Marine Corps Lance Corporal Munachimso Metu, aviation ordnance technician with Marine Fighter Attack Squadron 242, prepares ordnance at Royal Australian Air Force Base Tindal, Australia, August 12, 2022 (U.S. Marine Corps/ Jackson Ricker)

Beyond a Credible Deterrent

Optimizing the Joint Force for Great Power Competition

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The surest way to prevent a war is to be prepared to win it; however, the military's role in Great Power competition (GPC) must be more than just serving as a credible deterrent.[1] Having roughly 10 times the Department of State's annual budget and more than 30 times the personnel, the military plays an integral role as a global counterbalance to the People's Republic of China (PRC), the pacing threat.[2] China's strategy is to defeat the U.S. military by other means, to win without fighting. As Sun Tzu counseled, "To fight and conquer in all your battles is not supreme excellence; supreme excellence consists in breaking the enemy's resistance without fighting."[3] Current Department of Defense (DOD) strategy defines success in competition as deterring conflict on favorable terms, limiting adversaries' actions to expand the competitive space short of armed conflict, and enabling the rapid transition to armed conflict should deterrence fail.[4] The problem

is that DOD's current preparation for conflict centers on outdated premonitions of war, with adversaries exploiting fundamental U.S. misconstructions to their advantage. As Lieutenant General H.R. McMaster, USA (Ret.), stated, there are two ways to fight the United States: asymmetrically or stupidly.[5] In the era of GPC, there will be no neatly declared war between nation-states, and all hybrid conflicts will range from violence by proxy to the use of conventional forces. Moreover, DOD is facing fundamental changes to the character of war with technological advances in precision munitions, information technology, hypersonics, cyber warfare, robotics, and artificial intelligence. The country that masters new technology and considers ethical implications for proper legal authority will have a decisive advantage—at least initially—for all future conflicts.[6]

Part of regaining the initiative is a recognition of this change in the operating environment; however, the joint force must do more to prepare for its role in GPC beyond deterrence.

Ruthless Prioritization: The Joint Force Dilemma

To analyze this problem, it is useful to consider joint force gaps and solutions within the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) framework, starting with doctrine and policy. First and foremost, DOD must clearly outline and advertise its role in GPC. The Defense Department is just beginning to understand strategic competition, and current doctrine fails to define the military role beyond deterrence. This uncertainty has led to a conflation of terminology, disharmonious DOD effort, and a lack of distinct objectives that would drive reporting and assessments. Optimizing the joint force for competition will require a change in mindset and a careful analysis of each military Service. While DOD's main priority is stopping the erosion of conventional deterrence, it also requires the dexterity to win in the competition phase.

Doctrinal revisions will drive other changes across the joint force. As outlined in the following sections, the Army must equip itself for urbanized operations. The Air Force must modernize to achieve a blend of fourth- and fifth-generation aircraft and modernize with sixth-generation unmanned systems. The Space Force requires updates to organizational, policy, and partnership efforts to prevail. The Navy must grow its fleet. In a zero or negative growth environment, optimizing for the era of GPC will require trade-offs; however, all Services must coordinate divestiture of mission sets to ensure coverage of required capability in the joint force.

Army

The Army has elevated "competition" beyond mere preparation for war and "shaping the theater" to its *primary* mission. Still, the corresponding Training and Doctrine Command (TRADOC) pamphlet, *The U.S. Army in Multi-Domain Operations 2028*, is inadequate in defining the specifics of its role in GPC.[7] The 2021 Index of U.S. Military Strength assessed the Army as "marginal," with forces not modernized for GPC and programs in their infancy.[8] The Army routinely approves force design updates and acquisitions that support successful Combat Training Center (CTC) rotations without serious consideration of forces required for competition and future conflict.[9] It has used echelon-above-brigade (EAB) units and capability as bill-payers for additional personnel concealed in brigade combat teams (BCTs). For example, it is difficult to imagine any future conflict where the adversary has not recognized the asymmetric advantage of improved explosive devices (IEDs); however, CTCs facilitate less-plausible combined arms breaches and unit defenses instead of route clearance missions that detect IEDs. Consequently, the Army has cut route clearance equipment and units to enlarge BCT forces.

In terms of acquisition, the artificiality of CTCs (like thousands of prepositioned pieces) has led to the development of equipment with limited utility in the Indo-Pacific region. CTCs represent the permissive, expansive terrain the Army wishes it could fight in, but future conflict is most likely to be fought in highly urbanized areas with severely restricted mobility corridors. An estimated 60 percent of the world's population currently resides in urban areas, and a recent United Nations (UN) study projects that figure to increase to 68 percent by 2050.[10] Additionally, developing countries lack the infrastructure required for heavy mobility. In 2017, the Asian Development Bank estimated that the Indo-Pacific region needs an estimated $8.4 trillion to meet the transportation infrastructure gap.[11]

Instead of smartly planning for the limitation, the Army's next generation of tanks got bigger. The new Abrams tank (M1A2 System Enhancement Program Version 3) is not transportable by current recovery vehicles, tactical bridges, or heavy equipment transporters.[12] The Army also lacks a credible deterrence for fires.

The Army's acquisition challenges come at a pivotal time. Through Force Design 2030, the Marine Corps plans to divest equipment suited for sustained ground combat, including tanks, artillery, military police battalions, and bridging units.[13] In addition to accounting for any corresponding shortfalls in joint force capability, the Army must consider updates to training and doctrine if Marine Corps ground forces require maneuver and fire augmentation to extend combat power beyond the littorals in future conflict.[14]

In a departure from the BCT construct, the Army has developed and exercised a Multi-Domain Task Force (MDTF) that provides long-range precision fires and intelligence, information operations, cyber, electronic warfare, and space assets.[15] The Indo-Pacific Deterrence Initiative, which identified the specific resources required to enhance U.S. deterrence of China, included $41 million for at least one MDTF, and the Army now plans to align two to the Indo-Pacific region.[16] The MDTF seems similar to the emerging Marine Littoral Regiment (MLR) concept, tailored explicitly for island hopping in the Indo-Pacific.

With heavy integration into the 7th Fleet, III Marine Expeditionary Force stood up a pilot MLR earlier this year.[17]

Despite the apparent lack of coordination across the joint force, the MDTF is progress toward long-term strategic objectives. The BCT is the foundational unit in the current Army organizational structure, but it lacks the flexibility and agility required to compete below the conflict threshold or win in a large-scale ground combat fight. Instead of adding more BCTs, the Army should build EAB capability and expand the BCT's myopically focused training aperture. The Army must provide combatant commanders with consistently available, scalable, regionally savvy forces to support theater security cooperation. To improve the legacy Regionally Aligned Forces concept, the new Regionally Aligned Readiness and Modernization Model (ReARMM) is a more flexible force generation process that will align Army units against regional priorities and reorganize the Army's construct from the BCT to something more relevant by 2028.[18]

Through the Total Army Analysis and ReARMM processes, the Army must reimagine a construct for an organization that will compete and win in future conflicts.[19] Wary of getting caught between GPC rivals, Indo-Pacific countries may not be able to host a BCT in the same way as technical experts from nonstandard units like the U.S. Army Corps of Engineers (USACE), Civic Action Teams, and Security Force Assistance Brigades (SFABs). The USACE International Interagency Support program provides reimbursable and nonreimbursable engineering services across the region that support U.S. Indo-Pacific Command (USINDOPACOM) and interagency strategic objectives and National Security Strategy goals. The USACE provides DOD presence in less-accessible countries, such as Burma, Nepal, Laos, Malaysia, Sri Lanka, and Mongolia. In a region with the South China Sea's strategic equivalence, Mekong riparian countries have welcomed USACE as a counterbalance to PRC hydropower development.[20]

Civic Action Teams are small, rotational units operating in the Indo-Pacific region for decades in developing countries such as Palau. In addition to running medical clinics, these teams execute apprenticeship programs that build capacity. Former Secretary of Defense Mark Esper called for more Civic Action Teams throughout the Indo-Pacific. Almost simultaneously, the Army approved a cut in engineer construction capability.[21]

In 2016, the Army introduced SFABs with the primary mission of training, advising, liaising, and enabling allied and partnered nations. This volunteer unit's core component is a 12-member, relatively autonomous team that is readily employable and tailorable to assist with the host-nation's needs.[22] These units provide continuous forward presence and free up special operations forces for more highly specialized missions.

SFABs are not big enough to carry an entire load of building partners and allies. In addition to building EAB capacity, the Army must ensure that BCTs embrace the dexterity required for GPC and any future conflict. While building readiness to serve as a credible deterrent, BCTs must also execute joint and combined exercises and live fires, humanitarian assistance/disaster response missions, cultural training, security cooperation, and other competition-centric tasks. With a legacy mindset, commanders view these tasks as a distraction from traditional warfighting tasks. TRADOC should relieve the tension between readiness and Regionally Aligned Forces requirements by revising Mission Essential Task Lists (METLs) to reflect maneuver more accurately in modern warfare and increased relevance in GPC. Paraphrasing the Irregular Warfare Annex to the National Defense Strategy, all BCTs must train and institutionalize irregular warfare tasks and enabling activities.[23] Irregular warfare, like GPC, is a struggle to influence populations and affect legitimacy.[24]

Future METLs should include other competition-centric tasks such as joint and combined interoperability, building partner capacity, and information operations. While information is one of the eight combat power elements and one of the four forthcoming Joint Warfighting Concepts, it is not an Army warfighting function. In stark comparison, the Chinese believe information transforms into realistic combat capabilities and is the first element of operational power listed in Chinese military doctrine, ahead of firepower and maneuver.[25]

Perhaps in recognition of this need for smarter, collective investments, the Army initiated Project Convergence—a "campaign of learning" that integrates technology, tactics, and organization across multiple domains.[26] The first iteration combined scientists and Soldiers at the tactical level to reduce targeting time. The 2021 iteration of Project Convergence analyzed the problem of Joint All-Domain Command and Control against high-end adversaries.[27] In addition to working more closely with the other Services, future rounds of Project Convergence should address interagency participation, specifically in the Indo-Pacific region. This is where the ground forces will genuinely begin to optimize for competition and future conflict.

Air Force

The Air Force is at a strategic inflection point with materiel and personnel issues due to the rise of GPC and the budget woes of attempting to modernize a force after two decades focused on counterterrorism. The creation of the Space Force accounts for the USAF's shrinking budget, which has also relieved the Air Force of a proportional amount of responsibility.[28] The other issues are a mix of the Air Force's own making and legislation's impact on national security. To shift from 20 years of counterterrorism and present a credible deterrent to our adversaries, the USAF will have to make some uncomfortable decisions. The Air Force must modernize its current fleet, procure new assets, and sustain personnel required to operate the force to present a credible deterrent.

Shortly after taking office, the 22nd Chief of Staff of the Air Force, Charles Q. Brown, Jr., announced the requirement to divest or terminate all once-promising programs that were no longer affordable or failed to "deliver needed capabilities on competition-relevant timelines."[29] The

First Lieutenant Claire Waldo, 12th Missile Squadron missile combat crew commander, conducts dry run for intercontinental ballistic missile test launch in Launch Control Center, February 3, 2020, at Vandenberg Air Force Base, California (U.S. Air Force/Aubree Milks)

Air Force Special Operations Command (AFSOC) commander followed suit and announced the Major Command would divest itself of niche and redundant platforms, systems, and missions to create the "AFSOC we will need."[30] The comments suggest future force structure modifications that will exchange legacy capacity for additional manpower and capabilities required for future high-intensity, near-peer conflict.[31] As stated by Chief of Staff Brown, "unless we accelerate the changes we need, the U.S. Air Force will be ill-prepared to compete, deter, and win."[32]

Deterrence is an effort to stop or prevent an adversary from conducting an armed attack, and it is only as effective as the threat of force is credible.[33] Currently, 17 percent of the force is survivable within antiaccess/area denial (A2/AD) environments, limiting credibility and deterrent value.[34] Sustainability efforts for aging aircraft are insufficient because they do not achieve survivability in an A2/AD environment. Each year after an aircraft's 15th year of service, its maintenance costs increase by 3 to 7 percent.[35] By the time the B-52 retires in 2050, it will be nearly 100 years old. In comparison, if the B-17 were retired on the same timeline, it would be flying for another 19 years. However, the 2021 National Defense Authorization Act mandates that the Air Force maintain over 100 aircraft it had hoped to retire.[36] Unable to make choices to optimize the fleet smartly, the Air Force is saddled with increasing sustainment costs and the inability to procure the required numbers of sixth-generation aircraft.

The proper mix of aircraft to form a credible deterrence will blend fourth- and fifth-generation platforms with yet-to-come advanced, unmanned sixth-generation fighters. These sixth-generation fighters must be unmanned or optionally manned due to the physical limitations a human imposes on aerial combat. Recent successes have shown that human pilots are no longer a match for trained artificial intelligence systems in aerial combat. If the Air Force

Servicemember looks up at starry sky from Ka'ena Point Space Force Station, Hawaii, November 2, 2022 (U.S. Space Force/Jared Bunn)

develops a fighter requiring human occupancy, it will be outdated before completion, only suitable for lower end fights, and will not serve as a peer deterrent. Nevertheless, a fully modernized Air Force fleet is still not a credible deterrent without skilled personnel. AFSOC recognizes the importance of investing in human capital by stating in strategic guidance that "human capital is our competitive advantage."[37]

The COVID-19 pandemic has afforded reprieve to the Air Force's typical pilot retention issue. Because of the prolonged travel recession, airlines are not hiring, and pilots stayed in the Air Force. But for the airline market, what goes down must come up. As market analyst James Cramer has predicted, pent-up demand will serve as a great benefit to the airline industry once travel restrictions begin to lift. The airline industry's return will likely cause over a year's worth of delayed force separations to happen quickly. This unprecedented, worldwide demand will prompt airlines to hire and offer bonuses like never before, causing unforeseen pilot shortages leading to a short-term reduction in our deterrence credibility. In addition to the pending mass exodus of pilots to commercial airlines, the Air Force provided most personnel transfers to the Space Force's formation, approximately 6,000 thus far.

The Space Force

The Space Force faces the unique challenge of building a new military Service while simultaneously optimizing for competition. Improvements to the Space Force organization and national space policy will allow it and U.S. Space Command (USSPACECOM) to work with allies and partners to integrate timely and relevant space power into the joint force in support of GPC.

Military space power refers to three segments—terrestrial, link, and space—that enable freedom of action, lethality, and joint force effectiveness.[38] Terrestrial refers to the equipment needed to operate spacecraft, such as user equipment, control and tracking stations, and launch sites. Space includes spacecraft in orbit beyond the atmosphere of Earth. The link segment is the portion of the electromagnetic spectrum that connects the terrestrial and the space segment.[39] The U.S.-China Economic and Security Review

Commission calls for a whole-of-government strategy to mitigate China's rise, including ensuring that USSPACECOM is responsible for safeguarding freedom of navigation and keeping all three segments of the space domain safe and secure.40 The Space Force must work to improve its organizational structure, support enduring U.S. space policy, and pursue beneficial partnerships to execute its part of the joint mission.

Space Force Organization. The Space Force was established as the sixth branch of the U.S. military in December of 2019, and in its first year the new Service focused on organization, creating doctrine, and carving the initial cadre and capabilities out of existing Service budgets and personnel.[41] The Space Force is structured to be a lean, agile organization with an end strength of approximately 16,000 personnel.[42] The Space Force and the Space Combatant Command were established within 4 months of one another. The Service's role is to organize, train, and equip Space Force Guardians for global space operations. The USSPACECOM mission is to deter conflict, defeat aggression, and deliver combat power for space. USSPACECOM receives the preponderance of forces from the Space Force and is the lead for security in the space domain.

The Unified Command Plan designates USSPACECOM as the single point of contact to governmental, commercial, and international agencies for military space operations. It directs USSPACECOM to plan and execute global space operations, including support to other combatant commands.[43] Both Space Force personnel and equipment are low-density assets in the short term (next 20 years), and the Space Force is still negotiating with other Services and agencies to consolidate space assets and increase interoperability of combat capabilities. The Space Force must work with USSPACECOM to tailor its force presentation for effectiveness and unity of effort until the number of space forces available to the joint force increases and other geographic combatant commands (GCCs) establish command authorities for space operations.

DOD policy directs that the Army, Navy, Air Force, and Space Force separately provide space forces to joint commands.[44] A Space Force Service component may be stood up later this year in USINDOPACOM to provide operational-level integration of space capabilities as well as the required administrative linkage to the Space Force Service headquarters.[45] The Space Force has the responsibility to provide USINDOPACOM with a command and control element to conduct planning and integration activities for space effects. The Space Force should conduct a full mission analysis and consider leveraging liaison elements from the other Service components to augment the space component. The Space Force may present forces to USINDOPACOM in the future for space control, theater missile warning, or other missions. However, the Space Force is not currently resourced to simultaneously create a new Service and provide the full complement of joint force operations, logistics, planning, security cooperation, international engagement, and coordination across Services and functional components that are expected of an USINDOPACOM component command.

The Space Force has established one Service component within U.S. Space Command that accounts for most Space Force operational personnel and capabilities. Even with the preponderance of Space Force operations capability, U.S. Space Command is operating at an initial operational capability as of August 2021, with no definitive projection of full operational capability.[46] The Space Force is most likely years away from offering sufficient space forces to other combatant commands. USSPACECOM has the most extensive planning staff and integrated access to intelligence relevant to space operations.[47] Other GCCs have limited numbers, if any, space forces assigned, so USSPACECOM has co-located planning elements that integrate and synchronize worldwide effects to support joint force commander missions.[48] The most effective way for combatant commands to reliably plan for, execute, and deconflict joint space operations in the next few years is to leverage USSPACECOM forces, authorities, and relationships that extend to other Services and agencies with space equities while continuing to foster the growth of Space Force Service component capability.

Space Policy. The 2010 National Space Policy was the first to champion the establishment of international norms as a part of U.S. strategy, and the current space strategy reinforces this notion. Still, there are no definitive agreements on the standards of military use of space.[49] The Outer Space Treaty of 1967, the most crucial landmark in the international space agreement, prohibits mass destruction weapons in space and establishing military bases, conducting maneuvers, or testing weapons on the moon and other celestial bodies.[50] Notably, it does not ban the weaponization of space, and there are no widely accepted guiding principles for military activity in space.[51] For comparison, the Military Maritime Consultative Agreement provides a forum for the United States and China to discuss flight and navigational safety to establish norms that decrease misunderstanding and increase overall security.[52] The United States should pursue similar accords to increase security dialogue in the space domain.

The UN Office for Outer Space Affairs just completed the 65th session of the Committee on the Peaceful Uses of Outer Space, aimed at helping member states establish regulatory frameworks for space activities and developing space capacity. There are 95 members on the committee out of the 193 UN member states, including 9 Indo-Pacific nations in which the United States is actively competing for influence. Indonesia, for example, has shown interest in development of a regulatory framework for the extraction of materials from space for economic benefit like the frameworks created in the United States, Luxembourg, and the United Arab Emirates. Space Force needs to pursue cooperative activities that support the United States taking a leadership role in addressing responsible behaviors in space and the need for sustainable international space policy.

Space Partnerships. Alliances and partnerships offer an asymmetrical advantage to the joint force in GPC, and one of U.S. Space Command's top priorities is to strengthen and attract partners that can share responsibilities for leadership and bolster resiliency.[53] The Space Force has increased its focus on maintaining and developing international relationships since 2021.[54] The Air Force had historically focused on satellite communications agreements with its most advanced partners in space, and the Space Force is continuing that work and expanding into other mission areas such as missile warning, weather, and electro-optical sensing.[55] In addition to these activities, the Space Force should invest more in partnerships and security cooperation by expanding the scope of activity beyond high-end, on-orbit capabilities and including emerging space partners such as India, Indonesia, the Philippines, and Singapore. These partnerships should also include international organizations and commercial entities.

The Space Force is actively working with USSPACECOM to collaborate with key allies, including Australia and New Zealand, on space domain awareness, force support, contingency operations, and strategic messaging. It is working to increase the frequency of combined operations, exercises, and training with Australia, Japan, New Zealand, the Republic of Korea, and Thailand. Space Force experts are helping USSPACECOM advance space operations center interoperability and improve regional space domain awareness with existing partners. The Space Force should expand its activities to include working with partners to develop commercial options for space weather, remote sensing, and satellite communications for both civil and military applications.

Space capabilities are becoming increasingly important within the national policy of almost every country in the Indo-Pacific. Regional security experts have started exploring the benefit that nonspace-faring nations in Oceania could have to build a broader base of like-minded partners with shared strategic interests.[56] Some nations may not be able to sustain naval vessels or aircraft that have traditionally contributed to maritime domain awareness. The United States should work with these partners to develop commercial or military capacity for maritime domain awareness and space-based intelligence, surveillance, and reconnaissance (ISR) that can be applied to maritime security and humanitarian assistance and disaster response initiatives. The Space Force and USSPACECOM need to cultivate these relationships to meet the needs of critical partners and secure an advantage in the space domain to improve collective security in the Pacific.

The Navy

America's newest Service is not alone as it navigates the leviathan DOD bureaucracy to fully resource its force. The Navy has long-standing challenges of the same sort. Of great concern for the Navy is its acquisition, maintenance, and materiel modernization difficulty in achieving an overmatch in Indo-Pacific GPC. In this context, the Navy defines materiel as the ships, submarines, portable support equipment, and other hardware needed to operate. Unlike the other Services, the Navy has sought significant materiel expansion.

The Navy had over 6,700 ships at the end of World War II. Throughout the Cold War, it maintained a 600-ship fleet.[57] In fiscal year (FY) 2023, the procurement and construction of 9 new warships should begin, along with studies to determine the feasibility of over 400 unmanned vessels by FY 2052. In 2019, the Navy was carrying out a new force structure assessment to adjust the long-term plan for a 355-ship combat fleet. This effort collapsed because of prohibitive costs and the need to incorporate recent technologies, such as unmanned systems.[58] In its place is the recently introduced 30-year shipbuilding plan, which only repackages and restructures the path to the same 355-ship goal. Ship numbers matter for planning due to the operational tempo for crisis response, allied and partner engagement, and ongoing regional conflicts. The Chairman of the Joint Chiefs of Staff is on the record that a 500-ship Navy is probably the "entrance ticket" for deterring Great Power war,[59] with more than one-quarter consisting of unmanned vehicles, robotic ships, and up to 90 submarines.[60]

Any significant addition of ships will come with a price tag, and the United States has been slow to respond to China's comparatively rapid growth in defense expenditures. A recent Australian defense study found that

> *using "Purchase Power Parity" calculations, China's defense spending rises to about 70 percent that of the* [United States]. *If, in addition, adjustments are made for the real level of Chinese defense spending (as against the official figure) and the markedly lower costs of Chinese personnel, the figure rises further, to between 90 and 120 percent of the U.S. defense budget.*[61]

This spending overmatch should stand as a clear warning to Congress that if military budgets stagnate or shrink in the coming years, GPC will become significantly unbalanced.

Optimizing for competition may also require that the Navy, like the other Services, divest themselves of redundant capability that other Services are better suited to own. The Navy's *Navigation Plan 2021* describes divesting experimental littoral combat ships, legacy cruisers, and dock landing ships and "non-core Navy missions" such as Aegis Ashore.[62] Therefore, it is not enough to simply build more; the Navy must adjust the current order of battle by adding and taking away where it makes the most sense.

The Navy must also gravitate toward "tomorrow's fight," which is primarily in the East and South China seas, Oceania, and the Polar Silk Road (part of the Belt and Road Initiative) in the Arctic. The Navy recently released its updated Arctic strategy, *A Blue Arctic*, which calls for sustained presence and partnership in the Arctic. The PRC is investing in its icebreaker fleet, and it commissioned the first Chinese-manufactured icebreaker, the *Xuelong 2*, in 2019.[63]

Facilities

While geography provides the backdrop, the critical issue within the DOTMLPF-P construct is the number of facilities present in ally and partner nations. Facilities can range from simple maritime piers, anchorage expansions, and multidomain training ranges to elaborate and expensive fuel depots such as the one planned for Darwin, Australia, within the next 5 years. With most of the U.S. Indo-Pacific Command area of operations bordering water, the joint force needs infrastructure that facilitates access, basing, and overflight, both inside and outside China's People's Liberation Army Navy threat ranges, which becomes a crucial element to success in both competition and conflict. To that end, facilities and the U.S. ties to allies and partners are inextricably linked.

In FY 2019, the United States invested in infrastructure in Australia and Papua New Guinea.[64] The FY 2022 National Defense Authorization Act authorized $7.1 billion as the basis for the Indo-Pacific Deterrence Initiative to—among other things—optimize U.S. military presence and improve infrastructure in the region, strategic moves that mirror China's.[65] The U.S. and PRC strategies for construction are similar in that they involve dual-purpose facilities in most cases. The PRC formalized this in its 14th Five Year Plan, which stipulates that all commercial activities must serve and advance military purposes.[66] Civil construction projects aid host nations in their commerce, health, education, and overall development. These significantly contribute to winning hearts and minds during competition. However, it should be apparent to any strategist that location is as essential as the facility itself. Military applications in times of crisis transform partner-nation facilities into enablers or even force multipliers depending on the capacity and geographical location within the scenario's context. Therefore, realizing and mitigating facility shortfalls in the Indo-Pacific area of operations must be at the forefront of strategic thinking.

The most notable locations where dual-purpose U.S. facilities would be

Fast combat support ship USNS *Supply* (left) and the Royal Navy frigate HMS *Kent* conduct replenishment-at-sea in Barents Sea while training in Arctic Circle, May 3, 2020 (U.S. Navy/Lauren Spaziano)

Air Force KC-135 Stratotanker in-flight refueling operator and pilot, assigned to 340th Expeditionary Air Refueling Squadron, observe refueling of B-52 Stratofortress assigned to 2nd Bomb Wing during multiday bomber task force mission over Southwest Asia, December 10, 2020 (U.S Air Force/Trevor T. McBride)

advantageous to our partner nations, while also facilitating our strategic leverage, are along the Second Island Chain: Papua New Guinea, Palau, Yap, and Tinian are logical candidates to expand port, airfield, warehouse, and medical facilities. This would begin bridging the gap between U.S. and PRC strategic real estate. Because civil-military fusion is the law in the PRC, significant Belt and Road Initiative projects, particularly the ports and the digital Silk Road, are designed with dual-use features that bolster a range of potential military and intelligence capabilities.[67] At worst, the PRC tends to build overt military facilities, such as those on the Spratly Islands. At best, they thinly veil the balance of dual-purpose, with most of their sites still having a heavy emphasis on ISR and potential lodgment.

The Defense Department will need to demonstrate dexterity to maintain readiness as a "credible deterrent" in a prolonged competition phase, while also optimizing the force to compete and win in large-scale, multidomain combat. This requires careful consideration of the DOD role in GPC and joint force optimization across the DOTMLPF-P spectrum. The consensus definition of power is to mean raw capability; it would be impractical to build the force structure to match China's sheer size. Fortunately, in competition, the joint force can apply asymmetric strengths and "win" with more fiscal responsibility. The Army will need to work closely with the Marine Corps to ensure a credible ground force. The Air Force requires congressional flexibility to modernize its fleet. The Space Force requires appropriately delegated authorities and an effective organizational structure to bring space effects to bear. And the United States must accelerate shipbuilding to restore the Navy's fleet to a respectable number of manned and unmanned ships. As Sir Winston Churchill stated, "We have run out of money; now we have to think."[68] **JFQ**

Notes

[1] *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (Washington, DC: Department of Defense [DOD], 2018), available at <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

[2] DOD has 2.2 million personnel and a $685–$750 billion budget. The Department of State has 60,000–70,000 personnel and a $56 billion budget, including the U.S. Agency for International Development. See "North America," *The Military Balance* 120, no. 1 (2020), 28–63, available at <https://www.tandfonline.com/doi/abs/10.1080/04597222.2020.1707963>; *Department of State, Foreign Operations, and Related Programs*, Congressional Budget Justification, Fiscal Year 2021 (Washington, DC: Department of State, February 10, 2020), available at <https://www.state.gov/wp-content/uploads/2020/02/FY-2021-CBJ-Final-508compliant.pdf>.

[3] Sun Tzu, *The Art of War*, trans. Lionel Giles (Blacksburg, VA: Thrifty Books, 2009), III-2.

[4] U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Fort Eustis, VA: TRADOC, December 6, 2018).

[5] Allison Schrager, "The Four Fallacies of Warfare, According to Donald Trump's New National Security Advisor," *Quartz*, February 21, 2017, available at <https://qz.com/915438/the-four-fallacies-of-warfare-according-to-national-security-advisor-hr-mcmaster/>.

[6] Mark A. Milley, Chairman of the Joint Chiefs of Staff, Joint Webinar with War College Fellows, December 9, 2020.

[7] TRADOC Pamphlet 525-3-1, GL-2.

[8] "Launch of the 2021 Index of U.S. Military Strength," video, 1:09:00, The Heritage Foundation, November 17, 2020, available at <https://www.youtube.com/watch?v=5VV_vFiUI2w>.

[9] A retired general officer once remarked in a leader professional development forum that only what replicates in combat training centers makes its way through acquisition channels.

[10] "68% of the World Population Projected to Live in Urban Areas by 2050, Says UN," United Nations, Department of Economic and Social Affairs, May 16, 2018, available at <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>.

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