IMPROVING PROGRAM PERFORMANCE
PRESENTED TO:
OPEN ARCHITECTURE VS OPEN SYSTEMS?
CONFERENCE
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OVERVIEW

• OPEN ARCHITECTURE BUSINESS CASE

• NAVAIR PROGRAMS EXECUTION STATUS

• SUMMARY
“My vision for OA isn’t limited to systems built to a set of open standards, but rather it is focused on open business models for the acquisition and spiral development of new systems that enable multiple developers to collectively and competitively participate in cost-effective and innovative capability delivery to the Naval enterprise.”

Why do we need Open Architecture?

Naval Open Architecture is a technical solution (open systems) together with an open acquisition business model

• Life Cycle Cost
• Time to Market (Lower cost and rapid capability insertion)
• Business analysis is required to determine Open Architecture value

Must align Naval OA LCC Technical & Business Strategies
# PROGRAM PERFORMANCE TEAM

<table>
<thead>
<tr>
<th>OBJECTIVE:</th>
<th>IMPROVE THE PLANNING AND EXECUTION OF NAVY AND MARINE CORPS AIR PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY:</td>
<td>IDENTIFY ROOT CAUSES FOR CONTRACTOR COST AND SCHEDULE OVERRUNS</td>
</tr>
<tr>
<td></td>
<td>IMPLEMENT JOINT GOVERNMENT AND CONTRACTOR COUNTERMEASURES TO OVERRUNS</td>
</tr>
<tr>
<td>TACTICS:</td>
<td>USE OF CONTRACTOR PERFORMANCE REPORTS (CPR) TO IDENTIFY UNDERPERFORMING AREAS</td>
</tr>
<tr>
<td></td>
<td>DATA DRIVEN ROOT CAUSE IDENTIFICATION</td>
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<tr>
<td></td>
<td>HYPOTHESIS TESTING USING SCIENTIFIC METHODS</td>
</tr>
<tr>
<td></td>
<td>PERFORM MULTIPLE JOINT LEAN SIX SIGMA PROJECTS</td>
</tr>
<tr>
<td></td>
<td>TARGETING CONTRACTOR UNDERPERFORMANCE</td>
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</tbody>
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**Transform data into information for action & perform collaborative improvement activities**
COLLABORATIVE IMPROVEMENT WORKFLOW

1. STRATEGIC ANALYSIS OF CONTRACTOR PORTFOLIOS
   - Leverage Program and Contractor Performance Data

2. CONTRACTOR ENGAGEMENT & COLLABORATIVE PROJECT SELECTION
   - Leverage Contractor / NAVAIR Continuous Improvement Activities

3. COLLABORATIVE PROJECT EXECUTION
   - Leverage Contractor / NAVAIR Continuous Improvement Resources

Current Unfavorability
Projected Unfavorability

Root Cause #1
Root Cause #2
Root Cause #3

SWOT
PICK
POA&M

PROVEN IMPROVEMENT TECHNIQUE
**PROJECT COCKPIT CHART**
DEPLOYED JAN. 2007

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### Project Performance Cockpit Chart ($ in K)

#### Progress

<table>
<thead>
<tr>
<th>Indices (Period)</th>
<th>Variances (Cum.)</th>
<th>Burn Rate</th>
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</thead>
<tbody>
<tr>
<td>CPI Cum.</td>
<td>SPI Cum.</td>
<td>VAC%</td>
</tr>
<tr>
<td>EVEN 1.06</td>
<td>DOWN 0.93</td>
<td>EVEN 0%</td>
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#### Status

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</thead>
<tbody>
<tr>
<td>TAB</td>
<td>$ Spent</td>
<td>4%</td>
<td>Cost (Est.)</td>
<td>0.00%</td>
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<tr>
<td>MR</td>
<td>$ Scheduled</td>
<td>5%</td>
<td>Schedule (Est.)</td>
<td>0.00%</td>
</tr>
<tr>
<td>EAC</td>
<td>$ Performed</td>
<td>4%</td>
<td>Cost (Realized)</td>
<td>0.00%</td>
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</table>

#### Estimates

<table>
<thead>
<tr>
<th>MR</th>
<th></th>
<th></th>
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</table>

<table>
<thead>
<tr>
<th>CV Cum.</th>
<th>SV Cum.</th>
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<tbody>
<tr>
<td>$0</td>
<td>$0</td>
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</table>

<table>
<thead>
<tr>
<th>BCWS</th>
<th>BCWP</th>
<th>ACWP</th>
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<tbody>
<tr>
<td>($10,000)</td>
<td>($8,000)</td>
<td>($6,000)</td>
</tr>
<tr>
<td>($4,000)</td>
<td>($2,000)</td>
<td>$0</td>
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</table>

<table>
<thead>
<tr>
<th>BCWS</th>
<th>Burn Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>($10,000)</td>
<td>($1,000,000)</td>
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</table>

<table>
<thead>
<tr>
<th>LRE</th>
<th>EAC CPI</th>
<th>EAC CMP</th>
<th>EAC</th>
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<tbody>
<tr>
<td>$0</td>
<td>$50,000</td>
<td>$100,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>$200,000</td>
<td>$250,000</td>
<td>$300,000</td>
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**AIR 4.2 Assessment**

Potential schedule impact to CDR due to SFR shift

Many issues still need to be corrected in the schedule but Example Vendor’s projection that CDR will not shift will be challenged during the SRA. SRA will focus on critical path, SFR, and two near-critical paths. A “What if” analysis was performed on the current condition of the schedule, the slip to SFR and PDR results pushed CDR 1 to 5.5 months.

Need to continue pressing Example Vendor to use the IMS to manage all CARs (to include unique and Global) need to be corrected and reflected in the schedule. These issues need to be corrected in the IMS to manage the program. AIR-4.2 continues to have weekly meetings with Example Vendor to status CAR progress, schedule maturity, and any other issues that are impacting the schedule.

Delay in awarding subcontractors and staffing increase, potentially driving SV in the near term

One of the program schedule drivers is the late Engine Contract award. Approximately 12 subcontracts are targeted by March 9th; if follow on suppliers are awarded later than planned, the SV will most likely continue to degrade.

### Contract Profile

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Example Vendor</th>
<th>Award Amount</th>
<th>$</th>
<th>Category</th>
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<tbody>
<tr>
<td>Contract</td>
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<tr>
<td>Type</td>
<td>CPAF (SED)</td>
<td>Current Amount</td>
<td>$</td>
<td>Total OTB’s</td>
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<tr>
<td>Start Date</td>
<td>1/3/2006</td>
<td>Last Award Fee</td>
<td>12/15/2006</td>
<td>Last OTB</td>
<td>NA</td>
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<tr>
<td>Est. End Date</td>
<td>12/31/2010</td>
<td>Next Award Fee</td>
<td>9/30/2007</td>
<td>Next OTB</td>
<td>NA</td>
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# PROGRAM PERFORMANCE TEAM FINDINGS

## IMPROVE PLANNING

- Perform Schedule Risk Assessment (SRA) as part of source selection
- Improve contractor schedule quality prior to milestone B
- Perform Integrated Baseline Review (IBR) prior to milestone B
- Improve quality of cost, schedule, and requirements harmonization efforts during pre-SD&D
- Perform Level 2 review and concurrence of the cost analysis requirement document (CARD)
- Establish SD&D metrics prior to milestone B

## IMPROVE EXECUTION

- Staffing, spending, and work delinquency metrics serve as early warning systems
- Closeely monitor and mitigate Bill of Materials (BOM) growth
- Use Schedule Risk Assessments (SRA) to identify and prevent performance pitfalls
- Establish and maintain subcontractor / supply chain / material performance visibility
- Establish contractor / government collaborative improvement activity cycles throughout all program phases

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**Transformational impact to program performance is achievable**
SUMMARY

• DEVELOPMENT PROGRAM PERFORMANCE MUST BE IMPROVED

• BUDGET IMPERATIVE TO REDUCE LCC OF NAVAL SYSTEMS

• OPEN ARCHITECTURE DESIGNS FACILITATE RAPID CAPABILITIES INSERTION AT AN AFFORDABLE COST

• OPEN ARCHITECTURE IS ABOUT INCREAING COMPETITION AND COLLABRATION

• OPEN ARCHITECTURE WILL HELP ENABLE AN AFFORDABLE NAVY OF THE FUTURE

• MUST DEVELOP AN INTEGRATED OA STRATEGY THAT ADDRESSES
  – TECHNICAL, BUSINESS MODEL AND CULTURAL BARRIERS
BACK-UP
NAVAL OPEN ARCHITECTURE

- OA PRINCIPLES MUST BE APPLIED THROUGHOUT SYSTEM’S LIFE CYCLE FRAMEWORK

**NAVAL OA FIVE PRINCIPLES**

1. Modular design and design disclosure
2. Reusable application software
3. Interoperable joint warfighting applications and secure information exchange
4. Life cycle affordability
5. Encouraging competition and collaboration

- NAVAIR OA TECH. AUTHORITY OBSERVATIONS/RECOMMENDATIONS:

**PRINCIPLE # 1:**

**GOOD ACCOMPLISHMENTS**

OA CONTRACT GUIDE BOOK LANGUAGE USED

**PRINCIPLE # 3:**

**HIGH COMPLEXITY**

VARIOUS DOD WIDE STAKEHOLDERS

OA PRINCIPLES MUST BE APPLIED TO FORCENet

**PRINCIPLE # 2, 4, 5:** *(AFCEA BREAK-OUT SESSIONS)*

**SIGNIFICANT LCC COST DRIVERS!**

**BARRIERS-ENABLERS MUST BE IDENTIFIED**