



Life-Cycle Sustainment Plan Annotated Outline

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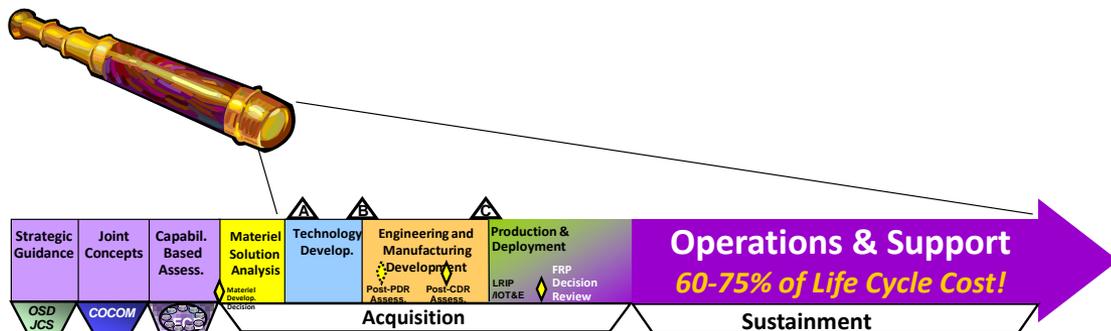
5 June 2012



Agenda

- ❑ LCSP Background and Perspective
- ❑ Outline and Expectations
- ❑ LCSP and RFPs
- ❑ Experiences
- ❑ Conclusion

He Who Fails To Plan is Planning To Fail



<https://acc.dau.mil/lcsp-outline>



LCSP...an introduction

❑ LCSP Facts

- 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*.
- **Separated** from Acquisition Strategy
- Annotated outline
 - **Required for all programs**
 - Approval for ACAT ID by ASD(L&MR); others (IAM, 1C) @Component

❑ Key document for:

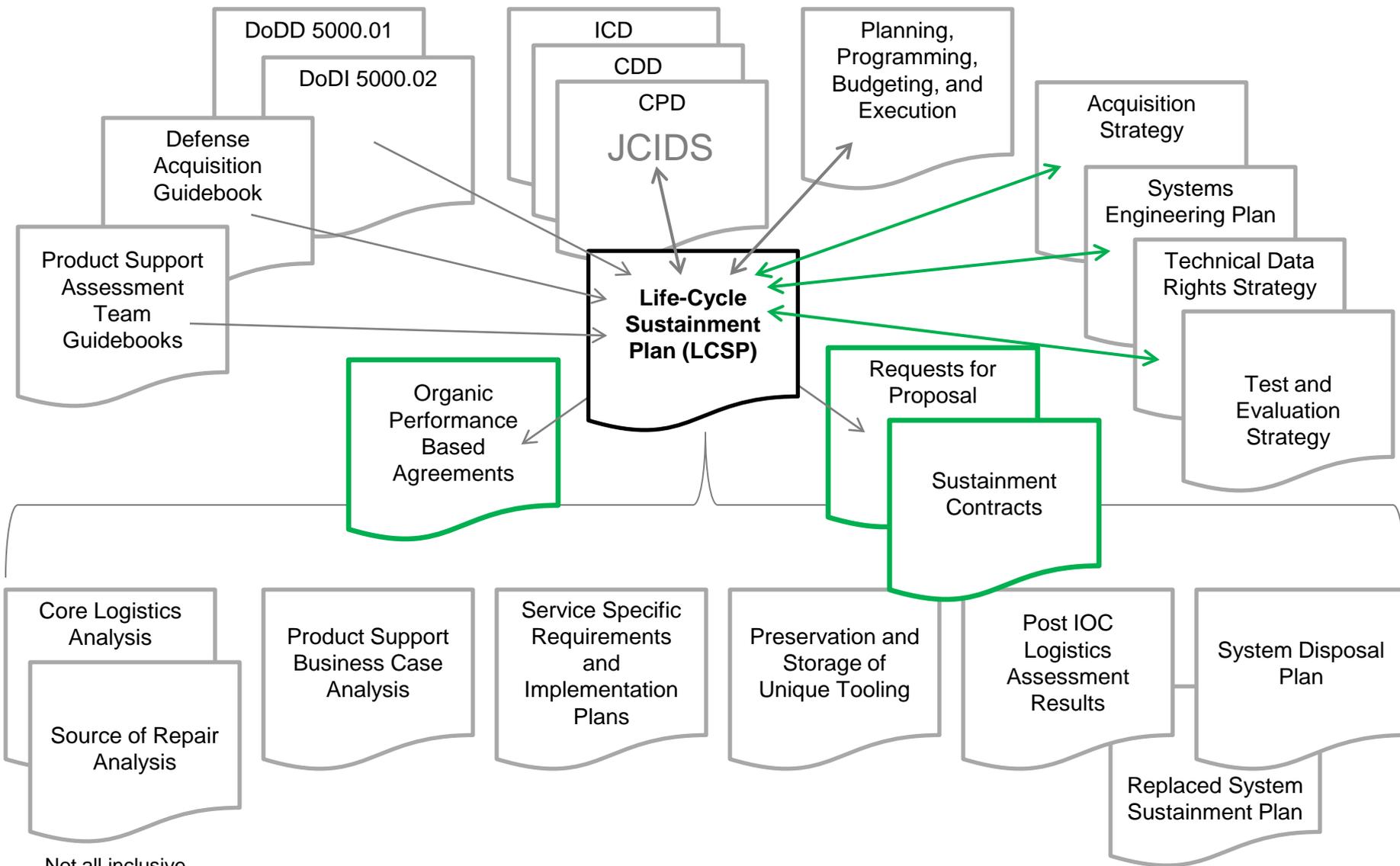
- Programs
- Milestone decision authorities
- Oversight and policy roles

In today's tight budget climate, the LCSP facilitates cross-functional alignment among acquisition and sustainment stakeholders to deliver affordable systems

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



The LCSP is the nexus of critical thinking to deliver affordable life-cycle product support



Not all inclusive



Key LCSP ~~Questions~~

Answers



- What is the Product Support Strategy?**
- How is the program implementing a Performance-Based Product Support Strategy?**
- What metrics are used?**
- How are the sustainment functions covered?**
 - What type contract(s) will be used to procure the Product Support Package?
- Where is the program in implementation?**
 - What's been done?
 - What's going to happen next?

Who

What

When

How



Key LCSP Purpose

The program's management tool to **communicate**, align, and integrate product support stakeholders efforts formulating, implementing, and executing the sustainment strategy

Both Teams Are Playing Football



...but they are not playing the same game.



Facts, not lengthy prose



Sustainment Matrix																				
Sub-sys**	Data Rights	Function	Maintenance									Software Support/Maint	Supply Support	Transportation (PHS&T)	Supportability Analysis	Configuration Control *	Technical Data	Training		
			Level 1			Level 2			Level 3											
			O-1	O-2	O-3	C	I-1	I-2	I-3	C	Depot								C	O
Airframe	Unlimited	Servicing/Inspections Corrosion Control/Treatment Repair	o	o	o							N I N I								
Power Plants Engine	Unlimited	Servicing/Inspections Assemble/Disassemble Repair	o	o	o	o	o	o				N I N I N I	o	o	o	o	o	o	o	o
APU	Negotiated License Rights Remove & Replace only	Remove & Replace Repair & Overhaul	o	o	o	P A					A	A	A	TRANSCC	P-A	A	A	A	A	
		Inspections Functional test & adjustments Repair	o	o	o	ISR	ISR	ISR	ISR	ISR	ISR	ISR ISR ISR		ISR	ISR	ISR	ISR	ISR	ISR	
		Inspections Functional test & adjustments Repair	o	o	o		o	o	o	o	o	Tinker Tinker Tinker	o			o	o	o	o	
		Diagnostics Software											o							
		Inspections Functional test & adjustments Repair	o	o	o	o	o	o	o	o	o	Tinker Tinker Tinker	o	A	TRANSCC	P-A	o	o	o	
		Inspections Functional test & adjustments Repair	o	o	o	o	o	o	o	o	o	Tinker Tinker	o	P-TBD	o	P-TBD	o	o	o	
		Inspections Functional test & adjustments Repair	o	o	o	o	o	o				NI	o			o	o	o	o	
		Diagnostics Software Hardware Diagnostics Software Hardware				o	o					NI B	o B	o B	o B	o B	o B	o B	o B	

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 1 st 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	XXX

cost or availability drivers. Also expand as program moves towards MS C.

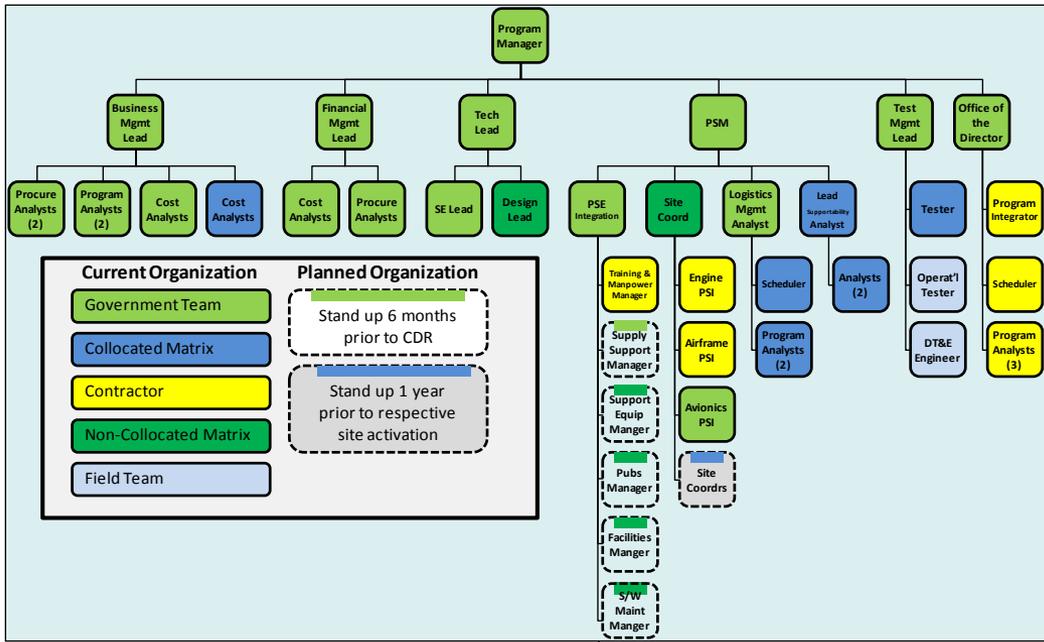
Maint Level Codes	Organizational Codes
O-1: Ashore Squadrons & Aviation ships	NI NADEP North Island
O-2: OCONUS Detachments	Tinker Tinker - AMC Tinker
O-3: Detachments aboard non-aviation ships	ISR Contractor TBD
I-1: Major CONUS Ashore & Aviation Ships AIM/MA	Contractor A
I-2: Minor CONUS Ashore Sites	B Contractor B
I-3: OCONUS AIMDs	TBD Contractor TBD
	P Organic/Commercial Partnership

* Includes design and logistics management responsibilities

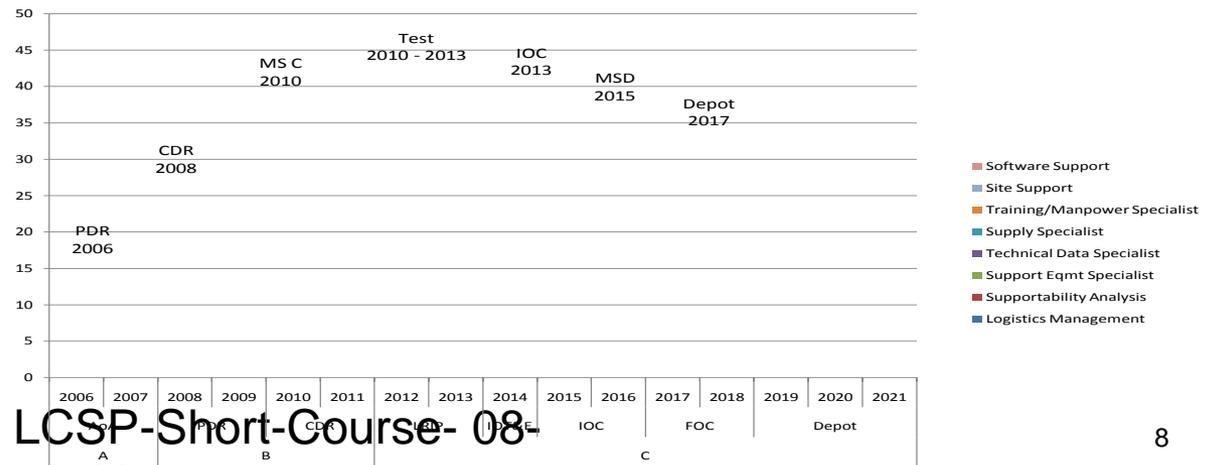
o Full organic capabilities
o Limited capabilities



A picture is worth a 1,000 words



Support Yearly Headcount Profile (May 20, 2007 Estimate)



LCSP-Short-Course- 08
19-11



The LCSP Is Not

❑ It is not a rehash of policy or guidance

- It is the program's plan for accomplishing policy and associated guidance
- It focuses on **specifically how** the program will implement it
 - Who will do what
 - When
 - How (specific tools/processes)
 - How much it will cost

Guidance already documented in the DAG

❑ It is not put together for milestone reviews

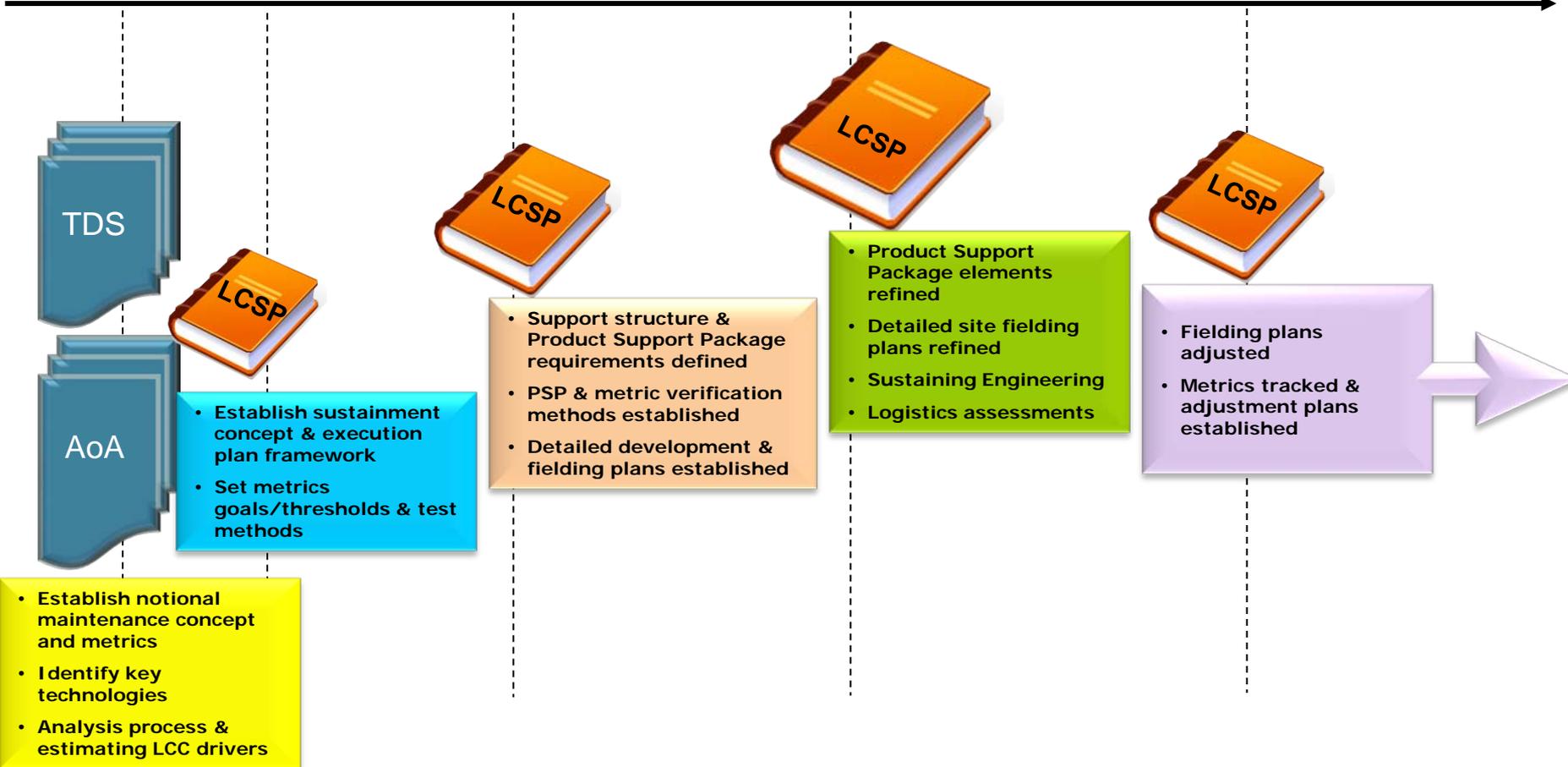
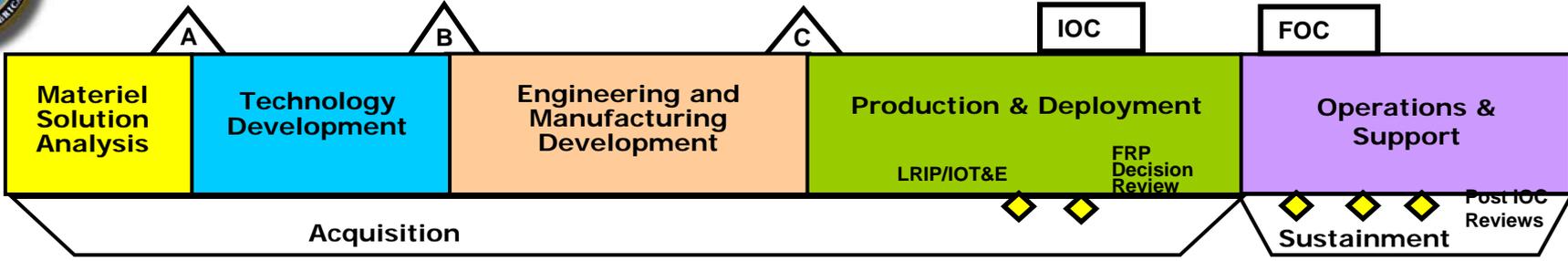
- Program's management tool for communicating the plan

❑ It is not static

- It is a living document describing the sustainment approach and resources necessary across the life cycle
- The LCSP documents the **current** program plan relative to sustainment
- It **evolves**



The LCSP Evolves





Agenda

- ❑ LCSP Background and Perspective

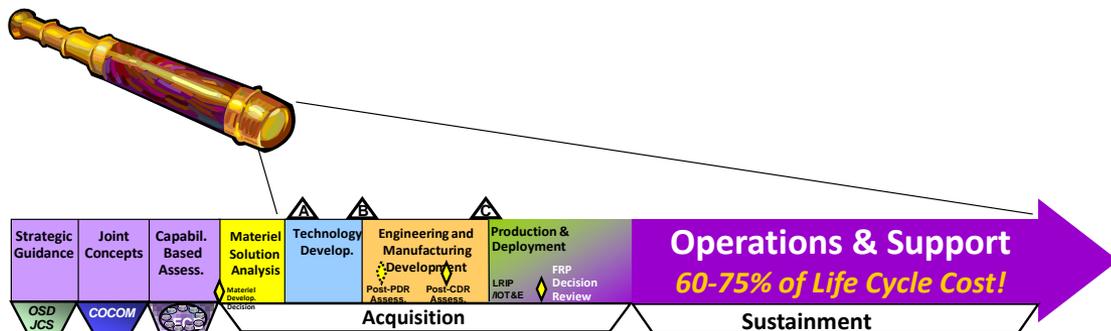
- ❑ Outline and Expectations

- ❑ LCSP and RFPs

- ❑ Experiences

- ❑ Conclusion

He Who Fails To Plan is Planing To Fail





Outline and Expectations: LCSP Table of Contents

1. **Introduction**
Purpose, scope, focus and objective
2. **Product Support Performance**
Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
4. **Product Support Arrangements**
Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
5. **Product Support Package Status**
Results from Logistics Assessments, Program & Design reviews (open issues)
6. **Regulatory/Statutory Requirements that Influence Sustainment Performance**
How being implemented
7. **Integrated Schedule**
Sustainment related events (major plans, Product Support Elements & site activations)
8. **Funding**
Product Support Elements & spending plans
9. **Management**
Organizational structure & staffing levels and management approach
10. **Supportability Analysis**
How design features being implemented/status, PSE determined and the performance tracked
11. **Additional Sustainment Planning Factors**
Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents: Introduction



1. Introduction

Purpose, scope, focus and objective

2. Product Support Performance

Metrics, their values and how they will be measured over time

- Scope
- Focus
- Objective
- Update process overview

6. Regulatory/Statutory Requirements that Influence Sustainment Performance

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	NAVAIR (AIR-00)
0.9	October 2008	Addressed PS WIPT (including Service and OSD) comments – many changes – see Comment Resolution Matrix (CRM)	APEO(L)
Etc.			

LCSP Annexes



LCSP Table of Contents: Product Support Performance and Strategy

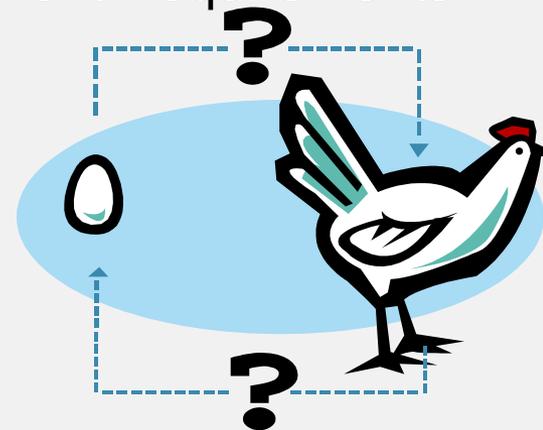
1. **Introduction**
 - o Purpose, scope, focus and objective
2. **Product Support Performance**
 - Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
 - Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)

2 Product Support Performance

- 2.1 Sustainment Performance Requirements
- 2.2 Testing and Demonstrating Sustainment Requirements

3 Product Support Strategy

- 3.1 Strategy Considerations
- 3.2 Sustainment Relationships



11. Additional Sustainment Planning Factors

- o Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents: Product Support Arrangements and Package Status

1. Introduction
 - Purpose, scope, focus and objective
2. Product Support Performance
 - Metrics, their values and how they will be measured over time
3. Product Support Strategy
 - Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
4. **Product Support Arrangements**
Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
5. **Product Support Package Status**
Results from Logistics Assessments, Program & Design reviews (open issues)

4 Product Support Arrangements

- 4.1 Contracts
- 4.2 Performance Based Agreements



5 Product Support Package Status

- 5.1 Program Review Results
- 5.2 Logistics Assessment Results





LCSP Table of Contents: Regulatory/Statutory Requirements

1. **Introduction**
 - o Purpose, scope, focus and objective
2. **Product Support Performance**
 - o Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
 - o Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
4. **Product Support Arrangements**
 - o Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
5. **Product Support Package Status**
 - o Results from Logistics Assessments, Program & Design reviews (open issues)
6. **Regulatory/Statutory Requirements that Influence Sustainment Performance**
How being implemented

Requirement	Documentation	OPR	Start / Implementation Date	CLIN	Review Cycle	Performance Metric
Core Logistics Analysis	10 USC 2464	AMCOM	MS-B, 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



LCSP Table of Contents: Integrated Schedule



1. **Introduction**
 - Purpose, scope, focus and objective
2. **Product Support Performance**
 - Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
 - Strategy (maintenance & s
4. **Product Support Arrange**
 - Contracting strategy (Deta
5. **Product Support Package**
 - Results from Logistics Ass
6. **Regulatory/Statutory Req**
 - How being implemented
7. **Integrated Schedule**
 - Sustainment related events
8. **Funding**
 - Product Support Elements
9. **Management**
 - Organizational structure &
10. **Supportability Analysis**
 - How design features being
11. **Additional Sustainment P**
 - Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents: Funding

1. Introduction
 - Purpose, scope, focus and objective
2. Product Support Performance
 - Metrics, their values and how they will be measured
3. Product Support Strategy

8 Funding

Sustainment related funding

- Required
- Funded

- Sustainment related events (major plans, Product
8. Funding
 - Product Support Elements & spending plans
9. Management
 - Organizational structure & staffing levels and man
10. Supportability Analysis
 - How design features being implemented/status, P
11. Additional Sustainment Planning Factors
 - Special topics related to sustainment

LCSP Annexes

Table 8-1: Product Support Funding Summary
(As of: 10 April 2012)

WBS Element		FY FMD (\$000)															Total
POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25			
Training	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		FMD (\$000)															
WBS Element	POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
Training	Required	0.0	0.0	2.9	3.8	2.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	
	Funding	0.0	0.0	3.1	3.1	3.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	
	Delta	0.0	0.0	(1.0)	(2.3)	(0.9)	(1.0)	(0.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(6.5)	
		FMD (\$000)															
WBS Element	POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
Spares	Required	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	9.4	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	(1.0)	(8.4)	0.0	0.0	0.0	0.0	0.0	0.0	(9.4)	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Training	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	4.3	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
ICS	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.5	0.0	0.0	0.0	0.0	0.0	0.0	24.5	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		FMD (\$000)															
WBS Element	POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
Spares	Required	0.0	0.0	0.0	0.0	0.0	0.0	1.3	9.9	9.4	9.2	9.3	9.0	8.3	8.0	54.0	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	(1.3)	(9.9)	(9.0)	(9.0)	(9.0)	(9.0)	(8.0)	(8.0)	(54.0)	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.3	0.0	0.3	0.0	0.0	
Training	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	3.1	4.9	4.8	4.8	4.8	3.7	26.2	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
ICS	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.5	24.0	0.0	0.0	0.0	0.0	0.0	55.5	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Depot Stand-Up	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		TOTAL Total															
WBS Element	POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
RDFAE Totals	Required	0.0	0.0	2.9	3.8	2.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	
	Funding	0.0	0.0	3.1	3.1	3.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	
	Delta	0.0	0.0	(1.0)	(2.3)	(0.9)	(1.0)	(0.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(6.5)	
		Procurement Total															
WBS Element	POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
Procurement Totals	Required	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Delta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Acquisition Total (TOTAL + Procurement)															
WBS Element	POI/PR13	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total	
Acquisition Totals	Required	0.0	0.0	2.9	3.8	2.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	
	Funding	0.0	0.0	3.1	3.1	3.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	
	Delta	0.0	0.0	(1.0)	(2.3)	(0.9)	(1.0)	(0.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(6.5)	



LCSP Table of Contents: Supportability Analysis

1. Introduction

Purpose, scope, focus and objective

10 Supportability Analysis

10.1 Design Interface

10.1.1 Design Analysis

10.1.2 Technical Reviews

10.2 Product Support Element Determination

10.3 Sustaining Engineering

- How being implemented

7. Integrated Schedule

- Sustainment related events (major plans, Product Support

8. Funding

- Product Support Elements & spending plans

9. Management

- Organizational structure & staffing levels and management

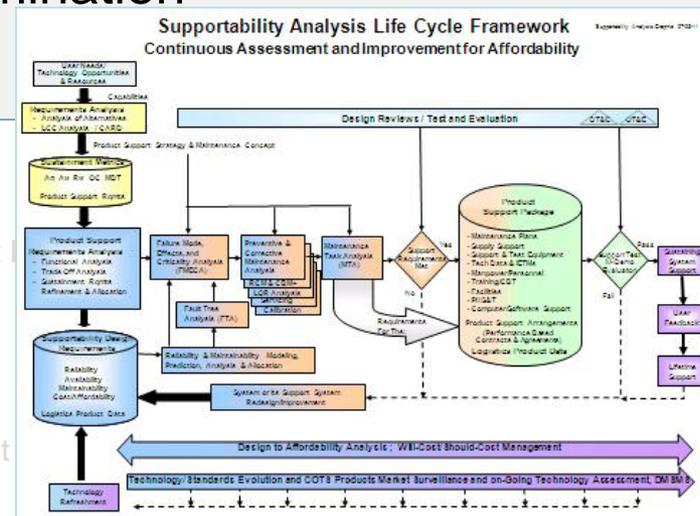
10. Supportability Analysis

How design features being implemented/status, PSE determined the performance tracked

11. Additional Sustainment Planning Factors

- Special topics related to sustainment

LCSP Annexes





LCSP Table of Contents: Additional Sustainment Planning Factors

1. Introduction

- o Purpose, scope, focus and objective

11 Additional Sustainment Planning Factors

Additional sustainment issues or risks cutting across functional lines not included elsewhere in the LCSP. 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 (e.g. require special handling, facilities, training)
- System integration with or onto another platform (e.g. vehicles onto transport ships/RoRos, air transports, etc.)
- Integration of C4I with the system
- Precious metals requiring recovery, items that are classified, export controlled, pilferable, or require special handling.

10. Supportability Analysis

- o How design features being implemented/status, PSE determined the performance tracked

11. Additional Sustainment Planning Factors

Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents

1. Introduction

- o Purpose, scope, focus and objective

LCSP Annexes

Specific annexes will vary based on life-cycle phase

- Product Support Business Case Analysis
- Logistics Assessment and Corrective Action Plan
- Service Specific Requirements
- Preservation and Storage of Unique Tooling
- Core Logistics Analysis
- Source of Repair Analysis
- System Disposal Plan

Services can require additional information to meet their needs

10. Supportability Analysis

- o How design features being implemented/status, PSE determined the performance tracked

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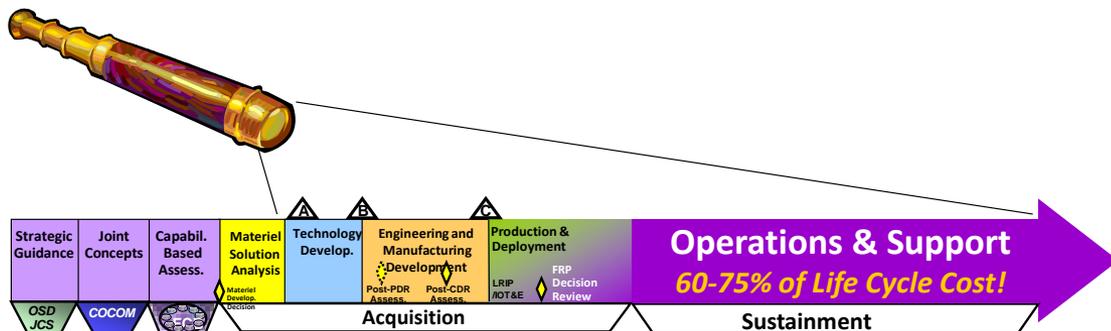
LCSP Annexes



Agenda

- ❑ LCSP Background and Perspective
- ❑ Outline and Expectations
- ❑ LCSP and RFPs
- ❑ Experiences
- ❑ Conclusion

He Who Fails To Plan is Planning To Fail





LCSP Informing RFPs (Key Communication Tool)



- ❑ **Program Manager’s Plan, not the Contractors**
 - Team means both involved
 - Content varies by life-cycle phase
- ❑ **How LCSP should be used to inform RFPs**
 - Government Convey the:
 - Baseline Product Support Strategy
 - Sustainment Performance Requirements
 - Government Organization
 - Regulatory/Statutory Requirements Including Core
 - Broad Schedule
 - Contractor Proposal Convey
 - Approach to Accomplish Contract Requirements
 - “Design to” Requirements including Verification Method
 - Alternative Strategy – “Affordable” Requirements
- ❑ **How LCSP should not be used in RFPs**
 - Fill in the Blanks

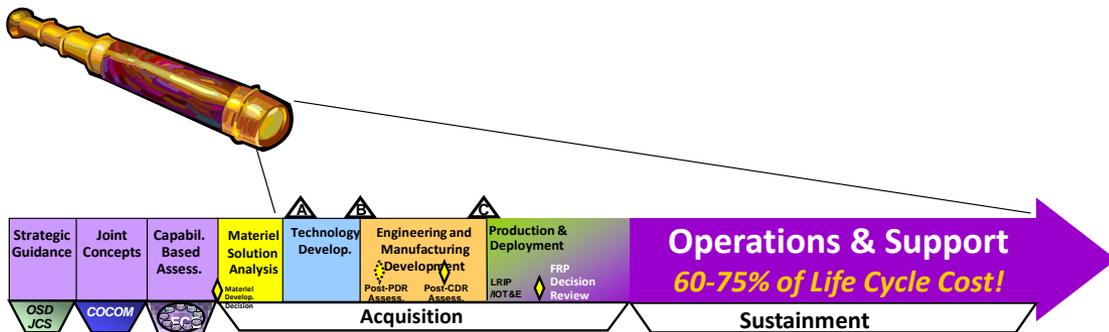




Agenda

- ❑ LCSP Background and Perspective
- ❑ Outline and Expectations
- ❑ LCSP and RFPs
- ❑ Experiences
- ❑ Conclusion

He Who Fails To Plan is Planning To Fail





What We Are Seeing

- ❑ **LCSPs are not PM/PMS's management tools**

- ❑ **Check the block mentality**
 - Missing the concept of LCSP being the baseline plan as of "now"
 - Reluctance to tailor to meet program needs

- ❑ **Too many words / cut and paste**

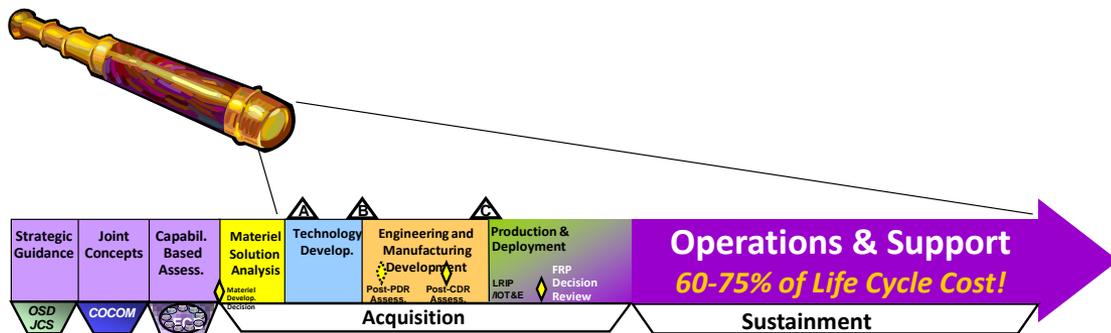
- ❑ **Limited planning, in a reactionary mode**
 - Limited flow of requirements to execution
 - Limited linkage with other acquisition documents



Agenda

- ❑ LCSP Background and Perspective
- ❑ Outline and Expectations
- ❑ LCSP and RFPs
- ❑ Experiences
- ❑ Conclusion

He Who Fails To Plan is Planning To Fail





Take Aways

- ❑ The LCSP is used to succinctly convey the plan for formulating, implementing, and executing the sustainment strategy.
- ❑ A Outline is available to help programs generate their LCSPs. It provides:
 - Structure
 - Mandated information
 - Examples
 - Data -- notional
- ❑ The LCSP Outline is a living document - evolving based on lessons learned.

Use the Web Site

<https://acc.dau.mil/lcsp-outline>



LCSP Must Address

The outcome-based product support strategy

- Analytical tools in determining an affordable product support strategy
- Use of competition to meet the best-value long-term outcomes for the Warfighter *and* Taxpayer
- Enterprise opportunities across programs and Services

The sustainment related requirements

The cost, schedule and management approach

- The product support arrangements

The assessment approach

- Product support strategy reviews
- Adjusting resource allocations, performance requirements and Warfighter needs

Making it affordable

Keeping it affordable

Key element in implementing “should costs”



Questions



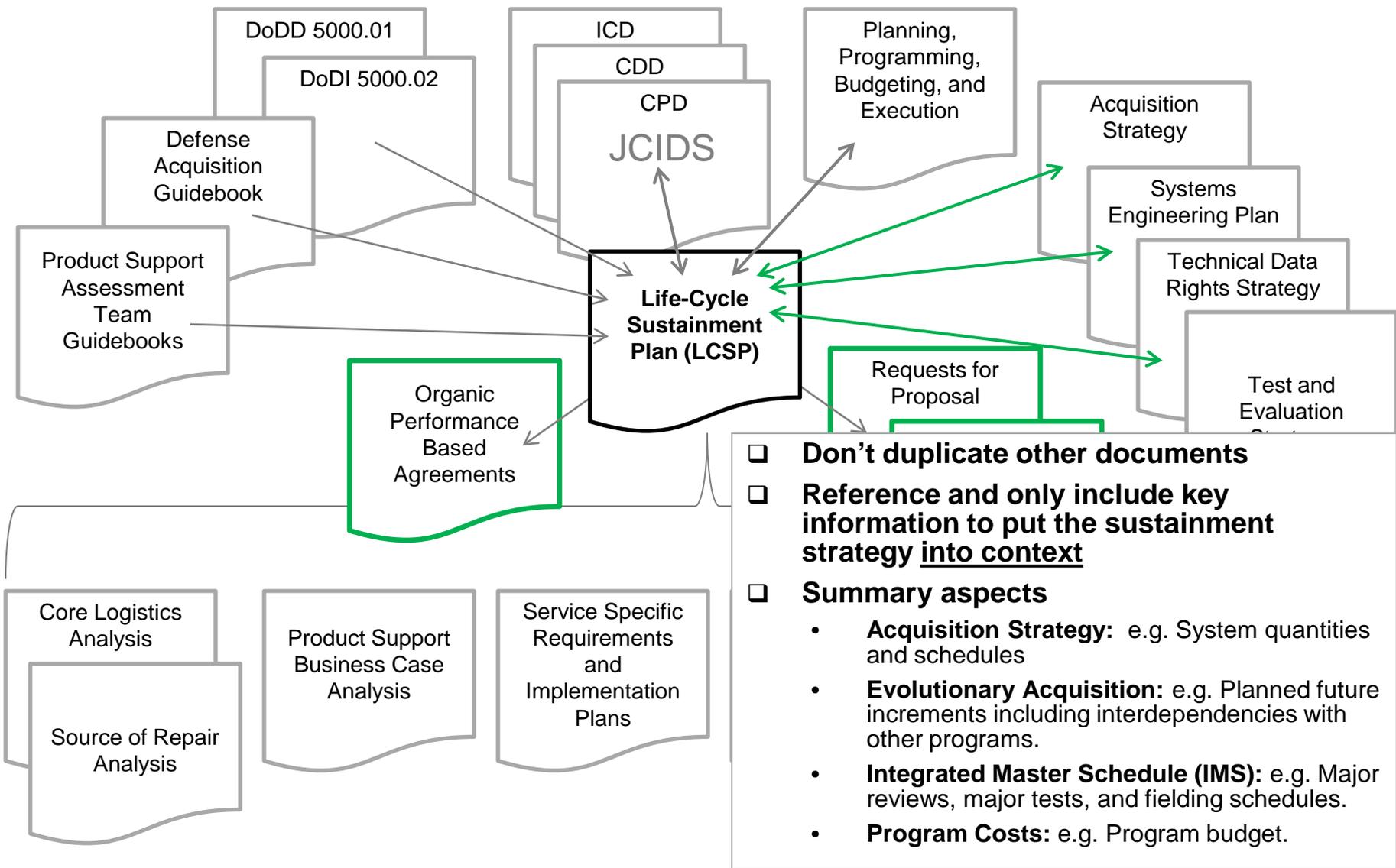
<https://acc.dau.mil/lcsp-outline>



BACK UP

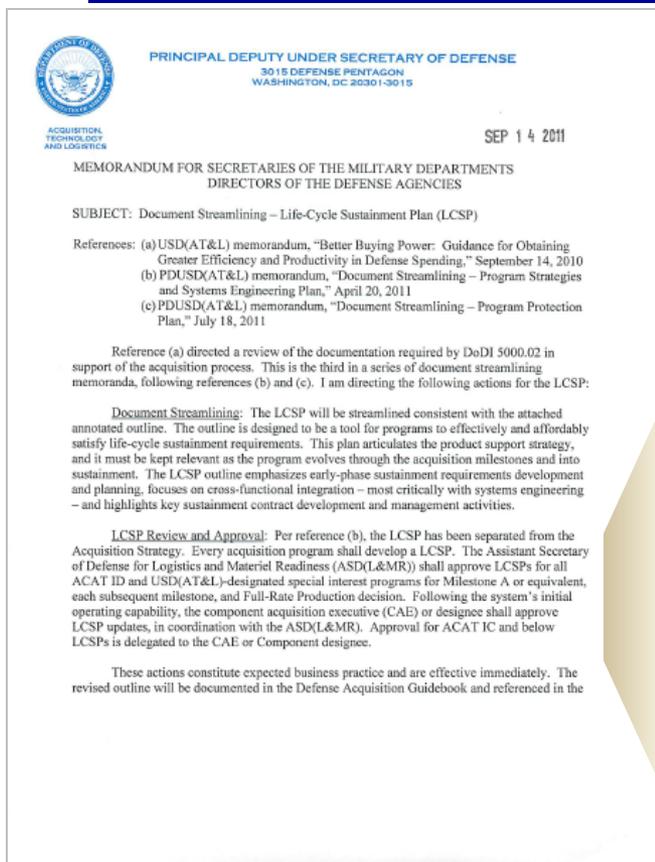


The LCSP is the nexus of critical thinking to deliver affordable life-cycle product support





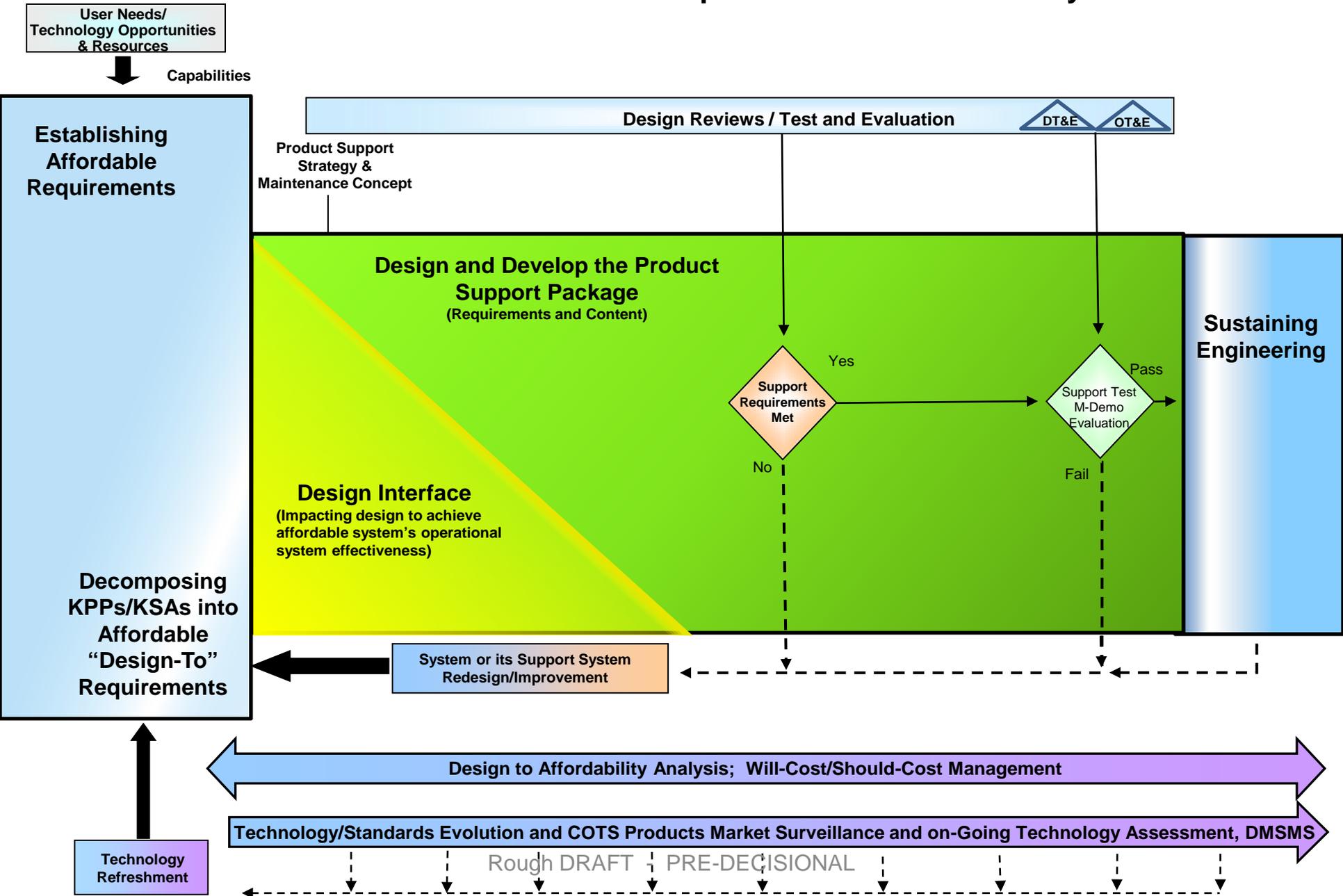
The LCSP streamlining memo



LCSP Review and Approval: Per the TDS/AS memorandum, the LCSP has been separated from the AS. 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 (IOC), 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.

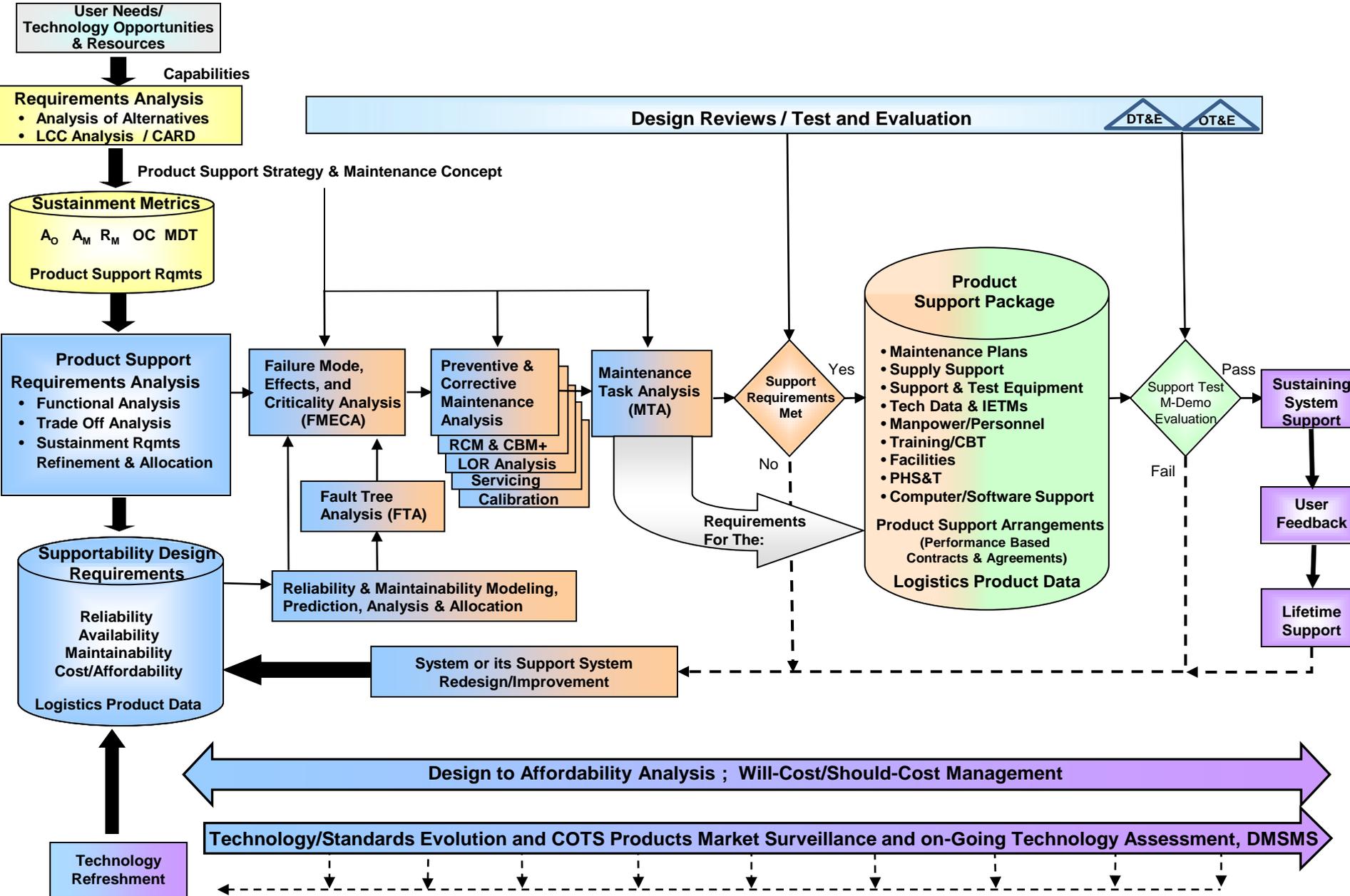
Supportability Analysis Life Cycle Framework

Continuous Assessment and Improvement for Affordability



Supportability Analysis Life Cycle Framework

Continuous Assessment and Improvement for Affordability





Product Support Package

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

- **Technical Data**
- **Computer Resources Support**
- **Training Courses/Materiel**
- **Manpower and Personnel**
- **Support Equipment**
- **Supply Support**
- **Facilities**
- **PHS&T**
- **Maintenance and Repair Capabilities**

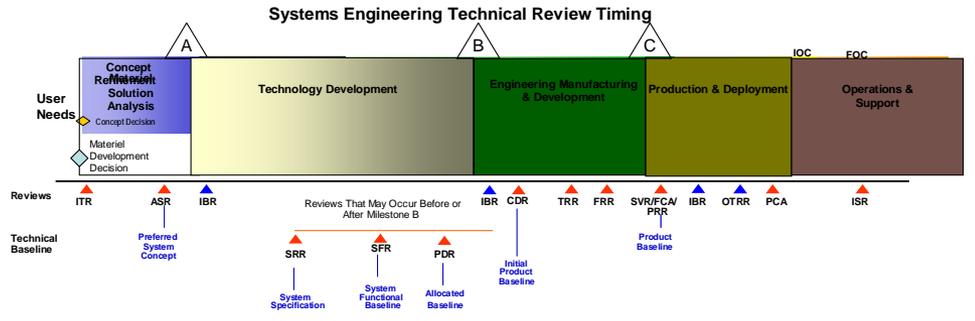
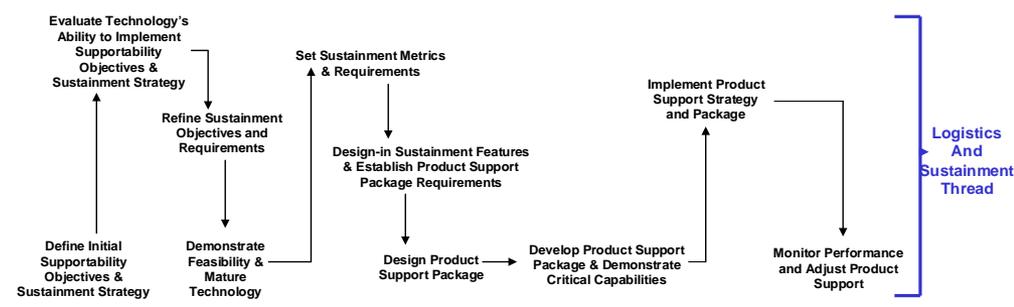
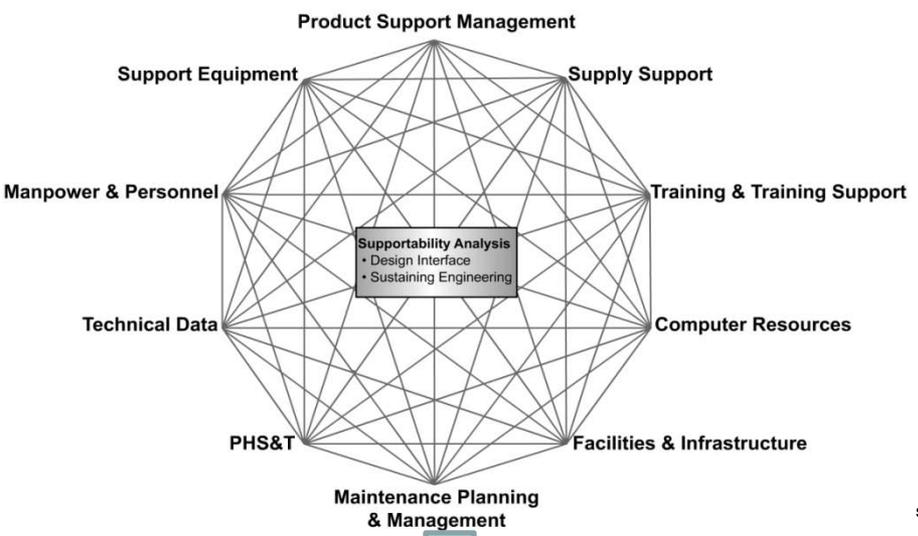
Achieved via the integrated product support elements including:

- **Product Support Management**
- **Supportability Analysis**
 - Design interface
 - Sustaining Engineering



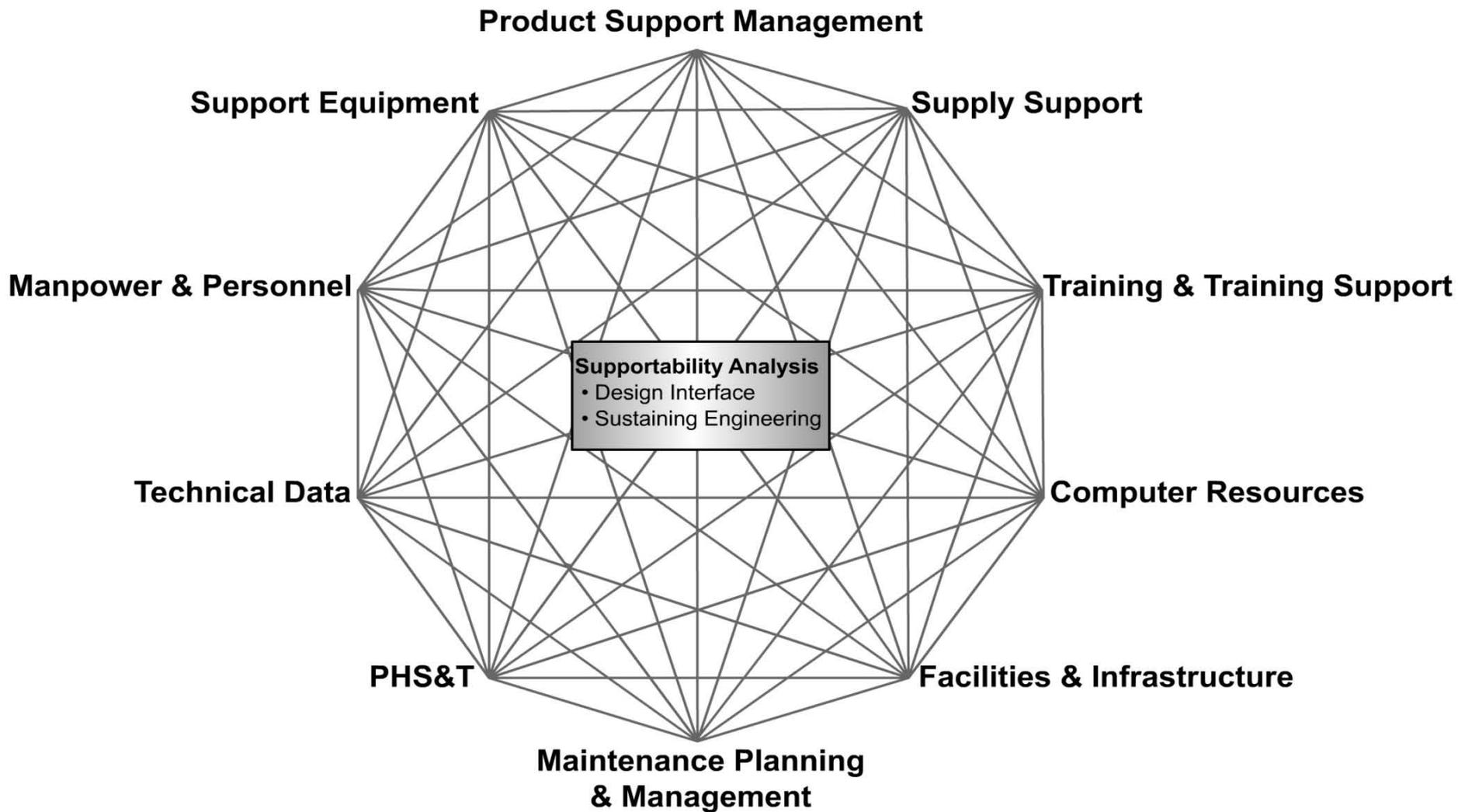
Sustainment Strategy

Achieved by integrating the product support elements to field the Product Support Package





Product Support Elements





Refining the Coordination/Approval Process

SUBMITTED BY

Name _____ Date _____

Product Support Manager

CONCURRENCE

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

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

Assistant Secretary of Defense
Logistics & Materiel Readiness
(for ACAT ID Programs)

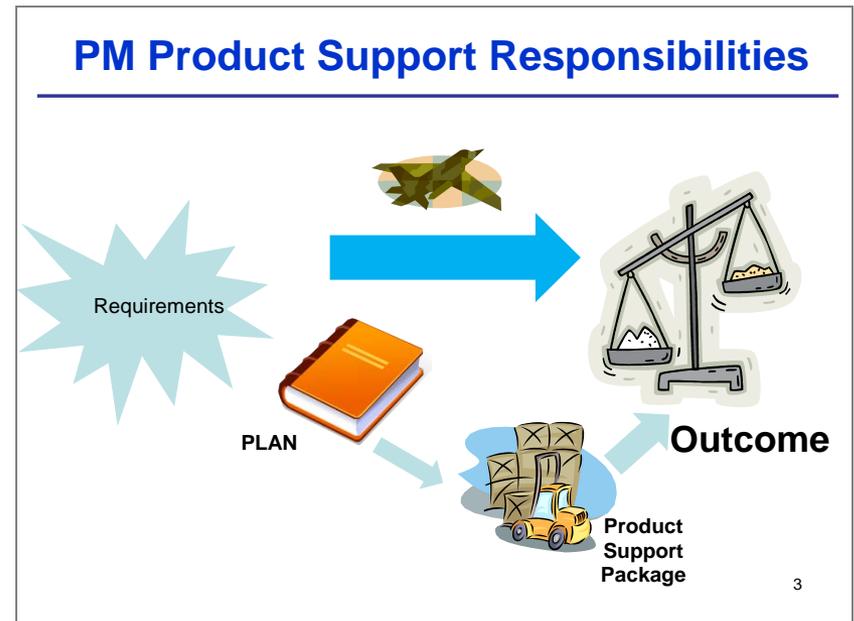
[or designated LCSP approval authority]

Date



Key Enterprise Players

- **Combat and Operational Commands**
 - Operational constraints (boundaries) and what willing to pay to sustain
- **Program and Acquisition Communities**
 - Contract, Design, & Milestone Reviews
- **Financial Community**
 - Budgets tied to outcomes
- **Sustainment Community**
 - What they can expect & what the program can expect





LCSP SECTION 2 PRODUCT SUPPORT PERFORMANCE



❑ Sustainment Performance Requirements

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
Commonality	CPD (2016) Support Equipment	<=2 new / None			2	2	2

❑ Break down of system-level metrics to the level of detail required to develop the product support package

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		

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LCSP SECTION 2 (Cont'd)



Sustainment metric assessments / tests

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 1 st 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

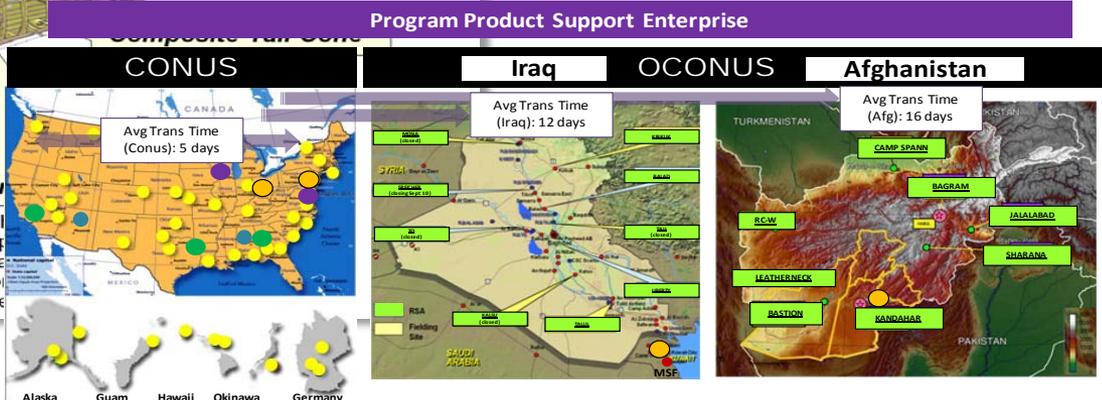
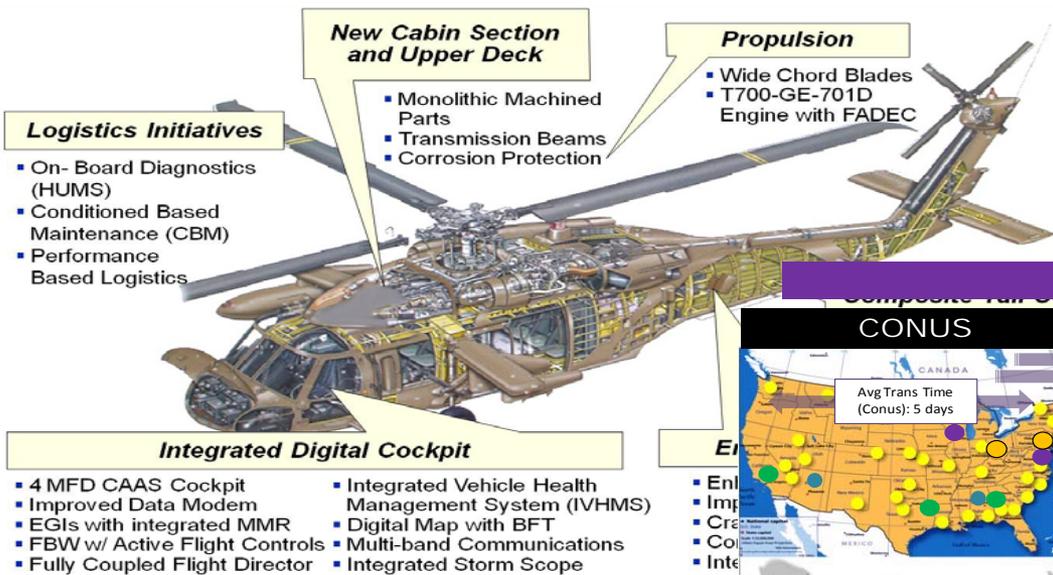
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LSCP SECTION 3, PRODUCT SUPPORT STRATEGY



Sustainment design features and Supply Chain performance expectations



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 ● Multiple throughout AOR Iraq ●	% 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

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LCSP SECTION 3 (Cont'd)

Critical sustainment strategy elements (e.g. concept, roles & responsibilities, core, data rights)

Product Support Strategy

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

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

- | | |
|---|----------------------------------|
| Maint Level Codes | Organizational Codes |
| O-1: Ashore Squadrons & Aviation ships | NI NADEP North Island |
| O-2: OCONUS Detachments | Tinker Tinker - AMC Tinker |
| O-3: Detachments aboard non-aviation ships | ISR ISR Contractor TBD |
| I- 1: Major CONUS Ashore & Aviation Ships AIM/A | Contractor A |
| I- 2: Minor CONUS Ashore Sites | Contractor B |
| I- 3: OCONUS AIMDs | TBD Contractor TBD |
| | P Organic/Commercial Partnership |

* Includes design and logistics management responsibilities

- O Full organic capabilities
- o Limited capabilities

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LCSP SECTION 3 (Cont'd)

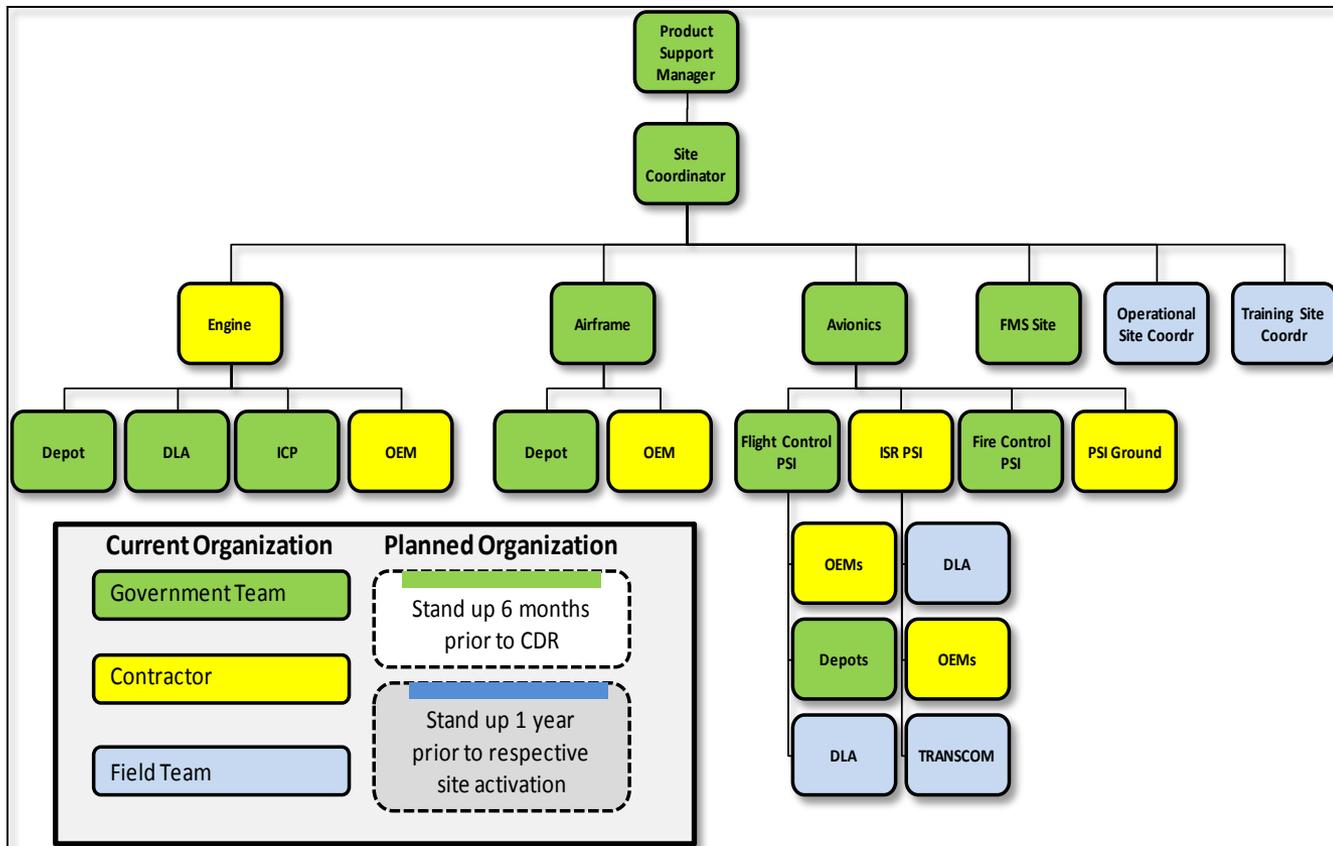
Sustainment strategy considerations and cost drivers impacting affordability

Consideration	Core Documents	Cost Driver	Product Support Element Impact/ Control
CONOPS			
Desert Operations	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> System CARD: 1.2.1.x.2 Environmental Conditions: 3.4.3 Training: 5.0 	<ul style="list-style-type: none"> 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



LCSP SECTION 3 (Cont'd)

Sustainment Relationships including industry, other DoD Components, international partnerships



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LCSP SECTION 4 PRODUCT SUPPORT ARRANGEMENTS



Sustainment related contracts and organic Performance Based Agreements, in place or planned, as part of the product support package

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: <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Maintenance beyond organizational level Supply support Publications Training of organizational personnel Transportation between contractor and 1st designation 	Metrics: <ul style="list-style-type: none"> AM target of 95% with min of 6% cost decrease each year Contract extension if met

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LCSP SECTION 5 PRODUCT SUPPORT PACKAGE STATUS



❑ Program Review (e.g. SRR, PDR, CDR, PMR) results with open and in-work sustainment related findings

Review	Finding	Corrective Action/ECD
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

❑ Product Support Package Assessment results

Product Support Element	Assessment	Discussion/Issues
Product Support Management		Sustainment BCA 6 months behind schedule
Design Interface		Sub-system reliability data analysis for impact on O&S costs in work. ECD: May 2015
Supply Support		Initial Spares funded; Cataloging actions incomplete; Warranty cost benefit analysis on-going
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
PHS&T		Containerization planning complete
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
Support Equipment		Funding MIPR to ** for hardware and automatic test systems
Training & Training Support		Funding shortfall in PB14 for initial simulator; Plus up planned in POM 15
Manpower & Personnel		
Facilities and Infrastructure		MILCON shortfall in FY 14; delayed construction for First Unit Equipped
Computer Resources		
Sustaining Engineering		

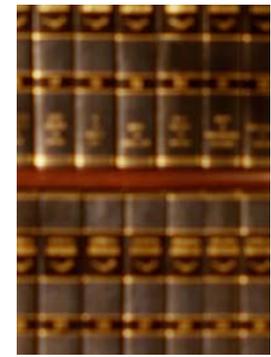
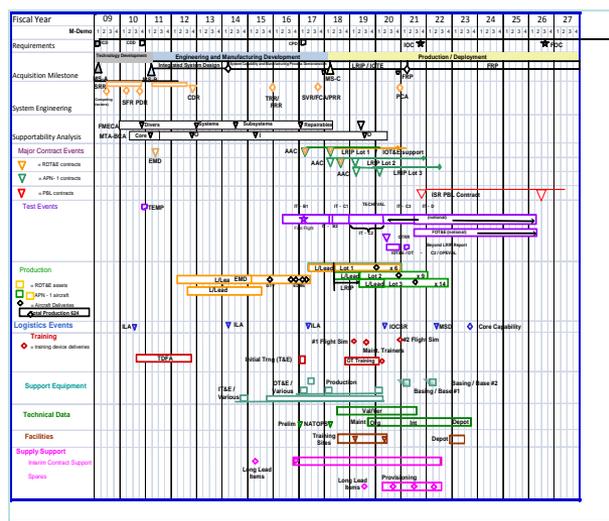
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Outline (4 of 7)

6 Sustainment Alignment with Regulatory/Statutory Requirements

7 Integrated Schedule



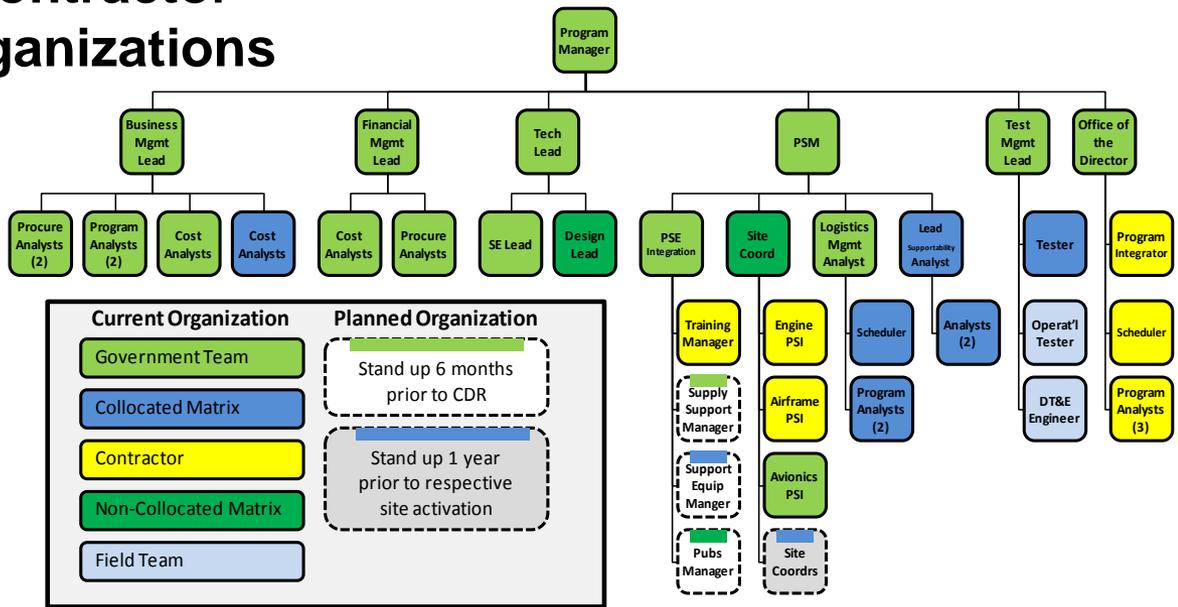
8 Funding

Program/Contract Name	Program Funding & Operations									
	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Program A	100	100	100	100	100	100	100	100	100	100
Program B	100	100	100	100	100	100	100	100	100	100
Program C	100	100	100	100	100	100	100	100	100	100
Program D	100	100	100	100	100	100	100	100	100	100
Program E	100	100	100	100	100	100	100	100	100	100
Program F	100	100	100	100	100	100	100	100	100	100
Program G	100	100	100	100	100	100	100	100	100	100
Program H	100	100	100	100	100	100	100	100	100	100
Program I	100	100	100	100	100	100	100	100	100	100
Program J	100	100	100	100	100	100	100	100	100	100
Program K	100	100	100	100	100	100	100	100	100	100
Program L	100	100	100	100	100	100	100	100	100	100
Program M	100	100	100	100	100	100	100	100	100	100
Program N	100	100	100	100	100	100	100	100	100	100
Program O	100	100	100	100	100	100	100	100	100	100
Program P	100	100	100	100	100	100	100	100	100	100
Program Q	100	100	100	100	100	100	100	100	100	100
Program R	100	100	100	100	100	100	100	100	100	100
Program S	100	100	100	100	100	100	100	100	100	100
Program T	100	100	100	100	100	100	100	100	100	100
Program U	100	100	100	100	100	100	100	100	100	100
Program V	100	100	100	100	100	100	100	100	100	100
Program W	100	100	100	100	100	100	100	100	100	100
Program X	100	100	100	100	100	100	100	100	100	100
Program Y	100	100	100	100	100	100	100	100	100	100
Program Z	100	100	100	100	100	100	100	100	100	100



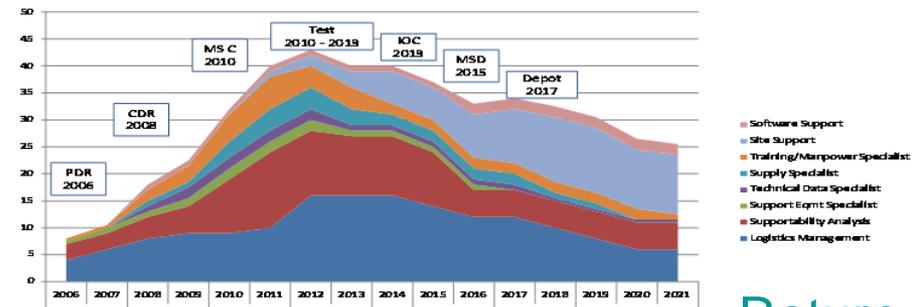
LCSP SECTION 9 MANAGEMENT

Government and Contractor Program Office Organizations



Product Support Staffing Levels and key program events

Product Support Yearly Headcount Profile (May 20, 2007 Estimate)





LCSP SECTION 9 (Cont'd)

Management approach (including sustainment risk management) and IPT Organization

Team Name	POC	Team Membership (by Function or Organization)	Team Role, Responsibility, and Authority	Products & Metrics
PS IPT	PSM Bob Smith 703-xxx-xxxx	<ul style="list-style-type: none"> - Program Office <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Engine • XXX <p>Size: YYY</p>	<p>Role: IPT Purpose</p> <p>Responsibilities: Integrate all product support efforts</p> <ul style="list-style-type: none"> • Team Member Responsibilities • Cost, Performance, Schedule Goals • Scope, Boundaries of IPT Responsibilities <p>Schedule and frequency of meetings</p> <p>Date of signed IPT charter and signatory</p>	<p>Products:</p> <ul style="list-style-type: none"> • LCSP/LCSP Updates • IMP/IMS Inputs • Specifications • AS input <p>Metrics:</p> <ul style="list-style-type: none"> • Cost <ul style="list-style-type: none"> ○ Program Product Support Element costs ○ OPTAR • Schedule • Sustainment <ul style="list-style-type: none"> ○ AM ○ Log Foot Print

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Risk	Rating	Driver	Mitigation	Status
------	--------	--------	------------	--------



LCSP SECTION 10 SUPPORTABILITY ANALYSIS



□ Design Analysis - FMECA schedule & results

System	Schedule	Issues/Likelihood	Impact / comments
Airframe	Complete Update after IOT&E	<ul style="list-style-type: none"> New failure modes uncovered due to projected corrosion issues around engine inlets and on wing spar. Fuel tanks moved 	<ul style="list-style-type: none"> 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	3rd Qtr 06 to 4th Qtr 07	None	

□ Reliability Growth Plan issues

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System	Planned/ De-rated Values (failures per operating hour)	Estimate at IOC	Confidence Level	Mitigation efforts
ISR systems	.01 / .15	.01 / .25	50%	<ul style="list-style-type: none"> Buy additional spares and add additional I level repair capabilities at larger sites. Decision required at MS C



LCSP SECTION 10 (Cont'd)



Completed and planned Supportability trade studies

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	<p>Alternatives:</p> <ul style="list-style-type: none"> - 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 <p>Criteria:</p> <ul style="list-style-type: none"> - A_M and A_O - Program costs and O&S costs 	<ul style="list-style-type: none"> - 3 levels of maintenance with 2nd level being performed commercially at 3 central sites for hot sections - 3rd level performed by industry 	<ul style="list-style-type: none"> - 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

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LCSP SECTION 10 (Cont'd)



Technical Review participation

Review	Sustainment Participants	Sustainment Focus	Criteria
PDR 2 nd Quarter 2009	<ul style="list-style-type: none"> • PSM • Supportability Analysis IPT Lead 	<ul style="list-style-type: none"> • Prognostic estimates; impact on spares and O&S cost • Diagnostic capability impact on manpower/personnel, training, CLS O&S cost (contract) 	<p>Entry</p> <ul style="list-style-type: none"> • TEMP <p>Exit:</p> <ul style="list-style-type: none"> • Test criteria for operational testing • Updated schedule • YYY
CDR 4 th Quarter 2010	<ul style="list-style-type: none"> • PSM • Supportability Analysis IPT Lead • xxx 	<ul style="list-style-type: none"> • XXX • XXX • XXX 	<p>Entry</p> <ul style="list-style-type: none"> • XXX <p>Exit:</p> <ul style="list-style-type: none"> • YYY • YYY

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LCSP SECTION 10 (Cont'd)



Product Support Element Determination analysis methods & tools

Product Support Analytical Support Methods and Tools Jan 10, 2009				
Process	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 software PowerLog	Draft Maintenance Procedures	MS C
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

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LCSP SECTION 10 (Cont'd)



Sustaining Engineering tools and monitoring methods

Sustainment Performance Data Collection and Reporting				
Tool	OPR/IPT	Metrics/Data Monitored	Feedback Mechanism	Review Timeframes
Sustainment Quad Chart	PSM	A _O , A _M , Do, 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 ,PSI and PSPs Summary reports forwarded to DASD (MR)	Even Years
Failure Reporting , Analysis, and Corrective Action System (FRACAS)	Sustaining Engineering IPT	Ao, Am, Do, O&S costs driver metrics including but not limited to: <ul style="list-style-type: none"> • XXX • XXX • XXX 	NALCOMIS/NALDA data analyzed and compared to baseline values and supportability analysis tools used to update product support elements as needed	<ul style="list-style-type: none"> • Critical systems effecting costs or A_M as needed • 25% of WUCs assessed every year

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Performance Based Product Support Strategy

Performance Based Logistics

□ DODD 5000.01

E1.1.17. Performance-Based Logistics. PMs shall develop and implement performance-based logistics strategies that optimize total system availability while minimizing cost and logistics footprint. Trade-off decisions involving cost, useful service, and effectiveness shall consider corrosion prevention and mitigation. Sustainment strategies shall include the best use of public and private sector capabilities through government/industry partnering initiatives, in accordance with statutory requirements.

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□ DODI 5000.02

8. Operations and Support Phase

c.1(d). The PM shall work with the user to document performance and sustainment requirements in performance agreements specifying objective outcomes, measures, resource commitments, and stakeholder responsibilities. The PM shall employ effective Performance-Based Life-Cycle Product Support (PBL) planning, development, implementation, and management. Performance-Based Life-Cycle Product Support represents the latest evolution of Performance-Based Logistics. Both can be referred to as “PBL.” PBL offers the best strategic approach for delivering required life cycle readiness, reliability, and ownership costs. Sources of support may be organic, commercial, or a combination, with the primary focus optimizing customer support, weapon system availability, and reduced ownership costs. The DoD Components shall document sustainment procedures that ensure integrated combat support.



Performance Base Logistics

□ DODD 5000.02

ENCLOSURE 7

RESOURCE ESTIMATION

b. On ACAT I programs, the sustainment contracts or organic Inter-/Intra-Service agreements (such as Memorandums of Understanding) shall provide tailored cost reporting that can facilitate future cost estimating and price analysis. If the logistics support falls under a performance-based life-cycle product support strategy, the contracts or organic agreements shall also include an agreed-to set of performance metrics that can be used to monitor performance.

Pub. L. 111–84, div. A, title VIII, § 805, Oct. 28, 2009, 123 Stat. 2403, provided that:

(d) Definitions.—In this section:

(2) The term ‘product support arrangement’ means a contract, task order, or any type of other contractual arrangement, or any type of agreement or non-contractual arrangement within the Federal Government, for the performance of sustainment or logistics support required for major weapon systems, subsystems, or components. The term includes arrangements for any of the following:

- (A) Performance-based logistics.
- (B) Sustainment support.
- (C) Contractor logistics support.
- (D) Life-cycle product support.
- (E) Weapon systems product support.

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LCSP SECTION 10 (Cont'd)



Completed and planned Supportability trade studies

Completed Supportability Trades Jan 10, 2009				
Trade (Completed since 11/12/07)	IPT	Options Analyzed	Results	Impact
Ground Segment Prognostic 5/20/08	SE IPT, PS IPT	Alternatives: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – Am, Ao, Do – Program costs and O&S costs 	<ul style="list-style-type: none"> – On site FSR; CLS for life 	<ul style="list-style-type: none"> – Technical data strategy and requirements required for competitive follow-on CLS

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LCSP SECTION 10 SUPPORTABILITY ANALYSIS



❑ Design Analysis - FMECA schedule & results

System	Schedule	Issues/Likelihood	Impact / comments
Ground Control Segment	Complete Update after IOT&E	<ul style="list-style-type: none"> New failure modes uncovered due to integration of COTS with prognostic and diagnostic software 	<ul style="list-style-type: none"> Less diagnostic capability to card level; higher O&S cost; higher cannot duplicate and re-test OK rates; increased spares / early development testing; partner with COTS OEM

❑ Reliability Growth Plan issues

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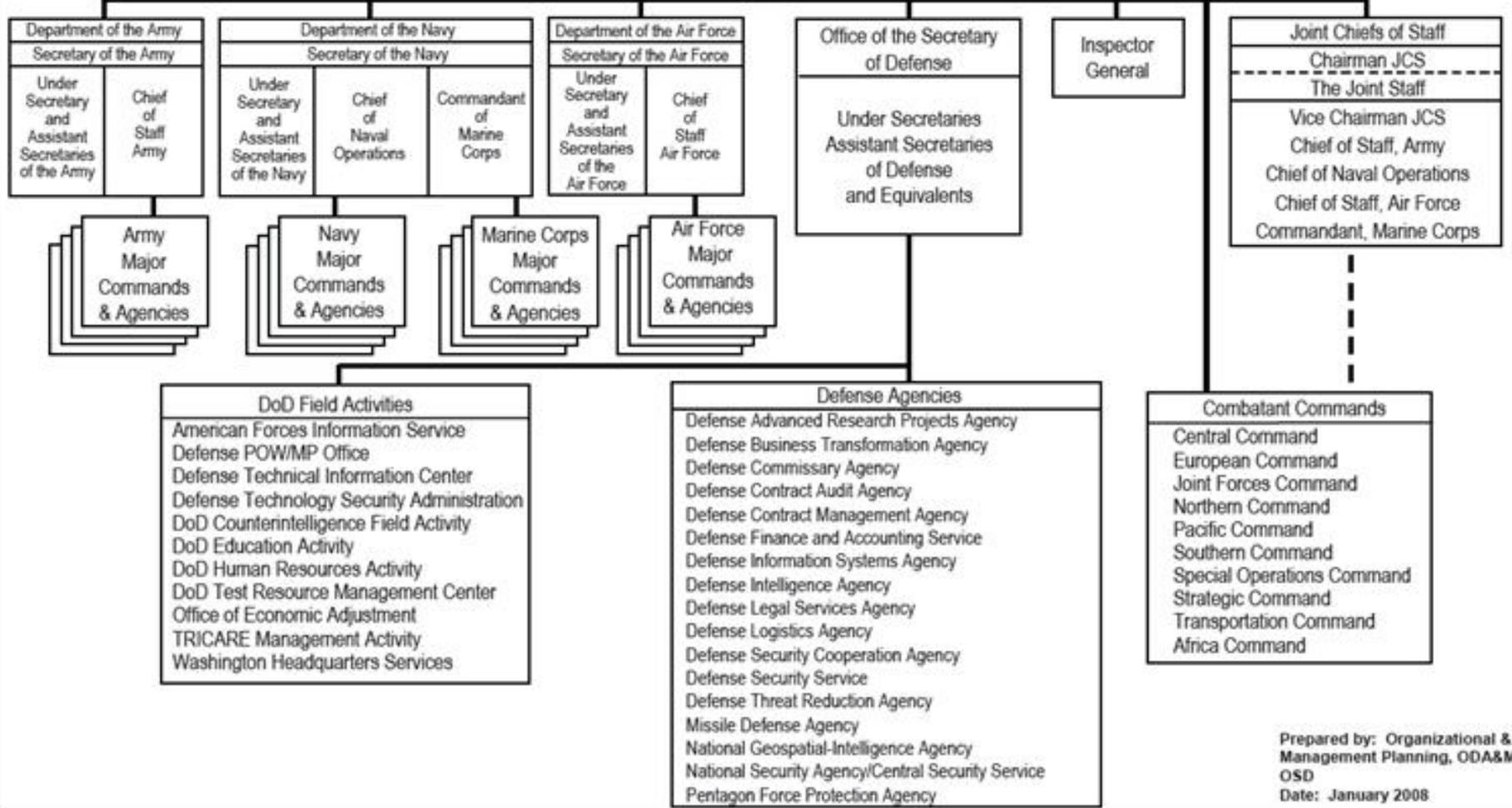
System	Planned/ De-rated Values (failures per operating hour)	Estimate at IOC	Confidence Level	Mitigation efforts
Diagnostic	0.98 card level accuracy	0.95	75%	<ul style="list-style-type: none"> Buy additional spares and add additional I level repair capabilities Decision required at MS C; update O&S cost elements



Organization

Department of Defense

Secretary of Defense
Deputy Secretary of Defense



UNDER SECRETARY OF DEFENSE
(ACQUISITION, TECHNOLOGY AND LOGISTICS)
The Honorable Frank Kendall
(Acting)
3E19C2 571-9021

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LOGISTICS AND MATERIEL READINESS



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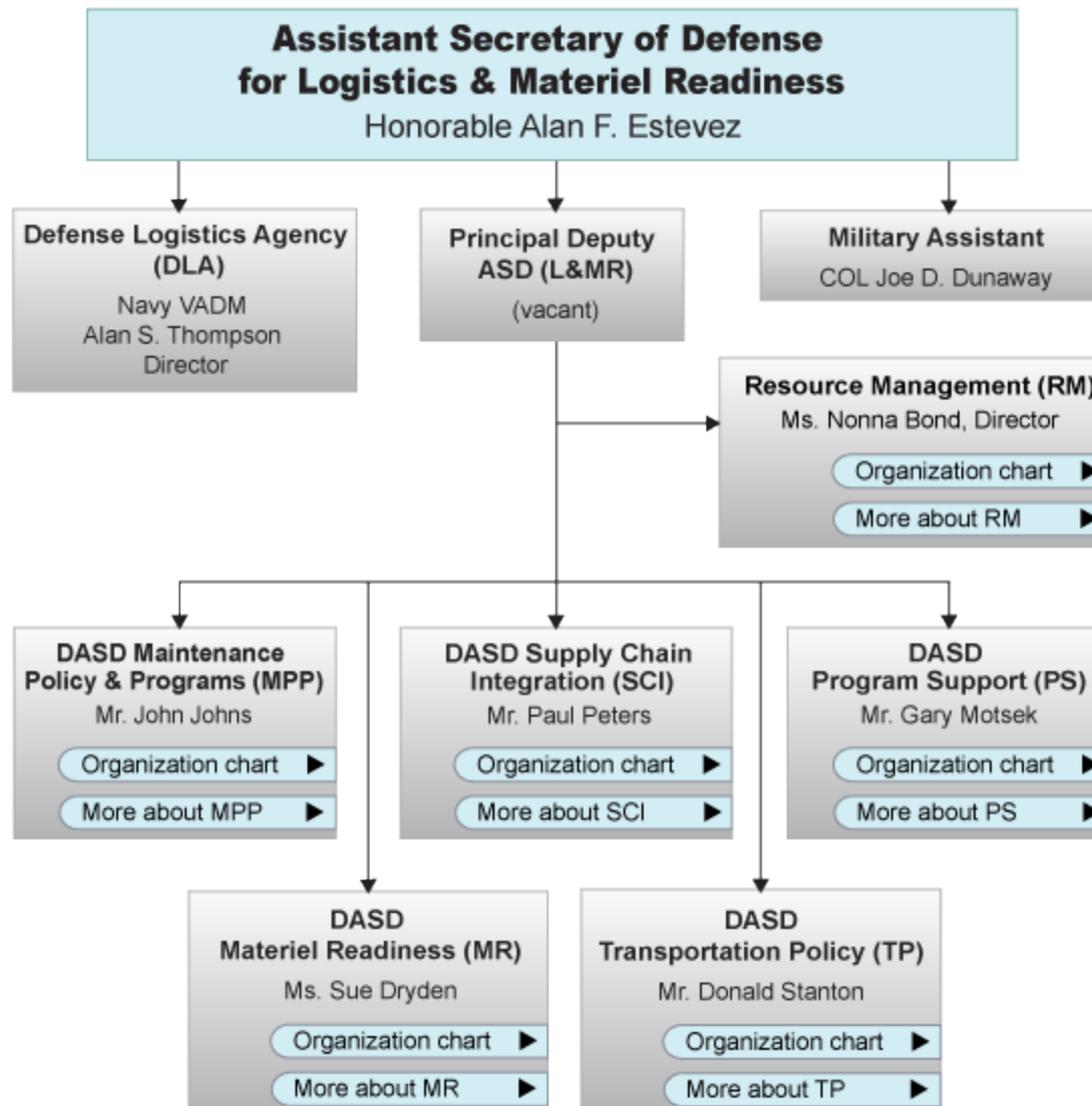
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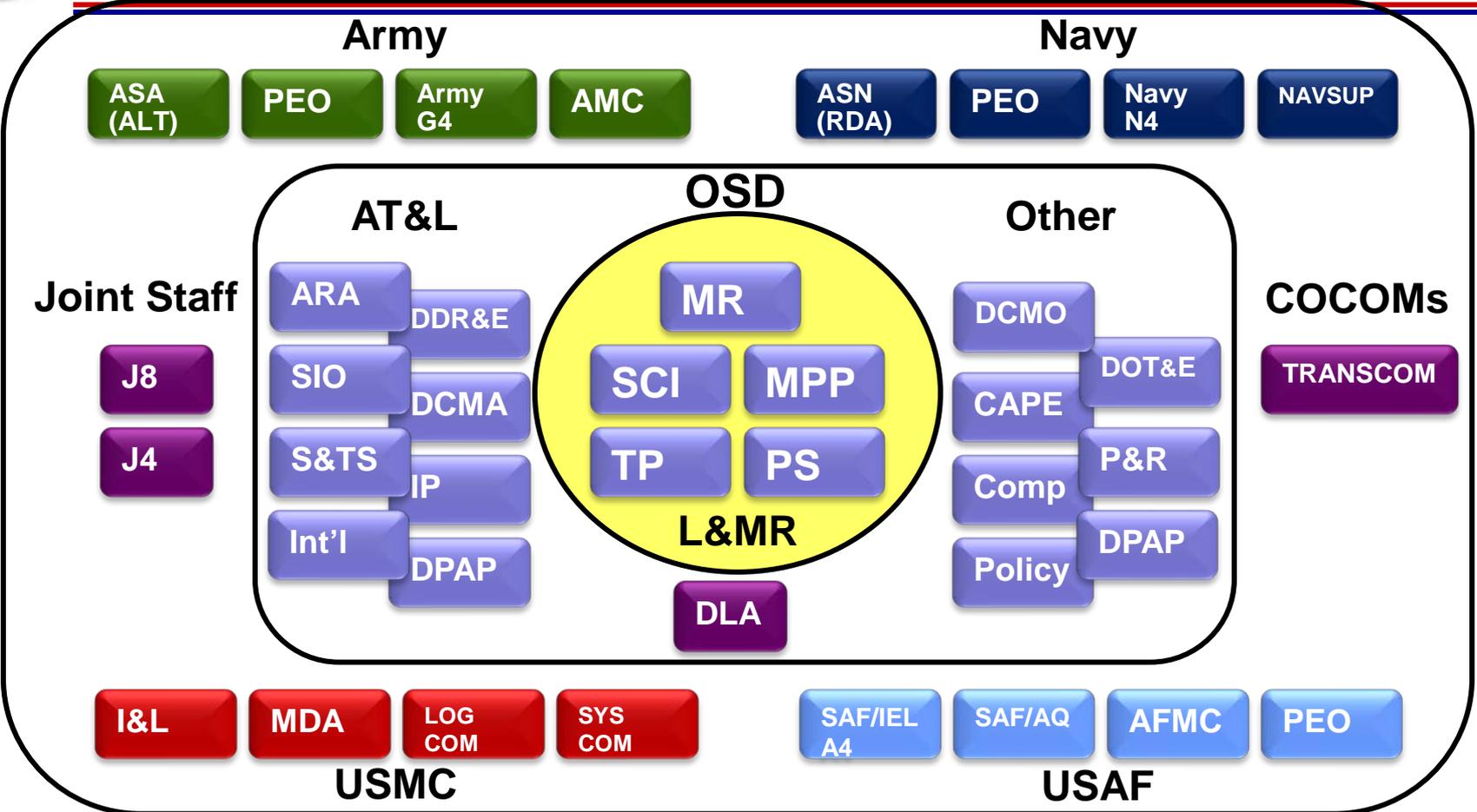
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Life Cycle Sustainment Advocacy Enterprise View



Industry / Assn



Academia



Other

