NSRP’s mission is centered around reducing the total ownership cost of ships, the key to the program is its collaborative framework.

NSRP manages and distributes national shipbuilding and ship repair research & development funding on technologies and processes that:

- Reduce the total ownership cost of ships for the U.S. Navy, other national security customers and the commercial sector.
- Develop and leverage best commercial and naval practices to improve the efficiency of the U.S. shipbuilding and ship repair industry.

NSRP provides a collaborative framework to improve shipbuilding-related technical and business processes. It currently has 9 member shipyard.

NSRP allows competitors to partner on common shipbuilding and ship repair problems to benefit the industry and their clients as a whole.

**NSRP’s NAVSEA Sponsors**

- Austal USA
- BAE Ship Repair
- General Dynamics Bath Iron Works
- General Dynamics Electric Boat
- General Dynamics NASSCO
- HII – Ingalls Shipbuilding
- Marinette Marine
- HII – Newport News Shipbuilding
- Halter Marine

**SDMT Panel Leadership**

- SDMT Team Lead: Dan Sfiligoi (NASSCO)
- SDMT Team Lead: Michael Gerardi (BIW)
- SDMT Panel Chair: Monika Skowronska (NASSCO)
- SDMT Vice Chair: Victoria Dlugokecki (Naval Consultant)
- Project Manager: Nick Laney (ATI)
- Panel Coordinator: Lydia Szydlo (ATI)

**NSRP PROJECT SELECTION PROCESS**

- Strategic Investment Plan
- Technology Investment Plan
- Executive Control Board
- NSRP R&D Portfolio
- Competitive Selection
- Technology Transfer
- Annual Meetings
- Conferences

**TYPICAL SOLICITATION CYCLE TIMELINE**

(DATES SUBJECT TO CHANGE)

**Solicitation Cycle**

- Release RA Solicitation
- Panel Project Solicitation, Released
- Proposals Due ATI
- Proposals Submitted White Papers to Panel Chairs
- Panel Chairs Submit Top 3 Panel White Papers to ATI
- ECB Panel Project Selection

**UPCOMING NSRP EVENTS**

- All Panel NSRP Meeting 2023
  - March 27th - 31st 2023 - In Person
  - Charleston Convention Center, SC

Best way to learn about NSRP and to get involved is to attend an event!
Meeting Focus: Digitalization of Shipbuilding
Address: Foreign Trade Zone Homer A Maxey Conference, 521 Ala Moana Blvd, Honolulu, HI 96813

Objectives:
- Presentations and discussions on shipyard digitalization and updates from ongoing projects
- Collaboration with Pearl Harbor Shipyard and Innovate Hawaii
- Tour of Pacific Shipyard International

PARTICIPATION AND ENGAGEMENT

Joints SDMT and BT Panel meeting in Hawaii Aug/Sept
Tour of Pacific Shipyard International + Boat Ride on their 3 Prototype Boats

27 Presentations included:
- Pearl Harbor presented on their 3D Scanning work, their Innovation Program, and provided a virtual tour of iLab
- Navy's Shipyard Infrastructure Optimization Program (SIOP) update from Brian Kupczyk, Project Manager
- Navy's Tech Bridge, Meal Miyake and Kaipo Crowell
- Paul Huang from ONR presented on "Digital Transformation in Manufacturing and How Standards could be Leveraged"
- ABS presented on "Classification Role in Supporting the Life Cycle Digital Twin"
- ManTech Presentation on "Dynamic Rules based Material Process"
- 7x NSRP Project updates and many more!
- For ALL presentations see NSRP.org website
- Coming soon recordings to be posted on our YouTube channel!

27 Presentations included:
- Pearl Harbor presented on their 3D Scanning work, their Innovation Program, and provided a virtual tour of iLab
- Navy's Shipyard Infrastructure Optimization Program (SIOP) update from Brian Kupczyk, Project Manager
- Navy's Tech Bridge, Meal Miyake and Kaipo Crowell
- Paul Huang from ONR presented on "Digital Transformation in Manufacturing and How Standards could be Leveraged"
- ABS presented on "Classification Role in Supporting the Life Cycle Digital Twin"
- ManTech Presentation on "Dynamic Rules based Material Process"
- 7x NSRP Project updates and many more!
- For ALL presentations see NSRP.org website
- Coming soon recordings to be posted on our YouTube channel!

Tour of Pacific Shipyard International + Boat Ride on their 3 Prototype Boats

71 Attendees TOTAL (44 IN PERSON + 27 VIRTUAL): 2 FULL DAYS + 1 HALF DAY

SDMT + BT PANEL LEADERSHIP

Pearl Harbor Naval Shipyard’s iLAB Virtual Tour
- Plastic 3D Printing Room (300 sqft)
- 3 Strategies Fortus 450mc
- ASA, ABS, KEMA, Nynas, YCF
- 2 Makerbot Replicator 2X
- PLA
- 5 Makerbot Method X
- ABS
- Ultrasonic Cleaner

SIOP Introduction
Department of the Navy Chief of Naval Operations (CNO)
- 3D Printing: Manufacturing Demonstrations Facility
- Transportation Research Center - Marine Engines
- Sea Power Innovation Council (SPIC)
- Naval Construction and Engineering Group
- Undersea Warfare Center - Keyport
- Project Manager: Brian Kupczyk

What problems are we trying to solve with SIOP?
- Current condition, configuration, and location of supporting facilities, dry docks, and equipment
- What improvements can be made to our shipyard's infrastructure to meet current and future needs?

71 Attendees included:
- NSRP Shipyards: NASSCO, Ingalls, Newport News, BIW, Electric Boat, Austal, Manchets
- NAVY: NAVSEA Carderock, Pearl Harbor SY, ONR, NAVSEA Naval Undersea Warfare Center Division
- Other Yards: Pacific Shipyard and Philadelphia Shipyard
- Local Companies: Makai, Innovative Hawaii, Ship Repair Association of Hawaii, Applied Systems
- Classification Societies: American Bureau of Shipping
- Industry: Siemens, General Electric, Hitachi, Boeing, Rolls Royce, General Electric, Mitsubishi Heavy Industries
- Academic: Carnegie Mellon University and University of Maryland

IDEAS FOR FUTURE SDMT TOURS
Where should we meet in 2023?
- Washington State
- Jacksonville, FL
- NASSCO Newport News Shipyard
- Newport News, VA
- Boeing
- Bath Iron Works
- Oregon
- Alaska
- Ketchikan or Seward
- Virginia
- Port of Long Beach
- Port of Lansing
- Port of Seattle

DON’T FORGET TO FOLLOW NSRP ON LINKEDIN!
**Panel Project Down Select - SDMT Top 4 Projects**

- **September 13th Project Pitch Meeting:** opportunity to brief project to voting member
- **Vote breakdown:** 8/10 NSRP Shipyards Voted, 10 Industry Votes, 3 Navy Votes
- **Top 3 projects selected plus 1 Joint Project with Sustainment Panel (Meld Tie Downs)**
- **ECB Panel Project Selection Meeting to take place the week of November 14th**

---

**Using MELD to Additively Manufacture Flight Deck Tie Downs**

**Project Lead Organization:** Highborn and Sons LLC
**Project Team Members:** Ingalls Shipyards, MELD Manufacturing, Fincantieri Cardenica and Philadelphia

**Concept/idea:**
- MELD additive flight deck tie downs are innovative and have low lead times.

**Proposed Solution:**
- Design MELD additive flight deck tie downs and test them to ensure they meet the performance of conventionally manufactured tie downs.
- The new MELD additive flight deck tie downs will be lighter than their conventional counterparts, resulting in faster installation.

**Benefits:**
- Lower cost of manufacture and improved performance for the Navy.
- Improved durability and reliability of the tie downs.

---

**3D Printing of Supply Sensitive Parts**

**Project Lead Organization:** General Dynamics NASSCO
**Project Team Members:** Austal USA, Additive Manufacturing Tech Warren Hildebrand

**Concept/idea:**
- Issuer is looking for supply chain opportunities to reduce cost and schedule for the Navy and shipyard/shipbuilder repair facilities.

**Proposed Solution:**
- Additive manufacturing supplies for repair facilities on the West Coast.
- The project will investigate the use of 3D printing for supply chain purposes and evaluate the cost and time savings compared to traditional manufacturing.

**Benefits:**
- Reduced cost and time savings for the Navy.
- Enhanced reliability of critical parts.

---

**Next Generation Design Review: Deeper Analysis with Zero Travel**

**Project Lead Organization:** NASSCO
**Project Team Members:** Fincantieri Maratraz Marine, ShipSpace, D’Angelo Technologies

**Concept/idea:**
- SDMT Top 4 Projects

**Proposed Solution:**
- Analyze and develop new zero travel concepts for future ship design.

**Benefits:**
- Improved efficiency and cost savings for shipbuilding.
- Enhanced safety and sustainability.

---

**BLÜCHER STAINLESS STEEL, PUSH-FIT DRAINAGE SYSTEM**

**Project Lead Organization:** Wettus Water Technologies/Blücher
**Project Team Members:** Fincantieri Maratraz Marine

**Concept/idea:**
- Issuer is looking for cost-effective and push-fit drainage systems.

**Proposed Solution:**
- Develop and prototype push-fit drainage systems for future ship designs.

**Benefits:**
- Reduced installation time and cost.
- Improved durability and maintenance.

---

**CURRENT NSRP RA PROJECTS**

**Automated Label Plate Generation**

**Project Lead:** Erik Bjorkner, SSI

**Lead:** Jessica Skogberg, NASSCO

**The goal is to develop a process to reuse existing data already contained within the 3D design model for label plates. This project will provide a platform for accessing digital data in a usable format to allow plate data to be shared with the supplier through purchasing.**

**Benefit:**
- Reducing the cost and time of re-creating label plates.

---

**Fatigue Analysis of Swaged Bulkheads**

**Lead:** Kolby Pearson, NASSCO

**U.S. shipyards are looking to implement cost-saving additive manufacturing technologies on a large scale and Classification Society rules are in the early stages of being developed to address the design and use of AM on commercial and Navy vessels. In order for the U.S. Navy to benefit from additive manufacturing, further research is required to determine the feasibility.**

**Benefit:**
- Establishing a 3D printing process for steel and demonstrating that the material properties of the printed coupons are adequate by NAVSEA standards.