

**RECORD VERSION**

**STATEMENT BY**

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**BEFORE THE**

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## **INTRODUCTION**

Chairman Kelly, Ranking Member Cotton, distinguished members of the Subcommittee, thank you for your continued support to our soldiers, civilians, and families. On behalf of the Secretary of the Army, the Honorable Christine Wormuth, and the Army Chief of Staff, General James C. McConville, we thank you for the opportunity to appear before you today to discuss the Army's modernization program.

The Army's Fiscal Year (FY) 2024 budget reflects the Army's comprehensive approach to modernization, so the Army can adapt to the challenges of an unpredictable era marked by technological change and great power competition. The budget request sustains momentum in our modernization initiatives to build the Army of 2030, while simultaneously prioritizing our role in the Indo-Pacific, improving our Nation's industrial base, and continuing to support our Allies. Most importantly, this request will provide our soldiers the materiel solutions needed to fight and win our Nation's wars as part of the Joint Force.

## **THE SECURITY ENVIRONMENT**

As highlighted in the 2022 National Defense Strategy and National Security Strategy, the security environment is marked by efforts of the People's Republic of China (PRC) and Russia to reshape the post-Cold War world and by rapid and disruptive technological change. The PRC is our most consequential strategic competitor and the pacing challenge, while Russia remains an acute threat. Both states are applying all instruments of national power, including military modernization, as they seek to challenge America, our allies, and our partners.

The PRC seeks decisive overmatch in emerging areas such as artificial intelligence (AI), robotics, and cyber. The convergence of technologies such as quantum computing,

AI, and robotics promises to expand the fields of competition and the race to find comparative advantage.

Russia's unprovoked invasion of Ukraine demonstrates how the character of war continues to change. The pace of technological innovation and Ukraine's ability to leverage the skills of its citizen-soldiers and integrate with its private sector are noteworthy, and we are studying their implications closely. What we are seeing in Ukraine validates our six modernization initiatives, particularly Long Range Precision Fires, Air and Missile Defense, Next Generation Combat Vehicle, and the Network.

## **MODERNIZING AND TRANSFORMING OUR ARMY**

Materiel modernization is an essential part of the Army's broader transformation effort. Transforming our Army to ensure war-winning future readiness requires integrating materiel modernization with non-materiel efforts. These include Doctrine, Organization, Training, Leadership and Education, Personnel, Facilities, and Policy. Transforming our Army holistically, including modernizing it, puts the capability and lethality we need into our formations and ensures that our Army will continue to dominate the land domain.

## **MODERNIZING THE FORCE**

The FY 2024 budget request puts the Army on a sustainable path to equip today's soldiers with modern equipment while we invest in the technologies and systems necessary to build the Army of 2030. We have also ensured that our requested resources are synchronized with the Secretary of the Army's six operational imperatives around which we are building the Army of 2030:

- First, to sense deeper and more persistently than our enemies at all echelons.

- Second, to concentrate combat forces from dispersed locations to overwhelm our adversaries.
- Third, to deliver long range precision fires as part of the Joint Force.
- Fourth, to deliver air and missile defense at echelon to protect our forces.
- Fifth, to reliably communicate amongst ourselves and our Joint and coalition partners and secure ourselves from enemy cyber and electronic attack.
- Last, to sustain the fight for whatever the duration.

Front and center in this effort is our sustained commitment to our key modernization portfolios – Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, Network, Air and Missile Defense, and Soldier Lethality – and we are grateful to Congress for the stable funding provided to advance these initiatives.

- Long Range Fires Programs:
  - The Army demonstrated the Precision Strike Missile's (PrSM) capability to achieve ranges well beyond the legacy Army Tactical Missile System and will begin production qualification testing in 4Q FY 2023.
  - We successfully tested the Land Based Anti-Ship Missile seeker and the Extended Range Propulsion ramjet, setting conditions for subsequent increments of the PrSM program.
  - The Extended Range Cannon Artillery (ERCA) program continues improvements compared to conventional artillery technology to deliver long-range cannon fires capability to the soldier. However, technical challenges emerged during a test event in 1Q FY 2023, resulting in delay of our planned procurements in FY 2024. The ERCA program will continue to move through system development and testing, and will execute extensive Soldier Touch Points and learning events in FY 2024.
  - The Army's Rapid Capabilities and Critical Technologies Office, in partnership with the Navy, is on track to deliver the first hypersonics battery in FY 2023.

- We also delivered the Army's Mid-Range Capability (MRC) initial hardware in 1Q FY 2023 and are on track to deliver the first operational prototype in 4Q FY 2023. The MRC prototype effort leverages existing Service missiles, launchers, software, and hardware to fill a critical capability gap identified by the U.S. Indo-Pacific Command.
- Next Generation Combat Vehicle Programs:
  - The Army remains fully committed to the Optionally Manned Fighting Vehicle program, executing a multi-phased acquisition approach to maximize competition. In 3Q FY 2023, the Army will award the competitive contract to up to three vendors for the Phase 3 (Detailed Design) and Phase 4 (Prototype and Test) portions of program.
  - The Robotic Combat Vehicle (RCV) program continues to make progress, informed by extensive experimentation with the RCV-Light Full-System Prototype effort. By the end of FY 2023, the Army intends to award multiple contracts for demonstrator vehicles.
  - We are currently fielding Armored Multi-Purpose Vehicles to replace the 1960s-era M113 Family of Vehicles and completed First Unit Equipped in 2Q FY 2023.
  - The Mobile Protected Firepower (MPF) program began low-rate initial production this year, with first fielding of MPF planned for FY 2025.
  - We are also supporting the Army's Climate Strategy and the administration's greenhouse gas policies with the Bradley Hybrid Electric Vehicle, Electric Light Reconnaissance Vehicle, High Mobility Multi-Purpose Hybrid Wheeled Vehicle, and Joint Light Tactical Vehicle Hybrid Electric Vehicle projects.

- Future Vertical Lift Programs:
  - The Army is committed to both the Future Attack Reconnaissance Aircraft (FARA) and the Future Long Range Assault Aircraft (FLRAA). They remain the highest aviation modernization priorities.
  - FARA will provide the Army and Joint Force with transformational battlefield reach, lethality, and survivability critical to operating in the expanded battlespace envisioned in future conflict.
  - FLRAA will provide effective assault and MEDEVAC capabilities, with significantly increased speed, range, and endurance.
  - The Future Tactical Unmanned Aerial System is leveraging a competitive rapid prototyping approach, informed by a year-long Soldier Touch Point “Buy, Try, Inform” effort to replace the RQ-7 Shadow in the Brigade Combat Teams with a runway-independent, CH-47F-transportable, and weather-hardened system with a reduced acoustics signature.
  - The Army continues development of Air Launched Effects, a low-cost aerial capability launched from crewed and uncrewed platforms to extend the tactical and operational reach, lethality, and protection of the host platform. This will include loitering munitions, additional sensors, and a vast array of small and large payloads of varying mission requirements.
  
- Network Programs:
  - The Army has delivered Capability Set 21 modernized tactical network equipment to eight Brigade Combat Teams, six Expeditionary Signal Battalions-Enhanced, and two Multi-Domain Task Force units.
  - The Army is now delivering Capability Set 23, which focuses on tactical edge communications for mounted formations and division headquarters, supporting the pivot from the Brigade Combat Team to the Division as the primary unit of action for large-scale combat operations.
  - We have also fielded modernized network technology, such as upgraded mission command and fires applications, mobile mission command

upgrades, resilient satellite communications equipment and modernized cryptographic systems, while piloting expanded Low Earth Orbit (LEO) commercial satellite service options.

- In FY 2024 the Army will focus on designing Capability Set 25 to support the pivot from the Brigade Combat Team to the Division as the primary unit of action for large-scale combat operations.
  - The Army is leveraging Project Convergence and regionally aligned operational exercises and experimentation to advance technologies such as data fabric, zero trust security architecture, and unified network management tools to provide commanders with data at the point of need.
  - In total the Army anticipates fielding more than 300 Army, Army Reserve and Army National Guard units with modernized network capability in 2024.
- Air and Missile Defense (AMD) Programs:
    - The Army is fielding the Initial Operational Capability for the Integrated Air and Missile Defense Battle Command System (IBCS) in 3Q FY 2023 and recently completed the Full Rate Production decision for this critical Air and Missile Defense system that will link Army and Joint sensors to shooters.
    - The Army is improving the Maneuver-Short Range Air Defense capability, which was fielded to the first battalion, with the second battalion planned to be fielded in 4Q FY 2023.
    - The Army continues to make progress on its Directed Energy Maneuver-Short Range Air Defense effort, a 50 kilowatt-class laser on a Stryker, including successful live-fire events at Yuma Proving Grounds, Arizona.
    - We are advancing directed energy efforts for Indirect Fire Protection Capability (IFPC) by pairing high-energy lasers (HEL) with high-power microwaves (HPM) for a layered defense of fixed and semi-fixed sites against an array of threats.

- Six Lower Tier Air and Missile Defense Sensor (LTAMDS) prototypes have been manufactured and are in developmental testing, with initial operating capability anticipated to be delivered in 1Q FY 2024.
- We have accepted delivery of two batteries of Iron Dome Defense System-Army from the Israeli government and are incorporating these systems into our exercises.
- The Army received the first IFPC Increment 2 launcher in 2Q FY 2023, with an additional 15 launchers planned for delivery by 4Q FY 2023.
- Soldier Lethality Programs:
  - Based on results from Integrated Visual Augmentation System (IVAS) FY 2022 operational testing, the Army conducted a program re-plan to address areas of improvement. The Army and Microsoft have identified solutions to address these areas through refinements driven by soldier-centered design, and the Army is on pace to field IVAS 1.0 and 1.1 systems to selected training and doctrine units (IVAS 1.0) and operational units (IVAS 1.1) in FY 2024. The Army intends to field IVAS 1.2, the full rate production goggle, to the Close Combat Force as early as 4Q FY 2025.
  - The Army has procured the majority of its Enhanced Night Vision Goggle Binocular (ENVG-B) procurement objective. Additional procurement funding in FY 2023, along with programmed funding in FY 2024, facilitates the purchase of an additional 10K ENVG-B systems and maintains ENVG-B production through 4Q FY 2025.
  - Production of the Next Generation Squad Weapon (NGSW) Rifle, Automatic Rifle, Fire Control, and General Purpose Ammo began in FY 2022, and First Unit Equipped is expected in 2Q FY 2024.



- Synthetic Training Environment (STE) Programs:
  - STE Information System (STE-IS) and Reconfigurable Virtual Collective Trainers (RVCT) will deliver initial prototype capability in FY 2023. One World Terrain, a key component of STE-IS, is in the hands of soldiers now providing operational battlefield visualization.
  - We continue progress on the Squad Immersive Virtual Trainer which remains closely coupled with IVAS, with development focused on hardware productization, cybersecurity, and other enhancements.
  - The Army's Live Training System (LTS) to conduct force-on-force and force-on-target live training will deliver initial capability to the Joint Readiness Training Center in FY 2024.
  - The Soldier Virtual Trainer (SVT) conducted its first Soldier Touch Point in 1Q FY 2023, with a second STP scheduled for 3Q FY 2023. The program is on track to deliver initial capability in 1Q FY 2025.
  
- Assured Positioning Timing and Navigation (PNT) and Space Programs:
  - The Army transitioned to M-Code Global Positioning System and alternative PNT beginning in FY 2022, following the first fielding of Dismounted Assured PNT Generation I Quick Reaction Capability System, fulfilling the Directed Requirement.
  - The Mounted Assured PNT System Generation II Program of Record, an M-Code GPS capable system, will initiate fielding in FY 2024.
  - The Army continues to invest in the ground segments of space-based technologies that close operational gaps in deep sensing and targeting activities. The Army prototyped and live-fire demonstrated the first-ever use of Low-Earth Orbit Satellite-based Alternative Navigation technology to guide a Precision Guided Munition in a totally GPS-denied environment and successfully engage a target at long range.

The Army's budget request also continues procurement and modernization of our key systems for our operational aviation platforms, Ground Combat Systems, Intelligence programs, Logistics, Armaments and Ammunition. We carefully balanced the overall Research, Development and Acquisition portfolio, including fine-tuning between Research, Development, Test and Evaluation funding and Procurement funding, as we transition from enduring systems to our new modernized systems.

Our Aviation portfolio strikes a balance between prudent investments to maintain the viability of current aircraft identified as part of the enduring fleet, while also investing in future aircraft and capabilities designed to provide reach, standoff, and overmatch against peer competitors in Multi Domain Operations. Beyond investments in Future Vertical Lift, we are making key investments in Apache and Black Hawk modernization, munitions, and aircraft survivability. Additionally, we are continuing to procure the MH-47G Block II Chinooks for our Special Operations units. The Army remains committed to Joint Air-to-Ground Missile production to replace the aging Hellfire missile and investing in Aircraft Survivability Equipment, a suite of systems that protect Army aircraft from threat infrared missiles, radar guided missiles, and lasers through detection and defeat systems.

Armored Brigade Combat Team modernization and combat vehicle protection remain a priority, as well. With this budget, the Army will procure 34 Abrams M1A2SEPV3s Tanks, 85 Strykers, 24 Self-Propelled Howitzer Paladin Integrated Management (PIM) vehicle sets, and 26 Joint Assault Bridges.

Our intelligence portfolio contains the resources required to provide intelligence and electronic warfare capabilities, support the Army's implementation of the National Defense Strategy, and enable "seeing and sensing farther." We continue to close capability gaps with the Tactical Intelligence Targeting Access Node, the Terrestrial Layer System, the Multi-Function Electronic Warfare-Air Large, Top Secret Communications, and investment in the Multi-Domain Sensing System-High Accuracy

Detection and Exploitation System. The investments in the High Accuracy Detection and Exploitation System will modernize our Aerial Intelligence, Surveillance, and Reconnaissance platforms by providing the range, speed, and sensing required to meet our pacing threat challenges.

The Air and Missile Defense portfolio invests in integrated command and control, sensors, and shooters to provide 360-degree, tiered, layered defensive fires against a wide range of air and missile defense. It continues to invest in Counter-small Unmanned Aircraft Systems (C-sUAS), Lower Tier AMD Sensor prototypes, Patriot radar upgrades, and procurement of critical AMD munitions, such as the Patriot Missile Segment Enhanced. In FY 2024, we will procure C-sUAS for one Division set and 15 fixed sites to cover globally prioritized critical sites. We will also work with Congress on options to consider additional multi-year procurement contracts for critical munitions, including the Guided Multiple Launch Rocket System rockets and Patriot PAC-3 missiles.

Our Command and Control portfolio is procuring Manpack and Leader Radios and related equipment to support Division type formations; a Low Cost Tactical Radio that will replace legacy Single Channel Ground and Airborne Radio System and meet National Security Agency cryptographic modernization requirements; and a Unified Network Operations prototype to enable common planning, configuration, monitoring, provisioning, management, and defense of the Network. It will also continue to procure and develop improvements for the Joint Battle Command-Platform.

Finally, the Logistics portfolio continues the procurement of Joint Light Tactical Vehicles, High Mobility Multipurpose Wheeled Vehicles (HMMWVs) and HMMWV antilock braking system/electronic stability control kits to improve our existing tactical wheeled vehicle fleet; invests in Army Watercraft, a significant combat multiplier in support of Army operational concepts and the Geographical Combatant Commander in large scale combat operations; invests in contested logistics capabilities to reduce demand and provide point of need production and sustainment; and realigns funding to

support critical ammunition program lines and Army Training Strategies to ensure contractual requirements are met to maintain Industrial Base Minimum Sustainment Rate capacities.

## **MODERNIZING OUR BUSINESS PRACTICES**

The Army has embraced industry best practices, such as the use of soldier-centered design and rigorous experimentation, to enable feedback from soldiers and commanders earlier in the development process. This is accomplished in phases – first by getting prototype equipment into the hands of soldiers from the operational force early, through Soldier Touch Points, to refine requirements before more investments are made. In subsequent phases of experimenting with prototypes in increasingly complex scenarios, we assess how we would organize and fight using this technology. This provides the Army not only valuable feedback on the technology itself, but we learn how we need to train and integrate across all facets, from Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, to Policy.

The Army continues Project Convergence, a Joint and multi-national experimentation campaign of learning that culminates in a major field experiment. Working closely with our counterparts from the other Services, we identify Joint warfighting problems to solve. Experimentation objectives, operational scenarios, and data collection plans are managed by the Project Convergence Board of Directors, which includes representatives from all the Services, the Joint Staff, and coalition partners.

Project Convergence seeks to enable and collect insights from exercises and experiments and apply them in future events. Project Convergence 21 (PC21) and Project Convergence Capstone 3 (PC22) incorporated Joint Partners to help inform the Army of 2030, the DoD Joint All-Domain Command and Control initiative, and the Joint Warfighting Concept. Project Convergence made it clear that we must adapt to a

system-of-systems approach that moves from “interoperable systems” to “integration of systems.” Project Convergence has also made it clear that we need to integrate our offensive and defensive fires using a combined arms maneuver approach and develop data-centric capabilities as part of the Joint Force. Lessons from PC22 will inform persistent experimentation over the next year including the Joint Warfighting Assessment (JWA), events such as the annual Balikatan exercise with the Republic of the Philippines, and Capabilities Development and Integration Directorate (CDID) events. Lessons from those events will inform Capstone 4, currently scheduled for February and March 2024.

The Army continues to implement and employ the reform initiatives granted by Congress that were designed to streamline and gain efficiencies in the acquisition process. For example, the Army is judiciously using Middle Tier Acquisition (MTA) rapid prototyping authority to experiment with innovative, mature technologies to quickly demonstrate new capabilities. The Army is using MTA rapid fielding authority to quickly field production quantities of new or upgraded systems with minimal development, potentially resulting in faster capability delivery and lower costs. In all, the MTA pathway enables a “try before we buy” framework that reduces risk, reduces cost, and accelerates capability development and deployment. The Army currently has 30 programs executing MTA rapid prototyping or rapid fielding efforts and is using these authorities to accelerate select Army modernization priorities including LTAMDS, PrSM, NGSW, MPF and IFPC.

The Army also benefits from expanded use of Other Transaction Authority (OTA), which can include follow-on production awards. OTAs are simplified contractual mechanisms that lend themselves to working with small companies and non-traditional contractors, two known sources of technological innovation. The Army effectively uses OTAs to streamline the acquisition of basic and advanced research activities, prototype projects, and follow-on production efforts. In FY 2022, the Army awarded more than 1,703 OTA agreements valued at \$6.3 billion. In November 2021, the Army updated its

OTA Policy and we continue to review our procedures to promote consistency in practice and increase transparency.

The Army also benefits from two additional authorities provided by Congress. The Software Acquisition Pathway (SWP) is a new acquisition pathway used to facilitate rapid and iterative delivery of custom software capabilities to users, recognizing that technology development cycles are more rapid in software systems. Programs using the SWP will demonstrate the viability and effectiveness of the capability within one year. The Army currently has nine programs operating on the SWP. Congress also made permanent the authority for Commercial Solutions Opening (CSO). Since its establishment as a pilot program, the Army has leveraged the CSO authority to obtain innovative commercial products and solutions to fulfill requirements, close capability gaps, and provide technological advances. The streamlined nature of the CSO procedures also serves to lower barriers to entry and incentivize small and non-traditional vendors who have not previously worked with the Department. The Army used CSO authority extensively as part of its pandemic response efforts.

In addition, in the FY 2016 National Defense Authorization Act, Congress encouraged delegation of Milestone Decision Authority (MDA) for most acquisition programs from the Office of the Secretary of Defense to the Military Departments. The Army further delegated MDA for some of these programs to the Program Executive Officer level, when appropriate. This delegation allows the Army to appropriately align program oversight with risk, resulting in reduced bureaucracy and increased efficiency.

All these initiatives, when used alone or in combination, allow for better and faster modernization decisions and faster requirements development.

## **CONCLUSION**

The Army is modernizing rapidly, building a force capable of competing across the spectrum of competition and conflict to deter war and, failing that, prevail in war. These capabilities give the Army the speed, range, and convergence of actions that provide decision dominance which gives us overmatch over our adversaries. Thanks to stable funding, new authorities, and a rigorous experimentation regime, we are further down the modernization path than envisioned a year ago. Modernization is a central element of long-term Army transformation, which translates materiel modernization into capability and lethality for our soldiers. The nature of our adversaries' actions and intent, amid rapid and disruptive technological change, demands that the Army continue to modernize and transform, and, with your support, we are committed to doing that.

Thank you again for this opportunity to discuss Army Modernization and for your strong support of our soldiers, civilians, and their families.