

Seizing the High Ground – United States Army Futures Command

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PUBLISHED BY THE INSTITUTE OF LAND WARFARE
AT THE ASSOCIATION OF THE UNITED STATES ARMY



OCTOBER 2018

The Army of 2028 will be ready to deploy, fight, and win decisively against any adversary, anytime and anywhere, in a joint, multi-domain, high-intensity conflict, while simultaneously deterring others and maintaining its ability to conduct irregular warfare. The Army will do this through the employment of modern manned and unmanned ground combat vehicles, aircraft, sustainment systems, and weapons, coupled with robust combined arms formations and tactics based on a modern warfighting doctrine and centered in exceptional Leaders and Soldiers of unmatched lethality.¹

The Army Vision, June 2018

As the 2018 National Defense Strategy (NDS) states, the U.S. faces a return to great power competition in addition to threats from terrorism and regional adversaries. Over the last two decades, the Army had to make difficult choices to defer modernization and instead support the demand for a steady rotation of forces optimized for counterinsurgency in the Middle East. Coupled with budgetary instability and several unsuccessful high-profile acquisition programs, this hampered Army modernization efforts. Simultaneously, U.S. adversaries made intellectual, organizational and materiel investments to gain advantage and increasingly challenge U.S. warfighting dominance. **The U.S. Army needs to modernize critical core capabilities now to regain overmatch for MDO against near-peer adversaries in the future.**

To address this challenge, the Army requires a unified, responsive, efficient modernization enterprise; a clear modernization strategy; and aggressive implementation. AFC is the vehicle that the Army will use to break free of its Industrial Age business model to move at the speed of the Information Age. Transforming the Army's approach to modernization will enable it to adapt, innovate and integrate technology at speed and scale, regaining assured battlefield dominance.²

¹ General Mark A. Milley, Chief of Staff, Army, and Honorable Mark T. Esper, Secretary of the Army, "The Army Vision," June 2018.

² Honorable Ryan D. McCarthy, Undersecretary of the Army, and General John M. Murray, Commander, "Army Futures Command," Statement to House Armed Services Committee (HASC), 13 September 2018.

ISSUE

The U.S. Army needs to modernize critical core capabilities now to regain overmatch for Multi-Domain Operations (MDO) against near-peer adversaries.

SPOTLIGHT SCOPE

- Provides strategic context and rationale for establishment of Army Futures Command (AFC);
- Describes: mission and structure of AFC; Army modernization priorities; supporting Cross-Functional Teams (CFTs); and
- Identifies keys to success for Army Modernization and AFC.

INSIGHTS

- Reemergence of great power competition is driving the Army to modernize to increase lethality and achieve overmatch in large-scale combat operations.
- Establishing AFC contributes to unity of effort across disparate modernization efforts and increases accountability, transparency and stewardship of the nation's resources. Realignment is not simply creating a new headquarters; AFC will adapt culture and streamline work to overcome organizational inertia.
- Army requires coherent, credible, consistent and compelling narrative with which to gain and maintain support. Keeping Congress fully apprised of modernization efforts—their progress, pitfalls and potential—is essential.
- Sustained and predictable funding is key to ensuring full support of Army's industry partners, who are critical in delivering innovative capabilities.

■ Army Modernization

The U.S. Army Modernization Strategy has one focus: to make Soldiers and units more lethal to win the nation's wars, then come home safely. The American people expect their Army to win; to do so, it must dominate its adversaries in the combat fundamentals: shoot, move, communicate, protect and sustain.

To outpace 21st century threats, the Army must invest, develop and field weapons and platforms with next generation technology to provide its formations distinct advantages over near-peer competitors. In 2017, the Army prioritized six capability areas key to operationalizing MDO:

1. **Long-Range Precision Fires.** Provide long-range and deep-strike capability through restoring dominance in range, munitions and target acquisition. Surface-to-surface fires must be precise, responsive and effective to penetrate enemy defensive capabilities by synchronizing effects across multiple domains.³
2. **Next Generation Combat Vehicle.** Provide overmatch along with other close combat capabilities in manned, unmanned and optionally-manned variants—with the most modern firepower, protection, mobility and power generation capabilities.⁴
3. **Future Vertical Lift.** An Army-led, multi-service initiative to optimize future vertical dominance—attack, lift and reconnaissance—in survivable manned, unmanned and optionally-manned variants.⁵
4. **Army Network.** Develop and enable hardware, software and infrastructure—sufficiently mobile and expeditionary—to fight cohesively in denied or degraded electromagnetic spectrum environments.
5. **Air and Missile Defense.** Provide protection from modern and advanced air and missile delivered fires and from drones. Defeat missile threats against the United States, deployed forces, allies and partners.⁶
6. **Soldier Lethality.** Spanning all fundamentals: shooting, moving, communicating, protecting and sustaining, it will field next generation individual and squad combat weapons, improved body armor, sensors, radios and load-bearing exoskeletons.

■ Why a “Futures Command”?

The Army has been neither organized nor designed to deliver timely, modernized and critical capabilities to Soldiers and units. Modernization



Command Sergeant Major Michael A. Crosby, left, nominated Command Sergeant Major of U.S. Army Futures Command, holds the U.S. Futures Command's colors as (left to right) General Mark A. Milley, Chief of Staff, Army; the Honorable Mark T. Esper, Secretary of the Army; and General John M. Murray, Commanding General of the U.S. Army Futures Command, unfurl the newly-established command's colors during the activation ceremony on 24 August in Austin, Texas (U.S. Army photo by Sergeant Brandon Banzhaf, 24th Press Camp Headquarters).

- **Near-peer adversaries:** Nation-states with intent, capabilities and capacity to contest U.S. interests globally in most or all domains and environments.
- **Overmatch:** Application of tactics and capabilities to prevent or mitigate opposing forces from using their tactics and capabilities.

ARMY MODERNIZATION PRIORITIES

1. Long-Range Precision Fires;
2. Next Generation Combat Vehicle;
3. Future Vertical Lift;
4. Army Network;
5. Air and Missile Defense; and
6. Soldier Lethality.

³ Fires Center of Excellence, “Long-Range Precision Fires,” *Army News Service*, 17 January 2018, <https://www.army.mil/standto/2018-01-17>.

⁴ Next Generation Combat Vehicle Cross-Functional Team, “Next Generation Combat Vehicles,” *Army News Service*, 22 February 2018, https://www.army.mil/standto/archive_2018-02-22.

⁵ Future Vertical Lift Cross-Functional Team, “Future Vertical Lift,” *Army News Service*, 7 February 2018, https://www.army.mil/standto/archive_2018-02-07.

⁶ Air and Missile Defense Cross-Functional Team, “Air and Missile Defense,” *Army News Service*, 14 March 2018, https://www.army.mil/standto/archive_2018-03-14.

processes are based on an Industrial Age model. They are stove-piped, bureaucratic and do not operate at the speed of relevance to a 21st Century force.

As the first AFC Commander, General Mike Murray observed in testimony to the House Armed Services Committee, “The world has changed since our current ground combat systems were designed and built in the 1970s and 1980s; the rapid pace of technological change, coupled with the speed of innovation we see in the world today, demands that the Army make changes in the way we develop and deliver concepts and capability for our Soldiers.”⁷

Recognizing the need to significantly reform the ways that the Army conducts research and development, Science and Technology (S&T), acquisition and procurement, Army leadership set out to add coherence to the processes by creating a single organization to look to the future. As Army Chief of Staff General Mark Milley explained, “We are in the midst of a change in the very character of war, and we . . . didn’t have the organization solely dedicated to that. . . . We needed to dedicate a single organization to [modernization] and thereby streamline and consolidate and bring unity of command and purpose to the Army for the development of our future capabilities.”⁸

In March of 2018, the Army announced the intent to create AFC for the purpose of overseeing modernization efforts, signifying its biggest



Specialist Shykeen McClellan, a Soldier with the 5th Squadron, 73rd Cavalry Regiment, 3rd Brigade Combat Team, 82nd Airborne Division, conducts a post-drop systems check of the Family of Weapons Sights-Individual (FWS-I), mounted to the M-249 squad automatic weapon, after landing on the Sicily Drop Zone at Fort Bragg, North Carolina. FWS-I is a broad program which modernizes direct fire optics for small arms platforms, including medium and heavy machine gun systems (Photo by Chris O’Leary, Airborne and Special Operations Test Directorate, U.S. Army Operational Test Command).

WITH THE ESTABLISHMENT OF AFC, THE U.S. ARMY HAS FOUR MAJOR COMMANDS:

Forces Command (FORSCOM)

Provides the force. Prepares a combat-ready, globally-responsive Total Army (Regular Army, National Guard and Reserve) force of Soldiers to build and sustain Army readiness capable of meeting Combatant Command requirements.

Army Materiel Command (AMC)

Sustains the force. Provides materiel readiness by sustaining the force, helping ensure that the Army is ready to deploy, fight and win when called to do so.

Training and Doctrine Command (TRADOC)

Designs and builds the force. Recruits, trains and educates the Army’s Soldiers; develops its leaders, standards and doctrine; supports training in units; builds the Army by developing and integrating operational concepts and organizational designs for the Army.

Army Futures Command (AFC)

Equips the force. Leads the Army’s future force modernization enterprise by assessing the future operational environment, emerging threats and new technologies to develop and deliver concepts, requirements, future force designs and modern materiel solutions to meet Soldiers’ wartime needs.

Army Futures Command is the vehicle that the Army will use to break free of the current Industrial Age business model to move at the speed of the Information Age.

⁷ Matthew Cox, “Head of Army Futures Command Fields Tough Questions from Congress,” Military.com, 14 September 2018; Congressional Research Service (CRS) Insight, “Army Futures Command,” 16 July 2018.

⁸ Jen Judson, “Why the Army picked Austin for Futures Command,” *Defense News*, 14 July 2018.

institutional restructuring since the establishment of Forces Command (FORSCOM) and Training and Doctrine Command (TRADOC) in 1973. AFC is responsible for developing the future force by introducing new capabilities and proposing new formations that address top modernization priorities focused on a more lethal force on a time horizon of 2028 while looking as far as 30 years into the future.

AFC provides oversight of the acquisition process under one command to deliver integrated solutions for increased lethality and capabilities whenever and wherever they are needed.⁹ This realignment is not simply creating a new headquarters; it contributes to unity of effort for the modernization enterprise, streamlining work to overcome bureaucratic inertia and improving transparency, accountability and responsible stewardship of limited resources.



The Joint Multi-Role Tech Demo is showcasing platform and mission systems technologies to help the Army make decisions about Future Vertical Lift capabilities that could look like this hypothetical rendering. The effort is managed jointly by a team led by the U.S. Army Aviation and Missile Research, Development and Engineering Center (AMRDEC) (U.S. Army graphic by AMRDEC VizLab).

THE ROLE OF AFC

The role of AFC will be to lead the Army's future force modernization enterprise. It will assess and integrate the future operational environment, emerging threats and technologies to develop and deliver concepts, requirements and future force designs and will support the delivery of modernization solutions.¹⁰

Army General Order No. 2018-10,
"Establishment of Army Futures Command"

While, on the surface, establishing AFC may appear to be an “organizational fix,” it is important to understand that previous shortcomings in Army modernization were not just due to organizational misalignment. Other contributing factors included cuts in research, development and acquisition funding; inconsistent attention from Army leaders; inexperienced personnel—uniformed and civilian—across the modernization enterprise; and short-term thinking, driven by the wars in Iraq and Afghanistan, that contributed to incremental improvement in the force when leap-ahead steps were also necessary.¹¹

■ AFC Structure

AFC began operations on 1 July 2018 and is based in Austin, Texas, near innovative industrial and academic institutions, where it is postured to inculcate the dynamic and adaptive culture needed to lead the Army modernization enterprise. With a small headquarters (that may grow to a strength not to exceed 500 personnel), the focus is on flexibility, collaboration and speed.

⁹ General Mark A. Milley, Chief of Staff, Army, and Honorable Mark T. Esper, Secretary of the Army, Statement before the Senate Armed Services Committee, 12 April 2018, https://www.armed-services.senate.gov/imo/media/doc/Esper-Milley_04-12-18.pdf.

¹⁰ Honorable Mark T. Esper, Secretary of the Army, “Establishment of United States Army Futures Command,” General Order No. 2018-10, 4 June 2018.

¹¹ Thomas Spoehr, “Army Futures Command: A Move in the Right Direction,” The Heritage Foundation, 3 August 2018, 4.

AFC subordinate organizations remain at the installations to which they were originally assigned to ensure that all Army commands remain aligned as AFC synchronizes the enterprise.¹²

AFC will assess the future operational environment, emerging threats and new technologies to develop and deliver concepts, requirements, future force designs and modern materiel solutions to meet Soldiers’ wartime needs.

Utilizing warfighter input and feedback, AFC will work with innovators, academia and industry in an environment where ideas and solutions can be developed rapidly to meet emerging demands. This is consistent with the 2018 NDS which calls upon the Department of Defense (DoD) to “anticipate the implications of new technologies on the battlefield, rigorously define the military problems anticipated in future conflict, and foster a culture of experimentation and calculated risk-taking.”¹³



Despite challenges, Army Science and Technology Reinvention Laboratories are making significant strides—including work by the U.S. Army Space and Strategic Defense Command/Army Forces Strategic Command to advance high-energy laser weapons, like this one. They have the potential to be a low-cost, effective complement to kinetic energy to address threats from rockets, artillery and mortars, as well as from cruise missiles and unmanned aerial systems (Image courtesy of the Office of the Deputy Assistant Secretary of the Army, Research and Technology).

REASSIGNMENT OF ORGANIZATIONS TO U.S. ARMY FUTURES COMMAND

The following organizations (with their authorities, responsibilities, designated subordinate elements, personnel and resources) are reassigned to AFC:

- | From TRADOC | From AMC |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Army Capabilities Integration Center; • Capability Development and Integration Directorates and associated battle labs; and • TRADOC Analysis Center. | <ul style="list-style-type: none"> • Research, Development and Engineering Command; and • Army Materiel Systems Analysis Activity. |

A non-traditional command, AFC will have three supporting elements and eight supporting CFTs. The three elements are Futures and Concepts, Combat Development and Combat Systems:

- **Futures and Concepts** will describe the future operational environment and blueprint of the future force. It will identify and prioritize capability needs based on threat and technology to inform refinement of modernization strategy across the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy (DOTM-LPF-P) enterprise.
- **Combat Development** will lead prototyping efforts, identify requirements and develop solutions for critical capability shortfalls.

ARMY FUTURES COMMAND

- **Futures and Concepts.** Identify and prioritize capability development needs and opportunities.
- **Combat Development.** Conceptualize and develop solutions for identified needs and opportunities.
- **Combat Systems.** Refine, engineer and produce modern materiel solutions.
- **CFTs.** Aligned with Army’s six modernization priorities plus two additional teams.

¹² Ibid.

¹³ Department of Defense, Summary of 2018 National Defense Strategy of The United States of America: Sharpening the American Military’s Competitive Edge, 19 January 2018, 3, [https:// www. defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf](https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf).

- **Combat Systems** will refine, engineer and develop materiel solutions. The Principal Military Deputy (PMILDEP) to the Assistant Secretary of the Army (Acquisitions, Logistics and Technology) [ASA (ALT)] will serve as Director, Combat Systems, as an additional duty and will advise the AFC commanding general on all matters pertaining to research, development, acquisition and contracting.¹⁴

As Director, Combat Systems, the PMILDEP will ensure that Program Executive Officers (PEOs) and Program Managers prioritize Army modernization efforts and maximize cooperation, urgency and unity of effort in support of AFC. The PMILDEP's assignment, reporting and responsibilities to the ASA (ALT) will remain unchanged in accordance with existing statutory acquisition authorities. **The Army Acquisition Executive will retain milestone decision authority and continue to serve as the office with sole responsibility for acquisition related functions for the Secretary of the Army.**¹⁵

The Driving Force behind Modernization: Cross-Functional Teams

Assisting the subordinate elements are eight CFTs, aligned with the six Army Modernization Priorities. Each is comprised of combat-experienced operators as well as experts in acquisition, S&T, testing and evaluation, development, training and integration. CFTs use experimentation, teaming with industry and academia, and rapid feedback to develop solutions to the most pressing modernization challenges. The eight CFTs are organized as follows:

Long-Range Precision Fires

Focus: Deep Fires, Long-Range Precision Fires Missile and Extended-Range Cannon Artillery.¹⁶

- **Deep fires.** Provide surface-to-surface capability to penetrate peer adversary defensive capabilities to engage key targets at strategic ranges.
- **Long-Range Precision Fires Missile.** Replace Army Tactical Missile System and provide “10x” capability through increased range, double the capacity per launcher, improved lethality, faster time of flight, increased rate of fire and jamming resistance.
- **Extended-Range Cannon Artillery.** Improve Paladin self-propelled howitzer to provide indirect-fires for brigade combat team and

¹⁴ HASC, 3.

¹⁵ McCarthy and Murray, “Army Futures Command,” Statement to HASC; Army Directive 2018-15, “U.S. Army Futures Command Relationship With the Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology),” 27 August 2018, 3.

¹⁶ Fires Center of Excellence, “Long-Range Precision Fires,”; “10x” refers to a “cumulative assessment” of capability based on improvement in defined key performance parameters. The 10x capability is not the same for each system.



Zac Wingard, a mechanical engineer at the Army Research Laboratory, explains the “third arm” body-worn weapon mount during the Association of the United States Army’s Global Force Symposium in Huntsville, Alabama, on 14 March 2017. The lab is developing the device that could lessen Soldier burden and increase lethality. Weighing less than 4 pounds, the device attaches to a Soldier’s protective vest and holds their weapon, putting less weight on their arms and freeing up their hands to do other tasks (Photo by Sean Kimmons).

CFT LOCATIONS

- **Long-Range Precision Fires**
Fort Sill, Oklahoma
- **Next Generation Combat Vehicle**
Detroit Arsenal, Michigan
- **Future Vertical Lift**
Redstone Arsenal, Alabama
- **Network Command, Control, Communication and Intelligence**
Aberdeen Proving Ground, Maryland
- **Assured Positioning, Navigation and Timing**
Redstone Arsenal, Alabama
- **Air and Missile Defense**
Fort Sill, Oklahoma
- **Soldier Lethality**
Fort Benning, Georgia
- **Synthetic Training Environment**
Orlando, Florida

division-level fights. Provide “10x” capability with increased range, lethality, reliability and survivability.

Next Generation Combat Vehicle

Provide increased survivability, mobility and lethality at reduced weight to close with and destroy peer threats through maneuver, firepower and shock effect.¹⁷ Leverage key enabling technologies:

- **Maneuver Robotics and Autonomous Systems.** Increase effectiveness of maneuver formations by combining manned and unmanned teams in conduct of cross-domain maneuver.
- **Directed Energy and Energetics.** Leverage directed energy and energetics in lethal, non-lethal and protection applications to increase survivability and lethality.
- **Power Generation and Management.** Provide capability to service all platform energy needs via alternative energy means, increasing operational range and reducing sustainment demands.
- **Advanced Armor Materiel Solutions.** Break the paradigm that dictates that greater protection comes only from passive armor.
- **Vehicle Protection Suites.** Optimize passive armor and active protection systems to increase survivability while decreasing weight, thus improving mobility, protection and sustainability.



An M270 Multiple Launch Rocket System assigned to the A Battery, 6th Battalion, 37th Field Artillery Regiment, 210th Field Artillery Brigade, 2nd Republic of Korea/United States Combined Division, fires an MGM-140 Army Tactical Missile into the East Sea off South Korea on 5 July 2017. The missile launch demonstrated the combined deep strike capabilities which allow the Republic of Korea (ROK)/U.S. alliance to neutralize hostile threats and aggression against the ROK, the United States and its allies (U.S. Army photo by Staff Sergeant Sinthia Rosario).

Future Vertical Lift (FVL)

Enhance vertical lift dominance in a contested and complex airspace:

- Extend Army Aviation’s interoperability to get there, stay there and dominate in MDO with lethality, autonomy and protection attributes, teamed with unmanned systems.
- Enable the joint force to seize, retain and exploit the initiative, giving the ground force commander an asymmetric advantage against peer and near-peer adversaries.¹⁸

Network Command, Control, Communication and Intelligence

Four lines of effort:

- **Unified Network.** Provide an available, reliable and resilient network that ensures seamless connectivity in any operationally-contested environment.
- **Joint Interoperability/Coalition Accessible.** Ensure Army Forces can more effectively interact (technically and operationally) with joint and coalition partners.
- **Command Post (CP) Mobility/Survivability.** Ensure CP deployability, reliability, mobility and survivability.

ARMY PROGRAM EXECUTIVE OFFICERS

- Ammunition;
 - Aviation;
 - Combat Support/Combat Service Support;
 - Command, Control and Communication (Tactical);
 - Ground Combat Systems;
 - Intelligence, Electronic Warfare and Sensors;
 - Missiles and Space;
 - Soldier; and
 - Simulation, Training and Instrumentation.
-

¹⁷ Next Generation Combat Vehicle Cross-Functional Team, “Next Generation Combat Vehicles.”

¹⁸ Future Vertical Lift Cross-Functional Team, “Future Vertical Lift.”

- **Common Operating Environment.** Ensure a simple and intuitive single-mission command suite that is easily operated and maintained by Soldiers.¹⁹

Assured Positioning, Navigation and Timing (PNT)

Provide accurate and trusted PNT:

- Establish a foundational architecture that affords an assured PNT path to enhance resiliency with incremental and scalable capability.
- Synchronize Army PNT efforts across PEOs, the Army Rapid Capabilities Office, S&T programs, policy, procedures, training and leader education.

Air and Missile Defense (AMD)

In conjunction with the PEO for Missiles and Space, coordinate and synchronize rapid procurement and fielding of initial air and missile defense capability:

- Examine promising technologies, such as high-energy lasers, with potential to add significant capability in the future.
- Accelerate delivery of Maneuver-Short Range Air Defense (M-SHORAD) and the U.S. Forces Korea joint emergency operational needs.
- Conduct comprehensive reviews of AMD S&T.²⁰

Soldier Lethality

Increase Soldier lethality, mobility and survivability. Focus:

- **Next Generation Squad Weapons.** Increase capability using latest developments in S&T. Replace M-249 squad automatic weapon and M-4 carbine.
- **Enhanced Night Vision Goggles.** Provide improved depth perception, fused image for improved detection and situational awareness, all-weather, limited visibility viewing capability, rapid target acquisition and augmented reality.
- **Adaptive Soldier Architecture.** Standardize data and power interfaces across the Soldier, squad and squad combat platform.
- **Synthetic Training Environment.** A single, interconnected system that enables units at all echelons to conduct realistic multi-domain training in diverse operational environments.²¹



Undersecretary of the Army Ryan D. McCarthy, (center left) and General James C. McConville, Vice Chief of Staff, Army (center right), discuss emerging technology that could be part of the Next Generation Combat Vehicle while inside the mission-enabling technologies demonstrator, a modified Bradley Fighting Vehicle equipped with several upgrades, on 18 January 2018. Both leaders toured the Army's Tank Automotive Research, Development and Engineering Center at the Detroit Arsenal in Michigan to gauge progress in developing the future combat vehicle (U.S. Army photo by Sean Kimmons).

¹⁹ Network Cross-Functional Team, "Army Network," *Army News Service*, 8 March 2018, https://www.army.mil/standto/archive_2018-03-08.

²⁰ Air and Missile Defense Cross Functional Team, "Air and Missile Defense."

²¹ Colonel Daniel S. Roper, USA, Ret., "Regaining Tactical Overmatch: The Close Combat Lethality Task Force," Institute of Land Warfare Spotlight 18-2, April 2018, <https://www.ausa.org/sites/default/files/publications/SL-18-2-Regaining-Tactical-Overmatch-The-Close-Combat-Lethality-Task-Force-0.pdf>; Soldier Lethality Cross-Functional Team, "Soldier Lethality," *Army News Service*, 22 March 2018, https://www.army.mil/standto/archive_2018-03-22.

Synthetic Training Environment

Converge live, virtual, constructive and gaming environments into a single synthetic training environment.²² Objectives:

- **Global/One World Terrain.** Provide accessible representations of any part of the globe to represent the complexities of the operational environment and multi-domain battlefield.
- **Virtual training.** Support collective combined arms training from Soldiers and squads through battalion level for all Army formations with dismounted and platform capabilities.
- **Training Simulation Software.** Provide a single training environment, open architecture and intuitive, common application interfaces.²³

■ Keys to Success

To realize the Army Vision, modernizing the force requires bold leadership at Army and AFC levels. The modernization enterprise will need to operate faster, communicate better and develop a culture that supports prudent risk-taking by a competent and confident workforce that is up to the task.

The Need for Speed

AFC must generate and sustain momentum within the Army, the Office of the Secretary of Defense (OSD) and with Congress. The only way to do this is by providing real results. As General Murray says, “It’s about showing successes, it’s about showing how we can go faster.”

This requires taking risks, and some initiatives will not succeed. Ideally, failures will be quick and cheap, but an early misstep in a high-visibility program has the potential to disrupt the hard-earned momentum necessary to carry it through to fruition. Even if AFC can help the Army accept short-term risk for long-term success, it still must convince OSD and Congress to maintain critical support.²⁴

When balancing the key parameters of any program—schedule, production and cost—the Army acquisition enterprise has tended to focus too much on production requirements and to hold out for exquisite solutions. This tendency, exacerbated by under-resourcing of the institutional force along with episodic senior leadership involvement, has often led to years of delay. A three to five-year process just to determine the requirements for a given program is unacceptable for a 21st Century force.

Secretary of the Army Mark Esper wants requirements determination to be on a 12-month timescale and to be fully informed by Soldier feedback; AFC is moving out on this guidance. The Commander testified that there will be



U.S. Army Specialist Ryan Cardiff, left, and Sergeant Ryan Heaton, both assigned to 2nd Cavalry Regiment, learn to operate a Stinger Man-Portable Air-Defense System during a virtual stinger dome training session at the 7th Army Training Command's Grafenwoehr training area, Germany, 14 March 2018 (U.S. Army photo by Markus Rauchenberger).

²² Synthetic Training Environment Cross-Functional Team, “Synthetic Training Environment,” *Army News Service*, 26 March 2018, https://www.army.mil/standto/archive_2018-03-26.

²³ Ibid.

²⁴ Sydney J. Freedberg, Jr., “‘A Little Bit Disruptive’: Murray & McCarthy on Army Futures Command,” *Breaking Defense*, 6 September 2018, <https://breakingdefense.com/2018/09/a-little-bit-disruptive-murray-mccarthy-on-army-futures-command/>.

“a very deliberate effort to align, synchronize and orchestrate across the entire modernization effort, and I think you will see much shorter timelines to deliver capabilities to Soldiers. . . . Some of the capabilities the Cross-Functional Teams are working will be in production and being delivered and in the hands of Soldiers in the next two years.”²⁵

A Coherent, Credible, Consistent and Compelling Narrative

The Army needs a coherent, credible, consistent and compelling modernization narrative with Congress, the total force and industry partners to generate and sustain momentum. (This is dependent of course on equally coherent and consistent National Security and National Defense Strategies, which the Army supports.) This requires internal discipline and continuous alignment of requirements, priorities and the budget. With momentum, adjustment is possible. Without it, change is much more challenging.

The Army narrative should involve a description of the value-added of modernization—it is more than new hardware. This includes a formation view of the enhanced capabilities (lethality, deployability, survivability and sustainability) and how new systems support Soldiers, the Army and the joint force to execute the NDS most effectively. This will also require the development of relevant metrics with which to demonstrate to Congress that AFC is making a demonstrable improvement in the Army’s modernization process. The Army Vision and the October 2018 Multi-Domain Operations concept, known as MDO 1.5, provide the foundation with which to describe the benefits sought in the Army Modernization Strategy and explain the concept for how all of this will work on the battlefield.

The narrative will help the rest of the Army to see where it fits, explaining how other critical capabilities, not explicitly addressed with the Army Modernization Priorities and AFC, fit into the bigger picture. Among these capabilities are intelligence, sustainment and deployability.

Finally, the narrative must help industry to help the Army. As the Army makes a commitment to accept prudent risk to modernize the force, **the Army (and rest of DoD) must recognize that industry partners are also accepting risk.** There must be richer conversations with industry, describing the operational or tactical problem that the Army is attempting to solve, as opposed to unnecessarily detailed specifications. A thorough description of risk that the Army is willing to take can benefit industry, the Army and the American taxpayer.

Culture

To realize the goal of achieving overmatch, the Army needs more than a new four-star command to lead its modernization efforts; it requires an institutional culture change. While establishing a new organization and changing related processes are relatively straightforward, changing culture



A Sabre short-range ballistic missile launches in June 2017 at White Sands Missile Range, New Mexico, for a test of the Patriot Advanced Capability-3 (PAC-3) Missile Segment Enhancement, an advanced missile defense system. Hypersonic missiles might be able to penetrate PAC-3 and similar systems (U.S. Army photo by U.S. Army Space and Missile Defense Command/Army Forces Strategic Command).

KEYS TO SUCCESS

- Early wins—build and sustain momentum (or fail early and cheap, then accelerate learning with increased operational inputs);
 - keeping Congress fully apprised of status—progress, pitfalls and potential—to secure stability in modernization funding and provide predictability to industry partners; and
 - not just reorganizing culture but adapting it.
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²⁵ Cox, “Head of Army Futures Command Fields Tough Questions from Congress.”

is much more complex. Army leaders will need to sustain their commitment to institutional risk-taking and supporting innovation if the force is to internalize this approach to modernization.²⁶ As Army Undersecretary Ryan McCarthy and General Murray testified, AFC “will address intellectual and materiel transformation by changing processes and organizations, but also the knowledge, skills, abilities and culture of the people within them.”²⁷

The Army should consider adjusting personnel policies that influence the quality, assignment length and advancement potential of those essential to AFC and modernization. This may include PEOs, AFC headquarters personnel and the CFTs. As Murray observes, “the way we reward people is through promotion boards and advancement, and you get that in the Army by commanding organizations, not by being associated with a program for an extended period of time.”²⁸

■ Conclusion

The Army, DoD leadership and Congress recognize that they must act now to put in motion the modernization efforts that will ensure America’s Army is ready to fight and win—anywhere, anytime against any foe. The processes that the Army is putting in place, including the consolidation of heretofore disparate entities and authorities involved in AFC, is the right step, right now.²⁹

As Secretary Esper has stated, “Army Futures Command postures the Army for the future by providing strategic direction, integrating the Army’s modernization enterprise, aligning resources to priorities, and delivering superior materiel solutions to our Soldiers consistent with the Army Vision.” With a candid recognition of challenges and past failings, the Army has purpose-built AFC to address its modernization shortcomings. With the help of industry, academia and Congress, the Army can begin to move at the speed of relevance in the Information Age.³⁰

Noted organizational management expert Peter Drucker observed, “The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday’s logic.”³¹ The U.S. Army recognizes that yesterday’s logic has limited utility in the turbulent security and fiscal environment it faces. More than just a rewiring of the Army’s organization chart, the establishment of AFC is a visible demonstration of the Army’s recognition that it needs to be willing to change everything but its values to provide the nation with the Army that it requires. ★



The Honorable Mark T. Esper, Secretary of the Army, and General Gustave Perna tour Watervliet Arsenal, New York, 30 March 2018. Secretary Esper also visited the Detroit Arsenal in Michigan on 27 April 2018 to discuss how the new CFTs will reduce the acquisition process timeline (U.S. Army photo).

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²⁶ CRS Insight, “Army Futures Command.”

²⁷ McCarthy and Murray, “Army Futures Command,” Statement to HASC.

²⁸ David B. Larter, “US Army looking to extend tours for acquisition officers,” *Defense News*, 6 September 2018, <https://www.defensenews.com/smr/defense-news-conference/2018/09/06/us-army-looking-to-extend-the-tours-for-acquisition-officers/>.

²⁹ General Carter Ham, USA, Ret., “AUSA’s Carter Ham to Macgregor: Futures Command Will Work,” *Breaking Defense*, 7 June 2018, <https://breakingdefense.com/2018/06/ausas-carter-ham-to-macgregor-futures-command-will-work/>.

³⁰ McCarthy and Murray, “Army Futures Command,” Statement to HASC.

³¹ Peter Drucker, *Managing in Turbulent Times* (New York: Harper Collins, 1980).

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AFC	Army Futures Command
AMC	Army Materiel Command
AMD	Air and Missile Defense
AMSAA	Army Materiel Systems Analysis Activity
ARCIC	Army Capabilities Integration Center
ASA (ALT)	Assistant Secretary of the Army (Acquisitions, Logistics and Technology)
CDID	Capability Development and Integration Directorate
CFT	Cross-Functional Team
CP	Command Post
DoD	Department of Defense
DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy
FVL	Future Vertical Lift
FORSCOM	Army Forces Command
MDO	Multi-Domain Operations
M-SHORAD	Maneuver-Short Range Air Defense
NDS	National Defense Strategy
NSS	National Security Strategy
PEO	Program Executive Officer
PM	Program Manager
PNT	Position, Navigation and Timing
PMILDEP	Principal Military Deputy
RDECOM	U.S. Army Research, Development and Engineering Command
S&T	Science and Technology
TRADOC	Army Training and Doctrine Command
TRAC	TRADOC Analysis Center

