Team Members: Atkinson, Donald L LtCol A8Y/A4YU; Callahan, Kathleen D LtCol A4YA; Rubino, Chad L LtCol A8A1; Taylor, Kevin L LtCol A4F Facilitators: Lt Col Matthew Cox, ACC/A4; Mr. Jeff Combs, ACC/A4; MSgt John Ace, ACC/A4Y

#### 1. Clarify & Validate the Problem

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Lack of clear guidance on how the WST operates modernization and sustainment Lack of clarity in who is in charge, ref. roles and responsibilities

Lack of training, guidance, and clarity

Unclear processes

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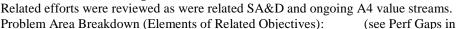
(see VSM in block 3)

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SUPPLIERS	INPUTS	PROCESSES	OUTPUTS	CUSTOMERS
SPOs (North/South) AFRL Units A4 / A8 COCOMs Warfighter AFCENT Defense Industrial Sector Industry Government Organizations Politicians Congress	People Access to SPOs/AFMC/Wings IPTs Liaison with Acquisition Community Gut Feeling/Common Sense "SMEness" / Expertise 1067 Process Capability Shortfalls Money Defining Capabilities Collaboration with A3 and other Staffs Capabilities Requirements and Risk Assessment (CRRA) Process (touchstone) Vision/Future Thinking Technology Urgent Operational Need (UON) Process Joint Urgent Operational Need (JUON) Process Data/Engineering Feedback from Units	Requirements Acquisition Modernization Sustainment Weapon System Management POM  [See VSM]	Mission Ready Weapon Systems Capabilities to Achieve Effects on Battlefield Policy/Guidance Delivering the Systems via the Acquisition Process Advocacy (funding, capabilities, etc.) Program Prioritization (funding, capabilities, etc.) Analysis Answering "What's wrong?" Taskers (distractors) Future Decision Making/Planning Guidance Aircraft Availability	* Warfighter Units (home/deployed) COMACC * COCOMs A8 / A4 A8A/A4F/Y/U

#### 2. Break Down the Problem/Identify Performance Gaps



CONOPS: Standardization Reachback Requirements Definition Weapon System Management AAIP: Money/People

Optimize Scheduled Maintenance

OPTIMIZE SCHEDULED MAINTENANCE: Aircraft Availability

COMMON TECHNICAL DATA:

Standardization

Economy

(see Perf Gaps in block 4) Improve Effectiveness/Reduce Cost

Eliminate Unnecessary Inspections Weapon System Management TRAINING: Internal/AO Standardization REQUIREMENTS DEFINITION:

Clearly Identify Requirements (Operational and Logistics)

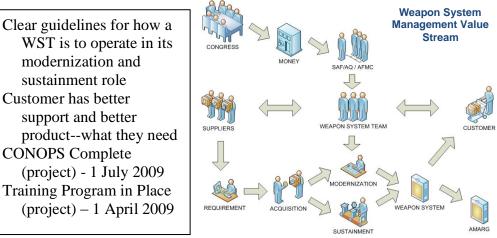
Link to AAIP

Doing the Same Thing Cheaper

Improve, Automate, Standardize the Sustainment Process Standardize/Replace Legacy Systems

#### 3. Set Improvement Target

Clear guidelines for how a WST is to operate in its modernization and sustainment role Customer has better support and better product--what they need **CONOPS** Complete



### ACC/A4 SA&D Objective - Weapon System **Management Problem Solving Workshop**

OODA – Observe, Orient, Decide, & Act 8-Step Problem Solving Model

#### 4. Determine Root Cause Problem Areas / Gap Analysis

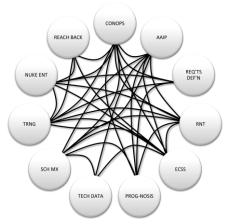
- Products/efforts not coordinated
- Current processes are the product of evolution, not design
- Lack of commonality
- Need an overall review process
- Who's in charge? SPO,

MAJCOM, SECDEF, JCS, AFMC, Nobody, Everybody, WST, SAF/AO, Congress?

- Who has the money? SAF/AQ and AFMC
- Lack of vision
- Degradation of control, authority, and responsibility
- Need the training to do the job
- Organizational impacts
- Fleet Viability Board expanding influence

5. Develop Countermeasures

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**Kev Relationships:** 9 - CONOPS

WSM SA&D Interrelationship Diagraph

- 8 ECSS 7 - AAIP 7 - RNT
  - 7 TRNG 6 - NUKE ENT
- 6 SCH MX 5 - PROGNOSIS
- 4 REACHBACK
- 4 REQT'S DEF'N
- 3 TECH DATA

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Recommendation to A4 Executive Council to charter two projects: one to develop a Concept of Operations Document for ACC/ CAF Weapon System Management, and one to develop a comprehensive Training plan. The team reviewed these measures against problem areas/perf gaps to ensure they adequately address the issues.

#### **CONOPS**

**AAIP** 

**Balancing Fleet Hours** Scheduled Maintenance

Requirements Definition

Common Systems

Tech Data

Test Equipment Deploy/Re-Deploy

Role of WST

Structure, Functions, and Processes Mission Specific

Nuke

C2ISR UAS

MDS Specific

Policy Training

**FVB** Interaction

Other topics as identified by team

#### **TRAINING**

**CONOPS** 

**Action Officer Products** 

A-Staff Structure and Functions

**POM Process** 

**CAM Process** 

External Courses (Knowledge Base) (AFIT/DAU)

SAF/AQ, LL, HAF Structure

**UON Process** 

Warfighter

**Defense Industry Sector** 

D&SWC

Who's the OPR in A4? Figure out who's in charge (Outline of key responsibilities) Training Requirements Driven by

**CONOPS** 

#### OTHER SA&D AREAS (stand-alone efforts in their own right, but addressed in

CONOPS and Training):

Tech Data Reachback GSC

Scheduled Maintenance

Nuclear Enterprise

**RNT AAIP ECSS**  Approval Information/Signatures

Ms Sarah V. Keller, ACC/A4P

#### 6. See Countermeasures Through

Maj Gen P. David Gillett, Jr, ACC/A4

#### Additional Information/Data/Vectors Needed:

Ownership for the CONOPS and A4 Training: Who is the process owner? Who is the team leader?

What form will the CONOPS take? (TTP, AFI, Annex,

Need to gather additional information and understand linkages and relationship between related efforts, e.g.: AFMC Guide

HAF/A4MY Efforts

AFI 63-101, Acquisition and Sustainment Life Cycle Management (Rewrite)



#### RESOURCE **REQUIREMENTS:**

A4 and A8 appointment of dedicated Team Leaders

Senior Leadership Priority and Support

Mid-level Leadership Priority and Support

Team Leader and Personnel afforded the time to do the work

Other ACC A-Staff and functional support as needed (A3, A4, A5, A8)

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#### 7. Confirm Results & Process



Completed CONOPS by 1 Jul 09

Completed Training Program by 1 April 09

#### **Measures to ensure improvements:**

Track progress in EC Council

Evaluate the priority afforded to the effort

Evaluate the effectiveness of resources applied to the effort (Do the Team Leaders have the resources, support, and afforded the time to do the work?)

Evaluate effectiveness of CONOPS (survey)

Evaluate training effectiveness (survey)

#### Link back measures outlined in problem statement

CONOPS and Training addresses all items identified in the problem areas / gap analysis

#### 8. Standardize Successful Processes



Standardization is achieved by formalizing the Weapon System Management CONOPS and instituting the formal Training Plan.

#### ROI:

Standardized processes

Trained AOs and WSTs

Increased aircraft availability to support increased mission requirements Improved communication and coordination

Better final product to the customer

#### OODA – Observe, Orient, Decide, & Act 8-Step Problem Solving Model

# Air Force Problem Solving Process & Related Toolsets

Approval Information/Signatures

#### 1. Clarify & Validate the Problem



- a. Does this problem, when solved, help meet needs identified by the organization?
  - Is it linked to the SA&D of organization?
  - Does it help satisfy customer needs (VOC)?
- b. Does this problem, when solved, address key issues identified during SWOT analysis?
- c. Has this problem been identified and directed by a Value Stream Map at the appropriate level?
  - What does the "Future State" need?
  - What resources have been identified to address this issue?
- d. What opportunities were identified or observed by the process or problem area "walk"?
  - Will addressing or improving these issues deliver results that relate to #a or #b?
  - Will addressing or improving this problem deliver the desired future state from #c?

**TOOLS:** SA&D, Voice of Customer, VSM, Go & See

#### 2. Break Down the Problem/Identify



#### Performance Gaps

- a. Does the problem require more analysis or does leadership have enough information to execute a solution?
  - Is this simply a leadership directive?
- b. If more data is needed, how do we measure performance now?
- What are the KPIs? What is the performance gap?
- c. Does other "non-existent" data need to be gathered?
- d. What does the data indicate are the potential root causes?
- e. Does the data review indicate a bottleneck or constraint?

**TOOLS:** KPI/Metrics, Performance Gap Analysis, Bottleneck Analysis

#### 3. Set Improvement Target



- a. Is the improvement target measurable? Is it concrete? Is it challenging?
- b. Is the target "Output Oriented"?
  - What is the desired output?
  - Should be "things to achieve"; should avoid "things to do"
    - -- Will be addressed by Action Plans (Step 5)
- c. The desired target should:
  - Do what? By how much? By when?
- d. If it is a Process Problem, what is the future state?
  - How will it be realized?

**TOOLS:** Ideal State, Future State Mapping, SMART

#### 4. Determine Root Cause



- a. What root cause analysis tools are necessary?
  - Why are these tools necessary?
  - What benefit will be gained by using them?
  - Who will need to be involved in the root cause analysis?
    - -- 10 heads are better than one
    - -- Remember "cultural" issues related to problem
- b. What is (are) the root cause(s) according to the tools?
- c. How will the root cause be addressed?
- d. Will addressing these address the performance gap?
- e. Can the problem be turned on or off by addressing the root cause?
- f. Does the root cause make sense if the 5 Whys are worked in reverse?
- Working in reverse, say "therefore" between each of the "whys"

**TOOLS:** 5 Whys, Brainstorming, Pareto, Affinity, Fishbone, Control Charts

#### 5. Develop Countermeasures



- a. Develop potential countermeasures
  - Tools and philosophies from Lean, TOC, 6 Sigma and BPR as appropriate
- b. Select the most practical and effective countermeasures
- c. Build consensus with others by involving all stakeholders appropriately
  - Communicate, communicate, communicate
- d. Create clear and detailed action plan
  - SMART actions
  - Reference Facilitation Techniques as appropriate

**TOOLS:** A3, Action Plans, Timelines, FM Tool

#### 6. See Countermeasures Through



- a. Which philosophy best prescribes tools that address root cause(s)?
- b. Which tools best address root cause(s)?
- c. Which method for implementation fits the tool and improvement need?
- Rapid Improvement Event?
- Improvement Project?
- Point Improvement or "Just Do It"?
- d. If RIE or Project, create "Charter" and communicate
- e. What training or education is needed? By Whom?

**TOOLS:** 6S & Visual Mgt, Standard Work, Cell Design, Variation Reduction, Error Proofing, Quick Changeover, TPM, RIE

#### 7. Confirm Results & Process



- a. How are we performing relative to the Observe phase (Steps 1 & 2)?
- b. How are we performing relative to Step 3?
- c. How are we performing relative to FM Tool projections?
- d. If we are not meeting targets, do we need to return to Step 4?
  - Most problem solving "breakdowns" occur relative to improper root cause identification

**TOOLS:** KPIs/Metrics, Performance Mgt, SA&D, Standard Work, Audit

#### 8. Standardize Successful Processes



- a. What is needed to Standardize Improvements?
  - Tech Order changes?
- Air Force Instruction changes?
- Official Instruction changes?
- b. How should improvements and lessons learned be communicated?
  - PowerSteering
- Key meetings?
- c. Were other opportunities or problems identified by the Problem Solving Process?
  - Restart OODA Loop

**TOOLS:** Checkpoints/Standardization Table, Report Out Theme Story, Broad Implementation, CPI Mgt Tool