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AFLCMC/HI VENDOR DAY



BES **Process** **Integration Board** **(PIB)**

Mr. David Sampson
Chief, Integration Branch
AFLCMC/HIQI

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Process Integration Board (PIB)



- **Goal: Enterprise commitment to process standardization**
- **Objective: “One-Stop-Shop”**
 - **Collect, prioritize, deliver, communicate and institutionalize BES common standards, repeatable processes, practices, tools, and persistent functions**
 - **Focus on quality guidance that assists with efficient and effective deliveries of BES capabilities and services**
 - **Leverage AFLCMC Standards & Process Board outcomes to support development of BES processes**
- **Some of Our Challenges:**
 - **Operating across multiple functional and geographic boundaries**
 - **Lack of organizational change management associated to processes**
 - **Volume and velocity of policy and process changes; multiple governance boards**



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Process Integration Board (PIB) Cont'd



- **PIB Structure:**
 - **Chair: Deputy PEO for BES (Mr. Scott Warren)**
 - **Voting Board Members: Division Directors, Organizational Senior Functionals (OSFs), Director of Integration (DoI)**
 - **Secretariat: Integration Office**
- **PIB Charter Approved: 17 Jul 2013**
- **Next Step: Kick-off Meeting**
 - **Review PIB Charter**
 - **Communicate scope and alignment with AFLCMC Standards & Process Team**
 - **Set foundation for the initial PIB roadmap; schedule recurring meetings**
 - **Identify and align initial opportunities**
 - **ECD: September 2013**



PIB Methodology

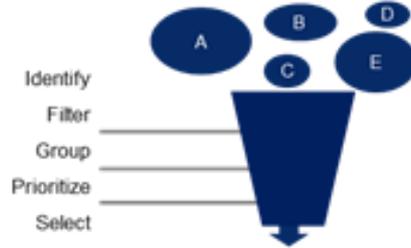


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1. Establish & Communicate PEO Vision



2. Evaluate the Opportunities



3. Qualify Problem/Issue

1. Compliance
2. Productivity
3. Excellence
4. Savings
5. Cost Avoidance

4. High-level Scope, Costs and Risk



5. Prioritize Initiatives

Prioritization Matrix			
	Benefits	Costs	Risk
"A"			
"B"			
"C"			

6. Charter Initiatives (IPT)

- Project Overview
- Sponsor
- Problem Statement
- Expected Benefits
- Approach
- Risks

7. Measure and Monitor Progress

- Sponsor support
- Scope control
- Milestones Achieved
- Issues & Help Needed

8. Make Decisions & Implement

- Recommendations
- Implementation Plan

9. Track Results

Scorecard									

Establish clear priorities with real quantifiable benefits based on data during the *initial planning phase (3-5)*.



Initial Targets of Opportunity



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- **IT Acquisition Reform (BCL, SDDP, New DoDI 5000.02)**
- **BES Metrics Program**
- **MDA / PEO Decision Processes and Milestones**
- **Release Types (Baseline, Major, Minor, Patch)**
- **Program Protection / Anti-Tamper**
- **PII / Privacy Act**
- **Scheduling & Schedule Re-baselines**
- **Technical Reviews**

- **What process issues are most troublesome to our industry partners that the PIB could address to improve our collaboration and effectiveness?**



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Process Impacts on Our Partners



- **IT acquisition processes are changing – new processes and procedures are being imposed on BES programs**
 - These new processes and procedures may change the way we solicit (CDRLs types/timing, new GFI products/timing, etc.)
 - Vendors may be asked to align with new internal BES processes and best practices
 - SEP Web Site will be updated with new processes, templates, checklists, etc.

- **What can our industry partners do?**
 - Gain thorough understanding of SDDP (new terminology, roles, responsibilities, documents, and processes)
 - Know relationship and alignment of BCL and DoDI 5000.02
 - Increase technical knowledge of TB/IB/OB implementation approaches (ERP and operational system migration)
 - Understand objectives/processes for implementing CCE, Commoditized Infrastructure, Common Tools
 - Help us understand what works in industry; bring us your best practices!



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BES **Metrics IPT**

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Introductory Problem Statement



Problem Statement: Centralized, consistent, and authoritative program cost, schedule, and performance metric data is not readily available to BES Leadership to support decision making processes

- **What Industry recommendations and/or methodologies are available for a "best practice" implementation of a portfolio metrics program for an organization the size and complexity of PEO BES?**
 - **Consider geographic dispersion, program lifecycles and maturity, and how to capture, evaluate, and present metrics**
 - **NOTE: We are NOT asking for specific metric recommendations**
- **Are there any customer references that PEO BES staff can follow-up with for implementation process details?**



BES Metrics IPT



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■ Goals:

- Improve program, division, and directorate performance
- Instill a culture of continuous improvement
- Praise organizational and individual performance

■ Objectives:

- Establish standard internal and external reporting and performance metrics for the BES Directorate
- Provide PEO Situational Awareness of Program Health
- Data to support predictive analysis vs. reactive execution
- Facts to support informed, real-time decision-making
- Analysis to support effective resource allocation and future estimation efforts

Predictive Analysis vs. Reactive Execution!



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BES Metrics IPT (Cont'd)



- **Standardizing our metrics requires that we focus not only on alignment, but change management. We are engaged to:**
 - **Establish buy-in across the directorate, divisions, programs, and all operating locations**
 - **Define strategies to overcome organizational and cultural obstacles (positive vs. negative perceptions)**
 - **Practice good change management and gain commitment to improve (workforce development)**
 - **Align resources (metrics are an investment of funds, time, and people)**

What gets measured gets done. What gets measured and fed back gets done well. What gets rewarded gets repeated.

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BES Metrics IPT Charter



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Process Owners / Champions	Mr. Scott Warren, Deputy Director Mr. Toy Robinson, Engineering Organizational Functional
IPT Co-Leads	Mr. Dave Sampson, Mr. Kevin Hamilton
Facilitator:	Mr. Mason Gaston
Problem / Opportunity Statement	Centralized, consistent, and authoritative program cost, schedule, and performance metric data is not readily available to BES leadership to support decision-making processes.
Impact Statement	Without enterprise-wide metrics data, BES leadership must react to program issues rather than use predictive analysis to identify trends in program execution that warrant corrective action before issues negatively impact program.
Scope / Goal	The Metrics IPT will focus on the key metrics necessary for effective enterprise-wide program monitoring and control. The goal is to define the minimum metrics required to keep BES leadership aware of program execution issues/trends without excessive data gathering and reporting requirements being placed on program teams.
Output	The IPT will use various techniques to elicit, define, and document the key metrics for use within the BES Directorate. For each metric defined, the IPT will determine the method for capturing and gathering data, the appropriate reporting mechanism, and the expected use of the metric data. Recommendations will be presented to the Process Owners/Champions for consideration
Governance	<ul style="list-style-type: none"> -Meeting Frequency: As determined by the IPT Co-Chairs -Meeting Minutes and Action Items will be recorded, monitored, and tracked to closure by the IPT Co-Leads - Periodic updates will be provided to the Process Owners/Champions following each meeting



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Initiatives Influencing Our Metrics Program



- **US(M)X – SDDP-based Performance Management Measures**
 - Identified 31 performance management measures
 - 16 designated as “Sponsor” measures
 - 8 designated as “Project Lead” measures
 - 7 designated as “ITO Lead” measures
- **Gartner Study – Leading Indicators**
 - PEO BES requested Gartner to identify the top leading indicators used in industry
 - 16 indicators identified; some subjective
- **McKinsey Study – OSD-led study of leading indicator methods**
 - 46 indicators identified and tied to various milestones and lifecycle checkpoints; extremely detailed

Many similarities, but slightly different viewpoints – our primary task is to determine the best mix of measures for BES



Initial Metrics



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- **Start small; implement only a few key metrics**
 - Use metrics that may already be in place within the Divisions
 - Start collecting data immediately; monitor implementation and adjust
 - Incrementally expand the effort
 - Keep it simple initially; refine and improve as we mature

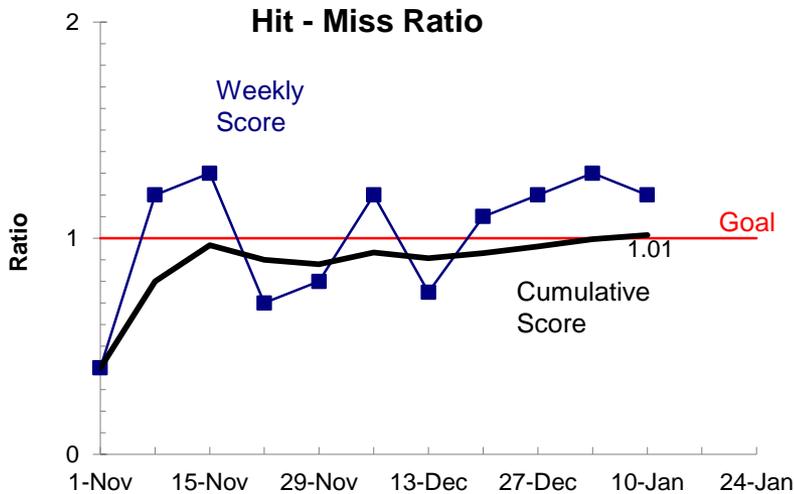
- **“First Five” Metrics**
 - Integrated Master Schedule (IMS) Hit-Miss Ratio
 - Requirements Change (Stability)
 - DT&E Test Pass Rates (1st / 2nd Runs)
 - Deficiency (Problem) Reports Open/Closed (DT&E)
 - Open Deficiency Reports (Production)



Hit-Miss Ratio (IMS Based)



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Interpretation

1.0 is the desired outcome meaning inch/milestones are being performed as planned at the detail level. Week to week misses are less important than the composite value as well as the trend. Continuing low hit rates indicate poor planning and/or execution.

Assessment

Anchor scale-based assessment of the Hit-Miss ratio trend over the program.

HIT/MISS %	Guidance				
	0	1	2	3	4
	<85%	90%	95%	100%	>100%

Purpose/Goal

Provide a very timely (leading) indicator of project performance especially for programs not subject to EVM requirements.

Definition/Calculation

Hit – Miss ratio = Achieved mile/inch stones in a time period ÷ planned mile/inch stones

Cumulative Score = Aggregate achieved MS ÷ Aggregate Planned MS

Data Owner/Source

Program Manager, PCO/PMO – IMS

Frequency of Collection

Weekly

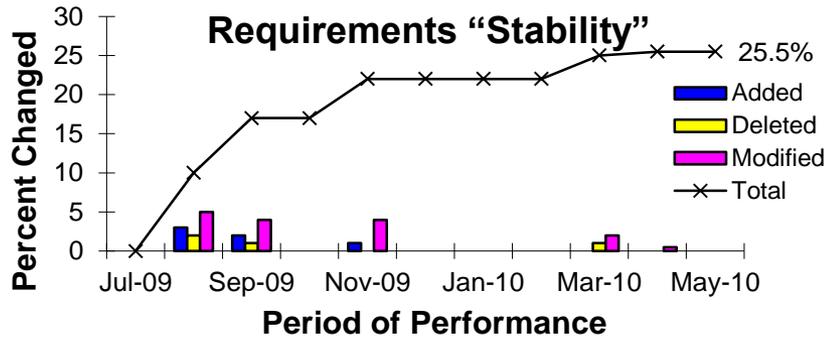
Notional



Requirements Change (Stability)



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Interpretation

High volatility indicates issues in scope management or environmental factors resulting in changes to requirements baseline. This might also indicate inadequate requirements engineering, insufficient SME involvement, or poor work planning.

Requirements % Change	Guidance				
	0	1	2	3	4
	>30%	30%	20%	10%	< 5%

Purpose/Goal

This measurement is used to plot the change in requirements over time to include the type of change. The measurement focuses on the changes to the IT requirements that may be identified as fixes to DRs during development testing.

Definition/Calculation

Added % = # requirements added by customer (or environment) to baseline/total requirements per month

Deleted % = # removed requirements/total # requirements per month

Modified % = # of requirements with changes/total # requirements per month

Total Change = sum of all above ÷ Total # of requirements

Assessment

Anchor scale-based assessment based on the cumulative change in requirements for a program or system:

Data Owner/Source

Sponsor/CM Tool

Frequency of Collection

Monthly/Semi-monthly > 12 months

Weekly for projects <12 months

Applicability

Development

Notional



Test Pass (1st/2nd) Rates (Government Test)



Purpose/Goal

These measurements track the periodic (monthly) or event driven testing statistics of 1st time pass for system requirements. 2nd Time pass rates are also tracked to show rework performance.

Definition/Calculation

Test Volume – number of test cases executed in period or event

1st Time pass - % of tests successful first run for a time period or test event

2nd Time pass - % of tests successful after initial rework for a time period or test event

Interpretation

Lower initial (1st time) pass rates can indicate issues in project team process maturity, the stability and completeness of requirements and/or functional participation. 2nd Time pass rates should be much higher as they represent rework to close out of deficiencies

Assessment

Anchor scale-based assessment of the monthly or test event results

Measure	Guidance				
	0	1	2	3	4
Testing Pass Rate - 1st Time	Inadeq	<30%	30%	50%	>70%
Testing Pass Rate - 2nd Time	Inadeq	<70%	70%	80%	>90%

Data Owner/Source

Test Manager - Test Tool/Reports

Frequency of Collection

Monthly/Semi-monthly > 12 months

Weekly for projects <12 months, or

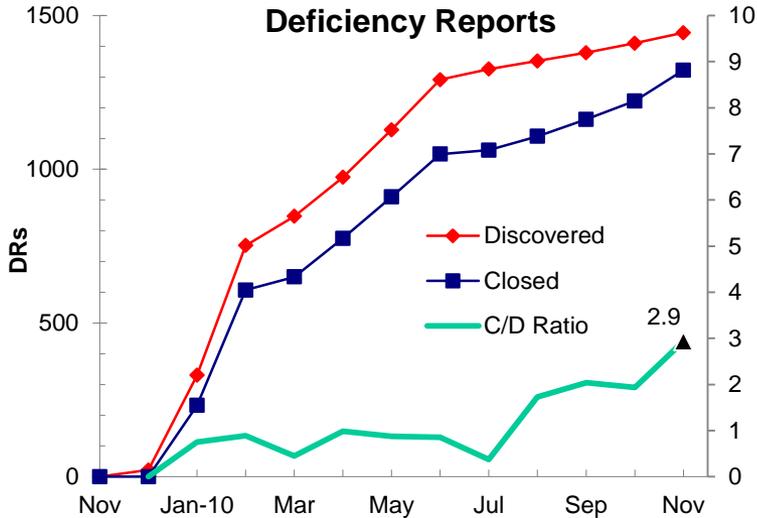
Per Major Test Event

Notional



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Deficiency (Problem) Reports Open/Closed (DT&E)



Purpose/Goal

Provides and indicator to track the readiness of the product or system for release based on the remaining critical deficiencies that need to be resolved.

Definition/Calculation.

Discovered DRs = cumulative value of DRs discovered through testing process ÷ Closed DRs = cumulative value of resolved DRs. Rate of open and close reports are critical for determining when/if a product might be ready for release

Interpretation

Slope of curves and total quantity of DRs reflect on the maturity of the process that created it and the amount of rework remaining. Rate of newly opened and close reports are critical for determining when/if a product might be ready for release.

Assessment

Anchor scale-based tied to the ratio of Closed DRs/month compared DRs Discovered over the same time period (month/week)

DR Close Rate Ratio	Guidance				
	0	1	2	3	4
	Inadeq	=< Open	> Open	>2x Open	>4x Open

Data Owner/Source

Test/CM Tool; Test Manager

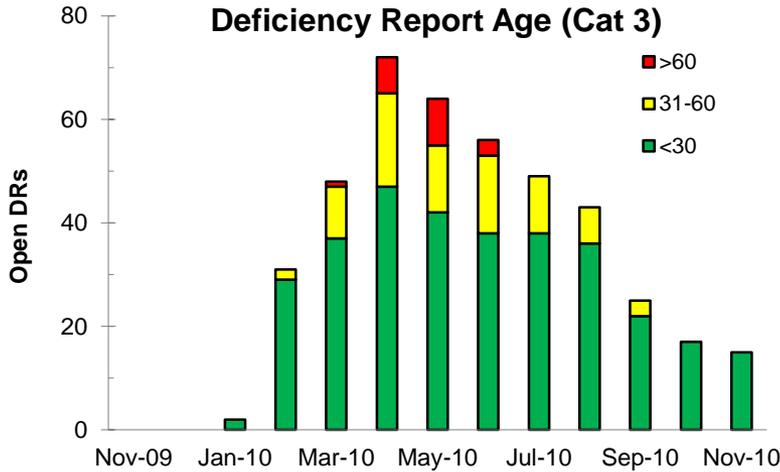
Frequency of Collection

Monthly/Semi-monthly

Notional



Deficiency Report Age (Production)



Purpose/Goal

This measurement is track the age of open deficiency reports by level of criticality. It is a leading indicator of product readiness for release and/or customer satisfaction for products in production.

Definition/Calculation

Snap shot of open DRs age at standard frequency (monthly/semi-monthly/weekly)– segregated into <30 days, 30-60 days and > 60 days since identification.

Interpretation

There is a natural increase in DRs and average associated age during the initial testing stage of systems but healthy programs quickly work off the backlog to the point of resolving issues within the month. Aging DRs can be an indication of other program issues and risk to successful acceptance testing and deployment.

Assessment

Anchor scale-based assessment based on the cumulative change in requirements for a program or system:

% of DRs over 60 days	Guidance				
	0	1	2	3	4
	>30%	30%	20%	10%	0%

Data Owner/Source

Configuration Manager / CM/Test Tool Database

Frequency of Collection

Monthly/Semi-monthly/Weekly

Notional



Impacts on Our Partners



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- **BES is energizing the metrics program across the portfolio**
 - **New internal BES procedures may change the way we solicit and manage future efforts with our partners (CDRLs types/timing, new GFI products/timing, etc.)**
 - **Vendors may be asked to report new metric data via CRDLs at timing critical for leading indicator analysis**

- **What can our industry partners do?**
 - **Be prepared to adjust to new metrics requirements**
 - **Help us understand what works in industry; bring us your best practices!**