AMC Quality Federation (AQF) for a Transforming Army

Presented to:
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AMC G-3

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AMC Quality Federation Customer Liaison

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Bottom Line Up Front

- Quality & System Assurance (Q&SA) plays a Pivotal Role in Army Transformation
- The AMC Quality Federation (AQF) is an AMC Community of Practice (COP) that provides a virtual, integrated business framework through which quality issues can be addressed, evaluated and acted upon
- The AQF has created a strategic vision for the long-term integration of core quality competencies and processes. This Strategy is called "Quality for the 21st Century" (Q21)
- The AQF is Adding Value to the Army’s Mission
- Long-term Stability Necessitates Command-level Involvement
Status of Army Quality

• Subset of Systems Engineering (ASAALT)/Industrial Operations (AMC) at HQ
  - Resources Limited
  - Increasing Reliance Upon Sub-Commands

• De-Centralization in Several Commodity Areas
  - Strained (but Improving) Intra-Army Quality Communication
  - Some Quality Professionals Managed by PEOs/PMs
  - Functional Integrity/Core Competencies in Jeopardy

• Acquisition Community Reorganized
Army Quality Challenges

• Risk-based/Business-based Implementation of Commercial Quality Practices
• Support to “Acquisition Excellence” Principles
• The Army needs to be an Educated Customer and Proactive Partner
  – Proficient in Related Competencies
  – Provide Detailed RFP/Contract Language
    • Basic Quality
    • Advanced Quality/Quality Engineering
    • Continuous Improvement Partnerships
  – Funding Profiles & Contract Incentives Consistent w/ Life Cycle Objectives
  – Risk-based Quality Supplier Management
    • Partnership with DCMA, et al.
Transformation Quality Roadmap

Robust Designs & High-Quality Products

High RMS Systems

Reduced Logistics Footprint

Shortening the Acquisition Life Cycle

Light Response w/ Heavy Lethality & Reduced Life Cycle Cost

RMS of Objective Force Systems = f (Design Reliability, Life Cycle Quality)
Transformational Quality

• Army Transformation Requires an Evolution in Life Cycle Quality Management

• Army Quality must Add Value to Program Managers to Remain Relevant
  - Materiel & Process Performance
  - Total Ownership Cost
  - Program Risk

• Army Quality must Possess the Necessary Skills, Tools and Techniques
AMC Quality History

• AMC Product Assurance & Test Directorate (S.J. Lorber)
  - Disbanded in the Late 1980’s
  - De-centralization of Quality

• Product Assurance Quality Management Board (PAQMB)
  - Formed in the Early 1990’s
  - Championed by AMC Principle Deputy for Acquisition (D. Adams)
  - Discussed Quality Issues
  - No Coordinated Activity

• HQ AMC Quality Mission Currently Resides with Deputy G-3 for Industrial Operations
  - One 1910 Position
  - Too Many Hats to be Fully Engaged
  - Quality Fragments in Other Divisions, i.e. Current OPS, Support OPS

• AMC Quality Federation
  - Formed in 2000
AMC Quality Federation (AQF)

What is it?
• A seamless, integrated, virtual structure that leverages quality resources from all AMC organizations to support the Transformation of the Army
• An AMC Quality Community of Practice
• The Single Voice for AMC Quality
• Chaired by the Director for Quality Engineering & System Assurance, RDECOM-ARDEC

Who is it?
• AMCOM
• LEAD
• CCAD
• CECOM
• TYAD
• JMC
• RDECOM
• TACOM
• GSIE
• RRAD
• ANAD
• SIAD
• WVA

Stakeholders: ASA(ALT) Partners: DCMA, NASA, JDPA
AMC Quality Federation (AQF)

Why it was Formed?

• Superceded PAQMB
• Modeled after TACOM Quality Federation
• Championed by AMC Principle Deputy for Acquisition (G. Tull & S. Flavin)
• Lead/Facilitate AMC Quality Transformation
• Provide AMC with a strong, cohesive and comprehensive quality voice
• Create a business environment to share best practices and maintain core competencies
• Leverage scarce quality resources
AQF Strategic Vision – $Q_{21}$

**Solution Set #1:**
Internal Quality Management (Improve Ourselves)
- Core Competencies
- Quality SPIs
- IDEs

**Solution Set #2:**
Quality Supplier Management (Improve our Suppliers)
- Supplier Management Evolution
- Gov’t & Commercial Partnerships
- Use of Past Performance Info
- Promote & Incentivize World-class Practices

**STRONG TOOLKITS**
- ISO/AS/Qs
- LEAN/6σ
- CMMI
- ATRIP Tools

**Partners:**
- NASA
- J.D. Power and Associates
AQF Initiatives

• AMC CG briefed CQSDI March 03 on behalf of AQF
• Transformed/Redeveloped Independent Quality Organizations at CCAD, RRAD and ANAD
• Partnerships with NASA, OSD, ASA(ALT), DCMA, etc
  – Reference, 8 Oct 03 MOA with NASA
• AQF is the recognized Quality Voice for RDECOM
  – Reference, 19 Sep 03 RDECOM Memorandum
• AQF Endorsement
  – Reference 6 Jan 04 AMC Memorandum
• ATRIP, LMP, Lean/6σ, and a J.D. Power’s Voice of the Customer Pilot
  – JDPA Brief to ASA(ALT), Date TBD
• Common Toolkits
• Collectively working initiatives, i.e. AMC PQDR Steering Committee
• Established an AQF Liaison at AMC HQ
AQF Liaison

• Assigned to HQ, AMC
  - Effective May 2003
  - Office of the Deputy G3 for Industrial Operations

• Objectives:
  - D.C. Area AQF POC
  - Proactive Customer Satisfaction
  - Q&SA G2
  - Facilitate/Coordinate AQF Initiatives
    • Core Competencies
    • Process Transformation
    • Lean/6σ
    • Supplier Management
    • Partnerships
AQF Benefits to AMC

• AMC’s Source for Corporate Knowledge on Quality
• Vehicle through which to Evolve AMC Quality Practices
• Promotes Quality Data-Exchange & Lessons-Learned Across AMC
• The Single “Face” of AMC Quality to the Outside World, including;
  - ASA(ALT)
  - OSD
  - NASA
  - DCMA
• Ready Source of Quality POCs to Tap for Quick Response
  - DCMA DFARS cases
  - Joint PQDR AR 702-7
  - Jump Started the stalled PQDR LMP issues
The Role of the G-3?

- 2-Star HQ Quality Champion/Advocate
- Monitor AQF Activities
  - Periodic Reviews
- Make Recommendations to AQF
  - HQ Vision
  - Set Priorities
  - New Initiatives
  - G2
- Promote & Facilitate “Beltway” Partnerships
- Help Acquire Needed Resources
- Consolidate HQ Quality activities
  - Direct, independent line to G-3
  - Align quality functions under a single group/identify quality POCs from other G-3 divisions as matrixed support
Take-a-Ways

• Quality is Important for Transformational Success
• HQ Resources are Limited
• The AQF Q\textsuperscript{21} Strategic Vision Focuses on Essential Issues for wide Quality Influence
• AQF Provides the Required Leadership & Competencies
• AQF Partnering with AMCOPS-IB
• A G-3 Quality Champion provides needed HQ Visibility
Back up
"As a collective AMC Quality Team we can institutionalize a progressive Q&SA culture throughout our organizations."

General Paul J. Kern, AMC
06 Jan 2004

RDECOM

MEMORANDUM FOR ALL RDECOM Technical Directors

SUBJECT: Quality and System Assurance in the US Army Research, Development and Engineering Command (RDECOM)

1. In his March 3, 2003 keynote address to the Conference on Quality in the Space and Defence Industries, General John C. Doesburg stated that the Army's strategic and business transformations were leading to the Army's need for Q&SA. Specifically, General Doesburg emphasized the need of commercial quality and system assurance (Q&SA) standards for the Q&SA team in the context of the Army's acquisition program. General Doesburg also recognized the Army Materiel Command (AMC) Quality Program as a valuable, independent source to assist Army leaders in addressing the Army's Q&SA needs.

2. The AMC Quality Program (QCP) is a valuable, independent source to help Army acquisition and programs manage risk and ensure success. The AMC QCP integrates the best practices from AMC's subsystems engineering, design, and assurance. The QCP provides an integrated quality and system assurance (Q&SA) program. AMC QCP is a virtual support that can support AMC Q&SA requirements in a variety of ways, including virtual support to AMC Q&SA requests.

3. The AMC QCP has developed an integrated Q&SA strategy for AMC Q&SA requirements. This strategy includes supporting AMC's acquisition planning and implementation. The AMC QCP is also responsible for providing AMC Q&SA support to AMC's acquisition planning and implementation. The AMC QCP is also responsible for providing AMC Q&SA support to AMC's acquisition planning and implementation.

4. AMC QCP's role in AMC's acquisition planning and implementation includes:
   a. Providing AMC Q&SA support to AMC's acquisition planning and implementation
   b. Providing AMC Q&SA support to AMC's acquisition planning and implementation

5. AMC QCP's role in AMC's acquisition planning and implementation includes:
   a. Providing AMC Q&SA support to AMC's acquisition planning and implementation
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As a collective AMC Quality Team we can institutionalize a progressive Q&SA culture throughout our organizations.

General Paul J. Kern, AMC
06 Jan 2004
Q_{21} Framework

- **Quality Management Systems**
  - ISO, AS, TS, TL, NATO
- **Quality System Assessments**
  - “(CP)2”, QSL, CMM-I
- **Quality Engineering**
  - DFL/6σ, DF Supply Chain, DMSMS
- **Quality Assurance**
  - POS, SPC, FAT/LAT, PCA/FCA, CIVR
- **Quality Performance Assessment**
  - PPAIS, PPIMS, RAMP, VOC

- **Quality Performance Improvement**
  - Six Sigma, Lean
- **Quality Workforce Credentials**
  - CQM, CQE, CQA, CPM, MS QE, MS Mantech
- **Quality Partnerships**
  - NASA, DCMA, OSD QMO, ADQMC, MDA, JDPA
Draft AMC Q\textsubscript{21} Enterprise Excellence Program Plan

- Reference 12 Jan 04 Brief to Gen Kern
- Plan for Cmdr, AMC Endorsement/Approval
- Draft – Subject to AQF & AMC G3 Concurrence
- Includes:
  - Current Initiatives
  - Deployment Model
  - Implementation Infrastructure
  - Notional Schedule
  - Lead System Integrator
AQF & ATRIP

Army Transformation Reliability Improvement Program

“RMS Culture Change for the Army”

ATRIP

- World Class Tools
- Best Practices
- RMS Technologies
- SW Reliability
- Network Reliability
- SoS Reliability
- “Pit Stop” Engineering
- Diag/Prog Sensors
- Probabilistic Analyses
- Physics of Failure
- Predictive Engineering
- LC Cost Models
- Progressive Assurance
- PBL/RCM
- etc

AQF

Accelerating RMS Knowledge Into FCS/OF Quality Systems

Army, Industry, LSI

RMS Core Competencies

F - the Quality Foundation for Transformation Success
AQF & the GSIE

- Operates an Industrial Enterprise Utilizing Designated Sites
- Member of the AQF Community of Practice
  - QA Directors at ANAD & RRAD
  - Use of Quality Function Deployment
  - Process Transformation & Standardization
    - Lean/6σ Initiatives at all Sites
  - Enterprise ISO 9001:2000 Registration
    - GSIE Contract w/Site Certification
  - Enterprise Metrics: Quality, Cost, Schedule & Customer Satisfaction

....Leverages all AMC Ground Systems Industrial Base Assets
AQF & J.D. Power

- Current Army Supplier Management through DCMA RAMP, Partnerships and use of PPI
- Customer Satisfaction Ratings often Play a Role in Commercial Buying
- J.D. Power provides Customer Ratings for several Sectors (Automotive, Services Consulting, Energy/Communications, Travel, Finance & Home Building)
- The AQF facilitated meetings with PM Stryker, GDLS, DCMA & J.D. Power whereby it was determined that the Stryker would serve as an Army Pilot for J. D. Power’s Voice of the Customer Assessment
AQF & LMP

- Assuring Quality input in the Logistics Modernization Program (LMP) and the Tools used by Quality Professionals
- SAP-based Programs to replace:
  - Standard Depot System (SDS)
  - Command Commodity Standard System (CCSS)
- Total Integrated approach across AMC
- AQF on site at Contractors Facility, Moorestown, NJ
- Participated in New Process Creation and Reviewed SAP Applications for Quality Processes
AQM & Lean/6σ

• Lean/6σ is Key AQF Business Tool
  - Transforming Processes and Management Concepts
  - AQF cuts across all AMC
    • Total Life Cycle Responsibility
    • Working with both Simpler and VSE
    • Positioned to Implement Lean/6σ

• Standardizing Cost Savings using VE Process
  - Recognized Standard
  - Independent Evaluation
  - GAO Critical of Low VE Savings

• Proposed Implementation
  - AMC Leadership
  - AQF as Executive Agent
  - 05 Jun Meeting with AMC G3
Quality Supplier Management

- Customer-Focused
- Supplier-Sensitive
- Risk-Based
- Performance-Based
- Objective
- Quantitative

QSM = f (Quality System Management & Past Performance)
AQF & FCS

• 05/21/03 Meeting at Boeing Integrated Defense Systems, Philadelphia, Attendees:
  - AQF (ARDEC, AMRDEC)
  - PM FCS (Product Assurance Manager)
  - Boeing Quality (Multiple Sites)
  - DCMA (HQ, St. Louis & Philadelphia)

• Boeing Briefs on; FCS Program Overview, FCS Quality Organizational Structure, FCS Quality Program & FCS Supplier Management

• Points of Note:
  - Quality Program Director Accountable to FCS Program Manager
  - Quality Team Embedded throughout the FCS Enterprise, including; Site (internal) QA, Software QA, Supplier QA, Reliability and Mission Assurance
  - Full deployment of the Boeing Quality Management System (AS9100 +) to all Business Units, Sites & Suppliers
  - A Preferred Supplier Certification for Acquisition & Partnering
  - Boeing Supplier Management Relying Heavily on Primes & DCMA
AQF & FCS (cont.)

• Outcomes:
  - Positive Foundation for Boeing/Army/DCMA FCS Partnership
  - Details TBD in Subsequent Meetings
  - Follow-on Meetings on FCS Reliability and Software Quality

• Actions:
  - PM FCS & AQF to ID Army FCS Quality Structure & Coordinate Insight functions with DCMA St. Louis (Lead FCS Integrator)
  - PM FCS to ID CECOM/CERDEC Quality Resources

• Issues:
  - Level of RDECOM Quality/AQF Support
  - Level of DCMA Support via QALIs