

The Battlefield Development Plan

A Holistic Campaign Assessment to Inform the Army Modernization Enterprise

Lt. Col. Wilson Blythe Jr., U.S. Army

David Farrell

Tim Jacobsen

James Owens

A study of the twenty-first century provides numerous examples of how extraordinary changes in society and technology shape humanity's rapidly changing world. These advances deliver the ability for any individual to communicate effectively with large numbers of people at a scale greater than previously imagined—with unprecedented effect. Reports of incidents occurring within a limited area can reach regional, national, or even global significance within minutes of occurrence by electronic means, and those reports often reflect the bias of the distributor. Advances in technology also make it easier to deceive individuals and groups of people, and to interfere in various aspects of their lives. Narratives of events circulate biased, selective, and even false information to reinforce or attack views and opinions worldwide, something previously reserved for select individuals or groups.

Meanwhile, many nations are reexamining the utility of legacy alliances and global or regional institutions within the context of new challenges and threats

for support, protection, and safety; they are questioning these bonds and looking internally or to new partnerships for solutions to secure their futures. Economies have become interdependent and competitive, yet at the same time, nations are engaging in economic disputes that are reshaping the production and trading of goods and services. The amount of information available has grown exponentially, along with the speed at which many events occur. A convergence of multiple technologies that are disruptive (some good, some bad) to economies, institutions, and traditional capabilities—autonomy, blockchains, robotics, biotech, nanotechnology, advanced networking (G-5), and sensors, to name a few—have given rise to the need for greater information technology capability and capacity to handle the exponential growth in available data. This is the environment as it exists now, and it will only become more complex in the future.

All this change affects the way humanity identifies and reacts to threats to its way of life. Writing at the end of the twenty-first century's second decade to predict the

operational environment of the European and Indian Ocean–Pacific theaters from 2028 to 2035 is challenging. Existing trends and projections provide a good estimation of demographics and other known factors that will potentially influence the makeup of these theaters during that time span. However, there are significant unknowns about other crucial factors—economic, environmental, political, and military—that complicate the ability to develop a reasonable portrayal of how and where Russia, China, or other competitors can and will challenge the United States and its allies as they attempt to contest global norms and alter the balance of power.

The U.S. Army has developed a new operational concept primarily to meet the challenges that Russia and China present but that also applies to competition and potential conflict with North Korea, Iran, and violent extremist organizations. Known as *The United States Army in Multi-Domain Operations 2028*, this concept discusses how the Army, as part of the joint force and in conjunction with allies and partners, will confront the threat posed by Russia, China, or any other potential adversary in both competition and conflict.¹ Overlaying the current doctrinal framework of decisive action, multi-domain operations (MDO) is conducted at all levels of war—strategic, operational, and tactical—and can extend from within the United States to deep within an adversary’s homeland. In a change from previous operational concepts that only apply during periods of conflict, Army forces will provide critical capabilities to enable the joint force

to execute MDO against potential adversaries during periods of both competition and conflict.

Military Problem

An examination of Russian new-generation warfare capabilities and of China’s economic growth and informatized warfare and systems-confrontation concepts demonstrates a deliberate and aggressive willingness to

confront the United States, its allies, and its partners not seen since the days of the Cold War. By attaining strategic objectives below the threshold of war, Russia and China have sought, and have been increasingly able, to improve their stature among nonaligned nations and offer them alternatives to a Western-dominated world. Having observed U.S. military dominance over the past thirty years and taking advantage of U.S. adjustments to global and regional force postures, Russia and China learned to employ a combination of asymmetric and standoff conventional means to challenge, intimidate, and coerce the United States, its allies, and its

partners. To this end, Russian and Chinese modernization efforts seek to reduce the United States’ comparative military advantages in order to present the United States with a dilemma it has not faced in decades—how to deter and defeat a near-peer threat.²

Institutional Problem

As part of the joint force, the Army needs a way to adapt future force development to maximize the



To view TRADOC Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, please visit https://www.tradoc.army.mil/Portals/14/Documents/MDO/TP525-3-1_30Nov2018.pdf.

effectiveness of MDO to deter adversaries from aggressive behaviors toward other nations, defend against their divisive activities in periods of competition, and defeat near-peer threats in armed conflict. In the past, the Army utilized the Battlefield Development Plan (BDP) as the means of presenting doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) recommendations to prepare the force for future conflicts.³ Russia's assertiveness on the world stage along with the emergence of China as a near-peer threat has resurrected interest in the BDP as a means of identifying and prioritizing DOTMLPF-P recommendations for action by the Army's leadership due to its top-down approach as opposed to the Joint Capabilities Integration and Development System/capabilities-based assessment bottom-up approach. The BDP provides a means to best identify gaps against multiple specific near-peer threats and prioritize integrated DOTMLPF-P solutions across Army functions and joint domains. Development of the BDP signifies the Army's return to a threat-focused, capability-driven process for modernization.

In order to implement the MDO concept, the Army needs to define the problems it faces from near-peer threats or other competitors, analyze the

Lt. Col. Wilson C. Blythe Jr., U.S. Army, is a strategist with the Futures and Concepts Center. His service includes deployments to Iraq and Afghanistan. He graduated from the University of Mississippi with a bachelor's degree in history. He also holds a master's degree in history from Eastern Michigan University. Blythe is a recipient of the Army Historical Foundation's Distinguished Writing Award (2013).

David Farrell is a defense analyst and former U.S. Army infantry officer who works for the Mitre Corporation. He has over twenty years of experience spanning operational assignments and force development and modernization projects supporting Headquarters, Department of the Army, U.S. Army Training and Doctrine Command, and U.S. Army Futures Command. He holds a master's degree in systems engineering from the George Washington University and a bachelor's degree in history from the University of Massachusetts Amherst.

variables affecting the problem, and provide recommendations about solutions for implementation. To this end, the Army has revived the BDP to conduct analysis of near-peer adversaries. The BDP provides an operationally focused, campaign-level approach with linkages from strategy and force structure to capability and program development, providing a comprehensive look not readily provided by recent approaches to scenario planning and strategic analyses.⁴

History of the Battlefield Development Plan

Following the Vietnam War, the U.S. Army Training and Doctrine Command (TRADOC) led the effort to shift the force's focus from counterinsurgency to major combat operations in order to counter the growing conventional Soviet threat in central Europe. From 1973 to 1977, the immediate concern was rebuilding the current force to fight the Soviets in the near term.⁵ By late 1977, Gen. Donn Starry, then commander of TRADOC, believed the time had come to begin a longer-range projection of Soviet and U.S. capabilities.⁶ In August 1977, Starry set his combat development planners to work on the first BDP (see figure 1, page 141), published in November 1978.⁷ According to Starry, the BDP was "to be used as a road map for the future."⁸

Tim Jacobsen is a retired U.S. Army officer, currently supporting Army Futures Command as a defense contractor, with master's degrees from Georgetown University and the U.S. Army's School of Advanced Military Studies. He has experience serving at every level from the Joint Staff and Capitol Hill down to platoon level, including assignments in Europe, the Pacific, and three deployments to Iraq.

James Owens is a retired U.S. Army officer. Currently supporting Army Futures Command, his experience covers engineering, information technology, and joint force and Army concept development as a defense contractor. He is a graduate of the Virginia Military Institute and the United States Army War College. His military experience includes command and staff assignments from the platoon to the Army service component command level, including assignments in Europe, the Pacific, and deployments to Bosnia, Afghanistan, Iraq, and Djibouti.

The BDP outlined priorities and issues requiring the Army's attention. Based on an assessment of selected near-term force readiness and programs for midrange force modernization, the BDP listed requirements necessary for program improvement. The BDP also included an assessment of the U.S. and Soviet militaries detailing effects of technology as well as problems with training, personnel acquisition, and spiraling costs.⁹

The BDP analyzed ten critical tasks viewed as encompassing all aspects of conflict for the next decade using data on existing and planned materiel solutions as a basis for setting priorities and for influencing planning, programming, and budgeting by the Department of the Army. The Army grouped the ten tasks into two primary battlefield functions: central battle and force generation. The essential tasks for central battle were target servicing; counterfire; air defense; logistical support; and command, control, communications/electronic warfare. The critical tasks for force generation included intelligence, interdiction, mobility, reconstitution, and force movement.¹⁰

The BDP began by forecasting a future operational environment, including both specific Soviet capabilities and the impact of the rapid technological change. Next, the BDP presented a detailed net assessment that compared U.S. and Soviet capabilities across the full range of functions listed above. The meat of the BDP was contained in its battlefield analysis. It used the ten critical tasks to assess a division's ability to execute the Army's emerging doctrine—AirLand Battle—against the Soviet Union in Europe with current and planned systems to determine current and remaining deficiencies (capability gaps). Finally,

the BDP concluded with specific recommendations and prioritized DOTMLPF-P solution areas for future Army programming to close those gaps with the Soviet Union and ultimately allow the successful execution of AirLand Battle.¹¹

The Army developed the BDP annually from 1978 to 1987; however, development changed to every two years when the Army went to a biennial budget cycle in 1987.¹² Every BDP built upon the previous version,

driving learning demands and furthering analysis and refinement. The 1991 collapse of the Soviet Union and perceived peace dividend removed the threat of a peer competitor to pace the United States' future requirements and led to the discontinuation of BDP preparation.

One of the great lessons of the BDP was the process itself, the consistency in which the cyclic learning process drove analysis and prioritized future capability demands against a specific pacing threat. The legacy of the BDP is still visible throughout the Army today. The BDP's process mission areas evolved into the Army's battlefield operating systems and

eventually into the warfighting functions currently in use.¹³ Similarities also exist between the BDP's ten critical all-encompassing tasks of battle and the five problems posed by China and Russia in competition and conflict as an analytical framework for future force development.¹⁴ The impact that the Cold War-era BDP process had and continues to have on the U.S. Army is significant. It is worth noting that the BDP was key to developing concepts essential for what became AirLand Battle. This enabled the BDP to continually inform concepts and doctrine, affecting all of DOTMLPF-P until the BDP was abandoned with



(Figure courtesy of the U.S. Army)

Figure 1. Battlefield Development Plan, 1978

AirLand Battle in 1991 with the end of the Cold War against the peer threat.¹⁵

The Battlefield Development Plan Today

The BDP provides a holistic campaign assessment for Army modernization utilizing a regularly updated set of documents that operationalize the MDO concept through a series of operational and tactical level actions or “plays” that can be modeled and tested.¹⁶ Utilizing a common framework, threat, and assumptions, the BDP provides a level of consistency

2028 and beyond. This is to address the challenges of peer and near-peer competition in the twenty-first century (or address the capability requirements needed to make the MDO concept a reality).

Purpose

The purpose of the BDP is to examine how the U.S. Army, as part of the joint force, conducts MDO to deter, or failing to deter, to defeat a near-peer threat or other adversary. This examination will entail an analysis of the projected 2028 capabilities, systems, and force structure of the Army when employed against a near-peer threat’s

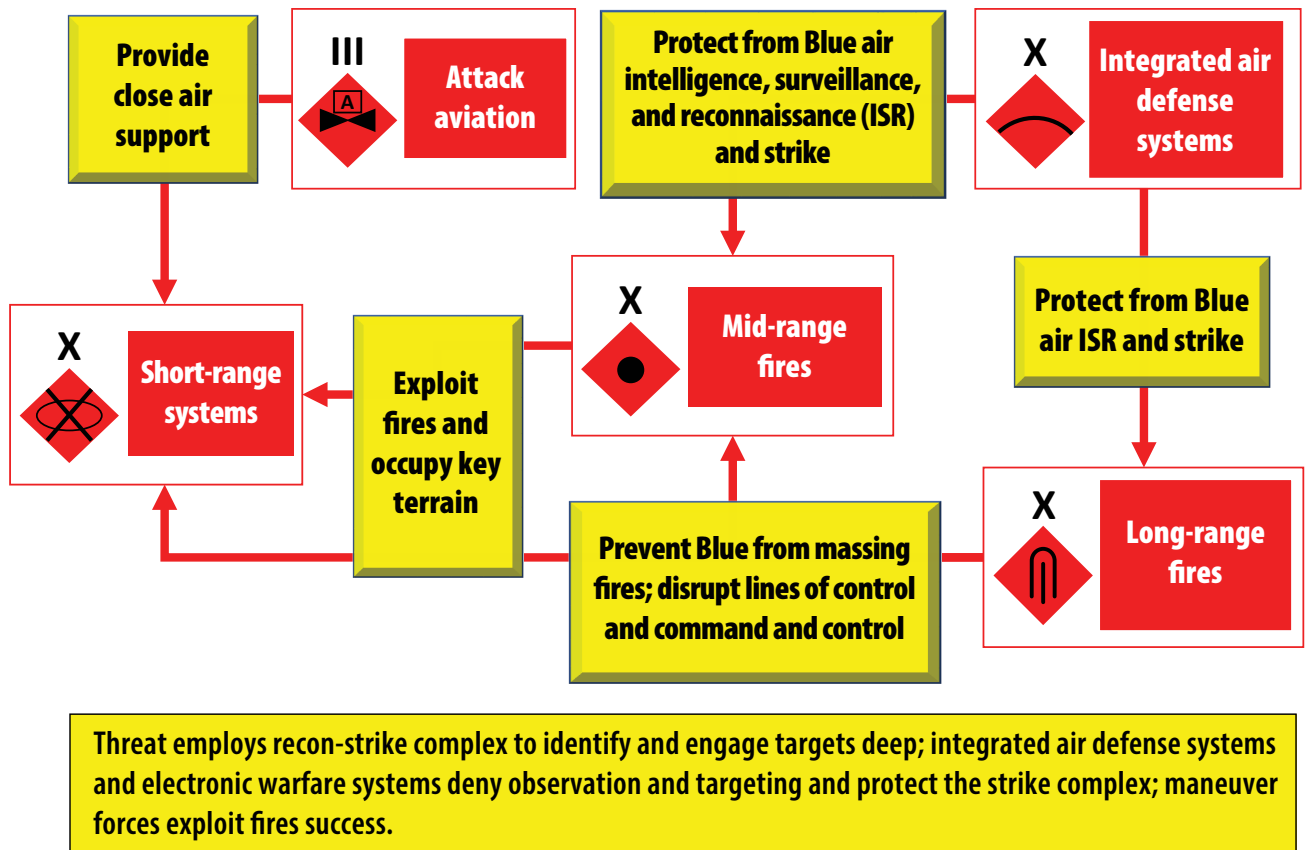
“The Battlefield Development Plan is a systematic program of experimentation focused on 2028 and 2035 capabilities, systems, and formations, and it provides a visualization of how the U.S. Army will perform in multi-domain operations against an adversary using specific scenarios.”

to Army Futures Command’s (AFC) experimentation efforts, enabling it to convey how future threat and friendly forces (organizations, systems, and capabilities) operate within an approved scenario to inform concepts, force structure, modernization, and trade-offs. The resulting analysis provides a holistic campaign assessment for use by AFC in guiding modernization and future force structure efforts.¹⁷

In this manner, the BDP informs Army decision-making at the secretary of the Army or chief of staff level. The BDP informs immediate (one to three years) decisions on future force structures, modernization, and concept and capability development through inputs to the Total Army Analysis and the Program Objective Memorandum. For the short-term (four to six years), it serves as a holistic campaign assessment for the Army Modernization Enterprise, informing annual modernization guidance and trades, and identifying modernization priorities for senior leader assessment. Lastly, the BDP informs long-term (more than seven years) Army decision-making concerning concept and capability modernization for the year

military using the principles outlined in *The United States Army in Multi-Domain Operations 2028*. The BDP is a systematic program of experimentation focused on 2028 and 2035 capabilities, systems, and formations, and it provides a visualization of how the U.S. Army will perform in MDO against an adversary using specific scenarios. The AFC Futures and Concepts Center’s (FCC) Directorate of Concepts (DoC) provides the results and analysis of experimentation as input to AFC for use in its decision-making process.

The analysis of the outcomes of simulations, tabletop experiments, and wargames is used by the Army’s senior leadership to make acquisition and funding decisions on the DOTMLPF-P requirements needed to create the future force required to prevail in competition, and if necessary, in conflict with near-peer threats. The Army utilizes its funding and acquisition decisions as the institution’s position in discussions with the other services regarding future concepts development, force design, and joint doctrine. The BDP focuses on capability development and concept development, as well as organizational structures needed to modernize the force to meet the



(Figure by TRADOC G-2/Dave Farrell)

Figure 2. Threat Systems—Conflict

challenges presented by near-peer adversaries—ranging from deterrence and preventing conflict in competition to fighting and winning in conflict. Laid out in four parts, the BDP consists of the following:

1. A main body describes the execution of an MDO campaign that employs the MDO force and future capabilities against a near-peer adversary within a specific theater (see sidebar, page 147).
2. A Threat Systems Annex, or Book 1, discusses an adversary's projected combat systems and means of employment.
3. An Army Capabilities Annex, or Book 2, discusses the Army's projected formations, combat systems, and capabilities.
4. A Playbook Annex, or Book 3, describes how the Army's future forces and capabilities could be employed using MDO in a campaign against a near-peer threat using theater and threat-specific vignettes.¹⁸

Book 1, "Red Forces"

Produced by the FCC Future Operational Environment Directorate in conjunction with the TRADOC Office of the Deputy Chief of Staff for Intelligence (G-2), Book 1 contains analysis of collective and individual threat systems.¹⁹ This analysis examines the strategies and capabilities possessed by these systems, as well as their vulnerabilities, providing recommendations on how to defeat them. The book consists of two sections: the overall threat system analysis and the subsystem analysis. Book 1 is a classified product. The overall threat system analysis section contains information on integrated air defense, long-range fires, conventional forces, and unconventional forces, and it discusses emergent threat doctrine and tactics, techniques, and procedures (see figure 2).²⁰ Diagrams are templated examples of how formations conduct various operations. The subsystem analysis section

contains information on command, control, and communications; sensors; operational and tactical guns/tubes; and kill-chain analysis for specific systems.²¹

Book 2, “Friendly Capabilities”

AFC’s capability development integration directorates (CDID), which are located at the Army’s centers of excellence, work closely with the centers’ force modernization proponents to develop functional (e.g., fires) organization and operational (O&O) concepts. O&O concepts vary in length from twenty to eighty pages. The CDIDs provide completed O&Os to FCC for use in experimentation and wargaming. Because the level of detail contained in the O&Os is not necessary for experimentation, the community creates executive summaries—capability sets for use. Each capability set contains enabling capabilities that enable the formation to operate. Book 2 utilizes two sections to convey this information—blue forces and capability enablers—and provides a look at the force that the Army will field in 2028.

The first section of Book 2 contains the O&O capability sets. These standard four-slide presentations enable the community to understand MDO organizations’ mission essential task lists (METL), capabilities, limitations, and basic sustainment requirements. Of the more than seventy individual brigade-level-and-above formations in the MDO force, in fiscal year (FY) 2019, capability sets for forty-five formations were on hand. The capability set includes the formations’ major systems, number of personnel, wiring diagram, METL, interdependencies, limitations, future capabilities (capability enablers), and basic requirements for Class I (rations), Class III (petroleum, oil, and lubricants), and Class V (ammunition).²² The last capability set slide includes a graphic that shows the ranges or distances at which the formation operates. It includes additional information such as an OV-1—a graphical concept diagram that describes how a capability or capability enabler is utilized, additional details on the formation’s METL or capabilities, and more detail on sustainment requirements. The MDO concept is inherently joint just like any future campaign would be, so Book 2 also contains the formations and capabilities that our joint partners anticipate having fielded in 2028 and 2035.

The second section of Book 2 contains the capability enablers. These come from the cross functional teams

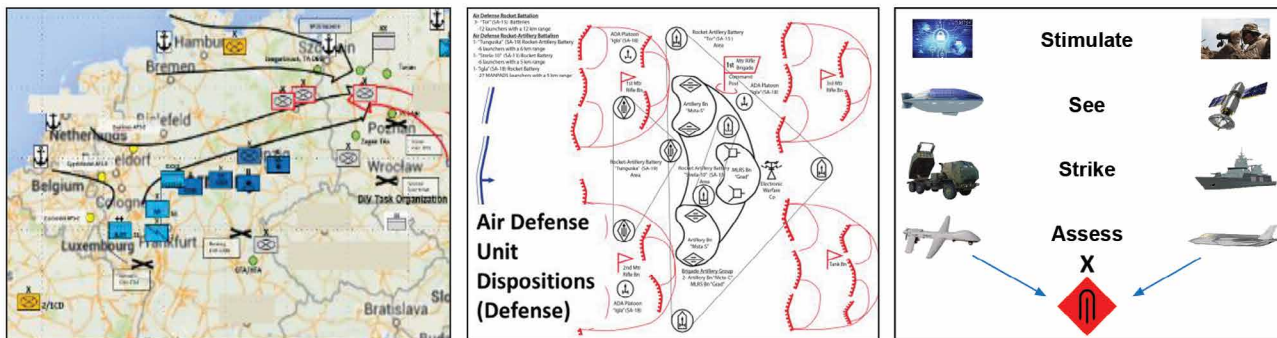
(CFTs), CDIDs, and science and technology (S&T) communities. Collectively, they bring more than 400 enablers to the table. We focused these to 126 for FY 2019 experimentation, which included all thirty-two CFT modernization efforts. To be included in MDO experimentation, capability enablers must be measurable or assessable at brigade level and above and must be at Technology Readiness Level 6 by 2030. Technology Readiness Level 6 tests a model or prototype system in a relevant environment. Capability enablers are two-page descriptions that contain a discussion of the benefit provided to the force by the enabler; a description of the enabler’s capabilities; a discussion of the planning factors concerning testing, location, and level of fielding, purchasing authority, and cost restrictions; and a discussion on the maturity of development and use of the enabler.

Book 3, “Blue versus Red” (2028)

Prepared by FCC’s DoC, this book provides a campaign view of how to employ future U.S. Army formations and capabilities to defeat specific near-peer threats. It uses deep-dive operational- and tactical-level vignettes, or “plays,” to examine the technical requirements for convergence against a near-peer’s layered standoff in order to generate the details necessary to drive capability development, to make informed decisions on future force structure, and—as we increase our understanding of how to execute multi-domain operations—concept refinement (see figure 3, page 145).²³ It is not the intent of the campaign outlined in Book 3 to serve as “the” solution to defeat near-peer threats. Nor is the intent for Book 3 to serve as a war plan or operation plan, as there are many ways to execute a campaign against any adversary. It is an evaluation of an approach used in experimentation to employ the 2028 and 2035 forces in a campaign executed according to the tenets of MDO against a specific near-peer future adversary.

In outlining how to employ the future force, Book 3 accounts for everything found in an operations order. Book 3 outlines Blue’s campaign, particularly in conflict, and in doing so, attempts to answer three questions:

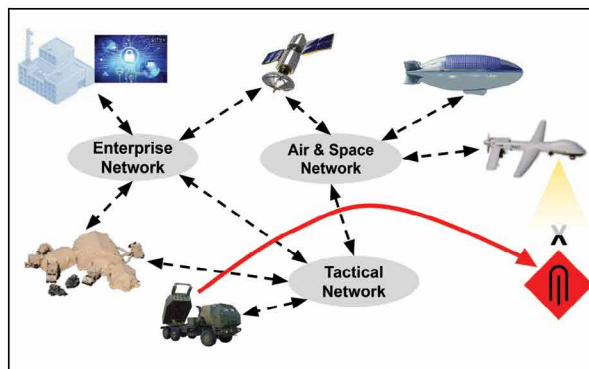
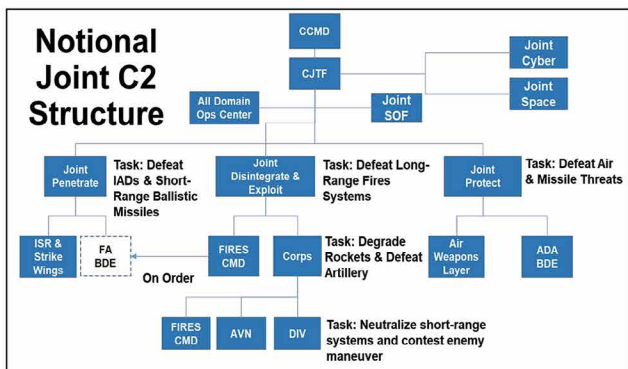
- How do Army forces posture to contest adversary efforts to challenge the status quo in a coercive manner and deter adversaries by demonstrating the capability to rapidly transition to conflict?
- In the event of conflict, how do Army forces, fighting by echelon and operating inside adversary



Concept of operations (CONOPS)

Threat analysis

Layered multi-domain options analysis



C2 analysis: Command relationships, technical architectures, control measures

(Figure by Pete Lugar and Dave Farrell)

Figure 3. Components of a Battlefield Development Plan Play

anti-access/area denial coverage, conduct simultaneous operations to penetrate and disintegrate adversary layered standoff in order to seize the initiative and allow exploitation by the joint force? The goal of this is the defeat of the adversary’s military forces so that the U.S. political leadership is in an advantageous position to negotiate a return to competition.

- How do we converge capabilities and employ them as described in the MDO concept (see figure 4, page 146)?

Book 3 contains the DoC’s hypotheses on how to accomplish this. Each play depicts the concept of the operations in both graphical and narrative form. The plays identify the echelon/headquarter leading the convergence during the play and the specific organizations that own the multi-domain capabilities involved in the layered options. Each play also

identifies domain or component command and control nodes likely involved in planning or execution.²⁴

Plays are linked together to form a “drive chart” as a representation of a campaign to defeat a near-peer adversary; it is not prescriptive in nature. While the drive chart describes Blue’s actions using mission threads, the specific plays will run concurrently to present an adversary with as many dilemmas as possible. The drive chart associated with Book 3 depicts requirements to execute the plays, in gray and in green text bars, that are the focus of this year’s experimentation.²⁵

Comparison to Past Battlefield Development Plan Efforts

The Cold War-era BDP used the concept-based requirements system as its future force development process.²⁶ Within the concept-based requirements system, the driving concept (AirLand Battle), the threat (Soviet

1 Cyber stimulates

2 Space intelligence, surveillance and reconnaissance (ISR) sees

3 Long-range precision fires strike

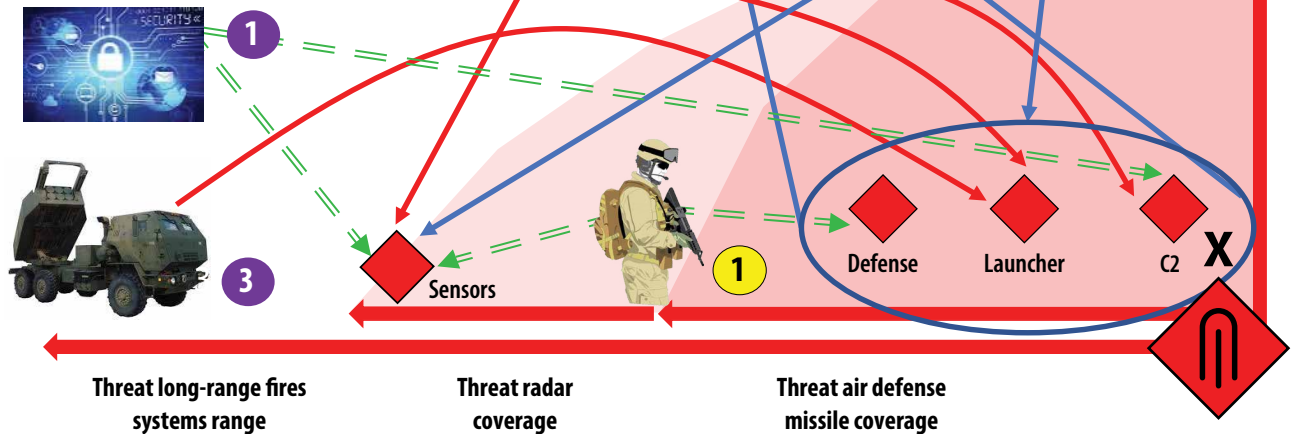
4 Space ISR assesses

1 Special operations forces stimulate

2 5th generation sees

3 U.S. Air Force strikes

4 5th generation assesses



(Figure by Pete Lugar and Dave Farrell)

Figure 4. Layered Convergence Options

Union), and the programmed U.S. forces fed the BDP. Additional feeds came from the mission area analyses (MAA) prepared by the lead center or school for each mission area. The MAA, similar to the recent capabilities-based assessment/capabilities-needs assessment, identified required capabilities (tasks), determined gaps and risk (deficiencies), and assessed potential solutions.²⁷ The BDP consolidated all MAA, concluding that year's analysis, and drove prioritized capability requirements across DOTMLPF-P to develop combat-ready future forces focused on the Soviet threat. The process then repeated, utilizing the learning demands and outcomes of the previous year's process.

At the end of the Cold War, the perceived peace dividend as well as the multitude of various mission types and lack of near-peer adversaries left the Army

to adapt to a more ambiguous security environment. Over time, the development process for the Army's future force evolved into a capability-based process to accommodate this complex, unknown, and constantly changing environment. Under this capability-based process, large-scale combat operation-focused analysis atrophied in favor of a wider range of contingency analysis and heavy emphasis on development of capabilities to support counterinsurgency.

While similar in methodology to the recent concept-to-capabilities process, there are a couple of significant distinctions.²⁸ The concept-based requirements system first was a threat-based process designed to develop a future force to fight against a singular known enemy (the Soviets). It used known equipment (T-72 tanks, BMP infantry fighting vehicles) and known

tactics (conventional Red Army doctrine) in a known environment (temperate plains) and in a known location (central Europe), with known coalitions (NATO versus Warsaw Pact). This singular focus provided Army-wide unity of effort for analysis and future force development across DOTMLPF-P that has not existed since the fall of the Soviet Union in 1991. Only recently, as reflected in national security, defense, and military planning guidance, have near-peer threats begun to reemerge, providing the United States once again with entire pacing threat systems against which to develop specific warfighting requirements.

Linkage of Battlefield Development Plans to AFC's New Principles and Processes

The BDP provides AFC senior leaders with data-driven products that can serve as a holistic operational assessment for how the Army integrates modernization priorities to enable the Army's operating concept to counter near-peer threat capabilities in future scenarios.²⁹

Guidance from FCC has stated that the purpose of the BDP is to drive experimentation and analysis to refine and integrate requirements for the MDO force of 2028 and 2035, and generate capabilities identified in Army, Department of Defense, and national-level guidance.

Strategy driven.

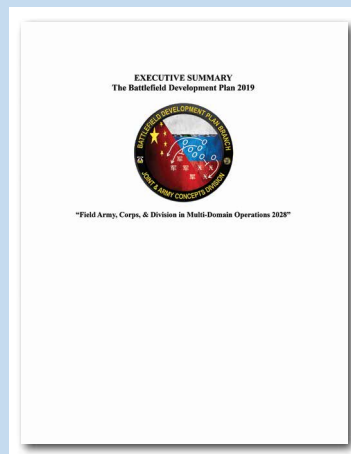
The BDP demonstrates how the Army, as part of the joint force, provides capabilities to implement guidance in the *National Defense Strategy*. It focuses on competition and conflict with near-peer threats and expresses capabilities required for the Army's blunt, contact, and surge forces.³⁰

Threat driven. The future operational environment and the maturation of threat capabilities over extended periods serves as the base for the BDP. It provides a comprehensive examination of how near-peer threats intend

to use their capabilities and capacity during campaigns against the United States and its partner forces.

Concept driven. The BDP operationalizes MDO in ways that allow modeling and testing. It conveys, in specific actionable detail, how future threat and friendly forces (organizations and equipment) operate within a testable scenario in order to develop a series of plays that together achieve campaign objectives in competition and conflict. The BDP provides comprehensive "playbooks" and a concept of operations that integrates operational art with forecasted Army and joint capabilities to solve specific strategic, operational, and tactical problems at echelon during a comprehensive campaign against a near-peer threat.³¹

Priority focused. The BDP describes the organizational capability sets for the Army MDO Force of 2028 and the calibrated force posture required to provide contact, blunt, and surge forces for U.S. European Command and U.S. Indo-Pacific Command. The BDP describes how the Army will employ science and technology enablers driven by Army modernization



For more information on the Battlefield Development Plan (BDP) or multi-domain operations, *Military Review* recommends the executive summary of "The Battlefield Development Plan 2019: Field Army, Corps, and Division in Multi-Domain Operations 2028." The BDP provides an operationally focused, campaign-level approach with linkages from strategy and force structure to capability and program development to provide the Army and joint force with holistic campaign assessment of how future Army forces can fight and win against near-peer adversaries. This generates the details necessary to drive capability development, make informed decisions on future force structure, and—as the Army increases its understanding of how to execute multi-domain operations—concept refinement. To view the report, visit www.armyupress.army.mil/Portals/7/military-review/Archives/English/JA-20/Executive-Summary-The-Battlefield-Development-Plan-2019-Finalv2.pdf.

priorities and converge them with joint capabilities to penetrate, disintegrate, and exploit threat standoff capabilities in competition and conflict.

System driven. The BDP examines how a potential near-peer adversary intends to confront the United States—in multiple domains—in a manner that reduces or negates previously held U.S. dominance within a domain. To accomplish this, the BDP first examines (in Book 1) the relationship between

components within each current or projected threat system used by potential adversaries. The BDP then delineates how an adversary integrates these systems for employment against the United States.³² Second, the BDP identifies the formations and systems in development or currently fielded by the Army for employment against an adversary (in Book 2). Finally, the BDP (in Book 3) outlines proposed means (plays) to converge capabilities against threat systems to open windows of opportunity for the Army to exploit.

poised by a near-peer competitor that requires the United States to “penetrate, dis-integrate, and exploit” and proposes concepts of employment for systems, and science and technology enablers.³³ The BDP also provides a technology net assessment for how science and technology enablers perform during scenario analysis. Finally, it provides a standard framework to measure and report the performance of combinations of force packages and enablers against common operational requirements and threat capabilities.³⁴

“ The Battlefield Development Plan examines how a potential near-peer adversary intends to confront the United States—in multiple domains—in a manner that reduces or negates previously held U.S. dominance within a domain. ”

Data-driven. The BDP synthesizes internal and external analysis into an integrated whole. Updated every two years, the BDP incorporates insights, recommendations, and feedback from focused experiments and analytical studies from across the Army modernization enterprise. Wargames, studies, field experiments from the intelligence community, think tanks, open-source intelligence, the Army, and the joint force provide qualitative data that link to MDO problems and solutions. Campaign models, systems analysis, and operations research studies conducted by the Army analytical community, federally funded research and development centers, and science and technology organizations generate quantitative technical and performance data.

Linkage to Processes

Today, with the standup of AFC, the BDP serves as an input to AFC’s decision-making process. The BDP provides a long-term view to enable prioritization of challenges and opportunities by several means. It links the Army and joint force challenges and opportunities to specific guidance in Army, Department of Defense, and national strategies. The BDP enables and examines Army and joint force performance in the future operational environment. It provides a way to address the issue of strategic, operational, and tactical standoff

The BDP informs the AFC’s prioritization of challenges and opportunities that guide the Army force modernization enterprise. It provides an evidence-based description of challenges in the future operational environment and of how near-peer threat capabilities and operations present risk to future Army missions. The BDP demonstrates how the Army can take advantage of opportunities by providing factual descriptions to integrate organizational capability sets and science and technology enablers to reduce risk and improve effectiveness and efficiency of future Army missions. The BDP specifies how the Army will leverage opportunities to solve specific challenges and the military benefit of proposed DOTMLPF-P solutions. Lastly, the BDP provides a rapidly tailored, comprehensive body of analysis for use to answer questions by the Army’s leadership related to Army modernization and future Army capabilities as compared to the capabilities of Russia and China.³⁵

Conclusion

The Army has reimagined the BDP to maximize the effectiveness of MDO to deter and defeat adversaries by identifying multi-domain capability gaps and prioritizing DOTMLPF-P solutions. With the reemergence of Russia and China as near-peer

threats, the Army has undertaken action to modernize the force to better prepare for the challenges of future conflict. The BDP provides input to Task 3 (Modernization Strategy Force Scenarios) of the AFC's Top-Down Futures Development Process (TDFDP). The Army uses the resultant holistic campaign assessment to define its input into the Joint Capabilities Integration and Development System, which was developed in 2002 to eliminate redundancies between the service-specific requirements generation systems. In this manner, the BDP informs Army decision-making at the secretary of the Army or chief of staff level and provides input for immediate (one to three years), short-term (four to six years), and long-term (more than seven years) decisions on the Army of the future.

The BDP is data-driven by nature and is a constantly updated synthesis of the numerous Department of Defense and Department of the Army internal and external studies, experiments, wargames, literature reviews, and other data points. The current BDP is a living document that provides an "audit trail" of conceptual and technical thinking to counter near-peer threats in competition and conflict. Its products have grown and matured over time and have reflected the growth in learning. All products were developed to answer specific analytical questions encountered along the way and drive learning, experimentation, and capability development. In FY 2019, the Army continued to refine the campaign analysis, but is now focused on directing capability into cohesive and

integrated packages for experimentation and testing to determine the multi-domain force packages for solving specific problems to compete, penetrate, disintegrate, and exploit threat standoff capabilities in the U.S. European Command and, in FY 2020, the U.S. Indo-Pacific Command.

Overall, the BDP serves as a running net assessment for the Army and provides an integrated look that links threats to solutions as part of the Army Modernization Framework to guide the Top-Down Futures Development Process. The BDP outlines specific threat and friendly future force capabilities and illustrates how those U.S. forces will operationalize MDO, allowing modeling and experimentation of the Army's and our joint partners' new concepts. In this way, the BDP provides Army senior leaders with validated data-driven products that serve as a running net assessment for how the Army integrates its modernization priorities to enable the *Army Operating Concept* to ensure that the future force can prevail against near peer threats.

The BDP drives continuous experimentation and analysis to refine and integrate the forces, concepts, and capabilities required to execute MDO. The BDP shows the interdependence of solutions and guides prioritization of challenges, opportunities, and trades to refine concepts and capability development across DOMLPF-P. Codifying these concepts into doctrine, the BDP provides a baseline for the evaluation of concepts and O&Os, ultimately providing the refinement that allows employment by the future force. ■

Notes

1. U.S. Army Training and Doctrine Command (TRADOC) Pamphlet (TP) 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Fort Eustis, VA: TRADOC, 8 December 2018).

2. Peter L. Jones et al., "Russian New Generation Warfare: Unclassified Summary of the U.S. Army Training and Doctrine Command Russia New Generation Warfare Study," (Fort Eustis, VA: TRADOC, n.d.) accessed 18 March 2020, <https://www.dtic.mil/dodtechspace/docs/DOC-30181> (CAC required); Jeffrey Engstrom, *Systems Confrontation and System Destruction Warfare: How the Chinese People's Liberation Army Seeks to Wage Modern Warfare* (Santa Monica, CA: RAND Corporation, 2018).

3. DOTMLPF-P is the Department of Defense acronym for doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy, which are the eight possible elements involved in solving warfighting capability gaps.

4. Michael Fitzsimmons, *Scenario Planning and Strategy in the Pentagon* (Carlisle, PA: U.S. Army War College Press, 2019).

5. Donn A. Starry, "Battlefield Development Plan: British Army Convention, Washington, DC, 24 September 1980," in *Press On! Selected Works of General Donn A. Starry*, ed. Lewis Sorley, vol. 1 (Fort Leavenworth, KS: Combat Studies Institute Press, 2009), 194.

6. Donn A. Starry, "Battlefield Development Plan: Letter to General George S. Blanchard, Commander in Chief, US Army, Europe and Seventh Army, 12 January 1979," in Sorley, *Press On!*, 1:179.

7. TRADOC, *Battlefield Development Plan I*.

8. Starry, "Battlefield Development Plan: British Army Convention," 1:194.

9. *Ibid.*

10. *Ibid.*, 1:194–95.

11. Ibid.
12. Mary C. Fischer, "Prioritizing Issues in the Battlefield Development Plan" (PhD diss., Columbia Pacific University, 1989), 15.
13. Ibid., 5–6. The mission areas used during the Concept Based Requirement System (CBRS) and Battlefield Defense Plan (BDP) were air defense, aviation, close combat heavy, close combat light, combat service support, command and control, communications, engineer and mine warfare, fire support, intelligence and electronic warfare, nuclear biological chemical, and special operations. Field Manual (FM) 100-15, *Corps Operations* (Washington, DC: Government Printing Office, 29 October 1996 [obsolete]), 2-8. As defined in the FM, "Commanders and organizations perform major functions within each level of war in order to successfully execute operations. . . . These functions, occurring on the battlefield, are the BOS [Battlefield Operating Systems]. The BOS include intelligence, maneuver, fire support, air defense, mobility and survivability," combat service support, and command and control.
14. TP 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*. This pamphlet identifies the five problems as the following: (1) How does the joint force *compete* to enable the defeat of an adversary's operations to destabilize the region, deter the escalation of violence, and should violence escalate, enable a rapid transition to armed conflict? (2) How does the joint force *penetrate* enemy anti-access and area denial systems throughout the depth of the support area to enable strategic and operational maneuver? (3) How does the joint force *dis-integrate* enemy anti-access and area denial systems in the deep areas to enable operational and tactical maneuver? (4) How does the joint force *exploit* the resulting freedom of maneuver to achieve operational and strategic objectives through the defeat of the enemy in the close and deep maneuver areas? (5) How does the joint force *return to competition* to consolidate gains and produce sustainable outcomes, set conditions for long-term deterrence, and adapt to the new security environment?
15. Wilson C Blythe Jr., "AirLand Battle: The Development of a Doctrine" (master's thesis, Eastern Michigan University, 1 March 2010), accessed 2 July 2020, https://www.academia.edu/31847297/AirLand_Battle_The_Development_of_a_Doctrine.
16. Plays: Multi-domain force package and capability employment options that achieve specific effects.
17. Holistic Campaign Assessment: A multidisciplinary assessment process used to provide a comparative evaluation of the balance of strengths and weaknesses.
18. TRADOC G-2, Book 3 (Fort Eustis, VA: TRADOC, 2019). Actual product is classified.
19. TRADOC G-2, "Example of a Threat System" (Fort Eustis, VA: TRADOC, 2019). Actual product is classified.
20. TRADOC G-2, "Example of Information about an Overall Threat System" (Fort Eustis, VA: TRADOC, 2019). Actual product is classified.
21. TRADOC G-2, "Example Kill Chain Analysis" (Fort Eustis, VA: TRADOC, 2019). Actual product is classified.
22. U.S. Army Fires Center of Excellence, "Example of O&O Wiring Diagram for the Operational Fires Command" (Fort Sill, OK: TRADOC, 2018).
23. BDP Branch, "Components of a BDP Play" (Fort Eustis, VA: Futures and Concepts Center, 2019).
24. BDP Branch, "Example of Layered Convergence Options" (Fort Eustis, VA: Futures and Concepts Center, 2019).
25. BDP Branch, "Example Drive Chart" (Fort Eustis, VA: Futures and Concepts Center, 2019).
26. TRADOC Regulation (TR) 11-15, *Concept Based Requirements System* (Fort Eustis, VA: TRADOC, 1986), 2-2.
27. *Battlefield Development Plan for 1985* (Fort Monroe, VA: TRADOC, 1985), 4-3.
28. TR 71-20, *Concept Development, Capabilities Determination, & Capabilities Integration* (Fort Eustis, VA: TRADOC, 2018 [draft]), 53.
29. Annex T, Appendix 1 (AFC Decision Forums) to Army Futures Command (AFC) OPORD 002-19, Army Futures Command, Headquarters, Austin, TX, 16 January 2019; Annex Y, Appendix 4 to AFC OPORD 002-19 (Terms and Definitions), AFC, Austin, TX, January 2019; OPORD 002-19 (Implementation OPORD), AFC, Austin, TX, 16 January 2019; "Annex T: Appendix 6 (Strategic Document Governance)" (Fort Eustis, VA: Army Futures and Concepts Center, January 2019); Joint and Army Concepts Division, "Battlefield Development Plans Overview" (Fort Eustis, VA: Army Futures and Concepts Center, February 2019); John M. Murry and Michael A. Crosby, "Thoughts and Guidance Memo # 1" (Austin, TX: AFC, 15 January 2019); The Research and Analysis Center, "Annex Y: Appendix 2 - Army Futures Command Modernization Process" (Austin, TX: AFC, 3 December 2018).
30. TP 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, 17n26. As described in the TP: "The *National Defense Strategy* 'contact force' is composed of forward presence forces. The 'blunt force' is a combination of forward presence forces and early-entry expeditionary forces. The 'surge force' is follow-on expeditionary forces that arrive after the outbreak of armed conflict."
31. A comprehensive campaign is an end-to-end campaign that covers competition, competition short of armed conflict, conflict, and return to competition.
32. "Threat System Chart" (PowerPoint presentation, TRADOC G-2, Fort Eustis, VA, 2018), slide 25.
33. TP 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*.
34. "Subject: Battlefield Development Plan in the Army Futures Command Top-Down Futures Development Process, 20 May 2019," Point Paper (Fort Eustis, VA: Futures and Concepts Center, 2019).
35. Ibid.