SAF/AQX CPI SUCCESS STORIES
2010-2016

Office of the Assistant Secretary of the

Air Force (Acquisition)

9 September 2016

EXECUTIVE SUMMARY

Since 2010, the Deputy Assistant Secretary of the Air Force for Acquisition Integration (SAF/AQX) has provided professional Continuous Process Improvement (CPI) support to a variety of Air Force teams identifying both near-term and long-term as well as lasting strategic and tactical changes to our Air Force processes. SAF/AQX has guided over 50 process improvement events with over 1000 participants in the development of hundreds of process, policy, and organizational recommendations. Additionally, prior to and in conjunction with each event, SAF/AQX provided just-in-time training on CPI tools and techniques ensuring participants are prepared not only for the event itself but providing tools to make improvements throughout their careers.

Consistent with the multidisciplinary nature of acquisition, the SAF/AQX CPI program has identified improvements in a variety of functional areas impacting Air Force Acquisition processes. Summarized into one-page overviews and presented in date order (from most recent to oldest), the events highlighted in this document demonstrate the breadth and depth of topics addressed by SAF/AQX's CPI program, the diversity of organizations involved in the improvement efforts, and the "building block" approach of events leveraging the outcomes of other events. A complete list of events can be found at the end of this document.

- Office of the Secretary of Defense (OSD) Intelligence Mission Data (IMD) Prioritization – In support of J2, identified 19 courses of actions (COA) to enable improvements to OSD level prioritization of IMD.
- Acquisition Program Reporting Tiger Team – In support of SAF/AQX, revised the program reporting process/tools used by Acquisition Program Managers with expected $7+ million in benefits over a 3-year period starting in FY17.
- USAF IMD Prioritization Planning – In support of AF/A2, developed a new process to provide for Air Force prioritization of IMD to eliminate conflicts and duplication of effort.
- Critical Intelligence Parameters (CIP) Policy – In support of AF/A2, AF/A5/8, and SAF/AQ, identified necessary changes in acquisition, intelligence, and requirements policy to integrate CIPs, consistent with Better Buying Power 3.0.
- Military Manpower Processes – In support of SAF/AQH, streamlined military manpower processes to eliminate duplicate activities.
- Future Air Force Organization (FAFO) – In support of SAF/AQ and SAF/FM, identified 37 Full Time Equivalents (FTEs) to meet SECDEF direction for 20% reduction in headquarters staff authorizations.
- Engineering Enterprise Executive Council (EEEC) – In support of SAF/AQR, established foundation for the creation of the strategic plan, roadmap, and action plans to address SECAF Donley direction to "Go Fix Engineering" in 2012.
- Requirements Sufficiency – In support of AF/A3/5, facilitated multiple events to revise various aspects of the requirements/acquisition process, e.g., revised Analysis of Alternatives (AoA) process and created a process for Cost Capability Curves.
- Science and Technology (S&T) Tiger Team – In support of SAF/AQR, identified 15 potential actions to improve the processes for identification and prioritization of S&T needs.

Moving forward, the SAF/AQX CPI team is actively facilitating four initiatives as well as continuing to identify future potential process improvement initiatives. SAF/AQX stands ready to assist. For further information about coordinating a process improvement event, please contact Maj Todd Dawson (SAF/AQXP) at todd.c.dawson4.mil@mail.mil.

Office of the Secretary of Defense (OSD) Intelligence Mission Data (IMD) Prioritization (2 Events – Apr – Jun 16)

Participants:
SAF/AQX, USD(I), AIR TF, USN, ONI, HAF/A2, USA/ASA-ALT, DIA, AT&L USMC Intel, SAF/AQ, USN/RDA, USA JS/J8, DIA-DI/TLA-IMDC, USMC DC&I, NGIC, AT&L M&S, USMC ACQ, Test

Problem Statement:
IMD is used for programming platform mission systems in development testing, operations, and sustainment including but not limited to, the functional areas of signature, electronic warfare integrated reprogramming, Order of Battle, Characteristics and Performance, and Geospatial Intelligence.

The OSD-level Acquisition Intelligence and Requirements Task Force was chartered to identify potential deficiencies with the production of IMD. The Task Force identified four deficiencies:

1. The need for an enterprise process for prioritizing IMD requirements driven by intelligence sufficiency to meet operational requirements.

2. The need to improve data transparency and consistency.

3. The need to specify the role modeling and simulation can play in supporting IMD intelligence sufficiency determination.

4. The need to improve the agility of the process.

CPI Methodology:
Implemented various CPI techniques and tools which resulted in the development of 19 COAs addressing the four problem statement needs.

Applied CPI Tools:
Critical to Quality Tree, Is/Is Not Analysis, Real Time Documentation, BACKTRACK, 7-Block.

Direct Results/Benefits:
Through SAF/AQX facilitated exploration, the participants identified the following program lifecycle intelligence issues: Requirements, Early Acquisition (AoA through Milestone (MS) B), Production and Fielding (MS B through Full Operational Capability (FOC)), and Operations and Support. Defined 19 Courses of Actions (COAs) that consisted of: development of IMD breach process, consolidation of IMD databases, creation of a common IMD data format and dictionary, and employment of a portfolio approach to improve efficiencies.

Indirect Results/Benefits:
The benefit of this event will allow an improved IMD prioritization process to meet operational requirements throughout the lifecycle, and provide a feedback mechanism to deal with arising issues to make the process agile.

Six-month assessment to occur no earlier than December 2016.

Acquisition Program Reporting Tiger Team
(1 Event – Jan 16)

Participants:
PEO/BES, SAF/AQD, SAF/AQXC, SAF/AQXE, SAF/AQXR

Problem Statement:
Acquisition Program Reporting is the reporting structure for ACAT ID and ACAT IAM Programs and is directed by Statute. SAF/AQ leadership was not satisfied with acquisition program reporting as the existing process was perceived as having the following problems (e.g. duplicate data entry by the program offices, data manipulation, lack of an authoritative data source, and cost issues).

CPI Methodology:
Implemented various CPI techniques and tools which resulted in the development of four COAs to address the problem.

Applied CPI Tools:
Current State and Desired State process mapping and analysis, Acquisition Process Model, Brainstorming, PICK chart, document reviews.

Direct Results/Benefits:
Team found that the long-standing existing acquisition System Metric and Reporting Tool (SMART) was the principal issue that caused duplication of work, rekeying of information, data manipulation, and insufficient information on ACAT II and III programs. SAF/AQ leadership approved the first recommended COA, leveraging alternate existing reporting tool in place of SMART. Estimated savings of $7M over a 3-year period, exclusive of time savings in the program offices.

Indirect Results/Benefits:
Removed risk of incorrect and/or conflicting acquisition information being presented to leadership. Removed redundant actions that were consuming man-hours.

USAF Intelligence Mission Data (IMD) Prioritization Planning
(1 Event – Jan 16)

Participants:
ACC/A2, AFGSC/A2, AFMC/A2X, AFSPC/A2, AMC/A2, HAF/A2D, HAF/A2C, HAF/A5R, NASIC, SAF/AQX, 21 IS, 53WF/68EWS

Problem Statement:
IMD is used for programming platform mission systems in development testing, operations, and sustainment including but not limited to, the functional areas of signature, electronic warfare integrated reprogramming, Order of Battle, Characteristics and Performance, and Geospatial Intelligence. HAF/A2 leadership determined that the current IMD requirements process does not articulate the Air Force's highest priorities for IMD allocation of limited IMD resources to optimize mission impacts.

CPI Methodology:
Implemented various CPI techniques and tools which resulted in efficient, streamlined processes with clear roles, and responsibilities enabling better planning, developing, and prioritizing IMD requirements.

Applied CPI Tools:
Critical to Quality Tree, Is/Is Not Analysis; Current State and Desired State process mapping and analysis, Real Time Documentation.

Direct Results/Benefits:
Executed the revised processes and conducted an initial Air Force-wide IMD prioritization session in June 2016 – initial feedback indicated that this session was successful. Policy updated through Guidance Memorandum to AFI 14-111, *Intelligence Support to the Acquisition Life-Cycle*, issued 20 June 2016. Institutionalizing these process revisions results in a more efficient allocation of limited IMD resources to optimize mission impact(s).

Indirect Results/Benefits:
Success in this event led to SAF/AQX CPI support for the OSD-sponsored Acquisition Intelligence and Requirements Task Force for the improvement of IMD prioritization across the services.

Critical Intelligence Parameters (CIP) Policy
(1 Event – Nov 15)

Participants:
AFMC/A2, HAF/A2D, HAF/A5RC, HAF/A5RP, NASIC, SAF/AQQ, SAF/AQX

Problem Statement:
Critical Intelligence Parameters are threat capability or threshold established by program managers, changes to which could critically affect the effectiveness and survivability of the proposed system. HAF/A2 leadership determined that the Air Force must better integrate Intelligence into the requirements and acquisition processes for the development of CIPs, and the resolution of CIP breaches.

CPI Methodology:
Implemented various CPI techniques and tools from which the participants developed process and policy changes.

Applied CPI Tools:
Process analysis, Real Time Documentation, Current State and Desired State process mapping and analysis.

Direct Results/Benefits:
Team members revised the Configuration Steering Board process and recommended policy changes for more effective integration of intelligence into the requirements process and the acquisition lifecycle. Revisions to AFI 10-601— *Operational Capability Requirements Development* (Draft)*,* AFI 14-111 – *Intelligence Support to Acquisition* (Implemented), AFI 63-101 – *Integrated Lifecycle Management* (Final Review) are in process or complete.

Indirect Results/Benefits:
Successful execution of this event led to SAF/AQX support of two other related CPI opportunities: IMD prioritization for the Air Force and IMD prioritization for OSD (through the Acquisition Intelligence and Requirements Task Force).

Military Manpower Processes
(1 Event – Nov 14)

Participants:
AFMC/A1L, AFPC/DPALA, SAF/AQH, SAF/AQX

Problem Statement:
The acquisition personnel community determined that the current processes for utilization, development, and placement of military personnel do not have clear roles and responsibilities for the participating organizations. This lack of clarity impeded the implementation of the 20% personnel reductions recommended by the FAFO work from FY14.

CPI Methodology:
Implemented various CPI techniques and tools from which the team developed streamlined processes, roles and responsibility clarification. In addition, the participants developed process and policy changes with regards to utilization, development, and placement of military manpower.

Applied CPI Tools:
PICK Chart, Current State and Desired State process mapping and analysis, 7-Block, AFSO21 Problem Solving Process, Real Time Documentation, Value Stream (Process) Mapping, Value Analysis, SMART Metrics, Brainstorming, SIPOC, Theory of Constraints, Root Cause Analysis.

Direct Results/Benefits:
The team developed streamlined processes, roles and responsibility clarification with respect to utilization, development and placement of military manpower within acquisition (Air Force Assignment System/High Performance Officer and Materiel Leader/Squadron Commander). Revised processes implemented in the FY15-16 cycle. Streamlined activities eliminated non-value added activities between SAF/AQH and AFPC, reducing the amount of time spent in process execution (hundreds of hours) and reducing the amount of rework for assignment matches.

Indirect Results/Benefits:
Improved timeliness in personnel actions.

Future Air Force Organization (FAFO)
(Multiple Events – Nov 13 – Jan 14)

Participants:
AFMC A2/5, AFMC/A6, AFMC/EN, AFMC/FM, AFLCMC/AQ, AFLCMC/FM, AFLCMC/XP, AFPEO/SP, AFSPC/PI, AQ Capability Support Offices, PEO/BES, SAF/AQC, SAF/AQL, SAF/AQR, SAF/AQX, SAF/FMBI, SAF/IEL, SMC/EN, SMC/FM, SMC/PI, SMC/XR

Problem Statement:
As a result of SECDEF direction in 2013, the USAF was challenged to eliminate duplication, excess, and obsolete staff elements and to establish more effective and efficient Future Air Force Organizations (FAFO) including a 20% reduction in headquarters staff authorizations.

CPI Methodology:
The team implemented various CPI techniques and tools to develop and conduct assessments and evaluations of the various mission area to identify mission overlaps and redundancies within the system that could be targeted for streamlining or elimination.

Applied CPI Tools:
Acquisition Process Model, Current State and Desired State process mapping and analysis, 7-Block, Real Time Documentation, Brainstorming.

Direct Results/Benefits:
Teams developed 25 actions eliminating inefficiencies and consolidating work efforts – 32 Full Time Equivalents eliminated meeting 20% reduction objective.

Indirect Results/Benefits:
Reductions in Staff and redesigned processes have reduced SAF/AQ's internal transaction timelines.

Engineering Enterprise Executive Council (EEEC)
(1 Kickoff Event with ongoing support – Feb 13 – Jun 16)

Participants:
AEDC/TSS, AEDC/CZ, AFIT/SY, AFLCMC/EN, AFLCMC/EZ, AFLCMC/XZ, AFMC/A4, AFMC/A5C, AFMC/EN, AFNWC/EN, AFRL/EN, SAF/AQR, SAF/AQX, SMC/EN, SMC/XR, 711 HPW/RH

Problem Statement:
In 2012, SECAF Donley directed SAF/AQR to "Go Fix Engineering." Specifically, the SECAF indicated that the Air Force Engineering Enterprise does not adequately meet today's life cycle engineering expectations.

CPI Methodology:
SAF/AQX facilitated the initial event which led to the creation of the EEEC and the development of an Engineering Enterprise Strategic Plan, Roadmap, and Action Plans. The EEEC created a structure of 4 Priorities (with 11 supporting goals based on 58 objectives) to address issues within the Engineering Enterprise

Applied CPI Tools:
7-Block, Real Time Documentation, Virtual Carousel Brainstorming, Current State and Desired State process mapping and analysis, Virtual Facilitation, Performance Metrics.

Direct Results/Benefits:
The EEEC efforts have resulted in establishment of policy (AFI 63-101/20-101) which formally confirms that SAF/AQR is the Chief Engineer and Technical Authority for the Air Force and has authority to establish engineering delegated responsibilities at key acquisition decision points. Additionally, the EEEC has developed a common technical data taxonomy for capturing and reusing engineering data and a common construct to evaluate engineering competencies across all centers.

Indirect Results/Benefits:
EEEC has provided input for Better Buying Power 3.0 – specifically, the "Strengthen Organic Engineering Capabilities".

Requirements Sufficiency
(Multiple Events – Dec 11 - Aug 12)

Participants:
ACC/A8X, AETC/A5R, AFMC/A5C, AFSPC/A5V, ASC/AQD, ASC/WIS, ASC/XRE, ESC/ENS, ESC/FMC, HAF/A4/7, HAF/A5R, HAF/A8P, HAF/TE, MITRE, NGB/A5, OAS/A9A, RAND, SAF/AQI, SAF/AQR, SAF/AQX

Problem Statement:
At the Fall 2011 CORONA, SAF/AQ and AF/A3/5 co-led a discussion on Requirements Sufficiency, identifying the need to assess the current AF requirements and acquisition processes and recommend changes to enhance discussion on affordability and cycle time. The CORONA Fall Tasker directed the determination and presentation for approval of explicit steps to vet affordability, capability and cycle time trades throughout USAF requirements and acquisition processes.

CPI Methodology:
SAF/AQX CPI professionals implemented various CPI techniques and tools to support the development of prioritized recommendations to address.

Applied CPI Tools:
Real Time Documentation, Pro/Con, Survey, Current State and Desired State process mapping and analysis, Root Cause Analysis, Brainstorming, Value Stream and Ideal State Mapping, 7-Block, Affinitization, Visioning, Activity Mapping, Brainstorming, Multi-voting.

Direct Results/Benefits:
Process redesigned for three initiatives: (1) Evaluate centralized Development Planning funding, (2) Refine the AoA process, and (3) Develop Cost and Capability curves. Personnel, policy and process changes that are now fully implemented.

Incorporated into AFI 10-601, *Operational Capability Requirements Development*, "*The AFI incorporates changes …, and implements requirements guidance developed as a result of Air Force acquisition improvement events.*"

Highlights of overall reengineering effort include: (1) Recommendation for Centralized Funding for Development Planning, (2) Refined AoA process with associated revised guidance for conducting Capability Based Assessments (projected savings of $1 million per AoA), (3) Process developed and implemented for preparing and managing cost-capability curves.

Indirect Results/Benefits:
This effort fed into the Bend the Cost Curve initiative and the Capability Development initiative.

Science and Technology (S&T) Tiger Team
(2 Events – Feb – Apr 10)

Participants:
AAC/XR, ACC/A8M, ACC/ST, AETC/A5/8/9, AFGSC/A5P, AFMC/A5S, AFRL/XP, AMC/A5/8, AFNWC/XR, AFSOC/A52, AFSPC/A5X, ASC/XR, HAF/A5R, HAF/A8X, ONR, SAF/AQR, SMC/XRD

Problem Statement:
The HAF and MAJCOMs lacked clear and consistent insight into how AF Science and Technology (S&T) priorities were established, how associated resources, and solutions were allocated and the how S&T efforts were transitioned.

CPI Methodology:
The team implemented various CPI techniques and tools that addressed Identification of Needs and Governance Process.

Applied CPI Tools:
Real Time Documentation, Process Modeling, 7-Block, Prioritization, Brainstorming, Action Plans for Communication, Engagement and Governance, SIPOC, PICK Chart, Parking Lot.

Direct Results/Benefits:
Developed processes that identify and prioritize S&T needs as well as to provide governance on large 6.3 technology demonstrations and funded transitions to warfighting capability. The 2011 Air Force S&T Plan incorporated the findings from this team.

Indirect Results/Benefits:
Provided foundational background for the work done in response to the issuance of the Air Force Strategic Master Plan, including the establishment of the Capability Development Council and the Capability Development Working Group in FY16.

Summary of Rapid Improvement Events

	Initiative/Event	Date	Attendees	Sponsor Organization
1	Capability Development Working Group	28-Jul-16	17	SAF/AQR & AF/A5R
2	Capability Development Working Group	25-Jul-16	13	SAF/AQR & AF/A5R
3	Audit Process	Summer 16	5	SAF/AQX
4	Engineering Enterprise Metrics	Summer 16	12	SAF/AQR
5	OSD Intel Mission Data (IMD) Phase 2	17-18 May 16	28	USD(I) - AIR TF
6	OSD Intel Mission Data (IMD) Phase 1	29-Apr-16	41	USD(I) - AIR TF
7	SAF/AQH Process Mapping/Continuity Guide	April 16	1	SAF/AQH
8	Directed Energy Flight Plan Kickoff	15-16 Mar 16	34	SAF/AQ & AF/A5/8
9	Acquisition Program Reporting Tiger Team	21-Mar-16	10	SAF/AQ & AF/A5/8
10	Directed Energy Flight Plan Development	2-Mar-16	30	SAF/AQX
11	Engineering Enterprise Annual Meeting	9-11 Feb 16	55	SAF/AQR
12	Air Force Intel Mission Data (IMD)	19-21 Jan 16	20	AF/A2D
13	SAF/AQX Offsite	22-23 Dec 15	12	SAF/AQX
14	Critical Intelligence Parameters	10-Nov-15	13	SAF/AQX
15	Military Manpower In Acquisition SAF/AQH	18-19 Nov 14	6	SAF/AQH
16	AQX Offsite	Fall 2014	14	SAF/AQX
17	Bending the Cost Curve (10 Calls)	Summer 2014	35	SAF/AQP
18	Centralize Resource Advisor (AQXR)	18-Jun-14	14	SAF/AQX
19	Affordability Analysis	6-Jun-14	8	SAF/AQX
20	FAFO - IT	9-Jan-14	8	SAF/AQ
21	FAFO Acquisition Management	20-Dec-13	19	SAF/AQ
22	FAFO Financial Management	18-19 Dec 13	7	SAF/AQ
23	FAFO Financial Management	10-12 Dec 13	13	SAF/AQ
24	FAFO - IT	1-Dec-13	8	SAF/AQ
25	Services Acquisition	4-5 Sep 13	21	PEO/CM
26	Standard Line of Accounting	16-18 Jul 13	15	SAF/FMP
27	Human Systems Integration	26-27 Feb 13	20	AFHSIO and AFLCMC/CV
28	Engineering Enterprise Kickoff	19-22 Feb 13	54	SAF/AQR
29	AQX Integration	12-13 Feb 13	17	SAF/AQX
30	SAF/AQRE Revitalization	11 & 14 Jan 13	15	SAF/AQR
31	SAF/AQRE Revitalization	18-Dec-12	16	SAF/AQR
32	F-15 TDAS	13-16 Nov 12	8	AFLCMC/WN (Agile Combat Support PEO)
33	Corrosion	20-22 Sep 12	29	AFLCMC/WN (Agile Combat Support PEO)
34	C130J MATS	20-24 Aug 12	8	AFLCMC/WN (Agile Combat Support PEO)
35	ACS Process Mapping	26-Jul-12	2	SAF/AQ, AF/A5R, and AFMC/A5C
36	Requirements Sufficiency - Overarching	28-29 Jun 12	10	SAF/AQ, AF/A5R, and AFMC/A5C
37	Requirements Sufficiency - DP Funding	15-16 May 12	15	SAF/AQ, AF/A5R, and AFMC/A5C

38	Requirements Sufficiency - Cost Capability Curve	19-Apr-12	12	SAF/AQ, AF/A5R, and AFMC/A5C
39	Requirements Sufficiency - DP Funding	26-Mar-12	25	SAF/AQ, AF/A5R, and AFMC/A5C
40	Requirements Sufficiency - Kickoff	17-18 Jan 12	23	SAF/AQX
41	CSB/AFRB/ASP Secretariat	December 2011	15	SAF/AQX and AF/A4L
42	FPRA	16-Aug-11	13	SAF/AQX
43	NGREA	16-18 May 11	20	SAF/AQX
44	AMC Fuel	18-22 Apr 11	55	AMC/CV
45	EWAG	13-Apr-11	20	AFMC/A5S
46	NGREA	21-Dec-10	27	SAF/AQX
47	Integrate Working Group	12-Aug-10	15	SAF/AQX
48	Integrate Working Group	14-Jul-10	38	SAF/AQX
49	AQXL Stand Up	29-Jun-10	13	SAF/AQX
50	Integrate Working Group	3-Jun-10	24	SAF/AQX
51	AQXL Stand Up	27-Apr-10	21	SAF/AQX
52	S&T Tiger Team	22-23 Apr 10	30	SAF/AQ
53	S&T Tiger Team	17-18 Feb 10	41	SAF/AQ
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