Headquarters U. S. Air Force

Integrity - Service - Excellence

AF Software Intensive Systems Strategic Improvement Program (AFSSIP)

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ASC/EN
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Overview

- Background
- AFSSIP Approach
- Related Activities
- Way Ahead
Background

- FY03 Authorization Act (Pub. Law 107-314), Section 804
  - Services implement S/W acquisition improvement programs
  - Focus on Processes, Metrics, People, and Compliance

- Mar 03 OSD Memo
  - DoD SISSG oversight of services/agencies programs
  - Additional focus areas (e.g. Config. Management, T&E)

- Various process improvement activities already underway
  - Mix of systems focus, software focus, or both
  - Not integrated
Air Force Organizations With Major Acquisition Roles

Component Acquisition Executives

- SAF/AQ
- SAF/US

- AFPEO/AC (Aircraft Systems)
- AFPEO/WP (Weapons)
- AFPEO/SV (Services)

- AFPEO/C2&CS (Command & Control Systems)
- AFPEO/F/A-22 (F/A-22)
- AFPEO/SP (Space Systems)

Related Commands

Organize, train, & equip

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AFSSIP Approach

- Guidance from Dr. Sambur (SAF/AQ)
  - Ensure AFSSIP meets Congressional intent
  - Focus on AF acquisition programs
  - Implement through AF Acquisition Executives & PEOs

- Congressional Intent
  - Based on October 2003 discussions with SASC staffers
  - Focus on MDAPs, not IT
  - Ensure software is properly addressed in program reviews
Program Purpose
- Evaluate efficiency and effectiveness of software management and processes as part of systems engineering and capability acquisition
- Identify changes that may be needed to improve them

Working Group Responsible to Execute
- Core team
- PEO representatives
- Industry representatives

Report results to CAEs by July 2004
Core Team

**Membership**
- Software experts from product and logistics centers, SAF/AQ, supporting organizations, SEI, and support contractors

**Responsibilities**
- Define overall AFSSIP approach
- Accomplish familiarization and feedback for PEOs
- Assist with data gathering from acquisition programs
- Define As-Is and To-Be states
- Perform gap analysis
- Define roadmap and implementation recommendations
- Accomplish all activities required to produce AFSSIP products and results
PEO Representatives

Membership

- Acquisition Program Representatives appointed by PEOs
- Senior program managers and engineers with software acquisition experience

Responsibilities

- Provide program experience and data
  - Information on section 804 focus areas
  - Problems encountered / success stories
  - Recommended best practices
- Review interim core team products and provide heading checks
Industry Representatives

- Responsibilities similar to those of PEO Representatives:
  - Solicited for input to As-Is and To-Be states
  - Review and validate working group products and provide input to roadmap and recommendations
Desired Acquisition Program Information (Draft)

- Program description
- Policy & guidance (all levels)
- Organizational structure and practices
- People, training, and experience
- Resources, funding, and investment
- Processes
- Metrics
- Best Practices
- Technology development and insertion
- Potential improvement activities
Challenges

- **Achieving balance:**
  - Prescribed processes with program manager autonomy, responsibility, and accountability
  - Integration within the systems engineering process with software stovepipes
  - Level of software insight with acquisition workforce downsizing
  - Need for speed of acquisition with adherence to disciplined processes

- **Additional challenges:**
  - Commonality across acquisition organizations
  - Reporting
  - Training
Related On-Going Activities

- **Air Force Level**
  - Systems Engineering Revitalization
  - Center for Systems Engineering (CSE)

- **Air Force Materiel Command (AFMC) / Air Force Space Command (AFSPC)**
  - Software Intensive Systems Steering Group

- **Acquisition Center Initiatives**
Air Force Level Activities

 Systems Engineering Revitalization
  - Focus on application of systems engineering practices through system life cycle
  - Incentivize contractors to perform more robust SE
  - Report status of SE processes/practices in program reviews

 Center for Systems Engineering (CSE)
  - Air Force & DoD SE Center of Excellence
  - Advocate, consult, implement, and provide training for SE
  - Repository for academic, government and industry SE best practices, processes, metrics and training
AFMC/AFSPC Activities

- Software Intensive Systems Steering Group
  - Foster collaboration among AFMC product, logistics and test centers
  - Disseminate S/W development and sustainment best practices
  - Source of resources for AFSSIP
  - Organize, train, and equip
A Possible Outcome

- **Air Force**
  - Software addressed as an integral part of systems engineering policy

- **AFMC/AFSPC**
  - Joint policies and implementation guidance
  - Training

- **Centers**
  - Tailored implementations
  - Training
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<thead>
<tr>
<th>Task</th>
<th>Complete</th>
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<tbody>
<tr>
<td>PEOs provide AFSSIP Working Group (WG) reps</td>
<td>30 Jan 04</td>
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<tr>
<td>Finalize AFSSIP WG Charter</td>
<td>2 Feb 04</td>
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<tr>
<td>Core Team Initial Activities</td>
<td>Mar 04</td>
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<tr>
<td>&quot;As Is&quot; State Draft</td>
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<td>&quot;To Be&quot; State Templates</td>
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<td>Planning for Working Group meeting</td>
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<tr>
<td>Working Group Session</td>
<td>Apr 04</td>
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<tr>
<td>“As Is” &amp; “To Be” Gap Analysis</td>
<td>May 04</td>
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<td>Develop Roadmap &amp; Implementation Recommendations</td>
<td>Jun 04</td>
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<tr>
<td>Brief Roadmap and recommendations to SAF/AQ/US</td>
<td>Jul 04</td>
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