



M A Y
2 0 1 2

Sustainable Pre-eminence
*Reforming the U.S. Military
at a Time of Strategic Change*

By Lieutenant General David W. Barno, USA (Ret.), Nora Bensahel,
Matthew Irvine and Travis Sharp



Center for a
New American
Security

Fifth Anniversary

About the Report

“Sustainable Pre-eminence” is part of an ongoing project called Responsible Defense at the Center for a New American Security (CNAS). The project examines how the United States should maximize its national security in an era of defense spending reductions. The project published its first report, “Hard Choices: Responsible Defense in an Age of Austerity,” in October 2011.

Acknowledgments

The authors would like to thank the many talented people who contributed to this report. First and foremost, we thank Bill French and Peter Bacon for their countless research contributions. We thank Kristin Lord, John Nagl, Melissa Dalton and Richard Fontaine for commenting on early drafts. We thank Liz Fontaine for imparting her creativity to the report’s design, and we thank Kay King and Sara Conneighton for helping to spread our message. In addition, we thank Tom Donnelly, Frank Hoffman, Russell Rumbaugh, Norm Augustine and Michèle Flournoy for serving as external reviewers. Their assistance does not imply any responsibility for the final product, which rests solely with the authors.

A Note about Funding

This report was made possible, in part, through the generous financial support of the Smith Richardson Foundation. The opinions expressed in the report are those of the authors and do not necessarily reflect the views of the Smith Richardson Foundation. Some organizations that have business interests related to the defense industry support CNAS financially, but they provided no direct support for the report. CNAS retains sole editorial control over its research and maintains a broad and diverse group of more than 100 funders including foundations, government agencies, corporations and private individuals. A complete list of CNAS’ financial supporters can be found at www.cnas.org/support/our-supporters.

Cover Image

A U.S. Air Force crew chief assigned to the 67th Aircraft Maintenance Unit checks over an F-15 Eagle aircraft on Kadena Air Base in Japan, September 8, 2010.

(STAFF SGT. CHRISTOPHER HUMMEL, U.S. AIR FORCE/Department of Defense)

TABLE OF CONTENTS

I. Executive Summary	5	VII. Reforming the Services and Special Operations Forces	28
II. Introduction	9	Army	28
III. Defense Strategic Guidance and Regional Priorities	13	Navy	33
IV. Four Principles for Reform	16	Marine Corps	39
V. Strengthening Joint Integration	22	Air Force	43
VI. Defense-Wide Reform: Downsizing Military Headquarters and Reducing Civilians and Contractors	24	Special Operations Forces	48
		VIII. Conclusion	53
		Appendix: Summary of Policy Recommendations	65

M A Y 2 0 1 2

Sustainable Pre-eminence

Reforming the U.S. Military at a Time of Strategic Change

By Lieutenant General David W. Barno, USA (Ret.), Nora Bensahel,
Matthew Irvine and Travis Sharp

About the Authors

Lieutenant General David W. Barno, USA (Ret.) is a Senior Advisor and Senior Fellow at the Center for a New American Security.

Dr. Nora Bensahel is the Deputy Director of Studies and a Senior Fellow at the Center for a New American Security.

Matthew Irvine is a Research Associate at the Center for a New American Security.

Travis Sharp is the Bacevich Fellow at the Center for a New American Security.



SUSTAINABLE PRE-EMINENCE: REFORMING THE U.S. MILITARY AT A TIME OF STRATEGIC CHANGE

By Lieutenant General David W. Barno, USA (Ret.), Nora Bensahel,
Matthew Irvine and Travis Sharp

M A Y 2 0 1 2

Sustainable Pre-eminence
Reforming the U.S. Military at a Time of Strategic Change



I. EXECUTIVE SUMMARY

By Lieutenant General David W. Barno, USA (Ret.), Nora Bensahel, Matthew Irvine and Travis Sharp

Maintaining the U.S. military's global pre-eminence is vital to protect American interests and promote American values. Yet, in order to sustain U.S. military pre-eminence in an emerging strategic environment characterized by new threats and constrained resources, the Department of Defense (DOD) will need to organize and operate America's armed forces in new ways. The reality of constrained defense budgets presents DOD with an opportunity to adopt reforms that will make the U.S. military more effective as well as less expensive. Such reforms will ensure that the U.S. military remains the world's pre-eminent fighting force at a sustainable cost to American taxpayers.

In early 2012, DOD released new strategic guidance and a corresponding budget reflecting \$487 billion in cuts over 10 years as imposed by the 2011 Budget Control Act. The guidance directs the U.S. military to prioritize the Asia-Pacific and greater Middle East. These are the correct regional priorities for the U.S. military, as we argued in our October 2011 report, "Hard Choices: Responsible Defense in an Age of Austerity."¹

However, the Pentagon still has not enacted the types of reforms that we believe are necessary to sustain U.S. military pre-eminence into the future. Too many DOD structures, processes, programs and operational concepts are legacies of the past, which create unnecessary redundancies, waste valuable resources and encourage unproductive competition among the services rather than competition. These practices are no longer acceptable in the current fiscal environment.

In this report, we argue that DOD should make numerous policy changes to achieve *sustainable pre-eminence*. While most studies focus primarily on either strategic ends or budgetary means, this report concentrates more on operational ways, the connective tissue that links goals to resources. Our recommendations rely on

judgments about both security threats and available resources, the inseparable elements of any practical strategy.

We disagree with those who argue that preserving American military pre-eminence requires maintaining or increasing current levels of defense spending. DOD must maintain America's military pre-eminence but spend less on defense by operating more efficiently and effectively. We continue to believe strongly in the judgment we reached in "Hard Choices":² that the defense budget can be reduced responsibly, but that total defense cuts beyond \$500 billion to \$550 billion over 10 years,* measured relative to the Pentagon's current level of spending, would place at high risk the U.S. military's ability to execute America's long-standing and generally successful military strategy of global engagement.

Four principles guide this report's recommendations. DOD has made limited progress implementing elements of these principles, but it should go much further. First, DOD should prioritize naval and air forces to project power and deter aggression in the vast Asia-Pacific and volatile greater Middle East. Second, DOD should increase interdependence across and within the military services to strengthen joint effectiveness and reduce unnecessary redundancy. Third, DOD should match requirements to likely threats based on holistic analysis of the aggregate capability of the joint force, not on narrow analysis of a single platform, service or domain. Fourth, DOD should accelerate investments in technologies that leap ahead of the planned next generation of existing systems, especially technologies related to unmanned, autonomous and artificial intelligence systems.

DOD must maintain America's military pre-eminence but spend less on defense by operating more efficiently and effectively.

Based on these principles, the U.S. military should adopt the following reforms:

- **Joint Integration.** Shrinking resources demand a more unified and integrated employment of capabilities. To make the joint force more capable, the chairman and vice chairman of the Joint Chiefs of Staff, in concert with the Office of the Secretary of Defense (OSD), should assert greater authority in challenging combatant command (COCOM) and service requirements. DOD also should form standing red teams for competitive analysis, create standing joint operational headquarters and reform joint professional military education (PME).
- **Military Headquarters.** To make U.S. military headquarters more efficient and effective, the Pentagon should shrink the number of geographic combatant commands from six to four by merging U.S. Africa Command with U.S. European Command and merging U.S. Northern Command with U.S. Southern Command. The military services should abolish most administrative service component commands and replace them with components that also have war-fighting capabilities. Following the model already used by the Marine Corps, the services

* Because we start from a different baseline, DOD would have to cut an additional \$150 billion beyond the cuts reflected in the FY 2013 request to reach what we refer to as \$500 billion to \$550 billion in total cuts over the next 10 years. DOD has announced plans to cut its budget by approximately \$487 billion during this time, but that figure is calculated relative to the *requested* FY 2012 base defense budget (\$553 billion). Our figures are calculated relative to the *actual* FY 2012 budget (\$531 billion). See David W. Barno, Nora Bensahel and Travis Sharp, "Hard Choices: Responsible Defense in an Age of Austerity" (Center for a New American Security, October 2011), 5-6.

should dual-hat remaining service component headquarters and commanders so they have both operational and administrative roles.

- **Civilians and Contractors.** The Pentagon and defense intelligence community should reduce their civilian and contractor workforces to reflect planned reductions to U.S. combat forces. Over the next decade, DOD should gradually shrink its civilian workforce by 100,000. It should reduce spending on contractor augmentees – personnel added to existing military headquarters staffs – by 15 percent beyond previous cuts, with the goal of returning spending on contractors to 2003 levels. Because approximately 30 percent of DOD’s civilian workforce will be eligible to retire by March 31, 2015, DOD should be able to accomplish some of the reductions through attrition. When necessary, however, Congress and DOD should shape the workforce using tools – such as early retirement, voluntary separation incentives and retention bonuses – to make reductions while retaining talented and experienced personnel in critical areas.
- **The Army.** To accommodate budget cuts and the end of two major ground wars, the Army should shrink to about 480,000 active-duty troops and continue its plans to reset the force after wartime operations. It should transfer up to one-quarter of its active component armored brigades to the reserve component, and mandate more lateral personnel assignments between the active and reserve components. It should delay fielding the ground combat vehicle until 2021, pursue the joint light tactical vehicle in smaller serial buys and cancel the Distributed Common Ground System – Army. It should consider adopting a new force generation model that maintains more units at higher readiness and retains more midgrade non commissioned officers and officers. The Army also should build greater advisory and regionally oriented capabilities, and rebuild the capabilities required to deploy overseas rapidly.
- **The Navy.** To meet the demands of a budget-constrained U.S. strategy weighted toward the Asia-Pacific and global dominance at sea, the Navy should adopt a broader set of crew rotation policies that enable ships to remain forward for greater stretches of time. It should reduce its carrier fleet from 11 to 10, truncate the littoral combat ship program and reduce its planned buy of F-35Cs while buying additional advanced F/A-18s. The Navy should accelerate the X-47B unmanned system and use its capabilities to create a requirement for an advanced unmanned strike aircraft, setting a service goal for one-quarter of all carrier-based strike assets to be unmanned by 2025. The Navy should home-port more of its ships in the Western Pacific, greater Middle East and nearby areas.
- **The Marine Corps.** To reshape itself as budget constraints increase and combat demands in Afghanistan decrease, the Marine Corps should shrink to 175,000 active-duty personnel. It should continue to reset its forces coming out of combat, but concentrate more on amphibious warfare and littoral missions rather than major land warfare. It should focus on operating F-35Bs from amphibious ships and reduce its inventories of carrier-based aircraft, C-130s, support aircraft and unmanned aerial systems, and instead rely on the Navy and Air Force for those capabilities. It should end MV-22 procurement early and pursue the joint light tactical vehicle in smaller serial buys. It should also increase its forward-positioned rotational Marine Expeditionary Units in the Pacific, especially in northern Australia, and at the same time increase the number of international exercises in the Asia-Pacific and greater Middle East.
- **The Air Force.** To maintain the right force mix in a demanding operational environment, the Air Force should continue to pursue the reductions to its reserve component proposed in the 2013 budget request. It should reduce its

planned buy of F-35As and purchase additional advanced F-16s to fill some of the inventory gap. It should create a new requirement for a long-range, stealthy unmanned strike/intelligence, surveillance and reconnaissance (ISR) aircraft in addition to its plans for a new bomber. It should operate all intratheater tactical airlifters and expand its role as the leading provider of operational and strategic ISR to the joint force, thereby subsuming those missions from the other services wherever possible. The Air Force should increase its agreements for access to and presence at overseas bases, particularly in the Asia-Pacific and greater Middle East.

- **Special Operations Forces (SOF).** To maintain their effectiveness as they operate globally, SOF should increase the opportunities for PME, joint assignments and improved tactical and language training, and refine career paths to include adequate time for these opportunities. DOD should increase investment in SOF rotary-wing aircraft and advanced technologies that strengthen operational integration. SOF should re-establish their expertise in missions that involve countering weapons of mass destruction and strengthen their ability to advise and train foreign forces. SOF also should become more integrated with the general-purpose forces upon which they rely for personnel and critical enablers. Civilian leaders should continue to reevaluate and update oversight policies as needed to keep pace with the potential speed of evolving SOF deployments and missions.

II. INTRODUCTION

Maintaining the U.S. military's global pre-eminence is vital to protect American interests and promote American values.³ Pre-eminence entails both having and being perceived as having a level of military strength that surpasses the closest competitors by a significant margin, so potential adversaries know unequivocally that they will incur high costs if they challenge the United States. Pre-eminence makes such challenges less likely and enables the United States to respond to unanticipated threats and crises, capitalize on unforeseen opportunities and preserve access to the global commons of sea, air, space and cyberspace. U.S. military pre-eminence, reinforced by robust alliance relationships, helps reduce international insecurity by deterring armed conflict.⁴

American military pre-eminence benefits not only the United States, but also people around the world. For decades, the United States has served as the linchpin of an interconnected system of alliances and coalitions that includes 60 nations. Together, they account for almost 80 percent of global gross domestic product (GDP) and more than 80 percent of global military spending.⁵ This unprecedented network has steadily provided the greatest levels of prosperity, security and freedom in world history, including for nations outside the network.

The United States invests significant money to maintain its military pre-eminence. Since the end of World War II, it on average has spent \$460 billion (in fiscal year [FY] 2012 dollars), or 5.8 percent of its GDP, per year on the DOD.⁶ In the past decade alone, the United States on average has spent \$480 billion per year (in FY 2012 dollars) on the base defense budget, plus an additional \$120 billion per year on the wars in Afghanistan and Iraq, totaling 3.8 percent of America's annual GDP.⁷

America's ability to sustain this pre-eminence is in question because the nation faces severe fiscal challenges. National debt held by the public has reached nearly \$11 trillion, or more than 70 percent of America's GDP, the highest level since 1950.⁸ Foreign nations hold more than \$5 trillion in U.S. debt, and China alone possesses more than \$1 trillion, representing 7.6 percent of U.S. GDP.⁹ American debt will continue to accelerate until the U.S. government reduces annual deficits by some combination of adjusting revenues, trimming spending and controlling the escalating costs of entitlement programs. Growing indebtedness leaves the United States more constrained in its ability to expend the resources required to project military power. In January 2012, for example, DOD released new strategic guidance and a corresponding FY 2013 budget that reflect \$487 billion in cuts over 10 years as imposed by the 2011 Budget Control Act.

In the face of these challenges, American political leaders increasingly disagree about the appropriate level of American defense spending. Some leaders, such as House Armed Services Committee Chairman Howard "Buck" McKeon, R-Calif., argue that the United States should maintain or increase defense spending despite today's fiscal challenges.¹⁰ These leaders believe doing so is the only way to maintain America's military edge. Other leaders, such as Sen. Tom Coburn, R-Okla., argue for sizable cuts to U.S. military spending.¹¹ These calls for deep defense cuts are supported by some analysts who believe that U.S. strategy should focus on restraint or offshore balancing rather than pre-eminence.¹² They recommend paring back America's international military presence and alliance relationships to avoid becoming entangled in operations in far-flung locales, thereby allowing U.S. policymakers to reduce defense spending significantly.

We disagree with both those who advocate for deep defense cuts and those who support a fundamental

shift away from America's six-decade long successful military strategy of global engagement. The end of American military pre-eminence could enable a global shift away from the current open and rule-based international order and toward a less cooperative system built on exclusive blocs, spheres of influence and mercantilist networks.¹³ This alternative system, sometimes referred to as the "Beijing model" because it reflects certain trends in Chinese development, could drive states toward opportunistic zero-sum competition and erode the current rule-based system of interdependent markets.¹⁴ Such a system could lead to more economic, political and military conflicts that would imperil core U.S. interests and values and could ultimately reduce global freedom and prosperity.

In coming years, the United States may lose its leading position in the global economy as other nations rise. This relative economic decline is largely caused by structural factors that are outside America's control. In contrast, U.S. military pre-eminence is a choice made solely by Americans. U.S. citizens and their elected representatives choose how much to spend on defense, and they decide how that investment is allocated within the U.S. military. Military pre-eminence will remain a U.S. choice for decades to come – even if America's relative economic position declines – because the nation will still be wealthy enough to afford the world's best military. The United States should not choose to abandon its military pre-eminence, especially because it cannot single-handedly choose or control its relative economic position.

However, we also disagree with those who argue that preserving American military pre-eminence requires maintaining or increasing the level of defense spending reflected in the Pentagon's FY 2013 budget request. The United States can certainly retain its military pre-eminence with profligate levels of defense spending. It can also lose pre-eminence if defense budgets are slashed too deeply. Yet we believe that there is a better,

middle path: DOD must maintain America's military pre-eminence but spend less on defense by operating more efficiently and effectively.

We continue to believe strongly in the judgment we reached in "Hard Choices": that the defense budget can be reduced responsibly, but that total defense cuts beyond \$500 billion to \$550 billion over 10 years, measured relative to the Pentagon's current level of spending, will place the U.S. military's ability to execute America's long-standing and generally successful military strategy of global engagement at high risk.¹⁵ Although this report does not provide a detailed assessment of budgetary means, we estimate that its recommendations fall below that \$500 billion to \$550 billion level of defense cuts. Because we use a different baseline than DOD, however, defense spending would have to be cut by an additional \$150 billion over 10 years – beyond the \$487 billion in cuts reflected in the FY 2013 request – to reach what we refer to as \$500 billion to \$550 billion in total cuts over the next 10 years.

In this report, we argue that DOD should focus on *sustainable pre-eminence*. While most studies focus primarily on either strategic ends or budgetary means, this report focuses on operational ways, the connective tissue that links goals to resources.¹⁶ We concentrate on DOD, not on civilian agencies, although we recognize that those agencies face severe budgetary challenges and that U.S. national security requires robust civilian capacity.¹⁷ Our recommendations rely on judgments about both security threats and available resources, since they are inseparable elements of any practical strategy. The reforms we recommend will make the U.S. military more effective and less expensive by preserving as much combat power as possible while reducing unnecessary duplication and overhead across the military services and within DOD. Our recommendations will produce a U.S. military that is as capable – if not more capable – than today's force. It will be

a military that can operate and, when necessary, fight in more than one region at the same time, albeit using different combinations of ways and means than today's force.

Like "Hard Choices," this report does not address reforming military pay and benefits. A number of comprehensive studies have already explored reform options, and synthesizing the results of those studies in this report would contribute little new to the debate.¹⁸ The main challenge to reforming personnel pay and benefits is not a lack of good ideas. Most experts agree on the broad contours of what should be done. Rather, the main challenge to reform is the lack of political will required to implement significant changes. While helping to create that will is not the objective of this report, we do believe that it has become a national security imperative for Congress and DOD to reform personnel pay and benefits in a way that puts DOD on a more sustainable fiscal path and protects the benefits that service members have earned.

Similarly, we do not address acquisition reform in detail, even though we believe it is urgently needed. The United States is still using an acquisition system from the industrial age which suffers from deep and systematic shortcomings. In recent years, the U.S. government has taken steps to improve acquisition practices within the Pentagon, but much more remains to be done. We support the acquisition reforms proposed by the 2010 Quadrennial Defense Review Independent Panel.¹⁹

The report starts by analyzing the new defense strategic guidance released by the Obama administration and identifying four principles that should drive change within DOD. Next, it outlines ways that DOD should strengthen joint force integration, downsize military headquarters and reduce its civilian and contractor workforces. Then it offers specific recommendations for the Army, Navy, Marine Corps, Air Force and SOF. For each service and SOF, it surveys present and future

plans and recommends reforms in four categories: personnel,²⁰ platforms, readiness and posture.

This report draws on a year's worth of research. We reviewed relevant literature, met with senior government officials, interviewed experienced specialists, hosted a series of working groups and conducted fact-finding trips. We also drew on insights from experts across the political spectrum and around the world, including representatives from government, industry, academia and civil society. Our goal was to be informed by representative views from the diverse groups that will be affected by changes to U.S. defense strategy and spending.

The Looming Budget Showdown

Today, there is deep uncertainty over the future of the federal budget, especially regarding sequestration. Sequestration is a process for automatic cuts that was included in the 2011 Budget Control Act, a law approved by bipartisan majorities in both houses of Congress and signed into law by President Barack Obama. Starting in January 2013, sequestration will increase the amount of defense cuts over 10 years as mandated by the Budget Control Act from \$487 billion – the level reflected in the new strategic guidance and fiscal year (FY) 2013 defense budget request – to at least \$950 billion, according to Pentagon estimates. Sequestration was triggered in November 2011 by the failure of the congressional “supercommittee” to reach a deal on deficit reduction. It was originally designed to encourage political compromise, not to be implemented as sound public policy. It should now be regarded as a “legislative accident” that threatens the responsible management of America’s armed forces.²¹

Sequestration would cut the Pentagon’s FY 2013 base budget from about \$530 billion to \$472 billion, an 11 percent real reduction that the Department of Defense (DOD) would be required to implement in a matter of months.²² If the president exempts military personnel costs from these cuts – as is his prerogative – all other defense programs will be cut by 23 percent in FY 2013 to make up the difference, according to DOD estimates.²³ Sequestration also requires DOD to allocate cuts in equal percentages

to every program, project and activity in its budget during FY 2013 and possibly beyond.²⁴ Though experts do not agree on how these across-the-board cuts might be implemented, there is a general consensus that the sequestration process is an unnecessarily damaging way to cut defense spending.²⁵

Few analysts expect Congress to modify sequestration before the election in November. After the election, the lame-duck session of the 112th Congress will confront a deluge of pressing budgetary issues. In addition to sequestration, Congress will face:

- Expiration of the Bush-era tax cuts, which would effectively raise taxes on three-quarters of Americans.
- Expiration of the Alternative Minimum Tax patch, which would affect many middle-class taxpayers.
- Expiration of Medicare physician payment offsets, which shelter doctors from deep cuts in Medicare payments.
- Expiration of the payroll tax holiday and extended unemployment benefits.
- Expiration of various tax “extenders,” which include benefits such as the research and experimentation tax credit and the state and local sales tax deduction.
- Debt ceiling authorization, which will be required near the end of 2012 (if not before) to raise the

ceiling authorized by Congress in summer 2011.

- Debate on spending bills for FY 2013. Since Congress will likely adopt temporary continuing resolutions when the fiscal year begins October 1, the debate on the final spending bills will continue throughout the fall and possibly into the 2013 calendar year.²⁶

The debate surrounding any one of these measures would prove long and contentious. Taken together, they present a daunting legislative agenda for the lame-duck session – and members of Congress may view addressing many of these other measures as a higher priority than sequestration. The outcome of the November election makes the situation even more complicated, since one party or the other may see advantages in waiting until its newly-elected party members assume office in late January 2013 before entering serious negotiations. As a result, the prospects for reaching any sort of deal in December 2012 may be more remote than they were in summer 2011.

The most likely outcome is that Congress will postpone making tough decisions once again, passing legislation that delays the implementation of some or all of the above actions until later in 2013. This would provide more legislative maneuvering room, but also ignore the popular demand from American citizens and financial markets for the U.S. government to take action to ameliorate its deficit and debt problems.

III. DEFENSE STRATEGIC GUIDANCE AND REGIONAL PRIORITIES

In early 2012, the Pentagon issued three documents that, taken together, show how it is adjusting to meet today's changing security and fiscal realities: new strategic guidance, an overview of defense budget priorities and the FY 2013 defense budget request.²⁷

These documents presented the results of a top-down review, directed by the president and conducted by DOD, which involved the senior-most representatives from the military services and incorporated both strategic and budgetary considerations. In terms of strategy, DOD addressed several major world developments since the 2010 Quadrennial Defense Review, including the Arab Spring, China's accelerating rise, global economic uncertainty, the death of Osama bin Laden, the U.S. withdrawal from Iraq and the drawdown in Afghanistan. In terms of resources, DOD revised its five-year spending plans to comply with \$487 billion in budget reductions over 10 years, as mandated by the Budget Control Act.

The documents showcased DOD's intention to transition "from an emphasis on today's wars to preparing for future challenges."²⁸ The guidance set clearer priorities than most previous defense planning documents by explicitly identifying the Asia-Pacific and the greater Middle East as the two most important world regions.²⁹ It embraced what we have described as a "pivot but hedge" approach to global engagement:³⁰ The U.S. military will pivot to the Asia-Pacific region but hedge against potential threats in the greater Middle East and elsewhere.³¹ Accordingly, the guidance declared that "U.S. forces will no longer be sized to conduct large-scale, prolonged stability operations" like those undertaken in Iraq and Afghanistan.³² Instead, the U.S. military "will of necessity rebalance toward the Asia-Pacific region" by emphasizing current regional alliances, expanding

cooperation with emerging partners and making additional investments as required.³³ At the same time, the U.S. military will continue "to place a premium on U.S. and allied military presence in – and support of – partner nations" throughout the greater Middle East.³⁴ In contrast, the guidance declared that the U.S. military must evolve its posture in Europe and develop "innovative, low-cost, and small-footprint approaches" in Africa, Latin America and elsewhere.³⁵

As we argued in "Hard Choices," these are the correct regional priorities for the U.S. military to pursue in the emerging international security environment. The pivot to the Asia-Pacific is essential because the region stands poised to become the centerpiece of the 21st-century global economy. The U.S. military should bolster its presence in the Asia-Pacific, through increased engagement with all regional actors, to convey clearly to allies and potential adversaries that America remains committed to a peaceful and prosperous regional order. From the perspective of the United States and its Asian allies, China and North Korea represent the most serious military threats to regional security. China continues to modernize its military, and it has pursued an increasingly aggressive foreign policy toward its neighbors in the past three years.³⁶ Meanwhile, the ongoing leadership transition in North Korea may lead to continued military aggressiveness as Kim Jong Un seeks to consolidate his power and demonstrate control.³⁷

The persistent presence of strong U.S. naval and air forces, complemented by tailored deployments of highly capable U.S. ground forces, will reassure allies who worry about American decline by conveying an unwavering U.S. commitment to Asia-Pacific security. Strengthening America's presence in the Asia-Pacific will make clear to China, North Korea and other potential adversaries that they cannot force the United States to reduce its long-standing commitment

to the region. Military confrontation between the United States and China is not desirable, and a strong U.S. presence in the region will help preserve the military balance and minimize the likelihood of conflict.

Meanwhile, the arc of the greater Middle East from Tunisia to Pakistan will remain the most volatile crescent in the world for years to come. American interests in the greater Middle East include ensuring the free flow of petroleum, halting nuclear proliferation and guarding against the diminished but still real threat of terror attacks by violent extremists. To protect these interests, the U.S. military should maintain a modest land, sea and air presence and strengthen its regional partnerships. This does not mean that U.S. forces will repeat the intensive counterinsurgency campaigns of the last decade. Instead, the military should help preserve regional security by maintaining a favorable balance of power vis-à-vis Iran, keeping trade routes open and preventing terrorist groups from establishing bases of operations. Regular regional training deployments by U.S. ground and air forces, complemented by tailored deployments of naval forces along with targeted arms sales and maintenance agreements, will both deter adversaries and reassure friends. The rotational presence of highly capable American armed forces, present in modest numbers, helps offer a credible hedge against growing volatility in the greater Middle East.

From a strategic perspective, the timelines in the Asia-Pacific and the greater Middle East differ considerably. While the U.S. military should increasingly focus on the Asia-Pacific in the years ahead, it is more likely to face near-term conflicts in the greater Middle East. Even as U.S. interests in the Asia-Pacific continue to grow, most potential security threats there are likely to evolve slowly, in the medium and long term. Other than near-term volatility in North Korea, the region's dominant security concerns revolve

around China's opaque military modernization and assertive foreign policy, which will pose far more of a challenge 15 years from now. America's regional military objectives in the Asia-Pacific should therefore center on deterring and preventing conflict. In contrast, the threats emanating from the greater Middle East are dangerous in the near and medium term and will demand substantial U.S. military resources and attention during the next decade.

While the U.S. military should increasingly focus on the Asia-Pacific in the years ahead, it is more likely to face near-term conflicts in the greater Middle East.

Europe remains important to advancing U.S. interests and values. European allies share U.S. liberal democratic values, are cornerstones of the global economy, can add political legitimacy to potential coalition military actions and provide valuable regional and local knowledge. The U.S. military should maintain robust regional engagement in Europe by continuing to promote greater partner interoperability and capacity, including through initiatives such as NATO missile defense. However, the United States should reframe engagement so its European allies do not measure America's commitment to regional security simply through the presence of active-duty U.S. troops on the continent. The U.S. military also should be realistic about the fact that European military budgets will likely continue to decline given the European financial crisis and the demands of aging

The Role of U.S. Allies and Partners

The United States has fought virtually all its past wars alongside allies and partners and will almost certainly do so in the future. However, this report focuses solely on the U.S. military, without assuming any specific capability contributions from future coalition members. We do so for two reasons.

First, and most important, the U.S. military must remain capable of conducting successful unilateral military operations anywhere in the world. Even though the United States may generally seek to conduct multilateral military operations, leaders cannot assume that it will always be preferable or even possible to do so in the future. The U.S. military should maintain the ability to project power unilaterally when necessary to defend vital U.S. interests.

Second, the capabilities that future partners can and will contribute

to coalition operations remain quite uncertain. In Europe, defense budgets declined sharply at the end of the Cold War and have remained relatively stagnant since then. From 2001 to 2009, for example, European defense spending increased by only 17 percent in real terms even as many European countries were fighting alongside U.S. troops in Iraq and Afghanistan.³⁸ Today, most European defense budgets are declining.

In the Asia-Pacific region, some U.S. allies and partners are spending more on defense to protect their sovereignty against potential threats from a rising China. In 2012, Asian defense spending is expected to exceed European defense spending for the first time in modern history.³⁹

Yet the interoperability gap between the U.S. military and allied forces in both regions seems

likely to grow. Even a reduced U.S. defense budget will still significantly dwarf the defense budgets of these countries, and the United States will continue investing in modernizations programs that many allies cannot afford.⁴⁰ Furthermore, even countries that possess advanced and interoperable capabilities may, in some cases, choose not to contribute these assets to future U.S. operations if they believe these operations will incur too many economic, political and diplomatic costs.

Nevertheless, the United States will continue to prefer conducting military operations with allies and partners wherever possible. Despite the constraints and uncertainties discussed above, U.S. allies and partners may be able and willing to contribute significant capabilities for some future scenarios, especially ones that directly threaten their interests.

populations.⁴¹ The U.S. government has asked its European allies to contribute greater capabilities to alliance operations for more than two decades, with only limited results.⁴² Unless the steepening decline in European defense spending reverses, the military value of U.S. allies and partners in NATO will continue to dwindle.⁴³

Finally, in Latin America, Africa and elsewhere, the U.S. military should seek to deter and address specific threats to U.S. interests through regional engagement activities such as military exercises, foreign military sales and training, and political and economic assistance. To advance this vision for

engagement, the U.S. military should increasingly leverage the capabilities provided by joint inter-agency task forces, the U.S. Coast Guard and the National Guard's State Partnership Program. DOD planners often overlook these assets, but they are exactly the type of innovative, low-cost and small-footprint approaches called for in the new strategic guidance.

IV. FOUR PRINCIPLES FOR REFORM

To accomplish these regional priorities under growing resource constraints, the U.S. military should embrace the following four principles. We originally introduced these principles in “Hard Choices” but expand our analysis to account for recent DOD decisions.⁴⁴

Principle #1: Prioritize Naval and Air Forces

Naval and air forces will grow increasingly important in the future strategic environment. The Asia-Pacific is a vast maritime region that requires strong naval and air forces to project military power. Naval forces provide forward presence without the need for foreign bases, and air forces provide rapid global response capabilities. As anti-access and area-denial (A2/AD) capabilities proliferate, naval and air forces will be the primary – though not the only – tools used to preserve access to the global commons. In contrast, large active-duty ground forces will be needed less now that the United States has withdrawn from Iraq and is drawing down its forces from Afghanistan. But the nation will still need capable if smaller ground forces to deter aggression by hostile nations, advise and assist U.S. allies facing regional instability and prevail in unexpected future ground wars.

Cutting the number of ground forces will incur some risk – but it incurs fewer risks than canceling naval and air modernization programs because the U.S. military can build up additional ground forces more quickly than it can acquire additional naval and air forces once production lines have closed. The rapid growth in the size of the ground forces, which started in 2007, increased the Army and Marine Corps by 65,000 and 27,000 active-duty personnel, respectively.⁴⁵ While seasoned sergeants and mid-grade officers cannot be created overnight, that rapid wartime increase demonstrates that DOD can expand ground forces successfully when necessary.

During the next five years, Pentagon leaders plan to prioritize naval and air forces, which have shrunk since 2001. Breaking with historical norms, defense officials have stated that they will not distribute defense cuts evenly across the services.⁴⁶ In January 2012, DOD proposed reducing the permanent size of the active-duty Army from 520,000 to 490,000 and the size of the active-duty Marine Corps from 202,000 to 182,000 by the end of FY 2017.⁴⁷ Deeper cuts may still occur, particularly if sequestration takes effect. While the Pentagon did cut some spending on naval and air forces in FY 2013 to reach the required level of budget savings, those relatively modest reductions should not overshadow the fact that the Pentagon largely protected naval and air forces and will likely continue to do so if defense budgets decline further.

Principle #2: Increase Interdependence Across and Within the Military Services

The U.S. military should increase interdependence across the four services and among the active and reserve components. Some services and components have acquired substantial assets beyond the requirements of their core missions, and the past 10 years of elevated defense spending have accelerated this trend. While some redundancy provides a useful hedge against risk, today’s extensive overlap among and within the services is unnecessary and inefficient, especially when joint interdependencies can yield comparable war-fighting effectiveness at less expense. To be clear, DOD should maintain multi-source acquisition competition and healthy interservice competition, which can drive efficiency and innovation. However, the extensive redundancy present in the U.S. military today is mostly the result of unconstrained requirements (as discussed below), institutional politics, abundant resources and inadequate analysis of force-wide tradeoffs – not of strategic, reasoned choices by senior leaders.

The Pentagon has emphasized the need to increase interdependence, but it has not yet taken concrete

steps to achieve it. General Martin Dempsey, Chairman of the Joint Chiefs of Staff, wrote recently that the armed forces should “[d]rive Jointness deeper, sooner in capability development, operational planning, and leader development,” and “[i]dentify and reduce, but ... not eliminate, overlapping capabilities across Services.”⁴⁸ However, the FY 2013 budget took minimal material steps toward this goal. It proposed few major changes to service force structure, procurement plans, tasks or capabilities designed to strengthen interdependence.⁴⁹ Similarly, while the strategic guidance pledged to “examine the mix of Active Component (AC) and Reserve Component (RC) elements,” it offered limited information about how, when, where or why such an examination should occur.⁵⁰

Principle #3: Match Requirements to Likely Threats

The U.S. military should generate requirements for new weapons systems based on realistic assessments of likely threats, not on the pursuit of maximalist capabilities. Since the end of the Cold War, the military has tried to prepare for more uncertain threats and to design capabilities for unknown but presumably potent future adversaries. This lack of clarity about threats has encouraged the military services to develop weapons systems requirements unmoored from either technological limits or defined enemy capabilities. Given that the defense budget is likely to remain constrained for years to come, DOD should return to a more restrictive planning and acquisition system that more selectively applies resources to the most serious and concrete threats to U.S. vital interests.⁵¹

The Pentagon should use what we call *aggregate capability* to guide its formulation of new requirements. Parts of DOD currently perform such analyses, but their conclusions are not adequately linked to service requirements. Aggregate capability describes the total effects achieved by the synergy of all military systems working together.

For example, consider today’s aggregate strike capability. The current joint force delivers strikes through a mixture of F-22s, F/A-18s, F-16s, F-15s, B-52s, B-2s, B-1s and cruise missiles, which are supported by advanced ISR, unmanned aerial systems (UAS) and cyber capabilities. Airpower in the 1980s could call on only a portion of this strike mix, with limited ISR and cyber capabilities. Today’s aggregate strike capability thus offers numerous joint attack options that will be highly potent against a range of likely future threats. This aggregate mix suggests that DOD should make decisions about new investments based on a holistic analysis of whether all U.S. forces, when integrated, possess the capabilities required to achieve specific military objectives related to likely threats. DOD should not make decisions based on a narrow analysis of the capabilities, end strengths or weapons inventories of specific platforms, services or domains.⁵²

Senior DOD leaders should use the concept of aggregate capability to develop more mixed service solutions to military problems. Leaders should examine options for operational plans and then approve the solution that best leverages the aggregate capability of the joint force. In the world of acquisition, leaders should keep in mind the capabilities created by innovative combinations of current weaponry before validating requirements for wholly new systems. A more balanced approach of this sort could enhance the strength of the current force by sometimes choosing to upgrade existing weapons systems or adding networks that make existing systems better, instead of procuring entirely new systems.

Although predicting specific future threats will remain difficult, the new strategic guidance offers a reasonable framework for planning. It represents a refreshing change from previous defense guidance, including the 2010 Quadrennial Defense Review, which often failed to differentiate among priorities. The new guidance selected 10 specific missions

Anti-Access/Area-Denial Threats and Air-Sea Battle

By Bill French

Joseph S. Nye, Jr. National Security
Research Intern

Anti-access/area-denial (A2/AD) strategies aim to prevent, delay or disrupt the U.S. military's ability to gain access to a theater of operations and to restrict freedom of action once in theater. To counter these strategies, the Pentagon is developing the Air-Sea Battle operational concept, which has garnered much attention in the United States and abroad. Air-Sea Battle shows positive signs of promoting increased levels of jointness and interoperability among the services. However, it also carries risks and shortfalls that policymakers should address.

Enemy weapons systems that may be employed in A2/AD strategies range from high- to low-tech, including underwater mines, cruise missiles, anti-satellite weapons, advanced fighter aircraft, submarines, sophisticated air defense systems and cyber capabilities.⁵³

These disparate weapons share an ability to target U.S. assets at long ranges or in ways that complicate defensive efforts.

Left unchecked, the rapid emergence of A2/AD capabilities threatens the ability of the United States to maintain its military strategy of global engagement, and directly threatens U.S. allies. Adversaries may seek to create zones that pose serious risks to U.S. military operations in critical areas of the world, especially the Persian Gulf and Western Pacific, and could potentially deny access to vital parts of the global commons.⁵⁴ Defense planners assess that these threats are likely to grow because of the proliferation of advanced technology and the rise of regional powers, creating "advanced military competitors ... able to pose significant regional military challenges in the event of conflict."⁵⁵

At its core, Air-Sea Battle calls for highly sophisticated levels of jointness and interoperability among

the services, particularly between the Air Force and Navy. As Chief of Naval Operations Admiral Jonathan Greenert and Chief of Staff of the Air Force General Norton Schwartz explained, forces across air, sea, space and cyberspace will "tightly coordinate" to "increase combat efficiency" and complement each other's strengths and weaknesses.⁵⁶ For example, in congressional testimony, General Schwartz suggested the possibility of a Navy submarine and an Air Force stealth bomber operating jointly to maximize their unique stealth capabilities.⁵⁷ By pressing the advantages of a joint force across all domains, U.S. advantages in one domain can be applied to create advantages in others, reducing the ability of an adversary to deny access and restrict the movement of U.S. forces.⁵⁸

Reaching the level of jointness and interoperability envisaged by Air-Sea Battle will require several

Continued on next page

that DOD will use to shape the future U.S. military and stated that DOD will use only four of those missions to determine the size and capacity of American forces: conduct counterterrorist and irregular warfare missions; deter and defeat aggression; maintain a safe, secure and effective nuclear deterrent; and defend the homeland and support civil authorities.⁵⁹ We interpret these priorities to mean that DOD is most concerned about transnational terrorist organizations based mostly in the greater Middle East, as well as aggression by

China, Russia, Iran and North Korea. As a result, the size and shape of the U.S. military should primarily fill needs related to U.S. military operations in these scenarios.

Principle #4: Accelerate Investments in "Leap-ahead" Technologies

The Pentagon should accelerate research and development investments in technologies that "leap ahead" of the planned next generation of existing systems. Successful leap-ahead technologies can render next-generation systems obsolete and

Continued from previous page

institutional changes. According to Admiral Greenert and General Schwartz, the services in the future must “institutionalize the pursuit of commonality, interoperability and joint efficiencies.”⁶⁰ In this respect, Air-Sea Battle will not succeed unless the services achieve greater interdependence, which will mean sacrificing turf and redundant capabilities for the sake of efficiency. Indeed, the increased joint service integration demanded by Air-Sea Battle will require even greater U.S. military interoperability and jointness in the future.

The Department of Defense (DOD) has prioritized investment in many capabilities necessary for Air-Sea Battle, including long-range strike, stealthy platforms, robust and survivable command, control, communications, computers, intelligence, surveillance and reconnaissance networks and ballistic missile defense. Specific investments have included the

long-range strike family of systems, research into carrier-based unmanned combat air vehicles, next-generation data links to allow platforms across services to communicate securely, upgrades to standard missile-3 missile defense, research into directed energy weapons and increased spending on cyber capabilities. Many of these investments were already under way before the Air-Sea Battle concept was developed, but Air-Sea Battle helps integrate and leverage these capabilities in novel ways. In many cases, the key to overcoming A2/AD challenges will be developing new technologies that can be added to existing platforms, not buying entirely new platforms.

However, DOD is still investing heavily in programs that may be vulnerable to A2/AD strategies. One risk identified by defense analysts is that Air-Sea Battle may become “a catch-all justification for weapons programs that the services do not want cut.”⁶¹ For example, the Navy still plans to procure 55

littoral combat ships and the Ford-class aircraft carrier. The former was cited as not survivable by the DOD test community and the latter is vulnerable to long-range ballistic and cruise missiles.

Air-Sea Battle is an operational concept, not a military strategy, and it carries risks and shortfalls. Its offensive operational nature may unintentionally signal an aggressive U.S. approach to the Asia-Pacific. Indeed, Chinese military officials have argued that Air-Sea Battle appears to assume that the People’s Liberation Army is the principal adversary of the U.S. military.⁶² Additionally, as defense strategist T.X. Hammes argues, using Air-Sea Battle in a China scenario may risk nuclear escalation because it would likely require “early and repetitive attacks on the Chinese mainland” to succeed.⁶³ He also argues that by requiring deep, penetrating strikes against potential adversaries, Air-Sea Battle plays into A2/AD strategies that impose high costs on such attacks.⁶⁴

serve as a force multiplier by enhancing the joint force’s aggregate capability by more than the sum of its parts. However, policymakers often fail to prioritize these technologies due to bureaucratic, political, financial and service cultural resistance. Furthermore, program managers face disincentives to support these technologies because of the high risks that such cutting-edge research involves.⁶⁵ The cumulative effect of these influences has caused DOD to remain heavily tilted toward building the next generation of legacy systems rather

than accepting prudent risk by investing now in the development of bold future capabilities.

We advocate a more balanced mix of next-generation systems, improved current-generation platforms and leap-ahead investments – what we have previously called a “high-low-new” mix.⁶⁶ Throughout this report, we make recommendations about whether to pursue next-generation, legacy or leap-ahead investments on a case-by-case basis drawing on our judgments about likely threats, acceptable risk, available technology and

Reversibility: Hedging Against the Unexpected

Accurately predicting future national security challenges is always problematic, and the rapid pace of political and technological change will only exacerbate this problem in the future.⁶⁷ The Pentagon's new guidance pledged to preserve the capacity and flexibility to conduct full-spectrum operations but reasoned that this ability did not require maintaining standing U.S. forces that are sized to perform every conceivable mission – an expensive arrangement. Instead, the guidance directed an approach based upon the principle of “reversibility,” which would manage military personnel, force structure and the defense industrial base in ways that permit the nation to regenerate capabilities that might be needed to meet unforeseen future demands.⁶⁸

Reversibility requires that the U.S. military must be deliberately designed to expand rapidly if required to deal with the unexpected. Reversibility is a highly responsive way to institute threat-based planning in a world of unknown threats; it prioritizes forces that are

expansible and adaptable in the face of unanticipated contingencies. This built-in flexibility is a realistic and pragmatic response to a world of rapid political and technological change capable of producing shocks and surprises even to well-prepared militaries.

The Pentagon should pursue several policies to achieve reversibility. First, it should continue its plans to retain more midgrade noncommissioned officers and officers who will lead any future rapid expansion of the force. Second, it should maintain high levels of readiness to ensure that the U.S. military can respond quickly and effectively to future challenges. Third, it should maintain a robust research and development base to develop a range of technological options that can be accelerated if needed in the future. Fourth, and perhaps most importantly, the Department of Defense (DOD) should preserve and strengthen professional military education in order to nurture men and women who possess mental agility and can lead the

military successfully in times of danger and uncertainty.⁶⁹

Reversibility is most difficult for naval and air forces because of the innate complexity and long development timelines of modern ships, submarines and aircraft. Ground forces require less time and resources to expand rapidly. Much of their required equipment is less complex and can be stockpiled from current excess capability or, if necessary, produced relatively expeditiously. For these reasons, ensuring adequate quantities of ships, submarines and aircraft must receive high priority when budgets tighten. They cannot be rapidly generated after the fact and often require years of effort to create substantially greater numbers. DOD should promote reversibility in the defense industrial base by continuing to procure major weapons systems at a steady rate, maintaining robust investments in research and development, pursuing international exports and creating more collaborative and transparent partnerships with industry.

available resources. In general, we believe that DOD should increase leap-ahead research and development investments in five main areas:

- Unmanned, autonomous and artificial intelligence technologies, from UAS to intelligence processing, which can operate across long ranges for extended periods of time;⁷⁰
- Cyber offense and defense capabilities, particularly those related to active cyber defense;⁷¹
- Energy conservation and alternative energy;
- Directed energy weapons; and
- Securely networked command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR), particularly space-based options such as lower-cost satellites.

To keep pace with fast-moving technology, DOD should accelerate the tempo of its decisionmaking, mandate shorter acquisition timelines, push decisions about certain program elements (such as software) as far back in the production cycle as possible and invest in capabilities with broader applicability and shorter service lives “more like those of computers than carriers,” as former Navy Secretary Richard Danzig wrote in a 2011 Center for a New American Security report.⁷²

The Pentagon has signaled a desire to rebalance its investments toward leap-ahead capabilities, and it is undoubtedly pursuing some innovative classified programs. The strategic guidance, for instance, stated: “[A]s we transition out of Iraq and draw down in Afghanistan, we will take extra measures to retain and build on key advancements in networked warfare in which joint forces have finally become truly interdependent.”⁷³ The guidance “sought to differentiate between those investments that should be made today and those that can be deferred.”⁷⁴ It stated that the U.S. military “will invest as required to ensure its ability to operate effectively in anti-access and area denial (A2/AD) environments” in which future high-intensity military operations will likely take place.⁷⁵ Meanwhile, the FY 2013 budget delayed or canceled several programs that DOD believed were entering service before they were needed, such as the Defense Weather Satellite System.⁷⁶

Despite these efforts, DOD’s plans still invest excessively in next-generation systems and inadequately in leap-ahead capabilities. A recent report concluded that more than 70 percent of the Air Force’s budget for new aircraft in the next decade will go toward just two programs, the F-35A and KC-46A tanker. Yet adversaries employing A2/AD strategies may employ tactics targeting bases or refueling assets, leaving U.S. tactical fighter aircraft unable to reach their operating areas.⁷⁷ The Air Force has not adapted by, for instance, downsizing its procurement plans for short-range tactical fighters and accelerating its investment in stealthy, long-range, combat-capable UAS.

V. STRENGTHENING JOINT INTEGRATION

One of the best ways to ensure sustainable pre-eminence is to further integrate the efforts of the joint force – ensuring that the “whole” of U.S. joint capabilities adds up to more than the sum of its individual service parts. The infusion of billions of dollars in the past decade has moved the services *away* from deeper integration and interdependence, as each service has sought greater self-sufficiency rather than rely upon the capabilities of other services. Whereas robust budgets permit and even encourage such independence, shrinking resources require capabilities to become more integrated. To make the joint force more capable, Congress and DOD should cooperate to implement the following reforms.

Strengthen the Roles of the Chairman and Vice Chairman of the Joint Chiefs of Staff

The inactivation of Joint Forces Command means that the chairman and vice chairman of the Joint Chiefs of Staff are now the strongest uniformed advocates for joint operations within DOD. The chairman and vice chairman, in concert with OSD, should assert greater authority in challenging COCOM and service requirements. This should entail, as necessary, directing the military services and defense agencies to change their operational, acquisition, personnel and related plans. Today, the military services continue to have the budgetary and bureaucratic clout to create requirements, design force structures, manage programs and develop operational plans through their component headquarters supporting the combatant commanders. This leads to service-centric solutions that often waste resources, create unnecessary duplication and fail to leverage the synergy of a more integrated joint force. Typically, the Joint Staff merely represents the service and COCOM positions, avoiding contentious judgments; this approach provides little objective analysis or support to the chairman in making

difficult tradeoffs or complex decisions. The chairman and vice chairman should actively support OSD in its statutory role in challenging service requirements, identifying and attacking redundancies and demanding better-integrated joint plans. OSD should leverage this support to accelerate a full review of all the combatant commanders’ operational plans, contingency plans and future requirements to ensure they are consistent with the new strategic and budget guidance while maximizing the integration of joint capabilities.

Create Standing Red Teams for Competitive Analysis

The Joint Staff and OSD should form two to three red teams that can independently assess requirements, programs and operational plans to provide an unvarnished, objective perspective to DOD’s senior civilian and military leadership. These red teams should include representatives from the Joint Staff, OSD (particularly the offices for Policy, and Cost Assessment and Program Evaluation), U.S. Special Operations Command, and national security federally funded research and development centers. Since they would be less affected by service equities, the teams would provide a more independent perspective on requirements, programs and plans.⁷⁸ While the red teams should have the opportunity to meet with stakeholders within DOD, the Joint Staff should grant them the autonomy needed to conduct sharp-edged competitive analysis. Each team should be co-led by a senior civilian appointee and a mid-level flag officer to ensure that both civilian and military perspectives are included.

Increase Standing Joint Operational Headquarters

The military services should develop regionally oriented, standing joint operational headquarters to build trust, promote faster decisionmaking and facilitate innovative exercises and training. During the past decade, DOD failed to establish and institutionalize effective joint war-fighting

headquarters to prosecute the wars in Iraq and Afghanistan,⁷⁹ largely because such standing multiservice operational headquarters do not exist in the peacetime force structure. In both Iraq and Afghanistan, the U.S. military was forced to create joint theater headquarters out of whole cloth in the midst of each conflict. Further, subordinate joint headquarters at the operational level were built by grafting Marine, Navy and Air Force officers onto existing Army corps-level service headquarters in an ad hoc fashion.⁸⁰ The U.S. military is now poised to return to this same single-service headquarters model despite its demonstrated wartime inadequacy. Once the drawdown in Afghanistan is complete, the military will return to having no standing deployable joint war-fighting headquarters. Events of the last decade would suggest that this requirement for joint-service, deployable operational headquarters is far too important and complex to be left to perpetually ad hoc solutions.

DOD can address this problem by directing selected service war-fighting headquarters to reorganize as permanent deployable joint force headquarters. These should include at least two Army Corps, one Marine Expeditionary Force, one Navy Fleet and two operational or “numbered” Air Forces.⁸¹ These newly operational commands should continue to perform their service roles, adding modest permanent joint staffing from other services but exercising regularly as a joint task force with their full complement of designated joint augmentation. This reorganization would avoid having to create ad hoc joint headquarters during wartime and would promote a deeper culture of joint war-fighting during peacetime as well.

Reform Joint Professional Military Education

Professional military education helps ensure that future military leaders are capable of adaptive thinking amid uncertainty about the time, location and character of future conflicts. During the 1930s, significant investment by the Army and Navy in rigorous PME for their midgrade

officers was a crucial contribution to the U.S. victory in World War II.⁸² Today, a decade of war has significantly eroded both the participation in and regard for PME among the officer corps, and cutbacks in funding, autonomy and prestige are already threatening the effectiveness of the National Defense University and the service war colleges.⁸³

DOD should protect and reinforce PME in three ways. First, DOD should protect the very modest budgets allocated to PME institutions in order to sustain their high quality. Second, DOD should strengthen policies to ensure that the best and brightest of the officer and noncommissioned officer (NCO) corps compete for attendance, and then attend PME programs once selected. Third, joint education for flag and general officers should be revamped and augmented with a new, more extensive program that focuses on levels above operations, including national security policy and strategy, international military issues and defense industrial base challenges. Attendees should include those flag officers destined for the senior-most ranks, which require the most demanding strategic leadership skills.

VI. DEFENSE-WIDE REFORM: DOWNSIZING MILITARY HEADQUARTERS AND REDUCING CIVILIANS AND CONTRACTORS

DOD as an institution should spend less money and time on organizations, personnel and processes that are not essential for effective defense. Spending on these activities has grown significantly in the past decade. As one budget expert recently concluded, “The base budget now supports a force with essentially the same size, force structure, and capabilities as in FY 2001 but at a 35 percent higher cost.”⁸⁴

Since 2001, the pressing need to support combat activities has triggered a massive infusion of resources into the Pentagon. Spending on defense-wide activities, for example, which exist outside the military services and support the entire Defense Department, currently consumes 18 percent of the annual base defense budget.⁸⁵ From FY 2001 to FY 2012, total defense-wide spending, including war costs, increased by 79 percent in real terms, therefore outpacing the growth rates of defense spending overall (up 58 percent) as well as spending on the Departments of the Navy (up 36 percent) and Air Force (up 36 percent).⁸⁶ DOD currently spends about \$200 billion per year on contracted services, which include overhead expenses by the military departments and defense-wide agencies for information technology support, maintenance, facilities upkeep and transportation costs.⁸⁷

This large influx of money has eroded the Pentagon’s need to scrutinize whether its expenditures are both essential and effective. DOD should revitalize its competence at this fundamental task. As budgets shrink, reforming unnecessary and ineffective organizations, personnel and processes will strengthen the U.S. military. It also will improve how DOD operates and save money that leaders can reinvest into more important priorities – such as the troops, training and weapons

systems that form the hard core of American combat power. DOD should not repeat the mistake it made during previous defense drawdowns when it failed to sufficiently downsize noncombat activities and related facilities because it faced political and bureaucratic resistance.⁸⁸

In “Hard Choices,” we illustrated how DOD could save from \$175 billion to \$340 billion over 10 years by reducing its spending on facilities maintenance, depots, civilian workers, commercial and retail activities, contractors and redundant intelligence capabilities.⁸⁹ Unfortunately, DOD produced fewer savings in these areas in its FY 2013 budget request, finding approximately \$60 billion in efficiencies and overhead savings.⁹⁰ This lack of progress represents a missed opportunity, and DOD, the president and Congress are all to blame.

DOD remains culturally resistant to bringing its business practices into the 21st century – and it had few incentives to do so when budgets were robust. Meanwhile, the president and bipartisan majorities in both houses of Congress approved the 2011 Budget Control Act, a law that contains a sequestration mechanism that will cut defense sharply beginning in January 2013. If implemented, these cuts will deny DOD the time and flexibility required to reduce spending intelligently in the aforementioned areas, which take more time to downsize than military force structure that can be added or subtracted more easily.

In this section, we recommend defense-wide reforms in two important areas: downsizing military headquarters and reducing the civilian and contractor workforce. We believe these recommendations entail little risk and will make the U.S. military stronger and more cost effective in the years ahead.

Downsize Military Headquarters

The size and number of military headquarters have expanded dramatically in the past decade,

We recommend defense-wide reforms in two important areas: downsizing military headquarters and reducing the civilian and contractor workforce. We believe these recommendations entail little risk and will make the U.S. military stronger and more cost effective in the years ahead.

even though most of this growth was unrelated to the wars in Iraq and Afghanistan. Since September 11, 2001, the number of staff members assigned to combatant commanders has grown by more than 50 percent.⁹¹ The total number of combatant commands increased from eight to nine, and some of their roles and missions have expanded significantly.⁹² For example, U.S. Strategic Command (STRATCOM) absorbed U.S. Space Command when it was abolished, and STRATCOM now also oversees U.S. Cyber Command (CYBERCOM), a new sub-unified command.⁹³ Thousands of military and civilian staff members work at each of these commands, as well as a host of support contractors.⁹⁴ In FY 2010, the 10 combatant command headquarters that existed at that time employed 98,000 military, civilian and contract workers with a total budget of \$16.5 billion.⁹⁵

Constrained defense budgets require re-examining the purpose, organization and staffing levels of all senior military headquarters, especially those that have no deployable, operational function.⁹⁶

This must include OSD and the Joint Staff, as well as more dispersed headquarters. Decreasing the numbers of military, defense civilian and contractor personnel required to perform administrative functions also holds great promise in making defense more efficient and cost effective. Both productivity gains and cost savings could be profound. In “Hard Choices,” for example, we estimated that DOD could save at least \$40 billion over 10 years by reducing spending on military personnel performing commercial-type activities.⁹⁷ Unfortunately, DOD has not generated many savings from streamlining defense headquarters.⁹⁸

DOD should consolidate from six into four the number of geographic combatant commands. It should merge U.S. Africa Command (AFRICOM) back into U.S. European Command (EUCOM) to restore and consolidate the dual responsibilities that EUCOM held from 1952 to 2008.⁹⁹ Since the direct threat to Europe has diminished steadily, a renamed EURAFRICOM could once again assume U.S. military responsibility for Africa – an obvious cost-savings move that would not significantly affect its present effectiveness.¹⁰⁰ In this hemisphere, DOD should merge U.S. Northern Command (NORTHCOM) and U.S. Southern Command (SOUTHCOM) into a single command dedicated to the Western Hemisphere. Some NORTHCOM functions could also migrate to U.S. Army Forces Command, which performed many of those tasks in the 1990s.

DOD should also bar the automatic practice of establishing service component headquarters commands for every new joint headquarters. These commands are primarily designed to ensure no service is left out of a new joint headquarters, but they have added numerous additional two- and three-star headquarters. For example, four major joint commands have been established in the past 10 years – CYBERCOM, NORTHCOM, AFRICOM and STRATCOM – and each one has its own Army, Navy, Air Force and Marine component

command headquarters. This further increases the number of generals, military staff, DOD civilians and contractors – even though it is not at all clear that each service has equal equity in every new joint command.¹⁰¹

DOD should limit the proliferation of service component headquarters in two different ways. First, it should direct the services to create service cells, not full component headquarters, inside most senior joint headquarters. The cells could be led by a brigadier or rear admiral who serves as the interface between the joint command and his or her respective service. Second, where a validated requirement for a separate service component command exists, DOD should direct the services to dual-hat existing service headquarters and commanders to assume additional roles as the service component to a combatant command. For example, the Marine Corps dual-hats most of its headquarters and senior commanders today.¹⁰² The three-star commander and two-star deputy commander of Marine Forces Command located in Norfolk also command Fleet Marine Forces, Atlantic; Marine Corps Forces, Europe; Marine Corps Forces, South; and Marine Corps Bases, Atlantic. In other words, two commanders (with small dedicated staff contingents) cover the requirements of the Marine service component to SOUTHCOM and EUCOM, two combatant commands, along with two other headquarters. As a result, the Marines have far fewer headquarters on a proportional basis than the other services, which each have many different headquarters, staffs and commanders performing these functions. Each of the other services should adopt the Marines' dual-hat model, which will increase effectiveness and save money.

Once this change has been made, DOD should abolish the existing administrative service component commands.¹⁰³ As noted, where truly necessary, the services could reassign component responsibilities to existing service headquarters

that also have war-fighting capabilities. This shift would eliminate numerous nondeployable headquarters around the world. In Europe, for example, U.S. Army Europe should be replaced by V Corps as the Army component of EUCOM. U.S. Air Forces in Europe could similarly be replaced by the 3rd Air Force, an operational Air Force headquarters stationed in Europe. Commander Naval Forces Europe could likewise be replaced with the commander and staff of the Sixth Fleet. The headquarters gaining these newly assigned missions would need to be augmented modestly, but this would still provide major efficiencies. Every geographic combatant command should explore the potential of this model.¹⁰⁴

Reduce Civilian and Contractor Workforce

Since 2001, the size of the Pentagon's civilian workforce has exploded in order to support military operations and manage the massive infusion of budgetary resources. From FY 2001 to FY 2011, DOD added 120,000 civilians to its workforce while adding only 50,000 active-duty service members.¹⁰⁵ This occurred partly because DOD converted many jobs previously performed by military personnel to civilian positions.¹⁰⁶ During the same period, the Air Force added 24,000 civilians while shedding 21,000 active-duty airmen, reflecting the growth in support tail over combat tooth.¹⁰⁷

Defense and civilian intelligence agencies, which draw about 80 percent of their total funds from the defense budget, also increased their civilian workforces rapidly after 2001. More than 50 percent of the intelligence community workforce was hired after 9/11.¹⁰⁸ While information about the exact size of the workforce remains classified, total intelligence spending, which includes both military and nonmilitary national components, more than doubled in real terms from FY 1998 to FY 2011.¹⁰⁹ Reflecting on these spending increases, Director of National Intelligence James Clapper remarked, "We've experienced 10 years of growth – actually a fairly easy proposition, when you think about it,

for the Intelligence Community, because every year all they had to do was hand out more money and more people.”¹¹⁰

The Pentagon and the intelligence community also drastically increased their use of contractor personnel in the past decade. Contractor personnel provide added flexibility and experience to fill critical manpower shortages, but in some cases contractors cost more, are harder to track and threaten to assume inherently governmental functions. From FY 2000 to FY 2008, DOD spending on service contracts more than doubled in real terms, and service contractors grew from 26 percent to 39 percent of the department’s workforce.¹¹¹ According to the Government Accountability Office, DOD supported nearly 767,000 contractor full-time equivalent positions in FY 2009.¹¹² This huge number means that DOD’s contractor workforce that year was larger than its entire government civilian workforce, and larger than the combined end strength of the Army and the Marine Corps.

The civilian and contractor workforces in DOD have provided vital support to two wars and the fight against global terrorism since September 11, 2001. But as the U.S. government tightens defense spending and plans to cut more than 100,000 uniformed personnel, DOD civilians and contractors should be reduced commensurately. Senior leaders already have made some progress. In its FY 2013 budget, for instance, DOD announced reductions to civilian overhead positions and support contractors that will lead to billions of dollars in savings in the next five years.¹¹³ Referring to the proliferation of DOD contractors, General Martin Dempsey, Chairman of the Joint Chiefs of Staff, commented, “[I]t can’t keep going that way.”¹¹⁴

DOD should gradually trim its civilian workforce by 100,000 during the next 10 years, a 12.5 percent reduction below the current level of approximately 800,000.¹¹⁵ This reduction will incur minimal

risk while saving nearly \$50 billion by 2021.¹¹⁶

Because approximately 30 percent of DOD’s civilian workforce will be eligible to retire by March 31, 2015, DOD should be able to accomplish some of the reductions through attrition.¹¹⁷ Of course, a stagnant U.S. economy and the relatively low retirement age for the federal workforce will make it difficult to achieve the recommended reductions solely through attrition. In that case, Congress and DOD should use tools – such as early retirement, voluntary separation incentives and retention bonuses – to make reductions while retaining talented and experienced personnel in critical areas.

DOD should also go beyond former Defense Secretary Robert Gates’ previously announced 30 percent cut in spending on contractor augmentees – personnel added to existing military headquarters staffs – by cutting spending by an additional 15 percent.¹¹⁸ This change should save approximately \$15 billion over 10 years. Additionally, DOD should adopt the Defense Business Board’s recommendation to return spending on contractors to FY 2003 levels, which would save tens of billions of dollars.¹¹⁹ While these cuts are appropriate as U.S. combat forces shrink, Pentagon leaders should continue to monitor the resilience of the defense contracting industry because its skilled personnel are an important element of reversibility.

VII. REFORMING THE SERVICES AND SPECIAL OPERATIONS FORCES

In addition to implementing these defense reforms, sustainable pre-eminence will require numerous reforms to the Army, Navy, Marine Corps, Air Force and SOF. In this section, we survey how the services and SOF have changed since 2001 and how they are currently preparing for the future. For each, we make recommendations in four categories: personnel, platforms, readiness and posture. Our recommendations address the issues that we believe are most important, but we do not attempt to provide a comprehensive account of every desirable change.

Some of these recommendations will force DOD to accept risk in certain areas. However, we judge that these risks are manageable in the emerging strategic environment and that accepting them will leave DOD better positioned to sustain U.S. military pre-eminence in the long run.

Army

THE CURRENT ARMY

The U.S. Army is on the cusp of major change. Emerging from a decade of war, it is facing a period of increasing fiscal austerity and the U.S. strategic pivot to the Pacific. At the same time, the Army continues to support tens of thousands of troops deployed to Afghanistan through 2014 and potentially beyond.

A decade of irregular warfare has transformed the last vestiges of the Cold War Army that entered the 1990s into today's battle-hardened but worn force. The Army found its pre-9/11 force stretched thin fighting the sustained ground wars in Iraq and Afghanistan. Starting in FY 2005, the Army grew significantly, expanding from 492,000 to today's 562,000 active-duty troops.¹²⁰ Permanent Army end strength was already scheduled to go down to 520,000 by FY 2016, but in January 2012, DOD announced that Army end strength would

decline further to 490,000 soldiers by FY 2017.¹²¹ The Army is now developing plans to implement that requirement.

The new defense strategic guidance proposes a shift toward the Asia-Pacific and outlines a greater demand for sea and air power, missile defense, counterproliferation and strengthening global partners. Taken together, these factors implicitly challenge the Army's future relevance in providing forces for "prompt and sustained combat incident to operations on land."¹²² With DOD investments pivoting along with the guidance, the Army has valid concerns about its future size and capabilities amid constrained budgets, especially as instability grows throughout the greater Middle East.

During the past decade, the costs of running the Army have grown significantly due to the requirements of long-term operations in Afghanistan and Iraq as well as the temporary increase in end strength. Increasing personnel costs, driven mostly by improved pay and benefits, have made Army end strength a lucrative target of budget cutters. From FY 2001 to FY 2012, the Army's annual budget including war costs grew by 131 percent in real terms.¹²³ Since 2001, military personnel costs on a per-person basis grew by 46 percent in real terms due to new and expanded benefits, health-care inflation, increased allowances for housing and subsistence, and pay raises higher than the employment cost index.¹²⁴ In addition to these costs, individual soldiers are equipped today with more and better gear than ever before in U.S. history. The average cost of a soldier's gear today is about \$17,000 – nine times more expensive in real terms than during the Vietnam War – largely based upon more and better communications, weaponry, night vision gear and body armor.¹²⁵

The Army benefited more than any other service from the massive supplemental appropriations of the last decade. The extra dollars not only covered its war costs, but also allowed it to strengthen basic

programs.¹²⁶ The Army recapitalized its tracked vehicle fleet during this time, and it poured billions of dollars into mine-resistant ambush-protected (MRAP) vehicles, Stryker wheeled combat vehicles, helicopter rebuilds, fixed-wing aircraft and UAS. Yet at the same time, several of the service's other modernization efforts were abject failures, resulting in the cancellation of programs that incurred \$25 billion in sunk costs from 2001 to 2009.¹²⁷ Terminated programs included the Comanche and Armed Reconnaissance helicopters, the Crusader artillery system and the Future Combat Systems suite of sensors and vehicles. For much of the last decade, almost 40 percent of the Army's annual developmental testing and evaluation spending did not lead to the procurement of any product.¹²⁸ These failures pose additional challenges as the service seeks to define its future today – and they raise questions about whether the Army will be able to determine how to properly equip its future force.

Despite questions about its future direction, the Army remains the nation's largest and arguably most versatile force. Its capabilities range from general conventional war on land, to national and ballistic missile defense, to advisory missions, to humanitarian relief and homeland defense. Because its ethos rests on its people rather than its platforms, the Army is highly adaptable. Former Army Chief of Staff Creighton Abrams once noted: "People aren't in the Army. People are the Army."¹²⁹

The Army must retain its core capabilities to fight on land in the face of amorphous threats and a new strategic focus, while hedging against unexpected contingencies. Low probability but high-risk conflicts on land could unexpectedly test the current shift toward air and naval capabilities. Largely unforeseen ground conflicts in Korea, Vietnam, Kuwait, Somalia, Iraq and Afghanistan all demonstrated the essential role of ground combat forces over the last 60 years in protecting U.S. interests around the world. This history weighs heavily on the Army's leadership as it confronts shaping the

service's future given substantial uncertainty about global threats.

In an environment characterized by both international instability and fiscal austerity, the Army faces unpalatable choices. It must balance the need to retain units and doctrines best suited to irregular warfare with those focused toward its most dangerous (if least likely) contingency: large-scale conventional combat. It must decide how deeply to specialize versus keeping the bulk of the force designed for general-purpose roles. And it must modernize, with a careful eye on a future sure to bring unexpected conflicts. Striking the right balance between these competing demands will be the foremost challenge for the Army's senior leadership looking ahead after a decade at war.

THE FUTURE ARMY

Many trends that will shape the future Army are already underway today. DOD has already decided to reduce the Army's end strength, and more reductions could occur if political leaders impose additional budget cuts on DOD. In this environment, the Army should invest in fewer new systems and upgrade more of its existing weaponry. It should shift more heavy armored capabilities into the reserve component and build greater advisory and regionally oriented capabilities. Finally, it should build in reversibility – the ability to expand the force rapidly should unexpected events require it. All of this must be done while both transitioning the current mission in Afghanistan to an advise and assist mission and sustaining high levels of operational readiness. For the Army, it is a daunting list of tasks.

Personnel

DOD has announced that the planned end strength of the Army will decrease from 520,000 to 490,000 active-duty soldiers by 2017. DOD should further reduce Army end strength, to about 480,000, by downsizing redundant headquarters and overhead support and shifting some capabilities to

the Guard and Reserve. These changes will incur minimal risk to the force and the capabilities of the nation.¹³⁰ A force of about 480,000 would replicate the size of the Army before the attacks of September 11, 2001, but would possess much greater capabilities. The Army-wide reorganization of combat forces into highly capable brigade combat teams (BCTs), now robustly outfitted with combat-proven weaponry and equipment, makes today's Army substantially more capable than its predecessors. Furthermore, since DOD will have to accept risk in certain areas to reduce its budget, it should accept the risks that result from trimming ground forces because they can be reconstituted more rapidly than either air or naval forces in the event of a crisis.

The Army should adjust the balance between its active and reserve components, relying more on the reserves for key roles and missions. Reserve formations are highly capable and are significantly less expensive to maintain than active forces.¹³¹ Their costs only rise to the level of active forces when activated for full-time duties. The Army should migrate as many as one-quarter of armored brigades found in the active component today to the National Guard. After all, the invasion of Iraq – which still had a sizable army in 2003 – only required three U.S. Army armored or mechanized brigades alongside their U.S. Marine and British counterparts.¹³² Today, the U.S. Army has 17 of those brigades in the active force alone. Moving four of those brigades to the Army National Guard would save considerable resources, assuming they are employed sustainably, while still enabling the Army to react quickly and effectively to any threats that require those capabilities.

The Army should develop a robust program of lateral personnel assignments between the active and reserve components to ensure continued readiness. Regularly exchanging officers and NCOs between active and reserve would strengthen the readiness of reserve formations to move rapidly into active

operations if required. Army National Guard officers should be able to move onto active duty to command companies or serve on staff, and active officers should be permitted to shift to reserve status and serve as staff officers or commanders in reserve units – perhaps as part of a broader professional development program. Doing so would support the concept of reversibility and help ensure that the Army maintains one readiness standard, while continuing to break down the cultural barriers between the active and reserve components.

Platforms

Armored Vehicles: The Army should delay the acquisition of the ground combat vehicle (GCV) until FY 2021 and reinvest the savings into upgrading the Bradley fighting vehicle fleet. The Bradley remains the pre-eminent infantry fighting vehicle in the world with no looming challenger, while the current requirements for the GCV are both unnecessary and expensive.¹³³ Delaying its acquisition until FY 2021 would provide ample time to refine or re-examine these requirements as technology and threats evolve. To sustain the M1 tank industrial base, the Defense and State Departments should aggressively pursue exports to partners to maintain low-rate production. The Army should end Stryker production, with limited numbers upgraded to better deal with roadside explosives. The Army should place most MRAPs in pre-positioned stocks or into the reserves, while keeping limited numbers readily available so they can be quickly activated if required. The United States could also sell some to its allies and partners.

Aviation: The Army should continue all of its modernization programs for its attack, rotary-wing lift and tactical UAS airframes. It also should prioritize finding a suitable replacement for the OH-58D Kiowa Warrior scout helicopter, an aircraft that has performed remarkably during a decade of war.¹³⁴ One unequivocal lesson of the last 10 years is the burgeoning need for helicopter lift and UAS. The rugged terrain and inaccessible

territory of Afghanistan reinforced the Army's enduring requirement to operate in regions where air transport may be the only way of moving and supporting its forces. Unmanned aerial systems have also provided such high value on the battlefield that demand for them will only increase in the future.

Wheeled Vehicles: The Army and Marines should revisit the joint light tactical vehicle (JLTV) program, reshaping the program to take advantage of modern truck-building technology.¹³⁵ Buys that last many years should be replaced with serial buys every two to three years to take advantage of robust industry improvements in both technology and manufacturing that bolster performance and save money. The Army should no longer upgrade its entire fleet of high-mobility multipurpose wheeled vehicles because it will entail significant costs and performance limitations without a commensurate increase in capabilities.

C4ISR: The Distributed Common Ground System – Army (DCGS-A) is the service program intended to knit together all ISR capabilities into an effective network. Despite costing \$2.7 billion, DCGS-A remains cumbersome and does not meet battlefield requirements in Afghanistan.¹³⁶ Currently, Army and Marine commanders on the battlefield are using commercially available substitutes, which are both cheaper and more effective. Because this program has repeatedly failed in operational use, the Army should cancel it and replace it with a commercial off-the-shelf variant. Furthermore, DOD should uphold its plans to reduce dramatically its procurement of the joint tactical radio system ground mobile radio.

Readiness

U.S. Army leaders remain concerned that the coming drawdown will produce an unready force. After the end of the Vietnam War led to the “hollow force” of the 1970s, Army leaders during the 1980s and 1990s prioritized rigorous and realistic

peacetime training. As the Army returns home after a decade of war, creating a new training regimen that is both demanding and realistic to a force of combat veterans will be essential. The vast combat experience of today's force will make this shift a significant leadership challenge as the force adjusts to the more bureaucratic demands of peacetime soldiering. Moreover, the return of the Army to the United States will demand a reinvigorated overseas exercise program to buttress foreign partners and maintain readiness. All of this will be expensive.

The Army should continue its plans to reset the force and repair the material costs of 10 years of war. But it should modify the scope of its plans based upon ongoing reductions to its end strength and alterations to its force structure. The Army also should re-examine its present force generation model, known as ARFORGEN. It was designed largely to sustain prolonged major overseas conflicts with long rotational unit deployments. Whereas it was reasonably effective at rotating units into Iraq and Afghanistan, it largely lacks a robust surge capability. It would not be sufficient for rapidly emerging and demanding contingencies such as a sudden North Korean assault on the South. Under ARFORGEN, at any given time, approximately one-third of Army units are ready to deploy, one-third are in pre-deployment training and the remaining one-third are not ready to deploy. In an emergency, at best two-thirds of the Army's planned 37 active-duty brigade combat teams could respond, while the remaining units would not be ready for months.¹³⁷ A new readiness model may be needed that maintains more units at higher readiness, and that can surge the vast majority of the active force into combat if required. Active forces that cannot deploy on a relatively rapid timeline should be reconstituted into reserve component units to save costs.

Army leaders should promote unit readiness by prioritizing operation and maintenance (O&M) budgets.¹³⁸ Resourcing BCTs and other deployable

supporting forces should be the highest priority, since that is far more important than protecting headquarters, staffs and largely civilian support agencies such as Army Materiel Command.¹³⁹ Cutting and consolidating unnecessary overhead and accepting tradeoffs among operational and nondeployable organizational functions and headquarters will free up O&M resources needed for training and deployment.

The Army should plan how to grow the force rapidly should unexpected world situations require it to meet the demands for reversibility contained in the strategic guidance. The Army can rapidly expand junior ranks through increased recruiting, but it must draw midgrade NCOs and officers from within the force. As a result, it should retain larger numbers of talented leaders and build them into the force structure; for example, it should retain more majors and staff sergeants than the numbers needed to sustain the manning requirements of battalions and brigades. Those additional leaders should fill added staff positions, enabling more leaders to attend military and civilian advanced schools.

The Army also should institutionalize its ability to partner with and advise and assist foreign militaries. One possible solution is a small advisory command that could develop sustained proficiency and institutional equity for this mission in the Army.¹⁴⁰ From 2001 to 2012, the Army addressed this key task with ad hoc groupings of officers and NCOs, providing them abbreviated training (or sometimes no training at all) and deploying them as advisory teams in Iraq and Afghanistan. The ad hoc approach of recasting combat battalions and brigades into advisory units has some advantages, but it fails to account for the individual attributes vital to successful advisory work. Combat unit commanders cannot simply be recast as advisers with a bit of training and be expected to uniformly succeed in this complex and often dangerous mission. Advise and assist missions

will grow increasingly important in the coming years, so these capabilities must become more institutionalized.

Posture

The U.S. Army posture before September 11, 2001 reflected the legacy of the Cold War, with tens of thousands of soldiers stationed in Europe and Korea. In the near future, the vast majority of Army units will be based in the United States. Of the Army's projected maneuver force of 37 active-duty BCTs, only *three* will be permanently based overseas: two in Europe and one in Korea. This is an unprecedented return home for the U.S. Army, nearly taking it back to its pre-World War II posture. It will also present some significant deployment, training and cultural adaptation challenges for a force with global responsibilities.

The Army should address these challenges in several ways. First, it must become more deployable. The Army must ensure its forces can get to the next fight – and do so rapidly should world events require it. Although domestic basing provides some immediate political benefits and some long-term economic benefits,¹⁴¹ there are major logistical challenges in assembling and deploying large forces from the United States to distant theaters. After the 1991 Gulf War, the Army improved deployment infrastructure around its bases in the United States, from railheads to airfields to shipping containers. The Army and DOD also invested in fast sealift ships along with afloat and ashore prepositioning to ensure that the Army's heavy armored formations could be rapidly brought to bear at key points around the globe.¹⁴² Much of this farsighted investment has atrophied during the last decade. It is time to rebuild these important capabilities.

Second, the Army should assign more specific regional responsibilities to its forces. Much of this is already under way,¹⁴³ but a more comprehensive effort would not only align selected BCTs with

During the past decade, American military operations in Iraq and Afghanistan have diverted attention and resources away from the U.S. Navy and its primary mission: power projection and sea control.

regions but also link division and corps headquarters with geographic combatant commands. Specifically, the Army should maintain four corps headquarters that are linked respectively with U.S. Pacific Command (PACOM); U.S. Central Command (CENTCOM); a consolidated EUCOM and AFRICOM; and a consolidated NORTHCOM and SOUTHCOM. These headquarters should also serve concurrently as the Army Service Component Commander for those COCOMs in which such component functions are necessary.¹⁴⁴ This would eliminate as many as six largely administrative Army headquarters today associated with the COCOMs and would replace them with capable and existing war-fighting organizations. The Army staff in the Pentagon or U.S. Army Forces Command could also potentially take on certain service functions today performed by administrative Army component headquarters. This could ensure that operational service component headquarters maintain a primary focus on war-fighting duties.

Third, the Army should significantly increase its rotational overseas exercise program to offset its lack of full-time presence around the world. The Army should exercise and train with its Pacific, Middle Eastern and European counterparts in order to demonstrate U.S. military proficiency, improve partner capabilities and model ethical

military standards. This rotational presence will also help bolster regional confidence and deter regional aggression. In addition, the Army should also continue to resource and support the National Guard's State Partnership Program, an effort to advise, assist and train allied forces around the world in combat and civil support activities.

Navy

THE CURRENT NAVY

During the past decade, American military operations in Iraq and Afghanistan have diverted attention and resources away from the U.S. Navy and its primary mission: power projection and sea control. The wars imposed opportunity costs on the Navy by consuming resources that might have been allocated to procure larger numbers of advanced ships and training for complex operations in contested maritime environments. Indeed, in 2010 more sailors were deployed ashore in Iraq, Afghanistan and the Horn of Africa than were deployed aboard ships in the region.¹⁴⁵

The high operating demands associated with supporting two wars and responding to unexpected contingencies, from the Libya intervention to humanitarian catastrophes, have stressed the U.S. Navy, which is shrinking and consists of many ships that are decades old. Since 2001, Navy end strength has fallen from 378,000 to 322,000 active-duty sailors while the fleet shrank from 316 to 284 ships.¹⁴⁶ The Navy recently reduced its inventory objective to 300 ships, but even that lower number looks overly optimistic given the likelihood that costs will grow for the ships the Navy plans to buy.¹⁴⁷

Despite its smaller overall size, the Navy today remains an unmatched global maritime force. Its highly capable ships, aircraft and equipment coupled with wartime-experienced sailors make it unique in the world. As Secretary of the Navy Ray Mabus remarked, comparing today's advanced-but-smaller fleet to the larger Navy of yesteryear

“is like comparing a smart phone to the telegraph.” But as he also noted, “at some point quantity has a quality of its own.”¹⁴⁸

Using American naval power to ensure open access to the world’s oceans remains vital to sustaining today’s tightly integrated global economy. More than 90 percent of global commerce travels by sea, a percentage that may increase in coming years.¹⁴⁹ Much of this commerce must traverse maritime chokepoints, the jugular veins of the international economy. For instance, about 15 percent of oil traded worldwide and more than half of the globe’s merchant fleet tonnage flow through the straits of Malacca, Sunda and Lombok, which funnel the raw materials of the Middle East and Africa into the booming East Asian economies.¹⁵⁰ About 35 percent of seaborne-traded oil worldwide flows through the Strait of Hormuz, the world’s most important strategic chokepoint.¹⁵¹

Despite its trimmed size, the Navy is arguably on course to become the premier element of U.S. military power in the Asia-Pacific region, the epicenter of global trade and politics in the 21st century. DOD’s strategic guidance and FY 2013 budget prioritize the Asia-Pacific region, a vast maritime domain, and make fewer reductions to the Navy than to the other services. Yet the Navy will continue to struggle to balance fleet quality and fleet size because its budget will be constrained, its ships are expensive and time-consuming to build, and its forces will remain in high demand all over the world.

At a time of growing strategic relevance, however, the Navy faces the twin challenges of sophisticated new threats abroad and constrained budgets at home. The rise of potential adversaries wielding A2/AD capabilities threatens some of the Navy’s prized investments, including new aircraft carriers, manned short-range strike aircraft and the LCS. Meanwhile, impending cuts to defense spending imperil all of the Navy’s next-generation systems,

which are quite expensive. Meeting these challenges will require the Navy to adopt new ways to project power and protect sea lines of communication around the world.

THE FUTURE NAVY

To meet the demands of a U.S. strategy weighted toward the Pacific Rim while maintaining global dominance at sea, the U.S. Navy should prioritize investment in cutting-edge technologies that offer new means of projecting naval power, such as stealthy unmanned long-range strike platforms and autonomous undersea vehicles. It should scale back purchases of platforms less useful in an A2/AD environment, such as LCS and the F-35C. It should home-port more of its ships in the Western Pacific and greater Middle East, while remaining capable of surging assets from the continental United States. It should adopt a broader set of crew rotation policies that enable ships to remain forward for greater stretches of time, and it should ensure that its high operational tempo does not undermine its future readiness.

Personnel

The Navy should adopt a broader set of crew rotation policies for cruisers, destroyers and amphibious ships to enable these ships to remain forward-deployed longer. Today, most Navy ships operate with a single crew. The exceptions are ballistic missile submarines (SSBNs), minesweepers and the new LCS. Single-crewed ships often must travel long distances between their home ports and operating areas, and they must remain in port for months between deployments so ships can be maintained and the crew can be rested and refitted. This reduces the time ships can spend forward-deployed to critical regions around the world.

In contrast, crew rotation, sometimes called “sea swap,” uses two separate crews and swaps them out while the ship remains forward-deployed. The embarking crew typically flies out and assumes control of the ship while in a foreign port, and the

disembarking crew flies back. While not deployed, crews at home can use simulators and training ships to preserve their skills. Previous Navy experiments with sea swap achieved mixed results because there were reports that ship maintenance and crew morale suffered. However, Navy leaders want to revisit this concept and find more effective ways to implement it.¹⁵² Any crew rotation policies should ensure that ships receive adequate in-port maintenance to compensate for their increased use and to prolong their service lives.

Crew rotation will help the Navy project more power with its smaller fleet. According to defense analyst Michael O’Hanlon, crew rotation could improve deployment efficiency by up to 40 percent per ship and save \$100 billion during the next 10 years.¹⁵³ It also would enable the Navy to maintain current levels of forward presence with about 60 surface combatants instead of the 94 it is currently pursuing,¹⁵⁴ although we do not believe the service should cut its fleet that deeply. The additional capacity could then be used to increase the U.S. naval presence in the Asia-Pacific, the littorals of the greater Middle East or an unexpected contingency elsewhere in the world.

Platforms

To prepare for emerging high-end threats, the Navy should invest more money into leap-ahead technologies and less into next-generation replacements for existing systems. Because new high-tech ships and aircraft will be more capable than existing platforms, the Navy will not need to replace existing platforms on a one-to-one basis. Instead, wise investment that selectively modernizes existing systems, procures fewer next-generation systems and invests more in leap-ahead capabilities will sustain the Navy’s global pre-eminence for decades to come.

Carriers (CVN): The Navy should reduce the current CVN fleet from 11 to 10 and the number of active-duty air wings from 10 to nine. This will

save considerable money and will foster more innovative ways to project naval power, such as using amphibious ships (discussed below). The Navy should extend the construction timelines for the new Ford-class carrier to maintain the industrial base while reassessing the ship’s enormous costs and its vulnerability to threats.

Surface Combatants: The Navy should end the LCS program in FY 2017 after procuring only 27 ships, not 55 as currently planned. The LCS does not have the war-fighting capabilities and seaworthiness needed to address emerging threats or rigorous conditions at sea. DOD’s weapons testing office concluded last year that the LCS “is not expected to be survivable in a hostile combat environment.”¹⁵⁵ Given this serious vulnerability, the ship’s oft-touted multimission versatility is not enough to justify an investment of tens of billions of dollars.¹⁵⁶ Procuring 27 ships from the initial production run will still provide the Navy with the mine hunting and clearing capabilities that it urgently needs. Meanwhile, DOD should promote LCS sales to allies and partners. The Navy should reinvest the savings generated by truncating LCS into buying upgraded DDG-51 destroyers and Virginia-class submarines, two ships that can better project power in potentially contested environments in the Asia-Pacific and greater Middle East. Congress and DOD should uphold the proposed reduction to naval cruisers contained in the FY 2013 defense budget request.

Amphibious Ships: The Navy should maintain a fleet of 30 amphibious ships. These ships, especially the new America-class LHA-6, offer uniquely versatile platforms and provide new opportunities to launch both short takeoff and vertical landing (STOVL) F-35Bs and strike UAS. This extends the global coverage of U.S. air power, since strike aircraft are no longer limited to operating from CVNs. The aggregate capability benefits of big-deck amphibious ships will increase as the STOVL F-35B enters the fleet. If tailored appropriately

before deployment, these ships will be able to embark with 19 to 22 F-35s aboard, allowing them to undertake some tasks heretofore only suitable for CVNs, such as forward presence and limited contingency response. In some cases, LHAs may replace CVNs to provide presence in selected theaters, effectively increasing the number of carriers that can project fighters in certain scenarios. Amphibious ships also provide unique afloat basing options for SOF, dramatically extending their reach for deep raids and inland strikes.

Submarines: The Navy should procure two Virginia-class submarines per year through the early 2020s, thereby undoing the decision in DOD's FY 2013 budget request to buy only one submarine in FY 2014. Stealthy and survivable submarines remain a major comparative advantage for the United States and provide uniquely valuable capabilities in an A2/AD environment. The Navy should emphasize the development of submarine-launched unmanned systems that can perform countermine operations, reconnaissance and stealthy strike operations against enemy vessels and even targets ashore. It should accelerate the Virginia Payload Module upgrades, which increase each submarine's cruise missile capacity from 12 to 40 Tomahawk missiles, in order to acquire greater and more versatile strike capabilities.¹⁵⁷ The Navy should also strongly support attempts by the executive branch to negotiate binding, verifiable and mutual nuclear arms control agreements that reduce the requirement for 12 next-generation SSBNs. That requirement will consume disproportionate amounts of the shipbuilding budget and reduce the Navy's ability to buy additional attack submarines and surface combatants that can meet a wider range of future military challenges.

Strike Aircraft: The Navy should reduce its planned buy of 369 F-35Cs by 50 percent and continue to procure additional F/A-18s after 2014, when the production line is scheduled to close, to

make up some of its inventory requirements. Once the F-35C achieves initial operational capability (IOC), the Navy should accelerate the procurement schedule and DOD should aggressively promote foreign sales to maximize production efficiencies. Due to its short range, the F-35C requires aircraft carriers to get dangerously close to enemy coasts or necessitates frequent aerial refueling. While external fuel tanks can extend the F-35C's range, such tanks compromise its stealth and thereby sacrifice an essential attribute. By buying fewer F-35s more quickly, the Navy will revitalize its strike fleet sooner and free up resources it can use in the 2020s and 2030s to buy combat-capable UAS, which by then should be more technologically advanced if DOD accelerates development now.

The Navy should set a service goal of having unmanned platforms constitute one-quarter of all carrier-based strike capability by 2025.

Aggregate capabilities in naval aviation will grow even stronger as the Navy accelerates the development of more strike UAS. Aggregate naval strike capabilities will include F/A-18E/Fs, F-35B/Cs, UAS, cruise missiles, C4ISR networks and cyber weapons. This diverse combination of strike assets will prevent potential adversaries from defending against only one type of attack and create operational synergies among platforms.

The U.S. government should promote and support foreign sales of the F-35 to the greatest extent possible. Robust numbers of these aircraft operated by U.S. allies and partners around the world help ensure interoperability with U.S.

air forces and dramatically increase the value of potential allied and partner contributions to future coalition air operations. Allies may, at some point, come to find the STOVL F-35B more attractive than the F-35A or C because of its ability to operate from more austere and thus more diverse sets of airfields.

UAS: The Navy should accelerate the development and testing of the carrier-based X-47B UAS. Capabilities demonstrated by the X-47B should rapidly be shifted into an unmanned strike program of record, and the Navy should set a service goal of having unmanned platforms constitute one-quarter of all CVN-based strike capability by 2025. The X-47 and related capabilities represent the future of carrier-based naval aviation, but strong cultural biases within naval aviation are hampering the development of unmanned strike capabilities.¹⁵⁸ With a range of more than 2,000 nautical miles, the X-47 far surpasses the range of current manned strike fighters such as the F-35C, which has a range of only 500-700 miles. Without long-range strike UAS, carriers will become excessively vulnerable and operationally limited in A2/AD environments.

ISR: To help generate savings that can be reinvested into the X-47B and related technologies beyond the above recommended F-35C cuts, the Navy should reduce its planned inventory of the MQ-4C broad area maritime surveillance (BAMS) UAS by 50 percent, and rely more on the Air Force for that capability. The Navy should continue to pursue other maritime ISR platforms, such as the P-8A Poseidon aircraft, and should rely on the Air Force's RQ-4 Global Hawks modified for maritime operations.¹⁵⁹

Munitions: DOD should continue funding ArcLight, a new hypersonic cruise missile with a range of more than 2,000 miles,¹⁶⁰ and it should pursue additional options for stealthy long-range strike munitions. The Navy should also continue to develop directed-energy weapons,

ballistic missile defense (BMD) standard missile-3 improvements and rail gun technology to ensure adequate fleet defense while leveraging emerging technologies.¹⁶¹ These advanced munitions and defenses are necessary to ensure first strike, first kill capability against increasingly sophisticated adversaries and to protect naval ships and sailors in A2/AD environments.

Readiness

To ensure sustainable readiness, the Navy should strike a better balance between the unremitting demands of combatant commanders for more ships, airplanes and submarines and the need to perform necessary maintenance and limit unnecessary wear and tear.¹⁶² Failing to balance these competing needs will mortgage the future viability of a smaller Navy. Both the Navy and joint leaders should challenge the combatant commanders' often unconstrained requirements and disproportional focus on current operations; doing so will be essential in order to preserve ship and aircraft life cycles as much as possible. As one senior military officer told us, "There is no reward at the COCOM level for taking a risk during your tour."¹⁶³ Senior joint and service leaders in the Pentagon should enforce a better balance between the pressing concerns of today against the loss of capability in the future: Put simply, the ever-increasing demands of today will consume the life spans of ships and aircraft too rapidly, ultimately taking them out of service far sooner than expected.

To promote reversibility, the Navy should expand the role of its reserve component and create a public-private partnership to monitor the defense industrial base. Rapidly regenerating new ships, submarines or aircraft is significantly more difficult, costly and time-consuming for the Navy than is growing bigger ground forces for the Army and Marines. The Navy should therefore selectively keep ships retired early in "warm" status with reserve crews, enabling them to re-enter

service quickly when needed. Similarly, the Navy should place older fourth-generation aircraft in “warm” status so naval reserve squadrons can deploy them on short notice, much as the Air Force Reserve and Air National Guard do today. Meanwhile, the Navy should help preserve the surge capacity of the industrial base by forming a permanent public-private partnership forum to monitor the overall health of America’s shipyards. This partnership is needed because byzantine legal restrictions have made it difficult for government and industry to communicate their concerns in an open forum.

Finally, the Navy should revitalize its proficiency at complex naval operations in contested environments, as envisaged in the Air-Sea Battle concept.¹⁶⁴ To accelerate its operational proficiency at Air-Sea Battle, the Navy and Air Force should lead a joint annual training exercise to test and refine these emerging operational concepts.¹⁶⁵

Posture

The Navy should continue to increase its presence at ports and air bases in the Asia-Pacific and greater Middle East, particularly by forward-basing more ships in these critical regions.¹⁶⁶ Greater presence in these two regions also can be achieved through increased forward-basing in nearby areas, such as the new stationing of U.S. Navy destroyers in Rota, Spain.¹⁶⁷ Forward-basing effectively increases overseas presence with fewer ships by dramatically reducing the lengthy transit times required to sail to forward operating areas from both coasts of the United States. As Admiral Jonathan Greenert testified recently, “One ship that is operating from an overseas location can provide the same presence as about four ships rotationally deployed from the continental United States.”¹⁶⁸

Forward-basing more ships will provide more naval power projection at less cost. For example, O’Hanlon estimates that an attack submarine home-ported in

the western Pacific can produce approximately 100 mission days per year, about three times more than a submarine home-ported in the continental United States. Adding six additional attack submarines to the three submarines currently home-ported in Guam would also save about \$1 billion per year.¹⁶⁹ Of course, forward-basing may create vulnerabilities, which the Navy should evaluate thoroughly before making final decisions.

In the Asia-Pacific, the Navy should forward-base one additional carrier, more attack submarines and more small to midsize combatants in Hawaii, Guam, Japan, Australia, Singapore, the Philippines, Thailand and/or Vietnam.¹⁷⁰ The small to midsize combatants are often more politically acceptable to host nations, so the Navy should prioritize those first. With the recent deployment of Marines to its northern coast, Australia offers attractive potential options for forward-basing Navy amphibious ships as well. The Navy also should forward-base more ships in the greater Middle East, using as a model the recent agreement with Spain to port U.S. destroyers at Rota. Potential locations could include the United Arab Emirates or Oman. In all cases, the Navy will have to pursue the arrangements in full cooperation with the host nations and stay attuned to local political, economic and military concerns.

The Navy should also expand its outreach in the Asia-Pacific and the greater Middle East by conducting more regional exercises with both longtime U.S. allies and new friends. For example, amphibious exercises with Thai and U.S. Marines, foreign exchanges on forward-based LCS and maritime exercises with the Philippines, Vietnam and India would all strengthen interoperability and reassure U.S. allies in the Pacific Rim. In the Middle East, ongoing anti-piracy maritime operations off the Horn of Africa provide significant multinational training in interoperability during an important regional mission.

Marine Corps

THE CURRENT MARINE CORPS

Ten years of prolonged ground combat in Iraq and Afghanistan have driven the U.S. Marine Corps away from its amphibious roots. Today, the Marine Corps is wrestling with three conflicting identities: the nation's amphibious force in readiness, deployed afloat around the world ready to respond to crises; its small wars force of choice, specializing in irregular warfare; and a middle-weight force that serves as the nation's second land army, backing up the U.S. Army during prolonged conflicts. This third identity – fighting in major wars – has dominated the Marines' combat history from Belleau Wood to Guadalcanal, from the Chosin Reservoir to Khe Sanh and now from Fallujah to Marja. The Marines now need to re-establish their niche for the 21st century: rapid power projection from the sea.

A decade of war has caused the U.S. Marine Corps to increasingly resemble the U.S. Army. Partly to meet wartime requirements, the Marine Corps grew larger, added heavier equipment and conducted full-scale ground combat and counter-insurgency operations. Since 2001, its active-duty end strength increased from 173,000 to 206,000, and it acquired thousands of MRAPs, new artillery and rocket launcher systems, and more airplanes and rotorcraft.¹⁷¹ Unlike the Army, it even deployed its M1 main battle tanks to Afghanistan.

Today, the Marine Corps is a sizable and nearly self-contained military in and of itself. A unique force design enshrined in legislation, strong sense of mission and self-reliant culture all discourage it from greater interdependence with its sister services. The Marine Corps ranks alongside the most capable full-size militaries in the world. It is larger than either the entire British military or the Israeli Defense Forces.¹⁷² Marines are in the skies, flying 370 fixed-wing aircraft and more than 650 rotary-wing aircraft, from strike fighters to V-22 Ospreys, from cargo aircraft to executive jets. Marines are on the ground, fielding 27 infantry battalions,

more than 400 M1 tanks, more than 250 light armored vehicles (LAVs), more than 500 artillery pieces and more than 2,200 MRAPs. Marines are at sea, cruising the globe in 31 amphibious warfare ships with scores of air cushion landing craft, barges and more than 1,300 tracked amphibious assault vehicles (AAVs). Marines are in cyberspace and in special operations, devoting personnel and resources to CYBERCOM and U.S. Special Operations Command (SOCOM).¹⁷³

With its enormous capabilities, the Marine Corps continues to function as an amphibious force in readiness in addition to its decade-long role in large-scale ground combat. For both combat and forward presence missions, the Marines organize their infantry battalions and aircraft into combined arms Marine Air-Ground Task Forces (MAGTFs). MAGTFs integrate air and ground capabilities and typically deploy as part of a Marine Expeditionary Unit (MEU), operating from three Navy amphibious ships. Several of these three-ship amphibious strike groups cruise near global hot spots, providing rapidly accessible combat power that can be deployed ashore in a crisis. MEUs are modest in size, typically consisting of three amphibious ships carrying approximately 2,000 Marines and a score of helicopters and STOVL strike fighters. Generally, three MEUs are afloat and available worldwide at any given time. Combatant commanders value MEUs for their flexible capabilities and ability to respond to natural disasters or U.S. embassies under siege.

The Marines should re-examine how these capabilities are deployed because of budget constraints and the shift in U.S. global priorities. Supporting three afloat MEUs requires a rotation of nine of the current 27 Marine infantry battalions, absorbing one-third of Marine combat forces.¹⁷⁴ Thus, the Marine Corps devotes a relatively small portion of its resources to the amphibious mission that makes it unique, and a large portion of its resources to sustaining air and land warfare capabilities that are similar to the capabilities of the other services.

The new strategic guidance's emphasis on the Asia-Pacific plays to the Marine Corps' strength as an amphibious force in readiness. Both Army and Marine forces have more than a century of experience in the Pacific, dating back to the 1899 Philippine Insurrection. Yet in some scenarios, the Marines provide more flexible capabilities today because they can project both limited air and land power from ships ranging across a whole theater, and do not require access to foreign land bases. Marine leaders are revitalizing their partnership with the Navy and rapidly shifting their focus from conducting sustained ground combat to projecting power from the sea.¹⁷⁵ Moreover, the Marines have moved to expand forward-basing in the Pacific by opening new locations in Guam and Australia.¹⁷⁶ The dispersion of Marines to more locations across the Asia-Pacific also reinforces the need for adequate amphibious shipping to allow their rapid movement around and deployments beyond the theater.

However, new security threats and constrained defense spending directly threaten the Marine Corps' historical amphibious role and its current plans. The Marine Corps may not be able to operate in A2/AD environments without putting ships and landing craft at unacceptable risk, which challenges its ability to conduct perhaps its most iconic mission: amphibious assault across hostile shores.

THE FUTURE MARINE CORPS

As it re-orientates after 10 years of combat operations, the Marine Corps should embrace greater jointness and rely more on its sister services for common support.¹⁷⁷ The Marine Corps should forward-base overseas two of the three MEUs it keeps constantly available, supporting the two regional hub constructs we recommend for the U.S. Navy.¹⁷⁸ It should become more expeditionary, relying less on ground operations from fixed bases like those in Afghanistan. It should maintain far fewer heavy armored vehicles, artillery

and strike aircraft. It also should reduce its end strength as budgets tighten and operations in Afghanistan slow down, while becoming more focused on amphibious warfare, power projection and littoral missions.

The Marine Corps should scale back its carrier-based strike and tactical airlift functions and allow the Navy and Air Force to absorb more of those responsibilities.

Personnel

The Marine Corps should shrink its active-duty end strength from the planned level of 182,000 to 175,000, its approximate size in 2001, by reducing the resources it dedicates to missions performed by the other services. DOD currently plans to reduce permanent Marine Corps active-duty end strength from 202,000 to 182,000 by FY 2017. However, drawing down to 175,000 would leave a force still significantly stronger than the Marine Corps of 2001. The addition of substantial new capabilities such as MV-22 Ospreys, advanced attack helicopters and sophisticated command and control systems coupled with its deep combat experience will sustain this smaller Marine Corps as a highly powerful force.

A shift toward greater interdependence will free up resources that the Corps can reinvest into its core mission of sea-based power projection. The Marine Corps should not continue to spend scarce resources to maintain the large variety of specialties that replicate capabilities found elsewhere in the U.S. military. As discussed below, the Marine Corps should scale back its

CVN-based strike and tactical airlift functions and allow the Navy and Air Force to absorb more of those responsibilities. The Marine Corps should reduce or eliminate other jobs more logically performed by the Navy or Air Force, including carrier-based fighter pilots, meteorologists, airfield tower operators, expeditionary airfield and bridge builders and cyber Marines. Shifting away from self-sufficiency and toward deeper joint integration will free up thousands of personnel from unnecessary and redundant aviation and support billets, allowing the Marine Corps to both get smaller and save dollars that can be better allocated to core Marine functions.

Platforms

The Marine Corps should invest in the platforms it needs for sea-based power projection and pursue greater interoperability with the other services. Doing so will restore the Marines to their unique niche while reducing costly redundancy and better leveraging the immense comparative advantages of the other services.

Aviation: The Marine Corps should reduce its fixed-wing aviation inventory and focus instead on STOVL F-35B strike fighters and a more select group of support aircraft. The Marine Corps should eliminate its F-18C/D Hornet and EA-6B Prowler squadrons aboard Navy carriers, a major redundancy given that carrier-based strike fighter operations are a primary mission of Navy aviation. Marine aircraft should not fly off of CVNs, and therefore the Marine Corps should minimize its purchases of F-35Cs. (The Navy should use the freed-up Marine squadron space to integrate long-range strike UAS on its carriers.) The Marine Corps should end MV-22 procurement in FY 2016 after buying 314 aircraft but sustain its current plans to buy AH-1Z, UH-1Y and CH-53K helicopters.¹⁷⁹

In the next few years, the Marine Corps will start fielding the STOVL F-35B. The F-35B, combined with advanced Marine attack helicopters and

Navy and Air Force jets, will provide an aggregate capability mix that should fully meet the Corps' close air support requirements. F-35Bs operating off large-deck amphibious ships also open a new opportunity to use amphibious ships in novel ways for selective forward presence, deterrence and limited strike missions.

For other fixed-wing assets, the Marine Corps should rely more fully on the Air Force to provide C-130s, C-9s, executive jets and ISR UAS, and on the Navy to provide electronic warfare EA-18s and future strike UAS.¹⁸⁰ The Marines also should limit their UAS squadrons and call upon operational and strategic level UAS support from the Air Force.

Ground Systems: The Marine Corps should store or eliminate hundreds of armored vehicles and artillery pieces as it refocuses on projecting power from the sea. The Army can reinforce the Marines with tanks and heavy artillery should the need arise, as occurred during the 1990-1991 Gulf War. The Marine Corps should proceed with its revised plan for the JLTV, but it should work with the Army to revise the vehicle's requirements.¹⁸¹ It should pursue a simpler JLTV that it can purchase with upgrade options in two- or three-year increments rather than fixed contracts lasting many years, which will fail to take advantage of industry's rapid technology improvements.

The Marine Corps should downsize its large current stocks of 2,225 MRAPs, 447 M1 tanks, 1,311 AAVs, 252 LAVs and more than 500 artillery pieces.¹⁸² It should place MRAPs in storage pools while keeping approximately one-third of the fleet ready to return to use. It should divest and realign at least two-thirds of its large stock of M1 tanks, placing most of this mission in the reserves. It should upgrade existing AAVs with more capable engines and modular armor, but it should not pursue a new replacement program at this time. It should modestly reduce and upgrade the LAV fleet.

It should also downsize Marine artillery and eliminate artillery rocket launcher capabilities.

Readiness

In the aftermath of 10 years of combat operations, the Marine Corps should broadly sustain its current reset plans for the force and address the related impacts on aircraft, vehicles and weaponry. The Marine Corps should also make greater investments in training and readiness to revitalize its ability to project power from the sea. Readiness is a sine qua non to an effective and responsive Marine Corps. Protecting this funding in the midst of shrinking budgets is vital. The service can afford greater investments in readiness if it sheds redundant capabilities as outlined above, particularly through divesting some costly fixed-wing aviation.

To meet the need for reversibility, the Marine Corps should retain somewhat larger numbers of active-duty midgrade officers and NCOs, as well as rely more on its reserve component to provide experienced mid-level leaders that can lead a rapid expansion of the force should it be necessary. The service should offer both active and reserve component officers more opportunities to pursue resident schooling and developmental assignments to strengthen their leadership skills and increase the odds of keeping the best of them in the service.

Posture

The Marine Corps should better align with the Navy's regional priorities in the Asia-Pacific and greater Middle East and do so in a more cost-effective way. It should sustain the three MEUs it keeps afloat but shift one from its base on the West Coast of the United States to new basing in northern Australia, taking advantage of recent agreements.¹⁸³ The third MEU would continue to deploy with its amphibious shipping primarily from the East Coast of the United States. Thus, two of three MEUs would now be forward-deployed with their amphibious ships closer to potential hot

spots. This modified approach improves Marines' regional mobility and preserves the three-MEU availability model but provides more sailing days closer to likely operating locations with less cost and wear on ships. It supports the Navy's two-hub model with three MEUs providing continuous coverage in the Western Pacific and greater Middle East. Three MEUs supporting two locations also opens the door for more innovative exercises and experiments, such as examining the power projection capabilities of launching large numbers of F-35Bs from LHAs.

To increase availability in the Asia-Pacific and greater Middle East, the Marine Corps should periodically airlift rotational forces to join pre-positioned equipment abroad. While the Marine Corps should continue to rely on the three afloat maritime prepositioning ship squadrons (MPSRONS) maintained today, it also should consider pre-positioning more equipment in Australia, Guam and Qatar to augment its afloat capability.¹⁸⁴ As the Corps gets lighter, it can repurpose large stocks of excess equipment for ashore pre-positioning, a relatively inexpensive option for multiple theaters. The Marine Corps should require an annual exercise to offload one MPSRON, which would entail linking Marines who have flown in to equipment such as tanks and amphibians unloaded from the MPSRON ships. Such regular exercises demonstrate rapid reinforcing capability, ensure readiness and project visible regional presence.

The Marine Corps should use its stronger presence in the Asia-Pacific and Middle East to engage more with key U.S. allies. The service should increase the number and frequency of international exercises performed by its MEUs afloat and by Marines doing fly-in rotations ashore. To showcase U.S. commitment and resolve across the Pacific while cementing ties to regional friends, Marines should continue to participate in Exercise Cobra Gold in Thailand, Exercise

Balikatan in the Philippines and Exercise Keen Sword in Japan. Similarly, the Marine Corps should support U.S. influence in the Middle East by having its afloat MEUs or Marines who fly in to train with pre-positioned equipment also train with the ground and air forces of key regional allies to bolster interoperability.

Air Force

THE CURRENT AIR FORCE

During the past decade, the Air Force sought to balance its requirement to provide air support for two prolonged ground wars with its competing need to invest in capabilities designed for future security challenges. These two objectives often conflicted, however, and on several occasions the secretary of defense had to compel the Air Force to prioritize current operations over modernizing for the future.¹⁸⁵ Wartime operations increased the Air Force's proficiency at coordinated air-ground missions, special operations, information operations, ISR and airlift but diverted resources away from other Air Force priorities, such as next-generation aircraft like the F-22, F-35 and long-range strike bomber, as well as for training for high intensity combat.¹⁸⁶ This opportunity cost has led to some frustration within the Air Force, which has a strategic culture that still broadly reveres high-technology and manned aircraft dedicated to achieving uncontested control of the air.

Despite dramatic increases in overall defense spending after 2001, the Air Force achieved limited success in sustaining and modernizing its forces. Its active-duty end strength shrank by 21,000 personnel.¹⁸⁷ It also reduced its aircraft inventory by more than 500, and it plans to eliminate nearly 300 additional aircraft by 2017.¹⁸⁸ Meanwhile, its aircraft have continued to age. The average fighter is now 22 years old; the average bomber, 35 years old; and the average tanker, 47 years old.¹⁸⁹

These trends are partly due to deliberate decisions made by the Air Force. It chose to trade

quantity for quality by pursuing next-generation systems, such as the F-22, rather than upgraded versions of existing systems, such as the F-16.¹⁹⁰ Air Force leadership decisions to prioritize acquisition of the expensive F-22 fifth-generation fighter left far fewer dollars available to buy greater quantities of less expensive but still capable fourth-generation jets and to fund other priorities, from UAS to personnel.

Despite its smaller size and the increasing age of its aircraft, the Air Force is more capable today than ever before. Nearly three decades of continuous combat air operations over the Middle East have honed its operational effectiveness to levels unparalleled anywhere in the world. Since 2001, the Air Force has added, expanded and strengthened several capabilities. It revitalized its management of and commitment to its nuclear deterrence mission. It added platforms such as the F-22, C-17, UAS, CV-22 and upgraded to its intercontinental ballistic missiles and bombers.¹⁹¹ Most of these programs were conceived and initiated before 2001 but bought in the past decade.

The Air Force's inventory of UAS, which increased exponentially since 2001, represents an entirely new capability with substantial future potential.¹⁹² The Air Force is now training more pilots for UAS than for fighters and bombers.¹⁹³ As the combat demand for UAS winds down with the war in Afghanistan, civilian leaders should monitor whether UAS and their advocates continue to be a growing and influential constituency within the Air Force – or whether they become marginalized. Early evidence suggests that the Air Force is embracing UAS more strongly than ever,¹⁹⁴ but the continuation of this trend depends on decisions by future Air Force leaders.

Air power will be increasingly vital to U.S. security. The Air Force's distinctive contributions – air and space control, global strike, responsive ISR and rapid airlift – will continue to be in high demand

for the foreseeable future, particularly in the Asia-Pacific and greater Middle East, where American air power remains a strong symbol of U.S. military pre-eminence. In its FY 2013 budget, DOD emphasized the need to “preserve the U.S. military’s ability to project power in contested areas and strike quickly from over the horizon,” clearly affirming the Air Force’s strategic importance.¹⁹⁵ The Air Force’s ability to hold targets at risk from great range offers an important solution to A2/AD challenges, and the service’s enormous ISR and airlift capacity offers the capability to detect and respond rapidly to global threats.

However, the Air Force faces distinct challenges in the emerging strategic environment. Potential adversaries are acquiring capabilities that threaten the operational utility of manned short-range strike fighters and their vulnerable bases, refueling tankers and supporting satellites. Potential adversaries also are developing their own fourth- and fifth-generation strike fighters that may reduce America’s air power advantages and could potentially challenge the Air Force’s decades-long dominance of the air. The Air Force’s current procurement plans are also expensive because the service is trying to acquire large numbers of aircraft that feature extraordinary technological sophistication. In a constrained budget environment, the Air Force will likely have to make additional tradeoffs between quantity and quality because it will not have the resources to buy – and does not need – such a large number of supremely advanced aircraft.

THE FUTURE AIR FORCE

To maintain its war-fighting advantage in the emerging strategic environment, the Air Force must invest more deeply in unmanned strike aircraft to increase endurance and long-range reach. The Air Force should rely more on its strong reserve component, recalibrating the mix between its active and reserve forces. It should reduce its aircraft inventory requirements based on a broader

vision of the aggregate capability residing in the joint force, and it should revitalize its proficiency at complex air operations in contested environments. It should also strengthen its agreements, presence and access to bases outside the continental United States, particularly in the Asia-Pacific and greater Middle East.

Personnel

The Air Force should rely more on its reserve component as a strategic and operational force. However, strengthening this reliance means that the Air Force must preserve the right mix between its active and reserve components. In 1990, the reserve component represented 25 percent of total Air Force end strength and owned 23 percent of its total aircraft. Today, those figures stand at 35 percent and 28 percent, respectively.¹⁹⁶ The Air Force fears that further reductions to the active component “would limit our ability to respond quickly to multiple crises or sustain long duration commitments.”¹⁹⁷

The reductions to the reserve component proposed by the Air Force in the FY 2013 budget are reasonable, and DOD should continue to pursue them despite opposition from many members of Congress.¹⁹⁸ The service has legitimate concerns about how further shrinking the active component below its proposed levels could harm the aggregate capability of the total force. However, the Air Force has erred by not providing a long-range personnel plan for the total force that is comprehensive and widely understood. Such a plan is urgently needed to help the Air Force manage the transition to a new era in which it will still operate actively around the globe but will not have to support ongoing wartime operations in Iraq, Afghanistan, Libya and elsewhere.

The Air Force reserve component should undertake regular cyclical deployments to meet the requirements of combatant commanders. This arrangement will help retain experienced personnel in the reserve component who want to continue their military

service, albeit at a slower tempo. Regular cyclical deployments are the best way to maintain sustainable deployment lengths and preserve the reserve component's operational expertise and strategic depth. Employing the reserve component in this manner will meet the call for reversibility articulated in the new strategic guidance.

Platforms

Strike Aircraft: Due to strategic and cost concerns, the Air Force should reduce the number of F-35As it plans to procure from 1,763 to 1,000-1,200 in part by reducing its inventory requirements for trainer and Air National Guard aircraft.¹⁹⁹ It should accelerate the rate of procurement once IOC is reached in order to maximize production efficiencies, and buy upgraded F-16s to help fill some inventory requirements. Procuring fewer F-35s will enable the Air Force to downsize the basing requirements associated with the currently planned inventory and, potentially, the number of KC-46A refueling tankers (discussed below).

The F-35 is highly expensive and lacks the longer range important in overcoming some A2/AD threats.²⁰⁰ In future combat scenarios, including high-end engagements against China or Iran, the U.S. military will not need a 100 percent stealthy manned fighter fleet. Instead, an aggregate capability joint mix of F-35s, F-22s, F/A-18s, F-16s, F-15s, B-52s, B-2s, B-1s, long-range strike bombers, cruise missiles, advanced ISR and UAS will provide sufficient options to conduct echeloned attack operations and succeed in any realistic configuration of potential contingencies.

Furthermore, the opportunity cost of the F-35 is tremendous. The Air Force plan to purchase 1,763 F-35As has caused the service to defer investments that may lead to greater capabilities in the future. For instance, the Air Force has not prioritized investments in long-range, stealthy, combat-capable UAS, which could be optimal against A2/AD

threats, because it has been expending resources on the F-22 and F-35.²⁰¹ Pursuing strike UAS will eventually enable the Air Force to reduce its overall inventory requirement because unlike manned aircraft, UAS do not require training aircraft because operators train on simulators.

If the Air Force buys fewer F-35s, some U.S. allies involved in the program may buy alternative fighters or defer modernization of their forces. We believe the most likely outcome is that allies, like the United States, will simply purchase fewer F-35s, look increasingly toward evolving combat UAS and invest modestly in upgrading their existing fleets. In any event, this challenge is unlikely to cause lasting damage to American alliances. As long as the United States remains the pre-eminent global military power, alliances will remain close because of shared national interests.

The Air Force should articulate a requirement for a long-range, stealthy unmanned strike/ISR platform.

UAS: The Air Force should articulate a requirement for a long-range, stealthy unmanned strike/ISR platform. This is not intended as a bomber replacement, but as an ultimate future successor for the fourth-generation fighters remaining after a reduced F-35A procurement. The requirement meshes well with the Air Force's envisioned long-range strike family of systems. By 2025, the Air Force should be shifting to a force where far greater air-to-ground capabilities in contested environments are vested in unmanned systems, potentially employing a land-based version of the Navy's projected unmanned combat air system (UCAS) with different design parameters. The prototype carrier-based X-47 UCAS boasts

an unrefueled range of over 2,000 nautical miles, approximately three times that of the Air Force F-35A. Such capabilities would be particularly useful in a future A2/AD environment. Moreover, fewer unmanned aircraft can still meet the same operational requirements given the dramatic decreases in aircraft required to sustain pilot training; this provides high cost effectiveness in times of tight budgets. Yet today, the Air Force has no requirement for this type of future aircraft.

Bomber Aircraft: The Air Force should sustain its current timeline to acquire a new long-range strike bomber, which will provide the ability to hold targets at risk even in A2/AD environments. However, given that the Air Force has repeatedly set large inventory goals for its previous aircraft programs only to scale back those goals and thereby drive up unit prices, the Air Force should *not* structure the new bomber's business plan around the notional inventory objective of 80 to 100 aircraft unless it is committed to making the internal tradeoffs that will be required to reach that objective. For example, if the F-35's procurement schedule is shortened and accelerated, as we recommend, the Air Force can increase bomber procurement as it winds down F-35 procurement, a sequencing policy that will keep the service's annual procurement budget at a manageable level. Pursuing a maximalist inventory requirement for both the F-35 and long-range strike bomber is probably not achievable as a practical matter and may lead to insufficient numbers of both aircraft, leaving the Air Force underequipped to perform its vitally important role in U.S. security strategy.

Tanker Aircraft: The Air Force may need fewer tankers if the F-35A and bomber inventories shrink. If those inventories do in fact shrink, the Air Force should therefore adjust its inventory requirement for the KC-46A tanker accordingly. However, the Air Force should accelerate the rate of KC-46A procurement once testing is complete to maximize production efficiencies.

Transport Aircraft: The Air Force should operate all intratheater tactical airlift aircraft, taking on the mission of the Navy and Marine Corps C-130 fleets. The Air Force currently has a surplus of C-130s that it can use (along with absorbing the modernized Marine Corps and Navy C-130s) to meet these additional requirements.²⁰² This would allow DOD to retire older aircraft from the Air Force, Navy and Marine Corps.

DOD will gain efficiencies by having a single service organizing support agreements and making fleet sizing decisions.²⁰³ Transferring the theater tactical airlift mission to the Air Force will enable the Navy and Marine Corps to reduce the unnecessarily redundant force structure, personnel, training and infrastructure they devote to maintaining C-130s. When appropriate, the Air Force should enter into direct support arrangements with the Navy and Marines, as it has already done with the Army, to provide specific dedicated mission support. Transferring C-130s to the Air Force will require the Air Force, Navy and Marine Corps to interact more closely, fostering the habits and culture of jointness that can make a difference in wartime.

ISR: The Air Force should sustain its current plans for ISR, including for UAS, and expand its role as the leading provider of responsive operational and strategic ISR to the joint force. The other services should seek to transfer their operational and strategic ISR roles and capabilities to the Air Force to the greatest extent possible to reduce unnecessary redundancy. For example, the Navy should scale back its plans to acquire MQ-4C BAMS UAS and rely more on the Air Force for that capability.

Munitions: The Air Force should prioritize replenishing its stock of munitions expended in recent operations. It should pursue new beyond-visual-range missile systems, which can be launched from longer distances so pilots do not have to engage in close-in combat. These missiles

are needed so that tactical aircraft can operate successfully in a wide range of combat contingencies. Similarly, the Air Force should develop and field long-range hypersonic missiles, such as the Falcon Hypersonic Technology Vehicle and other weapons to preserve long-range strike in A2/AD environments.

Space Capabilities: The Air Force should accelerate investments in securely networked C4ISR, particularly space-based options such as lower-cost satellites. It also should accelerate the Airborne Infrared system and data exploitation via overhead persistent infrared sensors (such as the space-based infrared system) to preserve the U.S. military's technological advantages in space.²⁰⁴ Were the nation to lose its military advantage in this increasingly important domain, it would have cascading effects that would undermine U.S. military pre-eminence in the other domains of land, air, sea and cyberspace – as well as create significant economic disruptions.

Readiness

Together with the Navy, the Air Force should co-lead an annual training exercise to test and refine emerging concepts related to Air-Sea Battle. After a decade of sustained ground combat, the exercises will help the Air Force revitalize its proficiency at complex air operations in contested environments. The exercises should focus on testing air operations in A2/AD environments and should build on the long-standing Red, Green and Blue Flag air-power exercises held in the United States. The exercises should include full Marine Corps, Army and ultimately allied participation in order to realistically incorporate all types of forces that would likely be involved in actual combat operations.

These exercises will improve the services' operational proficiency, as well as reassure U.S. allies in the Asia-Pacific and greater Middle East that are nervous because countries such as China and Iran are modernizing their militaries at a time when the

United States is cutting its defense budget. These exercises will also send a message of resolve to potential adversaries, although the primary purpose will be to hone U.S. service members' skills and deepen experience.

Posture

The Air Force should strengthen its agreements, access and selective presence at bases outside the continental United States, particularly in the Asia-Pacific and greater Middle East. Strengthening overseas posture is costly, but forward-basing aircraft and personnel can result in net savings. Foreign nations that host U.S. forces often help to offset the costs of maintaining those forces because U.S. forces help guarantee their security.²⁰⁵ Moreover, forward-basing requires maintaining fewer rotational forces in the United States while achieving the same levels of overseas presence. At the same time, the ability of Air Force squadrons to deploy rapidly into overseas bases where access has been assured in times of crisis provides a uniquely flexible tool to bolster allies and partners around the world.

While one of air power's benefits is that it is rapidly deployable and can strike targets from range without forward bases, Air Force leaders have emphasized their desire to secure access to more forward-basing.²⁰⁶ These options can increase the operational effectiveness and deterrent value of the Air Force. Strengthening the Air Force's overseas posture will also increase the reach and responsiveness of its forces; disperse its aircraft and personnel so they are not concentrated at a limited number of potentially vulnerable air bases; and demonstrate clearly that the United States is dedicated to preserving security in the surrounding regions.

The Air Force should prioritize its overseas activities in the near term by strengthening its agreements, presence and access to bases in Hawaii, Guam, Australia, South Korea, Japan,

the Philippines and Indonesia in the Asia-Pacific; and Afghanistan, Turkey, Qatar, the United Arab Emirates and Kuwait in the greater Middle East. Of course, the service should rigorously study basing vulnerabilities before making any decisions. The Air Force also should undertake brief rotational squadron deployments for combined training with nations such as India, Turkey and Singapore, among others.

Special Operations Forces

CURRENT SPECIAL OPERATIONS FORCES

Since 2001, SOF have played an increasingly prominent role in U.S. military operations. Today's SOF are larger, more capable and in higher demand than ever. SOF units have operated around the world performing counterterrorism, counterproliferation, intelligence gathering and foreign internal defense missions. These operations have stressed SOF, but they also have provided SOF with unprecedented experience.

Since September 11, 2001, SOF doubled in size, growing from 33,000 to 66,000 personnel.²⁰⁷ Annual spending on SOF, including war costs, has increased by 275 percent in real terms over the last decade.²⁰⁸ SOF are slated to continue to grow through 2015 despite the overall cuts being made to DOD.²⁰⁹ DOD plans to increase SOF personnel to 71,100 by FY 2015 to meet continuing demand from all regional commands and to increase their overall sustainability as they enter the second decade of continuous wartime operations.²¹⁰

SOF are organized under the unique structure of SOCOM, a functional command established by Congress that organizes, equips and trains all the services' special operations troops. SOCOM's deployed forces are usually assigned to the geographic combatant commands but can also conduct global operations under the direct command of the president and secretary of defense.²¹¹ SOF include both "black" and "white" units. Black SOF include special mission units primarily

focused on direct action operations, while white SOF have a wider skill set that includes training and advisory missions.²¹²

As the U.S. military draws down from Afghanistan, SOF's increasing role in U.S. defense strategy shows no sign of diminishing. The light footprint and cultural savvy of SOF relative to general-purpose forces frequently offer an attractive option in sensitive areas.²¹³ SOF will remain America's quietly deployed force fighting global terrorist threats, forging global partnerships and enabling allies around the world to secure their own territory and counter emerging threats. The drawdown in Afghanistan will enable DOD to redirect some SOF from combat operations to other partnership missions that have received less attention while the United States has been at war.²¹⁴

The military services provide all the people and most of the equipment to SOF despite the distinctive and specialized function of the SOF community, creating the need for a mutually supportive relationship between the two forces. Platforms that support SOF are generally purchased in smaller quantities and customized to support specialized missions and units. These platforms focus primarily on support for small units in remote areas, to include close air support, ISR and entry and extraction capabilities. As a whole, SOF remain closely connected to and frequently dependent upon the support infrastructure and broader capabilities of general-purpose forces.

SOF face two major future challenges. First, the health and capability of SOF are inseparably intertwined with the health and capability of general-purpose forces, which will face stress and uncertainty as defense spending slows and the U.S. military shrinks. If the human capital, readiness or capabilities of general-purpose forces decline, SOF will inevitably be affected as well. Second, the current proficiency and prominence of SOF, which increased markedly after the

successful raid that killed Osama bin Laden, may tempt leaders to use them inappropriately. Unless civilian and SOF leaders continue a frank dialogue about SOF's purpose and limitations, SOF may become seen – mistakenly and dangerously – as a low-risk tool.

FUTURE SPECIAL OPERATIONS FORCES

SOF are increasingly the force of choice for a wide spectrum of missions. Their effectiveness requires very high levels of training and readiness, however, which DOD must maintain even as SOF expand and overall defense budgets stagnate. SOF should re-establish their expertise in missions that involve countering weapons of mass destruction (WMD) and strengthen their ability to advise and train foreign forces through additional training and resources. SOF also should become more integrated with the general-purpose forces upon which they rely for personnel and critical enablers in order to promote more synchronized operations, greater mutual learning and adaptation, and increased readiness.

Personnel

As SOF enter their second decade of sustained operations, they continue to grow and adapt to the new environment. To maintain the capabilities and success of SOF, increased support for personnel and greater focus on training and education are critical. U.S. leaders have placed extraordinary operational demands on the SOF community during the last decade.²¹⁵ To meet these demands, SOF operators have conducted near continuous deployments and rotations to combat theaters, with little opportunity for traditional professional development and educational opportunities, including joint assignments.²¹⁶ As the force continues to grow and combat requirements decrease, SOCOM should focus on developing a stable and more integrated force that fully captures the skills, experiences and capabilities of today's personnel to better meet the uncertain challenges of tomorrow.

Finding opportunities to develop the current force as it expands is critical to sustaining SOF's long-term combat effectiveness. Key investments in human capital include emphasizing PME and joint assignments, improved tactical and language training, and the health and resilience of the force. SOCOM should refine SOF career paths to include adequate time and career incentives that support the professional development of the force in these critical but often unheralded ways. Senior SOCOM leaders should publicly set and reinforce these expectations, as well as measure the results. Additionally, creating a sustainable and healthy force for the long term requires refining the deployment cycle to ensure adequate dwell time at home between overseas assignments.

SOCOM must preserve the depth of its force's experience and training as it expands its ranks. What makes today's SOF dominant on the battlefield is the specialized training, experience and maturity of the force. While increasing the size of the force, SOCOM must be careful not to compromise its standards for training and force development.

Platforms

The modernization of SOF equipment will require renewed attention in coming years. The future combat effectiveness of SOF requires continuing to employ innovative technologies, ranging from low-signature materials for helicopters to advanced night-vision goggles and leap-ahead ISR platforms. Air Force and Army special operations aircraft provide SOF organic airlift and fire support capabilities in theaters such as Afghanistan. However, combat demands have far outstripped the capacity of SOF aviation, and half of all SOF missions flown in Afghanistan use conventional aircraft.²¹⁷ Many SOF units such as Army Green Berets and Navy SEALs must rely on support from conventional forces, often working with conventional units and aircraft that they have neither trained nor planned with before deployment.

Fixed-Wing Aircraft: The U.S. military should continue its current modernization plans for fixed-wing aircraft for the SOF community because these aircraft offer a great mix of effectiveness, versatility and affordability. Current plans include platforms for close air support (e.g. AC-130H/U), electronic warfare and ISR (e.g. EC-130J, U-28A and UAS), and transport (e.g. MC-130E/H, P, J and W). Air Force Special Operations Command (AFSOC) operates these aircraft to support joint SOF and selected conventional units.

Rotary-Wing Aircraft: The services should increase their investment in special operations rotary-wing lift capabilities to help meet the high sustained combat and training demands in support of SOF units around the world. At the same time, DOD should prioritize better future integration between SOF and conventional aviation since it is unlikely that there will ever be enough SOF lift aircraft to support all SOF missions. Shortages in dedicated assault lift have caused white SOF to rely routinely upon less available conventional helicopter support in training and combat, which has sometimes limited their mobility. Rotorcraft, including the CV-22 Osprey tilt-rotor operated by AFSOC, provide unique assault and lift capabilities for SOF units. Most rotary-wing capabilities within SOCOM are operated by the Army, which maintains a specialized helicopter aviation regiment with 184 aircraft supporting a wide range of special operators, to include SEALs, Special Forces and Rangers.²¹⁸ This Army rotary wing force should continue to modestly expand so all SOF can regularly train with the aircraft and crews they will use during operations. The Navy should allocate more dedicated rotary aircraft to support SEALs while the Army should further expand and modernize its special operations aviation battalions so they can support more SOF missions.²¹⁹ Moreover, regular exercises should involve conventional aviation units operating closely with SOF, to sustain the wartime partnerships that have deepened joint effectiveness.

UAS: The U.S. military should sustain its current plans for UAS for the SOF community. UAS provide persistent observation and precision strike capabilities to U.S. commanders while minimizing the footprint of U.S. forces in an area. Using this capability, SOF can operate in more remote areas not otherwise covered by close air support or traditional intelligence collection systems. Additionally, the availability of SOF UAS platforms has made SOF advisers and support teams an even greater force multiplier in security force assistance and irregular warfare missions throughout the world, especially in Pakistan, Yemen and the Horn of Africa.

Maritime Platforms: The U.S. military should continue to pursue its current plans for procuring SOF-focused maritime platforms, which provide additional SOF infiltration and deployment options and complicate the planning of adversaries. SOF currently deploy a variety of watercraft, such as the underwater SEAL delivery vehicle and the Navy's special boat and riverine fleets of combatant and support craft. These vehicles, along with the growing capabilities to insert and exfiltrate SOF onboard nuclear-powered submarines, increase the reach and strike capabilities of maritime special operations units.

Advanced Technology: DOD and SOCOM should continue to devote substantial resources to research and development of advanced technologies and combat systems, particularly those that increase operational integration between SOF and general-purpose forces. Acquiring specialized platforms and expanding stealth and UAS technology for SOF will continue to be crucial to maintaining America's qualitative battlefield edge as potential adversaries continue to adapt worldwide. Additionally, SOF are often the leading edge of military innovation for the conventional force. SOF develop and field new equipment, such as lightweight thermal sights, and employ innovative small-unit tactics, techniques and procedures that

can often be adapted and used by general-purpose forces. In this way, investments in advanced technology for SOF often serve as a catalyst and force multiplier for the joint force.

Readiness

To promote the continued high readiness of SOF, DOD should encourage personnel rotations between selected SOF and general-purpose forces. Such rotational assignments will increase the cross-fertilization of leadership, ideas and practices, thereby strengthening interoperability, a key element of combat readiness. On a broader scale, DOD should further experiment with placing conventional units under SOF command, and at times integrating them into SOF formations. This is a lesson drawn from operations in Afghanistan which deserves further development and refinement.

After a decade spent conducting mostly counterinsurgency and counterterrorism operations, SOF should also revitalize their expertise in other forms of irregular warfare.

After a decade spent conducting mostly counterinsurgency and counterterrorism operations, SOF should also revitalize their expertise in other forms of irregular warfare. These missions include countering WMD and exploiting cyberspace for sensitive SOF missions. Given the possibility that WMD could be used or illicitly transferred by Iran, Pakistan, North Korea or Syria, these counterproliferation capabilities

and functions could come into high demand quickly.²²⁰ SOCOM should devote more of its resources to better preparing its forces for such operations, which carry extreme risks and potentially devastating consequences.

Posture

As combat demands on SOF change in the coming years, SOCOM should develop plans to return more SOF to the task of advising foreign militaries. Shifting emphasis toward security force assistance will also revitalize SOF's global network of supporting foreign militaries across the globe, expanding partnership activities that have necessarily been neglected since 9/11. At the same time, SOCOM should reinforce black SOF's focus on operating against transnational terror threats and preparing for WMD-related events.

The U.S. government should continue to carefully monitor the demands and operational missions of SOF in the years ahead. Civilian leaders should continue to reevaluate and update oversight policies as needed to keep pace with the potential speed of evolving SOF deployments and missions. Although SOCOM forces primarily operate under the direct authority and command of the geographic combatant commanders, SOCOM maintains responsibility for those units' rotations, replacements and readiness. SOCOM is requesting greater autonomy to position and deploy its forces and equipment worldwide in response to rapidly emerging threats.²²¹ This approach mirrors the decentralized and adaptable organizational model used by the terrorist organizations SOCOM seeks to uproot. However, SOCOM leaders have not yet explained publicly why this change is necessary and what the associated risks are.

DOD should also reinvigorate and sustain the global network of foreign special operations forces with which American SOF have habitually engaged during the past three decades. While some of these partnering efforts have suffered

during the past decade because of high combat requirements, many of these foreign SOF units have also quietly served in combat alongside U.S. SOF in Afghanistan and Iraq, further cementing ties and deepening relationships. Maintaining strong, interoperable SOF-to-SOF relationships not only will enable the United States to target unexpected threats more quickly, but also will help empower allies and partners to assume greater responsibilities in defeating transnational terrorist organizations and other unconventional threats.

VIII. CONCLUSION

Old ways of organizing and operating American armed forces are no longer acceptable or sustainable. In this report, we recommend institutional innovation and reforms that will make the U.S. military more effective and less expensive, thereby providing the nation with sustainable military power for decades to come. These reforms require deepening interdependence and trust among the military services, thereby building sustained cross-service relationships that create powerful synergy and reduce costs.

If managed responsibly, defense budget reductions provide an opportunity to improve how the U.S. military uses its resources to accomplish the nation's goals. Achieving these reforms will require everyone, from the military services to OSD to Congress, to embrace fundamental changes in how to defend the United States. Clinging to the ways of the past will jeopardize the ability of the U.S. military to remain the world's pre-eminent military power.

America's global military pre-eminence is neither foreordained nor determined solely by the size of the U.S. defense budget. Instead, maintaining pre-eminence depends on constantly improving how the U.S. military is organized and operates. If civilian and military leaders prove willing to embrace the reforms proposed in this report, we believe that U.S. military pre-eminence can be sustained for decades to come.

ENDNOTES

1. David W. Barno, Nora Bensahel and Travis Sharp, "Hard Choices: Responsible Defense in an Age of Austerity" (Center for a New American Security, October 2011).
2. This judgment could change if policymakers recalibrate America's global engagement strategy and/or generate savings by reforming military pay and benefits for future service members.
3. For a list of these interests and values, see Barno, Bensahel and Sharp, "Hard Choices," 9.
4. Samuel P. Huntington, "Why International Primacy Matters," *International Security*, 17 no. 4 (Spring 1993), 70.
5. Michael O'Hanlon, *The Wounded Giant: America's Armed Forces in an Age of Austerity* (New York: The Penguin Press, 2011), 23-24.
6. Department of Defense, *National Defense Budget Estimates for FY 2012* (March 2011), 135-140, 238-240.
7. Department of Defense, *National Defense Budget Estimates for FY 2013* (March 2012), 32-34, 265-266.
8. We use the figure for debt held by the public, as opposed to gross federal debt, because the former has a direct and immediate effect on the economy. See Department of the Treasury, Bureau of the Public Debt, *Monthly Statement of the Public Debt of the United States* (March 31, 2012), <http://www.treasurydirect.gov/govt/reports/pd/mspd/2012/opds032012.pdf>; and Department of Commerce, Bureau of Economic Analysis, *Gross Domestic Product: Fourth Quarter and Annual 2011* (March 29, 2012), http://www.bea.gov/newsreleases/national/gdp/2012/gdp4q11_3rd.htm.
9. Department of the Treasury/Federal Reserve Board, *Major Foreign Holders of Treasury Securities* (as of April 16, 2012), <http://www.treasury.gov/resource-center/data-chart-center/tic/Documents/mfh.txt>; and Department of Commerce, Bureau of Economic Analysis, *Gross Domestic Product: Fourth Quarter and Annual 2011*.
10. Jeremy Herb, "GOP budget boosts defense spending," *The Hill*, March 20, 2012, <http://thehill.com/blogs/defcon-hill/budget-appropriations/216925-gop-budget-boosts-defense-spending>.
11. Senator Tom Coburn, *Back in Black: A Deficit Reduction Plan* (July 2011), http://www.coburn.senate.gov/public/index.cfm?a=Files.Serve&File_id=413f351a-2588-4017-ad8a-99891e956bc6.
12. See Stephen M. Walt, "The End of the American Era," *The National Interest* (November/December 2011); John Mearsheimer, "Imperial by Design," *The National Interest* (January/February 2011); Robert A. Pape and James K. Feldman, *Cutting the Fuse: The Explosion of Global Suicide Terrorism & How to Stop It* (Chicago: University of Chicago Press, 2010); Christopher Preble, *The Power Problem: How American Military Dominance Makes Us Less Safe, Less Prosperous, and Less Free* (Ithaca, NY: Cornell University Press, 2009); Andrew J. Bacevich, *The Limits of Power* (New York: Metropolitan Books, 2008); Barry R. Posen, "The Case for Restraint," *The American Interest* (November/December 2007); Christopher Layne, *The Peace of Illusions: American Grand Strategy from 1940 to the Present* (Ithaca, NY: Cornell University Press, 2007); Christopher Layne, "From Preponderance to Offshore Balancing: America's Future Grand Strategy," *International Security*, 22 no. 1 (Summer 1997); and Eugene Gholz, Daryl G. Press and Harvey M. Sapolsky, "Come Home, America: The Strategy of Restraint in the Face of Temptation," *International Security*, 21 no. 4 (Spring 1997).
13. G. John Ikenberry, "The Future of the Liberal World Order," *Foreign Affairs* 90, no. 3 (May/June 2011); Robert D. Kaplan, "A world with no one in charge," *The Washington Post*, December 5, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/03/AR2010120306537.html>; and Robert Kagan, "Not Fade Away," *The New Republic*, February 2, 2012.
14. Ikenberry, "The Future of the Liberal World Order."
15. Our recommendations are generally consistent with Scenario 2 in Barno, Bensahel and Sharp, "Hard Choices." As noted above, this judgment could change if policymakers recalibrate America's global engagement strategy and/or generate savings by reforming military pay and benefits for future service members.
16. See, for example, Sustainable Defense Task Force, "Debts, Deficits, & Defense: A Way Forward" (June 2010), http://armscontrolcenter.org/media/Debt_Deficits_and_Defense.pdf.
17. Nora Bensahel and Patrick M. Cronin, "America's Civilian Operations Abroad: Understanding Past and Future Requirements" (Center for a New American Security, January 2012).
18. Maren Leed, "Keeping Faith: Charting a Sustainable Path for Military Compensation" (Center for Strategic and International Studies, October 2011); Defense Business Board, *Modernizing the Military Retirement System* (July 21, 2011); Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (March 2011), 76-83; Department of Defense, *Report of the Tenth Quadrennial Review of Military Compensation* (2008); Beth J. Asch et al., *Assessing Compensation Reform: Research in Support of the 10th Quadrennial Review of Military Compensation* (Santa Monica, CA: RAND Corporation, 2008); and Cindy Williams, ed., *Filling the Ranks: Transforming the U.S. Military Personnel System* (Cambridge, MA: The MIT Press, 2004).
19. Quadrennial Defense Review Independent Panel, "The QDR in Perspective: Meeting America's National Security Needs In the 21st Century" (United States Institute of Peace, 2010), 83-94. See also Richard Danzig, "Driving in the Dark: Ten Propositions About Prediction and National Security" (Center for a New American Security, October 2011).
20. We use the word "personnel" broadly to encompass DOD's definitions of both manpower and personnel. According to DOD, manpower describes "the number of personnel or positions required to perform a specific task," while personnel describes "human aptitudes (i.e., personnel, cognitive, physical, and sensory capabilities), knowledge, skills, abilities, and experience levels that are needed to properly perform job tasks." See Defense Acquisition University, *Manpower & Personnel* (accessed April 18, 2012), <https://acc.dau.mil/CommunityBrowser.aspx?id=496046>.

21. "Terrible swift sword," *The Economist*, November 26, 2011, <http://www.economist.com/node/21540257>.
22. Todd Harrison, "Five Facts About Defense and Sequestration" (Center for Strategic and Budgetary Assessments, November 2011), 1, <http://www.csbaonline.org/wp-content/uploads/2011/11/2011.11.02-Five-Defense-Sequestration-Facts.pdf>.
23. Secretary of Defense Leon E. Panetta, *Effects of Sequestration on the Department of Defense* (November 14, 2011), http://lgraham.senate.gov/public/_files/_pdfs/11%2014%2011%20Panetta%20McCain%20Graham%20Ltr.pdf.
24. *Ibid.*
25. See Travis Sharp, "Down Payment: Defense Guidance, 2013 Defense Budget and the Risks of Sequestration" (Center for a New American Security, February 2012), http://www.cnas.org/files/documents/publications/CNAS_2013DefenseBudget_Sharp_0.pdf.
26. Charles S. Konigsberg, "A 'Perfect Storm' Approaching at Year's End," *USBudgetAlert.com*, as of April 2, 2012, <http://usbudgetalert.com>; and Kate Brannen, "Sequestration Could Be Left to Lame-Duck U.S. Congress," *Defense News*, April 7, 2012, <http://www.defensenews.com/article/20120407/DEFREG02/304070001/Sequestration-Could-Left-Lame-Duck-U-S-Congress>.
27. Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (January 2012); Department of Defense, *Defense Budget Priorities and Choices* (January 2012); and Department of Defense, *Defense Budget Materials – FY 2013* (February 2012).
28. Department of Defense, *Sustaining U.S. Global Leadership*, 1.
29. This paragraph draws from Sharp, "Down Payment," 3.
30. For more on the "pivot but hedge" approach, see David W. Barno, Nora Bensahel and Travis Sharp, "The Pentagon's Way Forward," *NationalInterest.org*, January 26, 2012, <http://nationalinterest.org/commentary/the-pentagons-way-forward-6411>; David W. Barno, Nora Bensahel and Travis Sharp, "You Can't Have It All," *ForeignPolicy.com*, January 6, 2012, http://www.foreignpolicy.com/articles/2012/01/06/you_cant_have_it_all; and David W. Barno, Nora Bensahel and Travis Sharp, "Pivot but Hedge: A Strategy for Pivoting to Asia While Hedging in the Middle East," *Orbis*, 56 no. 2 (Spring 2012).
31. DOD's strategic guidance used the word "rebalance" instead of "pivot." While this shift has led some observers to assert that the Obama administration has adopted elements of a restraint strategy, we believe the guidance is consistent with America's long-running and generally successful strategy of global engagement. On the elements of restraint in the new guidance, see Stephen M. Walt, "Why the new Defense Guidance is still interventionist," Stephen M. Walt blog on *ForeignPolicy.com*, January 9, 2012, http://walt.foreignpolicy.com/posts/2012/01/09/why_the_new_defense_guidance_is_still_interventionist; and Christopher Layne, "The (Almost) Triumph of Offshore Balancing," *NationalInterest.org*, January 27, 2012, <http://nationalinterest.org/commentary/almost-triumph-offshore-balancing-6405>.
32. Department of Defense, *Sustaining U.S. Global Leadership*, 6.
33. *Ibid.*, 2, 4-5.
34. *Ibid.*, 2.
35. *Ibid.*, 3.
36. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2011* (August 2011); and Thomas J. Christensen, "The Advantages of an Assertive China," *Foreign Affairs*, 90 no. 2 (March/April 2011).
37. Victor Cha, "The 3 A.M. Phone Call: Pyongyang," in *2012 Global Forecast: Risk, Opportunity, and the Next Administration*, eds. Craig Cohen and Josiane Gabel (Center for Strategic and International Studies, April 2012).
38. Stockholm International Peace Research Institute, Military Expenditure Database, "Military expenditure by region in constant US dollars, 1988–2011," *Sipri.org* (accessed April 18, 2012), <http://www.sipri.org/databases/milex>.
39. International Institute for Strategic Studies, "Military Balance 2012 – Press Statement," *iiss.org*, March 7, 2012, <http://www.iiss.org/publications/military-balance/the-military-balance-2012/press-statement/>.
40. For example, one recent report notes that the United States currently plans to reduce its defense budget by about \$50 billion each year during the next decade – which "is the equivalent of eliminating Japan's total current annual defense budget." Patrick M. Cronin, Paul S. Giarra, Zachary M. Hosford and Daniel Katz, "The China Challenge: Military, Economic and Energy Choices Facing the U.S.-Japan Alliance" (Center for a New American Security, April 2012), 7.
41. Jeffrey Simon, "NATO's Uncertain Future: Is Demography Destiny?" *Joint Force Quarterly*, 53 (Second Quarter 2009).
42. Examples include NATO operations in Afghanistan, where missions have suffered from unequal burden-sharing and battlefield restrictions among the allies, and operations over Libya, which relied disproportionately on U.S. capabilities and support. A recent NATO assessment of operations in Libya reportedly found that the allies had great difficulty sharing target information, lacked specialized planners and analysts, and relied extensively on U.S. reconnaissance capabilities, refueling capabilities and stocks of precision-guided munitions. Eric Schmitt, "NATO Sees Flaws in Air Campaign Against Qaddafi," *The New York Times*, April 14, 2012. See also Adrian Johnson and Saqeb Mueen, eds., "Short War, Long Shadow: The Political and Military Legacies of the 2011 Libya Campaign," *Whitehall Report 1-12* (Royal United Services Institute, 2012).
43. In February 2011, NATO Secretary-General Anders Fogh Rasmussen launched a new initiative called Smart Defense. He stated that Smart Defense would "ensur[e] greater security, for less money, by working together with more flexibility," by pooling and sharing capabilities, setting priorities and improving coordination. The initiative remains poorly defined as of this writing. See Anders Fogh Rasmussen, "Building Security in an Age of Austerity" (2011 Munich Security Conference, February 4, 2011); NATO, *Smart Defence* (accessed May 1, 2012), <http://www.nato.int/cps/en/natolive/78125.htm>; and NATO, *Preparing for Chicago* (accessed May 1, 2012), http://www.nato.int/cps/en/SID-8706F7B7-FD4D44B9/natolive/news_84287.htm.
44. Barno, Bensahel and Sharp, "Hard Choices," 11-12.

45. Jim Garamone, "Gates Calls for 92,000 More Soldiers, Marines," *American Forces Press Service*, January 11, 2007.
46. David J. Berteau, "Defense Planning Under the Threat of Sequester" (Center for Strategic and International Studies, April 2012), 8-9; and Marcus Weisgerber and Zachary Fryer-Biggs, "Pentagon Punts on Major Program Cuts," *Defense News*, January 30, 2012, <http://www.defensenews.com/article/20120130/DEFREG02/301300007/Pentagon-Punts-Major-Program-Cuts>.
47. Department of Defense, *Defense Budget Priorities and Choices*, 11.
48. GEN Martin E. Dempsey, *Chairman's Strategic Direction to the Joint Force* (February 2012), 8.
49. Department of Defense, *Defense Budget Priorities and Choices*.
50. Department of Defense, *Sustaining U.S. Global Leadership*, 7.
51. On current DOD efforts, see Marcus Weisgerber, "Pentagon Streamlines Requirements Process," *Defense News*, April 18, 2012; and Government Accountability Office, *Defense Management: Guidance and Progress Measures Are Needed to Realize Benefits from Changes in DOD's Joint Requirements Process*, GAO-12-339 (February 2012).
52. We are not arguing that weapons inventories are an irrelevant metric. We are arguing that they are an insufficient metric to capture the enormous complexity and sophistication inherent in 21st-century net assessment.
53. Department of Defense, *Joint Operational Access Concept (JOAC)*, Version 1.0 (November 22, 2011), 8-14.
54. U.S.-China Economic and Security Review Commission, *2011 Report to Congress* (November 2011), 182-197.
55. Department of Defense, *Capstone Concept for Joint Operations*, Version 3.0 (January 15, 2009), 3.
56. General Norton A. Schwartz and Admiral Jonathan W. Greenert, "Air-Sea Battle: Promoting Stability in an Era of Uncertainty," *The-American-Interest.com*, February 20, 2012, <http://www.the-american-interest.com/article.cfm?piece=1212>.
57. General Norton A. Schwartz, Air Force Chief of Staff, testimony to the Armed Services Committee, U.S. Senate, March 20, 2012.
58. Department of Defense, *Joint Operational Access Concept (JOAC)*, 14-17.
59. Department of Defense, *Sustaining U.S. Global Leadership*, 4-6.
60. Schwartz and Greenert, "Air-Sea Battle."
61. Mackenzie Eaglen and Diem Nguyen, "Super Committee Failure and Sequestration Put at Risk Ever More Military Plans and Programs" (Heritage Foundation, December 5, 2011).
62. Eric Sayers and Gaoyue Fan, "AirSea Battle: An Exchange," *PacNet No. 17* (Pacific Forum CSIS, March 17, 2011).
63. T.X. Hammes, "Offshore Control: A Proposed Strategy," *Infinity Journal*, 2 no. 2 (Spring 2012), 13.
64. *Ibid.*, 10-14.
65. Clayton M. Christensen, *The Innovator's Dilemma* (Boston: Harvard Business School Press, 1997).
66. Barno, Bensahel and Sharp, "Hard Choices," 13.
67. Danzig, "Driving in the Dark," 5.
68. Department of Defense, *Sustaining U.S. Global Leadership*, 6-7.
69. As Winston Churchill remarked, "Professional attainment, based upon prolonged study, and collective study at colleges, rank by rank and age by age – those are the title reeds of the commanders of future armies, and the secret of future victories." Quoted in Steven H. Kenney, "Professional Military Education and the Emerging Revolution in Military Affairs," *Airpower Journal* (Fall 1996), 50. We discuss PME in more detail later in the report.
70. Autonomous and artificial intelligence technologies do not necessarily entail removing human control completely. We acknowledge the costs, legal questions, and manpower and technological challenges of current-generation UAS, but we expect many of these obstacles to be overcome in the years ahead. A more disciplined requirements process would reduce unnecessary redundancy in unmanned systems (and in other systems as well). See Government Accountability Office, *2012 Annual Report: Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings, and Enhance Revenue*, GAO-12-342SP (February 2012), 26-32.
71. For further discussion, see Kristin M. Lord and Travis Sharp, "America's Cyber Future," Volume 1 (Center for a New American Security, June 2011), 42-44. On active cyber defense, see Department of Defense, *Strategy for Operating in Cyberspace* (July 2011), 7.
72. Danzig, "Driving in the Dark," 26.
73. Department of Defense, *Sustaining U.S. Global Leadership*, 7-8.
74. *Ibid.*, 7.
75. *Ibid.*, 4-5.
76. Department of Defense, *Defense Budget Priorities and Choices*, 11.
77. Mark Gunzinger with Chris Dougherty, "Outside-In: Operating from Range to Defeat Iran's Anti-Access and Area-Denial Threats" (Center for Strategic and Budgetary Assessments, January 2011), 17.
78. Defense Science Board, *Capability Surprise, Volume I: Main Report* (September 2009), 44-48.
79. For example, problems with the ad hoc and understaffed Combined Joint Task Force 7 in Iraq during 2003-2004 contributed to the abuses at Abu Ghraib. The Combined Forces Command-Afghanistan (CFC-A) headquarters during 2003-2005 was plagued by 18-month-long growing pains, as was the current

NATO International Security Assistance Force Joint Command headquarters during 2009-2011.

80. The Army's XVIII Airborne Corps headquarters was reformulated with scores of U.S. joint service augmentees in 2005 to form the core of Multi-National Corps-Iraq, and the Army's V Corps was similarly reconfigured in 2009 to form the core of the newly established ISAF Joint Command.

81. Possible choices include the Army's XVIII Airborne Corps, III or I Corps; the Marines' I or II MEF; the Navy's Fourth, Fifth or Sixth Fleets; and the Air Force's 3rd, 5th or 7th Air Forces.

82. Kenney, "Professional Military Education and the Emerging Revolution in Military Affairs," 57; and Williamson Murray, "The Army's Advanced Strategic Art Program," *Parameters*, 30 no. 4 (Winter 2000-2001).

83. The president of National Defense University (NDU) has recently been downgraded from a three-star billet to a two-star billet. The chiefs of the National War College and the Industrial College of the Armed Forces (which are subordinate parts of NDU) have been downgraded from two-star billets to one-star billets, which makes them one rank below their respective service war college counterparts. Another recent change removed NDU from its longstanding direct reporting relationship to the chairman of the Joint Chiefs and placed it under the direction of the three-star Joint Staff J7, an office that is primarily responsible for joint training and interoperability rather than education. Plans are further advancing to significantly consolidate and cut back the research arms associated with both NDU and the U.S. Army War College as new budget cuts are being applied. These and other changes threaten to diminish the importance of military education at a time when the intellectual capital resident in these programs is likely to be even more important and require stronger advocacy. Authors' meetings with PME representatives.

84. Todd Harrison, "Analysis of the FY 2012 Defense Budget" (Center for Strategic and Budgetary Assessments, July 2011), 19.

85. Department of Defense, *National Defense Budget Estimates for FY 2013*, 31, 34.

86. *Ibid.*, 23-34.

87. Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, *Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending* (September 14, 2010), 1, http://www.acq.osd.mil/docs/USD_ATL_Guidance_Memo_September_14_2010_FINAL.PDF.

88. Eugene Gholz and Harvey M. Sapolsky, "Restructuring the U.S. Defense Industry," *International Security*, 24 no. 3 (Winter 1999/2000).

89. Barno, Bensahel and Sharp, "Hard Choices," 38-41, 44-45.

90. Department of Defense, *Defense Budget Priorities and Choices*, 3-4.

91. Defense Business Board, *Reducing Overhead and Improving Business Operations: Initial Observations* (July 22, 2010), 17.

92. U.S. Northern Command and U.S. Africa Command were both established after 2001, but U.S. Joint Forces Command was disestablished in 2011.

93. Some military leaders have recommended elevating CYBERCOM to full combatant command status. Ellen Nakashima, "Military leaders seek higher profile for Pentagon's Cyber Command unit," *The Washington Post*, May 1, 2012.

94. Matthew Hansen, "StratCom 'insourcing' angers defense contractors," *Omaha World-Herald*, March 11, 2012; and Jim Wolf, "The Pentagon's new cyber warriors," *Reuters*, October 5, 2010.

95. Defense Business Board, *Reducing Overhead and Improving Business Operations*, 30.

96. There are two types of headquarters: "operational" headquarters, which can deploy into (or near) combat zones and oversee the rigorous command, control and planning functions necessary to conduct military operations; and "administrative" headquarters, which oversee the noncombat elements of defense – from recruiting and training to equipping, educating and supplying the force. Many administrative headquarters have proliferated in the past decade.

97. Barno, Bensahel and Sharp, "Hard Choices," 38.

98. Government Accountability Office, *Defense Headquarters: Further Efforts to Examine Resource Needs and Improve Data Could Provide Additional Opportunities for Cost Savings*, GAO-12-345 (March 2012).

99. Lauren Ploch, "Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa," RL34003 (Congressional Research Service, as of July 22, 2011).

100. With deeply reduced U.S. military forces and activities in Europe, EUCOM could readily assume the military responsibilities for Africa it held before 2008. The extensive involvement of EUCOM continues to be required for any substantial U.S. military operations in Africa, as was dramatically demonstrated by EUCOM's central role in Operation Odyssey Dawn in Libya in 2011.

101. For example, the Marine component to CYBERCOM could be covered by either service representatives on the staff or by the U.S. Navy.

102. Faced with a limited pool of Marines available to perform both its service and joint functions, the "dual-hat" model permits the smallest service to play equally on the field occupied by its three much larger counterparts.

103. In some instances, the roles of inactivated commands could be assumed by their higher headquarters, e.g., U.S. Army Forces Command taking on the roles of U.S. Army North/Fifth Army and the reserve component supervisory role of First Army, eliminating two three-star administrative commands.

104. U.S. Pacific Command (PACOM) might be an exception: It might make sense for PACOM to retain four-star Navy and Air Force components with broad theater responsibilities since its area of responsibility includes over 50 percent of the Earth's surface.

105. Department of Defense, *National Defense Budget Estimates for FY 2013*, 259-260.

106. Sean Reilly, "Experts: DoD could slash 150K jobs," *Federal Times*, December 4, 2011.

107. Department of Defense, *National Defense Budget Estimates for FY 2013*, 259-260.
108. Office of the Director of National Intelligence, *Key Facts About Contractors* (July 2010), http://www.dni.gov/content/Truth_About_Contractors.pdf.
109. Steven Aftergood, "Intelligence Budget Data," Fas.org, accessed April 22, 2012, <http://www.fas.org/irp/budget/index.html>.
110. Director of National Intelligence James R. Clapper, "Remarks as delivered at the GEOINT 2011 Symposium" (San Antonio, Texas, October 17, 2011).
111. Department of Defense, *Fiscal Year 2010 Budget Request Summary Justification* (May 2009), 2-18.
112. Government Accountability Office, *Defense Acquisitions: Further Action Needed to Better Implement Requirements for Conducting Inventory of Service Contract Activities*, GAO-11-192 (January 2011), 13.
113. Department of Defense, *Fiscal Year 2013 Budget Request Overview* (February 2012), 3-2.
114. Karen Parrish, "Dempsey: Military Contracting Costs Must Shrink," *American Forces Press Service*, March 6, 2012.
115. Department of Defense, *National Defense Budget Estimates for FY 2013*, 259-260.
116. Barno, Bensahel and Sharp, "Hard Choices," 39.
117. Government Accountability Office, *Human Capital: Further Actions Needed to Enhance DOD's Civilian Strategic Workforce Plan*, GAO-10-814R (September 27, 2010), 1.
118. Stephen Daggett, "Preliminary assessment of efficiency initiatives announced by Secretary of Defense Gates on August 9, 2010" (Congressional Research Service, August 12, 2010), 3.
119. Defense Business Board, *Reducing Overhead and Improving Business Operations*, 40.
120. Department of Defense, *National Defense Budget Estimates for FY 2013*, 259-260.
121. Barno, Bensahel and Sharp, "Hard Choices," 43, endnote 11; and Department of Defense, *Defense Budget Priorities and Choices*, 11.
122. 10 U.S.C. § 3062, "Policy; Composition: Organized Peace Establishment."
123. Department of Defense, *National Defense Budget Estimates for FY 2013*, 173-175.
124. Harrison, "Analysis of the FY 2012 Defense Budget," 18-19, 25.
125. Cost estimates are from the Defense Manpower Data Center. See Todd Lindeman, Seth Hamblin and Josh White, "The Price of Protection," *The Washington Post*, November 13, 2007.
126. Russell Rumbaugh, "What We Bought: Defense Procurement from FY01 to FY10" (The Henry L. Stimson Center, October 2011), 7-10.
127. This figure includes developmental test and evaluation costs, which often include program cancellation penalties. 2010 Army Acquisition Review, *Army Strong: Equipped, Trained and Ready* (January 2011), 163.
128. *Ibid.*, x.
129. Quoted in GEN George W. Casey Jr., "America's Army: The Strength of the Nation," *The Hill*, May 20, 2008.
130. Barno, Bensahel and Sharp, "Hard Choices," 15.
131. The comparative cost of active versus reserve component units is a subject of continual debate. The 2010 Quadrennial Defense Review concluded that effective use of the National Guard and Reserves "will lower overall personnel and operating costs, better ensure the right mix and availability of equipment, provide more efficient and effective use of defense assets, and contribute to the sustainability of both the Active and Reserve components." Department of Defense, *Quadrennial Defense Review Report* (February 2010), 53.
132. Michael R. Gordon and General Bernard E. Trainor, *Cobra II: The Inside Story of the Invasion and Occupation of Iraq* (New York: Pantheon Books, 2006).
133. The ground combat vehicle is wedded to a requirement to dismount nine soldiers rather than the six soldiers dismounted by the Bradley. It further requires much higher levels of protection for its occupants. The combination of these two new requirements has increased the projected weight of the vehicle, making it potentially unsuitable for use on many roads and bridges. It has further driven up the vehicle's cost to \$11 million to \$17 million per vehicle, compared with \$3 million per vehicle (in constant dollars) for the Bradley. See Andrew Feickert, "The Army's Ground Combat Vehicle (GCV) Program: Background and Issues for Congress," R41597 (Congressional Research Service, as of March 1, 2012); and Congressional Budget Office, *Total Quantities and Unit Procurement Cost Tables, 1974-1995* (April 1994), 25-27.
134. An "off-the-shelf" alternative, such as an armed version of the UH-72 Lakota already in the Army inventory as a utility aircraft, could speed this replacement.
135. This recommendation differs from the recommendation in "Hard Choices" because the Army and Marine Corps have taken steps to make the JLTV program more realistic and affordable. See Eric Beidel, "New Requirements, Lower Cost Breathe New Life Into JLTV," *National Defense* (February 2012), <http://www.nationaldefensemagazine.org/archive/2012/February/Pages/NewRequirements,LowerCostBreatheNewLifeIntoJLTV.aspx>.
136. Charles Hoskinson, "Army's faulty computer system hurts operations," *Politico*, June 29, 2011, <http://www.politico.com/news/stories/0611/58051.html>.
137. The Army currently has 45 BCTs and plans to go down to 37. It is also considering whether to add a third maneuver battalion and more engineers to its BCTs. If it does so, the number of active-duty BCTs could further decline from 37 to 32 or 33.

138. Independent analysts have struggled to verify the relationship between operation and maintenance spending and unit readiness. See Congressional Budget Office, *Linking the Readiness of the Armed Forces to DoD's Operation and Maintenance Spending* (April 2011).
139. This has been a common outcome of previous drawdowns, as noted in the section on downsizing military headquarters.
140. David W. Barno, Andrew Exum and Matthew Irvine, "The Next Fight: Time for a Change of Mission in Afghanistan" (Center for a New American Security, December 2011).
141. Rebasing in the United States has generated relatively modest savings in the past. See Government Accountability Office, *Higher Costs and Lower Savings Projected for Implementing Two Key Supply-Related BRAC Recommendations*, GAO-08-315 (March 2008).
142. Congressional Budget Office, *Options for Strategic Military Transportation Systems* (September 2005).
143. General Raymond T. Odierno, "The U.S. Army in a Time of Transition," *Foreign Affairs*, 91 no. 3 (May/June 2012).
144. Similar efforts should occur in the other services, as noted in the section on downsizing military headquarters.
145. Admiral Gary Roughead, "Remarks at University of Chicago Conference on Terrorism and Strategy" (Chicago, October 12, 2010).
146. Department of Defense, *National Defense Budget Estimates for FY 2013*, 259-260; and Nathan Hodge, "'Geriatric' U.S. Arsenal Needs Expensive Face-Lift," *The Wall Street Journal*, September 15, 2011.
147. Andrea Shalal-Esa, "US Navy eyes 300-ship fleet, but sees challenges," *Reuters*, March 28, 2012.
148. Ray Mabus, Secretary of the Navy, statement to the Armed Services Committee, U.S. House of Representatives, February 16, 2012.
149. International Maritime Organization, Maritime Knowledge Centre, "International Shipping Facts and Figures," *Imo.org*, as of March 6, 2012, <http://www.imo.org/KnowledgeCentre/ShipsAndShippingFactsAndFigures/TheRoleandImportanceofInternationalShipping/Documents/International%20Shipping%20-%20Facts%20and%20Figures.pdf>.
150. U.S. Energy Information Administration, "Maritime chokepoints critical to petroleum markets," *Eia.gov*, March 2, 2011, <http://205.254.135.7/todayinenergy/detail.cfm?id=330>; and GlobalSecurity.org, "South China Sea Oil Shipping Lanes," accessed April 19, 2012, <http://www.globalsecurity.org/military/world/war/sprately-ship.htm>.
151. U.S. Energy Information Administration, "World Oil Transit Chokepoints," *Eia.gov*, as of December 30, 2011, http://www.eia.gov/cabs/world_oil_transit_chokepoints/full.html.
152. Sam Fellman, "Back to Sea Swap?" *Navy Times*, January 23, 2012.
153. Michael O'Hanlon, "A Frugal Fleet to the Rescue," *The New York Times*, November 13, 2011.
154. *Ibid.*
155. Quoted in Elisabeth Bumiller, "Smaller Navy Ship Has a Rocky Past and Key Support," *The New York Times*, April 5, 2012.
156. Navy leaders disagree and have defended LCS. See Admiral Jonathan Greenert, Chief of Naval Operations, statement to the Armed Services Committee, U.S. House of Representatives, February 16, 2012.
157. Rear Admiral Michael J. Connor, "Investing in the Undersea Future," *Proceedings* (June 2011).
158. Authors' meeting with military and industry representatives.
159. Barno, Bensahel and Sharp, "Hard Choices," 43.
160. Amy F. Woolf, "Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues," R41464 (Congressional Research Service, as of February 13, 2012), 19.
161. On directed-energy weapons, see Mark Gunzinger with Chris Dougherty, "Changing the Game: The Promise of Directed Energy Weapons" (Center for Strategic and Budgetary Assessments, April 2012).
162. For background on this issue, see ADM J.C. Harvey Jr., Commander, U.S. Fleet Forces Command, statement to the Readiness Subcommittee and Seapower and Expeditionary Forces Subcommittee, Armed Services Committee, U.S. House of Representatives, July 28, 2010; and ADM J.C. Harvey Jr., *Fleet Readiness Review Panel Report (One Year Later)* (May 11, 2011), http://www.public.navy.mil/usff/Documents/flt_readiness_review_1-yr_later.pdf.
163. Authors' meeting with a senior U.S. military official.
164. For an Air Force example of this effort, see David Axe and Noah Shachtman, "'Operation Chimichanga' Tests Pentagon's Stealth Strike Force," Danger Room blog on *Wired.com*, April 11, 2012, <http://www.wired.com/dangerroom/2012/04/air-force-stealth-strike/>.
165. We also discuss this proposal in more detail in the section on Air Force readiness.
166. For more on U.S. efforts in this area, see Adam B. Siegel, "Base Access Constraints and Crisis Response," *Airpower Journal* (Spring 1996); and Manuel Mogato, "U.S. military seeks more access in Philippines," *Reuters*, February 9, 2012.
167. "Navy Announces Destroyers to be Based in Spain," *Navy Times*, February 16, 2012, <http://www.navytimes.com/news/2012/02/navy-rotta-destroyers-forward-deployed-named-ross-donald-cook-porter-carney-021612w/>.
168. Admiral Jonathan Greenert, Chief of Naval Operations, statement to the Armed Services Committee, U.S. Senate, March 16, 2012.
169. O'Hanlon, *The Wounded Giant*, 128-129.

170. For an overview of the Navy's current efforts in this area, see Craig Whitlock, "Obama's Asia strategy gives Navy key role, fewer ships," *The Washington Post*, February 15, 2012.
171. Rumbaugh, "What We Bought," 15-16.
172. In 2012, the U.S. Marine Corps included 200,827 active-duty personnel; the British military included 174,030 active-duty personnel; and the Israeli Defense Forces included 176,500 active-duty personnel. See International Institute for Strategic Studies, *The Military Balance 2012* (London: Routledge, 2012), 60-61, 168-173, 328-331.
173. *Ibid.*, 60-61.
174. In its FY 2013 budget request, the Marine Corps is scheduled to drop to 23 infantry battalions.
175. SFC Tyrone C. Marshall Jr., "'Bold Alligator' Helps to Sustain Amphibious Operations," *American Forces Press Service*, January 31, 2012.
176. Eric Talmadge, "Okinawa Marines Going to Guam, Australia, Hawaii and Philippines," *Associated Press*, February 8, 2012.
177. As noted in DOD's official guide to terminology, joint "connotes activities, operations, organizations, etc., in which elements of two or more Military Departments participate." Department of Defense, *Dictionary of Military and Associated Terms* (as amended through March 15, 2012), 171.
178. Forward-basing one MEU in Japan would continue as one MEU was added from the new rotational presence in northern Australia. Both of these MEUs would comprise rotational forces of Unit Deployment Program Marines.
179. Barno, Bensahel and Sharp, "Hard Choices," 17.
180. The Air Force has successfully provided tactical airlift direct support to the Army in Afghanistan, and the Air Force should negotiate similar direct support agreements with the Marine Corps.
181. As noted earlier, this recommendation differs from the recommendation in "Hard Choices" because the Army and Marine Corps have taken steps to make the JLTV program more realistic and affordable. See Beidel, "New Requirements, Lower Cost Breathe New Life Into JLTV."
182. International Institute for Strategic Studies, *The Military Balance 2012*, 60.
183. This would mean two of three MEUs would be sustained by a Unit Deployment Model where Marines permanently based in the United States deploy forward for six to eight months to link up with their amphibious shipping for operational cruises. This would be analogous to the current 31st MEU model based out of Japan.
184. Congressional Budget Office, *Options for Strategic Military Transportation Systems*.
185. John D. Banusiewicz, "Gates Shares Vision for Air Force's Future," *American Forces Press Service*, March 4, 2011.
186. Department of the Air Force, *Posture Statement 2012* (February 2012), 9.
187. Department of Defense, *National Defense Budget Estimates for FY 2013*, 259-260.
188. Department of the Air Force, *Air Force Priorities for a New Strategy with Constrained Budgets* (February 2012), 1, 3.
189. *Ibid.*, 1.
190. Rumbaugh, "What We Bought," 10-11.
191. *Ibid.*, 10-13, "What We Bought," 10-13; and Amy F. Woolf, "U.S. Strategic Nuclear Forces: Background, Developments, and Issues," RL33640 (Congressional Research Service, May 4, 2011), 8-14, 21-27.
192. Air Force Magazine, "USAF Almanac," editions 2001-2011, Airforce-Magazine.com, accessed May 1, 2012, <http://www.airforce-magazine.com/Almanacs/Pages/USAFAlmanacs.aspx>; and United States Air Force Chief Scientist, *Technology Horizons: A Vision for Air Force Science & Technology During 2010-2030*, Volume 1 (May 2010), 40-42.
193. General Norton A. Schwartz, Air Force Chief of Staff, statement to the Armed Services Committee, U.S. Senate, March 20, 2012.
194. Authors' meetings with senior U.S. Air Force officials.
195. Department of Defense, *Defense Budget Priorities and Choices*, 5.
196. Department of the Air Force, *USAF Force Structure Changes: Sustaining Readiness and Modernizing the Total Force* (February 2012), 5.
197. *Ibid.*
198. In its FY 2013 budget, the Air Force proposed eliminating 900 Air Force Reserve personnel and 5,100 Air Guard personnel, versus only 3,900 active component personnel. It also proposed retiring or canceling procurement of all 38 planned C-27Js, a brand-new aircraft that was slated to be solely owned, operated and maintained by the Air Guard. Department of the Air Force, *USAF Force Structure Changes*, 3; Lt Col Ellen Krenke, "Air Guard readies for C-27J fleet," *Armed Forces Press Service*, November 2, 2009; Kate Brannen, "Lawmakers rail against proposed Air Guard cuts," *Air Force Times*, April 17, 2012; and James Dao, "Air National Guard Lobbies Successfully Against Budget Cuts," *The New York Times*, April 24, 2012.
199. The Air Force should buy fewer F-35 trainer aircraft and rely more on simulators, and it should invest in fewer F-35s for Air National Guard units based in the United States that are primarily tasked to perform sovereignty patrols. The Air Force should upgrade or buy updated F-16s for these units instead. The Air Force should use the resulting savings to accelerate development of the new long-range bomber and combat-capable UAS.
200. Andrea Shalal-Esa, "U.S. sees lifetime cost of F-35 fighter at \$1.45 trillion," *Reuters*, March 29, 2012.
201. Authors' meeting with senior U.S. Air Force official.
202. Jeff Schogol, "5 A-10 squadrons to be cut," *Air Force Times*, January 30, 2012.

203. In recent years, the Air Force has successfully used its C-130s in direct support of the Army. It should replicate this success with the Navy and Marine Corps as we propose.

204. The House Armed Services Committee included this recommendation in its markup of the FY 2012 National Defense Authorization Act. See House Armed Services Committee, *National Defense Authorization Act for Fiscal Year 2012*, Report 112-78 (May 17, 2011), 81-82.

205. Host nations can help pay for the costs of facilities, labor, utilities and vicinity improvements – something that obviously could not occur if the bases were located in the continental United States. Host nations also can make indirect contributions such as forgoing or reducing rents and revenues on government-owned land, providing tax concessions or waiving customs duties.

206. In 2011, General Schwartz identified “[s]eeking broader, global access to bases [...] to provide effective power projection in the future” as one of his focus areas. See Department of the Air Force, *CSAF Vector 2011* (July 4, 2011), 6.

207. Jim Garamone, “Special Ops, Conventional Forces Work Together, Admiral Says,” *American Forces Press Service*, February 7, 2012.

208. Department of Defense, *National Defense Budget Estimates for FY 2013*, 104-105.

209. ADM William H. McRaven, Commander, U.S. Special Operations Command, statement to the Armed Services Committee, U.S. Senate, March 6, 2012, 4, 16-17.

210. *Ibid.*, 4.

211. SOCOM is formally a functional command charged with providing SOF to geographic combatant commands to fulfill their requirements. However, SOCOM’s subordinate commands, such as Joint Special Operations Command, have the authority to conduct operations directly overseas. In the future, SOCOM may increase its own ability to globally position forces in support of these missions and other operations.

212. Many SOF units are highly specialized to conduct niche mission sets. The units that specialize in direct action are popularly identified with the Navy’s Special Warfare Development Group and the Army’s Delta Force. These “black SOF” often carry out highly specialized kinetic operations in counterterrorism, counterproliferation and other priority missions. Most SOF units are “white SOF,” which mainly conduct advisory missions and traditional unconventional warfare operations. These units include the Army’s Special Forces.

213. Throughout this section, we refer to all non-SOF military units as general-purpose forces.

214. Department of Defense, *Defense Budget Priorities and Choices*, 7.

215. The SOCOM FY 2013 budget request described the high demand for SOF as a “new normal” that requires SOF forces to be persistently forward-deployed.” See U.S. Special Operations Command, *Fiscal Year 2013 Budget Estimates* (February 2012), 802.

216. Michelle Tan, “Less Turn and Burn for Special Operators,” *Army Times*, March 19, 2012.

217. Dan Parsons, “Special Operations Boost Demand for Helicopters,” *National Defense* (May 2012).

218. Paul McLeary, “Making Do for Special Ops,” *Aviation Week*, September 6, 2011.

219. This capability could also be provided by Army special operations aviation if cross-service agreements and funding are put in place to meet this requirement for additional aircraft.

220. Department of Defense, *Sustaining U.S. Global Leadership*, 3.

221. Eric Schmitt, Mark Mazzetti and Thom Shanker, “Admiral Seeks Freer Hand in Deployment of Elite Forces,” *The New York Times*, February 12, 2012.

Appendix

APPENDIX: SUMMARY OF POLICY RECOMMENDATIONS 65

M A Y 2 0 1 2

Sustainable Pre-eminence
Reforming the U.S. Military at a Time of Strategic Change



APPENDIX: SUMMARY OF POLICY RECOMMENDATIONS

While the executive branch and Congress will have to cooperate to achieve many of these reforms, DOD already possesses the authorities required to take initial steps on its own.

DOD-Wide Recommendations

STRENGTHEN JOINT INTEGRATION

- Strengthen the roles of the chairman and vice chairman of the Joint Chiefs of Staff in challenging COCOM operational plans and service program requirements.
- Create standing red teams, under the purview of the Joint Staff and OSD, to conduct competitive analysis and provide an independent perspective on requirements, programs and plans.
- Increase standing joint operational headquarters to avoid having to create ad hoc joint headquarters during wartime and to promote further jointness during peacetime.
- Reform joint PME to help produce future leaders capable of adaptive thinking amid uncertainty about the time, location and character of future conflicts.

DOWNSIZE MILITARY HEADQUARTERS

- Reduce geographic combatant commands from six to four by merging AFRICOM with EUCOM and combining NORTHCOM and SOUTHCOM into a single command dedicated to the Western Hemisphere.
- Limit the practice of establishing service component headquarters commands for every new joint headquarters; instead, either create small service cells within joint headquarters or assign existing service operational headquarters to serve as service component headquarters.
- Once this change is made, abolish existing administrative service component commands, replacing some with operational headquarters and others by shifting functions to higher service staffs.

REDUCE DEFENSE CIVILIANS AND CONTRACTORS

- Reduce DOD's civilian workforce by 100,000 in the next 10 years by not replacing some retirees and

Guide to Acronyms Used in Appendix

AAV: amphibious assault vehicle
AC: active component
AFRICOM: U.S. Africa Command
ARFORGEN: Army force generation model
BAMS: broad area maritime surveillance
BCT: brigade combat team
C4ISR: command, control, communications, computers, intelligence, surveillance and reconnaissance
CENTCOM: U.S. Central Command
COCOM: combatant command
COTS: commercial off-the-shelf
CVN: nuclear powered aircraft carrier
DCGS-A: Distributed Common Ground System-Army
EUCOM: U.S. European Command
FY: fiscal year
GCV: ground combat vehicle
JLTV: joint light tactical vehicle
LAV: light armored vehicle
LCS: littoral combat ship
MEU: Marine Expeditionary Unit
MPSRON: maritime prepositioning ship squadron
MRAP: mine-resistant ambush-protected vehicle
NCO: noncommissioned officer
NORTHCOM: U.S. Northern Command
O&M: operation and maintenance
OSD: Office of the Secretary of Defense
PACOM: U.S. Pacific Command
PME: professional military education
R&D: research and development
RC: reserve component
SBIRS: space-based infrared system
SOF: special operations forces
SOUTHCOM: U.S. Southern Command
SSN-774: Virginia-class attack submarine
UAS: unmanned aerial systems
WMD: weapons of mass destruction

using workforce-shaping tools when necessary.

- Reduce spending on contractor augmentees for headquarters staffs by increasing by 15 percent the reductions directed by former Defense Secretary Robert Gates, with the goal of returning spending on contractors to 2003 levels.

ARMY RECOMMENDATIONS

PERSONNEL	PLATFORMS	READINESS	POSTURE
<ul style="list-style-type: none"> • Reduce AC end strength to 480,000 • Transfer up to one-quarter of AC armored BCTs to the RC • Mandate more lateral personnel assignments between the AC and RC 	<ul style="list-style-type: none"> • Delay the GCV until FY 2021 • Support export of M1 tanks to allies and partners • End Stryker production • Store most MRAPs or place in RC • Continue all attack, rotary-wing lift and UAS aircraft programs • Change JLTV to smaller serial buys every two to three years • Uphold cancellation of Humvee modernization program • Cancel DCGS-A and replace with COTS alternative 	<ul style="list-style-type: none"> • Continue plans to reset the force after war-time operations • Redesign AR-FORGEN such that it can: <ul style="list-style-type: none"> » Maintain more units at higher readiness » Surge the AC into combat more rapidly • Prioritize O&M budgets • Retain more midgrade NCOs and officers • Create small advisory command to institutionalize advise and assist capability 	<ul style="list-style-type: none"> • Strengthen rapid deployment by rebuilding infrastructure, fast sealift ships, and afloat and ashore prepositioning • Assign regional responsibilities for divisions and corps; link corps headquarters to PACOM, CENTCOM, EUCOM/AFRICOM and NORTHCOM/SOUTHCOM • Direct Army staff in Pentagon or U.S. Army Forces Command to assume more duties now performed by administrative Army service component headquarters • Increase rotational overseas exercise program, particularly in the Asia-Pacific, Middle East and Europe

NAVY RECOMMENDATIONS

PERSONNEL	PLATFORMS	READINESS	POSTURE
<ul style="list-style-type: none"> • Adopt crew rotation for more surface ships to enable them to remain forward-deployed longer 	<ul style="list-style-type: none"> • Reduce CVN fleet from 11 to 10 and AC air wings from 10 to nine • End LCS in FY 2017 after procuring 27 ships • Maintain 30 amphibious ships • Procure two SSN-774s per year through the early 2020s • Reduce by 50 percent the planned inventory of 369 F-35Cs • Accelerate the carrier-based X-47B UAS and create an unmanned strike program of record • Set goal for one-quarter of CVN strike assets to be UAS by 2025 • Reduce by 50 percent the planned procurement of MQ-4C BAMS UAS • Continue funding ArLight hypersonic cruise missile 	<ul style="list-style-type: none"> • Challenge unconstrained requirements of combatant commanders in order to sustain ship and aircraft service lives • Place older but still operable ships and aircraft in “warm” status within the RC • Form a permanent public-private partnership to monitor the health of America’s shipyards • Co-lead a joint annual training exercise with the U.S. Air Force to test emerging concepts related to Air-Sea Battle 	<ul style="list-style-type: none"> • Forward-base one additional carrier, more attack submarines and more small to midsize combatants in the Asia-Pacific and Middle East, or nearby areas • Forward base more amphibious ships in the Western Pacific • Conduct more regional exercises in the Asia-Pacific and Middle East

MARINE CORPS RECOMMENDATIONS

PERSONNEL	PLATFORMS	READINESS	POSTURE
<ul style="list-style-type: none"> • Reduce AC end strength to 175,000 • Downsize the many specialties that replicate capabilities found elsewhere in the U.S. military 	<ul style="list-style-type: none"> • Maintain current plans for the F-35B • Eliminate F-18C/D and EA-6B squadrons on CVNs • End MV-22 procurement in FY 2016 after buying 314 aircraft • Sustain current plans for AH-1Z, UH-1Y and CH-53K helicopters • Transfer or reduce inventories of C-130s, C-9s, executive jets, UAS and EA-18s • Change JLTV to smaller serial buys every two to three years • Upgrade, eliminate and/or move to the RC most MRAPs, M1 tanks, AAVs, LAVs and artillery pieces 	<ul style="list-style-type: none"> • Continue plans to reset the force after war-time operations • Increase investments in training for sea-based power projection • Retain more midgrade NCOs and officers • Offer AC and RC personnel more opportunities to pursue resident schooling and developmental assignments 	<ul style="list-style-type: none"> • Sustain three MEU rotations globally • Shift one MEU now stationed on the U.S. West Coast to forward-base in northern Australia • Sustain three MPSRONS • Airlift rotational forces periodically to fall in on pre-positioned stocks • Pre-position ashore more equipment in Australia, Guam and/or Qatar • Hold annual exercise to offload one MPSRON • Increase the number and frequency of international exercises performed by MEUs afloat and Marines doing fly-in rotations ashore

AIR FORCE RECOMMENDATIONS

PERSONNEL	PLATFORMS	READINESS	POSTURE
<ul style="list-style-type: none"> • Uphold cuts to the RC proposed in DOD's original FY 2013 budget request • Prepare a long-range personnel plan outlining the future of the Air Force's total force • Assign the RC to undertake regular cyclical deployments to meet requirements of combatant commanders 	<ul style="list-style-type: none"> • Reduce planned F-35A inventory from 1,763 to 1,000-1,200 • Create a new requirement for a long-range, stealthy UAS strike/ISR platform • Sustain current long-range strike bomber timeline, but re-evaluate current inventory goal of 80-100 aircraft • Reduce planned KC-46A inventory if supported by reduced inventories of F-35A and long-range strike bomber • Assume full intratheater tactical airlift mission, thereby assuming the mission of Navy and Marine Corps C-130 fleets • Expand the Air Force's role providing operational and strategic ISR and UAS • Replenish expended munition stocks and pursue new beyond-visual-range missile systems • Accelerate investments in securely networked C4ISR, including space-based options such as lower-cost satellites • Accelerate the Airborne Infrared system and data exploitation via overhead persistent infrared sensors (such as SBIRS) 	<ul style="list-style-type: none"> • Co-lead a joint annual training exercise with the U.S. Navy to test emerging concepts related to Air-Sea Battle 	<ul style="list-style-type: none"> • Strengthen agreements, access and selective presence at bases outside the continental United States, particularly in the Asia-Pacific and Middle East • Undertake brief rotational squadron deployments for combined training with India, Turkey, Singapore and others

SOF RECOMMENDATIONS

PERSONNEL	PLATFORMS	READINESS	POSTURE
<ul style="list-style-type: none"> • Increase opportunities for PME, joint assignments and improved tactical and language training • Refine career paths to include adequate time and career incentives for professional development 	<ul style="list-style-type: none"> • Continue current plans for fixed-wing aircraft • Increase investment in rotary-wing lift capabilities • Sustain current plans for UAS • Continue to pursue current plans for maritime platforms • Continue to invest in R&D for advanced technologies, particularly those that increase integration between SOF and general-purpose forces 	<ul style="list-style-type: none"> • Encourage more rotational personnel assignments between SOF and general-purpose forces • Enhance expertise in counter-proliferation and exploiting cyberspace for sensitive missions 	<ul style="list-style-type: none"> • Return more SOF to the task of advising foreign militaries • Reinforce black SOF focus on operating against transnational terror threats and preparing for WMD-related events • Continue to monitor force to assess the impacts of high demands • Continue to reevaluate and update oversight policies as needed • Reinvigorate the global network of foreign special operations forces with which U.S. SOF engage



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, and was established in February 2007 by co-founders Kurt M. Campbell and Michèle A. Flournoy. CNAS is a 501(c)3 tax-exempt nonprofit organization. Its research is independent and non-partisan. CNAS does not take institutional positions on policy issues. Accordingly, all views, positions, and conclusions expressed in this publication should be understood to be solely those of the authors.

© 2012 Center for a New American Security.

All rights reserved.

Center for a New American Security

1301 Pennsylvania Avenue, NW
Suite 403
Washington, DC 20004

TEL 202.457.9400
FAX 202.457.9401
EMAIL info@cnas.org
www.cnas.org

Production Notes

Paper recycling is reprocessing waste paper fibers back into a usable paper product.

Soy ink is a helpful component in paper recycling. It helps in this process because the soy ink can be removed more easily than regular ink and can be taken out of paper during the de-inking process of recycling. This allows the recycled paper to have less damage to its paper fibers and have a brighter appearance. The waste that is left from the soy ink during the de-inking process is not hazardous and it can be treated easily through the development of modern processes.





STRONG, PRAGMATIC AND PRINCIPLED
NATIONAL SECURITY AND DEFENSE POLICIES

1301 Pennsylvania Avenue, NW
Suite 403
Washington, DC 20004

TEL 202.457.9400
FAX 202.457.9401
EMAIL info@cnas.org

www.cnas.org

ISBN 978-193508759-5
5 0999 >



9 781935 087595



Printed on Post-Consumer Recycled paper with Soy Inks