

NSRP

National Shipbuilding Research Program

Common Parts Catalog (CPC) Commonality Working Group (CWG) Update

Part Standardization & Management Committee

April 26-28, 2016

McLean, VA

Program Mission

- Manage and focus **national shipbuilding and ship repair research & development funding** on technologies and processes that will:
 - **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
- Provide a **collaborative framework** to improve shipbuilding-related technical and business processes



NSRP Collaboration



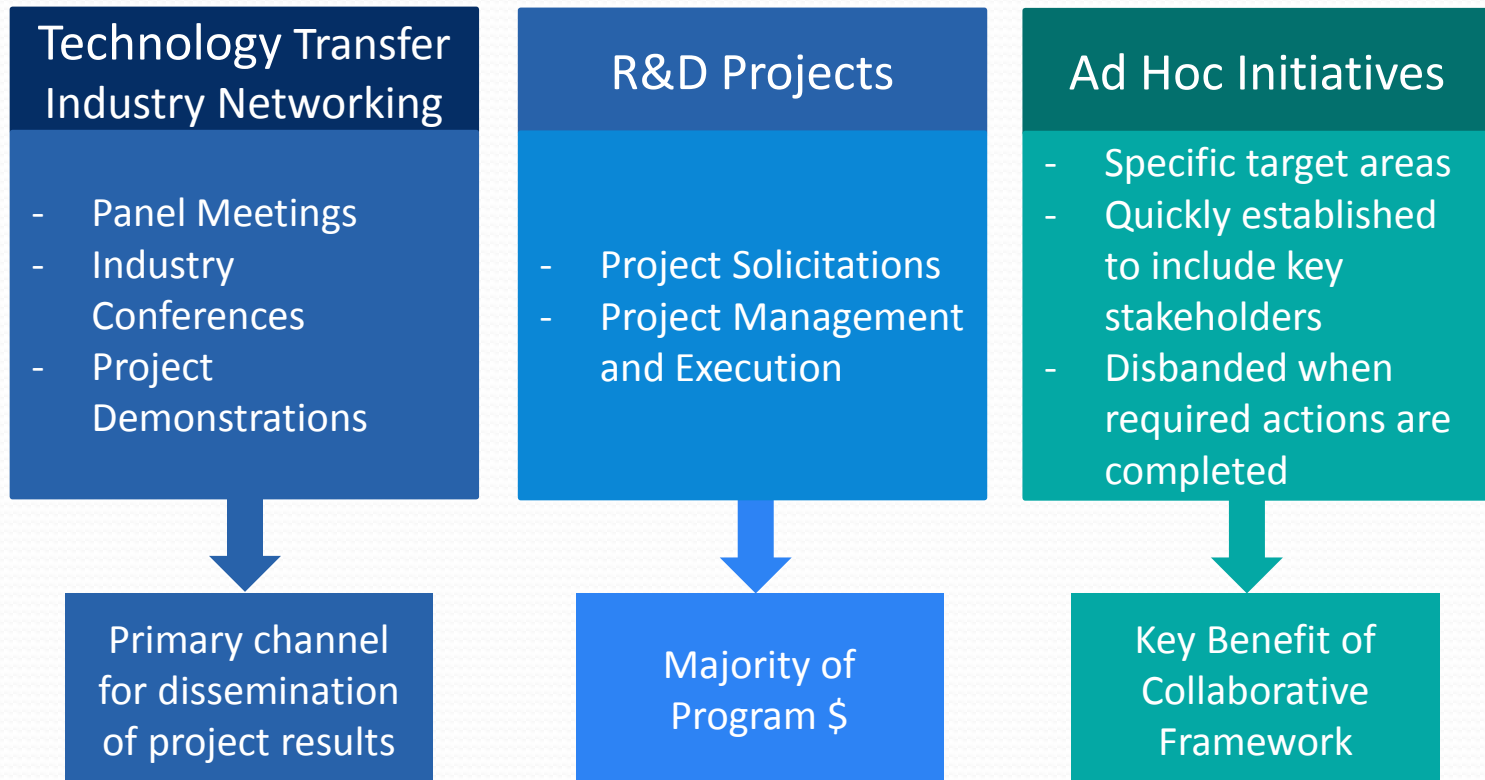
Anti-Trust Rules – Don't Discuss:

- Your company's or your competitors' **product & services** (pricing, sales, marketing, etc.)
- Your company's or your competitors' selection of their **supplier companies**
- Your company's or your competitors' **trade secrets**



Program Overview

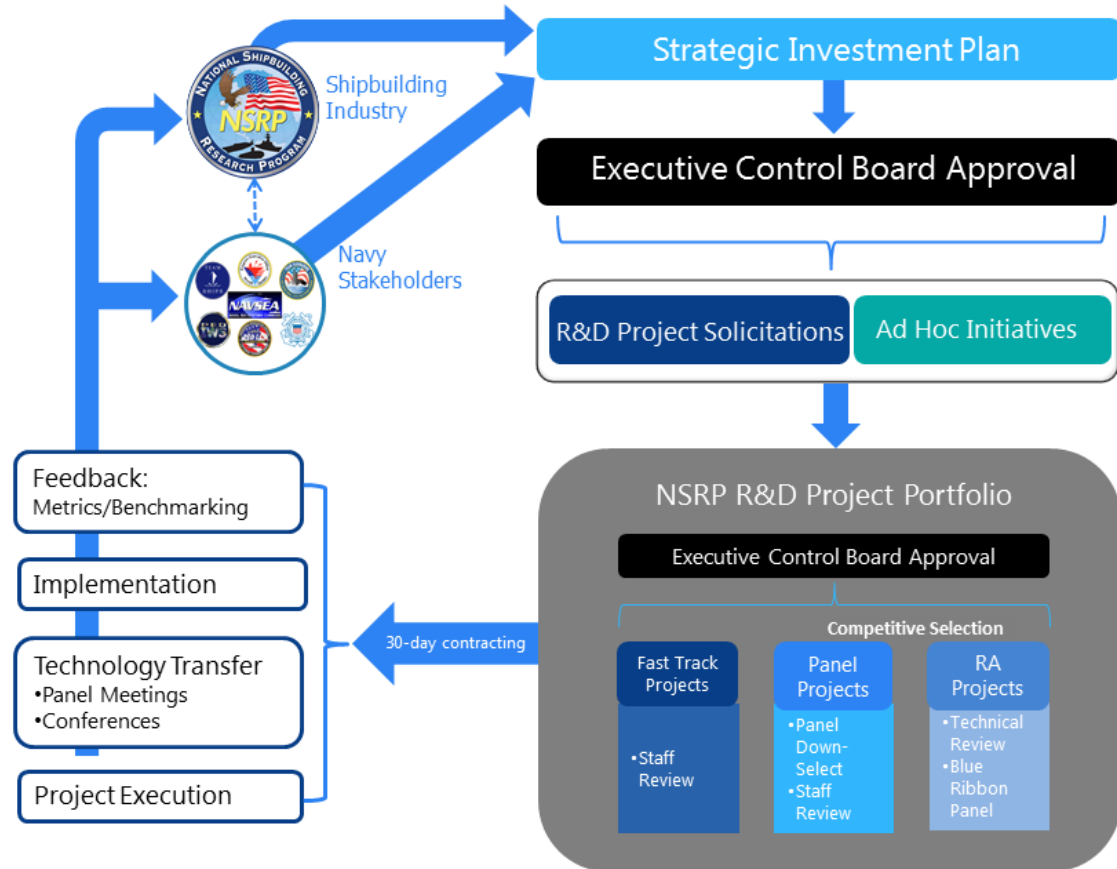
Program Focus



Operations



Greatest portion of
Program funding
goes to Projects



Organization

Sponsors



Executive Control Board

Executive Director
and Staff



Extended Team

Major Initiatives

Aligns with Shipbuilding Enterprise

Ship Design &
Material Technologies

Ship Production
Technologies

Business Processes
& Information
Technologies

Infrastructure &
Support

Panels

Ship Design &
Material Technologies

Ship Warfare Systems
Integration

Electrical
Technologies

Planning, Production
Processes & Facilities

Surface Preparation &
Coatings

Welding Technology

Business Processes

Information
Technologies

Environmental

Risk Management

Workers'
Compensation

Safety &
Health

Workforce
Development



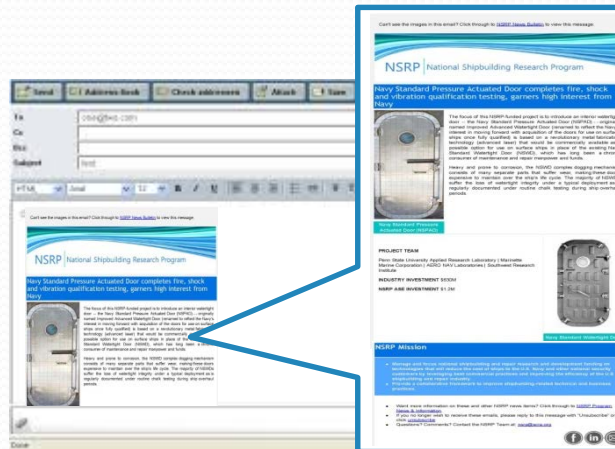
Communications



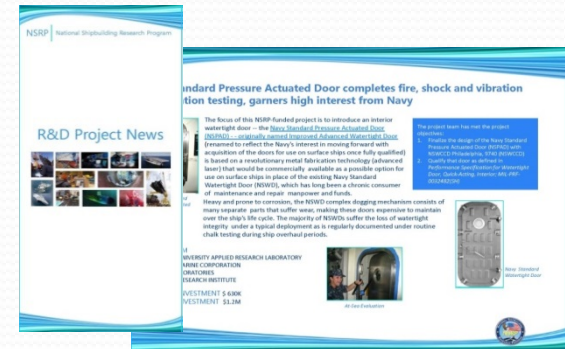
Bi-monthly Newsletter



Embedded Project News Bulletin

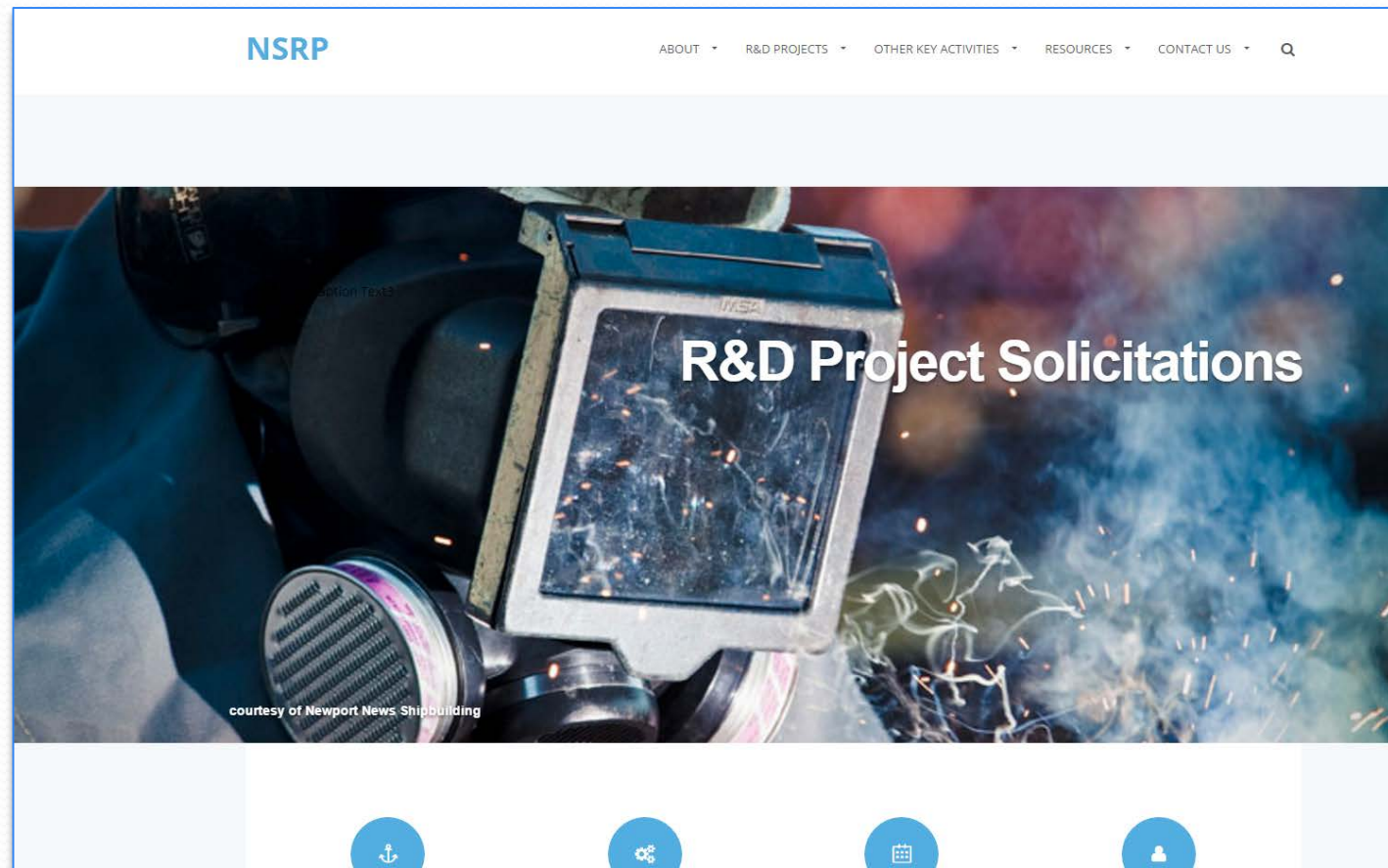


Tri-fold Project News Bulletin (hardcopy and pdf)



New in 2016

- NEW WEBSITE!
- Responsive
- Highly searchable with tags and categories



R&D Projects



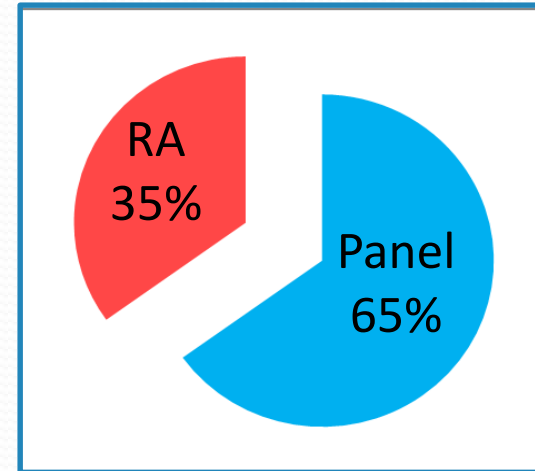
Project Snapshot

Total # of projects

339

Projects with > 1 shipyard

207



63%
transition rate

31%
limited transition



Project Solicitations



Technology Transfer Industry Networking

- Panel Meetings
- Industry Conferences
- Project Demonstrations

R&D Projects

- Project Solicitations
- Project Management and Execution

Ad Hoc Initiatives

- Specific target areas
- Quickly established to include key stakeholders
- Disbanded when required actions are complete

2
types

Yearly
Issued on roughly
annual basis

Research Announcements

SCOPE

More
comprehensive
Multiple
phases

\$

Funding with
Gov't and
Industry Cost
Share
Can run into
\$Ms

2

Duration
up to 2
years

Panel Project Solicitations

SCOPE

Smaller, targeted
Submitted
through Panels

\$

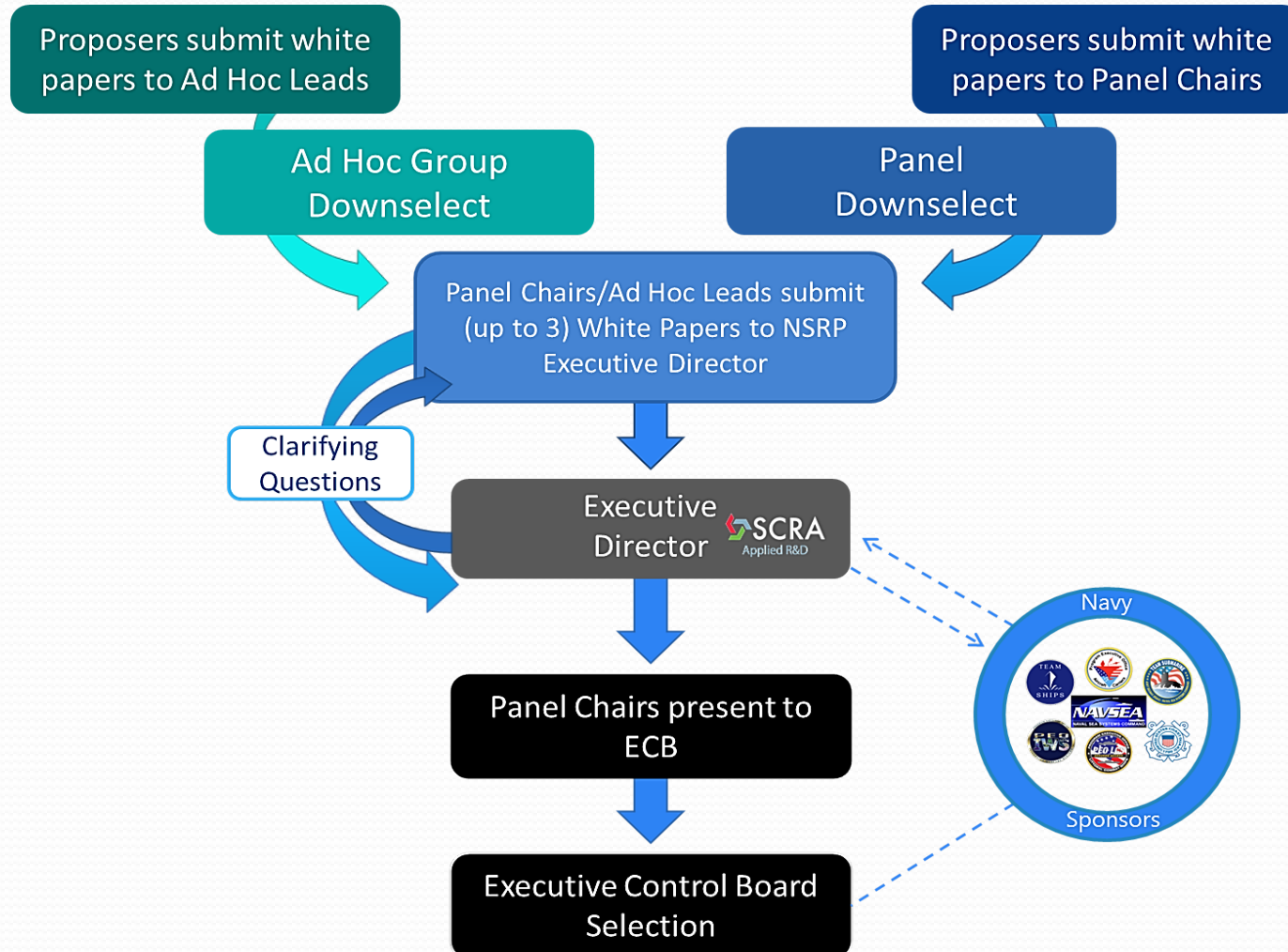
Up to
\$150K

1

Duration
up to 1
year



Panel Project Solicitation Process



April – Panel
Project
Solicitation
Issued



Panel Chairs/Ad
Hoc Review and
down-select



Q&A
Period



Proposers submit white papers
to Panel Chairs/Ad Hoc Leads
(Panel Chairs/Ad Hoc Leads
determine submission deadline)



August - Panel Chairs/Ad
Hoc Leads submit white
papers to SCRA



September - Panel
Chairs/Ad Hoc Leads
present project portfolio
to ECB for award



Panel Project Solicitation 2016 Timeline

39

WHITE PAPERS
SUBMITTED

11

ALL PANELS SUBMITTED +
COMMONALITY AND BIG DATA
WORKING GROUPS

19

SELECTED
BY ECB AT SEPT
MEETING

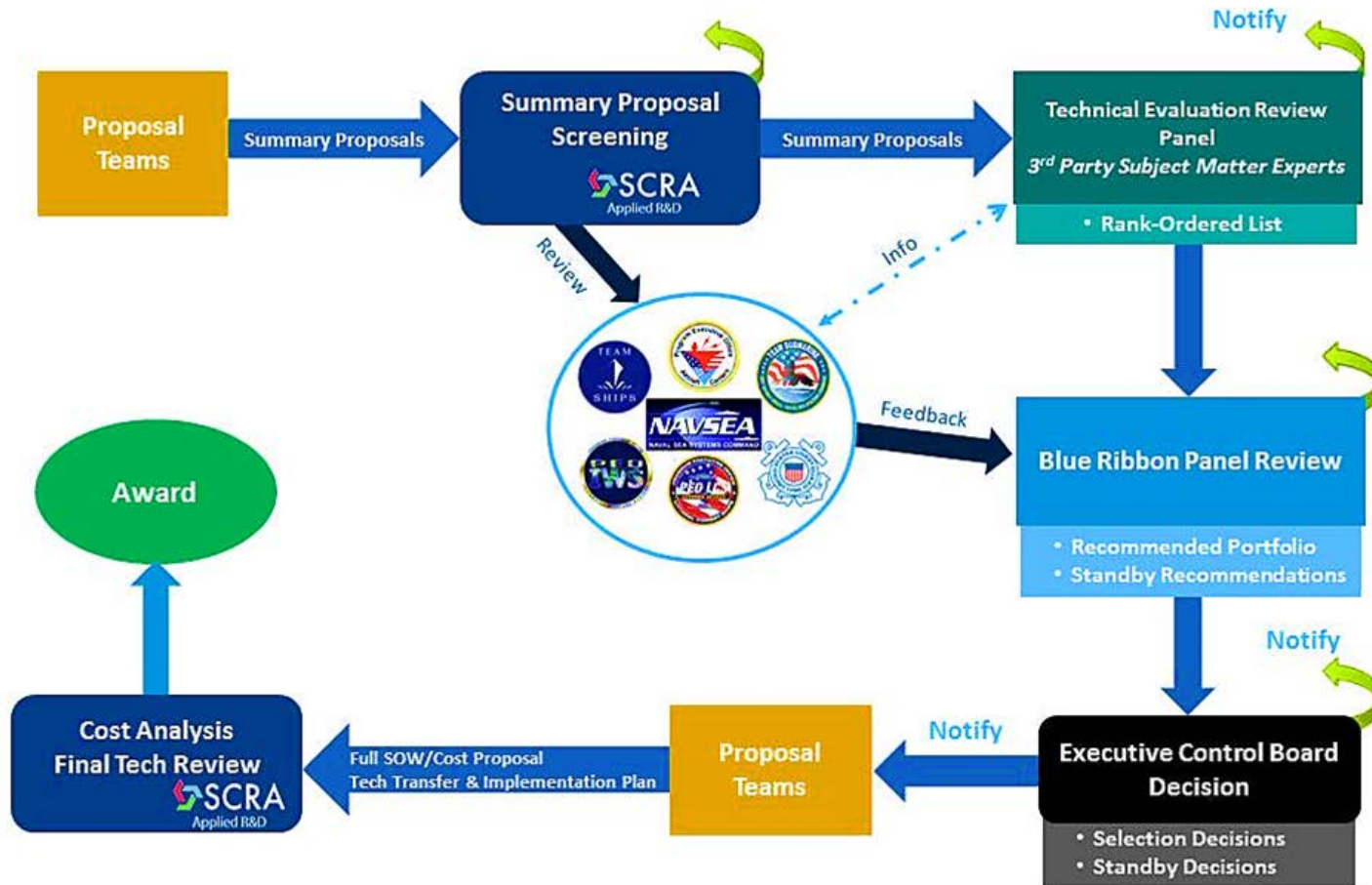
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~\$2.7M

TOTAL
FUNDING
AWARD



Research Announcement Proposal Process



Technology Transfer



NSRP Day @ NAVSEA

- Thursday, October 1st
- NAVSEA HQ building, Washington Navy Yard
- Over 30 project teams discussed and demonstrated the tools and technologies they are developing to key Navy stakeholders
- NAVSEA Executive Director



World Maritime Technology Conference 15

- November 3-7, 2015
- Held in conjunction with SNAME Maritime Convention
- Ship Production Symposium
 - Panel Chairs put their **SNAME Ship Production T&R Committee** hats on to review abstracts and moderate technical sessions
- NSRP Project Demos & Displays
 - 22 NSRP Project Teams participated

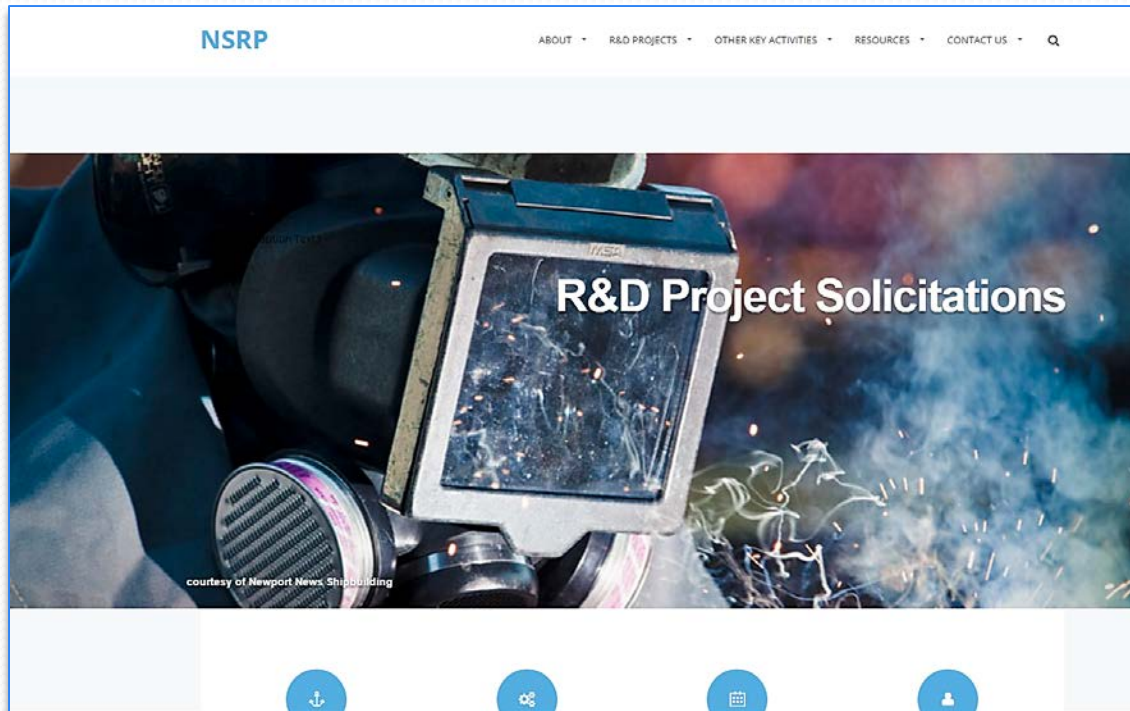


ShipTech 2016

- March 1-2, 2016
- Sponsored by Office of Naval Research-Navy Manufacturing Technology Program
- Co-supported by NSRP and the Navy Metalworking Center
- 24 NSRP Project Teams presented abstracts during the technical sessions



Looking for more information?



- Resource Documents
- Contact Information
- Panel Information
- Ad Hoc Initiatives
- Presentations
- NSRP History
- Solicitations
- Teaming



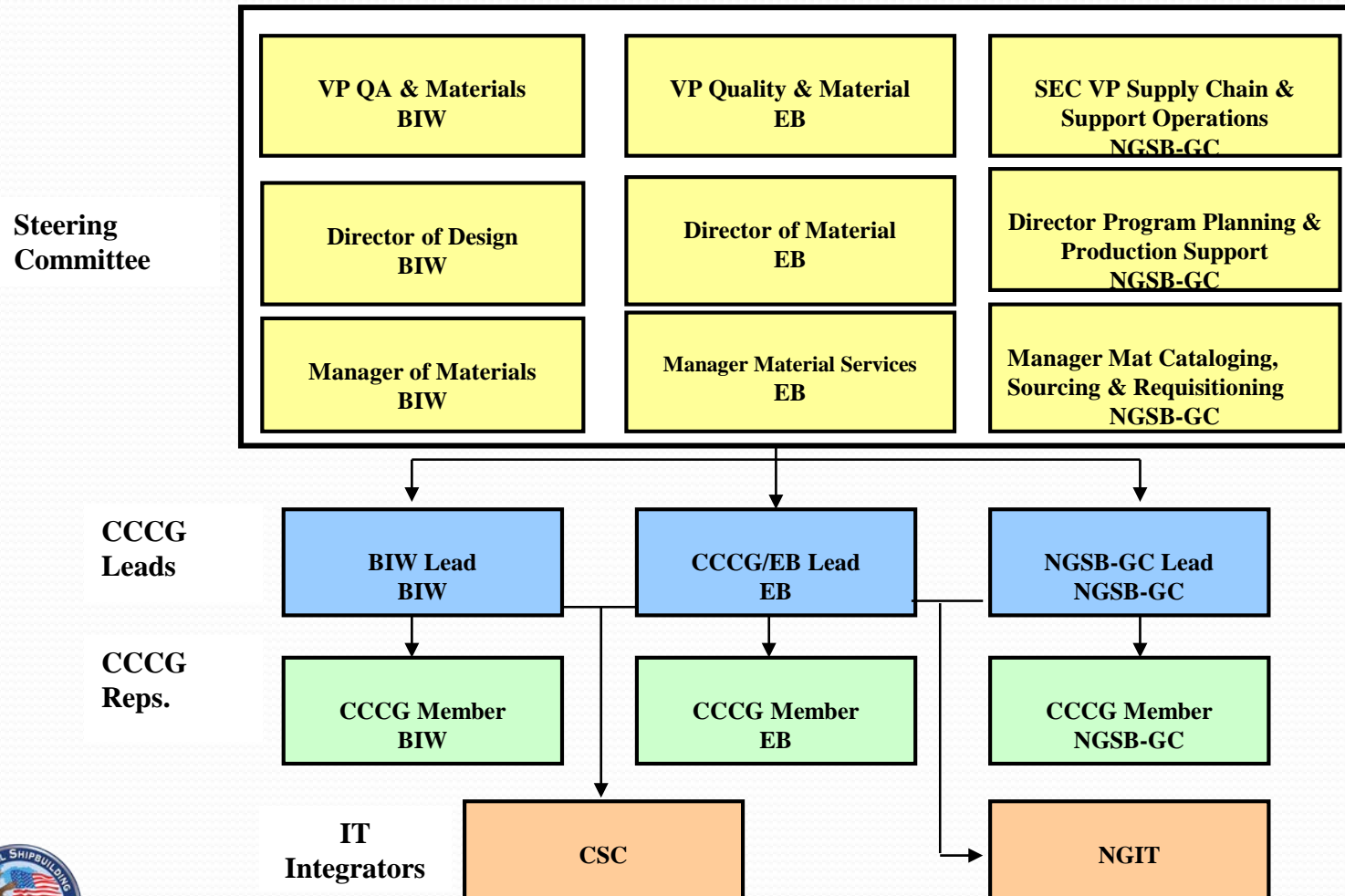
Common Parts Catalog (CPC)

Background

- The collaborative Common Parts Catalog has been in production since May 2004.
- Senior Navy Leadership are briefed and engaged
- DDG1000 Support activities included:
 - Part Standardization Program supported with defined standardization criteria and coding
 - Part Equivalency supporting a joint design with part catalog definition
- CGN(x) and CG(x) materials team was represented by CPC CCGG representatives
- CPC Navy Pilot was completed on June 1, 2008.
- Defense Standardization Program Office published a case study “Common Parts Catalog for Industry Shipyards”



CPC Project Management Structure



Role and Responsibilities

- Steering Committee
 - Senior level executives from the Participating Shipyards
 - Ensures resources are provided for the CWG's operation
 - Acts as mediator and final decision body on issues
 - Quarterly status reviews are recommended
- CWG Lead
 - Manage the everyday activities to assure the CWG projects are consistent with business requirements, schedules and budgets
 - Teleconference and face to face meetings per year
- CWG Representative
 - Subject Matter Experts and Support group to the team as required
- IT Integrators
 - Manage the IT resources necessary for production system support, application enhancements and software vendor management



NSRP Research Announcement (RA)

- April 2010 – NSRP RA contract awarded – CPC Enhancement Task
 - There were 4 tasks and 1 was for the evaluation of NASSCO and HII-NNS joining the CPC collaboration. The P.O.P. was Sept. 2011 – Dec. 2012.
- December 2012 – Project team provided the NSRP Executive Control Board (ECB) with high level cost estimates and schedule for re-engineering CPC and implementing at all 5 shipyards (EB, BIW, HII-Ingalls, HII-NNS, NASSCO).
 - Based on this estimate, the ECB tasked the project team to develop additional detail on the proposed activities and schedule drivers as well as a value/impact assessment of the strategic initiatives identified
 - The team was asked to form a cross functional group consisting of the CPC team leadership and representatives from the Navy, NNS, NASSCO and other interested NSRP members including mid-tier shipyards.
- March 2013 – Completed CPC Enhancement Task and provided Strategic Initiative Recommendations to NSRP
- NSRP Commonality Working Group (CWG) was established



Commonality Working Group (CWG)

Purpose

- Discuss past, present, and future of CWG
- Discuss commonality barriers and strategic focus areas
- Develop a CWG 2016 budget request for SCRA
- Review NAVSEA Commonality Handbook comments
- Discuss each of our approved 2016 panel projects
- Discuss potential panel projects and RA projects for 2017



Commonality (NAVSEA Definition)

Reduced variation in the application of systems, sub-systems, and components that meet cross platform requirements and provide optimum acquisition and life-cycle costs (i.e. total ownership costs).



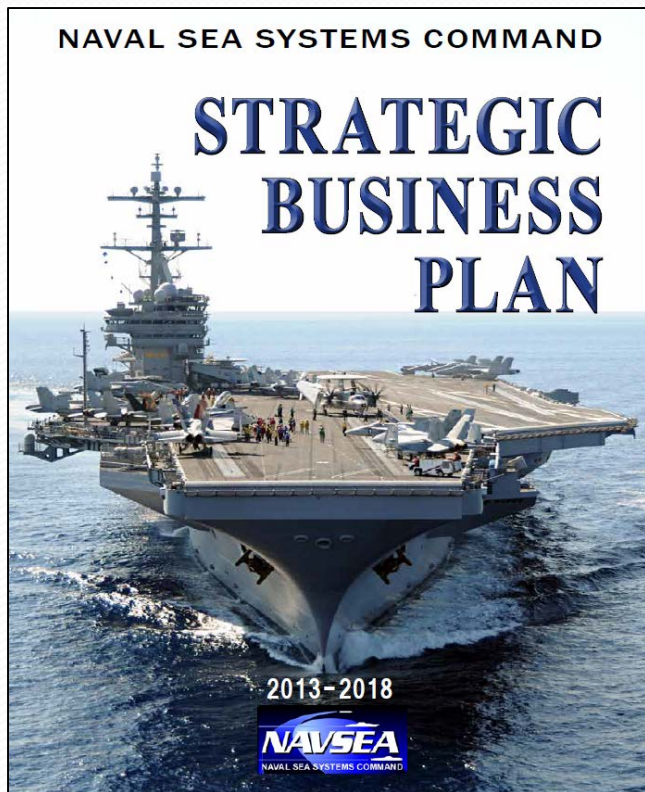
Importance

“Maximizing Commonality across Platforms has tremendous potential to **reduce life cycle costs** and **improve the readiness of our fleet**. Significant savings can be achieved by implementing cross platform commonality to reduce the amount of unique systems, subsystems, and components in the fleet inventory.”

-Vice Admiral
Commander, Naval Sea Systems Command



Importance (cont'd)



NATIONAL SHIPBUILDING RESEARCH PROGRAM
ADVANCED SHIPBUILDING ENTERPRISE

Reducing Naval Ship Construction & Repair Costs

National Shipbuilding Research Program

Taking CPC to the Next Level

CPC Enhancements
Project Extension Review

March 14, 2013

Logos at the bottom include: NSRP, BIW, EB, Ingalls Shipbuilding, and Newport News Shipbuilding.





Executive Control Board



Executive Director &
Staff (SCRA)



Extended Team

Major Initiatives

Ship Design &
Material
Technologies

Ship Production
Technologies

Business Processes
& Information
Technologies

Infrastructure &
Support

Commonality
Working Group
(CWG)

Panels

Ship Design & Material
Technologies

Electrical Technologies

Business Processes

Environmental

Ship Warfare Systems
Integration

Planning, Production
Processes & Facilities

Information
Technologies

Risk Management

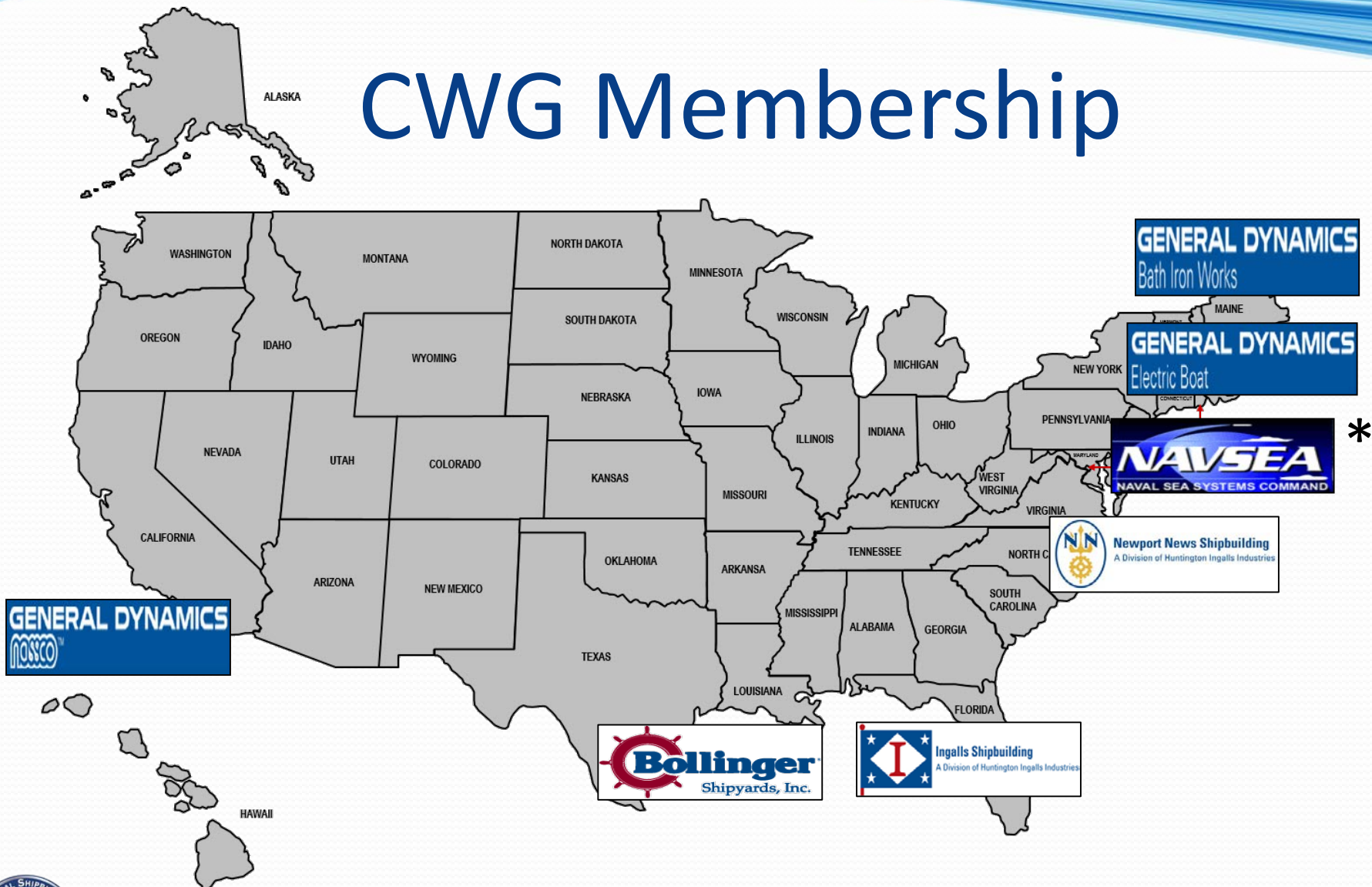
Surface Preparation &
Coatings

Workforce
Development

Welding Technology

Ad Hoc Group

CWG Membership



* NAVSEA 06C, Enterprise Commonality Office



Future Membership?

- Naval Ship Systems Engineering Station (NAVSSSES)
- Naval Supply Systems Command (NAVSUP)
- Austal USA
- BAE Systems-SE Shipyards
- Marinette Marine
- Vigor Industrial
- VT Halter Marine
- Shipbuilding Suppliers



CWG Objectives

Established by the NSRP to accomplish the following:

- Identify the top barriers preventing material commonality across platforms and between shipyards
- Provide recommendations and a phased approach for overcoming each of the barriers identified
- Begin taking action to eliminate the barriers through panel projects and RA projects



Top 5 Recommendations

- Establish More Uniform Part Design Approval and Manufacturer Qualification Requirements (Across Contracts)
- Develop Consistent Inter/Intra Ship Class Contract Language
- Establish a Standard for the Navy and Shipyards to Identify Preferred Parts
- Navy Invoke Commonality for Specifications, Effective Dates, Approval Requirements, and Specification Modifications
- Establish Common Content and Format for Sharing Catalog Data



Additional Recommendations

- Establish Common Content and Format for Sharing Engineering (2D/3D) Data Models and Attributes
- Align Procurement Notes
- Establish and Maintain Part Equivalency Relationships with Parts 'Owned' by Other Participating Shipyards
- Part Template and Spec Profile Development
- Enter Into an Agreement to Exchange Material Requirement Identification and Acquisition Plan/Schedule Dates
- Enter Into an Agreement to Identify On-Hand Available Excess/Surplus Material Inventory
- Establish Navy Part Data in the CPC Including NSN, Procurement Data, Related Documentation, Qualifications, and Manuals



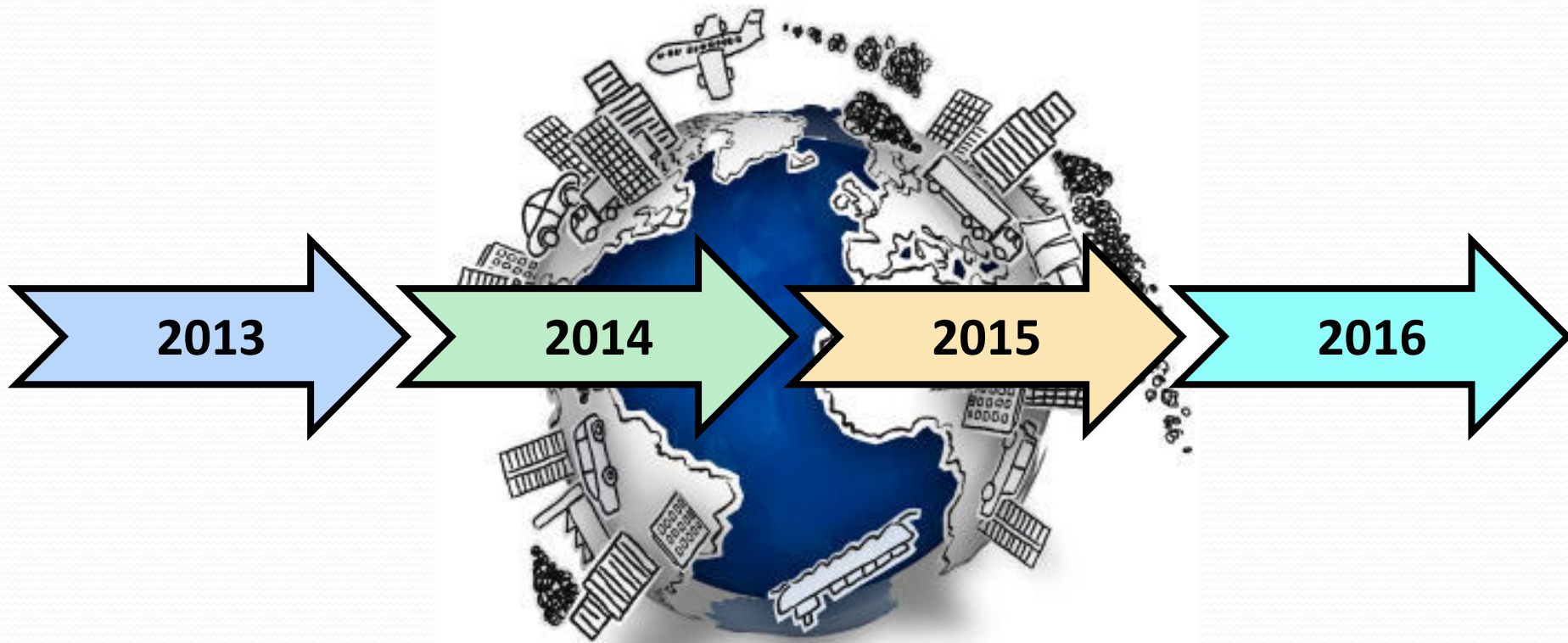
Top Strategic Focus Areas

1. Develop Consistent Contract Language
2. Invoke Common Specifications and Revisions
3. Establish Uniform Qualification Requirements
4. Establish a Standard to Identify Preferred Parts
5. Enable the Sharing of Material Catalog Data

Supplier Input Incorporated into Strategic Focus



CWG Timeline / Milestones

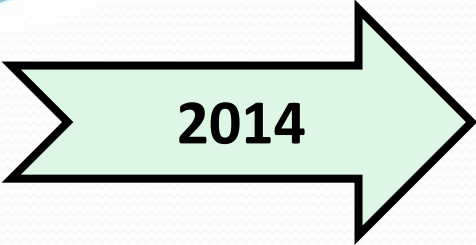




2013

- CWG formed by Executive Control Board (ECB) for Government and Industry collaboration
- Completed CPC Enhancement Task Value Assessments and provided Strategic Initiative Recommendations to NSRP ECB
- Developed and conducted a consensus survey with 12 potential barriers to commonality to identify the Top 5
- Developed recommendations for a phased approach to address the Top 5 barriers identified

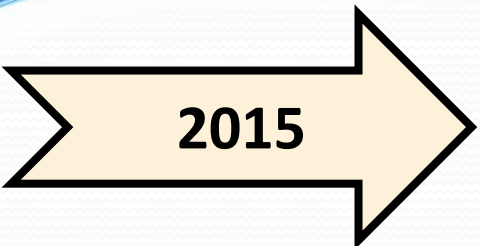




2014

- Joint meeting held at EB WEO between NAVSEA 06 and CWG to discuss funding, synergy, and strategy
- CWG awarded 2 panel projects to perform in 2015:
 - Shared Specification Effectivity Management
 - Shared Manufacturer Drawing Qualification Requirements
- Requested funding to develop a phased approach and repeatable process for conducting joint Deep Dives
- Reviewed and provided NAVSEA with feedback on draft commonality contract language

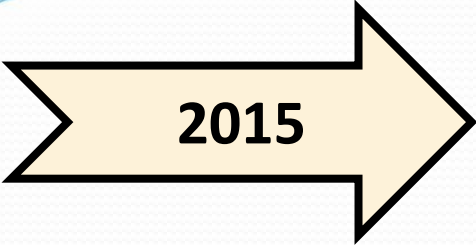




2015

- Established CWG By-Laws for conducting operations
- Successfully completed 2014 panel projects
- CWG awarded 4 panel project to perform in 2016:
 - Develop Process for Conducting Joint Deep Dives
 - Perform Shipyard Deep Dive on Vaneaxial Fans
 - Integrate Virtual Shelf Data into CPC and NNS Parts Catalog
 - Improvement to Supply Base Oversight Program
- Developed RA Project for CWG to perform requirement variation/standardization analyses on 8 commodities
 - Project wasn't selected by the Blue Ribbon Panel





2015

CONT'D

- Reviewed and provided NAVSEA 06 with comments on S9000-AE-MAN-010, NAVSEA Commonality Handbook
- Developed commonality pilot project recommendations for new design program as requested by Sean Stackley, Assistant Secretary of the Navy
 - Joint meeting held at Washington Navy Yard to discuss
 - Recommendations presented to ECB at December meeting
 - White paper provided to SCRA in February 2016 which summarizes the CWG's recommendations





2016

- Hold CWG 2016 Kick-Off Meeting at NNS
- Perform and complete panel projects approved in 2015
- Develop, solicit, and vote on panel projects for 2016-2017
- Discuss potential RA project ideas for 2016-2017



Major Accomplishments

- Identified the top barriers preventing material commonality and provided recommendations to overcome each barrier
- ECB has approved 6 different CWG submitted panel projects
- Completed Specification Effectivity Management Project
 - Developed Process Agreement for sharing spec comparisons
 - Developed an index to identify interchangeable spec revs
 - Letter sent to NAVSEA requesting reciprocal Navy approvals
- Completed Shared Manufacturer Drawing Qualification Project
 - Developed standard set of minimum requirements to invoke on suppliers
- Provided ECB with recommendations for commonality on a new ship design program to support Sean Stackley request



The People, Process, and Tools are in place to enable advancements in commonality

- People – The CWG has established itself as a Industry wide collaborative group making significant strides in Commonality
- Process – The CWG is successfully addressing barriers that have inhibited part commonality
- Tools – Knowledge gained through CWG efforts will allow the re-engineering of CPC to enhance the current capabilities and processes and will establish a shipbuilding “Best Practice” that will integrate the Virtual Shelf





Questions?