



# Soldier Requirements Division



## LETHALITY BRANCH

### April 5, 2023





# LETHALITY BRANCH

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Small Arms Deputy

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# Agenda



- Lethality Branch Organization
- Lethality Branch Mission
- Portfolio Programs
- Challenges | Opportunities
- Desired Capabilities
- Questions



# Lethality Branch Mission



**Soldier Requirements Division's Lethality Branch designs the Army of 2040 and delivers the Army of 2030 by serving as the Department of the Army proponent for Small Arms Systems, Mortars, Close Combat Missile Systems, Beyond Line-of-Sight Systems, Shoulder Launched Munitions, Soldier Handheld Munitions and advocate for scalable effects.**





# Soldier Portfolio Programs



## LETHALITY

### Individual Weapons



### Limited Visibility Devices



### Crew-Served Weapons



### Small Arms Ammunition



### Weapon Sights / Enablers



### Mortars



### Rockets / Missiles / Grenades

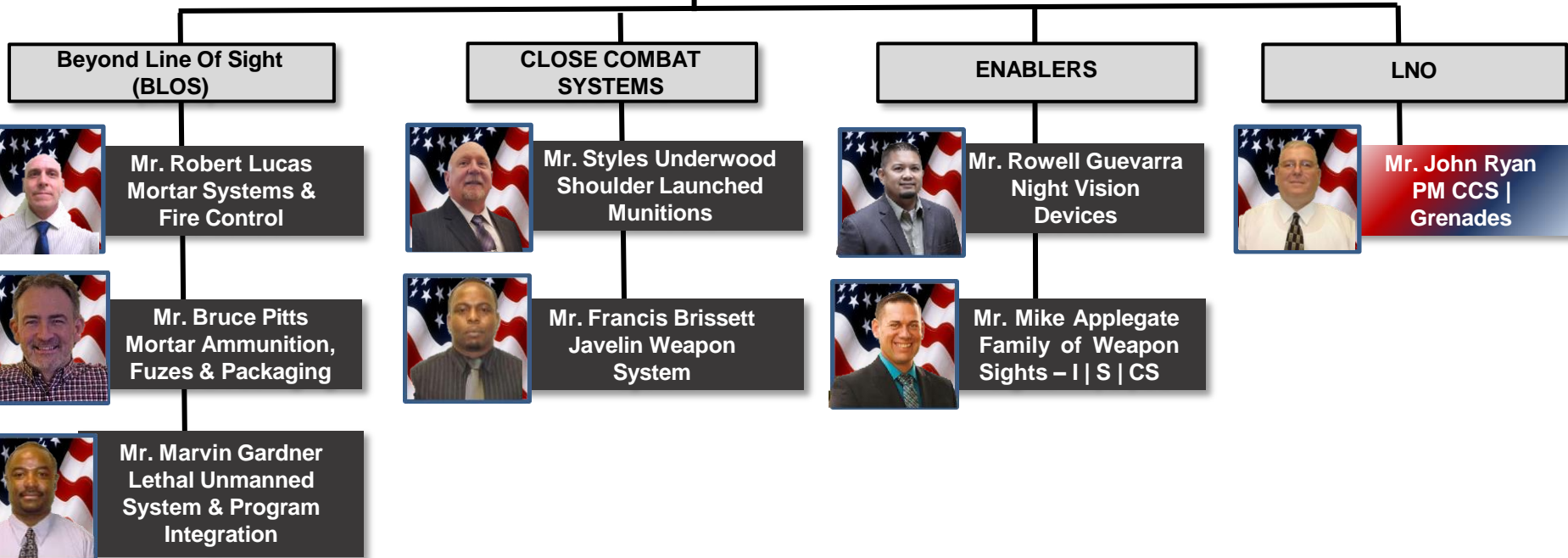




# ***FIREPOWER***



# Firepower Section



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Military	GS Civilian	Contractor	LNO
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# Soldier Portfolio Programs

Future Generation  
SA Deices  
IVAS (CFT)



## FIREPOWER

### Weapon Sights / Enablers

### Limited Visibility Devices

### Rockets / Missiles



Capacity	Function
<ul style="list-style-type: none"> <li>Close Assault Sight</li> <li>Close Assault Sight</li> <li>Close Assault Sight</li> </ul>	<ul style="list-style-type: none"> <li>Close Assault Sight</li> <li>Close Assault Sight</li> <li>Close Assault Sight</li> </ul>
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Modernization Strategy

ENVG  
ENVG-B

NVD-N  
Legacy NVGs



STORM (PI, SLX, II)

ATPIAL PEQ-15

NGSW-FC



Legacy Thermal Weapon Sights



Javelin / CLU



Lightweight CLU

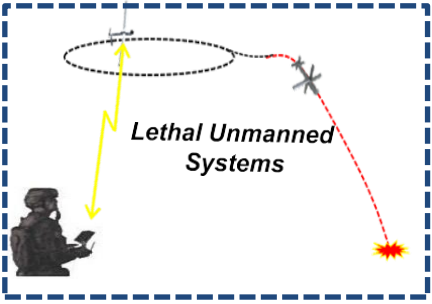
### Grenades, Smoke, Pyrotechnics

### Beyond Line of Sight (BLOS)

Legacy Mortar Systems

Infantry Battalion Mortar System

Mortar Stowage Kit



M67 Frag



M106 Smoke Bursting



AN/M14 Incendiary



M330



AN/M8 Smoke Screen



M18 Signal Smoke (G,Y,R,V)





# Opportunities



## *Signature Reduction*

- To maintain dominance during night operations, the Army must reduce Soldier signature.
- The Army relies primarily on infrared laser aiming devices to designate and engage targets. However, a laser not only illuminates a target, but also functions as a beacon of light that provides an infrared-visible location of firer's position that any adversary equipped with night vision can see and engage.

Seeking signature reduction: covert /passive, aiming, pointing, & designating



# Opportunities



## ***IBCT Lethality***

Provide Infantry Brigade Combat Teams (IBCT) greater lethality than currently fielded organic capabilities in terms of stand-off and destruction against dismounted formations, armored vehicles, and tanks (objective) without sacrificing Soldier load and unit mobility.

Seeking lethal unmanned system organic to IBCTs



# Summary of Firepower Section Desired Capabilities



## Mortar Systems, Fire Control, and Ammunition

- Infantry Battalion Mortar System (IBMS) and Family of Munitions (81mm)
  - First-round accuracy with conventional munitions
  - Increase lethality
  - Mobility – ability to fire and displace quickly prior to splash
  - Shoot from the short halt, with immediate emplacement and displacement capability
  - Provide automatic pointing
  - Exotic lightweight cannon materials
- Precision and Extended Range munitions
- Extend the range of current organic 81mm Indirect Fires

Seeking increased organic IBCT lethality



# Summary of Firepower Section Desired Capabilities (cont.)



## Shoulder Launched

- On-going Individual Assault Munition (IAM) effort to replace Anti-Tank Confined Space (AT4-CS) & Bunker Defeat Munition (BDM)
- Desired future capabilities
  - Reduced weight by ~50% (O=10 lbs.)
  - Increase probability of incapacitation effects
  - Increase range from 200M (T) to 500M+ (O)
- For questions regarding the XM919 IAM acquisition, contact ACC-NJ Contracting Office Point of Contacts:
  - Mr. Erick Martins, [erick.d.martins.civ@army.mil](mailto:erick.d.martins.civ@army.mil)
  - Mr. Blake Isakson, [blake.r.isakson.civ@army.mil](mailto:blake.r.isakson.civ@army.mil)

Single solution for multiple target sets



# Summary of Firepower Section Desired Capabilities (cont.)



## Night Vision Capabilities:

- Detect and Recognize across multiple spectrums
  - IR, Short Wave, Mid Wave, Long Wave
- Defeat adversaries future signature obscuration efforts
  - Technological advancements in textiles that masks detection
- Reduce signature across multiple spectrums
- Gain efficiency by reducing power demand, increasing operating time and providing more efficient power sources (e.g. batteries)
- Future demand for items to repair enduring NVG's (AN/PVS-14s)
  - Basic Issue Items to bring equipment back to 10/20 standards in order to cascade



# Summary of Firepower Section Desired Capabilities (cont.)



## Thermal Devices Family of Weapon Sights

- Increased ability to Detect, Recognize, and Identify targets in multiple conditions (Day, Night, and Obscured)
- Ability to transition from thermal to glass rapidly while maintaining sight picture (degraded solutions from loss of function in thermal device)
- Gain efficiency by reducing power demand, increasing operating time and providing more efficient power sources (e.g. batteries)
- Small and Lighter thermals for dismounted solutions
- Signature reduction (light splash from sight) at the shooter's eye
  - Limit enemy's ability to locate and identify our Soldiers (better options for an eye cup / light reduction)



# Summary of Firepower Section Desired Capabilities (cont.)



## Small Arms Targeting Strategy

- AN/PEQ-15 is the current Army solution for pointing and illuminating target
  - Current efforts to limit visible laser/signature
  - Smaller & lighter Laser Range Finders (LRF)
- Reduced signature
- Targeting and pointing during offensive operations
  - Develop the capability to passively target and point while in a dynamic environment.



# Summary of Firepower Section Desired Capabilities (cont.)



## Soldier Munitions (Hand Grenades)

- Multi-spectral obscuration "Bursting"
  - Produces immediate/short-term duration obscuration
- Improve Tactical Obscuration
  - Ability to produce tactical obscuration for a long duration (smoke)
- Increase lethality within the current lethal radius
  - Uniformed fragmentation within bursting radius
  - Increased height of lethal effects
- Improve lethal grenade employment for (accuracy and distance)
  - Optimize grenade size and weight for increased lethality, range and accuracy

Non-toxic and Environmentally Friendly Filler



# Summary of Firepower Section Desired Capabilities (cont.)



## Close Combat Missile Systems Medium (Javelin/LW CLU)

- **Lightweight Stabilized Platform (Tripod):** Supports employment of the Javelin System for both surveillance and engagements
- **Auto-Gate and Fast Launch:** Reduces target engagement time
- **Networking:** Shares targeting data photos & streaming video across existing network
- **Far Target Location (FTL):** Identifies target grid location to support cooperative engagements
- **Slew to Cue:** Enables rapid acquisition of targets identified by external sources via networked battle management system.

## Far Term

- **Artificial Intelligence:** System automatically identify targets for the Javelin gunner, etc
- **Target Handoff:** Pass targets from CLU to CLU or other control systems
- **Multi-target engagement:** A multi-launch system capable of engaging multiple targets simultaneously
- **Reach back capability:** Remotely fire missiles in support of forward operations



# Summary of Firepower Section Desired Capabilities (cont.)



## Lethal Unmanned Systems

- Organic to IBCT to align with ABCT lethality
- Man packable / Crew served
- Intuitive / Easy to operate (Not MOS specific)
- Anti-Armor Defeat
- Beyond line-of-sight (BLOS) engagements
- Target hand-off / Cooperative engagements
- Options for multi-purpose lethal payloads
- GPS Hardened

Seeking lethal unmanned system organic to IBCTs



# Lethality Branch – Firepower Points of Contact



<b>Headquarters, Lethality Branch</b>			
<b>Name</b>	<b>Rank/GS</b>	<b>Position</b>	<b>E-Mail Address</b>
Marcus Farmer	MAJ	Lethality Branch Chief	<a href="mailto:marcus.d.farmer2.mil@army.mil">marcus.d.farmer2.mil@army.mil</a>
Steve Howard	GS-13	Deputy, Firepower	<a href="mailto:steven.r.howard8.civ@army.mil">steven.r.howard8.civ@army.mil</a>
Franklin Moore	CPT	Firepower Project Officer	<a href="mailto:franklin.c.moore15.mil@army.mil">franklin.c.moore15.mil@army.mil</a>
Vacant	SFC	Project NCO	
<b>Beyond Line of Sight (BLOS)</b>			
Robert Lucas	CTR	Mortar Systems & Fire Control	<a href="mailto:robert.lucas.ctr@army.mil">robert.lucas.ctr@army.mil</a>
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Marvin Gardner	CTR	Integration Transition and Sustainment	<a href="mailto:marvin.l.gardner6.ctr@army.mil">marvin.l.gardner6.ctr@army.mil</a>
<b>Close Combat Systems</b>			
Styles Underwood	CTR	Shoulder Launched	<a href="mailto:styles.e.underwood.ctr@army.mil">styles.e.underwood.ctr@army.mil</a>
Francis Brissett	CTR	Javelin Weapon System	<a href="mailto:francis.m.brissett.ctr@army.mil">francis.m.brissett.ctr@army.mil</a>
<b>Enablers</b>			
Rowell Guevarra	CTR	Night Vision Devices	<a href="mailto:rowell.c.guevarra.ctr@army.mil">rowell.c.guevarra.ctr@army.mil</a>
Mike Applegate	CTR	FWS-I / FWS-S / FWS-CS	<a href="mailto:michael.j.applegate4.ctr@army.mil">michael.j.applegate4.ctr@army.mil</a>
<b>LNO</b>			
John Ryan	CTR	PM Close Combat Systems	<a href="mailto:john.j.ryan74.ctr@army.mil">john.j.ryan74.ctr@army.mil</a>



# *Questions?*



# Quad Chart Timeline



<b>CV/FB AUSA Industry Day</b>	<b>6-7 April 22</b>
<b>Quad Charts due to MCoE</b>	<b>NLT 9 May 22</b>
<b>Quad Chart Tier Ranking complete</b>	<b>5 August 22</b>
<b>Industry Notified of Quad Tier Ranking</b>	<b>NLT 19 August 22</b>
<b>AUSA Annual Meeting and Exposition</b>	<b>10 – 12 October 22</b>



# Quad Chart Tiers



- **Tier I:** Highest level of interest. Out brief to the MCoE CG at AUSA National Conference. Possible Joint implications, fills a stated gap or requirement.
- **Tier II:** High level of interest. Out brief to the Division Director. May fill a stated gap or requirement.
- **Tier III:** Interested. Out brief to the Requirement Branch Chief. May mitigate a stated gap or requirement.
- **Tier IV:** Not interested at this time – no briefing scheduled. This is our requirement area but does not mitigate a stated gap or requirement. Capability previously briefed with no new development.
- **Tier V:** This is not our requirement area; POC to alternate Center of Excellence.