



Better Buying Power Initiative for “Target Affordability and Control Cost Growth”

NPS Acquisition Research Symposium

Mrs. Katrina McFarland
President, Defense Acquisition University
May 16, 2012

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 16 MAY 2012		2. REPORT TYPE		3. DATES COVERED 00-00-2012 to 00-00-2012	
4. TITLE AND SUBTITLE Better Buying Power Initiative for 'Target Affordability and Control Cost Growth'				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Defense Acquisition University, 9820 Belvoir Rd, Fort Belvoir, VA, 22060				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES Presented at the 9th Annual Acquisition Research Symposium, May 16 - 17, 2012, Monterey, CA					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 28	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



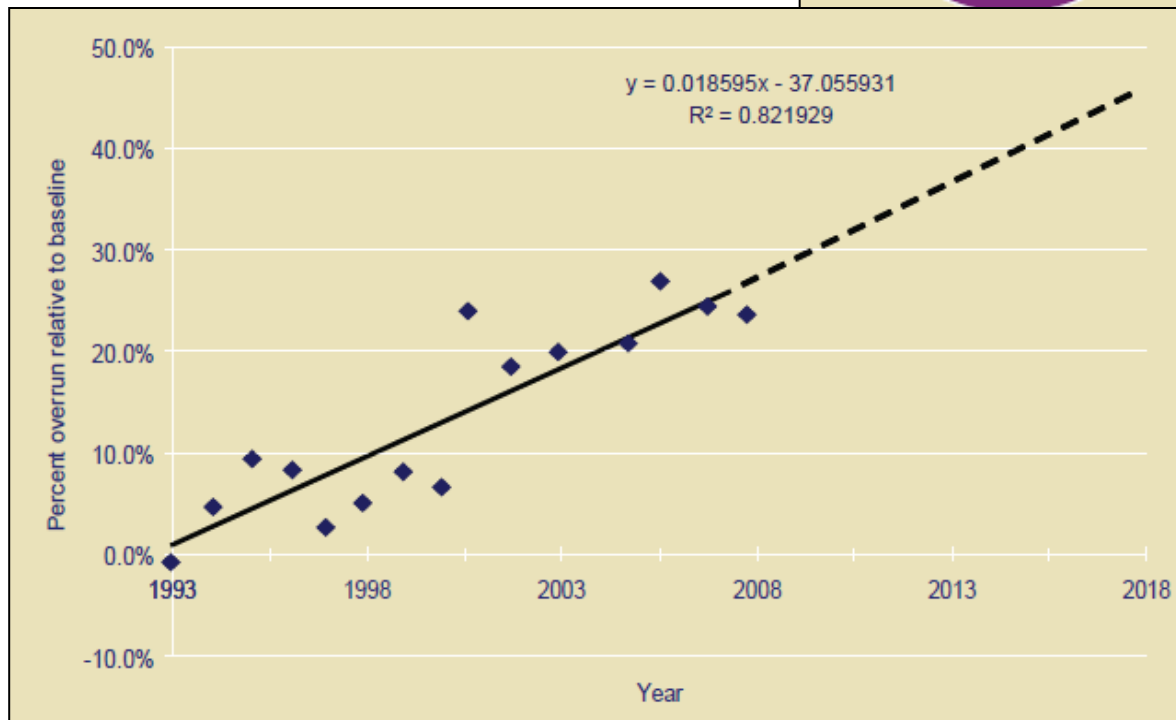
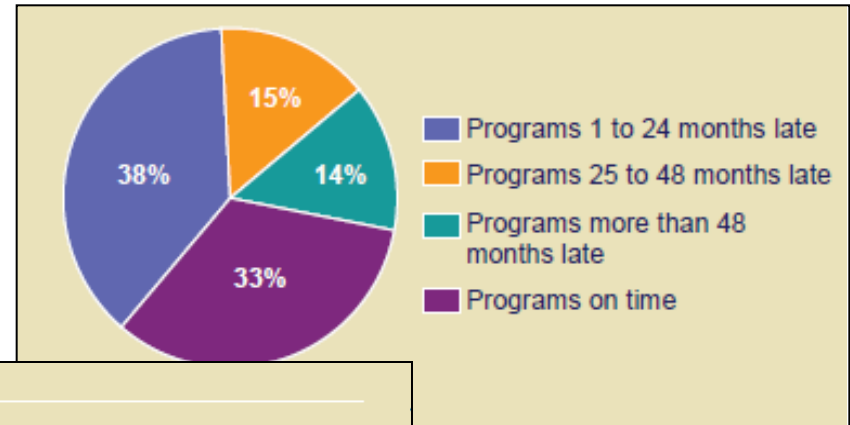
Agenda

- **Background**
- **Overview of Target Affordability and Control Grown initiatives**
- **DAU tools and resources**
- **Summary**



What is the Current State?

- **Schedule Delays**
- **Decline of Economy**
- **Budget Overruns**



**We are Just
Paying Too Much**

Source: Deloitte A&D Study, “Can we afford our own future?”, December 2008



What OSD AT&L Found

- **Dr. Carter in his first year noticed limited productivity across DoD**
 - **Production Cost increasing for the same item over time**
 - **Over 51% of the DoD budget is Acquisition of Services**
 - **Examination of programs exposed large sole source activity (vendor lock) and poor examples of real competition**
 - **Small Business was not constructively engaged**
 - **Programs took a long time to get to Milestones and no one could clearly explain the value of many of the reports AT&L was asked to sign**
 - **Requirements were being implemented without consideration of cost or affordability**



The Results

- **Dr. Carter wanted to implement guidance within his span of control without it being 'reform' but rather the use of Best Practices that would achieve:**
 - Delivering the warfighting capability we need for the dollars we have
 - Getting better buying power for the warfighter and taxpayer
 - Restoring Affordability to defense goods and services
 - Improving defense industry productivity
 - Removing government impediments to leanness
 - Avoiding program turbulence
 - Maintaining a vibrant and financially healthy defense industry
 - Developing our Acquisition Workforce



Targeting Affordability & Controlling Cost Growth

- **Mandate Affordability as a Requirement**
- **Implement “Should Cost” Based Management**
- **Eliminate Redundancy within Warfighter Portfolios**
- **Achieve Stable and Economical Production Rates**
- **Manage Program Timelines**



Mandate Affordability As a Requirement

What OSD/AT&L Found:

- Increasing cost and schedule growth of DoD acquisition programs and failure to deliver promised performance
- Unconstrained Requirements, created without considering affordability
- Requirements “creep,” resulting in considerable damage to programs or program cancellation



Should Cost Management

What OSD/AT&L Found:

- **Managing to expenditures without consideration to historical bad behavior and cost growth**
- **Lack of focus on reducing cost; spending to the ICE, Program Office Estimate or obligation/expenditure benchmarks set by Comptrollers**



Should Cost Management

Implementation Tools

- **Scrutinize every element of program cost**
- **Look for cost reductions in respective activities**
- **Leverage Learning Curves**
- **Examine overhead and indirect costs**
- **Incentivize contractors to identify and create cost reductions**
- **Tie savings to specific discrete and measurable items and initiatives that can be quantified and tracked**



Eliminate Redundancy within Warfighter Portfolios

What OSD/AT&L Found:

- **Multiple programs with similar or redundant capabilities (or limited additive capabilities)**
 - Duplicative capabilities were found across DoD and within Service portfolios
 - Costs were sometimes inconsistent between such programs, i.e., identical sub-items with different costs



Achieve Stable and Economical Production Rates

What OSD/AT&L Found:

- **Funding instability due to changes in quantities being acquired**
- **Lack of application of improvement methodologies such as Continuous Process Improvement, Lean/Six Sigma, Reduction of Total Ownership Cost, etc.**
- **Lack of planning for Diminishing Manufacturing Sources and Material Shortages (DMSMS) and long lead items**
- **Lack of focus on production planning and Joint Supply Chain Architecture**



Manage Program Timelines

What OSD/AT&L found:

- **Programs that did not manage to timelines**
- **Increased timelines result in:**
 - **Substantial cost growth**
 - **Late delivery to the warfighter**
 - **Delivering outdated technology and capabilities**



DAU Course Information and Assistance

- **Affordability is seamlessly woven through all of our DAU curriculum.**
- **Extensive coverage across all DAU functional curriculum:**
 - **Cost Estimating and Financial Management**
 - **Contracting**
 - **Program Management and Services Acquisition**
 - **Engineering and Technology**
 - **Life Cycle Logistics**



Affordability in Cost Estimating and Financial Management Curriculum

- Within the BCF Cost Estimating curriculum students are introduced to policies and techniques that are used for the preparation of system cost estimates. Inherent in the courseware is the focus on affordability. Not only in terms of fiduciary stewardship of the taxpayers' dollar but is the system the right fit for the warfighter with respect to need, maintainability, and timeliness.
- The courseware reinforces these tenets through inclusion of DoD estimating requirements and guidance, cost estimate use and structure, analogy estimates, parametric estimating, improvement curves, inflation, risk, economic analysis, and software cost estimating. Through practical exercises in the courseware, students gain the opportunity to apply the policies and techniques to real-world examples.
- Within the BCF Financial Management curriculum also introduces students policies and procedures regarding affordability. Within BCF 103, 211, and 301 affordability is address throughout the lessons and case studies as it is a primary responsibility of a financial manager to address affordability as develop program budgets and execute program funds.



Cost Estimating Curriculum

- **BCF 106 – Fundamentals of Cost Analysis.** Discuss the people, processes, and products associated with life cycle cost estimating within the Department of Defense; Discuss the means of identifying and quantifying the risk associated with a program estimate; Define the concept of an Economic Analysis within the DOD.
- **BCF 107 – Applied Cost Analysis.** Assess the impacts on the cost estimate due to changes in economic year, quantity, scope, schedule, engineering design, and estimating methodology.
- **BCF 204 – Intermediate Cost Analysis.** Apply the cost estimating process in the construction of a cost estimate; Describe and develop unit cost using unit learning curve theory; Formulate a cost estimate following steps in the cost modeling process.
- **BCF 206 – Cost Risk Analysis.** Analyze the cost risk associated with a major defense acquisition program.
- **BCF 215 – Operating and Support Cost Analysis.** Describe the operating and support (O&S) phase of a weapons system, including the breadth of O&S cost estimating; Prepare an independent estimate for comparison to official program office estimate.
- **BCF 302 – Advanced Concepts in Cost Analysis.** Critically evaluate actual cost products; Understand the key ideas, analytical constructs, and practical applications of software cost estimating; Critically evaluate competing cost estimates for a major defense acquisition program, and use that evaluation to develop and defend a reconciled life cycle cost estimate.
- **Additional 20 continuous learning modules available to provide other cost estimating guidance.**



Contracting Curriculum

- **Proper use of Statistical Techniques, Analysis of Program Cost Elements, Contract Type and Risk Management are taught primarily in our DAWIA Level I and II courses and several continuous learning modules**
 - To the extent that an understanding of the cost elements (direct costs, overheads and profit), statistical analysis tools and negotiation strategy is necessary to the evaluation, analysis and negotiation of a contract that drives productivity and reduces overall cost to the government, CON 170, Fundamentals of Cost and Price Analysis, provides fundamental instruction in these areas.
 - CON 270, Intermediate Contract Pricing builds upon the fundamental concepts to more fully treat the areas of cost risk (probability/consequence) and integrate the analysis when structuring of a contract arrangement that drives appropriate contractor behavior. CON 270 also builds upon the statistical concepts introduced in CON 170 to include learning curves and their application when analyzing program cost elements.



Contracting Curriculum

- **At the advanced level, CON 235, Advanced Pricing and CON 232, Overhead Management provide specific training on the following topics that directly support this initiative:**
 - **Specific training on Earned Value Management and how it assists the Government in managing cost, schedule and performance**
 - **A comparison of traditional Should Cost Analysis to Will/Should Cost as defined by the BBPi and the role of the contracting officer in supporting program managers**
 - **A complete analysis and understanding of the elements of contractor indirect costs (including overheads and G&A)**
 - **Advanced discussion of quantitative techniques and application to the acquisition environment**
- **CON 360: Contracting for Decision Makers discusses Should Cost to familiarize contracting specialists with the definition, templates, and use of negotiated amounts versus budgeted amounts as "should cost"**



ACQ/PM Curriculum

- In ACQ 201B (Intermediate Systems Acquisitions, Part B), the students are taught how to evaluate alternative approaches to meet a needed capability based on affordability, schedule, and technical considerations. Relate the concept of affordability and cost as a CAIV to the planning of an acquisition program.
- In PMT 352 B (Program Management Office Course, Part B), covers Targeting Affordability and Controlling Cost Growth topic at a high level. BBPI teaching note and copy of Defense AT&L Magazine article on Should Cost provided to students. Discussion on whether an affordability assessment should use the annual funding or unit cost approach or the unit cost approach be used.



Service Acquisition Support

Knowledge Sharing

SAM

Service Acquisition Mall



Web based, Organized by service type, Integrated training, best practices and samples and examples

Research

Knowledge Portfolio Manager

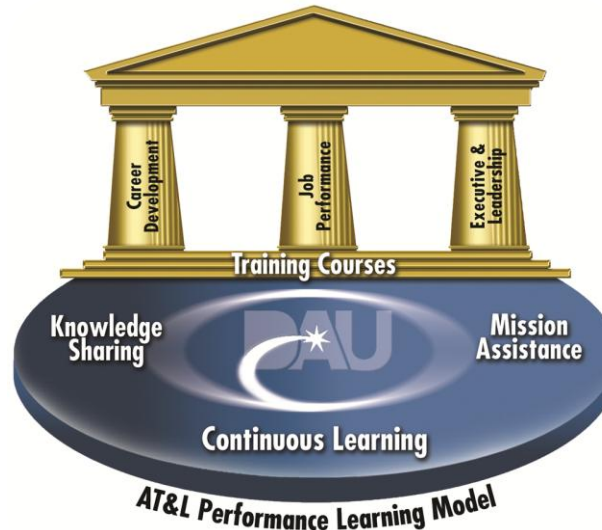


Research and analyze commercial service acquisition practices and document in market research advisory

Continuous Learning



CLC 013 Service Acquisition



Classroom

ACQ 265

Mission Focused Services



Case based course
Application of Service Acquisition Process
4 Days in Length

Mission Assistance

SAW

Service Acquisition Workshop



Team Based, Just in Time, Acquisition specific
Facilitated 4 Day workshop

Senior Leader Overview



Adjustable 2 to 4 hour
Focus on key process elements and need for their involvement

Service Acquisition



Overview training
Application case
General in nature
2 to 3 Days



ARRT – Automated Requirements Roadmap Tool

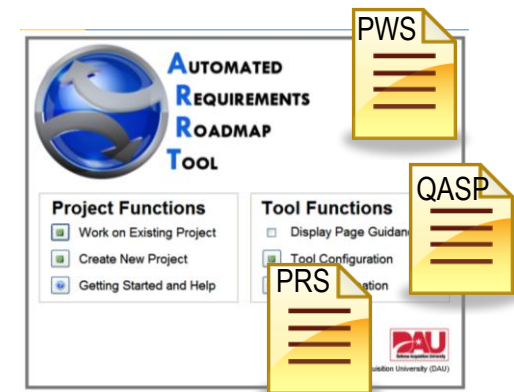
A **job aid** using **standard templates** for PWS, QASP and PRS to help you organize and write performance requirements following the Requirements Roadmap process.

Builds your documents

- Performance Work Statement (PWS)
- Quality Assurance Surveillance Plan (QASP)
- Performance Requirements Summary (PRS)
- Easy to use
- Step by Step Approach
- Wizards provide guidance to help build documents
- Performance Based requirements
- Proven methodology for building better requirements.

Online today at
<http://sam.dau.mil/arrt>

- Over 550 downloads since 15 Aug
- Runs on Microsoft Office applications
- Generates Microsoft Word documents for use in your acquisition
- ARRT Community of Practice on DAU's ACC





Engineering and Technology Curriculum

- **Affordability is extensively taught across the entire Engineering and Technology Portfolio, major courses and functional disciplines include:**
 - **Science and Technology Management (STM 202 and STM 303)**
 - **Systems Engineering (SYS101, SYS 202, SYS 203 and SYS 302)**
 - **Test and Evaluation ((TST102, TST203, and TST303)**
- **Examples from STM 202 (Intermediate S&T Management):** In lesson one we have a slide on the BBP initiatives followed by a discussion on how we can address affordability in Science and Technology Development. At several places in succeeding lessons we list (and discuss) cost as one of the key factors to successful technology transition.
- **Example from STM 303 (Advanced S&T Management):** This is a threaded exercise where students must select which of 6 pairs of technology will be funded to proceed from Applied Research to Advanced Technology Development to a Program Of Record. Cost is a factor that must be evaluated at each step. Some technologies do not get funded because they are not affordable.



Test and Evaluation Courses (TST102, TST203, & TST303)

- **T&E: “Affordability” focus in DAU's three T&E courses is centered around minimizing the costs of resources required to support, plan, and conduct test programs in DoD. These courses have lessons on "Test Planning" and the "Test and Evaluation Master Plan". In these lessons, the T&E infrastructure requirements (such as test range capability, instrumentation, telemetry, data storage, data security, threat simulators, M&S, integration labs, etc.) as well as the test assets themselves (statistically relevant sample sizes) are reviewed and discussed. The objective of these lessons is to introduce the concept of cost/resource management to DoD's T&E professionals.**

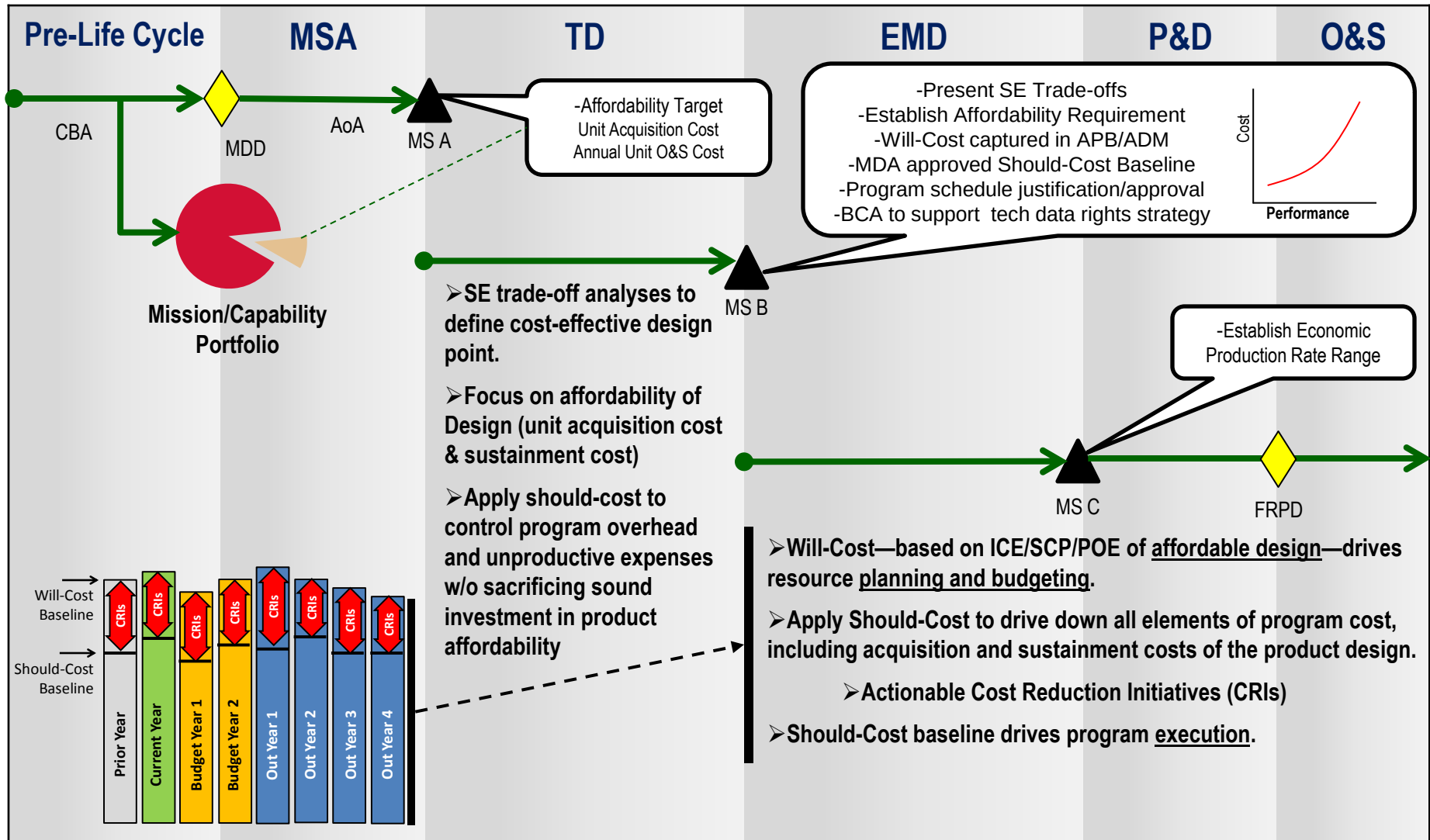


Systems Engineering **(SYS101, SYS 202, SYS 203 and SYS 302)**

- **Example from SYS 203: Lesson 05 TD Phase Lesson Goal: to augment provide paper test data through the “Dragonfly” simulation & identify new requirements and to perform trade-offs to establish a “Should Cost” baseline). Lesson 7; EMD Exercise Lesson Goal: to collect relevant Test data due to the new requirement and to change requirements forcing trade-off in order to establish a “Should Cost” baseline.**
- **Examples from SYS 302 Lesson 1: Desired outcome is to have an affordable preliminary design at MS B—high likelihood of meeting affordability target while delivering needed capabilities—while identifying key tradeoffs contemplated in EMD phase. Threaded Case study requires students to determine root causes of risks that may affect cost growth; analyze EVM charts: discuss in their presentations impacts on affordability.**



Affordability & Should-Cost (SYS 302)





Life Cycle Logistics

- All foundational LOG courses, O&S Cost KSA is dealt with extensively as one of the Key Sustainment Metrics
- LOG 101 - describes linkage between affordability and Reliability, Availability and Maintainability (RAM)
- LOG 102 - describes affordability as it relates to basic systems sustainment
- LOG 103 – describes the role of the RAM in maximizing supportability and ensuring affordability, effects of poor RAM design on supportability, suitability and cost/affordability
- LOG 201 - teaches how to design for supportability, operation and support cost KSA, and total ownership costs/cost
- LOG 206 - describes Ownership Cost Key System Attribute (KSA) along with the other Sustainment KPP and KSAs and supply chain management for affordability.
- LOG 235 and LOG 340 - PBL strategies to optimize system's readiness and minimize O&S costs and leverages business case analysis to help determine the optimal product support strategy
- LOG 350 - discusses both procurement and sustainment of weapons systems, and in both cases from the perspective of affordability and cost control.



Knowledge Sharing Assets

- **Affordability was a foundational cornerstone of the November 2009 DoD Weapon System Acquisition Reform Product Support Assessment (<https://acc.dau.mil/psa>). Numerous products, guidebooks, and tools developed as a result of report recommendations are now available to the workforce, including:**
 - **Product Support Manager Guidebook**
 - **O&S Cost Management Guidebook**
 - **CAPE O&S Cost Estimating Guide**
 - **Product Support BCA Guidebook**
 - **Logistics Assessment Guidebook**
 - **Public Private Partnering (PPP) Guidebook**
- **All are within the LOG purview, all of which are intended to improve system availability but from the context of the overarching need to procure and sustain efficiently - "cost-wise readiness" vice the stereotypical "readiness at any cost".**



Other DAU Information and Assistance

- **Defense Acquisition Portal: Source for latest memos, guidance and news**
 - **Better Buying Power Gateway:**
<https://dap.dau.mil/bbp>
 - **Better Buying Power Community of Practice:**
<https://acc.dau.mil/bbp>
- **Defense Acquisition University – Mission Assistance Contact your DAU local representative for further information:**
 - **CNE: 703-805-4978**
 - **DSMC: 703-805-4368**
 - **Mid Atlantic: 240-895-7363**
 - **West: 619-524-4811**
 - **Midwest: 937-781-1029**
 - **South: 256-922-8720**



Summary – Closing Thoughts

- **Affordability must drive our investment decisions**
- **Implementation of Better Buying Power continues, but much remains to be done to institutionalize it at all levels, both internal to acquisition organizations and external to it--the search for acquisition efficiency will never end**
- **We must make win-win business deals to strengthen industry and provide more value for our investments – tie profit to performance**
- **DAU is your learning partner, we will be with you in the classroom, online, and in your workplace — whenever and wherever you need us**