PM CCS
PROJECT MANAGER CLOSE COMBAT SYSTEMS

ON EVERY MISSION

NDIA Future Force Capabilities
Remote Breaching - 26 Sept 2024

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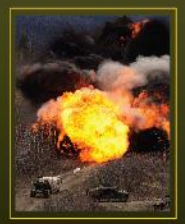
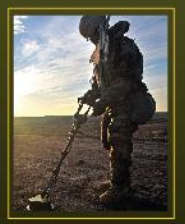
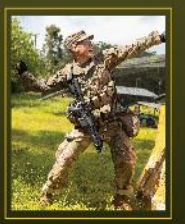








Team PM CCS

ON EVERY MISSION

- ***Manage 44% of the Army's conventional munition lethality***
- ***401 products: 328 Class V, 59 Class VII & 14 RDT&E***
- ***Average 100+ Contracting Actions/Year***
- ***Oldest PMO in the US Army, 1961 "PM-Selected Ammunition"***

Mission

Provide dominant and innovative lethal and protective capabilities for the Joint Warfighter through acquisition excellence

Vision

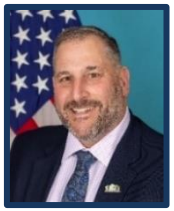
Skilled innovative team, empowered to deliver dominating close combat capabilities

Team PM CCS

Provide dominant and innovative lethal and protective capabilities for the Joint Warfighter through acquisition excellence

ON EVERY MISSION

Project Manager
COL Vinson Morris



Deputy Project Manager
Joe Pelino

Business Division Manager
Anita Polesky

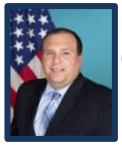
Chief, Product Support
Jamie Kiessling

Director, Program Integration & International Division
Michael O'Grady

Chief, Systems Engineer
Snehali Patel

Product Manager Terrain Shaping Obstacles

Product Manager
Stephen Bielamowicz



Deputy PdM
Chris Ayoub

Asst Product Manager(s)
MAJ PJ Walerko

Branch Chiefs
Top Attack - Renée Bober
Bottom Attack – Mike Tolerico

Product Director Combat Armaments & Protection Systems

Product Director
Stephan McFarlane

Deputy PdD
Brian Gruchacz

Branch Chief
G&IFC – Sean Stevens
SLDD – Derek DeReiter

Asst Product Manager
MAJ Matthew Strasser (Incoming)

Product Director Demolitions & Countermeasures

Product Director
Michael Burke

Deputy PdD
Jeremy Lucid

Asst Product Manager
CPT Cameron Fulford (Incoming)

Branch Chiefs
Pyrotechnics - Hugh MacMillan
Demolitions - Phillyp Lawson

PM CCS Portfolio

ON EVERY MISSION

Protection System

AN/PSS-14C Hand Held Mine Detector

SS-ADT

Launched Electrode Stun Device

Acoustic Hailing Device

Grenades

M67 Fragmentation Hand Grenade

M106 SOD-V_R

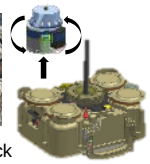
M111 Offensive Hand Grenade

M228 Practice Fuze

Smoke Grenades

Terrain Shaping Obstacle

XM204 Top Attack



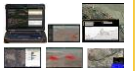
XM343 Standoff Activated Volcano Obstacle (SAVO)

XM250 Close Terrain Shaping Obstacle Inc 1

Next Gen. TA Munition System

Remote Control System

Obstacle Planning Tool



Demolitions

SLAM

Claymore

RF-Remote Activation System

Shaped Charge

Sheet Explosive

Det Cord

C-4 Block

Pyrotechnics

Countermeasure Flares

Signals

Simulators

Shoulder Launched Munitions

M141 Bunker Defeat Munition

M136 AT4CS-RS

XM919 Individual Assault Munition

EOD

EOD Response Kit, (ERK)

Hook and Line Kit

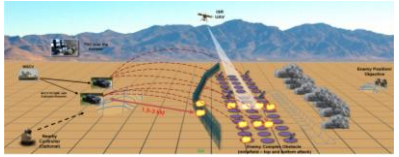
Tool Kit, Supplemental (Platoon Supplemental Kit)

EOD Tool & Equipment Kit (ETEK))

Breaching Systems

APOBS

MICLIC



XM123 GOBLN

XM123 Ground Obstacle Breaching Lane Neutralizer (GOBLN)

Breaching and Demolition Ground Engineer Robot (BADGER)

Ground Obstacle Breaching and Lane Neutralization (GOBLN)

BADGER and GOBLN are complimentary programs to provide all-weather, multi-domain breaching capability in support of the Army Warfighting Concept within the future operating environment.

- BADGER will deliver Human-Machine Integration (HMI) capability for ground-based, non-precision, close area breaching.
- GOBLN will deliver HMI capability for aerial-based, precision strike, in the close to deep areas.

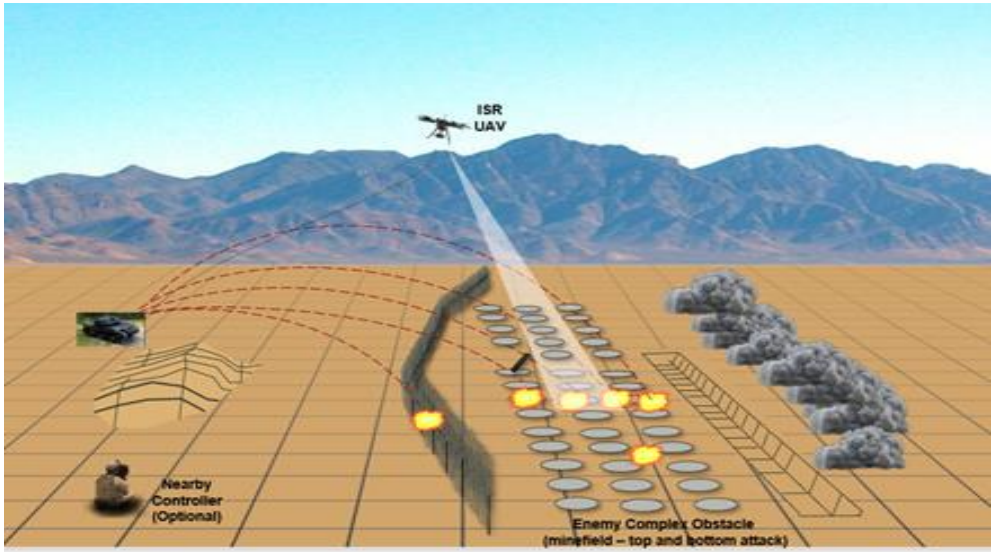
"We have the ability, and I think the moral responsibility to not trade blood for first contact with the enemy,"
Gen. James Rainey, commander of Army Future's Command

Ground Obstacle Breaching and Lane Neutralization (GOBLN), XM123

ON EVERY MISSION

Capability

- The XM123 GOBLN provides a Modular Mission Payload (MMP) for current and future vehicle platforms that is a reliable, scalable, and capable of providing targeted effects at stand-off ranges against current and emerging explosive and non-explosive obstacles
- The XM123 GOBLN future remote capability aligns with the NGCV-CFT priorities and Remote Combat Vehicle (RCV) breaching
- Remove Soldiers from the breach



- ✓ Abbreviated Capabilities Development Document (A-CDD)
- Currently in Technology Maturation and Risk Reduction Phase
- MS B - FY27
- MS C - FY30

Abbreviated – Capabilities Development Document Desired Characteristics

Desired Characteristics (DC)	
Priority	**Description**
DC #1: System Stand-Off	+/-1KM forward edge of obstacle
DC #2: Neutralize Explosive Hazards	Current and future Explosive Hazards (EH), up to 150m lane depth in a single combat load.
DC #3: Detection/ Sensors	Detection/Sensor targeting
DC#4: Fire Control Station	Manual and remote at +/- 1.6KM.
DC #5: Scalability	Neutralization proportionate to obstacle.
DC #6: Modular Mission Payload	Current and future manned or unmanned prime movers.
DC #7: Load and Reload	Load and reload with organic personnel and equipment in an operational environment
DC #8: Reporting	Provide obstacle information to the Command Post Computing Environment
DC #9: Marking	Provide an initial lane marking system by digital means
DC #10: Reliability	90% chance of successful mission employment
DC #11: Maintainability	Field Level Maintenance Ratio (MR) will not exceed 0.19 Maintenance Man-hours per Mission
DC #12: Cyber Survivability	Operate in a cyber-contested environment

Future breaching capability must reduce obstacles, provide a passable lane for maneuver, and remove Soldiers from the point of breach!

XM123: GOBLN

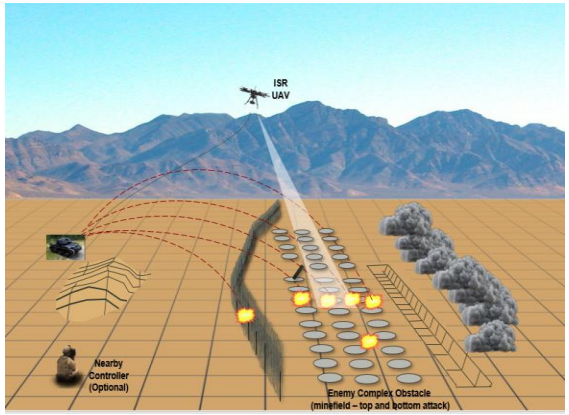
ON EVERY MISSION

Program Description

- Current and future near-peer counter mobility capabilities challenge current capabilities
- GOBLN will be a modular, scalable solution providing targeted effects against current and emerging explosive and non-explosive hazards
- Remove Soldiers from the breach

XM123 Desired Capabilities

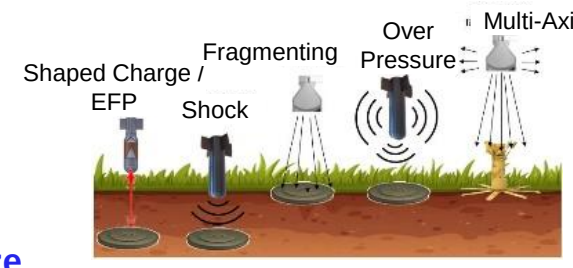
- Operate at Standoff >1KM
- **Detection** & **Neutralize** Explosive Hazards (Surface & Buried)
- Scalable effects
- Modular Mission Payload



Concepts being explored during TMRR

Detection

- Air and Ground platform systems w/Operator Connectivity & Autonomy
- On-board processing
- Trained algorithms using real and synthetic data
- Multiple Spectrums being Explored:
  - Electro-Optical (EO)
  - Infrared (IR) sensor
  - Ground Penetrating Radar
  - Light Detection and Ranging (LiDAR)
  - Multi-spectral



Directed Energy

Neutralize

- Air and Ground platform systems, Operator Connectivity & Autonomy
- Capable of carrying multiple neutralizers, out to 5km
- Onboard imaging systems confirm target and reports damage assessment
- Multiple systems can be delivered simultaneously and rapidly reloaded for fast paced target engagements

FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32
Technology Maturation & Risk Reduction Phase				B	Engineering & Manufacturing Development		C	Production & Deployment	FUE

XM123 GOBLN TMRR Touchpoints

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Touchpoint 1
Subsystem: Launcher

✓ **Conducted** 20 OCT 22 @ Picatinny, NJ

Purpose

- Demonstrate DEVCOM-AC Launcher subsystem: Automated Direct / Indirect Mortar (ADIM) to support stand-off neutralization concept

Findings

- Demonstrated modularity, scalability, system stand-off, and remote fire control
- Demonstrated Firestorm integration
- Assessed ADIM TRL/MRL

Touchpoint 2:
Subsystem: Detection

✓ **Conducted** 12 APR 23 @ FT AP Hill

Purpose

- Demonstrate DEVCOM -C5ISR's detection sensor payload with Aided Target Recognition (AiTR)
- Demonstrate integrated with Firestorm and Mortar Fire Control System

Findings

- Validated detection at standoff
- Successful Integration with Firestorm and legacy Mortar Fire Control System.
- Assessed TRL/Manufacturing Readiness Level (MRL) of detection concept

Touchpoint 3:
Dynamic Neutralization

✓ Conducted 28 MAR 24 @ YTC, Yuma AZ

Purpose

- Dynamic live-fire demonstration of 81mm HE Mortar on surface laid targets to determine effectiveness

Outcomes

- Demonstrated detection-to-defeat system concept, rate of fire launch sequence, and down-range effects through representative breaching missions
- Provided forum for industry and Government to engage/collaborate

Touchpoint 4:
Gov't Concept & Industry Tech Demonstration

○ 26 AUG-13 SEP 24 @ RTC, Huntsville, AL

Purpose

- Government and industry will demonstrate critical subsystem concepts side by side against purpose-built test lanes

Goals

- Assess TRL/MRL of concepts
- Inform CDD requirements
- Shape Engineering & Manufacturing Development (EMD) strategy and system architecture
- Provide forum for industry and Government to engage/collaborate

Touchpoint 5:
Integration Demo

○ Planned 2QFY26, Location: TBD

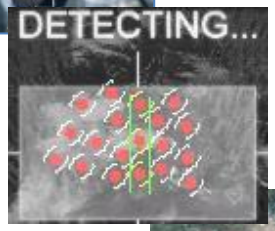
Purpose

- Final concept demonstration for the user prior to MS B

Goals

- Final TRL/MRL assessment
- Develop cost, schedule, performance planning for EMD
- Inform CDD Requirements
- Inform EMD Contract
- Prepare for Industry Day post-MS B

Remote detection of explosive and non-explosive items of interest



Neutralization achieved at standoff (~2.6KM)

The Future of Breaching

ON EVERY MISSION

Keep the soldier out of the breach

Remote operations:
- Human Machine Integration
- Operator Connectivity / Autonomy
- Swarm

Detection:
- Multi-spectrums
- On-board processing
- Automated Target recognition

Neutralization:
- Effective
- Scalable
- Clear lane rapidly

Contested Environments (to include Logistics)

Many technologies can also be utilized in EOD Operations