

New Initiatives for the Common Parts Catalog



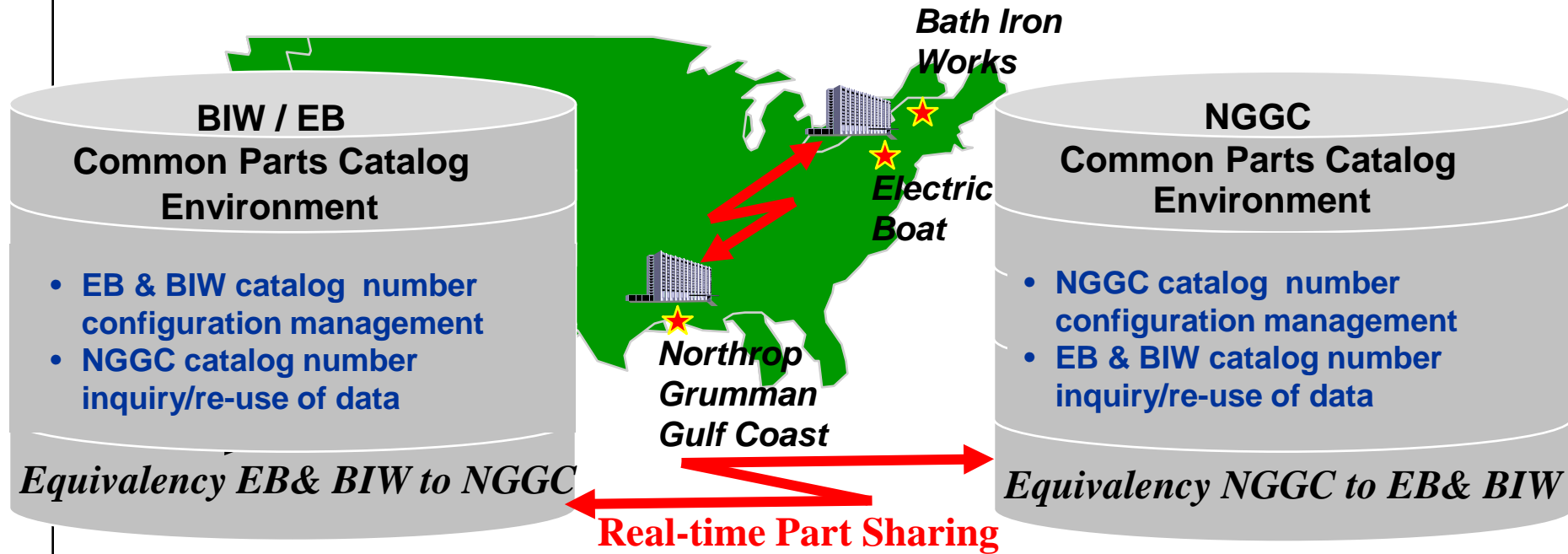
PDMT - May 6, 2009



What is the Common Parts Catalog (CPC)



EB, BIW and NGSB-GC have implemented a Common Parts Catalog



- 2M+ Catalog Numbers assigned to standardized classification schema
- 7.2M configuration managed Document ID's linked to these catalog numbers
- 300K Inner-shipyard Part Equivalency Links
- 10K Inter-shipyard Part Equivalency Links
- 90K Inter-shipyard Shared Procured Catalog Numbers
- 100's of daily shared part transactions between shipyards
- Monthly audits to verify data accuracy rate against defined inter-shipyard standard



CPC Provides an On-line, Real-time Solution to our Shipyard's Previous Catalog's Limitations

- **Flexible “user-friendly” search function**
- **System architecture to support standardization of data**
- **Electronic link between catalog numbers and their contractually effective documents, specifications and procurement requirements**
- **On-line, real-time transaction audit trail**
- **Standard part data shared across multiple shipyards**
- **Facilitates the ability to support future requirements:**
 - **Controlling part proliferation thru a Part Standardization Program**
 - **Providing standard part data to the design, manufacturing and procurement environments**
 - **Collaboration with other Shipyards and Life-cycle Naval Activities**



Our Shipyards Developed Catalog Standards and Processes to Support CPC

- **Standards that our shipyards developed and jointly agreed to included:**
 - **Data Element Dictionary provides criteria definition (483)**
 - **Classification Schema provides relationship definition (2063)**
 - **Attribute Valid Values standardize and control the specific value definition of a catalog number attribute (14,152)**
- **Processes to maintain these standards have been implemented across our shipyards**
 - **6-CPC inter-shipyard operational procedures**
 - **2-Part and document configuration management procedures**
 - **2-Part Equivalency maintenance procedures**
 - **2-Catalog data audit procedures**



Class: CPC PROCURED PARTS	
Property	<input type="checkbox"/> Item 1
Bottom Class ID -> Class Label	VALVE, BALL-NON METRIC
🔑 Catalog Number	* 10-21-0100K
Noun Name	* VALVE
Type	3-WAY BYPASS
Modifier	SCH-80
Material	* STEEL
Document ID -> Part Document ID	* 1385965_K_K_ASSY-34
Document Sort Order	1
Applicability -> Applicability	* NSSN
Standardization Code	K

Document ID to CPC Part		
Form	DEFAULT	Local
🔑 Catalog Number -> Catalog Number	🔑 Document ID -> Part Document ID	🔑 Catalog Num
211022060	MIL-F-16377/53_-_A_M16377/53-100.2	96169
211022060	MIL-F-16377_G_G1_TY-II,CL-1,SYM-100.2	96169
211022060	SC-12-4_2_2	96169
211022060	SC-76-150_1_1	96169
211022060	SC-SD1040_5_5	96169
211022060	SC-10-87V_4_4	96169
211022060	SC-60-29_16_16	96169
211022060	SC-76-87_2_2	96169

User Friendly Search

Common Parts Catalog is:

Document to Part X-Ref



Inter-shipyard Part Equivalency

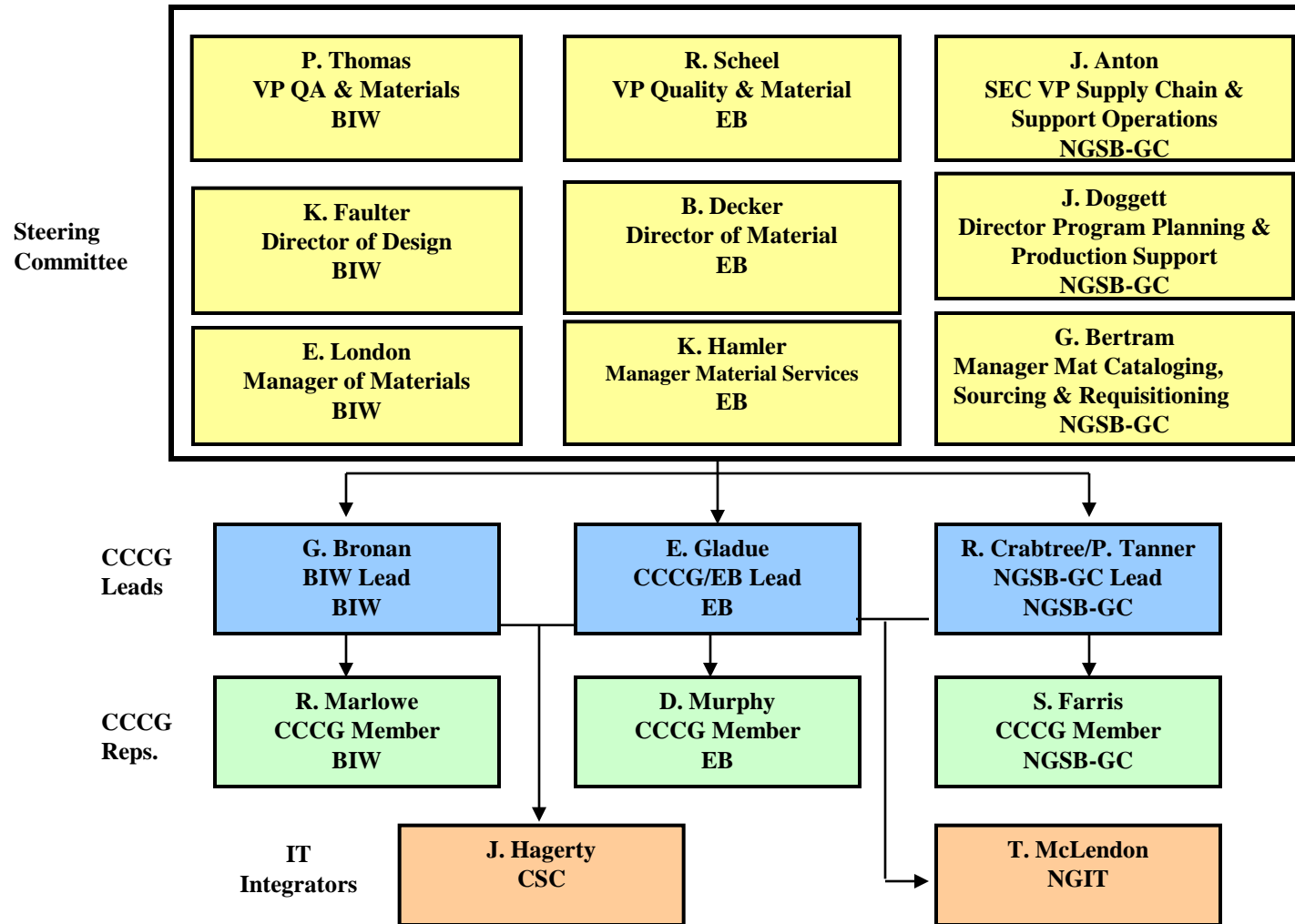
- shipyard parts catalog
- part search and retrieve repository
- shipyard, supply chain, Navy collaborator
- future business facilitator

Shipyard Part to NSN X-Ref

Power Search			
Browser View	Power Search View	Results View	
Equivalence			
Items 1 to 2 of 2			
🔑 *	🔑 Master Cat... *	🔑 Equivalent Cata...	🔑 Equivalent Catalo
	55019011		
70876	55019011	96169	24-51-0089
70876	55019011	34293	9535-DA0-648795

NSN to CPC Part		
Items 1 to 2 of 2		
🔑 Cat... *	🔑 Catalog Number... *	🔑 NSN -> NSN National Stock Number *
		*00-725-4465
70876	14336052	4730-00-725-4465
34293	4730-DA0-139132	4730-00-725-4465

CPC CCCG Project Management Structure



CCCG Role & Responsibilities

- **Steering Committee**
 - Senior level executives from the Participating Shipyards representing the initiative's sponsors.
 - Ensures resources are provided for the CPC's operation.
 - Acts as mediator and final decision body on issues.
- **Central Configuration Control Group (CCCG) Team Lead**
 - Manage the everyday activities to assure the CCCG procedures are consistent with business requirements, schedules and budgets
- **CCCG Representative**
 - Support group to the Core Team and assures the CPC Participating Shipyards act as one in relation to CCCG responsibilities while not adversely impacting the day to day business activities



CCCG Role & Responsibilities (Cont'd)

- IT Integrators
 - CSC (EB & BIW) and Northrop Grumman Information Technology (NGIT) manage the IT resources necessary for production system support, application enhancements and software vendor management



Central Configuration Control Group (CCCCG)



Current CCCG Activity

- CPC Bylaws call for two face to face CCCG meetings per year.
 - Traditionally coordinated with other travel.
 - Last CCCG meeting was held on February 12 at NGSB-GC
 - Focus was on Part Sharing.
 - Ensure all processes, procedures and systems support the sharing of parts between the participating shipyards. (i.e. daily e-mails, kick-out messages, etc)
- Synchronization of the environments
 - Existing process requires individual discipline.
 - Parts at NR
 - Reviewing a recommended weekly NR audit
 - Equivalent part not in the same class as the Master part
 - CCCG CR to revise code was approved and implemented
 - Make parts
 - Team Analysis req'd for CR or Business Process
 - EVV's (i.e.-Std Inspection code)
 - Procedural Compliance
 - Must investigate a potential system issue (i.e. MQ Series hang-ups)
 - Reviewed technical solution to automate and track.
 - Cost would be excessive and significant technical issues exist.
 - A manual process will be put in place to check that the environments are in synch which will be sufficient.



Current CCGG Activity

- CCGG Change Requests (CR's)
 - We have a process in place that recommends, tests and shares common functionality CR's.
 - Also address system and functionality enhancements
 - Recommend and review feasibility of potential projects
 - Navy Pilot is an example



New Initiatives for CPC

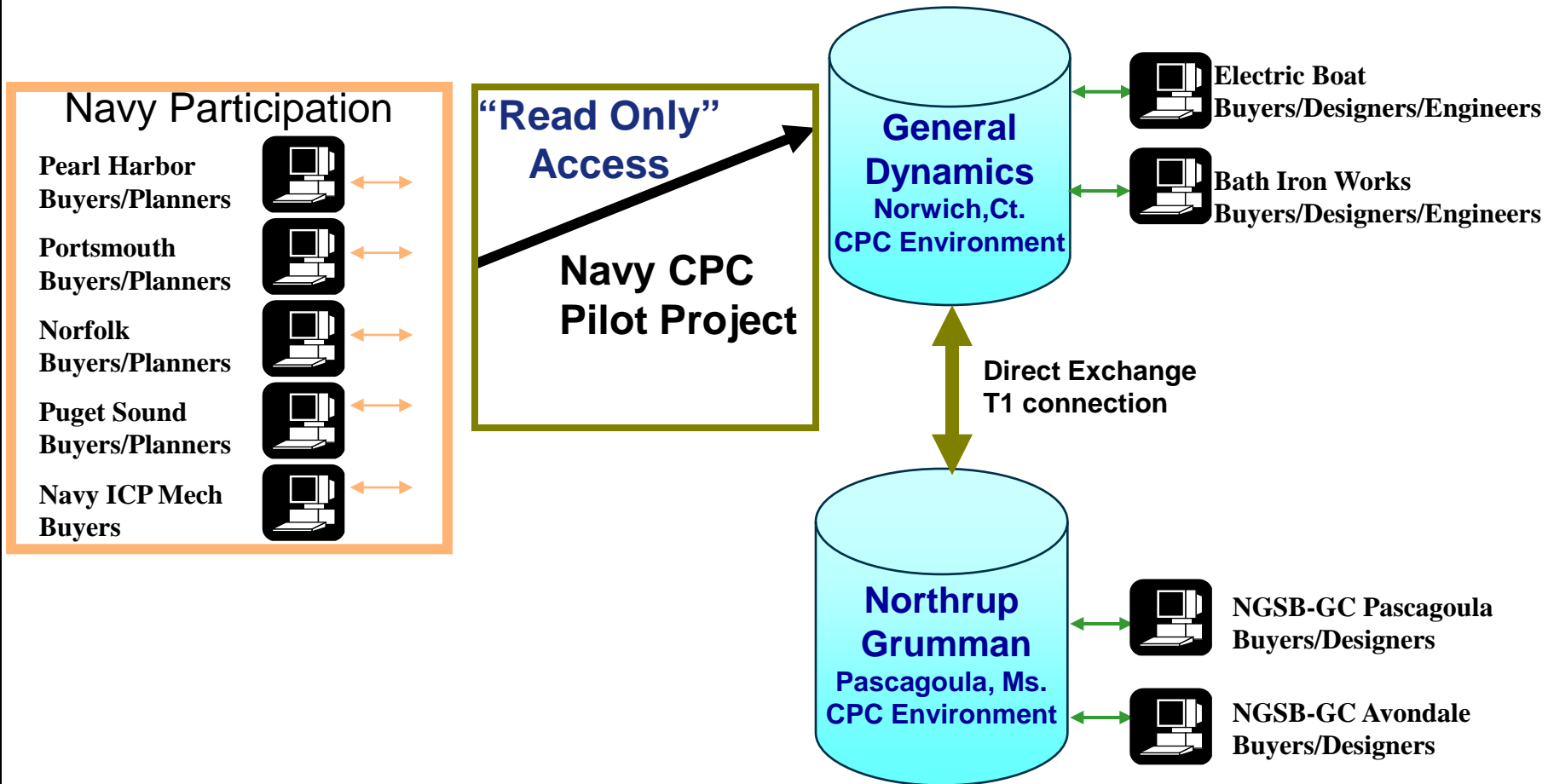


CG(X) Activity

- CG(x) has assembled a Materials Team.
 - Notional plan for CG(x) is a four shipyard collaboration
 - CPC Representatives Ed Gladue, Roger Duchesne, Geri Bertram, Kenny Moore and NGSB-NN representative Ed Price are actively participating in the Material Standardization and Catalog Working Group monthly meetings.
 - There is a lot of Synergy related to CPC activity
 - The last meeting was February 10 – 11 at NGSB, Inc.
 - There are four active tasks to the phase II SOW
 - Common terminology led by Geri Bertram
 - Common part numbers and common procurement notes led by Ed Gladue
 - Common data structures (DED, Classification Schema, Specification Histories) led by Ed Gladue
 - Part Standardization led by Roger Duchesne
 - The effort was on hold for March but was resumed April 21.
 - Next meeting is on May 20-21 at NGSB-GC.



CPC Navy Pilot Project



CPC Navy Pilot Project Status

- Navy Security Requirements:
 - Security permission was a lengthy process which required an “Authority to Test” approval from PEO SUBS Director, R. McNamara
- Training Curriculum
- CPC access production turnover
- Three training sessions
 - Portsmouth Training
 - Puget Training
 - Mechanicsburg Training
- Navy Shipyards conduct CPC Pilot Assessment
- Post Project Work
 - Receive Decision from the Navy on permanent Navy access to CPC
 - Navy Shipyards have action to provide a Business Case Analysis (BCA)
 - CPC Team has provided a recommendation for their assistance
 - If BCA is accepted, develop new project plan for Navy permanent access to CPC.



CPC Navy Pilot Project Status (cont'd)

- Meeting with NAVSEA on Jan. 6 resulted with 2 key actions.
 - Develop a Business Case Analysis or plan to acquire access to the CPC by the Navy community for fleet support.
 - Team recommendation approved by Steering Committee is to offer CCGG assistance to the Navy.
 - The effort will take 3-4 weeks to complete.
 - Each shipyard will provide SME's as required.
 - The vendor, i2 Technologies, will participate with two full time senior consultants.
 - CSC support as required.
 - Potential travel for one meeting (kick off or working).
 - **Action – Navy Shipyards. ECD-TBD**
 - Contact and organize meeting between Best Value Standardization Process Team, Commonality Team and industry CPC CCGG to discuss aligning Navy data with industry CPC data.
 - **Action-Ed Gladue. ECD - COMPLETE**
 - **Meeting was conducted March 19 at EB led to specific action items.**



Mandate for Commonality and Best Value Stream



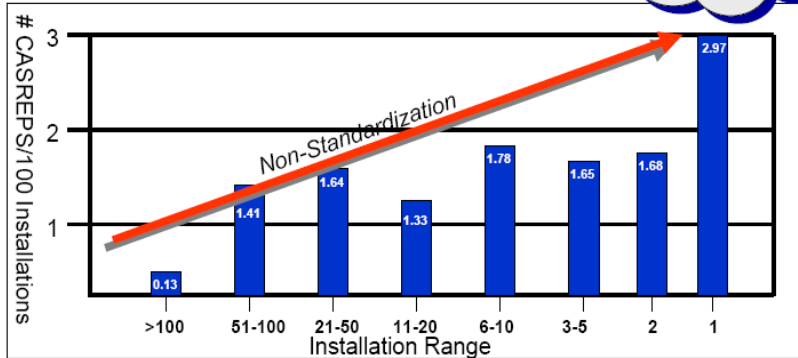
Impact of Low Density HM&E



- Proliferation of non-standard HM&E
 - Drives higher life cycle logistics support costs
 - Negatively impacts readiness

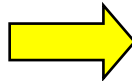
Approximately 51% or 65K Equipment Have 5 or fewer Fleet installs

- Non Standard HM&E Hardware

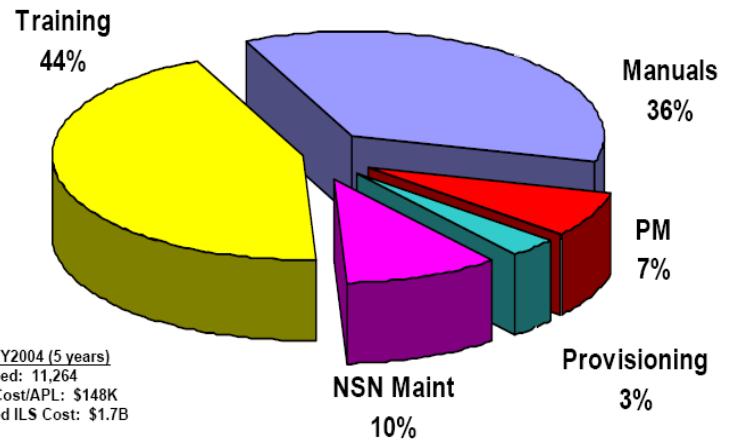


Costs ↑ Readiness ↓

- Drives increased ILS Support Costs



Average ILS Cost per HM&E APL Introduction



FY2000 thru FY2004 (5 years)
 APLs developed: 11,264
 Average ILS Cost/APL: \$148K
 Total Projected ILS Cost: \$1.7B

Drives additional inefficiencies across Maritime sustainment processes

Basic Commonality Approach

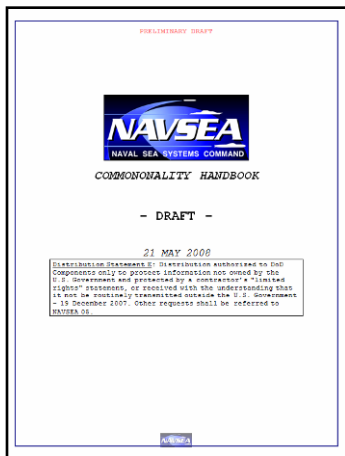
<i>What Commonality is</i>	<i>What Commonality is NOT</i>
<ul style="list-style-type: none">▪ Reduce parts/systems▪ Critical examination of necessary variation▪ Applied at the logical level of design▪ Includes Business Case Analysis	<ul style="list-style-type: none">▪ Elimination of all variation▪ Sacrifice performance, safety, quality▪ Not applied to all levels of design▪ Impacts every system or where there is no justification

**Reduce Variation & Maintain Performance
... But One Size Won't Fit All**

Commonality Instruction Overview

The NAVSEA Commonality Handbook details commonality processes and metrics, and includes detailed tools and templates

NAVSEA Commonality Handbook Contents



- IPT Process
 - Enables program offices to use the Shelf
 - Defines commonality metrics to measure program compliance
- Shelf Process
 - Enables TWHs and SEA04 to lead the population and management of the Shelf
 - Defines TWH and SEA04 metrics for commonality
- Commonality Clauses and Language
 - Includes commonality language to be included in program documents and contracts
- Commonality Tools & Templates
 - Provides sample forms and tools to facilitate Shelf processes - deviation reports, BCAs, COB report forms
- IT Shelf Tool
 - Provides an overview for the Virtual Shelf IT tool, which is in development

Best Value Stream Background

- HM&E Equipment Data Research System (HEDRS) was developed to support HM&E standardization efforts to reduce the number of new HM&E equipment being introduced into the Fleet and Navy Supply System
- Best Value is a follow-on development to identify the best equipment to standardize on.
 - ✓ **Smarter approach**
 - ✓ **TOC/OEM Supportability factored in**
 - ✓ **Not just standardizing for “standardization sake”**

HME Standardization - The Way Forward

Commodity Contracts

Long term contracts

Reduce introduction of non-std items

Use by public and private SYs

Best Value

Identifies BV items in Supply System

Total cost of ownership approach

Support commodity candidate selection

Commonality Initiative

Reduce System and Equipment Variations

Total Cost of Ownership approach

Standard designs and parts lists

Standardization/Commonality

New construction / Maintenance / Modernization

Use of Commodity Contract Vehicles

Virtual Shelf used by public and private entities

Best Value Implementation with SYs, RMCs

Drives standardization to the Fleet

Lower Life Cycle Support Costs

Increased Readiness



New Construction and Maintenance/Modernization

Integrated efforts to impact New Ship Construction, Maintenance, Modernization, and Repair

Navy/Industry Parts Catalog Workshop Action Items (Cont'd)

- EB will provide (at least) 50 items from CPC for Navy use in discussions and analysis of CPC improvements.
 - In process. Navy identified recipients of the data. EB is collecting part data for submission.
- Provide Virtual Shelf Commonality instruction and handbooks to NG and GD.
 - Done. John Sofia provided the documentation on March 19.
- Provide (at least) 50 items from best value database with NSNs, and other data to determine if bulk loads of NSN fields, Non CPC Equivalent Catalog Number, and other data for best value items is practical.
 - Done. Keith Doyne provided the sample parts on March 23.
- Provide recent acquisition standard clause referring to CPC review in parts selection board process.
 - Done. Jim Mays provided the language on March 19.



Navy/Industry Parts Catalog Workshop Action Items (Cont'd)

- Determine the process to provide the Navy engineering and supply community access to the technical data package information in the Total Item Record (TIR) databases at NAVICP and DLA. These databases contain technical information on end-items that is similar to the technical information in the industry CPC that the Navy users found so valuable.
 - In process. Chuck Simmons has contacted Tim Rose.
- Develop a Business Case Analysis or plan to acquire access to the CPC by the Navy community for fleet support.
 - In process. Notional approach provided to NSRP PMO 2009-02.
- Identify NAVSEA 04L leads as William Buchanan and Mike Howard in workshop documentation.
 - Done.



Navy/Industry Parts Catalog Workshop Action Items (Cont'd)

- GD and NG shipyards will provide a list of personnel needing access to the HME Engineering Data Research System (HEDRS) to NAVSEALOGCEN. Industry CPC Personnel will be provided accounts to go into HEDRS and look at the preferred solutions for various situations as a prelude to determining how to influence items identified in CPC.
 - In process. CPC industry team is identifying BIW, EB and NNSB-GC personnel that they would like to have access to Navy preferred equipment solutions that have been identified in HEDRS.



Navy/Industry Parts Catalog Workshop Action Items (Cont'd)

- Contact and organize meeting between Navy HM&E EXCOM Working Group 4 (Best Value Standardization Process Team (BVSPT)) Leads (Steve Case/NAVSEALOGCEN, Lenny Burdick/NAVSUP, Keith Doyne and Chuck Simmons) and various ship industry Part Standardization Board POCs to discuss Navy Best Value algorithms and discuss aligning data with CPC.
 - In process.
- Discuss desirability and feasibility of adding/sharing engineering data in the CPC (e.g. 3d geometry to support arrangements, layout, and visualization).
 - In process. Linking engineering data in CAD libraries with logistics information is an original requirement of CPC that is being addressed as part of IDE development. Individual shipyards are building CAD models of systems for arrangements, interference checking, foundations, pipe connections, etc. If 3D models of external geometry could be shared there would be another opportunity for savings.



Navy/Industry Parts Catalog Workshop Action Items (Cont'd)

- CPC CCGG and Navy collaborate on an NSRP recommendation to NAVSEA 04/05 on a standard clause for use in future ship acquisition programs addressing CPC, HEDRS, DLA E-Mall and other ideas for part selection boards to reduce parts in industry and Navy inventory, simplify procurement, and improve quality of preferred solutions.
 - In process. Industry CPC team will discuss three issues identified by the CG(X) work for applicability in contract language.
 - Mandate via contract language design integration/standardization across ship classes to minimize the type, varieties, styles, etc. used in design and construction. Establish central control of preferred/allowed parts entered into the NSRP CPC for participating yard use.
 - Establish ship contract language that allows the application of uniform specification effectivity requirements across contracts and a single approval to use other than referenced document (specification) issues or alternate specifications. If it is in the NSRP CPC it is good for any active contract being worked by participating yards.
 - Establish ship contract language that allows the application of uniform part design approval and manufacturer qualification requirements involving vendor drawings, procedures, tests, etc. across contracts and allows for a single approval of identical documents. If it is in the NSRP CPC it is good for any active contract being worked by participating yards. This also is a NAVSEA SUPSHIPS process issue the Navy needs to address.



Navy/Industry Parts Catalog Workshop Action Items

- Identify, review, and plan implementation of enhancements to CPC to address recommended improvements needed for future acquisition program requirements, e.g. CG(X).
 - In process. Industry CPC team will discuss two issues identified by the future catalog requirements work for CG(X) for increased CPC functionality:
 - Mandate exchange of on-hand available material inventory data for purposes of identifying urgently needed and excess/surplus material for participating yard acquisition.
 - Mandate exchange of material requirements identification and acquisition plan/schedule data between participating yards for purposes of establishing outline agreements and consolidated procurement.
- Invite NGNN to participate in CPC CCB meetings.
 - In process. CCCG drafting letter to invite NGSB-NN to participate in CPC CCCG meetings and discussions.



QUESTIONS

