DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
RESEARCH, DEVELOPMENT AND ACQUISITION
1000 NAVY PENTAGON
WASHINGTON DC 20350-1000

FEB 22 2012

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Document Streamlining - Life-Cycle Sustainment Plan (LCSP)

The Principal Deputy Under Secretary of Defense for Acquisition, Technology and Logistics (PDUSD(AT&L)) issued new guidance for streamlining Life Cycle Sustainment Plans on 14 September 2011. The memorandum, which is attached, does not alter Department of Navy (DON) guidance contained in SECNAVINST 5000.2E issued 1 September 2011, except:

- LCSPs will be reviewed and approved beginning at Milestone A for ACAT ID and USD(AT&L) special interest programs.
- Cross-functional review and concurrence within the program office by the lead engineer, lead financial manager and contracting officer is now required for ACAT ID and USD(AT&L) special interest programs.

All new DON programs, regardless of ACAT level, shall prepare documentation consistent with the attached USD(AT&L) guidance. For existing DON programs, the Program Managers (PMs) will work with the program's Milestone Decision Authority (MDA) action officer to determine how to capture the information requirements dictated by the new outline.

The LCSP is the program's primary product support planning tool. Programs should include input from applicable acquisition and sustainment stakeholders to ensure delivery of an affordable system. The LCSP content requirements outlined in the memorandum are maintained at the Acquisition Community Connection Product Support web site: https://acc.dau.mil/productsupport .

The annotated outline in the attached memorandum includes best practices which are provided to assist programs in identifying and developing appropriate plans and are not intended to constrain the program office. Regardless of the format used to document the product support strategy, PMs are responsible for ensuring that the content of the plans meets all applicable statutory and regulatory requirements.

SUBJECT: Document Streamlining - Life-Cycle Sustainment Plan (LCSP)

My point of contact is CAPT Jerry Reid, Executive Director, Logistics Management, jerome.reid@navy.mil, 703-693-2937.

Brian R. Detter
DASN (Expeditionary Programs and
Logistics Management)

Attachment:
As stated

Distribution:
PEO(T)
PEO(A)
PEO(U&W)
PEO(EIS)
PEO(C4I)
PEO(SPACE)
PEO(SHIPS)
PEO(IWS)
PEO(LCS)
PEO(SUBS)
PEO(CARRIERS)
PEO(LS)
DRPM SSP
COMMARCORSYSCOM
COMNAVAIRSYSCOM
COMNAVFACENGCOM
COMNAVSEASYSCOM
COMNAVSUPSYSCOM
COMSC

Copy to:
PEO (JSF)
CMC (DC I&L)

SUBJECT: Document Streamlining - Life-Cycle Sustainment Plan (LCSP)

Copy to (continued):
OPNAV (N4)
DASN Ships
DASN Air
DASN C4I
DASN M&B
DASN AP
DASN RDT&E

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE
3015 DEFENSE PENTAGON
WASHINGTON, DC 20301-3015

ACQUISITION,
TECHNOLOGY
AND LOGISTICS

SEP 14 2011

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Document Streamlining – Life-Cycle Sustainment Plan (LCSP)

References: (a) USD(AT&L) memorandum, "Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending," September 14, 2010
(b) PDUSD(AT&L) memorandum, "Document Streamlining – Program Strategies and Systems Engineering Plan," April 20, 2011
(c) PDUSD(AT&L) memorandum, "Document Streamlining – Program Protection Plan," July 18, 2011

Reference (a) directed a review of the documentation required by DoDI 5000.02 in support of the acquisition process. This is the third in a series of document streamlining memoranda, following references (b) and (c). I am directing the following actions for the LCSP:

Document Streamlining: The LCSP will be streamlined consistent with the attached annotated outline. The outline is designed to be a tool for programs to effectively and affordably satisfy life-cycle sustainment requirements. This plan articulates the product support strategy, and it must be kept relevant as the program evolves through the acquisition milestones and into sustainment. The LCSP outline emphasizes early-phase sustainment requirements development and planning, focuses on cross-functional integration – most critically with systems engineering – and highlights key sustainment contract development and management activities.

LCSP Review and Approval: Per reference (b), the LCSP has been separated from the Acquisition Strategy. Every acquisition program shall develop a LCSP. The Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD(L&MR)) shall approve LCSPs for all ACAT ID and USD(AT&L)-designated special interest programs for Milestone A or equivalent, each subsequent milestone, and Full-Rate Production decision. Following the system's initial operating capability, the component acquisition executive (CAE) or designee shall approve LCSP updates, in coordination with the ASD(L&MR). Approval for ACAT IC and below LCSPs is delegated to the CAE or Component designee.

These actions constitute expected business practice and are effective immediately. The revised outline will be documented in the Defense Acquisition Guidebook and referenced in the

next update to DoDI 5000.02. My point of contact is Mr. John Baranowski, Acting Deputy Assistant Secretary of Defense for Materiel Readiness, at 703-614-6137.

Frank Kendall

Attachment:
As stated

cc:
DCMO
All CAEs
DCAA
DCMA
DASD(S&TS)
Director, ARA
Director, DPAP

LIFE-CYCLE SUSTAINMENT PLAN

Sample Outline

August 10, 2011

Version 1.0

MANDATED FORMAT FOR ALL LIFE-CYCLE SUSTAINMENT PLANS

PROGRAM NAME – ACAT LEVEL

LIFE-CYCLE SUSTAINMENT PLAN

VERSION ___

SUPPORTING MILESTONE _

AND

[APPROPRIATE PHASE NAME]

[DATE]

****

OFFICE OF THE SECRETARY OF DEFENSE (OSD) APPROVAL

_____ _____

Date

Assistant Secretary of Defense
(Logistics & Materiel Readiness)

SUBMITTED BY

Name	Date
Product Support Manager	

REVIEW

Name	Date	Name	Date
Program Contracting Officer		Program Manager	
Name	Date	Name	Date
Program Lead Engineer		Program Financial Manager	

CONCURRENCE

Name	Date	Name	Date
Program Executive Officer or Equivalent		Sustainment Command Representative	

COMPONENT APPROVAL (ACAT IC)

Name	Date

DoD Component Acquisition Executive (CAE) or designated representative

Table of Contents

1 Introduction 8
2 Product Support Performance 9
2.1 Sustainment Performance Requirements 9
2.2 Demonstrated (tested) Sustainment Performance 10
3 Product Support Strategy 12
3.1 Sustainment Strategy Considerations 15
3.2 Sustainment Relationships 16
4 Product Support Arrangements 17
4.1 Contracts 17
4.2 Performance Based Agreements (PBA) 18
5 Product Support Package Status 19
5.1 Program Review Results 19
5.2 Product Support Package Assessment 19
6 Regulatory/Statutory Requirements That Influence Sustainment Performance 21
7 Integrated Schedule 22
8 Funding 24
9 Management 26
9.1 Organization 26
9.1.1 Government Program Office Organization 26
9.1.2 Program Office Product Support Staffing Levels 26
9.1.3 Contractor(s) Program Office Organization 27
9.1.4 Product Support Team Organization 27
9.2 Management Approach 29
9.2.1 Product Support Manager Roles and Responsibilities 29
9.2.2 Sustainment Risk Management 29
10 Supportability Analysis 31
10.1 Design Interface 31
10.1.1 Design Analysis 31
10.1.2 Technical Reviews 34
10.2 Product Support Element Determination 35
10.3 Sustaining Engineering 37
11 Additional Sustainment Planning Factors 38
LCSP Annexes 38

List of Tables

Table 2-1: Sustainment Performance Requirements (Mandated) (NOTIONAL) 9
Table 2-2: Sustainment Performance Metric Breakdown (Mandated) (NOTIONAL) 10
Table 2-3: Sustainment Performance Assessment/Test Results (Mandated) (NOTIONAL) 11
Table 3-1: Product Support Strategy for Reference Design Concept (Mandated) (NOTIONAL) 13
Table 3-2: Sustainment Cost Drivers (Mandated) (NOTIONAL) 15
Table 4-1: Performance Based Arrangements Implemented in Contracts (Mandated) (NOTIONAL) 18
Table 4-2: Performance Based Agreements (Organic Support Providers) (Mandated) 18
Table 5-1: Program Review Results (Mandated) (NOTIONAL) 19
Table 5-2: Product Support Package Assessment (Mandated) (NOTIONAL) 20
Table 6-1: Sustainment Alignment of Regulatory/Statutory Requirements (Mandated) (NOTIONAL) 21
Table 8-1: Product Support Funding Summary 25
Table 9-1: IPT Team Details (Mandated) (NOTIONAL) 28
Table 9-2: Risk Summary (Mandated) 30
Table 10-1: FMECA Summary (Mandated) (NOTIONAL) 32
Table 10-2: Reliability Growth Plan Issues (Mandated) (NOTIONAL) 32
Table 10-3: Completed Supportability Trades (Mandated) (NOTIONAL) 33
Table 10-4: Planned Supportability Trades (Mandated) (NOTIONAL) 34
Table 10-5: Technical Reviews (Mandated) (NOTIONAL) 35
Table 10-6: Product Support Analytical Methods and Tools (Mandated) (NOTIONAL) 36
Table 10-7: Sustainment Performance Monitoring (Mandated) (NOTIONAL) 37

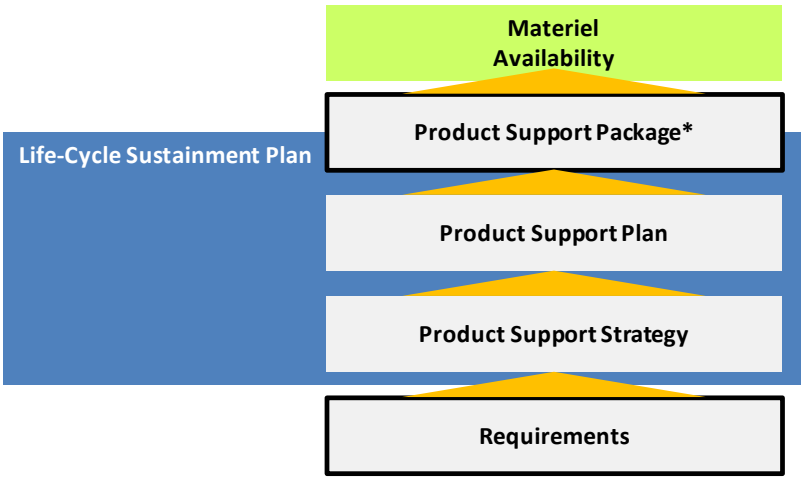
List of Figures

Figure 3-1: Sample Drawing of the Reference Design Concept (Optional) (NOTIONAL) 12
Figure 3-2: Sustainment Concept (Mandated) (NOTIONAL) 14
Figure 3-3: Product Support Providers (Mandated) (NOTIONAL) 16
Figure 7-1: Product Support Schedule (Mandated) (NOTIONAL) 23
Figure 9-1: Program Office Organization (Mandatory) (NOTIONAL) 26
Figure 9-2: Program Product Support Staffing (Mandated) (NOTIONAL) 27

(Additional, optional tables and figures may be included at the Program's or the Component's discretion)

General Expectations:

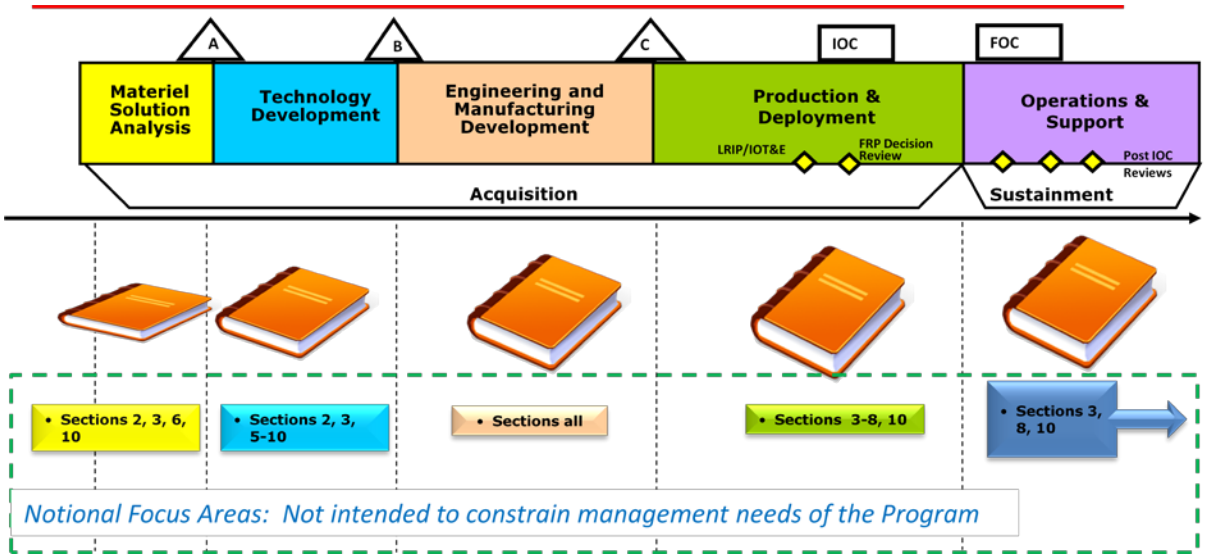
The Life-Cycle Sustainment Plan (LCSP) is the program's primary management tool to satisfy the Warfighter's sustainment requirements through the delivery of a product support package. Development of a life-cycle product support strategy and plan are critical steps in the delivery of the product support package. The LCSP remains an active management tool throughout the operations and sustainment of the system, and the program must continually update the LCSP to ensure sustainment performance satisfies the Warfighter's needs.



*The logistics elements and any sustainment process contracts/agreements to attain and sustain the maintenance and support needed for materiel availability

The contents of this annotated outline are applicable DoD-wide and are intended to stimulate critical thinking about the necessary product support elements required for an effective plan. The program may include, in the annex section, any additional Service-specific requirements and implementation details it deems critical to the delivery of the product support package. NOTE: If, as a Program Manager or Product Support Manager and author of an LCSP, you are inclined to cut-and-paste portions of this outline into your plan in a boiler-plate effort to satisfy your next milestone review, you will NOT satisfy the spirit or intent of this outline.

The LCSP is expected to evolve throughout the acquisition process with the maturity of the system and clarity for the program's life-cycle product support strategy. Additionally, it may be tailored based on varying entry points in the acquisition process. For example, a new system entering the acquisition process at Milestone C (a COTS capability, for instance) may have minimal requirements to consider in accomplishing Table 3-2 and the statutory and regulatory compliance of Table 6-1.



The primary audience for the LCSP is the program office. This annotated outline is structured to enable the program office to communicate and collaborate with other stakeholders in both the acquisition and sustainment communities. The program's logisticians, led by the Product Support Manager, must collaborate with other functional areas to ensure alignment among the LCSP and other critical program documents, including the Acquisition Strategy, Systems Engineering Plan, and Technical Data Rights Strategy. The Sustainment Quad Chart is the primary vehicle for summarizing the program's product support planning to stakeholders outside the program. The LCSP must support and provide the detail behind the summary information presented on the Sustainment Quad Chart.

Among the key stakeholders are the Product Support Integrators and Providers. The LCSP is a useful tool in defining statements of work, performance objectives, and incentives in requests for proposal, contracts, and performance-based agreements with organic support providers.

NOTIONAL INFORMATION: Tables and figures are provided with notional information. This information is illustrative only and not intended to proscribe or constrain the program office in documenting information it deems essential to its plan. The column headings for tables depict the minimum information required, but programs may add information to suit its unique management needs. Text to amplify information in figures and tables is encouraged to provide clarity.

Additional guidance, including the lessons learned, can be found in Section 5.1.2.2 of the Defense Acquisition Guide. The latest formats (including examples) for the various tables and figures can be found on the LCSP web site (HOT LINK).

1 Introduction

This section must answer the following questions:

- What is the specific purpose, scope, focus and objective for the version?
- Who will use the Life-Cycle Sustainment Plan (LCSP)?
- How will the LCSP be updated and the criteria for doing so including:
    - Timing of updates (e.g., Pre-EMD, prior to milestones, planning changes, as a result of specific contractor-provided inputs)?
    - Updating authority?
    - Approval authorities for different types of updates?
- What revisions have been made since the last ASD(L&MR) review, if required? (Table 1-1)

Revision Number	Date	Change and Rationale	Approved By
0.7	April 2008	Addressed results from CDR and changes in due to avionics reliability issues – see comments in xxx	APEO(L)
0.8	June 2008	Updated Section 10.2 with results from approved PBAs with NAVICP	APEO(L)
0.9	October 2008	Addressed PS WIPT (including Service and OSD) comments – many changes – see Comment Resolution Matrix (CRM)	APEO(L)
Etc.			

Table 1-1: LCSP Update Record (Mandated) (NOTIONAL)

2 Product Support Performance

2.1 Sustainment Performance Requirements

Provide a table (Table 2-1) that lists the sustainment requirements that are integrated into the design process. Identify where each requirement is satisfied in product support arrangements (contractor and/or organic processes) and the corresponding performance metrics.

Expectation: The PSM must identify all explicit, implicit or derived sustainment requirements, references to RFPs or contracts in which the metric is used to manage sustainment performance, the planned evaluation timeframe, and expected time frame for achieving the threshold/objective. (Note: This list should be more extensive than Table 3-2 which identifies only sustainment cost drivers).

Requirement (KPP, KSA, Derived requirement)	Documentation	Threshold / Objective	RFP/ Contract*	TES / TEMP	IOC	FOC	Full Fielding
Availability (KPP)	CDD (May 24, 2014): 6.2.6.1	66% / 82%	RFP (Jun 16, 2014) Para 7.2	TEMP (2 Jun 2015): 3.2	100%	100%	72%
Reliability (KSA)	CPD (Aug 16, 2016): 6.2.6 MTBF-I: 6.3.2.1 False Alarm: 6.3.22 MTBM: 6.3.2.5	37.8% / 61.6% 2% / 1% 2 hrs / 4 hours			37% 2% 2 hrs	48.7% 2% 2 hrs	51% 2% 3 hrs
Maintainability	CPD (Aug 16, 2016) BIT: 6.3.3.4 Scheduled Maintenance: 6.2.6.3 Fault Reporting: 6.3.3.4.2	100% critical faults at system start (T = O) 10% less than antecedent / 20% less 100 stored faults / 300 stored faults			100% 300 minutes per month 100	100% 240 min per month 100	100% 240 min per month 100
Mobility	CPD (2016) Palletization	4 pallets per 3 ship formation / 2 pallets per 2 ship formation			5 pallets	4 pallets	4 pallets
Commonality	CPD (2016) Support Equipment	<=2 new / None			2	2	2
Training	CPD (2016) Aircrew Training 14.3.1	60 hr crew differences tng / 40 hr			60-	N/A	N/A

Table 2-1: Sustainment Performance Requirements (Mandated) (NOTIONAL)
Figure is time sensitive; must include as-of date.

*Note, applicable for all program RFPs/Contracts (eg. AoA, TD Phase, EMD Phase (Pre-EMD Review/MS-B), Production (MS-C), ICS (Post MS-C or FRPDR)

Provide a table (Table 2-2) that breaks down the system-level metrics to the level of detail required to develop the product support plan and deliver the product support package.

Expectation: The PSM must identify linkage between the system's sustainment requirements (KPP/KSA) identified in system requirements documentation and Service specific sustainment metrics.

Requirement	Lower Level Metric	Documentation	Standard or Level
Availability (KPP) Materiel Availability Operational Availability	NMCS, CWT, AWT, etc Depot Cycle Time Logistics Response Time NMCS NMCM,	Service Instruction, Command Directives, etc	
Reliability MTBCF	 MTBM		
O&S Costs			
Affordability	Operating Cost per Unit *		
Maintainability	Maintenance Manhour per Flight Hour		
Mean Down Time			
All Others			

Table 2-2: Sustainment Performance Metric Breakdown (Mandated) (NOTIONAL)

Include as-of date

* Consistent with the Affordability Requirement

2.2 Demonstrated (tested) Sustainment Performance

For each sustainment metric in Table 2-1 provide a table (Table 2-3) of sustainment assessments and tests including: Operational Assessments, Development Tests, Operational Evaluations, Reliability Growth Tests, and Logistics Demonstrations. Data in this table must map to the Test and Evaluation Strategy (TES), Test and Evaluation Master Plan (TEMP) and SEP. For each performance metric provide the following information, with an as-of date:

- Design Feature
- Location in design specification/contract
- When and how demonstrated
- Impacted product support (PS) element
- Planned metric value upon which the product support strategy/package is based
- Demonstrated performance measure and gap to requirement
- Current estimate at IOC

Note: Ensure the demonstrated performance measures are consistent with the required metrics identified in Table 2-1*; include key sustainment assumptions as appropriate.*

Demonstrated (tested) Sustainment Performance Jan 10, 2009					
Metric / Feature	**Contractual Requirements**	**Demonstration Schedule**	**Requirement / PS Elements Impacted**	**Performance Objective / PS Package Baseline Value**	**Estimated Value / IOC Estimate**
Low observable coating on external surfaces	XXX	Maintainability Demo 1st Qtr 2011	Maintenance, Training, Facilities, Publications	Repair 1 sq ft area in 4 hours	IOT&E tested value: 7 hr / 5 hours projected at IOC
ISR system Reliability of .01 failures/operating hour	XXX	Reliability Growth Curve from the SEP	Maintenance, Spares	.15 failures/operating hour	0.5 failures/operating hour 0.25 failures/operating hour @ IOC
All maintenance at operational sites performed within a 15 ft ceiling	XXX	Maintainability Demo 1st Qtr 2011	Facilities	15 Feet	14 Ft/ 14 Ft

Table 2-3: Sustainment Performance Assessment/Test Results (Mandated) (NOTIONAL)
Figure is time sensitive; must include as-of date.

3 Product Support Strategy

Expectation: Planning for product support begins at system initiation and builds on system information documented in other requirements and acquisition deliverables available, such as the AoA, RAM-C Rationale Report, CONOPS, and CDD. The program should include opportunities to improve its product support over the antecedent system.

Provide the product's standard reference design concept (see TDS/AS) showing major subsystems and features (Figure 3-1). The figure must be consistent with the program's work breakdown structure. More than one drawing may be needed to illustrate the major features affecting product support.

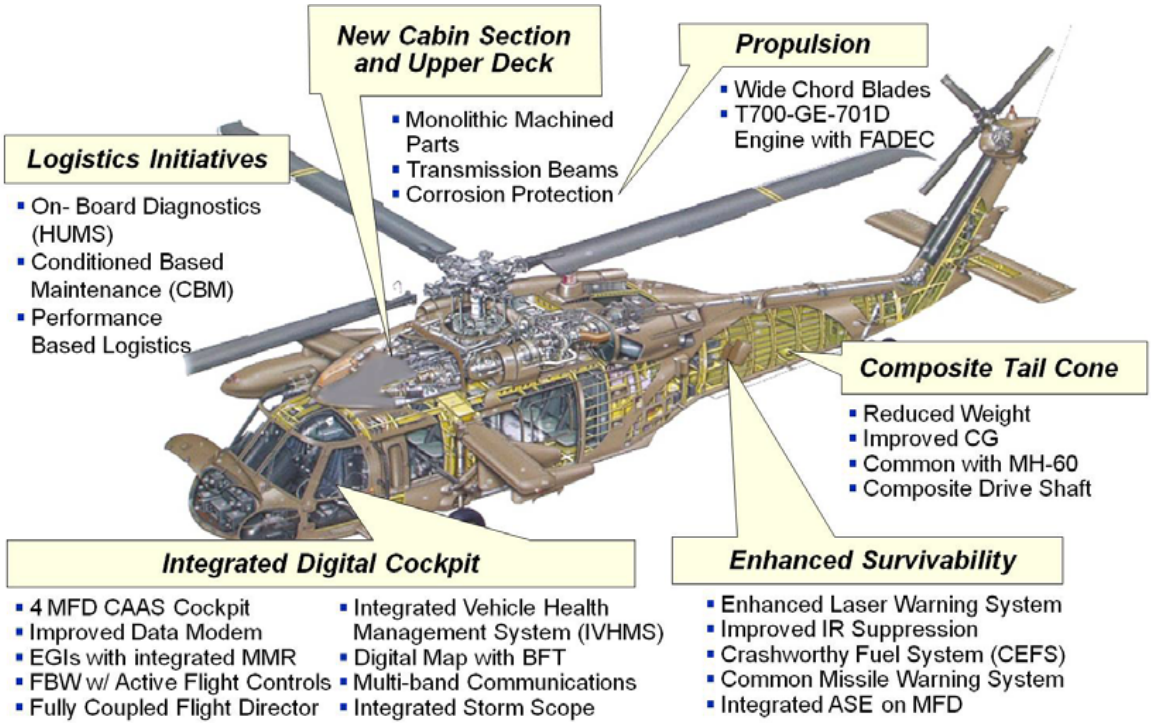


Figure 3-1: Sample Drawing of the Reference Design Concept (Optional) (NOTIONAL)

Provide a table (Table 3-1) listing the following sustainment strategy elements:

- Sustainment concept, (maintenance (including software support) and other major supply chain elements)
- Roles and responsibilities
- Plans for acquisition of technical data rights

Expectation: This table develops incrementally throughout the acquisition process. Prior to Milestone A, the table might only be completed to the second level of the program WBS, with additional levels included to convey the strategy at its current level of development. While specific facilities or providers may not be known this early in the life cycle, the program must develop sufficient detail to identify technical data rights provisions in its contracting actions and Technical Data Rights Strategy.

Table 3-1: Product Support Strategy for Reference Design Concept (Mandated) (NOTIONAL)

Figure is time sensitive; must include as-of date.

Product Support Strategy

Sub-sys**	Data Rights	Function	Maintenance: Level 1 O-1	Level 1 O-2	Level 1 O-3	Level 1 C	Level 2 I-1	Level 2 I-2	Level 2 I-3	Level 2 C	Level 3 Depot	Level 3 C	Software Support/Maint O	Software Support/Maint C	Supply Support O	Supply Support C	Transportation (PHS&T) O	Transportation (PHS&T) C	Supportablilty Analysis O	Supportablilty Analysis C	Configuration Control * O	Configuration Control * C	Techical Data O	Techical Data C	Training O	Training C
Airframe	Unlimited														O		O		O		O		O		O	
		Servicing/Inspections	O	O	O																					
		Corrosion Control/Treatment	O	O							N I															
		Repair	O	o			O	o	O		N I															
Power Plants	Unlimited																									
Engine															O		O		O		O		O		O	
		Servicing/Inspections	O	O	O		O	O	O		N I															
		Assemble/Disassemble	O	o			O	o	O		N I															
		Repair					O				N I															
APU	Negotiated License Rights															A	TRANSCC	P- A		A		A		A		A
	Remove & Replace only	Remove & Replace	O	O	O	P																				
		Repair & Overhaul				A				A		A														
Avionics																										
ISR	Negotiated License Rights															ISR		ISR		ISR		ISR		ISR		ISR
	Remove & Replace only	Inspections	O	O	O							ISR														
		Functional test & adjustments				ISR	ISR	ISR	ISR	ISR		ISR														
		Repair				ISR	ISR		ISR	ISR		ISR														
Fire Control †	Government Purpose Rights														O		O		O		O		O		O	
	no expiration date	Inspections	O	O	O						Tinker															
		Functional test & adjustments					O	o	O		Tinker															
		Repair					O		O		Tinker															
		Diagnostics Software											O													
Other	Government Purpose Rights															A	TRANSCC	P- A	O		O		O		O	
	no expiration date	Inspections	O	O	O						Tinker				O											
		Functional test & adjustments	O	o			O	o	O		Tinker															
		Repair					O		O		Tinker	P-TBD				P -TBD		P -TBD								
Life Support	Unlimited														O		O		O		O		O		O	
		Inspections	O	O	O																					
		Functional test & adjustments	O	O																						
		Repair					O		O		NI															
Test Equipment																										
Avionics	Unlimited	Diagnostics Software									NI		O													
		Hardware					O	o							O		O		O		O		O		O	
Propulsion	Negotiated License Rights	Diagnostics Software												B												
		Hardware					o					B				B		B		B		B		B		B

** Expand as required to highlight major sustainment cost or availability drivers. Also expand as program moves towards MS C.
† Core

Maint Level Codes

O-1:	Ashore Squadrons & Aviation ships
O-2:	OCONUS Detachments
O-3:	Detachments aboard non-aviation ships
I - 1:	Major CONUS Ashore& Aviation Ships AIMI
I - 2:	Minor CONUS Ashore Sites
I - 3:	OCONUS AIMDs

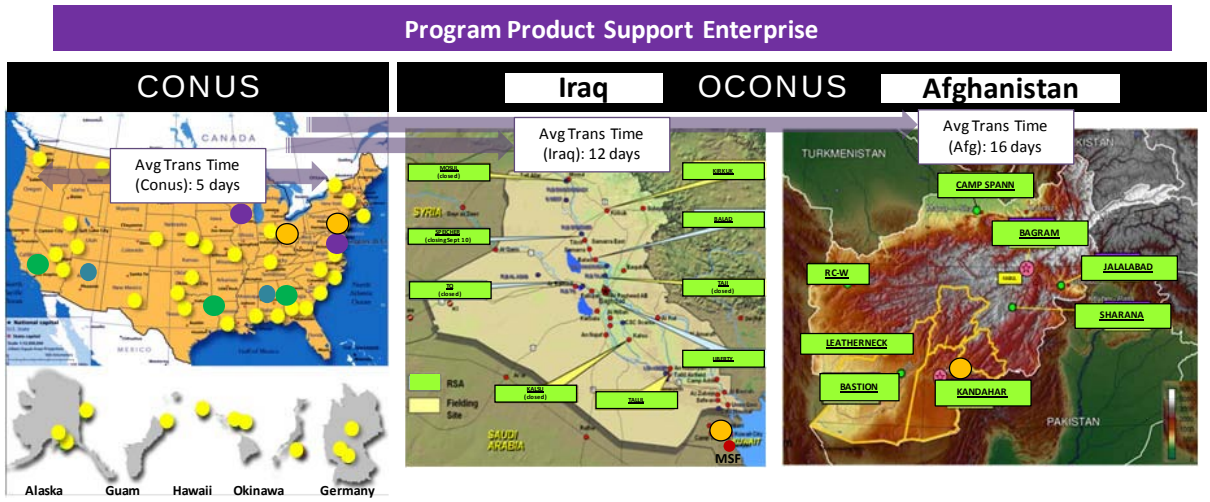
Organizational Codes

NI	NADEP North Island
Tinker	Tinker - AMC Tinker
ISR	ISR Contractor TBD
A	Contractor A
B	Contractor B
TBD	Contractor TBD
P	Orgainic/Commerical Partnership

O Full organic capabilities
o Limited capabilities

* Includes design and logistics management responsibilities

Provide a depiction of the sustainment concept (Figure 3-2). The figure must identify roles and responsibilities for product support providers that support the system's operational concept as depicted in the Acquisition Strategy (Operational View (OV)-1). The figure must list the program's planned supply chain performance metrics. Additionally, the figure must include joint support, if planned, and the roles and responsibilities of the major agencies, organization and contractors planned as part of the system's product support.



Product Support Functional Area	Location	Planned Sustainment Performance Metrics(1)	Planned Contracted Support(2)
Program Head Quarters (Product Support Management)	Quantico/Stafford, VA; Warren, MI	n/a	Mix contract and gov't
Test Facilities	Aberdeen, MD; Yuma, AZ; Huntsville, AL	Tests execution within 5 days of schedule	All gov't
Logistics Support	Albany, GA; Barstow, CA; Red River, TX, Multiple throughout CONUS and AOR	Configuration support turn around time, backlog, fill rate	Mix contract and gov't
Maintenance Depots	Albany, GA; Barstow, CA; Red River, TX	Avg Repair cycle time, Reset Time	All gov't
DLA Support	Columbus, OH, Philadelphia, PA, DDRT, DDKS, DDKA	Avg Fill Rate: Days supply: ,	All gov't
Contingency Support Activity Afg / Iraq	Multiple throughout AOR	% ASL/PLL stocked, Zero bal w/ due out critical readiness drivers, days supply on hand,	All contract
Contingency Maintenance Depot	Kuwait	Throughput (vehicles/wk), Avg Repair cycle time (mission capability, battle damage), cost (per repair type, operation level)	All contract

Figure 3-2: Sustainment Concept (Mandated) (NOTIONAL)
Figure is time sensitive; must include as-of date

(1) Must be consistent with metrics in Table 2-1
(2) List explicitly in Section 4, Product Support Arrangement

Expectation: The program must develop a graphic that Illustrates the major elements of the system's Product Support Strategy, both government furnished and commercially provided, that will be used across the breadth of system operations, peacetime and contingency. More than one graphic may be used, if needed. The PSM must coordinate the Program's plans with the Services for organic logistics enterprise support for the availability and affordability requirement. The PSM must also use data on capabilities and limitations of the logistics enterprise to influence system reliability design trade decisions. Additionally, this figure in conjunction with Table 3-1 provides the product support functional breakdown necessary to develop effective contracted product support arrangements.

3.1 Sustainment Strategy Considerations

Provide a matrix of considerations and cost drivers (Table 3-2) that impact affordability of the Sustainment Strategy. These elements must map to the appropriate program documents (e.g. Cost Analysis Requirements Description, Manpower Evaluation Report, Concept of Operations (CONOPS)).

Consideration	Core Documents	Cost Driver	Product Support Element Impact/ Control
CONOPS			
Desert Operations	• System CARD: 1.2.1x.s Environmental Conditions: 3.2; Basing & Deployment Description • CONOPS: OPLAN 5500, para 3.1 • CDD (May 24, 2014): Para 3	• Increased scheduled maintenance cycle; filter demand and filter cost	Design Interface; Supply; Technical Data; Higher Incidence of Failure Include filter system to filter to 0.1µ
DESIGN FEATURE			
Hydrazine	• System CARD: 1.2.1.x.2 • Environmental Conditions: 3.4.3 • Training: 5.0	• 6 additional personnel per operating wing; specialized /dedicated equipment, facilities and IPE	Manpower & Personnel; Training; Support Equipment Facilities Specialized manning, training, & facilities / alternative power sources addressed in ongoing trade study; ECD: Jun 2013
Nuclear Hardening	• System CARD • CDD (May 24, 2014): Para 10	• Specialized test equipment at field and depot • Training	Design Interface; Maintenance; Training; Support Equipment Flight controls and weapon control/delivery system shielded
FACILITIES/MILCON			
Low Observable	• System CARD: 10.2 Operational Support Facilities • CDD: Para 12, Assets required to achieve IOC	• One shelter for each assigned or deployed asset • One repair hanger per 12 assigned aircraft	Design Interface; Maintenance; Training; Support Equipment; Facilities. Low observables coatings require individual shelters and specialized operational and depot facilities

Table 3-2: Sustainment Cost Drivers (Mandated) (NOTIONAL)

Expectation: The PSM must identify the considerations, sources, and the product support elements affected that are a sustainment cost driver. Product Support Strategy considerations are derived from multiple sources and can be explicit (e.g. hydrazine), implicit (e.g. low observable), or derived (e.g. desert operations). The table's sub-headings (e.g., CONOPS, Design Feature, MILCON) are NOTIONAL.

3.2 Sustainment Relationships

Identify relationships (industry, other DoD Components, international partnerships) included in the product support strategy. List planned provisions to ensure completion of support providers remains a viable option throughout the life cycle.

Provide a figure showing the relationships between the Product Support Manager (PSM), Product Support Integrators (PSI), and Product Support Providers (eg. OEMs, DLA, TRANSCOM, Service Maintenance Depot) (Figure 3-3). The diagram must include field activities, support centers, integration activities, and other stakeholders, as appropriate. In cases where the relationships (eg. MOA, international agreements) are not yet in place, indicate the required actions, the individual with primary responsibility, and the associated time frame in which the relationships are expected to be established.

Expectation: This example depicts a mature product support structure. Early in the acquisition process, this figure may not be as detailed. By the Pre-EMD Review, the program must have defined the organizational structure in sufficient detail to support contracting actions.

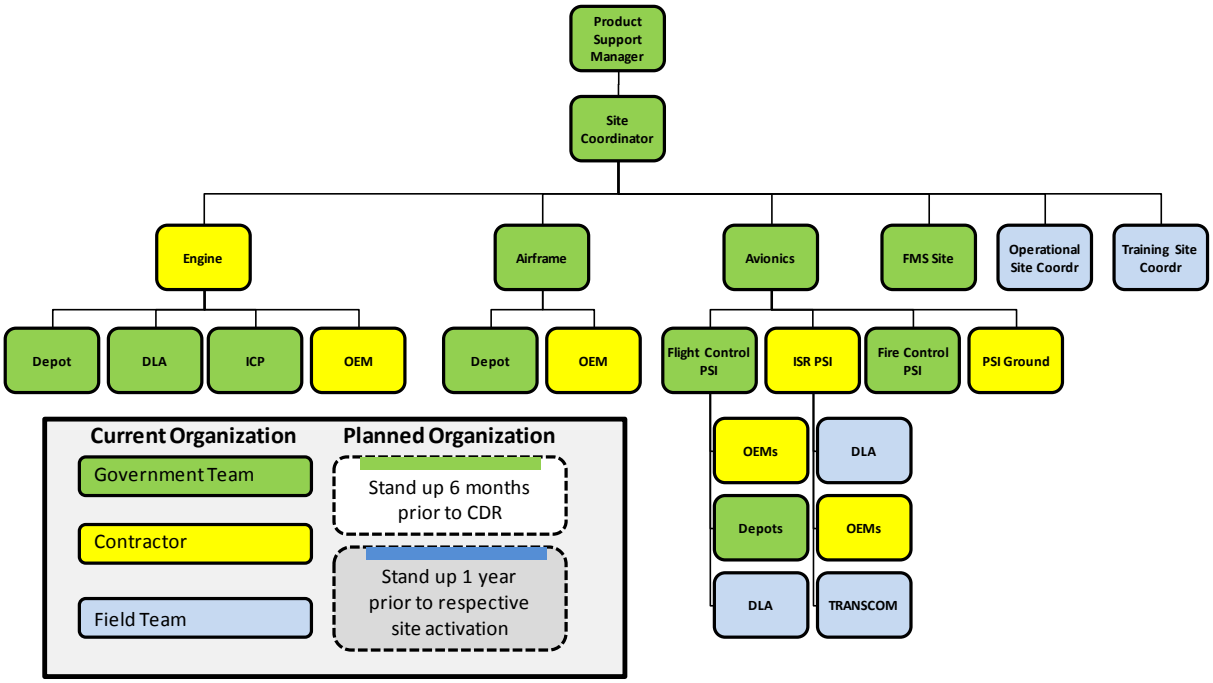


Figure 3-3: Product Support Providers (Mandated) (NOTIONAL)

Notes: must be consistent with Program Office organization; figure is time sensitive, must include as-of date.

4 Product Support Arrangements

4.1 Contracts

Provide a table (Table 4-1) of the sustainment related contract efforts, in place or planned, as part of the product support package. Data in the table must map to the Acquisition Strategy and provide sustainment specific provisions including the:

- Name and CLINs
- Organization and points of contact
- Products and period of performance covered, including remaining actions to put the contract into place
- Responsibilities/authorities and functions
- Metrics and incentives

> *Note: Include the associated costs for each contract in* the cost section (Table 8-1) *broken out into appropriate logical segments (e.g., locations or types of site, functions, etc.). The costs must roll-up and be traceable to the procurement, O&M and O&S data provided in the program's LCCE, affordability requirement, and PPBS documents.*

Expectation: The table must identify the PSM's engagement in the system's contracts, specifically the product support contract line items, delivery orders, or sub-contracts if the services are imbedded in broader program and support service contracts. The table must indicate the extent of coverage of hardware and software, design and configuration, and each of the product support elements consistent with Table 2-1 (including the extent to which the statement of work emphasizes outcomes and performance, rather than activity and transactions). The table must include the incentives and remedies (competition, incentive and award fees, etc.) designed to motivate the contractor to improve performance and reduce cost.

Product Support Related Contracts May 20, 2009				
Name	**Organizations**	**Products / Timeframe**	**Responsibilities/Authority and Functions**	**Metrics & Incentives**
ISR Sustainment Contract **CLIN:** WWW **Type:** FFPAW	NAVICP Bob Smith 215-xxx-xxxx Contractor A	**Products Covered**: • ISR Avionics • ISR Ground Stations **Time frame:** Jan 2013 to Dec 2018 4 yr base with potential for 3 additional option years Date of signed BCA and signatory	**Responsibilities:** Integrate all design and product support efforts ISR equipment including configuration management. **Functions:** Sustainment Coverage includes • Maintenance beyond organizational level • Supply support • Publications • Training of organizational personnel • Transportation between contractor and 1st designation	**Metrics:** - AM target of 95% with min of 6% cost decrease each year • Contract extension if met

XXX **CLIN:** WWW **Type:** FFPAW	NAVAIR TBD	**Products Covered**: • ZZZ **Timeframe:** Expect a 5 year contract • RFP to be issued Feb 2012 • Contract award expected Jan 2013	**Responsibilities:** XXX **Functions:** Sustainment Coverage includes • YYY • YYY	**Metrics:** XXX

Table 4-1: Performance Based Arrangements Implemented in Contracts (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

4.2 Performance Based Agreements (PBA)

List the PBAs in place or planned, including the performance incentives, in a table (Table 4-2).

Note: Early in the acquisition process complete details will not be available. However, by Pre-EMD Review the program must have defined the PBAs to sufficient detail to identify contract actions required to support the organic providers, and the associated implementation schedule.

Performance Based Agreements with Organic Product Support Providers May 20, 2009				
Name	**Organizations**	**Products / Schedule**	**Responsibilities/Authority and Functions**	**Performance Metrics**

Table 4-2: Performance Based Agreements (Organic Support Providers) (Mandated)

Note: Time sensitive figure; include an as-of date.

5 Product Support Package Status

5.1 Program Review Issues and Corrective Actions

Provide a table that identifies all reviews (e.g. SRR, PDR, CDR, PMR) in which the product support team participates, the open and in-work findings from the reviews, as well as corrective action and completion dates (Table 5-1).

Expectation: The table provides a single location to track and monitor sustainment-related findings and corrective actions among design, programmatic, test and logistics reviews.

Review	Finding	Corrective Action/Planned Completion Date
TRR (Feb 2014)	TRR 2014-05 LRU-3 reliability is less than half of planned; 3 circuit cards contribute to 90% of failures	Investigation into inherent design flaw or manufacturing flaw / 3QTR/2014
Logistics Assessment (Mar 2013)	LA 2013-22 Detailed schedule with critical path needs to be developed	Develop a detailed schedule NLT 30 days prior to MS-B; PSM will review, in conjunction w/LRFS; develop POA&M to resolve or mitigate critical path issues

Table 5-1: Program Review Results (Mandated) (NOTIONAL)
Figure is time sensitive; must include as-of date.

5.2 Product Support Package Assessment

Provide a table (Table 5-2) of assessment results for the product support package. Include the plan for resolving each of the issues identified in the Logistics Assessment, identify the individual responsible for resolving the issue, and specify the steps and schedule for closing each unresolved issue, Significant tasks required to resolve product support issues shall be captured in the Product Support Schedule (Figure 7-1).

Expectation: For each product support element, provide an assessment the actual level of development compared to the plan. The program must also assess any risk in the integration among the product support elements. Logistics Assessment must be integrated with the Product Support Schedule (Figure 7-1), and this section must summarize the results and plans for corrective action.

Product Support Element	Assessment	Discussion/Issues	Corrective Action/ECD
Product Support Management		Sustainment BCA 6 months behind schedule	OPR: (name)
Design Interface		Sub-system reliability data analysis for impact on O&S costs in work.	ECD: May 2015 OPR: (name)
Supply Support		Initial Spares funded; Cataloging actions incomplete; Warranty cost benefit analysis on-going	OPR: (name)
Maintenance Planning and Management		Core determination complete; LORA for hardware and software in-work; FMECA complete; on track to meet depot activation 4 years after IOC	OPR: (name)
PHS&T		Containerization planning complete	OPR: (name)
Technical Data		Intellectual property data rights contested by OEM; contracting and legal in negotiation with OEM; no impact on operational technical data requirements; affects competition for re-procurement	OPR: (name)
Support Equipment		Funding MIPR to ** for hardware and automatic test systems	OPR: (name)

Training & Training Support		Funding shortfall in PB14 for initial simulator; Plus up planned in POM 15	OPR: (name)
Manpower & Personnel			OPR: (name)
Facilities and Infrastructure		MILCON shortfall in FY 14; delayed construction for First Unit Equipped	OPR: (name)
Computer Resources			OPR: (name)
Sustaining Engineering			OPR: (name)

Table 5-2: Product Support Package Assessment (Mandated) (NOTIONAL)

Figure is time sensitive; must include as-of date.

6 Regulatory/Statutory Requirements That Influence Sustainment Performance

Include a table (Table 6-1) that lists all statutory and regulatory requirements that impact the sustainment of the program's system, and potentially affect sustainment performance.

Requirement	Documentation	OPR	Start Date / Implementation Date	CLIN	Review Cycle	Affected Performance Metric
Core Logistics Analysis	10 USC 2464	AMCOM	Pre-EMD Rev, Sept 2013		Milestone C; FRPDR	Availability & O&S Cost
Source of Repair Analysis	Public Law 111-23	OPNAV/N4	MS-C, Nov 2014		As required	
Public-Private Partnership	10 USC 2474	HQ AFMC/A4	MS-B, Sep 2013		MS-C; Every 5 years after IOC	Availability KPP Reliability KSA
Corrosion	DODI 5000.67 (Feb 2010)	PSM/Contractor	RFP, Sep 2011,	CLIN 008	MS-B MS-C Every 5 years after IOC	Availability KPP
IUID	DODI 5000.02 (Dec 08) DODI 8320.04 (Jun 08)	PSM/Contractor	RFP, SEP 2011	CLIN 007	MS-B MS-C FRPDR	
CBM +	DODI 4151.22 (Dec 07)		RFP, SEP 2011			Availability KPP
Serialized Item Management	DOD 4140.1-R DODI 4151.19 (Dec 06)		RFP, SEP 2011			
Supply Chain Risk Management	DEPSECDEF DTM 09-016, SCRM to Improve the Integrity of Components Used in DOD Systems DODI 5200.39 (Jul 08)		RFP, SEP 2011			
Affordability	AT&L Better Buying Power Memo, Nov 3, 2010					
DMSMS		PSM/Contractor	RFP, Sep 2011,	CLIN 009	On-going through production	Availability KPP
Counterfeit						
Others (Service Specific)						

Table 6-1: Sustainment Alignment of Regulatory/Statutory Requirements (Mandated) (NOTIONAL)

Expectation: Illustrate the PSM's recognition and compliance with statutory, regulatory, and policy requirements, their inclusion in RFP/contracts and how those requirements are tied to performance metrics.

7 Integrated Schedule

Provide a detailed, integrated, life-cycle system schedule (Figure 7-1), that is consistent with the integrated master schedule, and that emphasizes the next acquisition phase. Schedule items shall include, but are not limited to:

- Planned significant program activities (i.e., activities which must be performed to produce the system):
  - Program and technical reviews
  - Request for Proposal (RFP) release dates
  - Software releases
  - Key developmental, operational, integrated testing
  - Production lot/phases
  - Contract award (including bridge contracts and sustainment contract awards)
  - Long-lead or advanced procurements
  - Performance agreements, particularly with and among organic providers
- Major logistics and sustainment events for each of the product support elements with specific emphasis on the materiel and data development and deliveries. Include dependencies on key sustainment planning documents:
  - Reliability Growth Plan from the SEP
  - Product Support Business Case Analyses (BCA)
  - Maintenance Plans (initial and final)
  - Core Logistics Assessment
  - Depot Source of Repair
  - Training Plan
  - Diminishing Manufacturing Sources and Material Shortages (DMSMS) Plan
  - Source of Repair Assignment Process (SORAP)
  - Corrosion Prevention and Control (CPC) Plan (mandatory for ACAT I programs only, recommended for lower ACAT programs)
  - Planned post-implementation/post-IOC reviews
- Major activation activities for sites in the supply chain required to support the system, to include maintenance sites (including depot maintenance core capabilities stand-up), software support, and training sites. Include events for interim contractor support, hardware (including support and test equipment, trainers, etc.).

Expectation: The figure must expand upon the program's integrated master schedule (IMS and SEP), in the area of product support, especially activity that drives the program's sustainment budget (e.g. support/test equipment, trainers, etc.). This figure should capture major activities the PSM has required to develop and implement the product support package. Detailed, task-level implementation plans for the individual product support elements may be included as an annex to the LCSP.

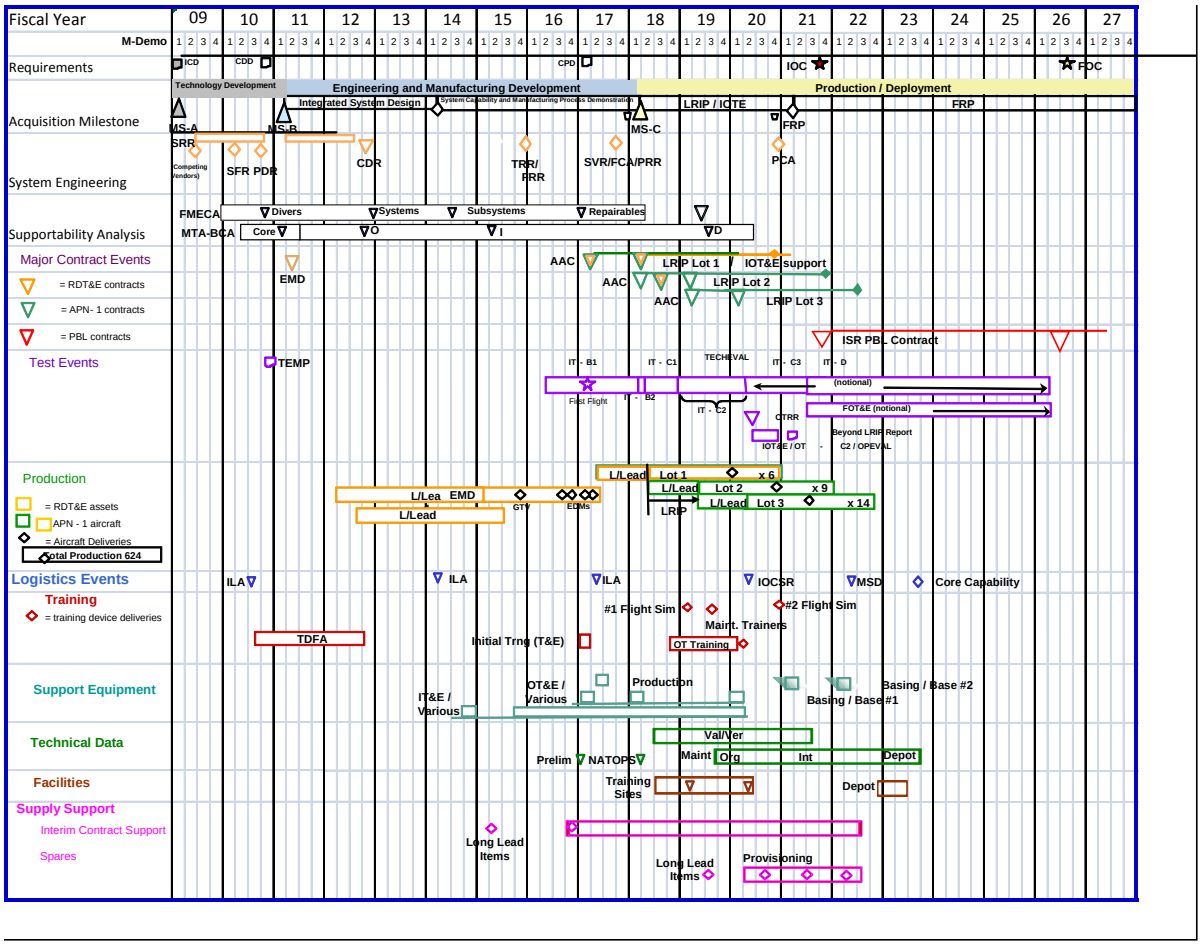


Figure 7-1: Product Support Schedule (Mandated) (NOTIONAL)
Figure is time sensitive; must include as-of date.

8 Funding

Identify the life-cycle sustainment logistics requirements for all appropriations. Funding must be traceable to the "Investment Program Funding and Quantities" Chart in Section 8 of the program's Acquisition Strategy template. See Table 8-1. Identify the program's major sustainment funding requirements, the documentation of those requirements (e.g. program office estimate, Service cost estimate, independent cost estimate), and the current budget documentation (e.g. program objective memorandum, President's Budget). In addition to inclusion in the various estimates, it's important that sustainment requirements are also included and updated in the affordability requirement, Will Cost/Should Cost estimates, and updated to reflect on going, fact-of-life changes, such as design changes, reliability growth, and budget and funding cycles. Additionally, after Milestone C as the system is tested (IOT&E), fielded, and operated, update to reflect data-driven changes or modifications to the system (i.e. design changes, ECPs) or the product support strategy.

Sustainment requirements can be provided as footnotes to the chart or as a list.

Expectation: Provide comprehensive sustainment requirements planning activities that are traceable to current cost estimates and funding documentation. Note, this chart is similar to the overall Program Funding chart in format, but the data should be specific to Sustainment Funding Requirements.

Program Life-Cycle Sustainment Specific Funding and Quantities Chart with footnotes

Template version PB12.6	Program Funding & Quantities										
($ in Millions / Then Year)	Prior	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY12-16	To Comp	Prog Total
RDT&E											
Prior $ (PB 11)	106.4	6.7	8.3	17.2	7.1	0.0	0.0	0.0	24.3	0.0	145.7
Current $ (PB 12)	108.0	5.0	4.2	16.0	6.5	3.2	1.3	0.0	27.0	0.0	144.2
Delta $ (Current - Prior)	1.6	(1.7)	(4.1)	(1.2)	(0.6)	3.2	1.3	0.0	2.7	0.0	(1.5)
Required $	108.0	6.5	7.9	16.0	6.5	3.2	1.3	0.0	27.0	0.0	149.4
Delta $ (Current - Required)	0.0	(1.5) [1]	(3.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(5.2)
PROCUREMENT											
Prior $ (PB 11)	0.0	128.3	133.2	145.2	133.5	138.0	112.0	0.0	528.7	217.0	1,007.2
Current $ (PB 12)	0.0	89.6 [2]	135.2	141.1	152.3 [3]	155.4	121.0	93.0	662.8	145.0	1,032.6
Delta $ (Current - Prior)	0.0	(38.7)	2.0	(4.1)	18.8	17.4	9.0	93.0	134.1	(72.0)	25.4
Required $	0.0	94.0	134.2	141.1	152.3	155.4	121.0	93.0	662.8	145.0	1036.0
Delta $ (Current - Required)	0.0	(4.4) [4]	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(3.4)
MILCON											
Prior $ (PB 11)	0.0	0.0	1.3	1.6	0.0	2.1	2.3	0.0	6.0	15.3	22.6
Current $ (PB 12)	0.0	0.0	1.4	1.7	0.0	2.0	2.1	3.0	8.8	12.6	22.8
Delta $ (Current - Prior)	0.0	0.0	0.1	0.1	0.0	(0.1)	(0.2)	3.0	2.8	(2.7)	0.2
Required $	0.0	0.0	1.4	1.7	0.0	2.0	2.1	3.0	8.8	12.6	22.8
Delta $ (Current - Required)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
WEAPON SYSTEM O&M [1]											

[1] Product Support BCA Unfunded
[2] Initial Spares: ($16M)
[3] MIPR to PMA-260; $16.4M Capital Investment Support Equipment Funding
[4] Initial Spares: $4.4M of $16M requirement unfunded

Prior $ (PB 11)	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	12.0	88.0	100.0
Current $ (PB 12)	0.0	0.0	0.0	0.0	0.0	0.0	11.0	15.0	26.0	75.0	101.0
Delta $ (Current - Prior)	0.0	0.0	0.0	0.0	0.0	0.0	(1.0)	15.0	14.0	(13.0)	1.0
Required $	0.0	3.8	3.5	4.0	4.3	4.6	5.2	5.0	23.1	40.0	70.4
Delta $ (Current - Required)	0.0	(3.8)	(3.5)	(4.0)	(4.3)[5]	(4.6)	5.8	10.0	2.9	35.0	30.6
TOTAL											
Prior $ (PB 11)	106.4	135.0	142.8	164.0	140.6	140.1	126.3	0.0	571.0	320.3	1275.5
Current $ (PB 12)	108.0	94.6	140.8	158.8	158.8	160.6	135.4	111.0	724.6	232.6	1300.6
Delta $ (Current - Prior)	1.6	(40.4)	(2.0)	(5.2)	18.2	20.5	9.1	111.0	153.6	(87.7)	25.1
Required $	108.0	104.3	147.0	162.8	163.1	165.2	129.6	101.0	721.7	197.6	1278.6
Delta $ (Current - Required)	0.0	(9.7)	(6.2)	(4.0)	(4.3)	(4.6)	5.8	10.0	2.9	35.0	22.0
QUANTITIES[2]											
Prior (PB 11)	0	552	575	681	587	602	634	656	3160	512	4,799
Current (PB 12)	0	385	582	607	655	669	521	400	3819	980	4,799
Delta $ (Current - Prior)	0	(167)	7	(74)	68	67	(113)	(256)	(308)	(468)	0
Required Qty	0	385	582	607	655	680	550	500	3959	840	4,799
Delta Qty (Current - Required)	0	0	0	0	0	(11)	(29)	(100)	(140)	140	0

Table 8-1: Product Support Funding Summary
Figure is time sensitive; must include as-of date.

- **<u>Acquisition logistics and sustainment funding requirements by appropriation</u>**
  - RDT&E: Milestone B Sustainment BCA (FY15, $1.5M, Unfunded), Supportability Analysis MIPR to AMCOM (FY13, $0.9M 3 man year effort); A&AS program office logistics A&AS (FYs13-20; 3 personnel)
  - PROCUREMENT: Initial Spares Buy (FYs16/17; $16.3M, $4.4M Unfunded); ICS (FYs18-21; $6.4M/year); Depot Stand-Up (FY22: $18.4M); MIPR to PMA-260 Support Equipment Buy (FY16: $5.6M; FY17: $5.1M)
  - MILCON: Training facilities (FY17: $13.3M; FY18: $4.3M; FY19: $20.6M); Operational Sites (FY16: $14.8M—3 location; FY17: $14.8M—3 locations; FY20: $15.1M—3 locations); Depot Facilities (FY21: $24M)
  - O&M: ICS (FYs22-24: $6.4M/year; FYs25-26: $3.2M—transition to organic stand-up); Steady state average operational support cost per unit ($1.4M/unit/year)

[5] ICS Funding Shortfall (FY13 and FY14)

9 Management

Expectation: The LCSP must provide the planned evolution in the organizational structure and IPTs through the acquisition process, including operations and sustainment.

9.1 Organization

9.1.1 Government Program Office Organization

Provide the planned program office organization structure (Figure 9-1), with expanded detail on the Product Support function. Include an as-of date and the following information:

- Organization to which the program office reports
- Program Manager (PM)
- Product Support Manager (PSM)
- Functional Leads (e.g., T&E, Engineering, Financial Management)
- Core, matrix, and contractor support personnel
- Field or additional Service representatives
- Legend, as applicable (e.g., color-coding)

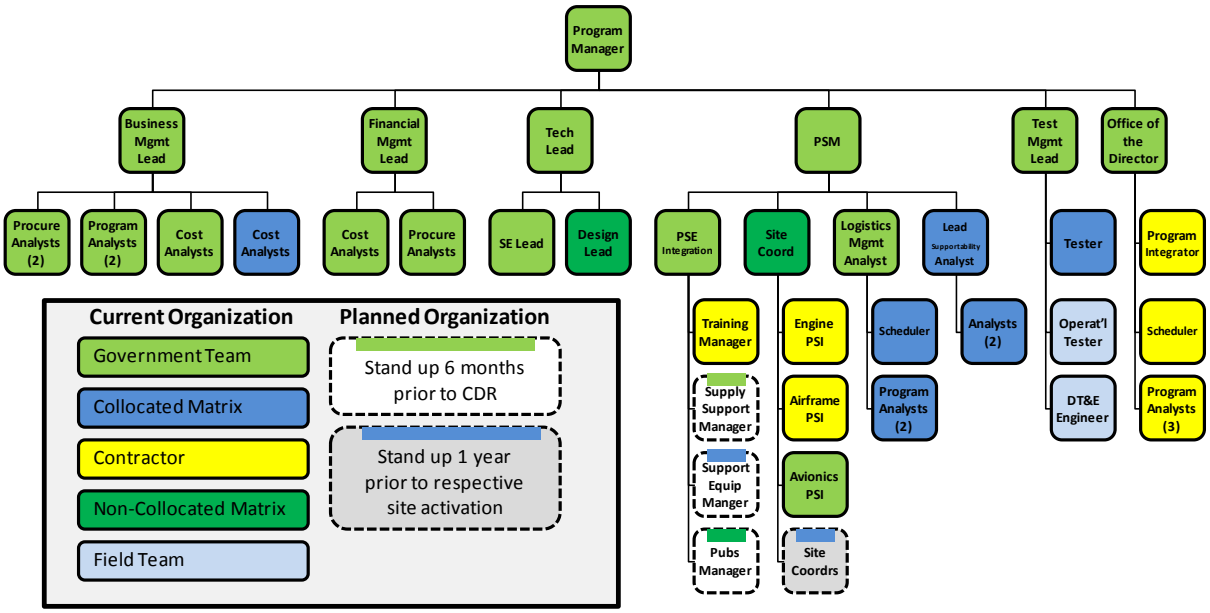


Figure 9-1: Program Office Organization (Mandatory) (NOTIONAL)
Note: Time sensitive figure; include an as-of date.

Provide the following information relative to the Product Support Manager:

- Name, code/office symbol and contact information
- Career field and qualifications/certifications (e.g. DAWIA Level III Logistician, PM). If not currently certified summarize the specific actions and timeframe for certification.
- The reporting relationship(s) relative to the PM and to any logistics, sustainment or materiel commands

9.1.2 Program Office Product Support Staffing Levels

Summarize the program's product support staffing plan (Figure 9-2) showing the number of required full-time equivalent (FTE) positions (e.g., organic, matrix support, and contractor) by key program events (e.g., milestones

and technical reviews). Provide supporting tables breaking out the positions by numbers (both authorized and assigned), position type, and major functions performed.

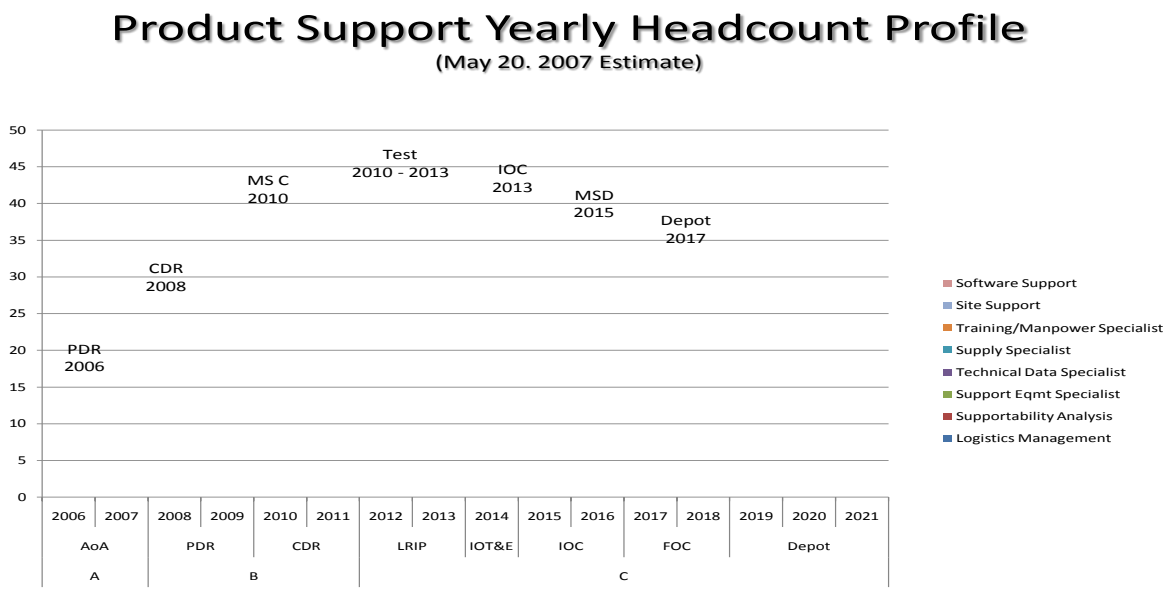


Figure 9-2: Program Product Support Staffing (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

9.1.3 Contractor(s) Program Office Organization

Provide diagrams of the contractor(s) program office organization and staffing plans in figures analogous to Figure 9-1 and Figure 9-2.

9.1.4 Product Support Team Organization

Integrated Product Team (IPT) Organization – Provide a figure (analogous to Figure 9-1) showing all government personnel and contractors (when available) assigned to sustainment related IPTs, working IPTs, and working groups. The figure must show the vertical and horizontal interrelations among the groups listed. Identify the government and contractor(s) leadership for all teams.

IPT Details – For all government and contractor(s) (when available) IPTs and other key teams (e.g., Level 1 and 2 IPTs and Working Groups); include the following details in a table (Table 9-1):

- IPT name and effective dates. IPT standup dates shall be included in the Product Support Package Schedule (Figure 7-1)
- POC and contract information
- Functional team membership (to address the appropriate product support elements)
- IPT roles, responsibilities, and authorities
- IPT products (e.g., updated baselines, risks, etc.)
- IPT-specific metrics

Note: Ensure the IPTs in the figure and table match and are consistent with the overall program IPT structure

Expectation: Product Support IPT's are expected to include appropriate Service, DoD Agency, and COCOM representation, to ensure that organic Maintenance, Supply Chain, and Transportation capabilities, constraints and risks inform LCSP development.

Team Name	POC	Team Membership (by Function or Organization)	Team Role, Responsibility, and Authority	Products & Metrics
PS IPT	PSM Bob Smith 703-xxx-xxxx	- Program Office • Deputy PM • Sys Eng Lead • Financial Lead • SW Lead • Site Rep. • R&M Lead - PSIs (List) - Prod Spt IPT Leads (List) - Service Representative(s) - DoD Agency Representative(s) - Key Subcontractor or Suppliers • Engine • XXX **Size**: YYY	Role: IPT Purpose Responsibilities: Integrate all product support efforts • Team Member Responsibilities • Cost, Performance, Schedule Goals • Scope, Boundaries of IPT Responsibilities Schedule and frequency of meetings Date of signed IPT charter and signatory	Products: • LCSP/LCSP Updates • IMP/IMS Inputs • Specifications • AS input Metrics: • Cost o Program Product Support Element costs o OPTAR • Schedule • Sustainment o A_M o Log Foot Print
XXX IPT	XXX	- Program Office • Sys Eng Lead • Test Manager • Logistics Manager • R&M Deputy • Site Rep. - PSI X Lead - Key Subcontractor or Suppliers **Size:** YYY	Role: IPT Purpose Responsibilities: Integrate all technical efforts • Team Member Responsibilities • Cost, Performance, Schedule Goals • Scope, Boundaries of IPT Responsibilities Schedule and frequency of meetings Date of signed IPT charter and signatory	Products: • Specification input • LCSP input • TES/TEMP input Metrics: • Performance Measure (PM) 1 • PM 2

Table 9-1: IPT Team Details (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

9.2 Management Approach

9.2.1 Product Support Manager (PSM) Roles and Responsibilities

List the interfaces, deliverables and dependencies that the PSM and logistics staff must coordinate with other functional areas to ensure sustainment is aligned with program design, program management (including risk management and configuration management) and test reviews. List the program processes through which the PSM must integrate design and program decisions with sustainment considerations, referencing the relationships identified in Figure 3-3. Provide the program's unique delineation of the PSM's specific roles, responsibilities, and authorities. This section must specify how the PSM will accomplish the following roles and responsibilities:

- Develop a performance-based product support strategy that provides for competition and leverages common infrastructure and resources across programs and DoD Components
- Develop and implement product support arrangements
- Assess and adjust resource allocations and performance requirements
- Conduct product support strategy reviews and validate the supporting business case analysis
- Contribute to the program's financial efforts (e.g. budgeting, funds execution)
- Participate in and lead as appropriate program IPTs, with specific emphasis on sustainment related IPTs

Expectation: The PSM's responsibilities listed here map explicitly to the Product Support Strategy and Planning sections listed in this annotate outline and align with the intent that the LCSP serve as the program's primary Product Support Management tool. The activities and products associated with each responsibility shall be scheduled on the Product Support Schedule (Figure 7-1)

The management approach must also establish:

- **IPT Alignment –** The processes and mechanisms through which the government will interact with the prime and subcontractors.
- **Performance Assessment –** The process to manage performance (e.g. review cycle, triggers to alert management to cost, schedule, or performance deviation)

Expectation: Specific attention must be paid to <u>how</u> the Product Support IPT (PS-IPT) manages program communications, issues resolution, and its role in budget formulation and affordability analysis. This section must demonstrate that product support considerations are included within the program decision making framework.

9.2.2 Sustainment Risk Management

Specify the process through which the Program will manage sustainment-specific risks, within the context of the overall Program risk management process.

Indicate roles, responsibilities, and authorities within the risk management process for:

- Reporting/identifying risks
- Determining the criteria under which risks are defined and categorized (typically based on probability of occurrence and consequence)
- Adding/modifying risks
- Changing likelihood and consequence of a risk
- Closing/retiring a risk

If Risk Review Boards or Risk Management Boards are part of the process, identify the chair, participants, and meeting frequency. If program office and contractor(s) use different risk tools, identify the means by which information will be transferred among them. NOTE: In general, the same tool should be used. If the contractor's tool is acceptable, then this merely requires Government-direct, networked access to that tool.

Provide a table (Table 9-2) that lists key risks identified in the reviews listed in Section 5 to the Sustainment which includes:

- As-of date
- Risk including the review(s) in which it was identified
- Risk rating
- Description
- Driver
- Mitigation status

Expectation: Sustainment risk management must be part of the program's overall risk management program and not an isolate process. This section should include specific risks that could adversely impact the product support package, including but not limited to changing design based requirements creep or immature sustainment technologies required to implement the product support strategy. The Mitigation Plan shall include schedule for addressing risk and responsible individual in the Product Support organization.

Risk	Rating	Driver	Mitigation Plan	Status

Table 9-2: Risk Summary (Mandated)

Note: Time sensitive figure; include an as-of date.

10 Supportability Analysis

Expectation: This section lists the analytic methods and tools that the Supportability Analysis Engineers use to define the product support package. The program must closely align the engineering design with the product support elements to ensure that materiel availability can be achieved affordably. Early in the acquisition process, the emphasis of this section is on the design trades in preparation for each of the design reviews necessary to achieve the sustainment requirements, and in preparation for the Pre-EMD Review. As the program progresses into production this section focuses more heavily on integrating the product support elements to provide the most affordable product support. During sustainment, the focus is on adjusting product support based on the operational needs.

10.1 Design Interface

Expectation: This section must match the SEP, so the logistics community can reference one document for the FMECA, and ensure a common understanding of failure modes. Once the initial FMECA is complete, the table provides a means to communicate changes as the design evolves. Ultimately the FMECA triggers the Program to make timely adjustments to the product support package.

10.1.1 Design Analysis

Failure Modes, Effects, and Criticality Analysis (FMECA) – For each of the major or critical subsystems provide the following details from the systems engineering FMECA in a table (Table 10-1) with an 'as-of date':

- Systems (break into subsystems as needed to highlight subsystems with reliability drivers or with reliability issues) and identify the responsible IPT Lead
- Schedule, including planned updates
- List subsystems and/or modes driving changes to baseline product support package
- Impact on product support strategy or product support package baseline change

System	Schedule	Issues/Likelihood	Impact / comments
Airframe IPT Lead	Complete Update after IOT&E	• New failure modes uncovered due to projected corrosion issues around engine inlets and on wing spar. • Fuel tanks moved	• Ensure there are sufficient doors and panels to allow accessibility to critical areas. Ensure panels, doors, etc. are interchangeable between aircraft and designs meet support event frequencies in terms of access and its 3-dimensional access plane. • Verify fuel tanks not adding stress to bulk heads during operations resulting from high "G" operations
Propulsion IPT Lead	3rd Qtr 06 to 4th Qtr 07	None	
Avionics – General IPT Lead	Complete	• New failure modes uncovered which current health monitoring system cannot predict.	• Design out diagnostic ambiguity groups that cause false alarm rates taking into account the new failure modes.
ISR systems IPT Lead	3rd Qtr 06 to 4th Qtr 07	• ISR design behind schedule due to efforts to understand unexpected failure mode in optical sensor	• Will delay development of publications and Test Equipment. The potential severity may require development of new prognostics capabilities
Fire Control IPT Lead			

Avionics Test Equipment IPT Lead			

Table 10-1: FMECA Summary (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

Reliability Growth Plan Issues – Provide a table (Table 10-2) that lists the results of the systems engineering analysis efforts. The information must link with the current Reliability Growth Plan and include:

- Product Support Plan Driver Systems reflected with reliability 20% (number is illustrative; Program must tailor based on its specific needs) or more above target
- Planned value in the Reliability Growth Plan and corresponding de-rated value upon which the product support strategy/package is based
- Current reliability estimate (measured and de-graded) at IOC
- Confidence level target will be met
- Mitigation and, if the target is not reached, a trigger for action required to ensure the program remains on schedule

System	Planned/ De-rated Values (failures per operating hour)	Estimate at IOC	Confidence Level	Mitigation efforts
ISR systems	.01 / .15	.01 / .25	50%	• Buy additional spares and add additional I level repair capabilities at larger sites. • Decision required at MS C

Table 10-2: Reliability Growth Plan Issues (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

Completed Supportability Trades - List the following for major supportability trade studies that have been completed since the last LCSP update in a table (Table 10-3):

- Trade name and date completed
- Lead IPT
- Options analyzed
- Criteria used to evaluate costs and benefits
- Results
- Impact - on the weapon system design and/or product support strategy and package

Note: Includes business case or other economic analysis that consider sustainment costs and outcome value. Limit the list to the 10 most critical trades.

Completed Supportability Trades Jan 10, 2009				
Trade (Completed since 11/12/07)	**IPT**	**Options Analyzed**	**Results**	**Impact**
Engine level of repair 5/20/08	Engine IPT	**Alternatives:** – 2 level or 3 levels of repair – Centralized 2nd level of repair or at every major site – Commercial or organic at 2nd or 3rd level **Criteria:** – A_M and A_O – Program costs and O&S costs	– 3 levels of maintenance with 2nd level being performed commercially at 3 central sites for hot sections – 3rd level performed by industry	– Competitive 2nd and 3rd level performance based contract in place by IOC to cover all sustainment functions, (e.g. design, maintenance, supply, transportation, etc.). – Complete drawing set needed for competition

Table 10-3: Completed Supportability Trades (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

Planned Supportability Trades – List the following for major upcoming trades to be conducted prior to the next milestone and major trades in subsequent phases in a table (Table 10-4):

- Trade name
- Lead IPT
- Timeframe
- Objective
- Options to be analyzed
- Criteria used to evaluate costs and benefits

Planned Supportability Trades Jan 10, 2009				
Trade	**IPT**	**Options Analyzed**	**Results**	**Impact**
ISR sustainment capabilities	Mission Equipment IPT	Jan 09 – Jan 10	– Determine lowest LCC cost solution considering the risks associated with the rapid change in technology while meeting the overall A_M	**Alternatives:** – Commercial or organic sustainment – Best blend between sustainment functions, (e.g. design, maintenance, supply, transportation, etc.). **Criteria:** – A_M and A_O – Program costs and O&S costs
Post MS C Supportability Trades Jan 10, 2009				
Trade	**IPT**	**Options Analyzed**	**Results**	**Impact**
Engine repair locations	Engine IPT	May 12 – Sept 12	• determine best locations for maintenance	**Alternatives:** – CONUS/OCONUS mix – International partners **Criteria:** – A_M and A_O Program costs and O&S costs

Table 10-4: Planned Supportability Trades (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

Expectation: The trades identified in Table 10-3 and Table 10-4 ensure the PM has considered the coupling among the requirements, design and product support strategy. This section must ensure that the supportability analysis results in an affordable design and product support package. The trades are used in the Technology Development phase to provide an initial assessment of requirement affordability. Prior to and following the Pre-EMD Review, the trades are critical in determining the Product Support Arrangement, both commercial and organic. Later, including during sustainment, trades are used to examine alternatives to control sustainment costs or achieve materiel available at a lower cost.

10.1.2 Technical Reviews

In a table (Table 10-5) identify the following information for each of the Technical Reviews identified in the SEP:

- Technical Review/Schedule
- Sustainment /Product Support Community participants
- Sustainment related focus area

- Entry and Exit Criteria

Review	Sustainment Participants	Sustainment Focus	Criteria
PDR 2nd Quarter 2009	• PSM • Supportability Analysis IPT Lead	• Fire Control System prognostics capability • Airframe access panel locations for corrosion control	**Entry** • TEMP **Exit:** • Test criteria for operational testing • Updated schedule • YYY
CDR 4th Quarter 2010	• PSM • Supportability Analysis IPT Lead • xxx	• XXX • XXX • XXX	**Entry** • XXX **Exit:** • YYY • YYY

Table 10-5: Technical Reviews (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

10.2 Product Support Element Determination

In a table (Table 10-6) identify the supportability analysis methods and tools (including the product support business case analysis) used to define the elements that comprise the product support package. Among the required information:

- Supportability Analysis processes addressed
- Schedule (identify when the tool will be applied and on what portion of the weapon system*)
- Tools **
- Output product
- Product review/update timeframes

Notes:
** A separate schedule may be appropriate in cases when sub-systems are not in sync with the basic design.*
*** Include a separate schedule if the tool has to be developed, integrated with other tools, refined, or updated. The table must include the responsible analyst performing the supportability analysis, tool, timeframe, and list of the required changes.*

Product Support Analytical Support Methods and Tools Jan 10, 2009				
Process/Analyst	**Schedule**	**Tool**	**Output Product**	**Update Timeframe**
Maintainability Analysis and Prediction	XXX	MIL-HDBK-472 Maintainability Prediction Techniques supported by NALDA data for analogous systems	Maintenance Concept	xxx
Maintenance Task Analysis	XXX	YYY proprietary	Draft Maintenance	MS C

		software PowerLog	Procedures	
Repair Level Analysis considering both cost and materiel availability impact	XXX	COMPASS (updated to include A_M)	Repair vs Discard and level of repair decision	MS C
Reliability Centered Maintenance (RCM) – including its natural fall outs or related analyses	XXX	– SAE JA 1011, RCM Evaluation – SAE JA 1012, RCM Guide – S4000M, Scheduled Maint. Analysis	– Corrosion Control Maintenance Procedures – Condition-Based Maintenance Plus (CBM+) – Prognostics & Health Management (PHM)	MS C
Training System Requirements Analysis (TSRA)	XXX	SCORM	Training Programs of Instruction	MS C
Sources for Sustainment (e.g., Warranty Cost Benefit Analysis (CBA), business case or other economic analysis that consider costs and outcome value)	XXX	Clockworks CASA	XXX BCA	MS C
Depot Source of Repair (DSOR) Analysis	XXX	xxx	Xxx	Xxx
Sparing	XXX	Arrows COMPASS	Spares Allowance list Sparing to Availability	MS C
Manpower	XXX	LCOM Manpower Authorization Criteria	Manning recommendations	MS C
Tools and Test Equipment Analysis		PowerLog CASA COMPASS	Support Equipment Recommendation Data TMDE Requirements	MS C
Transportability Analysis		xxx	Transportability Plan & Procedures for Transportability	MS C

Table 10-6: Product Support Analytical Methods and Tools (Mandated) (NOTIONAL)

Note: Time sensitive figure; include an as-of date.

Expectation: This section must demonstrate that the program is building its product support package on a foundation of sound data and analytical decision support capabilities.

10.3 Sustaining Engineering

In a table (Table 10-7) list the tools that will be used to monitor the performance of the product support package:

- Monitoring Tool
- Office of primary responsibility
- Metrics/Data monitored and frequency
- Feedback mechanism (including the method for highlighting to senior management the consequences and impacts on the Sustainment KPP/KSAs of budget constraints)
- Performance review timeframes

Sustainment Performance Data Collection and Reporting				
Tool	**OPR/IPT**	**Metrics/Data Monitored**	**Feedback Mechanism**	**Review Timeframes**
Sustainment Quad Chart	PSM	A_O, A_M, R MDT_O, MDT_M, O&S costs	Automatic updates to PEO and DASD (MR) via DAMIR. Metrics feed from NALDA GCSS	Quarterly
Post IOC Review	PSM	Logistics Assessment elements	Feedback from operators and PSI and PSPs Summary reports forwarded to DASD (MR)	Even Years
Failure Reporting , Analysis, and Corrective Action System (FRACAS)	Sustaining Engineering IPT	Ao, Am, R MDT_O, MDT_M, O&S costs driver metrics including but not limited to: • XXX • XXX • XXX	NALCOMIS/NALDA data analyzed and compared to baseline values and supportability analysis tools used to update product support elements as needed	• Critical systems effecting costs or A_M as needed • 25% of WUCs assessed every year

Table 10-7: Sustainment Performance Monitoring (Mandated) (NOTIONAL)

Expectation: This table must demonstrate that the program has a monitoring plan and capability that can trigger corrective action in the event one or more product support element is at risk of degrading sustainment performance. This data is also useful for the PSM in linking resources to readiness.

11 Additional Sustainment Planning Factors

List additional sustainment issues or risks that cross functional lines that could adversely impact sustainment or sustainment support across the system's life cycle that are not included elsewhere in the LCSP. If the topic is addressed in another document (e.g., the Systems Engineering Plan, etc.) provide a short summary and reference the source. For example:

- Critical Program Information elements provided in the Program Protection Plan (maintaining anti-tamper on component or sub-components)
- Materials with environmental impacts addressed in the PESHE (require special handling, demilitarization, facilities, training)
- System integration with or onto another platform (vehicles onto transport ships/RoRos, air transports, etc.)
- Integration of C4I with the system

Provide a list of precious metals requiring recovery, items that are classified, export controlled, pilferable, or require special handling.

Expectation: Information may be included in other acquisition documents but is important to the effective functioning of operators and maintainers. This section provides product support stakeholders additional information that impacts sustainment planning and operations and a reference to where additional information can be found.

LCSP Annexes

The following annexes must be included:

- Product Support Business Case Analysis (DODI 5000.02)
- Logistics Assessment and Corrective Action Plan (DODI 5000.02)
- System Disposal Plan (DODI 5000.02; DOD 4160.21-M)
- Preservation and Storage of Unique Tooling (DODI 5000.02).
- Core Logistics Analysis (DODI 5000.02)
- Source of Repair Analysis (DODI 5000.02)
- Service-Specific Requirements, including detailed system Product Support Plan/integrated product support elements

Expectation: The DoD Components will use this section to provide more detailed implementation information to guide the development and fielding of the product support package.