

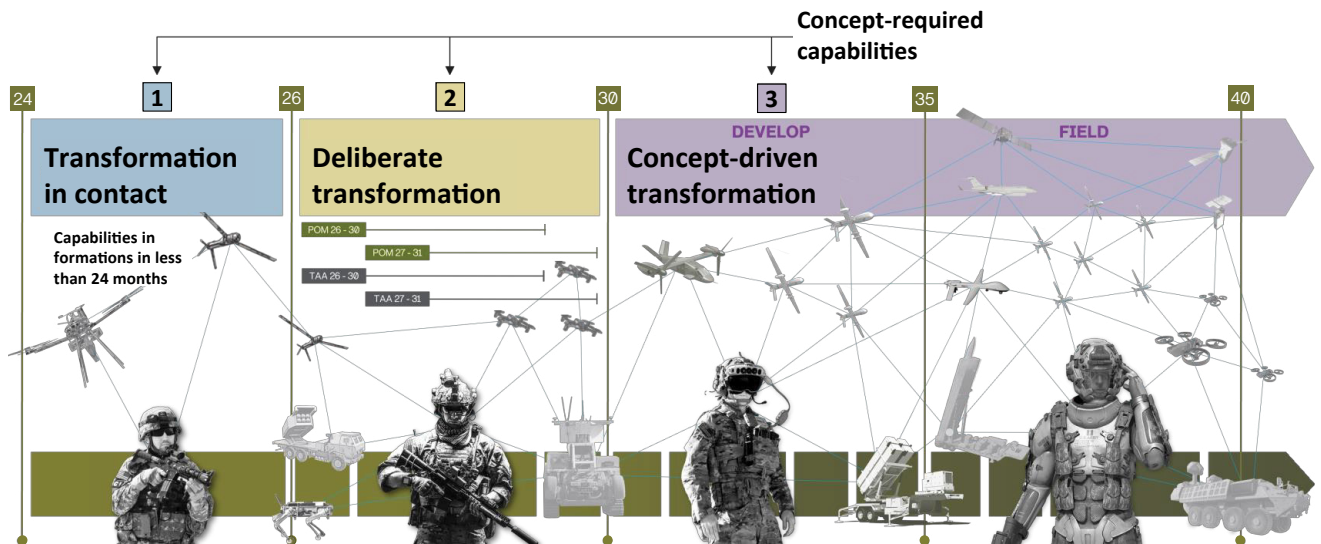


Col. James Stultz, brigade commander of 2nd Brigade Combat Team (Strike), 101st Airborne Division (Air Assault), briefs key leaders during a combined arms rehearsal prior to assaulting an objective during Operation Lethal Eagle 24.1 at Fort Campbell, Kentucky, on 25 April 2024. During the exercise, Strike tested and fielded a prototype of the U.S. Army's new mobile brigade combat team, an organizational structure being implemented as part of the Army's "transformation in contact." (Photo by Sgt. Caleb Pautz, 101st Airborne Division [Air Assault])

Continuous Transformation

Gen. James E. Rainey, U.S. Army

Editor's note: The article presented in this edition of Military Review is a combination of three articles from Gen. James E. Rainey that were originally published as Military Review online exclusives on the Army University Press website at <https://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2024-OLE/>.



(Figure by Army Futures Command)

Figure 1. Three Periods of Time for Transformation

We've learned a lot of lessons ... one of the things we want to start doing is transforming in contact, so we can start getting after some of these changes almost immediately.

—Gen. Randy George, 5 February 2024

Part I: Transformation in Contact

Our country and its allies are competing with determined adversaries during a period of unprecedented technological change. To guarantee our security, we must recognize change and adapt faster than any army in the world. We are not preparing for a theoretical future fight. The struggle for advantage is now.

Before we ask how warfare is changing, we should take stock of what is not changing. First, because war is a human endeavor, people matter most. Second, people live on land. Thus, armies must be able to seize and hold land. When they do, close combat is unavoidable. That means the ability to close with and destroy the enemy on land is decisive. Third, wars are unpredictable. No one can guarantee a war will be short or that it will not escalate. Finally, the United States abides by the law of armed conflict. We must build our force accordingly.

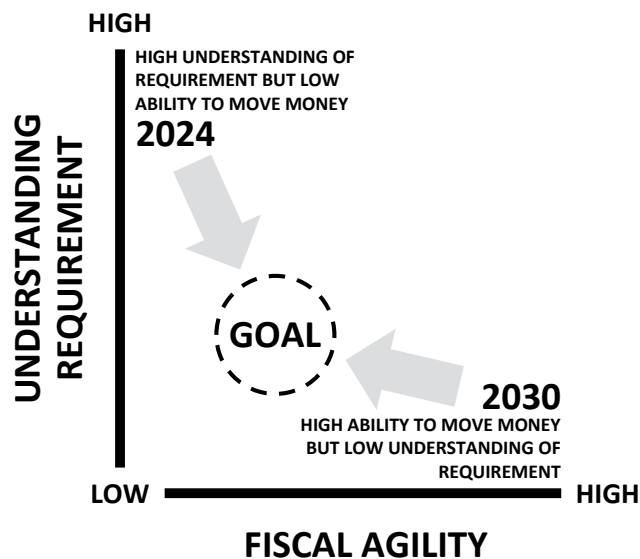
At the same time, civilian and military technologies are changing at a pace not seen since before World War II. Because armies adapt, new technology is rarely decisive in the ways people predict.¹ But, it is disruptive

in that it changes how military forces operate, organize, and equip.

As technology makes warfare more complex, the difference between skilled and unskilled armies becomes more pronounced. The real impact of technology is that it will increase punishment of unskilled commanders and untrained formations. The consequences of failure to adapt will be severe.

We only have one Army. Transformation is challenging because we only have one Army. This Army must conduct current operations, generate ready forces, and transform simultaneously. Transformation efforts are directed toward three periods: capabilities we need in less than twenty-four months, capabilities we need in roughly two to seven years—the time frame for defense budget planning—and capabilities for the deeper future (see figure 1). The three periods are inextricably inter-related since decisions about one have implications for the others.

In this context, a *capability* is the ability to do something on the battlefield.² This requires having people organized, trained, and equipped to do it. Thus, technology is not a capability by itself. Capabilities come from formations, and developing a new capability requires action across doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P).



(Figure by author)

Figure 2. Fiscal Agility

Transforming the Army starts with operational units *transforming in contact*, solving problems, and seizing opportunities today. It also depends on *deliberate transformation*—efforts managed through Army-level processes to deliver the Army we need within the time horizon for defense programming. All the above occurs within the context of *concept-driven transformation*, which is the longer-term vision described in the Army's emerging warfighting concept.

Flexible requirements and fiscal agility. The principal obstacle to transformation in contact is programmatic. It takes the Army about two years to approve a requirement and get funding added to the budget for a new system, even for existing technology. But the Army is increasingly reliant on AI-enabled robotics and other technologies that evolve much faster than that. As a point of reference, in the first two years after Russia's large-scale invasion of Ukraine, drone warfare evolved through four generations as the tactics and technologies changed.³

In some cases, when we document the requirement for a capability, the only thing we know with certainty is that what we need in two years will be different. The result is that we must fund requirements before we fully understand them. Later, when we fully understand the requirement, it is too late to change what we funded (see figure 2).

Our lack of fiscal agility comes mostly from necessary bureaucracy—sound processes that allow time for

consultation among Army stakeholders, higher-level review, and congressional oversight. But the Army must be able to integrate an existing technology into an operational unit in less than twenty-four months. During war, this will require even greater speed. We can build that capability into the Army now. It starts with thinking differently about how we write requirements and fund programs.

An illustration. The iPod music player was one of the most successful consumer electronics products ever sold. But, within eight years of the first sale, smartphones were already making them obsolete. What if that had been a warfighting technology? By the time the Army approved the requirement, funded it, and completed the multiyear effort necessary to develop, test, and start fielding a military-grade version of the system, it would be well on the way to obsolescence. Some soldiers might already be using a better commercial solution at home.

In that scenario, the Army would have two bad options. We could continue buying systems that would be obsolete before they finished fielding, or we could cancel contracts with industry partners and give soldiers nothing while we run a new requirement through the process. We could not nimbly pivot an acquisition program based on a requirement for a music player to a system so different as a smartphone. Army requirements documents are not written that broadly. Neither are the associated funding documents nor contracting arrangements.

A smartphone is a completely different tool from a music player. A requirement that could accommodate both might be problematic. Nevertheless, when tactics and technologies are evolving quickly, the Army needs to be able to evolve capabilities without restarting the process.

You get what you ask for. The solution is to develop requirements documents for a capability rather than a specific type of system and to manage program funding the same way.⁴ This is what Mike Brown, then director of the Defense Innovation Unit, was discussing during congressional testimony in April 2022 when he proposed a "capability of record" approach for systems like small drones.⁵ In their January 2024 report published by the Atlantic Council, the number one recommendation from the Commission on Defense Innovation Adoption was similar: They recommended piloting a "capability portfolio model."⁶ If we communicate well with Congress, the Army can do this now.

Increasing our fiscal agility will also increase speed to capital for small- and medium-sized companies whose help we need. Sixty years ago, two-thirds of U.S. research and development was federally funded.⁷ Today, only one-fifth is, and many technologies we need are developing fastest in the commercial space. Defense primes built their business models around Department of Defense processes because they build things only the Department of Defense buys. In the future, the Army will be increasingly reliant on companies that do not traditionally do business with the government and do not have to. We cannot tell these smaller companies that we need their technology but cannot pay for two or more years. They are moving too fast.

However, agility is not right for everything. When the Army needs to develop and manufacture a large system that does not exist on the commercial market, like a tank, the requirement can't be vague or frequently changing. These systems require years of development and large capital investments from industry. Success requires stable requirements and predictable funding. The agile, capability-focused approach is right for smaller tranches of lower-cost systems that have a rapid technology refresh rate and no major DOTMLPF-P implications.⁸

Perfect is the enemy of good enough. In many cases, we are allowing the aspirational to stand in the way of the doable. There are technologies that would be useful in our formations right now but are not yet fielded because we are waiting until they can do even more. New technologies with game-changing potential should be in operational units as soon as they are useful, even if only in small quantities of minimum-viable products. This accelerates development of the technology, but it also lets us learn how to best employ it and how to adapt our formations and training accordingly. Most importantly, it gives leaders experience using the technology as it evolves.

We can take a lesson from the development of military aviation. The world's first military airplane was the Wright Military Flyer, purchased by the U.S. Army in 1909.⁹ It would be another twenty years before airplanes had the range and payload to start fulfilling their full potential. But the Army did not wait until airplanes could sink battleships to start fielding them. We fielded meaningful numbers for limited roles like reconnaissance. That developed the industrial base for

military aviation and informed future requirements. It also ensured that, by the 1930s, the Army had a generation of officers who had grown up using the technology.

Today, we are in a similar place with AI-enabled robotic systems. We are years from the time that an uncrewed vehicle can keep up with an Abrams tank moving cross-country at full speed. And, we will not pin a Ranger tab on a robot anytime soon. But we can put uncrewed systems to good use as part of human-machine integrated formations this year.

Think big, start small, go fast. Formation-based transformation orients capability development on how people are organized, trained, and equipped—as a holistic solution—rather than orienting on equipment and then accounting for the other DOTMLPF-P implications of the change. The best way to do this is to put cutting-edge systems directly into our fighting formations, where they can be useful to soldiers today and mature in the laboratory of the real world.

If a system is safe and, in the assessment of the company-level leaders burdened with it, useful enough to be worth the work of having, it is a candidate for fielding—at least to a few brigades. What units learn will then inform how formations are organized, trained, and equipped only a few years later. The Army is doing this now, allowing operational units to purchase commercial-off-the-shelf equipment and experiment with innovative combinations of tactics and technology. Today, the priority is simplifying our warfighting formations' command-and-control (C2) networks and fielding human-machine integrated (HMI) formations.

The C2 network is central to everything we

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Staff Sgt. Stetson Manuel, a robotics and autonomous systems platoon sergeant from Alpha Company, 1st Battalion, 29th Infantry Regiment, 316th Cavalry Brigade, carries the Ghost-X Unmanned Aircraft System after its flight during experimentation as part of Project Convergence–Capstone 4 on 11 March 2024 at Fort Irwin, California. (Photo by Sgt. Charlie Duke, U.S. Army)

do on the battlefield. The first step to improving the network is reducing the complexity of the systems currently fielded in fighting formations. We are doing that now, streamlining C2 to reduce the burden on lower echelons and ensure compatibility across the Army. To be ready for 2030 and beyond, we must move to a software-centric C2 warfighting system very different from what we use today. The key to building that will be designing the system to continuously evolve and getting it into operational units so warfighters and engineers can develop it together and iteratively.

The secretary of the Army announced the Army's HMI formations initiative in October 2023, saying, [W]e are beginning a new Human-Machine Integrated Formations initiative. These integrated formations will bring robotic systems into units alongside humans, with the goal of always having robots, not soldiers, make first contact with the enemy. This will shift some of the work onto robots so that soldiers can do what

only humans can: make values-based decisions, accept risk, and practice the art of command.¹⁰

Human-machine integration is combining people with uncrewed systems—ground and air—in ways that optimally employ both. The goal is not to replace soldiers with machines but to offload risk and work to machines so that soldiers can do what only people can do. That includes exercising judgment and ethical decision-making, and practicing the art of command.¹¹

The Army will develop HMI formations by putting capabilities in operational units, and learning and updating requirements in real time. While version 1.0 is in a brigade combat team, version 2.0 might be in trials with the opposing forces unit at the National Training Center. Meanwhile, version 3.0 can be in field experimentation with the Maneuver Center of Excellence, and version 4.0 can be on the drawing board. All the above will be a collaboration involving Army scientists and engineers, industry partners, acquisition program managers, capability developers,



Soldiers assigned to the 1st Battalion, 29th Infantry Regiment, based out of Fort Moore, Georgia, take part in a human-machine integration demonstration using the Ghost Robotic Dog and the Small Multipurpose Equipment Transport (SMET) during Project Convergence–Capstone 4 at Fort Irwin, California, on 15 March 2024. The robotic dog is a mid-sized, high-endurance, agile unmanned ground vehicle that provides enhanced reconnaissance and situational awareness supporting soldiers on the ground. The SMET is an eight-wheeled, enabling robotic technology serving as a “robotic mule” with the flexibility to operate in combat, combat support, and combat service support operations. (Photo by Spc. Samarion Hick, U.S. Army)

and operational units. The result will be a continuously improving, full-DOTMLPF-P solution that integrates state-of-the-art technology quickly and discards bad ideas just as fast.

The Army can do this because we will write requirements documents for capabilities rather than specific types of systems, fund them by capability portfolio, and keep the fielding effort at a manageable scale. That means fielding in small tranches, iteratively, rarely fielding a system to the entire Army. This will also open competition to smaller companies that are designed to turn engineering redesigns quickly—companies that want to sell more than a few prototypes but don’t need multiyear production of high-price systems to justify their research-and-development investment.

Putting it all together. We must develop the ability to adopt and integrate technology faster. But new technology is not transformational by itself. To fully exploit the technology’s potential, we must change how we operate, organize, and equip with it. That means accounting for every element of DOTMLPF-P together

as a holistic solution. The best way to do this is to orient capability development on formations. In other words, we buy equipment but fight formations, and the Army’s transformation must be *formation-based*.

For this reason, an essential element of transforming in contact is unit innovation: warfighting formations using new combinations of tactics and technology to solve problems and create opportunities from the bottom up. How can a division operating in the Indo-Pacific simplify its communications networks, slim down command posts, and sustain itself while distributed? How can an infantry brigade operating in Europe use creative combinations of drones, loitering munitions, rockets, and precision-guided missiles to defeat an armored attack? What can we give our formations operating in the Middle East now to help them defend against drones?

To support unit innovation, the Army’s transformation enterprise must be more agile. We can do that now, within existing processes, by doing three things. First, we must develop requirements documents for capabilities instead of specific types of systems and fund



Soldiers assigned to 3rd Platoon, Alpha Battery, 1st Long Range Fires Battalion, 1st Multi-Domain Task Force, fire an M142 High Mobility Rocket System on 2 May 2024 during Exercise Balikatan 24 at Rizal, Philippines. (Photo by Cpl. Kyle Chan, U.S. Marine Corps)

them the same way. Second, we must field meaningful quantities to operational units as soon as they can be useful. Third, we must develop holistic DOTMLPF-P solutions iteratively so that those solutions can update as fast as their underlying technologies. This approach fully engages the operational force in Army transformation and expands competition in the industrial base.

Transforming in contact must not be reactive. Investments we make today have a ripple effect on the future, creating some options and foreclosing others. They must be informed by our plans for deliberate transformation and concept-driven transformation. These are the topics of the next two sections in this article.

Part II: Deliberate Transformation

Reform of an institution as large as our Army is problematic under the best of circumstances ... We may have analyzed ... and made some considerable progress ... But that in no way ensures either that change will occur or that it will be an easy, orderly process.

—Donn Starry, “To Change an Army,” 1983¹²

The first section of this article addressed how the Army can rapidly integrate new technologies, evolving capabilities on multimonth rather than multiyear timelines. This section is on how we drive and manage change in the midterm.

Nothing published in an Army strategy document ever happened unless it was also published in an order. And even what we direct in orders may go undone without tracking and follow-up. But the most draconian staff could not *impose* change on an organization the size and complexity of our Army. Army transformation involves coordinated action across DOTMLPF-P.

Change on that scale involves the entire Army. No one leader below the levels of the secretary and chief of staff can manage it all. The reality is that changing the Army requires winning teammates and building consensus. The question is not how to impose change but how to work together to accomplish it.

A new warfighting concept from Army Futures Command will not move the needle on DOTMLPF-P without Training and Doctrine Command

determining how to put it into practice. A requirement document for new equipment is just a piece of paper until the Army headquarters funds the requirement and Army acquisition professionals begin developing the system. We need Army Materiel Command to ensure we get concepts and requirements right, help divest old capabilities, and support fielding and sustainment of new ones. And our best warfighters are in the operational force—Forces Command and the Army Service component commands. If they are not at the center of the process, what we give them will not be what they need.

This requires people to work across organizational boundaries and solve problems together. Transformation is not a relay race. We do not hand the baton from concept writer to requirement developer to organization designer and technology developer. Soldiers, scientists, engineers, acquisition, testing, contracting, and other professionals are working together throughout. Without that, plans laid in one stage will not be executable in later stages, and changes made in later stages will undermine earlier intent and parallel efforts. Who is in lead and who is in support changes, but no one organization truly *owns* any part of the pipeline. Managing change in a busy Army with multiple organizations working together to coordinate changes across DOTMLPF-P must be a deliberate effort. It starts with defining the objective.

Defining the objective. The way to achieve any goal is to make it specific, give it a deadline, and tell people how you will measure success. The Army's stated transformation objective for the period of two to seven years—the time frame for defense budget planning—is delivering Army 2030.¹³ So, what is Army 2030, and how will we know when we have delivered it?

Army 2030 is a force optimized to win in large-scale combat in a multidomain operations environment.¹⁴ It is a realistic goal, based on a clear-eyed assessment of what the Army can accomplish within available resources, with technology we are confident we can field by that time. This requires not only delivery of signature modernization efforts but also concerted effort across DOTMLPF-P.

For large-scale combat, our divisions need division-level artillery, engineer, and other capabilities.¹⁵ We can address this by consolidating assets currently in brigade combat teams into division-level formations.

This has the added benefit of unburdening those brigades. Moving complexity up to the division echelon frees brigade commanders and their staffs to focus on maneuver. But we must also give divisions new assets, such as air defense battalions.

While brigades and divisions focus on ground maneuver, corps headquarters must converge land, sea, air, space, and cyber capabilities. These corps must be staffed, trained, and equipped to synthesize vast amounts of data from multiple sources, integrating Army sensors, shooters, and sustainment systems with those of other military services and coalition partners.

Managing large-scale combat operations involving multiple corps and many nations requires a headquarters to serve as a combined/joint land component command. U.S. Army Pacific and U.S. Army Europe and Africa must have the assets to do this. That includes new, theater-controlled intelligence brigades, fires elements, security force assistance brigades, and multidomain task forces with the staff, training, and equipment to manage them.

We can say we have delivered Army 2030 when we have organized the right people into the new or transformed formations, equipped them, trained them, and validated that they can perform their wartime missions. Some of those formations we are building from scratch, like mobile protected firepower (MPF) battalions and additional multidomain task forces. Others, such as division artillery brigades, require mostly reorganization of existing units.

Turning decisions into action. The U.S. Army knows how to stand up or reorganize a formation and make it ready for war—no army in the world does it better. But the systems we use to do that do not kick into action until we formally allocate resources—people, equipment, and funds, including for sustainment, facilities, and training. The real work does not begin until resources move in the Army Structure Memorandum (ARSTRUC) and the Program Objective Memorandum (POM).¹⁶

Making big changes in the ARSTRUC and POM can be an uphill climb. In practice, the decision to stand-up or reorganize a formation is not one decision. It is a set of interrelated decisions, made in separate forums, about resources that are managed in separate portfolios. Which units will lose personnel



Chief of Staff of the Army Gen. Randy A. George receives a demonstration on 18 March 2024 of next generation command-and-control system human-machine integration capabilities from a 1st Infantry Division officer during Project Convergence–Capstone 4 at Fort Irwin, California. Deliberate transformation focuses on developing program objective memoranda and Total Army Analysis to inform how the Army will leverage new systems, including by ensuring integration across DOTMLPF-P. (Photo by Sgt. Brahim Douglas, U.S. Army)

authorizations when others gain them? Where will the formations be stationed, and how will we provide their barracks and other facilities? Will we invest to accelerate procurement of the new equipment? What will we allocate for our maintenance enterprise to sustain it? How will we pay for fuel, ammunition, and other training expenses?

To turn decisions into timely action, the Army must do five things. First, as we have done with Army 2030, set the objective. Second, as we will explain below, focus on the formations, which are the true source of battlefield capability. Third, account for all the DOTMLPF-P costs associated with creating or changing those formations. Fourth, present Army senior leaders with options explicitly framed in terms of the costs, benefits, and risks. Finally, ensure decisions are unambiguous, clearly communicated, and aggressively executed.

Focus on the formations. Equipment is not, by itself, capability. A capability is the ability to do something on the battlefield.¹⁷ This requires having people organized, trained, and equipped to do it. In other words, it requires a combat-ready formation. Fielding a new capability always requires action across multiple elements of DOTMLPF-P. Often, it involves all of them.

It was about six years from approval of the initial capabilities document for MPF to the award of a contract for initial production of what would become the M10 Booker armored combat vehicle.¹⁸ In the beginning, the Army had plenty of time to decide whether to field the system in companies or battalions, where to station those units, and what occupational specialties would crew the vehicles. Nevertheless, on approach to fielding, we found ourselves racing to answer those questions and allocate resources. The tortoise nearly caught the hare. Some even thought we should slow



Soldiers with the 2nd Battalion, 263rd Air Defense Artillery, 678th Air Defense Artillery Brigade, 263rd Army Air and Missile Defense Command, South Carolina Army National Guard, conduct short-range air defense training 25 April 2024 at McCrady Training Center, Eastover, South Carolina. Soldiers, scientists, engineers, and other professionals in acquisition, testing, and contracting all work together throughout the process of deliberate transformation. (Photo by Sgt. Tim Andrews, U.S. Army National Guard)

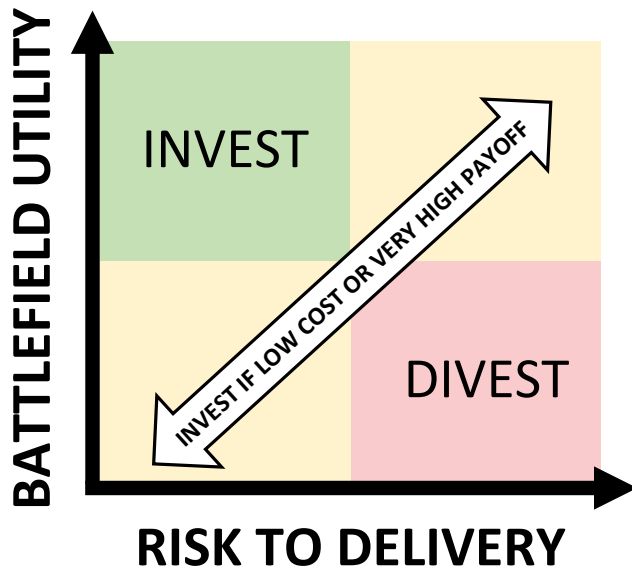
the fielding. The answer was not to slow down delivery of the materiel. It was to speed up the rest of DOTMLPF-P.

In the future, nothing would prevent the Army from making those decisions in the same forums where we make decisions about equipment. We viewed MPF as a materiel solution with DOTMLPF-P implications, which were to be handled by separate Army processes. If, instead, we had viewed it as a DOTMLPF-P solution with a materiel solution component, it would have been harder to neglect the big picture. Focusing on the formation accomplishes that. When we ask how to make the formation that fights with the new equipment ready for war, the full DOTMLPF-P picture immediately comes into view.

Show the fully burdened cost. The Army is conscientious about forecasting the cost to develop and procure new materiel. We do this less well for the associated

DOTMLPF-P. Battalions equipped with the M10 Booker need maintenance and training facilities. These do not yet exist everywhere they could be stationed. Since construction costs could vary widely depending on the station, we were understandably reluctant to budget for MPF facilities prior to an official stationing decision. Thus, for a time, there was no provision for this in the Army's budget plan for the two-to-seven-year time frame. This was a solvable problem. But there have been similar examples across DOTMLPF-P for many capabilities in the Army's transformation pipeline, and the unseen costs can add up.

Today, thanks to hard work by people in the Army headquarters, Training and Doctrine Command, and other organizations, we understand the costs associated with Army 2030. Going forward, we will make these costs visible to Army senior leaders earlier. Knowing the fully burdened costs of a capability early smooths



(Figure by author)

Figure 3. Cost-Benefit

implementation. But it should also be part of the cost-benefit calculus when we choose which capabilities to pursue in the first place.

Present costs, benefits, and risk. Army resources are finite. To invest in one opportunity, we must forgo another. So, we should frame investment options explicitly in terms of their full DOTMLPF-P cost, the battlefield utility of the capability, and the risk that we fail to deliver. On the one hand, if a new capability has great potential but will require costly research and development, and we will also struggle to recruit and train enough soldiers for the formations, those resources might do more for the Army elsewhere. On the other hand, if a capability is a moon shot, but it could be game-changing and the cost of taking that shot is low, why not try (see figure 3)?

Most of the Army's signature modernization efforts do not, by themselves, fit neatly into either category. In 2017, the Army set out to develop systems we knew we needed and could realistically deliver.¹⁹ Today, a few have been responsibly off-ramped, but most are succeeding, which means they will eventually compete with one another and with other Army priorities for procurement dollars. However, considering every DOTMLPF-P change necessary to deliver the capability, and its battlefield utility given our updated assessment of the future operational environment, some capabilities will stand out.

Assessing the full DOTMLPF-P cost of a new formation with new equipment, the utility of that formation in different scenarios, and the risk if we fail to field it is both science and art. But it can be done. There will be disagreement about planning assumptions. Nevertheless, presenting information in that cost-benefit frame focuses the dialog on the right questions. Staff will know what information decision-makers need before they ask for it, and the Army will be better prepared for discussions with industry and Congress.

Undeciding. Force structure and budget are arenas of continuous competition for the Army's branches and parts of the Army bureaucracy. For example, the infantry and armor communities take an understandable interest in decisions affecting infantry and armor people, organizations, or equipment. The Army's many headquarters—and even different parts of the same headquarters—have different priorities, based on their unique perspectives and areas of responsibility. Different communities view themselves as custodians of important institutional imperatives. Sometimes this leads them to work at cross-purposes.

When the Army makes a hard decision about force structure or modernization, it must be documented and unambiguous. Rarely can a decision be implemented without cooperation among midlevel people in different organizations and staff directorates. If a decision appears tentative, some will simply take no action. If it is unclear, some will act according to their own, best-case interpretation. This is *undeciding*. People are usually acting in good faith—they do not always know they are undeciding. But the result is a time-wasting delay and relitigation of decisions already made.

Putting it all together. Given the size and complexity of the Army, that transformation is executable at all is a testament to incredible Army people and sound Army processes. Once unleashed, our transformation machine will execute. We should not wait for the publication of an annual document to start necessary movement. We should do the opposite—take Army senior leaders' intent and move fast. But the decisive point for changing the Army at scale is fully capturing the plan in the ARSTRUC and the POM. We are doing that by defining the objective; focusing on the formations holistically; accounting for all the DOTMLPF-P costs; framing options in terms of the costs, benefits, and risks; and then



A drone swarm operated by the Threat System Management Office takes off from a training area during Marne Focus 2024 at Fort Stewart, Georgia, on 7 April 2024. Modern warfare is waged in every domain. Frontline soldiers must remain flexible and agile while improving their lethality by leveraging technology and integrating all warfighting functions against current and future threats. (Photo by Staff Sgt. Jacob Slaymaker, U.S. Army)

ensuring Army senior leader decisions are clearly understood by all who have a role in implementation.

This is how the Army will succeed in *deliberate transformation*, making changes across DOTMLPF-P to turn the Army we have into the one we need in the midterm. How we set the course for longer-term transformation is the subject of the final section, *concept-driven transformation*.

Part III: Concept-Driven Transformation

If you don't like change, you are going to like irrelevance even less.

—Gen. Eric Shinseki²⁰

The focus of this section is concept-driven transformation, which provides the broad avenue of approach for long-term change. Earlier sections address how the Army manages change in the near- and midterm—the *transformation in contact* and *deliberate transformation* periods.

The long-term vision. The purpose of the forthcoming Army Warfighting Concept is to drive Army transformation.²¹ Transformation is everything we do to turn the Army we have into the one we need by

making changes across DOTMLPF-P. This involves the entire Army, which presents a coordination challenge. People in different organizations who focus on different time horizons are working through different processes to solve interrelated problems. The Army Warfighting Concept provides the common, long-term vision that unites those efforts.

Because we cannot perfectly predict the future, our long-term vision is not fixed. The Army Warfighting Concept is a living document, based on a continuously updated running estimate of the future operational environment.²² This process includes intelligence assessments, observation of ongoing conflicts, research, wargaming, experimentation, and innovation by operational units deployed forward in their operational environment.

The role of the Army. The purpose of the Army is to dominate the land domain. Ground forces do this as a part of the combined joint force, employing capabilities from the sea, air, space, and cyberspace in the land domain while simultaneously providing joint force commanders land-based capabilities they need to deliver effects into other domains.

The broader purpose of all military forces is to deter aggression. With the right capabilities,



A soldier assigned to 3rd Infantry Brigade Combat Team, 25th Infantry Division, operates a drone to observe opposing force movements at South Range, Schofield Barracks, Hawaii, on 6 November 2023. The Joint Pacific Multinational Readiness Center is the Army's newest combat training center and generates readiness in the environments and conditions where the Hawaii-based forces are most likely to operate. The U.S. Army must be ready for a full range of military operations involving multiple threats and across varied geography. (Photo by Sgt. Samantha Cate, U.S. Army)

capacity, and positioning, our military causes adversaries to question whether they could prevail by force. If that fails, the mission becomes to defeat enemy forces in the field, allowing a political resolution

effectors—lethal and nonlethal—will only increase as forces approach forward lines. Commanders will not achieve surprise by the same methods they do today. They will also not mass forces for the close fight

favorable to the United States and its allies.

Once political authorities commit military forces in pursuit of political aims, military forces must win something, or else there will be no basis from which political authorities can bargain to win politically. Therefore, the purpose of military operations cannot be simply to avert defeat but, rather, it must be to win.

—Gen. Donn Starry²³

Military implications of the future operational environment.

We live in a dangerous world, increasingly subject to the disruptive effects of new technologies. We have every reason to expect that by 2030 China and Russia will retain advantages in mass and magazine depth. They will also have closed capability gaps that restrain them today. At the same time, Iran, North Korea, and other adversaries—including non-state actors that wield significant military power—will prevent the Army from focusing exclusively on the greatest threats.²⁴

The combination of ubiquitous sensing and precision strike has significant implications for the conduct of warfare. The most obvious is that it pushes operational and strategic support area activities—logistics, staging, and higher-echelon C2—further away or into distributed nodes. But the combination of sensing with precision also changes the close fight.²⁵ The density of sensors and

without deliberate condition setting to break the enemy's ability to sense and strike.²⁶

Precision remains an effective counter to mass, but it is a poor substitute for it ... the U.S. is probably over-indexed on long-range precision, versus adjusting to and dealing with proliferation of short-range precision on the battlefield ... UAS have democratized precision in the close-in battle. They made it cheap, they made it accessible. So now you have mass precision.

—Michael Kofman²⁷

The major driver of change at the tactical level of war will be the employment of AI-enabled autonomous systems at scale. This will not displace traditional weapons, like tanks and tube artillery, but it will change how ground formations operate. At the operational level, the convergence of domains—land, sea, air, space, and cyberspace—will place a premium on joint force integration. The net effect of the above is an exponential increase in the complexity of modern warfare on par with the emergence of combined arms early in the last century.²⁸ This only raises the stakes for the decisions we make about training and leader development.

Problem statement, primary notions, and theory of victory. The Army Warfighting Concept has a two-part problem statement. The warfighting problem is how to succeed in the future operational environment described above. The institutional problem is how to build an Army as a warfighting *institution* that can do that across all time horizons.

The Army Warfighting Concept is based on three primary notions.²⁹ These are C2 and counter-C2, expanded maneuver, and cross-domain fires. The Army does all these today, but not to the degree that it could, even with technology that already exists. The concept also clearly states a three-part theory of victory. First, the Army must sustain and build upon advantages it already has—its people and its competence in combined arms maneuver. Second, we must develop the ability to integrate new technology and adapt faster than any adversary. Third, we must significantly enhance endurance—capability and capacity within the Army and in the industrial base to prevail during protracted conflict.

A new approach. The Army Warfighting Concept is a new approach in both content and form. It

challenges assumptions about warfighting that have become so engrained in Army culture in recent decades that they are rarely questioned today. These include the relative importance of preparing to win the first battle versus preparing to win a long war, the primacy of the offense, and the idea that fires serve primarily to enable maneuver.

The concept also breaks with a tradition of Army concepts that specifically described how commanders should fight. *AirLand Battle* was first published over forty years ago.³⁰ Since then, a succession of Army concepts sought to furnish a theory of victory for the operational-level commander in the field. That was sound during the Cold War when the Army's organizational strategy was to optimize for one threat in one region.³¹ However, we face multiple threats today, in multiple geographies, across the full range of military operations. No single, operational-level theory of victory would be practically useful in all those scenarios.³²

For this reason, while the concept addresses tactics and operations, the theory of victory for the Army Warfighting Concept centers on how the Army as a warfighting *institution* remains the dominant land force in the world. Beyond that general theory of victory, the concept identifies competencies and provides a list of imperatives for Army transformation. These point to a need for bold shifts with significant implications for Army doctrine, force structure, leader development, and talent management.

How to fight. The Army can posture for multiple threats and still determine how to fight in different scenarios. To do that, we will conduct a series of wargames. Scenarios will vary by threat, geography, and time frame. Some will involve China-Taiwan crises. Others will pit the combined joint force against the People's Liberation Army in broader Indo-Pacific scenarios, with different combinations of coalition partners and different political objectives. There will be scenarios involving competition and conflict with Russia, North Korea, Iran, and other adversaries. Some scenarios will involve protracted contests that test strategic endurance. All will stress contested force projection, contested logistics, defense of the homeland, and the human and information dimensions of war.

Who participates in these wargames matters as much as their design. The Army's best warfighters are in our divisions, corps, and the Army Service



Spc. Dylan Horak, a network communication systems specialist with the 44th Expeditionary Signal Battalion–Enhanced, reacts to a drone swarm attack during Saber Junction 23 on 11 September 2023 at the Joint Multinational Readiness Center near Hohenfels, Germany. U.S. Army soldiers and NATO troops train with drones that simulate modern weapon systems to help their militaries update doctrine and training for combat against developing and future threats. (Photo by 1st Sgt. Michel Sauret, U.S. Army Reserve)

component commands. And we will wargame the same way that we fight—as part of the combined joint force. Scientists and engineers will participate to help warfighters understand what technology could make possible and people from industry will join to help explore the implications for industry.

What we learn will allow the Army to develop concept “applications,” or annexes, for specific scenarios, threats, or geographies. When appropriate, these annexes will describe context-specific, operational-level defeat mechanisms. When a lesson applies across a wide range of scenarios, we will incorporate it into the main body of the Army Warfighting Concept.

2040 is sooner than you think. If a soldier who was discharged from the Army shortly before 11 September 2001 returned today, they would be more surprised by how the Army is the same than by how it is different. We are much closer to 2040 than we are to

2001. The world is changing too quickly for the Army to be changing that slowly.

Concept-driven transformation is implemented *through* transformation in contact and deliberate transformation. It is not a separate activity. While the primary function of the Army Warfighting Concept is to provide direction for the long-term, this necessarily also sets the broad avenue of approach for the near- and midterm. To have a capability by 2040 requires that it be in fielding by 2035, which means it must exist as a prototype by around 2030. The Army will submit its initial budget request for that year in 2025. And new materiel is not even the slowest part of DOTMLPF-P. The longest lead times are for personnel and leadership.

The challenge of the last two decades was how to develop leaders who could echelon fires for a combined arms breach as adeptly as they could negotiate with a tribal elder. The challenge of the next two decades will be the same, only technology is adding to the list of

required competencies. The best commanders will be—among other things—experts in the physics of combat, data fluent, and as attuned to the information and human dimensions as they are to the physical dimension of their operational environment.

There are two kinds of change described in the concept—changes we can make now and changes we will only make if we start now. Only by acting now will we ensure the U.S. Army remains dominant in the land domain. Commanders and leaders must start by creating a culture where innovation is expected as a normal part of how we win.

Leaders must educate themselves on the technologies that are changing how we and our adversaries

fight. It is essential that officers and noncommissioned officers actively participate in the professional dialogue on the Army Warfighting Concept. By including our best leaders in wargaming and experimentation, we will sharpen the concept and identify areas across DOTMLPF-P where we can start necessary movement.

Since we only have one Army, we do not have the luxury of choosing between being ready to fight tomorrow and ready to fight tonight. The question is not whether to prioritize current readiness or future readiness, but how to account for uncertainty and manage continuous transformation across all three periods of time. ■

Notes

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18. The Initial Capabilities Document for Mobile Protected Firepower was approved 18 August 2016, though it had been in Army staffing since 2013. The Capability Development Document was approved 4 June 2018. The contract for low-rate initial production was awarded 28 June 2022. It is projected to begin fielding in 2025.

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20. Eric Shinseki, quoted in James Dao and Thom Shanker, "No Longer a Soldier, Shinseki Has a New Mission," *New York Times* (website), 10 November 2009, <https://www.nytimes.com/2009/11/11/us/politics/11vets.html>. One of Gen. Eric Shinseki's earliest public employments of this admonition may have been on 24 May 2001 during remarks at the Armor Conference at Fort Knox, Kentucky. In attendance were several retired officers who had been critical of Shinseki's initiative to field lighter weight, more deployable combat vehicles. U.S. Army Col. Jonathan S. Dunn, who was then a junior officer, witnessed the remark.

21. The Army Warfighting Concept is an internal document under development by Army Futures Command. This article serves to introduce the concept and some of its key ideas.

22. The *Future Operational Environment Running Estimate* is a continuously updated, classified assessment maintained by Army Futures Command but informed by and accessible to the wider intelligence community. The point of contact is Dr. Jacob Barton, jacob.e.barton.civ@army.mil.

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