DOD Acquisition

A second PMI presentation and discussion with the "809 Panel"

AGENDA (23 FEBRUARY)

- Introduction and background
- Organizational Agility
- Ideas about Project Management
- Portfolio Management
  - GAO identified challenges
  - Single vis Multiple Tier management structure
- Portfolio Performance Management
  - Lean Systems Management
  - Earned Value beyond contacts
  - System team – beyond DoD staff

Summary Discussion – 23 February 2017

- Introduction to Project Management Institute (PMI)
  - Headquartered in the US, PMI is a not-for-profit professional membership association with international membership
  - PMI owns many standards, 4 of which are accredited ANSI standards. PMI administers the ISO/TC 258 Secretariat on behalf of the American National Standards Institute.
    - ANSI PMI FS-BOK-2013 (project), ANSI PMI FS-PRM-2013 (program), ANSI PMI FS-POM-2006 (portfolio)
  - Many studies/whitepapers on successes in industry/government
- Discussion focus/recommendations
  - Embrace ANSI standards – common language and structure
    - Use multi-tier structure linked to strategy
    - Migrate MDA functions to Portfolio Manager
  - Utilize project management across functional/project teams
    - Update training to include project/portfolio management

Discussion – 23 March 2017

- Embrace ANSI standards – common language and structure

- Use the ANSI Standards multi-tier structure. Portfolio Management bridges between strategy and change / execution. All strategic change happens through program and project management.

- Migrate tactical MDA functions to Portfolio Manager

- Utilize project management across functional/project teams

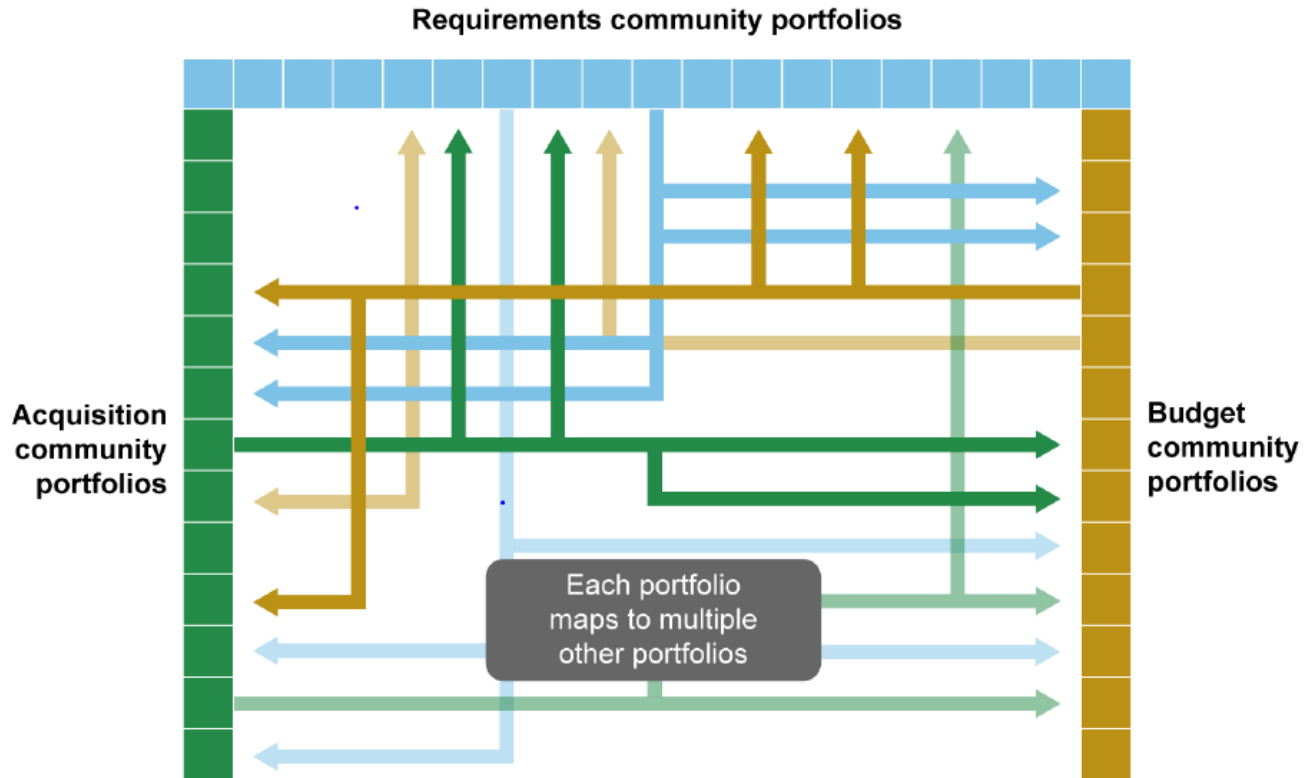- Training include project and portfolio management

- Others?

Embrace ANSI standards – common language and structure

- Portfolio, Program, and Project terms are being used throughout Federal Government and Department of Defense

- ANSI standard provides for a common language
  - Within DoD and interface to federal agencies
  - With Industry, Universities, International

- Federal/DoD already using Portfolio
  - A-11 (Portfolio in IT), Capital Programming Guide (CPG)
  - DoDI 5000.02 with cost and affordability (Enclosures 6, 8, 12)
  - DoDI 7045.20 and CJCSI 3170.1I with Capability Portfolios
  - DoDD 8115.02 IT PfM (similar to CPIC selection process)

- Would comply with PMIAA Law on use of standards

GAO notes lack of consistency in Portfolios

Figure 2: Notional Mapping of Portfolio Constructs

Requirements community portfolios

Acquisition community portfolios

Budget community portfolios

Each portfolio maps to multiple other portfolios

Source: GAO analysis of DOD policies and documents. | GAO-15-466

Source: GAO Report to Congressional Committees dated August 2015. "Weapons System Acquisition, Opportunities Exist to Improve the DoD's Portfolio Management"

PMI White Papers … industry views

- *"View from Above: The Power of Portfolio Management," April 2013*
  - Portfolio Mangement improves Program and Project performance

- *"Using PMI Standards Framework to Improve U.S. Federal Government Capital Investment Outcomes," March 2015*
  - Move to three tier Portfolio, Program, Project structure
  - Federal Government can use Industry Standards Framework

- "*Improving Program Management in the Federal Government*," July 2015
  - Written in partnership with the National Academy of Public Administration (NAPA)
  - Basis for PMIAA law signed by President Obama, Dec 2016

- "*Time to Update OMB Capital Programming Guidance,*" February 2017 (to be published)
  - A-11 and CPG needs updating to Industry Standards
  - Go beyond PMIAA law (signed Dec 2016)

Many PMI White Papers and Reports capture industry views

View from Above: The Power of Portfolio Management

WHY DO ORGANIZATIONS PRACTICE PORTFOLIO MANAGEMENT?

Respondents to PMI's *Pulse of the Profession™ In-Depth Report: Portfolio Management* cited customer satisfaction, cost reduction and revenue growth as the top reasons to practice portfolio management.

Customer Satisfaction	73%
Cost Reduction	59%
Revenue Growth	58%
Improved ROI	45%
Improved Development Costs	40%
Regulatory Compliance	35%
Innovation	34%
Internal Knowledge Sharing	32%
Employee Satisfaction	
Share of Market	
Sustainability	
Supplier Relations	

0%

Source: ©2012 Project Management Institute, Inc. Pulse o

	Highly effective at portfolio management	Minimally effective at portfolio management	% Increase
AVERAGE PERCENTAGE OF PROJECTS:			
Completed on time	68%	50%	36%
Completed on budget	64%	54%	19%
Met original goals and business intent	77%	65%	18%
Met/exceeded forecasted ROI	62%	48%	29%

Source: ©2012 Project Management Institute, Inc. *Pulse of the Profession™ In-Depth Report: Portfolio Management*, November 2012. PMI.org/Pulse

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Use multi-tier structure linked to strategy

- Push tactical decision making down by empowering portfolio managers in portfolio and program execution.

- Multi-tier (Portfolio, Program, Project) structure allows flexibility
  - Link to Strategy – value to Portfolio, can break to sub-portfolios
  - Link value to benefits baselined on Programs
  - Link benefits to costs/schedule/requirements on Projects

- Align all decision support systems at Portfolio level
  - Planning (DPG) sets structure for PPBES, Requirements and Acq

- MDA function focus on cross portfolio strategies to balance/align
  - Portfolio Managers oversight on program execution
  - Program Managers oversight on project execution
  - Project Managers oversight on Control Accounts

Federal Lifecycle could mirror PMI

Multi-tiered lifecycles would allow for differences in governance (gates)

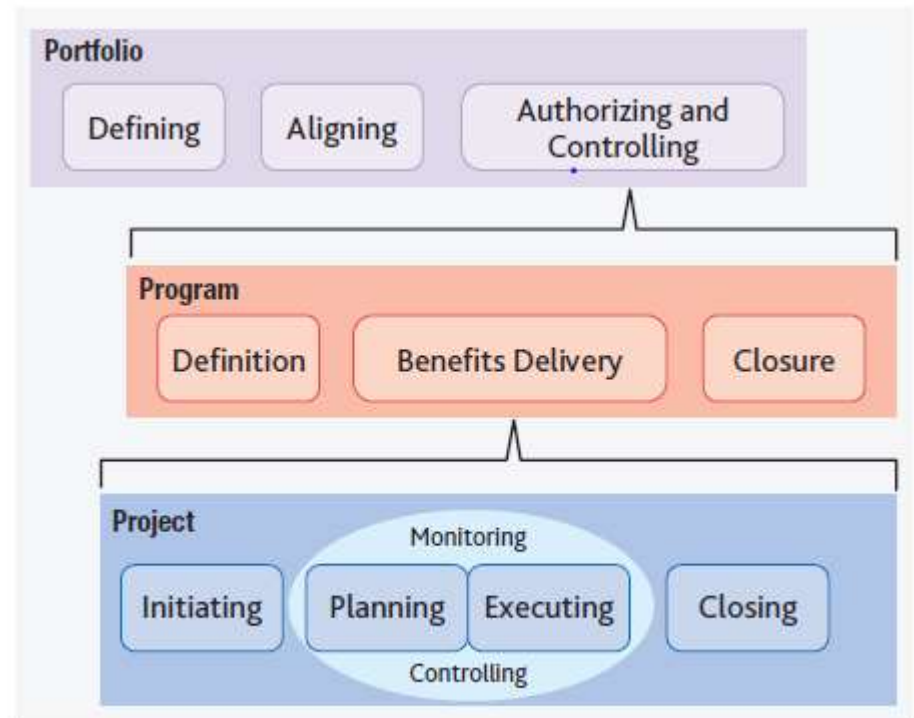**Portfolio's could align with Strategy as Programs and Projects align with Budget (programming)**

Figure 11: Relationship of PMI standards' lifecycle phases.

Reference " Using PMI standards framework to improve U.S. federal government capital investment outcomes", PMI White Paper

Migrate MDA functions to Portfolio Manager

- MDA set Portfolio "value baseline" based on alignment/balance
  - Approves Portfolio Managers Strategic Roadmap
    - Governance structure (programs/projects), Performance Measures, Communication (stakeholder management), Risks
  - Manages infrastructure (train, organize, equip)
- Portfolio Managers replace PEOs
  - Approves Program Managers Acquisition Strategy
    - Ability to tailor process … implement flexibility, ….
    - Sets baseline for cost/schedule/performance
  - Manage resource across portfolio (effective/efficient)
    - Broad authority to move resources
    - Direct coordination with CJCSI 3170/PPBES equivalents

Portfolio Standard very different than Program/Project

Portfolio Strategic Plan and Roadmap would be derived from Enterprise level similar documents

Portfolio Risk should be directly linked to Enterprise Risks

…etc

Knowledge Areas	Process Groups		
	Defining Process Group	**Aligning Process Group**	**Authorizing and Controlling Process Group**
Portfolio Strategic Mangement	4.1 Develop Portfolio Strategic Plan 4.2 Develop Portfolio Charter 4.3 Define Portfolio Roadmap	4.4 Manage Strategic Change	
Portfolio Governance Management	5.1 Develop Portfolio Management Plan 5.2 Define Portfolio	5.3 Optimize Portfolio	5.4 Authorize Portfolio 5.5 Provide Portfolio Oversight
Portfolio Performance Management	6.1 Develop Portfolio Performance Management Plan	6.2 Manage Supply and Demand 6.3 Manage Portfolio Value	
Portfolio Communication Management	7.1 Develop Portfolio Communication Management Plan	7.2 Manage Portfolio Information	
Portfolio Risk Management	8.1 Develop Portfolio Risk Management Plan	8.2 Manage Portfolio Risks	

Source: The Standard for Portfolio Management, Table 3-1, p. 31

Figure 6: Mapping of the Portfolio Management Process Groups and Knowledge Areas.

Reference " Using PMI standards framework to improve U.S. federal government capital investment outcomes", PMI White Paper

Utilize project management across functional/project teams

- Tailor in … vis tailoring out, embrace a lean approach

- Re-energize IPPD – Integrated Product/Process Development
    - Integrated Product or Process Teams run "projects"
        - Charter with C/S/P expectations
        - Team lead with authority (similar to Program Manager)
    - This is a Team of Teams (Gen McChrystal's book) approach
        - Getting through procurement is a "project"
        - Completing series of flight tests is a "project"
        - Developing the Program Office Estimate (POE) is a "project"

- Allows for performance measurement to the lowest level of management … all teams need to be responsible, thus accountable!

Who are we?

MIT Consortium for
Engineering
Program
Excellence

The **Consortium for Engineering Program Excellence (CEPE)** at the *Massachusetts Institute of Technology* (MIT) seeks to improve program outcomes through research at the intersections of:

- Program management
- Systems engineering
- Product development
- Lean management
- Organizational change

More info:
http://cepe.mit.edu

Strategic Partners:

Project Management Institute

INCOSE
International Council on Systems Engineering

Key Results and Ongoing Research

The **Guide** to **Lean Enablers**

The **Encyclopedia** for Lean Enablers

The Guide to
LEAN ENABLERS
for **MANAGING**
ENGINEERING
PROGRAMS

➢ Improving Integration of Program Management and Systems Engineering
➢ Project Management Agility Global Survey
➢ Lean Program Metrics
➢ Supplier integration in early-stage program development

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Lean Enablers (LE) Structured Along Six Lean Principles (LP)	No. of Lean Enablers
LE 1.x: Respect the people in your program (LP6)	6
LE 2.x: Capture the value defined by the key customer stakeholders (LP1)	6
LE 3.x: Map the value stream and eliminate waste (LP2)	11
LE 4.x: Flow the work through planned and streamlined processes (LP3)	10
LE 5.x: Let customer stakeholders pull value (LP4)	2
LE 6.x: Pursue perfection in all processes (LP5)	8
Total	43

Oehmen, Josef, (Ed.). 2012. The Guide to Lean Enablers for Managing Engineering Programs, Version 1.0. Cambridge, MA: Joint MIT-PMI-INCOSE Community of Practice on Lean in Program Management. URI: http://hdl.handle.net/1721.1/70495.

Major Challenge Themes in Engineering Programs that Lean Enablers Help to Address

1. Firefighting—Reactive program execution
2. Unstable, unclear, and incomplete requirements
3. Insufficient alignment and coordination of the extended enterprise
4. Processes are locally optimized and not integrated for the entire enterprise
5. Unclear roles, responsibilities, and accountability
6. Mismanagement of program culture, team competency, and knowledge
7. Insufficient program planning
8. Improper metrics, metric systems, and KPIs
9. Lack of proactive program risk management
10. Poor program acquisition and contracting practices
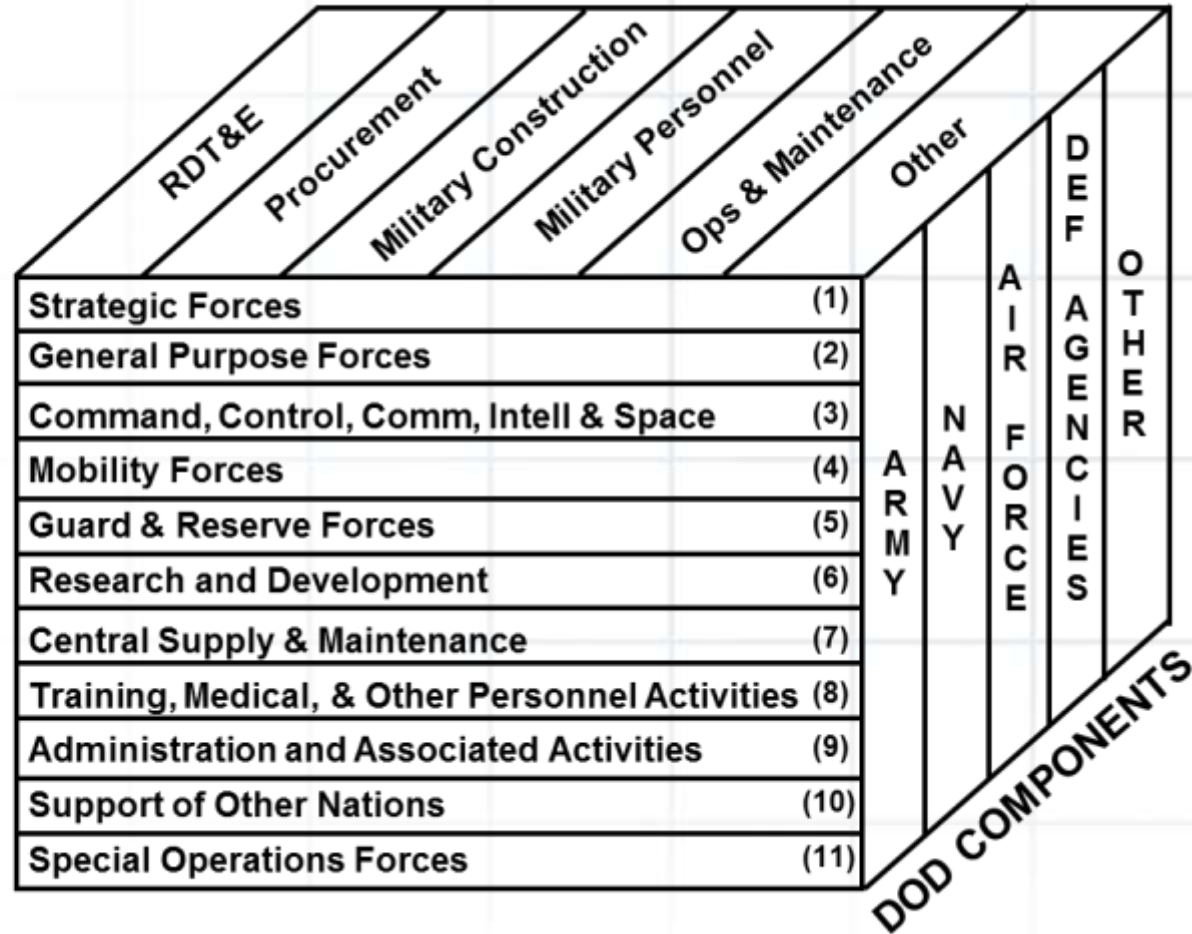
Training include Project/Portfolio Management

- Everyone needs the project fundamentals
    - Projects (like control accounts) are how we manage at the lowest level of management … within the IPT (Product or Process)
    - "direct" work needs to be on the schedule … not level of effort
    - Simple charters … sets expectations and ability to measure

- Senior staff (including functional) need Portfolio fundamentals
    - Portfolio Strategic Roadmap is above the Acq Strategy
    - Support the IT Enterprise Architecture or Warfighter Conops

Next Steps

- Expand the dialog to develop notional approach
  - Engage the various stakeholders
  - Explore potential lean/flexibility structure/processes
  - Develop notional Portfolio structures
    - Weapon Systems and Commodity/Support System
    - Business Systems and IT Infrastructure
  - Build notional strategy for transition

- Opportunity with 901 (j)(1) NDAA
  - Portfolios under Acq and Sustainment (A&S) and SAEs
  - Define notional authorities and initial alignment to Portfolios

BACKUP AND REFERENCE SLIDES FOLLOW:

DOD APPROPRIATIONS

RDT&E · Procurement · Military Construction · Military Personnel · Ops & Maintenance · Other

MAJOR FORCE PROGRAMS

Strategic Forces	(1)
General Purpose Forces	(2)
Command, Control, Comm, Intell & Space	(3)
Mobility Forces	(4)
Guard & Reserve Forces	(5)
Research and Development	(6)
Central Supply & Maintenance	(7)
Training, Medical, & Other Personnel Activities	(8)
Administration and Associated Activities	(9)
Support of Other Nations	(10)
Special Operations Forces	(11)

DOD COMPONENTS

ARMY · NAVY · AIR FORCE · DEF AGENCIES · OTHER

Key PPBE Action Officers

- AIR FORCE: Program Element Monitor (PEM)
  - Works for Air Force SAE (SAF/AQ)
  - Each Air Force program element is assigned a PEM
  - Interfaces with Using Commands, Material Command, Air Staff, Air Secretariat, OSD, and sometimes Congress
  - A PEM may be responsible for more than one program element

- NAVY: Requirements Officer (RO)
  - Works for resource sponsor on OPNAV staff (e.g., Navy Aviation resource sponsor is N98)
  - Interfaces with Using Commands, Systems/Developing Commands, OPNAV Staff, Navy Secretariat, and OSD

- ARMY: Department of Army Systems Coordinator (DASC)
  - Works for Army SAE (ASA/ALT)
  - Interfaces with Using Commands, Developing Commands, Army Staff, Army Secretariat, OSD, and Congress

PPBE - Planning

National Strategy Documents Provide Input to PPBE

FEB   MAR   APR   MAY

Strategic Portfolio Review (SPR)

President
National Security Council

National Security Strategy

every 4 years

QDR

SECDEF
Joint Staff/OSD

National Defense Strategy

SECDEF

DPG

Components
Military Departments
Defense Agencies
Combatant Commands

CJCS

Combatant Commands

CPR

CJCS
Joint Staff

National Military Strategy

QDR – Quadrennial Defense Review
CPR – Chairman's Program Recommendation
DPG – Defense Planning Guidance

Joint Strategy Review (Joint Staff, Combatant Commands, Military Departments)
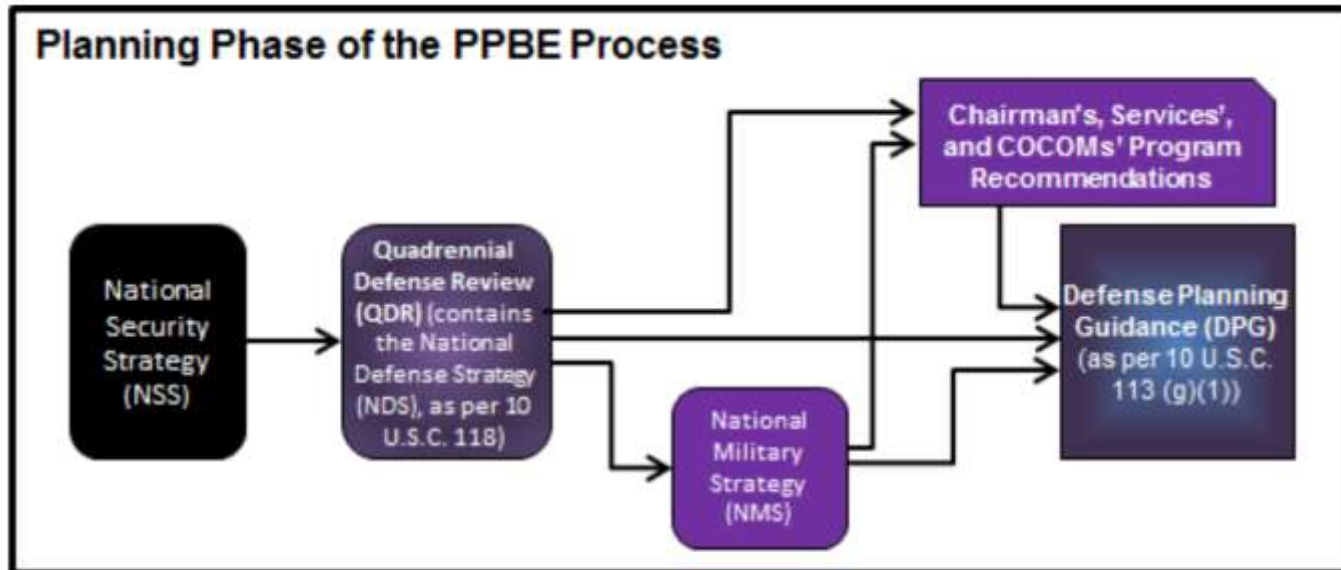
PMI

Figure: Planning Phase of the PPBE Process

"Colors of Money"

Military Personnel (MILPERS)
  Active & Reserve Forces

Operation & Maintenance (O&M)
  Active & Reserve Forces
  (civilian Salaries, supplies,
    spares, fuels, travel, etc…)
  Environmental Restoration
  Former Soviet Union Threat
    Reduction
  Overseas Humanitarian,
    Disaster, & Civic Aid

Procurement
  Aircraft
  Missiles
  Weapons
  Weapons & Tracked Combat
    Vehicles
  Ammunition
  Other Procurement
  Shipbuilding & Conversion
  Marine Corps
  Defense wide procurement
  National Guard & Reserves

Research, Development, Test & Evaluation (RDT&E)
  Basic Research
  Applied Research
  Advanced Technology Development
  Advanced Component Development
    & Prototypes
  System Development & Demonstration
  RDT&E Management Support
  Operational Systems Development

Military Construction (MILCON)
  Facilities
  Family Housing
  Base Realignment & Closure (BRAC)

Other
  Defense Health Program
  Chemical Agents & Munitions
    Destruction
  Drug Interdiction & Counter-Drug
    Activities
  Joint Improvised Explosive Device
    Defeat Fund
  Rapid Acquisition Fund
  Office of the Inspector General

DoD Directive/Instruction – 5000 series

- **Directive (5000.01)**
  - **No reference to PEO, just PM and MDA**
  - **No reference to a milestone structure**
  - **Calls for flexibility, innovation, responsiveness ….**
  - **Enclosure does the same ... Across 28 topics**

- **Instruction (5000.02)**
  - **PEO/CAEs provide supervision (5.a.4.c) to PMs**
    - **PEO "dedicated to executive management of assigned programs and will not have other command responsibilities" ..but waived as needed!**
  - **Provide for Generic and DoD Specific Acq Program Model (5.c)**
    - **All models are one tier approaches for a program**
  - **Portfolios discussed for analysis**

Portfolios noted in DoDI 5000.02

- Milestone A …"The analysis will be supported by a quantitative assessment of all of the programs in the prospective program's portfolio or mission area that demonstrates the ability of the Component's estimated budgets to fund the new program over its planned life cycle.

- Enclosure 6 … "conducting portfolio affordability analysis …"

- Enclosure 8 …"portfolio plans and strategies such as those required by statute (i.e., the 30-year plans required by 10 U.S.C 231 (for ships) and 10 U.S.C 231a (for aircraft)

- Enclosure 12 … "The IRB Chair will ensure that the business need and recommended solution are consistent with portfolio priorities and are compliant with the Business Enterprise Architecture."

NO STANDARD PORTFOLIO STRUCTURE

NDAA 2016
Title VIII, Subtitle C, Provisions Related to MDAPs

- Sec. 821. Acquisition Strategy Required for Each Major Defense Acquisition Program, Major Automated Information System, and Major System.

  - Creates 10 USC 2431a, Acquisition Strategy. Requires an acquisition strategy for **MDAPs (ACAT I), MAIS (ACAT IA) and Major Systems (ACAT II)**.

  - Requires each strategy, where appropriate, to consider:

    - Delivering capability in increments
    - National technology and industrial base considerations
    - Risk Management
    - Business Strategy
    - Contracting Strategy
    - Intellectual Property Strategy
    - International Involvement
    - Multiyear Procurement
    - Integration of Intelligence Assessments
    - Requirements related to logistics, maintenance, and sustainment

  - MDA review and approval required at: Milestone A, Development RFP Release Decision, each subsequent decision, and when significant or critical changes to cost, or significant changes to schedule or performance occur.

  - Requires Congress to be notified of any MDA revisions to the strategy.