

# Title: The Life Cycle Sustainment Plan (LCSP)



Certification Training



Knowledge Sharing



Continuous Learning



Mission Assistance



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Date: 10 February 2016

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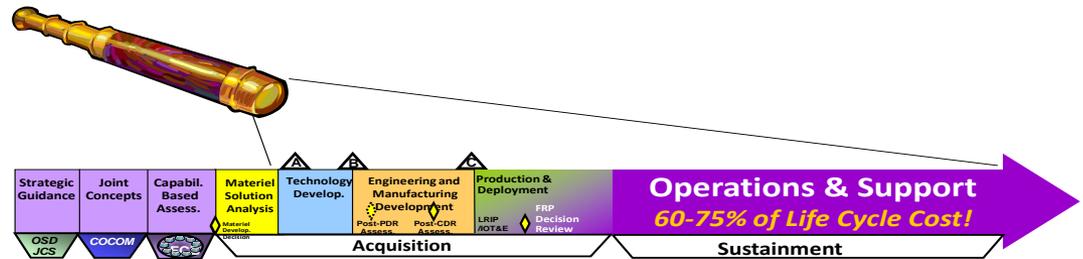
# Purpose and Background



This webinar is intended to outline the Office of the Assistant Secretary of Defense, Logistics and Materiel Readiness' (OASD, LM&R) expectations for a program's Life Cycle Sustainment Plan (LCSP). Mr. Medlin and his office authored the LCSP guidance that all programs are now required to follow and are charted by the Secretary of Defense to screen and approve all ACAT I and above LCSPs. In short, Mr. Medlin's group is the definitive source for what should be included and excluded from your program's LCSP.

- LCSP Background and Perspective
- Outline and Expectations
- LCSP Phase Emphasis
- LCSP and RFPs
- Next Steps
- Conclusion

**He Who Fails To Plan is Planning To Fail**



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

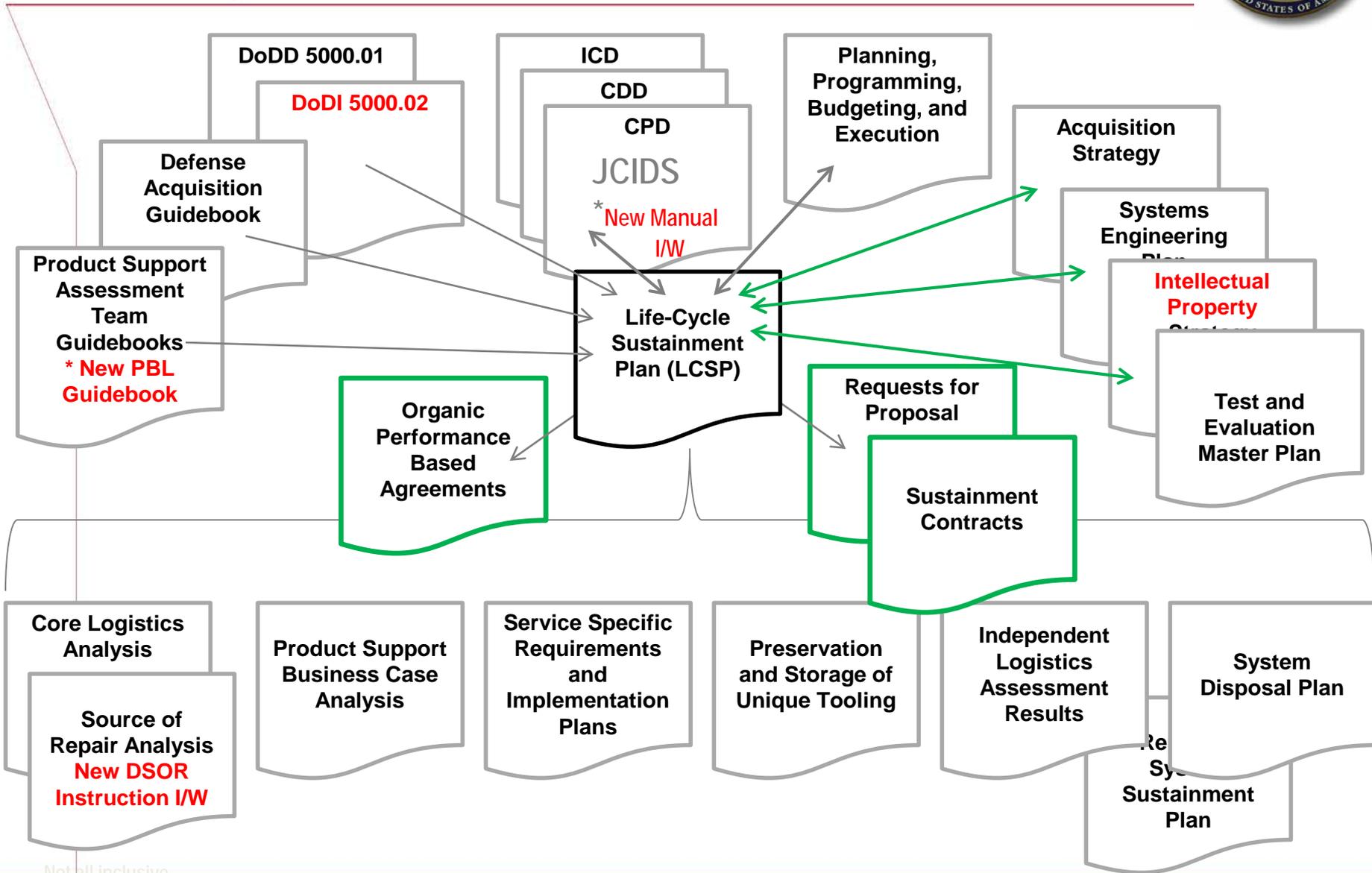
- LCSP Facts
  - The Life-cycle Sustainment Plan (LCSP) is the **program's primary management tool** to satisfy the Warfighter's **sustainment requirements** through the delivery of a product support package\*.
  - **Separated** from Acquisition Strategy
  - Annotated outline
    - **Required for all programs**
    - Approval for ACAT ID by ASD(L&MR); others (IAM, 1C) @Component
- Key document for:
  - **Programs**
  - Milestone decision authorities
  - Oversight and policy roles

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





# 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



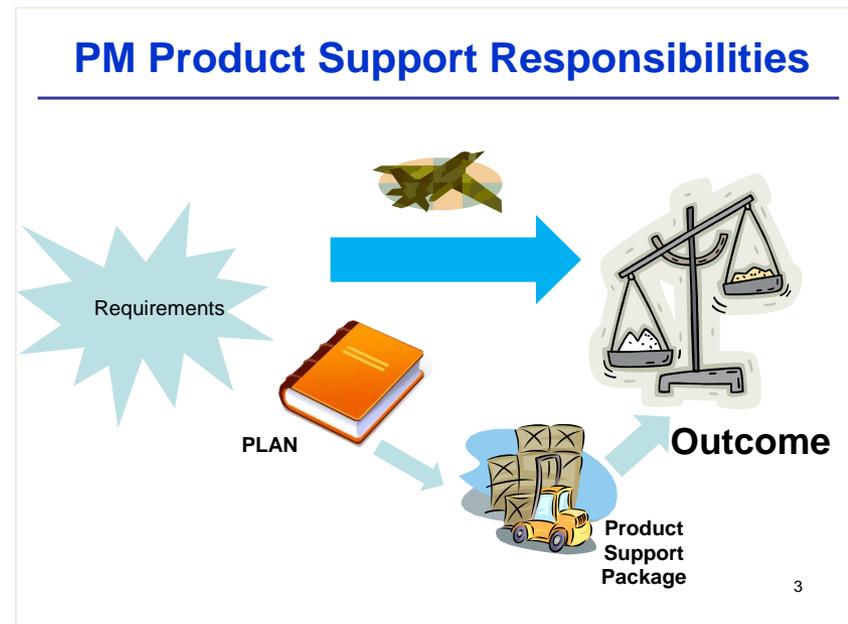
The program's management tool to communicate, align, and integrate product support stakeholders efforts formulating, implementing, and executing the sustainment strategy

## Both Teams Are Playing Football



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

- **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



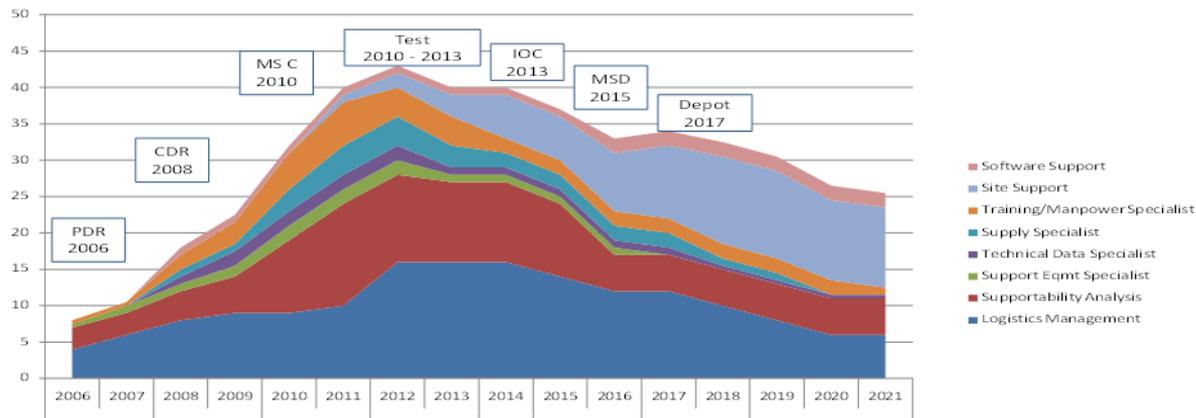


# Facts & Figures, not lengthy prose



Sustainment Matrix		Function	Maintenance									Software Support/Maint		Supply Support		Transportation (PHS&T)		Supportability Analysis		Configuration Control *		Technical Data		Training	
Sub-sys**	Data Rights		Level 1			Level 2			Level 3			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	
Airframe	Unlimited	Servicing/Inspections	0	0	0																				
		Corrosion Control/Treatment	0	0																					
		Repair	0	0																					
Power Plants	Unlimited	Servicing/Inspections	0	0	0																				
		Assemble/Disassemble	0	0																					
		Repair	0	0																					
APU	Negotiated License Rights	Remove & Replace	0	0	0	P																			
		Repair & Overhaul	0	0		A																			
Avionics	Negotiated License Rights	Inspections	0	0	0																				
		Functional test & adjustments	0	0																					
		Repair	0	0																					
Fire Control †	Government Purpose Rights no expiration date	Inspections	0	0	0																				
		Functional test & adjustments	0	0																					
		Repair	0	0																					
Other	Government Purpose Rights no expiration date	Diagnostics Software	0	0	0																				
		Inspections	0	0																					
		Functional test & adjustments	0	0																					
		Repair	0	0																					

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

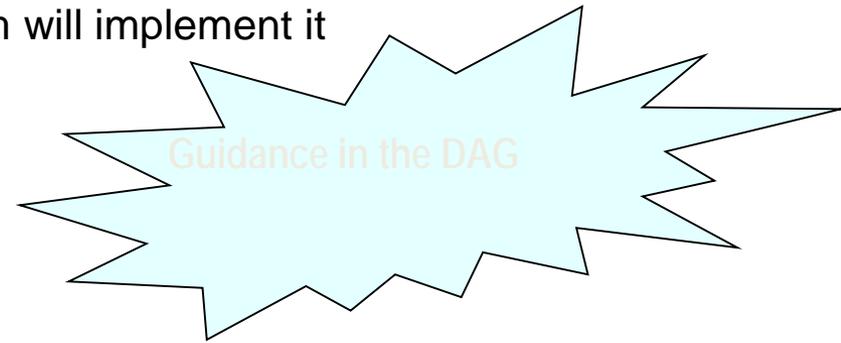


Codes  
 \* North Island  
 † AMC Tinker  
 ‡ Contractor TBD  
 § for A  
 ¶ for B  
 †† for TBD  
 ‡‡ Commertical Partnership

\* Includes design and logistics management responsibilities

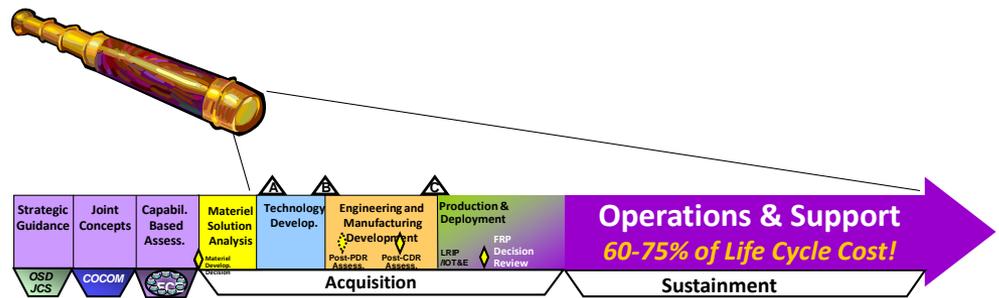


- It is not a rehash of policy or guidance
  - It is the program's plan for accomplishing policy and associated guidance
  - It focuses on **specifically how** the program will implement it
    - Who will do what
    - When
    - How (specific tools/processes)
    - How much it will cost
- It is not 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**



- LCSP Background and Perspective
- Outline and Expectations
- LCSP Phase Emphasis
- LCSP and RFPs
- Next Steps
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**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 Independent 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, PSP 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

- Scope
- Focus
- Objective
- Update process overview

## 6. Regulatory/Statutory Requirements that Influence Sustainment Performance

Revision Number	Date	Change and Rationale	Approved By
1.1	April 2014	Addressed results from CDR and changes in due to avionics reliability issues – see comments in xxx	APEO(L)
1.2	June 2015	Updated Section 10.2 with results from approved PBAs with NAVICP	NAVAIR (AIR-00)
2.0	Oct 2015	Milestone C	MDA
Etc.			

## 11. Additional Sustainment Planning Factors

- Special topics related to sustainment

LCSP Annexes



# LCSP Table of Contents: Product Support Performance and Strategy



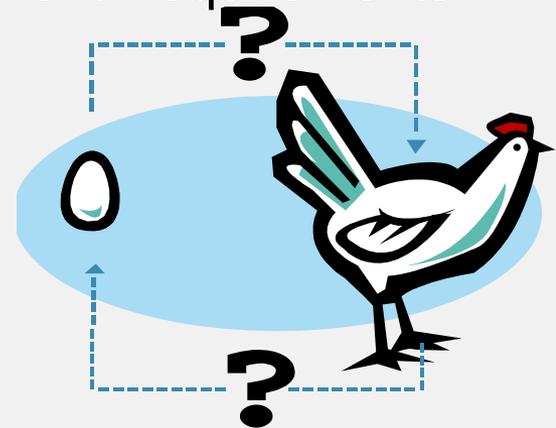
1. Introduction
  - Purpose, scope, focus and objective
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  - Metrics, their values and how they will be measured over time
3. Product Support Strategy
  - Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)

## 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



- How design features being implemented/status, PSE determined the performance tracked
11. Additional Sustainment Planning Factors
  - Special topics related to sustainment
- LCSP Annexes



# 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		

- Sustainment metric assessments / tests

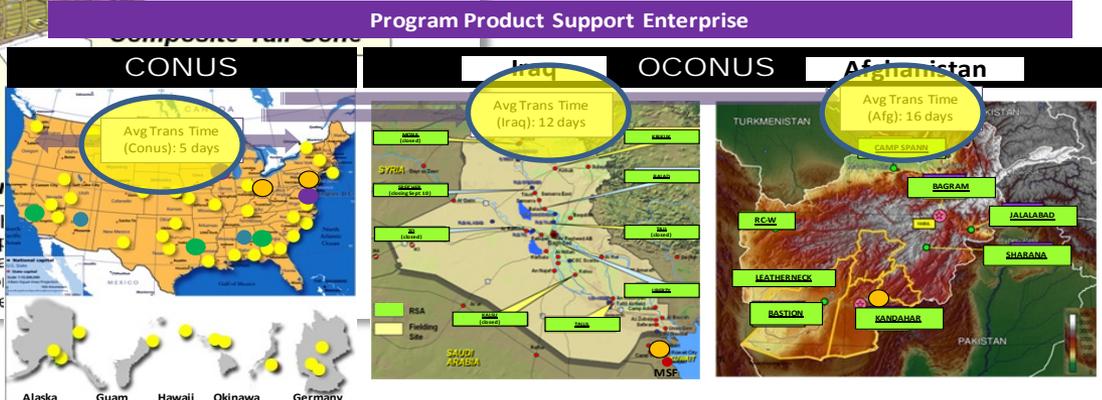
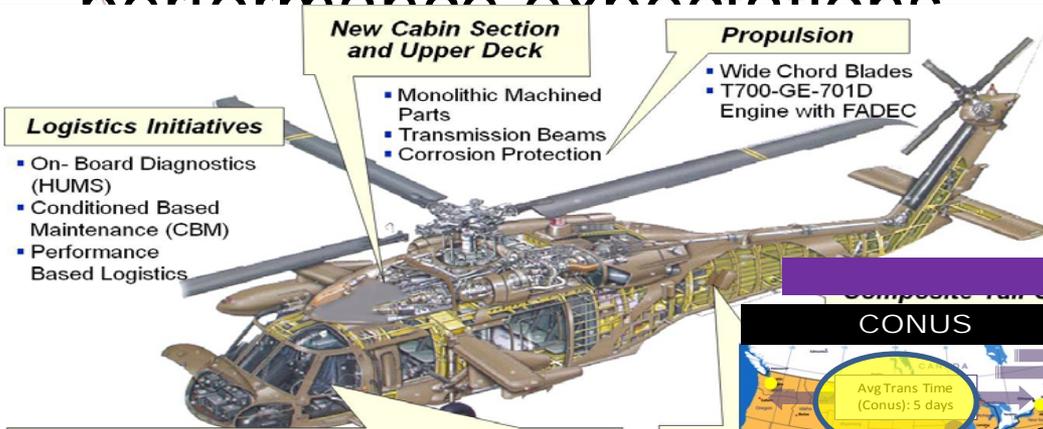
Metric / Feature	Contractual Requirements	Demonstration Schedule	Requirement / PS Elements Impacted	Performance Objective / PS Package Baseline Value	Estimated Value / IOC Estimate
Low observable coating on external surfaces	XXX	Maintainability Demo 1 <sup>st</sup> Qtr 2011	Maintenance, Training, Facilities, 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



# LSCP SECTION 3, PRODUCT SUPPORT STRATEGY



## Sustainment design features and Supply Chain performance expectations



Product Support Functional Area	Location	Planned Sustainment Performance Metrics <sup>(1)</sup>	Planned Contracted Support <sup>(2)</sup>
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: 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



# 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-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	
<b>Airframe</b>	Unlimited	Service/Inspections Corrosion Control/Treatment Repair	o	o	o						NI														
<b>Power Plants</b>	Unlimited	Service/Inspections Assemble/Disassemble Repair									NI														
Engine											NI														
APU	Negotiated License Rights	Remove & Replace Repair & Overhaul	o	o	o						NI			A	TRANS	P-A		A		A		A	A		
<b>Avionics</b>	Negotiated License Rights	Inspections Functional test & adjustments Repair	o	o	o						ISR				ISR		ISR		ISR		ISR		ISR		
ISR	Remove & Replace only										ISR														
Fire Control †	Government Purpose Rights no expiration date	Inspections Functional test & adjustments Repair Diagnostics Software	o	o	o						Tinker														
Other	Government Purpose Rights no expiration date		o	o	o						Tinker				A	TRANS	P-A								
<b>Life Support</b>	Unlimited	Inspections Functional test & adjustments Repair	o	o	o						Tinker														
			o	o	o						Tinker														
			o	o	o						Tinker														
			o	o	o						Tinker	P-TBD													
			o	o	o						Tinker														
<b>Test Equipment</b>	Unlimited	Diagnostics Software Hardware									NI														
Avionics																									
Propulsion	Negotiated License Rights	Diagnostics Software Hardware											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 AIMLA
- 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: Organic/Commercial Partnership

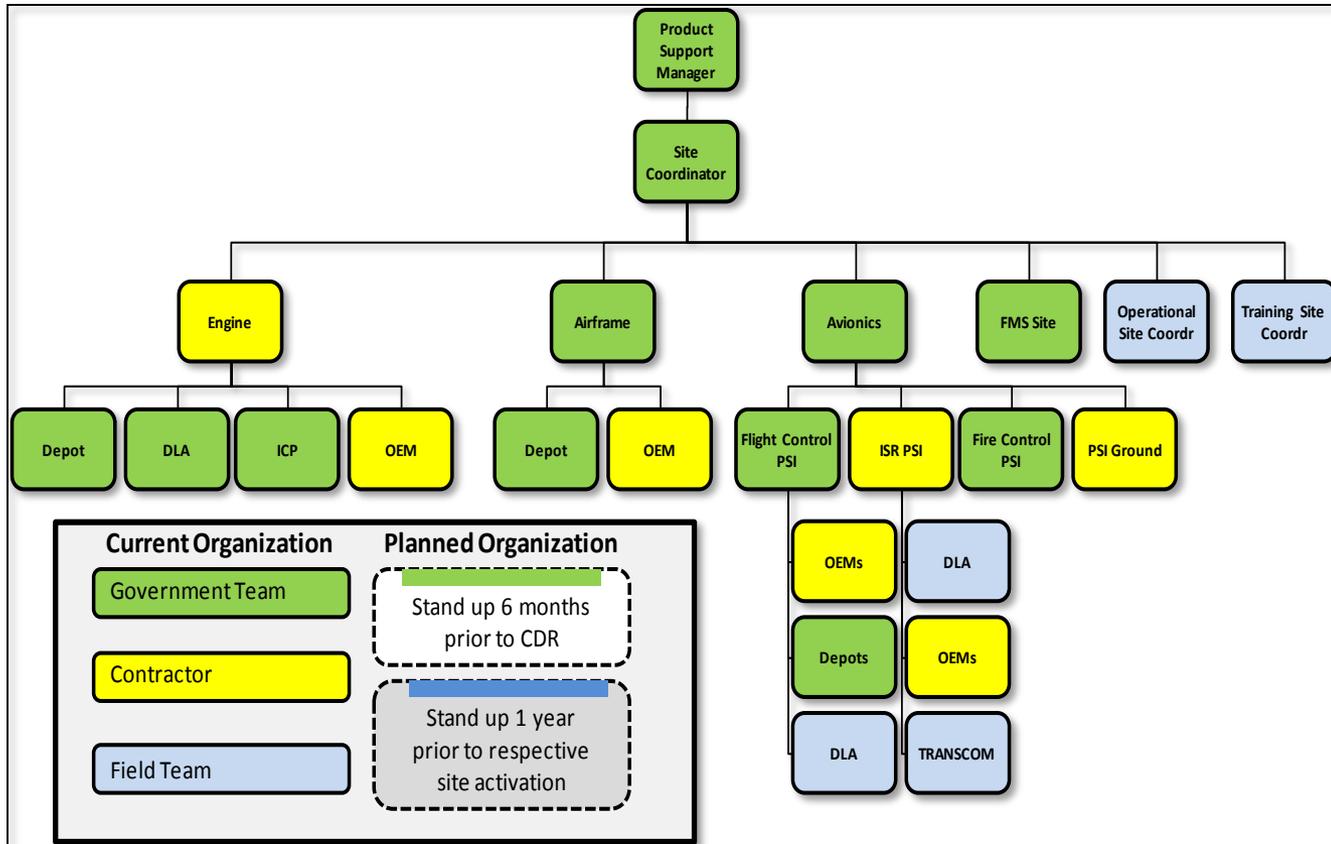
\* Includes design and logistics management responsibilities

- O: Full organic capabilities
- o: Limited capabilities

## Sustainment strategy considerations and cost drivers impacting affordability

Consideration	Core Documents	Cost Driver	Product Support Element Impact/ Control
<b>CONOPS</b>			
Desert Operations	<ul style="list-style-type: none"> <li>System CARD: 1.2.1x.s</li> <li>Environmental Conditions: 3.2; Basing &amp; Deployment Description</li> <li>CONOPS: OPLAN 5500, para 3.1</li> <li>CDD (May 24, 2014): Para 3</li> </ul>	<ul style="list-style-type: none"> <li>Increased scheduled maintenance cycle; filter demand and filter cost</li> </ul>	Design Interface; Supply; Technical Data; Higher Incidence of Failure Include filter system to filter to 0.1μ
<b>DESIGN FEATURE</b>			
Hydrazine	<ul style="list-style-type: none"> <li>System CARD: 1.2.1.x.2</li> <li>Environmental Conditions: 3.4.3</li> <li>Training: 5.0</li> </ul>	<ul style="list-style-type: none"> <li>6 additional personnel per operating wing; specialized /dedicated equipment, facilities and IPE</li> </ul>	Manpower & Personnel; Training; Support Equipment Facilities Specialized manning, training, & facilities / alternative power sources addressed in ongoing trade study; ECD: Jun 2013

## Sustainment Relationships including industry, other DoD Components, international partnerships





# LCSP Table of Contents:

## 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 <b>CLIN:</b> WWW <b>Type:</b> FFPAW	NAVICP Bob Smith 215-xxx-xxxx Contractor A	<b>Products Covered:</b> <ul style="list-style-type: none"> <li>ISR Avionics</li> <li>ISR Ground Stations</li> </ul> <b>Time frame:</b> Jan 2013 to Dec 2018 4 yr base with potential for 3 additional option years Date of signed BCA and signatory	<b>Responsibilities:</b> Integrate all design and product support efforts ISR equipment including configuration management. <b>Functions:</b> Sustainment Coverage includes <ul style="list-style-type: none"> <li>Maintenance beyond organizational level</li> <li>Supply support</li> <li>Publications</li> <li>Training of organizational personnel</li> <li>Transportation between contractor and 1<sup>st</sup> designation</li> </ul>	<b>Metrics:</b> <ul style="list-style-type: none"> <li>A<sub>M</sub> target of 95% with min of 6% cost decrease each year</li> <li>Contract extension if met</li> </ul>



# LCSP Table of Contents:

## 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		







# 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
<b>PS IPT</b>	PSM Bob Smith 703-xxx-xxxx	<ul style="list-style-type: none"> <li>- Program Office               <ul style="list-style-type: none"> <li>• Deputy PM</li> <li>• Sys Eng Lead</li> <li>• Financial Lead</li> <li>• SW Lead</li> <li>• Site Rep.</li> <li>• R&amp;M Lead</li> </ul> </li> <li>- PSIs (List)</li> <li>- Prod Spt IPT Leads (List)</li> <li>- Service Representative(s)</li> <li>- DoD Agency Representative(s)</li> <li>- Key Subcontractor or Suppliers               <ul style="list-style-type: none"> <li>• Engine</li> <li>• XXX</li> </ul> </li> </ul>	<p><b>Role:</b> IPT Purpose</p> <p><b>Responsibilities:</b></p> <p>Integrate all product support efforts</p> <ul style="list-style-type: none"> <li>• Team Member Responsibilities</li> <li>• Cost, Performance, Schedule Goals</li> <li>• Scope, Boundaries of IPT Responsibilities</li> </ul> <p><b>Schedule and frequency of meetings</b></p> <p><b>Date of signed IPT charter and signatories</b></p>	<p><b>Products:</b></p> <ul style="list-style-type: none"> <li>• LCSP/LCSP Updates</li> <li>• IMP/IMS Inputs</li> <li>• Specifications</li> <li>• AS input</li> </ul> <p><b>Metrics:</b></p> <ul style="list-style-type: none"> <li>• Cost               <ul style="list-style-type: none"> <li>○ Program Product</li> <li>○ Support Element costs</li> </ul> </li> <li>• Schedule</li> <li>• Sustainment               <ul style="list-style-type: none"> <li>○ AM</li> <li>○ Log Foot Print</li> </ul> </li> </ul>

Risk	Rating	Driver	Mitigation	Status
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# LCSP Table of Contents: Supportability Analysis



1. Introduction

## 10 Supportability Analysis

10.1 Design Interface

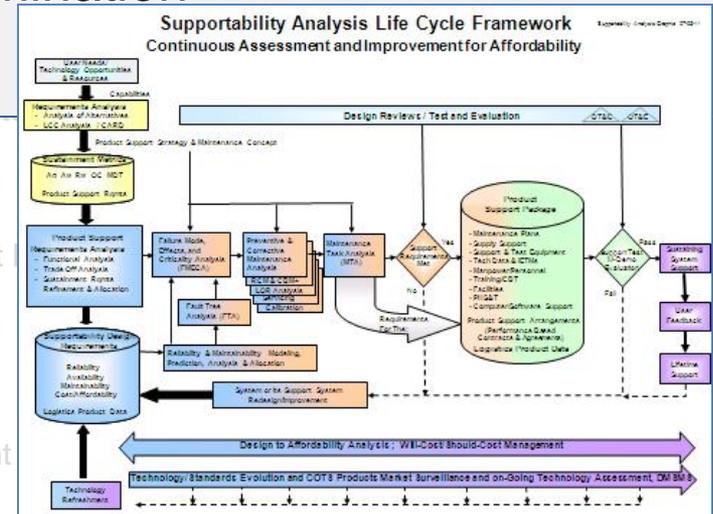
10.1.1 Design Analysis

10.1.2 Technical Reviews

10.2 Product Support Element Determination

10.3 Sustaining Engineering

- o How being implemented
  - 7. Integrated Schedule
    - o Sustainment related events (major plans, Product Support
  - 8. Funding
    - o Product Support Elements & spending plans
  - 9. Management
    - o Organizational structure & staffing levels and management
  - 10. Supportability Analysis
    - o How design features being implemented/status, PSE determined the performance tracked
  - 11. Additional Sustainment Planning Factors
    - o Special topics related to sustainment
- LCSP Annexes





# LCSP SECTION 10 SUPPORTABILITY ANALYSIS



- Design Analysis - FMECA schedule & results

System	Schedule	Issues/Likelihood	Impact / comments
Airframe	Complete Update after IOT&E	<p>New failure modes uncovered due to projected corrosion issues around engine inlets and on wing spar.</p> <ul style="list-style-type: none"> <li>Fuel tanks moved</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Verify fuel tanks not adding stress to bulk heads during operations resulting from high "G" operations</li> </ul>
Propulsion	3rd Qtr 06 to 4th Qtr 07	None	

- Reliability Growth Plan issues *or Maintainability*

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"> <li>Buy additional spares and add additional I level repair capabilities at larger sites.</li> <li>Decision required at MS C</li> </ul>



# 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><b>Alternatives:</b></p> <ul style="list-style-type: none"> <li>– 2 level or 3 levels of repair</li> <li>– Centralized 2<sup>nd</sup> level of repair or at every major site</li> <li>– Commercial or organic at 2<sup>nd</sup> or 3<sup>rd</sup> level</li> </ul> <p><b>Criteria:</b></p> <ul style="list-style-type: none"> <li>– A<sub>M</sub> and A<sub>O</sub></li> <li>– Program costs and O&amp;S costs</li> </ul>	<ul style="list-style-type: none"> <li>– 3 levels of maintenance with 2<sup>nd</sup> level being performed commercially at 3 central sites for hot sections</li> <li>– 3<sup>rd</sup> level performed by industry</li> </ul>	<ul style="list-style-type: none"> <li>– Competitive 2<sup>nd</sup> and 3<sup>rd</sup> level performance based contract in place by IOC to cover all sustainment functions, (e.g. design, maintenance, supply, transportation, etc.).</li> <li>– Complete drawing set needed for competition</li> </ul>

## Technical Review participation

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



# LCSP SECTION 10 (Cont'd)

## 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 nature or related analysis	XXX	– SAE JA 1011, RCM Evaluation	– Corrosion Control Maintenance Procedures	MS C

### 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:	NALCOMIS/NALDA data analyzed and compared to baseline values and	<ul style="list-style-type: none"> <li>Critical systems effecting costs or <math>A_M</math> as needed</li> </ul>



# LCSP Table of Contents: Additional Sustainment Planning Factors



## 1. Introduction

### 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.**

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

## 11. Additional Sustainment Planning Factors

Special topics related to sustainment

LCSP Annexes



## 1. Introduction

### **LCSP Annexes**

**Specific annexes will vary based on life-cycle phase**

- **Product Support Business Case Analysis**
- **Independent 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**

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

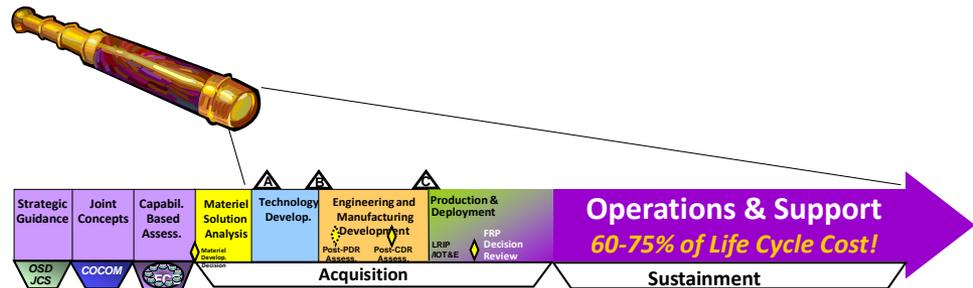
## 11. Additional Sustainment Planning Factors

- Special topics related to sustainment

## LCSP Annexes

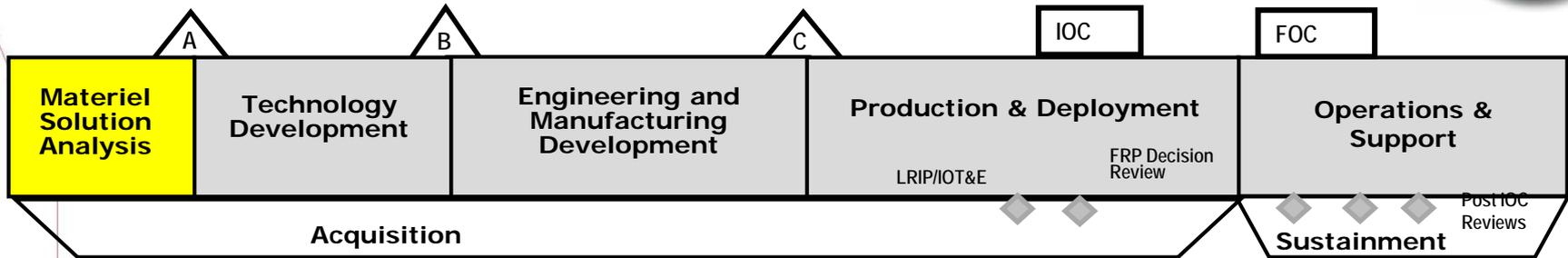
- LCSP Background and Perspective
- Outline and Expectations
- **LCSP Phase Emphasis**
- LCSP and RFPs
- Next Steps
- Conclusion

## He Who Fails To Plan is Planning To Fail





# LCSP Phase Emphasis: Material Solution Analysis Phase



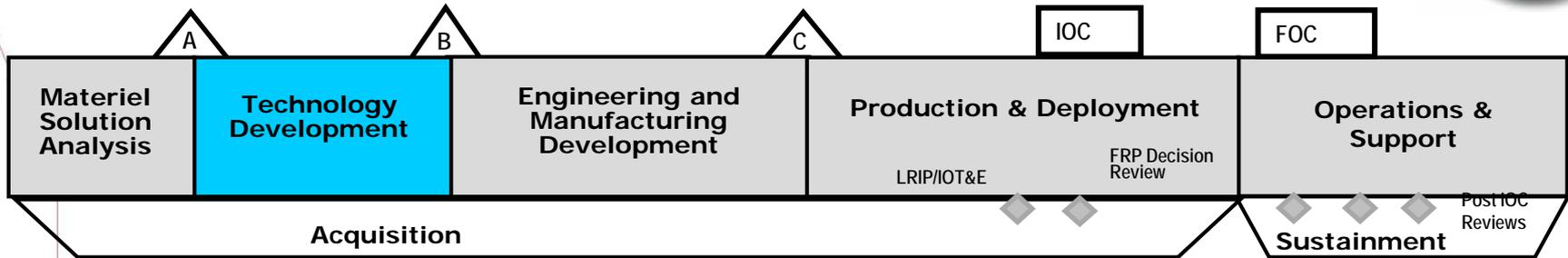
- Establish notional maintenance concept and metrics
- Identify key technologies
- Analysis process & estimating LCC drivers

## LCSP Focus:

- Framing the baseline product support strategy
- Analytical process for determining:
  - Affordable metrics and Affordability Cap
  - Cost drivers and availability degraders
- Key sustainment technologies requiring development
- Affordability targets



# LCSP Phase Emphasis: Technology Development Phase



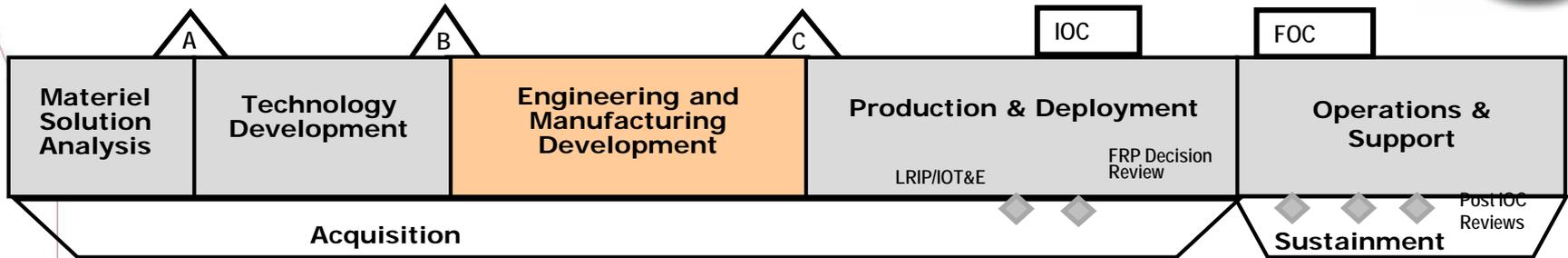
- Establish sustainment concept & execution plan framework
- Set metrics goals/thresholds & test methods

## LCSP Focus

- Baseline product support strategy
- Analytical process for determining affordable metrics goals and thresholds:
  - System and subsystem level
  - Supply chain
- Ensuring the supportability design feature requirements are incorporated in the overall design specifications
  - Sustainment metrics test methods
- Affordability Requirements & drivers



# LCSP Phase Emphasis: Engineering and Manufacturing Development Phase



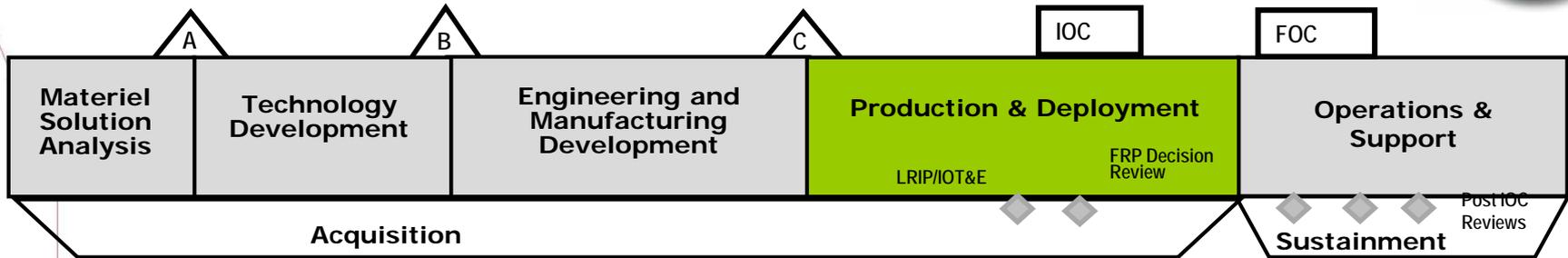
- Support structure & Product Support Package requirements defined
- PSP & metric verification methods established
- Detailed development & fielding plans established

## LCSP Focus

- Product Support Package (PSP) & supply chain
  - Detailed Product Support Element requirements
  - Detailed Product Support Package development & implementation
  - Performance verification methods
  - Fielding plans



# LCSP Phase Emphasis: Production and Deployment Phase



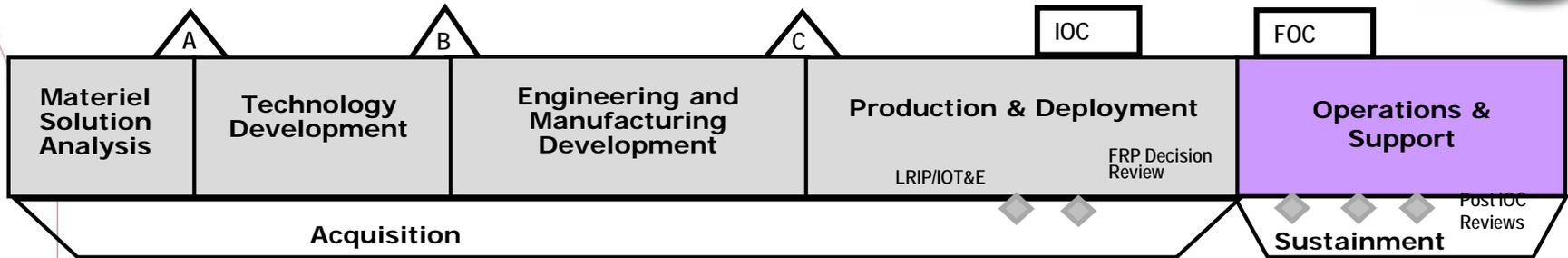
- Product Support Package elements refined
- Detailed site fielding plans refined
- Sustaining Engineering
- Logistics assessments

## LCSP Focus

- Fielding plan details and adjustments
- Logistics assessments
  - How sustainment performance will be measured, managed, assessed and reported
- Analytical and management processes for :
  - Refining Product Support Package elements
  - Cost drivers and availability degraders



# LCSP Phase Emphasis: Operations and Support Phase



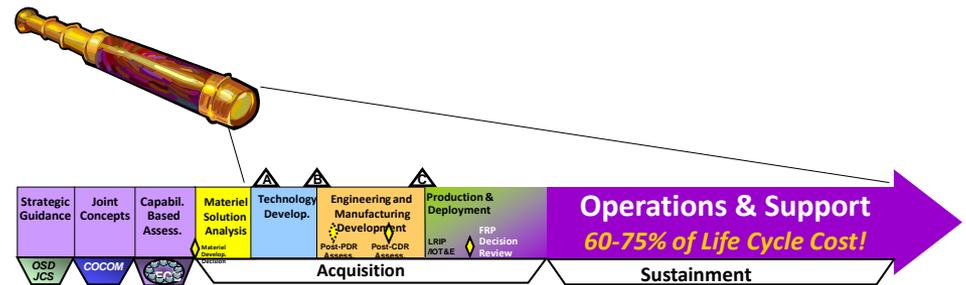
• Fielding plans adjusted  
• Metrics tracked & adjustment plans established

## LCSP Focus

- Sustaining Engineering processes for refining Product Support Package elements
- Logistics assessments on how the system and supply chain are performing
- Adjustments required for program or funding changes

- LCSP Background and Perspective
- Outline and Expectations
- LCSP Phase Emphasis
- **LCSP and RFPs**
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## He Who Fails To Plan is Planning To Fail





# LCSP Informing RFPs

## (Key Communication Tool)

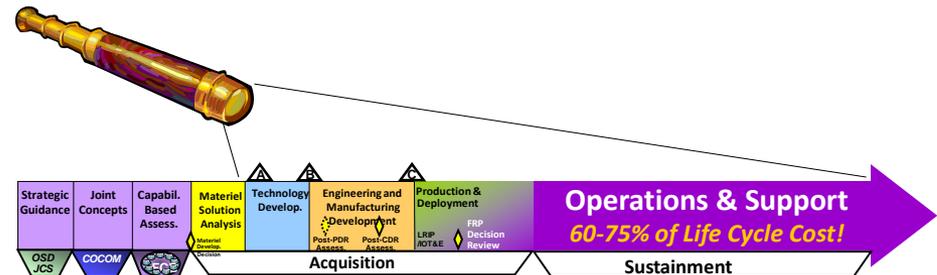


- Program Manager's Plan, not the Contractors
  - Team means both involved
  - Content varies by life-cycle phase
- How LCSP should be used to inform RFPs
  - Government Convey the:
    - Baseline Product Support Strategy
    - Sustainment Performance Requirements
    - Government Organization
    - 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



- LCSP Background and Perspective
- Outline and Expectations
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- **Next Steps**
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## He Who Fails To Plan is Planning To Fail





- LCSPs are not PM/PSM's management tool
- Check the block mentality / easy path / limited "THINK"
  - 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
- Limited Collaborative Development by All Stakeholders

Room for Improvement



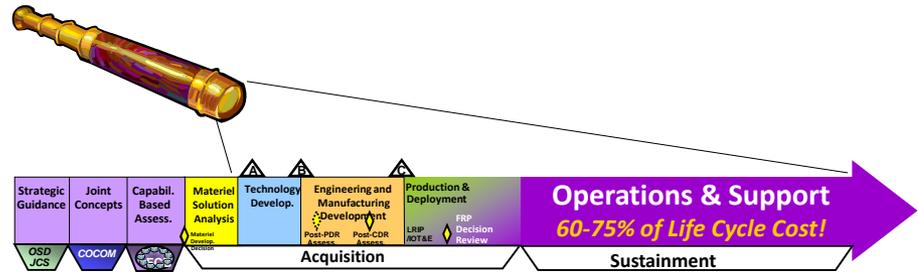
- ✓ • Continued Service and PSM engagement
  - Action Officer proactive coaching of programs
  - Service collaboration to accelerate communication and oversight
- ✓ • Expand LCSP Website based on feedback
  - Examples
  - Expectation refinement based on lessons learned
    - Phase emphasis
    - RFP
- Updated to Address Interim/New DODI 5000.02

**Feedback Welcomed for “What Doesn’t Add Value”**

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

- LCSP Background and Perspective
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## He Who Fails To Plan is Planning To Fail





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

## Use the Web Site

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

- 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



**Key element in implementing “should costs”**



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



- [Life Cycle Sustainment Plan \(LCSP\) Outline](https://acc.dau.mil/lcsp-outline) at <https://acc.dau.mil/lcsp-outline>
- [Defense Acquisition Guidebook \(DAG\) Chapter 5](#)
- [DoD Product Support Manager \(PSM\) Guidebook](#)
- [DoDD 5000.01, The Defense Acquisition System](#)
- [DoDI 5000.02, Operation of the Defense Acquisition System](#)
- [USD AT&L Policy Memorandum "Document Streamlining - Life-Cycle Sustainment Plan \(LCSP\)"](#) (14 Sep 11)
- [USD AT&L Policy Memorandum "Strengthened Sustainment Governance for Acquisition Program Reviews"](#) (5 Apr 10)
- [Public Law 112-239, Section 823](#)
- [10 U.S.C. § 2337](#)



For more info on the webinar or with regard to the LCSP, contact one of the following:



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