



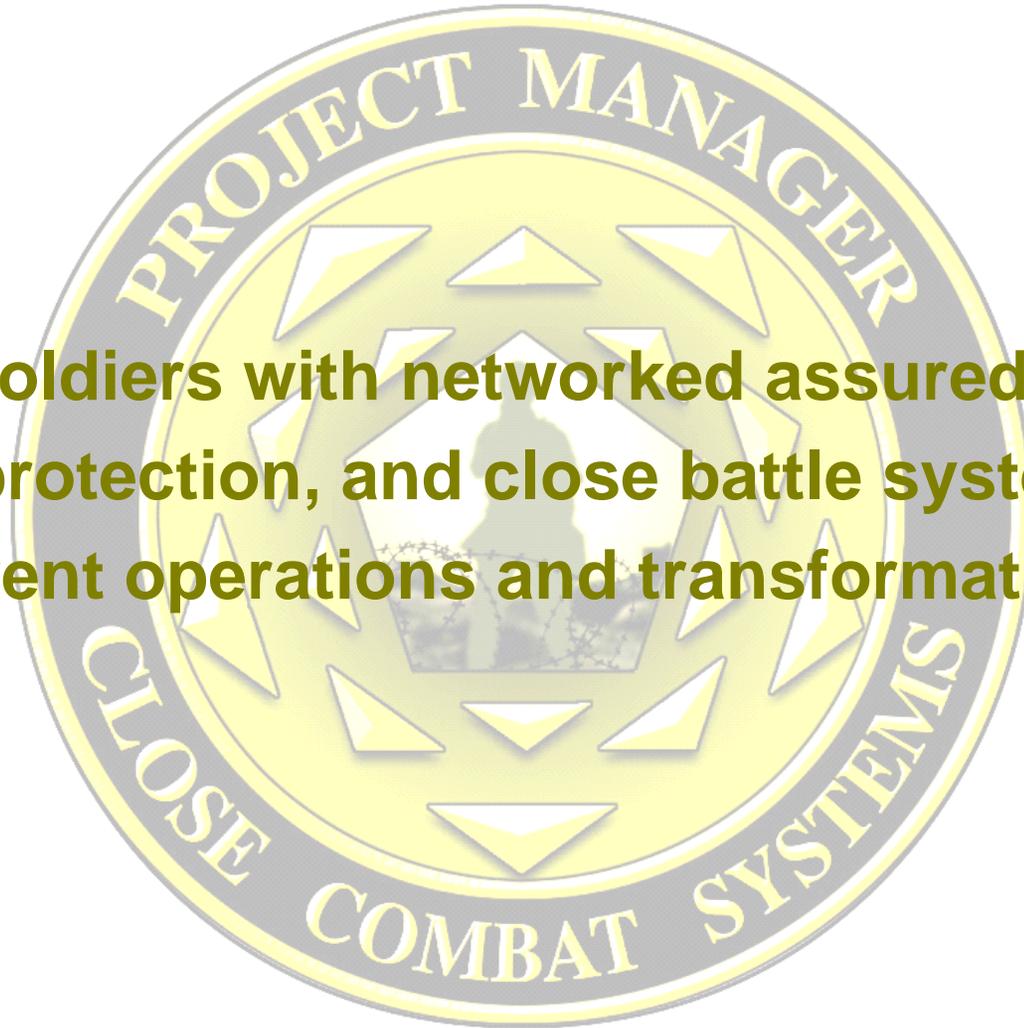
# PM-CCS Technology Insertion Opportunities NDIA Firepower Symposium

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# Mission Statement



**“Equip soldiers with networked assured mobility, force protection, and close battle systems for current operations and transformation.”**



# PM CCS Product Lines

- Networked Munitions/Legacy Mines
- Countermine
- Demolitions
- Grenades
- Pyrotechnics
- Shoulder-Launched Munitions
- Non-Lethal Systems & Munitions
- Special Projects (for SOCOM)
- EOD Equipment
- IED Defeat



# Organization & Programs Managed

**200+ Products  
Managed in FY07**

PM CLOSE COMBAT SYSTEMS

**Business Management**  
Bob Wisser

**COL Ray Nulk**  
Project Manager  
**Patti Felth**  
Dep. Project Manager

**Chief System Engineer**  
Ross Benjamin  
Technology Associate  
Harold Schlieske

**PdM IMS**  
LTC Jim Winbush  
Joe Pelino DPdM

**PdM Countermine  
& EOD Equipment**  
LTC Pete Lozis  
Phil Purdy DPdM

**PdM IED Defeat/  
Protect Force**  
LTC Karl Borjes  
Robin Gullifer DPdM

**Networked/  
Demolitions**  
Doreen Chaplin

**Pyrotechnics &  
Shldr-Launched  
Munitions**  
Santo Lombardo

**Force Application**  
Kevin Wong

(IMS) Intelligent  
Munitions  
System\*  
(ACAT II,  
FCS Incrmt. 1)

Standoff Mine  
Detection Systems:  
- GSTAMIDS\*  
- ASTAMIDS\*  
- AN/PSS-14  
AMCS FCT  
-Aardvark Med Flail  
-Hydrema Flail  
AMDS  
Husky MDS  
VOSS  
Interrogation Arms  
EOD Equipment

IED Mine Rollers  
Rhino  
FSEP  
Non Lethal  
Capability Set  
VLAD  
PVAB  
Taser  
ADS, AHD  
ISNLS  
**OVERSIGHT:**  
Bloodhound  
Rattlesnake  
Sparrow  
Cache Detection

Spider Networked  
Munitions System  
Legacy Mines  
- Claymore  
- MOPMS  
- Volcano  
Demolitions  
- Block Explosive  
- Sheet Explosives  
- Bangalore Torpedo  
- MDI  
- Det. Cord  
- Blasting Caps  
- Fuzes  
APOBS  
CAD/PAD  
EOD Ammo

Pyrotechnics  
- Flares  
- Signals  
- Simulators  
Shoulder-  
Launched  
Munitions  
- AT4 Family  
- BDM  
- LAW  
- Indiv. Assault  
Munition

Grenades  
- Lethal Grenades  
- Smoke Grenades  
- Launcher Grenades  
Non Lethal Ammo  
- MCCM  
- 40 mm  
- 12 gauge  
- NL Grenades  
- Mk19 Munitions  
Special Projects  
- RAMS  
- MI RAMS  
- GDS  
- TD-SYDET  
- SOF Demo Kit  
- RWBK

\* FCS Program4



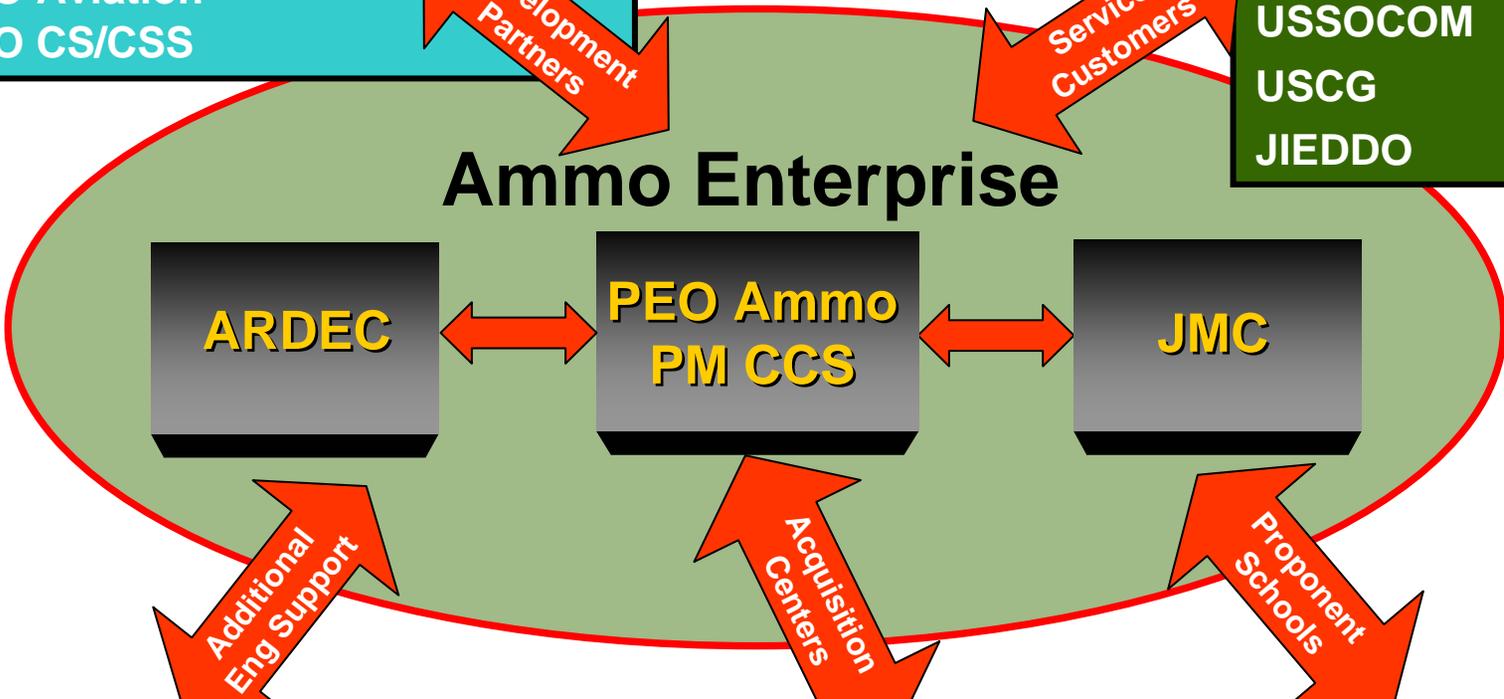
# PM CCS Life Cycle Management

Programs managed through IPTs supporting JM&L LCMC Philosophy

PM CLOSE COMBAT SYSTEMS

- PEO-STRI/PM TRADE
- PEO GCS/PM FCS
- PEO Soldier/PM Soldier Weapons
- PEO Chem Bio/PM-ODS
- PEO Aviation
- PEO CS/CSS

- USA
- USMC
- USN
- USAF
- USSOCOM
- USCG
- JIEDDO



- NVESD
- CERDEC
- TARDEC
- ARL
- ECBC

- PICATINNY
- ROCK ISLAND
- CECOM/FT. BELVOIR

- Infantry
- Engineer
- Armor
- Aviation
- Military Police
- Artillery

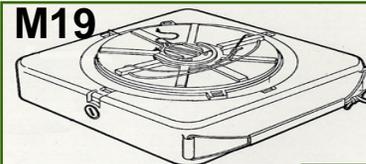
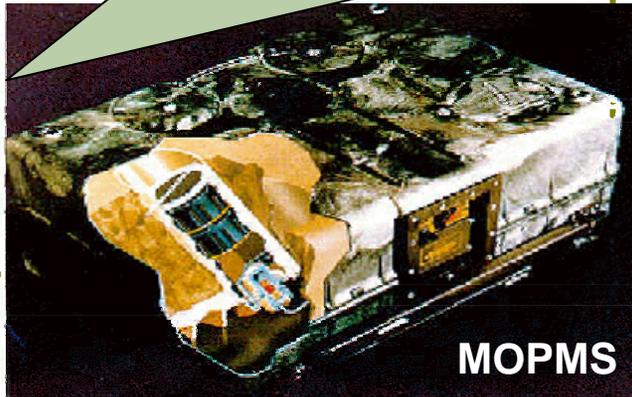


# Legacy Mines

LEGACY

## Technology Insertion Opportunities

- Mini Modular Claymore
- Vehicle-Mount Modular Claymore
- Low-Cost wireless initiators





# Networked Munitions Systems

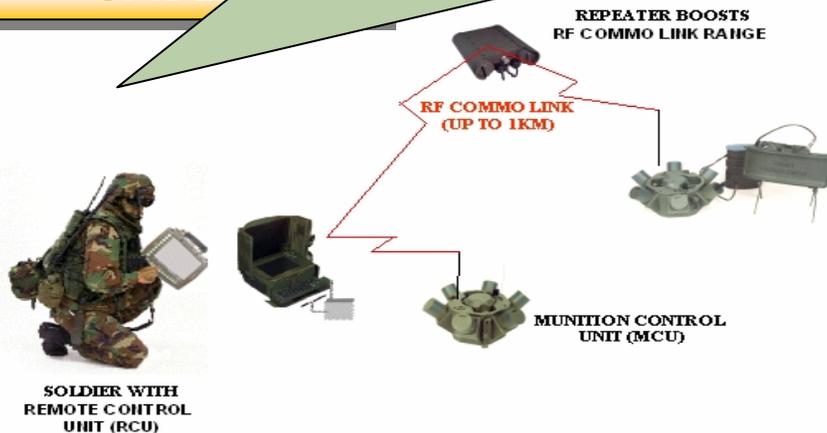
## Intelligent Munitions System

- COMMAND & CONTROL

### Technology Insertion Opportunities

- Better target identification in urban environments
- Improved battery life
- Control of scaleable effects
- Ability to deploy systems remotely
  - Sensor networks for surveillance
  - Near real-time battle damage assessment

### SPIDER





# Countermine

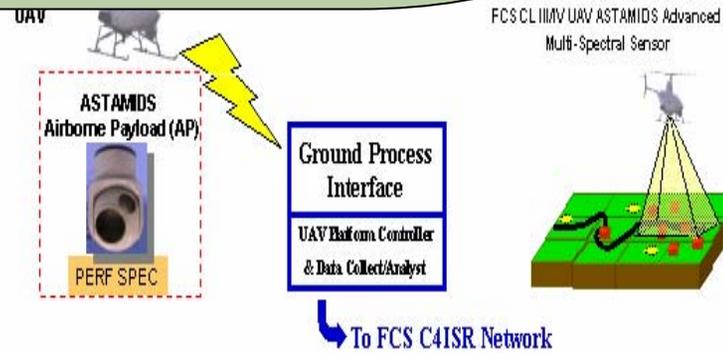
GSTAMIDS

ASTAMIDS

## Technology Insertion Opportunities

- Improved, less expensive detection sensors
- Small, lightweight unmanned ground and air vehicle payloads
  - Mine detection
  - Mine marking
  - Mine neutralization
- Automated mine identification/analysis
- Minefield breaching at extended standoff

PM CLOSE COMBAT SYSTEMS



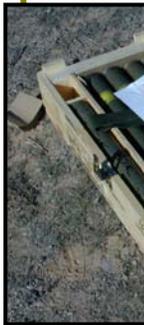


# Demolitions

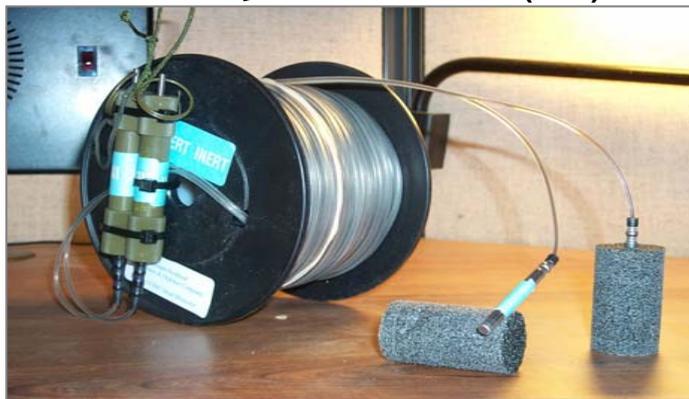
## DEMOLITION MUNITIONS

### Technology Insertion Opportunities

- More powerful demolitions
- Single stage cratering device
- Insensitive munitions compliance



Modernized Demo Initiators (MDI)



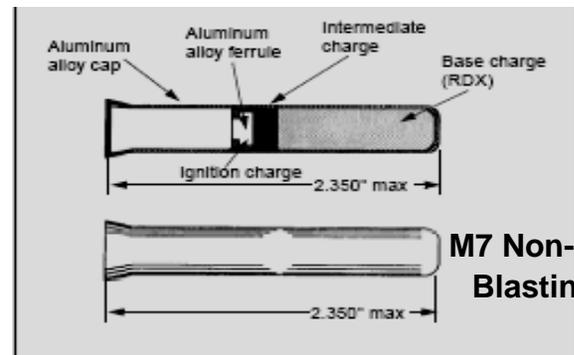
15lb Shaped Charge



M14/M15



M6 Electric Blasting Cap

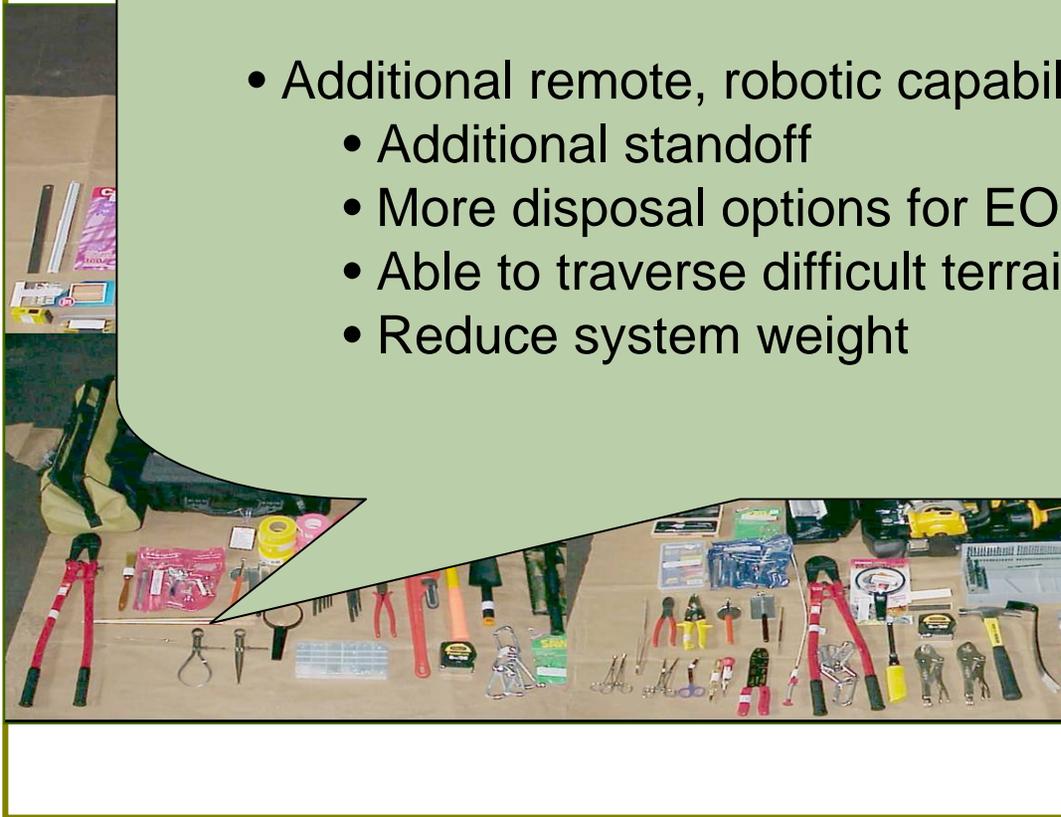




# Explosive Ordnance Disposal Equipment

## Technology Insertion Opportunities

- Additional remote, robotic capabilities
  - Additional standoff
  - More disposal options for EOD personnel
  - Able to traverse difficult terrain
  - Reduce system weight





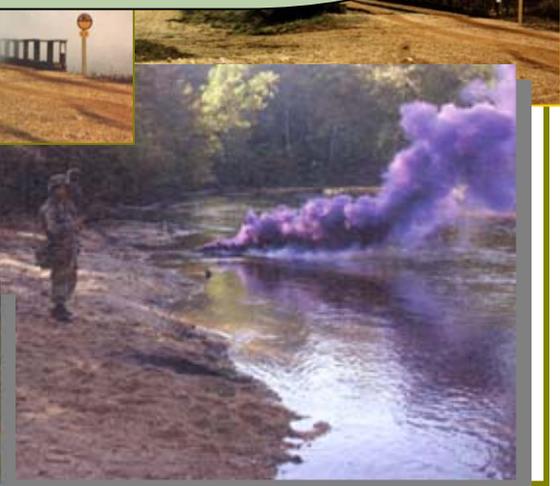
# Grenades

HAND GRENADES

SMOKE GRENADES

## Technology Insertion Opportunities

- Additional smoke colors
- Multiple smoke options in one item
- Enhanced incendiary device
- Replacement of environmentally unfriendly materials
- Insensitive munitions compliance





# Pyrotechnics

## FLARES

### Technology Insertion Opportunities

- Next generation of counter measure flares
- New and improved simulators
- Pocket sized hand held signals
- Replacement of environmentally unfriendly materials
- Improve pyrotechnic characteristics with nanotechnologies

## SIGNALS





# Shoulder Launched Munitions

PM CLOSE COMBAT SYSTEMS

## Technology Insertion Opportunities

- One system that defeats bunkers and light armored vehicles
- Reduced fragmentation toward the user at short ranges
- Reduce weight and size
- Reduce visual signature
- Insensitive munitions compliance



AT4-CS





# Non-Lethal Systems



FAMILY OF VEHICLE ARRESTING DEVICES

## RIOT CONTROL GEAR

### Technology Insertion Opportunities

- Scalable effects
- Increased range
- Single net solution for light and heavy vehicles
- New non-lethal capabilities



NON-LE



MODULAR CROWD CONTROL MUNITION



LAUNCHER GRENADES



12 gauge



66mm



STUN GRENADES

PM CLOSE COMBAT SYSTEMS



# Special Projects

## Technology Insertion Opportunities

- Ability to breach concrete and the rebar in a single shot
- Smaller, lighter systems
- Single RF/MI transmitter
- Better antennas



SOF De



MI RAMS  
Transmitter  
XM27



Type "A" Receiver  
XM39



Type "B"  
Receiver XM40



MI RAMS Transmitter  
w/ Auxiliary Battery  
Pack (M6)



TD SYDET





# IED Defeat

PM CLOSE COMBAT SYSTEMS



## Technology Insertion Opportunities

- Mature IED Defeat technologies
- Looking for modular plug and play capabilities for platforms

**MINE ROLLERS**  
**Self Protection Adaptive Roller Kit**



# Summary

- PM CCS is fully engaged in JM&L Life Cycle Management:
  - Accelerated acquisition/fielding of key systems/items for war fighting
    - Developing New Systems
    - Rapid Fielding of Non-Developmental Capabilities
  - Modernization & acquisition improvement of large number of current force ammo items
- New Warfare → New Challenges
  - Decreasing effectiveness of older products
- Many opportunities for technology insertion