Memos to the PRESIDENT

Defense Transition

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Subject: The Path to an Innovative and Lethal Military

Purpose: This memo analyzes key geopolitical, technological, and organizational challenges confronting the U.S. military and recommends a series of bold initiatives to bolster America's fighting edge, particularly against the People's Liberation Army (PLA).

Objectives: To ensure the U.S. military opens up a commanding lead in innovation and lethality:

1. *Forge* the World's Most Dominant Fighting Force by Organizing and Equipping the Department of Defense for Unrivaled Lethality and Technological Supremacy;

2. *Seize and Hold* the Commanding Ground in AI and Digital Warfare to Guarantee American Leadership in the Defining Battlespace of the 21st Century; and

3. *Resurrect* American Industrial Might by Building a 21st Century Arsenal of Democracy to Secure Our Technological and Military Edge.

Background

Not since the late 1930s has the United States faced a more determined set of adversaries—in China, Russia, Iran, and North Korea—united in their desire to challenge and weaken America and its allies, and discredit the ideals they represent.[1] This new axis may not be a formal alliance, but there are examples of their growing diplomatic, economic, informational, and military cooperation.[2] And while they complement and help each other in different ways, including with lethal aid,[3] it is the People's Republic of China (PRC) that is the most formidable of them.[4] The PRC has the intent, ambition, and

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[1] Frederick Kempe, War Is Coming, Will Our Next President Be Ready?, The Atlantic (2024).
[2] Frederick Kempe, War Is Coming, Will Our Next President Be Ready?, The Atlantic (2024).
[3] Dasl Yoon & Matthew Luxmoore, Satellite Images Show North Korea Boosting Arms Flow to Russia, Wall Street Journal (2024).
[4] Stavros Atlamazoglou, U.S. Military Thinks China Is Biggest Threat Faced Since World War II, The National Interest (2024).

heft to challenge the United States in all domains of national power.[5] Its military, the PLA, which has been undergoing the most rapid, ambitious, and extensive build up, at least since World War II,[6] rivals the U.S. military and, if it continues in its present course, could eclipse it and even defeat it.[7] America would never recover from such an outcome.

It is not just geopolitics that are challenging the U.S. military. Rapid technological advances, particularly in autonomous systems, artificial intelligence (AI), space, cyber, cognitive, and electronic warfare are driving a fundamental shift in the character of war.[8] In this shift, geographic sanctuaries for nation states are quickly disappearing. A period of defensive dominance in several domains has dawned.[9] Air and maritime superiority are increasingly difficult to establish.[10] Logistics are increasingly contested, requiring dispersed pre-positioning, local manufacturing, and hardened deliveries across vast distances.[11] The potency of the defense industrial base increasingly depends on scale of production and speed of iterative adaptation. The absence of both is the difference between certain capitulation and a chance of victory.[12] Changes in each of these elements of warfare are fundamentally challenging the American way of war, its military overmatch, its ability to defend the homeland, and its power projection abroad.

These geopolitical and technological realities beg a critical question: is the U.S. military organized and resourced for victory in competition, crisis, and conflict, particularly against the PLA? The current Combatant Command structure continues to reflect domain and geographically confined problems, despite the most existential challenges being increasingly global and multi-domain in nature.[13] Military Service-based initiatives remain the norm, not the exception.[14] Most of the inventions of consequence are now occurring outside of government labs,[15] yet relatively tiny fractions of the defense budget are being spent on acquiring such inventions, particularly from new vendors.[16] Nearly every capability of consequence and budgetary significance acquired by the Department of Defense (DoD) quickly becomes a legacy system at the point of contracting, and most certainly at the point of delivery.[17] The budget, if appropriated, lacks the flexibility necessary to seize opportunities.[18] Frontier AI models are being developed exclusively by private companies, and incorporated into the defense enterprise very gradually.[19] In the race for more advanced AI, including AGI—likely the most consequential technology of this

[5] National Security Strategy, The White House at 23 (2022).
[6] National Defence: Defence Strategic Review, Australian Government Defense at 23 (2023).
[7] Christian Brose, The Kill Chain: Defending America in the Future of High-Tech Warfare, Grand Central Publishing at xii (2024).
[8] Michael Raska, The Artificial Intelligence Wave and the Future of Air Power, The Air Power Journal (2024).
[9] Thomas Hammes & Mark Montgomery, Joint Warfighting Concept 2034-2044, Special Competitive Studies Project at 2 (2024).
[10] Hal Brands & Zack Cooper, Dilemmas of Deterrence: The United States' Smart New Strategy Has Six Daunting Trade-offs, Center for Strategic and International Studies (2024).
[11] Emily Hardesty, Lifelines: Supporting Logistics in the Indo-Pacific with Technical Interoperability, Georgetown Security Studies Review (2024).
[12] 2023 National Defense Industrial Strategy, U.S. Department of Defense at 51 (2023).
[13] Benjamin Jensen, et al., Using Artificial Intelligence to Rethink the Unified Command Plan, Center for Strategic and International Studies (2024).
[14] Commission on the National Defense Strategy, U.S. Senate Committee on Armed Service at 17-18 (2024).
[15] Arun Seraphin & Diem Salmon, How the Pentagon Can More Rapidly Buy & Field the Latest Tech, DefenseNews (2024).
[16] Scaling Nontraditional Defense Innovation, Defense Innovation Board at 16 (2025).
[17] Defense Resourcing for the Future: Final Report, Commission on Planning, Programming, Budgeting, and Execution Reform at 1-3 (2024).
[18] Defense Resourcing for the Future: Final Report, Commission on Planning, Programming, Budgeting, and Execution Reform at 1-3 (2024).
[19] Riley Ceder, DOD Must Accelerate AI Adoption Amid Growing Threats: PrimerAI CEO, C4ISRNet (2024).

century[20]—the Pentagon remains a distant observer, often more heavily focused on risks and man-on-the-loop dilemmas, rather than opportunities and safeguarding America's advances. At this rate, by the end of this decade it is conceivable that the U.S. military could end up as only the fourth most powerful entity in America, behind three frontier AI developers. Finally, talent management appears increasingly disconnected from the career aspirations of new recruits[21] and the digital skills needed to succeed in an intelligentized world.

Recommendations

As these geopolitical, technological, and organizational challenges converge, the United States also faces the risk of a near-term war of aggression in the Indo-Pacific, its most vitally important region. Even if such a scenario does not transpire, the U.S. military still confronts an enduring risk of being outgunned, outsmarted, and outmatched by the PLA—with our economy and society having to materially and psychologically adjust to such a new, bleak reality.

Advancing the lethal overmatch against the People's Liberation Army will require more than just capability and capacity. It will require, for the first time since 1947, a new **National Security Act** (**2025**) that will put our entire government on a competitive footing. When it comes to the DoD specifically, such an Act—necessarily paired with a clearly articulated vision by the Secretary of Defense—would seek to forge a U.S. military that is able to overmatch any adversary through offsetting innovations, winning warfighting concepts, and dedicated organizations. Only a focused and sustained effort by Congress and the Secretary can deliver the enduring innovation, lethality, and the warrior ethos that the U.S. military needs to fight and win in war. Below, we propose several, critical steps that the defense portion of the Act and the Secretary's vision should include:

Objective 1: Establish a Joint Warfare and Innovation Command (JWIC)

As war undergoes dramatic changes, geopolitics become more contested, and AI alters the technological landscape, the DoD finds itself without a dedicated entity that prepares the U.S. military for the future. To be sure, a number of existing entities—the Office of Net Assessment, Joint Staff's J7 Directorate, and OSD's Strategy, Plans, and Force Development office—play important roles in looking at the future. But none has an all-encompassing role—some have a narrow analytic or advisory role, others are separated from resource decisions, and all are hamstrung in their ability to shape the future of Military Services. Some of the military services, particularly the Marine Corps, the Air Force, and the Space Force, have taken important steps towards preparing for the future and for a potential fight with China. But the progress has been uneven. At the same time, despite the proliferation in innovation entities across the DoD,[22] no single organization has been empowered to lead in acquiring - at scale - new emerging capabilities, and drive innovation across the joint force. Therefore, to address this gap, the Department and the White House should establish a Joint Warfighting and Innovation Command. This new Combatant Command would serve as the organizational and implementation arm for the Secretary of Defense and the President to drive **innovation**, **autonomy**, and **lethality** across the joint force. The JWIC would provide much needed focus on assessing the future character of war, design the force of the

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[20] Sam Altman, The Intelligence Age, Open AI (2024).

[21] Lindsey Sheppard, et al., To Compete, Invest in People: Retaining the U.S. Defense Enterprise's Technical Workforce, Center for Strategic and International Studies (2024).

[22] According to a report by the Defense Innovation Board, there are now over 200 innovation cells across the Department of Defense. See Aligning Incentives To Drive Faster Tech Adoption, Defense Innovation Board at 18 (2024).

future, conceive winning warfighting concepts, manage a "colorless" innovation budget to rapidly acquire new technologies for joint use, and lead rapid experimentation with such technologies in the field. The JWIC Commander would optimally partner with a senior civilian who would consolidate the various innovation-focused entities within OSD that have been created since 2015.[23] As such, the JWIC promises to deliver a singular agent focused on innovation and warfighting. Any entity short of that will struggle to gain access to key decision-making fora inside the Department, will face an uphill battle for relevance, and will most certainly encounter insurmountable, parochial pushback.

Objective 2: Create a Dedicated Tech Innovation Budget

Despite important institutional undertakings by the Department of Defense that started in 2015, such as the creation of the Defense Innovation Unit, Defense Innovation Board, Defense Digital Service, and the Joint Artificial Intelligence Center, the adoption of technological innovation remains a challenge. Speed, scale, and jointness in adoption continue to elude the Department, in part because various secretaries of defense since then have failed to prioritize innovation and in part because many of the budgetary decisions are predominantly made at the level of the military services that often prioritize major weapon systems. When it comes to AI, the Department requested a mere $1.8 billion in its FY2025 budget.[24] When it comes to drones, the Department had to start Replicator in 2023,[25] a standalone initiative, to try to fast track the delivery of unmanned systems to the Indo-Pacific. While commendable, the initiative is expected to deliver fewer than 10,000 drones in two years.[26] In comparison, the Ukrainian Ministry of Defense's drone production capacity grew from 300,000 units in 2023 to 4 million units in 2024.[27] While shifting the balance of the DoD's budgetary decision-making towards jointness and innovation would be the optimal solution, an interim solution would be to establish a dedicated innovation budget. Such a budget would start at 1% of the DoD's overall budget and increase annually thereafter. The acquisition priorities for this budget would be AI, software, and automation, and it should be managed by the Secretary of Defense, in close coordination with the Chairman of the Joint Chiefs of Staff. A critical feature of this budget would need to be flexibility for the Secretary to start new initiatives outside of the annual budgetary cycle.

Objective 3: Enable and Safeguard America's Dominance in Artificial General Intelligence (AGI)

AGI is generally defined as computer systems that are equal or superior to human capabilities across most, if not all, cognitive domains and tasks.[28] While AGI is yet to be fully realized, recent trend data suggests the next levels of AGI will arrive during this Presidency.[29] AGI has the potential to reshape the global balance of power[30] and transform warfare. It is a technological milestone that the United States must get to first, and safeguard it diligently as it proliferates across our economy, society, and national

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[23] As noted, the Department has seen a proliferation of innovation-focused entities across military services and within the Office of Secretary of Defense. While the JWIC Commander could consolidate the service-specific initiatives, his/her civilian partner would consolidate the OSD-level entities, such as the Office of Strategic Capital, Defense Innovation Board, Defense Digital Service, and the Defense Innovation Unit. Such consolidation could be done under a re-imagined Undersecretary of Defense for Research and Engineering that would include Innovation as a core mission, a new Undersecretary of Innovation, or under a new position of Director for Defense Innovation.

[24] Brandi Vincent, Why The Pentagon Didn't Request Higher Funding for AI in Fiscal 2025, DefenseScoop (2024).

[25] Replicator, Defense Innovation Unit (last accessed 2025).

[26] Noah Robertson, The Pentagon's 'Replicator' Drone Bonanza Faces an Uncertain Future, Air Force Times (2024).

[27] Viacheslav Ratynskyi, Ukrainian Drone Production Increased Tenfold Compared to 2023, The New Voice of Ukraine (2024).

[28] 2024 Report to Congress, U.S.-China Economic and Security Review Commission at 27 (2024); see also Meredith Ringel Morris, et. al., Position: Levels of AGI for Operationalizing Progress on the Path to AGI, arXiv (2024).

[29] Sam Altman, Reflections (2025); see also Ylli Bajraktari, The Artificial General Intelligence Presidency is Coming, Foreign Policy (2024).

[30] Memos to the President: Artificial General Intelligence, Special Competitive Studies Project at 6 (2025).

security. American companies have been leading in this race towards more advanced AI, including AGI,[31] but the PRC is catching up. Therefore, in order to preserve current U.S. leadership in AI and ensure primacy in more advanced AI, the DoD must rise to the occasion, convene American frontier model developers, help them overcome obstacles to further progress, and provide an umbrella of protection for their infrastructure, personnel, and intellectual property. In turn, frontier developers should help the DoD and other government agencies to incorporate and scale AI across their systems and operations, exercise prudence in sharing their advances to nations that are not allies, and collaborate on identifying weaknesses in AI systems of our adversaries.

Objective 4: Prepare for Warfare in the Digital Domain

America is already under sustained attacks in the digital domain.[32] In addition to persistent theft of intellectual property,[33] foreign adversaries have digitally burrowed into the U.S. critical infrastructure,[34] stolen the data of millions of U.S. government employees,[35] fueled social and political discord, and built digital platforms with direct influence over millions of Americans.[36] In so doing, our adversaries have benefited from their strong public-private partnerships. In Ukraine, Russian aggressors have deployed sophisticated electronic warfare systems to degrade American weapon platforms and munitions.[37] These types of attacks and threats will likely persist and intensify, particularly as more advanced AI is fielded. The PLA strategists have increasingly begun to plan for "algorithmic cognitive warfare" that emphasizes the capabilities powerful AI algorithms offer to target and influence individuals at increasingly granular levels.[38] In order to defeat this threat and prepare the U.S. military for warfare in the digital domain, the United States should take three critical steps. First, stand up a **Digital Warfare Corps** that would unify and standardize the recruitment, training, and equipping of a digital corps, with cyber, EW, information, AI, and cognitive warfare as its core mission. Congress is rightly considering the creation of a Cyber Force,[39] and it would be prudent to examine the addition of other important digital missions to this prospective corps. Second, the President should expand the current Cyber Command's mission to include information, electronic, algorithmic, and cognitive warfare. This reformed **U.S. Digital Command** (**USDIGICOM**) would be responsible for the employment of the Digital Warfare Corps as the principal warfighters and serve as the private sector's partner to mount and deploy a unified digital defense. Third, the United States should establish a broader **U.S. Digital Service Academy** to recruit, educate, and train the next generation of America's digital *warfighters and workforce*. As identified by the National Security Commission on AI in March 2021, without a steady and reliable talent pipeline, the U.S. Government, including the U.S. military, will continue to face intense competition for talent in the digital space.[40] The

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[31] Memos to the President: Artificial General Intelligence, Special Competitive Studies Project at 2 (2025).
[32] Testimony of Dr. Benjamin Jensen before the House Judiciary Subcommittee on Courts, Intellectual Property, and the Internet, How the Chinese Communist Party Uses Cyber Espionage to Undermine the American Economy (2023).
[33] Gerald Krieger, From "Made in China" to "Created in China": Intellectual Property Rights in the People's Republic of China, National Defense University Press (2024).
[34] Salt Typhoon Hacks of Telecommunications Companies and Federal Response Implications, Congressional Research Service (2024).
[35] Aaron Boyd, 22 Million: OPM Releases Its New Data Breach Tally, The Federal Times (2015).
[36] GAO-24-107600, Foreign Disinformation: Defining and Detecting Threats, U.S. Government Accountability Office (2024).
[37] Sam Skove, Another US Precision-Guided Weapon Falls Prey to Russian Electronic Warfare, US Says, Defense One (2024).
[38] Algorithmic Cognitive Warfare: The Next Frontier in China's Quest for Global Influence, Special Competitive Studies Project (2024).
[39] Mark Pomerleau, House and Senate Defense Committees Agree on Independent Cyber Force Assessment, Defensescoop (2024).
[40] Final Report, National Security Commission on Artificial Intelligence at 127 (2021).

DoD, among other agencies, also needs to attract digital civilian talent, and develop reserve corps-like relationships with mid-career and seasoned technologists who are willing to serve the nation.

Objective 5: Build a Defense Industrial and Innovation Base (DIIB)

The war in Ukraine has demonstrated that the defense industrial base has been subject to the same hollowing out that the commercial has experienced.[41] Business strategies that prioritized efficiency over reliability, capacity, and speed have created dependencies and multiple points of failure in the supply chain, workforce availability, and the ability to scale defense production.[42] These vulnerabilities have not only called into question our ability to simultaneously support Ukraine and Israel while conducting our own operations in the Red Sea, but have created additional risk for the Indo-Pacific Command[43] and cumulative risk for our national interests elsewhere. The weaknesses in our Defense Industrial Base also impose limitations on the President's ability to wage a sustained and high intensity war with a peer adversary.[44] But perhaps most concerning is that our defense industrial base remains tailored towards supporting the current force structure and the wars of today. As the character of warfare undergoes transformation, the United States cannot afford only to rebuild the existing defense industrial base. It must also focus on fostering an industrial base that can deliver innovative technologies at speed and scale for warfare of the future. An increase in the annual rate of production of current munitions and ships is necessary. So too is scaling our ability to produce vast quantities of unmanned, autonomous systems, as well as rapidly integrating and updating the software that manages battlespace awareness, enables command and control, and facilitates delivery of effects.

Objective 6: Forge an Allied Innovation Coalition

While the United States leads in several of the emerging technologies, especially on AI, this lead is neither pre-ordained nor guaranteed to last.[45] Our adversaries, particularly the PRC, can often and quickly replicate our technological achievements, and sometimes even out innovate the United States. But one thing that they struggle to reproduce is the network effects of America's alliances and partnerships. Therefore, as the United States leads the way in AI—including for national security purposes— it must create streamlined processes that enable technology transfers to trusted allies and partners. Such transfers would strengthen our collective security, help fund additional research and development by America's frontier developers, and promote global proliferation of technologies that are built with democratic values. Expeditious transfers could also help obviate the need for our allies and partners to build their own sovereign AI capabilities which could be both inefficient and ineffective.

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[41] Mark Bowden, The Crumbling Foundation of America's Military, The Atlantic (2024).
[42] Commission on the National Defense Strategy, U.S. Senate Committee on Armed Service at 17 (2024).
[43] Remarks by Commander, U.S. Indo-Pacific Command Admiral Samuel Paparo, The Brookings Institution at 33:45 - 35:01(2024).
[44] Surge Capacity in the Defense Munitions Industrial Base, Army Science Board at 3 (2023).
[45] Welcome to the Arena: Who's Ahead, Who's Behind, and Where We Are Headed Next in the U.S.-China Technology Competition, Special Competitive Studies Project at 2 (2025).

Conclusion

The United States finds itself in the middle of two tectonic factors—omnipresent aggression by the PRC to upend the international status quo and unseat American global leadership, and the emergence of generational and society-altering technologies. Mired in irregular warfare short of conventional war and the onslaught of asymmetric threats below the level of armed conflict, the DoD's readiness to execute and endure great power conflict is being tested. Therefore, the DoD must retool how, and at what speed, it delivers innovative warfighting capability to meet the threat posed by the PLA and other committed adversaries. To retain the balance of power in the United States' favor, teaming across the DoD, the White House, Congress, Allies, and the private industry will be vital in unleashing new initiatives that wield U.S. innovation power to its full advantage.