

RECORD VERSION

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BEFORE THE

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Introduction

Chairman Turner, Ranking Member Sanchez, distinguished Members of the Subcommittee on Tactical Air and Land Forces, thank you for this opportunity to discuss the Fiscal Year 2017 (FY17) President's Budget request on Army Ground Force Modernization Programs.

In support of Joint operations to counter acts of aggression, combat terrorism, and defend the Homeland, the Army provides critical capabilities – command and control, communications, intelligence, logistics, and special operations. Effective Joint operations against any land threat will not be possible without ready Army ground combat forces and the supporting units that enable them. A properly sized, equipped, and ready Army makes it possible for the Joint Force to deploy in sufficient scale and duration to prevent conflict, shape security environments, and provide multiple options for resolving crises and winning decisively.

Over the past several years and into the near future, fiscal constraints and an unpredictable budget have caused the Army to reduce end strength and prioritize readiness at the expense of modernization programs. Despite these measures, the Army still requires equipment to fight, and modernized equipment to win in the future. Equipping is, and will continue to be, a critical component of readiness. An unintended consequence of our current fiscal constraints is that the Army can no longer afford to equip and sustain the force with the most modern equipment and, as a result, risks falling behind near-peers in critical areas. Instead, we are forced to selectively modernize equipment to counter our adversary's most significant technological advances.

Therefore, for FY17, the Army equipment modernization objective remains focused on maintaining technological overmatch in our combat formations to deter and defeat potential adversaries. We plan to achieve this by ensuring we have the proper mix of necessary capabilities enabled by a flexible and rapid acquisition process attained by

working with Congress. We are also exploring the activation of a rapid capabilities office to address the immediate and near-term equipping needs of our Warfighters through rapid Programs of Record. Currently, near-term capability gaps are mostly mitigated through incremental improvements to existing platforms and systems, while we make prudent investments in emerging and breakthrough technologies to address future gaps.

While the Army's modernization budget remains near historic lows, our modernization mission remains essential. We must always ensure our Soldiers have the right equipment, at the right time, and at the right place to accomplish the assigned mission.

On behalf of our Acting Secretary, the Honorable Patrick Murphy, and our Chief of Staff, General Mark Milley, we look forward to discussing with you the Army's FY17 modernization budget request.

Army Equipment Modernization Objectives

As the nation's principal land force, the Army deploys multiple, different formations to conduct complementary and expeditionary combined arms maneuver as part of the Joint Force and coalition forces.

As a result, Army leaders and units must react, decide, and act at the speed of information. Mission Command ensures the Army has a common understanding of the situation and mission with agile and expeditionary command posts supported by robust home station architecture, reliable cyber security, and connectivity with our Joint Force partners.

Other Services man equipment, the Army equips Soldiers. The Army ensures our Soldiers are provided with the equipment and capabilities they require to support broad Joint missions anywhere they are sent. When we do so, we empower these Soldiers and their squads with improved lethality, protection, and situational awareness.

Resourcing Army Modernization

Because of resource constraints, today's Army prioritizes readiness while assuming risk to modernization. The Army cannot equip and sustain the entire force with the most modern equipment. Still, it is the Army's responsibility to address current and emerging threats and to ensure every deployed Soldier is equipped to achieve decisive overmatch, regardless of the situation.

In FY17, the President's Budget request totals \$22.6 billion for the Army's Research, Development, and Acquisition (RDA) program, which includes \$15.1 billion for Procurement and \$7.5 billion for Research, Development, Test and Evaluation (RDT&E). In support of the Combat Vehicle Modernization Strategy, the Procurement request modernizes the Abrams fleet; prioritizes the Bradley Mods, Stryker (Double V-Hull and Lethality), Paladin Integrated Management, and the Joint Light Tactical Vehicle. The RDT&E request provides for key S&T investments in combat vehicle and automotive technologies, as well as high energy lasers. Major engineering and development efforts includes combat vehicles; air and missile defense; Assured Position, Navigation and Timing; and cyberspace operations.

Our RDA resources are focused on the following areas:

1. **Science and Technology (S&T).** Protected S&T funding ensures the next generation of breakthrough technologies can be rapidly applied to existing or new equipment designs. We are implementing a strategic approach to modernization that includes an awareness of existing and potential gaps; an understanding of emerging threats; knowledge of state-of-the-art commercial, academic, and Government research; and an understanding of competing needs for limited resources.
2. **New Systems.** The Army is making modest developmental investments based on critical operational requirements and capability shortfalls. Fiscal realities have led to the delay or discontinuance of new systems. Two key investments

that remain in the next generation of ground vehicle capabilities include the Armored Multi-Purpose Vehicle and the Joint Light Tactical Vehicle, a critical program for the Army and the U.S. Marine Corps.

3. **Modification/Modernization.** The Army must incrementally modify or modernize existing systems in order to increase capabilities and extend service life. In addition, the continuous improvement of existing systems helps to sustain the industrial base. In this area, we are focused on improving the Abrams, Bradley, and Stryker Families of Vehicles, as well as Paladin, Improved Turbine Engine Program, and the Guided Multiple Launch Rocket System Unitary.
4. **Reset and Sustain.** Returning Army equipment to the required level of combat capability remains central to both regenerating and maintaining equipment near-term readiness for contingencies.
5. **Divest.** The Army divestment process seeks to identify equipment and systems that are excess across the Total Army in order to reduce and eliminate associated sustainment costs. For example, we are divesting the aging M113 armored personnel carriers. Additionally, the Army's Mine Resistant Ambush Protected (MRAP) vehicles divestiture will eliminate a large portion of the fleet through Foreign Military Sales, distribution to other agencies, and demilitarization of older, battle-worn, excess vehicles.

FY17 Budget Priorities

The President's budget request for FY17 prioritizes the following five capability areas:

- **Aviation.** The Army continues to invest in Aviation to sustain fleet modernization and close key capability gaps in survivability and lethality.

- **Network.** The Army must maintain a robust Network that is protected against cyber-attacks to execute uninterrupted mission command. Key investments supporting the Network include:
 - *Warfighter Information Network-Tactical (WIN-T)* provides “networking-on-the-move” capability. WIN-T also provides Soldiers and leaders a mobile infrastructure that employs military and commercial satellite connectivity, and high capacity line-of-sight (terrestrial) connectivity. It extends the tactical wide area network throughout division, brigade, battalion, and company levels in the maneuver force. The WIN-T Increment 2 program is in Full Rate Production and fielding following a successful operational test and performing well in operations in theater.
 - *Assured Position, Navigation and Timing (A-PNT)* is a critical enabler for Army warfighting functions and virtually all Army weapon systems. Program Manager Positioning, Navigation and Timing (PM PNT) and Army S&T are developing technologies to provide Dismounted and Mounted Soldiers the capability to attain trusted PNT information while operating in conditions that impede or deny access to the Global Positioning System (GPS). These technologies include non-GPS augmentation for distributed Mounted and Dismounted PNT capabilities, pseudolite transceivers (an alternative source of GPS-like signals), and anti-jam capabilities. Both the Mounted and Dismounted efforts are structured to provide a hub capability, that distributes an A-PNT solution to vehicles and Soldier systems. In FY17, Army S&T will transition A-PNT technologies for Mounted and Dismounted application to PM PNT with the Program of Record Milestone B scheduled in mid-FY18.
 - *Communications Security* supports the implementation of the National Security Agency (NSA) developed Communications Security (COMSEC) technologies into the Army by providing COMSEC systems capabilities

through development and integration of encryption, trusted software, and/or standard operating procedures into specified systems in support of securing Army and Department of Defense Networks and capabilities.

- *Offensive Cyber Operations (OCO) and Defensive Cyber Operations (DCO)* allow the Army to protect its networks and project force in cyberspace. The Army has positioned itself with U.S. Army Cyber Command (ARCYBER) and the Cyber Center of Excellence to provide capabilities in both mission areas and will continue to do so. In the area of DCO, the Army will continue to invest in infrastructure and tools to set conditions for increased defensive capabilities. We are in the initial stages for fielding capability and FY17 will be critical in further development.
- *Cyber Situational Awareness* is integral to OCO, DCO, and Department of Defense Information Network operations that support commanders in the conduct of unified land operations. These capabilities range from system status to mission and threat awareness to targeting and engagement data to influence cyber and electromagnetic effects. We are currently working with the Cyber Center of Excellence and ARCYBER to address these requirements.
- **Integrated Air Missile Defense.** The Army must be able to defeat a large portfolio of threats ranging from micro unmanned aerial vehicles and mortars, to cruise missiles and sophisticated short and medium range ballistic missiles. The Army will support this priority by investing in an Integrated Air and Missile Defense Battle Command System, an Indirect Fire Protection Capability, and modernization of the Patriot system.
- **Combat Vehicles.** The Army fixes gaps in its tactical formations by improvements in combat vehicles to increase mobility, protection, and lethality. Key areas of investment are:

- *Ground Mobility Vehicle (GMV)* will be procured as a Commercial/Government Off-the-Shelf (C/GOTS) solution to address a significant mobility gap in the Infantry Brigade Combat Teams (IBCT). The Army's current analysis of alternatives for GMV is expected to be complete in mid-FY16 and inform the acquisition of a commercial, non-developmental solution beginning in FY17.
- *Stryker Lethality Upgrades* address capability gaps resulting from more than 12 years of combat through an incremental Engineering Change Proposal (ECP) strategy currently focused on increasing mobility, electrical power, and the need to accept future network upgrades. Efforts also include upgrades to increase the lethality of the Stryker Family of Vehicles and Double V-Hull upgrades to increase vehicle protection. The Army plans to increase lethality by having half of the Infantry Carrier Vehicles equipped with a 30 mm cannon and the other half equipped with a Javelin missile on the existing Remote Weapons Station in each brigade. The Army plans to increase protection by upgrading Stryker vehicles to a Double-V Hull (DVH) architecture. DVH production utilizes an exchange process, removing select components and mission equipment packages from flat bottom Strykers and installing them into a new DVH.
- *Mobile Protected Firepower* will provide protected, long-range, direct fire capabilities to the Infantry Brigade Combat Team (IBCT) to defeat enemy prepared positions, destroy enemy armored vehicles, close with the enemy through fire and maneuver, and ensure freedom of maneuver and action in close contact with the enemy. The Army plans to conduct the Mobile Protected Firepower Analysis of Alternative in FY17 to assess the operational effectiveness, suitability and life-cycle cost of both

developmental and non-development materiel solutions that satisfy requirements contained within the Initial Capabilities Document.

- *Armored Multi-Purpose Vehicle* will replace the legacy M113s at the brigade level and below to support the Armored Brigade Combat Team and will consist of five mission roles: General Purpose, Mortar Carrier, Mission Command, Medical Evacuation, and Medical Treatment variants. The Engineering and Manufacturing Development contract was awarded in December 2014, and we anticipate the first prototype delivery vehicle in December 2016.
- **Emerging Threats.** As mentioned earlier, the Army invests in S&T to focus on critical capability gaps and allow our Soldiers to operate in contested environments and win decisively against any potential adversary. There are several areas of Army S&T investment, including the Modular Active Protection System program to increase vehicle survivability and protection against current and emerging advanced threats, Electronic Warfare efforts focused on designing countermeasures to address threats against Army rotorcraft, ground mounted platforms and dismounted Soldiers, and the Combat Vehicle Prototyping program to mature technologies that address technical and integration challenges facing our ground combat fleets. Other areas to help ensure that our Soldiers are protected against emerging threats include Degraded Visual Environment Mitigation to inform leadership on improvements to platform survivability; Red Teaming and Vulnerability Analysis to know our weaknesses and fix them; and sensor protection to ensure more consistent situational awareness.

Other Major Programs for FY17

The Army is constantly working to reduce the weight and improve the performance of the Soldier's *individual equipment*. Currently, we are researching improved ways to help redistribute the weight carried by Soldiers so they can carry their load with less

stress on their backs or knees. Plans include the development of new rucksacks and other equipment so Soldiers can more comfortably carry their supplies, ammunition, and equipment. Research is also taking place on a new load-bearing system. Every effort undergoes extensive user evaluations by Soldiers throughout the development process. The Army is also working to reduce the weight of the clothing and equipment Soldiers carry by developing lighter body armor, helmets, and other equipment while addressing a wide-range of threats to our Soldiers, including ballistics, blast overpressure, concealment, fragmentation, and heat.

In addition to the above efforts, the Army's Soldier Protection System (SPS) is an integrated personal protection system that integrates head, torso, and extremity protection. It maintains current standards of personal protection but with lighter weight than current systems. It is also scalable, allowing Soldiers to increase the level of protection or reduce weight depending upon mission requirements. SPS consists of five major subcomponents: (1) the Integrated Head Protection System is a new helmet concept which allows the Soldier to add additional protection, such as an additional layer of armor or facial protection, depending upon mission requirements; (2) Transitional Combat Eye Protection is eyewear that electronically either automatically or manually adjusts for darkness or light, which is critical when a Soldier exits a sunlit street into a darkened structure; (3) Torso Protection features a new combat vest with pelvic protection that provides modular levels of protection that can be scaled up or down depending on mission requirements; (4) Vital Torso Protection provides lighter weight hard armor plates; and (5) the Integrated Soldier Sensor System will provide sensor technology to record forces that affect the Soldier, as well as monitor the Soldier's health status. Other important initiatives include the Lightweight Advanced Combat Helmet, which provides the same levels of protection as the Advanced Combat Helmet but with less weight and the Enhanced Combat Helmet, which provides significantly better head protection without additional weight.

The Army is committed to providing Soldiers with the best intelligence tools and technology available. As we continue to refine and improve the current version of the *Distributed Common Ground System-Army* (DCGS-A), we are committed to a full and

open competition in FY16 to develop, test, and produce the next version of this intelligence software system. FY17 funding will provide for the fielding of enhanced Increment 1, Release 2 capabilities to the Force, which improves the tools currently used by Soldiers to analyze, process, and visualize the information on the battlefield, and support Increment 2 development and testing. DCGS-A Increment 2 will provide a modernized data management architecture that complies with the Common Operating Environment, the Intelligence Community Information Technology Enterprise, and the Joint Information Environment; the integration of emerging sensor and automation technology; and enhanced ease of use and analytic capabilities. Funding also provides for the procurement of DCGS-A Tactical Intelligence Ground Stations to equip activating Expeditionary Military Intelligence battalions in all components.

The *Joint Light Tactical Vehicle* (JLTV), a Joint program with the U.S. Marine Corps, is the centerpiece of the Army's Tactical Wheeled Vehicle modernization strategy and a key enabler of Joint Combined Arms operations. JLTV provides the necessary leap in protection, performance, and payload – the Iron Triangle – to fill the capability gap remaining between the High Mobility Multipurpose Wheeled Vehicle and the Mine Resistant Ambush Protected Family of Vehicles. The JLTV is in Low-Rate Initial Production.

The Army is working to ensure that system requirements are affordable and do not add excess technical risk to our acquisition programs. We have instituted processes known as *Knowledge Points* to identify necessary requirements trade-offs at key decision points. This process is mandatory across all major programs and is a critical factor in achieving a more effective, more affordable, and more responsive acquisition system. Knowledge Points enable the Army Chief of Staff to formally review system requirements throughout the development phase. In addition, the Army has instituted *affordability caps* on new programs when they start to make sure that we can sustainably afford the development and production costs. For example, we made certain that we could afford AMPV at the same time we were producing the Paladin Improvement Management howitzer and JLTV.

Conclusion

The generous support from Members of Congress for our efforts to strengthen the Army Acquisition Workforce, a critical component in the success of a well-equipped, ready force, is greatly appreciated. With more than 37,000 Army military and civilian acquisition professionals worldwide, this dedicated component of the Defense acquisition workforce is comprised of engineers, scientists, logisticians, contract specialists, testers, program managers, cost estimators, and many other acquisition career field specialties who effectively manage the Army RDA enterprise in a challenging budget environment. Army Acquisition Workforce professionals are the critical assets to the Army's ability to design, develop, and deliver capability to the Soldiers so they can dominate on the battlefield.

We are also grateful for your continued advice and support. These are challenging times. In the end, the security challenges of tomorrow will be met with the equipment we develop, modernize, and procure today. Because adversaries will continue to invest in technology to counter or evade U.S. strengths and exploit vulnerabilities, resource reductions and insufficient force modernization will place the Army's ability to overmatch its opponents at risk.

We can assure you that the Army's senior leaders are working hard to address current challenges and the needs of the Army now and in the future. We are doing so with affordability as our watchword as we endeavor to remain good stewards of our nation's resources while meeting the equipping needs of our Soldiers.

Mr. Chairman and distinguished Members of this Subcommittee, thank you for your steadfast and strong support of the outstanding men and women in uniform, our Army Civilians, and their Families.