Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party

Baker's Dozen:

Thirteen Recommendations to Improve Deterrence in the Western Pacific

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Introduction

The United States Department of Defense (DOD), with the support of both Congress and the U.S. defense industrial base, has built the preeminent military force in the world. The United States has unmatched power projection capability, the ability to establish air and maritime dominance far from its shores, the resources to execute large scale ground maneuver operations, and the ability to conduct brigade-level amphibious operations. But despite all this, the United States will not be ready to deter and defeat America's most capable adversary — China — in the demanding military environment the United States will face in the next few years in the western Pacific.

This testimony will first discuss the People's Republic of China's build-up and the advantages it has in a Taiwan conflict. Next, the testimony will identify thirteen key investments that Congress can make across five mission areas in order to help restore the future balance of power and deter China form taking action, and, if deterrence fails, defeat Chinese aggression.

The Chinese Challenge

The United States has relied heavily on precision-guided munitions at range, large-scale military mobility and sustainment capacity, trained and empowered non-commissioned officers, and expansive intelligence collection and analysis capabilities to deter and, if needed, defeat adversaries. But China is investing in similar weapons and sensor systems, using emerging technologies to attempt to neutralize America's operational superiority and reduce the ability of U.S. forces to rapidly detect, track, and kill the adversary.

The Chinese military's capability and capacity growth has been meteoric. The Chinese Communist Party (CCP) was embarrassed by the military's relative impotence during the Third Taiwan Straits crisis of 1995-1996, when two U.S. carrier strike groups operated with impunity in the waters immediately off China's coast. The CCP has spent the past 25 years addressing that problem — building a military force designed specifically to place U.S. air and maritime operations at risk within the first island chain— and soon will have the same impact within the second island chain. These Chinese investments in advanced technologies targeted observed U.S. weaknesses, such as the missile defense of ships and airfields, looking to create asymmetric advantages for Chinese forces. The Chinese also spent aggressively on technology that would marginalize existing U.S. advantages, such as military mobility and precision targeting. While the United States labeled China as the "pacing threat," the Chinese acted to develop and procure weapons as if the United States was actually *their* "pacing threat." Not surprisingly Chinese actions outperformed American rhetoric.

It is likely that current Chinese war plans will include a comprehensive pressure campaign that uses these emerging technologies to try and blind U.S. intelligence networks and silence U.S. forces' ability to communicate with forward forces, employ malicious cyber activity to weaken critical infrastructure in order to both paralyze military mobility and logistics enterprises and bring America's economy to a standstill, and conduct a disinformation campaign to try and freeze national security decision making. The Chinese objective would be to deliver a strong

signal to U.S. leaders about the vulnerabilities in U.S. systems, ensuring the United States does not come to the support of its allies and partners.

This emerging technology challenge is complicated by a number of issues Congress cannot directly solve. The first is geography. The United States is trying to deter conflict in Taiwan and in the East or South China Seas, areas within 100 miles of Chinese ports and airfields but 8,000 miles from the U.S. West Coast. Second, China is also likely to have a "first mover" advantage — as an authoritarian regime with rapacious designs, they are much more likely to strike the first blow in a conflict. Finally, China maintains a strong advantage in the "gray zone," able to conduct operations that push the bounds of international law, lack transparency, and slowly, sometimes imperceptibly, establish advantage. While Congress cannot fix these problems directly, it needs to acknowledge them.

Despite all these challenges, the United States can take actions to retain its military-technological superiority and, in the process, overcome China's asymmetric advances. These efforts would help maintain America's ability to project power, impose costs, and ensure the United States supports both its allies and partners and the stability of the region over the next two to five years. These efforts would require targeted investments in multiple areas where the United States and its key partners, especially Taiwan, can develop and deploy new capabilities in ways that China will struggle to match.

Recommendations for Congress

There is a great deal that Congress can do to address the challenges posed by China. My colleague at FDD, Bradley Bowman, and I have written extensively on this issue and argued that the United States needs to: (1) Enhance U.S. Ability to Strike Chinese Forces while Minimizing the Risk to U.S. Forces;¹ (2) Enhance Taiwan's Ability to Defend Itself;² (3) Bolster U.S. Kinetic Resilience to Chinese Power Projection Capabilities;³ (4) Improve U.S. and Partner Ability to Fight Together;⁴ and (5) Maintain a Resilient, Innovative, and Capable Military and Nation.⁵ All of these actions — which can be driven or overseen by Congress — will increase deterrence and, if war comes, improve the chances for success and reduce U.S. casualties — all at a fraction of the current defense budget.

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¹ Bradley Bowman and Rear Adm. Mark Montgomery (ret.), "America's arsenal is in need of life support," *Defense News*, October 12, 2022. (https://www.defensenews.com/opinion/commentary/2022/10/12/americas-arsenal-is-in-need-of-life-support)

² Rear Adm. Mark Montgomery (ret.) and Bradley Bowman, "Washington is waking up on weapons for Taiwan," *Defense News*, December 19, 2022. (https://www.defensenews.com/thought-leadership/2022/12/19/washington-is-waking-up-on-taiwan)

³ Rear Adm. Mark Montgomery (ret.) and Bradley Bowman, "Guam Needs Batter Missile Defense Urgently," *Defense News*, May 23, 2022. (https://www.defenseone.com/ideas/2022/05/guam-needs-better-missile-defensesurgently/367275)

⁴ Bradley Bowman and Rear Adm. Mark Montgomery (ret.), "Standing With the Free People of Taiwan," *Foundation for Defense of Democracies*, December 15, 2020. (https://www.fdd.org/analysis/2020/12/15/defending-forward-standing-with-the-free-people-of-taiwan)

⁵ Rear Adm (Ret) Mark Montgomery and Dr. Samantha Ravich "We Have a New National Cybersecurity Strategy, Now What", *The Cipher Brief*, March 3, 2023. (https://www.thecipherbrief.com/column_article/we-have-a-new-national-cybersecurity-strategy-now-what)

Enhance U.S. Ability to Strike Chinese Forces while Minimizing the Risk to U.S. Forces.

A key finding from nearly every wargame I participate in is that the ability of U.S. forces to destroy the Chinese Navy with a mix of submarine-launched torpedoes and long-range strike weapons employed from air-, ground-, and ship-launched platforms is the number one factor in both winning the conflict and reducing U.S. casualties. The degree to which the United States has to employ shorter-range (i.e., less than 300 nautical mile) strike weapons from ships and aircraft contributes greatly to increased U.S. casualties and risk of tactical defeat. Other factors, such as the availability of anti-ship cruise missiles employed from Taiwan, can also drive down the casualty rates, but nothing is more important than long-range strike weapons inventory.

Similarly, the availability of both 5th generation U.S. and ally fighter aircraft and effective air battle management assets allows for a more rapid campaign to reassert allied air control over Taiwan's air space. The United States and its allies (in this case Japan and Australia) will need to leverage a significant qualitative advantage to offset China's geographic proximity to the battlespace. Specific programs that can provide a significant advantage in the next two to five years include:

(1) Procure Long Range Anti-Ship Missiles (LRASMs) and the Systems to Employ Them. In most unclassified wargames I have played, the U.S. forces required 1,000-1,200 LRASMs to allow U.S. airmen to stay at a relatively safe range and destroy Chinese warships and larger civilian amphibious watercraft. Unfortunately, the current U.S. inventory of LRASMs is less than 250 missiles, and until this spring, the Department of Defense has been comfortable procuring an average of 50 missiles a year for the past five years. At this rate the department would reach 1,200 missiles by 2040, which would be unacceptable. Additionally, these weapons are currently only launched from Air Force B-1s, which have poor readiness, and Navy F-18s, which are tied to aircraft carrier presence. The Air Force has been very slow in working to make the B-52 capable of launching these missiles. Sinking ships in a Taiwan Strait contingency must be a priority for the U.S. Air Force. The Navy is developing software to integrate these missiles on P-8 surveillance aircraft. This P-8 effort would allow for rapid introduction of more than 100 launch platforms in a matter of years. Congress should continue its efforts to maximize LRASM production, to include multi-year contracts and funding expansion of production capacity while strongly encouraging the Air Force to expedite installation of missile launch compatibility on B-52s.

(2) Build and Deploy Ground Based Anti-Ship Cruise Missile Systems. Recent U.S. Army efforts to develop ground-based strike systems — both the Precision Strike Missile (Increment 2) and the Typhoon Weapon System — have included future anti-ship missile capabilities. These are useful longer-term investment efforts. In the short term however, the key ground-based system is the U.S. Marine Corps (USMC) "Navy Marine Expeditionary Ship Interdiction System

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⁶ Bradley Bowman and Rear Adm. Mark Montgomery (ret.), "America's arsenal is in need of life support," *Defense News*, October 12, 2022. (https://www.defensenews.com/opinion/commentary/2022/10/12/americas-arsenal-is-in-need-of-life-support)

⁷ Lt. Gen. Michael Loh and Bradley Bowman, "Guarding Contested Skies," *Foreign Podicy*, January 27, 2023. (https://www.fdd.org/podcasts/2023/01/27/guarding-contested-skies); Bradley Bowman and Lt. Gen. Richard G. Moore, "Building the Air Force the U.S. Needs," *Foreign Podicy*, October 11, 2022. (https://www.fdd.org/podcasts/2022/10/10/building-the-air-force-the-us-needs)

(NMESIS)" utilizing the Naval Strike Missile (NSM), a proven anti-ship weapon, and this procurement effort needs to be fully funded. The next most important issue for a ground-launched system is location. These NMESIS systems can have some limited effectiveness from launch positions in the southern Japanese islands or northern Philippine islands, but their maximum efficiency would be achieved from firing positions on Taiwan itself. The USMC initiatives to create Marine Littoral Regiments (MLRs) equipped with NMESIS systems provide an opportunity to place them in Taiwan if the administration has the political will to either start rotating combat units onto Taiwan routinely, or to clearly plan to do so in a crisis or contingency. If an MLR had access to additional pre-positioned NSM munitions in Taiwan (see below) that would be even more effective.

(3) Rapidly Field Modernized Airborne Battle Management Systems. The success of American joint forces in a potential conflict with China will depend in part on whether the U.S. Air Force can continue to provide warfighters with advanced airborne early warning and control capabilities. Yet the Air Force's ability to do just that is increasingly in question and there are new technologies that need to be brought into the air defense fight. Upgrading the outdated E-3 Sentry Airborne Early Warning and Control System (AWACS) aircraft to the new E-7 Wedgetail is a much-needed step. That's because the E-3 fleet is composed of four-decade-old aircraft that are in bad shape; some are already being retired without relief. This potential capability gap looms just when China is fielding increasingly advanced air forces and trying to outpace U.S. airborne early warning and control capabilities.

The Air Force has grudgingly followed recommendations that many have made⁸ and decided to procure and field the E-7A Wedgetail, a Boeing 737-derivative aircraft used by both the Australians and British. Employing a 737-derivative provides a robust and healthy aircraft supply chain that would reduce maintenance and supply costs and increase readiness. The E-7A also has extended ranges with in-flight refueling and features a highly capable sensor suite built around a modern radar system, with all-weather performance and longer range 360-degree surveillance.

The challenge Congress faces is the speed of E-7A delivery. Current Air Force planning is for two aircraft in 2027 then a two-year gap. By pulling \$688 million in funding forward to FY 2024, two more E-7A aircraft can be delivered two years earlier. How such critical investments can slip into "unfunded priorities" when the capabilities they provide are in the talking points of every senior Air Force official briefing Congress is troubling.

Enhance Taiwan's Ability to Defend Itself

Taiwan has to be more committed to its defense than the United States is. Taiwan has increased its defense spending as a percentage of gross domestic product (GDP) to a level of 2.4 percent, a respectable number for a democracy, but Taiwan trails China's defense spending (and GDP) by a factor of 20. Given this, the United States should encourage Taiwan to spend more, and spend wisely, but also recognize Taiwan is too small to handle this challenge alone. The FY 2023

⁸ Rear Adm. Mark Montgomery (ret.) and Bradley Bowman, "Time to Wedge the Wedgetail into the US Air Force Fleet," *Breaking Defense*, October 25, 2021. (https://breakingdefense.com/2021/10/time-to-wedge-the-e-7a-wedgetail-into-the-us-air-force-fleet)

NDAA included numerous investments in, and support for, Taiwan's armed forces such as the provision of up to \$2 billion a year in Foreign Military Financing (FMF) assistance for Taiwan over five years — if Taiwan continues to increase its defense spending. If Congress acts to appropriate this assistance it would effectively create a 10 to 12 percent increase in Taiwan's defense spending and reward Taiwan for getting its defense spending up. But there is even more that Congress can do to support Taiwan in this effort. Specific programs that can provide a significant advantage in the next two to five years include:

Streamline the Foreign Military Sales (FMS) Program and Prioritize Taiwan's Place in it. The FY 2023 NDAA included much-needed guidance to the U.S. Defense and State Departments to prioritize⁹ the delivery of arms to Taiwan. There is still a nearly \$19 billion backlog of weapons intended for Taiwan thanks to a persistent combination of insufficient U.S. industrial capacity and a sluggish bureaucratic process dangerously disconnected from the serious threat the United States and Taiwan confront. The delay in the delivery of the Harpoon coastal defense system and associated missiles to Taiwan is a perfect example. The sale was announced in 2020 but was only recently put under contract more then 30 months later, and now delivery will not be complete until 2029 at the earliest, barring urgent intervention.¹⁰

Equally problematic is that important ground combat weapons — more than 200 Javelin missiles¹¹ and launchers and 250 Stinger systems¹² — were approved for sale to Taiwan in 2015 and have not been delivered. Given the need to supply Ukraine and restock U.S. and allied inventories, it is not realistic to expect these systems in Taiwan before 2026 or 2027. The Defense Security Cooperation Agency, which runs the arms sales process for the Pentagon, issues world class press releases to announce sales, but the military services contract and deliver these capabilities like a bunch of minor leaguers. Congress' attention and persistent oversight on this issue is long overdue.

Congress should take action to ensure FMF and FMS assistance efforts are aligned with national security theater priority efforts. If the Indo-Pacific is the priority theater, Taiwan should be "first in line" for FMF and FMS and certainly ahead of a North African country that allegedly tried to sell ammunition to Russia last year.

(5) Pre-positioning Munitions in the Region and in Taiwan. Another important lesson from recent wargaming is the difficulty in re-arming Taiwan during a conflict. This is in stark contrast to Ukraine, where land borders with Poland, Slovakia, and Romania have facilitated re-arming and re-supply. In the case of a Chinese blockade or invasion of Taiwan, it will be nearly impossible to resupply Taiwan. Instead, this will require that the U.S. will have already pre-

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⁹ Rear Adm. (Ret) Mark Montgomery and Brad Bowman, "Expedite Arms Deliveries to Beleaguered Democracies", *Defense News*, June 14, 2022. (https://www.defensenews.com/opinion/commentary/2022/06/14/expedite-arms-deliveries-to-beleaguered-democracies)

¹⁰ Rear Adm. (Ret) Mark Montgomery and Bradley Bowman, "Taiwan Needs our Help Now", *Dispatch*, April 17, 2023. (https://thedispatch.com/article/taiwan-needs-our-help-now)

¹¹ Defense Security Cooperation Agency, 81 Federal Register 7522, December 16, 2016. (https://www.federalregister.gov/documents/2016/02/12/2016-02865/36b1-arms-sales-notification)

¹² Defense Security Cooperation Agency, 81 Federal Register 7516, December 16, 2016. (https://www.federalregister.gov/documents/2016/02/12/2016-02862/36b1-arms-sales-notification)

positioned key munitions in Taiwan that the United States might want to transfer to Taiwan in a crisis, such as anti-armor missiles, air defense missiles, anti-ship missiles, and mines. Just such a regional munition stockpile effort was authorized in the FY 2023 National Defense Authorization Act, but no funding was appropriated to execute this task. Pre-positioning of munitions in Taiwan should be prioritized for appropriation in FY 2024 budgets. The Presidential Drawdown Authority for Taiwan, also authorized by the FY 2023 NDAA, could be utilized to rapidly pull relevant weapon systems from the U.S. stockpile to get them to Taiwan now. With U.S. stockpiles replenished by up to \$1 billion in authorized funding, this is very similar to how the Defense Department gets available weapons to Ukraine more rapidly.

One additional step that Congress could take to improve munition readiness in Taiwan that has yet to be authorized is the establishment of a War Reserve Stocks Allies fund for Taiwan or WRSA-T, similar to the program that already exists with six sites in Israel. WRSA is a collection of materials — munitions, equipment, combat essential consumables, and hospital equipment — that is maintained for U.S. and partner forces to draw on in time of war until future in-country production and/or external resupply can meet consumption. Placing NSM reloads for NMESIS launchers in Taiwan could be a wise investment.

(6) Support Development of Taiwan's Cyber Capabilities. The United States should help Taiwan improve its ability to absorb the barrage of Chinese cyberattacks that will both precede and be integrated with a broader Chinese attack on Taiwan. China already conducts a persistent cyber malicious activity campaign against Taiwan that includes intellectual property theft, infrastructure malware attacks, and cyber-enabled disinformation campaigns. The United States confronted a similar challenge in 2018 when the Ukrainian government asked for help with fending off Russian cyberattacks on Ukraine's electrical power grid. The Congress and State Department implemented a nearly \$50 million cyber capacity building program to improve Ukrainian network security. As tensions mounted this effort was expanded to include nearly a year of persistent "Hunt Forward Operations" conducted by U.S. Cyber Command to assist Ukrainian cyber defenders in identifying Russian malicious activity in Ukrainian networks. A similar effort is needed for Taiwan today, but one tailored to Taiwan's capabilities and the Chinese threat.

The recently introduced Taiwan Cybersecurity Resiliency Act is the exact sort of effort needed. This legislation would require the Defense Department to work with the Taiwan government and expand cooperation on military cyber operations. These efforts would include working with Taiwan to help defend their networks against cyberattacks, hunting through systems to eradicate cyber vulnerabilities, and conducting U.S.-Taiwanese cyber bilateral training and exercises. Part of this effort should explicitly include recurring U.S. Cyber Command "Hunt Forward Operations" in Taiwan, as both Taiwan and U.S. cyber operators would benefit from this effort and be better prepared to work closely together in a crisis environment.

Bolster U.S. Kinetic Resilience to Chinese Power Projection Capabilities.

Chinese development of asymmetric attack capabilities has progressively put United States forces in the western Pacific at risk. Where Chinese system developers and war planners identified potential U.S. vulnerabilities 10 and 15 years ago, they now have functioning weapon systems that eliminate the U.S. ability to operate safely inside the second island chain. It will

take a mix of U.S. weapon and sensor system improvements, innovative operational concepts and experienced personnel to establish the necessary resilience and redundancy to counter these Chinese military capabilities and bring the fight back to the CCP. Specific programs that can provide a significant advantage in the next two to five years include:

(7) Developing and Deploying Cruise, Ballistic, and Hypersonic Missile Defenses. One of the most salient lessons from the invasion of Ukraine is the impact of Russian cruise and ballistic missiles on Ukrainian critical infrastructure and the significant air defense capacity required to deter them. While the United States has both sea-based and land-based ballistic missile defense capabilities and has sufficient sea-based cruise missile defense capabilities, U.S. forces have significant gaps in protecting against cruise missiles attacking land-based targets and against all forms of hypersonic missile threats.

In defending against cruise missiles targeting U.S. airfields, prepositioned equipment, ports, and logistics systems, the U.S. Army has failed to develop a follow-on mid-range air defense system to replace the "Hawk" systems, which were retired nearly 30 years ago. The Army has struggled to deliver the Indirect Fire Protection Capability (IFPC) system, which is now years late, and the Army refuses to consider procuring the National Advanced Surface to Air Missile System (NASAMS) that the United States has provided to Ukraine for the same mission, and which the National Guard deploys to protect the U.S. National Capital Region. As a result, U.S. airfields and logistics sites throughout the Pacific are left insufficiently protected against Chinese cruise missile threats. Congress needs to direct the Army (as it did in 2018) to purchase a "gap-filler" cruise missile defense system, like NASAMS. Congress should also inquire into U.S. efforts to integrate Australian and Japanese air defense assets with U.S. systems. Both Australia and Japan have significantly more land-based cruise missile defense capabilities in the Pacific theater and could provide much needed airfield defense.

The development of U.S. offensive hypersonic capabilities is starting to pace those of China and Russia. However, the development of U.S. hypersonic defensive countermeasures lags Beijing and Moscow's offensive hypersonic efforts. The Missile Defense Agency (MDA) is still in the early stages of developing hypersonic defense systems — principally leveraging the Glide Phase Interceptor work — and the MDA will need to be both aggressive and lucky to pace Chinese offensive capability development. It would be especially worrisome and destabilizing if a "first mover" authoritarian state was to develop significant offensive hypersonic capacities before the United States and its allies had hypersonic defense capabilities. It is concerning that the U.S. spending on hypersonic defense is significantly lower (five to 10 times less) than the U.S. spending on offensive hypersonic systems each year, and it appears there is a \$147 million unfunded request for the Missile Defense Agency to develop this defensive mission.

The Congress should also ask the Defense Department to assess the need for medium- and highaltitude persistent aerostats (dirigibles and balloons) with installed air defense radars for the defense of both Guam and the homeland. These are technologies the United States has previously excelled at but has been slow to exploit.¹³

¹³ Rear Adm. Mark Montgomery (ret.) and Bradley Bowman, "Guam Needs Batter Missile Defense Urgently," *Defense News*, May 23, 2022. (https://www.defenseone.com/ideas/2022/05/guam-needs-better-missile-defensesurgently/367275)

(8) Resourcing and Positioning Deployable Air Base Systems (DABS). The US Air Force's Agile Combat Employment (ACE) operational concept is a key element in building resilience into regional U.S. air power capabilities. The concept relies on utilizing numerous airfields distributed throughout the theater — in Japan, Australia, the Marianas, the Compact States, and possibly the Philippines — in order to complicate Chinese targeting opportunities, from both military and political perspectives. To support this concept, the Air Force needs to expedite the procurement of thirty or more DABS for the Pacific theater — each system includes maintenance, runway repair, munitions handling, and air traffic control equipment. Despite Congress identifying this issue as early as 2018, the Air Force has struggled to procure sufficient Pacific positioned DABS units, continued Congressional oversight and tracking of this underresourced effort is required.

Improve U.S. and Partner Ability to Fight Together

The positive impact of operational force integration is not just a theory. Multiple iterations of wargaming addressing a China conflict scenario showed the introduction of integrated forces — from Japan, Australia, or Taiwan — consistently reduced U.S. casualties nearly 30 percent. This is not an academic exercise— for example, if the United States and Taiwan can field a coordinated or integrated force, they are more likely to win and more likely to win well.

To best understand what an integrated force looks like, it is useful to understand the "stages" or attributes of combined military C2 enterprises. Partner militaries can work together at four different levels of cooperation – deconflicted, coordinated, integrated, or unified. Higher levels of cooperation are a product of shared equipment and networks, organizational structures, experience levels, and most importantly frequency of training, exercising, and operating together. This integration drives efficiencies, minimizes shortfalls, and enhances performance. One can think of this force coordination in mathematical terms: a deconflicted force is at best "2 plus 2 equals 3" while an integrated force is "2 plus 2 equals 5."

Similarly, while purchasing systems and exercising with key allies are both critical elements of operational collaboration, there is one more clear requirement for warfighting success — building an effective command and control mechanism to support combat operations. Currently, the United States utilizes Indo-Pacific Command (INDO-PACOM) a large, unified combatant command situated in Hawaii and responsible for everything from "Hollywood to Bollywood and the Arctic to Antarctic." This is not an agile, operationally-focused organization constantly preparing for conflict, nor one suitably located for an attack by an authoritarian, well-equipped, first-mover adversary. Specific programs that can provide a significant advantage in the next two to five years include:

(9) Training and Exercising with Taiwan Forces. The United States has not exercised with the Taiwan air and naval forces in theater in nearly 40 years. This failure to train together has left U.S. and Taiwan forces at the lowest level of operational partnership — "deconflicted" — which basically means your forces stay over there and our forces will stay located over here. To effectively counter Chinese military moves, the United States and Taiwan need to raise their level of operational partnership to "coordinated" or even "integrated." This will take significant

operational exercises, table-top drills, and wargaming — all of which were authorized and directed in the FY 2023 NDAA after years of "sense of Congress" statements that such work was needed. This is achievable, for example U.S. and Japanese forces have spent the past 15 years moving from "deconflicted" to "integrated" through just such a training and exercise regime. Given the previous Department of Defense reluctance to conduct such bilateral exercises with Taiwan, Congress will have to carefully oversee and manage the department's efforts.¹⁴

(10) Turn Congressional Guidance for a Joint Force Headquarters into a Force Multiplier. After several years of waiting for Department of Defense action, Congress directed the Department to move out on a new construct for operational command in the western Pacific. The FY 2023 NDAA directed the Secretary of Defense to establish a Joint Force Headquarters (JFHQ) in the Indo-Pacific theater of operations to serve as an operational command to integrate "joint all-domain command and control effects chains and mission command and control, including in conflicts that arise with minimal warning".

As the Secretary of Defense determines how to address the NDAA guidance and develop an appropriate JFHQ for INDO-PACOM, a few key questions will need to be addressed: How persistent is the command's operational control of forces?; what are its responsibilities for developing operational plans?; what are the JFHQ's responsibilities for operational integration with critical allies and partners such as Japan, Australia, the Philippines and Taiwan?; what is its location, with Guam, Japan, Hawaii, and at-sea as options?; and what is the geographic scope of the JFHQ and what rank is its commander?

At a minimum, Congress should ensure the JFHQ effort be a persistent headquarters that has constant interactions with the newly created Japanese Permanent Joint Headquarters, the Australian Joint Operational Center (JOC), and the Philippine and Taiwan armed forces. The JFHQ should coordinate and, when appropriate, lead routine training and exercise events with regional allies and partners. This effort would also include building and assessing national, bilateral, and multilateral war-planning efforts. Most importantly, the JFHQ should be the commander for the region inside the first and second island chains and should have a four-star commander.

Maintain a Resilient, Innovative and Capable U.S. Infrastructure

In the cyber, information, and critical infrastructure areas there are equally important steps that need to be taken to ensure U.S. forces are ready to deter and defeat America's adversaries in the demanding cyberspace environment the United States will face in the next five years. This will require that the U.S. build the cyber resilience necessary to both support U.S. military mobility — the agile movement of equipment, personnel, spares and supplies from the United States to the front lines; and that U.S. national critical infrastructure — financial services, electrical power, healthcare, water etc. — can support economic productivity and soft power tools. The United States will also need a Cyber Mission Force capable of handling a high volume of offensive and defensive cyber missions. This must all be supported by an environment where

¹⁴ Bradley Bowman and Rear Adm. Mark Montgomery (ret.), "Standing With the Free People of Taiwan," *Foundation for Defense of Democracies*, December 15, 2020. (https://www.fdd.org/analysis/2020/12/15/defending-forward-standing-with-the-free-people-of-taiwan)

innovation is encouraged and risk is accepted. Specific programs that can provide a significant advantage in the next two to five years include:

(11) Improve U.S. Cyber and Information Resilience. In a contingency or conflict with China, U.S. forces must maintain their ability to detect and track adversaries, communicate among forces, and mobilize and sustain forces. China's opening moves in any crisis or conflict, either to deter U.S. action or to defeat U.S. efforts, will be aimed at limiting or eliminating: the U.S. military's ability to sustain its operations logistically; the U.S. ability to see, track, and locate Chinese forces; and the capability of U.S. military leaders to command and control forces. China hopes that, unable to communicate, deploy, or resupply, U.S. forces will be paralyzed. To avoid this situation, the U.S. military needs to build information resilience, including through redundancies, across every link and node of its operations — from sensors to attack platforms, in information architecture and networks, across command-and-control systems, and at a pace commensurate with the threat. In addition to this cyber hardening, the United States will need to acquire large numbers of low-cost and expendable platforms that would support surveillance, communications, logistics, and strike — especially during the opening days of a campaign. The Congress can and should have a significant say in investments that protects the resilience of the cyber and information enterprise.

The Chinese will test the cyber resilience of U.S. military mobility systems. The rail, highway, maritime (especially ports) and aviation networks that move forces off of their bases and into the warfighting theater are generally owned and operated by the private sector. It is critical that the federal government is working closely with these transportation sectors before a crisis to ensure that they the transportation networks are ready for cyber malicious activity and have proactively rooted out foreign malware. A delay or disruption in the movement of supplies, personnel, equipment or munitions could have devastating consequences on the battlefield. Recent Congressional legislation addressing the challenges with a proliferation of Chinese-built cranes in major U.S. ports is a good start at assessing and addressing this threat.

This resilience will have to extend into all U.S. national critical infrastructure — the financial sector, electrical power systems, water systems, pipelines, and other sectors that enable the economic productivity that produces equipment and supplies and supports significant U.S. economic and diplomatic warfighting tools. Building such a resilience is a burdensome process as it relies on a public-private collaboration that has struggled despite 20 years of government efforts. It is estimated that 85 percent of the national critical infrastructure is owned and operated by private sector or state and local utilities, not the federal government. This creates a cyber defense challenge that is much more complex than traditional warfare areas, such as antisubmarine warfare or air defense, where all the assets are owned and operated by the U.S. military. The responsibility for this collaboration extends across multiple federal agencies and congressional committees, but Congress must ensure that key elements of the public-private partnership are being addressed.

(12) Assess and Strengthen U.S. Cyber Forces. Over the past decade, the Congress has provided extensive guidance and oversight to the development and employment of U.S. cyber forces. Despite this Congressional attention, and persistent efforts by U.S. Cyber Command, U.S. cyber forces have been unable to raise their readiness for a number of years and are inconsistent in

organization and training across the military services. Additionally, the size of each service contribution to the Cyber Mission Force has not changed appreciably since the original agreements a decade ago, despite significant changes in the cyber threat. As a result, the United States is not optimized for conflict with a Chinese adversary, which created a single military cyber component in its Cyber Support Force back in 2016. This Chinese effort is improving in capability and already has a significantly larger capacity then similar U.S. forces.

The Congress should assess if the current force design of Cyber Mission Force, using separate inputs from all four services, can effectively produce forces for 21st century warfare, or if more dramatic solution, such as an independent Cyber Force, should be considered, as was recently done with the Space Force. Additionally, Congress should ensure that the principles laid out in Section 1632 of the FY 2019 NDAA — supporting "defend forward" operations and increasing the level of U.S. efforts to impose costs on adversaries in cyberspace — are being adhered to.

(13) Enable an Environment to Innovate. The United States has learned some important lessons from the conflict in Ukraine, and the Department of Defense should be working to apply these same lessons in dealings across the defense industrial base. For example, the Ukrainians needed anti-ship cruise missiles to limit Russian Navy operations in the Black Sea. With no program of record available for a land-based Harpoon missile launching system, the Ukrainians had to work with Boeing, the Danish Army, and the U.S. Navy to "MacGyver" a cobbled-together launcher system. Taiwan asked for a similar land-based Harpoon system and was approved for purchase in 2020, but delivery of a "new design" system is not expected for completion until 2029 or later. Clearly a "MacGyver" approach can and should be taken by Boeing and the U.S. Navy to ensure that a key partner has the weapon systems needed to deter Chinese action sooner than nine years after they ordered it. 15 Congress should work to encourage a little more "MacGyver" and a little less "Valley of Death."

Conclusion

The United States and its allies and partners may not be on the right track to be ready for a conflict with China in the next five years, but they certainly can be, and Congress can help make that so. Targeted investments by the Congress in anti-ship munitions, missile defense capabilities, prepositioned gear in Taiwan, air asset deployment capabilities, and exercising with Taiwan forces, will restore the U.S. ability to maneuver forward and reduce U.S. casualties — and all at a fraction of the current defense budget. Congress can also work to improve the cyber resilience of the military and the nation; bolster the capacity of the U.S. cyber forces; and enable an environment where innovation is encouraged. All of these efforts will restore the U.S. ability to deter malicious Chinese efforts in the Western Pacific and — if deterrence fails — defeat Chinese aggression.

¹⁵ Rear Adm. Mark Montgomery (ret) and Bradley Bowman, "How 'MacGyver' magic can get Taiwan its Harpoon defenses faster," *Defense News*, December 7, 2022.

⁽https://www.defensenews.com/opinion/commentary/2022/12/07/how-macgyver-magic-can-get-taiwan-its-harpoon-defenses-faster)