



PEO AMMUNITION

Presented to the:
Armaments Division Forum

Presented by:
Mr. James Shields,
PEO Ammunition



2 May 2017



PEO Ammo Place Within the DoD



President of the United States



Secretary of Defense



Secretary of the Army



**Assistant Secretary of the Army
(Acquisition, Logistics & Technology)**



Program Executive Office Ammunition



Ammunition Enterprise

LEADERSHIP

Director, Armament Research, Development & Engineering Center



Picatinny (Army Materiel Command)

Mr. John Hedderich

Program Executive Officer



Picatinny (Assistant Secretary of the Army for Acquisition, Logistics & Technology)

Mr. James Shields

Joint Munitions Commander



Rock Island (Army Materiel Command)

BG Richard Dix

MISSION

Lead Research, Development and Engineering of Systems Solutions to arm those who defend the Nation against all current and future threats, at home and abroad

Develop, equip, and sustain lethal armament and protective systems enabling joint warfighter dominance.

Provide America's Joint Forces with ready, reliable and lethal munitions at the right place and time in a cost effective manner to enable successful military operations.

ROLES

RESEARCH & DEVELOPMENT:

- Life-cycle engineering support lead
- Manage/execute Tech Base (BA6.1-6.3)
- Rapid Prototyping & Manufacturing Process Development
- System Engineering & Integration
- R&D Evaluation & Experimentation
- Ammunition Packaging, Handling, Storage, and Transportation R&D
- Quality Engineering/System Safety (Products)
- Matrix Support to PMs

ACQUISITION:

- Single Manager for Conventional Ammo
- Systems Development
- Acquisition Strategy
- Hardware Production
- Components for Renovation
- Ammunition Peculiar Equipment (Maintenance Support)
- Research Development Test & Evaluation
- Industrial Base
- Demilitarization/Disposal

LOGISTICS/SUSTAINMENT

- Receipt / Issue
- Storage / Distribution Mgmt.
- Inventory / Accountability
- Safety / Security
- Quality Assurance (Ammunition Stockpile Reliability Program/Surveillance)
- Maintenance
- Transportation
- Operations & Maintenance Army Program/ Budget / Receive
- Funding



Program Executive Office Ammunition Organization



Project Manager Combat Ammunition Systems

Indirect Fire Munitions and Mortar Weapon Systems

- Excalibur
- Guided Precision Munitions & Mortar Systems

Mr. Pete Burke
(acting)



PEO Ammunition
Mr. James Shields



DPEO Ammunition
BG Alfred F. Abramson III



Mr. Chris
Grassano

Chief of Staff

- Systems Acquisition
- Business Management
- Human Resources
- International
- Chief Information Officer
- Science & Technology



Project Manager Close Combat Systems

Networked Munitions, Force Application Systems, Explosive Hazard, and Countermine

- Counter Explosive Hazard
- Area Denial
- Combat Munitions
- Support Systems

COL Jonathan
Slater



APEO International
Doreen Chaplin



Command Chief
Warrant Officer
CW5 Bill Lewis



Mr. Keith
Gooding
USMC

Project Manager Towed Artillery Systems

Support Fires for Maneuver forces

- M777A2 Lightweight 155mm Howitzer
- M119A3 105mm Howitzer Digitization
- Target Acquisition



Project Manager Maneuver Ammunition Systems

Direct Fire Munitions

- Small, Medium and Large Caliber
- Non-Standard Ammunition

COL Moises
Gutierrez



Project Director Joint Services

- SMCA Integration
- Demilitarization
- Ammunition Industrial Base
- Ammunition Logistics R&D
- Technology and Prototyping

COL Joseph
Chan

Develop, equip, and sustain lethal armament and protective systems enabling joint warfighter dominance

- US ARMY
- US AIR FORCE
- US NAVY
- USMC



Col Anthony
Puente USAF

Project Director Joint Products

- Air Force and Navy Bombs
- Navy Deck Gun Ammo
- Energetics
- Cartridge Actuated Device / Propellant Actuated Device



CAPT Brian
Schorn USN

O/EDCA Executive Director Conventional Ammunition

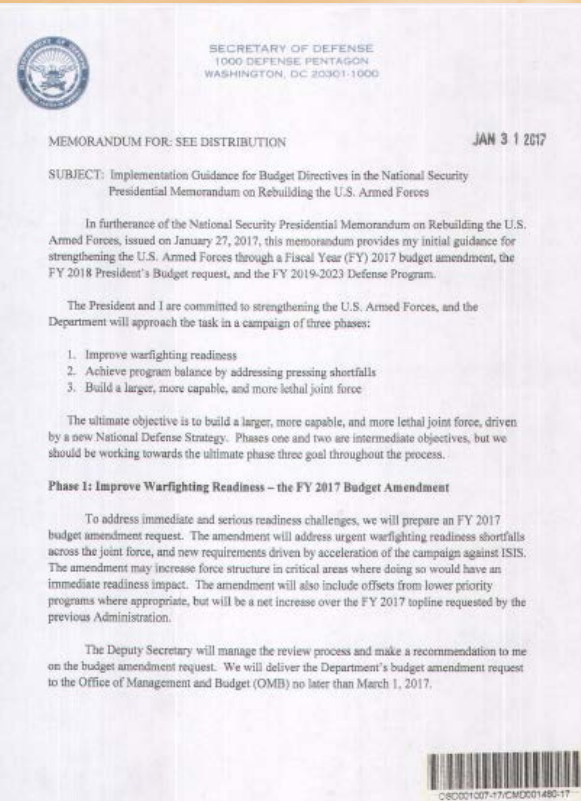
SMCA Assessment

Single Manager for Conventional Ammunition



POTUS and SECDEF are committed to Strengthening our U.S. Armed Forces*

- The *“ultimate objective is to build a larger, more capable, and more lethal joint force”*
- Strengthen the Armed Forces by:
 1. Improve warfighting readiness with FY17 Budget Amendment
 - ✓ *“Address urgent warfighting readiness shortfalls”*
 - ✓ *“Increase force structure in critical areas”* to have an *“immediate readiness impact”*
 2. Achieve program balance by addressing pressing shortfalls in the FY18 Pres Budget Request
 - ✓ *“Focus on balancing the program, addressing programmatic shortfall, ... continuing to rebuild readiness”*
 - ✓ Examples include *“building more critical munitions”*
 3. Build a larger, more capable, and more lethal joint force in the FY19-23 Defense Program
 - ✓ Determine the approach to *“enhancing the lethality of the joint force against high-end competitors and the effectiveness of our military against a broad spectrum of potential threats”*
 - ✓ *“Improve how the Department does business”* ... and include *“horizontal integration across DoD components to improve efficiency and take advantage of economies of scale”*



- Excerpts from SECDEF Memo dated 31Jan17
- This memo is Distribution A, available and download-able off of the Internet

Improved Efficiency and More Lethal Joint Force

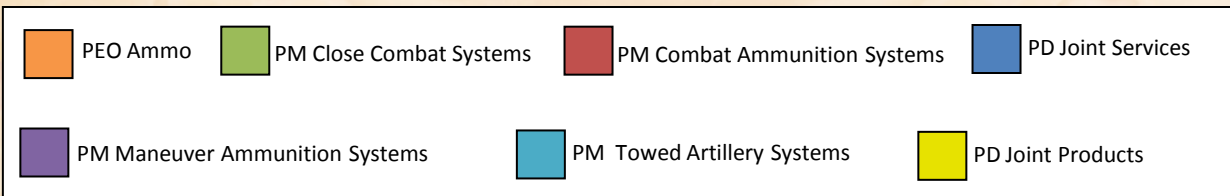
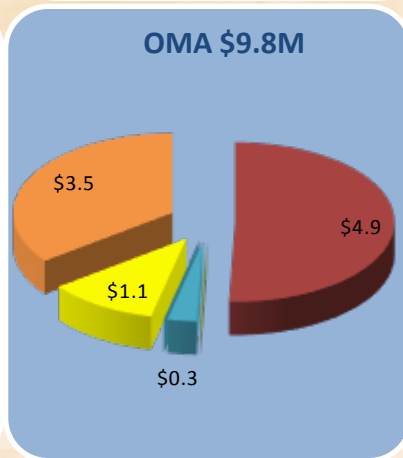
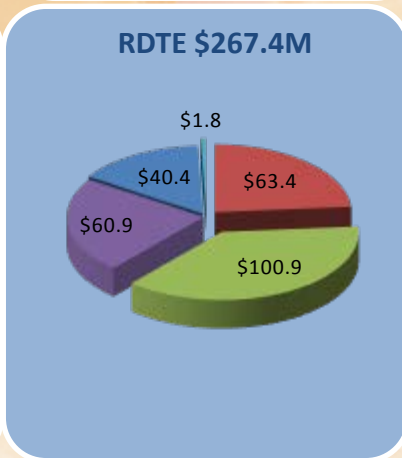
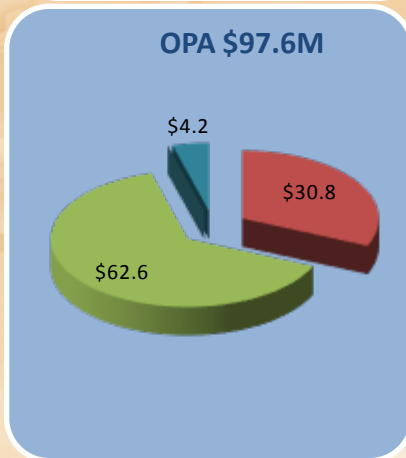
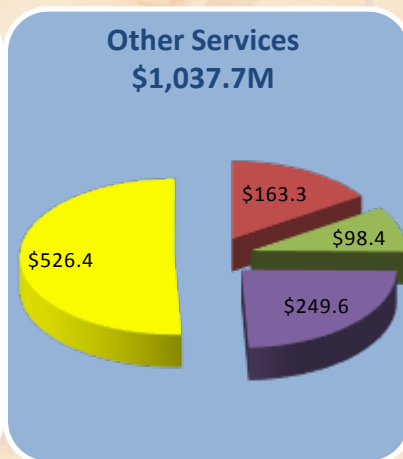
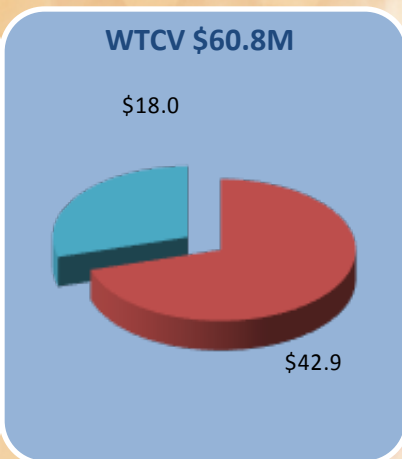
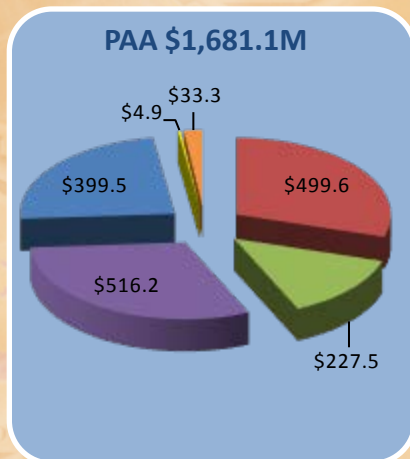


Army Issues

- While the US focused on the Counter-Insurgency Fight its Peers and Near-Peers focused on the US
 - 4+1 (Russia, China, Iran, North Korea [4] + ISIS and other terrorist organizations [1])
- Capability Gaps
 - “We are not maintaining our combat-overmatch for the next ten-years”
 - “We need Long-Range-Precision-Fires, Air & Missile Defense, Cyber, ...”
 - Current size of the Army is not adequate for potential global issues
- Chief of Staff is not happy with the speed of acquisition
 - The Army needs to find ways to decrease the complexity of fielding munitions and systems
 - “Empower the PEOs”
 - Leave Project Managers in place longer so they own success or failure for a program
 - CSA sees SOCOM as one example of an acquisition process that works well
- Full-year 2017 CR would create a \$4B delta in Readiness while also collapsing RDA



PEO Ammunition FY17 Budget





PEO Ammunition Items and the FY17 Amended Budget

Appropriation	Item	\$ in Amended Budget Submission
AMMO	CTG, 30mm, All Types	\$8,200
AMMO	120MM Mortar, All Types	\$27,300
AMMO	Artillery Cartridges, 75MM & 105MM, All Types	\$4,490
AMMO	Artillery Projectile, 155MM, All Types	\$2,238
AMMO	Artillery Propellants, Fuzes and Primers, All	\$51,667
AMMO	Cartridges, Tank, 105MM and 120MM, All Types	\$15,000
AMMO	CTG, .50 Cal, All Types	\$7,000
AMMO	CTG, 20MM, All Types	\$28,000
AMMO	Ctg, 5.56mm, All Types	\$4,000
AMMO	CTG, 7.62mm, All Types	\$7,000
AMMO	CTG, Handgun, All Types	\$4,000
AMMO	Ammo Industrial Facilities	\$182,390
AMMO	Proj 155mm Extended Range M982	\$135,400
RDTE	ARTILLERY SYSTEMS - EMD	\$2,750
RDTE	Tank and Medium Caliber Ammo	\$2,000
RDTE	Weapons and Munitions Engineering Development	\$18,800
RDTE	Weapons and Munitions Product Improvement Programs	\$5,100
WTCV	M119 Modifications	\$31,198
WTCV	M777 Mods	\$21,687
WTCV	Mortar Systems	\$8,200
	PEO AMMO Total	\$566,420



PEO Ammo Focus Areas



Flares & Signals

Near-term:

- Defeating increased threats to aircraft
- Lighter and more tunable countermeasures (multi-purpose)

Mid-term:

- Defeating advanced aircraft threats

Long term:

- Fully tunable effects (user selectable)



Tank Ammo

Near-term:

- Advanced KE and AMP

Mid-term:

- DU alternates

Long-term:

- Guided extended range for advanced targets



Small Cal

Near-term:

- OWL; Training Flexibility
- RRA; Mobility
- Lightweight Sm. Cal Ammo (LSCA)

Mid-term:

- Precision

Long-term:

- Extended range guided with user tunable effects
- "Trace" capability in smart sight on the weapon vs. on the round
- "Ammo on demand" - user has the capability to "produce" the ammo as needed.



Multi-Purpose

Family of Ammo CDD

Artillery & Mortars

Near Term:

- Fielding light-weight wpns / Precision ammo
- Producing High Explosive rounds with insensitive munition fills
- C-DAEM Bridging Strategy
- Compatibility with M-Code GPS
- High Explosive Guided Mortar (HEGM)
- Lightweight digital fire control
- Improved HOB (iMOFA/iMOFM)

Mid-term:

- Longer range through ammo improvements
- Increased lethality for 155mm (cluster munition replacement)

Long-term:

- Longer range through weapon upgrades
- Extended Range Autonomous Weapons

Demolitions:

Near-term

- Improving producibility of Modernized Demolition Initiators components (i.e., blasting cap)

Mid-term

- Reducing collateral damage
- Developing more IMX compliant items

Long-term

- Non-kinetic neutralization of explosives from standoff

Bomb Production:

Near-term:

- Address increases in Bomb requirements

Affordable Precision

Increased Range

Assured PNT

Increased Lethality

Improved Safety





PEO Ammo Focus Areas (cont.)



Medium Caliber

Near-term:

- Increased lethality through warhead and round design
- Door Breach

Mid-term:

- Extended range and guidance

Long-term:

- Collaborative/swarming effects
- "Ammo on Demand"

Airburst Capability



Non-Lethal

Near-term:

- Improvements to the 40mm and 12 ga ammunition

Mid-term:

- More covert and passive marking of targets

Long-term:

- Integrated lethal and non-lethal effects and non-kinetic engagement

Increased Range



Shoulder Launched

Near-term:

- FMR of Multi-role Anti-armor Anti-personnel Weapon System (MAAWS)

Mid-term:

- Development of IAM

Long-term:

- Fielding of IAM
- Longer range defeat of advanced targets

Multi-Purpose



Area Denial

Near-term:

- Spider (all increments)
- Remote/autonomous emplacement and scalable effects - Gator Landmine Replacement Program (GLRP)

Mid-term:

Close-Terrain Shaping

Long-term:

Mid-Terrain Shaping Obstacles

Scalable Effects



Counter Explosive Hazard (CEH)

Near-term:

- Development of autonomous operations

Mid-term:

- Greater speed and standoff for detection marking and lower cost technologies

Long-term:

- Detection and non-kinetic neutralization of explosives from standoff

Standoff Neutralization



Grenades

Near-term:

- Benign smoke & fuze/primer upgrades

Mid to long term:

- Dual use grenades

Long-term:

- Non-kinetic effects and lighter weight

Lightening the Load





PEO
Ammunition



FY19-23 Army Requirements

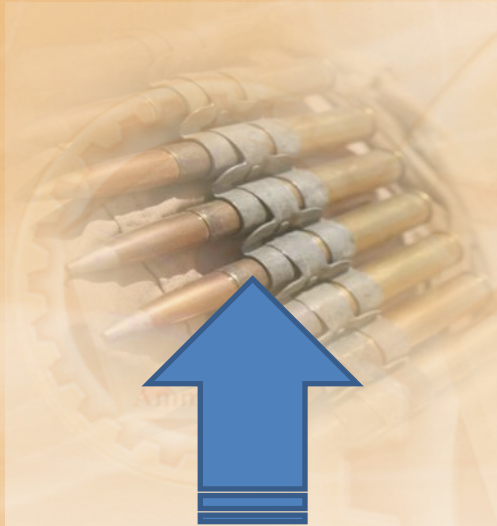
The munitions trend is an increase in both war reserve and training requirements

- Emerging factor that could further affect future requirements:
 - Potential increase in force structure
 - War reserve requirements increased due to changes to the war fight scenarios, number and type of BCTs in the campaigns, and changes to BCT structure
 - » Aviation Restructure Initiative
 - » 30mm on Stryker
 - » Mobilization training
 - Training requirements increased due to use of the current 1,015K personnel in force structure vice the 980K used in previous training requirements analysis
 - » Priority is maintaining funding to replenish training expenditures to support the DA G3 ability to authorize 100% of the annual Training Requirements
 - » The Army is expending more ammunition in training than it is acquiring
 - » ARSTAFF is assessing the funding needs to mitigate projected funding shortfalls as part of the POM 19-23 process

Assess the impact of increased requirements on the Organic and Key Commercial Ammo Production Capabilities



Trends in Army Ammunition Requirements (FY18-22 vs FY19-23)



- Minimal Increase

- Small Caliber
- Medium Caliber
- Mortar
- Signals
- Grenades



- Moderate Increase

- Demolition
- Tank
- Aircraft Flares



- Significant Increase

- Shoulder Launched
- Artillery Fuze and Primer
- 155mm Artillery
- Modular Artillery Charge (MACS)
- 30mm Stryker
- 20mm C-RAM



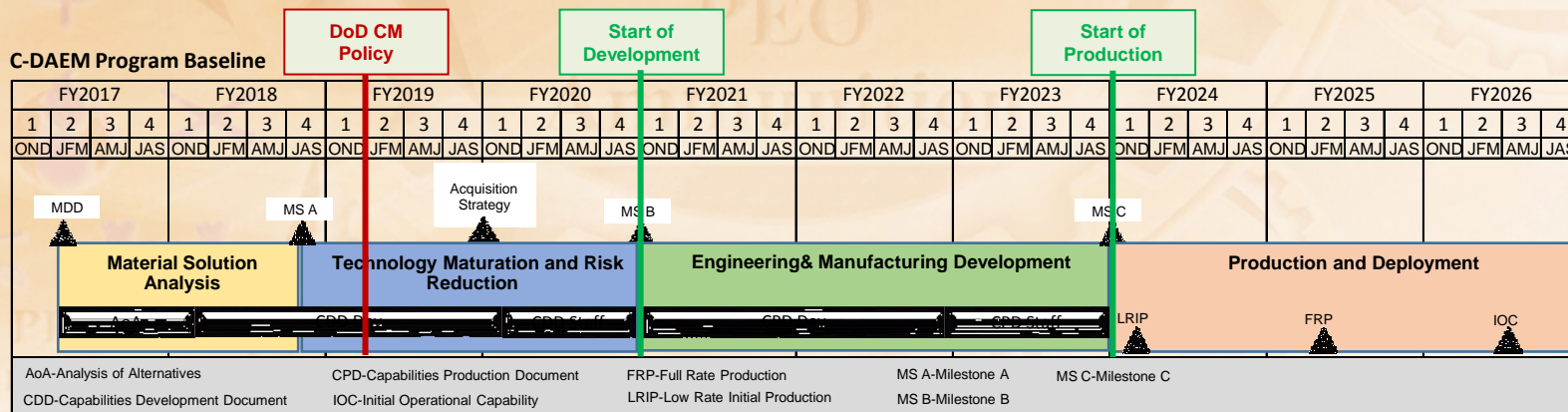
Capability Gaps & Operational Risk

- **Oslo Accord**: Full implementation of the DoD cluster munitions policy is scheduled for 1 Jan 2019 and will prevent US Armed Forces from using existing cluster munitions (DPCIM, APAM).
 - By end of 2018, no longer use cluster munitions that result in more than 1% UXO in intended operational environments
 - » No waivers
 - » Self-Deactivation can reduce hazards to civilians, but still considered UXO
 - Can use cluster munitions that exceed 1% UXO until the end of 2018, but use must be approved by COCOM
 - **Replacement Program**: Cannon-Delivered Area Effects Munition (C-DAEM)
- **National Landmine Policy**: Prohibits the Use, Stockpiling, Production and transfer of Anti-Personnel Mines. There are no current policy compliant systems capable of replacing the Anti-Personnel Mines role of conducting Deep Terrain Shaping (17km and beyond)
 - **Replacement Program**: Gator Landmine Replacement (GLMR)
- **Unmanned Aerial Systems (UAS)**: A decade ago unmanned aerial systems were used only by a handful of industrialized countries armed forces. Now with a rapidly growing commercial industry UAS' are cheap ,readily available and being used by ISIS, Hezbollah and other terrorists groups for both surveillance and to carry and release munitions
 - **Defense**: Counter-Unmanned Aerial Systems (C-UAS)



DoD Position on Cluster Munitions

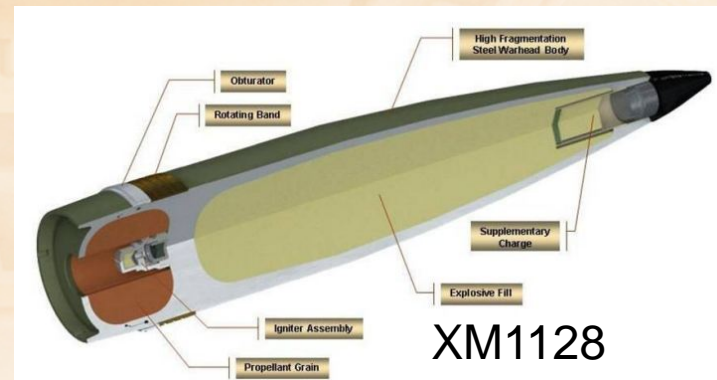
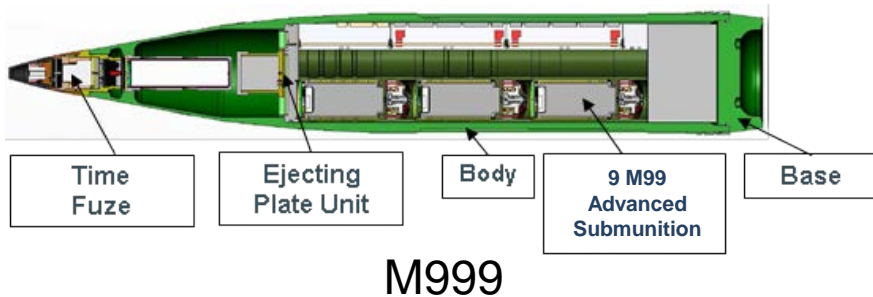
- DoD Policy on Cluster Munitions (19 June 2008):
 - Implemented to minimize unintended harm to civilians from Unexploded Ordnance (UXO)
 - Loss of cluster munitions creates a capability gap starting in Jan. 2019
 - Policy eliminates use of 155mm Dual-Purpose Improved Conventional Munition (D-PICM)
- Solution: Cannon-Delivered Area Effects Munition (C-DAEM) Program
 - Develop & deliver a **FULL Area Effect** capability to mitigate or eliminate gaps for engagement of area targets, poorly located targets, moving targets, counter-fire, and suppression of enemy air-defense (SEAD).
 - Provides fires/counter fires overmatch (range and lethality).
 - Delivers efficient effects against personnel and light to heavy mechanized vehicles in poorly located & GPS Degraded/Denied environments





Cannon-Delivered Area Effects Munition (C-DAEM) Bridging Strategy

- C-DAEM Bridge for loss of DPICM 1 January 2019
 - C-DAEM Bridge will deliver 155mm Sensor Fuzed Munition capability for Area Effects against Armor, goal of first deliveries Fall of 2018
 - C-DAEM Bridge accelerates development of 155mm XM1128 with enhanced lethality features.
 - C-DAEM Bridge will Test & Evaluate 155mm Improved Conventional Munition (ICM) projectile's compliance with DoD Cluster Munition Policy (achieve less than 1% unexploded ordnance)



BONUS

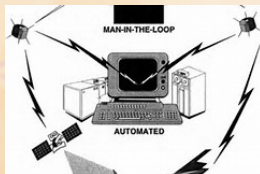


Gator Landmine Replacement Program (GLRP)



What is GLRP

- Technologies and systems to employ deep, mid and close range obstacles to:
 - Deny enemy access to terrain
 - Deny enemy freedom of action
 - Allow friendly forces to maneuver freely within the same battlespace
- The deployed components will likely be delivered by fixed-wing aircraft to the pre-planned locations
- GLRP will enable early situational awareness without exposing friendly forces while shaping the battlespace at deep operational ranges
- Will be compliant with current policy and will incorporate Man in the Loop controlled effects.



Innovative Acquisition Approach

- PM Close Combat Systems awarded DOTC contracts to 4 contractors to develop and demonstrate capabilities to meet the Program of Record requirements
- In parallel PM CCS is implementing a bridging strategy of rebuilding legacy Gator without Anti-Personnel mines which will be policy compliant
- The bridging strategy would be an interim solution that would provide the same legacy operational effect within 5 years to support Warfighter needs





Counter Unmanned Aerial Systems (C-UAS)

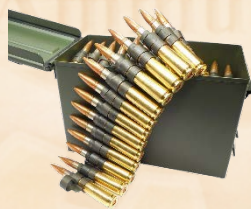
- Production of commercial UAS' is a rapidly growing industry
- UAS' are cheap and readily available
- UAS' are being used by ISIS and other terrorists groups for surveillance and to carry out terrorist acts against military and civilian targets
- ARDEC and PEO Ammo are working on a number of possible solutions to counter the UAS threat
- Potential candidates include the Ballistic Low Altitude Drone Engagement (BLADE) and the 40mm C-UAS Net Warhead Technology
- Small Cal Solution - Ballistic Low Altitude Drone Engagement (BLADE)
 - C-UAS Interceptor using .50 cal. Munition
 - Payoff: Detects, tracks and defeats enemy UAS using an organic, low cost, low collateral damage solution
- Medium Cal Solution - 40mm C-UAS Net Warhead Technology
 - Non-lethal CUAS launched from a man-portable grenade launcher or Stryker LEDS Launcher
 - Payoff: Uses existing systems to launch a non-destructive method to incapacitate and recover the enemy UAS



Precision Fire Control Radar (PFCR)



Common Remotely Operated Weapon Station (CROWS)



Small Caliber (0.50 cal) C-UAS munition



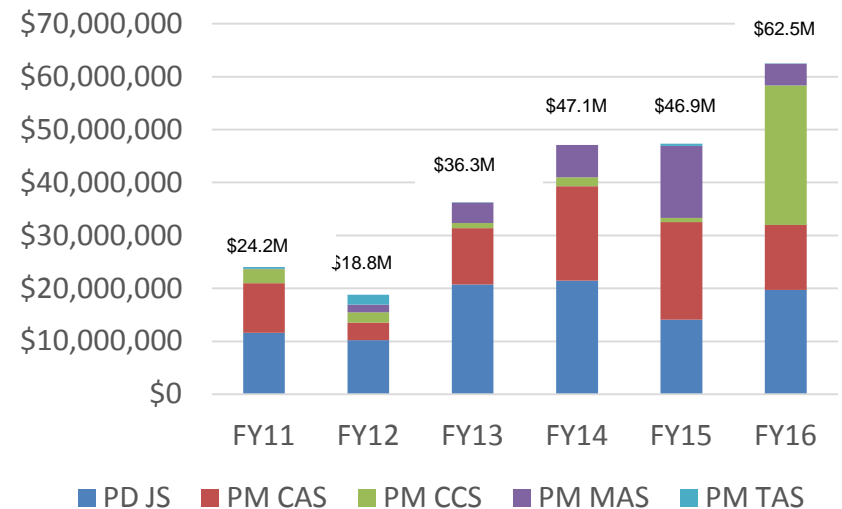


Need for Speed

PEO Ammunition initiatives to increase the speed of acquisition

- Bridging Strategies (ex. C-DAEM, GLMR, IAM)
- DD250 versus Technical Proposals
- Other Transaction Authority (OTA)
- Longer Contract/Higher Values
- Bundling Family of Items
- Cleansheeting
- Ceiling Values
- Cross Leveling
- Special Defense Acquisition Fund (SDAF)

PEO Ammo's Use of DOTC (FY11-16)



(Through 30 SEP 2016)



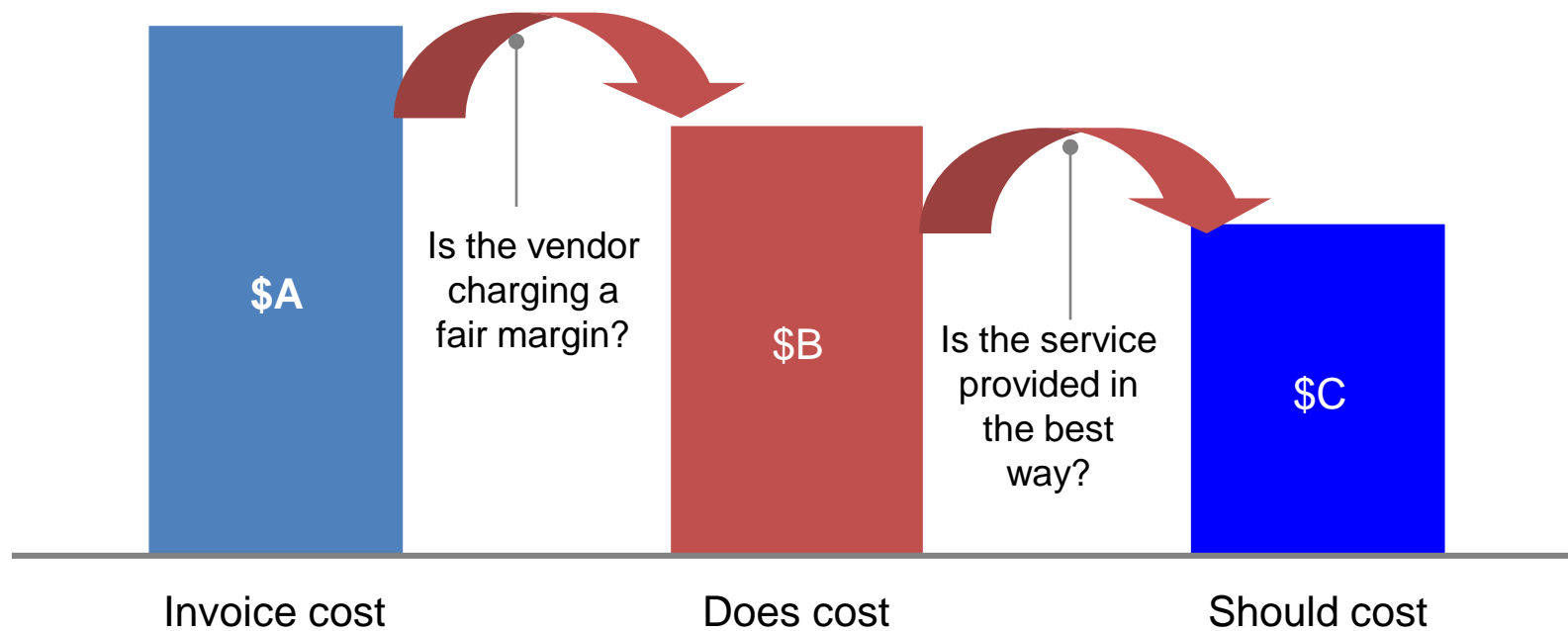
Cleansheets help you change the conversation from “does cost” to “should cost”

- Understand Supplier costs
- Increase Cost Transparency
- Improve Negotiation Power
- Find Mutually Beneficial Solutions

PEO Ammo Programs

- Precision Guidance Kit (PGK)
- PSS-14C
- M829A4

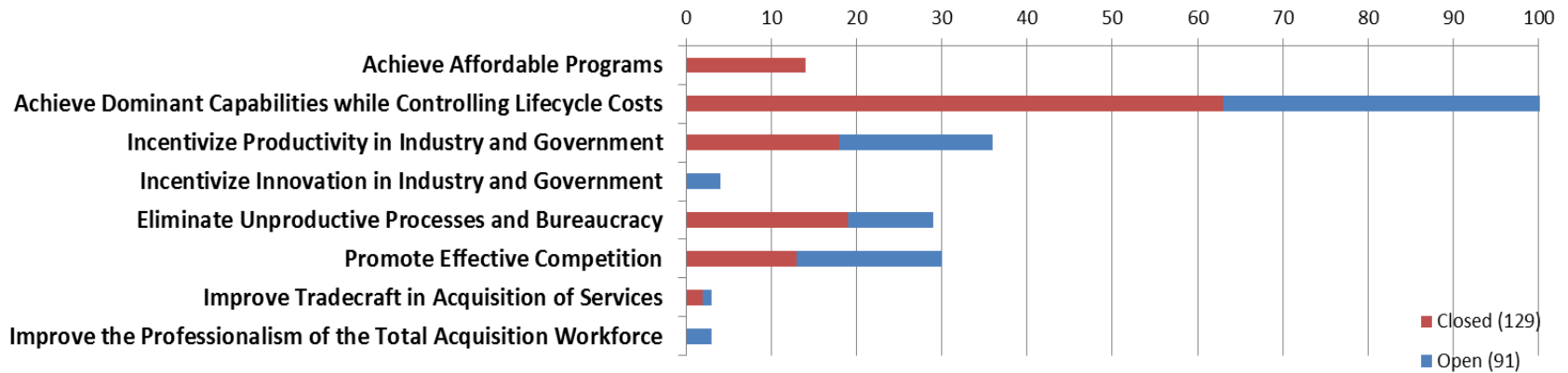
- M141 Bunker Defeat Munition (BDM)
- Bombs
- Lake City



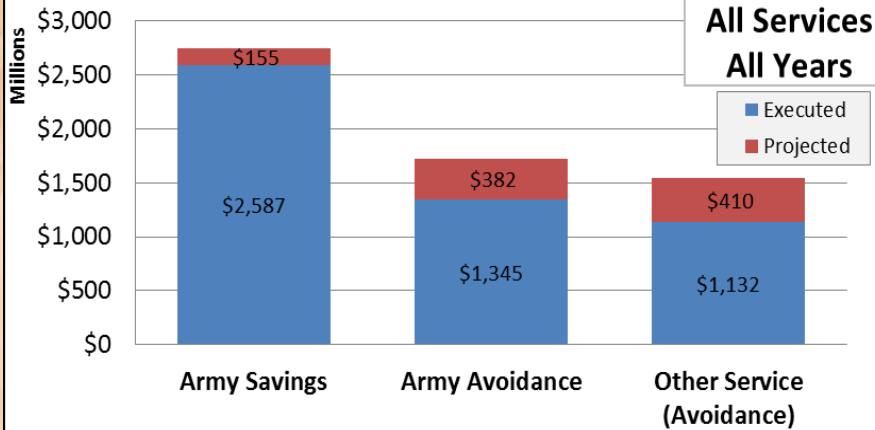


PEO Ammunition Better Buying Power

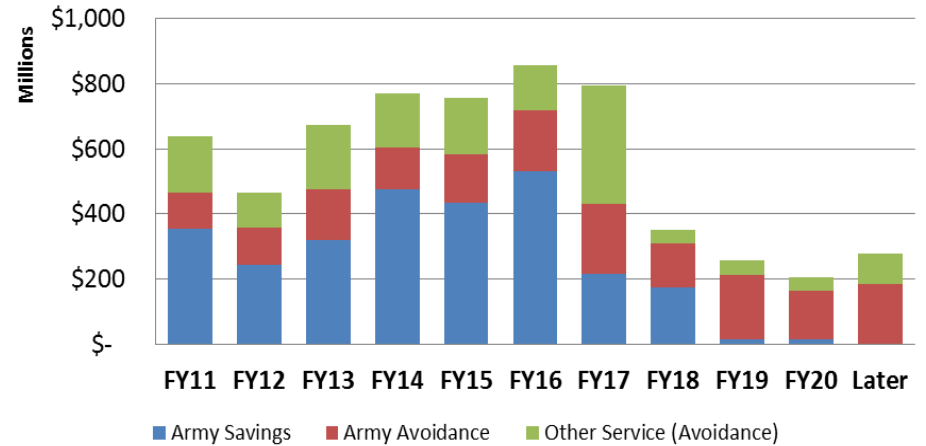
220 Initiatives Across All BBP Focus Areas



\$6.01B Savings & Avoidance



Savings & Avoidance By Year





Single Manager for Conventional Ammunition (SMCA) Customer Satisfaction Survey



FY15 SMCA Customer Survey Results

Category	Individual Metric	Service Ratings						FY15 Average Score	
		USAF	USMC	IMSC	PMA 201	PMA 242	USSOCOM		
Transition	1. Participation in the transition of SMCA-assigned conventional ammunition	Satisfactory	↑ Excellent	Good	↑ Good	Good	↑ Excellent	↑↑ 1.25	
	2. Management of the transition process	Needs Improvement	↑ Good	↓ Satisfactory	Needs Improvement	Good	↑ Excellent	↑ 0.50	
Production Base	3. Identification & incorporation of new manufacturing technologies	Needs Improvement	Good	Good	↑ Satisfactory	Satisfactory	↑ Good	↑ 0.38	
	4. Industrial Preparedness Planning	Needs Improvement	Good	↑ Good	↓ Satisfactory	Satisfactory	↑ Excellent	↑ 0.63	
	5. Coordination on significant production base issues	Needs Improvement	Excellent	Good	↑ Good	↑ Satisfactory	↑ Excellent	↑ 0.94	
	6. Management & investment in the conventional ammo production base	Satisfactory	Excellent	Good	↑ Satisfactory	Satisfactory	↑ Excellent	↑↑ 1.13	
	7. Section 806 processing	Good	Good	Good	Satisfactory	Satisfactory	↑ Excellent	↑ 1.13	
Acquisition	8. Participation and influence in the IPT process	Good	Excellent	↓ Satisfactory	↑ Satisfactory	Good	↑ Excellent	↑ 1.31	
	9. Procurement Planning	Needs Improvement	↑ Excellent	Needs Improvement	Needs Improvement	Satisfactory	↑ Excellent	↑ 0.56	
	10. Procurement Administrative Lead Times (PALT) (NEW)	Needs Improvement	↑ Good	Satisfactory	↑ Satisfactory	Satisfactory	↑ Excellent	↑ 0.50	
	11. Source Selection Process	Good	↑ Excellent	Good	Satisfactory	Satisfactory	↑ Good	↑↑ 1.13	
	12. Accurate and timely program status	↑ Satisfactory	↑ Good	Needs Improvement	↑ Satisfactory	Good	↑ Excellent	↑↑ 0.69	
	13. Cost (all cost factors)	Satisfactory	↑ Good	Good	Satisfactory	Satisfactory	↑ Excellent	↑↑ 0.88	
	14. Configuration management	Good	Satisfactory	↓ Satisfactory	Satisfactory	Satisfactory	Excellent	↓ 0.75	
	15. Product quality	Satisfactory	Excellent	Good	↑ Good	Satisfactory	↑ Excellent	↑ 1.19	
	16. On-time delivery	Needs Improvement	↑ Good	Satisfactory	Needs Improvement	↑ Satisfactory	↑ Excellent	↑↑ 0.44	
	17. Management of customer funds	↑ Good	↓ Good	↓ Satisfactory	Good	Satisfactory	↓ Satisfactory	↓ 0.56	
	Logistics	18. Requisition processing for items in inventory	Good	Good	Good	Satisfactory	Satisfactory	Excellent	1.13
		19. Inventory management	Satisfactory	↓ Satisfactory	↑ Good	Needs Improvement	Satisfactory	↑ Excellent	↑ 0.56
		20. Ammunition surveillance (NEW)	Satisfactory	Good	Good	Satisfactory	Satisfactory	↑ Excellent	↑↑ 0.88
		21. Wholesale storage (NEW)	Satisfactory	Good	Satisfactory	Satisfactory	Satisfactory	↑ Excellent	↑↑ 0.75
		22. Transportation and handling (NEW)	Satisfactory	↓ Good	↑ Good	Satisfactory	Satisfactory	↑ Excellent	↑ 0.88
	Customer Service	23. Accommodate specific requirements/requests	Good	Excellent	↑ Good	Satisfactory	Satisfactory	↑ Excellent	↑ 1.38

FY16 SMCA Customer Survey Results

Category	Individual Metric	Service Ratings						FY16 Average Score	FY15 Average Category Score
		USAF	USMC	IMSC	PMA 201	PMA 242	USSOCOM		
Transition	1. Participation in the transition of SMCA-assigned conventional ammunition	Satisfactory	↑ Excellent	Good	↑ Good	Good	↑ Excellent	↑ 0.75	0.75
	2. Management of the transition process	↑ Satisfactory	↑ Excellent	↓ Satisfactory	↑ Satisfactory	↓ Satisfactory	↓ Satisfactory	↑ Good	
Production Base	3. Identification & incorporation of new manufacturing technologies	↑ Good	Good	↓ Satisfactory	Satisfactory	Satisfactory	Satisfactory	Good	↑ 0.75
	4. Industrial Preparedness Planning	↑ Satisfactory	Good	Good	Satisfactory	Satisfactory	Excellent	↑ 0.88	
	5. Coordination on significant production base issues	↑ Good	↓ Good	Good	↓ Satisfactory	Satisfactory	Excellent	↑ 1.13	
	6. Management & investment in the conventional ammo production base	↑ Good	↓ Good	↑ Excellent	↑ Good	Satisfactory	Excellent	↑ 1.31	
	7. Section 806 processing	Good	↑ Excellent	↑ Excellent	Satisfactory	Satisfactory	Excellent	↑ 1.50	
	8. Participation and influence in the IPT process	Good	Excellent	Satisfactory	Satisfactory	Good	↓ Good	↓ 1.06	
	9. Procurement Planning	↑ Satisfactory	↑ Excellent	↑ Satisfactory	Needs Improvement	↑ Good	↓ Good	↑ 0.75	
Acquisition	10. Procurement Administrative Lead Times (PALT) (NEW)	↑ Satisfactory	↓ Satisfactory	Satisfactory	↑ Satisfactory	Satisfactory	↓ Satisfactory	↓ -0.06	
	11. Source Selection Process	Good	↑ Excellent	Good	Satisfactory	Satisfactory	Good	↑ 1.13	
	12. Accurate and timely program status	Satisfactory	Good	↑ Satisfactory	↓ Needs Improvement	Good	Excellent	↑ 0.75	
	13. Cost (all cost factors)	Satisfactory	Good	Good	Satisfactory	Satisfactory	Excellent	0.88	
	14. Configuration management	Good	Satisfactory	↑ Excellent	Satisfactory	Satisfactory	Excellent	↑ 1.00	
	15. Product quality	Satisfactory	↓ Good	Good	↓ Satisfactory	↑ Good	↓ Good	↓ 0.69	
	16. On-time delivery	↑ Satisfactory	Good	↑ Good	Needs Improvement	Satisfactory	Excellent	↑ 0.81	
	17. Management of customer funds	Good	↓ Satisfactory	↑ Good	↓ Satisfactory	↑ Good	↑ Excellent	↑ 0.94	
	Logistics	18. Requisition processing for items in inventory	Good	Good	↑ Excellent	Satisfactory	Satisfactory	Excellent	↑ 1.25
		19. Inventory management	Satisfactory	↑ Excellent	Good	↑ Satisfactory	Satisfactory	Excellent	↑↑ 1.13
20. Ammunition surveillance (NEW)		Satisfactory	Good	Good	Satisfactory	Satisfactory	Excellent	0.88	
21. Wholesale storage (NEW)		Satisfactory	Good	↑ Good	Satisfactory	Satisfactory	Excellent	↑ 0.88	
22. Transportation and handling (NEW)		Satisfactory	↑ Excellent	Good	Satisfactory	Satisfactory	↓ Good	0.88	
Customer Service	23. Accommodate specific requirements/requests	↑ Excellent	↑ Excellent	Good	Satisfactory	Satisfactory	Excellent	↑ 1.63	1.63

ns: = Area of Concern = Positive Indicator
 = Amber = Needs Improvement (performance does not meet most expectations)
 = Dark Green = Good (performance meets most expectations)
 = Increase in Rating/Decrease in Rating compared to FY15 results (no symbol means no change in rating)
 = Increase in Rating/Decrease in Rating with > or < 0.5 delta from FY15 results

2016 FINDINGS:

- ✓ No “Areas of Concern”
- ✓ 22 out of 23 questions are “Positive Indicators” (96%)
- ✓ 134 of 138 responses are “Satisfactory or Better” (97%)



GOCO Army Ammunition Plant (AAP) Modernization Strategy

Key Objectives:

- Increase manufacturing readiness to meet current & future requirements
- Reduce AAP operating costs and footprint
- Improve safety and environmental compliance
- Improve quality and efficiency
- Improve Quality of Work Environment (QWE)

- Radford (VA) - Propellants
- Lake City (MO) - Small Cal
- Holston (TN) - Explosives
- Scranton (PA) - Metal Parts
- Iowa (IA) - Load/Assemble/Pack (LAP)
- Milan (TN) - LAP
- QCCCF (IL) - Metal Parts



Approach:

- Identify, consolidate and prioritize production deficiencies, aligning with Joint Warfighter needs
- 1-N Priority List Scoring Criteria
 - (1) Operational Continuity (30%), (2) Environmental (20%), (3) Safety (15%), (4) Cost (20%), (5) Return on Investment (15%)
- Characterize “Critical” requirements
- Target organic capabilities & capacities not found in the Commercial Sector

SMCA DODI 5160.68

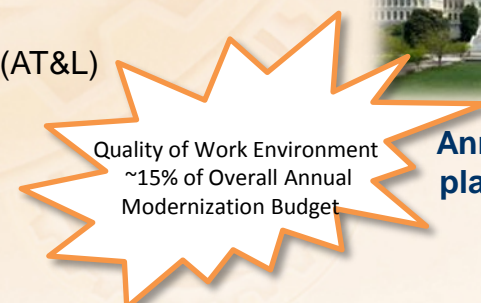
“Manage and Invest..... To Ensure Adequate Production Base that Supports SMCA Assigned Products”

Requirements:

- **Critical:** Investment necessary to avoid significant supply disruptions or to provide an immediate improvement to operating efficiencies. Also includes efforts requiring action in order to meet specific environmental compliance regulations or safety standards.

Validation:

- Process establish w/ HQDA G8/G3/G4; AMC, ABO, ASA(ALT); USD(AT&L)
 - Determination & Findings (D&F) used to validate requirement
 - <\$10M PEO Ammo approves
 - >\$10M USD (AT&L) approves



Annual long range planning report to Congress



Cross-leveling Program



- **History**

- Implemented in FY1997
- Office of the Executive Director for Conventional Ammunition facilitates the Military Munitions Cross-leveling program

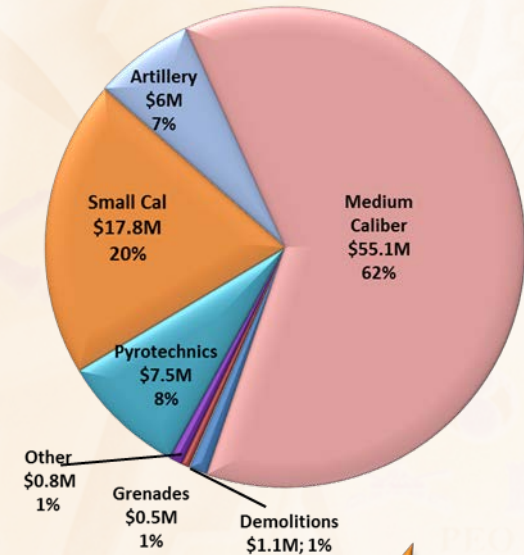
- **Purpose**

- Provides formal process for transfer of conventional military munitions (to include missiles) deemed in long supply between Military Departments to fulfill munition requirements
- Military Services assess munitions inventory annually for potential long-supply stocks that may satisfy requirements of another Military Service

- **Benefits**

- Validates/Justifies military munition inventories
- Minimizes potential excess
- Avoids unnecessary procurement
- Avoids unnecessary demil

FY16 Military Munition Cross-Leveling By Family



\$88M in Cost Avoidance for FY2016



Ammunition Demilitarization

The Single Manager for Conventional Ammunition (SMCA) is responsible for demilitarization and disposal of excess, obsolete and unserviceable ammunition for all military services

PATH TO DEMILITARIZATION



Field Service Ammunition



STEP 1

Ammunition deemed excess, obsolete, unserviceable



STEP 6

Ammunition sent to demil



STEP 2

Ammunition offered to other military services (cross leveling)



STEP 3

Ammunition offered to other Federal Agencies (FBI, ATF, etc)



STEP 4

Ammunition offered to state government agencies



STEP 5

Ammunition offered to foreign governments





Re-use of Demil Stocks

PM CAS M483 Re-use

Downloaded M483A1 Projectile Metal Parts are used to create five new projectiles



M42/M46 DPICM Grenades

M483A1 DPICM Projectile

Provides extended range at lower cost than existing projectiles!

PM Precision Fires MLRS Re-use



PODS for GMLRS

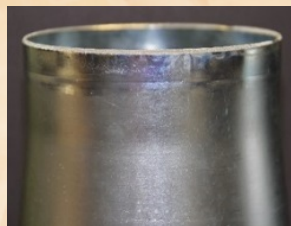
Rocket Motors – Low Cost rocket Trainer



PM MAS Tank Ammo Re-use



Steel Cartridge Cases



Propellants – M30, JA-2



Other Services Re-use



US Navy Torpedoes – Otto Fuel, batteries



USAF Cluster Bombs – FZU-39
Altimeter fuzes, CB411 containers

New production cost avoidance in hundreds of millions \$\$, also demil cost avoidance



Global Ammunition Power Projection

Joint Warfighter Support

NORTHCOM
Value: \$48M

EUCOM
Value: \$291M

PACOM
Value: \$469M

SOUTHCOM
Value: \$17M

CENTCOM
Value: \$4.7B

AFRICOM
Value: \$41M

Foreign Military Sales

67 Countries
331 Open
Foreign Military
Sales Cases
\$5.5B
Total Value

Global Presence

- Leveraging Ammunition Positioning for the Joint Warfighter and our Allies
- Building Coalition Capacity

Non Standard Ammo	24.6%
Mortars	13.7%
Small Caliber	12.6%
Artillery	11.9%
Med Caliber	11.7%
Other	25.5%



NSA Supplier Base

- Non Standard Ammunition (NSA) is ammunition that has not been Type Classified by Department of Defense, is not in U.S. inventory, and is designed for Former Soviet Union (FSU) weapons platforms
- Supplier base is comprised of manufacturers in Eastern European countries, FSU
- Current FSU supplier base has been producing NSA for decades
- Supplier base manufacturers are subcontracted by U.S. Prime contractors who are contracted by U.S. Government

- 300 Products Managed
- Over 942M Rounds Delivered
- Over \$1.34B Procured





Summary

- Dangerous place
- Munitions are critical
- Reform & accelerate everything we do
- Continue to grow technologies

PEO
Ammunition

PEO
Ammunition

PEO
Ammunition

PEO
Ammunition



Meeting Joint Warfighter's Needs!



Over 20B
Rounds
Delivered
FY02-16

PEO Ammunition

PEO Ammunition

