THE
LIFE CYCLE SUSTAINMENT PLAN (LCSP)
OVERVIEW
FOR
LUNCH-AND-LEARN

28 MARCH, 2018
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# *OK…..SO, HERE IS WHAT WE ARE GOING TO DO…..*

AGENDA & EXPECTATIONS:

❑ LCSP Review & Concur Process – *Army AR / DA Pam 700-127*

❑ LCSP Vers. 2.0 – 19 JAN'17 – *"Why" The Revision & a "Notional" Timeline*

❑ Observations - Logistics & Materiel Readiness (L&MR) & *Shared Lessons Learned*

❑ Concerns as an *Contributor / Inputter* into the LCSP – *Central Themes*

❑ Highlight of LCSP Changes from Vers. 1.0 to Vers. 2.0

❑ Review of each LCSP (Vers. 2.0) Section - #s 1-10 (Includes Annexes)

   ▪ *Critical Content Questions to Check as An Inputter*

Throughout:

*What are your Challenges as a "Sustainment Thought"
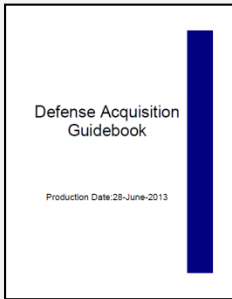Contributor / Inputter ???*

AT&L Product Support Guidance

DoDI 5000.02
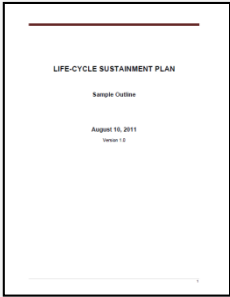Overarching acquisition direction
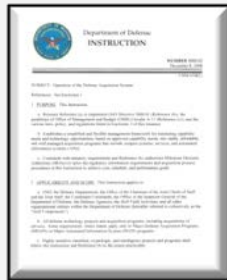
What needs to be done for planning product support?

Defense Acquisition Guidebook (DAG)
Acquisition guidance
Chapter 4, specific to Life Cycle Logistics

How do I plan for product support? What do I need to consider?

Where do I document my planning efforts?

Life Cycle Sustainment Plan Outline
Documentation of sustainment planning

ALSO - Life Cycle Management & Product Support - Required By Statute

§2337. Life-cycle Management and Product Support
(a) Guidance on Life-Cycle Management. - The Secretary of Defense shall issue and maintain comprehensive guidance on life-cycle management and the development and implementation of product support strategies for major weapon systems. The guidance issued pursuant to this subsection shall-
(1) maximize competition and make the best possible use of available Department of Defense and industry resources at the system, subsystem, and component levels; and
(2) maximize value to the Department of Defense by providing the best possible product support outcomes at the lowest operations and support cost.

LCSP Review / Concur and Approval Process
*(Per AR 700-127-Table 8-2 & DA PAM 700-127 - Paragraph 8-2**)*

Table 8–2

Life Cycle Sustainment Plan Development, Coordination, and Approval Process

ACAT Level	Develop/ Collabo-	Review / Concur[1]	Approve
ID and designated special interest programs[2]	MATDEV PSMIPT	ASA(ALT)[3] , DCS G–4, DCS G–8, AMC, PEO, LCMC, CAPDEV Representative **AMC CG** Concur Only**	Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD (L&MR))
I & select II [4]	MATDEV PSMIPT	ASA(ALT)[4] , DCS G–4, DCS G–8, AMC, PEO, LCMC, **LCMC CG** - Review & Concur**	DASA(APL)
II & III	MATDEV PSMIPT	PEO, LCMC [5], CAPDEV representative[6]	PEO

LCMC CG** - Concur Only

Notes:

1 Review periods will not exceed 15 business days by any organization. Concurrence by representatives identified in DA Pam 700–127 coordination pages. Representatives signing for concurrence on LCSP coordination sheets following review must provide written justification for reasons for a non-concurrence with recommended changes to the LCSP to reach concurrence. The approval authority makes the final decision where full agreement cannot be reached.

2. ASD (L&MR) approval is required for MS A, or equivalent, each subsequent milestone, and FRP decision. DASA (APL) approves LCSP updates, in coordination with ASD (L&MR), following the materiel's IOC.

3. MATDEVs will send draft LCSPs to ASA (ALT), (SAAL–LC), who will be responsible for coordinating within HQ DA and AMC. SAAL–LC will provide consolidated responses to the MATDEV.

4. DASA (APL) approves ACAT IC, IAC, and II programs where the AAE is the MDA, and ACAT IAM programs.

5. The Sustainment Command representative for LCSP coordination will be the Commander of the AMC LCMC designated as the Materiel Release Authority for a program. The PEO for Simulation, Training and Instrumentation (PEO STRI) and Joint PEO for Chemical Biological Defense do not require a signature in the sustainment command representative block since they are the materiel release authorities.

6. The CAPDEV representative is the designated representative from the Combined Arms Support Command of TRADOC.

Source Document for Successful Strategic Transition to Sustainment 4
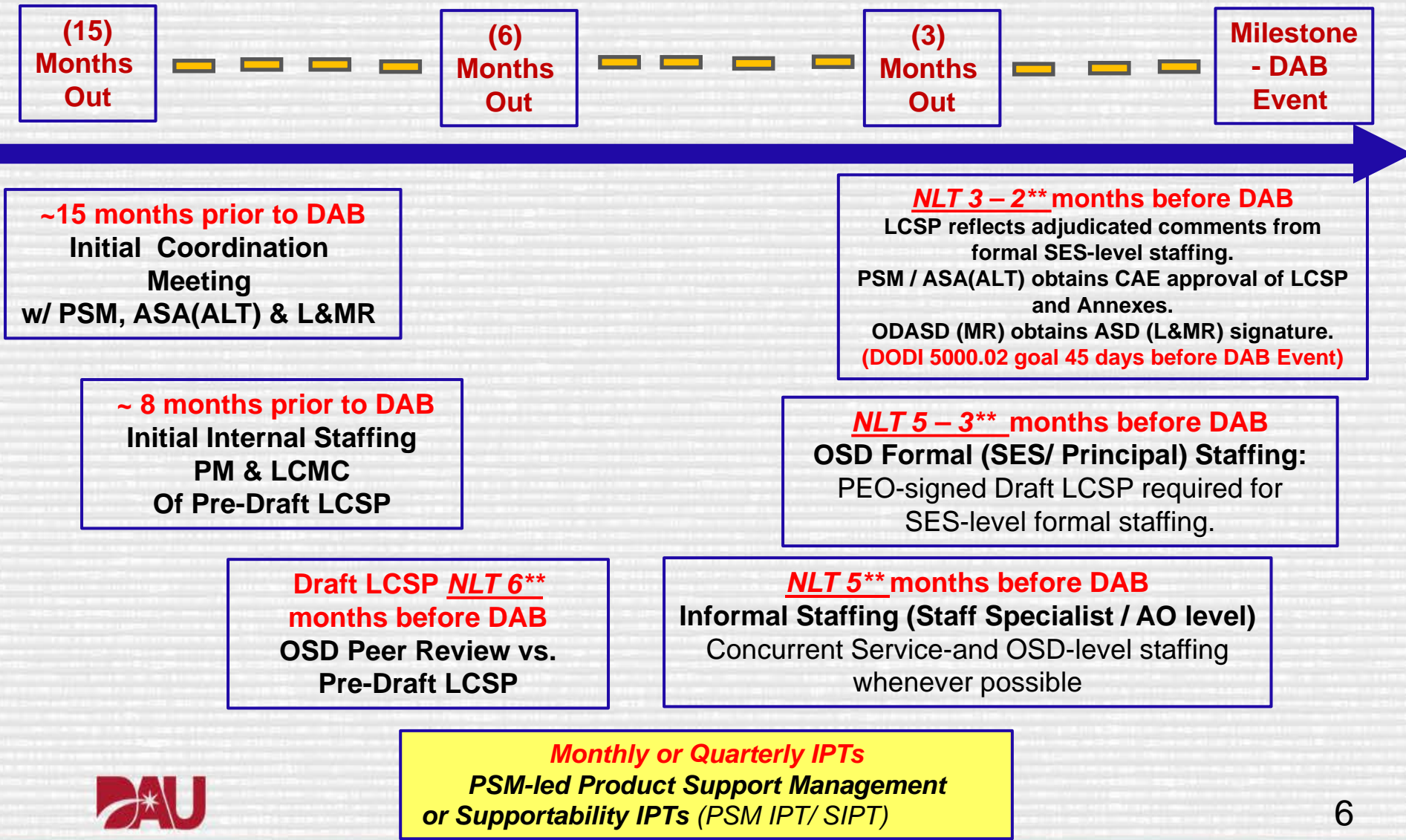
LCSP Vers. 2.0 – The "WHY"

<u>ASD(L&MR) Memo to the Components signed on January 19, 2017</u>

- *Revisions to the LCSP Outline Vers. 1.0:*
  - Reflect new statute/policy – *Since 2011…..from The Services & Congress*
  - Clarify guidance; incorporate lessons learned – **ASD(L&MR) Has Learned** *@ Outline & What Works!!!*
  - Expand the Funding Section – Section # 7 – **BIGGEST CHANGE ("Costers")To LCSP Outline vers 2.0**
  - Stress the tailor-ability of the document – *Educating HQs Staff – "Doesn't have to be exact format…"*
  - Introduces "Critical Thinking Questions" - *Each Section – Provides topics - PSMs to think about*
  - Reference appropriate Chap. #4 DAG sections (*future*) – *To point PSMs to the right sections of the DAG*

- *Review and Approval Process Unchanged from DoDI 5000.02*

- *Implementation Timeline*: - **20 OCT'17** - Transitioned to revised 2.0 Outline
  - Programs **already in sustainment are not required** to transition their sustainment planning document to the revised 2.0 Outline format
- Plan is to make the LCSP Outline stable (i.e., update infrequently), *while the DAG will evolve to capture new content, best practices, lessons learned*, etc. – "Living" DAG

> *Revision reflects an **Evolution**, not a Revolution….A **Realignment** / **Streamlining***
> *To **Guide** Development Planning & Implementation for Sustainment Support*
> *Take Internal (PEO/PM, Svcs.) / External (Congress, etc.) **Pressures** Into Account*
> ***Shape what is needed** to Support across the Life Cycle*
> ***Can Deviate** from this Outline / It is **NOT a Template***

5

LCSP *Notional Timeline* for LCSP Staffing
Prior to An ACAT ID - DAB / Milestone Event

(OASD(L&MR) Guidelines & Lessons Learned Briefing Packet – 1 Mar'17 **)

| (15) Months Out | → | (6) Months Out | → | (3) Months Out | → | Milestone - DAB Event |

~15 months prior to DAB
Initial Coordination Meeting
w/ PSM, ASA(ALT) & L&MR

NLT 3 – 2** months before DAB
LCSP reflects adjudicated comments from formal SES-level staffing.
PSM / ASA(ALT) obtains CAE approval of LCSP and Annexes.
ODASD (MR) obtains ASD (L&MR) signature.
(DODI 5000.02 goal 45 days before DAB Event)

~ 8 months prior to DAB
Initial Internal Staffing PM & LCMC Of Pre-Draft LCSP

NLT 5 – 3** months before DAB
OSD Formal (SES/ Principal) Staffing:
PEO-signed Draft LCSP required for SES-level formal staffing.

Draft LCSP NLT 6** months before DAB
OSD Peer Review vs. Pre-Draft LCSP

NLT 5** months before DAB
Informal Staffing (Staff Specialist / AO level)
Concurrent Service-and OSD-level staffing whenever possible

Monthly or Quarterly IPTs
PSM-led Product Support Management or Supportability IPTs (PSM IPT/ SIPT)

SHARED LESSONS.....FROM THE TRENCHES

❑ *Engage early* with *Sustainment IPT Mbrs*. & identify risk areas throughout the applicable phases.

❑ Does the Technical Data Rights (TDRs) / Intellectual Property (IP) Strategy flow from Program to Sustainment Planning?

- Are the *TDRs sufficient* for depot work, for supply support, for the technical manuals?
- Is the level of TDRs correct – Govt. Purpose Rights?, Unlimited Rights?, Restricted Rights?

❑ Engage in real Communication & Debate - *Communication* can remove road blocks for support

❑ Ensure *You Are Involved* – within the Programmatic / Engineering / Sustainment IPT structure

- If Not, Identify to Leadership – To get their assistance

❑ From your LCMC's perspective – Does the Product Support Integrator (PSI) and the Product Support Provider (PSP) responsibilities *make sense*?

❑ Do you see the appropriate *budget resources* (funding - appropriations) being aligned for the sustainment functions being executed / planned for? – *Communicate* to IPT / Leadership if not.

❑ Are *ALL* of the applicable *Supportability Analysis (SA) planned on -- being conducted?*

- Know what the SA "deliverables" are - And why they are being conducted / planned

❑ Figuratively *"walk"* the provisioned (supply support) parts through the *Supply Chain Process* – is the Process Complete? – Where are their voids?

❑ *IS IT MAKING SENSE?*

❑ What are the "*Legacy" Cost Drivers* vs. "*Future" / Anticipated Cost Drivers* that you are occupied with?

❑ Are *Should-Cost Initiatives* being worked? & How will they impact the Cost Drivers?

❑ *TEMP & LCSP Interaction* – Have you articulated the "deliverable" of Supportability Data needed, within the Program's DT/OT Plan – to impact Sustainment Planning?

❑ Annexes – Being Worked? – The (7) Core Annexes & the (11+) Army specific Annexes

❑ Do you see *"Boiler plating"* or is it being written specifically for the applicable Sustainment?

❑ Are the *Sustainment Metrics* being derived from the Requirements, and are they being developed to effectively impact the Strategy? (ICS?, Organic?, Performance-based?)

❑ Does the *Intellectual Property (IP) / Data Rights Strategy (DRS)* make sense?

8

1   **Introduction**

2   **Product Support Performance**

3   **Product Support Strategy**

4   **Program Review Issues and Corrective Actions**

5   **Influencing Design and Sustainment**

6   **Integrated Schedule**

7   **Cost & Funding**

8   **Management**

9   **Supportability Analysis**

10 **LCSP Annexes (& Component Required Annexes)**

11 **Acronym List**

COMPARISON OF LCSP OUTLINES

LCSP Outline v1.0 (2011)

1. Introduction
2. Product Support Performance
3. Product Support Strategy
4. Product Support Arrangements
5. Product Support Package Status
6. Regulatory/Statutory Requirements Influencing Product Support
7. Integrated Schedule
8. Funding
9. Management
10. Supportability Analysis
11. Additional Sustainment Planning Factors

   LCSP Annexes

Incorporated into Section 3

New Section

Section Renamed

Expanded into Cost and Funding to include O&S Cost Estimates, Should Cost Initiatives, and Affordability

LCSP Outline v2.0 (2017)

1. Introduction
2. Product Support Performance
3. Product Support Strategy
4. Program Review Issues and Corrective Actions
5. Influencing Design and Sustainment
6. Integrated Schedule
7. *Cost* and Funding
8. Management
9. Supportability Analysis
10. LCSP Annexes

Critical Thinking Questions added to Vers. 2.0 to *illustrate* the thinking required to successfully plan for sustainment.
Illustrate the types of thinking required on particular topics to ensure that the sustainment plan is *comprehensive*, *cohesive*, and *actionable.*

10

CONSISTENT SECTION LAYOUT… *FOR EACH SECTION*

LCSP Outline v2.0 (2017)

1. **Introduction**

2. **Product Support Performance**

3. **Product Support Strategy**

4. **Program Review Issues and Corrective Actions**

5. **Influencing Design and Sustainment**

6. **Integrated Schedule**

7. **Cost and Funding**

8. **Management**

9. **Supportability Analysis**

10. **LCSP Annexes**

Purpose statement – a description of the intent of the section and why this information is important for product support planning.

Description of requirements – a description of the type of information expected to be in the section, including any differences between milestones.

Representative pictures – notional examples of how a program may wish to portray the required information. (Table / Graph) Other depictions are acceptable if more appropriate for the information.

Critical thinking questions -- added to illustrate the thinking required to ensure that sustainment planning is comprehensive, cohesive, and actionable. Not necessarily intended to be answered explicitly.

Considerations for System of Systems (SoS) programs – direction for SoS programs pertaining to considerations that make them different from other MDAPs

LCSP CONTENT…….SECTION #1.0

1.0 Introduction

- A short, concise strategic overview of the program and the program sustainment strategy.

- ASD(L&MR) may occasionally direct subsequent updates of a program's LCSP to address specific topics.

- **System of systems (SoS) programs must describe the sphere of influence included in the LCSP.** *(Not in DA PAM)*
    - For parts of the weapons system that are not included in the LCSP, indicate where sustainment planning for that subsystem or component may be found,

Critical Content Questions to Check as an Inputter -

(#1 - Intro Section):

❑ Does the ***Intro address*** the: Purpose, Scope, Focus, & Objective of the LCSP?

❑ Does the Intro address: ***future updates***, the criteria for those updates-to include timing-and update approval authority?

❑ If applicable - Is there a list (a Table) of any ***past revisions*** – since the last LCSP?

❑ Did The PSM IPT members ***consult / contact*** the Milestone Decision Authority (MDA) Staff to ensure MDA expectations will be met?

<u>2.0 Product Support Performance</u> - (Same Section In The PAM)
- Provide an overview of the planned sustainment performance requirements *(i.e. KPP's-Availability, KSA's-Reliability, APA's-Maintainability, Mobility, Transportability, etc.)*
- Observed sustainment performance of fielded end items
- How the Product Support Strategy, contracts, and other sections deliver these required sustainment outcomes.

2.1 - **Sustainment Performance Requirements -** Identify all explicit, implicit or derived sustainment requirements cited in all requirements or other program documentation *(I.e. in RFP, Contract, Product Support Agreement, etc.).* *Recorded in Table Format in LCSP… similar in DA PAM*

2.2 - **Demonstration of (tested) Sustainment Performance –** Actual Data for demonstrations & tests that include evaluation of sustainment elements. *(e.g., Reliability Growth Test via Systems Engineering Plan [SEP], IOT&E Event via TEMP). Recorded in Table Format in LCSP… similar in DA PAM*

14

Critical Content Questions to Check as a Inputter –
(Section #2 – Product Support Performance):

❏ Will the LCSP correctly *identify all explicit, implicit or derived sustainment requirements* cited in all Requirements or other Program documentation?

❏ *Are they traceable* to the program's execution planning documents (e.g., RFP, contract, program support agreement) in which a metric is used to manage sustainment performance?

❏ For each sustainment requirement - *are the applicable sustainment KPPs / KSAs / APAs – correctly identified?*

❏ All KPP, KSA, APA and derived requirements – should be annotated in a Table Format – *both the Performance Requirements & and Performance Test results*

❏ Will program requirements *need to be revisited*, based on the test results?

❏ Will the *current test results* change any sustainment planning?

❏ Are the *metrics listed applicable* to both the acquisition and sustainment phases?

❏ Are their *lower level metrics* that the program intends to track?

LCSP Section #2
- Sustainment Performance Requirements

Section #2: Sustainment Performance Requirements: Sustainment metrics, their values, and how they are measured over time.

Info Tech
- ❑ What/where is the cybersecurity boundary?
- ❑ Is it realistic?
- ❑ What can be automated/what must be manual?

Cost Estimating
- ❑ How does the current estimate compare to the KSA or KCP (Navy)?
- ❑ Does the current estimate reflect the same baseline as the KSA?
- ❑ How is the cost estimate affected if the KPPs and KSAs are not met?

Test and Evaluation
- ❑ What requirements are suitable and/or effective?
- ❑ Does a requirement's suitability or effectiveness affect product support?

Engineering
- ❑ What requirements are "designable" or "non-designable"?
- ❑ How can the requirements be allocated across the parts of the system?

Requirements
- ❑ What requirements are tradeable?
- ❑ Are the requirements achievable?

Questions posed are not exhaustive but representative of the linkages between the functional areas.

LCSP CONTENT…..SECTION #3.0

3.0 Product Support Strategy - - (Significant use of Figures & Tables)

❑ Product Support Manager's (PSM's) begin using insights and critical thinking as the logical basis for a sustainment plan–with a sustainment design concept (or drawing) showing major sub-systems, with the concept of maintenance support identified

❑ Provide a depiction (usually an illustration) of the Product Support Strategy with consideration given to data rights & cost drivers that impact affordability of the sustainment strategy

3.1 – **Sustainment Strategy Considerations (In PAM) -** *Obsolescence Management, Competition in Sustainment, Property Management, Cybersecurity, Other Considerations*
(Authority – Statutory / Policy - References are highlighted in vers 2.0 for clarity)

3.2 – **Sustainment Relationships (In PAM) -**   Identify relationships *(Industry, Service staff elements, other DoD Components, Primary Inventory Control Activity (PICA), Secondary Inventory Control Activity (SICA), International Partnerships, etc.)* for the product support strategy.

3.3 – **Product Support Arrangements (In Its Own Section (#4) In PAM)** - all product support arrangements (contract, task order, agreement or non-contractual arrangement within the government) for systems, subsystems or components.
(Contract Support Providers, Performance Agreements)

17

Integrated Product Support Elements *

Sub-sys***	Proprietary Intellectual Property	Data Rights	Function	Maintenance — Level 1: O-1	O-2	O-3	CR	Level 2: I-1	I-2	I-3	CR	Level 3: Depot	CR	Software Support: O	C	Transportation (PHS&T): O	C	Config. Control**: O	C	Technical Data: O	C	Training: O	C
Airframe†	None	Unlimited												F		F		F		F		F	
			Servicing/Inspections	F	F	F																	
		OMIT data	Corrosion Control/Treatment	F	F							NI											
		OMIT data	Repair	F	L			F	L	F		NI											
Power Plants																							
Engine†	Partial	Negotiated License Rights												F		F		F		F		F	
		OMIT data	Servicing/Inspections	F	F	F		F	F	F		NI											
			Assemble/Disassemble	F	L			F	L	F														
			Repair	F				F				NI												
APU†	Partial	Negotiated License Rights													A	TR	P-A		A		A		A
		OMIT data	Remove & Replace	F	F	F	F																	
			Repair & Overhaul				A				P-A		A											
Avionics																							
ISR	Yes	Negotiated License Rights													ISR		ISR		ISR		ISR		ISR
		OMIT data	Inspections	F	F	F							ISR											
			Functional test & adjustments				ISR	ISR	ISR	ISR	ISR		ISR											
			Repair				ISR	ISR		ISR	ISR		ISR											
Fire Control†	None	Government Purpose Rights												F		F		F		F		F	
		No expiration date	Inspections	F	F	F						TK												
		OMIT data	Functional test & adjustments					F	L	F		TK												
		OMIT data	Repair					F		F		TK												
		OMIT data	Diagnostics Software																					
Other	In Work	Government Purpose Rights													A	TR	P-A	F		F		F	
		No expiration date	Inspections	F	F	F						TK		F										
			Functional test & adjustments	F	L			F	L	F		TK												
			Repair					F		F		TK	P-TBD			P-TBD			P-TBD					
Life Support	TBD	Unlimited												F		F		F		F		F	
			Inspections	F	F	F																		
			Functional test & adjustments	F	F			F		F		NI												
			Repair																					
Test Equipment																							
Avionics	Yes	Unlimited	Diagnostics Software									NI		F		F		F		F		F	
			Hardware					F	L															
Propulsion	Yes	Negotiated License Rights	Diagnostics Software																				
		OMIT data	Hardware					L					B		B		B		B		B		B
Simulator																							

Critical Content Questions to Check as an Inputter – (Section #3 – Product Support Strategy):

☐ Are the *sustainment considerations* and *cost drivers "mapped"* to the appropriate programmatic document?

☐ Are the *sustainment relationships identified* from the PSM to the PSI(s) and PSPs? And are timelines in place to identify when relationships should be in place?

☐ Is there sufficient detail to illustrate *arrangement for data in the Intellectual Property Strategy* and *technical data rights provisions* in its contracting actions, maintenance planning, and supply chain management?

☐ Is there *application of obsolescence management planning* to include Diminishing Manufacturing Sources and Material Shortages (DMSMS)?

☐ Is there a strategy for *planned competition* in product support and is it consistent with other programmatic strategies?

☐ *Mission critical subsystems* and *strategy* to keep these subsystems operational identified?

☐ Are specific programmatic *interdependencies* with other programs being worked?

☐ Are appropriate *cybersecurity* and related *program protection planning* details identified during the system sustainment and disposal phases?

☐ Is *software support and maintenance support device interoperability* addressed throughout the program life-cycle?

19

4.0 Program Review Issues & Corrective Actions –
(A NEW SECTION FROM 1.0 TO 2.0)

Single location to track and monitor information on the development of a system's product support as part of a Program's standard review processes.

Span a Program's different functional areas, to include:

  Programmatic (Program Management Reviews)

  Technical (SRR, PDR, CDR, PRR)

  Test (Test Readiness Reviews)

  Logistics (Independent Logistics Assessments)

Program Review Results will (normally) be shown in a table format
(Review / Sustainment Findings & Actions (#) / Open Findings & Actions Description)

❑ *A Cross-Walk* - Are sustainment findings / actions *tied to the logistics-related events* on the Product Support Schedule in Section #6 of the LCSP and the Supportability Analysis in Section #9?

❑ Are sustainment findings / actions *extended to include any reviews* of an *associated* system / subsystem that *resides in the system* or impacts the system's sustainment?

❑ Is information from *ALL subsystems, supporting systems (e.g., trainers, simulators) or system of systems* – included that may impact the system's product support?

❑ Identify the *Product Support Strategy assumptions* and their continued viability?

❑ Were *trade-offs* made?
- If so…what were they, and what was their impact?

❑ Sustainment *Risks identified?*
- *If so….. how are they being mitigated*?

LCSP CONTENT…..SECTION #5.0

5.0 Influencing Design and Sustainment (D. & S.)   (Is Section #6 In PAM)

- Identify the *Statutory*, *Department Regulatory* and *Component-level policy* (regulations, instructions) requirements that **ONLY-SPECIFICALLY-** affect a system's design, performance, product support strategy, planning, and implementation.

- Analyses, documentation, and reviews must be integrated with other LCSP sections (e.g., 3.0-Product Support Strategy, 9.0-Supportability Analysis, 6.0-Integrated Schedule)
    - Consistent with the assumptions and methodologies used in those sections

- Information identifies the requirement (statute, regulation, instruction), if it is a *design* or *sustainment consideration* (*can be both, e.g., corrosion, IUID, Condition Based Maintenance [CBM]), how, when, & where requirement is documented, and its review.)*

- Cited requirements are *actionable* (e.g., Acquisition documentation, RFP, SOW, Specification

- Can be displayed in a Table Format –
    (*Requirement / Design or Sustainment / Documentation / Milestone Review*)
        FY14 NDAA-DMSMS / SUSTAINMENT / LCSP-V.2.7 / MILESTONE "C"

22

Critical Content Questions to Check as an Inputter - (Section #5.0 - Influencing Design and Sustainment):

❑ Are the Design & / or Sustainment requirements *applicable* for this Program?
- ▪ - e.g. Does Corrosion Apply?

❑ Are the D. &/or S. requirements *integrated with other LCSP sections* (e.g., product support strategy, supportability analysis, schedule) and are they consistent with the *assumptions and methodologies* used in those sections?

❑ How will the analyses / plans in Design & Sustainment *impact the Product Support Strategy*?

❑ Will the requirements in Design & Sustainment *create program cost drivers*?

LCSP CONTENT…..SECTION #6.0

**6.0 – Integrated Schedule – (Is Section #7 In PAM – Similar Content)**

Provide the product support schedule consistent with the program's integrated master schedule.

Integrated Schedule items include but not limited to:
Significant program activities **-** *Program and technical reviews (including ILAs), RFP release dates for sustainment related contracts, software releases (post-FRP), sustainment contracts, CLA / DSOR process, IOC, Fielding Plan, and Product Support Business Case Analysis (BCA).*

Major activation activities for sites in the supply chain required to support the system, to include - *Maintenance (field, depot, overseas, ashore), supply, and training. Include events for contractor support (interim, long term, partnerships).*

Interdependencies and interactions with other weapon systems or subsystems that are part of the platform…..**NEW FOR 2.0 LCSP CONTENT**

25
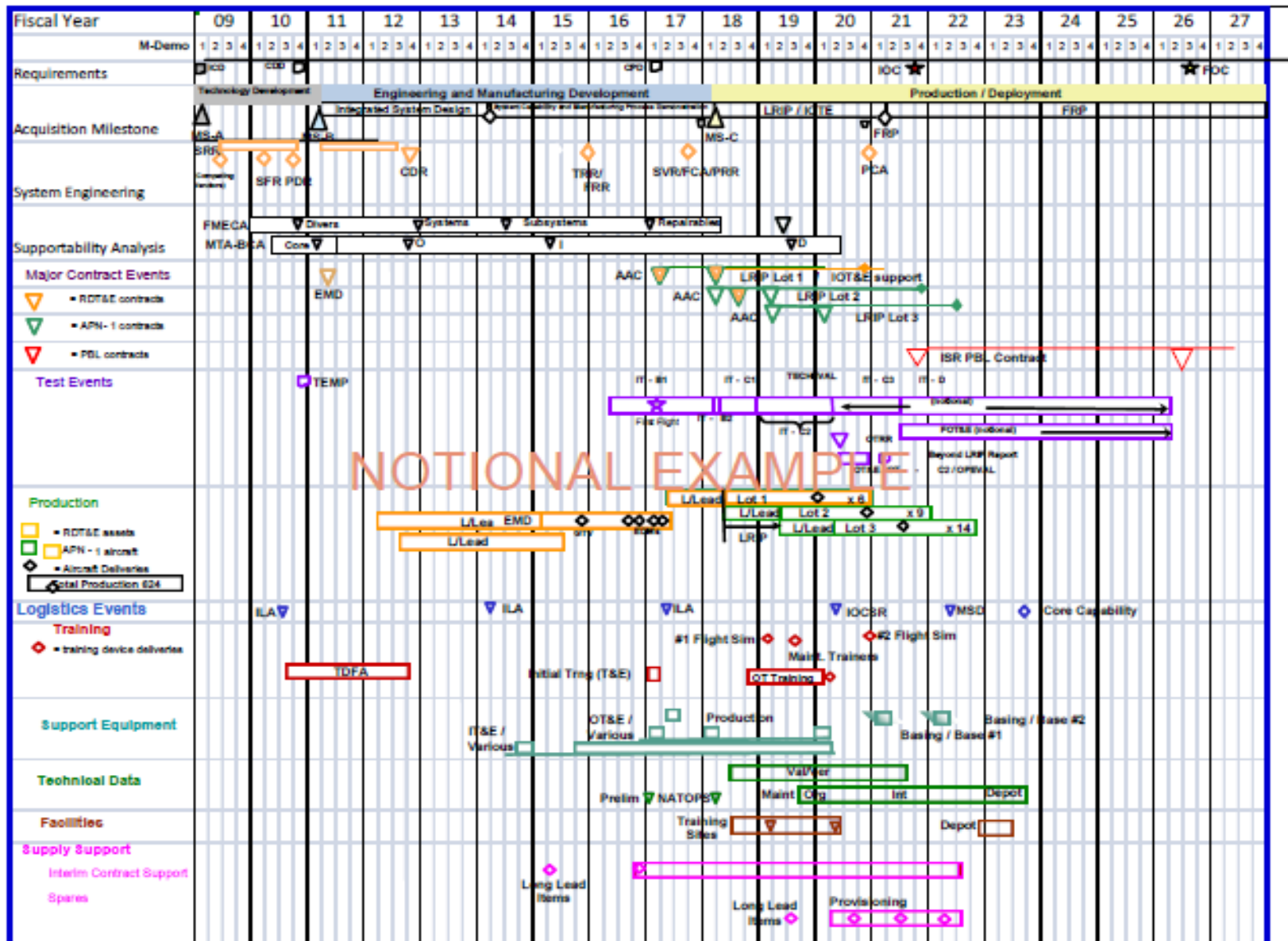
Critical Content Questions to Check as an Inputter - (Section #6.0 – Integrated Schedule):

❑ Are the *Following (as an example) Included* in the Integrated Schedule?:

- Program and technical reviews (including ILAs)
- RFP release dates for sustainment related contracts
- Software releases (post-FRP)
- Sustainment contracts
- CLA / DSOR process
- IOC
- Fielding plan
- Product Support Business Case Analysis (BCA)
- Major logistics and sustainment events for product support elements
- Major activation activities for sites in the supply chain required to support the system, to include maintenance (field, depot, overseas, ashore), supply, and training.
- Events for contractor support (interim, long term, partnerships)
- Interdependencies and interactions with other weapon systems or subsystems that part of the platform.

❑ Will all of the planned Product Support Strategy Analyses, Demonstrations and Tests *be reflected on the Product Support Schedule*?

❑ Will the Product Support Strategy events be synchronized to *support Acquisition events* and to *influence upcoming decision points*?

LCSP CONTENT…..SECTION #7.0

7.0 Cost & Funding - developed in collaboration with the Program's *Cost Estimators* and *Business Financial Manager*. **..(SIGNIFICANTLY EXPANDED SECTION FROM VERS. 1.0 - 2.0)**

7.1 - O&S Cost

      O&S Cost Estimate – *track the evolution of the O&S framing assumptions, cost estimates, and cost actuals as the program progresses through the life-cycle. All O&S cost should be included, regardless of funding source or management control - includes costs outside of the program office's control.*

      Disposal Cost Estimate – *baseline the disposal costs of the antecedent / legacy system and compare the evolution of the Disposal cost estimate of the new system against that baseline.*

      O&S / Disposal Cost Drivers – *identify the elements of the system that are the greatest contributors to the estimated O&S and disposal costs. Include the actionable Should Cost initiatives the program plans to use in controlling such costs.*

      O&S / Disposal Should Cost Initiatives – *Identify the initiative, rationale for selection, investment dollars required, appropriation - to resource the investment (e.g., Research, Development, Test, and Evaluation [RDT&E], procurement, and O&M), **expected O&S savings / avoidance, expected timeframe for the savings / avoidance, and current status of the initiative.***

27

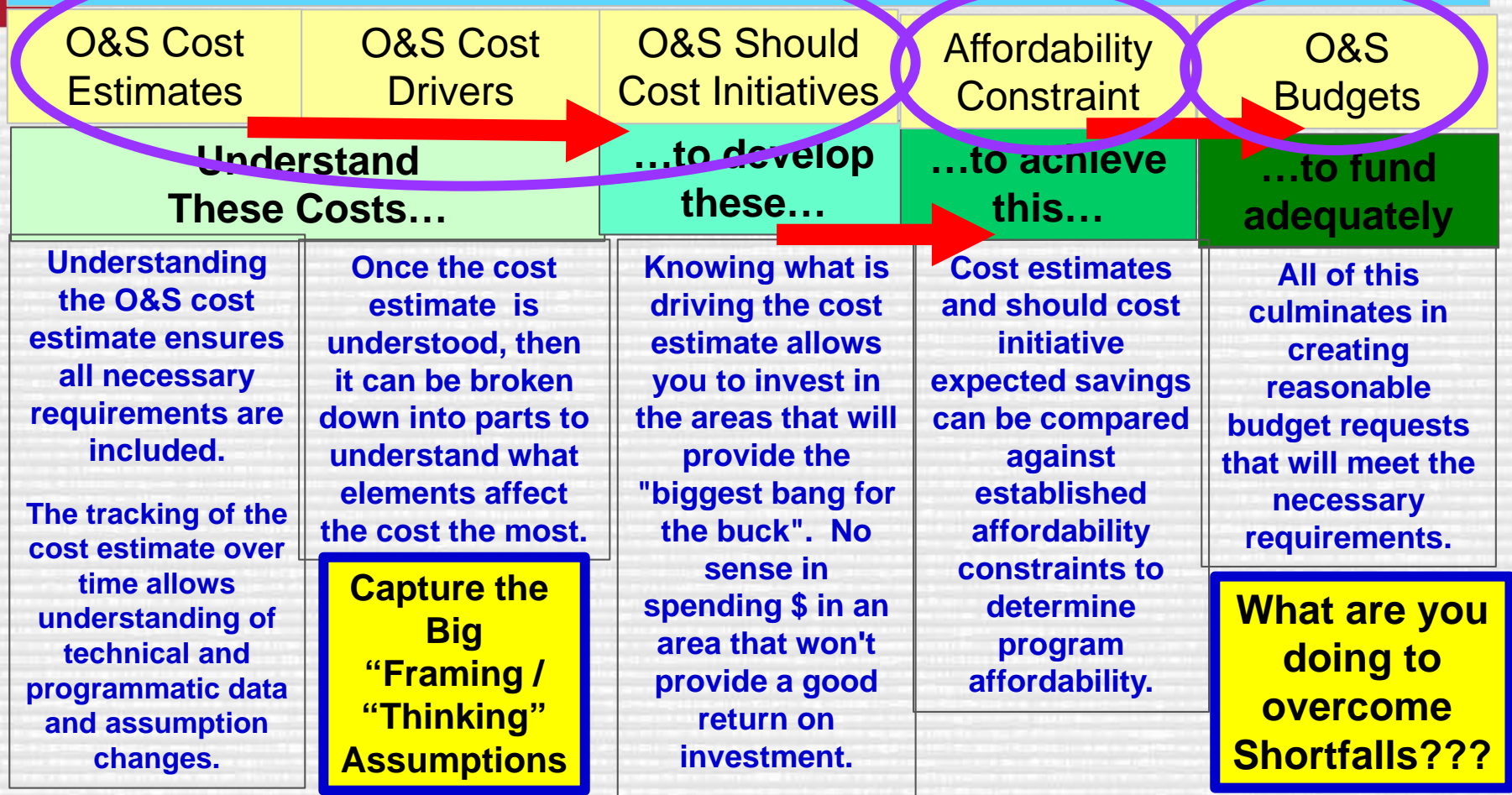**7.2 - <u>O&S Affordability Constraints</u> -**

- Identify the established O&S affordability constraints (target/goal/cap) for the program and provide the status of meeting the constraint.

- Provide a comparison of the current O&S Cost Estimate to the established (or proposed) affordability constraint.

- Include a synopsis of the affordability analysis and/or reference the affordability analysis documentation.

7.3 – <u>O&S and Disposal Budgets</u> -

- Link the O&S resources required (per the cost estimate) to the actual / expected budget levels and highlight and address any shortfalls.

- O&S funding requirements shown must tie to the most recent O&S Cost Estimate shown in Section 7.1 (O&S Cost) of the LCSP.

LCSP SECTION 7 – COST AND FUNDING

LCSP Section 7 – *Capturing the "Big Ticket" Cost Assumptions*

O&S Cost Estimates	O&S Cost Drivers	O&S Should Cost Initiatives	Affordability Constraint	O&S Budgets
Understand These Costs…		**…to develop these…**	**…to achieve this…**	**…to fund adequately**

Understanding the O&S cost estimate ensures all necessary requirements are included.

The tracking of the cost estimate over time allows understanding of technical and programmatic data and assumption changes.

Once the cost estimate is understood, then it can be broken down into parts to understand what elements affect the cost the most.

Capture the Big "Framing / "Thinking" Assumptions

Knowing what is driving the cost estimate allows you to invest in the areas that will provide the "biggest bang for the buck". No sense in spending $ in an area that won't provide a good return on investment.

Cost estimates and should cost initiative expected savings can be compared against established affordability constraints to determine program affordability.

All of this culminates in creating reasonable budget requests that will meet the necessary requirements.

What are you doing to overcome Shortfalls???

Intent with this Section is to get PSMs to get involved to
Create Should Cost Opportunities *- - tell us cost estimate story*
To drive down costs that will be reflected in the budget
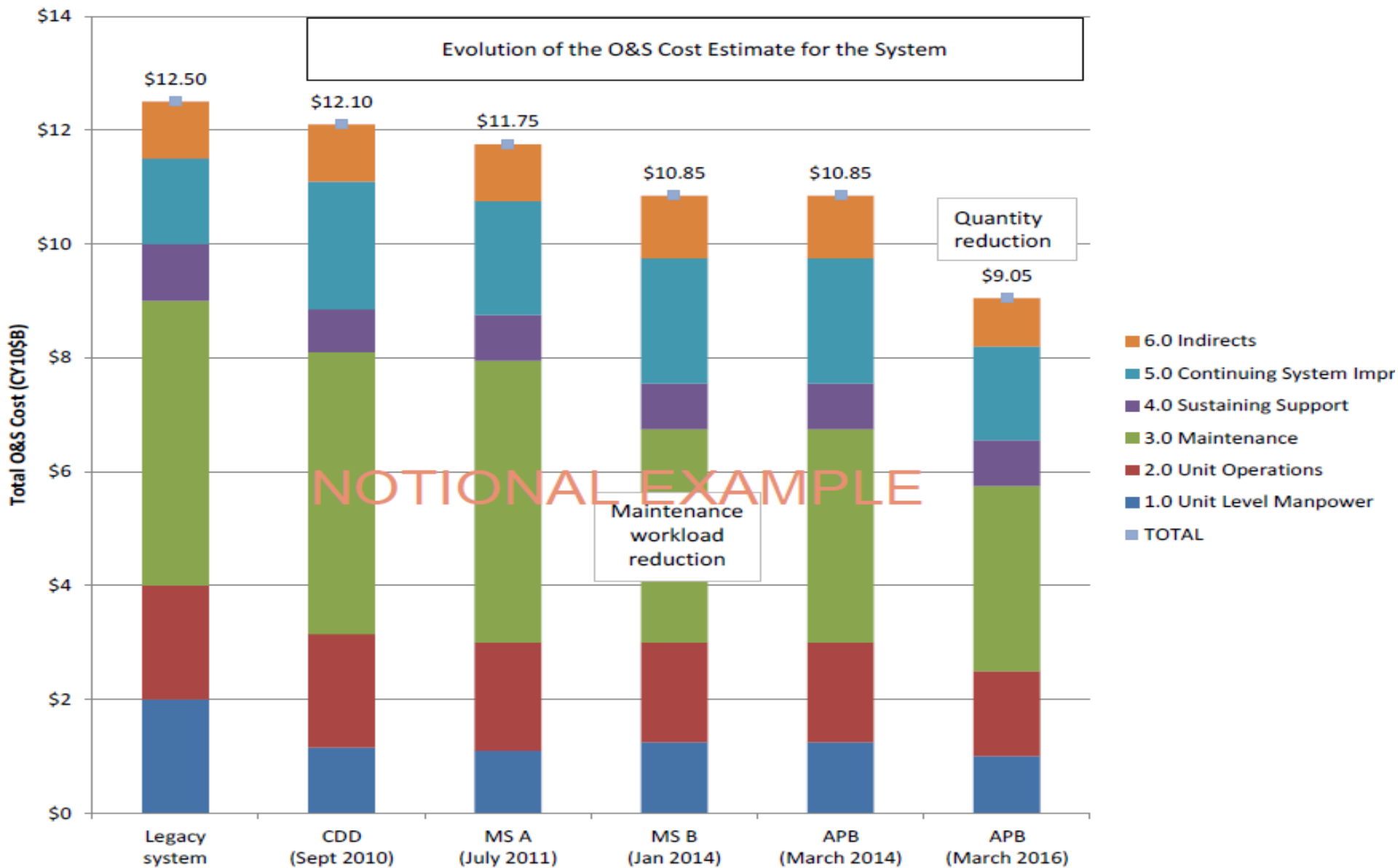*PSM Involved in Information & Ideas & Assumptions That Feed Cost & Budget #s* 29

Figure 7-1: Evolution of the O&S Cost Estimate for the System

Include an as-of date

30

Total O&S and Disposal Funding by Appropriation

TY$M	Prior	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY17-21	To Comp	Prog Total	Program Total (CY$XX)	Legacy Total (CY$XX)
O&S RDT&E requirement		0.3	0.4	0.6	1.5	2.1	3.0	4.9	12.1	295.2	308.0	196.0	250.3
Prior Budget $ (PB16)		0.2	0.5	0.6	1.5	2.1	3.0	4.9	12.1				
Current Budget $ (POM17)		0.3	0.4	0.6	1.5	2.0	2.5	4.0	10.6				
O&S PROCUREMENT requirement		0.6	0.8	1.1	2.9	4.2	6.1	9.9	24.2	590.5	616.1	509.0	505.9
Prior Budget $ (PB16)		0.6	0.8	0.5	3.0	4.2	6.1	9.9	23.7				
Current Budget $ (POM17)		0.6	8.0	1.1	2.7	4.2	6.1	9.9	24.0				
Non-PMO-funded O&M requirement		2.4	3.3	4.6	11.7	16.6	24.2	39.4	96.5	2361.9	2464.1	2134.0	2367.1
Prior Budget $ (PB16)			3.0	5.0	12.1	16.8	24.2	39.4	97.2				
Current Budget $ (POM17)		2.4	3.1	4.6	11.7	16.6	24.2	39.4	96.5				
PMO-funded O&M requirement		0.5	0.9	1.6	3.9	7.0	9.0	14.5	36.0	295.2	332.6	192.0	451.0
Prior Budget $ (PB16)		0.3	0.4	0.6	3.9	5.0	7.6	15.0	32.1				
Current Budget $ (POM17)		0.3	0.5	1.6	3.9	5.0	7.9	15.0	33.4				
MILPERS requirement		3.0	3.3	4.9	12.0	15.2	25.3	29.4	86.8	2596.8	2689.9	2258.6	2689.4
Prior Budget $ (PB16)		3.0	3.3	4.9	12.0	15.2	25.3	29.4	86.8				
Current Budget $ (POM17)		3.0	3.3	4.9	12.0	15.2	25.3	29.4	86.8				
TOTAL O&S (without Indirects) requirement		6.8	8.7	12.8	32.0	45.1	67.6	98.1	255.6	6139.6	6410.7	5289.6	6263.7
Prior Budget $ (PB16)	-	6.1	8.0	11.6	32.4	43.1	66.2	98.6	251.9				
Current Budget $ (POM17)	-	6.6	15.3	12.8	31.8	43.0	66.0	97.7	251.3				
DISPOSAL (specify appn) requirement										50	50	32.6	47.8
CUMULATIVE QUANTITIES[2]					2	5	9	15	31	49	80	80	100

Note 1: Requirement Source:

Note 2: Quantity based on number of systems in service as of the end of the FY. Provide explanation if total sustainment quantity is less than the acqusition total.

Note 3: Indirect costs are omitted from the table. Total Indirects cost requirement is $XX (CYXX$), $XX (TY$).

Table 7-6: Total O&S and Disposal Funding by Appropriation (MS C and Beyond Example)

Include as-of date

31

Critical Content Questions to Check as an Inputter - (Section #7 – Cost & Funding):

❑ Will all *costs be reported* in accordance with the current Cost Assessment and Program Evaluation (CAPE) O&S Cost Element Structure (dated March 2014)?

❑ Are All O&S costs being planned for - *regardless* of funding source or management control?

❑ Will the identified cost drivers *be able to be impacted* - to reduce O&S cost?

❑ Can the most expensive categories be *influenced by design or nonmaterial solutions?*

❑ Are any *cost impacts tied* to the system's sustainment requirements (KPP/KSA)?
  ▪ What will be able to be mitigated?

❑ Will **all** *(not just O&S) required funding have* been budgeted for?

❑ What plan does the Sustainment IPT have if *required funds are not provided*?

❑ What are the specific impacts that could result from *any budget shortfalls*?
  ▪ Will these impacts be tied to the system's sustainment requirements (KPP/KSA)?

8.0 – Management **…….. (In PAM - Section #9)**
(Manpower data should be consistent with data in the program's CARD.)

8.1 – Organization:
<u>Government Program Office</u> - Provide data on the program office organization product support function, to include:

- PSM and staff organization and alignment in the program office
- Functional offices (e.g., Test and Evaluation [T&E], Engineering, Financial Management) responsible for LCSP review and signature
- Core, matrix, and contractor support personnel
- Contracting support, Contracting Officer's Representative (COR)/Administrative Contracting Officer (ACO)

Outline roles, responsibilities, and reporting relationship(s) relative to all logistics, sustainment or materiel commands for product support package implementation.

<u>Product Support Team</u> - Provide data for all IPTs and working groups for sustainment or integration of sustainment. Include all relevant stakeholders (including other program offices and organizations) for sustainment IPTs.

8.2 – Sustainment Risk Management: Identify sustainment risks identified as part of a program's risk management processes and plans (consistent and integrated with the development contractor's risk system). Include the risk rating, driver, impact if realized, mitigation plan, and current status.

Critical Content Questions to Check as an Inputter - (Section #8 – Management):

❑ Is the *PSM positioned at the right level* of the management structure and properly staffed to influence decisions?

❑ *When & How* should the PSM's IPT be involved in design decisions for sustainment considerations? How Confirming This Insertion / Involvement?

❑ Are all *roles, responsibilities, and reporting relationship(s)* relative to all logistics, sustainment or materiel commands for the product support package outlined?

❑ How to check that the Product Support related staff *will evolve* as the program matures?

❑ Are *sustainment risks being* identified as part of a program's risk management processes and plans (consistent & integrated with the development contractor's risk system)?

❑ Are there any sustainment specific risks that would *adversely impact* the product support package?   (*e.g., changing design baseline, requirements creep, immature sustainment technologies for new critical technologies, and DT/OT&E results).*

9.0 Supportability Analysis –   **(Section #10 In PAM – Content Still Similar)**

Lists the analytic methods and tools that the Supportability Analysis Engineers and PSM team use to define the product support package.

PSM's role is to assess Failure Modes, Effects, and Criticality Analysis (FMECA) and other design output and support subsequent design changes for sustainment impacts.

9.1 – Design Interface - This section must match the Systems Engineering Plan (SEP), so the logistics community can reference one document for the FMECA, and ensure a common understanding of failure modes.

9.1.1 – Design Analysis – Provide data of the program's Key Design Considerations in the program's SEP, the key subsystems for each consideration, major sustainment issues identified, planned reviews/updates, and any impacts or comments

9.1.2 – Failure Modes, Effects, & Criticality Analysis (FMECA) – For each of the major or critical subsystems, provide details from the systems engineering FMECA.

9.1.3 – Reliability – Identify the top system and subsystem reliability drivers and issues that affect O&S cost, including allocations and current estimates.

9.1.4 – Supportability Trades – Provide data for planned or completed supportability trade studies since the last LCSP update

9.1.5 – Technical Reviews – Provide data on sustainment integration in system analyses and reviews – for example AoA, requirements, technical, and design.

35

9.2 – Product Support Element Determination -

Provide data for the supportability analysis methods and tools used to define and inform the elements that comprise the product support package, the planned implementation schedule, applicable tool used for the analysis, the output, and updates or reviews.

9.3 – Sustaining Engineering –

Provide data on processes and tools used or planned for use to monitor system performance (sustainment metrics), the product support package, the responsible office, the metrics or data monitored, any feedback process, and review timeframes

Critical Content Questions to Check as an Inputter - (Section #9.0 - Supportability Analysis):

❑ How is the *LCSP "lining up" with the Systems Engineering Plan (SEP),* (i.e. in order to reference "1" document for the FMECA, & ensure a common understanding of failure modes)?

❑ Will *failure modes be identified by the FMECA -* in order to determine the impact on maintenance planning, supply support, supportability, diagnostics, or cost?

❑ Are all applicable Supportability Analyses budgeted for and scheduled? Will they sufficiently satisfy provisioning requirements and is there a *data management plan being worked*?

❑ Will the *LCSP reflect* maintainability demonstration and reliability growth planning, implementation, and evaluation?

❑ Will estimates of current failure and removal rates *against allocated values* for impacts to corrective / preventive maintenance and provisioning be provided / a "deliverable"?

❑ Will trade outcomes for *changes to product support arrangements* (commercial / organic) be assessed?

❑ Will there be a sustainment monitoring plan / capability that *triggers a corrective action response* to adverse or degraded performance metrics or O&S cost growth?

LCSP CONTENT…..SECTION #10.0

10.0 – LCSP Annexes

Component (Army - AL&T) - level LCSP approval authority approves the individual LCSP annexes.
The Program Office should provide <u>Executive Summaries</u> in ACAT I LCSPs that require ASD(L&MR) approval.
Ensure the point of contact for the annex and how to access the collection of data, information, and analyses is included in the summary.

<u>Per DA PAM 700-127 (Chap. 8-3 (Section L.), the following Annexes must be included:</u>
Annex A—Depot Level Maintenance Analyses and Determinations (at MS A, B, and C).
Annex B—Analysis of Product Support Alternatives (APSA) (at MS A, B, and C).
Annex C—Independent Logistics Assessment (ILA) Report, ACAT I and II programs, (at MS A, B, & C).
Annex D—Replaced System Sustainment Plan, for MDAPs only, (at MS B).
Annex E—Computer Resources Life Cycle Management Plan (CRLCMP) (at MS B and C).
Annex F—System DEMIL Plan (at MS B and C).
Annex G—Preservation and Storage of Unique Tooling, for MDAPs only, (at MS C).
Annex H—MFP(s) (at MS C).
Annex I—Plan for MR (at MS C).
Annex J—Post Production Support Plan (at MS C).
Annex K—ICS to Objective Support Concept Transition Plan (NLT two years following the FRPDR).
Annex L—Sustainment Quad Chart (SQC) (at each program review).
Annex M—Support Facility Annex.
Additional annexes may be added at the PSM's discretion.

(7) LCSP Annexes (topics) to include and / or to address

LCSP Annexes –must be included or addressed - for ASD (L&MR) approval
1 -Business Case Analysis (BCA) (MS B, C, FRP + 5 YRS) (DODI 5000.02) --Not necessarily a PBL BCA.
--Example: Army uses "analysis of product support alternatives" (APSA) per ASD(L&MR) PBL Guidebook and AR 700-127, infers more rigor in a BCA than APSA.

2 - Independent Logistics Assessment (ILA)-STATUTORY (DODI 5000.02) (MS B, C, FRP + 5 YRS)
--MDAP Programs only per DODI 5000.02. --MAIS: OSD does not require it for MAIS programs. However, Services may require it for MAIS.

3 – System Disposal Plan (MS C) (DODI 5000.02; DODI 4160.28; DOD 4160.21-M; DODI 4160.28-M)

4 – Preservation-Storage-Unique Tooling-STATUTORY (MS C)[DODI 5000.02; DFARS 207.106 (S-73)]

5 – Core Logistics Analysis (CLA)-STATUTORY (MS A, B, C) (overarching Depot analysis) [DODI 5000.02; DODI 4151.xx (DSOR); DODI 4151.21]--MDAP Programs only per DODI 5000.02. --MAIS: OSD does not require it for MAIS programs. However, Services may require it for MAIS.
6 – Intellectual Property (IP) Strategy (DODI 5000.02) (MS C) --IP Strategy becomes part of LCSP during O&S Phase.
--However, *depending on adequacy of IP Strategy in the AS*, IP planning may be included LCSP MS B/C .

7 – Replaced System Sustainment Plan (RSSP)-STATUTORY (DODI 5000.02) (10 USC 2437)
--Once decision made to replace another system, Service prepares it for existing system.
--may be as early as MS A or NLT MS B

39

INTEGRATED SUITE OF PRODUCT SUPPORT

FOCUSED LEARNING ASSETS & RELATED RESOURCES

Logistics Training (13)
http://icatalog.dau.mil/onlinecatalog/tabnav.aspx?tab=LOG

Logistics Continuous Learning (44)
http://icatalog.dau.mil/onlinecatalog/tabnavcl.aspx?tab=CLL

Product Support Guidance Suite (12)
https://www.dau.mil/tools/p/integrated-Product-Support-Guidebook-Suite

Product Support Mission Assist Workshops (5), Consulting Support
www.dau.mil/consulting-services

Logistics Functional Area Gateway
https://www.dau.mil/training/career-development/logistics/

Product Support Tools Suite (473)
https://www.dau.mil/tools/p/Integrated-Product-Support-Tools-and-Resources

Product Support Communities of Practice (
https://www.dau.mil/training/career-development/logistics/p/Communities-of-Practice
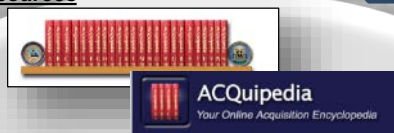
Product Support ACQuipedia Suite (132)
https://shortcut.dau.mil/acq/acquipedia

Product Support Articles (33) & Blogs (1,200)
https://go.usa.gov/xXaF4

FINAL

QUESTIONS???