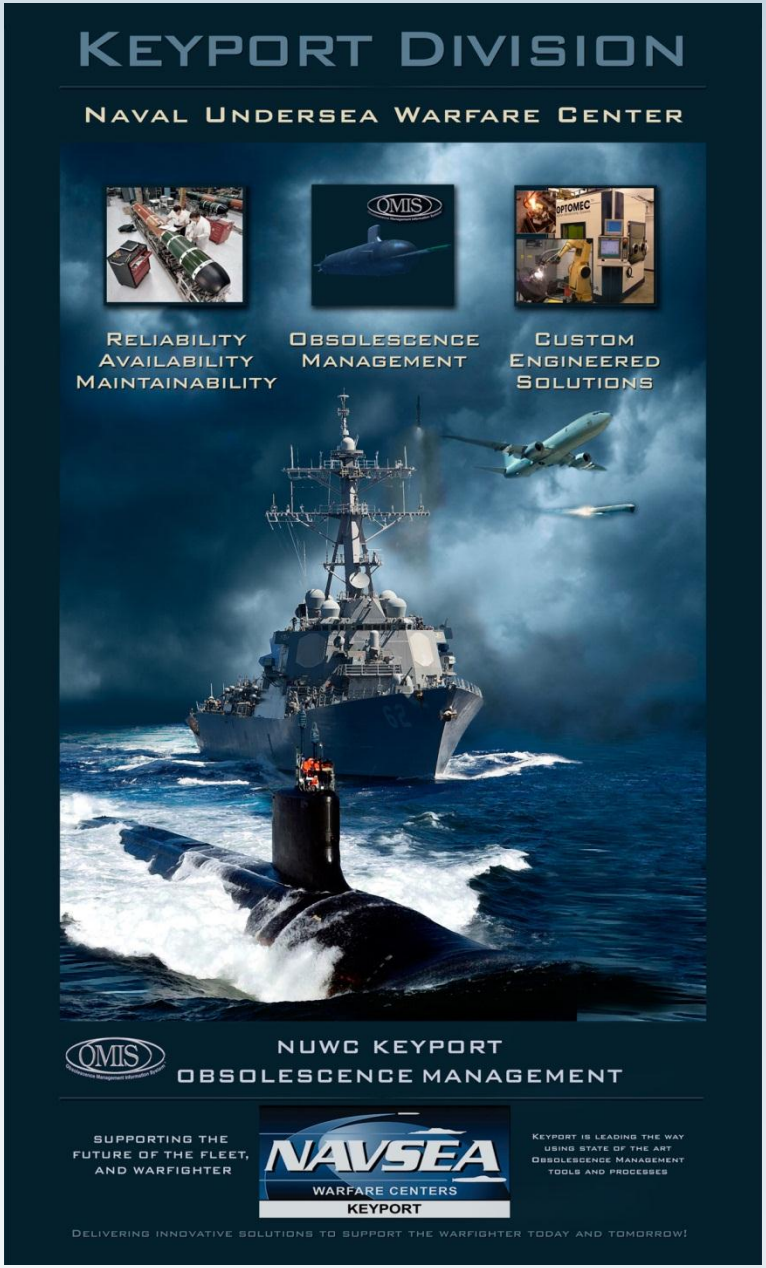


NUWC Division, Keyport

Obsolescence Management

&

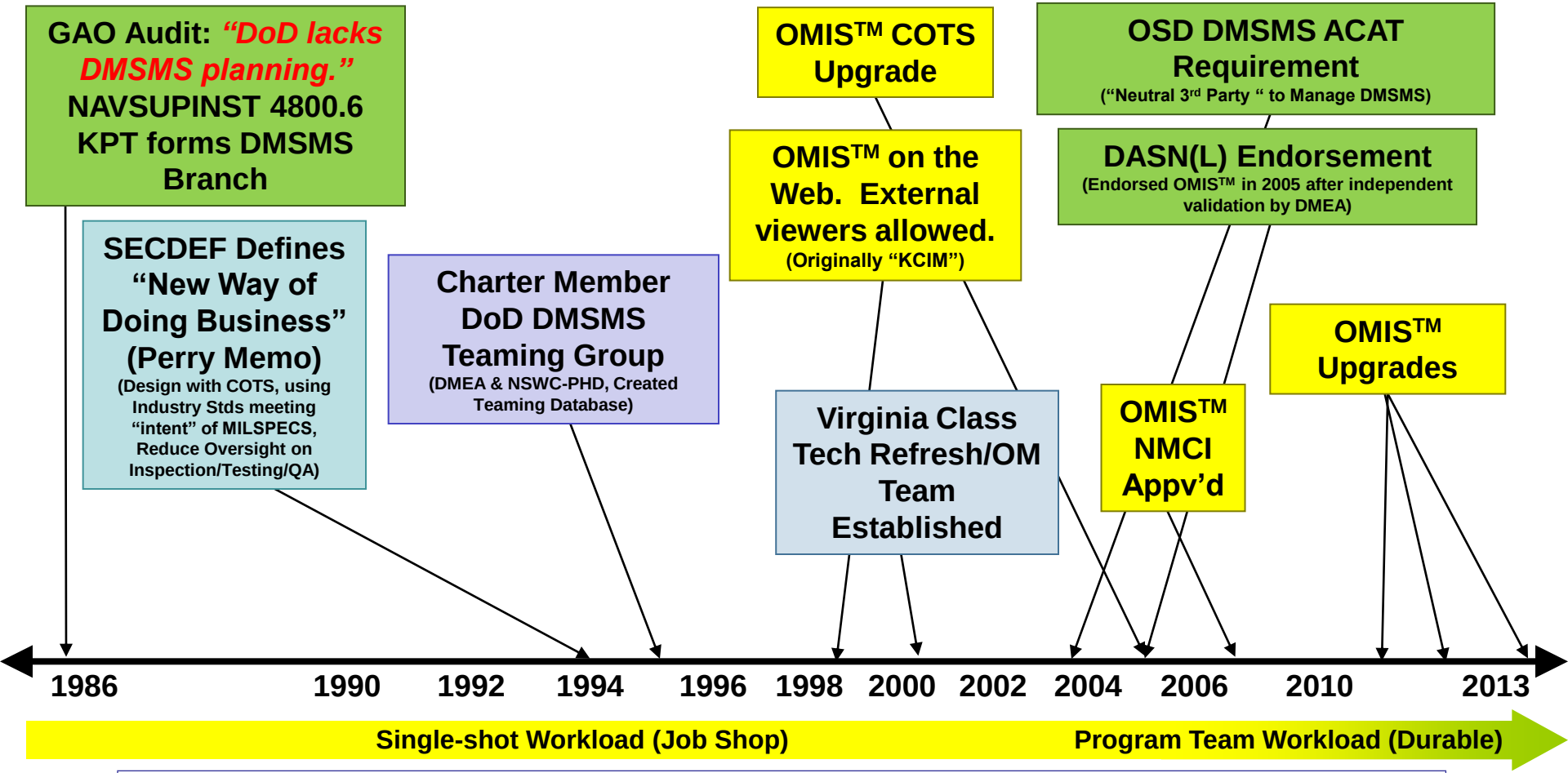
Obsolescence Management Information System (OMIS™)

What is Obsolescence/DMSMS?

"A Diminishing Manufacturing Sources and Material Shortages (DMSMS) issue is the loss, or impending loss, of manufacturers or suppliers of items, or raw materials, or software…This can be caused by many factors—such as low-volume market demand, new or evolving science or technology, detection limits, toxicity values, and regulations related to chemicals and materials—that significantly affect the DoD supply chain and industrial base."

SD-22, Diminishing Manufacturing Sources and Material Shortages,
A Guidebook of Best Practices for Implementing a Robust DMSMS Management Program.
DSPO, August, 2012

Path To Obsolescence Management (How Did We Get Here?)



- DMSMS Policy Environment
- 2003: ASN-RD&A issues Product Support Boundaries Guidance
- 2004: DASN(L) holds DMSMS EXCOM. ASN-RD&A issues DMSMS draft update to ILA process
- 2005 ASN-RD&A provides DMSMS Guidance, Calls for DMSMS plans. DASN(L) #DID to obtain BOM's. OSD Identifies DMSMS as separate DoD ILA Evaluation Criteria. DoD DMSMS Guidebook issued
- 2006: DASN-L issues DMSMS Strategic Plan. ASN-RD&A issues DMSMS Guidance for contracts

DMSMS Services Span All Acquisition Phases

- ***DEVELOP*** **DMSMS Charters, DMSMS Plans, and Budgets**
- **Develop Systems Obsolescence Cost-Over-Time Projections to Minimize Tech Refresh Redesign Costs**
- **Initial Technology Review of Prototype/Engineering Design Model (EDM) System Bills of Materials**

- ***DEVELOP*** **DMSMS Management Teams (DMTs) / Support DMSMS Related Issues / Meetings**
- **Follow-On Technology Review of Prototype/Engineering Design Model (EDM) System Bills of Materials**
- **Perform Technology Trending / Technology Road Mapping**
- **Work with Program Office/Prime Contractors (Integrators) to Insert DMSMS Requirements into ALL Production & Follow-On / PBL Contracts**

- ***FACILITATE*** **DMSMS Management Teams (DMTs) / Support DMSMS Related Issues/Meetings**
- **Research Technical Data to develop Bills of Materials**
- **Load Bills of Materials into Predictive System / Define System Obsolescence**
- **Recommend Solutions for Obsolescence Issues Based on a Best Value Analysis**
- **Track Obsolescence Cases to Completion**

- ***PROACTIVELY MONITOR*** **Electronic Parts and COTS Assemblies for Obsolescence**
- **Periodic Component / COTS Obsolescence ALERT Reports / Supportability Analysis Reports**
- **Provide Out-Year Budgetary Estimates to Mitigate Obsolescence Issues**
- **Update DMSMS Charters / DMSMS Plans**

DMSMS Services CAN and SHOULD be utilized in All Phases of the Acquisition Life Cycle.

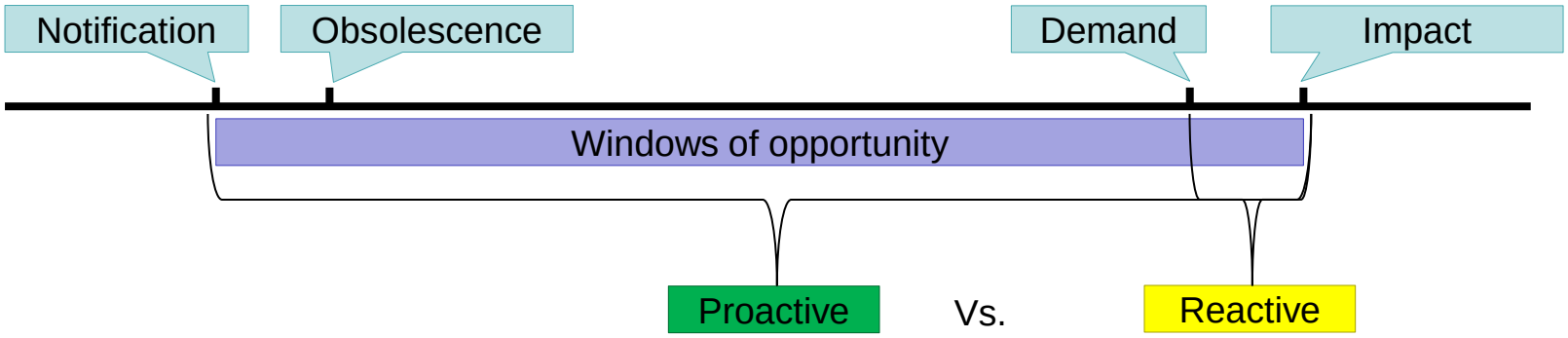
Reactive and Proactive Strategies

Reactive

- Wait until you can't buy it, then deal with the problem
- **ROI: None (no investment, but also no savings)**
- Higher potential for impact on Operational Availability

Proactive

- Ranges from monitoring parts in order to determine obsolescence early to strategic tech refreshes to eliminate or minimize obsolescence
- **ROI: Medium to High (Reduces TOC)**
- Potentially eliminates or minimizes impacts on Operational Availability



Introduction to OMIS™

- What is OMIS™?
  - OMIS™ is a web-based application designed to store and relate information important to the management of Diminishing Manufacturing Sources and Material Shortages (DMSMS) in DoD systems
  - OMIS™ is hosted on a secure, clustered server farm with failover redundancy
  - **Supports the "common" processes, policies, and infrastructure of an effective DMSMS Program!**
  - It is one of two "organic" obsolescence management systems
    - Data is owned and stored on secure government systems

What Does OMIS™ Store and Display?

- Bills of Materials (BOMs) for Platforms and Systems Down to the Level Necessary for Effective DMSMS Management
- Systems are typically loaded in an indentured format using their Configuration Part Number (CPN) – sometimes known as the Provisioned Part Number
- Systems are also loaded with their Manufacturer (Vendor) Part Numbers to determine obsolescence status
- Where applicable, other data is also loaded
  - NSN and related supply data
  - Images of the part
  - Related documents such as data sheets

Overview of OMIS™ Processes

- Monitor selected parts for DMSMS issues
  - Automated Monitoring (currently IHS and Q-Star)
    - Approximately weekly
    - Component level
  - Manual Monitoring (COTS Vendor Surveys)
    - Approximately every 6 months
    - Electrical, Mechanical, Assemblies, Software, etc.
- Notify customers of obsolescence issues (cases)
  - Each case explains the problem and recommends the most viable resolution identified
- Case Management
  - Maintain cases to track case progress towards resolution
  - Capture respective cost avoidance and metrics

Who Can Access OMIS™?

- Access to the OMIS™ can be granted to programs and users who have systems loaded in the application
- Access only allowed from within DOD networks
- DoD Common Access Card (CAC) are required
- External users are allowed “read only” access to only *their* systems

OMIS™ System Inputs / Outputs

DADMS Approved and Registered

System Support Inputs

NAVAIR NAVSEA WARFARE CENTERS

System & Configuration Information

Source Inputs

Q-Star™

Obsolescence Information

Stock/ Reliability Inputs

NAVSUP

Logistic Information

COTS Vendor Inputs

General Dynamics Corporation · Curtiss Wright · Raytheon · GE FANUC · Lockheed Martin

Relational SQL Database (OMIS™ WorkStation)

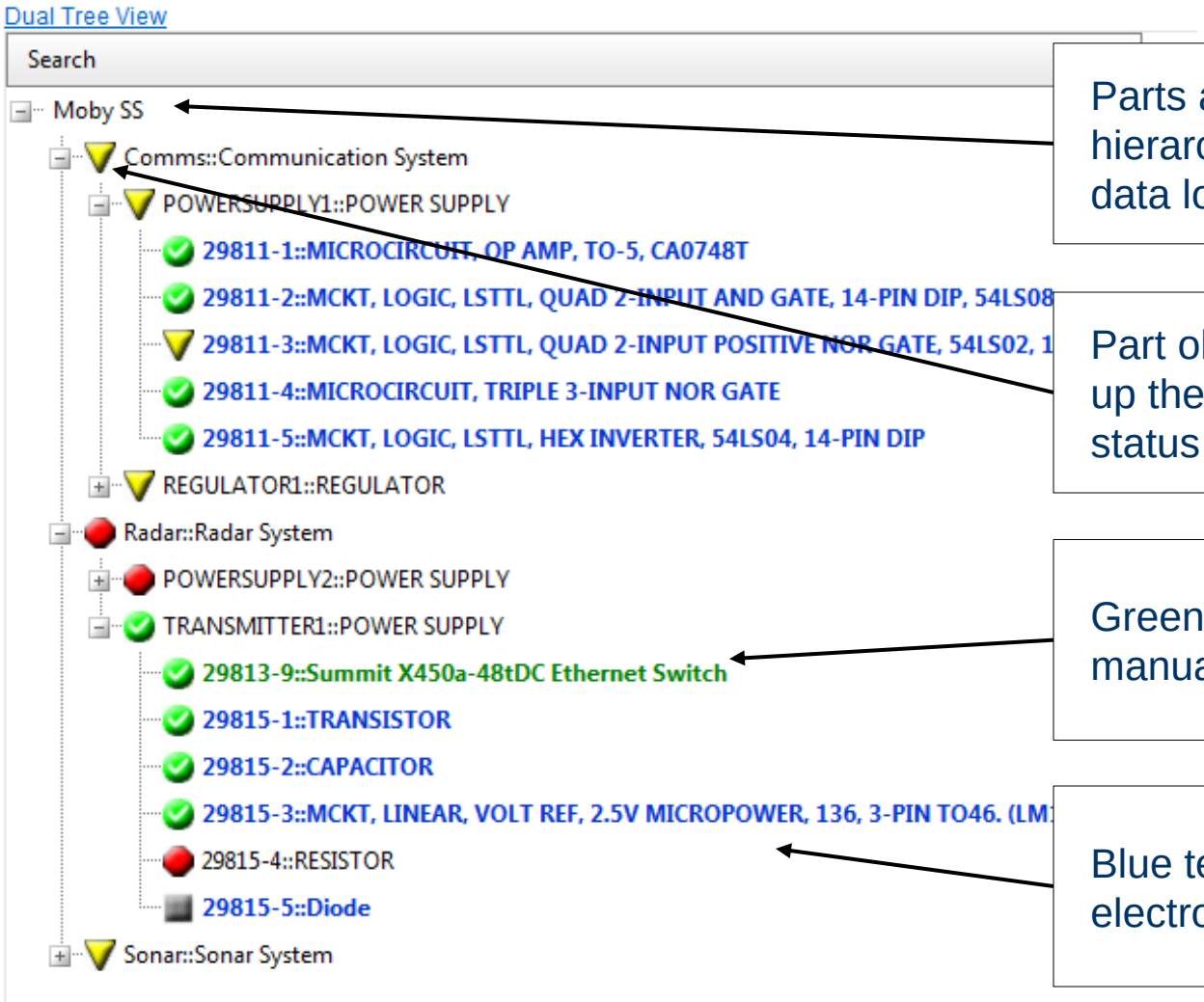
System Level Health & Obsolescence Analysis

System Component ALERT Report

Web-Accessible Obsolescence Management Information System (OMIS™)

OMIS™ Designed to Solve Obsolescence Issues As they Arise / Share Solutions Across All Platforms

Platform View



Parts are displayed in a hierarchical tree format if the data loaded support that view

Part obsolescence status rolls up the tree with the worst status rolling up

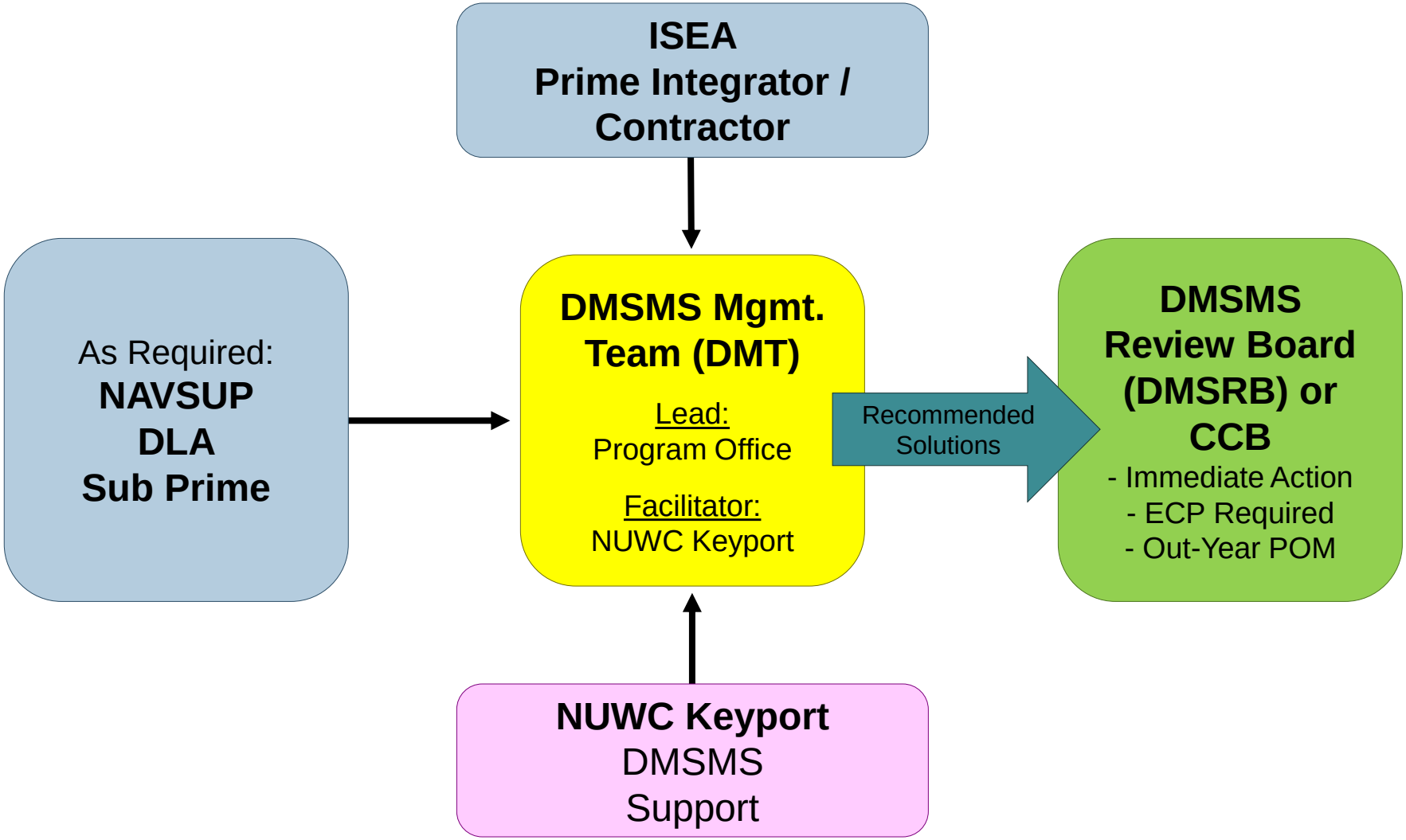
Green text indicates a manually monitored part

Blue text indicates a electronically monitored part

Building An Obsolescence Management Program

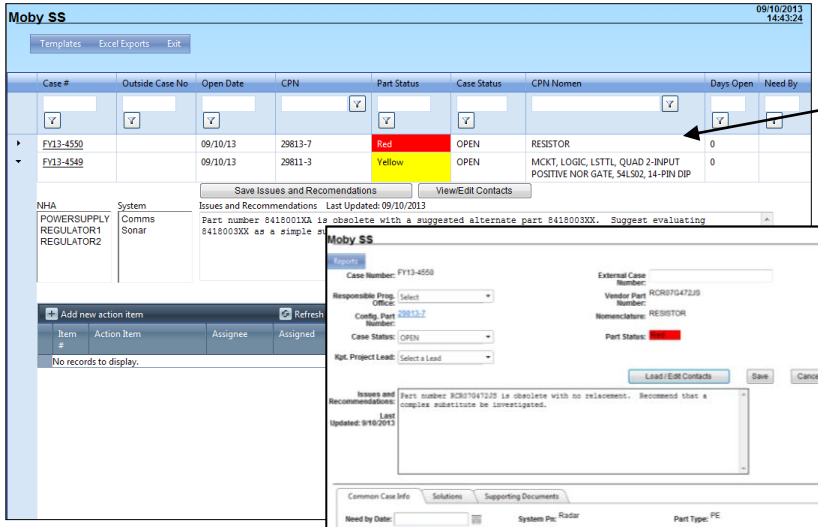
- **STEP #1 – Stand-Up a DMSMS Management Team (DMT) / DMSMS Plan / Define Roles & Responsibilities (R & R)**
  - Assign government and contractor members (Program Offices, OEM, key sub-vendors), draft obsolescence management plan, assign DMT roles & responsibilities
- **STEP #2 – Profile/Prioritize System Components/Commercial Off The Shelf (COTS)**
  - Prioritize COTS, HM&E assets / (Load all – track only high priority / unique assets)
- **STEP #3 – Collect/Collate Platform/System Life Cycle and Technical Data**
  - Define system's quantities, configurations, COTS, Non-COTS/MilSpec – perform COTS vendor surveys
- **STEP #4 –Define Technology Roadmap / Trends for Production / Modernization**
  - Define associated industry & technology design and manufacturing trends investigate optimum design refresh plan, consider periodic integration of new technology
- **STEP #5 – Define Current Obsolescence / Out-year Sustainability**
  - Define procurability (**SOURCE**), supportability (**STOCK**), and failure (**RELIABILITY**) data, develop out-year supportability summary bar charts on impacted assemblies

DMSMS Management Team (DMT) Structure



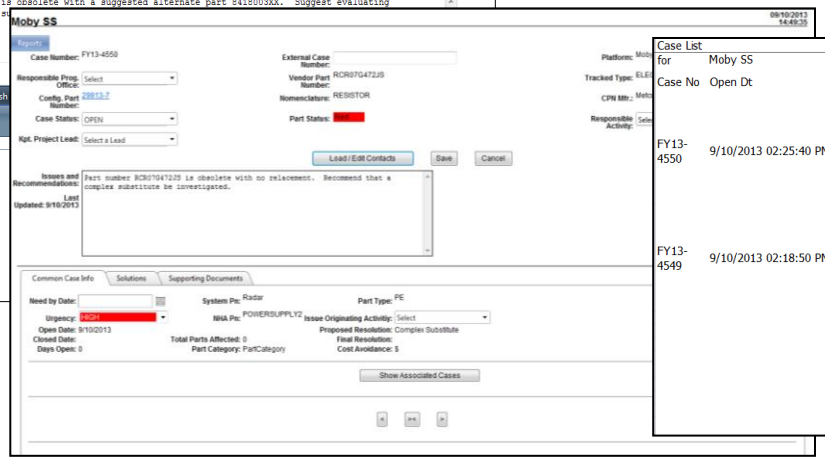
Obsolescence Cases

- An Obsolescence Case is created for every obsolete or End of Life (EOL) part that negatively impacts a system.
- The OMIS™ Obsolescence Case Log (OCL) is used to track and monitor all cases from initiation to closure, including resolution type, cost and cost avoidance
  - The OCL is the main focus of DMTs
  - Actions and status of cases are assigned and updated at each DMT



OMIS™ Obsolescence Case Log

Obsolescence Case Log Data Output Reports



Case List
for Moby SS 9/11/2013 07:32:38 AM

Case No	Open Dt	Case Stat	CPN	CPN Cage	CPN_Nomen	CPN_Mfr	Part Status	Issues and Recommendation	VPN
FY13-4550	9/10/2013 02:25:40 PM	OPEN	29813-7	88888	RESISTOR	Metcut	Red	Part number RCR07G472JS is obsolete with no relacement. Recommend that a complex substitute be investigated.	RCR07G472JS
FY13-4549	9/10/2013 02:18:50 PM	OPEN	29811-3	88888	MCKT, LOGIC, LSTTL, QUAD 2-INPUT POSITIVE NOR GATE, 54LS02, 14-PIN DIP	Metcut	Yellow	Part number 8418001XA is obsolete with a suggested alternate part 8418003XX. Suggest evaluating 8418003XX as a simple substitute.	8418001XA

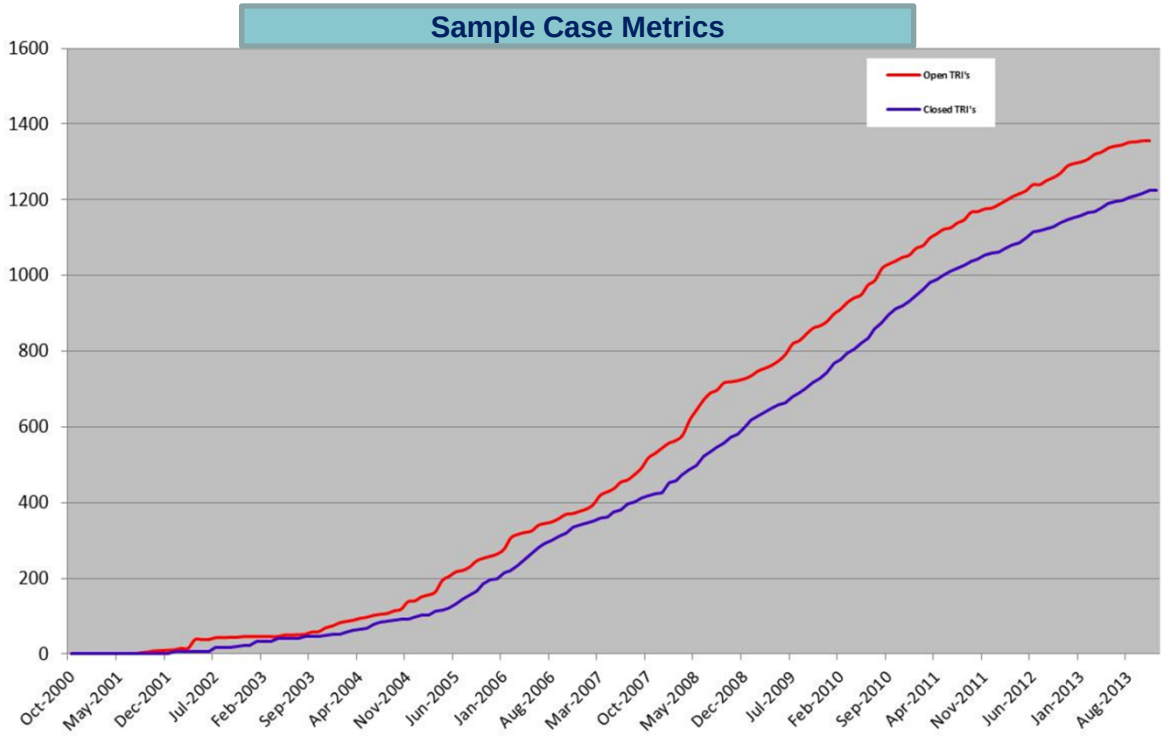
Case Management Benefits

- **“PROACTIVE”** We are working to establish a proactive process to take advantage of windows of opportunity when they occur
- **“ACTIONS / DUE DATES”** Encourage ownership of individual actions by assigning action POCs and due dates to all open cases
- **“LOT/BRIDGE BUYS”** Quick turn around (recommended within 30 days) to take advantage of commercial “End Of Life” alerts
- **“FEEDBACK LOOPS”** Working with ILS Managers, ISEAs, and DLA to compare and contrast alerts and cases with provisioning data and Engineering Changes
- **“CASE CLOSURE”** Will be based on program requirements
- **“VISABILITY”** Drives and provides insight into other logistics processes such as systems documentation, training, tech manual updates, configuration management, provisioning, and supportability requirements

Cases Opened/Closed & Cost Avoidance Metrics

- The OCL also allows for capture of metrics associated with resolving the obsolescence cases
  - Cost avoidance metrics are captured and recorded for each case closed
  - Open and closed dates for each case are captured

- Metrics can then be reported easily within a table and/or graph

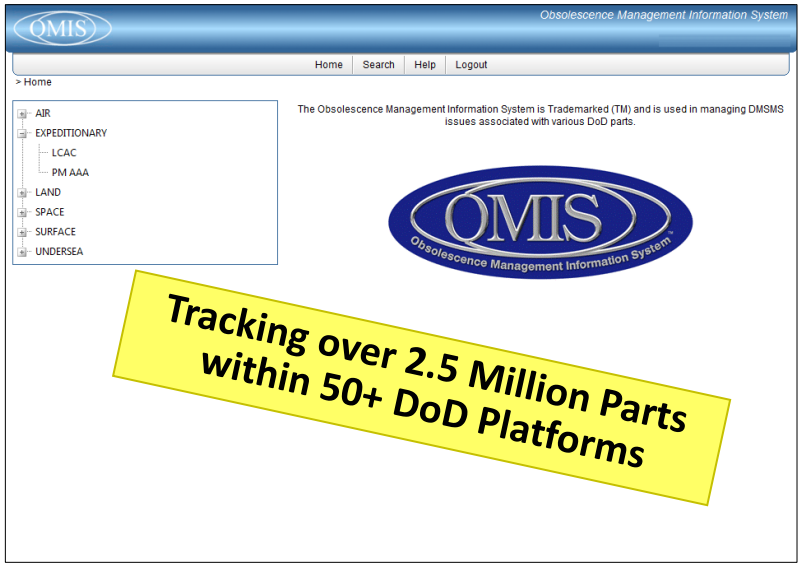


Scope of Systems Loaded in OMIS™

Systems & Equipment from all current Navy submarine classes, multiple aircraft series, several surface ship and SPAWAR systems, and various ground vehicles

Air

Expeditionary



Land

Space

Undersea

Surface

NUWC Keyport Obsolescence Management Services

- Assist in the development of obsolescence management infrastructure including ***DMSMS Plans/Charters*** and organizing/leading ***DMSMS Management Teams (DMTs)***
- Provide ***Cross-System/Platform/Service Visibility*** and resolution of obsolescence issues
- Provide ***System Obsolescence Health Assessments***
- Provide ***Technical Expertise*** in developing DMSMS resolutions
- Case Management - Track and capture ***System/Program Metrics***
- ***Analysis of Options*** for proposed DMSMS mitigation choices (cost, supportability profile, life-cycle requirements)
- ***Analysis of New Designs*** – early in the design phase!
- Minimize cost to customer via implementation of ***Custom Engineered Solutions (CES)*** mitigation options
- System Supportability Assessments

Over 50 Obsolescence Management Subject Matter Experts!

Summary

- Keyport provides a comprehensive set of obsolescence management services
- Data and products are government owned, maintained, and safeguarded
- Keyport's Obsolescence Management Division supports programs across DoD and private industry
- To contact Keyport's Obsolescence Staff:

Email – omis_dmsms@navy.mil