NAVSEA focus in coming weeks will be identifying value and conveying message to sponsors
  - Will involve engagement with MITLs, Panels and project leads – ATI will coordinate



# New Panel Projects

2011 Selected Panel Projects			
Project	Participants	Panel	NSRP Funding
Weld Sizing Criteria for Lightweight Ship Structures	NGSB-GC; Bollinger, University of New Orleans	Welding	\$100,000
Evaluation of "Spot and Sweep" Blasting as a Cost Effective method of Underwater and Outer Hull Surface Preparation	Elzly Technology Corporation; Chariot Robotics, BAE Southeast Shipyards	Surface Prep	\$95,700
Course Material for Training Rigging Engineers	GD NASSCO	Planning, Production & Facilities	\$100,000
Green fastening technologies to reduce operating costs and boost quality and productivity	Nelson Stud Welding; Bath Iron Works, NGSB-GC, NGSB-NN	Welding	\$100,000
Compatibility of "Single Coat" Tank Coatings with Retained Pre-construction Primer	Elzly Technology Corporation; GD NASSCO, BAE Systems Shipyard	Surface Prep	\$99,829
Reduction of Weld Fume Risk in Naval and Commercial Shipyards	Atrium Environmental Health and Safety Services; Applied Thermal Sciences, Navy and Marine Public Health Center	Risk Management	\$100,000
Improved Bonding and Grounding	NGSB-GC; BIW, Panduit Corp., AVO Training Institute	Electrical	\$100,000
Hanger Standardization	NGSB-GC	Ship Design	\$98,400
Rapidly Deployable Lighting System	NGSB-GC; BIW, EB, Bollinger, NGSB-NN	Electrical	\$99,360
Design Manual for Fabricated Shapes	Applied Thermal Sciences; NGSB-GC	Ship Design	\$100,000
Ship Design and Construction Training Module	NGSB-GC; University of New Orleans	Planning, Production & Facilities	\$99,800
Shipboard Installation Methods for Insulated Bus Pipe	NGSB-NN; GLB & Associates, MacPherson Consulting	Electrical	\$100,000
Low-Cost High-Performance Gas Metal Arc Welding	Applied Thermal Sciences; NGSB-NN, Todd Pacific, NGSB-GC	Welding	\$99,830
			<b>\$1,292,919</b>
Standby List			
Project	Participants	Panel	NSRP Funding
Orientation Program: Overview of Shipbuilding Systems and Processes	Marinette Marine	Workforce Development	\$52,000



# Project Solicitations

- Research Announcement
  - Solicitation released on 24 September 2011
  - Proposals due on 11 February 2011
  - Orals (for competitive proposals) will be held the week of 28 March 2011
  - Project Selection will be the week of 11 April 2011
- Anticipate having ~ \$10M available for major projects
- ECB tentatively approved earlier solicitation timeline for next year, subject to projected availability of Navy funding...*be proactive!*



# Potential Solicitation Timeline

RA Project Selection		Panel Project Selection
Event	Date	Event
	Apr	Solicit whitepapers
Release RA	Jun	
Proposers Conference	Jun	
Abstracts due, feedback given	Jun-Jul	
	Jul-Aug	Whitepapers due
Receive proposals	Sep	Project selection meeting
Technical Eval Review Panel	Oct	
Blue Ribbon Panel	Nov	
Project selection meeting	Dec	



# Strategic Investment Plan 2010

- 2010 update to the Strategic Investment Plan approved by the ECB
  - Will be published to website soon
- NSRP Organization & Operations Manual being drafted
  - Anticipate publication in Spring 2011
- Program website being updated to reflect new structure
- Major highlights discussed on following slides...



# SIP 2010

- Major Initiative changes:
  - 4 instead of 6
  - Business Process Technologies and Systems Technology combined
  - Crosscut (Workforce Development) combined with FTRM to make Infrastructure and Support
- Panels – same 10, a few name changes
- Structure mimics major shipbuilding processes:
  - Design
  - Production
  - Business / IT
  - Support functions
- Document changes:
  - New 2-book system that makes updating easier
  - Answers the desire for the SIP to read more like an “Executive Summary” that provides high level information
  - Updated discussion of the Major Initiatives and how they interact with new strategic priorities



# Executive Control Board

Executive Director



## Major Initiatives

Ship Design & Material Technologies

Ship Production Technologies

Business Processes & Information Technologies

Infrastructure & Support

### Panels

Ship Design & Material Technologies

Electrical Technologies

Business Processes

Environmental

Planning, Production Processes & Facilities

Information Technologies

Risk Management

- Workers' Compensation
- Safety & Health

Surface Preparation & Coatings

Workforce Development

Welding Technology



# New Document Structure

## Strategic Investment Plan

- Record of Changes
- Endorsements
- Introduction (brief explanation of NSRP)
- Summary of Industry and Navy Priorities (currently Navy big 3)
- Focus Areas (combined ECB/Navy strategic guidance)

*Update every 2 years*

## NSRP Organization & Operations

- NSRP CONOPS (MI/Panel structure; project activities; history)
  - Program History
  - Organization / Structure
  - R&D Project Process
- Benchmarking
- Methodology
- Acknowledgements
- Glossary
- References (project book, etc.)

*Update sections as necessary*



# Other Initiatives



# Specifications Review

- Documents for Ship Cost Reduction (DSCR)
  - NSRP working with NAVSEA to ID and review specification changes that will reduce cost without impacting quality
  - NSRP has performed assessments of changes to the following...
    - MIL-STD-777 (piping & valves)
    - MIL-DTL-17060 (60Hz, AC motors)
    - MIL-STD-1689 / Tech. Pub 278 (welding)
    - Virtual Shelf (Commonality)
    - MIL-STD-167-1A (mechanical vibration)
    - Shock Testing requirements
    - Use of software tool for identifying EMI testing reqts
  - Shipyards can also draft a change proposal and submit through the review process



# International Shipyard Visits

- The ECB is tentatively planning visits to several foreign shipyards for a focused look at processes / technologies that they execute well
- Trips would take place in Summer of 2011 with a small team representing industry and Navy
- Output would be a trip report detailing the team's assessments and observations...fertile ground for new R&D project ideas

*Still in planning stages. Panels will be updated as details finalize.*



# Recent Meetings & Events

Dates	Event	Comments
Nov 1-2	Electrical Technologies Panel Meeting <i>Seattle/Bellevue, WA</i>	Panel Meeting in conj. w/ SNAME / SPS
Nov 3-5	SNAME Ship Production Symposium Call for Papers Closed <i>Bellevue, WA</i>	Conference
Nov 3-4	Facilities, Tooling & Risk Management <i>Mobile, AL</i>	Panel Meeting
Nov 9-10	Environmental Technologies <i>Jacksonville, FL</i>	Panel Meeting
Nov 17-18	Crosscut Initiatives <i>Norfolk, VA</i>	Panel Meeting



# *Upcoming* Meetings & Events

Dates	Event	Comments
Jan 25-26, 2011	Ship Design & Material Technologies; Welding Technology <i>Mobile, AL</i>	Joint Meeting
Feb 3	Surface Preparation & Coatings (w/ SSPC Conference) <i>Las Vegas, NV</i>	Meeting
Mar 15-16	ShipTech <i>Biloxi, MS</i>	Conference
Fall 2011	All Panel Meeting <i>TBD</i>	Joint Meeting



# For More Information



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Program Information
Projects
Ship Production Panels
Industry Initiatives
Solicitation

#### VIDEO GALLERY

Gallery



**Remote Climbing Robot for Automated Welding Processes**  
Demo of a mobile, autonomous, robotic welding platform that



**Portable Automated Bulkhead and Hull Straightener**  
The focus of this project expanded existing technology used in

### Proposal Writing Workshop

October 27, 2010  
Charlotte, NC



For additional Information:  
[Proposal Writing Workshop](#)

Proposal Writing Workshop

#### ABSTRACT SUBMISSION



[Solicitation Information](#)  
[Current Research Announcement](#)

#### TECHNOLOGY TRANSFER

[NSRP Proposal Writing Workshop](#)  
October 27, 2010  
Charlotte, NC

[Electrical Technologies Panel Meeting](#)  
November 2, 2010  
Seattle, WA



#### MAJOR PROGRAM INITIATIVES

SHIPYARD PRODUCTION PROCESS TECHNOLOGIES	SYSTEMS TECHNOLOGY	BUSINESS PROCESS TECHNOLOGIES	PRODUCT DESIGN & MATERIAL TECHNOLOGIES	FACILITIES, TOOLING & RISK MANAGEMENT	CROSSCUT INITIATIVES
					

-  PROJECT SELECTION PRESS RELEASE
-  PROJECT BOOK
-  NEWS BULLETIN
-  PROPOSAL WRITING WORKSHOP



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# Questions?



# National Shipbuilding Research Program

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