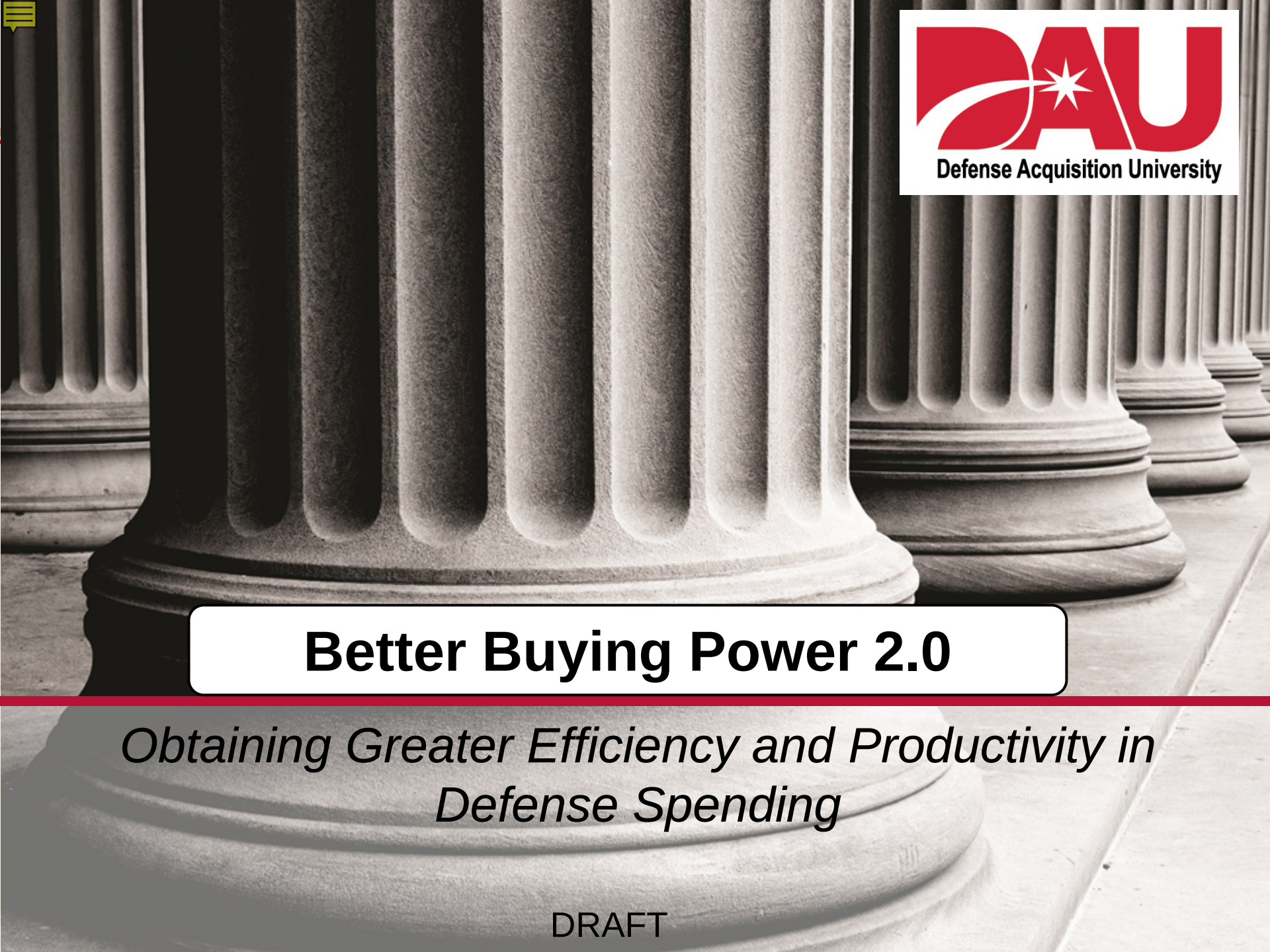


Better Buying Power 2.0

Obtaining Greater Efficiency and Productivity in Defense Spending

DRAFT

BBPi 2.0 Team

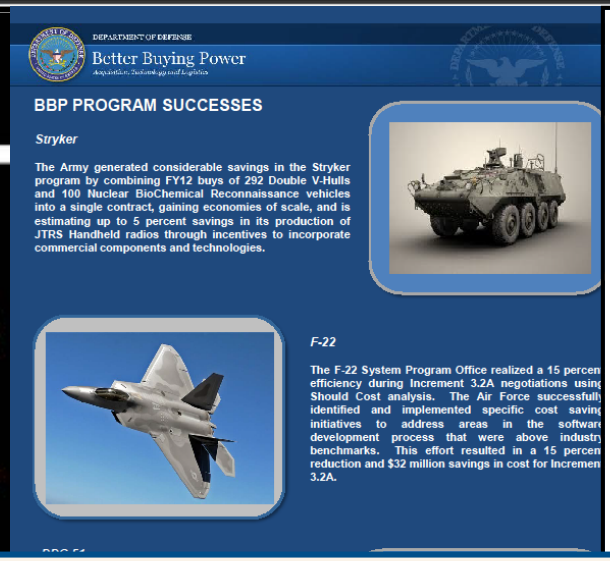
Ron Burgess

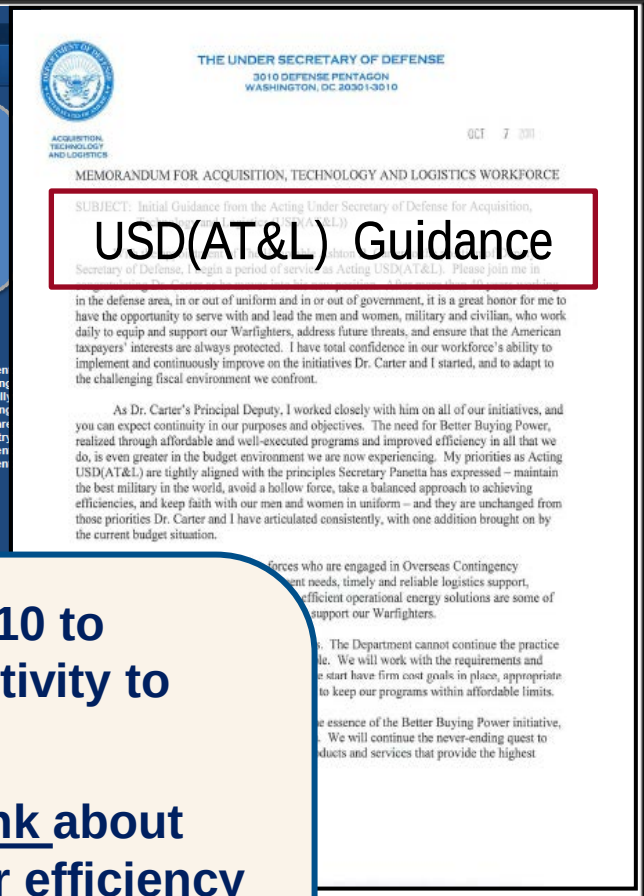
George Cash

Hal Ernest

Sam King

OSD(AT&L) Better Buying Power Initiative





- **USD(AT&L) launched BBP in 2010 to restore affordability and productivity to Defense spending**
- **BBP Challenges the way we think about our programs to achieve greater efficiency**
- **BBP 2.0 builds on this beginning to further instill a culture of cost consciousness and increase procurement efficiencies**

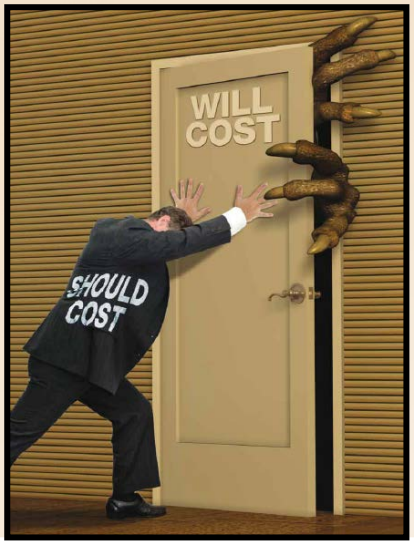
Better Buying Power 2.0

A Guide to Help You Think

- **BBP 2.0 reflects the Department of Defense's commitment to continuous improvement – must make it part of our culture**

- **Overarching acquisition principles underlie BBP and all that we do**
  - **Think**
  - **People Count**
  - **Start With the Basics**
  - **Streamline Decisions**

- **BBP 2.0 encompasses 34 initiatives organized into seven focus areas**
  - **Achieve Affordable Programs**
  - **Control Costs throughout the Product Lifecycle**
  - **Incentivize Productivity & Innovation in Industry and Government**
  - **Eliminate Unproductive Processes and Bureaucracy**
  - **Promote Effective Competition**
  - **Improve Tradecraft in Acquisition of Services**
  - **Improve the Professionalism of the Total Acquisition Workforce**



Overarching Acquisition Principles

Stars to Steer By

- **Think**
  - Apply our education, training and experience
  - Creative, informed, thorough
  - Do not default to perceived 'school solutions'
- **People Count**
  - Professional preparation to think well
  - Policies/processes of little use without acquisition professionals trained & supported
  - People and professionalism - Acquisition leaders drive results more than any policy
- **Start with the Basics – Acquisition Fundamentals Work**
  - Effective incentives to industry – especially competitive pressures
  - Understand and manage technical risk
  - Demonstrated progress before major commitments
  - Getting big early decisions right – particularly requirement tradeoffs
  - Using the right contract type for the job
- **Streamline decisions**
  - Streamline processes/oversight to provide value added
  - Directing differences of opinion to the *appropriate* decision makers
  - Allow managers to be more effective by protecting their most precious resource - time

These principles have always been valuable…and will increase in value as our acquisition environment becomes more volatile

Better Buying Power 2.0

Achieve Affordable Programs
- Mandate affordability as a requirement
- Institute a system of investment planning to derive affordability
- Enforce affordability caps

Control Costs Throughout the Product Lifecycle
- Implement "should cost" based management
- Eliminate redundancy within warfighter portfolios
- Institute a system to measure the cost performance of programs and institutions and to assess the effectiveness of acquisition policies
- Build stronger partnerships with the requirements community to control costs
- Increase the incorporation of defense exportability features in initial designs

Incentivize Productivity & Innovation in Industry and Government
- Align profitability more tightly with Department goals
- Employ appropriate contract types
- Increase use of Fixed Price Incentive contracts in Low Rate Initial Production
- Better define value in "best value" competitions
- When Lowest Price Technically Acceptable is used, define Technically Acceptable to ensure needed quality
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- Reduce backlog of DCAA Audits without compromising effectiveness
- Expand programs to leverage industry's IR&D

Eliminate Unproductive Processes and Bureaucracy
- Reduce frequency of higher headquarters level reviews
- Re-emphasize Acquisition Executive, PEO and PM responsibility, authority, and accountability
- Reduce cycle times while ensuring sound investment decisions

Promote Effective Competition
- Emphasize competition strategies and create and maintain competitive environments
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- Establish higher standards for key leadership positions
- Establish increased professional qualification requirements for all acquisition specialties
- Increase the recognition and support of excellence in acquisition management
- Continue to increase the cost consciousness of the acquisition workforce – change the culture

Green are new in BBPi 2.0

Achieve Affordable Programs

Mandate Affordability as a Requirement

- Affordability means conducting a program at a cost constrained by the resources the Department can allocate for that capability
  - DoD has a history of starting programs we can't afford and later canceling them
  - Affordability is established by the Programmer Community based on the likely future budgets and available funding to acquire and sustain the product portfolio
- What's New
  - Affordability analysis will be conducted at the portfolio level and will result in "affordability goals" at MDD / MS A and "affordability caps" at pre-EMD / MS B
  - The requirements validation authority will validate the requirement – Capability Development Document (CDD) Validation decision – prior to Pre-EMD and MS B
  - Active engagement between the MDA and the requirements validation authority during the development and review of proposed requirements trades is essential to ensuring the requirement is *technically achievable and affordable*
  - Affordability caps set at Pre-EMD or MS B decision points for unit procurement and sustainment costs and are considered equivalent to a KPP

Mandate Affordability as a Requirement

- Key Implementers and Examples
  - Portfolio level affordability analysis processes being refined by DoD Components
  - Program level SE trade-off analysis guidance covered in new DAG Chapter 4
  - Joint Light Tactical Vehicle (JLTV)/TARDEC Advanced Concepts Lab use of System Modeling and Competitive Prototyping to inform key technical trades and achieve affordability goals for unit cost prior to EMD phase
- Key Takeaways
  - New DAG Chapter 4, Systems Engineering updated summer 2013
  - New DoDI 5000.02 coming fall 2013
  - Early phase systems engineering and close coordination with requirements developers are key enablers
  - If cost growth occurs, then requirements must be changed to stay within affordability caps – or the program will be terminated

Control Costs Throughout the Product Lifecycle

Implement "Should Cost" Based Management

- Should cost management *scrutinizes every element of government and contractor costs* and looks at reasonable measures to reduce them
- Don't accept the ICE as a self-fulfilling prophesy
- Our job is not to spend the budget – it's to get all the value for the $ we can

- What's New
  - PMs' performance evaluation should consider effective cost control including implementation of should cost
  - Should cost targets required for all ACAT I-III (services and products) programs
- Key Implementers
  - Benchmark against similar programs
  - Promote Supply Chain Management to encourage competition and incentivize cost performance at lower tiers
  - Track cost schedule performance trends and identify ways to improve
  - Take full advantage of integrated DT/OT to reduce overall cost of testing

Implement "Should Cost" Based Management

- Examples
  - Use of traditional operations research methods to identify and prioritize cost reduction opportunities (AIM-9X Program)
    - Fishbone diagram to conduct root cause analysis and identify cost drivers
    - Combined Pareto and Business Case Analysis to identify and prioritize best cost reduction opportunities
    - Discrete Plan of Action and Milestones developed for each actionable cost reduction initiative
    - Establish measurable targets, consolidate into SC baseline, and monitor progress
  - AIM-9X Active Optical Target Detector manufacturing improvements reduced unit production cost AIM-9X
  - DDG 51 shifted from sole source to performance specification-based competition for Main Reduction Gear (MRG) DDG-51
  - Guided Multiple Launch Rocket System (GMLRS) bundled FY12 and FY13 procurements GMLRS
  - Stryker used a bundle buy concept to achieve economies of scale by combining order for 294 Double V-Hulls (FY11) with 100 NBCRVs (FY12) Stryker
  - F-22 conducted Should Cost Reviews on vendor proposal to inform negotiations prior to major contract awards. F-22

Implement "Should Cost" Based Management

- Key Takeaways
  - A *continuous and sustainable Should-Cost estimating process* is a vital program management tool
  - Realized SC savings generally have been reinvested in the original program
  - Savings from SC efforts often used to fund the inevitable "unknowns" that are otherwise unaccounted for
  - Stability of Will-Cost baselines are a challenge to effective SC management. Continuing Resolution and budget cuts affect SC initiatives
  - Program access to the right expertise is key to conducting SC activities
  - Submitting SC proven practices and lessons learned provides valuable and worthwhile help to other programs – AND the Department!
  - *Every acquisition manager's performance evaluation should consider effective cost control, including implementation of SC management*
  - *All ACAT I, II, III must have established SC targets*
  - *ACAT I programs, PMs and PEOs report should cost targets and progress in achieving them via DAES and DAB reviews*

Affordability or Should Cost?

"Affordability as a requirement" directs that we establish quantified goals for unit production cost and sustainment costs for our products, driven by what the Department or Service can pay. We should set these goals early and use them to drive design trades and choices about affordable priorities…

"Should-cost" asks us consciously to do something different…to continuously fight to lower all our costs, wherever that makes sense. Should-cost is a tool to manage all costs throughout the life cycle and it operates in parallel with the effort to constrain our requirements appetites…Should-cost is focused on controlling the cost of the actual work that we are doing and expect to do.

- USD(AT&L) Memo, "Should-cost and Affordability" Aug 24, 2011

Build Stronger Partnerships with the Requirements Community to Control Costs

- More than anything else, requirements drive costs. The acquisition and requirements communities must cooperate *closely and continuously* to ensure requirements are technically *achievable and affordable*. Acquisition leaders need a thorough understanding of user priorities, and requirements leaders need a better understanding of cost performance trade-offs and technical risk implications

- What's New
  - Requirements validation point being added to Defense Acquisition Framework between MS A and Pre-B Decision Points
    - A check for *affordability and technical feasibility* prior to the Pre-EMD review
  - Greater emphasis placed on use of Configuration Steering Boards to "monitor, review, and, if necessary, modify requirements to control cost and schedule..."

Acquisition and Requirements must collaborate from warfighter requirement inception throughout the program lifecycle

Incentivize Productivity & Innovation in Industry and Government

Employ Appropriate Contract Types

- What's New
  - BBP 2.0, expands guidance to emphasize use of contract type(s) appropriate for the products or services being acquired
- Key Implementers
  - FAR/DFARS provide for a range of contract types for a reason ("one size does not fit all")
  - Selected contract type should be a manifestation of risk
- Key Takeaways
  - Identify available & potential contract types
  - Consider commerciality of the requirement
  - Consider acquisition method (FAR Part 13-15, 17: Simplified; Sealed Bid; Negotiation; Special)
  - Consider cost risk associated with the contract action
  - Consider appropriate performance incentives
  - Consider the accounting system adequacy
  - Document contract type rationale and selection

Employ Appropriate Contract Types
Risk Considerations

Factors to Consider in Selecting Contract Type

- Price Competition
- Complexity of the requirement
- Urgency of the requirement
- Period of Performance (e.g. Prod Qty)
- Technology Maturity
- Adequacy of the contractor's accounting system
- Concurrent contracts
- Extent and future of subcontracting opportunities
- Acquisition history

Align with Technology & Mfg Maturity

Vague technical requirements; labor and material costs uncertain

Technical requirements, labor, material, and production capability stable; fair & reasonable prices determinable

CPAF* ***CPFF*** ***CPIF*** ***FPI (F)*** ***FPAF*** ***FFP*** ***(not all inclusive)***

*** - Use of CPAF requires extreme justification, to include lack of any objective criteria for incentive***

Better Define Value in "Best Value" Competitions

- FAR: Using the term "best value" in a competitive source selection indicates:
  - The Gov't is assessing all evaluation factors – not just cost – in relation to one another
  - Gov't is open to paying more (to a point) than the minimum price bid for a product or service that provides more than the minimum needed performance
- What's New: Components are directed, where possible, to
  - Quantify the value, in terms of an increased premium they will pay, for proposals exceeding the threshold level of performance, and
  - Include this information in solicitations to industry
- Key Implementers
  - Clearly define and articulate - in the solicitation - the value associated with providing capability that is above minimum levels
  - Determine which evaluation factors support the overall intent of the RFP and if it will reward offerors should they provide a superior capability. Limit criteria to those that:
    - Add value
    - Clearly identify the basis of evaluation and award
    - Preserve the offerors' flexibility to propose innovative solutions
    - Convey a clear understanding of the Government's requirements
    - Specify areas where the offerors can make technical & cost tradeoffs in proposals

Best Value Example
Combat Rescue Helicopter

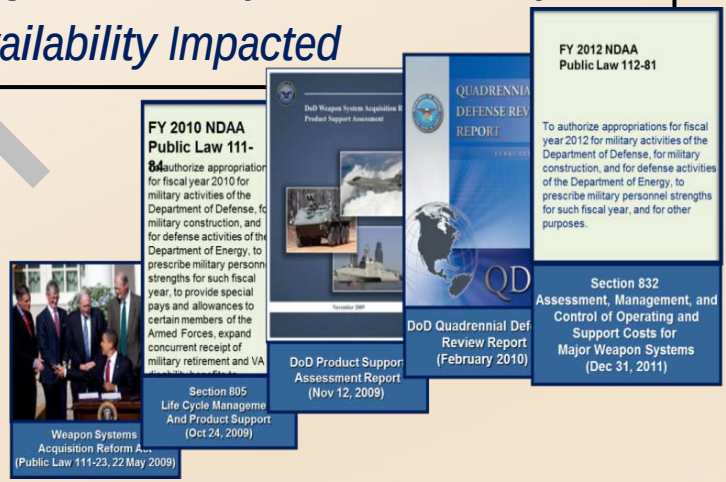
- Six objective requirements from previous CRH program were important enough to warrant pursuit during source selection
- Affordability analysis proved that two of the six requirements would be too costly for any proposed platform; four objective requirements remained during the competitive process
- The "Goal Factor" methodology was then applied to the RFP to let potential bidders know the specific value of the Goal Factor capabilities and that exceeding a goal or proposing unrequested capabilities would not be rewarded

By clearly communicating Government objectives, offerors proposed higher capability solutions only on those objectives of value to the Government!

Increase Effective use of Performance-Based Logistics (PBL)

- Where Do We Stand?
  - < 5% of DoD systems, sub-systems and components covered by a PBL
  - High Sustainment Costs – Financial incentives not aligned to life cycle affordability
  - Dismal Reliability for Transactional Sustainment – *Availability Impacted*
- What's New
  - BBP 2.0 PBL Requirement is New
    - *Why?* PBL delivers readiness at reduced cost by rewarding innovative cost reduction initiatives
    - *How?* PBLs deliver performance versus parts
- DASD(MR) Proof Point Study (Nov 2011)
  - Properly *structured* and *executed*, PBLs reduce cost per unit-of-performance while driving up system, sub-system and component readiness
  - Average annual savings for programs with generally sound adherence to PBL tenets is 5-20% over the life of the PBL arrangement compared to transactional support
  - Annual DoD Logistics Spending is ~ $185B* *and growing!*
    - $85 B in maintenance
    - $73 B in supply
    - $27 B in transportation

These are the primary areas PBL can improve



* FY12 expenditure

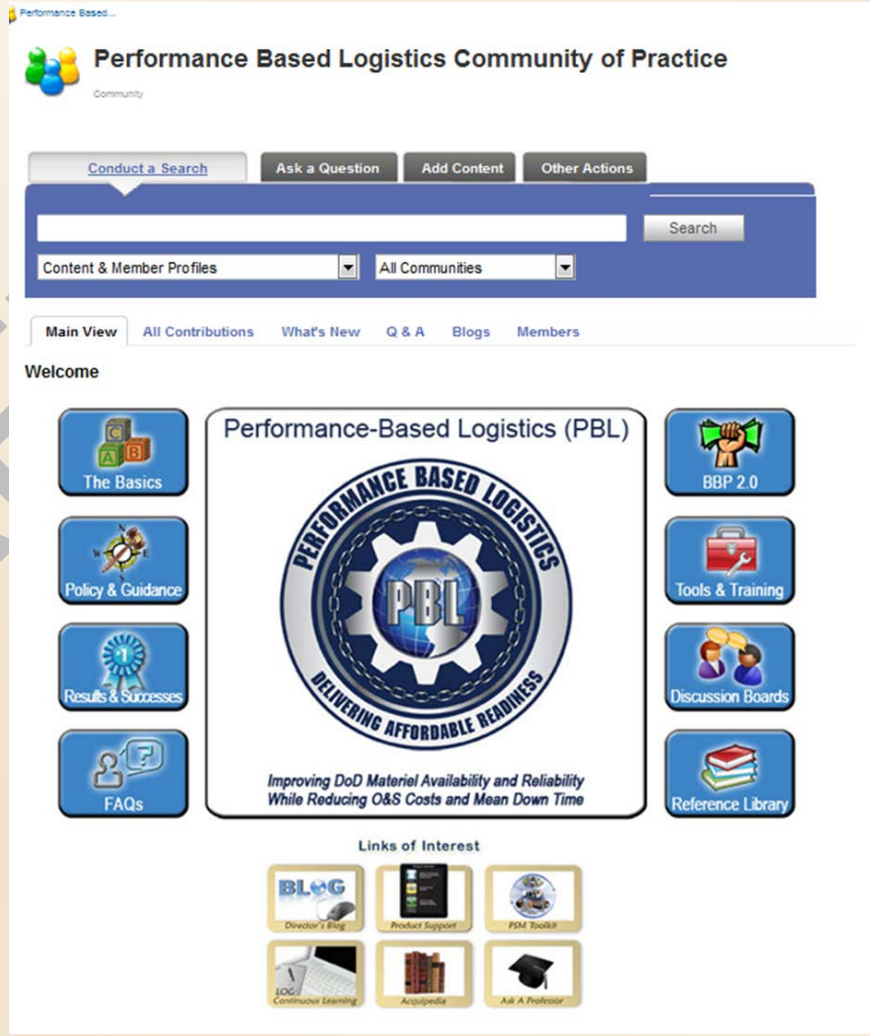
Increase Effective use of PBL

- Key Implementers
  - Produce *OUTCOMES*, not *OUTPUTS*
  - Performance is a package, vice transactional goods and services
  - Document performance, support, resource requirements in Performance Based Agreements (PBAs)
  - Establish Product Support Integrators (PSIs) to integrate and manage all (contract and organic) sources of support
  - Establish incentives to promote "win-win" relationships and achievement of performance outcomes
  - Leverage public-private partnerships (PPP) to make best use of organic and commercial capabilities in long-term collaborative relationships
  - Contract terms provide for long-term (5+ years) relationships
  - Funding provisions incentivize investment
  - Contractor assumes higher risk but risk offset by flexibility and opportunities
  - Metrics should be few, generally five or less

PBL Success = Focus on the "End-State" Performance – NOT the "How To"

Increase Effective use of PBL

- **Key Takeaways**
  - New PBL Community of Practice launched 1 Feb 13 https:acc.dau.mil/pbl
  - Cross-functional resource for PBL tools, processes and lessons-learned
    - Designed for Program Management, Contracting, Systems Engineering, Financial Management
    - Not just for Loggies!
    - Government and Industry encouraged to participate
  - **Contents**
    - *Key Tenets, Enablers & Stakeholders*
    - *Definition & Overview*
    - *Value Proposition & Benefits*
    - *Policy & Guidance*
    - *Award Winning Programs*
    - *Project Proof Point & BBP 2.0*
    - *Proven Practices & Service Initiatives*
    - *Tools & Training and Reference Library*



Eliminate Unproductive Processes and Bureaucracy

Re-emphasize AE, PEO and PM Responsibility, Authority, and Accountability

- Key Takeaways
  - Staff and support organizations provide *support* – decision *advisors* are not decision *makers*
  - Elevate issues raised by outside influences to appropriate decision makers – *don't allow outside influences to impede effective /efficient progress without command approval*
  - PM for an ACAT I or IA
    - Should be assigned during the planning and preparation leading to a milestone or decision point
    - Should lead the final effort for approval of entering the phase
    - Should manage the execution of that phase
    - A measure of PM performance should be the successful execution of the phase they planned *in parallel with the long-term risk management for optimum long-term success*
  - Tenure agreements are a best practice

Authority for acquisition execution, and accountability for its results, have become vastly diluted. Program managers have in effect been deprived of control over programs. They are confronted instead by never-ending bureaucratic obligations for making reports and gaining approvals that bear no relation to program success. (Packard Commission)

Promote Effective Competition

"Nothing else works as well as competition to drive down costs."

Honorable Frank Kendall,
USD/AT&L BBP 2.0
Implementation brief at
Ft Belvoir, VA, 25 Apr 13

Open Systems Architecture / Data Rights

- Key Implementers
  - OSA is a mechanism for invoking effective competition to improve early planning and execution
    1. Business Model and Data Rights strategy
    2. Implementation over life cycle
  - Five Core Principles

    (Business)
    1. Strategic Use of Data Rights
    2. Enterprise investment strategies
    3. Life Cycle Sustainment Strategy (Plug and Play)

    (Technical)
    4. Modular designs with loose coupling and high cohesion
    5. Lower Development Risk via System-Level Designs

Sole Source J&A's will be reviewed more stringently

Open Systems Architecture / Data Rights

- **Key Takeaways**
  - **Resources**
    - **DoD OSA CLE 012**
    - **DoD OSA Contract Guidebook https://acc.dau.mil/osaguidebook**
    - **CLE 068, Data Rights**
    - **Data Rights Brochure: "Better Buying Power: Understanding and Leveraging Data Rights in DoD Acquisitions"**
    - **Learn how to Break Vendor Lock**
    - **CLE 041, Software Reuse**
    - **OSA Web Site https://acc.dau.mil/osa**
    - **Contract Guidebook https://community.forge.mil//group/osa-guidebook**
  - **Examples**
    - **Surface Electronic Warfare Improvement Program (SEWIP)**
    - **Anti-Submarine Warfare's (ASW) Advanced Processing Build/ Acoustic-Rapid COTS Insertion (ASW/ARCI)**

Technology Development Phase Risk Reduction

- Key Implementers
  - Acquisition professionals must have a deeper understanding of risk and the steps necessary to reduce that risk – and insist that industry reduce those risks during TD
  - Technology Readiness Assessments need to be more robust. PM's need to work with their system engineer to think about how the TRA can be better used to mitigate risk.
  - Assuming competitive prototyping is part of the strategy, the Gov't needs to *incentivize* contractors to reduce the true product risk as part of the down-select in the source selection.
  - TRL-6 of prototype cannot be used to avoid professional engineering judgment and independent risk assessment of the design
    - Prototype usually does not represent the totality of the design – therefore cannot mitigate the total design risk

Improve Tradecraft in Acquisition of Services

Improve Requirements Definition/ Prevent Requirements Creep

- What's New
  - Multi-Functional Teams (MFTs) leading services acquisitions valued at $1B or more will participate in a DAU Service Acquisition Workshop (SAW), or an equivalent program, prior to seeking acquisition strategy approval (Army: SAW required >$250 Million for services)
    - SAW is an interactive workshop that helps teams apply performance-based techniques to develop Performance Work Statements – improves the quality of requirements documents, reduces costs, increases likelihood of effective competition, shortens acquisition lead times
- Key Implementers
  - Leadership support, MFT commitment, using available tools
- Key Takeaways
  - Acquisition Requirements Roadmap Tool (ARRT) at: http://sam.dau.mil (Assists development of PWS and QASP documents using standard formats)
  - Reference: Director, DPAP Memo - Service Acquisition Workshops, 6 December 2012

Service Acquisition Workshops

- SAW history/successes
  - First SAW conducted in 2009
  - 100+ SAWs conducted to date
    - Estimated $75B worth of programs have completed a SAW workshop
    - Acquisitions ranging from relatively simple installation services up to complex MDAP-level programs
  - Tailored DAU facilitation teams that integrate professors from contracting and functional areas as SMEs, depending on the acquisition
  - Resources
    - https://acc.dau.mil/CommunityBrowser.aspx?id=252669&lang=en-US - SAW link
    - https://acc.dau.mil/CommunityBrowser.aspx?id=21990&lang=en-US - Best Practices
    - https://acc.dau.mil/CommunityBrowser.aspx?id=466940&lang=en-US - Guidebook for the Acquisition of Services

Increase Small Business Participation Through More Effective Use of Market Research

- What's New
  - Emphasis on market research to look at areas where there is a healthy SB industrial base and where competition can lead to efficiencies and productivity
- Key Implementers
  - Start market research and communication with small businesses early, as soon as the requirement is identified
  - Employ the use of SD-5 Market Research document dated Jan 2008 coupled with the DoD Market Research Report Guide dated May 2012 (Included in revised ACQ 265)
  - Acquisition members review or take CLE 028 (Market Research for Engineers and Technical Personnel) and CLC 004 (Market Research)
  - Contact federal and non-federal resources, such as the Small Business Administration, state and local governments, and university small business centers – sources of information for potential SB providers
- Key Takeaways
  - Small Business Maximum Practicable (MaxPrac) Opportunity Analysis Model at: http://www.acq.osd.mil/osbp/gov/index.shtml#MaxPrac
  - Market Research/Market Intelligence http://www.acq.osd.mil/dpap/cpic/cp/market_research.html

Improve the Professionalism of the Total Acquisition Workforce

Continue to Increase the Cost Consciousness of the Acquisition Workforce – Change the Culture

- What's New
  - A continued commitment to controlling cost
  - Increasing productivity
  - Providing greater value to the warfighter and the taxpayer

These commitments animate everything in BBP 1.0 and 2.0

- Key Implementers
  - These same commitments have to animate all of us in order to improve acquisition outcomes
- Key Takeaways
  - Spending the budget is *not* the goal
  - Don't fixate on meeting obligations rates *over* value received
  - Don't worry *more* about spending the budget than whether you can spend it *efficiently*
- Specific Actions
  - Practice and reward behaviors that benefit the taxpayer and warfighter by obtaining the best value possible for the dollars entrusted to us

Last Thoughts…

BBP 2.0

- **Reemphasizes proven acquisition best practices**
- **Is a continuation of the process begun by BBP 1.0 to drive down costs and receive the best value for each dollar spent**
- **Identifies acquisition methods and practices that can help us better provide our customers**
  - **the capability they need**
  - **for the resources available**
- **Is a living process of vigorous implementation and further refinement – *it has to become routine in our programs***
- **Requires innovative and thoughtful planning and execution**
  - **Encourages the acquirer to creatively adapt to the specific circumstances of their program**
- **Intent is to increase the cost consciousness of the workforce – to *change the culture***

BACKUP

Better Buying Power 2.0

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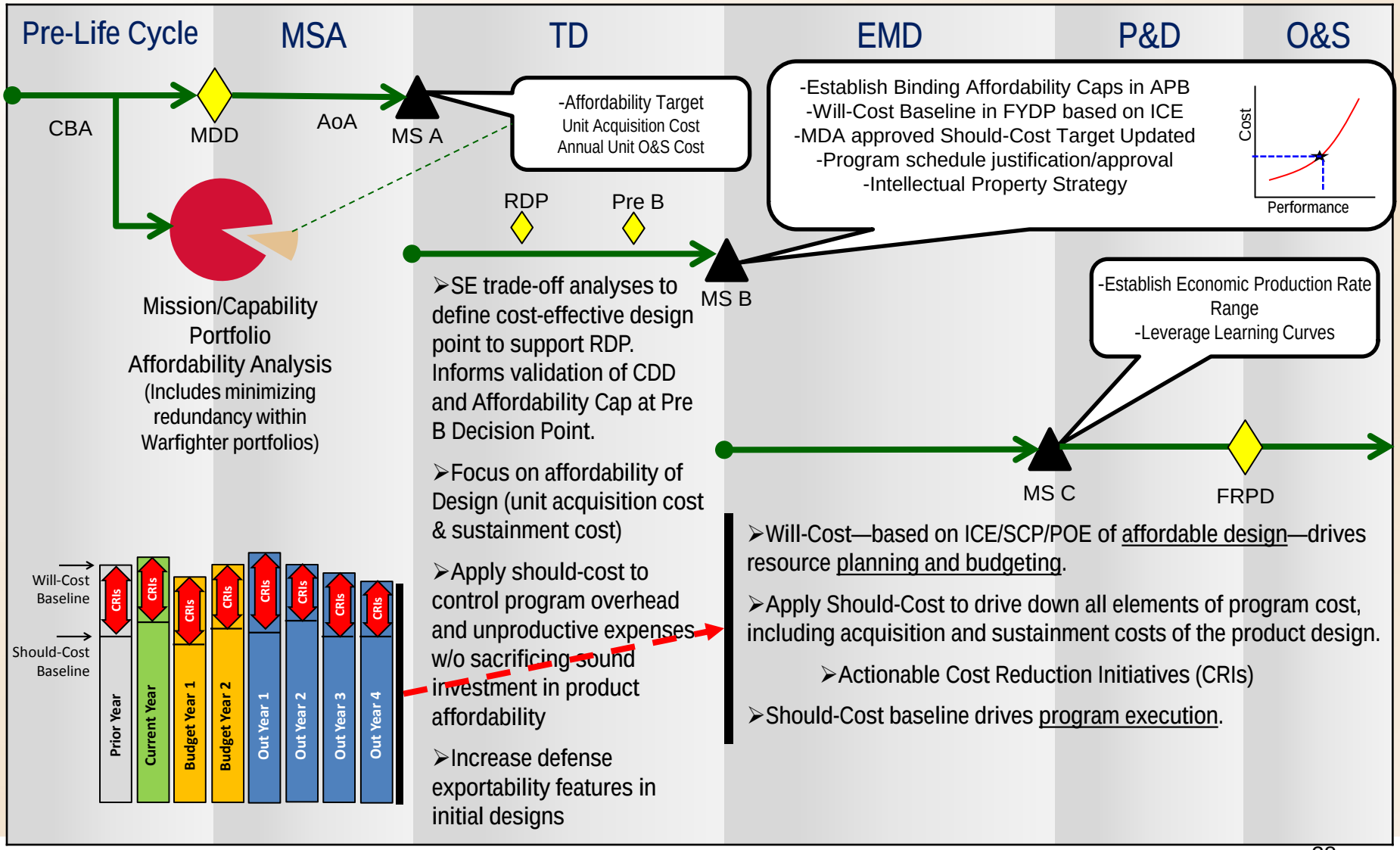
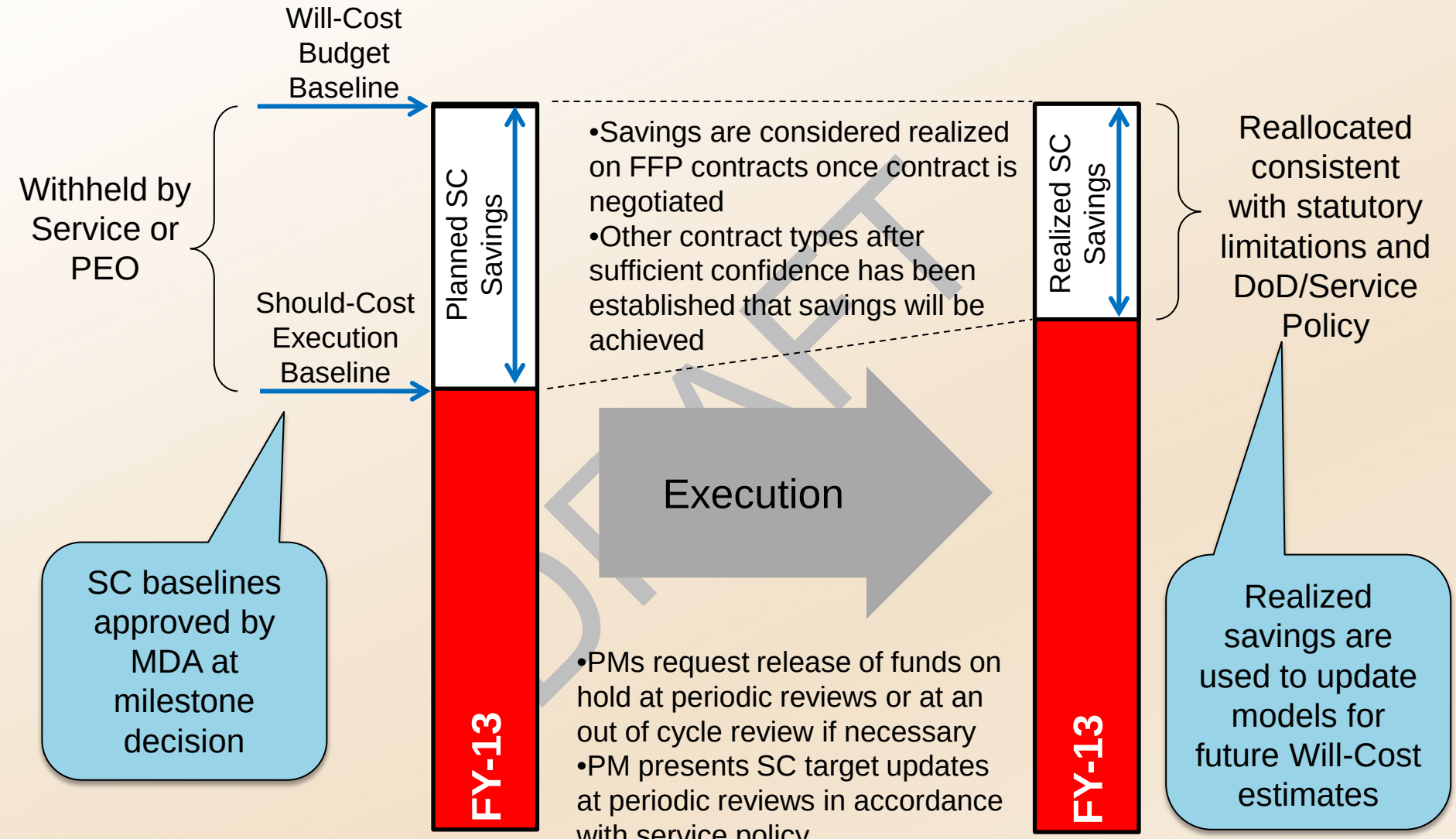
Affordability & Should-Cost



Savings Related to Should-Cost



Success Story - AIM-9X Block II

- Applied traditional operations research methods to identify and prioritize cost reduction opportunities
  - Fishbone diagram
  - Pareto Analysis
  - Plan of Action and Milestones
  - Establish measurable targets
  - Monitor progress
- Accelerated production deliveries
- Leveraged FMS for EOQ buys
- Active Optical Target Detector manufacturing improvements

Realized savings: $21M for Lot 11
Projected savings: $82M (FY11-15); $595M over program of record

Success Story – DDG 51 Shipbuilding Program

- **DDG 51 Main Reduction Gear (MRG)**
  - Existing sole source subcontractor exited market
  - Transferred data rights and equipment to new company
  - Negotiations between new company and prime contractors were unsuccessful
  - Navy ran separate, performance specification-based competition for MRGs
    - Will provide to shipbuilders as GFE

Estimated Savings: ~$400 Million, FY10-15

Success Story – F-22

- Conducted Should Cost analysis to inform negotiations prior to major contract award
  - Early validation tests enabled less oversight of sub-contractor development
  - Proposal SW development hours challenged based on contractor's advanced capability, process, and language experience
  - Number of contract vehicles reduced (i.e. CLINS, DO's, etc.)
  - Implemented defined promotion criteria for tests passed, requirements met, and number of known defects before code is promoted across phases and locations

*Savings applied to Life Support System and Auto-Ground Collision Avoidance System unfunded requirements

Projected savings: $32M for Increment 3.2A (negotiated CPIF contract price compared to Will Cost)*

Success Story - GMLRS

Guided Multiple Launch Rocket System

- Bundled FY12 and FY13 procurements
  - Leveraged total quantities instead of independent annual quantities
  - Extending cost / pricing data through 31 Dec allowed PMO to execute FY13 procurement through contract mod to FY12 contract
    - Mod repriced FY12 FRP 7 Unitary rocket cost from $99.4K to $92.6K per rocket—a ~$23M savings in FY12
    - Mod avoided significant cost increase due to lower quantities in a FY13 stand alone contract—cost avoidance of ~$29.3M
- Alternative Warhead Should Cost approaches
  - Implemented test efficiencies
  - Shortened development schedule by 16 months (~32%)
  - Used rockets from inventory to build test articles
  - Aggressive contract negotiations

Realized savings: ~$52.3M for bundled procurements; ~$33.6M for Alternative Warhead Should Cost savings

Success Story - Stryker

- Bundle buy concept
  - Achieved economies of scale by combining order for 294 Double V-Hulls (FY11) with 100 NBCRVs (FY12)
  - Required senior leader authority to purchase on tight timeline
- Test cost efficiencies
  - Utilize existing test data
  - Combine test events

Realized savings: ~$18M bundle-buy; ~$7.7M test efficiencies (FY12)

Example of Data Rights Success: ONR SEWIP

- Multi-Function Electronic Warfare (MFEW) prototyped by Office of Naval Research (ONR)
- ONR asserted Government Purpose Rights (GPR) on most hardware and software
- Surface Electronic Warfare Improvement Program (SEWIP)
  - Productionized MFEW
  - Provided MFEW GPR data as GFI with the RFP
- SEWIP RFP required priced option for data and data rights and included evaluation criteria on that option in the RFP
- Result: All offerors addressed data rights
- Some IRAD development offered as GPR by contractor

Government obtained a better price and performance by getting GPR rights very early in development and competitively priced data rights options in the production contract - before sole-source environment

Example of Open Systems Architecture Success: Anti-Submarine Warfare's (ASW) Advanced Processing Build/ Acoustic-Rapid COTS Insertion /Tactical Control System Programs

- Performance
  - Continuous competition yields best-of-breed applications (Better Quality Solutions/Capabilities)
  - Able to focus on war-fighter priorities
- Schedule
  - System integration of OA compliant software happens quickly
  - Rapid update deliveries driven by user operational cycles (tailored for war-fighter)
- Cost avoidance mechanisms -~$500M for ASW programs
  - Software –develop once, use often, upgrade as required
  - Hardware –use high volume COTS products at optimum price points
  - Training systems use same tactical applications and COTS hardware
  - Design for Maintenance Free Operating Periods (MFOP)
    - Install adequate processing power to support "failover" w/o maintenance
    - Schedule replacement with improved COTS vice maintaining old hardware
    - Reduced maintenance training required
  - Consolidate Development and Operational Testing for reused applications
- Risk reduction
  - Field new applications only when mature
  - Don't force the last ounce of performance
    - Deploy less (but still better than existing) performance or wait until next update

Increase Use of FPI Contracts in LRIP

- What's New
  - Original guidance called for the use of 120% ceiling and 50/50 share ratio as *point of departure only* – not prescriptive
  - Program managers need to perform an objective analysis and quantify the cost risk
  - Contract type and incentives should be governed by nature of work/deliverables
- Key Implementers
  - Firm requirements: very clear understanding of what we want the contractor to build
  - Low Technical Risk – design proven through developmental testing
  - Established manufacturing processes
  - Qualified suppliers
    - Firms with experience with product
    - Can be expected to bid rationally and perform to plan
  - Suppliers with resources to absorb some degree of risk
  - Adequate business case for suppliers to continue work if they get into trouble
    - Unrealistic to believe contractors will simply accept large losses – requires reasonable returns from full rate production

Increase Use of FPI Contracts in LRIP
Key Takeaways

- Guidance applies to programs nearing end of EMD with CDR complete, Engineering Development Models built and some fraction of DT significantly complete
  - Very difficult to price FPI LRIP option prior to M/S B
    - Although attractive since still in competitive environment, benefits must be balanced with risk
    - Optimism tends to prevail early on – need to be realistic about risks before EMD has begun
  - Only if characterized by low risk of completing EMD without major design changes
  - Programs successfully negotiating FP production options include Air Force tanker and a Navy auxiliary, where shipyards have vast experience with similar designs for that class of ship
  - FPI most attractive with stable design and production processes under control as bridge to FFP
    - Provides insight into contractor's costs necessary for negotiating a follow-on FFP effort
    - Allows government to share in any cost savings
- FPI may be appropriate during the mature production phase of a program when there may be a poor correlation between negotiated and actual outcomes due to:
  - Ineffective estimating techniques
  - Unreliable actual cost predictions at either the prime and/or subcontract level
  - Incomplete audit findings
  - Diminishing manufacturing sources for some components.
  - A period of performance long enough to place too much uncertainty and risk on either party
  - Upgrades requiring significant technological changes

Increase Use of FPI Contracts in LRIP

- Air Force tanker program, KC-46, is a good example of the criteria being met for FPIF in LRIP
  - Stable requirements in place
  - Although CDR isn't until summer 2013, airframe design and manufacturing based on 767 airframe (>1,000 767s already produced)
  - Boeing is experienced and large enough to perform in a reduced profit environment, if needed

Best Value in Competitively Negotiated Source Selections

- The objective of a competitively negotiated source selection is to select the proposal that represents the "best value" to the Government

- The FAR identifies two processes that can be used to conduct a competitively negotiated source selection: Tradeoff Source Selection Process and Low Priced Technically Acceptable Source Selection Process. *In both processes, offerors have to meet threshold technical acceptability*

  - Tradeoff Source Selection Process (see FAR 15.101-1). This process allows for a tradeoff between non-cost factors and cost/price and allows the Government to accept other than the lowest priced proposal or other than the highest technically rated proposal to achieve a best-value contract award. Further, it describes various rating approaches to evaluating proposals when using a tradeoff process.

  - Lowest Price Technically Acceptable (LPTA) Source Selection Process (see FAR 15.101-2). The LPTA process is appropriate when best value is expected to result from selection of a technically acceptable proposal with the lowest evaluated price.

Comparison of Product Support Strategies

Traditional/Transactional-Based Logistics	Performance Based Logistics (PBL)
Often separately organized support organizations	Support organizations linked via Product Support Arrangements (PSA)/Performance Based Agreements
Lack of top-level system integration function	Single PSM and PSI(s) provides integrating function
Work often under ID/IQ contract or T&M	Leverage fixed price or CPIF contracts
Transaction-based	Outcome-based
"More is better"	"Appropriate is better"
"Spares & repairs"	"Reliability, availability, maintainability & supportability"
Focus on discrete and potentially stove-piped performance, modifications, & modernization efforts risks sub-optimal support posture	Product & process improvements reduce demand, increase time-on-platform, decrease response time, and mitigate DMSMS & obsolescence risk
Risks facilitating adversarial "win-lose" focus	PSM-PSI-PSP alignment & partnerships facilitate synergistic "win-win" focus
Shifting priorities can drive risk-adverse behaviors	Clear metrics & incentives drive best-value outcomes
Near-term, budget-driven thinking	Long-term, warfighter-driven thinking
Transactional logistics risks incentivizing "more parts/repairs I sell, more profit I can make"	PBL support reverses vendor incentive, facilitating "less parts/repairs needed, more profit I can make"
Parts/Repair = Provider Revenue	Parts/Repair = Provider Cost
Leveraging existing infrastructure	Optimizing affordable readiness

PBL Success Stories

Figure 1. **Examples of PBL Cost Benefits**

Program	System Description	PBL Owner	Total Cost Benefit ($M)
C-17	transport aircraft	Air Force	$477
F/A-18	fighter/attack aircraft	Navy	$688
AH-64	attack helicopter	Army	$100
TOW-ITAS	integrated mobile missile and targeting system	Army	$350
Sentinel AN/MPQ-64	mobile air defense radar	Army	$302
CH-47 (UK)	cargo helicopter	UK Ministry of Defence	$250

- All DoD Components seeing improvements
- Improvements are contract incentivized and continue over life of program

- More than 10 years of documented evidence now exists for PBL contracts
- Improvements are significant, not just a few percentage points

Figure 2. **Examples of PBL Performance Benefits**

Program	System Description	PBL Owner	Availability Improvement[1]	Cycle Time Reduction[2]
F/A-18	fighter/attack aircraft	Navy	23%	-74%
Tires	aircraft tires	Navy	17%	-92%
F-22	fighter	Air Force	15%	-20%
UH-60 Avionics	utility helicopter	Army	14%	-85%
F404 Engine	jet engine for the F/A-18 aircraft	Navy	46%	-25%

1. Ready for tasking, operational readiness, mission cabable, etc.
2. Logistics response time or repair turnaround time

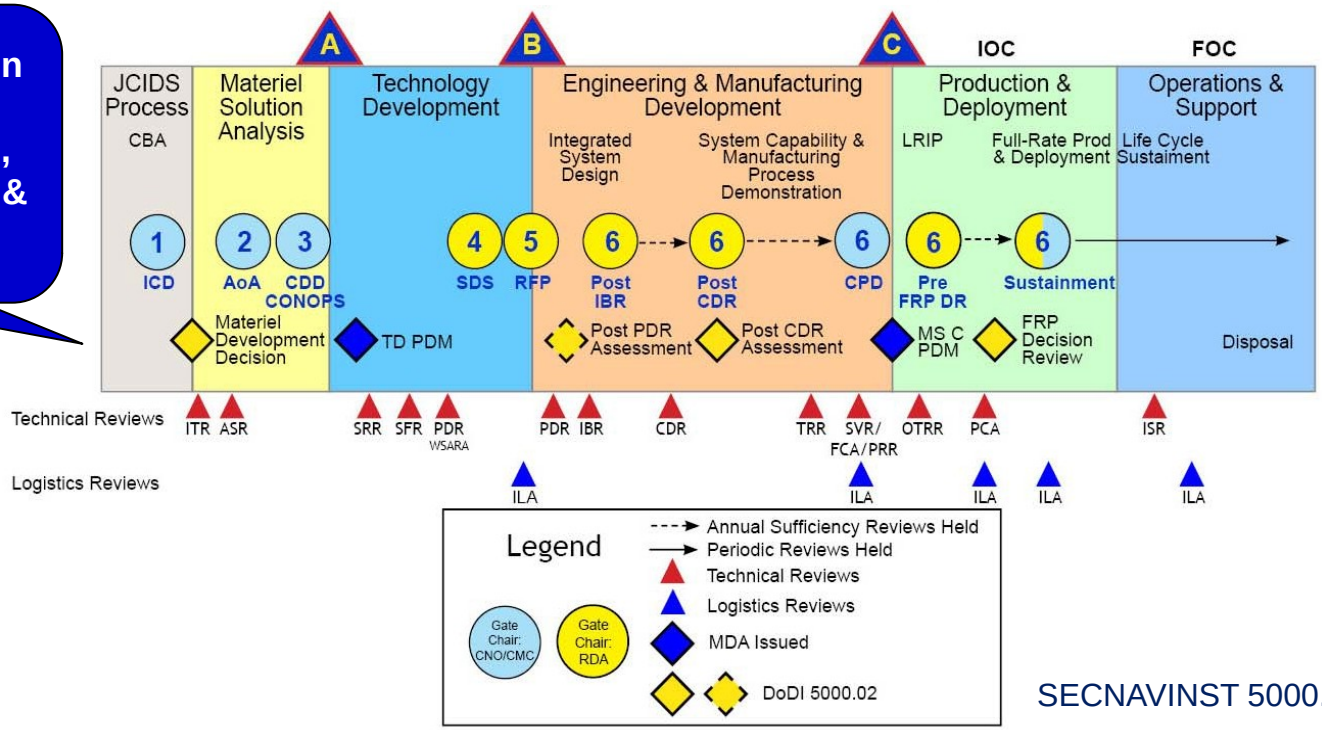
Source: *Defense AT&L*, Jan – Feb 2009

Technology Development Phase Risk Reduction

- Key Takeaways – USD(AT&L) commissioned study to examine effectiveness of competitive prototyping at maturing technology & reducing risk in EMD (8 MDAP's)
  - Too much contractor focus on developing a TRL-6 prototype with unique discriminators in order to win the down-select in the TD phase
  - Not enough focus on reducing risk specifically for the product that will be developed and tested in the next phase. Need performance trades to reduce technical risk
  - TD phase is not a long enough time to build a prototype, mature technology and reduce cost/schedule/performance risk
  - System design not available until PDR or CDR; prototype is a different design than system
  - Production cost is not traceable to prototype cost
  - The long time required to obtain requirements approval discourages requirement refinement & trades

Navy Military Needs "Gate" Process

Requirements inception in OPNAV Resource Sponsor (N2/6, N4, N9, etc.) & N-8 capabilities & resources integration



SECNAVINST 5000.2

- **The Resources and Requirements Review Board reviews and decides Navy Requirements and Resources Issues in 'Two Pass, Six Gate' process**
  - **First Pass - led by CNO (or CMC)**
    - **Gate 1: ICD; Gate 2: AoA ; Gate 3: CDD & CONOPS; Gate 6: CPD**
  - **Second Pass – led by CAE**
    - **Gate 4: Sys Design Spec; Gate 5: RFP Rel; Gate 6: In-Process/Sufficiency Review**
- **Fleet Forces Command, with PACFLEET, is Fleet advocate for requirements**

Defense Innovation Marketplace

- The Defense Innovation Marketplace website was developed to provide a one-stop-resource for industry:
  - To learn about Department and Service investment priorities and capability needs through links to key S&T documents and websites.
  - For large companies to submit IR&D project data and comply with the DFARs rule.
  - For small- to mid-size firms to securely share company IR&D projects in a database designed for Department S&T program managers and Acquisition executives.

- For Department of Defense personnel, the Marketplace is the centralized place to:
  - Highlight Service, program and acquisition S&T needs to the entire defense industrial base, and;
  - Search, learn about and then leverage industry technology (IR&D) projects for current and future programs.

www.DefenseInnovationMarketplace.mil

FY12 DEF Pilot Programs

Programs	MIL DEP	Contractor	Milestone	Status
Joint Proximity/Height of Burst Fusing (HOBF)	Army	Picatinny Arsenal	Non-MDAP	Phase 1B thru DOTC; Starting Implementation in FY14
Army Integrated Air and Missile Defense (AIAMD)	Army	Northrop Grumman	Post-B	Phase 1B Ongoing; to Include Tri-Service Committee (TSC) Engagement
Indirect Fires Protection Capability, Increment 2 – Intercept (IFPC2-I)	Army	AoA	Pre-A	DEF Study Possible in FY15
Common Infrared Counter Measures (CIRCM)	Army	BAE Systems Northrop Grumman	Pre-B	DEF Feasibility Studies Complete in FY13; DEF included in EMD RFP
MQ-4C Triton (formerly Broad Area Maritime Surveillance, BAMS)	Navy	Northrop Grumman	Post-B	Phase 1B study Scheduled to Commence March 2013
Three Dimensional Expeditionary Long Range Radar (3DELRR)	Air Force	Raytheon Lockheed Martin Northrop Grumman	Pre-B	Pending 3rd Qtr FY14 MS B Decision and Contract Award

FY13-14 DEF Pilot Programs

Programs	MIL DEP	Contractor	Milestone	Status
Next Generation Jammer (NGJ)	Navy	Source Selection	Post-A	Initial NGJ TTSARB for International Release Complete; AT Design Incorporated
Air & Missile Defence Radar (AMDR)	Navy	Source Selection	Post-B	Possible FY14 DEF Study (was on hold pending protest resolution)
P-8A Poseidon	Navy	Boeing	Post-C	FY14 DEF Funding rec'd 26 Feb 2014; AT Plan in Work
E2D Advanced Hawkeye	Navy	Northrop Grumman	Post-FRP	Internal Navy DEF Lessons Learned Study Completed
Small Diameter Bomb II (SDB II)	Air Force	Raytheon	Post-B	Air Force (AF) funded RMS Statement of Objectives Underway; TSC Decision Memorandum Received 4 Feb 14
MQ-9 Reaper	Air Force	General Atomics	Post-C	AF Funded; ATL DEF Study Complete
Joint Air-to-Surface Standoff Missile (JASSM)	Air Force	Lockheed Martin	Post-C	FMS Case Funded; AF Requested Removal from DEF Pilot Program
Joint Ground to Air Missile (FY14)	Army	Lockheed Martin (LM)	Pre-B	Awaiting Confirmation of LM's Agreement for 50/50% cost sharing
Armed Aerial Scout and Ground Combat Vehicle	Army	N/A	N/A	Army Requested Removal of Both Programs from DEF Pilot Program