Enabling the Continuous Improvement of our Surface Navy Fleet Post Shakedown Availability (PSA) by Standardizing Execution Processes

CDR Mike Mehls and Kaitlyn Hines (Herren Associates)
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<th>1. REPORT DATE</th>
<th>2. REPORT TYPE</th>
<th>3. DATES COVERED</th>
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<tbody>
<tr>
<td>FEB 2012</td>
<td></td>
<td>00-00-2012 to 00-00-2012</td>
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<th>4. TITLE AND SUBTITLE</th>
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<td>Enabling the Continuous Improvement of our Surface Navy Fleet Post Shakedown Availability (PSA) by Standardizing Execution Processes (BRIEFING CHARTS)</td>
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<th>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</th>
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<td>Naval Sea Systems Command, PMS 400D6, Washington, DC, 20376</td>
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<th>11. SPONSOR/MONITOR’S REPORT NUMBER(S)</th>
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<tr>
<th>12. DISTRIBUTION/AVAILABILITY STATEMENT</th>
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<td>Approved for public release; distribution unlimited</td>
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<th>13. SUPPLEMENTARY NOTES</th>
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<td>Presented at the American Society of Naval Engineers, (ASNE Day), Arlington, VA, February 9-10, 2012</td>
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<th>15. SUBJECT TERMS</th>
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<th>16. SECURITY CLASSIFICATION OF:</th>
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<td>a. REPORT: unclassified</td>
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<td>b. ABSTRACT: unclassified</td>
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<th>17. LIMITATION OF ABSTRACT</th>
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<th>19a. NAME OF RESPONSIBLE PERSON</th>
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Objective

• Identify, Document and Standardize PSA processes
  – Retain expert knowledge regarding PSA processes
  – Assist new employees in executing processes with minimal training / experience
  – Improve awareness of roles and responsibilities of all stakeholders
Introduction

- Post Shakedown Availability (PSA) is the final industrial opportunity to correct ship deficiencies and accomplish authorized work prior to Ship Conversion, Navy (SCN) Obligating Work Limiting Date (OWLD)
  - Before a PSA, many months are allotted for planning and the PSA Work Package is developed
  - During a PSA, deficiencies are corrected and engineering changes are implemented
  - A successful PSA is critical to presenting the Fleet with a Ship free of New Construction discrepancies and ready for immediate deployment

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Background

• The Post Delivery period commences with Delivery, continues with PSA, and culminates with a War Ready ship.

• The Navy has planned, scheduled, and executed 59 PSAs for Arleigh Burke-class Destroyers (DDG 51 class):
  – The first ship in the class was commissioned in July 1991.
  – DDG 51 class is the longest production run of any US Navy surface combatant.

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On Site Organizational Chart

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Project Approach

Determine Critical PSA Processes
Document PSA Processes and Improvements
Review Documentation
Incorporate Improvements to Documentation
Distribute and Maintain Documentation

Proven industry model was applied to PSA process documentation and standardization

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A Kickoff Event was held Spring 2010 to determine the PSA processes for documentation

~30 Stakeholders participated from Government and Industry

25 PSA processes were identified for documentation, some of which include:

- D6 Program Management Processes
- D6 Organization: Roles & Responsibilities
- Transition of Information from New Construction
- Financial Management of Post Delivery Program
- Planning Letter Process
- Work Item Development Process
- Trial Card Process
- PSA Execution Management Processes
- Managing the PSA Schedule
- PSA Departure Letter
- Transfer Book Process

**Strategy:** Define strategy to identify and achieve the objectives critical to success

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• Created and maintained a Plan of Action and Milestones (POA&M) for events to be held to synchronize a geographically diverse team
• Met with stakeholders to develop process maps and Standard Operating Procedures (SOPs) for each PSA process
• Constructed checklists and report templates for PSA processes to support strategic objectives

**Measurement: Identify operational metrics and measure performance against strategic objectives**

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After process mapping events, stakeholders reviewed and refined process documentation
- Allowed for verification and validation of captured process
- Ensured processes were aligned with PSA mission and objectives
- Provided insight into true execution of processes, fostering improvement ideas

Once finalized, the documentation became the basis for standardized PSA execution
- Agreement amongst all stakeholders

Analysis: Objective analysis in support of operational and strategic decisions
• Stakeholders verified processes real time during PSA execution
  – Using standardized documentation, ensured accuracy of process maps and SOPs and refined as necessary
• Communicated process documentation to broader stakeholder audience
  – Waterfront personnel aided in verification and validation
• Adjudicated feedback and redesigned documentation to create final product

Redesign: Identify the key actions, projects, and programs required to achieve objectives
Two deliverables were created for the standardized PSA processes:

- **“PSA Processes Handbook”**
  - Compiled of chapters corresponding to each PSA process
  - Each chapter contains the knowledge and instructions required to understand and perform the process without further documentation

- **“DDG PSA Executive Summary”**
  - High level guide defining processes and procedures governing PSA
  - Verbally documents PSA from Delivery through SCN OWLD

These products were shared with other ship classes and organizations throughout NAVSEA
Deliverables

- All inclusive “PSA Processes Handbook”; 25 documented and standardized PSA processes
  - Deliverables enable PSA team to successfully plan for and execute PSAs
  - Allows for the DDG PSA Program to be leveraged for other ship classes within NAVSEA

- Benefits have included:
  - Aiding in the on-boarding of Government and Contractor personnel
  - Improved awareness of roles and responsibilities of all stakeholders

Proven “SMART” model can be reapplied to promote continuous improvement of PSA Processes

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Back-Up
PSA Processes

- Transition of Information from New Construction
- PSAPY & SUPSHIP Negotiations
- Planning Letter Process
- Work Item Development Process
- Warranty Process
- Preparing For & Conducting Planning Conferences
- Emergent Work Process
- Documenting Individual Filenames
- Trial Card Process (and GI/D4 Rescreen)
- Managing the PSA Schedule
- FCT: Pre, Execution, Post
- PSA Ship Check Process
- Pre-PSA
- MOAs
- Executing Yard Tasking Process
- PSA Execution Management
- PSA Departure Letter
- D6 Program Management Processes
- GFE LOGDET Process
- CHIT Process
- D6 Organization: Roles & Responsibilities
- PSA Database Functionalities
- PSA LOGDET Process
- Financial Management of Post Delivery Program
- Transfer Book Process

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