



1600 Wilson Boulevard, Suite 203 Arlington, VA 22209 P: 703-522-5828 | F: 703-522-5837

 [lexingtoninstitute.org](http://lexingtoninstitute.org)

<http://lexingtoninstitute.org/the-u-s-army-needs-a-small-five-modernization-strategy/>

## The U.S. Army Needs A “Small Five” Modernization Strategy

October 16, 2015

Daniel Gouré, Ph.D.

The organization and capabilities of today’s Army have much to do with the success of a handful of modernization efforts known collectively as the “Big Five.” The Big Five consisted of the Abrams main battle tank, the Bradley fighting vehicle, the Apache attack helicopter, the Black Hawk utility helicopter, and the Patriot air defense missile system. Begun in the early 1970s, these systems proved their worth in Operations Desert Storm and Iraqi Freedom. The Army’s current plan envisions all of these continuing in service, with some enhancements, for at least another 20 years.

Over the ensuing decades, the Army has sought to replicate the success of its Big Five strategy. In pursuit of this goal, it repeatedly tried to envision the future world and define the requirements for future capabilities accordingly. General Eric Shinseki, former Army chief of staff, envisioned a transformational modernization program involving lighter, faster, smarter and robotic air and ground systems; this morphed into the Future Combat System which cost the Army billions and produced exactly nothing. Then there was the Ground Combat Vehicle, a miracle platform that would carry a nine-man squad, be virtually impervious to improvised explosive devices and rocket propelled grenades (RPGs), have a big weapon, weigh less than a tank and cost less than a Bradley. Whether it is combat vehicles, helicopters or something as simple as a new rifle, the Army’s record in this area since the Big Five is one almost entirely unblemished by success.

Today the Army is working on a 30-year modernization strategy to change equipment, weapons and vehicles, as if anyone could predict either threats or technology changes for next year much less three decades from now. The Army has no big, new weapons system or platform programs at this time primarily because it doesn’t have the money for them. But it sure wants them.

The Army would do better if it stopped looking so far ahead and high up, and instead developed what I will call a “small five” set of modernization programs that address serious operational and tactical weaknesses staring them right in the face or allow a smaller Army to punch above its weight. Here are my candidates.

**Active Protection.** Fielded RPGs and anti-tank guided missiles are becoming increasingly lethal. It is virtually impossible to put enough passive protection on a vehicle to overcome this threat. The Army needs to invest now in an active protection system. After nearly a decade of work, the Israeli Defense Forces have deployed such a system, called Trophy. It proved its worth during last year’s conflict in Gaza. Why is the Army waiting?

**Indirect Fire Protection (IFP).** As demonstrated by events in conflict zones from eastern Ukraine to Syria, the threat from rockets, artillery, mortars and even unmanned aerial systems (UASs) is becoming ubiquitous and more dangerous by the day. The Army has a development program underway, called Indirect Fire Protection Capability Increment 2, which is striving to fuse together existing command and control and radars with a new launcher and a version of the AIM 9X air-to-air missile for a projected 2019 initial operating capability. Ironically, Israel’s Iron Dome system could perform the same task today, not four years from now.

By the way, much of the radar sensors for Iron Dome and Trophy are made in the U.S. In a few years, directed energy weapons may be available to supplement kinetic means for IFP.

**Precision Munitions.** The Army is not going to increase the number of tanks, fighting vehicles, attack helicopters or artillery/mortars it fields. In fact, as force structure shrinks, the number of lethal weapons systems is likely to decline. Greater investment in precision munitions, particularly if they are less expensive than current rounds, have longer ranges and are not dependent on jammable guidance systems, just makes sense. Infantry Brigade Combat Teams would benefit from precision rounds for their mortars and even grenade launchers.

**Electronic Warfare (EW).** It is increasingly evident that this is no longer an area of U.S. technological advantage. It is time to play catch up. But now is a good time as our adversaries invest in precision weapons, advanced sensors and networks. In some ways, our adversaries often have fragile kill chains because they have so few high quality sensors and networks and rely more on centralized command and control. EW can be employed to defeat hostile guided weapons and sensors and even platforms such as UASs. The Army needs to make battlefield EW a core competence.

**Advanced Tactical Sensors.** The U.S. military has been very successful at exploiting long-range sensors and weapons, particularly against platforms and fixed targets. Tactical units have not benefitted the same way from advances in sensors, battle management systems and command, control and communications capabilities. Yet, miniaturization of electronics could allow the creation of what two defense experts call “the modern binocular.”<sup>[1]</sup> This would rely on combinations of miniature high resolution radars, advanced electrooptical/infrared/laser sensors and short-range communications intelligence receivers connected through distributed tactical networks to portable devices. These sensors could be man-portable, deployed on land and aerial platforms, on fixed towers and even on buildings and other infrastructure in urban environments.

Even as it searches for the best weapons systems of the next 30 years, the Army needs to invest now in “small five” capabilities — not in five or ten years.

<sup>[1]</sup> Brig (Res) Benny Mehr and Mr. Danny Eylon , *Fused Multisensory Sight – The Modern Warfighter Binoculars*, unpublished paper.