Aeronautical Systems Center

Dominant Air Power: Design For Tomorrow…Deliver Today

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Mind The Gaps – A Systems Engineering Implementation of DODI 5000.02

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Overview

- **Purpose**
- **Background**
- **ASC Engineering Assessment**
- **Summary**

Purpose

- **To present ASC/EN's unique approach to implement current policy DODI 5000.02**

Background

- **DoDI 5000.02 released in Dec 2008**
- **Directed by ASC Director of Engineering to identify local policy impacts and implementation**
- **Conducted a preliminary assessment in early 09 and recommended an offsite for a gap analysis**
- **Held an ASC engineering offsite in Mar 09**
  - Members: Engineering Senior Leaders, Wing DOEs, ASC/EN division chiefs/tech directors, XR, AQ DOEs, and ASC/AQ staff

Background

- **Promulgated across AF to raise awareness**
  - Resulted in other functionals to do the same
- **Presented results at the SAF/AQR ILCM Tech Forum and HQ AFMC Engineering Council in May 09**

ASC/EN Assessment

ASC/EN Assessment Approach

- **Evaluated 5000.02 changes for each Milestone and Phase**
- **Identified gaps (processes/tools/training) between DoDI 5000.02 and current ASC systems engineering processes/toolset**
- **Consolidated and prioritized gaps**
- **Outbriefed to ASC Director of Engineering in Mar 09**

Goal: To meet statutory and regulatory requirements

5000.02 Major Changes

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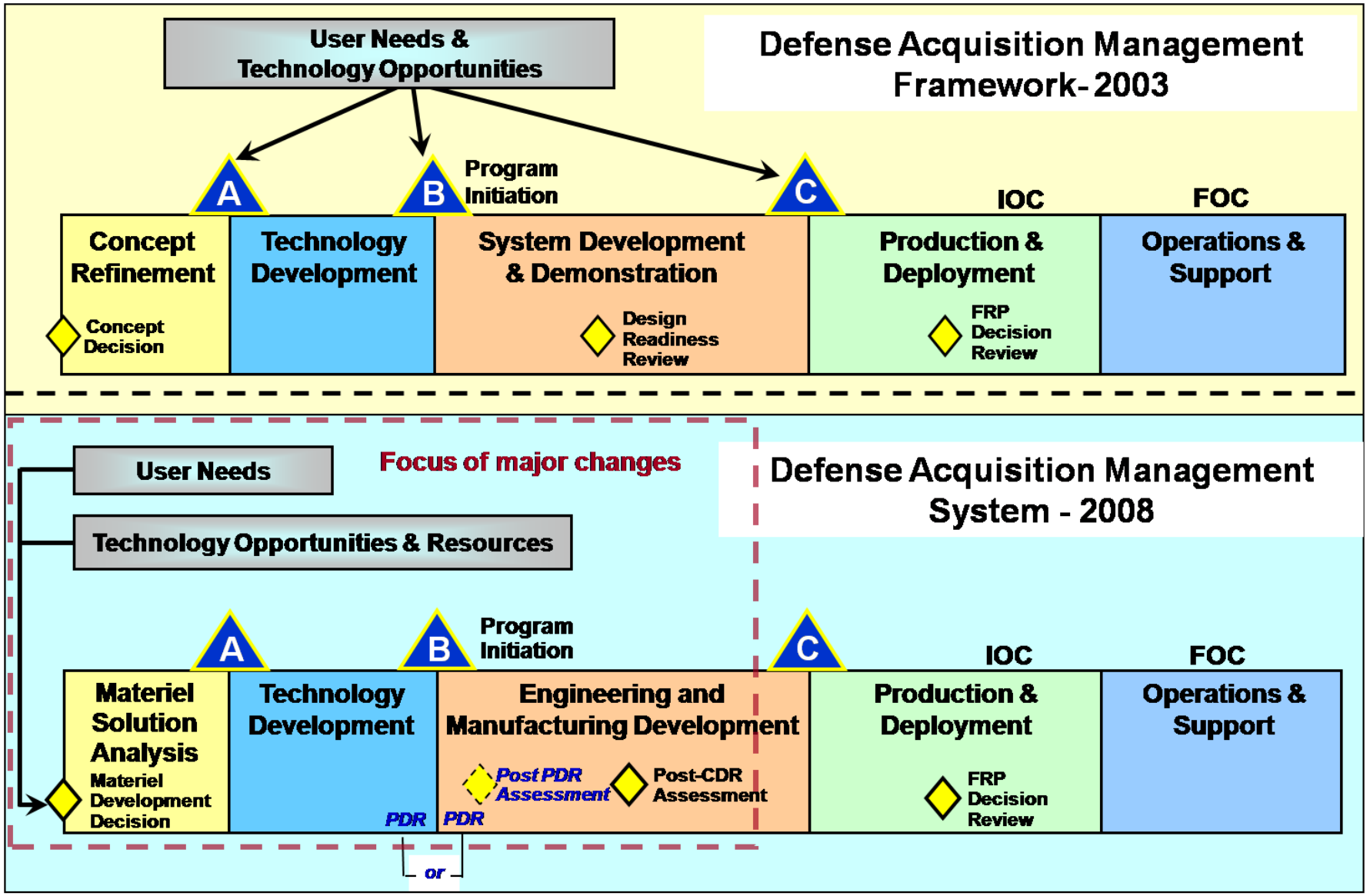

Requirements Flow-Down

- **OSD**
  - DoDI 5000.02
  - DAG being updated
- **AF**
  - AFPD 63/20-1 and AFI 63-101, 63-1201
  - D&SWS initiatives
  - SAF/AQ policy memos
- **HQ AFMC**
  - AFMCI 63-1201
  - AFMC policy memos
- **ASC**
  - PEO Memos
  - ASC/EN SE Toolset

5000.02 Key Emphasis for Engineering

- **More Robust Systems Engineering**
  - Emphasis much earlier in life cycle
  - More robust Analysis of Alternatives (AoA)
  - Manufacturing emphasis
- **Technical Risk Reduction**
  - Competitive prototyping
- **Independent SME Reviews**
- **Additional Program Documentation**
  - Technology Development Strategy
  - PDR assessment report
  - CDR assessment report

Prioritized Gaps

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Near Term Efforts:

- **Engineering Manpower Strategy**
  - PDR Bfr MS B Gap: No manpower allocations to execute TD phase objectives (i.e., prototyping/PDR)
  - PDR Bfr MS B Gap: Independent SME manpower driver, to include RFP prep, source selection support, and other predecessor PDR reviews (i.e., SRR)
  - EMD Gap: Independent SME manpower driver (EN HO and Wings)
- **MDD Gap: No technical planning document exists to guide early systems engineering activities – ASC/EN and XRE**
- **TD Gap: RAM strategy not uniformly implemented across all programs**
- **TA Gap: Lack of EN-corporate process for TRA/MRAs**
- **EMD Gap: No template for PDR/CDR Reports**

Long Term Efforts:

- **MS A Gap: No template for Technology Development Strategy (TDS)**
- **TR Gap: Lack of definition for "independent SME"**
- **MDD Gap: Lack of formalized process for engineering SME reach-back support**
- **MSA AoA Execution Gap (process): Lack of formalized process for engineering SME reach-back support**
- **MSA Gap: New requirement (SAF/AQR/AFMC/EN) to develop Organizational SEP (O-SEP) or Operating Instructions (OIs)/training**
- **TD Gap: Lack of decision analysis guidance on determining requirements for maturity of critical technologies and/or competitive prototyping**
- **TD Gap: No template for Data Management Strategy**

Summary

- **Better understanding of 5000.02 impacts**
- **Focusing on near term efforts**
- **Still in flux – additional guidance will follow**
  - Weapon Systems Acquisition Reform Act of 2009, dated May 09
  - Will implement as additional guidance becomes available
- **May drive additional manpower**