Sustainment Planning in the Acquisition Process and throughout the Life Cycle: How early is too early?

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Where are we going? (goals):

1 – successful acquisition programs

2 – design in Affordable Readiness and Maintainability

3 – add value without duplicating Service / Stakeholder sustainment analysis
Where are we now:

- Waiting until Milestone (MS) C and FRP when O&M bill payers / funding becomes on FYDP problem.
- Throwing Programs over the fence to the Materiel Commands to sustain and fund
- POM O&M in crisis mode: SOP to fund 80% of already low-ball O&S/O&M Cost estimate
- Someone else’s problem 5-20 years from now

Where are we going? (goals):

1. successful acquisition programs
2. design in Affordable Readiness and Maintainability
3. add value without duplicating Service / Stakeholder sustainment analysis

How we get there:

- You’re your own advocate: Council of Colonels (CoC) and OIPT / SIPT / WIPT…
- Create your own and take every opportunity to coach: every working group is your team
- Create and lead your own Sustainment Enterprise Team:
  - Product Support, O&S Cost Risk, and Sustainment Planning (RDT&E, Procurement & O&S)
Analysis of Alternatives (AoA)

- **AoA Key Documents:**
  1. CAPE AoA Study Guidance
  2. AoA Report
  3. CAPE’s Assessment of Sufficiency
     (AKA AoA Sufficiency Analysis)

- **Affordability and Product Support Risk Assessments**
  - O&S Cost Affordability: portfolio-level O&S/O&M requirement analysis
  - Product Support Planning Operations & Sustainment

- **Integrate results into:**
  - Requirement Documents (ICD, CDD)
  - Acquisition Strategy review process is directly informed by our participation/observation of AoA processes.
Any program is affordable if you look at cost one program at a time.

“… looking at any one of these systems as an individual system, you can sell just about anything. But, when you look at the entire portfolio you can start to see where we have duplication in different systems or maybe we’re overinvesting in one and underinvesting in another.”

—Army Campaign Plan 2012
• Service Resource Managers (Service 8s) manage portfolio-level O&S Cost Affordability Assessment criteria.

• Service’s portfolio-level affordability analysis and conclusion (O&M sand chart)
  
  o Does Portfolio appear (affordable or unaffordable) with potential negative impact to (other programs)?

  o Are we able / unable to assess O&S Cost Affordability risk for the FVL and FVL CS3 Portfolio with the affordability analysis currently available?
Analysis of Alternatives (AoA)

• **O&S Cost Affordability Assessment:**
  
  o Service’s portfolio-level affordability analysis (sand chart) and compare it to the current FYDP
  
  o Assessment of each likely alternative
    Legacy A+ vs Legacy B+ vs new start
  
  o Is there enough data to effectively assess O&S Cost Affordability risk?
“Affordability Readiness” assessment

- Maintenance Concept affects O&S Cost Sensitivity Analysis (critical sustainment cost drivers)

  (1) **Manpower** (MIL, Gov’t, Contractor)
      Impact of CLS O&M-must-pay annual bill?

  (2) **Parts**
      - production / manufacturing
      - contract and organic repair of spares
      - Contract DLR/LRU repair start date
      - transition start/end date to Organic Depot repair
      - TDP Options

  (3) **Fuel Consumption** (relating to Operational Radius)
• **RDT&E** sustainment requirements include:
  o fully staff software engineering support completion of initial software releases
  o Reliability testing and analysis

• **Other Development** requirements include:
  o operator and maintainer training efforts
  o depot standup
  o software support activity standup
  o software lab assets
  o fully fund development and procurement of initial spares and to fund the repair of repairables contract
• Other O&S Cost Estimate Sensitivity Analysis considerations:
  o If COTS/GOTS Alternative, use of existing commercial/government?
  o Current FAA-licensed mechanics? (UH-72A example)
  o Feasibility of MIL mechanics getting FAA licenses?
  o CLS / MIL / HYBRID requirements?
  o CLS for Life is not feasible/affordable.

• TDP Options: Who owns what?
  o Assert Data Rights for New Development
  o Require Cost Estimate of Level III Repair for depot level repair of select components / sub-components in TMRR RFP.

• RFP, PSS, and SPS alignment:
  o Incremental Physical Configuration Audits (PCA): Conduct PCAs as components become available.
  o Will Contractor-provided depot-level repair be in place to support Material Support Date?
  o Readiness / Cost risk if DLR capability established at OR after IOC + 4 years?
• **Upgrades and Mods are planned and programmed dollars:**
  - Service-level long-range resource requirement forecasts
  - Identify potential portfolio resource constraints
  - Example: Improved Turbine Engine capabilities

• **Commonality of** maintenance, supply chain management, operator and maintainer training, sustaining engineering and other FVL logistics elements?
  - Does design drive commonality?
  - Facilities: assumptions made?
  - Metrics: When comparing Ao to MC, what are the common sub-level metrics to provide optimal readiness outcomes?

• **OTA / MTA:** Sustainment Planning and O&S Cost Affordability gaps identified/mitigated if using Other Transactional Authorities (OTA) and Middle Tier Acquisition (MTA) authorities?
Source-selection criteria for Product Spt and O&S

• O&S Cost reporting and estimate requirements

• Logistics Management Information (LMI) data quality

• Logistics Product Data (LPD)

• provisioning planning

• technical manuals

• software life cycle planning

• Data module format: reusable taxonomy (one definition to meet all stakeholder needs beyond sustainment and O&S cost)
Acquisition Strategy (AS)
Concept of Sustainment

- **FSR Footprint:**
  - Identify FSR size and duration
  - FSRs perform maintenance and supply support for unique items (LRUs)
  - Interim Contractor Logistics Support (ICLS) thru authenticated maintenance products authentication and availability
  - OEM/Contractor provides all Basic Issue Items (BII) including authenticated Operator Technical Manuals.
  - Successful logistics demonstration (LOG DEMO) for critical maintainer tasks prior to FRP decision.

- **Operating & Support (O&S) Cost Affordability**

- **Sustainment and O&S Cost Metrics available trade space**

- **logistics product development (LPD) scheduled deliverables includes:**
  - LORA and TM delivery – and then their use during LOG DEMO
  - LOG Demo of critical operator and maintainer tasks prior to FRP decision
  - LOG DEMO planning

- **Realistic schedules and estimates considerations:**
  - Workforce availability: Sustainment experts to deliver logistics products and ECPs
  - TDP Level III data (depot repair tech data)

- **Is Sustainment commonality realistic?**
MDA Delegation and MTA: Sustainment Factors

ACAT ID **MDA** Delegations in Sept 2015

- Most programs were approaching or post MS-C
- After mass delegation memos, only one program delegated
- Example: Navy LCS delegated with 90% Fielded at time of delegation

**MTA notional** examples of actual programs:
- USMC Amphibious Combat Vehicle (ACV)
- Army UH-72 Lakota Light Utility Helicopter (LUH)
- **If** the MTA authority existed during Milestone entry approval,
  - then ACV and LUH *would have been* positive examples of MTA programs
  - because both highly successful commercial platforms *before* competition and contract award providing convincing data points
MDA Delegation and MTA: Sustainment Factors

MTA Examples: If MTA existed during their acquisition process

- **USMC Amphibious Combat Vehicle (ACV)**
  - Began with 4 Vendors of Commercially Successful Systems
  - EMD: Down-Select to 2 Vendors within two years
  - Final Source Selection (1 Vendor) immediately following MS C
  - Tailored MS B LCSP starting with Draft Pre-RFP LCSP

- **Army UH-72 Lakota Light Utility Helicopter (LUH)**
  - Based on successful Commercial platform (EADS/Airbus EC-145 multirole helicopter)
  - pre-existing COTS FAA certified helicopter
  - CY2004-2006: RFP, contract and initial delivery
  - FY2007: entered service and FRP authorization
  - Product Support Strategy: Hybrid CLS and Organic
    - Example: FAA licensed Military repairers required