

AMERICA'S ARMY: THE STRENGTH OF THE NATION™



UNITED STATES ARMY



Cannon Precision Fires

LTC Fischer



SOLDIERS * FAMILIES * ARMY CIVILIANS

ARMY STRONG.™



Five Requirements

2

Accurate Firing Location

IPADS/GPS



3

Accurate Weapon and Munition Information

Shell/Fuze, Powder Temperature



4

Accurate Meteorological (MET) Information (Profiler Meteorological System)

5

Accurate Computational Procedures

AFATDS



1

Accurate Target Location and Size

Enhanced Q36 Radar



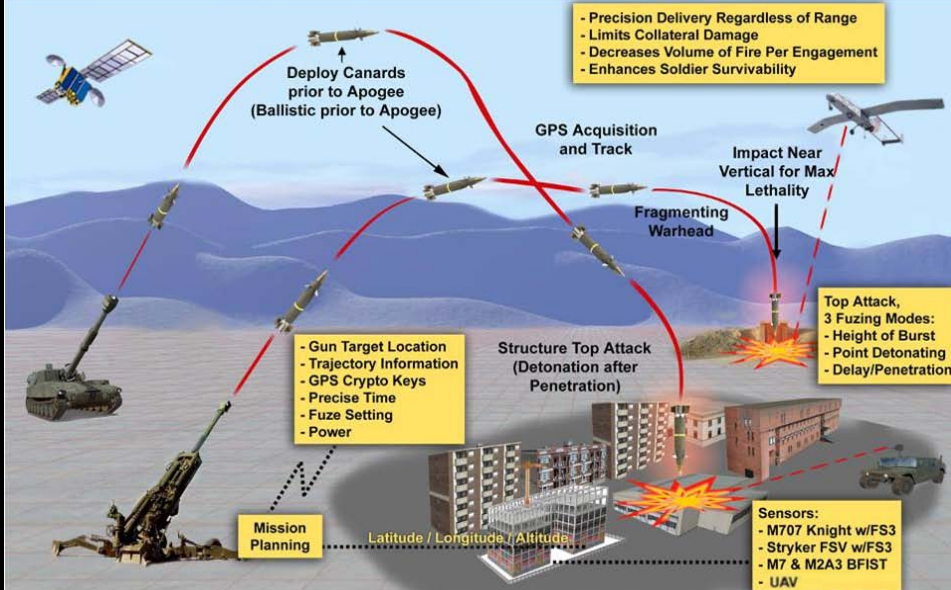
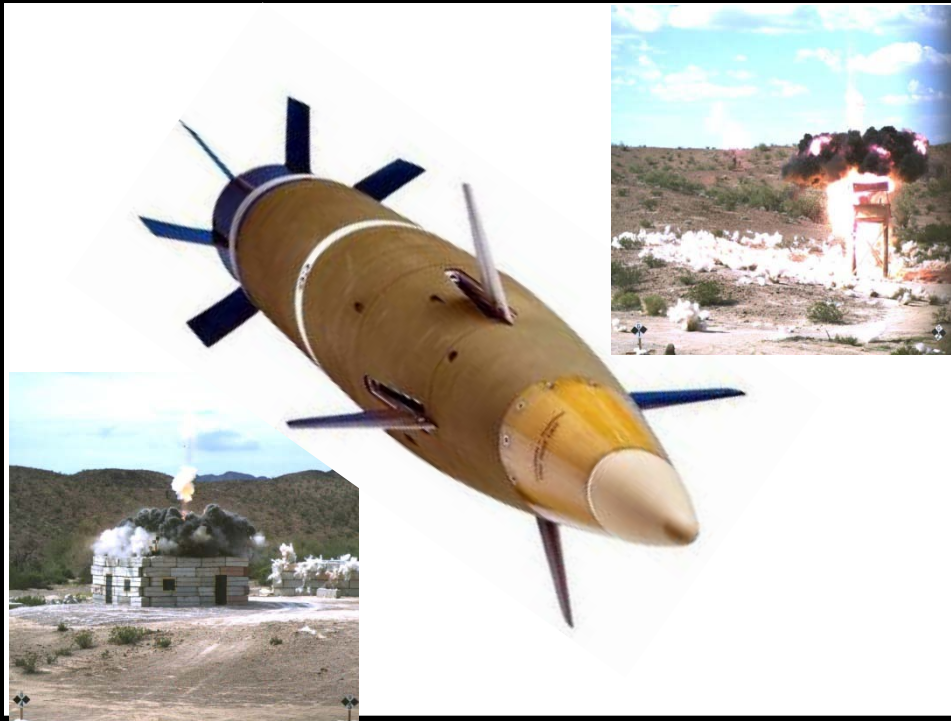
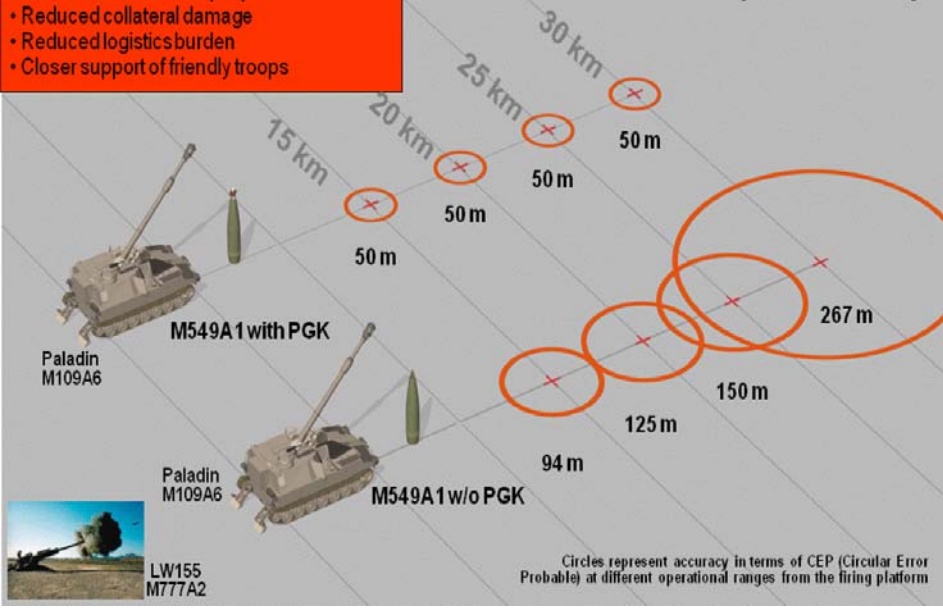
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Precision Munitions

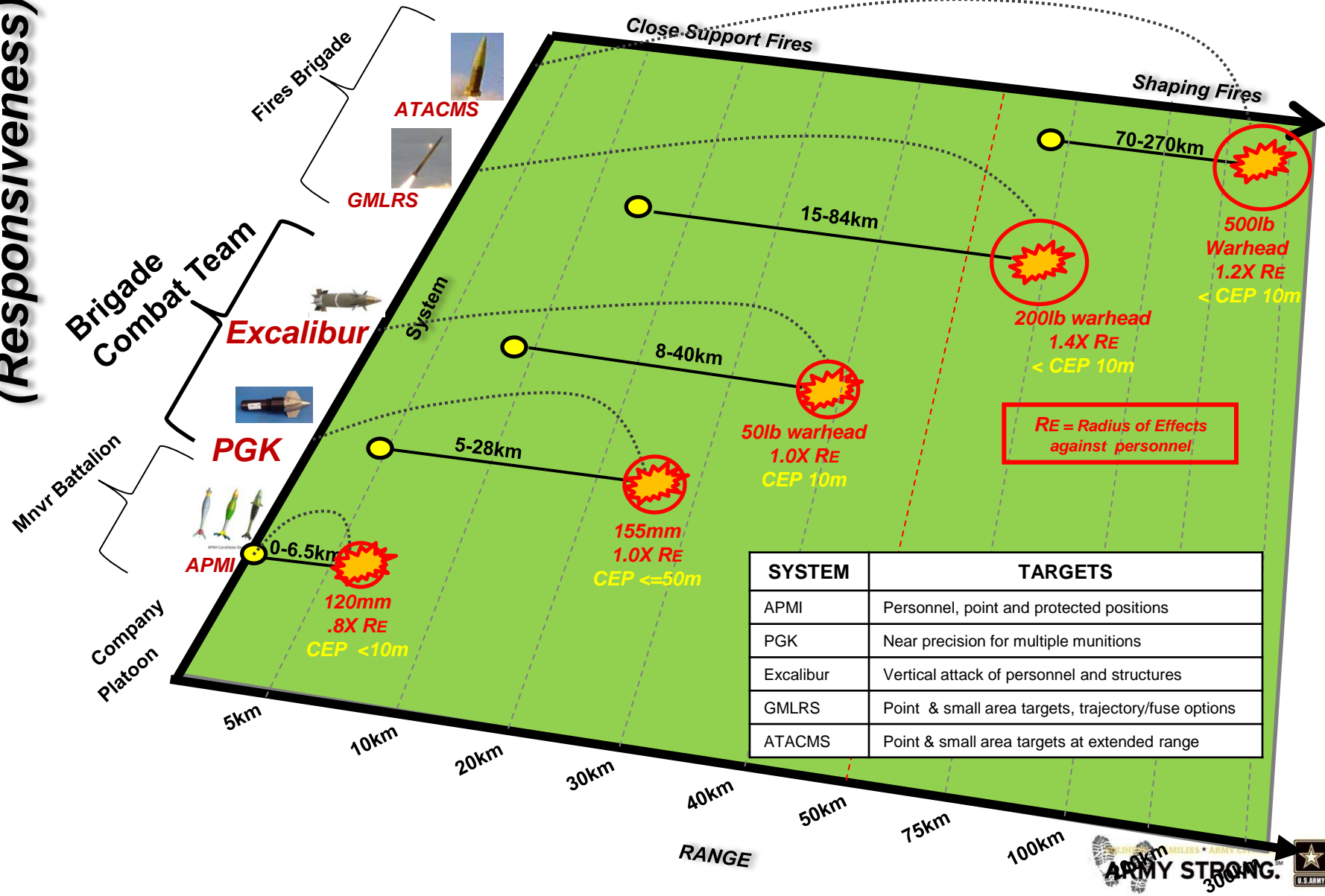
- User Needs**
- Increased effectiveness (kill targets quicker)
 - Increased stowed kills per platform
 - Reduced collateral damage
 - Reduced logistics burden
 - Closer support of friendly troops

**XM1156 PGK Increment 1
155mm Projectile Accuracy**



Indirect Fires Precision Portfolio

Command and Control
(Responsiveness)



Mix of Capabilities

- Housing density can vary widely over small distances between terrain elements
- Selecting munitions with increasing levels of precision may be most cost-effective

**Area
Munition**

120m Radius Circle

Open Area

Cultural Area

**Densely-Packed
Urban**

**Precision
Guided
Munition**

10m Radius Circle

**Near Precision
Munition**

50m Radius Circle

**Sparsely-Packed
Urban**

“An organic precision indirect fire munition will allow commanders to engage targets in environments that ordinarily require putting Soldiers and non-combatants in harms way or cause unnecessary collateral damage”

Balancing Precision Fires

The tactical commander will have many fires capabilities available in the future. These are divided into general area fires, efficient area fires (near precision) and precision fires. The targeting conditions necessary to utilize these capabilities will aid the commander to optimize these fires assets.

Conventional - Non-Precision

Near-Precision

Precision

155mm HE

155mm HE with PGK

Excalibur

260m CEP (max range)

<50m CEP

10m CEP

Match round to task

- Area coverage required
- Precision not required
- TLE* not restricted
- CD** not an issue
- Ammunition resupply is not an issue

- Efficient area fires required
- Near precision creates efficiency
- TLE between 30m and 120m
- CD is a consideration
- Reduced resupply burden

- Point target attack
- Precision required (<10m CEP)
- TLE ≤ 25m
- Minimize CD
- Lowest resupply burden

Scaleable precision provides more effective and efficient fires

* Target Location Error (TLE)
** Collateral Damage (CD)



- Precision-guided munitions increase desired effects with more effective fires, while mitigating unnecessary collateral damage and reducing overall logistic footprint
- Artillery units must have the ability and capability to mass precision fires on a single target and attack multiple targets simultaneously throughout the battle space
- Key question from Precision Fires Portfolio Review: **How much Precision is needed?**