Lessons Learned, Futures Forged: Adapting Air Force Strategy for the Multi-Domain Era

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In 2027, the skies over the Pacific could be filled with the noise of advanced missile systems, jamming devices, and fighter jets from multiple nations. For the U.S., this is not a distant hypothetical but a real, looming challenge. As the global security environment grows increasingly complex[1], the United States faces the challenge of adapting its military operations to counter evolving threats. Peer adversaries like China have advanced Anti-Access/Area Denial (A2/AD) strategies[2] designed to disrupt traditional command and control (C2) structures, requiring the Air Force to rethink how it organizes, trains, and equips its forces.[3] To address these challenges, the Air Force is implementing new force structures[4]—In-Place Combat Wings, Deployable Combat Wings, and Combat Generation Wings—to facilitate distributed control of airpower operations. However, the success of this transition depends on comprehensive updates to Air Force doctrine and joint doctrinal publications. This essay proposes revisions to key Air Force Doctrine Publications (AFDPs) and relevant joint doctrine to address the operational requirements of distributed control. These updates will empower commanders with the necessary authorities and capabilities, tailor A-Staff compositions to specific mission types, establish robust command relationships, and enhance combat support and C2 structures. Informed by lessons learned from past conflicts, Chinese doctrine, military organizational principles, psychological theories, these changes will enable the Air Force to meet the demands of future warfare, particularly in contested environments like those envisioned for a potential conflict with China in 2027.

Lessons from the Field

The Global War on Terror (GWOT) highlighted critical lessons for the Air Force in the areas of command structure, adaptability, and joint operations. One of the most significant lessons was

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[1] General Stanley McChyrstal. *Team of Teams: New Rules of Engagement for a Complex World*, 2015, 74.
[2] Fabian-Lucas Romero Meraner, "China's Anti-Access/Area-Denial Strategy", *The Defence Horizon Journal*, February 2023, 1-2.
[3] Secretary of the Air Force Public Affairs, "Air Force realigns to ensure readiness, future competitiveness", September 2024, 1.
[4] Secretary of the Air Force Public Affairs, "Air Force transitions to A-Staff structure for air expeditionary wings", June 2023.

the value of decentralized execution in highly fluid and unpredictable environments.[5] In operations such as those in Afghanistan, tactical leaders were often required to make rapid decisions on the ground without waiting for approval from higher echelons of command. For example, during the Battle of Kamdesh in 2009, small units relied on immediate air support and on-the-spot coordination to fend off an overwhelming insurgent attack.[6] This success underscored the importance of empowering local commanders with the authority to adapt quickly to changing situations.

However, this flexibility often came at a cost to strategic coherence. The reliance on decentralized execution sometimes led to operational silos, where units focused on immediate tactical objectives at the expense of broader strategic goals. The lack of a clearly defined and consistently communicated strategic end state in GWOT campaigns, particularly in Afghanistan[7], further exacerbated this issue. As the Air Force transitions to engaging potential near-peer adversaries like China, the need for a balance between decentralized execution and strategic alignment becomes increasingly clear.

Furthermore, the GWOT emphasized the importance of sustainability in prolonged operations. In Afghanistan, the Air Force had to adapt its logistics and sustainment operations to support remote bases like Kandahar and Bagram, which faced constant threats and supply chain challenges. Lessons learned in maintaining readiness and resilience in austere environments can be directly applied to potential Indo-Pacific operations, where vast distances and contested logistics chains will demand similar innovation and adaptability.

Another lesson from the GWOT era was the challenge of conducting joint and coalition operations across diverse domains. For instance, during Operation Enduring Freedom, the integration of air assets with ground operations was critical but not always seamless. In many cases, the need for coordination between air controllers, Army units, and allied forces exposed inefficiencies in communication and command structures.[8] The extensive use of remotely piloted aircraft (RPAs) like the MQ-1 Predator highlighted the need for real-time intelligence-sharing, but also revealed vulnerabilities in data dissemination and situational awareness.[9] Addressing these challenges is essential in preparing for a conflict where multi-domain operations against a technologically advanced adversary will be the norm.

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[5] General Stanley McChyrstal. *Team of Teams: New Rules of Engagement for a Complex World*, 2015.
[6] U.S. Central Command. *Executive Summary: AR 15-6 Investigation Re: Complex Attack on COP Keating – 3 Oct 09*, 2010, 2.
[7] Graeme Hurd. *The Causes and Consequences of Strategic Failure in Afghanistan?* George C. Marshall European Center for Security Studies, 2021, 9-13.
[8] Lieutenant Colonel Andre Haider, *Remote Piloted Aircraft Systems in Contested Environments: A Vulnerability Analysis*, Joint Air Power Competence Centre, September 2014.
[9] Ibid.

As we pivot to addressing the threats posed by nation-states, it is imperative to integrate these lessons into doctrine, ensuring that our approach to operations is guided by the hard-earned experience from the GWOT. Doctrine must reflect the need for decentralized decision-making while maintaining strategic cohesion, foster seamless multi-domain integration, and prioritize sustainability in contested environments. By codifying these principles, the Air Force will not only preserve its agility and resilience but also ensure that it remains capable of countering the challenges posed by peer adversaries in the rapidly evolving global security landscape.

Looming Threats

With the window of opportunity opening for the 'Ambitious Dragon' in 2027[10], the Air Force must understand all aspects of their adversary. With a recorded history spanning approximately 5,000 years, China is recognized as one of the world's earliest civilizations. Renowned for its innovations, it pioneered the crossbow as early as 400 BCE and was among the first to adopt groundbreaking military technologies like gunpowder weaponry. In modern times, they are currently taking the lead when it comes to hypersonic missiles and electronic warfare capabilities. With a broad chronicle of development and innovation, China is a known peer threat that has a well-documented history of quietly building itself up. Former Chinese leader Deng Xiaoping popularized the aphorism *tao guang yang hui* or "hide one's capacities and bide one's time" in the early 1990's to sum up China's foreign policy. The *cheng yu* dated to the mid-700's when Tang dynasty Emperor Xuanzong earned his throne in part because he hid his talents from potential competitors. Deng also embedded the phrase in a much longer twenty-four-character phrase: Observe the situation calmly (冷静観察), secure our positions (穏住陣脚), respond with composure (沈着応対), conceal our capabilities and await an opportune moment (韜光養晦), do as little as appropriate (有所作為).[11]

With that in mind, the overall goal of the Chinese Communist Party (CCP) is the great rejuvenation of the Chinese nation. This includes the unification of the renegade province of Taiwan before the year 2049. The current posturing of the People's Republic of China (PRC) remains on the concept of "active defense" (积极防御).[12] The PRC is looking to establish an extensive A2/AD system around the East and South China Sea, to keep the surrounding waters under Chinese control and hinder/prevent U.S. intervention if they were to invade Taiwan. Taking influence from Mao and the people's war, the idea is to control the region with swift/decisive actions and maintain a solid defensive posture and allow the enemy to stretch

[10] Major Kyle Amonson & Captain (Ret.) Dane Egli, "The Ambitious Dragon: Beijing's Calculus for Invading Taiwan by 2030", Journal of Indo-Pacific Affairs, March-April 2023, 39.
[11] Elizabeth Economy, The Third Revolution: Xi Jinping and the New Chinese State, 2019, 188.
[12] Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China*, 2023, 34.

themselves thin.[13] In 2021, the People's Liberation Army (PLA) began discussing a new "core operational concept," called "Multi-Domain Precision Warfare (多域精确战)" (MDPW). MDPW is intended to leverage a C4ISR network that incorporates advances in big data and artificial intelligence, what the PLA calls the "network information system-of-systems," to rapidly identify key vulnerabilities in the U.S. operational system and then combine joint forces across domains to launch precision strikes against those vulnerabilities.[14] As these information systems expand and integrate further into their doctrine, the information veil over Taiwan has the potential to be swift and deadly.

China's Three Defensive Layers

(Map by Michael Lopez, *Military Review*, information courtesy of the Office of Naval Intelligence)[15]

While the PLA certainly has numerous technological shortfalls to overcome to make successful expeditionary operations a reality, the current reforms and active defense strategic guidelines

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[13] Fabian-Lucas Romero Meraner, "China's Anti-Access/Area-Denial Strategy", *The Defence Horizon Journal*, February 2023, 8-10.

[14] Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China*, 2023, 34.

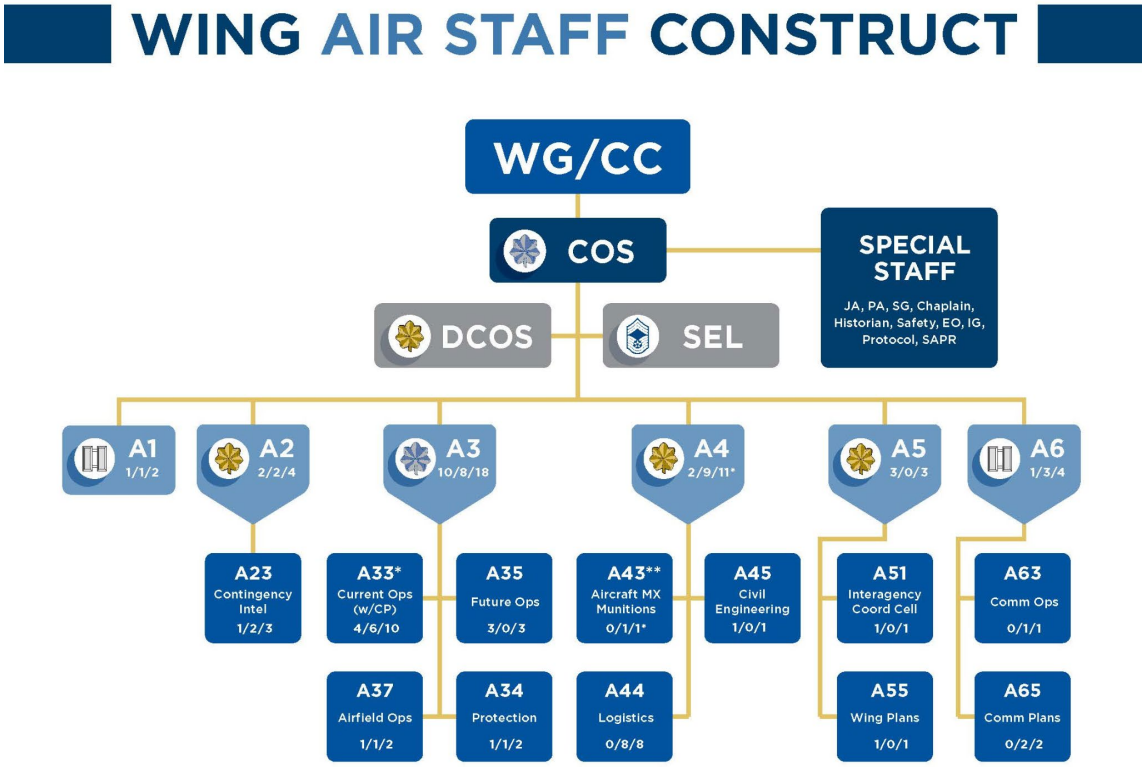
[15] Captain Scott Tosi, *Xi Jinping's PLA Reforms and Redefining "Active Defense"*, Military Review, September - October 2023.

may prove sufficient in providing the force structure, organization, and doctrinal foundation to enable such activities in the future.[16] Xi Jinping's reforms, therefore, may prove to be a vital first step to realizing the "Chinese dream of national rejuvenation" by achieving the goal of transforming the PLA into a world-class force by the mid-twenty-first century.[17]

Organizational Change

When considering the lessons learned from our most recent conflict and examining the current and projected position of the Great Power Competition, the Air Force must transition to distributed control of airpower operations, which necessitates transformative organizational changes. To meet the demands of future conflicts, the Air Force must empower wing commanders with expanded authorities, tailor A-Staffs to mission-specific requirements, and integrate seamlessly with joint and coalition partners. These changes require a corresponding overhaul of training programs to prepare commanders and their A-Staff personnel for the complexities of operating in contested, multi-domain environments.

[16] Captain Scott Tosi, *Xi Jinping's PLA Reforms and Redefining "Active Defense"*, Military Review, September - October 2023.
[17] Xi Jingping, "Secure a Decisive Victory," 1, 48



(A-Staff is a standardized organizational structure, representing the following Air Force Function: A1 Manpower, Personnel, and Services; A2, Intelligence; A3, Operations; A4, Logistics and Engineering; A5, Plans and Integration; and A6, Communications.)[18]

Central to distributed control is empowering wing commanders with decision-making autonomy. In a conflict with a peer adversary like China, communication links may be degraded or severed, requiring commanders to act independently within their Areas of Responsibility (AOR). Air Force Doctrine Publication (AFDP) 3-30: Command and Control currently discusses the importance of conditions-based authorities, but lacks guidance on the application of these principles.[19] It should expand wing commanders' authorities to include Operational Control (OPCON) and Tactical Control (TACON) over assigned assets. It would also benefit by adding a subsection clarifying how subordinate commanders can execute mission objectives when communication with higher echelons are disrupted. It would define specific conditions that trigger command negation and provide a decision matrix for when and how to deviate from standing orders under degraded communications. Similarly, Joint Publication (JP) 3-0: Joint

[18] Secretary of the Air Force Public Affairs, "Air Force transitions to A-Staff structure for air expeditionary wings", June 2023.
[19] Air Force Doctrine Publication 3-30: Command and Control, 7 January, 2020. 13-20, 52-54.

Operations[20] must emphasize the importance of decentralized decision-making, reinforcing that lower-echelon leaders must be trusted to act in alignment with strategic objectives. Granting commanders the ability to respond dynamically to unfolding situations strengthens resilience and ensures strategic goals are not jeopardized by delays.

Agile Combat Employment (ACE) is critical to adapting Air Force operations to contested environments.[21] ACE emphasizes dispersed basing, rapid mobility, and modular logistics to ensure continuity of operations under adversary anti-access/area denial (A2/AD) threats. Adopting and expanding ACE concepts will reduce reliance on centralized hubs, enhancing resilience and survivability. While the guidance provides a solid baseline for offensive engagement, there is a considerable gap in the defensive operations and layered defense systems needed in order to protect deployed high value assets that must be addressed. AFDP 4-0: Combat Support[22] should incorporate ACE frameworks, emphasizing pre-positioned resources and redundant supply chains to support distributed operations.

Tailoring A-Staffs to mission-specific needs is equally important. Each wing—In-Place Combat Wings, Deployable Combat Wings, and Combat Generation Wings—requires customized support structures. For instance, In-Place Combat Wings focus on sustained operations and readiness, requiring robust A4 (Logistics) and A5 (Plans) sections. Deployable Combat Wings prioritize rapid deployment and multi-domain integration, benefiting from streamlined A3 (Operations) and A6 (Communications) teams. Combat Generation Wings emphasize sustainment and airpower generation, necessitating logistics-heavy A4 and sustainment-focused A7 (Installations) sections. JP 5-0: Joint Planning[23] provides integration considerations and the Air Force must ensure modular A-Staffs integrate seamlessly into joint operations. This modularity ensures flexibility and responsiveness.

Training must also evolve to prepare commanders and A-Staffs for distributed operations. Static models are insufficient for contested, multi-domain environments. Instead, dynamic, scenario-based training should simulate degraded communications, cyberattacks, and resource constraints. Exercises like Red Flag should integrate ACE concepts, teaching personnel to operate from dispersed locations with limited resources. A-Staffs must also understand the interplay between air, space, and cyber domains, leveraging ISR platforms, electronic warfare tools, and space-based capabilities. JP 3-12: Joint Cyberspace Operations[24] should further develop a framework for coordinating cyber operations with kinetic operations to neutralize dispersed threats,

[20] Joint Publication 3-0: Joint Campaigns and Operations, 18 June, 2022.
[21] Air Force Doctrine Publication 1-21: Agile Combat Employment, 23 August, 2022, 3-12.
[22] Air Force Doctrine Publication 4-0: Combat Support, 5 January, 2020, 3-12.
[23] Joint Publication 5-0: Joint Planning, 1 July 2024.
[24] Joint Publication 3-12: Joint Cyberspace Operations, 19 December, 2022.

integrating it more into other operations rather than a standalone entity to achieve information superiority.

Using China's expressed position for sovereignty of Taiwan, consider a scenario in which a catalyst event has the United States utilizing these systems. China's initial assault includes cyberattacks and anti-satellite (ASAT) strikes to degrade ISR capabilities and cut Taiwan off from the rest of the world. The Indo-Pacific Command (INDOPACOM) tasks three wings with distributed operations. An In-Place Combat Wing at Kadena Air Base in Okinawa sustains defensive operations, using a logistics-heavy A4 section to ensure munitions flow uninterrupted while its A3 section, with A5 support, adjusts plans in real time. Meanwhile, a Deployable Combat Wing at Guam establishes air superiority, leveraging A3 (Operations) and A6 (Communications) teams to coordinate precision strikes on Chinese naval assets. Simultaneously, a Combat Generation Wing dispersed across the Philippines sustains high sortie rates using makeshift airstrips coordinated by its A7 section. Each wing operates autonomously but aligns with INDOPACOM's strategic objectives, showcasing how modular A-Staffs and empowered commanders enhance resilience.

The organizational changes required to support distributed control are comprehensive and essential. Empowering wing commanders with greater autonomy, tailoring A-Staffs to mission-specific needs, and prioritizing dynamic training are critical steps. The success of military operations often hinges on the ability to adapt faster than the enemy.[25] Incorporating ACE principles and strategic insights ensures the USAF remains agile and resilient in contested environments while dominating the air, space, and cyber domains.

A Basis in Psychology

The proposed doctrinal changes and training for distributed control are supported by psychological theories that enhance decision-making, adaptability, and leadership in complex environments. These frameworks provide a robust cognitive foundation, ensuring Air Force personnel are well-prepared to thrive under contested conditions.

Decision Theory emphasizes how individuals make choices under uncertainty. By decentralizing decision authority and implementing intent-based leadership, commanders can focus on critical objectives while subordinate leaders make timely, well-informed decisions. This approach aligns with Herbert Simon's concept of bounded rationality, which acknowledges the cognitive limits of decision-makers in high-stress scenarios. Simon's research suggests that simplifying choices and clarifying objectives reduces cognitive overload, enabling flexibility in degraded

[25] Geoffrey Parker, *The Cambridge History of Warfare*, 2005.

communication environments[26]. Kahneman and Tversky's work on decision-making further supports the need for structured yet adaptive frameworks in uncertain conditions.[27]

Theory Y, introduced by Douglas McGregor, highlights the importance of trust, autonomy, and intrinsic motivation in organizational success.[28] This aligns with the cultural shift required for distributed control, where personnel must act independently and creatively. By fostering autonomy, distributed command structures empower commanders and A-Staffs to dynamically respond to emerging threats, improving adaptability and operational effectiveness. Edward Deci and Richard Ryan's research on self-determination theory further supports this perspective, emphasizing that empowerment drives engagement and innovation.[29]

Prospect Theory examines how individuals perceive risk and reward. Kahneman and Tversky demonstrated that people are risk-averse in gains but risk-seeking when facing losses, a tendency mitigated through training.[30] Realistic, scenario-based exercises simulate high-stakes environments, conditioning personnel to assess risks rationally and take calculated actions, building confidence in decision-making under stress.[31]

Critical Systems Heuristics (CSH), developed by Werner Ulrich, emphasizes the inclusion of diverse perspectives and systemic evaluation.[32] Modular A-Staffs reflect this principle, integrating expertise from operations, logistics, planning, and communications to create comprehensive and adaptive strategies. By addressing boundary critiques and ensuring decisions account for varying operational demands, CSH enhances decision-making in dynamic environments.[33]

Contingency Theory, as outlined by Fiedler and later expanded by Burns and Stalker, posits that organizational effectiveness depends on aligning structures with environmental demands.[34] This

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[26] Simon, Herbert A. "A Behavioral Model of Rational Choice." *The Quarterly Journal of Economics* 69, no. 1 (1955): 99-118.
[27] Kahneman, Daniel, and Amos Tversky. "Prospect Theory: An Analysis of Decision Under Risk." *Econometrica* 47, no. 2 (1979): 263-291.
[28] McGregor, Douglas. *The Human Side of Enterprise*. New York: McGraw-Hill, 1960.
[29] Deci, Edward L., and Richard M. Ryan. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Springer, 1985.
[30] Tversky, Amos, and Daniel Kahneman. "The Framing of Decisions and the Psychology of Choice." *Science* 211, no. 4481 (1981): 453-458.
[31] Kahneman, Daniel, Olivier Sibony, and Cass Sunstein. *Noise: A Flaw in Human Judgment*. New York: Little, Brown Spark, 2021.
[32] Ulrich, Werner. *Critical Heuristics of Social Planning: A New Approach to Practical Philosophy*. New York: Wiley, 1983.
[33] Midgley, Gerald. *Systemic Intervention: Philosophy, Methodology, and Practice*. New York: Springer, 2000.
[34] Fiedler, Fred E. "A Contingency Model of Leadership Effectiveness." *Advances in Experimental Social Psychology* 1 (1964): 149-190.

principle is embodied in the modular configuration of A-Staffs for In-Place Combat Wings, Deployable Combat Wings, and Combat Generation Wings. Each configuration is tailored to its mission, ensuring operational flexibility and effectiveness across diverse scenarios.[35]

Finally, Social Cognitive Theory, introduced by Albert Bandura, explains how individuals learn through observation and build confidence through practice.[36] Distributed training exercises like Red Flag incorporate these principles, providing opportunities for personnel to observe decision-making in action, develop critical skills, and build self-efficacy.[37] By combining practice with observation, personnel are better prepared to adapt and perform under operational uncertainty.

These psychological theories provide a scientific foundation for the proposed doctrinal changes and training programs. Integrating their principles ensures that Air Force personnel are cognitively prepared, behaviorally resilient, and organizationally adaptable—key attributes for mastering the complexities of modern warfare.

Clearing the Hurdles

The transition to distributed control presents significant obstacles, but also provides opportunities for growth, innovation, and resilience. Addressing organizational, technological, logistical, cultural, and operational barriers is essential to ensuring the U.S. Air Force remains prepared to face emerging threats and maintain its strategic advantage.

Cultural resistance to decentralization is one of the most pressing challenges. Leaders accustomed to centralized command structures may hesitate to embrace intent-based leadership, fearing a loss of oversight. To overcome this, the Air Force must prioritize leadership development programs that emphasize awareness, learning, practice, and accountability.[38] These programs, coupled with scenario-based exercises, can demonstrate the effectiveness of decentralized decision-making in contested environments.

Logistical complexity, particularly in the Indo-Pacific region, underscores the importance of adopting modular logistics frameworks. Pre-positioned supply caches, autonomous resupply drones, and energy resilience technologies such as portable microgrids are critical to sustaining operations in austere environments. Joint training exercises should incorporate these solutions to validate their effectiveness and refine their implementation.

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[35] Burns, Tom, and G. M. Stalker. *The Management of Innovation*. London: Tavistock Publications, 1961.
[36] Bandura, Albert. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall, 1986.
[37] Bandura, Albert. *Self-Efficacy: The Exercise of Control*. New York: Freeman, 1997.
[38] Tom Didonato & Noelle Gill, *Changing an Organization's Culture, Without Resistance or Blame*, Harvard Business Review, July 15, 2015.

Operational challenges, such as adversary adaptability and command complexity, require continuous wargaming and testing to refine distributed control strategies. Advanced C2 tools, cross-training personnel, and redundancy in equipment and systems will mitigate these risks and ensure continuity during disruptions.

The comprehensive framework to address these obstacles includes leadership adaptation, technological resilience, logistical innovation, cultural shifts, and rigorous testing. By incorporating these elements, the Air Force can turn obstacles into opportunities, ensuring a seamless transition to distributed control.

Forging Ahead

As we look to the future, the lessons of the past serve as a guide. Decentralized operations during the Global War on Terror showcased the value of autonomy and flexibility, while studying adversaries like China reveals the need to counter advanced A2/AD strategies. Adaptation is the key to overcoming new threats. This mindset, combined with the psychological and organizational innovations outlined, positions the Air Force for continued dominance.

With a clear understanding of the challenges, a commitment to learning from past engagements, and a focus on innovation, the Air Force is poised to meet the demands of the future. By empowering commanders and addressing cultural and logistical barriers, the Air Force will remain a dominant force, prepared to confront peer adversaries with confidence and resolve.