



# 2024 NDIA Munitions Executive Summit

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# PM MAS

## Mission, Vision and Priorities

### Mission:

PM MAS develops, equips and sustains integrated lethal direct fire ammunition effects to enable joint and Allied warfighters overmatch in the battlefield

### Vision:

Innovative and dedicated hard-working professionals ensuring our warfighters prevail in battle and return home safely

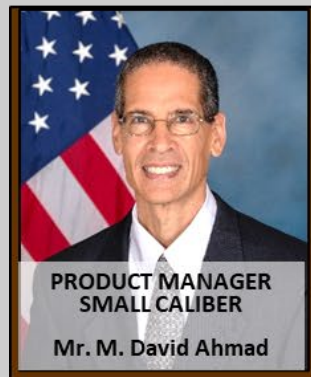
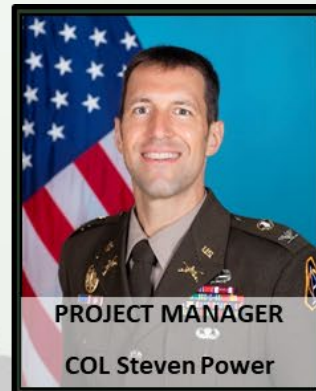
### Objectives:

1. Develop and deliver reliable and timely ammunition to the warfighter
2. Inform and influence future capability requirements
3. Create opportunities to grow a multi-talented acquisition workforce/team
4. Shape and optimize the industrial base (organic and commercial)





# PM MAS Organization



**DEPUTY PRODUCT MANAGER**  
Mr. Robert Muth



**DEPUTY PRODUCT MANAGER**  
Ms. Kaitlyn Tani



**DEPUTY PRODUCT MANAGER**  
Mr. Reinaldo Martinez



**DEPUTY PRODUCT DIRECTOR**  
Ms. Jessica Vanatta (Actg)





# Family of Products

557  
PM-MAS Products  
Under Mgmt.

**85 Products**

15  
Total

RRA OWL LSCA 6.8mm .338 NM

**Development**

*Small Caliber*

M1037 M200 M193 M855 M856A1 M855A1 M973 M974 M62 M62A1 M80 M80A1 M82 M276 M118 MK248 M1A1 M33 M17 M20 M8 M211 MK257 M917 M199A1 M63A1 M2A1 12 Gauge Buckshot M1030 Breach M1041 M1071 M1042 M882 MK243 MHS

**PRODUCTION**

**50 Products**

XM121 XM122 M433E1 XM1166 XM1176 XM1182 XM1173 XM1170 XM1175 M918E1 M781E1 M430A1 M918 M385A1 M781 M433 M992 M662 M661 M585 M583A1 MK244 M940 PGU27 PGU28 PGU30 M791 M792 M793 M910 PGU23 PGU25 PGU32 M919 M788 M789 XM950 KM1198 MK238 MK239 MK258 MK266 MK310 MK317 PGU14 PGU15 PGU138

**Development**

*Medium Caliber*

**PRODUCTION**

PM MAS develops, equips and sustains integrated lethal direct fire ammunition effects to enable joint and Allied warfighters overmatch in the battlefield

**22 Products**

XM1202 XM1203 XM1204

**Development**

*Large Caliber Special Ammunition & Weapon Systems*

7.62mm x 39&54R 40mm ATGMS & Launchers 60/82/120mm Mortar Ammo and Systems RPG & SPG-9 Recoilless 58 80mm AVN Rocket 155/122/152mm Artillery 90/125mm Tank 120MM KEW A4

**PRODUCTION** **PRODUCTION** **Development**

**400 Products Managed**

120MM (KEW A1 / IM HET)

Non NATO Munitions, Soviet Calibers



# PM MAS Support to Army Modernization Priorities

## Development Programs


**NGSW 6.8 FoA**

XM1184 (SP)  
XM1186/87 (GP/Trace)  
XM1188/89 (RRA/Trace)  
XM1192 (Blank)



**Precision FoA**

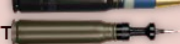
XM1224 .338 NM AM  
M118LR 7.62mm  
M1163 .300 NM  
M1162 .338 NM






**30x113mm**

XM1223 MMPA   
XM1211 HEP 


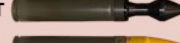
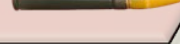
**30x173mm**

XM1182 HEAB-T   
XM1173 TP-T   
XM1170 APFSDS-T   
XM1172 TPDS-T 

**40mm**

XM1176 HV HEDP-AB   
M918E2 HV TP-DNT   
M433E1 LV HEDP 

**50mm**

XM1202 TP-T   
XM1203 APFSDS-T   
XM1204 HEAB-T 

**105mm**


Advanced Multi-Purpose 

## Platforms

**XM7**  
  
**XM250**  


**MK22**  


**M-LIDS**  
  
**M-SHORAD Inc 3**  


**Stryker ICVVA1-30mm**  


**Mk19**  
  
**M320**  


**XM30 COMBAT VEHICLE**  


**M10 Booker**  


## Capabilities

- Family of Ammo
- One Way Luminescence
- Enhanced Performance
- Increased lethality and probability of hit
- Integrated fire control, improved ergonomics

- Increased performance against hardened targets & improved accuracy
- Increased performance soft & hard targets

- Programmable fuze modes
- Proximity airburst against sUAS
- Counter defilade
- Armor penetration
- Enhanced lethality against personnel
- Minimize collateral damage

- Programmable fuze modes
- Enhanced lethality against personnel
- Lethality within urban structures
- Enhanced armor penetration
- Minimize collateral damage
- Ballistically matched training capability

- Programmable airburst
- Counter defilade
- Enhanced lethality
- Increased training capabilities

- Training
- Anti-materiel
- Airburst
- Anti-personnel

- Line of sight
- Multipurpose
- Defeat personnel at extended ranges





# Future PM MAS Competitive Opportunities

FY24/FY25				
Program/ Item/ Description	Projected RFP Release	Projected Award Date	Contract Strategy	Contract Type
12 Gauge Door Breaching	FEB 2024	SEP 2024	Competitive	FFP IDIQ
AMP	MAR 2024	JAN 2025	Competitive	FFP IDIQ
40mm NRE	JUN 2024	MAR 2025	Competitive	FFP IDIQ
30mm XM1225 APEX			Competitive (OTA-DOTC)	CPFF
30mm XM1223 MMPA	JUN 2023	MAR 2024	Competitive (OTA-DOTC)	CPFF
M548 Containers	SEP 2024	MAY 2025	Small Business Set Aside	FFP IDIQ
FY26				
Small Caliber Second Source	JUN 2025	MAR 2026	Competitive	FFP IDIQ
Medium Caliber NRE	JUN 2025	MAR 2026	Competitive	FFP IDIQ



# Small Caliber Ammunition

## Challenges

- **Supply chain challenges continue due to global shortages and increased prices on raw materials**
  - Shortages of propellant for boutique rounds of ammunition (PSR) as well as constituent materials (Antimony Sulfide) driven by OCONUS sources & commercial market demand
  - Grow 6.8mm Industrial Base
- **Replacement of ammunition inventories due to consumption from support of global threats**

## Industry Opportunities

- **Establishing new manufacturing processes or facilities for raw materials, either domestically or in stable regions of the world**
- **Addition of production lines at Government owned facilities for new and legacy items**
- **There are limited industry partners positioned to support classified projects**
  - Government is looking to qualify new and existing industrial partners



# Medium Caliber Ammunition

## Challenges

- **Fuze reliability and manufacturability**
- Long lead times and supply chain risks/issues
- High cost and limited volume/capacity for fuze proximity module production
- Limited manufacturers for liquid reserve battery
- Transitioning from EMD into production without significant cost risk
- Significant production unit cost growth
- **Industrial Base readiness for increased demand for cannon caliber ammunition**



XM1176



XM1182 XM1211 XM1223 M789

## Industry Opportunities

- Alternate propellant vendors
- Automation and cost reduction in fuze proximity module production
- New power sources or increased capacity and sources for liquid reserve batteries
- Exploit existing technology across calibers
- Investment in advanced manufacturing, assembly, and inspection processes
- Improve producibility and reduce cost in legacy ammunition
- Engage commercial industrial base to reduce lead-times on standard electronic components





# Large Caliber Ammunition

## Challenges

- **Fuze Technology**
- **Tank Training Propellant Capacity**
- **Onshoring of 120mm Armor Piercing Ammo Propellant**
- **Domestic supply of Benite**

## Industry Opportunities

- **Anticipating large FMS orders for tactical and training ammunition-a challenge for both Govt and Industry**



# SETI

## Challenges

- **Implementation of Digital Engineering**
- **3Di Technical Data Packages (TDPs)**
- **Munitions Chemical Specifications Modernization (MCSM)**
- **Supply Chain Risk Management (SCRM) of Raw Materials and Processors**
  - Single Point Failures
  - Fragile Sources of Supply (“Covered Foreign Entities”, Producers of low/inconsistent demand products, etc.)

## Industry Opportunities

- **Assessment, modernization and communication of digital ecosystems, tools, and practices across product lifecycle**
- **JPEO A&A PMs will soon request 3D model-based TDPs in our solicitations**
  - We will need Industry feedback to support 3D standards and requirements
- **Need Industry input of antiquated specifications and/or other issues with existing specifications**
- **Identify critical materials/suppliers during RFP process**
  - Manage and report during program execution (Including all sub-tier suppliers)





# Digital Engineering / Specification Modernization

- **Implementation of Digital Engineering (DE):**
  - DE is integrated digital approach that uses authoritative sources of systems' data and models as developmental continuum across disciplines to support lifecycle activities from concept through disposal
  - JPEO A&A wants to leverage Digital Engineering to achieve better management of programs and acquisitions
  - Effort will execute Digital Engineering 3Di TDP Conversions, aligned with industry intent and future contract actions
    - Developing Contract Language that supports digital model deliverables
    - Prescribing Technical, Interface and Architecture Standards for DE interchange, integration, and data / info management
    - 60 Models Complete (3 Full TDP's Converted) – (All TDPs converted by CY25)
  
- **Munitions Chemical Specification Modernization (MCSM) Effort:**
  - Phase III of MCSM Complete by 2QFY24 (11 Total Specs)
    - Aligned with Assured Munitions Priorities (Nitrated materials, black powder, AGB)
    - Supports modernization to qualify new production with updated specifications
    - Additional specifications TBD – Need Industry Input

## FY23 Specifications

<b>Antimony Sulfide</b>	MIL-A-159D (MAR 2023)
<b>Aminoguanidine Bicarbonate (AGB)</b>	MIL-A-60569 (SEP 2023)
<b>Strontium Nitrate</b>	MIL-S-20322B (APR 2023)
<b>Lead Nitrate</b>	MIL-L-20549 (SEP 2023)

## FY24 Specifications

<b>Strontium Peroxide</b>	MIL-S-612B (MAR 2024)
<b>Potassium Sulfate</b>	MIL-P-193A (MAR 2024)

## FY25 Specifications (Tentative)

<b>Methyl Centralite</b>	MIL-A-19719A
<b>Potassium Perchlorate</b>	MIL-P-217A
<b>Strontium Oxalate</b>	MIL-S-12210
<b>Zirconium</b>	MIL-Z-399D

# COL Steven Power, Project Manager

## Maneuver Ammunition Systems (PM MAS)

### US Army, JPEO Armaments & Ammunition

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# Questions?

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