

Testimony before the House Armed Services Committee

DOD's Role in the Competition with China

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Chairman Smith and Ranking Member Thornberry, distinguished members of the House Armed Services Committee, it is truly an honor to testify before you today on the Department of Defense's role in the United States' strategic competition with China.

U.S.-China Competition Broadly

Strategic competition between the United States and China is multi-faceted, with economic, technological, political, ideological, and military dimensions. Any successful approach to this competition must take account of each of these dimensions and neglect none. Therefore, before I outline the Department of Defense's role in the competition with China, I'd like to sketch how I view U.S.-China competition more broadly.

First, the strategic competition between the U.S. and China is taking place between two globally integrated economies. For about two decades, the United States premised its approach to China on the belief that integrating a rising China into the global economy and international institutions would increase the likelihood that Beijing would become a "responsible stakeholder" in the rules-based international order, and that this was in the U.S. interest. While the assumption behind this engagement strategy is no longer universally accepted, the legacy of it is universally acknowledged: the U.S. and Chinese economies are deeply intertwined. These connections provide benefits to U.S. business – markets, supply chains, investment and talent – but also create vulnerabilities for U.S. business and U.S. national security – via theft of intellectual property and data, and untrustworthy supply chains with ties to the People's Liberation Army. Because of these vulnerabilities, some have proposed that the United States initiate a so-called "decoupling" from the Chinese economy. But if the U.S. were to pursue blanket restrictions on its commercial ties with China, this could have the unintended effect of hurting U.S. economic dynamism. I do not think wholesale decoupling is realistic or wise, but I do think we need to do a better job of using carefully targeted measures to protect our intellectual property and data while safeguarding technologies critical to our national security.

Second, the period of unrivaled technological superiority the United States enjoyed after the Cold War is over. China is investing tens of billions of dollars in a state-directed technology roadmap for emerging technologies – from hypersonics and robotics to quantum computing and artificial intelligence. Indeed, the primary competition on which the United States must focus is the tech race with China, as it is this competition that will determine whether we keep our military edge and will have the most profound and long-lasting impacts for U.S. prosperity and security over the next half century. In the quest to maintain our edge in key technologies, we must be clear eyed about the risks that our open economy poses: China is trying to use foreign investment and espionage to gain access to nonpublic IP and leveraging its role in U.S. supply chains to introduce vulnerabilities into our systems.

Third, competition between the U.S. and China will be shaped in large part by our success in developing close relationships with allies, partners, and other countries in the Indo-Pacific

region. It is in China's interest for Washington to view U.S.-China competition in purely bilateral terms. Instead, we must be laser focused on further developing our existing relationships in the region and on building new relationships. The U.S. will be far more effective if we pool our resources and efforts with allies and partners who share our interests. Yet we must seek to avoid forcing countries to choose between the United States and China; given the deep economic relationships countries in the region have with China, our allies and partners will not sign up to a virtual Berlin Wall separating the Indo-Pacific into openly competing U.S. and Chinese spheres of influence. The best ways to bolster these relationships is to show up in the region more often, invest in bilateral cooperation with key allies and partners, participate and lead in regional fora, strengthen military-to-military ties, and cooperate on global issues like climate change, nonproliferation and economic development.

Fourth, competition between the U.S. and China has a strong ideological and narrative element. The number one objective of the Chinese leadership is to maintain the Communist Party's control of its system of government, and the number one threat to their system is for economic liberalization and the rising expectations of the Chinese population to spark some kind of democratic movement like the one we're seeing in Hong Kong. The Chinese government is therefore attempting to shape both a domestic and global narrative of China through a robust information campaign. Too often the United States is caught flat-footed. We must do a better job of offering a contrasting vision of the Indo-Pacific – one that is free of coercion; respects sovereignty, the rule of law and human rights; and is open to the free flow of people, goods, and ideas.

Militarily, the resurgence of great power competition requires the United States to reimagine how we deter and, if necessary, fight and prevail in a future conflict with China. America's military advantage is rapidly eroding in light of China's modernization efforts. In fact, if we stay the current course, a rising China will likely achieve overmatch in a number of key capability areas, calling into question our ability to credibly deter aggression; defend our interests, allies, and partners; and prevail in any future conflict at acceptable levels of cost and risk. The number one military objective for the United States today should be to re-establish credible deterrence; I will expand on this point below.

Finally, at the same time as we compete with China, we must remember that China may also serve as a critical partner to address global challenges like climate change, North Korea, and the proliferation of weapons of mass destruction. We should be able to compete with China while also cooperating in key areas of mutual interest.

Principles for Strategic Competition

In each of these five dimensions – economic, technological, political, ideological, and military – there are three overarching principles that should guide the United States' approach to strategic competition with China.

First, the most important thing for the United States to do is to invest more substantially in the drivers of U.S. competitiveness here at home. This includes science and technology, research and development, using federal funding to incent private sector investment in key technology areas, STEM education, broader access to higher education, and 21st century infrastructure like 5G. We also need a smart immigration policy. We should welcome foreign-born talent that pose no risks to our national security and encourage them to stay and build innovative companies here in America. We should also do a better job of protecting the crown jewels that are essential to our security while maintaining the open system that drives our prosperity. This is a moonshot moment, and we need the national leadership, call to action, and smart investment plans to inspire and enable America to compete and win. As our history proves again and again, this is something we know how to do as Americans. It is imperative that Congress overcome its current partisan polarization to make urgently needed strategic investments in our future.

Second, the United States should leverage the unique, strategic advantage of having many allies and partners around the world. The best way to deal with the challenges China poses is by making common cause with our allies and partners whenever possible. We are infinitely stronger confronting China's violations of the rules-based order as a coalition of like-minded states committed to a shared set of norms rather than as the U.S. alone. This lesson seems to have been lost on the Trump administration as it engineered a trade war with Beijing in strictly bilateral terms. Going forward, the United States should work closely with its allies and partners to make a clear-eyed assessment of what each country can contribute to stabilizing the Indo-Pacific environment and deterring the increasingly aggressive behavior of revisionist powers. This will also require reassuring our partners in words and deeds that they can count on the United States to have their backs in disputes with Beijing and ultimately to defend them against coercion or attacks.

Third, the United States should lead in protecting and adapting the rules-based international order to the new realities of the 21st century. We should uphold norms like freedom of navigation and the peaceful resolution of disputes, in order to ensure "might does not make right" in the Indo-Pacific. An Indo-Pacific dominated by a revisionist power like China would be very different than the one we all live, trade, and travel in today. Ships that today can freely navigate the seas would be liable to possible harassment. Decisions taken today by independent governments could increasingly fall prey to coercion. And failure to resist these coercive measures would, in turn, limit our collective ability to deter aggression or – if aggression takes place – to reverse it. The U.S. needs to do a better job of spelling out the stark contrasts between what international rules and norms shaped by Beijing would look like in contrast to those the region has enjoyed to date.

The Role of the Department of Defense

The first objective of the Department of Defense in the strategic competition with China must be to re-establish credible deterrence vis à vis Beijing. While I believe neither the United States nor China is likely to deliberately start a war given the dire costs involved, we could

nevertheless stumble into conflict if the Chinese leadership were to miscalculate the ability or willingness of the United States and our allies to respond to provocations or outright aggression. I assess that the risk of miscalculation is greatest in the next 10 years – when the United States has telegraphed its vision for the future force but has yet to procure and deploy all of the technologies and systems necessary to fully translate this vision into fielded capabilities.

Since the first Gulf War, China has gone to school on the American way of war and has developed an expanding set of asymmetric approaches to undermine our strengths and exploit our vulnerabilities. At the core of the military challenge to the United States and our allies is the substantial investment by China and Russia in anti-access/aerial denial or “A2/AD” capabilities. These A2/AD capabilities -- ranging from persistent precision strikes on U.S. logistics, forces, and bases to electronic, kinetic, and cyber attacks on every digital connection and system inside our battle networks -- mean that the United States can no longer expect to achieve air, space, or maritime superiority early in a conflict; we will need to fight to gain superiority and then to keep it in the face of ongoing efforts to disrupt and degrade our battle management networks.

Thanks to Beijing’s massive, systematic theft of Western intellectual property and its doctrine of “civil-military fusion,” in which any commercial or research-based technological advancement with military applications must be shared with the People’s Liberation Army, the Chinese military has made rapid advancements in artificial intelligence and machine learning. Indeed, Chinese military doctrine is now premised on the belief that the side that can make and execute battlefield decisions most quickly – and preferably well inside the decision-making cycle of the adversary – will gain a decisive strategic advantage in a future conflict. Given the centrality of emerging commercial technologies like AI, quantum computing, 5G and autonomous systems in ensuring the U.S. military keeps its edge, the United States needs its own effective (though undoubtedly different) answer to “civil-military fusion,” and soon.

In addition, China has paired these technological investments with doctrinal innovations. China’s theory of victory increasingly relies on “system destruction warfare,” an effort to take out or cripple an adversary’s networks at the outset of conflict – deploying sophisticated electronic warfare, counter-space, and cyber capabilities to disrupt critical C4ISR networks, thwart U.S. power projection, and undermine our national resolve. This means the United States can no longer take space for granted as an uncontested domain from which to provide services like early warning, navigation and communications. In the future, space will be a critical warfighting domain through which and from which to project power.

To prevent a miscalculation or escalation to conflict with a nuclear-armed rival, the United States must decide what capabilities we need to prioritize developing, acquiring, and demonstrating in order to credibly deter aggression, deny any adversary the ability to rapidly seize territory, and prepare to impose significant costs for any act of aggression. And we need to do this with two timeframes in mind: deterrence in the interim (the next 5-10 years) and deterrence in the long term (10 years and beyond).

The United States must think creatively about how we might stop a rival great power from starting down the road to war. As an illustrative example, what capabilities would U.S. forces need to credibly threaten to sink 300 military vessels, submarines, and merchant ships within 72 hours? Such a capability would certainly pose a fundamental dilemma for any great power contemplating aggression, forcing them to consider whether it's worth putting their entire fleet at risk. Undoubtedly, there are other approaches to be considered to give an adversary pause in the near to mid-term. DoD should devote considerable effort to conceptualizing and wargaming a suite of interim deterrence approaches using existing capabilities in new ways to deny or dissuade aggression.

Strengthening deterrence will also require major, focused efforts to enhance and demonstrate new capabilities, including emerging capabilities that could dramatically increase the costs borne by an aggressor in the longer term. New technologies will enable potential adversaries to challenge us in new ways on the battlefield, but these technologies can also greatly strengthen our ability to deter aggression and bolster our response capability should conflict break out. The United States also needs a strategic framework to guide whether, when and how to reveal new capabilities that could cause a future adversary to rethink the costs and risks associated with aggression.

Assessing the Department's Performance

In assessing the Department of Defense's performance in the strategic competition to date, I will focus on the three principles I outlined at the beginning of my testimony: (1) enhancing our competitiveness, with a focus here on military and technology elements; (2) strengthening our relationships with allies and partners; and (3) protecting and adapting the rules-based order.

First, despite some promising exceptions, the Department of Defense has not, on the whole, adequately re-oriented itself to fully leverage emerging technologies. The Department is currently under-investing in the new technologies that will ultimately determine our success in the future security environment and is still over-investing in legacy platforms and weapons systems. While DIU, SOCOM, and various service units are playing important tech scouting roles, there remains a difficult to cross "valley of death" between achieving a successful technology demonstration or prototype and becoming a program of record. Moreover, the Department lacks the tech talent – senior and junior, civilian and military, active duty and reserve – to develop, integrate, and deploy these critical emerging technologies rapidly and at scale. In the acquisition workforce, DoD has not yet adequately trained or incentivized employees to use the flexible authorities Congress has provided. While there are pockets of excellence (e.g., in SOCOM and Air Force acquisition), the bulk of the acquisition corps is not using these authorities effectively, consistently and at scale.

In addition, the Department is right to take a hard look at Chinese investments in the U.S. tech sector, particularly in areas with national security applications, as well as export controls and DoD's dependency on Chinese suppliers in its supply chains. But the Department should take care to approach each of these areas with a scalpel, not a sledgehammer. DoD would be wise

to undertake a deeper dialogue with cutting-edge tech companies, investors, and defense industry to better understand how to work with these partners to reduce DoD vulnerabilities while not undermining the vibrancy of the very companies on whom we must rely for our technological edge.

Second, the Department of Defense has continued to do great work with allies and partners at the tactical and operational levels to bolster deterrence and to build interoperability and their capacity to contribute to coalition operations. The National Defense Strategy rightly acknowledges that “mutually beneficial alliances and partnerships are crucial to our strategy, providing a durable, asymmetric strategic advantage that no competitor or rival can match” and calls for a “robust constellation of allies and partners.” Across the Indo-Pacific, DoD is doing a great deal to implement this aspect of the NDS. For example, the U.S. and India have held Tiger Triumph, the first land, sea, and air exercise in their history, after signing a bilateral Defense Agreement in 2018. The U.S. has also transferred a former U.S. Coast Guard cutter to Vietnam and conducted an historic aircraft carrier visit there in 2018.

However, at the political level, the signaling and relationship management is so poor in some cases that it is undercutting otherwise strong military-to-military relationships. For example, the Trump Administration postponed regular exercises with the Republic of Korea as an act of “good will” to North Korea and aggressively pressured both Korea and Japan to pay even more for hosting U.S. troops and bases in order to offset trade imbalances. This transactional approach to some of our closest allies, combined with the unpredictability of U.S. policy and Presidential tweets, has created strains in some of our most important bilateral defense relationships that must be rectified if we are to compete effectively with a rising China.

Finally, while this administration has taken constructive actions to protect and adapt the rules-based international order through increased freedom of navigation operations in the South China Sea, it has not been sufficiently present in regional dialogues that will help form future military, diplomatic, and economic arrangements in the region. For example, the Department of Defense’s own 2019 Indo-Pacific Strategy Report argued that the United States’ participation helped make the East Asia Summit the “region’s leading forum for addressing political and security challenges,” yet the administration downgraded U.S. participation at the summit that same year. These mixed signals undercut the U.S. ability to be seen as a trusted partner in leading and upholding the rules-based order.

Recommendations for the Department

Today, I’d like to recommend seven lines of effort the Department of Defense should pursue in competing with China.

First, the DoD needs to implement a series of acquisition, investment, and workforce development reforms to foster the innovation ecosystem necessary to maintain the U.S. military’s technological edge. As the Department prioritizes procuring the software and network capabilities critical to enabling future joint, Multi-Domain Operations, it will need an

acquisition cadre trained and incentivized for the rapid and agile development of new technologies. Fully leveraging more flexible authorities and incentivizing program managers will also require top-down leadership to provide strategic direction and top cover in pursuing more ambitious goals. For example, what if the Secretary of Defense were to set an audacious goal for each of the services to drive more rapid integration of transformative technologies into the force? For example, he could direct the Marine Corps to field a newly conceived Special Purpose Marine Air Ground Task Force built around human-machine teaming and leveraging AI and unmanned systems to the maximum extent possible by the end of the FYDP. Similar goals could be set for re-imagined Navy, Army and Air Force combat teams.

DoD must also accelerate reform efforts to make it easier for leading-edge commercial technology companies to do business with the Department, including increasing the availability of funds to rapidly scale successful prototypes into full-fledged programs. One potential approach would be to authorize funds that each service could allocate on a competitive basis to sustain continued capability development in priority areas and bridge the gap between prototyping contracts and formal competitions for programs of record. For example, let's say an AI company won a SOFWERX competition in FY2019 and the Army decides to put out an RFP to acquire the capability at scale in its FY2021 budget request. How does that small company stay in the game through FY2020? Bridge funding can provide a critical lifeline to small technology companies looking to continue the development of urgently needed, cutting-edge capabilities for the U.S. military.

To bolster the tech workforce, DoD should work with Congress to expand programs (currently focused on cyber talent) that offer scholarships or debt relief to students in a broad swathe of tech fields in return for a government service commitment. DoD should also recruit mid-career technical talent by expanding fellowships for private-sector technologists to serve a tour of duty in national security, bringing in private sector HR best practices, educating national security leaders about the range of expedited hiring authorities at their disposal, and overhauling the painfully slow and antiquated security clearance process. Meanwhile, DoD can meaningfully enhance the tech skills of existing employees by providing more training opportunities in key areas and creating viable career paths for technical talent that allow for both promotion and continued professional development, including rotations in private sector tech companies.

Second, the Department should ramp up its efforts to develop joint and service-specific operational concepts to drive more rapid fielding of game-changing technologies. The United States needs urgently to develop and test joint concepts, such as Multi-Domain Operations, and supporting service concepts, such as the Navy/Marine Corps' Distributed Maritime Operations, both of which are premised on eroding adversary advantages by creating simultaneous dilemmas across multiple domains, spreading out (rather than concentrating) the force across the theater of operations. Testing the technologies that will be most critical to operationalizing these concepts -- from battle management networks to unmanned systems to long-range precision fires -- will require a continuous, reinforcing cycle of wargaming, prototyping and experimentation.

To do so, Congress should provide the services with robust funding to field small numbers of emerging capabilities for early-stage concept development and experimentation. For example, Congress should not hesitate to allow a service to acquire small numbers of AI-enabled unmanned systems of various types to facilitate the development of new concepts for human-machine teaming. Unfortunately, DoD and Congress now find themselves in a Catch-22 – some in Congress want more clarity before they fund experimental systems, while the Department needs a certain number of these systems to experiment with in order to develop a compelling case for Congress to fund the capability long-term. It's time to break this logjam, accept a bit more risk in the short term, and allow the services to acquire the prototypes they need to enable an agile development process that includes robust field experimentation and iterative feedback from the warfighter. This is the only way we will be able to develop new concepts and capabilities fast enough to keep pace with our competitors.

Meanwhile, in the short term, concept development and wargaming can also provide insights into how to reconfigure existing platforms to shore up critical capability gaps. For example, as the Department continues to develop new long-range weapons systems, the Navy and Air Force could experiment with reconfiguring bombers with LRASMs for long-range sea patrol against Chinese surface combatants and the Chinese A2/AD complex. This is exactly the sort of critical bridging work that the Strategic Capabilities Office (SCO) has done historically and should be empowered to do in the future. SCO has a unique and invaluable role to play to driving efforts to shore up deterrence and the U.S. military's operational edge in the near to mid-term. (To do so, it should not be subsumed under DARPA where its focus would necessarily shift to the longer-term future.)

Third, the Department should adopt best practices and lessons learned from commercial sector technology development and program management. The Department has ambitious goals to migrate to the cloud, leverage large data sets for artificial intelligence and machine learning solutions, and build interoperable, multi-domain networks at scale. The Air Force is already building its Advanced Battle Management System -- the long-pole in the tent for bringing Multi-Domain Operations to life -- which will require rapid advancements in sensor integration, data processing, artificial intelligence, network connectivity, and cloud computing.

Integrating private sector approaches to technology development, data management, and network security will be critical to realizing these advancements on the timeline required. As previously mentioned, this means using a spiral development model with integrated prototyping that enables substantial input from real-world operators. It also means exploring how to incentivize industry to leverage open-source approaches that support iterative design and testing and provide platform and system interoperability. Finally, it will require prioritizing what elements of a complex network of networks must be secured, continuously weighing and re-evaluating potential trade-offs between openness, security, and resiliency.

Fourth, budget realities will require the Department and Congress to make urgent trade-offs between legacy platforms and critical new technologies. Currently, the United States is under-investing in the new technologies that will ultimately determine our success in the future

security environment and over-investing in legacy platforms and weapons systems. This is a recipe for failure with dire costs for the nation. In order to make the trade-offs necessary to position the United States to compete and win, DoD and Congress must answer a fundamental question for every major program of record: Where is the knee in the curve? Where is the point where it makes more sense to forgo the n+1 platform in order to invest those resources in the cutting-edge technologies and capabilities that will keep the existing platforms survivable, combat-relevant, and effective? For example, if the cost of a single additional aircraft carrier could cover the cost of electric weapons for ship defense, UAVs for ISR, refueling and electronic warfare, and new longer-range penetrating weapons for strike, would it be smarter to trade that extra carrier for a slightly smaller, but much more capable fleet? The same question can be used to frame the trade-offs associated with buying more amphibious ships for the Marine Corps, fighter squadrons for the Air Force, or tanks for the Army. The Secretary of Defense should ask each service tough “knee in the curve” questions and be willing to make the hard choices necessary to prepare for the future fight – and Congress should support the Pentagon when these hard but correct choices are made.

Fifth, the United States will need to adapt and enhance our overseas posture and shore up ally and partner capability to deter and operate in more contested, lethal environments. The United States should expect that Russia and China will seek to disrupt our ability to project power to re-enforce forward forces from the outset of a conflict and in all domains – air, sea, undersea, space, cyber. Therefore, we need to make our forces, forward bases, logistics networks, and C4ISR networks more survivable, resilient, and geographically dispersed.

The United States must fortify key overseas bases, while also moving towards a more distributed model of “places not bases.” Key forward bases that sit at the outer edge of China’s threat ring will still be critical for staging and logistics. However, the military services will increasingly rely on smaller, distributed, more agile force packages to operate within the densest Chinese A2/AD threat rings. These forces, working with allies and partners, will provide temporary bases and resupply for forces in the area as well as more distributed fires to further complicate adversary planning.

Enabling our allies and partners to better defend their own sovereignty and serve as critical force multipliers necessitates a more strategic approach to security cooperation. This should begin with a clear-eyed assessment of what each partner country can contribute, followed by the development of multi-year security cooperation plans for each country and the region – laying out what capabilities we collectively need to deter coercion and aggression. One low-cost, high-value opportunity is to invest in AI-enabled systems that fuse unclassified data streams to identify, track, and characterize the behavior of ships at sea or aircraft in the air; such unclassified systems exist today and can be easily shared with partners to dramatically improve their situational awareness.

Sixth, the Department should align its efforts around shoring up near-term vulnerabilities that undermine deterrence even as we invest in longer-term technological and organizational innovations. As I’ve noted, I believe that the next five to ten years will prove the most

challenging and determine the course of U.S.-China relations for many decades to follow. In the near term, the United States must work with greater urgency to close this vulnerability gap by re-configuring current platforms with new technological enablers, re-evaluating our “reveal or conceal” posture to demonstrate resolve, re-investing in building ally and partner capacity, and fortifying vulnerable forward bases while establishing new places from which we can operate when needed. Long-term superiority, however, will require fundamental shifts in technological capability, operating concepts, and force posture.

Seventh, the Department must be more active in setting norms and standards for emerging technologies and in participating in security dialogues, in order to show the U.S.’ commitment to the rules-based order. In the absence of a concerted U.S. effort to set norms and standards in emerging technology areas, China has begun filling the void. For example, establishing norms of behavior in cyberspace would bolster deterrence by setting collective expectations and enabling collective action when red lines are crossed. In addition, the U.S. needs to do a better job of leading in key regional fora, like the East Asia Summit and various ASEAN fora. Lastly, the U.S. should reestablish a strategic dialogue with China that is led by the State Department and includes other players like the Departments of Treasury, Commerce and Defense. We need to have a clear strategy and whole of government engagement with China to advance it.

Conclusion

In conclusion, strategic competition with China is more than a military contest – it has economic, technological, political, and ideological elements the United States must not neglect. The actions we take in the next few years could not be more critical. They must be driven by a broader strategic vision of the core values and interests we seek to protect. The United States must maintain its unique leadership role as a force for good in the world -- a defender of democracy, human rights, and the rules-based international order. The United States must maintain its ability to leverage all instruments of national power, not only defense, but also diplomacy, development, and economic influence. Only by harnessing all of these levers can the United States demonstrate the resolve and capability to compete effectively on the world stage, deter war among the great powers, defend our interests, allies and partners, and, if necessary, fight and win in a far more challenging future.

Within this larger context, the Department of Defense’s role is central: the Department needs to make urgent investments in its technological capacity and new operational concepts, redouble its commitment to allies and partners, and take consistent actions to protect and adapt the rules-based international order. Speed is of the essence, and we are not moving fast enough given how rapidly the challenges we face are evolving.

In the course of this competition, there will be temptations to take actions that distract from our foremost objectives. Being drawn into an avoidable conflict in the Middle East, for instance, would have a substantial impact on DoD’s ability to stay focused on this strategic competition.

We must calibrate our aims with our resources and focus on the most consequential long-term challenge we face as a nation: the strategic competition with China.