

# **Life Cycle Logistics -- For the Rest of Us --**

**Al Barnes  
Production and Logistics Department  
DAU South Region**



# WHAT IS LIFE CYCLE LOGISTICS?

Many think of Logistics solely as planning, coordinating, and moving THINGS....



Too many TV commercials...

**Let's expand the definition from "Logistics" to "Product Support"**

# WHAT THE LAW SAYS ABOUT PRODUCT SUPPORT STRATEGY

**“Package of support functions required to field and maintain the readiness and operational capability of major weapon systems, subsystems, and components, including all functions related to weapon system readiness”  
(10 U.S.C. § 2337)**

- Requires consideration **throughout life cycle**, from requirements determination through system design, development, operational use, retirement, and disposal
- Sometimes referred to as **system sustainment**



# WHAT'S THE OBJECTIVE OF THE PRODUCT SUPPORT STRATEGY

- To achieve and sustain warfighter operational readiness outcomes
- Dependent on optimizing the integrated product support elements



Availability: a measure of the degree to which an item is in an operable state and can be committed at the start of a mission when

Reliability: a measure of the probability the system will perform without failure over a specific interval under specified

Affordability: conducting a program at cost constrained by the

Supportability: inherent characteristics of system and enabling system elements that allow effective/efficient sustainment (including maintenance and other support functions) throughout the system's life cycle

personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair

Doesn't the 1<sup>st</sup> bullet sound like something we all want?



# WHAT OTHERS THINK....



You will not find it difficult to prove that battles, campaigns, and even wars have been won or lost primarily because of logistics.

— Dwight D. Eisenhower —



The line between disorder and order lies in logistics...

~ Sun Tzu

AZ QUOTES

My logisticians are a humorless lot ... they know if my campaign fails, they are the first ones I will slay.

-Alexander the Great



# WHY SHOULD YOU CARE?

No really...why should you care???

Requirements vice Capabilities





# WHAT YOU SAID...

## PLUS IT'S THE LAW!!!

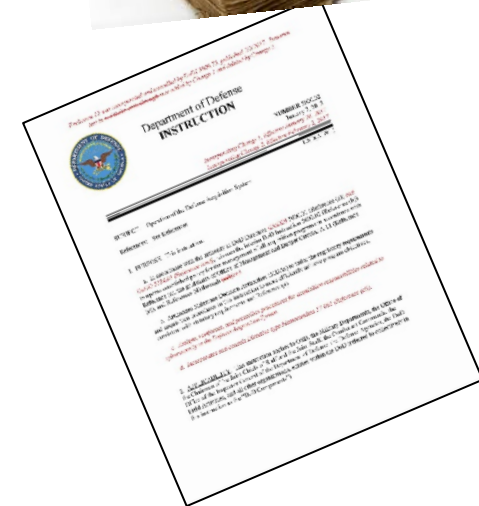
### **Statutory requirements, *10 USC § 2337***

**Stipulates a review of a weapon support strategy every 5 years or prior to a major change in the program product support strategy**



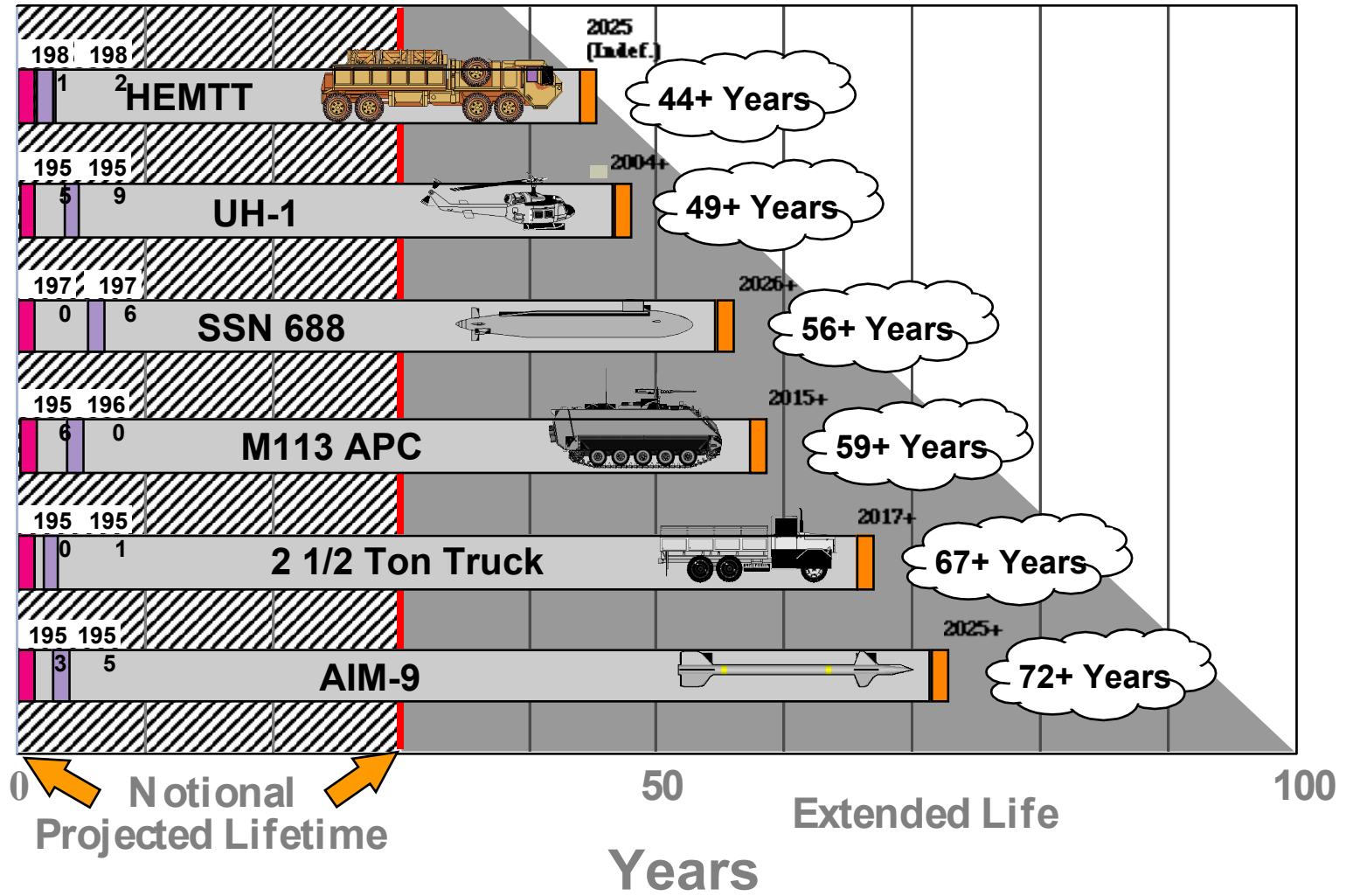
### **5000.02, enclosure 6**

**Program managers, with the support of the Product Support Manager (PSM), will develop and implement an affordable and effective performance-based product support strategy**





# A FEW MORE COMPELLING REASONS...



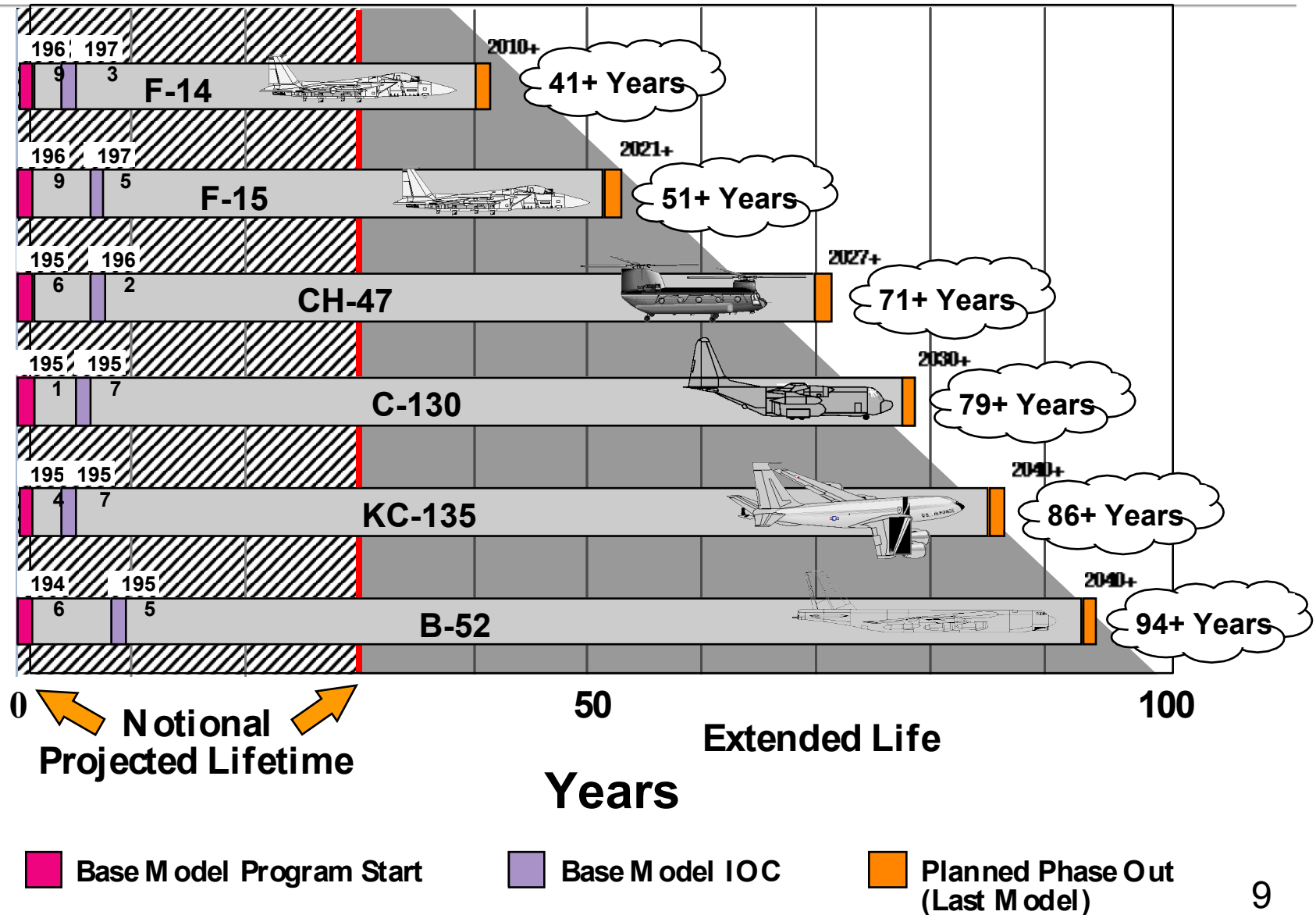
Base Model Program Start

Base Model IOC

Planned Phase Out



# A FEW MORE COMPELLING REASONS...

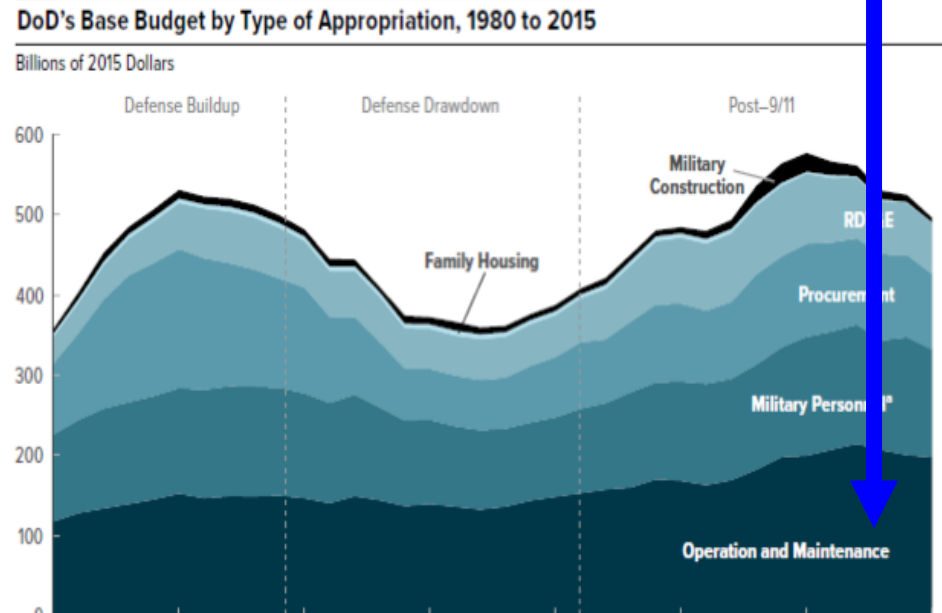
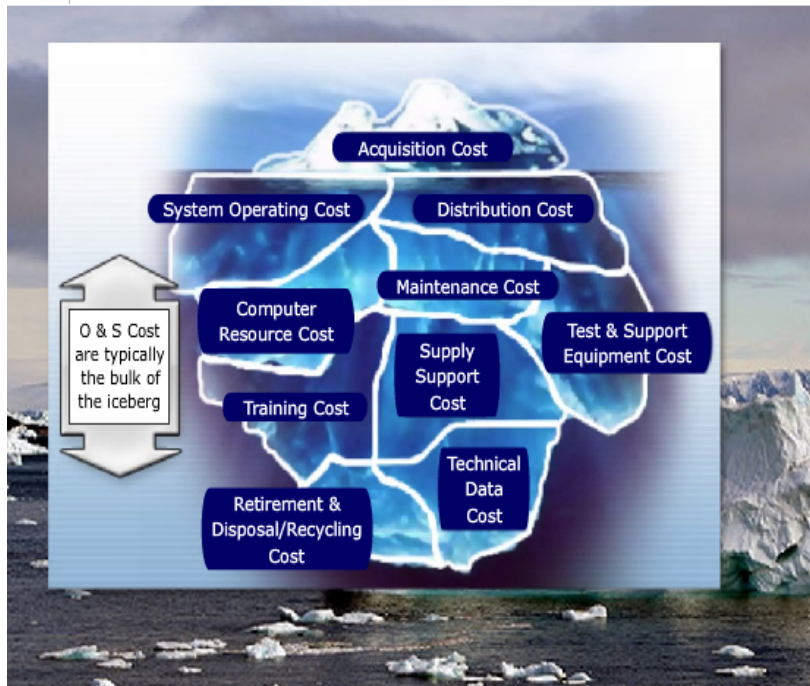




# OUR CHALLENGE ...

*“Traditionally, development and procurement have accounted for about 28 percent of a weapon’s total ownership cost, while costs to operate, maintain, and dispose of the weapon system account for about 72 percent of the total.”*

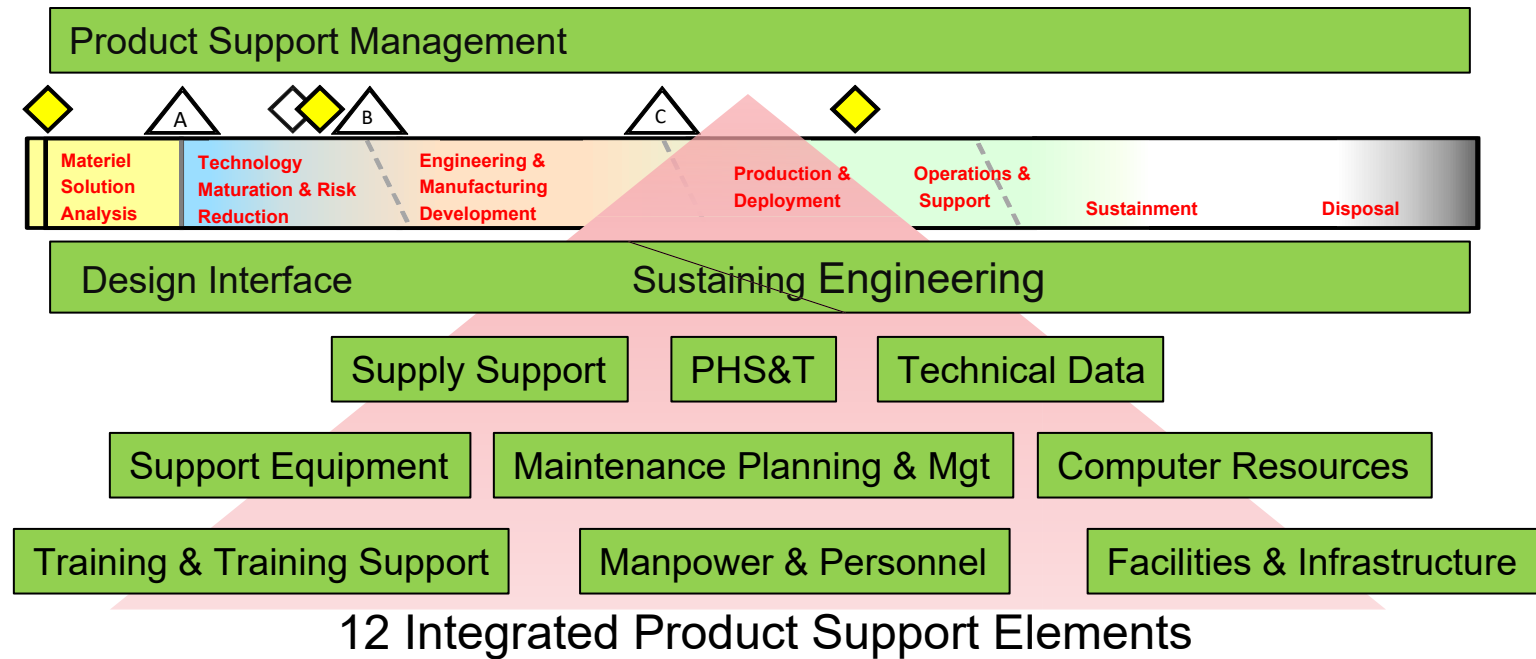
*In 2015, about \$200 billion (40 percent) of DoD’s base budget of \$500 billion was designated for O&M Funding, in the base budget for each of the other major categories was much lower. As a result, some modernization has been postponed in order to pay high and unexpected operating and maintenance costs.”*





# HOW DO WE MEET THE CHALLENGE?

- Working together to better understand what each functional area within our acquisition and sustainment IPTs care about or value--what makes them tick??
- From the beginning, through each phase, your Life Cycle Logisticians see the world through the lens of the 12 Integrated Product Support (IPS) Elements





# Integration of Key Integrated Product Support (IPS) Element Products

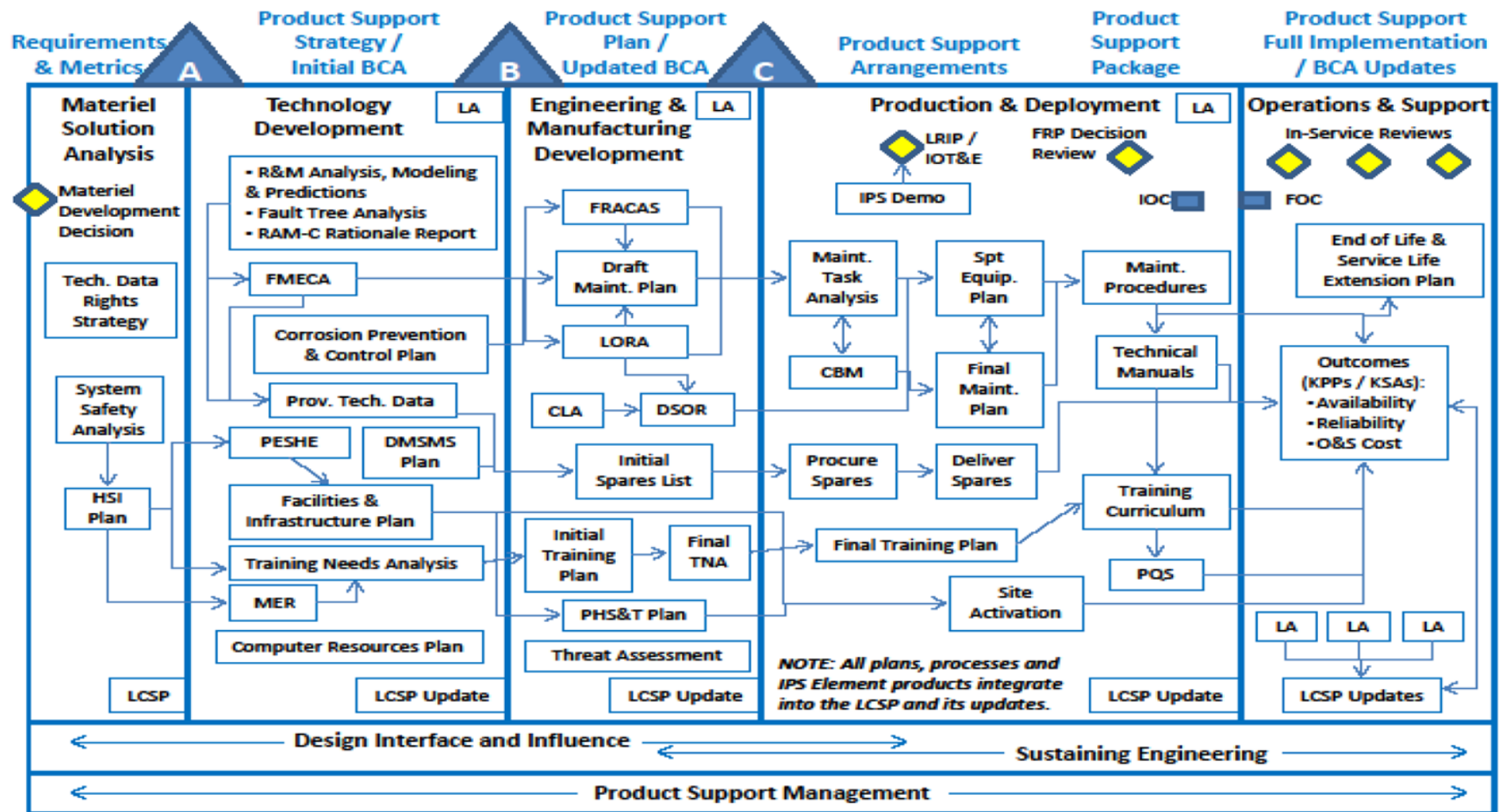
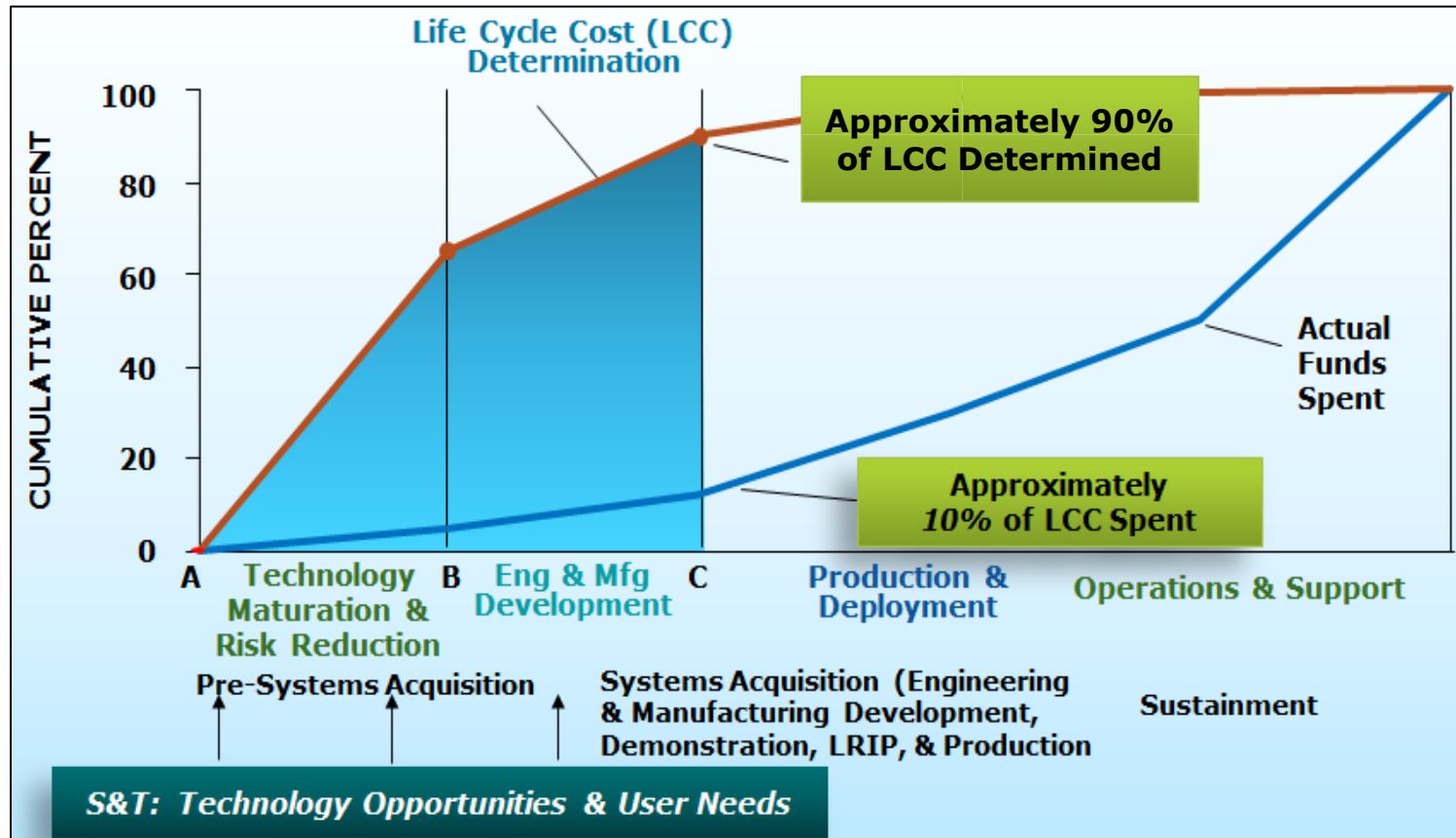


Figure P3. Integration of IPS Elements Product Deliverables

# WHEN DO WE START???

*Now that you know how Logisticians think...*

*WHEN do you start working together?*



**Logisticians must be involved early in design planning to influence the design to insure supportability. Once designed, much of the support costs are locked**



# “WHO YA GONNA CALL”...THE PSM

## US Code Title 10 Section 2337

Each major weapon system be supported by a  
**Product Support Manager (PSM)**



- “The Program Manager, with the support of the Product Support Manager (PSM), will...” (*Aug 2017 DoDI 5000.02, Enclosure 6*)
- Product Support Strategy
- Life-Cycle Sustainment Plan (LCSP)
- Product Support Business Case Analysis (BCA)
- Product Support Arrangements (PSA)

**Optimized   Affordable   Readiness**

*Provides weapon system product support subject matter expertise to the Program Manager for execution of PM's duties as Total Life Cycle Systems Manager*





# PSM REQUIREMENT REITERATED

## DODI 5000.20

“***Sustainment planning***, including the requirements in 10 U.S.C. 2337, and in Appendix E to Enclosure B of the Manual for the Operation of the Joint Capabilities Integration and Development System, must be ***an integral element of the capability requirements and acquisition process from inception.***”

“The Program Manager, with the support of the Product Support Manager (PSM), will:”

“***Develop and implement an affordable and effective performance-based product support strategy.*** The product support strategy will be the basis for all sustainment efforts and lead to a product support package to achieve and sustain warfighter requirements.”



### Department of Defense INSTRUCTION

NUMBER 5000.02  
January 7, 2015

*Incorporating Change 3, August 10, 2017*

USD(AT&L)

SUBJECT: Operation of the Defense Acquisition System

References: See References

1. **PURPOSE.** This instruction:

a. In accordance with the authority in DoD Directive (DoDD) 5000.01 (Reference (a)) and DoDD 5134.01 (Reference (cm)), reissues the interim DoD Instruction 5000.02 (Reference (b)) to update established policy for the management of all acquisition programs in accordance with Reference (a), the guidelines of Office of Management and Budget Circular A-11 (Reference (c)), and References (d) through (cw).

b. Authorizes Milestone Decision Authorities (MDAs) to tailor the regulatory requirements and acquisition procedures in this instruction to more efficiently achieve program objectives, consistent with statutory requirements and Reference (a).

c. Assigns, reinforces, and prescribes procedures for acquisition responsibilities related to cybersecurity in the Defense Acquisition System.

d. Incorporates and cancels Directive-type Memorandum 17-001 (Reference (cl)).

2. **APPLICABILITY.** This instruction applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this instruction as the “DoD Components”).

3. **POLICY.** The overarching management principles and mandatory policies that govern the Defense Acquisition System are described in Reference (a). This instruction provides the detailed procedures that guide the operation of the system.




# WHAT YOU SHOULD EXPECT FROM THE PSM

1. Develop and implement a ***comprehensive product support strategy for the weapon system***
2. Use appropriate predictive analysis and modeling tools that can ***improve material availability and reliability, increase operational availability, and reduce O&S cost***
3. Conduct appropriate cost analyses to validate the product support strategy, ***including cost-benefit analyses***, as outlined in OMB Circular A-94
4. Ensure achievement of desired product support outcomes through ***development and implementation of appropriate Product Support Arrangements (PSAs)***
5. ***Adjust performance requirements and resource allocations across PSI and PSPs*** as necessary to optimize implementation of the product support strategy
6. Periodically review PSAs between the PSIs and PSPs to ***ensure the arrangements are consistent with the overall product support strategy***

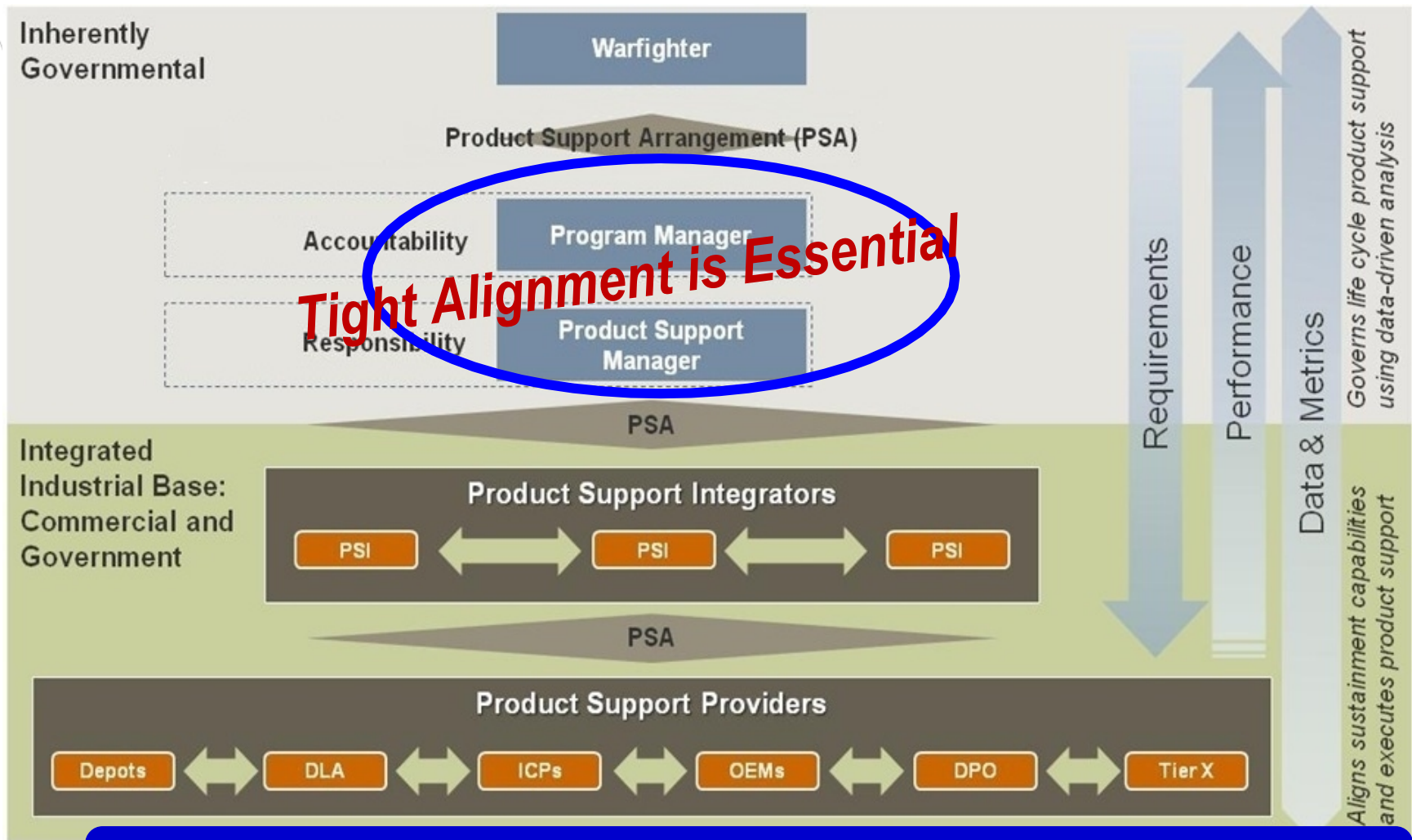


# WHAT YOU SHOULD EXPECT FROM THE PSM

- 
7. Prior to each change in the product support strategy, or every five years, whichever occurs first, ***revalidate any business-case analysis performed for the strategy***
  8. Ensure that the product support strategy ***maximizes small business participation*** at the appropriate tiers
  9. Ensure that PSAs for the weapon system describe how such arrangements will ***ensure efficient procurement, management, and allocation of Government-owned parts inventories in order to prevent unnecessary procurements of such parts***
  10. Make a determination regarding the ***applicability of preservation and storage of unique tooling*** associated with the production of program specific components; if relevant, include a plan for the preservations, storage, or disposal of all production tooling
  11. Work to ***identify obsolete electronic parts*** that are included in the specifications for an acquisition program of the DoD and approve suitable replacements for electronic parts



# DoD Product Support Business Model



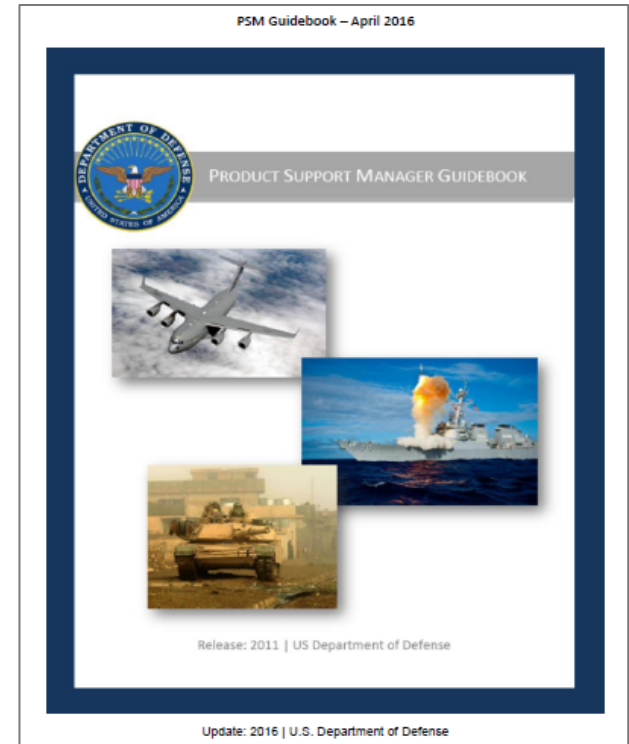
***PSM is the Warfighter's Principle Product Support Agent  
Responsible for Incentivizing PSI(s) to Achieve Warfighter Requirements***



# PSM GUIDEBOOK - A TOOL FOR YOU TOO

***“A tool for PMs, PSMs, their support staffs, and others in acquisition / sustainment organizations*** as they develop and implement product support strategies for new programs, major modifications to legacy programs, or as they re-validate and re-engineer product support strategies for existing fielded systems.”

“This guide is focused on identifying, developing, implementing, incentivizing, and measuring quantifiable ***best value, outcome-based product support solutions that optimize Life-Cycle Cost (LCC) and readiness.***”

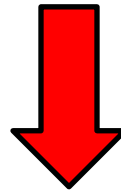


The PSM for a major weapon system must ***provide the best possible product support outcomes and maximize competition while making use of public and private resources*** at the system, subsystem, and component levels, at the lowest O&S cost



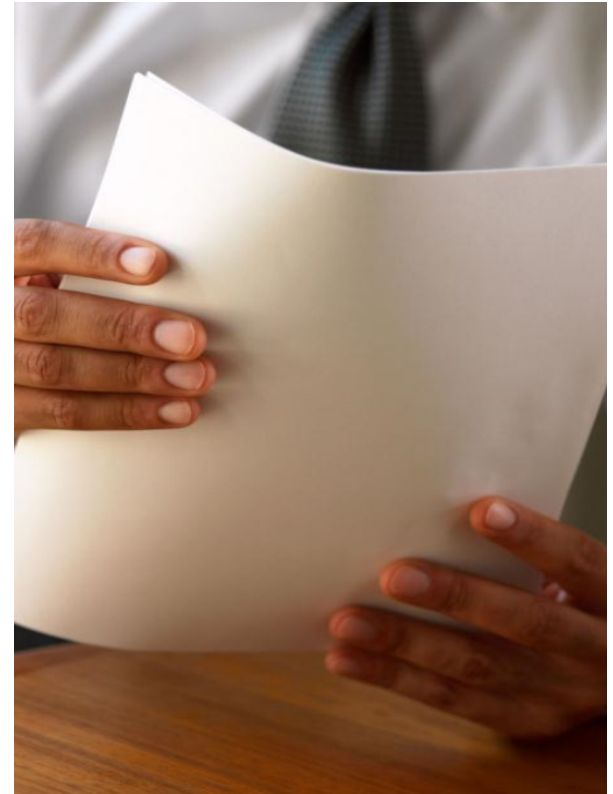
# WHERE IS THE PRODUCT SUPPORT STRATEGY DOCUMENTED?

- You know what the Product Support Strategy (PSS) is
- You know the 12 IPS Elements
- You know when you start working with your Logisticians on the PSS
- You know who is responsible/accountable for the PSS
- Where do we document our Product Support Strategy?



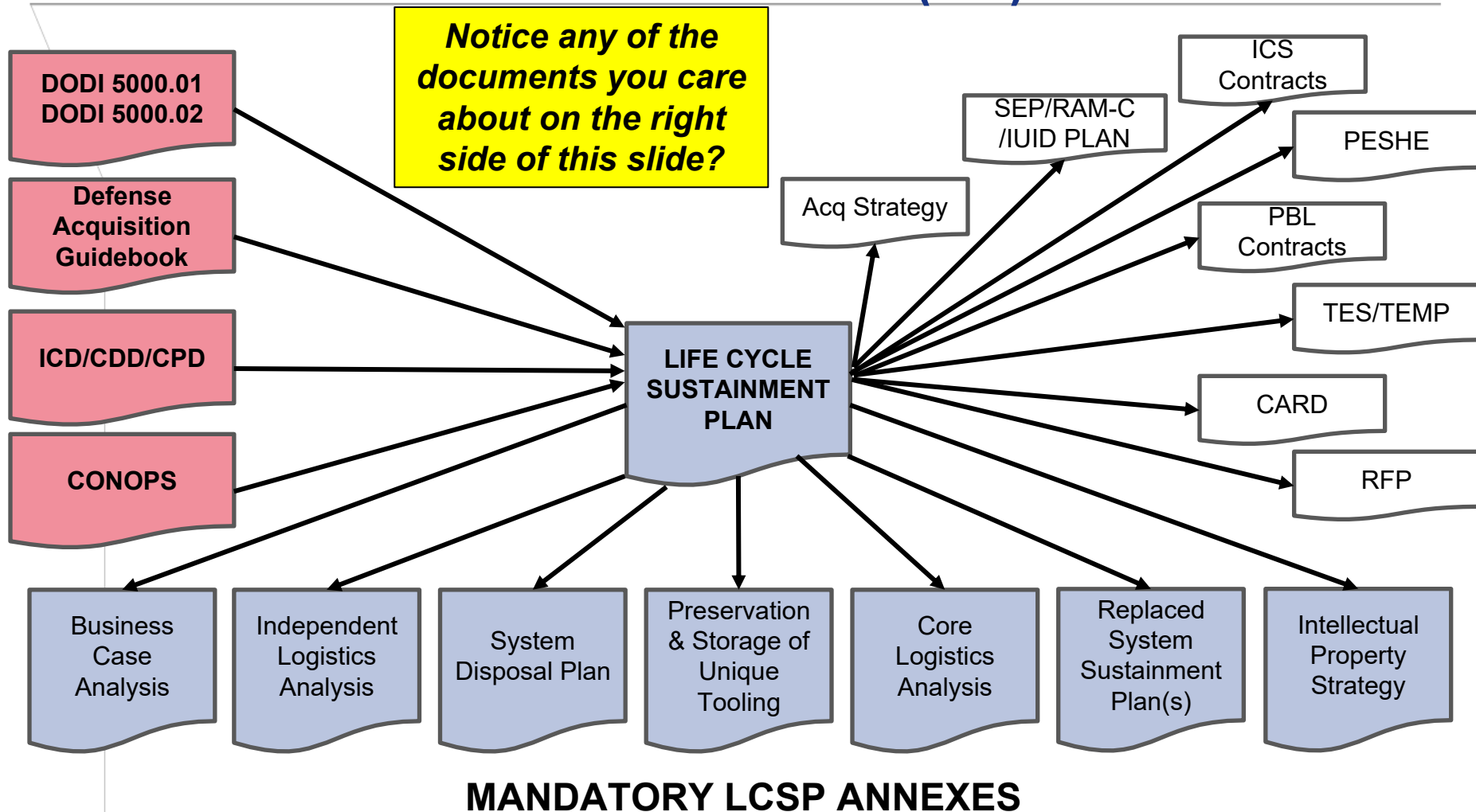
**Life Cycle Sustainment Plan (LCSP)**

- **Acquisition Strategy (AS)**
  - Overall strategy
  - Specific targets per phase
- **Systems Engineering Plan (SEP)**
- **Test and Evaluation Master Plan (TEMP)**
- **Life Cycle Sustainment Plan (LCSP)**
  - Outline
  - Phase specific targets – sections required by phase



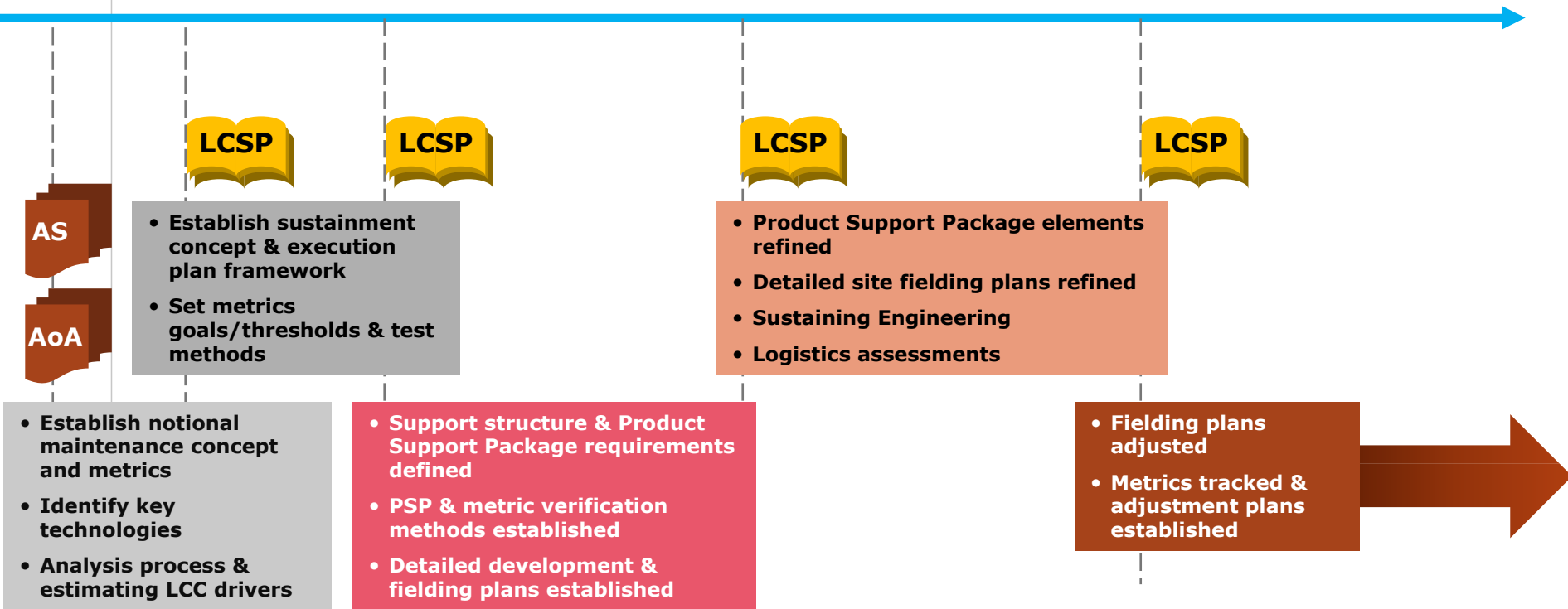
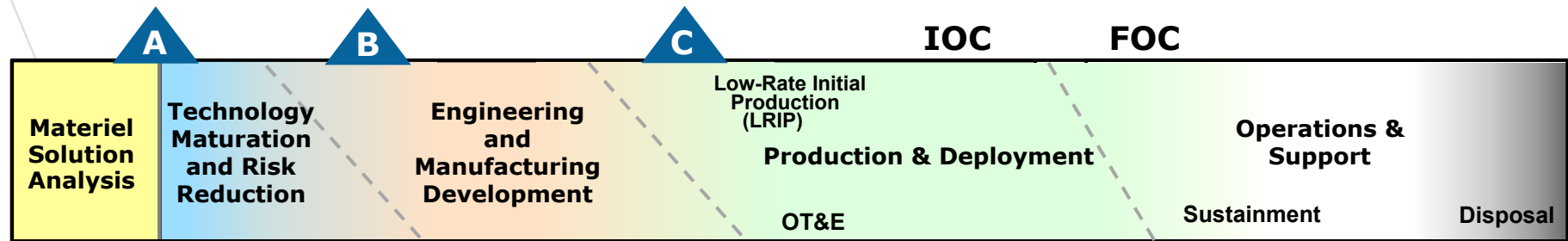


# LCSP DEVELOPMENT: AN ALL-HANDS (IPT) EVENT!





# AS THE PSS EVOLVES... SO DOES THE LCSP





# HOW DO WE KNOW OUR PSS IS WORKING?

*“What’s measured improves”  
Peter Drucker*

## **Sustainment Key Performance Parameters (KPPs) & Key System Attributes (KSAs)**

- **Materiel Availability (KPP\*)**
  - A Key Data Element Used In Maintenance and Logistics Planning
- **Materiel Reliability (KSA\*)**
  - Provides A Measure Of How Often The System Fails/Requires Repair
  - Another Key Data Element In Forecasting Maintenance/Logistics Needs
- **Ownership Cost (KSA\*)**
  - Focused On The Sustainment Aspects Of The System
  - An Essential Metric For Sustainment Planning And Execution
  - Useful For Trend Analyses – Supports Design Improvements/Modifications
- **Mean Downtime**
  - A Measure Of How Long A System Will Be Unavailable After A Failure or PM
  - Another Key Piece Used In The Maintenance/Logistics Planning Process



**Goals Determined  
By Warfighter  
Needs**

***These 4 Life Cycle Sustainment Outcome Metrics Are Universal  
Across All Programs & Key To Effective Sustainment Planning***



# WE NEED EACH OTHER

At the End of the Day, Life Cycle Logisticians pursue two fundamental objectives:

- Weapons systems be designed, maintained, and modified to continuously ***reduce the demand for logistics and O&S cost.***
- Logistics support must be ***effective and efficient***; the resources required to provide life cycle product support must be minimized while ***meeting warfighter readiness requirements***



*Our Primary Focus: Affordable Readiness*



# Supporting the Supporter

- **Our job as Life Cycle Logisticians is to:**
  - Influence system requirements, design, development, testing, fielding, sustainment, disposal
  - Tightly align product support planning and execution with a range of acquisition and sustainment community stakeholders
  - Support system PEOs, PM and, product support managers in achieving program goals
  - Develop, field & sustain reliable, available, maintainable, supportable, & affordable systems
  - While achieving program cost, schedule, performance and supportability requirements
  - Enabled by interdisciplinary, multi-functional integration
  - Spanning the system life-cycle -- from requirements to disposal
  - Documented in system life cycle sustainment plan and other programmatic documents
  - Bridging acquisition and sustainment
  - Supporting a wide range of customers and stakeholders
  - **In Support of the Warfighter**
- **Our job at DAU is to support the workforce in achieving these outcomes through:**
  - Integrated, multi-functional learning asset portfolio
  - Classroom, distance learning, continuous learning, and video-based training
  - Web-based workflow learning resources
  - Workshops, mission assist and advisory support
  - Subject matter expertise



# **Ten Things Great PM's Know About Product Support**

- 1. I'm the life cycle manager (LCM): The product support buck stops with me.**
- 2. The right Product Support Manager (PSM) is key. Demand excellence & accept nothing less.**
- 3. Everything that really matters can be captured on a single page.**
- 4. Design systems with supportability in mind.**
- 5. Product support strategies must be iteratively crafted, revalidated, & documented.**
- 6. Twelve Integrated Product Support (IPS) elements provide the framework.**
- 7. Obsolescence & DMSMS will eat your lunch (along with breakfast & dinner if not careful).**
- 8. Performance Based Logistics (PBL) is a powerful force multiplier.**
- 9. Maintenance planning and management is a big deal. So is supply chain management.**
- 10. Acquisition and sustainment are ultimately two sides of the same coin.**

# Aligned & Integrated Suite of DoD Product Support Guidance

## ...Reinforced by Portfolio of Targeted DAU Learning Assets

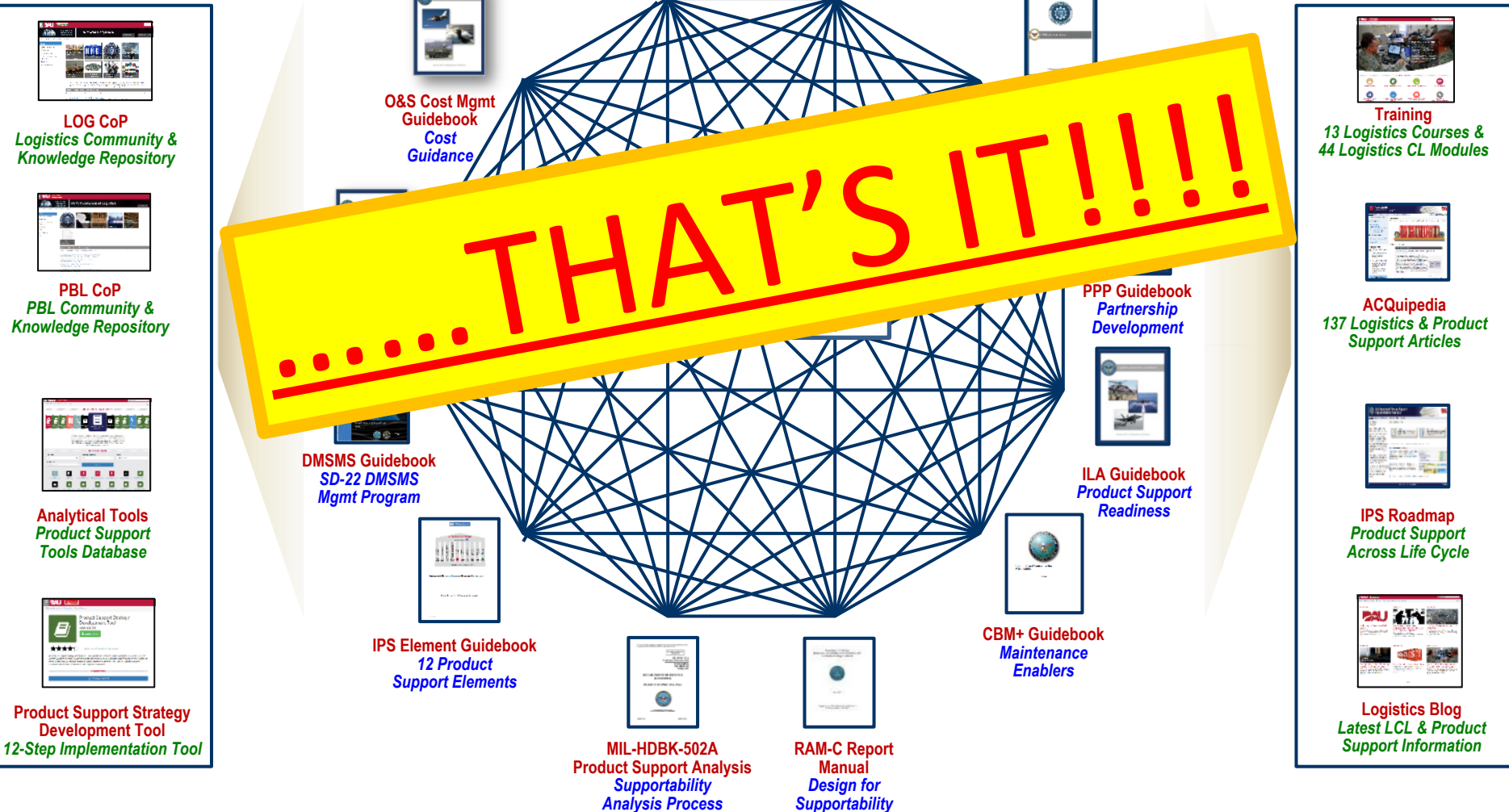
<https://www.dau.mil/tools/p/integrated-Product-Support-Guidebook-Suite>

**Overarching Policy:** DoDI 5000.02, Enclosure 6 & DoD Life Cycle Sustainment Plan (LCSP) Outline

**Key Players:** product support managers, life cycle logisticians, program managers, systems & sustaining engineers

**Common Themes:** affordability, effectiveness, integration, outcomes, life cycle management

**Focus:** crafting & executing well-thought out, affordable product support strategies to meet warfighter readiness & cost requirements



# Logistics Hot Topics

**Carolyn Middleton**  
**Learning Director for Logistics**  
**DAU HQ – Foundational Learning Directorate (FLD)**





# New DAU Virtual Campus

- As of **September 24**, all **Online Training (OLT)** will go through the new virtual campus (CSOD)
- **What to expect**
  - All student course completions/training records transfer automatically
  - Students must complete current courses in old system within standard timelines
  - Distance learning (DL) courses and continuous learning modules (CLM) both referred to as online training (OLT)
  - OLT courses retain existing names (i.e. “LOG xxx” and “CLL xxx”)
- **“WIIFM”**
  - Unlimited restart opportunities - no need for resets!
  - No deadline to complete course – take as long as you need
  - Pre-requisites no longer REQUIRED for OLT but RECOMMENDED
  - Immediate access to course upon registration
  - Students MUST PASS the course at 80% within THREE attempts; auto reset
  - Students can contact faculty for OLT help via Support Community or Help Desk
- **OLT Registration**
  - ATRRS and iCatalog links will automatically redirect to new virtual campus

A student orientation module with video tutorials on how to use the virtual campus to access training will be provided



# Life Cycle Logistics DAWIA Certification Requirements (FY19)

## Level I Certification

### ACQ 101

Fundamentals of Systems Acquisition Management

25 hrs, online

### ENG 101

Fundamentals of Systems Engineering

35 hrs, online

### LOG 100

Life Cycle Logistics Fundamentals

27 hrs, online

### LOG 102

Fundamentals of System Sustainment Management

25 hrs, online

### LOG 103

Reliability, Availability and Maintainability (RAM)

22 hrs, online

### CLL 008

Designing for Supportability in DoD Systems

### CLL 011

Performance Based Life Cycle Product Support (PBL)

*Knowledge based*

## Level II Certification

### ACQ 202

Intermediate Systems Acquisition, Part A

35 hrs, online

### ACQ 203

Intermediate Systems Acquisition, Part B

4.5 days, classroom

### LOG 200

Product Support Strategy Development, Part A

22 hrs, online

### LOG 201

Product Support Strategy Development, Part B

4.5 days, classroom

### LOG 206

Intermediate Systems Sustainment Management

27 hrs, online

### LOG 235

Performance-Based Logistics

16 hrs, online

### CLL 001

Life Cycle Mgt & Sustainment Metrics

### CLE 068

Intellectual Property & Data Rights

### CLC 011

Contracting for the Rest of Us

### CLL 012

Supportability Analysis

### Choice of:

- EVM 101 Earned Value Mgt OR
- RQM 110 – Requirements Mgt OR
- CON 121/124/127 Contract Planning, Execution and Mgt OR
- LOG 204 – Configuration Mgt OR
- LOG 215 Technical Data Mgt

15-35 hrs, online

*Application/case based*

## Level III Certification

### LOG 340

Life Cycle Product Support

4.5 days, classroom

### LOG 350

Enterprise Life Cycle Logistics Management

9.5 days, classroom

### CLL 005

Developing a Life Cycle Sustainment Plan (LCSP)

### CLL 015

Product Support Business Case Analysis (BCA)

### CLL 020

Independent Logistics Assessments

### Choice of:

- LOG 211 – Supportability Analysis OR
- BCF 215 – O&S Cost Analysis OR
- ACQ 265 – Services Acquisition OR
- ACQ 315 – Understanding Industry (Business Acumen)

4.0-4.5 days, classroom

*Case/scenario based*

1 Year Experience

2 Years Experience

4 Years Experience



# Logistics Functional Area Gateway

<https://www.dau.mil/training/career-development/logistics/>

- **Menu & Operational Status** →

- DAU Regional Locations & Colleges
- Product Support References & Tools
- Product Support Policy & Guidance

- **Rotator Announcements** →

- **Logistics Quick Links** →

- Training & CL Modules
- Communities of Practice
- Ask-a-Professor
- ACQuipedia
- Certification Standards
- Product Support Guidance Suite

- **Logistics Director's Blog** →

- Four Most Recent Blogs
- Access to Archives Since 2009

- **Contact & Organizational Information & Feedback** →

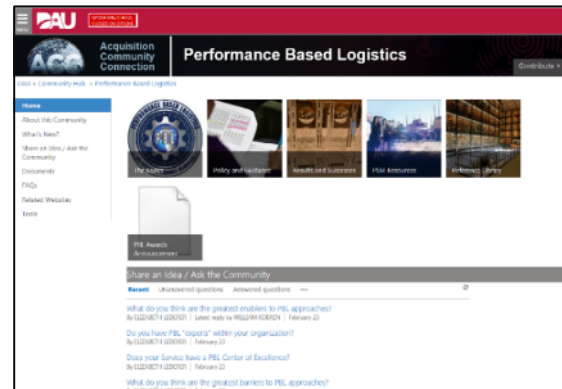




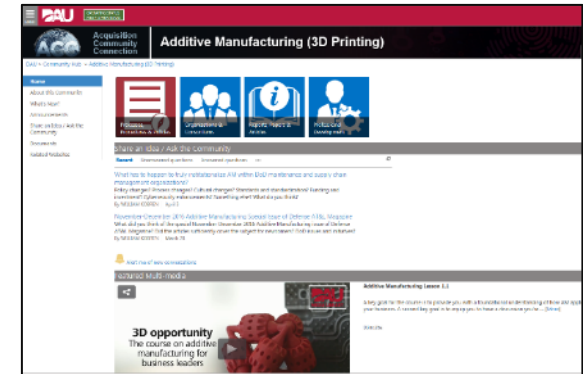
# Five Primary Product Support CoPs: Logistics, PBL, AM, DMSMS & Ammo



<https://www.dau.mil/cop/log>



<https://www.dau.mil/cop/pbl/>



<https://www.dau.mil/cop/am>



<https://www.dau.mil/CoP/ammo>



<https://www.dau.mil/CoP/dmsms>



# AT&L Reorganization

- Effective 1 Feb 2018, the Office of the Under Secretary of Defense (OUSD) for Acquisition, Technology & Logistics is reorganized into:
  - USD for Research & Engineering (USD(R&E))
  - USD for Acquisition & Sustainment (USD(A&S))
- New USD A&S: Honorable Ellen Lord
- New USD R&E: Honorable Michael Griffin
- Details in January 31, 2018 AT&L All-Hands

*Food for thought:*

*What can we as Defense Acquisition Workforce professionals each do to help facilitate alignment and integration across the R&E and A&S enterprise?*



# USD for Research & Engineering (USD(R&E))

## USD for Acquisition & Sustainment (USD(A&S))

### **OUUSD (A&S)**

*Honorable Ellen Lord*

- Acquisition
- Energy, Installations & Environment
- Logistics & Materiel Readiness
- Nuclear, Chemical & Biological
- Defense
- Def. Contract Management Agency
- Def. Logistics Agency (DLA)
- Def. Threat Reduction Agency (DTRA)
- Office of Economic Adjustment
- Defense Acquisition University (DAU)
- Office of Strategy & Design (Reorg)

### **OUUSD (R&E)**

*Honorable Michael Griffin*

- Research & Engineering
- Strategic Capabilities Office
- Defense Innovation Unit (Experimental) (DIU)
- Defense Advanced Research Projects Agency (DARPA)
- Missile Defense Agency (MDA)
- DoD Test Resource Management Center
- Defense Microelectronics Activity
- Defense Technical Information Center



# USD(A&S) Priorities

- Other Transaction Authorities (OTA)
- Mid-tier acquisition process (MTA)
- Agile Software development
- Intellectual property (IP)
- Software Provenance
- Adaptive acquisition framework
- Success stories

**“I don't mean a four-week class where you are locked down somewhere, I mean two-to-four-hour sessions where you can talk about how we do things.”**

**“We want to make sure DAU can send more people to help organizations as they stand up their programs.”**

**“We have a lot of work in terms of looking at the curriculum and making sure we are tailoring it to what we need.”**

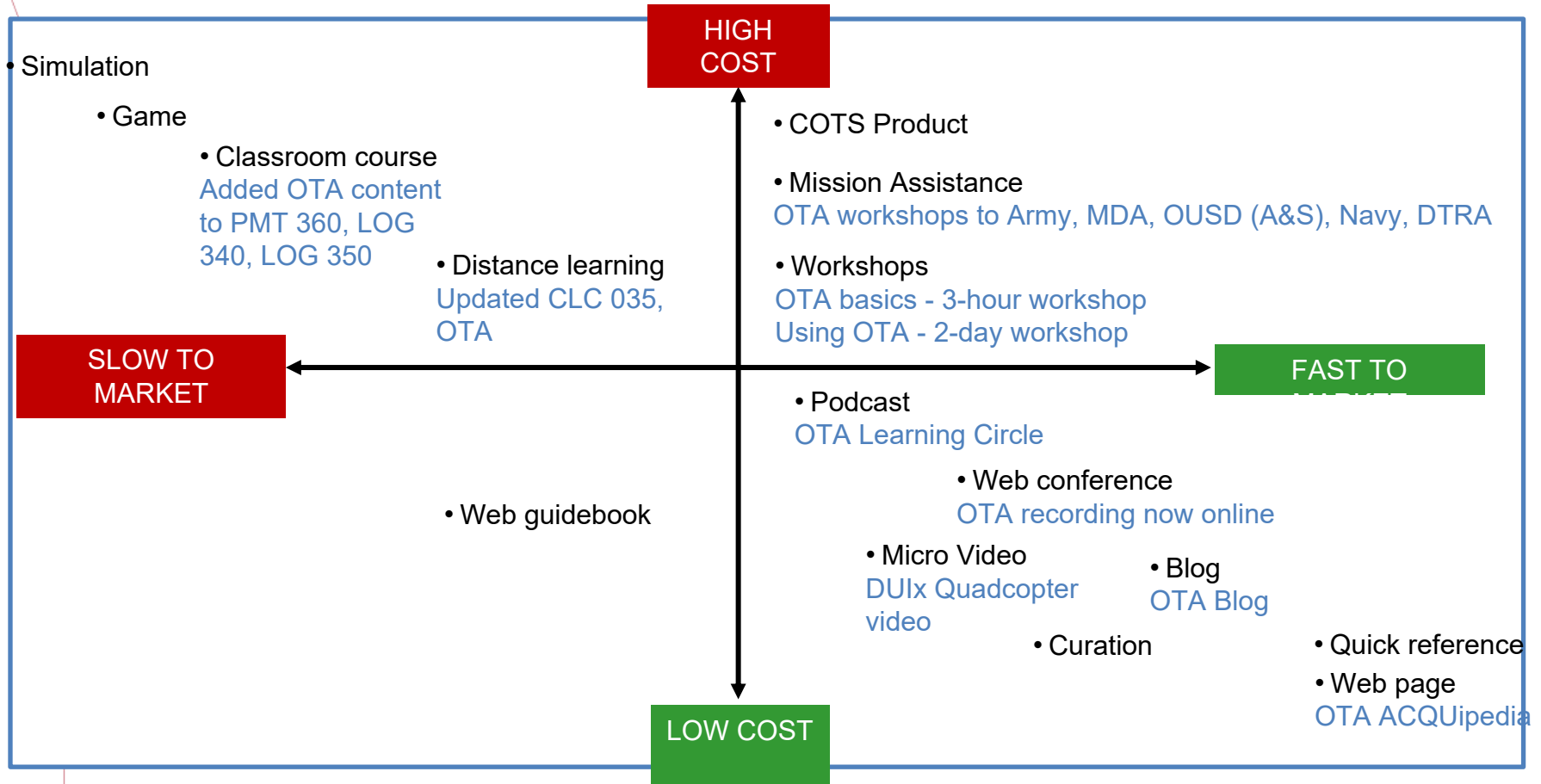
Ellen Lord,  
USD (A&S)





# Meeting the Need With the Right Tools

## OTA Example





# Mission Assistance: Cybersecurity Workshops

Workshop Title(s)	Dates	Customer
1. Cybersecurity Acquisition Integration; 2. Cybersecurity Leadership Training; 3. Risk Management Framework; 4. Cyber Strengths, Weaknesses, Opportunities and Risks	July 10 - 12, July 13 - 17	Joint Base Elmendorf-Richardson (JBER), Alaska
1. Cybersecurity Leadership; 2. Cybersecurity Acquisition Integration; 3. Systems Security Engineering and Cyber Threats; 4. Cybersecurity and Covered Defense Information	July 30 – August 3	NSWC, Port Hueneme, CA
1. Cybersecurity Acquisition Integration 2. Risk Management Framework	July 17 -19	PEO C3T, Aberdeen Proving Ground, MD
Cybersecurity Acquisition Integration	July 11	ARDEC, Picatinny Arsenal, NJ
Program Protection Planning	July 14 - 16	NAVSEA, Washington Navy Yard
1. Cybersecurity Acquisition Integration; 2. Risk Management Framework	July 31 – August 2	Joint Air-to-Surface Standoff Missile, JASSM, Ft Walton, FL
Cybersecurity Acquisition Integration	August 7 - 8	F-35 Lightning II JPO, Washington, DC



# Section 809 Panel

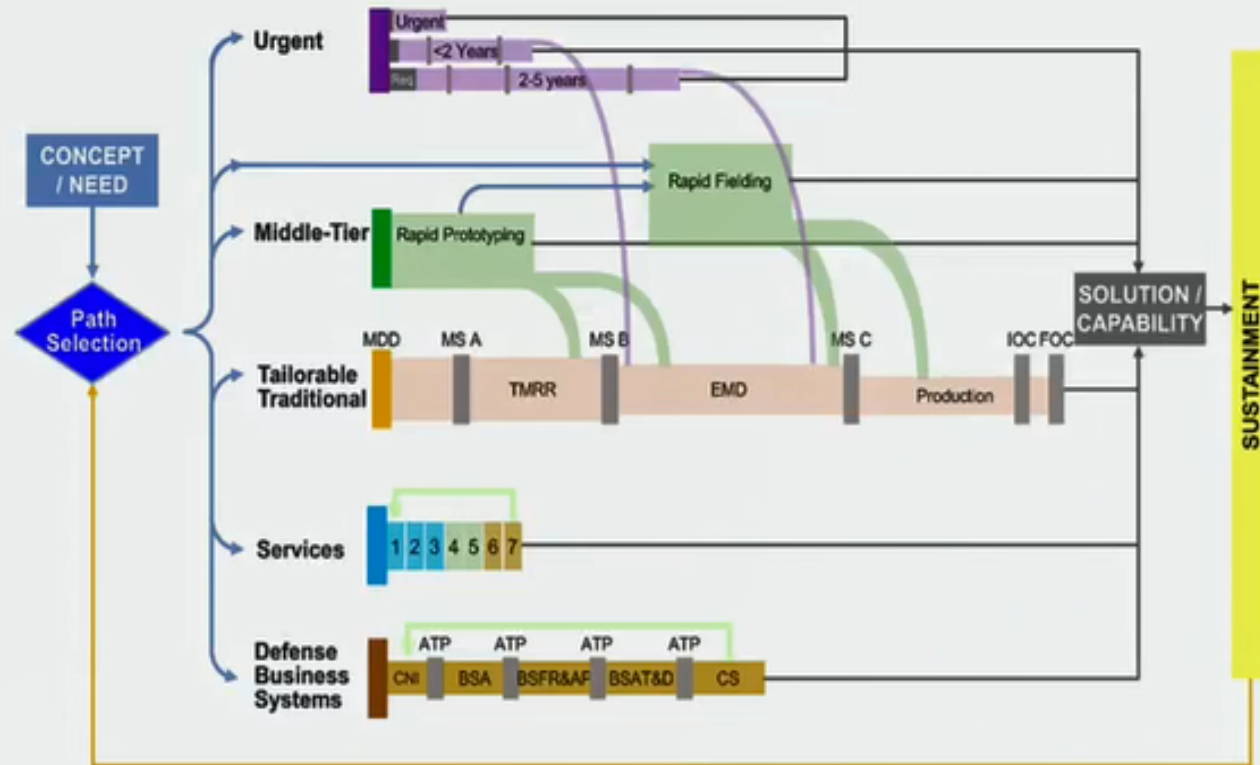
<https://section809panel.org>

- **Sec. 809 of FY16 NDAA directed SECDEF establish an independent advisory panel on streamlining & simplifying acquisition regulations to:**
  - Review the acquisition regulations applicable to the DOD with a view toward streamlining and improving the efficiency and effectiveness of the defense acquisition process and maintaining defense technology advantage
  - Make recommendations for amendment or repeal of such regulations the panel considers necessary, to
    - (A) establish and administer appropriate buyer and seller relationships in the procurement system;
    - (B) improve the functioning of the acquisition system
    - (C) ensure the continuing financial and ethical integrity of defense procurement programs
    - (D) protect the best interests of the Department of Defense
    - (E) eliminate any regulations that are unnecessary for the purposes described above
- **Volume 1 report issued in Jan 2018**
- **Volume 2 report (including readiness & sustainment recommendations) released in June 2018**



<https://section809panel.org/50worst/>

# Adaptive Acquisition Framework





# DoD Adaptive Acquisition Authorities

	Section 804 Middle Tier Acquisition	Section 806 Weapon System Component Prototypes	DODI 5000.02 Model 4 Accelerated Acquisition	DODI 5000.02 Enclosure 13 Urgent Capability Acquisition
<b>Summary</b>	Rapid Prototyping and Rapid Fielding	SAE selected most promising prototype	Aggressively tailor when schedule is king	Fulfill urgent operational needs
<b>Requirement</b>	"Approved requirement" Exempt from JCIDS		JCIDS	UON, JUON, or JEON by CCCR or VCJCS
<b>Timelines</b>	Field <5 years; Production start < 6 months	Complete within 2 years	None	Field within 2 years
<b>Funding Limit</b>	None	\$10M or \$50M if Secretary approve	None	Below ACAT I and IA
<b>Other Factors</b>	Exempt from 5000 PM reports to SAE	Budgeted separate from PoR	MDAPs have statutory requirements that limit speed	No JCIDS once initial doc signed



# JCIDS Manual and CJCSI 5123.01H

## Updated: 31 Aug 18

### Summary of Significant Changes:

- **Policy/Guidance:**
  - Combines CJSCIs 5123.01G & 3170.01I combined into CJCSI 5123.01H
- **JCIDS Manual Key Performance Parameters (KPPs):**
  - **Currently: 6 Mandatory KPPs**
    - Net-Ready, Training, System Survivability, Force Protection, Energy, & Sustainment
  - **Updated: 4 Mandatory KPPs**
    - System Survivability, Force Protection, Energy, & Sustainment
- **CPD no longer required**
- **CDD adds new section 7: Interoperability (MOSA, Physical, Net Ready)**
- **Performance attributes designated a JPR (will be upgraded to KPP)**
- **Delegates Certification/Endorsement to match validation authority**
- **Adds Classified Information Compromise Assessment Procedures**
- **VOLT replaces STAR**
- **Webinars Describing Updates Located at:**

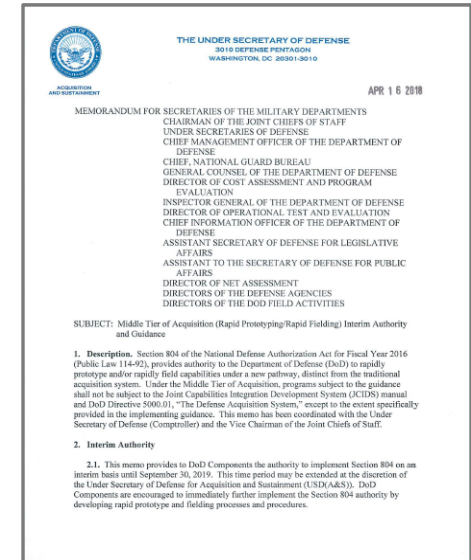
[https://intellipedia.intelink.gov/wiki/Joint Capabilities Integration and Development](https://intellipedia.intelink.gov/wiki/Joint_Capabilities_Integration_and_Development)

(CAC certificates registration required)



# Middle Tier of Acquisition (MTA)

- **Authority: PL 114-92 FY16 NDAA, Section 804**
- **MTA Program Authority Requirements**
  - Requirement Approved in 6 Months
  - Program Can be Completed in 2 to 5 Years
  - \*Not subject to DoDD 5000.01 (DAS)
  - \*Not Subject to Jt. Capabilities Integration Dev. System (JCIDS) Process  
(\*Except as Provided in Implementing Guidance)
- **Two ACQ Pathways**
  - Rapid Prototyping
  - Rapid Fielding
- **USD(A&S) 16 April 2018 Memo Provides Interim Authority for MTA Implementation thru 30 Sep 2019**
- **Formal DoD Policy Development NLT Jan 2019**



SAF-AQ



## WITH APPROVED REQUIREMENTS from JCS & COCOMM

### ➤ Rapid Prototyping

- Use of Merit-Based Innovative Tech. to Rapidly Develop Fieldable Prototypes
  - Demonstrate New Capabilities
  - Meet Emerging Military Needs
- Objectives:
  - Operational Environment Demonstration within 5 Years
  - Ops. Capability Residual

# WITH APPROVED REQUIREMENTS from JCS & COCOMM

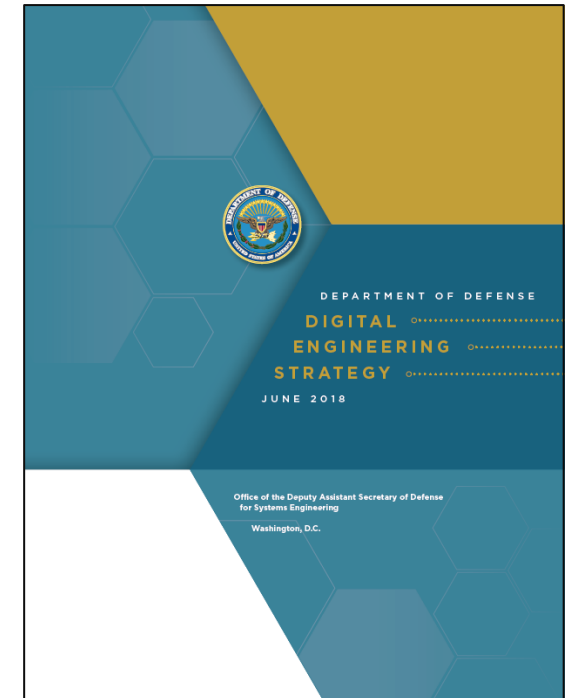
### ➤ Rapid Fielding

- Use of Proven Technologies to Field New or Upgraded Systems
  - Minimal Developmental Requirements
  - Meet Military Needs
- Objectives:
  - Begin Production within 6 Months
  - Complete Fielding within 5 Years



# DoD Digital Engineering Strategy (June 2018)

- **What?** Digital computing, analytical capabilities, and new technologies to conduct engineering in more integrated virtual environments
- **Why?** To increase customer and vendor engagement, improve threat response timelines, foster infusion of technology, reduce cost of documentation, impact sustainment affordability.
- **Benefits?** Allows DoD and industry partners to evolve designs at the conceptual phase, reducing the need for expensive mock-ups, premature design lock, and physical testing.
- **Goals?** Promote the use of digital representations of systems and components and the use of digital artifacts as a technical means of communication across stakeholders.
  1. Use models to inform enterprise and program decisions
  2. Provides an enduring, authoritative source of truth
  3. Incorporate technological innovation to improve engineering
  4. Infrastructure and environments to perform, collaborate & communicate across stakeholders
  5. Transform workforce/culture to adapt digital engineering across the lifecycle

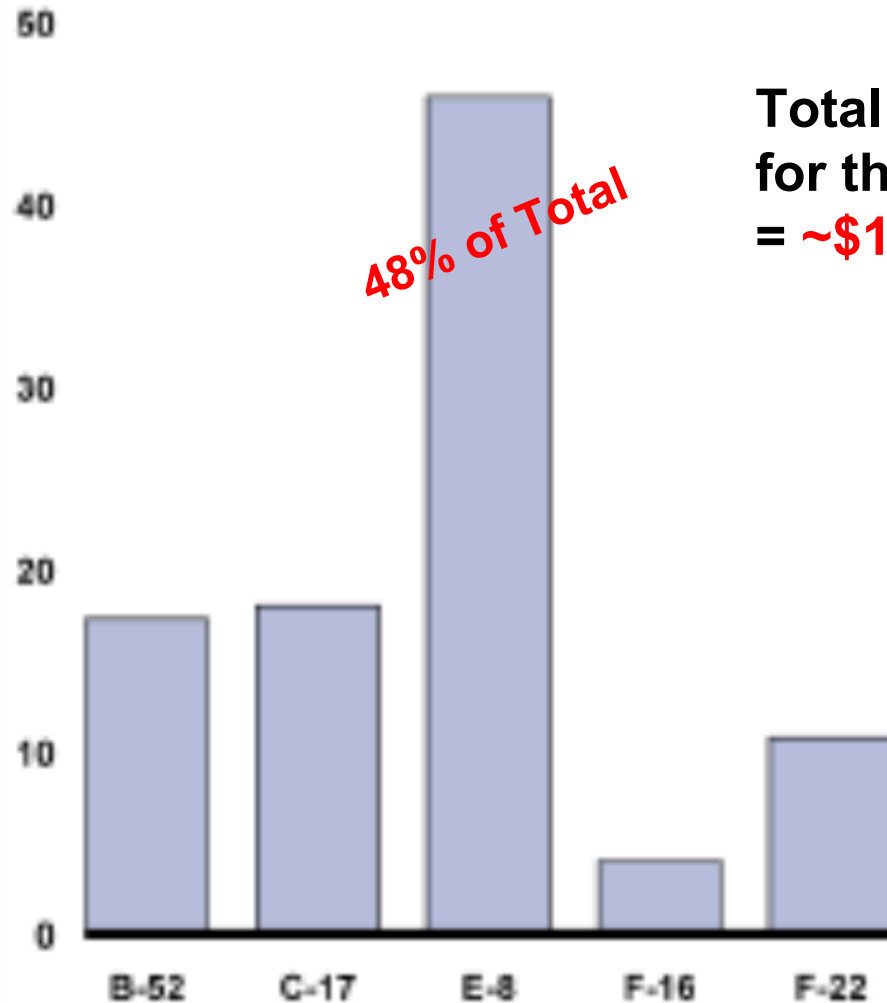


<https://www.acq.osd.mil/se/docs/2018-DES.pdf>



# 2016 Avg. O&S Cost Per Aircraft

Millions of constant fiscal year 2016 dollars









**Total O&S Costs  
for the 5 Systems  
= ~\$12B**

Source: GAO analysis of Air Force data. | GAO-18-678



# Sustainment Challenges

Aircraft		Aging aircraft		Maintenance		Supply support	
		 Delays in acquiring replacement aircraft	 Unexpected replacement of parts and repairs	 Delays in depot maintenance	 Shortage of depot maintainer personnel	 Parts obsolescence <sup>a</sup>	 Diminishing manufacturing source <sup>b</sup>
Air Force	B-52		✓	✓		✓	✓
	C-17		✓	✓			✓
	E-8C		✓	✓		✓	✓
	F-16	✓		✓			✓
	F-22		✓	✓	✓		✓
Navy	AV-8B	✓	✓	✓	✓	✓	✓
	C-2A		✓	✓	✓	✓	✓
	E-2C		✓	✓	✓	✓	✓
	E-2D			✓	✓	✓	✓
	EA-18G			✓	✓		✓
	F/A-18A-D	✓	✓	✓	✓	✓	✓
	F/A-18E-F		✓	✓	✓		✓

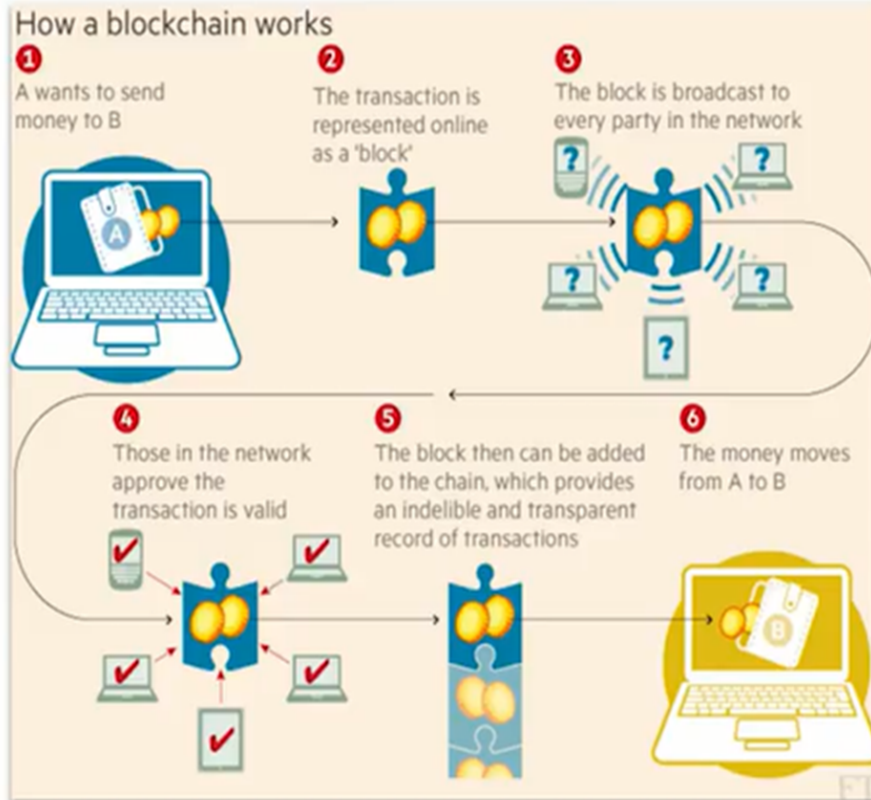
Source: GAO analysis of Air Force and Navy data. | GAO-18-678



# Supply Chain Risk Management (SCRM)

- **Definition**
  - “A systematic process for managing supply chain risk by identifying susceptibilities, vulnerabilities and threats throughout DoD’s “supply chain” and developing mitigation strategies to combat those threats whether presented by the supplier, the supplied product and its subcomponents, or the supply chain (e.g., initial production, packaging, handling, storage, transport, mission operation, and disposal)”
  - Threats include cyber, physical, industrial base, counterfeit parts, obsolescence/ DMSMS
- **Sep 2017 GAO Report “Defense Supply Chain: DOD Needs Complete Information on Single Sources of Supply to Proactively Manage the Risks” (GAO-17-768)** - Single Sources of Supply, DMSMS, lack of DoD DMSMS policy
- **FY18 NDAA Sec. 807. Process for Enhanced Supply Chain Scrutiny**
  - “...the Secretary of Defense shall establish a process for enhancing scrutiny of acquisition decisions in order to improve the integration of supply”
- **DAU Offers Wide-Range of Learning Assets, including:**
  - Training Courses & Continuous Learning Modules
  - Guidebooks, ACQuipedia & Magazine Articles
  - Communities of Practice / Job Support Tools
- **Details in January 30, 2018 SCRM LOG Blog Post**
  - [https://www.dau.mil/training/career-development/logistics/blog/Supply-Chain-Risk-Management-\(SCRM\)-and-Supply-Chain-Management-\(SCM\)-Resources](https://www.dau.mil/training/career-development/logistics/blog/Supply-Chain-Risk-Management-(SCRM)-and-Supply-Chain-Management-(SCM)-Resources)

# Potential Supply Chain Game Changer: Blockchain



weforum.org/agenda/2016/06/blockchain-explained-simply

- Decentralized and distributed ledger across a large network of secure computers
- Technology, not a single network
- Securely records transactions and tracks records to reduce likelihood of data tampering
- A non-destructive way to track data changes over time
- No single point of control or failure (SPoC / SPoF)
- Increases trust, accountability, & transparency

A Good Overview: <https://www.youtube.com/watch?v=3xGLc-zz9cA>



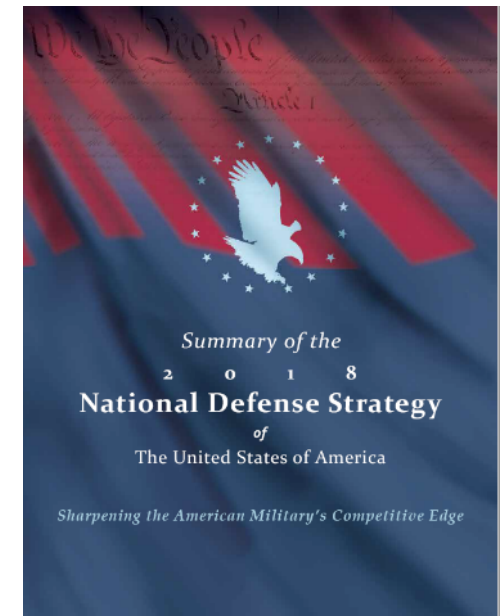


# Potential Supply Chain Game Changers: ...Other Considerations

- **Machine Learning (Cognitive Computing)**
  - Mimic Human Brain to Improve Decision-Making
- **Big Data**
  - High Volume, Velocity, and Variety of Unstructured Data
- **Cloud Computing**
  - 3<sup>rd</sup> Party or “Private” Virtual Server Accessible from Any Network Location
- **Internet of Things (IoT)**
  - Networked Devices Which Can Connect and Exchange Data
- **Predictive Data Analytics**
  - Combining Machine Learning & Statistics to Predict the Future

**Our efforts must align with and support the three lines of effort outlined in the 2018 National Defense Strategy (NDS):**

- 1. Rebuilding military readiness** as we build a more lethal Joint Force
  - *Including focus on Resilient and Agile Logistics*
- 2. Strengthening alliances** as we attract new partners; and
- 3. Reforming the Department's business practices** for greater performance and affordability
  - *Including focus on “streamlining rapid, iterative approaches to capability development”*
  - *Including focus on “logistics and supply chain management, wherein Department seeks to transform sustainment to enhance operational readiness...also captured under Strategic Goal 1” (per Apr 18 National Defense Business Operations Plan)*





# In Closing: A Few Logistics Perspectives

- “You will not find it difficult to prove that battles, campaigns, and even wars have been won or lost primarily because of logistics”  
– *Gen Dwight D. Eisenhower, USA*
- “Be nice to your mother, but love your logisticians”  
– *Gen Charles A. Horner, USAF*
- “Logisticians are a sad and embittered race of men, very much in demand in war, who sink resentfully into obscurity in peace”  
– *RADM Isaac Campbell Kidd, USN*
- “I don’t know what the hell this logistics is that (General) Marshall is always talking about, but I want some of it”  
– *Fleet Admiral E. J. King, USN*
- “My logisticians are a humorless lot . . . They know if my campaign fails, they are the first ones I will slay”  
– *Alexander the Great (Attributed)*

***Never Lose Sight of Why We Do What We Do....or Who We Do It For!***