



The Battlefield Development Plan: A Holistic Campaign Assessment to Inform the Army Modernization Enterprise

戰場發展計畫： 為美陸軍現代化作為提供整體戰役評估

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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.

21世紀眾多研究文獻的案例指出，社會與科技大幅變化使人類迅速改變世界。這些進步使每個人能同時跟許多人進行有效溝通，隨之帶來的大規模影響力是以往無法想像的。在局部地區事件發生的消息，透過電子通訊手段在幾分鐘內就能傳到全區、全國乃至全世界，但這些消息往往反映出傳播者的偏見。科技進展也讓不管是個人或是團體更容易受到蒙蔽，我們日常生活各方面也都受到科技的影響。事件的來龍去脈會以帶有偏見、片面，甚至不實訊息形式傳播，並在世界各地為特定個人或團體所持觀點與意見帶來強化或攻擊效應。

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.

於此同時，許多國家在新興挑戰與威脅環境下，再度檢視舊有同盟的適用性以及全球或區域性制度，以確保彼此相互支援、協防及安全無虞；也對這些結盟的有效性產生質疑，對內審視自己，對外尋求建立新夥伴關係的方案，以確保未來的安全。經濟已變成相互依賴與彼此競爭，同時，各國不斷處於經濟爭端，將重新塑造產品與服務的生產以及交易。資訊量的獲得呈現大幅成長，連同許多事件發生後的傳播速度也越來越快。多項科技的聚合對傳統能力如自主性、區塊鏈、機器人、生物科技、奈米科技、5G先



進網路、感測器等，以及為經濟、制度帶來顛覆式影響，這引發需要更多資訊科技的能力與能量，以處理現有資料的大幅增長。這就是當前的環境，未來只會變得更為複雜而已。

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.

所有的改變都會影響人類本身對威脅的判斷與反應。本文的挑戰是要在2020年底預測從2028～2035年間歐洲與印太戰區的作戰環境。雖然既有趨勢與預測可提供這段時間影響戰區態勢的預判，然而，還有一些未知的重大關鍵因素，如經濟、環境、政治及軍事等，都將複雜化對俄羅斯、中共及其他競爭者兵力能力虛實之判斷，況且它們未來將挑戰美國及其盟邦，並企圖挑戰全球規範及改變權力平衡。

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

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).

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.

美陸軍已發展新的作戰構想，旨在因應中共與俄羅斯所構成的挑戰，同時也能運用在與北韓、伊朗及其他暴力極端組織的可能衝突和競爭。美陸軍訓練暨準則司令部頒布的《美陸軍2028年多領域作戰手冊》，探討陸軍身為聯合部隊之一員，如何跟盟邦和夥伴國並肩作戰，一同面對中共與俄羅斯之威脅，或是在競爭與衝突時任何其他可能的敵人。¹ 多領域作戰是建構在當前決勝行動準則架構之上，其內涵是為了要遂行各層級戰爭：戰略、作戰、戰術，並可從美國本土向前深入打擊敵人的國土。改變先前作戰構想的好處，不僅能適用於衝突時期，還能使聯合部隊獲得陸軍所提供的關鍵能力，並以遂行多領域作戰方式在競爭與衝突時對抗可能的敵人。

Military Problem 軍事問題

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

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\(CAC required\)](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).



檢視中共經濟成長、資訊化作戰及體系對抗構想，以及俄羅斯新一代作戰能力，就能發現兩者對美國及其盟邦與夥伴國已出現蓄意對抗意圖，這是自冷戰後所未見的。中共與俄羅斯除了以低於戰爭門檻方式來達成戰略目標外，還試圖逐漸提升在非結盟國家中的態勢，提供它們在西方國家主導世界下的另一個選項。中共與俄羅斯已觀察到美國過去三十年來如何維持軍事支配地位，調整全球與區域兵力部署的態勢，兩國知道要同時運用不對稱與遠距常規攻擊手段，才能對美國及其盟邦和夥伴國構成高壓威懾的挑戰。為達此一目的，中共與俄羅斯的現代化作為是企圖削弱美國的相對軍事優勢，使美國陷入數十年來所未曾面臨的困境，即如何嚇阻並擊敗同儕匹敵者。²

Institutional Problem 制度問題

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

美陸軍身為聯合軍力之一員，需要採取方法讓未來兵力發展能發揮多領域作戰的最

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. 「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」(DOTMLPF-P)是解決作戰能力罅隙的八個可能要素。

大效能，以嚇阻敵人對他國的進犯行為，對抗敵人在競爭時所採取的分化作為，以及在武裝衝突中擊敗實力匹敵者的威脅。為了整備兵力以面對未來衝突，美陸軍在過去運用「戰場發展計畫」的手段來實現「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」的建議事項。³俄羅斯在世界舞台的強勢作為，再加上中共崛起成為實力匹敵者的威脅，已讓「戰場發展計畫」再度興起成為陸軍領導階層的一種手段，主因在於「戰場發展計畫」是由上而下的方法，有別於「聯合戰力整合與發展系統」由下而上以能力為基礎的評估，還可用於確認並依序排定「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」的行動建議。「戰場發展計畫」在對抗多種特定實力匹敵者的威脅時，是一項可找出不足之處的最佳手段，同時運用在跨陸軍各職能與聯合領域中，可以理出「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」的整合優先順序。「戰場發展計畫」之發展意味著陸軍重返以威脅為主、能力導向的現代化程序。

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 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

為了執行多領域作戰構想，美陸軍需要界定實力匹敵者或其他競爭者所帶來的威脅問題、分析影響問題的變數，以及提出解決方案的建議事項。為達此一目的，陸軍需要重振「戰場發展計畫」，才能遂行對實力匹敵者的分析。「戰場發展計畫」提供一個作戰為主、戰役層級的方法，並能使戰略和兵力結構跟能力與計畫發展產生鏈結，其通盤考量的視野並非當前計畫想定與戰略規劃所能比擬。⁴

History of the Battlefield Development Plan 戰場發展計畫之歷史

Following the Vietnam War, the U.S. Army Training and Doctrine Command (TRADOC)

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



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 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

繼越戰之後，為了因應在中歐逐漸增長的傳統蘇聯威脅，在美陸軍訓練暨準則司令部主導下，將兵力型態從綏靖作戰轉變成因應主要作戰行動。在1973～1977年間，短期的當務之急是重建當前兵力以對抗蘇聯。⁵到了1977年底，時任陸軍訓練暨準則司令部司令的唐恩·史塔里確信，已到了對美國與蘇聯兩國更長程軍力預測的時候。⁶1977年8月，史塔里成立作戰發展規劃人員小組來規劃首部「戰場發展計畫」，並於1978年11月頒布「戰場發展計畫」文件(如圖1)。⁷根據史塔里表示，「戰場發展計畫」係「作為未來發展的路線圖。」⁸「戰場發展計畫」指出陸軍應關注的各項議題與優先順序。根據特定近程兵力整備與中程兵力現代化計畫之評估，「戰場發展計畫」就能列出計畫改進所需事項，還能評估美國與蘇聯在軍事方面的詳細科技效應，以及和訓練、兵員獲得及軍費不斷攀升等問題。⁹

The BDP analyzed ten critical tasks viewed as encompassing all aspects of conflict for

- 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.

the next decade using data on existing and planned materiel solutions as a basis for setting priorities and for influencing planning, programing, 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

「戰場發展計畫」分析十個關鍵要項，以涵蓋未來十年所有面向的衝突，同時運用現有軍品規劃方案的資料，理出優先順序，這將影響陸軍部的計畫預算執行制度。美陸軍將這十大要項區分兩種主要戰場功能：核心戰鬥與兵力生成。核心戰鬥的關鍵任務是目標鎖定、反制火力、防空、後勤支援、指管通／電子戰；兵力生成的關鍵任務是情報、阻絕、機動、重建及部隊行動。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

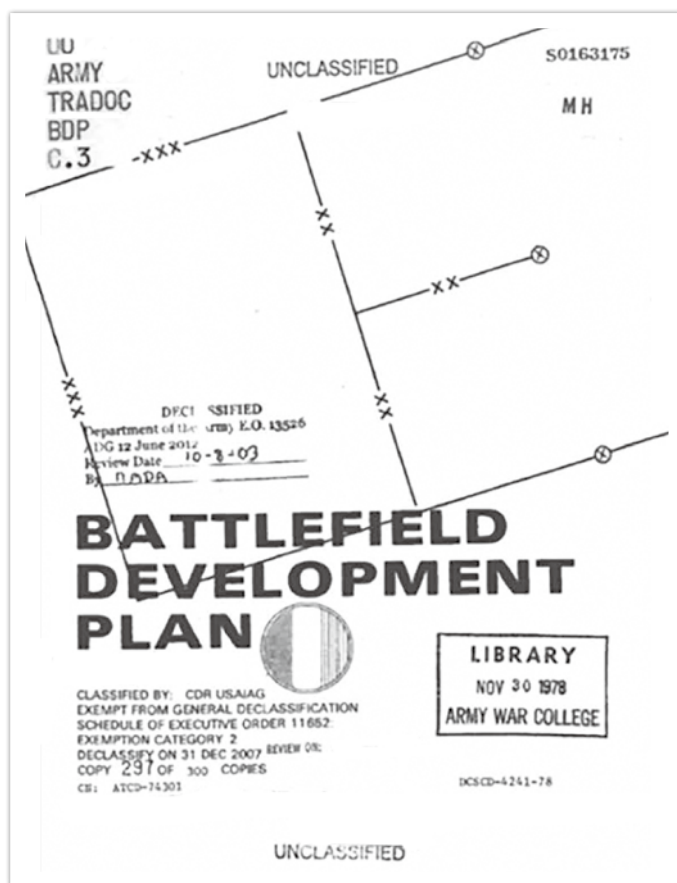


圖1 1978年「戰場發展計畫」文件

¹⁰ Ibid., 1:194-95.



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

「戰場發展計畫」第一步是先預測未來作戰環境，包含蘇聯有哪些特定能力以及科技迅速變遷帶來的影響。接下來，「戰場發展計畫」提出一份詳細的淨評估報告，比較美國與蘇聯在上述所列條件下的各項作戰職能。「戰場發展計畫」主要功用在於戰場分析，其使用十個關鍵要項來評估一個師是否有能力執行陸軍新式準則——空地作戰——以對抗在歐洲的蘇聯勢力，同時運用當前規劃系統來判斷現有不足之處(戰力罅隙)。最後，「戰場發展計畫」在結論提出特定建議，並理出「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」方案的優先順序，使陸軍在計畫作為上能弭平與蘇聯之間的落差，以利成功遂行空地作戰。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.

在1978～1987年間，美陸軍每年都發展「戰場發展計畫」，然而，這個慣例到了1987年採用每兩年一度的預算審定時發生變化。¹² 每一份「戰場發展計畫」都是依據前一份來驅策學習需求、深層分析與精進需求。由於蘇聯在1991年解體，美國認知到實力同等競爭者的威脅解除，未來各項需求的定調都以和平紅利為前提，這導致「戰場發展計畫」之整備無法持續下去。

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

11 Ibid.

12 Mary C. Fischer, "Prioritizing Issues in the Battlefield Development Plan"(PhD diss., Columbia Pacific University, 1989), 15.

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

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. 任務領域之使用是在構想需求系統與戰場防禦計畫期間，涉及防空、航空、重型密接作戰、輕型密接作戰、戰鬥勤務支援、指管、通信、工兵、地雷戰、火力支援、情報、電子戰、核生化及特種作戰。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. 野戰教範之定義：指揮官與單位在各層級戰爭中共同執行主要職能，以利成功遂行作戰任務。這些運用在戰場上的職能稱為戰場作戰體系，包含情報、機動、火力支援、防空、戰場移動與存活、戰鬥勤務支援及指管。

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 longterm deterrence, and adapt to the new security environment ?

《美陸軍2028年多領域作戰手冊》界定出五項問題：

- (1)聯合部隊如何完成「競爭」態勢整備，以擊退敵人破壞區域穩定的行動，嚇阻暴力行動之升級，以及一旦暴力行動升級，如何迅速轉變成因應武裝衝突的兵力態勢？
- (2)聯合部隊如何「突穿」敵反介入／區域拒止系統，深入敵錨重區，以利爾後戰略與作戰機動？
- (3)聯合部隊如何「瓦解」敵反介入／區域拒止系統，深入敵區，以利爾後作戰與戰術機動？
- (4)聯合部隊如何在接近敵深入機動區打擊敵人，「奪取」所望機動自由，以利達成作戰與戰略目標？
- (5)聯合部隊如何「重返競爭態勢」，以鞏固並產生持續性戰果，如何為爾後長期嚇阻設立條件，如何適應未來新的安全環境？



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

「戰場發展計畫」最重要的一課是週期性循環過程的學習，這有助於分析能力提升並排定未來能力需求的優先順序，以利對抗長期的特定威脅。「戰場發展計畫」的傳承仍存在於今日美陸軍中，其任務領域之過程是先演化成陸軍戰場作戰體系，最後變成當前所使用的作戰職能。¹³「戰場發展計畫」所涵蓋與作戰任務有關的十大要項，以及中共和俄羅斯在競爭與衝突領域中所構成的五大問題，兩者相似之處都是作為未來兵力發展的分析架構。¹⁴冷戰時期的「戰場發展計畫」程序仍持續對美陸軍有重大影響。值得一提的是，「戰場發展計畫」是後來美陸軍演變成空地作戰構想的關鍵要素，其能讓構想與準則持續精進，影響「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」，直到1991年冷戰終結，威脅解除，才從同儕競爭的空地作戰中退場。¹⁵

The Battlefield Development Plan Today 今日的戰場發展計畫

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 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

「戰場發展計畫」利用定期更新的資料集為美陸軍現代化提供一項整體戰役評估，

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. 劇本：達成特定效應的多領域兵力組合與作戰能力運用選項。

17 於下頁。

使多領域作戰構想得以實現，作法是透過一系列作戰與戰術層級的行動或是可以當成模式並驗證的「劇本」。¹⁶「戰場發展計畫」利用一個共同性架構、威脅及假設，使未來司令部能穩定持續進行各項驗證作為，並在許可想定下輸入構想、兵力結構、現代化及方案抉擇，從而描繪出未來威脅及友軍情況(組織、系統及能力)。分析結果提供一項整體戰役評估，讓未來司令部能用於指導現代化作為與未來兵力結構。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 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).

「戰場發展計畫」之運用可為陸軍部長或參謀長層級提供決策建議，其提供(一～三年)立即性的決策，內容攸關未來兵力結構、現代化作為，以及經參酌整體陸軍分析與計畫目標備忘錄後所望之構想和能力發展。就(四～六年)短期目標而言，「戰場發展計畫」可以作為陸軍現代化作為的一項整體戰役評估，提供年度現代化指導與方案抉擇，以及為高階領導者在評估時確立各項現代化作為的優先順序。最後，「戰場發展計畫」提供美陸軍長期性(超過七年)的決策參考，內容攸關2028年及之後的構想與能力的現代化作為。「戰場發展計畫」旨在解決21世紀實力同等或同儕匹敵者所帶來的挑戰(或是解決要實現多領域作戰構想所需的各項能力要求)。

Purpose 目的

17 Holistic Campaign Assessment: A multidisciplinary assessment process used to provide a comparative evaluation of the balance of strengths and weaknesses. 整體戰役評估：使用跨學門評估程序以提供優勢與劣勢的權衡比較。



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 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.

「戰場發展計畫」之目的是要檢視身為聯合部隊之一員的美陸軍，能否有效遂行多領域作戰以嚇阻同儕匹敵者或是其他敵人。這種分析結果須符合美陸軍預計到2028年所需的作戰能力、作戰體系及兵力結構，以利用來對抗同儕匹敵者的軍事行動，至於用兵原則都以《美陸軍2028年多領域作戰手冊》揭櫫的內容為本。「戰場發展計畫」是一項系統性驗證計畫，著重於美陸軍在2028年與2035年的作戰能力、作戰體系及作戰編隊，其能劃出一個作戰想像圖，使美陸軍理解在各個特定想定中，如何運用多領域作戰方法以迎戰敵人。美陸軍未來司令部未來構想中心的構想委員會所提供的結果與驗證分析，也使未來司令部能運用在決策程序上。

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 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.
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

模擬推演、桌上兵棋驗證及兵棋推演的結果分析都可為陸軍高層領導者所用，並從「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」的需求要素中做出資金與獲得的決策規劃，如此才能建構未來競爭環境中所需的致勝兵力，萬一有必要的話，也能在衝突中贏戰同儕匹敵者。美陸軍運用資金與獲得的決策規劃為本身立場定調後，才能與其他軍種討論未來構想發展、兵力設計及聯戰準則。「戰場發展計畫」著重於能力與構想之發展，以及兵力現代化所需的組織架構，目的是要因應同儕匹敵者所構成的挑戰，範圍從嚇阻到在競爭中避免衝突，乃至在發生衝突時克敵致勝。

「戰場發展計畫」主要由四個部分組成，分述如下：

一、主軸是說明在特定戰區中對抗同儕匹敵者時，執行一場多領域作戰戰役所需的多領域作戰兵力與未來能力。

二、威脅體系的附加說明(腳本一)在討論敵預期的戰鬥體系與部署手段。

三、美陸軍能力的附加說明(腳本二)在討論自身預期的作戰編隊、戰鬥體系及作戰能力。

四、推演的附加說明(腳本三)運用戰區或是特定威脅的場景，以討論美陸軍未來兵力與作戰能力，如何在戰役中運用多領域作戰對抗同儕匹敵者。¹⁸

Book 1, Red Forces

腳本一，敵軍能力

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

18 TRADOC G-2, Book 3(Fort Eustis, VA: TRADOC, 2019). Actual product is classified. 腳本三所產製結果列為機密。

19 TRADOC G-2, "Example of a Threat System"(Fort Eustis, VA: TRADOC, 2019). Actual product is classified. 威脅體系案例列為機密。



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

腳本一涵蓋集體與個人威脅體系之分析，是由未來司令部未來作戰環境委員會跟訓練暨準則司令部副參謀長辦公室(主管情報)共同產製。¹⁹ 此分析檢視敵體系所擁有的戰略與能力以及相關弱點，並提出可行的致勝之道。該腳本是屬於機密等級文件，並由兩個部分組成：整體威脅系統分析及子系統分析。整體威脅系統分析涵蓋整體防空、長程火力、常規及非常規兵力等資訊，同時討論因應迫切威脅的準則以及戰術、技術與程序(如圖2)。²⁰ 圖2範例內容說明各編隊如何遂行不同的作戰行動。子系統分析涵蓋指管通、感測器、執行作戰與戰術的槍砲，以及特定系統的擊殺鏈分析。²¹

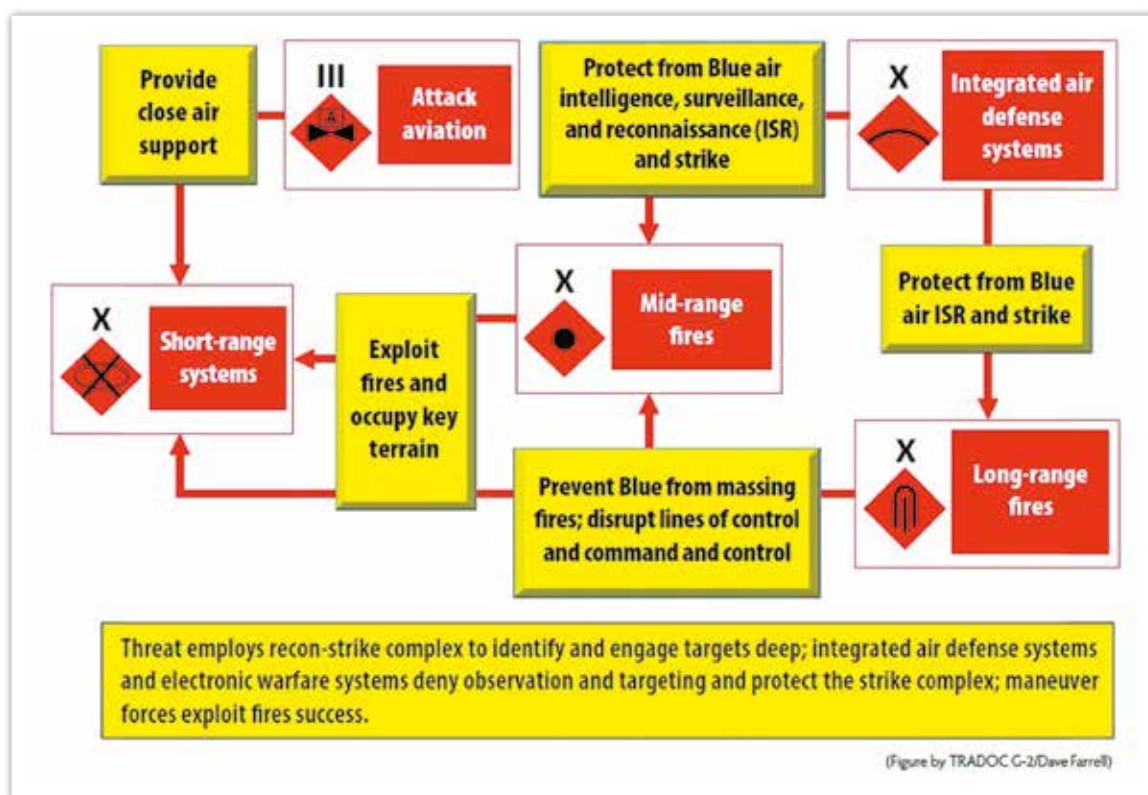
Book 2, Friendly Capabilities

腳本二，友軍能力

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

20 TRADOC G-2, "Example of Information about an Overall Threat System"(Fort Eustis, VA: TRADOC, 2019). Actual product is classified. 整體威脅體系資訊列為機密。

21 TRADOC G-2, "Example Kill Chain Analysis"(Fort Eustis, VA: TRADOC, 2019). Actual product is classified. 擊殺鏈分析列為機密。



中英對照表

Attack aviation	航空攻擊	Integrated air defense systems	整體防空系統
Short-range systems	短程火力	Mid-range fires	中程火力
Long-range fires	長程火力	Provide close air support	提供密接支援
Protect from Blue air intelligence, surveillance, and reconnaissance (ISR) and strike	保護從藍軍的空中情監偵及打擊		
Exploit fires and occupy key terrain	攻克火力與占領關鍵要地		
Prevent Blue from massing fires; disrupt lines of control and command and control	避免藍軍的大規模火力攻擊；破壞管制線與指管系統		
Threat employs recon-strike complex to identify and engage targets deep; integrated air defense systems and electronic warfare systems deny observation and targeting and protect the strike complex; maneuver forces exploit fires success.	威脅運用偵打一體來確認並打擊後方目標；整體防空系統與電子戰系統阻斷偵察、鎖定及避免合式打擊；機動兵力成功攻克敵火力。		

圖2 衝突時的威脅體系

provides a look at the force that the Army will field in 2028.

美陸軍未來司令部的能力發展整合委員會設置在陸軍各類卓越中心內，並與各中心兵力現代化的部門密切合作，以發展功能性(各式火力)組織與作戰構想。組織與作戰構想的文件頁數可從20頁到80頁。能力發展整合委員會為未來司令部提供完整的組織與作戰構想，並用於進行驗證與兵推。鑒於組織與作戰構想的細節部分並不需要進行驗證，



因此各委員會研擬執行摘要——能力集以供使用。每個能力集皆說明使編隊能執行作戰任務所需的促成能力。腳本二的說明方式區分兩個部分：藍軍能力與作戰能力促成要素，同時描繪出陸軍在2028年時兵力部署的樣貌。

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.

腳本二的第一部分是組織與作戰能力集。標準四張投影片簡報要能讓各委員會理解多領域作戰的任務行動要項列表、能力、限制、基本補給量。在2019年會計年度時，多領域作戰部隊已有超過70個獨立旅級及比旅更大規模的編隊，目前已完成45個編隊的能力集，涵蓋編隊的主要作戰體系、兵員數量、線路圖、任務行動要項列表、互賴性、各項限制、未來能力(作戰能力促成要素)，以及對第一類(糧秣)、第三類(油料)、第五類(彈藥)補給品的基本需求量。²² 最後一張能力集的簡報以圖解說明編隊行動的範圍與距離，其額外的資訊還包含OV-1——用於高階作戰的地形構想圖，說明如何使用作戰能力及其輔助能力，附帶說明編隊的任務行動要項列表或能力細節以及更詳盡的補給量。多領域作戰構想在本質上就是聯合作戰，像未來可能發生的戰役型態一樣，所以腳本二也包含美軍聯合夥伴未來在2028～2035年間之編隊與能力的兵力部署預測。

22 U.S. Army Fires Center of Excellence, "Example of O&O Wiring Diagram for the Operational Fires Command"(Fort Sill, OK: TRADOC, 2018).

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.

腳本二的第二部分為作戰能力促成要素，這些要素是產自於未來司令部下轄的跨功能團隊、能力發展整合委員會，以及科技單位。整體而言，這些單位提出超過400項作戰能力促成要素，軍方從中挑選126個重點項目於2019會計年度期間進行驗證，也包含各跨功能團隊的32項現代化作為。要納入多領域作戰驗證，作戰能力促成要素必須能在旅級單位及以上單位進行衡量與評估，同時也要在2030年達到技術成熟度六的等級。技術成熟度六的階段是達到在相關環境中進行構型或原型系統測試。作戰能力促成要素是兩頁的說明，包含討論部隊獲得促成要素的好處；討論促成要素的能力；討論計畫中有關測試、定位、部署層級、採購單位、成本限制等問題；以及討論發展成熟度與促成要素之使用。

Book 3, Blue versus Red (2028)

腳本三，敵我能力評估(2028年)

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).²³ It is not the intent of the campaign outlined in Book 3 to serve as "the" solution to

23 BDP Branch, "Components of a BDP Play"(Fort Eustis, VA: Futures and Concepts Center, 2019).



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.

腳本三係由未來司令部的構想委員會所策劃，提供如何從戰役觀點來部署未來美陸軍編隊與作戰能力，以利擊敗特定同儕匹敵者。其使用作戰與戰術層級的深度分析小場景或稱「劇本」，以檢視要整合哪些技術需求，進而對抗同儕匹敵者的層層攻勢，目的在於產生所需詳細資料以策進作戰能力發展，提供關於未來兵力結構所需的決策資訊，以及使構想更加精進——即增加理解如何遂行多領域作戰(如圖3)。²³ 腳本三所描繪的戰役不是要作為擊敗同儕匹敵者的特定方案，也不是要用來作為一個戰爭計畫或作戰計畫，因為還有許多方法部署一場對抗敵人的戰役。這是一個評估的途徑，用於2028～2035年所望兵力的戰役部署驗證，以利執行多領域作戰的宗旨：對抗未來特定同儕匹敵者。

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:

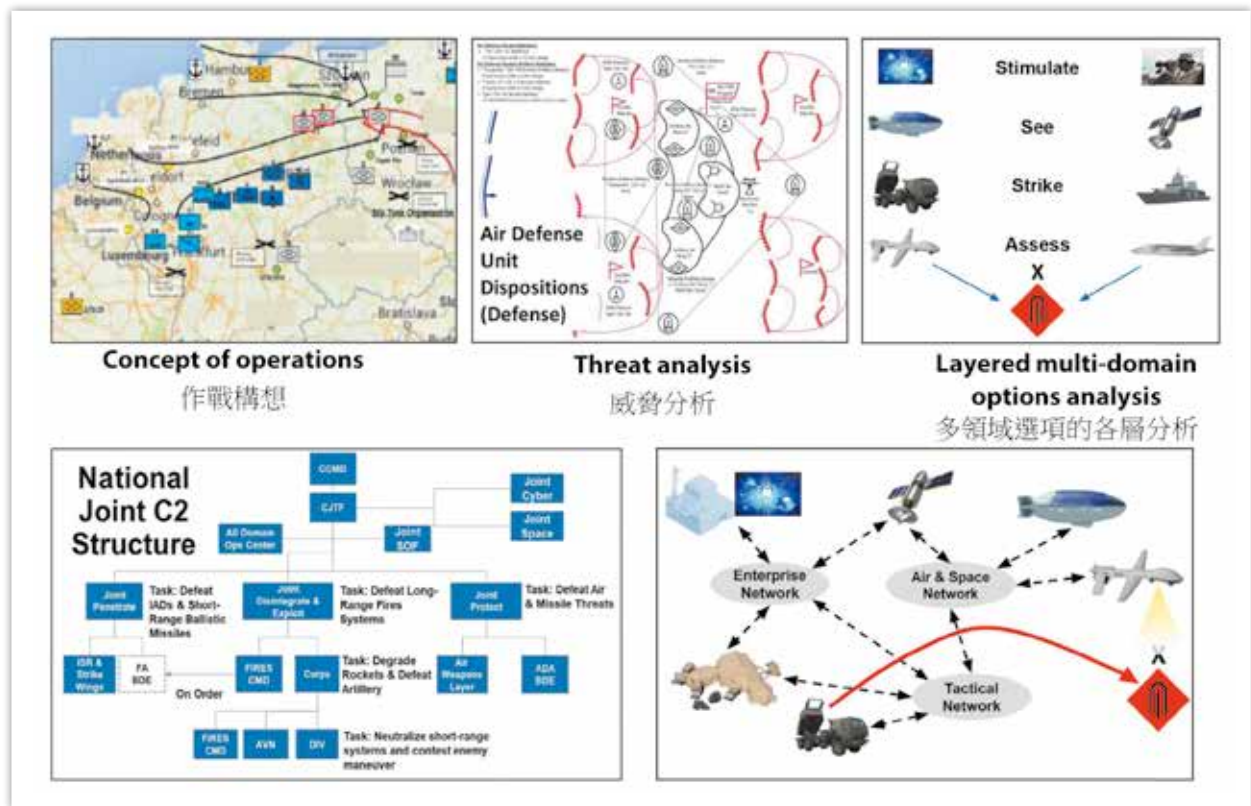
1. How do Army forces posture to contest adversary efforts to challenge the status quo in a coercive manner and deter adversaries by demonstrating the capability to rapidly transition to conflict?

2. In the event of conflict, how do Army forces, fighting by echelon and operating inside adversary 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.

3. How do we converge capabilities and employ them as described in the MDO concept (see figure 4)?

在描述如何部署未來兵力，腳本三的各项說明都能在作戰命令中找到。腳本三說明我軍的戰役，特別是在衝突中，之所以如此做是因為要試著回答三個問題：

- 一、美陸軍兵力態勢如何因應敵人以威嚇方式挑戰現狀，同時藉由展現能將作戰能力迅速轉移至衝突的能力？



中英對照表

Air Defense Unit Dispositions (Defense)		防空單位配置(防禦)	
Stimulate	模擬	See	發現
Strike	打擊	Assess	評估
National Joint C2 Structure	國家聯合指管架構	CCMD	作戰司令部
CJTF	聯合特遣部隊指揮官	All Domain Ops Center	全領域作戰中心
Joint SOF	聯合特種作戰	Joint Cyber	聯合網路
Joint Space	聯合太空	Joint Penetrate	聯合突穿
Joint Disintegrate & Exploit	聯合瓦解與攻克	Joint Protect	聯合防護
ISR & Strike Wings	情監偵與打擊	FA BDE	艦隊航空旅
On Order	命令下達	FIRES CMD	火力指揮部
Corps	軍	Air Weapons Layer	空中武器層
ADA BDE	防空砲兵旅	FIRES CMD	火協中心
DIV	師	AVN	航空
Task: Defeat IADs & Short-Range Ballistic Missiles		任務：打擊整體防空系統與短程彈道飛彈	
Task: Defeat Long-Range Fires Systems		任務：打擊長程火力系統	
Task: Defeat Air & Missile Threats		任務：打擊防空與飛彈威脅	
Task: Degrade Rockets & Defeat Artillery		任務：消除火箭彈威脅與打擊砲兵	
Task: Neutralize short-range systems and contest enemy maneuver		任務：壓制短程火力系統並搶占敵機動路線	



戰場發展計畫：
為美陸軍現代化作為提供整體戰役評估

Enterprise Network	單位網路	Air & Space Network	航太網路
Tactical Network	戰術網路		

圖3 戰場發展計畫各劇本組成要素

二、一旦衝突發生，陸軍如何遂行梯隊作戰，如何在敵反介入／區域拒止範圍內遂行作戰行動，如何執行同步作戰以突穿並瓦解敵人的層層攻勢，以奪取主動權並有利於聯合部隊爾後之運用。這個目標是為了要擊敗敵軍，並讓美國政治領導者享有後續協商的優勢地位，以利將衝突降溫成競爭等級？

三、陸軍如何整合並有效部署在多領域作戰構想中所述的各項能力(如圖4)？

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

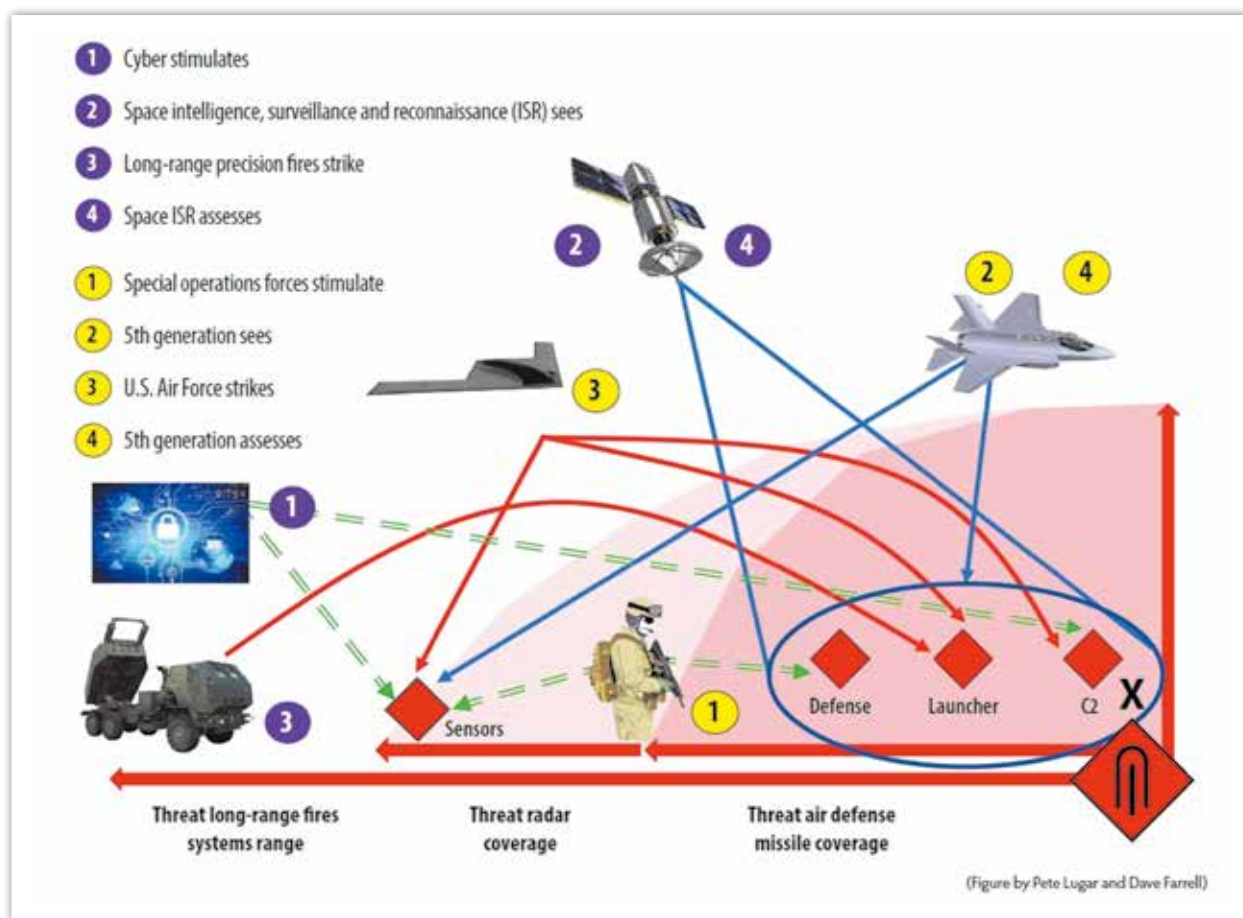
腳本三包含構想委員會關於如何達成目的之假設。各劇本以圖和文字敘述方式說明作戰構想。這些劇本確認演練期間由梯隊／總部所領導的合擊作戰，以及擁有多領域能力的特定組織在敵層層攻勢下的多種選項。各劇本亦確認可能涉及作戰規劃或執行之領域或指管構成要素的節點。²⁴

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

這些劇本全部統整後形成一個「指引圖」，作為一場與同儕匹敵者接戰的示意圖，其本質上並非是規定下的產物。「指引圖」使用任務擊殺程序、特定劇本來說明我軍之

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).



中英對照表

Cyber stimulates	網路模擬	Space intelligence, surveillance and reconnaissance (ISR) sees	發現：運用太空情監偵
Long-range precision fires strike	長程精準火力打擊	Space ISR assesses	評估：運用太空情監偵
Special operations forces stimulate	特種作戰模擬	5th generation sees	發現：運用5G網路
U.S. Air Force strikes	打擊：運用美空軍	5th generation assesses	評估：運用5G網路
Sensors	感測器	Defense	防禦
Launcher	發射器	C2	指管
Threat long-range fires systems range	敵長程火力系統射程	Threat radar coverage	敵雷達涵蓋面
Threat air defense missile coverage	敵防空飛彈射程		

圖4 各層合擊選項

行動，這些作為之功用在於儘可能對敵人構成多重困境。這個在腳本三中的「指引圖」說明執行各劇本的需求條件，並以灰色與綠色的內容方框來表示，同時也是年度驗證之重點。²⁵



Comparison to Past Battlefield Development Plan Efforts 比較過去戰場發展計畫之作為

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 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.

冷戰時期的「戰場發展計畫」運用是以構想為主的需求系統作為未來兵力發展的程序；²⁶而以構想為主的需求系統的組成要素是推動構想(空地作戰)、威脅(蘇聯)、美軍計畫兵力，至於其他要素則來自領導中心或各任務領域學院所做的「任務領域分析」整備。「任務領域分析」類似近期以能力為主的評估／戰力需求評估，意即找出所需能力(任務)，確認落差與風險(不足之處)及衡量可能方案。²⁷「戰場發展計畫」強化所有的「任務領域分析」，包含年度分析，在「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」中找出需要優先推動的能力，以利完成戰備整備並因應蘇聯這個重點威脅。這個過程是一再重複進行，同時須利用學習需求法並借鏡往年程序經驗的成果。

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

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), pp.4-3.

operation-focused analysis atrophied in favor of a wider range of contingency analysis and heavy emphasis on development of capabilities to support counterinsurgency.

冷戰結束後，由於認知到欠缺同儕匹敵者所帶來的和平紅利以及各種接踵而來的任務型態，使美陸軍處於混沌不明的安全環境。隨著時間過去，美陸軍未來兵力發展程序演變成以能力為主的程序，俾利適應複雜、未知及不斷變化的環境。在這種以能力為主的程序下，大規模作戰行動的分析萎縮成偏向各種不同範圍的應急作戰分析，並著重在支援綏靖作戰的能力發展。

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.

雖然和近期以構想到能力的方法論相似，不過有兩個不同的重大區別。²⁸ 以構想為主的需求系統，其首要假設前提是基於威脅的程序，旨在發展未來足以對抗單一已知敵人(蘇聯)的未來兵力。其使用敵已知裝備(T-72主戰車、BMP步兵戰車)、敵已知戰術(傳統紅軍準則)、已知環境(溫帶平原)與地點(中歐)，以及已知敵我結盟國(北約組織對上華沙公約組織)。這種單一重點強調使美陸軍能統一上下的分析作為，以及在「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」中找出未來兵力發展的優先順序，不過蘇聯在1991年解體後就不復存在。直到近期，國家安全、國防及軍事規劃指導都反應出同儕匹敵者的威脅開始再度崛起，這讓美國再度定調整個長期安全的威脅體系，進而發展特定各項作戰需求。

28 TR 71-20, Concept Development, Capabilities Determination, & Capabilities Integration(Fort Eustis, VA: TRADOC, 2018 [draft]), 53.



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

戰場發展計畫與未來司令部的新原則和程序之鏈結

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.

「戰場發展計畫」為未來司令部高層領導者產製以資料為本的報告，能拿來作為整體作戰評估，以供美陸軍統整出自身現代化項目之優先順序，並讓陸軍作戰構想能在未來各種想定中成功對抗同儕匹敵者的威脅。²⁹ 未來構想中心的指導已敘明「戰場發展計畫」是為了策進驗證與分析，以利精進並整合2028年和2035年的多領域作戰兵力的各項需求，同時達成陸軍、國防部及國家等各層級指導所望之能力。

Strategy driven

一、以戰略為本

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

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 於下頁。

「戰場發展計畫」說明身為聯合部隊之一員的陸軍，如何展現自我能力以執行國家安全戰略的指導。其著重於與同儕匹敵者的競爭與衝突，同時展現陸軍的鈍挫部隊、接敵部隊及增援部隊所擁有的各種作戰能力。³⁰

Threat driven

二、以威脅為本

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.

「戰場發展計畫」假設基礎是未來作戰環境以及隨著時間逐漸成熟的威脅能力。其可讓人全盤理解同儕匹敵者如何在戰役中使用全般能力來對抗美國及其友軍。

Concept driven

三、以構想為本

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

「戰場發展計畫」是實現多領域作戰的方法，可以作為模式建立與驗證。其以確切

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." 如《美陸軍2028年多領域作戰手冊》所述，國防戰略的「接敵部隊」是由前進駐軍兵力所組成；「鈍挫部隊」是由前進駐軍兵力與先期進入的遠征部隊兩者結合而成；「增援部隊」是在武裝衝突發生後，陸續抵達的遠征部隊。

31 A comprehensive campaign is an end-to-end campaign that covers competition, competition short of armed conflict, conflict, and return to competition. 全般戰役評估意指一個戰役的全程，包含競爭、競爭但未達武裝衝突程度、衝突、降溫重返競爭等各種階段。



可行的細節說明，未來威脅與友軍(組織和裝備)如何在一個驗證的想定下運作，旨在發展一系列劇本進而達成在競爭與衝突下的戰役目標。「戰場發展計畫」提供一套完整的劇本與作戰構想，將作戰藝術跟未來所望陸軍能力和聯戰能力進行整合，以利解決在全面戰役期間對抗同儕匹敵者時，所面臨各層級的特定戰略、作戰及戰術問題。³¹

Priority focused

四、著重於優先項目

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

「戰場發展計畫」為美陸軍2028年多領域作戰兵力描繪出組織能力集，同時校準所需兵力態勢，進而形塑能供美國歐洲司令部與印太司令部運用的接敵部隊、鈍挫部隊及增援部隊。「戰場發展計畫」說明陸軍如何運用科技促成要素，以實現須優先發展的現代化事項，同時使之與聯戰能力整合，進而擁有在競爭與衝突時對敵威脅攻勢的突穿、瓦解及攻克威脅攻勢的能力。

System driven

五、以體系為本

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.

32 "Threat System Chart"(PowerPoint presentation, TRADOC G-2, Fort Eustis, VA, 2018), slide 25.

「戰場發展計畫」檢視潛在的同儕匹敵者在多領域中對抗美國之意圖，並探討敵以何種方法削弱或抵銷先前美國在某領域的主宰優勢。為達此一目的，「戰場發展計畫」第一步先檢視(如腳本一)潛在敵人當前與未來威脅系統各組成要素的關係，緊接著說明敵方如何統合運用這些武器系統來對付美國。³²「戰場發展計畫」第二步是確認發展中的編隊與作戰系統，或是當前美陸軍用來對付敵方既有的作戰部署(如腳本二)。「戰場發展計畫」最後一步(如腳本三)是提出統合作戰能力的各手段(各劇本)，以利對抗敵作戰系統並開啟奪取主動權的機會之窗。

Data driven

六、以資料為本

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.

「戰場發展計畫」將內、外部的分析統整為一體，每兩年更新一次，整合了各見解、建議及回饋意見，這些係來自美陸軍現代化作為中的重點驗證與分析研究結果。兵棋推演、各項研究及實地驗證的結果是得力於情報機關、智庫、公開來源情資之助，至於陸軍與聯合部隊則提供質化資料，以接軌多領域作戰的問題與解決方案。陸軍分析部門、聯邦資金贊助的各研發中心及各科技組織等負責執行戰役模式、系統分析及作戰行動研究，藉此產製量化的科技數據與成果。

Linkage to Processes

與程序的鏈結

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 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

今日在美陸軍未來司令部成立之後，「戰場發展計畫」成為未來司令部決策程序中的一項輸入要素，提供一個長期規劃視野，並透過運用各種手段依序處理各種挑戰與機會。「戰場發展計畫」能連結陸軍與聯合部隊將面對的挑戰與機會，並提供陸軍、國防部、國家戰略之特定指導，也能用於檢視在未來作戰環境中陸軍與聯合部隊的作戰表現。「戰場發展計畫」提供一個解決由同儕匹敵者所構成的戰略、作戰及戰術攻勢問題，美國將需要突穿、瓦解及攻克的用兵之道，同時提出作戰體系部署的構想以及各種科技的促成要素。³³「戰場發展計畫」還能提供一項科技淨評估，以檢視科技促成要素在作戰想定分析之影響成效。最後，「戰場發展計畫」可以作為一個標準架構來衡量並匯報兵力組成與各促成要素能否相互整合，以利解決共同作戰需求問題並有效對抗威脅。³⁴

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

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).

to the capabilities of Russia and China.³⁵

「戰場發展計畫」讓未來司令部能依序處理各個挑戰與機會，同時成為美陸軍兵力現代化作為的指導方針。其在未來作戰環境中對於各挑戰的描述是以證據為本，同時說明同儕匹敵者的能力與作戰行動對陸軍未來各項任務所構成之風險。「戰場發展計畫」說明美陸軍如何將當前狀況跟組織能力集、科技促成工具進行整合，以利奪取先機，進而減低風險並增進未來陸軍執行各任務時的效能與效率。此外還特別說明美陸軍如何搶占先機以解決各種特定挑戰，以及指出排定「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」優先順序的軍事益處。最後，「戰場發展計畫」提供一個快速的針對性全般分析，以解決陸軍領導階層對於陸軍現代化能否增進未來能力之疑問，意即有效對抗中共和俄羅斯。³⁵

Conclusion

結論

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.

美陸軍已重新規劃「戰場發展計畫」之想定，希冀藉此讓多領域作戰發揮最大作戰效能，進而嚇阻並擊敗當前之敵，作法是確認多領域作戰能力罅隙與排定「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」的優先順序。隨著中共與俄羅斯再度崛起成為同儕匹敵者，陸軍已採取兵力現代化作為並進行適切整備，以利因應未來衝突中的各項挑戰。「戰場發展計畫」可以作為未來司令部「由上至下未來發展程

35 Ibid.



序」任務三(現代化戰略兵力想定)之輸入資訊，而這種結果論的整體戰役評估，還能讓陸軍用來作為精進「聯戰能力整體發展系統」的輸入資訊，後者在2002年發展目的是要避免軍種在發展特定世代武器系統過程中不必要的重複作為。「戰場發展計畫」之運用可為陸軍部長或參謀長層級提供決策建議，同時也可以作為策劃當前(一～三年)、短期(四～六年)及長期(超過七年)陸軍未來決策的輸入要素。

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.

「戰場發展計畫」本質上是以資料為本，同時是一個不斷更新的整體評估，眾多資料來自國防部與陸軍部的內外研究、各項驗證、兵棋推演、文獻回顧及其他資料點。當前的「戰場發展計畫」是一個活用的文件，為構想與科技思維提供一個「審查試驗」機制，以利在競爭與衝突時反制同儕匹敵者，其產製報告的成熟度會與時俱進，同時也會在學習中成長，此外，這些報告是為了要回答在過程中遇到的學習、驗證及作戰能力發展之特定分析問題。在2019會計年度，美陸軍持續精進戰役分析，然當前著重於將作戰能力導向整體凝聚的兵力組合，並在驗證與測試下決定何種多領域作戰兵力組合，才能解決2020會計年度在美國歐洲司令部、印太司令部欲進行競爭、突穿、瓦解及攻克敵攻勢能力所遇到的特定問題。

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.

整體而言，「戰場發展計畫」可以作為美陸軍淨評估之工具，同時提供陸軍現代化架構中威脅解決方案的全盤規劃，進而引導「由上至下未來發展程序」。「戰場發展計畫」說明特定威脅與友軍未來兵力的能力，指出美軍如何實行多領域作戰，並如何模擬與驗證陸軍及友軍的新構想。「戰場發展計畫」之運用為陸軍高階領導人提供具可信度的資料分析，並成為陸軍整合其現代化優先項目的淨評估工具，進而使未來兵力能運用「陸軍作戰構想」迎戰同儕匹敵者。

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.

「戰場發展計畫」能帶動持續性驗證與分析，以精進並整合兵力、構想及所需能力，進而達成多領域作戰之實踐。「戰場發展計畫」指出各方案之互補性，同時能依序處理各個挑戰、機會及方案選擇，以精進整體「準則、組織、訓練、物資、領導統御暨教育、人事、設施與政策」之構想與能力發展。一旦這些構想被編成準則後，「戰場發展計畫」便能成為評估組織與作戰構想及其他構想之依據，最終提供精進部署未來兵力之道。

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