

# Risky Business Future Strategy and Force Options for the Defense Department

Stacie Pettyjohn, Becca Wasser, and Jennie Matuschak



#### **About the Authors**



**Stacie Pettyjohn** is a senior fellow and director of the Defense Program at the Center for a New American Security (CNAS). Her areas of expertise include defense strategy, posture, force planning, force presentation, security cooperation, and wargaming. Prior to joining CNAS,

Pettyjohn spent over 10 years at the RAND Corporation as a political scientist. From 2019–2021, she was the Director of the Strategy and Doctrine Program in Project Air Force. From 2014–2020, she served as the co-director of the Center for Gaming at the RAND Corporation. She has designed and led strategic and operational games that have assessed new operational concepts, such as multi-domain operations (MDO); tested the impacts of new technology, such as human-machine collaboration and combat teaming; explored unclear phenomena, such as gray zone tactics and information warfare; and examined nuclear escalation and warfighting. Previously, she was a research fellow at the Brookings Institution, a Peace Scholar at the United States Institute of Peace, and a TAPIR fellow at the RAND Corporation.



**Becca Wasser** is a fellow in the Defense Program at CNAS. Her research areas include wargaming, force posture and management, and U.S. defense strategy. She is also an adjunct instructor at the School of Foreign Service at Georgetown University, where she teaches an

undergraduate course on wargaming. Prior to joining CNAS, Wasser was a senior policy analyst at the RAND Corporation. In this role, she designed and led wargames for the U.S. Department of Defense and U.S. Army, and led research projects exploring critical national security and defense issues for the U.S. Department of Defense, U.S. Army, U.S. Air Force, and the U.S. Department of State. She also served as a liaison to U.S. Army HQDA G-3/5/7. Previously, she was a research analyst at the International Institute for Strategic Studies (IISS), based jointly in Washington, D.C., and Manama, Bahrain.



Jennie Matuschak is a research assistant for the Defense Program at the Center for a New American Security (CNAS). Previously, Matuschak served as a Joseph S. Nye, Jr. intern for the Middle East Security Program at CNAS. Prior to joining CNAS, she worked as a research intern

for the Enabling Peace in Iraq Center (EPIC) where she monitored security, political, economic, and humanitarian affairs in Iraq. She has also interned with the Middle East Policy Council and the House of Representatives. Matuschak graduated summa cum laude and Phi Beta Kappa from Bucknell University with a BA in history and a minor in Arabic. In 2018, she studied Arabic and Middle Eastern politics in Amman, Jordan. Her research interests include Iraq, Iran, Israel-Palestine, and U.S. policy in the Middle East. She is proficient in Arabic, Spanish, and French.

#### **About the CNAS Defense Program**

Over the past 10 years, CNAS has defined the future of U.S. defense strategy. Building on this legacy, the CNAS Defense team continues to develop high-level concepts and concrete recommendations to ensure U.S. military preeminence into the future and to reverse the erosion of U.S. military advantages vis-à-vis China, and, to a lesser extent, Russia. Specific areas of study include concentrating on great-power competition, developing a force structure and innovative operational concepts adapted for this more challenging era, and making hard choices to effect necessary change.

#### **Acknowledgments**

We thank our Decision Science partners at Govini, Jim Mitre, Billy Fabian, Mike Cadenazzi, and Andrew Maclary, with whom we developed the three force structures enumerated in this report. We likewise are deeply grateful to Andrew Metrick and other tabletop exercise participants for contributions to these discussions, and all of the above for their time, insights, and creativity. We thank Molly Parrish for her help reviewing many drafts; Hannah Dennis and Ripley Hunter for their invaluable research support; and Maura McCarthy, Emma Swislow, and Rin Rothback for their assistance with editing and design.

# **TABLE OF CONTENTS**

01	Executive Summary
02	Introduction
03	Strategic Priorities
04	Three Alternative Biden Administration Defense Strategies
12	Assessing Alternative National Defense Strategies
21	Deciphering the FY22 Budget and

**Looking Ahead to FY23** 

Conclusion

26

#### **Executive Summary**

espite the overarching strategic priorities laid out by the Biden administration and initial indicators provided by the Department of Defense (DoD), it is unclear how the next National Defense Strategy (NDS) will prioritize threats and the primary role of the U.S. military. Will the DoD clearly preference China (and to a lesser extent Russia)? Or will it hedge and try to more equally meet the expanded list of threats detailed in the *Interim National Security Strategic Guidance*? Is the Pentagon's priority to compete below the threshold of armed conflict, or is it to prepare to defeat a great-power adversary in a large-scale war to strengthen deterrence? Answering these questions is critical to developing a clear strategy that emphasizes the right priorities, activities, and resources.

To consider the next defense strategy and the tradeoffs associated with different options, we developed three possible strategies—high-end deterrence, day-to-day competition, and full-spectrum competition—that alter the factors highlighted above and reflect the Biden administration's stated priorities.

Our analysis of the Fiscal Year (FY) 2022 budget indicates that the DoD is trying to do more than constrained budgets can support over the next few years and is moving toward what we term as a strategy of "full-spectrum competition." It appears as if the Biden administration is pursuing a strategy that seeks to strike a balance between competing in the near term while still enhancing preparedness for great-power conflict, as well as hedging against a range of threats and mitigating risk over time. The forces and posture that are necessary for this competition are quite different from those that are needed to defend against a conventional fait accompli attack by China on Taiwan or Russia on the Baltics. It is unlikely that the United States can build a force that can achieve both of these objectives with the current topline.

Our testing of the budget-constrained force associated with the full-spectrum competition strategy finds that it could not successfully fulfill its two primary aims: defeating sub-conventional aggression and Russian and Chinese gray zone tactics, and building a force capable of defeating a great-power adversary attack on its neighbor. Moreover, this strategy risks significant overstretch, the potential for long-term technological overmatch, and inadvertent escalation.

The other two strategies focus on China, but dayto-day competition emphasizes the daily military contest with Beijing and the threat of sub-conventional conflict, while high-end deterrence focuses on defeating conventional aggression and achieving a long-term military technological advantage. The day-to-day competition strategy would lose a high-end conflict in East Asia and Europe; it also would fail to halt or overturn sub-conventional land grabs. The competition strategy bets that a large and visible force that actively contests daily military provocations will deter both sub-conventional and conventional aggression, even if the force is not capable of stopping either type of attack. The risk that this assumption fails grows over time because this strategy forgoes investments in advanced technologies, while China and Russia are rapidly seeking to wrest the military technological advantage from the United States. There are also significant escalatory risks associated with an approach that regularly and assertively contests Chinese and Russian forces. We conclude that it is unlikely that competition can be won by the military, even one optimized to face this challenge.

More optimistically, our analysis suggests that it is possible to build a force capable of winning one big conflict and overturning sub-conventional aggression with this topline—but only if the department is willing to accept some near-term risk in competition, against other threats, and in other regions. The high-end deterrence strategy mitigates the temporal risk by making near-term improvements in combat capabilities, including expanding stockpiles of preferred long-range munitions, investments to improve the resiliency of U.S. posture in the Indo-Pacific and Europe, and additional investments in cyber and electronic warfare capabilities. It also relies on frontline allies and partners to be responsible for the daily competition.

We assert that the high-end deterrence strategy is the best path forward, but it requires a better delineation and ranking of threats and responsibilities for the joint force and strategic discipline over the long run. Congress must also support this strategy and allow the Defense Department to make the hard choices, such as cutting capacity and retiring weapons systems, that are required to rebalance the force for this mission and to sustain its military technological advantage over the long run. Senior Pentagon leaders will need to partner with Congress to help them understand how specific changes are connected to higher order objectives.

It is important to note that the FY22 budget is largely an inherited one and the Biden administration is making some significant investments that align with a high-end deterrence strategy. Nevertheless, the 2022 NDS and the FY23 budget will need to accept more risk and further prioritize to prepare the force for the most challenging

1

and consequential threats. If the Biden administration does not make these hard choices or Congress refuses to support this strategy, the chasm between U.S. strategic and military objectives and the costs of achieving them will only grow significantly. Trying to do too much is a risky business that could result in the United States losing its military technological edge and, ultimately, a war against a great power.

#### Introduction

The Biden administration is in the process of updating the National Defense Strategy (NDS) and has just submitted the President's Fiscal Year (FY) 2022 Budget request. The NDS identifies priority threats and missions and links these to the size and shape of the force that is required to satisfy these tasks, which in turn drives resourcing. President Joe Biden has outlined the broad contours of his administration's strategy, which are "leading first with diplomacy" and only using military force "when the objectives and mission are clear and achievable" and as a "last resort." The Biden administration also has elevated the threats of climate change and biothreats, while retaining the 2018 NDS's focus on China as the pacing nation-state threat. Although some senior national security officials have outlined their priorities and the Biden administration has issued an Interim National Security Strategic Guidance (interim NSS), these do not substitute for a fully vetted and comprehensive defense strategy.

Questions remain about the prioritization of different threats and missions and the force-sizing construct that accompanies the 2022 NDS. Does the Biden administration maintain an exclusive focus on China or does it elevate other threats? Even if it remains focused on China, does it focus on strengthening conventional deterrence and warfighting or does it also focus the DoD on competing below the threshold of conventional conflict?

This paper considers several alternative strategies that the Biden administration could adopt, determines how they could be resourced given a flat topline defense budget, and identifies the strengths and weaknesses of each approach. We develop a framework to assist with NDS implementation and use it to explore the direction the FY22 budget suggests that the administration is going in. This framework helps with policy oversight, which asks the fundamental question of whether the DoD is spending its money in a way that it is likely to achieve its goals.<sup>2</sup> Such a framework should help policymakers evaluate the alignment of future defense budgets and the 2022 NDS.

To conduct this type of strategy oversight, the following must be considered: what are the priority threats identified by the strategy? What missions and operations does the joint force need to be able complete to counter these threats? Finally, how does a program enable the execution of these missions? The 2018 NDS, for instance, made "inter-state strategic competition—not terrorism," especially competition with China and Russia, "the primary focus of U.S. national security." Specifically, the U.S. military's goal was "preserving the status quo by favorably managing escalation to win limited wars" by "defeating the other side's theory of victory, and particularly the fait accompli strategy."4 Defeating a Chinese invasion of Taiwan, for instance, would require successfully executing a number of critical missions, such as identifying, targeting, and damaging or destroying ships in a contested environment.<sup>5</sup> The succeeding defense budgets should have made investments in capabilities that allowed the joint force to rapidly close kill chains and sink ships in a denied environment.6

### Just as previous administrations have failed to sufficiently link resources to strategy, the Biden administration is in danger of this misstep.

Just as previous administrations have failed to sufficiently link resources to strategy, the Biden administration is in danger of this misstep. While the FY22 defense budget request illuminates some of the Biden administration's likely areas of emphasis, subsequent budgets must be more strongly linked to the new strategy and lay the groundwork for the execution of this new guidance.

We analyze the different directions that the next NDS may go and what each of these paths would mean for joint force structure and the budget. As a first step in this process, we developed three alternative defense strategies. Although all three alternatives align with the strategic priorities articulated by the administration thus far, they differ in several key dimensions. These alternatives are ideal type strategies that are designed to illustrate clear distinctions among potential priorities to illuminate tradeoffs. From these ideal type strategies, we developed representative force structures that are budget neutral, but tailored to counter the threats emphasized in that particular strategy. Next, we tested the three force structures using tabletop exercises (TTXs) focused on

high-end warfighting and sub-conventional conflict scenarios against China and Russia to see how they fared and to identify the strengths and weaknesses of each approach. We developed the alternative strategies and ran the TTXs with our Decision Science partners at Govini, although we each reached our own conclusions from these events.

In reality, there is often a wide gulf between an articulated strategy and its execution. It is particularly challenging to digest something as complicated as the U.S. defense budget, let alone align it with a defense strategy. To help identify areas where a budget may stray from the strategy's expressed goals, we developed a framework with budgetary signposts that indicate that the strategy is moving in a certain direction. One can use this structure to evaluate whether and how future budgets support the 2022 NDS to ensure that resources are being aligned in a way that implements the strategy. We conclude with clear recommendations for strategy development, force design, and resourcing requirements.

#### **Strategic Priorities**

The new administration has already offered a sketch of its strategic vision in a number of speeches and in the interim NSS. A core tenant of the interim NSS is that "diplomacy, development, and economic statecraft should be the leading instruments of American foreign policy," while a powerful military is a tool of last resort. Additionally, the administration has adopted an expanded view of national security, in which domestic policy and foreign policy are inextricably linked.8 According to this view, domestic policy concerns such as racial inequality, anti-democratic movements, and economic challenges to the working class are critical drivers of American security.9 With this logic, shoring up American power through domestic economic prosperity and democratic renewal enables the United States to model democratic values, work with allies and partners, and counter authoritarian regimes to "lean forward, not shrink back."10

The Biden administration has also taken an expanded view of security challenges. Officials have cited transnational threats that "respect no borders or walls," such as COVID-19 and climate change, as top challenges with which the United States and its partners will have to contend. The rise of authoritarian populism and shifts in the balance of power fueled in part by rapidly changing technology have made continued strategic competition with China and, to a lesser extent, Russia a priority. Already, China has emerged as the key threat

for the administration, and China's autocratic government poses an ideological challenge to the United States' democracy. <sup>13</sup> The administration has also cited regional adversaries, in the form of state and non-state groups, as continued threats. <sup>14</sup>

Taken altogether, the Biden administration has adopted an expanded and holistic view of security threats and sources of American power. In an effort to make that shift, the administration is pursuing a "diplomacy first" strategy. 15 This strategy requires renewing alliances and partnerships and joining international institutions, while placing military power in support of diplomacy and other soft power tools. The Biden administration's interim NSS highlights a key role for the DoD: "Promote a favorable distribution of power to deter and prevent adversaries from directly threatening the United States and our allies, inhibiting access to the global commons, or dominating key regions."16 This suggests that the priority mission of the U.S. military is to protect the U.S. homeland and to compete against and deter great-power adversaries, while maintaining U.S. commitments to allies and partners.

U.S. Department of Defense officials, including Secretary of Defense Lloyd Austin, have reinforced this approach. The DoD has cited China as the department's "pacing challenge," which guides the development of capabilities, concepts, and plans to retain U.S. military advantages.<sup>17</sup> The DoD has reiterated the need for the U.S. military to respond to transnational challenges and "credibly deter" state and non-state threats, as well as compete against these actors under the threshold of conflict.<sup>18</sup> The inclusion of transnational threats, such as COVID-19 and climate change, has elevated additional missions to the DoD and U.S. military beyond traditional warfighting responsibilities. However, given the unique role of the DoD within the interagency, the U.S. military will be expected to respond to emerging military threats and deter China and, to a lesser extent, Russia.<sup>19</sup>

Responding to these challenges requires modernizing conventional forces, investing in cutting-edge technology, and fielding new capabilities and technologies to maintain the United States' slipping military technological edge. The administration has also recognized the need to maintain the nuclear triad and intends to review ongoing nuclear modernization programs in order to counter top U.S. rivals. Moreover, the DoD is pursuing new warfighting concepts and altering posture to enhance its ability to compete with and deter adversaries. 22

The development of a new U.S. National Defense Strategy is underway. Already, there are some aspects of this strategy that can be discerned from DoD officials. Deputy Secretary Kathleen Hicks has noted some continuity with the 2018 NDS, but that the 2022 NDS would address the China challenge more distinctly than the threat posed by Russia and address new threats such as climate change.<sup>23</sup> Additionally, Undersecretary of Defense Colin Kahl has touted "integrated deterrence" as the cornerstone of the forthcoming NDS.<sup>24</sup> In line with the interim NSS guidance and the Biden administration's priorities, integrated deterrence is framed as a whole-of-government approach that spans the diplomatic, information, military, and economic (DIME) spectrum. It also spans across competition and conflict, and integrates all domains, to include space, cyber, and information, as well as allies and partners.<sup>25</sup> From the military angle, this approach not only relies on developing and testing cutting-edge weapons and technologies, but also combines with them the right existing capabilities to achieve an effective mix of systems to deter adversary aggression.26

Despite the overarching strategic priorities laid out by the Biden administration and initial indicators provided by the DoD, it is unclear how the next NDS will handle two critical questions. The first question addresses the prioritization of threats—will the DoD clearly prioritize China (and, to a lesser extent, Russia) over other threats, or will it hedge and more equally prioritize across the expanded list of threats detailed in the interim NSS guidance? The second question examines the primary role for the DoD—is it to compete below the threshold of armed conflict, or is it to prepare the force to defeat a great-power adversary in the event of conflict, should deterrence fail? Answering these questions is critical to developing a clear strategy that emphasizes the right priorities, activities, and resources.

# Three Alternative Biden Administration Defense Strategies

The NDS should directly influence and alter the size, shape, and capabilities of the U.S. military to meet the demands of the strategic guidance. U.S. national defense strategies, congressionally mandated to be produced every four years to align with a change in administration, have historically differed in two key dimensions: the prioritization of threats and the primary role of U.S. military forces.<sup>27</sup> These two dimensions are inextricably linked and coalesce in the strategy's force planning construct, which identifies the conflicts (the "threats" dimension of the equation) that the U.S. military should prepare for, and determines how the DoD should size and shape

forces to face these challenges (the "role" dimension).<sup>28</sup> The force planning construct sets the benchmark used to assess whether U.S. military forces can carry out the priority missions directed by the strategy. In turn, this analysis informs the changes in force structure needed to fulfill the strategy's objectives and informs budget development.<sup>29</sup>

For most of the post-Cold War era, U.S. defense strategies and force planning constructs called for a conventional force that was large enough to fight and win at least two overlapping major regional wars. The specific composition of these demands changed over time and some strategies were more or less ambitious than others as they added or subtracted requirements for peacetime "shaping," counterterrorism, and stabilization operations.<sup>30</sup> Given this, it is unsurprising that despite the changes to the margins of these strategies, the size and shape of the U.S. military remained remarkably static between 1993 and 2014.31 This legacy force structure is ill-suited to the demand of fighting and winning against a great-power adversary, and managing the complexity of the current strategic environment. Because of the two-war construct, "the United States now fields forces that are, at once, larger than needed to fight a single major war, failing to keep pace with the modernizing forces of great power adversaries, poorly postured to meet key challenges in Europe and East Asia, and insufficiently trained and ready to get the most operational utility from too many of its active component units."32

The 2018 NDS heralded a shift in approach, as it highlighted China and Russia as the predominant threats and prioritized great-power competition and preparedness for potential future conflict against another great power.<sup>33</sup> It also created "the great power war" force planning construct, which prioritized having sufficient capability and capacity to win a conventional war against one adversary by defeating aggression in a contested environment.34 In particular, the 2018 NDS espoused a theory of deterrence that depended on "rapidly delaying and degrading or ideally denying China or Russia's ability to impose the fait accompli on, for instance, Taiwan or the Baltics."35 This force planning construct sought to rectify force structure deficiencies and shift from retaining capacity to developing the right capabilities in sufficient quantity to win one future great-power conflict.<sup>36</sup> However, in doing so, it lowered the joint force's ability to fight and win two simultaneous wars and instead adopted the lower standard of deterring opportunistic aggression.

To date, the implementation of the 2018 NDS has been varied at best, but long-term changes to force structure to

prepare for great-power conflict have borne some fruit, albeit less than one may have hoped.<sup>37</sup> In part this is due to the fact that while the 2018 NDS clearly prioritized high-end deterrence, it also stressed the "reemergence of long-term strategic competition"38 with China and Russia. Identifying competition as a priority mission while not clearly defining it enabled different parts of the DoD to justify their preferred programs by tying them to this more ambiguous and expansive concept of rivalry.<sup>39</sup> Using the term great-power competition helped awaken the DoD, and the U.S. government more broadly, to the wide-ranging actions that China and Russia are taking to hurt American interests. It also broke the United States out of the mindset that there is a binary and clear distinction between war and peace.<sup>40</sup> Yet the insertion of great-power competition also created a broad mission for the DoD that contended with preparing for high-end conflicts with China or Russia.

Yet the insertion of greatpower competition also created a broad mission for the DoD that contended with preparing for high-end conflicts with China or Russia.

In this paper, we define day-to-day competition as efforts by a rival to improve its relative power or influence while avoiding retaliation, escalation, or third-party intervention.<sup>41</sup> Competition, therefore, is a contest that takes place below the conventional level of conflict.

Competition may be non-violent, such as disinformation campaigns or the imposition of trade restrictions, or it may entail the threat or use of violence by paramilitary units or military forces to harass, intimidate, or coerce a target. <sup>42</sup> It is further important to distinguish day-to-day competition—the persistent low-level forms of gray zone tactics that China and Russia use to challenge the U.S.-led international order—from sub-conventional aggression—attempts to expand territorially without provoking a full-scale conventional conflict.

The initial indications from the Biden administration suggest the 2022 NDS will have some continuity with elements of the 2018 NDS. However, it is an open question as to whether the DoD will maintain the overriding focus on China and a force planning construct that centers on winning a single great-power war. President Biden has emphasized several newly prioritized threats and associated missions for U.S. forces, meaning the administration may modify the 2018 force planning construct to better reflect its prioritization of threats and roles for U.S. military forces, which may alter force structure and, in turn, require resource investments and budgetary tradeoffs.

To think through the possible content of the next NDS and the tradeoffs associated with these different options, we developed three possible strategies that reflect the Biden administration's stated priorities. Each strategy altered the two variables highlighted above as key differentiators of defense strategies—the prioritization of threats and the primary role for U.S. military forces identified within the strategy. See Figure 1 for an illustration of these strategies.

FIGURE 1: FRAMEWORK FOR THE THREE IDEAL TYPE DEFENSE STRATEGIES



To test these different strategies, we built out the concomitant force structures that aligned with each strategy and made trades within this budget across the next five years (FY 2023–FY 2028). We then tested the resulting U.S. force structures in a series of tabletop exercises set in the year of 2030. Because the Biden administration appears disinclined to spend more on defense, our force structures are budget neutral, in the sense that we adhered to the FY22 topline.

To design the force, we created unique force planning constructs for each alternative strategy that helped us develop joint force structures tailored to the military objectives detailed in each strategy. Our force planning constructs do not include the full range of the DoD's missions and force requirements, but rather emphasize the priority missions and primary drivers of force structure. They, therefore, are partial force planning constructs that would need to be further developed to be truly comprehensive. Investments in new capabilities and forces required divestment of existing capabilities and forces, and enhancing existing capabilities and forces required similar trades. This exercise enabled us to explore whether the Biden administration could make enough trades within the existing topline to build a force that could achieve its goals. These strategies, force planning constructs, and force structures are detailed below.

#### Strategy I: High-End Deterrence

#### **SNAPSHOT**

- Strategy: Deter conventional aggression by greatpower adversaries (China and, to a lesser extent, Russia) by denial while enhancing preparedness for potential future conflict.
- Force Planning Construct: Prioritize China, sustain focus on Russia, and accept risk against regional adversaries and other threats.
- Force Structure: Modernize conventional capabilities that enhance denial strategies and advance the U.S. military technological edge in the long term; in the near term, improve the resiliency of posture in the Indo-Pacific, place upgraded heavy U.S. Army ground forces in eastern Europe, and buy large quantities of long-range anti-ship, anti-surface, anti-radiation, and anti-armor area-effects munitions.

This strategy requires the DoD to design and deploy forces to bolster deterrence by denial by being prepared to prevail in conventional conflict, should deterrence fail.<sup>43</sup> In particular, the joint force needs to be able to defeat a fait accompli, such as a Chinese attack on Taiwan or a large-scale Russian attack into the Baltics, by stopping the invasion forces before they achieve their objectives. This strategy recognizes that absent significant changes to joint force capabilities and operational

The first strategy requires the DoD to design and deploy forces to bolster deterrence by denial by being prepared to prevail in conventional conflict, should deterrence fail.

concepts, the U.S. military could lose its military technological edge and a large-scale war against a great power.<sup>44</sup>

The Biden administration's relegation of military power to a supporting role creates a clear division of labor for the DoD, where the top priority of the military becomes deterring great-power adversaries and preparedness for high-end conflict—a role that only the U.S. military can fulfill within the interagency.<sup>45</sup> The logic of this approach is that peacetime competition is not the military's bailiwick, and that other agencies and departments are better poised to counter adversary political, economic, and informational coercion than the DoD.46 Moreover, countering day-to-day military competition imposes tremendous costs on the United States because its saps the joint force's readiness and diverts resources from modernization to operating and maintaining increasingly costly weapons systems. According to this view, trying to compete day-to-day is self-defeating because the United States is unlikely to be able to compel China or Russia to cease its low-level forms of military harassment and by attempting to do so, it leaves the joint force incapable of stopping large-scale aggression.

This strategy is centered on rebuilding the U.S. military's preparedness for war against another great power by reducing the current operations tempo. Readiness no longer means that forces are ready to deploy, but instead that they are trained and equipped to engage in high-intensity combat operations in degraded environments.<sup>47</sup> Investments in long-term readiness would focus on stockpiling munitions and spare parts required for high-end warfighting. Rigorous all-domain training in

contested and degraded environments would enhance joint force readiness and would provide opportunities to iteratively develop and refine new warfighting concepts.

To achieve this strategy with constrained resources, the DoD would trade conventional capacity and nearterm readiness in favor of modernization. The overall size of the force would shrink, and the DoD would divest of weapons that are not critical to fighting a war against China or Russia. Consequently, this strategy accepts risk in the near term against threats other than a conventional war with China and Russia, and against the possibility of having to engage in multiple simultaneous operations. To mitigate the near-term risk of an opportunistic Chinese or Russian attack, this approach makes improvements to U.S. posture in the Indo-Pacific and European theaters to make it more survivable and combat credible.<sup>48</sup> Specifically, it would forward posture heavy ground forces in eastern Europe to halt a Russian invasion while prioritizing investments in passive base defenses in the Indo-Pacific.<sup>49</sup> It also closes some critical capability gaps by fielding mobile air defenses for maneuver units and builds up stockpiles of standoff preferred munitions, including long-range anti-ship cruise missiles, anti-radiation missiles, anti-surface missiles, and anti-armor area-effects weapons.<sup>50</sup> Longer-term modernization efforts include investing in potentially game-changing technologies such as autonomous systems, AI-assisted decision-making, and directed energy active defenses.<sup>51</sup> Despite the focus on conventional warfighting, this strategy fully funds the modernization of the nuclear triad and nuclear command and control systems.

#### FORCE PLANNING CONSTRUCT: WIN ONE BIG ONE

The force planning construct associated with this strategy emphasizes deterring great-power war against China and Russia by preparing to defeat a territorial fait accompli. The construct explicitly prioritizes preparedness for war over peacetime competition. It adopts a deterrence by denial warfighting strategy where, should deterrence fail, U.S. forces would be prepared to defeat a Chinese or Russian invasion of a neighboring country. While the construct focuses on both great-power adversaries, it *prioritizes* the China challenge and seeks to *sustain* the status quo in Europe vis-à-vis Russia. It balances this by recognizing the different capabilities required for the two theaters, asking the U.S. Army to concentrate on Europe while the U.S. Air Force, U.S. Navy, and U.S. Marine Corps focus on the Indo-Pacific.<sup>52</sup>

Under this force planning construct, the joint force does not have the capacity to posture many forces in

secondary theaters. As a result, this force planning construct *accepts risk* in theaters outside of the Indo-Pacific and Europe, and against regional adversaries and terrorists. U.S. Special Operations Command (SOCOM) remains about the size that it is today and focuses on sustaining pressure on terrorist organizations. Of the three strategies discussed here, this force planning construct most closely resembles the one war force planning construct of the 2018 NDS.

#### **FORCE STRUCTURE**

Significant changes need to be made to the current U.S. force structure to build a force optimized for a conventional great-power war. To fulfill this strategy, the Army rebalances its force mix and enhances its heavy armored units by equipping them with additional air defenses, longer-range organic tube and rocket artillery, and other key enablers (e.g., electronic warfare and bridging capabilities). These heavy forces would be forward postured in eastern Europe along with a multi-domain task force (MDTF) with longer-range missiles. Two MDTFs are based in the Indo-Pacific, equipped with mid-range capability and hypersonic missiles. To resource changing its force composition and capabilities, the Army reduces its force size (to include cannibalizing several brigade combat teams), halts several modernization programs or reduces the planned purchase of capabilities deemed not essential to deterrence by denial, and ends operations in the U.S. Central Command (CENTCOM) area of responsibility.

The Navy shifts away from a fleet comprised of large surface combatants to a more distributed architecture with smaller surface ships, like frigates and light amphibious ships, and logistics ships. This force places a greater emphasis on the undersea domain, which means it continues to build attack submarines and invests in a range of unmanned undersea vehicles (UUVs), which would be based in the Indo-Pacific. It also makes some investment in unmanned surface vessels (USVs). To fund these investments, the Navy reduces the size of its carrier fleet, retires its guided missile cruisers and littoral combat ships, and reduces the frequency and duration of deployments to preserve readiness. To counter China's anti-access/aerial denial threat to these forces, the Navy buys more long-range air- and sea-launched anti-ship cruise missiles, air defense missiles, and anti-radiation missiles.

The Marine Corps adhere to its Force Design 2030 by reducing its end strength and developing Marine Littoral Regiments intended to be the "stand in force" in the Indo-Pacific. These Marine regimes are equipped with anti-ship cruise missile batteries and mobile short-range air defenses. The Marine Corps significantly reduces its planned buy of fixed wing, rotary wing, and tiltrotor aircraft, instead choosing to invest in more capable unmanned aerial vehicles for reconnaissance.

The Air Force significantly reduces its current fighter fleet, decreasing its planned fighter buys and retiring older fighter aircraft, like F-15C/Ds, so that it can pursue the Next-Generation Air Dominance program. It also retires older unmanned aerial systems (UAS) and largebody intelligence, surveillance, and reconnaissance (ISR) aircraft. With the resources freed up by these retirements, the Air Force accelerates the development of the B-21 bomber, invests in developing a targeting mesh of attritable UAS, a penetrating ISR aircraft, and increases its stockpiles of long-range anti-radiation, anti-ship, anti-surface, and area-effects missiles. It also develops a new longer range and more capable air-to-air missile as well as a mid-range (150-200 nautical mile) land attack and anti-ship missile that can be internally carried by F-35s and B-21s. This increases the capability of shortrange low observable aircraft to launch strikes from outside of the worst threat rings and also would improve the capability of the carrier air wing if the U.S. Navy were to adopt it. Finally, the Air Force also invests in air base resiliency, particularly a mix of passive defenses in the Indo-Pacific, to improve the survivability of its forward postured forces. The Space Force reduces its investments in high-value at-risk space assets and concentrates on fielding more resilient satellite architectures, including proliferated low earth orbit small satellite constellations.

#### Strategy II: Day-to-Day Competition

#### **SNAPSHOT**

- Strategy: Compete against great powers (China and, to a lesser extent, Russia) on a daily basis to deter sub-conventional and conventional aggression.
- Force Planning Construct: Prioritize the Indo-Pacific and European theaters; create a smaller presence in the Middle East, Africa, and Arctic; and accept risk in preparing for future great-power conflict.
- Force Structure: Purchase capabilities that enable persistent presence today; expand U.S. Navy and Air Force capacity.

This strategy considers day-to-day competition and sub-conventional conflict with China and Russia as

the primary threat to the U.S.-led international order. According to this perspective, China and Russia are slowly changing the status quo through increasingly sophisticated and persistent gray zone tactics below the threshold of war. The underlying assumption of this strategy is that a large-scale conventional war among great powers is plausible but unlikely. Conversely, China and Russia are challenging the United States daily and thus, sub-conventional aggression is certain. Moreover, if the United States fails in this sub-conventional conflict, conventional deterrence will be weakened as China and Russia will question the willingness and ability of the United States to uphold the territorial status quo. As a result, this strategy concludes that great-power competi-

The second strategy considers day-to-day competition and sub-conventional conflict with China and Russia as the primary threat to the U.S.-led international order.

tion is won or lost within the domain of day-to-day gray zone operations, and it prioritizes capacity and current capabilities over long-term modernization.<sup>53</sup>

Forward presence is a key component of this strategy, as it demonstrates the United States' ability and willingness to contest Chinese and Russian sub-conventional aggression. This, in turn, supposedly strengthens conventional deterrence. The strategy stresses air- and maritime-centric presence operations in the Indo-Pacific and maintains lighter Army units to coordinate with allies and partners across the globe, while Marine forces would continue their traditional role as a global crisis response force. This emphasis on presence maintains a high operational tempo for the joint force and requires a steady stream of units continuously ready to deploy to the two priority theaters, as well as show the flag in other regions to counter Russian and Chinese influence. The purpose of persistent presence is to contest and deter further sub-conventional behavior, which requires close monitoring of Chinese and Russian actions through ISR operations and capabilities, as well as the ability to respond to hostile actions that challenge other countries' sovereignty or their right to operate in international waters and airspace. This may involve patrolling skies and seas and interdicting aircraft or ships that behave aggressively.

This strategy leverages partnership building, particularly with like-minded democracies, in line with the Biden administration's ideological framing of competition with China and Russia.<sup>54</sup> These partnerships foster burden-sharing and intelligence sharing in an effort to uphold a democratic international order. Operationally, the joint force will work with allies and partners to enhance their ability to respond to Chinese and Russian provocations.

In the context of a budget-constrained environment, this presence-centric strategy prioritizes expanding the capacity of the joint force to contest the daily sub-conventional conflict by acquiring already fielded weapons systems over investments in high-end technologies and modernization that could offer the United States a military technological edge in the future. As a result, this strategy expands existing conventional force structure with an emphasis on a range of manned surface ships, combat aircraft, and light ground forces. It also reallocates resources from nuclear modernization to conventional procurement by cancelling the long-range standoff weapon and retires low-yield submarine-launched ballistic and cruise missiles.

## FORCE PLANNING CONSTRUCT: WIN THE SUB-CONVENTIONAL FIGHT TODAY

The force planning construct associated with this strategy emphasizes actively countering Chinese and Russian sub-conventional activities that undermine U.S. interests on a daily basis, especially in the Indo-Pacific and European theaters. It also calls for the capacity to compete with China and Russia in other theaters. The construct posits that great-power conflict is unlikely and can be adequately prevented through vigorous shaping operations. Thus, it accepts that it cannot implement a warfighting strategy of denial and instead adopts a strategy of punishment.

This force planning construct lowers the level of ambition in that the joint force is no longer required to prepare to stop conventional aggression by halting an invasion. However, it raises the standard in that the joint force must now be prepared to compete *globally*, as opposed to solely in the Indo-Pacific and Europe. By prioritizing day-to-day competition and sub-conventional conflict, this force planning construct accepts risk at the conventional level and in the long-run because it does not invest in retaining the U.S.'s military technological advantage.

#### **FORCE STRUCTURE**

As this strategy shifts readiness and operational tempo to meet day-to-day competition demands in Europe and the Indo-Pacific, its force structure prioritizes proven capabilities that can be fielded quickly and are capable of interdicting and attributing sub-conventional aggression committed by China and Russia. This strategy envisions a higher operational tempo with a large force structure to maintain or expand current end strength, particularly that of the U.S. Air Force and U.S. Navy. This strategy is predicated on a highly visible forward posture and active forward presence with forces routinely engaged in operations to counter Chinese and Russian influence. However, this strategy does not prioritize improving the resiliency of its posture or survivability of its force, as it assumes that if the United States effectively competes, great-power competition will remain below the threshold of war. Ultimately, the competition strategy puts in place a large tripwire force that is intended to deter conflict not by shifting the balance of power enough to stop an invasion, but to entangle the United States in a war and precipitate a larger intervention should one break out.55

Because this strategy prioritizes attribution, it invests heavily in cyber, information operations, and electronic warfare, specifically focusing on defensive cyber operations that support critical civilian infrastructure. U.S. Space Force supplements the U.S. military's overhead ISR capabilities by purchasing open-source satellite imaging as a service to ease the process of sharing and publicizing evidence of Chinese and Russian sub-conventional activities.

This strategy requires lighter and leaner ground forces that are ready for deployments overseas to engage with allies and partners and removes currently forward postured heavy Army forces from Europe. Army end strength and capability are the bill payers to maintain readiness and fund the expansion of U.S. fleets of aircraft and ships.<sup>56</sup> The U.S. Army incrementally upgrades its existing capabilities while reducing investments in modernization, including fielding fewer multi-domain task forces than planned, as well as smaller-than-planned purchases of important long-range fires. This lighter force works closely with partners and allies to improve their ability to compete. In addition to prioritizing dayto-day presence in Europe and the Indo-Pacific, the U.S. Army also maintains a presence in the Middle East and Africa.

This strategy expands the surface fleet so that it can visibly dominate the maritime domain, particularly in

# The full-spectrum competition strategy attempts to balance the ability to compete today and win the fight tomorrow without tilting too far in one direction.

the Indo-Pacific and the Arctic.<sup>57</sup> As such, the U.S. Navy, Marines, and Coast Guard units are frequently deployed overseas. Accordingly, the U.S. Navy maintains 11 carriers, continues to buy additional guided-missile destroyers and maritime surveillance aircraft, while investing in a larger fleet of smaller vessels, such as frigates, small-patrol craft, and counter-mining ships. Consequently, the U.S. Navy makes fewer investments in submarines and unmanned vessels. The U.S. Marine Corps remains a combined air-ground task force that is optimized for crisis response with a mixture of fixed wing, rotary wing, and tiltrotor aircraft and presence operations, instead of an expeditionary force built for sea denial.

Additionally, this strategy emphasizes the air domain. The U.S. Air Force invests in unmanned systems with improved sensors to contribute to persistent, long-duration ISR, as well as in a large, mixed fourth- and fifth-generation fleet of manned fighters to support presence missions, engage with allies and partners, and respond to Chinese and Russian provocations. To visibly demonstrate U.S. power and will to counter aggression, frequent rotations of bomber task forces will deploy around the globe.

#### **Strategy III: Full-Spectrum Competition**

#### **SNAPSHOT**

*Strategy:* Deter conflict with great powers by competing daily and preparing for war, while hedging against a range of threats.

- Force Planning Construct: Prepare for conventional war with China and Russia while competing globally; maintain sufficient capacity to respond to other threats.
- Force Structure: Preserve near-term capacity and readiness while investing in game-changing technologies and purchasing incremental improvements in fielded capabilities; leverage dynamic force employment to sustain global presence.

This strategy attempts to balance the ability to compete today and win the fight tomorrow without tilting too far in one direction. China remains the pacing threat and, at least rhetorically, the DoD's number one priority. But countering a revanchist Russia, terrorists

in the Middle East and Africa, climate change, and biothreats, all while containing North Korea and Iran, prevent a strict focus on Beijing. In part, this is in response to ongoing events in the world that demand a response, but this is also due to this strategy's equal emphasis on day-to-day global competition as well as preparing for high-end conflicts in the Indo-Pacific and Europe. As a result, this strategy supports the deployment of rotational forces to meet the geographic combatant commanders' requests to compete with China and Russia by being present and thus, reassuring allies and partners and deterring aggressors worldwide.

To achieve these goals, the full-spectrum conflict strategy attempts to preserve a moderate amount of near-term capacity, as well as to retain a reasonably high level of readiness across the joint force. Units are ready to deploy for contingency and presence operations, but this readiness is constantly being consumed as the operational tempo remains fairly high. This strategy reduces the Pentagon's footprint in the Middle East, but it retains a smaller continuous military presence that is supplemented with frequent but unpredictable deployments of expeditionary units, such as bomber task forces, carrier strike groups, and security force assistance brigades, to various locations throughout Central Command's area of operations. Regular rotations under the rubric of dynamic force employment also occur apace in the Indo-Pacific and, to a lesser extent, Europe to bolster deterrence in those theaters.

While managing these near-term challenges and the daily demands of a global great-power competition, the department recognizes the requirement to modernize both its conventional and nuclear forces. Toward this end, the administration invests a modest amount in advanced and potentially game-changing technologies, but research and development investments are constrained by the equally important desire to field a large force that is capable of stopping opportunistic aggressors. Thus, acquisitions are heavily weighted toward incremental improvements in fielded capabilities, rather than large investments in advanced technologies. In addition to mitigating near-term risk, the department chooses to replace legacy systems that are being retired with new capabilities so that its force is large enough to meet the demands of day-to-day competition.

## FORCE PLANNING CONSTRUCT: COMPETE TODAY, WIN TOMORROW

The force planning construct associated with this strategy emphasizes daily competition to *prevent* war while simultaneously building readiness, capability, and capacity to *deter* Chinese and Russian aggression by denial. In this construct, the joint force will actively counter Chinese and Russian sub-conventional activities and gray zone tactics not only in the Indo-Pacific and Europe, but globally. It does, however, give slight preference to the Indo-Pacific and the China challenge. However, it also seeks to *punish* opportunistic aggression from regional adversaries and non-state actors to prevent conflict and terrorist attacks in order to defend the homeland.

This force planning construct raises the level of ambition regarding the number of threats against which the joint force needs to compete and hedges against optimizing for a single threat. It also raises the standard for demands on the joint force, including both competition *and* deterrence by denial of two great-power adversaries. This construct incurs risk because in attempting to do everything, it risks that it does everything poorly.

#### **FORCE STRUCTURE**

As this strategy attempts to meet the full spectrum of threats from sub-conventional competition, to conventional conflict, to nuclear conflict, it results in a balanced force that closely resembles an upgraded version of the one that exists today. In this environment, the services largely implement their existing modernization plans that align with their institutional preferences, as most programs can be tied to competition or warfighting.

The Army retains an active component of 485,000 soldiers with the same mix of 31 brigade combat teams and 11 combat aviation brigades. Existing weapon systems are upgraded instead of fielding entirely next-generation capabilities. To retain its end strength, however, much of the Army forgoes modernization and only two MDTFs are fielded. There are limited improvements to fires and air defense capabilities. The service elects to invest in strategic fires, which are useful in both priority theaters, instead of focusing on tube artillery and long-range rockets.

To provide presence and to prepare for warfighting, the Navy continues to build large surface warships, procuring additional destroyers, amphibious ships, and frigates, while also increasing the number of Virginiaclass submarines. It retires one Nimitz class carrier early to fund shipbuilding, while maintaining a high level of readiness as the demands for forward presence keep the operational tempo high. There are small investments in unmanned underwater vehicles and unmanned surface vehicles.

The Marines fail to fully implement Force Design 2030 as the Corps never converts any of its regimental combat teams to Littoral Combat Regiments. In large part, this transformation fails to occur because of the need to maintain a two regimental combat team landing requirement in the event of a conflict on the Korean Peninsula, but also because of the need to generate marine expeditionary units for day-to-day presence operations with the Navy. As a result of the investments in readiness, the Marines acquire fewer anti-ship missiles and long-range unmanned aerial vehicles (UAVs) than envisioned in the expeditionary advanced base operations concept.

The third strategy attempts to meet the full spectrum of threats from sub-conventional competition, to conventional conflict, to nuclear conflict, it results in a balanced force that closely resembles an upgraded version of the one that exists today.

The Air Force retires some of its oldest fourth-generation fighter aircraft but fails to make some of the other divestments needed to fully fund investments in the Advanced Battle Management System, Next-Generation Air Dominance system, and penetrating ISR system. The Air Force executes the planned buy of fifth-generation fighter aircraft, which are supplemented by more modest numbers of new fourth-generation fighters. As the Air Force continues to be responsible for counterterrorism operations in CENTCOM, it retains its presence there and continues to invest heavily in readiness for nearterm contingencies. Because of this mission, it continues to need to invest in precision weapons for permissive environments and makes limited upgrades to existing stockpiles of standoff weapons. The Space Force continues to invest in large satellites and only makes minimal improvements in a more survivable space architecture.

## Assessing Alternative National Defense Strategies

To assess the three alternative defense strategies, we ran a series of TTXs focused on great-power competition and conflict in the Indo-Pacific and European theaters. We tested the three strategies and the associated force structures in the most stressing warfighting scenarios in each region—a Chinese invasion of Taiwan and a short warning Russian attack into the Baltics to establish a land bridge to Russia's Kaliningrad enclave.58 These scenarios allowed us to take stock of the strategies in the most challenging situations and provide the outermost bounds with which we measure each strategy.<sup>59</sup> We also explored the ability of these forces to meet the demands of dayto-day competition and sub-conventional territorial aggression. These TTXs were intended to illuminate the major tradeoffs among the strategies against the priority threats. To increase confidence in our observations from these exercises, we compared the results of these TTXs with the results of other similar games and existing analysis to ensure consistency.

We did not seek to develop precise metrics of how well one strategy fared compared to another, but rather to obtain a relative sense of strengths, weaknesses, and risks. We also looked for similarities between the strategies and found that there were some common weaknesses. It was beyond the scope of our analysis to examine the strategic issue of deterrence—how China or Russia would perceive each strategy and whether a particular strategy would make them more or less likely to attack a neighbor. Instead, we focused on the more concrete question of whether the force associated with each strategy could halt aggression and deny a quick and easy fait accompli. Denying an adversary its objective is

"the gold standard of deterrence" and thus, worthy of evaluation. $^{60}$ 

As a complement to these conventional scenarios, we also explored sub-conventional conflicts in East Asia and Europe. In these scenarios, the adversary used gray zone tactics to seize a small piece of neighboring territory in an effort to stay below the threshold of major war.<sup>61</sup> The key difference in these situations was not the use of gray zone tactics,62 which we assume China and Russia would employ either in a major war and sub-conventional conflict, but the more limited ambitions of the adversary. In these scenarios, we posited that China and Russia privileged avoiding outright war and thus only tried to make limited territorial gains. We considered a Russian seizure of the Estonian border town of Narva, a Russian occupation of Serpent Island in the Black Sea, a Chinese attempt to seize the Senkaku Islands, and a Chinese attempt to transform the Scarborough Shoal into an artificial island.

Like the high-end conflict scenarios, the sub-conventional TTXs focused on the operational requirements for defeating Chines and Russian aggression. In addition to stopping these limited takeovers, we also identified the operational missions that U.S. forces might be called on to carry out in day-to-day competition and considered how well each force structure could meet these demands. The operational missions associated with daily competition include intercepting adversary aircraft and ships that encroach on another nation's airspace or territorial waters; intervening to stop the harassment of other nations' fishing boats and ships; asserting the right to transit through contested waters and airspace; collecting intelligence on adversary force movements to improve warning time and responsiveness, and to attribute gray zone tactics to China or Russia.

**FIGURE 2: TABLETOP EXERCISES** 

	ADVERSARY	TYPE OF CONFLICT	SCENARIO
•	China	Conventional	Taiwan invasion
		Sub-conventional	Senkaku Islands seizure
		Sub-conventional	Scarborough Shoal transformation
		Conventional	Baltics fait accompli
	Russia	Sub-conventional	Narva selzure
			Serpent Island occupation

Our goal with this TTX series was narrowly defined: to shed light on the big tradeoffs among the different strategies. Our analysis, therefore, identified the key strengths and weaknesses of each strategy and where each strategy accepted risk, while noting similarities and differences among them. It was beyond the scope of our analysis to rigorously compare the performance of the different force structures. We asked: could a given force structure plausibly defeat the most capable adversaries in the most stressing scenarios? What level of risk did U.S. forces accept in trying to meet this goal? If a force could not succeed at stopping an invasion, what alternate warfighting strategies could it support? How well could a strategy meet the demands of day-to-day competition or halt small-scale aggression perpetrated at the sub-conventional level? While we explored both sub-conventional and conventional conflict scenarios against both great-power adversaries, we did not stress the strategies and force structures to see how they fared against other demands, such as counterinsurgency or counterterrorism missions, or against other potential adversaries, such as North Korea or Iran.<sup>63</sup> We, therefore, did not assess the robustness of these strategies against a full-range of potential security challenges, but instead focused on the priority threats identified by the Biden administration.64

For each strategy we present a summary box detailing the strategy and the results of our analysis, reflecting the sub-conventional and conventional operational problems described above. We note how each strategy fares in the conventional warfights and against sub-conventional aggression in the Indo-Pacific and Europe. We then assess each strategy based on a common set of criteria: the vulnerability and survivability of forces, the responsiveness and adequacy of forces to meet the challenge, and the propensity of escalation. We end by highlighting the potential risks inherent to the alternate strategies.

#### Strategy I: Winning or Losing One Big War?

Not surprisingly, the 2030 U.S. force structure that was optimized for winning one big war was able to prevent China *or* Russia from executing a rapid fait accompli against Taiwan or the Baltic states. It was the least effective strategy at meeting the operational demands of day-to-day competition and equally as ineffective as the other strategies at stopping limited sub-conventional aggression. It could, however, more easily roll back sub-conventional aggression than the other strategies.

In Asia, a key factor that enabled the high-end strategy to defeat a Taiwan invasion was a more distributed

# The 2030 U.S. force structure that was optimized for winning one big war was able to prevent China or Russia from executing a rapid fait accompli against Taiwan or the Baltic states.

and resilient posture and a reduced forward air and sea presence. Initially, submarines and Marine Littoral Regiments were the primary U.S. forces launching strikes from within the contested battlespace. Bombers and fighter aircraft launched standoff strikes and provided the bulk of the firepower, while very long-range Army ground-based missile batteries provided a limited capability to rapidly hit key fixed targets in the early phases of the war. These attacks required large stockpiles of preferred long-range anti-ship, anti-surface, and anti-radiation missiles. Prepositioned unmanned underwater vehicles (UUVs) laid minefields near Chinese ports and launched torpedoes at the invasion fleet to allow manned submarines to launch cruise missile strikes at fixed targets from the safety of deeper waters. A distributed satellite architecture and investments in alternate precision, navigation, and timing (PNT) systems improved the resilience of satellite communications, ISR, and PNT.

Penetrating ISR aircraft and a mesh network of attritable unmanned aerial vehicles (UAVs) developed targeting solutions for moving targets in the Taiwan Strait to improve the efficiency and effectiveness of standoff missile strikes against the invasion fleet. <sup>65</sup> U.S. aircraft provided intermittent air defense and air support to Taiwanese defenders using large packages of low observable aircraft armed with long-range anti-radiation missiles, while carrier strike groups defended the air approaches to Guam and the Northern Marianas. Marine Littoral Combat Regiments armed with anti-ship missiles operated inside of the First Island Chain and helped bottle up the Chinese Navy, dissuading it from venturing outside of the First Island Chain to threaten standoff U.S. forces.

In Europe, the U.S. high-end force was able to penetrate Russian air defenses and attrite the invasion forces by employing large stockpiles of long-range anti-radiation munitions carried by low observable fighter aircraft, which suppressed Russian air defenses and enabled air-to-ground strikes. Armored ground forces based in eastern Europe armed with long-range tube and rocket artillery, along with organic short-range air defenses, could slow Russian tanks and mechanized vehicles, enabling aircraft carrying anti-tank area-effects weapons to disrupt, delay, and destroy Russian maneuver forces.

In day-to-day competition, this strategy, which prioritized readiness for warfighting over presence operations, was generally unable to interdict incursions from Chinese and Russian aircraft and ships in East Asia and Europe, nor could it stop them from harassing

The first strategy accepts

more risk in the near term

against non-priority threats by

reducing the size of the force

and divesting of capabilities

that are not survivable in a

high-end warfight.

allies and partners because of the small number of forward postured air and sea forces. Occasionally, there would be temporary rotations of U.S. combat forces overseas to bolster deterrence and assurance, but most of the time U.S. forces would remain in their home garrisons training for

high-end conflict. The United States reassured its allies and partners by developing a modernized and combat capable force, as well as a limited but resilient posture optimized for warfighting. U.S. troops would still participate in large-scale exercises with allies and partners, but these events would practice the skills needed for a major conflict while also seeking to enhance interoperability.

The high-end strategy, like all the strategies, was not able to stop small-scale sub-conventional territorial aggression. In northeastern Europe, however, this strategy could enable the United States to rapidly move its heavy armored forces to dislodge the small Russian land grab. The ability to quickly conduct such a rollback operation should strengthen deterrence. Doing so would likely require the United States to escalate and to destroy an allied country's city, but this force structure would be able to rapidly expel the Russians and hold the city. Conversely, in Asia it is more difficult to effectively seize and hold very small islands, which are vulnerable to air and missile strikes. In the event of a conflict, these islands or features become a mutual denial zone and potentially a missile sink, as each side can repeatedly destroy adversary forces from the air and sea. The high-end strategy, which makes significant investments in long-range missiles, would be very capable of denying the Chinese the ability to hold onto any feature or small island that it seized. This problem of sub-conventional aggression will be discussed in greater detail after analyzing each of the strategies.

Instead of trying to counter Chinese and Russian gray zone tactics, this strategy places the onus of daily competition on frontline allies and partners, which is not without risk. If reductions to the American overseas

presence embolden China or Russia, this high-end deterrence strategy could increase the likelihood that they try to incrementally change the status quo through salami-slicing tactics, which cumulatively could fundamentally alter the balance of power. However, because U.S. forces are not operating every day near Chinese and Russian forces, this strategy reduces the risk of inadver-

tent escalation. Moreover, such a shift in approach may lead to strained relations with frontline allies and partners, which could result in changes to military access required for a high-end warfight.

The high-end strategy runs the risk of overoptimizing for a threat—great-power conflict that may not materialize, while

also losing the day-to-day competition that is more likely to occur. There is the potential that over time, a series of small sub-conventional attacks results in significant changes to the status quo if U.S. policymakers decide not to escalate and overturn this form of sub-conventional aggression. Relatedly, this strategy may focus on the wrong adversary and is ill-suited to deal with multiple major threats simultaneously.

Because the high-end strategy places a great deal of emphasis on winning the military technological competition and investing in advanced capabilities, there is a risk that these capabilities do not perform as expected or are not fielded rapidly enough to be available during a conflict.66 This strategy accepts more risk in the near term against non-priority threats by reducing the size of the force and divesting of capabilities that are not survivable in a high-end warfight. Doing so could create windows of American vulnerability that opportunistic aggressors try to exploit, especially in East Asia, and this strategy may be ill-equipped to handle. The high-end strategy sought to mitigate this risk by making near-term improvements, such as expanding stockpiles of preferred long-range munitions, investments to improve the resiliency of U.S. posture in Asia and Europe, and additional investments in cyber and electronic warfare capabilities.

## HIGH-END DETERRENCE "Win One Big War"

#### INTENT

Deter great-power war by defeating an invasion force or a fait accompli.

#### STRENGTHS

- Can likely defeat an invasion of Taiwan or of the Baltics.
- Has the capability to roll back limited sub-conventional aggression.
- Reduces the risk of great-power conflict across time by filling key near-term capability gaps and modernizing.

#### WEAKNESSES/RISKS

- Optimized for a threat that might not materialize, or for the wrong threat.
- Incremental changes through sub-conventional aggression may fundamentally alter the balance of power.
- Advanced capabilities may not materialize or do not perform as expected.
- Opens windows of vulnerability in the near term that opportunistic aggressors may try to exploit.
- Insufficient capacity to counter multiple major threats concurrently.

#### KEY INVESTMENTS

#### MUNITIONS

- Large numbers of long-range anti-ship and anti-surface cruise missiles, standoff area-effects (anti-armor) weapons, and long-range anti-radiation missiles.
- Long-range ground-based tactical and operational fires.

#### MARITIME

- Attack submarines and unmanned underwater vehicles.
- Small surface combatants.
- Logistics ships
- Littoral Combat Regiments armed with anti-ship missiles, air defenses, and unmanned aerial vehicles (UAVs).

#### AIR & SPACE

- Penetrating intelligence, surveillance, and reconnaissance (ISR).
- Mesh network of attritable UAVs.
- · Accelerated buy of penetrating bombers.
- Palletized air-delivered munitions
- Distributed satellite architecture, operationally responsive low-cost launch.

#### ARMY

- Heavy ground forces stationed in eastern Europe with longer-range tube and rocket artillery and other key enablers.
- Short-range air defenses for maneuver units and fixed installations.

#### JOINT FORCE

- Improvements in the resiliency of posture in Asia and Europe.
- Conservation of readiness and prioritization of training for highend conflict
- Increased investments in cyber and electronic warfare.
- Investments in logistics and sustainment to support distributed operations.

## Strategy II: Winning or Losing Sub-conventionally?

The strategy aiming to win the sub-conventional competition with China and Russia is nearly the opposite of the high-end deterrence strategy. Predictably, the day-to-day competition strategy fared poorly in the warfights against China and Russia. Unexpectedly, it also was not capable of stopping sub-conventional, small territorial land grabs. Should deterrence fail, this strategy would provide the U.S. president with fewer options to counter aggressors and uphold the status quo. Moreover, the competition strategy becomes less effective over time because it fails to invest sufficiently in modernization, leaving the United States at risk of technological overmatch by great-power adversaries.

In both the Taiwan and Baltics warfighting scenarios, the competition strategy lost. Although the United States had a larger overall force than in the other strategies, it suffered heavy losses in the opening stages of the war in Asia. Forces based in closer proximity to China or Russia are at greater risk of destruction because both great-power competitors have a dense network of air defenses and are capable of projecting significant power (especially air and missile strikes) near their borders. <sup>67</sup> This was one of the key weakness of the competition strategy. To contest the invasion, the competition strategy, which had fewer long-range and attritable weapons, had to push U.S. forces deeper inside Chinese and Russian threat rings, resulting in more losses. Moreover, increased ISR assets did not appreciably increase warning time of the invasion. <sup>68</sup>

In the Taiwan scenario, the Chinese fired large salvos of ballistic and cruise missiles at U.S. bases and forces forward postured in the region before launching their amphibious assault. Many unsheltered U.S. aircraft were damaged or destroyed at airbases in the First and Second Island Chains, while the U.S. Navy's surface fleet suffered heavy losses as waves of ground-, air-, and sea-launched anti-ship cruise and ballistic missiles landed the first blow. The large visible presence force necessary for

sub-conventional competition was vulnerable in a large-scale conflict, especially in the Indo-Pacific theater. If the bet that U.S. presence would deter aggression fails, the competition strategy leaves U.S. forces poorly positioned to fight a war—let alone win a war.

Moreover, while the competition strategy pushed U.S.

forces forward, their numbers did not significantly alter the balance of power in the region because these forces were not capable of conducting key wartime missions. Sinking the Chinese invasion fleet proved to be a very dangerous mission as this strategy did not invest in long-range munitions that could hit

Since the competition strategy cannot stop such invasions, U.S. leaders would be left with the options of either attempting to roll back aggressors after they have achieved their goal or adopt a punishment strategy, such as horizontal escalation, mainland strikes, or distant blockade.

moving ships, suppress air defenses, or attack surface targets. The lack of standoff options meant U.S. attack submarines had to operate on either side of what was by 2030 a crowded and dangerous Taiwan strait to try to sink ships, resulting in some losses. After shooting, U.S. attack submarines needed to cycle outside of the strait to reduce their likelihood of being detected, which reduced their time on station and the efficiency of their offensive strikes. Bombers using direct attack munitions had to fly over their targets into heavily defended airspace, which required overstretched fighter aircraft to escort bombers on these deep missions, reducing their availability to attack the invasion fleet and provide air support to Taiwanese forces. Compounding this was the heavy degradation of satellite communications, intelligence, and precision navigation and timing, which made finding and fixing moving targets a significant challenge. China's geographic advantages required U.S. forces to push forward at significant risk to their survivability and the United States suffered heavy losses.

In Europe, the absence of highly responsive American armored forces already stationed in northeastern Europe meant the Russian invasion force was able to move at maximum speed and circumvent the NATO enhanced forward presence battle groups or encircle the light forces and bombard them with long-range fires. <sup>69</sup> In the absence of preferred long-range anti-radiation or anti-armor area-effects weapons, U.S. aircraft had to fly into the teeth of the Russian air defenses to launch attacks on the invasion force. These ground strikes were not only inefficient as U.S. aircraft had to drop one unitary bomb

on each Russian vehicle, but also ineffective as U.S. forces had few weapons capable of precisely hitting moving targets. The accuracy of U.S. air strikes was further degraded by disruptions to PNT.

Since the competition strategy cannot stop such invasions, U.S. leaders would be left with the options of either

attempting to roll back aggressors after they have achieved their goal or adopt a punishment strategy, such as horizontal escalation, mainland strikes, or distant blockade. The competition strategy is not capable of launching a counterattack against a Chinese force that has secured control of Taiwan. To It simply does not have the capability or capacity (after suffering

heavy losses) to roll back that type of attack. Nor is the competition strategy well suited for quick counterattack in Europe because deploying heavy armored forces to northeastern Europe would take months and a counterattack would become more difficult over time as an adversary's forces would dig in, making them harder to dislodge.

Conversely, a warfighting strategy that relies on punishment takes time to inflict enough pain that the adversary opts to concede. Punishment strategies may take the form of conventional strikes against targets on an adversary's mainland, horizontal escalation by conducting strikes against adversary forces in secondary theaters, or damaging a target's economy through a distant blockade, which is a long-term effort that would require cooperation from key nations.<sup>71</sup> Historically, strategies that punish a population alone have not led states to capitulate, 72 and whether a distant blockade that denied the Chinese economy key resources would work is hotly debated.<sup>73</sup> Moreover, while proponents of a blockade argue that it lowers the risk of escalation by avoiding the need to strike targets on the Chinese mainland and provides Chinese leadership with time to carefully deliberate how to respond to American coercion, others argue that blockades may provoke the targeted state to lash out and escalate.74 The competition strategy, therefore, leaves U.S. leaders with less preferable or unproven warfighting strategies for countering aggression.

Furthermore, the competition strategy prioritizes the near-term procurement of existing capabilities to

#### **DEFENSE | JULY 2021**

Risky Business: Future Strategy and Force Options for the Defense Department

expand force size and fails to invest adequately in future capabilities. This means that the United States is likely to lose its military technological advantage over time as the costs of constantly operating aging U.S. weapon systems to compete day-to-day will prevent future investments in modernization. In short, the competition strategy sacrifices U.S. long-term prospects to counter great-power adversaries and win today's sub-conventional competition.

In terms of meeting the demands of day-to-day competition, this strategy is more capable of jockeying with China and Russia, but it requires more base access in contested areas so that U.S. forces can maintain a persistent presence. While the competition strategy is better postured to respond to Chinese and Russian provocations, it will not be able to respond to every probe. Moreover, while this strategy fares the best in terms of holding its ground and meeting many of the Chinese and Russian sub-conventional military provocations, it also holds the greatest risk of inadvertent escalation. The risk of accidental escalation goes up significantly as forces are frequently operating in close proximity, which increases the opportunities for miscalculations and errors and can, in turn, spiral into a full-blown war that the competition force is not well suited for.

#### DAY-TO-DAY COMPETITION "Win the Subconventional Fight Today"

#### INTENT

Being present and competing every day deters sub-conventional and conventional aggression.

#### STRENGTHS

- Best positioned to respond to daily Chinese and Russian provocations.
- Visible presence may reassure allies and partners.
- Expanded near-term air and maritime capacity enables some flexibility for threats other than China or Russia.

#### WEAKNESSES/RISKS

- Forces are not capable of denying a fait accompli, nor defeating a great power in conventional conflict.
- Incapable of stopping sub-conventional aggression and less capable of rolling back small land grabs.
- Constrains options to deter and defeat aggression; must resort to a strategy of punishment (e.g., distant blockade, horizontal escalation, deep strikes); unlikely to be capable of quickly rolling back aggression.
- Increases risk to the survivability of forces, as presence requires high visibility platforms forward postured.
- High risk of inadvertent escalation, as operating in close proximity to the adversary increases opportunities for miscalculation and error.
- High long-term risk by not investing in advanced technologies.

#### KEY INVESTMENTS

#### MUNITIONS

Large numbers of direct attack precision guided munitions.

#### MARITIME

- Large fleet of surface ships, including warships and smaller patrol vessels.
- More ships and aircraft forward stationed and additional rotations of forces to Pacific and Europe.
- Current Marine Corps end strength.
- Marine equipment in Norway and forces on Okinawa.
- Rotary wing and tiltrotor aircraft for crisis response.

#### AIR & SPACE

- Additional fourth-generation aircraft for air defense and intercepts.
- Additional persistent ISR aircraft for maritime and ground surveillance
- · Commercial space that can be shared with allies.
- Space ISR to monitor contested areas and provide early warning.

#### ARMY

· Light ground forces for security cooperation and presence.

#### O JOINT FORCE

- Continued presence in the Middle East.
- · Expanded investments in cyber and information.

#### Strategy III: Winning Today, Losing Tomorrow?

The full-spectrum competition strategy attempts to do it all: compete today, while preparing to win tomorrow. However, this strategy proved mediocre at meeting both requirements. The full-spectrum strategy performed better than the day-to-day competition strategy in the high-end warfight scenarios, but it was still incapable of preventing the fait accompli. At best, this strategy could *contest*, but not stop the invasion of Taiwan or the Baltics. Moreover, while the strategy fared better than the high-end deterrence strategy at responding to Chinese and Russian competition activities, it was insufficient to halt this form of aggression and had more difficulty overturning it than the high-end conflict strategy.

In the high-end conflict scenarios, this strategy performed better than the competition strategy, primarily because it made limited investments in preferred standoff munitions and next-generation upgrades to the

The third strategy risks

overstretching the force as it

struggles to maintain enough

ready forces to deter daily gray

zone tactics around the globe,

respond to emergent threats in

alternate theaters, and prepare

for potential future conflict.

force. The full-spectrum strategy also had a smaller peacetime footprint, which resulted in fewer losses in the first hours of the war in East Asia. Initially, this strategy was able to slow the Chinese amphibious force because it invested in a few UUVs which mined ports. It also was able to generate several waves of standoff

bomber missile strikes against the invasion fleet before running out of preferred munitions. Because it did not invest in penetrating ISR or a mesh network of attritable UAVs, it relied on its large fleet of fifth-generation fighter aircraft for targeting. As stockpiles of standoff weapons dwindled, this strategy had to push attack submarines, surface ships, and aircraft closer to the threat. While they inflicted some damage, they too suffered significant losses. Over time, sustainment would have become an issue, as this strategy did not invest in logistics enablers in terms of the personnel or ships needed to support distributed air and sea operations.

In the Baltics scenario, the full-spectrum strategy was able to execute reasonably effective airstrikes against Russian troops since fifth-generation fighters were able to operate inside Russian air defenses and long-range ground-based fires helped suppress air defenses. These air attacks were also not as effective as in the high-end conflict strategy because there was not a sufficiently robust and combat-credible armored force stationed in eastern Europe to slow the Russian forces. Moreover,

the United States very quickly exhausted its stores of preferred munitions for its multi-domain task force and aircraft, requiring these forces to close on the adversary to continue strikes. Ultimately, there were not enough American ground forces forward to blunt the invasion and the forces in the theater were increasingly vulnerable to attacks from Russian aircraft and artillery.

The full-spectrum strategy proved insufficient to stop conventional Chinese or Russian aggression against Taiwan or the Baltics. While this strategy is capable of contesting the invasions—a step up from the competition strategy—it must put U.S. forces at greater risk to do so. Moreover, this strategy's ability to sustain effective combat operations declines over time as long-range munitions are quickly depleted. The full-spectrum strategy could leave U.S. leaders in the position of having to adopt a warfighting strategy of rollback or punishment, the risks of which are detailed extensively in the

previous section.

In terms of daily competition, the full-spectrum strategy performed far better than the high-end strategy. This strategy could not meet all of the daily requirements to overwatch contested areas and intercept adversary units because it maintained a global posture similar to

the one that exists today. Nevertheless, it would manage to respond to a considerable number of Chinese and Russian provocations in the Indo-Pacific and European theaters. This strategy also retained a mixture of existing ISR capabilities, fourth-generation aircraft, and surface naval forces, which enabled it to perform the presence missions necessary to compete. But like the other two strategies, the full-spectrum strategy is unlikely to stop China or Russia from small land grabs using sub-conventional means.

This strategy risks overstretching the force as it struggles to maintain enough ready forces to deter daily gray zone tactics around the globe, respond to emergent threats in alternate theaters, and prepare for potential future conflict. There is a delicate balance within this strategy, where it invests in current capabilities while still pursuing game-changing technology required to at least maintain military parity with a great-power competitor in the future. In this respect, this strategy accepts some long-term risk in return for near-term readiness and responsiveness. Even though this strategy trades

Risky Business: Future Strategy and Force Options for the Defense Department

fast and complete modernization for readiness, the high daily operational tempo is likely to stretch the somewhat smaller force.

Moreover, this strategy emphasizes the force's ability to respond to China and Russia's gray zone tactics around the globe, not just in Asia and Europe. Not only does this contribute to the risks of overstretch described above, but it also contributes to the risk of inadvertent escalation. Because U.S. forces will be operating in proximity to Chinese and Russian forces, there may be increased chances of miscalculation which, in turn, could escalate into conflict.

It is worth noting that this strategy hedges against the risk of opportunistic aggression by "lesser" threats, in the form of regional adversaries, non-state actors, and transnational threats. While we did not assess the ability of the alternate strategies to meet these challenges, this strategy may be the only one of the three with the ability to respond to opportunistic aggression from these challengers or unexpected events that may arise, in part because the strategy is not overoptimized for a single threat, resulting in a more balanced force.

In sum, this strategy seeks to compete with and deter great-power adversaries, while also deterring opportunistic aggression. The full-spectrum strategy is not fully able to meet the challenge of a high-end warfight and can somewhat meet the challenge of daily competition with China and Russia, but at a high cost. The end result, in both cases, is the risk of significant overstretch, the potential for long-term technological overmatch, and some risk of inadvertent escalation.

### FULL-SPECTRUM COMPETITION "Compete Today, Win Tomorrow"

#### INTENT

Deter great-power war by competing across the spectrum of conflict and hedge against a range of threats.

#### STRENGTHS

- Balances risk across various potential threats.
- Retains a moderate capability to compete every day and to contest a conventional attack.
- Middling ability to reassure allies and partners.

#### WEAKNESSES/RISKS

- Can only contest rather than deny a fait accompli.
- Constrains options to deter and defeat aggression; must resort to a strategy of rollback or punishment (e.g., distant blockade, horizontal escalation).
- Risks survivability of forces because forces must operate inside adversary's weapons engagement zone.
- Cannot stop limited sub-conventional aggression and has only a limited ability to roll back a small land grab.
- Moderate long-term risk because of insufficient investments in science and technology, as well as advanced technologies.
- High risk of overstretch, as forces are trying to compete, deter, and defeat.
- Moderate risk of inadvertent escalation, as operating in close proximity to the adversary increases opportunities for miscalculation and error.
- Opens windows of vulnerability in the near term that opportunistic aggressors may try to exploit.

#### KEY INVESTMENTS

#### MUNITIONS

- Limited investments in long-range anti-ship and anti-surface cruise missiles, anti-armor area-effects weapons, and long-range anti-radiation munitions.
- Emphasis on strategic versus tactical and operational groundbased fires, which results in small buy of very long-range fires.
- Purchases of direct attack weapons for continued counterterrorism operations.

#### 🏶 MARITIME

- Retain balanced marine air-ground task forces instead of fielding Littoral Combat Regiments.
- Nuclear powered attack submarines.
- Small investments in unmanned underwater vehicles and unmanned surface vessels.
- Large surface combatants (destroyers, amphibious ships) and frigates.

#### AIR & SPACE

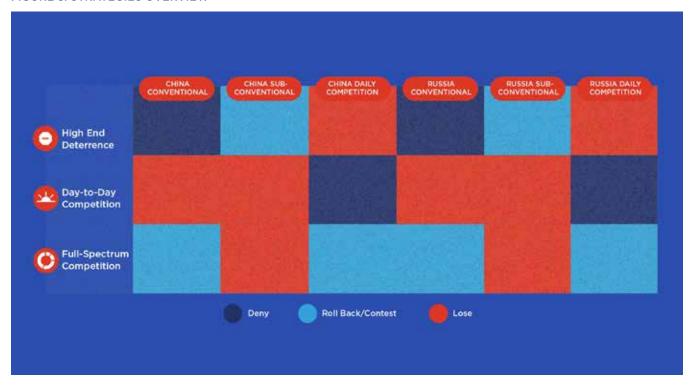
- · Mix fighter fleet, large numbers of fifth-generation aircraft.
- · Planned buy of bombers on current schedule.
- · Field small constellations of large satellites.

#### ARMY

- Keep current mix of 31 Active Component Brigade Combat & 11 Combat Aviation Brigades with incremental upgrades.
- Evenly distributed investments in 31 Army priorities.
- . Fewer multi-domain task forces than planned.

#### **JOINT FORCE**

- Continued presence in the Middle East.
- Limited steps to improve resiliency of Indo-Pacific posture.



#### FIGURE 3: STRATEGIES OVERVIEW

#### The Dilemma of Small-Scale Sub-conventional Territorial Aggression

None of the strategies proved particularly capable of stopping small-scale sub-conventional territorial expansion. While the competition strategy is the most responsive to Chinese and Russian daily provocations, its ability to stop a small land grab remains low. If China or Russia use aggressive gray zone tactics to seize a small island or small piece of territory, U.S. forces would have to already be present to stop such a swift small-scale attack.

The geography of the two theaters creates important differences in the nature of sub-conventional competition in Europe compared to the Indo-Pacific. Most of the islands or features in the East and South China Seas are not large enough to garrison a robust force capable of repelling an attack. The United States could try to preempt a Chinese attack by covertly inserting a company of special operations forces on a feature and providing them with constant armed overwatch. Because these tiny islands are incredibly exposed and vulnerable to standoff air and missile strikes, this type of presence is simply a tripwire one, which has been found to be ineffective at deterring aggression.<sup>76</sup>

In Europe, on the other hand, there is simply too much territory to defend. The border between Russia and

Estonia, Latvia, and Lithuania is approximately the same size as the West German border with the Warsaw Pact states where NATO stationed more than 20 divisions during the Cold War. <sup>77</sup> Unless U.S. forces happen to be at the right spot at the right time when Russia attacks, they are unlikely to be able to contest the seizure of territory. Moreover, even if they are in the exact right place at the right time, the ambiguity of the invasion force—which may be masquerading as civilian forces—presents a dilemma that cannot be surmounted kinetically as it places the onus of escalation on the United States.

Yet if the United States had division-sized heavy force in eastern Europe and large stockpiles of long-range munitions, it could rapidly dislodge a small-scale land grab in the northeast. Similarly, a joint force armed with many long-range anti-surface and anti-radiation munitions could clear any small island in the South or East China Seas of Chinese forces, but it would not be capable of controlling those islands because China has a similar long-range strike capability that can hold at risk any forces placed on the exposed islands.

## Deciphering the FY22 Budget and Looking Ahead to FY23

As the National Defense Strategy takes shape within the Pentagon, what does the FY22 budget reveal about the potential priorities and preferences of this strategy? According to senior DoD officials, the FY22 DoD budget request reflects a number of forward-looking priorities to meet a changing national security landscape. Aligned to the interim NSS, the budget reflects a key role of the DoD: to defend the nation. 78 To enhance the DoD's ability to fulfill this objective, the budget provides the investments to deter military aggression, particularly with regard to China, the DoD's military pacing challenge. The budget seeks to maintain a credible deterrent vis-à-vis China by preserving readiness and making investments in critical capabilities, such as long-range fires, hypersonics, and munitions, to develop the "right mix of capabilities" needed to respond to the China challenge, both now and in the future.<sup>79</sup> It also seeks to reduce the military's reliance on vulnerable capabilities while enhancing resources for the research and development of new technologies and long-term modernization to retain military technological advantages. The budget request reflects shifts in posture, including winding down military operations in Afghanistan to focus on strategic competition with China. The FY22 budget request also invests in countering an expanded array of near-term threats, such as COVID-19, and long-term challenges, like climate change, while still contending with other adversaries, such as Russia, Iran, North Korea, and non-state actors.80

While the budget is a massive document with thousands of program lines distributed across dozens of PDF files, advances in decision science make it possible to analyze whether the budget adequately resources the articulated defense strategy. This year, we decided not to assess the budget based on strategy given the significant amount of uncertainty surrounding it in the absence of a formalized defense strategy and a Future Years Defense Program. Moreover, beyond a few priority areas the new administration surfaced for review, much of this budget reflects decisions made by the last administration.81 While we may know the basic contours of the next NDS based on interim guidance and statements by senior White House and DoD officials, we do not know exactly what this strategy may be and whether the administration has truly put its money where its mouth is.

To help understand the *revealed strategy*, which is embodied in the budget and may in fact differ from the stated strategy, we developed a framework that identifies signposts or indicators for each strategy. This framework assigns parts of the budget into key variables that differ across strategies and can help maintain discipline during strategy implementation. The three alternative ideal type strategies vary along the overarching dimensions of whether they prioritize China and then whether they focus on competition or warfighting. Given these priorities, we have identified eight signposts or key parts of the budget where the strategies differ: force size; readiness; operational tempo; research, development, testing, and evaluation (RDT&E); procurement; divestments; longrange preferred munitions; and resilient posture. These are depicted in Figure 4.

With these signposts in mind, which of the three strategies does the FY22 budget most closely reflect? Does the budget prioritize great-power competition, especially with China, as the administration claims? If it does prioritize China, is it more focused on competition and stopping sub-conventional aggression or is it focused on being able to halt a large conventional invasion? The figure below includes relevant information from the president's FY22 budget request and then assigns a relative ranking of how the three strategies address each variable. These ordinal ranks reflect relatively how large of investments each strategy makes along that dimension. In other words, does it invest a lot, some, or a little in this area? The table then identifies where these scores match the three alternative strategies by highlighting those boxes.

As illustrated in Figure 4, the FY22 budget is a mixed bag. In some respects, it appears to prioritize preparing for high-end conflict. The large RDT&E budget suggests that the DoD is focused on developing the next generation of technologies and capabilities. Yet one needs to look below the topline RDT&E budget to examine how much of those funds is allocated to the science and technology budget (budget activity codes 6.1-6.3), which is critical basic and applied research that is needed to develop advanced technologies, especially the game-changing types of technologies that the Biden administration claims to be focused on. The other RDT&E activity codes apply existing scientific and technical knowledge to develop more near-term prototypes and improvements to existing capabilities. 82 As shown in Figure 5, the DoD's overall budget for science and technology (S&T) equals \$14.68 billion or just 13 percent of the total RDT&E budget, which is roughly equal to what the department requested in FY21 for S&T.83 Therefore, most of the 5.1 percent gains that make this FY22 RDT&E budget request the largest ever are not focused on developing the most advanced capabilities. In recent times,

S&T peaked as a percentage of the fiscal year 2015 budget request at 18.1 percent of the RDT&E budget.84

The FY22 budget request also makes notable improvements to the robustness of the U.S. military posture in Europe, albeit less so in the Indo-Pacific, and makes modest investments in some of the long-range missiles required for the high-end warfight.

Yet at the same time, this budget largely protects the current force size—referred to as the capacity of the force—which is one area where further cuts could be expected if the DoD was focused on preparing to win in a conflict against China or Russia. The force size, a significant (\$125.1 billion) investment in readiness, and a \$290.5 billion investment in operations and maintenance seem

FIGURE 4: SIGNPOSTS IN FY22 BUDGET REQUEST

Active force size; personnel costs	Total active component <sup>1</sup> :  1.3 million people ••	High	Low	High	Medium
	Military personnel account: \$167.3 million				
Readiness <sup>2</sup>	Total readiness across services: 117.5 million	High	High	High	Medium
Operational tempo (operations & maintenance) <sup>1</sup>	Total: \$290.5 billion 🟏	High	Low	High	Medium
Research, development test, and evaluation (RDT&E) <sup>4</sup>	RDT&E total: \$112 billion  Science and technology total: \$14.7 billion	High	Initially High (especially science and technology), but should gradually decline as capabilities move from develop- ment to procurement	High	Medium
Procurement <sup>s</sup>	Total: \$133.6 billion 😾	Medium	Low-Medium Initially Increases over time	High	Medium
Divestments <sup>6</sup>	Total: \$2.8 billion 🐣	Medium	High	Low	Medium
Long-range preferred munitions <sup>7</sup>	Number of missiles: JASSM: 550 A SM-6: 125 E LRASM: 48 E GMLRS: 6,471 PrSM: 110 A Tomahawk: 60 W NSM: 34 A Mid-range capability:	Medium	High	Low	Medium
	\$286.46 million, four batteries A Hypersonic missiles: \$3.8 billion				
Improvements to the resiliency of posture <sup>6</sup>	European Deterrence Initiative: \$648 million infrastructure \$1.19 billion to preposition equipment	Medium	High	Low	Medium
	Pacific Deterrence Initiative: Improvements in Tinian Guam defense system				

to align with the competition strategy. This suggests that despite the withdrawal from Afghanistan, U.S. forces are planning to remain nearly as active as they have been in recent years. Some of the readiness budget could be allocated to support high-end training instead of frequent overseas deployments to enhance the United States' ability to compete, but this is difficult to discern.

The procurement budget is down slightly at \$133.6 billion from \$141.7 billion in FY21,85 and the Departments of the Air Force and Navy are making sizable divestments (\$1.4 and \$1.3 billion, respectively), which aligns with the desire to acquire fewer fielded capabilities that are less relevant for a high-end warfight. The budget does invest \$6.6 billion in long-range preferred munitions, including hypersonic weapons, but the buys do not meet the requirements to win one big fight. 86 Moreover, there are no planned purchases of anti-armor area-effects munitions.

Posture improvements are focused on Europe under

the European Deterrence Initiative and include prepositioning Army, Marine Corps, and Air Force equipment and capabilities in theater.87 Somewhat surprisingly, there is not a similar level of effort in improving U.S. posture in the Indo-Pacific, despite the DoD's stated emphasis on China.

The Air Force is making improvements to the Tinian and Andersen airbases in the Mariana Islands, and the budget asks for \$118.3 million for research and development and to procure initial materials for an integrated air and missile defense system on Guam.88 Yet these program elements are not linked to any particular air defense architecture or weapons system. Therefore, it remains to be seen whether the Guam defense system becomes the Aegis Ashore, which was Indo-Pacific Command's

highest priority in its Pacific Deterrence Initiative (PDI) request.<sup>89</sup> Additionally, there are few significant investments in enhancing the resiliency of U.S. basing in the Indo-Pacific, including passive defenses such as distributed fuel and munitions storage, or hardened aircraft shelters.

Looking at the budgets of the three service departments helps shed light on whether they are making investments that align with their expected roles in a future strategy. The Army avoided the force structure cuts that some expected if the Biden administration prioritized training and equipping the force for a high-end war against China. The Army is investing in maintaining the readiness of these forces, but less than the other departments, and it expects to spend less on operations and maintenance. The Army also divested significantly fewer capabilities than the other departments, which Army leaders claim is due to cuts over the past few vears.90

The Navy's procurement budget request of This budget largely protects the \$58.18 billion dwarfs that of the Army (\$22.4 billion) and exceeds that of the Air Force (\$47.2 billion). The Department of the Navy is also making the most significant investments in preferred long-range munitions

> required for a high-end warfight and is procuring the only long-range anti-ship and anti-radiation weapons in this budget. In contrast, the Air Force is buying more anti-surface cruise missiles but is not investing in anti-ship or anti-radiation missiles. All three services are continuing to fund research and development for hypersonic weapons. Of all of the services, the Army is by far investing the largest percentage of its RDT&E-21 percent or \$2.685 billion—in S&T. While the Air Force

current force size—referred to as the capacity of the force—which is one area where further cuts could be expected if the DoD was focused on preparing to win in a conflict against China or Russia.

FIGURE 5: OVERALL RDT&E FY22 ACCOUNTS AND S&T

	OVERALL	DEPARTMENT OF THE ARMY	DEPARTMENT OF THE NAVY	DEPARTMENT OF THE AIR FORCE
RDT&E	\$111,964,188	\$12,799,645	\$22,639,362	\$50,450,715
S&T total	\$14,685,278	\$2,685,200	\$2,355,572	\$2,537,182
S&T percentage of RDT&E	13% =	21% 🐣	10% 🟏	6% 🚩

is investing just a bit less in S&T—\$2.537 billion—it accounts for only 6 percent of the Air Force's RDT&E budget. The Air Force's larger RDT&E investments overall, therefore, are going to field more near-term improvements into basic research than into key advanced technologies, such as artificial intelligence.

In terms of posture, the Army is significantly improving its ability to rapidly get heavy forces to western Europe by prepositioning additional equipment sets, while the Marine Corps is still investing in placing prepositioned equipment in Norway despite the shift to focus on the Indo-Pacific with Force Design 2030. The Air Force is making limited improvements to two airbases in the Mariana Islands and improving airfields and prepositioning equipment in Europe.

The FY22 budget was delivered late due to the Trump administration's obstruction during the transition, which hampered the Biden administration's ability to prepare a budget. Given the compressed timeline, it is unclear how much of the current request has been aligned to the administration's priorities, or whether it has reshaped only a few areas. The administration may have chosen to defer decision-making until the FY23 budget, after it has had sufficient time to craft a strategy. As such, our analysis takes an eye to the next fiscal year, considering how NDS development and budget resourcing may align.

Looking ahead to the FY23 budget request, we can use these variables to help indicate which strategy the department is resourcing and whether it aligns with its articulated goals. If the Biden administration intends to have continuity with the 2018 NDS and keep the strategy focused on deterring high-end conflict and winning a conflict against a great power, cuts to the size of the forces should be expected. This would free up resources to move into S&T and, following a few years of high-level research and development budgets, those efforts should mature and be fielded at scale, causing the procurement budget to rise. Should investments in readiness remain high but operations and maintenance costs decline due to fewer overseas deployments and the divestment of older weapons systems, this will suggest that the department is resourcing the high-end deterrence strategy (Strategy 1).

Alternatively, if end strength remains high along with readiness and operational tempo, it would appear that the administration is moving toward the day-to-day or full-spectrum competition strategies (Strategies 2 and 3). If the department spreads its resources to keep a middling level of capacity, readiness, and operational tempo for sub-conventional competition, while also making moderate investments in RDT&E, procurement, and divestment of some older capabilities, this would

indicate a shift toward the full-spectrum competition strategy (Strategy 3).

Moreover, the administration does not have sole discretion over the budget. Indeed, Congress plays an important role in determining the resourcing for the DoD, and, in turn, setting the course of its strategy and force structure. With this in mind, one could also imagine a future in which the administration attempts to resource the high-end deterrence strategy, but appropriators refuse to fund investments in new technologies or allow the military to divest of force structure or legacy capabilities. Such decisions by Congress would push the DoD's force structure toward day-to-day competition or the full-spectrum competition strategy (Strategies 2 and 3). With this in mind, while it is the DoD that sets the strategic priorities of the force, Congress often determines its implementation and strategic direction. As a result, these signposts can be equally helpful in assessing not only the strategy that the DoD has adopted, but the direction that implementing this strategy may take.

If the Biden administration intends to have continuity with the 2018 NDS and keep the strategy focused on deterring high-end conflict and winning a conflict against a great power, cuts to the size of the forces should be expected.

DEPARTMENTS	ARMY	NAVY	AIR FORCE
Active force size; number of brigades, ships, battallions, or aircraft	Active component: 485,000 Active component brigade combat teams: 31 Security force assistant brigades: 5 Combat aviation brigades: 11	Navy active component <sup>2</sup> : 346,200 Ships: 296 Marine Corps active component: 178,500 Infantry battalion: 22	Air Force active component <sup>3</sup> : 328,300 Total aircraft inventory: 5,451 Space Force active component: 8,400
Readiness <sup>4</sup>	\$27.8 billion 💙	\$53.2 billion 🔥	\$36.5 billion 🤝
Operational tempo (operations & maintenance) <sup>5</sup>	\$69.1 billion 🐸	\$71.2 billion 🦰	\$67.6 billion 🔥
RDT&E <sup>6</sup>	Total: \$12.8 billion > S&T: \$2.69 billion _	Total: \$22.64 billion 🐣 S&T: \$2.36 billion 💟	Total: \$39.2 billion A S&T: \$2.54 billion
Procurement <sup>2</sup>	\$22.4 billion 💙	\$58.18 billion	\$47.2 billion 🤝
Divestments <sup>8</sup>	\$47.8 million 🤟	\$1.3 billion 🔥	\$1.4 billion 🔥
Long-range preferred munitions	PrSM <sup>9</sup> : 110 A GMLRS: 6,471 W Develop mid-range capability: \$286.5 million A LRHW <sup>10</sup> : \$412 million W	NSM <sup>II</sup> : 34 A Tomahawk: 60 M SM-6: 125 E LRASM: 48 M AARGM-ER: 54 A JASSM: 25 A CPS <sup>II</sup> : \$1.374 million	JASSM <sup>13</sup> : 525 ARRW <sup>M</sup> : \$238.26 million HACM <sup>15</sup> : \$200.1 million
Improvements to the resiliency of posture	<ul> <li>Continues to build division-sized army prepositioned stock equipment set with corps-level enablers in Europe.<sup>16</sup></li> <li>Prepositioned Patriot munitions.<sup>17</sup></li> <li>Joint reception staging onward movement and integration improvements.<sup>18</sup></li> </ul>	<ul> <li>Marine Corps prepositioning in Norway.<sup>19</sup></li> <li>Improve fixed undersea surveillance systems.<sup>20</sup></li> <li>Joint mobility processing center in Greece.<sup>21</sup></li> </ul>	Improve Tinian airbase. <sup>22</sup> Construct airfield damage repair warehouse and munitions igloos on Andersen Air Force Base. <sup>23</sup> Improve airfields in Europe. <sup>24</sup> Preposition rapid
*See Table Endnot	'es		runway repair equipment and deployable airbase

system sets in Europe.25

#### **Conclusion**

Defense hawks have lambasted the Biden administration for requesting a budget that is too small to build a force capable of keeping pace with great-power competitors. This criticism has merit if the goal is to try to go toe-to-toe with China and Russia in daily sub-conventional competition *and* to defeat a large-scale invasion. The forces and posture that are necessary for day-to-day competition are quite different from the forces and posture that are needed to defend Taiwan or the Baltic states from a conventional attack. It is not clear that the United States can build a force that can achieve both of these objectives given the current topline.

Yet given the escalatory risks associated with dayto-day competition and the challenge small scale sub-conventional land grabs pose, it is unlikely that competition can be won by the military, even one optimized to face this challenge. The competition strategy bets that a large and visible force that actively contests daily military provocations will deter both sub-conventional and conventional aggression, even if the force is not capable of stopping either type of attack. The risks that this proposition does not hold grow over time because the competition strategy forgoes investments in advanced technologies, while China and Russia are rapidly seeking to wrest the military technological advantage from the United States. As the conventional balance tilts further away from the United States, it is increasingly likely that Beijing and Moscow could decide one day that the odds that an attack on a neighbor succeeds is great enough that they are willing to run the risk.

The full-spectrum strategy (Strategy 3) compounds this strategy-resource mismatch by seeking to manage other lesser threats and to remain active in other regions. Yet our analysis also suggests that it is possible to build a force capable of winning one big conflict with this topline if the department is willing to accept some near-term risk in competition, against other threats and in other regions. This approach is very similar to the strategy articulated by the Trump administration in the 2018 NDS.

Our analysis of signposts and the FY22 budget indicate that the Department of Defense is trying to do more than what any credible topline could support in the next few years. In some areas, such as RDT&E and munitions, the budget makes critical investments for a high-end deterrence strategy. But at the same time, its preservation of the current force size and continued commitment to funding readiness to source forces for peacetime

deployments suggest an attempt to cover down on all missions, which it is unlikely able to do well. In other words, it appears from the FY22 budget request that the Biden administration is pursuing a strategy in line with the approach we call full-spectrum competition (Strategy 3). This strategy seeks to balance between competing in the near term while still enhancing preparedness for great-power conflict and hedging against a range of threats. In many respects, this strategy reflects a middle approach as it does not necessarily make tough choices in prioritizing threats or U.S. military roles. It instead tries to do it all to hedge against a wide number of threats and mitigate risk over time. In doing so, it risks not being able to do anything particularly well.

Our analysis suggests that it is possible to build a force capable of winning one big conflict with this topline if the department is willing to accept some near-term risk in competition, against other threats and in other regions.

It remains to be seen whether the next NDS will clearly prioritize among these missions and clarify the U.S. military role to better align resources. It also remains to be seen whether the FY23 budget request will course correct in support of the administration's stated objectives, cutting capacity and reducing the operational tempo to invest in long-term modernization needed to meet the China challenge. At present, the FY22 budget indicates that the DoD is not only doing more than it can afford, but it is also setting up the U.S. military force to be unable to meet future challenges and requirements to maintain U.S. military advantages and secure U.S. interests.

Our assessment of the budget-constrained force associated with the full-spectrum competition strategy identified that it could not successfully fulfill the two primary aims of this approach: defeating sub-conventional aggression and Russian and Chinese gray zone tactics, and building a force capable of defeating a great-power adversary attack on its neighbor. While the force developed for this strategy demonstrated an ability to compete, this came at significant cost and it still could not effectively defeat small-scale land grabs. More so, the force could only initially contest a large-scale attack, but fell well short of defeating the invasion force.

This limited U.S. policymakers' options for countering aggression and upholding the status quo, forcing them to adopt a warfighting strategy of rollback or punishment. While this strategy may limit the risks of failing at any given mission, it also is unable to defeat the challenges posed by the most pressing U.S. adversaries and unable to defend vital U.S. interests.

The full-spectrum competition strategy does not adequately choose among the iron triangle of capacity, readiness, and modernization. Rather, it attempts to do them all despite the fact that doing so produces a force that is too big, incapable of sufficiently addressing the most concerning forms of aggression, and less ready and poorly postured for the future fights the joint force may face—particularly if this administration is genuine about meeting the China challenge. This approach may also place the United States in the position of missing the narrow window to modernize the force and maintain its technological advantage over other great powers. As such, this type of strategy may exacerbate the gap between the United States and its ability to compete, deter, and defeat great-power adversaries.

new technologies that are not merely next generations of existing weapon systems to keep pace with its great power competitors.

It is important to note that the FY22 budget is largely an inherited one and the Biden administration is making some significant investments that align with a high-end deterrence strategy. Nevertheless, the 2022 national defense strategy and the FY23 budget will need to accept more risk and further prioritize to prepare the force for the most challenging and consequential threats and heed Secretary Austin's call for "resources matched to strategy, strategy matched to policy."94 If the Biden administration does not make these hard choices or Congress refuses to support this strategy, the chasm between U.S. strategic and military objectives and the costs of achieving them will only grow significantly. Trying to do too much is a risky business that could result in the United States losing its military technological edge and, ultimately, a war against a great power.

The budget-constrained force associated with the full-spectrum competition strategy identified could not successfully fulfill the two primary aims of this approach: defeating sub-conventional aggression and Russian and Chinese gray zone tactics, and building a force capable of defeating a great-power adversary attack on its neighbor.

A gulf can often open between the articulated strategy and the implementation of this approach, which only becomes evident when examining the budget—the investments that instantiate this strategy and create a joint force. A lack of strategic discipline in the executive branch may create this gap. But a strategic vision may not be fully realized because Congress subverts the implementation of the strategy by not funding priority investments or allowing the department to make hard choices, which may involve cutting capacity and divesting of weapons systems that cannot be effectively employed to defeat the priority operational challenges. Congress is often skeptical of the need for new technologies and capabilities in part because its members struggle to understand how the different pieces of the force structure fit together and how to tie to them to higher order objectives. This is a particularly salient issue today as it is incumbent on the department's leadership to make these connections as the DoD needs to develop and integrate

- The White House, Interim National Security Strategic Guidance, (March 2021), 14, https://www.whitehouse.gov/ wp-content/uploads/2021/03/NSC-1v2.pdf.
- 2. Robert K. Art, "Congress and the Defense Budget: Enhancing Policy Oversight," *Political Science Quarterly*, 100 no. 2 (Summer 1985): 227–248, <a href="https://www.jstor.org/stable/2150654">https://www.jstor.org/stable/2150654</a>.
- Department of Defense, Summary of the 2018 National Defense Strategy, 1, https://dod.defense.gov/Portals/1/ Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.
- 4. Elbridge Colby, Director of the Defense Program at the Center for a New American Security, "Testimony Before the Senate Armed Services Committee, Hearing on Implementation of the National Defense Strategy," Statement to the Senate Armed Services Committee, United States Senate, January 29, 2019, 4, <a href="https://www.armed-services.senate.gov/imo/media/doc/Colby\_01-29-19.pdf">https://www.armed-services.senate.gov/imo/media/doc/Colby\_01-29-19.pdf</a>.
- David Ochmanek, "Improving Force Development Within the U.S. Department of Defense: Diagnosis and Potential Prescriptions," (RAND Corporation, 2018), 10, <a href="https://www.rand.org/pubs/perspectives/PE302.html">https://www.rand.org/pubs/perspectives/PE302.html</a>.
- Susanna V. Blume and Molly Parrish, "Investing in Great-Power Competition: Analysis of the Fiscal Year 2021 Defense Budget Request," (Center for a New American Security, July 2020), <a href="https://www.cnas.org/publications/reports/investing-in-great-power-competition">https://www.cnas.org/publications/reports/investing-in-great-power-competition</a>.
- 7. The White House, Interim National Security Strategic Guidance, 14.
- 8. The White House, Interim National Security Strategic Guidance; President Joe Biden, "The Power of America's Example: The Biden Plan for Leading the Democratic World to Meet the Challenges of the 21st Century," July 11, 2019, New York City, <a href="https://joebiden.com/american-leadership/">https://joebiden.com/american-leadership/</a>; and Scott Detrow, "Why Biden's National Security Adviser Plans To Focus On The Middle Class," NPR, December 30, 2020, <a href="https://www.npr.org/sections/biden-transition-updates/2020/12/30/951280373/why-bidens-national-security-adviser-plans-to-focus-on-the-u-s-middle-class">https://www.npr.org/sections/bidens-national-security-adviser-plans-to-focus-on-the-u-s-middle-class</a>.
- 9. The White House, *Interim National Security Strategic Guidance*.
- 10. The White House, *Memorandum on Revitalizing America's Foreign Policy and National Security Workforce, Institutions, and Partnerships*, (February 4, 2021), <a href="https://www.whitehouse.gov/briefing-room/presidential-actions/2021/02/04/memorandum-revitalizing-americas-foreign-policy-and-national-security-workforce-institutions-and-partnerships/">https://www.whitehouse.gov/briefing-room/presidential-actions/2021/02/04/memorandum-revitalizing-americas-foreign-policy-and-national-security-workforce-institutions-and-partnerships/</a>.
- Executive Office of the President, Office of Management and Budget, Presidential Request for Fiscal Year (FY) 2022 Discretionary Funding, April 9, 2021, https://

- www.whitehouse.gov/wp-content/uploads/2021/04/ FY2022-Discretionary-Request.pdf; The White House, *Interim National Security Strategic Guidance*; and David Vergun, "Climate Change Resiliency a High DoD Priority, Deputy Defense Secretary Says," Department of Defense News, May 24, 2021, <a href="https://www.defense.gov/Explore/News/Article/Article/2630037/climate-change-resiliency-a-high-dod-priority-deputy-defense-secretary-says/">https://www.defense-secretary-says/</a>.
- 12. The White House, Interim National Security Strategic Guidance; Jen Psaki and Jared Bernstein, "Press Briefing by Press Secretary Jen Psaki and Council of Economic Advisers Member Jared Bernstein, February 5, 2021," February 5, 2021, Washington, D.C., https://www.white-house.gov/briefing-room/press-briefings/2021/02/05/press-briefing-by-press-secretary-jen-psaki-and-council-of-economic-advisers-member-jared-bernstein-february-5-2021/; and President Joe Biden, "Remarks by President Biden at the 2021 Virtual Munich Security Conference," February 19, 2021, Washington, D.C., https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/02/19/remarks-by-president-biden-at-the-2021-virtual-munich-security-conference/.
- 13. President Joe Biden, "Remarks by President Biden in Press Conference," March 25, 2021, Washington, D.C., <a href="https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/03/25/remarks-by-president-biden-in-press-conference/">https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/03/25/remarks-by-president-biden-in-press-conference/</a>.
- 14. The White House, Interim National Security Strategic Guidance.
- 15. The White House, Interim National Security Strategic Guidance; and President Joe Biden, "Remarks by President Biden on America's Place in the World," February 4, 2021, U.S. Department of State Headquarters, Washington, D.C., <a href="https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/02/04/remarks-by-president-biden-on-americas-place-in-the-world/">https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/02/04/remarks-by-president-biden-on-americas-place-in-the-world/</a>.
- 16. The White House, *Interim National Security Strategic Guidance*; and Biden, "Remarks by President Biden on America's Place in the World."
- "Secretary Lloyd J. Austin III Message to the Force," Department of Defense.
- 18. "Secretary Lloyd J. Austin III Message to the Force," Department of Defense.
- 19. Deputy Secretary of Defense Kathleen Hicks, "Day 1: CNAS 2021 National Security Conference: A New American Security," June 8, 2021, <a href="https://www.youtube.com/watch?v=krLukIuqUyc">https://www.youtube.com/watch?v=krLukIuqUyc</a>.
- 20. The White House, *Interim National Security Strategic Guidance*; "Secretary Lloyd J. Austin III Message to the Force," Department of Defense; and The White House,

- Presidential Request for Fiscal Year (FY) 2022 Discretionary Funding.
- 21. The White House, Presidential Request for Fiscal Year (FY) 2022 Discretionary Funding; "Secretary Lloyd J. Austin III Message to the Force," Department of Defense; Leonor Tomero, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense, testimony to the Strategic Forces Subcommittee, Committee on Armed Services, United States Senate, https://www.armed-services.senate. gov/imo/media/doc/5-12-21%20DASD%20Tomero%20 Written%20Statement\_Final1.pdf; Antony Blinken, "Transcript of interview with US Secretary of State Antony Blinken," Nikkei Asia, March 17, 2021, https:// asia.nikkei.com/Editor-s-Picks/Interview/Transcript-ofinterview-with-US-Secretary-of-State-Antony-Blinken; and Paul McLeary, "New Hicks Memo Sets Acquisition, Force Posture 2022 Budget Priorities," Breaking Defense, February 24, 2021, https://breakingdefense.com/2021/02/ exclusive-hicks-memo-sets-2022-budget-priorities/.
- 22. McLeary, "New Hicks Memo Sets Acquisition, Force Posture 2022 Budget Priorities."
- 23. Hicks, "Day 1: CNAS 2021 National Security Conference: A New American Security."
- 24. Jim Garamone, "Official Talks DoD Policy Role in Chinese Pacing Threat, Integrated Deterrence," Department of Defense News, June 2, 2021, <a href="https://www.defense.gov/Explore/News/Article/Article/2641068/official-talks-dod-policy-role-in-chinese-pacing-threat-integrated-deterrence/">https://www.defense.gov/Explore/News/Article/Article/2641068/official-talks-dod-policy-role-in-chinese-pacing-threat-integrated-deterrence/</a>.
- 25. Hicks, "Day 1: CNAS 2021 National Security Conference: A New American Security."; Secretary of Defense Lloyd J. Austin III, "Secretary of Defense Remarks for the U.S. IN-DOPACOM Change of Command," April 30, 2021, Hawaii, <a href="https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/2592154/secretary-of-defense-remarks-for-the-us-indopacom-change-of-command/">https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/2592154/secretary-of-defense-remarks-for-the-us-indopacom-change-of-command/</a>; and Garamone, "Official Talks DoD Policy Role in Chinese Pacing Threat, Integrated Deterrence."
- 26. C. Todd Lopez, "Defense Secretary Says 'Integrated Deterrence' Is Cornerstone of U.S. Defense," Department of Defense News, April 30, 2021, <a href="https://www.defense.gov/Explore/News/Article/Article/2592149/defense-secretary-says-integrated-deterrence-is-cornerstone-of-us-defense/">https://www.defense.gov/Explore/News/Article/Article/2592149/defense-secretary-says-integrated-deterrence-is-cornerstone-of-us-defense/</a>; and Garamone, "Official Talks DoD Policy Role in Chinese Pacing Threat, Integrated Deterrence."
- 27. Raphael S. Cohen, "The History and Politics of Defense Reviews," (RAND Corporation, 2018), <a href="https://www.rand.org/pubs/research\_reports/RR2278.html">https://www.rand.org/pubs/research\_reports/RR2278.html</a>; and Mark F. Cancian et al., "Formulating National Security Strategy," (Center for Strategic and International Studies, October 2017), <a href="https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/171006\_CSIS\_NationalSecurityStrategyFormulation\_FINAL\_0.pdf">https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/171006\_CSIS\_NationalSecurityStrategyFormulation\_FINAL\_0.pdf</a>.

- 28. Mark Gunzinger, "Force Planning for the Era of Great Power Competition," (Center for Strategic and Budgetary Assessments, October 2, 2017), <a href="https://csbaonline.org/research/publications/force-planning-for-the-era-of-great-power-competition">https://csbaonline.org/research/publications/force-planning-for-the-era-of-great-power-competition</a>; and Jim Mitre, "A Euology for the Two-War Construct," *The Washington Quarterly*, 41 no.4 (January 24, 2019): 7, <a href="https://www.tandfonline.com/doi/abs/10.1080/0163660X.2018.1557479">https://www.tandfonline.com/doi/abs/10.1080/0163660X.2018.1557479</a>.
- 29. Mitre, "A Euology for the Two-War Construct," 7, 10.
- 30. Gunzinger, "Force Planning for the Era of Great Power Competition."; Mitre, "A Euology for the Two-War Construct."
- 31. Mitre, "A Euology for the Two-War Construct."
- 32. David Ochmanek et al., "U.S. Military Capabilities and Forces for a Dangerous World: Rethinking the U.S. Approach to Force Planning," (RAND Corporation, 2017), 96–97, https://www.rand.org/pubs/research\_reports/RR1782-1.html.
- 33. Department of Defense, Summary of the 2018 National Defense Strategy.
- 34. Mitre, "A Euology for the Two-War Construct," 23-24.
- 35. Colby, "Testimony Before the Senate Armed Services Committee, Hearing on Implementation of the National Defense Strategy," 5.
- 36. Mitre, "A Euology for the Two-War Construct," 9.
- 37. Blume and Parrish, "Investing in Great-Power Competition: Analysis of the Fiscal Year 2021 Defense Budget Request."; and Susanna V. Blume, "Strategy to Ask: Analysis of the 2020 Defense Budget Request," (Center for a New American Security, May 2019), <a href="https://www.cnas.org/publications/reports/strategy-to-ask">https://www.cnas.org/publications/reports/strategy-to-ask</a>.
- 38. Department of Defense, Summary of the 2018 National Defense Strategy, 1.
- 39. Katie Bo Williams, "What's Great Power Competition? No One Really Knows," Defense One, May 13, 2019, <a href="https://www.defenseone.com/threats/2019/05/whats-great-power-competition-no-one-really-knows/156969/">https://www.defenseone.com/threats/2019/05/whats-great-power-competition-no-one-really-knows/156969/</a>.
- 40. Frank G. Hoffman, "The Contemporary Spectrum of Conflict: Protracted, Gray Zone Ambiguous, and Hybrid Modes of War," (The Heritage Foundation) 32, <a href="https://www.heritage.org/sites/default/files/2019-10/2016\_IndexOfUSMilitaryStrength\_The%20Contemporary%20Spectrum%20of%20Conflict\_Protracted%20Gray%20Zone%20Ambiguous%20and%20Hybrid%20Modes%20of%20War.pdf.">https://www.heritage.org/sites/default/files/2019-10/2016\_IndexOfUSMilitaryStrength\_The%20Contemporary%20Spectrum%20of%20Conflict\_Protracted%20Gray%20Zone%20Ambiguous%20and%20Hybrid%20Modes%20of%20War.pdf.</a>
- 41. Stacie L. Pettyjohn and Becca Wasser, "Competing in the Gray Zone: Russian Tactics and Western Responses," (RAND Corporation, 2019), 3, <a href="https://www.rand.org/pubs/research\_reports/RR2791.html">https://www.rand.org/pubs/research\_reports/RR2791.html</a>; For a more general

- definition of competition see: Michael J. Mazarr et al., "Understanding the Emerging Era of International Competition: Theoretical and Historical Perspectives," (RAND Corporation, 2018), 3–4, <a href="https://www.rand.org/pubs/research\_reports/RR2726.html">https://www.rand.org/pubs/research\_reports/RR2726.html</a>.
- 42. For more on Chinese economic coercion, see: Peter Harrell, Elizabeth Rosenberg, and Edoardo Saravalle, "China's Use of Coercive Economic Measures," (Center for a New American Security, 2018), <a href="https://s3.us-east-l.amazonaws.com/files.cnas.org/documents/China\_Use\_FINAL-l.pd-f?mtime=20180604161240&focal=none;">https://s3.us-east-l.amazonaws.com/files.cnas.org/documents/China\_Use\_FINAL-l.pd-f?mtime=20180604161240&focal=none;</a>; For more on gray zone tactics, see: Lyle J. Morris et al., "Gaining Competitive Advantage in the Gray Zone: Response Options for Coercive Aggression Below the Threshold of Major War," (RAND Corporation, 2019), <a href="https://www.rand.org/pubs/research\_reports/RR2942.html">https://www.rand.org/pubs/research\_reports/RR2942.html</a>.
- 43. Billy Fabian, "Overcoming the Tyranny of Time: The Role of U.S. Forward Posture in Deterrence and Defense," (Center for a New American Security, September 21, 2020), <a href="https://www.cnas.org/publications/commentary/overcoming-the-tyranny-of-time-the-role-of-u-s-forward-posture-in-deterrence-and-defense">https://www.cnas.org/publications/commentary/overcoming-the-tyranny-of-time-the-role-of-u-s-forward-posture-in-deterrence-and-defense</a>.
- 44. Christopher M. Dougherty, "Why America Needs a New Way of War," (Center for a New American Security, June 2019), https://s3.amazonaws.com/files.cnas.org/CNAS+Report+-+ANAWOW+-+FINAL2.pdf; and Alan J. Vick, "Air Base Attacks and Defensive Counters: Historical Lessons and Future Challenges," (RAND Corporation, 2015), 11–19, https://www.rand.org/pubs/research\_reports/RR968.html; Michèle Flournoy and Gabrielle Chefitz, "Sharpening the U.S. Military's Edge: Critical Steps for the Next Administration," (Center for a New American Security, July 13, 2020), https://www.cnas.org/publications/commentary/sharpening-the-u-s-militarys-edge-critical-steps-for-the-next-administration.
- 45. Biden "Remarks by President Biden on America's Place in the World."
- 46. Jim Mitre and Andre Gellerman, "Defining DoD's Role in Gray Zone Competition," (Center for a New American Security, August 4, 2020), <a href="https://www.cnas.org/publications/commentary/defining-dods-role-in-gray-zone-competition">https://www.cnas.org/publications/commentary/defining-dods-role-in-gray-zone-competition</a>.
- 47. Christopher M. Dougherty, "More than Half the Battle: Information and Command in a New American Way of War," (Center for a New American Security, May 2021), 27, https://s3.amazonaws.com/files.cnas.org/CNAS+Report-Command+and+Info-2021.pdf.
- 48. For more on improving air base defenses, see: Alan J. Vick et al., "Air Base Defense: Rethinking Army and Air Force Roles and Functions," (RAND Corporation, 2020), <a href="https://www.rand.org/pubs/research\_reports/RR4368.html">https://www.rand.org/pubs/research\_reports/RR4368.html</a>.
- 49. Ochmanek et al., "U.S. Military Capabilities and Forces for a Dangerous World: Rethinking the U.S. Approach to Force Planning," 28–29, 46–47.

- 50. For more on preferred munitions, see: Ely Ratner et al., "Rising to the China Challenge: Renewing American Competitiveness in the Indo-Pacific," (Center for a New American Security, December 2019), 17, https://s3.us-east-l.amazonaws.com/files.cnas.org/documents/CNAS-Report-NDAA-final-6.pdf?mtime=20200116130752&fo-cal=none.
- 51. Robert O. Work and Shawn Brimley, "20YY: Preparing for War in the Robotic Age," (Center for a New American Security, January 22, 2014P, <a href="https://www.cnas.org/publications/reports/20yy-preparing-for-war-in-the-robotic-age">https://www.cnas.org/publications/reports/20yy-preparing-for-war-in-the-robotic-age</a>.
- 52. Even in a region that is not a service's focus area, it will play a supporting role. For instance, the Navy would conduct anti-submarine warfare to secure the sea lines of communication for a war in Europe, while the Army would fulfill its Title X sustainment responsibilities and provide some long-range fires during a war in the Indo-Pacific. Similarly, the Air Force would be called on to provide critical intelligence and air support in both theaters.
- 53. Melanie W. Sisson, "A Strategy for Competition," (Center for a New American Security, August 17, 2020), <a href="https://www.cnas.org/publications/commentary/a-strate-gy-for-competition">https://www.cnas.org/publications/commentary/a-strate-gy-for-competition</a>.
- 54. David E. Sanger, "Biden Calls for U.S. to Enter a New Superpower Struggle," *The New York Times*, April 29, 2021, <a href="https://www.nytimes.com/2021/04/29/us/politics/bidenchina-russia-cold-war.html">https://www.nytimes.com/2021/04/29/us/politics/bidenchina-russia-cold-war.html</a>.
- 55. Dan Reiter and Paul Poast, "The Truth About Tripwires: Why Small Force Deployments Do Not Deter Aggression," *Texas National Security Review*, 4 no. 3 (Summer 2021): <a href="https://tnsr.org/2021/06/the-truth-about-tripwires-why-small-force-deployments-do-not-deter-aggression/">https://tnsr.org/2021/06/the-truth-about-tripwires-why-small-force-deployments-do-not-deter-aggression/</a>.
- 56. Blake Herzinger, "The Budget (And Fleet) That Might Have Been," War on the Rocks, June 10, 2021, <a href="https://warontherocks.com/2021/06/the-budget-and-fleet-that-might-have-been/">https://warontherocks.com/2021/06/the-budget-and-fleet-that-might-have-been/</a>.
- 57. Henry J. Hendrix, *To Provide and Maintain a Navy: Why Naval Primacy Is America's First Best Strategy* (Annapolis, MD: Foscle LLP, 2020), 99–103.
- 58. Elbridge Colby and Jim Mitre, "Why the Pentagon Should Focus on Taiwan," War on the Rocks, October 2020, https://warontherocks.com/2020/10/why-the-pentagon-should-focus-on-taiwan/; David Ochmanek et al., "America's Security Deficit: Addressing the Imbalance Between Strategy and Resources in a Turbulent World," (RAND Corporation, 2015), 14–19, https://www.rand.org/pubs/research\_reports/RR1223.html; and LTG (Ret.) Ben Hodges, Janusz Bugajski, and Peter B. Doran, "Securing the Suwałki Corridor: Strategy, Statecraft, Deterrence, and Defense" (Center for European Policy Analysis, July 2018), https://cepa.org/cepa\_files/2018-CEPA-report-Securing\_The\_Suwa%C5%82ki\_Corridor.pdf.

- 59. This is similar to the idea of a limiting case or the most extreme situation that the force could face.
- 60. Ochmanek et al., "America's Security Deficit: Addressing the Imbalance Between Strategy and Resources in a Turbulent World," 45; and John J. Mearsheimer, *Conventional Deterrence* (Ithaca: Cornell University Press, 1983). Deterrence by denial was also the military objective laid out in the 2018 National Defense Strategy.
- 61. Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1996).
- 62. Pettyjohn and Wasser, "Competing in the Gray Zone: Russian Tactics and Western Responses."
- 63. Ochmanek et al., "America's Security Deficit: Addressing the Imbalance Between Strategy and Resources in a Turbulent World," 45.
- 64. A game that was designed to do that: Michael E. Linick et al., "Hegemony: A Game of Strategic Choices," (RAND Corporation, 2020), <a href="https://www.rand.org/pubs/tools/TL301.html">https://www.rand.org/pubs/tools/TL301.html</a>.
- 65. Thomas Hamilton and David Ochmanek, "Operating Low-Cost, Reusable Unmanned Aerial Vehicles in Contested Environments: Preliminary Evaluation of Operational Concepts," (RAND Corporation, 2020), <a href="https://www.rand.org/pubs/research\_reports/RR4407.html">https://www.rand.org/pubs/research\_reports/RR4407.html</a>.
- 66. In our tabletop exercises, we made the optimistic assumption that some new capabilities were available and worked as expected.
- 67. Scott Boston and Dara Massicot, "The Russian Way of Warfare," (RAND Corporation, 2017), 10–11, https://www.rand.org/content/dam/rand/pubs/perspectives/PE200/PE231/RAND\_PE231.pdf; Eric Heginbotham et al., "The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power, 1996-2017," (RAND Corporation, 2015), Chapters 2 and 5, https://www.rand.org/pubs/research\_reports/RR392.html.
- 68. It was determined that the proliferation of commercial intelligence, surveillance, and reconnaissance satellites by 2030 meant that neither adversary could not hide the assembly and movement of large invasion forces.
- 69. Russian helicopters or aircraft could also launch strikes on these forces, which lacked short-range air defenses.
- 70. To be fair, it is not clear that any of the strategies or force structures would be capable of liberating Taiwan if a Chinese invasion culminated.
- 71. Fiona S. Cunningham, "The Maritime Rung on the Escalation Ladder: Naval Blockades in a US-China Conflict," *Security Studies*, 29 no. 4 (October 31, 2020): 730–768, https://www.tandfonline.com/doi/abs/10.1080/0963641 2.2020.1811462; Sean Mirski, "Stranglehold: The Context,

- Conduct and Consequences of an American Naval Blockade of China," *Journal of Strategic Studies*, 36 no. 3 (February 12, 2013): 385–421, https://www.tandfonline.com/doi/abs/10.1080/01402390.2012.743885; T. X. Hammes, "Offshore Control: A Proposed Strategy for an Unlikely Conflict," *Institute for National Strategic Studies*, INSS Strategic Forum 278 (June 2012): 1–16; Douglas C. Peifer, "China, the German Analogy, and the New AirSea Operational Concept," *Orbis*, 55, no. 1 (Winter 2011): 114–31; and Hal Brands, "The Too-Good-to-Be True Way to Fight the Chinese Military," *Bloomberg*, July 9, 2019, https://www.bloomberg.com/opinion/articles/2019-07-09/how-to-fight-china-and-russia-on-american-terms.
- 72. Robert A. Pape, Bombing to Win: Air Power and Coercion in War (Ithaca: Cornell University Press, April 18, 1996); Susan Hannah Allen and Carla Martinez Machain, "Understanding the impact of airpower," Conflict Management and Peace Science, 36 no. 5 (February 1, 2017): <a href="https://journals.sagepub.com/doi/abs/10.1177/0738894216682485;">https://journals.sagepub.com/doi/abs/10.1177/0738894216682485;</a> Michael Horowitz and Dan Reiter, "When Does Aerial Bombing Work?: Quantitative Empirical Tests, 1917-1999," Journal of Conflict Resolution, 45 no. 2 (April 1, 2001): <a href="https://journals.sagepub.com/doi/abs/10.1177/00220027">https://journals.sagepub.com/doi/abs/10.1177/00220027</a> <a href="https://journals.sagepub.com/doi/abs/10.1177/00220027">01045002001</a>; and John J. Mearsheimer, The Tragedy of Great Power Politics (New York City: W. W. Norton, 2001), 85–110.
- 73. Gabriel Collins, "A Maritime Oil Blockade against China—Tactically Tempting but Strategically Flawed," Naval War College Review, 71, no. 2 (Spring 2018): 49–78; Erik Sand, "Desperate Measures: The Effects of Economic Isolation on Warring Powers," Texas National Security Review, 3 no. 2 (Spring 2020): 12–37, <a href="https://tnsr.org/2020/04/desperate-measures-the-effects-of-economic-isolation-on-warring-powers/#\_ftn3">https://tnsr.org/2020/04/desperate-measures-the-effects-of-economic-isolation-on-warring-powers/#\_ftn3</a>; Gabriel B. Collins and William S. Murray, "No Oil for the Lamps of China?" Naval War College Review, 61, no. 2 (Spring 2008): 79–95.
- 74. Cunningham, "The Maritime Rung on the Escalation Ladder: Naval Blockades in a U.S.-China Conflict," 766–767; and Sand, "Desperate Measures: The Effects of Economic Isolation on Warring Powers."
- 75. Avery Goldstein, "First Things First: The Pressing Danger of Crisis Instability in U.S.-China Relations," *International Security*, 37, no. 4 (Spring 2013); Kurt M. Campbell and Ali Wyne, "The Growing Risk of Inadvertent Escalation Between Washington and Beijing," Lawfare, August 16, 2020, <a href="https://www.lawfareblog.com/growing-risk-inad-vertent-escalation-between-washington-and-beijing">https://www.lawfareblog.com/growing-risk-inad-vertent-escalation-between-washington-and-beijing</a>; and Lyle J. Morris et al., "Gaining Competitive Advantage in the Gray Zone: Response Options for Coercive Aggression Below the Threshold of Major War," (RAND Corporation, 2019), 132, <a href="https://www.rand.org/content/dam/rand/pubs/research\_reports/RR2900/RR2942/RAND\_RR2942.pdf">https://www.rand.org/content/dam/rand/pubs/research\_reports/RR2900/RR2942/RAND\_RR2942.pdf</a>.
- Dan Reiter and Paul Poast, "The Truth About Tripwires: Why Small Force Deployments Do Not Deter Aggression,"

- Texas National Security Review, 4 no. 3 (Summer 2021), https://tnsr.org/2021/06/the-truth-about-tripwires-whysmall-force-deployments-do-not-deter-aggression/.
- David A. Shlapak and Michael Johnson, "Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics," (RAND Corporation, 2016), 3, <a href="https://www.rand.org/pubs/research\_reports/RR1253.">https://www.rand.org/pubs/research\_reports/RR1253.</a> <a href="https://www.rand.org/pubs/research\_reports/RR1253">httml.</a>
- 78. Hicks, "Day 1: CNAS 2021 National Security Conference: A New American Security"; and "Secretary Lloyd J. Austin III Message to the Force," Department of Defense.
- 79. Hicks, "Day 1: CNAS 2021 National Security Conference: A New American Security"; "The Department of Defense Releases the President's Fiscal Year 2022 Defense Budget," Department of Defense, Statement from Secretary of Defense Lloyd J. Austin III, May 28, 2021, <a href="https://www.defense.gov/Newsroom/Releases/Release/Article/2638711/the-department-of-defense-releases-the-presidents-fiscal-year-2022-defense-budg/">https://www.defense.gov/Newsroom/Releases/Release/Article/2638711/the-department-of-defense-budg/</a>; and Lloyd J. Austin III, Secretary of Defense, testimony to the Armed Services Committee, U.S. Senate, June 10, 2021, <a href="https://www.armed-services.senate.gov/hearings/department-of-defense-budget-posture-in-review-of-the-defense-authorization-request-for-fiscal-year-2022">https://www.armed-services.senate.gov/hearings/department-of-defense-budget-posture-in-review-of-the-defense-authorization-request-for-fiscal-year-2022</a>.
- 80. Hicks, "Day 1: CNAS 2021 National Security Conference: A New American Security"; and Austin, testimony to the Senate Armed Services Committee.
- 81. For more on the fiscal year 22 budget priorities, see:
  Stacie L. Pettyjohn and Becca Wasser, "Making Sense of
  Cents: Parsing the U.S. Department of Defense's FY 2022
  Budget Request," (Center for a New American Security,
  May 6, 2021), <a href="https://www.cnas.org/publications/reports/the-skinny?x-craft-preview=7F1TeeoLlQ&token=7gPdZ-jX1BMii8k3Lj2iGmT6dLe56d74H">https://www.cnas.org/publications/reports/the-skinny?x-craft-preview=7F1TeeoLlQ&token=7gPdZ-jX1BMii8k3Lj2iGmT6dLe56d74H</a>.
- 82. Congressional Research Service, *Department of Defense Research, Development, Test, and Evaluation (RDT&E): Appropriations Structure,* (October 7, 2020), 5, <a href="https://fas.org/sgp/crs/natsec/R44711.pdf">https://fas.org/sgp/crs/natsec/R44711.pdf</a>.
- 83. Blume and Parrish, "Investing in Great-Power Competition: Analysis of the Fiscal Year 2021 Defense Budget Request."
- 84. Blume and Parrish, "Investing in Great-Power Competition: Analysis of the Fiscal Year 2021 Defense Budget Request."
- 85. Office of the Under Secretary of Defense (Comptroller), *Defense Budget Overview*, Slide 23.
- 86. Office of the Under Secretary of Defense (Comptroller), *Defense Budget Overview*, Slide 9.
- 87. Office of the Under Secretary of Defense (Comptroller)/ Chief Financial Officer, *European Deterrence Initiative*:

- Department of Defense Budget Fiscal Year (FY) 2022.
- 88. Office of the Under Secretary of Defense (Comptroller), *Pacific Deterrence Initiative*, 10-11.
- 89. Admiral Philip S. Davidson, Commander, U.S. Indo-Pacific Command, Statement to the Armed Services Committee, U.S. Senate, March 9, 2021, 5, <a href="https://www.armed-ser-vices.senate.gov/imo/media/doc/Davidson\_03-09-21.pdf">https://www.armed-ser-vices.senate.gov/imo/media/doc/Davidson\_03-09-21.pdf</a>.
- Department of the Army, Army Fiscal Year 2022 Budget Overview, (May 28, 2021), <a href="https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/pbr/FY22\_PB\_brief\_28MAY21.pdf">https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/pbr/FY22\_PB\_brief\_28MAY21.pdf</a>.
- 91. Tony Bertuca, "Hicks Says Defense Budget Could Be Delayed Because of Trump Team's Obstruction," Inside Defense, February 2, 2021, https://insidedefense.com/daily-news/hicks-says-defense-budget-could-be-delayed-becausetrump-teams-obstruction.
- 92. Andrew Solender, "Biden's Defense Budget Request Panned by GOP, Progressive Democrats in Congress," Forbes, April 9, 2021, <a href="https://www.forbes.com/sites/">https://www.forbes.com/sites/</a> andrewsolender/2021/04/09/bidens-defense-budget-request-panned-by-gop-progressive-democrats-in-congress/?sh=6931c84a5257.
- 93. Kathleen Hicks, "Defense Strategy and the Iron Triangle of Painful Tradeoffs," Defense360, June 21, 2017, <a href="https://defense360.csis.org/defense-strategy-and-the-iron-triangle-of-painful-tradeoffs/">https://defense360.csis.org/defense-strategy-and-the-iron-triangle-of-painful-tradeoffs/</a>.
- 94. "Secretary Lloyd J. Austin III Message to the Force," Department of Defense.

#### **DEFENSE | JULY 2021**

Risky Business: Future Strategy and Force Options for the Defense Department

#### **TABLE ENDNOTES**

#### FIGURE 4

- Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, (May 2021), 136 and 139, <a href="https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY2022\_Budget\_Request\_Overview\_Book.pdf">https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY2022\_Budget\_Request\_Overview\_Book.pdf</a>.
- 2. Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 41.
- Office of the Undersecretary of Defense (Comptroller), *Operation and Maintenance Programs (O-1) Revolving and Management Funds (RF-1)*, (May 2021), 2, <a href="https://comptroller.defense.gov/Portals/45/Documents/def-budget/FY2022/FY2022\_o1.pdf">https://comptroller.defense.gov/Portals/45/Documents/def-budget/FY2022/FY2022\_o1.pdf</a>.
- Office of the Undersecretary of Defense (Comptroller), RDT&E Programs (R-1): Department of Defense Budget Fiscal Year 2022, (May 2021), II, https://comptroller.de- fense.gov/Portals/45/Documents/defbudget/FY2022/ FY2022\_rl.pdf; and Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 28.
- Office of the Undersecretary of Defense (Comptroller), Procurement Programs (P-1), (May 2021), II, <a href="https://comptroller.defense.gov/Portals/45/Documents/def-budget/FY2022/FY2022\_p1.pdf">https://comptroller.defense.gov/Portals/45/Documents/def-budget/FY2022/FY2022\_p1.pdf</a>.
- 6. Office of the Undersecretary of Defense (Comptroller), *Defense Budget Overview*, 35.
- 7. Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 23; Department of the Defense, Justification Book of Missile Procurement, Army, (May 2021), 9, <a href="https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/Base%20Budget/Procurement/MSLS\_FY\_2022\_PB\_Missile\_Procurement\_Army.pdf">https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/Base%20Budget/Procurement/MSLS\_FY\_2022\_PB\_Missile\_Procurement\_Army.pdf</a>; Department of Defense, Justification Book of Weapons Procurement, Navy, (May 2021), 12, <a href="https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/WPN\_Book.pdf">https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/WPN\_Book.pdf</a>; Office of the Undersecretary of Defense (Comptroller). Department of Defense Budget Fiscal Year 2022, 14; and Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 29.
- 8. Office of the Undersecretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, (June 2021), 16 and 18, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY2022\_EDI\_JBook.pdf; and Office of the Undersecretary of Defense (Comptroller), Pacific Deterrence Initiative, (May 2021), 5, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/fy2022\_Pacific\_Deterrence\_Initiative.pdf.

#### FIGURE 5

 Office of the Under Secretary of Defense (Comptroller), RDT&E Programs (R-1): Department of Defense Budget Fiscal Year 2021.

#### FIGURE 6

- Department of the Army, Army Fiscal Year 202 Budget Overview, (May 28, 2021), 6 and 8, <a href="https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/pbr/FY22\_PB\_brief\_28MAY21.pdf">https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/pbr/FY22\_PB\_brief\_28MAY21.pdf</a>.
- Office of Budget, Department of the Navy, Highlights of the Department of the Navy FY2022 Budget, (May 2021), 71 and 99, https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/Highlights\_Book.pdf; Department of the Navy, Fiscal Year (FY) 2022 Budget Estimates, Justification Estimates, Military Personnel, Marine Corps (MPMC), (May 2021), 6, https://www.secnav.navy.mil/ fmc/fmb/Documents/22pres/MPMC\_Book.pdf; and Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 138.
- 3. Department of the Air Force, FY2022 Budget Overview, (May 28, 2021), 12, https://www.saffm.hq.af.mil/Portals/84/documents/FY22/SUPPORT\_/FY22%20Budget%20Overview%20Book.pdf?ver=Reck2JzBUzoZmGByl9Zm-Q%3d%3d; and Department of the Air Force, Fiscal Year (FY) 2022 Budget Estimate, Military Personnel Appropriation, (May 2021), 13, https://www.saffm.hq.af.mil/Portals/84/documents/FY22/MILP-ER\_/20210525%20%20USAF%20FY%202022PB%20JBook%20(Main).pdf?ver=dHx2AXmuwkcdVDnCXPccYA%3d%3d.
- 4. Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 41.
- 5. Office of the Undersecretary of Defense (Comptroller), Operation and Maintenance Programs (O-1) Revolving and Management Funds (RF-1), 1.
- 6. Office of the Undersecretary of Defense (Comptroller), RDT&E Programs (R-1): Department of Defense Budget Fiscal Year 2022, A-1, N-1, and F-1.
- 7. Office of the Undersecretary of Defense (Comptroller), *Procurement Programs (P-I)*, II.
- 8. Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 14.
- 9. Department of Defense, *Justification Book of Missile Procurement, Army*, (May 2021), 9 and 10, <a href="https://www.asafm.army.mil/Portals/72/Documents/BudgetMa-asafm.army.mil/Portals

- terial/2022/Base%20Budget/Procurement/MSLS\_FY\_2022\_PB\_Missile\_Procurement\_Army.pdf.
- Department of Defense, Justification Book Research, Development, Test & Evaluation, Army RDT&E—Volume II, Budget Activity 4, (May 2021), R-1, Line 80, <a href="https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/Base%20Budget/rdte/RDTE\_BA\_4\_FY\_2022\_PB.pdf">https://www.asafm.army.mil/Portals/72/Documents/BudgetMaterial/2022/Base%20Budget/rdte/RDTE\_BA\_4\_FY\_2022\_PB.pdf</a>.
- 11. Department of Defense, Justification Book of Weapons Procurement, Navy, (May 2021), 12, 133, and 293, <a href="https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/WPN\_Book.pdf">https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/WPN\_Book.pdf</a>; Office of the Undersecretary of Defense (Comptroller), Defense Budget Overview, 23.
- 12. Department of Defense, *Justification Book Research*, *Development, Test & Evaluation, Navy, Vol. 5*, (May 2021), 17 <a href="https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/RDTEN\_BA7\_Book.pdf">https://www.secnav.navy.mil/fmc/fmb/Documents/22pres/RDTEN\_BA7\_Book.pdf</a>.
- 13. Office of the Undersecretary of Defense (Comptroller), *Defense Budget Overview*, 23.
- 14. Department of Defense, Justification Book Research, Development, Test & Evaluation, Air Force Vol-II, (May 2021), Exhibit R-1 Line 43, https://www.saffm.hq.af.mil/Portals/84/documents/FY22/RDTE\_/FY22%20DAF%20J-Book%20-%203600%20-%20AF%20RDT%20and%20E%20Vol%20II.pdf?ver=K-pJJbVq68o32dSvkjuv\_Iw%3d%3d.
- 15. Department of Defense, Justification Book Research, Development, Test & Evaluation, Air Force Vol-II, Exhibit R-1 Line 43.
- 16. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 13.
- 17. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 14.
- 18. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 15.
- 19. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 13.
- 20. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 16.
- 21. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of

- Defense Budget Fiscal Year (FY) 2022, 16.
- 22. Office of the Under Secretary of Defense (Comptroller), *Construction Programs (C-1)*, (May 2021), State-23, <a href="https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2022/fy2022\_c1.pdf">https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2022/fy2022\_c1.pdf</a>.
- 23. Department of the Air Force, *Military Construction Program Fiscal Year (FY) 2022 Budget Estimates*, (May 2021), 169–173, https://www.saffm.hq.af.mil/Portals/84/documents/FY22/PROCUREMENT\_/FY22%20DAF%20
  J-Book%20-%203300%20-%20Military%20Construction.pdf?ver=5d2iUKIKQwP3i3r71xQn6g%3d%3d. The Air Force requested \$94.824 thousand to make improvements to Andersen Air Force Base on Guam.
- 24. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 17.
- 25. Office of the Under Secretary of Defense (Comptroller), European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2022, 14.

#### **About the Center for a New American Security**

The mission of the Center for a New American Security (CNAS) is to develop strong, pragmatic and principled national security and defense policies. Building on the expertise and experience of its staff and advisors, CNAS engages policymakers, experts and the public with innovative, fact-based research, ideas and analysis to shape and elevate the national security debate. A key part of our mission is to inform and prepare the national security leaders of today and tomorrow.

CNAS is located in Washington, DC, and was established in February 2007 by cofounders Kurt M. Campbell and Michèle A. Flournoy. CNAS is a 501(c)3 tax-exempt nonprofit organization. Its research is independent and non-partisan.

As a research and policy institution committed to the highest standards of organizational, intellectual, and personal integrity, CNAS maintains strict intellectual independence and sole editorial direction and control over its ideas, projects, publications, events, and other research activities. CNAS does not take institutional positions on policy issues and the content of CNAS publications reflects the views of their authors alone. In keeping with its mission and values, CNAS does not engage in lobbying activity and complies fully with all applicable federal, state, and local laws. CNAS will not engage in any representational activities or advocacy on behalf of any entities or interests and, to the extent that the Center accepts funding from non-U.S. sources, its activities will be limited to bona fide scholastic, academic, and research-related activities, consistent with applicable federal law. The Center publicly acknowledges on its website annually all donors who contribute.

© 2021 by the Center for a New American Security.

All rights reserved.

