

U.S. Airmen with 36th Airlift Squadron during first day of Pacific Air Forces commander-directed Red Flag–Alaska 14-3 at Joint Base Elmendorf-Richardson, providing combined offensive counterair, interdiction, close air support, and large force employment training, August 11, 2014 (U.S. Air Force/Chad C. Strohmeyer)



Securing the Third Offset Strategy

Priorities for the Next Secretary of Defense

By Timothy A. Walton

Following a process of examining strategy, scenarios, and assessments, this article identifies for the next Secretary of Defense eight capability statements that merit attention as the Department of Defense's (DOD's) top new investment priorities as part of the Third Offset Strategy in the fiscal year 2018 budget and beyond. Additionally, this article recommends that reforms to the analytical processes informing force

planning decisions in general and the Third Offset Strategy in particular be guided by increased selectivity, transparency, and commonality.

Setting the Course

In November 2014, then-Secretary of Defense Chuck Hagel announced a new Defense Innovation Initiative, which included the Third Offset Strategy. The initiative seeks to maintain U.S. military superiority over capable adversaries through the development of novel capabilities and concepts. Secretary Hagel modeled his approach on the

First Offset Strategy of the 1950s, in which President Dwight D. Eisenhower countered the Soviet Union's conventional numerical superiority through the buildup of America's nuclear deterrent, and on the Second Offset Strategy of the 1970s, in which Secretary of Defense Harold Brown shepherded the development of precision-guided munitions, stealth, and intelligence, surveillance, and reconnaissance (ISR) systems to counter the numerical superiority and improving technical capability of Warsaw Pact forces along the Central Front in Europe.

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Secretary of Defense Ashton Carter has built on Hagel's vision of the Third Offset Strategy, and the proposed fiscal year 2017 budget is the first major public manifestation of the strategy: approximately \$3.6 billion in research and development funding dedicated to Third Offset Strategy pursuits.¹ As explained by Deputy Secretary of Defense Bob Work, the budget seeks to conduct numerous small bets on advanced capability research and demonstrations, and to work with Congress and the Services to craft new operational concepts so that the next administration can determine "what are the key bets we're going to make."²

The next Secretary of Defense will have the opportunity to make those big bets. However, what should he or she bet on? In response, this article answers two related questions. First, what sorts of military capabilities should receive top priority for *new* investments? Second, what changes should be made to the analytical processes supporting force planning decisions? In identifying capabilities that merit the greatest emphasis, this article examines relevant strategy, scenarios, and assessments to identify insights regarding current and future operational needs.³ While not comprehensive, this article aims to direct activity toward the highest priority areas and illuminate a way forward for the next Secretary of Defense.

U.S. Strategy

The Defense Strategic Guidance (DSG) articulated 10 missions the joint force must accomplish in the future.⁴ These missions include the ability to:

- deter and defeat aggression
- project power despite antiaccess/area-denial (A2/AD) challenges
- operate effectively in cyberspace and space.

The follow-on 2014 Quadrennial Defense Review confirmed the importance of these missions and called for the joint force to "project power and win decisively" in spite of "increasingly sophisticated adversaries who could employ advanced warfighting capabilities."⁵ However, capable adversaries are adopting potent A2/AD strategies that

are challenging U.S. ability to ensure operational access. Although a future Presidential administration probably will create its own defense strategy documents, these enduring requirements and challenges will likely continue.

The People's Republic of China (PRC) has developed powerful forces capable of challenging the U.S. ability to project power, deter and defeat aggression, and operate effectively in different domains, as called for by U.S. defense strategy documents. The scale and sophistication of the PRC threat, coupled with an overall Comprehensive National Power capable of rivaling that of the United States, result in a near-peer threat that is rapidly adopting peer characteristics. The ability of the United States to counter Chinese aggression and project power is essential to its ability to advance its interests and sustain its partnerships.

There are valid reasons for developing unique capabilities necessary to counter grave threats not related to China. Multiple states, including Russia and Iran, are fielding potent A2/AD capabilities, and it is likely that many A2/AD capabilities will proliferate globally. The threat posed by Russian aggression to North Atlantic Treaty Organization (NATO) Allies—especially in the Baltics—is particularly worrisome. A recent series of RAND wargames unambiguously concluded that "as presently postured, NATO cannot successfully defend the territory of its most exposed members."⁶ While addressing this threat will require improvements in the posture and capacity of the force, it will also require the development of new capabilities that may not overlap with the capabilities necessary to counter Chinese aggression in most China-focused scenarios. For example, ground maneuver forces likely require new capabilities to engage enemy forces at range and in mass with different types of fires. Furthermore, the continued growth of the Islamic State of Iraq and the Levant and other terrorist groups around the world threatens to endanger not only U.S. interests abroad but also U.S. citizens at home. This threat is magnified by the potential of terrorists to be armed

with weapons of mass destruction. Unique capabilities to counter these threats may need to be developed.

Ultimately, however, the ability of the United States to deter and defeat PRC aggression serves as a bellwether for U.S. capabilities worldwide. By developing the ability to deter and defeat the pacing threat of the PRC, the United States will ensure that it not only has the fundamental capabilities necessary to defend its allies and advance its interests in the Asia-Pacific but that it also has many of the capabilities necessary to counter most other types of aggression worldwide. Consequently, to innovate and develop new capabilities, DOD should aggressively focus the majority of its attention and resources on those capabilities necessary to excel in relevant scenarios involving China.

Selecting Scenarios

While multiple planning scenarios with land, maritime, and air components involving China merit examination and may reveal distinct operational needs, the defense of Taiwan should be the lead planning scenario for DOD to identify operational needs. Strategically, even if conflict in Taiwan never takes place, it is perceived as a potential major scenario involving the United States, and the perceived capability of the United States to deter and defeat aggression underpins U.S. alliance relationships. Overall, the United States strategically requires a demonstrated ability to defend its allies and partners to support its security guarantees and advance its interests. Additionally, in the defense of Taiwan, the United States has a crucial intersection of interests, objectives, and capabilities that result in a critical planning scenario.

Operationally, to a greater degree than other possible scenarios involving China, the People's Liberation Army (PLA) can leverage short-range and interior lines of communication to employ an enormous capacity of forces to attempt to compel capitulation or to invade and occupy Taiwan. Additionally, the United States may receive little indication and warning of an impending Chinese attack,



Defenders from 790th Missile Security Forces Squadron Tactical Response Force take up defensive positions, April 14, 2016, as they prepare to advance toward launch facility during exercise in F.E. Warren Air Force Base, Wyoming, Missile Complex (U.S. Air Force/Brandon Valle)

further complicating its ability to support the defense of Taiwan.

In light of this challenging situation, prudence demands the United States employ it as a planning scenario. This is not to say a potential conflict with China would likely remain localized to the Western Pacific. On the contrary, it would likely involve overt and covert conflict across the globe, as well as in space and cyberspace, and DOD must plan accordingly. However, if the United States can succeed in the defense of Taiwan scenario, it is likely to have many of the constituent elements and concepts necessary to win in other scenarios involving China—such as conflict in the South China Sea or East China Sea—or scenarios involving other countries.⁷

This analysis uses a notional 2020–2025 defense of Taiwan scenario, which seeks to capture, at a general level, expectations regarding how forces might be employed. An overall concept of operations (CONOPS) for the defense

of Taiwan might seek first to deter PRC aggression via deployment of forces in a resilient warfighting posture and the communication of the general costs of conflict. Specifically, disruption to peace and stability in the international order would lead to dislocation from it.

Then, if deterrence fails, U.S. forces would employ geographically distributed units to prevent a successful PRC invasion of Taiwan, counter compellent forces, support Taiwanese survival, and apply direct pressure via strikes against PRC power projection forces and indirect pressure via an extended blockade and other elements of a whole-of-government response. Specifically, operational lines of effort may include disrupting, deceiving, and destroying PRC over-the-horizon (OTH) ISR capabilities; defeating a PRC amphibious invasion; constraining and eventually defeating a PRC naval fleet; defending allies and partners as possible, with a focus on protecting power projection nodes; dislocating the PRC from

the international economy by interdicting trade and reorganizing trading structures; and resupplying Taiwan as possible.

At the same time, Taiwan would defend itself by preventing the landing of enough PLA combat power to sustain an invasion and by countering those troops that do arrive. To that end, Taiwan would be well served to pursue a strategy that increases the difficulty of conducting an invasion. One approach, described in a recent report from the Center for Strategic and Budgetary Assessments, would develop resilient sea and air denial capabilities, layered ground defenses, and counter–command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) systems to prevent the landing of enough PLA combat power and reduce its effectiveness once on the ground.⁸

Overall, the scenario would likely feature a U.S. commitment to swiftly counter PRC aggression, backed by the commitment to conduct a prolonged,

global compelling campaign as necessary.⁹ It is possible that in the defense of Taiwan scenario, U.S. forces could rely more heavily on indirect approaches, such as an extended blockade. However, more directly responsive operational alternatives must be examined. Their inclusion in a suite of response options for national leadership represents the minimum acceptable level of military planning, especially as they may be required to counter immediate, existential threats to allies or partners, such as that posed by an invasion.

Assessment of the Force

Assessments of the performance of the programmed joint force against advanced adversaries such as China or Russia reveal significant challenges as a confluence of three factors that would exacerbate existing deficiencies. First, sophisticated A2/AD systems will likely proliferate to a larger number of countries than currently field them. Second, A2/AD battle networks (sensors; command, control, and communications; and weapons) will mature and improve in sophistication and regional and global coverage. Third, China will likely continue to develop capabilities, posture, and forces more suited to global power projection, moving beyond most current estimates of regional hegemony. China's 2015 defense strategy confirmed this shift to a force capable of enhanced power projection.¹⁰ This destabilizing "Anti-Access Enabled Power Projection Force" has the potential of posing major challenges for the United States in not only East Asia but also other regions of the world through the extended range of mainland China-based weapons and sensors, the global mobility of other antiaccess systems, and the development of global power projection and sea control forces, such as surface action groups, amphibious and carrier battlegroups, nuclear-powered attack and guided-missile submarines, and long-range aerial refueling and strike aircraft.¹¹

The defense of Taiwan scenario is highly challenging for U.S. forces and entails the assumption of high levels of

risk. Both traditional and alternative CONOPS that could be employed are relatively brittle and vulnerable to enemy disruption and deception. Additionally, U.S. forces face at least four major operational problems:

- ports and airfields are at risk of air and missile strikes
- networked integrated air defense systems (IADS) restrict the area of operation for supporting and strike aircraft
- carrier strike groups can be tracked and engaged at significant ranges that limit the offensive power generated by the carrier air wing
- both the space and the cyber domains are contested.

Additionally, perceived U.S. advantages in military competitions, such as undersea warfare, air superiority, and secure C4ISR, are eroding due to symmetric and asymmetric counters adopted by the PLA. Moreover, the geographical and environmental conditions of the Western Pacific, and the Taiwan Strait in particular, facilitate PLA defensive concepts and likely complicate the ability of the United States to employ certain assets, such as attack submarines, in particular concepts of employment. In other areas, such as surface warfare, ground-based offensive fires, electronic warfare, and integrated air and missile defense, the United States faces marked deficiencies vis-à-vis PRC threats.¹²

A 2015 RAND report assessed the Sino-American balance of power in the context of two scenarios: a Taiwan invasion and a Spratly Islands campaign. It observed that "the advantages conferred by proximity severely complicate U.S. military tasks while providing major advantages to the PLA."¹³ While the report emphasized that there are many actions that the United States could take to reinforce deterrence and provide stability in the region, its sobering conclusion stressed that "over the next five to 15 years, if U.S. and PLA forces remain on roughly current trajectories, Asia will witness a progressively receding frontier of U.S. dominance."¹⁴

Top Priorities for New Investments

The above process of examining strategy, scenarios, and assessments illustrates the enormous challenges facing DOD plans for the defense of Taiwan. The exercise, however, has also provided focused insights on operational needs in terms of military capabilities and novel concepts of operation.

The following section identifies military capabilities that should receive top priority for new investment as the core capabilities the Third Offset Strategy. The section aims for a finite set of concise statements of need for new capabilities to accomplish operational tasks. If employed with new concepts of operation, they have the potential to offset adversary advantages and increase the likelihood of U.S. success in the defense of Taiwan and other possible contingencies.

In Chinese culture, the number eight is most auspicious. Accordingly, this article has selected eight statements that reflect the most urgent needs of future commanders. Some of the capability statements will subsequently present associated inputs, that is, types of systems. The following descriptions do not preclude a formal examination of options or analysis of alternatives for each capability statement, but rather reflect a preliminary assessment of promising alternatives, which may be useful as the Office of the Secretary of Defense (OSD) guides accelerated initiatives to address these urgent operational needs.

Strike Fixed and Mobile Targets Defended by Robust IADS from Long Range. In the defense of Taiwan scenario, U.S. power projection requires the ability to destroy key targets inside and outside of China. Among others, OTH ISR and space-situational awareness sensors enable China's A2/AD capabilities and severely constrain U.S. joint operational access. Given the importance of these and other targets, they are likely defended by advanced, robust IADS, which challenge U.S. ability to penetrate defenses, launch weapons, and have weapons successfully strike their targets. This difficulty in striking targets on land increasingly applies to mobile targets at



Members of 576th Flight Test Squadron monitor operational test launch of unarmed Minuteman III missile, March 27, 2015, at Vandenberg Air Force Base, California (DOD/Michael Peterson)

sea, as a combination of ship-borne and land-based defenses poses the same problem for naval strike missions.

In response, DOD should consider developing two new unit classes. First, DOD should develop conventionally armed intermediate nuclear forces—compliant and noncompliant intermediate-range missiles (maneuvering re-entry vehicle ballistic missiles and boost-glide vehicles, respectively) capable of penetrating the most advanced and robust IADS to strike their targets or the IADS themselves. Missiles could be fired from different platforms: ground-based U.S. Army units in the First and Second Island Chain, naval surface platforms (including commercial-standard Handysize freighters), or submarines.¹⁵ If fielded in sufficient numbers, these theater weapons could credibly penetrate defenses and provide a resilient offensive fire capability.

Second, DOD should develop sufficient numbers of an all-aspect, low-signature long-range bomber (that

is, the B-21) capable of cooperating with other systems to penetrate defenses and fire sufficient numbers of new short-range, stand-off weapons to overwhelm advanced point defenses. The combination of new long-range missiles and bombers (with supporting systems) would improve U.S. ability to degrade enemy defenses and exploit them with volume precision fires.

Provide Robust and Resilient Terminal Defense Against Structured Attacks of Theater Air and Missile Threats. In this scenario, the United States requires the ability to defeat structured attacks of PLA air and missile threats. While the capacity of the PLA's structured attack threatens to overwhelm defenses at locations near Chinese launch points (throughout many areas of the First Island Chain), the ability of U.S. and friendly forces to sustain a degree of protection (thus denying enemy air superiority, even in the First Island Chain) could complicate

the PLA's attack calculus and compel a reliance on a smaller inventory of longer range standoff precision-guided munitions. Even more importantly, in the Second and Third Island Chains, the ability of defenses to counter the more limited numbers of PRC weapons able to reach these areas is essential to preserving the ability of the joint force to operate from this area.

While wide-area defenses against cruise and ballistic missiles are beneficial for the defense of military forces and partner and ally populaces, preliminary assessments suggest they face significant challenges, including difficulty establishing complex kill chains to intercept missiles at long range during combat conditions, the large size of long-range interceptors, and relatively higher costs compared to current and projected terminal defenses. Therefore, relative increases in investment should be largely devoted to short-range or terminal defenses instead of wide-area defenses.

In response, DOD should consider developing improved defense capabilities for naval combatants and ground forces. These include more plentiful missile and gun-based defensive systems, high-powered microwave weapons, lasers, jammers, and electronic decoys. Additionally, DOD should improve passive or lower probability of intercept/lower probability of detection surveillance and targeting capabilities for these weapons and improve joint force track integration and battle management capabilities. To be successful, these active defenses must be complemented by a dedicated commitment to passive defenses: dispersal and displacement of forces, hardening of key infrastructure, camouflage, concealment, deception, and rapid reconstitution capabilities.

Conduct Persistent ISR in A2/AD Environments. U.S. forces require the ability to credibly detect PRC power projection and strike forces and weapons, thus discriminating true targets from feints and decoys and cueing other forces to surveil or strike. Persistent ISR in A2/AD environments is challenging due to the range and sophistication of multidomain A2/AD threats—including China’s ability to jam or destroy radars and communications—and to the decreased force gradient caused by operating platforms—in particular aircraft—from a distance.

In response, DOD should consider developing and deploying new capabilities leveraging multiple sensor phenomenology. Options include ground-based high-frequency OTH and S- or L-band multistatic radars, low-signature high-altitude long endurance (HALE) unmanned aircraft systems (UAS), and fixed and distributed undersea sensors and unmanned underwater vehicles (UUV).

Provide Secure Long-Distance Communications and Positioning, Navigation, and Timing (PNT). Long-distance communications and PNT capabilities are essential for commanding units, integrating forces, navigating, and executing certain kill chains during operations in the region. The U.S. defense communications architecture is



Unarmed Minuteman III ICBM accelerates toward test range near Guam after launching from Vandenberg Air Force Base, March 27, 2015 (DOD)

vulnerable to PRC disruption, deception, or destruction; in particular, orbital satellites and sea cables are vulnerable to enemy attack, with major deleterious effects on U.S. forces.

In response, DOD should consider developing new, more survivable communications and PNT capabilities. Promising alternatives include ground-based global positioning system pseudolites, HALE UAS, and improved inertial and celestial navigation capabilities.

Contain and Destroy Naval Forces. The United States must be able to not only interdict a PRC amphibious invasion force but also restrict the movement of PLA Navy (PLAN) forces within the

First Island Chain—and beyond—and destroy them as necessary. As with other capability statements, this requirement extends to other scenarios involving the PRC. Currently, U.S. advantages in undersea warfare are being addressed by PLAN anti-submarine warfare efforts, which could potentially limit the freedom of action of U.S. submarines during hostilities. Additionally, the ability of U.S. surface combatants to conduct offensive sea control has degraded relative to the ability of PLAN combatants, and U.S. surface-based warfare is concentrated in high-value surface combatants that may face difficulty operating within the A2/AD envelope.



U.S. Air Force F-22 Raptor flies over Arabian Sea in support of Operation *Inherent Resolve*, January 27, 2016 (U.S. Air Force/Corey Hook)

In response, DOD should consider focusing on three lines of effort. Regarding surface combatants, promising options include deploying new long-range combination land-attack/anti-ship missiles to a range of surface combatants, submarines, and aircraft (such as the B-2 and B-21), adding the ability to conduct vertical launch system reload under way or in forward anchorages (so as to improve the overall combat potential of the fleet and enable distributed and forward logistics), and disaggregating some combat power into new classes of small surface combatants (ranging from the Navy's proposed frigate to fast attack craft).

Regarding undersea naval forces, DOD should focus on developing numerous ISR and lethal autonomous UUVs, advanced sensors, and mines. DOD should also increase funding for attack submarine production.

Regarding land forces, DOD should focus on the role Army sensors and strike weapons could play in targeting naval combatants. Key forces include ground-launched coastal defense cruise or ballistic

missiles (both modifications of short-range missiles such as the Army Tactical Missile System and development of new intermediate-range missiles) and anti-submarine rocket torpedoes.

Provide Long-Range, Long-Endurance Carrier-Based Naval Air Forces. Naval air forces play a crucial role in the defense of Taiwan scenario by providing air support to other naval forces, strike against enemy surface combatants inside and outside the First Island Chain, broad-area surveillance of the maritime space, offensive counter-air escort and airborne electronic attack for bomber missions, and supplemental defensive counter-air for Second Island Chain bases. The need for sea-based airpower would especially grow if airbases on land are under attack. However, limitations in aircraft range and type among the current and projected carrier air wing restricts the utility of the carrier as a system, especially in missions in which large, long-range sorties are required and Air Force tanking is unavailable.

In response, DOD should develop capabilities for maximizing the utility of

the carrier as a system, with calculated improvements to the carrier ship, the carrier air wing, and other supporting ships. Regarding the carrier air wing—the most critical area for improvement—investments should be focused on those capabilities that increase striking range, provide new sea control capabilities (for maritime strike and surveillance), and integrate new munitions and sensors.¹⁶ This includes a stealthy, long-range, and unmanned surveillance-strike aircraft.

Operate Air and Naval Forces from an Increased Number of Resilient and Dispersed Air and Sea Locations in the Asia-Pacific Region. In the defense of Taiwan scenario, U.S. ability to operate from a range of locations in the First, Second, and Third Island Chains complicates the PRC's attack calculus and enables U.S. power projection. Currently, U.S. forces are concentrated in a limited number of largely unhardened bases, which facilitates PLA structured attack.

In response, DOD should develop and exercise the ability to operate air and naval forces from dispersed clusters of air and naval locations in the First,

Second, and Third Island Chains. A more distributed posture in the First Island Chain would complicate enemy targeting. Also, a more distributed and hardened posture in the Second Island Chain would complicate targeting and provide credible force-generation nodes. Lastly, select operating locations in the Third Island Chain (such as Australia, the Aleutians, and Central Pacific islands west of Hawaii) would reduce trans-Pacific sustainment requirements and provide for rapid contingency tanking and attrition reserve reinforcements to the Second Island Chain.

These recommendations apply to both air forces and naval forces, which also face logistical constraints operating from a distance. The proposed distributed posture would utilize active and passive defenses and measures as appropriate. Necessary capabilities include improvements in combat logistics force capabilities, offshore and inland petroleum distribution systems, vertical launching system reload, runway rapid preparation and repair, and intratheater lift. Although this capability statement might normally be considered a posture statement, the numerous subordinate capability requirements associated with this overall capability and the major importance of this effort elevate it to one of these top priorities.

Precisely Disrupt, Deceive, and Destroy C4ISR Systems and Defend Against Similar Capabilities. The ability to precisely disrupt, deceive, and destroy Chinese C4ISR systems would have tactical, operational, and strategic relevance. Open sources indicate that Chinese forces are assiduously preparing to wield similar capabilities and fight in “complex electromagnetic conditions.” Major U.S. secure command and control (C2) and sensing capabilities are vulnerable to these forms of attack and deception while at the same time being essential to the highly networked American way of war. The ability to detect, defend, and counter these attacks and deceptions, while conducting our attacks and deceptions, is critical. To do so, DOD should shift from today’s high-power active sensing and communication capabilities to

more passive and active low probability of intercept or detection sensors and communications.¹⁷ Additionally, DOD should develop new secure C2 systems. At the same time, DOD should systematically develop the capabilities to attack and deceive Chinese C4ISR systems.

Summary of Top Priorities

Based on a process of examining envisioned strategy, scenarios, and assessments, the aforementioned capability statements should receive attention as DOD top development priorities. Informed by other, classified sources of information, there may be additional capability statements that merit close examination. Concomitantly, other key Third Offset Strategy efforts will likely be in classified research and development projects that may take years to bear fruit.

By focusing on the requirements of specific scenarios, instead of pursuing assorted technologies for their seemingly “revolutionary” nature, this process ensures that Third Offset technological development is closely linked to operational challenges—much like the Second Offset Strategy was informed by the operational demands of combat with the Warsaw Pact in Central Europe. The process will inject a sense of urgency and focus into DOD efforts—and ultimately the linkage will result in the development of truly transformative capabilities that establish areas of enduring U.S. advantage.

There are other capabilities important to the defense of Taiwan scenario (and other challenging scenarios involving China) that require attention and additional investment, such as the ability to interdict military and commercial lines of communication—especially seaborne lines of communication. However, those capabilities likely do not require the same level of additional investment as the enumerated top priorities to be realized.

Lastly, there are other important capabilities to accomplish operational tasks unrelated to China scenarios. As mentioned, this includes certain new capabilities necessary to counter Russian aggression. The eight listed priorities are not comprehensive but rather seek to

concentrate effort and investment into the most important capabilities needed to deter and defeat aggression and project power despite A2/AD challenges, not only vis-à-vis China but also beyond.

Changes to the Analytical Processes Supporting Force Planning

To support the pursuit of the objectives as part of the Third Offset Strategy, the next Secretary of Defense should reform analytical processes informing force planning decisions along the lines of three guidelines: increased selectivity, transparency, and commonality.

The force planning process should carefully adhere to a strategy-based process that encompasses an examination of strategy, scenarios, and assessments. Building off of strategic guidance, force planners should exercise selectivity in choosing the most important scenarios to inform assessments. As mentioned, the defense of Taiwan scenario should receive top priority. In examining this and other scenarios, realistic and prudent assumptions regarding enemy capabilities and practices should be included. Efforts to shape assumptions in unrealistic or imprudent ways that favor outcomes for particular Services should be repudiated. Additionally, while eschewing a capabilities-based approach for force planning, planners should be mindful of the possibility of lagging intelligence assessments of future adversary projected or validated threats. Consequently, force planners should improve sensitivity analysis (examining a range of values for key variables) and prudently assume the presence of adversary capabilities when appropriate—even if the threat is not formally validated.

In terms of assessments, the Secretary of Defense should direct the Director of Cost Assessment and Program Evaluation to reinstate the ability to conduct OSD campaign-level modeling, which was eliminated in 2011. Campaign-level modeling consists of the use of large-scale computer simulations to examine the performance of a full fielded military in planning scenarios. It takes the results of focused DOD wargaming activities,



USS *John C. Stennis* steams at dusk in South China Sea, supporting security and stability in Indo-Asia Pacific, April 25, 2016 (U.S. Navy/Emiline L.M. Senn)

as well as inputs from more detailed tactical modeling, to better represent the effects of large-scale forces on a battlefield. Campaign-level modeling is essential in developing insights on the performance of the entire joint force and in revealing key dynamic relationships and interdependencies. These insights are instrumental in properly analyzing complex factors necessary to judge the adequacy of the joint force to meet capacity requirements, such as the two-war construct, and to make sensible, informed trades between solutions. Campaign-level modeling is essential to the force planning process, and although the Services have their own campaign-level modeling capabilities, OSD should once more be able to conduct its own analysis to provide objective, transparent assessments to senior decisionmakers.

In addition to campaign-level modeling, assessments should use simpler, more transparent analytic tools and wargames with capable Red Teams to examine discrete issues. These processes reveal key insights and assist in evaluating new CONOPS for emerging challenges. Additionally, their increased level of transparency assists in explaining combat and

in turn force-planning dynamics to senior decisionmakers.

Furthermore, the assessment process requires improvement in its characterization of risk. Increased commonality within and among Services in how risk is measured would assist in better understanding the effect of programs on desired outcomes.¹⁸ Moreover, changes are necessary in how assessments of risk are aggregated. Current practices frequently “average” levels of risk across a portfolio; consequently, even though a single point of failure in an effects chain may produce extreme levels of risk, the overall assessment may conclude that risk is being mitigated due to actions in other, less stressing areas. Similarly, assessments of risk frequently assume projected capabilities in the program of record will address current capability gaps, seldom anticipating the future adversary capabilities that will exacerbate those same gaps or produce new ones.

As assessments of risk are vertically aggregated throughout Services and combatant commands, these problems mount enormously. Increased transparency regarding the effects of high levels of risk on subsequent or encompassing

concepts of operation may allow senior leaders to more effectively gauge the situation and respond accordingly.

Finally, DOD should exercise increased transparency in how it communicates assessments to senior leaders inside and outside DOD, including senior political leadership in Congress and the White House. An increased level of transparency could more effectively communicate the effects of different budgetary decisions on scenario outcomes, as well as arming civilian leadership with a better understanding of key defense issues.

Overcoming Obstacles

Pursuit of both the top priorities for new investment, as well as improving force planning analytical processes, will be challenging. The proposed fiscal year 2017 DOD budget takes some positive steps to focus resources on the priorities, but much more is necessary in the subsequent budgets to set DOD on the right path.

The next Secretary of Defense will likely face passive and active opposition from portions of the Services, Congress, and industry. Among the Services, there

will be resistance to reallocating funding from the Army to the departments most relevant in a conflict with China: the Navy and Air Force. Within all the Services, funding must be reallocated to those capabilities that are relevant in the most operationally stressing scenarios. In many cases, there will be opposition from Service branches that might have program budgets reduced to fund the newly proposed capabilities. Given the limited terms of Cabinet secretaries, some may attempt to stall to wait him or her out.

In Congress, the next Secretary of Defense will face the dual challenge of increasing funding for DOD amid Budget Control Act limits and collaborating with the House and Senate Armed Services Committees to ensure a unified approach on these top investment priorities. In particular, Congress will need to address the requirements for nuclear modernization investment by increasing topline funding in a manner that does not throttle conventional modernization investments, at precisely the time the Third Offset Strategy gathers steam. Lastly, it is likely that contractors with reduced or cancelled programs will solicit congressional support to block necessary changes.

To accomplish these goals and other necessary changes in DOD outside of the purview of force planning, creative methods to incentivize stakeholders will be necessary. These include positive and negative budgetary inducements, such as competitions among the Services for pots of funding to address statements of need. Additionally, OSD will need to secure the political support of Congress and the President to enact some of these disruptive changes—especially if a larger portion of the budget shifts to classified investments. The process of strategy, scenario, and assessments may serve to clearly convey the grave stakes involved in these decisions to those leaders and encourage them to positively participate in this crucial process.

Lastly, the next Secretary of Defense will face numerous other, important defense challenges that will threaten to engross his or her attention, ranging from leading U.S. forces in Afghanistan, to countering Chinese, Russian, and

Islamic State aggression, to reforming Goldwater-Nichols, military compensation, and base structure.

Given limits of time and resources, the next Secretary of Defense will find it challenging to reform the entire DOD enterprise at once. He or she can, however, initially concentrate on those areas in which the greatest impact can be achieved. The top eight investment priorities and changes to the force planning process are prime places to start.

Armed with a new mandate, the new Secretary of Defense will be able to collaborate with Congress to realize these changes. However, time is short. Each day that passes, U.S. military gaps grow, and adversaries (especially China) feel increasingly emboldened to use military force to threaten U.S. and allied interests. If he or she is up for it, the next Secretary of Defense should answer a nation that pines for a new defense strategy, secure a legacy as a transformative leader, and successfully define and implement a successful Third Offset Strategy. JFQ

Notes

¹ Aaron Mehta, “Defense Department Budget: \$18B Over FYDP for Third Offset,” *Defense News*, February 9, 2016.

² Sydney J. Freedberg, Jr., “DepSecDef Work Details 2017 Budget,” *Breaking Defense*, February 9, 2016, available at <<http://breakingdefense.com/2016/02/high-tech-seed-corn-for-next-president-bob-work-on-2017-budget/>>.

³ This force planning process of strategy, scenario, and assessment was developed by David Ochmanek of RAND. Some of the language in the strategy, scenario, and assessment sections of this article was first published in Timothy A. Walton, Seth Cropsey, and Bryan G. McGrath, *Sharpening the Spear: The Carrier, the Joint Force, and High-End Conflict* (Washington, DC: Hudson Institute, October 2015).

⁴ *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (Washington, DC: Department of Defense, 2012).

⁵ *Quadrennial Defense Review 2014* (Washington, DC: Department of Defense, 2014), 14, 19.

⁶ David A. Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics* (Santa Monica, CA: RAND, 2016), available at <www.rand.org/pubs/research_reports/RR1253.html>.

⁷ By focusing on necessary capabilities, this article does not examine the force-sizing considerations involved in being able to address the threat posed by China and other actors simultaneously. It also does not address critical questions of readiness, such as the sufficiency of current or future munitions inventories.

⁸ Jim Thomas, John Stillion, and Iskander Rehman, *Hard ROC 2.0: Taiwan and Deterrence Through Protraction* (Washington, DC: Center for Strategic and Budgetary Assessments, December 2014).

⁹ *Compellence* is “inducing [an enemy’s] withdrawal, or his acquiescence, or his collaboration by an action that threatens to hurt, often one that could not forcibly accomplish its aim but that, nevertheless, can hurt enough to induce compliance.” See Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), 2–3.

¹⁰ *China's Military Strategy* (Beijing: The State Council Information Office of the People's Republic of China, May 2015), available at <<http://news.usni.org/2015/05/26/document-chinas-military-strategy>>.

¹¹ This phrase was developed by Jim Thomas of the Center for Strategic and Budgetary Assessments.

¹² James R. Holmes, “The U.S. Navy’s Cruise Missile Nightmare,” *Real Clear Defense*, February 20, 2015, available at <www.realcleardefense.com/articles/2015/02/20/the_us_navys_cruise_missile_nightmare__107640.html>.

¹³ Eric Heginbotham et al., *The U.S.-China Military Scorecard Forces, Geography, and the Evolving Balance of Power, 1996–2017* (Santa Monica, CA: RAND, 2015), xxx.

¹⁴ *Ibid.*, xxxi.

¹⁵ The First Island Chain refers to the first chain of major archipelagos out from the East Asian continental mainland coast. The Second Island Chain is the next chain of archipelagos out from the East Asian continental mainland, principally composed of the Bonin Islands, Marianas Islands, and Caroline Islands.

¹⁶ For more information on the potential role of the aircraft carrier in a conflict against China and necessary carrier strike group improvements, see Walton, Cropsey, and McGrath.

¹⁷ Bryan Clark and Mark Gunzinger, *Winning the Airwaves: Regaining America's Dominance in the Electromagnetic Spectrum* (Washington, DC: Center for Strategic and Budgetary Assessments, December 2015).

¹⁸ Mike Leonard, James Thomason, and James Bexfield, “QDR: The Role of Analytics in Addressing the New Budget Environment,” *Phalanx: Bulletin of Military Operations Research and Related Sciences*, June 2013.