State of the Panel

Business Technologies Panel

Jamie Breakfield, Panel Chair

Huntington Ingalls Industries, Ingalls Shipbuilding

NSRP
NATIONAL SHIPBUILDING RESEARCH PROGRAM™
Taking Shipbuilding and Repair to the Next Level

Organization

Executive Control Board

Program Administrator

Extended Team

Major Initiatives

Information, Design, & Integration

Ship Production Technologies

Infrastructure, Logistics, & Sustainment

Panels

Ship Design & Material Technologies

Electrical Technologies

Workforce & Compliance

Ship Warfare Systems Integration

Planning, Production Processes & Facilities

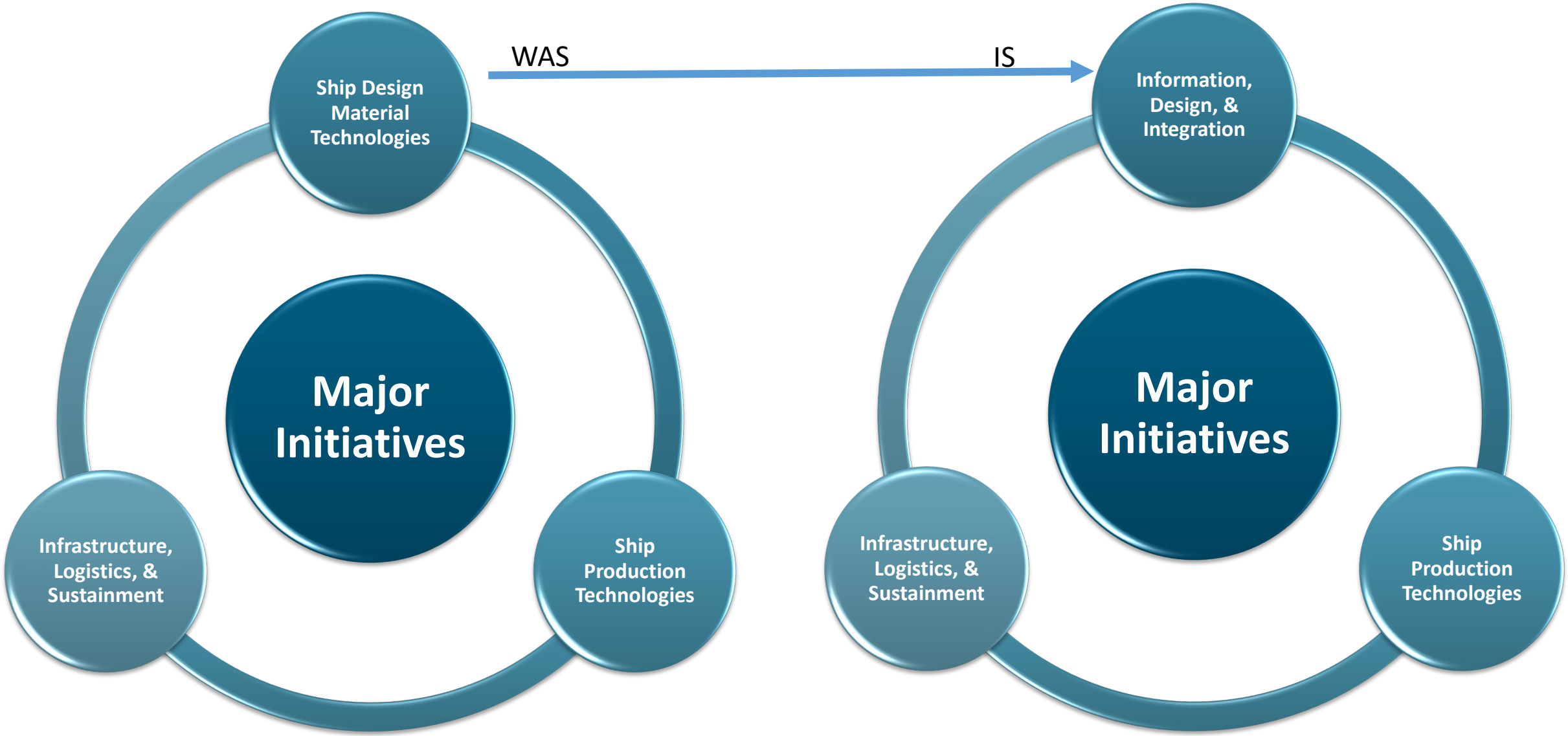
Sustainment

Business Technologies

Surface Preparation & Coatings

Welding Technology

Major Initiative - Transformation



Business Technologies Panel Leadership

Panel Chair: Jamie Breakfield, Ingalls Shipbuilding

Panel Vice-Chair: Patrick Roberts, SSI-USA

Business Technologies Panel's Mission

- Focus on emerging digital capabilities, blending process and information to develop advanced solutions that support product lifecycles from concept to disposal.

Panel's Purpose

- Strategically align with US Navy Initiatives

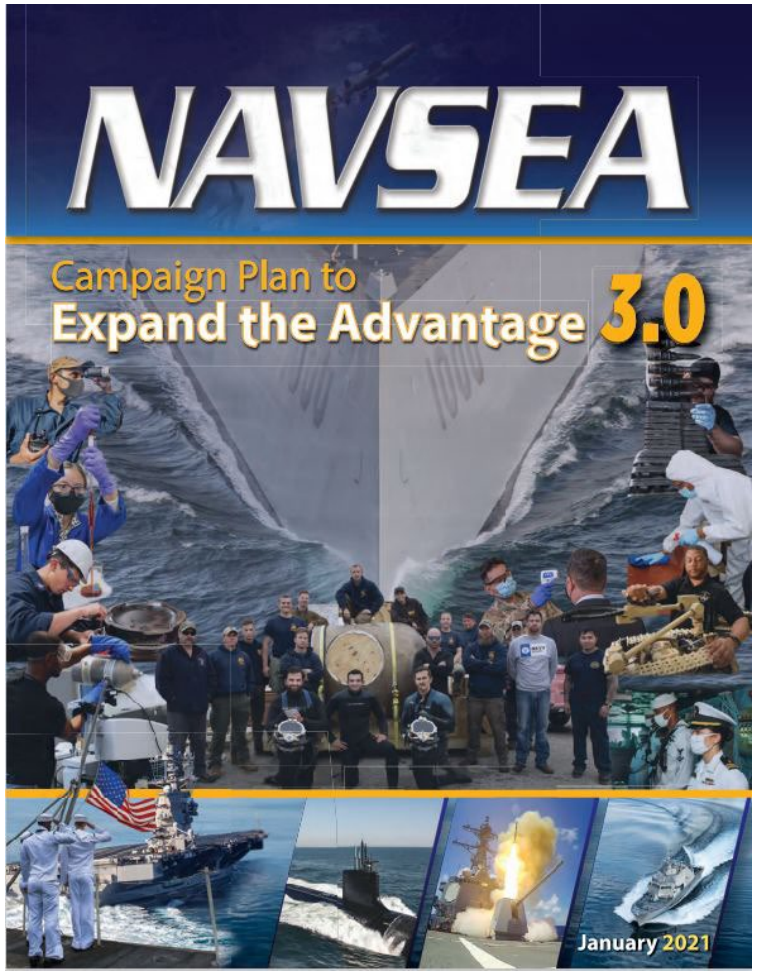
Business Technologies Targeted Initiatives

1. Advance and Leverage Digital Shipbuilding
2. Enable Digital Thread
3. Work towards MBE/MBSE
4. Cybersecurity Compliance, Solutions, Education & Awareness

Benefit and Assistance to the Navy, shipbuilding and ship repair industries

NAVSEA Strategic Framework 3.0
Mission Priorities

- Deliver Combat Power: On-time Delivery of Combat Ready Ships, Submarines and Systems
- Transform Digital Capability
- Build a Team to Compete and Win



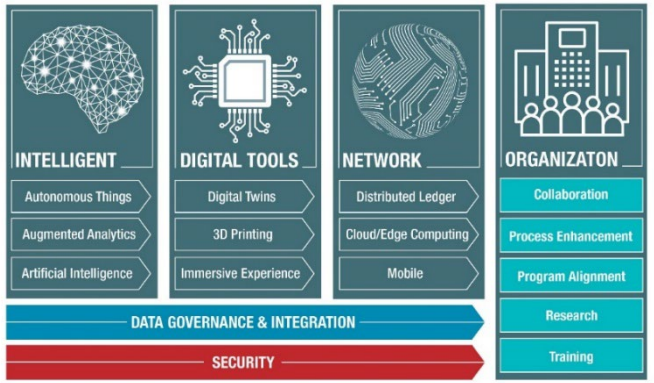
Navy & Marine Corps Digital Systems Engineering Transformation Strategy

Objectives

- Formalize the development, integration and use of models
- Provide an enduring authoritative knowledge source
- Incorporate technological innovation to improve the engineering practice
- Establish the supporting infrastructure and environments for the Digital Engineering practice
- Transform the culture and workforce to adopt and support Digital Engineering across the lifecycle

NSRP BT Panel – Benefit to Navy & Industry

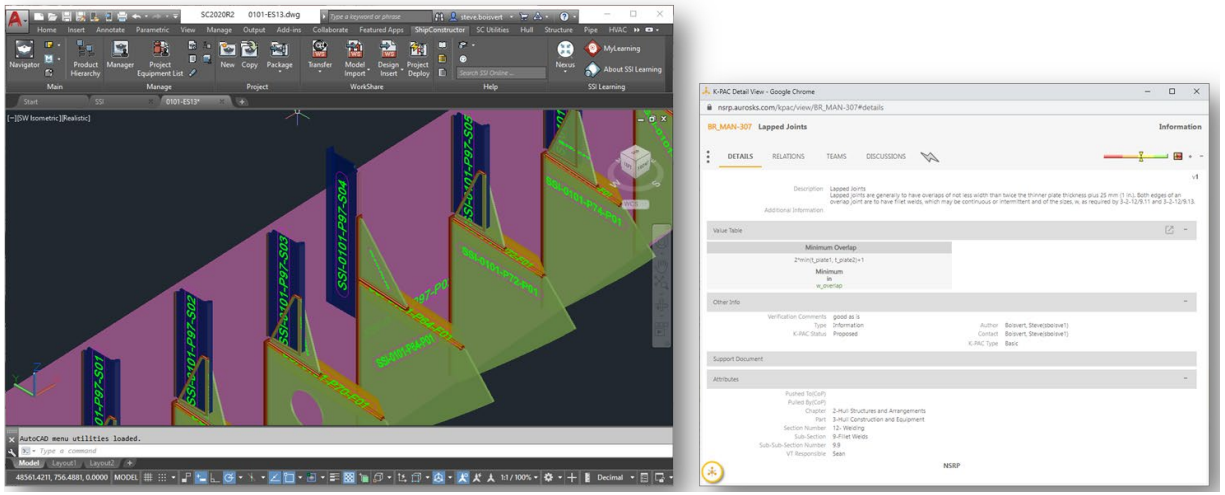
- Forum for collaboration of industry/Navy/vendors
- Navy and industry are in the midst of digital transformation
- BT Panel focus on initiatives that benefit both the Navy and the shipbuilding and ship repair industries
- Seek exposure to and understanding of common problems and vision towards providing solutions

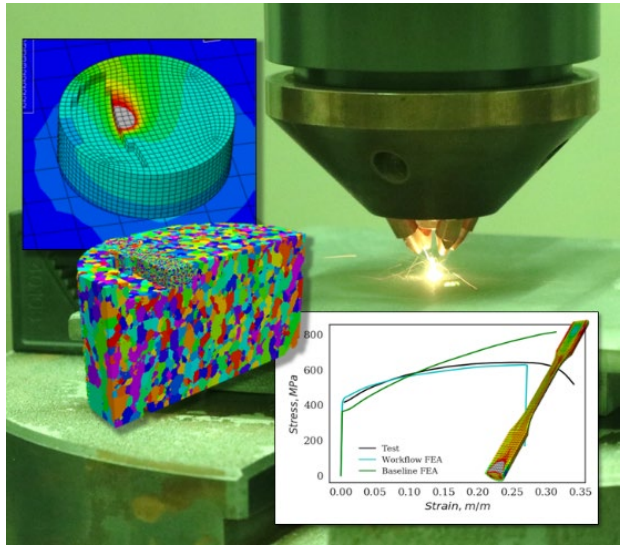


Panel Projects

2020 Panel Projects (Complete)

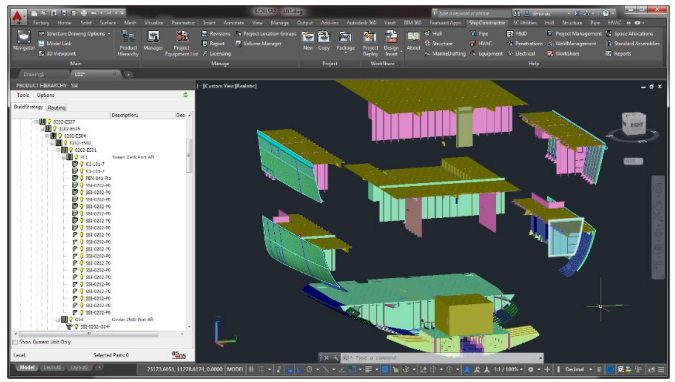
- Structural Interface for Automated Compliance Checking (BT)
  - Benefit: Streamline the regulatory compliance workflow by provisioning digitized structural rules directly into the 3D Design Model workflow with compliance verification against the ABS Rules and contract specification
- Simulation Workflow Development for Additive Manufacturing (Joint SDMT/BT)
  - Benefit: Prediction of AM part performance for faster design and potential for accelerated, model-supported qualification.

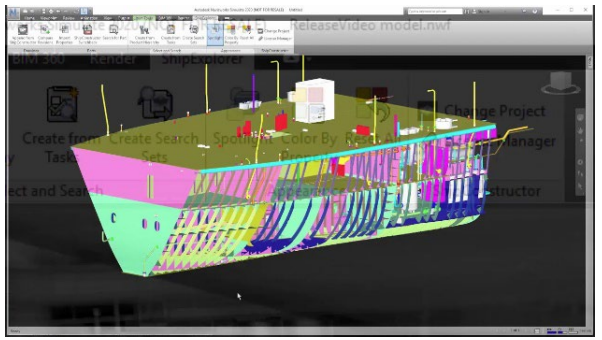


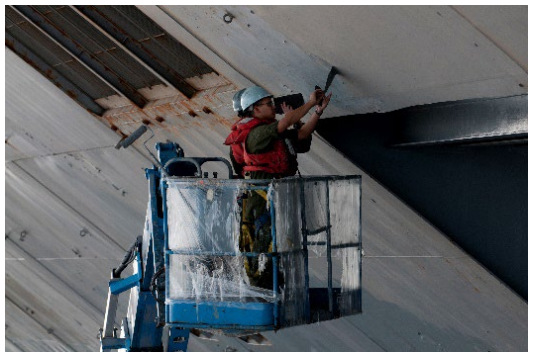


2021 Panel Projects (Awarded)

- Automated Detailed Planning and Instant Earned Value Control (Pending Contract)
  - Benefit: Automate the detail planning process coordinated with the project plan through a direct integration with engineering data allowing for automated sequencing, budgeting, scheduling, resource allocation, and Earned Value Management System (EVMS) control.
- Utilizing Ship Product Model Information for Corrosion Control and Coatings (Under Contract)
  - Benefit: Better coupling of product model to paint schedule; leverage product model to assist with paint schedule creation and automate calculation of design variables.

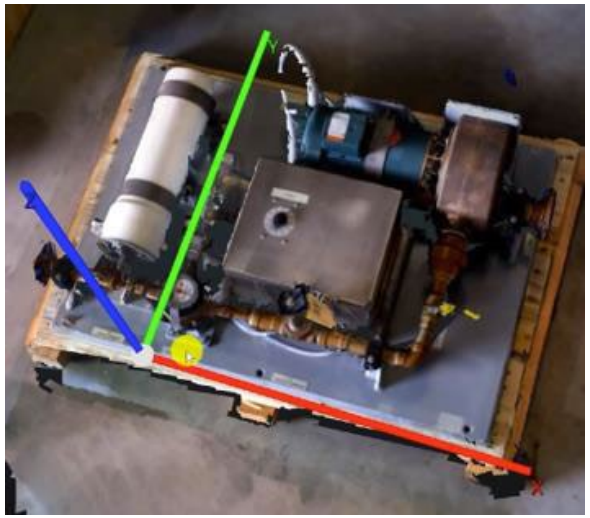


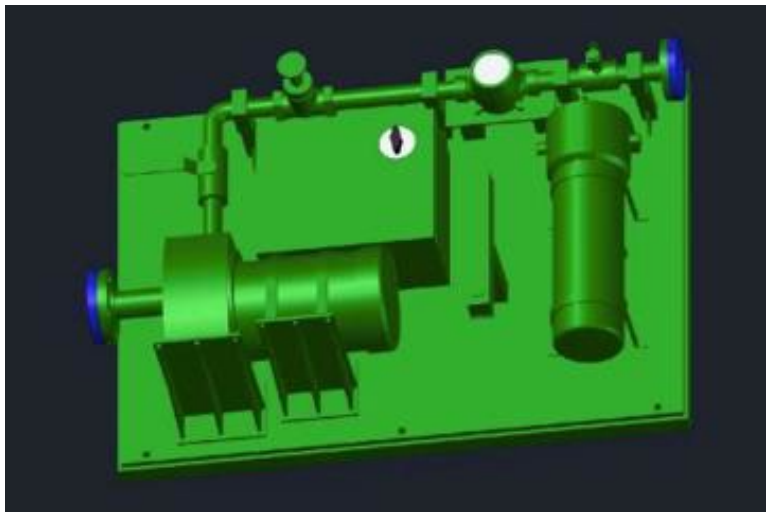


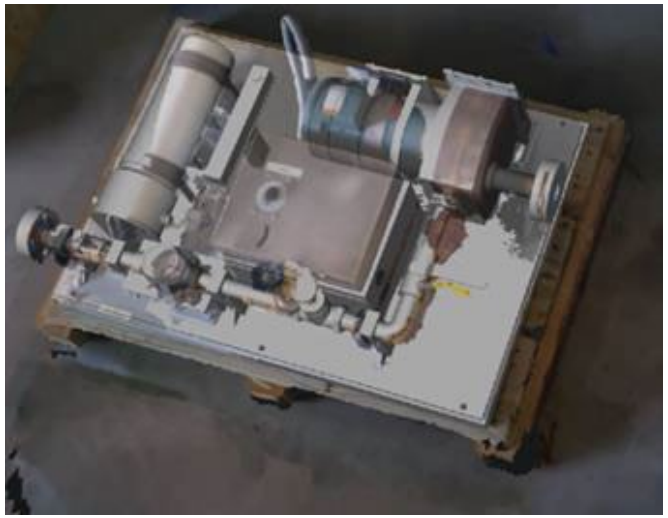


2022 Panel Projects (Awarded)

- Equipment Validation Through Scanning (Pending Contract)
  - Benefit: Provide an efficient process using a COTS handheld 3D scanner to digitally compare items at receiving to the 3D model for verification of form/fit.







Panel Activities
Past, Current, and Future

BT/SDMT Joint Panel Meeting San Francisco, CA
September 2021

- 90 Attendees Total (31 in person + 59 virtual)
- Tour of Bay Ship and Yacht Shipyard In Alameda, CA
- 1.5 days
  - 20 presentations

BT/SDMT Joint Panel Meeting Honolulu, HI

August 2022

- 71 Attendees Total (44 in person + 27 virtual)
- Tour of Pacific Shipyard International
  - Demonstration of 3 Prototype Vessels
- Collaboration with Pearl Harbor Naval Shipyard and Innovate Hawaii
- 2.5 days
  - 27 Presentations

Future Activities

- Business Technologies Panel Breakout Session
  - All-Panel Meeting – March 30th, Room 7
- BT/SDMT Joint Panel Meeting
  - Summer 2023, Keyport, WA
  - NAVSEA NUWC Keyport Division

Questions?

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