

SENATE COMMITTEE ON ARMED SERVICES

STATEMENT OF
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BEFORE THE
SENATE COMMITTEE ON ARMED SERVICES
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INTRODUCTION

Mr. Chairman and distinguished members of the committee, I am honored to join you today. It is my privilege to lead United States Strategic Command (USSTRATCOM), and on behalf of our 54,500 outstanding military and civilian men and women I am pleased to report USSTRATCOM remains capable and ready to meet our assigned missions. I thank Congress and this committee for your support and I look forward to continuing to work together to ensure our national security today and tomorrow.

USSTRATCOM TODAY

Uncertainty and complexity continue to dominate the national security landscape. Today's operating environment is increasingly characterized by the potential for persistent conflict across all domains—air, sea, land, space and cyberspace—where state and non-state actors alike can employ highly adaptive combinations of strategies, tactics and capabilities to simultaneously and quickly exploit and transit political, geographic and domain boundaries. These hybrid threats are challenging earlier assumptions; stressing our plans, practices, and organization; compelling unity of effort; and demanding flexible and innovative approaches to create effects tailored to the unique actors, circumstances and scenarios we face. In short, yesterday's battlefield is rapidly becoming tomorrow's global battle-space.

Events continue to validate this perspective. Even as the U.S. continues to transition from today's conflicts, the reality of preparing for tomorrow's challenges has emerged. Violent extremists continue to threaten U.S. interests, allies, partners and the homeland. Their acts remind us that we must remain both vigilant and engaged with our combatant command (CCMD) partners to prevent a terrible connection between such extremists and weapons of mass destruction (WMD). In December 2012, North Korea conducted a missile launch in violation of its obligations under multiple United Nations Security Council resolutions and announced last month it conducted another nuclear test. Iran continues to pursue its ballistic missile program and its nuclear ambitions. The Arab Spring continues to unfold and the outcome remains unresolved. Syria, a state with significant stocks of chemical weapons, continues to be gripped by civil war.

We continue to see improvements in more traditional militaries whose capabilities can range from low-end conventional, to sophisticated, all-domain regional and global (including WMD). China conducted a successful anti-ballistic missile test and continues to modernize its nuclear forces. South and East China Sea tensions rose between China and the Philippines (Scarborough Shoals) and Japan (Senkaku/Diaoyutai Islands) respectively. Russia continues to modernize its nuclear forces and increase its level of strategic military activity.

Hostile cyber activities have increased in both quantity and intensity, and the potential exists for even greater activity against U.S. intellectual property, institutions, and critical infrastructure. U.S. national power relies heavily on cyberspace and the capabilities it enables; therefore, we must continue to improve the protection and resilience of our networks as we work to increase cyber capacity and capability.

Fiscal uncertainty presents our people with an unprecedented combination of professional and personal concerns as well. The all-volunteer military and civilian team has performed beyond our greatest expectations and is the envy of the world; but some of the best young uniformed and non-uniformed people assigned to USSTRATCOM are questioning their future. The uncertainty surrounding civilian hiring restrictions, salary freezes, and the possibility of unpaid furloughs is especially troubling since 60% of the USSTRATCOM headquarters staff and much of the essential work force which supports our missions and sustains our mission critical platforms and systems are civilians. Preserving this combat-experienced military-civilian team in the face of further force reductions, a potential decline in readiness and unpaid furloughs is one of my greatest concerns.

The possibility of dramatic budget reductions creates additional problems. The inflexible nature of cuts associated with sequestration and the associated out year budget cuts of over \$50 billion per year across the Department of Defense, will likely cause dramatic decreases in force readiness that will eventually impact our ability to deter aggression and assure allies and partners. The impact of across-the-board reductions and out year budget cuts to readiness accounts will cascade as time passes; recovery from such cuts will take longer and be more difficult to achieve. Similarly, cuts to investment accounts

will delay often deferred and much needed modernization to the nuclear enterprise, curtail the expansion of cyber capabilities needed to meet the growing threat, and will delay other key capabilities. In all cases risk will increase.

The challenges inherent in these examples remind us that as we plan, prepare and apply current capabilities to existing problems, we must also remain aware of and prepared for the unexpected. Within the new defense strategy we must maintain the organizational, programmatic, and intellectual flexibility to deal with surprise and meet the uncertainties of tomorrow's unforeseen problems.

USSTRATCOM remains focused on conducting the missions most critical to protect the core national security interests described in the 2012 defense strategic guidance: defeating al-Qa'ida and its affiliates and succeeding in current conflicts; deterring and defeating aggression by adversaries, including those seeking to deny our power projection; countering WMD; effectively operating in cyberspace, space, and across all domains; maintaining a safe and effective nuclear deterrent; and protecting the homeland.

While our heritage is nuclear and our nuclear vigilance will never waver as long as nuclear weapons exist, today's command is far more diverse and versatile. The missions and forces assigned to this command allow us to gain a global perspective and to create synergy from a range of strategic capabilities—those that can impact many people or systems, affect large physical areas, act across great distances, persist over long periods of time, change the status quo in a fundamental way, and provide the President ready military options in extreme circumstances—that is unique among the CCMDs.

USSTRATCOM's nuclear and conventional strike, space, cyber, and other capabilities remain foundational to confronting the challenges of the future. The U.S. can neither deter adversaries and assure allies nor prevail in war without them—simply put, USSTRATCOM's responsibilities and capabilities underwrite freedom of action for our nation and generate viable options for our national leaders. Our seemingly diverse missions share commonalities: they are strategic in nature, global in scope, and they are interdependent with the responsibilities and capabilities of the other CCMDs, the whole of the U.S. government, and key allies.

21ST CENTURY DETERRENCE AND ASSURANCE

USSTRATCOM's primary mission objective is to deter strategic attack on the U.S., our allies and partners by making anyone who might contemplate such an attack recognize that they will not achieve their goals and will pay an extraordinary price if they try. We employ many means to

Future conflict will:

- Encompass all domains (air, sea, land, space, and cyberspace, all tied together through the electromagnetic spectrum)
- Cross traditional geographic and man-made boundaries
- Involve a wider range of actors with access to advanced, low-cost capabilities
- Likely involve the U.S. homeland and multiple Combatant Commands
- Demand that the U.S. continue to evolve toward an interdependent joint force that is integrated in every aspect

influence the perceptions and assessments of others; but the continuing credibility of America's capabilities is the most effective deterrent against a strategic attack on the U.S.

Deterrence and assurance have been part of the national lexicon for well over half a century and, for many of those decades, strategic deterrence was synonymous with nuclear deterrence (i.e., using nuclear weapons to deter a massive nuclear or conventional attack on the U.S. or our allies). Today we believe deterrence and assurance concepts address a broader array of strategic attacks from individual actors who will have widely different capabilities and motivations. While nuclear attack will always remain unique in its potential for impact and devastation, today's strategic attacks are potentially broader and defined by their effect versus a specific weapon or means of delivery. Therefore, it is increasingly clear that the capabilities we need, to deter or defeat attacks, are those that can meet multiple scenarios and take full account of the interdependencies and interactions among CCMDs and across the air, sea, land, space, and cyberspace domains—all tied together through the electromagnetic spectrum.

It is also increasingly clear that we must carefully shape our deterrence planning to specific actors and situations. To do this will require a deeper and more comprehensive understanding of our potential adversaries and their decision making processes, a robust understanding of the threats they pose, and more flexibility and speed in our strategy development and planning processes. In practice, 21st Century deterrence encompasses a wider range of complementary tools, including both nuclear and strong

conventional forces, perhaps non-kinetic capabilities, limited missile defenses, unfettered access and use of space and cyberspace, and modern capabilities that are both resilient and sustained.

USSTRATCOM MISSIONS
<ul style="list-style-type: none">• Strategic Deterrence• Space Operations• Cyberspace Operations• Joint Electronic Warfare• Global Strike• Missile Defense• Intelligence, Surveillance, and Reconnaissance• Combating Weapons of Mass Destruction• Analysis and Targeting

Future conflicts will likely involve multiple CCMDs from the outset, and so we must improve how we integrate our efforts across CCMDs and with the whole of the U.S. government and allies. We need the resources, the situational awareness, the organizations, and the decision-making capabilities with the responsiveness and flexibility to provide the

tailored effects the President might need before, during, or after armed conflict.

Assuring U.S. allies and partners also contributes to deterrence by demonstrating to our adversaries that our alliances and coalitions are resilient and enduring. Our assurance efforts must leverage the strengths of the individual CCMDs, Services, and Agencies, and complement other efforts already in place or in planning. Assurance is not necessarily a byproduct of deterrence; it is a deliberate effort in itself and one that often requires additional resources beyond those needed for deterrence.

USSTRATCOM is helping to shape the DoD's approach to deterrence and assurance. I'm pleased to report we have made significant progress in this regard through our Deterrence and Assurance Campaign. This campaign arranges USSTRATCOM's actions, operations, and messages in time, space, and purpose to achieve our deterrence objectives, ensure combat readiness, and generate unity of effort. The campaign is oriented toward four strategic military objectives.

- Enhancing strategic military deterrence. Adversaries who contemplate strategic attack on the U.S. and our allies must perceive unacceptable costs and an inability to obtain desired outcomes.
- Maintaining our readiness and capability to employ force to prevent and defeat all strategic attacks, not just nuclear.

- Strengthening efforts to prevent proliferation and use of WMD and mitigate effects if such weapons are used. This includes accelerating the speed with which we develop and field capabilities like standoff detection, better nuclear forensics and improved global situational awareness.
- Increasing the combat capability of the Joint Force by continuing to integrate and exercise USSTRATCOM capabilities and support plans across mission areas and with other CCMDs and allies.

The end result of the campaign planning and organizational effort is a USSTRATCOM that is more effective and soundly positioned to meet today’s challenges, deter tomorrow’s threats, and assure allies and partners of U.S. commitment to them.

COMMAND PRIORITIES

The new U.S. defense strategy is based on a future Joint Force that will be smaller and leaner, but will be agile, flexible, ready, and technologically advanced. The strategy also incorporates the concepts of networked warfare (recognizing the interdependence of both the forces and the CCMDs) and unity of action (integrated military action as part of a comprehensive whole of government and, when needed, multi-national approach). Within this new strategy and in support of USSTRATCOM’s assigned missions, I have identified five priorities:

CDR USSTRATCOM PRIORITIES
<ul style="list-style-type: none"> • Deter nuclear attack with a safe, secure, and effective nuclear deterrent force • Partner with the other combatant commands to win today • Respond to the new challenges in space • Build cyberspace capability and capacity • Prepare for uncertainty

As long as nuclear weapons exist, USSTRATCOM’s top priority must be to deter nuclear attack with a safe, secure and effective strategic nuclear deterrent force. USSTRATCOM plans, operates and, if directed by the President, employs the strategic nuclear deterrent force as needed to achieve national objectives. To meet national deterrence objectives, we continue to maintain a Triad of ballistic missile submarines, intercontinental ballistic missiles (ICBMs), nuclear capable heavy bombers and associated aerial tankers, and an assured warning and command and control system. To provide the President with

maximum flexibility, we maintain a portion of the missile submarine and ICBM forces in a ready-to-use posture that is governed by strict nuclear surety procedures and is constantly under the direct positive control of the President. I can assure you that today's nuclear weapons and Triad of delivery platforms are safe, secure, and effective.

My second priority is to bring USSTRATCOM's tremendous military capabilities to bear in support of our CCMD partners as needed to address today's conflicts. Over the last year we have worked hard with the other CCMDs, departments and agencies to institutionalize and enhance the integrated and synchronized joint force capability that was the by-product of the last decade of conflict. To that end we are actively exploring and creating new processes and relationships to wield all of the nation's capabilities in responding to future threats.

My third priority is to ensure that space capabilities will be available whenever and wherever they are needed. Space capabilities are integral to the American way of warfare and today's space environment is characterized by more participants, more activity, and the proliferation of a variety of capabilities that can threaten our access to and freedom of action in space. In order to preserve the national security, humanitarian, scientific, and commercial advantages we gain from operating in space, USSTRATCOM has spent much of the last year improving our contingency plans and working with our Service components to enhance the resilience of our space capabilities.

My fourth priority is to continue building the cyberspace capability and capacity. Cyberspace is central to civil, commercial, humanitarian and national security endeavors as well and, like space, we need to protect our access to and freedom of action in cyberspace. We are also working with others in the U.S. government to help protect the nation's intellectual property and critical infrastructure. We are actively collaborating with partners in industry, academia, and the intelligence community to achieve those goals. At the same time we are working hard with United States Cyber Command to shape our future cyber force and advocate for the resources to meet the increased demands of this new domain.

Finally, we expend considerable effort trying to understand the emerging strategic environment to avoid or limit the impact of surprise which military history makes clear is a deadly enemy. We explore

ways to limit the impact of surprise by integrating our plans and operations with other CCMDs, agencies, and partners through realistic and challenging exercises, and by exploring alternative scenarios and futures through aggressive table-top exercises. We are also creating opportunities for Joint Forces to exercise in an environment in which space and cyberspace capabilities are degraded.

ENDURING ADVANTAGES

Given the uncertainty in the global environment abroad and the fiscal environment at home, the Nation must rely ever more heavily on the enduring advantages represented by our people and the ability of our interdependent Joint Force to maintain global awareness and project power. USSTRATCOM contributes and advocates for major capabilities that enable these enduring advantages.

Our People

People are our greatest and most enduring strength. The men and women of USSTRATCOM remain fully engaged with our many mission partners every day—both at home and abroad—despite uncertainty and a high mission pace multiplied by the inherent stresses of conflict and combat. As a result of DoD-wide suicide statistics and other human factors indicators, we have renewed our efforts to ensure our workforce remains viable, strong, capable, and resilient. We have taken specific steps to strengthen our workforce and enhance the working environment—addressing the wholly unacceptable nature of sexual assault within our ranks, respecting and including service members of all sexual orientations, understanding and treating combat-induced stress, and confronting and preventing the tragedy of suicide. These efforts are a good start toward protecting our most valuable asset, but we must do more. Leaders at all levels of USSTRATCOM are emphasizing the critical issues of personal health and well-being that are confronting our military and civilian members and their families.

I fully support the efforts of the Secretary of Defense, Chairman of the Joint Chiefs of Staff, Service Chiefs, and the Congress to recruit, retain, and support our active duty, reserve, National Guard and civilian personnel. Our strategy demands that we also support educational efforts (including lifelong science, technology, engineering and math skills development) that will enable us to sustain the unique and highly technical nuclear, global strike, space and cyber workforce skills we need. However, I am

extremely concerned about the impacts of actual and potential budget reductions on our people. While I believe these amazing professionals will continue to cope with uncertainty in the near-term, I cannot say the same over time if the financial risks to the individuals and their families persist.

Global Awareness

Our future success also depends on enhancing our enduring advantage in global awareness. Over the past decade, U.S. air, sea, and space-based capabilities have provided unfettered global access for the surveillance and reconnaissance information needed to detect and characterize trends and events. Most often, these platforms operated in uncontested environments. As we go forward, USSTRATCOM and its mission partners need to work to ensure the U.S. sustains this advantage in anti-access/area denial (A2/AD), cyberspace, space, and other contested operating environments.

Space situational awareness (SSA) is foundational to unfettered freedom of action in all domains. SSA involves not only characterizing the dynamic physical arrangement of the space domain, but also the EMS through which we transmit and receive spacecraft commands and mission data. Protecting our assets from unwanted electromagnetic interference is one of our highest priorities, and we are in the process of streamlining procedures to detect, identify, characterize, geo-locate and resolve such problems.

Many nations share the space domain and it is in our best interest to create an environment where the sharing of SSA data facilitates transparency. We provide conjunction analysis and collision warning for space operators around the world, intent on reducing the risk of collision that would create dangerous space debris. USSTRATCOM has entered into 35 signed commercial SSA sharing agreements. In 2012, we provided orbital data to 90 commercial and foreign, and 180 U.S. entities. We received and reviewed nearly 500,000 satellite observations and screened over 1,000 active satellites on a daily basis. From those screenings we provided over 10,000 conjunction warnings, supported 75 conjunction avoidance maneuvers, and fulfilled over 300 orbital data requests for more than 85 separate entities. Those numbers will grow every year, lending urgency to SSA improvements and establishment of appropriate “rules of the road” that will govern orbital behavior and allow us to more easily detect problems as they occur.

We are also working to share the awareness advantages of space with some of our closest allies and partners. The Combined Space Operations (CSpO) concept is built upon the current Joint Space Operations Center (JSpOC) at Vandenberg Air Force Base, California, with virtual connections between it and other nations' space operations centers around the world. This new paradigm enables partnering nations to work together to maintain the strategic advantage of access to space capabilities through synchronized activities and sustainable, combined military space operations.

Another component of global awareness, cyberspace, has become a key element for operations in all other domains, and cyber capabilities have enabled military forces to function with greater efficiency, precision and lethality. Adversaries also recognize the contribution of cyberspace to their overall warfighting capabilities and continue to pursue the advantages that effective use of cyberspace can provide. The result is a competitive and continuous life cycle of modification, enhancement and replacement of information technology systems that friends and foes alike can use to gain military, economic, or social advantages. We believe that military functions and battlefield operating systems will increasingly depend upon agile use of cyberspace to gain advantages in combat.

Other intelligence, surveillance, and reconnaissance (ISR) capabilities also strengthen global awareness; the space capabilities described just above provide some of these, but a large number of other systems—manned and unmanned aircraft, ships, submarines, cyber, human—make critical contributions as well. In crisis or contingency, “ISR” is one of the first capabilities commanders request and expect for the duration of the mission. From determining the status of Syrian chemical weapons, to identifying violent extremist organizations' safe havens in North Africa, to monitoring tensions in the South and East China Seas, to assessing Iran's progress with nuclear weapons, to tracking the development and deployment of adversary ballistic missiles—ISR has gone from an enabler to an essential component of all military operations.

A fourth component of global awareness is control of usable portions of the electromagnetic spectrum (EMS). Almost every modern technological device is reliant on the EMS. The commercial sector is now the primary driver of spectrum technology development which has led to an exponential

increase in the availability of EMS-dependent devices and a global proliferation of emerging commercial-off-the-shelf (COTS) and dual-use technologies. This proliferation creates competition with the military's required access to the EMS and potentially pits economics against national security needs. USSTRATCOM is working with the Services, Joint Staff, and OSD to engage the whole of government to develop a cooperative way ahead to secure spectrum access.

USSTRATCOM employs capabilities in the air, space, cyberspace, and at sea in order to ensure the Nation maintains global awareness as the foundation for deterrence and, ultimately, to project power when and where needed.

Power Projection

The U.S. has long held a decisive military advantage through our ability to project power to any corner of the globe. U.S. conventional forces are second to none and our forward presence around the world ensures we can rapidly respond to crisis in any theater of operations. Adversaries and potential adversaries have taken note of this and are working to deny us this advantage through A2/AD strategies, improvements to their own capabilities, and the acquisition of WMD to discourage or limit U.S. action. As described in the 2012 DoD strategic guidance, "In order to credibly deter potential adversaries and to prevent them from achieving their objectives, the United States must maintain its ability to project power in areas in which our access and freedom to operate are challenged."

The ballistic missile submarines (SSBNs), ICBMs, heavy bombers, and cruise missiles assigned to USSTRATCOM remain the core of our nuclear deterrent. These highly reliable platforms are credible because we continue to invest the resources required to properly evaluate their performance and upgrade their capabilities on a recurring basis. Each time we test a ballistic missile or forward-deploy a heavy bomber, our allies and potential adversaries take note; our ability to transparently demonstrate the continued effectiveness of these tools creates a lasting impression which enhances our deterrent.

As effective as the U.S. deterrent force is today, we must plan for the likely circumstance that while we are projecting power abroad in a future crisis or conflict, we will also be defending the homeland in cyberspace and against missile or terrorist attack, perhaps at the outset of—or even before—

a regional conflict goes “hot”. This is an operational challenge that has strategic implications for warning, thresholds, plans, and responses. Therefore, U.S. plans and operations across multiple CCMDs must be so well integrated and synchronized that when executed, they function as a single, coherent American campaign. Over the past year, USSTRATCOM has begun a complete reassessment of our operational plans to ensure we are well-integrated with our mission partners in the other CCMDs. We continue to exercise and seek robust training opportunities with these partners (including opportunities that highlight operations in contested environments) to ensure we are ready to achieve the objectives directed by the country’s senior leaders.

KEY INVESTMENTS

Deciding what capabilities are needed to meet these goals—hardware, people, organizations and procedures—is more difficult. Success in this context will be increasingly problematic as resources decline, but we can compensate by complementing planned investments with new operational concepts, more comprehensive and collaborative plans, and more effective use of the capabilities we have.

Key Investment: Nuclear Deterrent Forces

Over the past two decades, the United States has responded to changing geopolitical conditions by making appropriate reductions in the total number of nuclear delivery platforms we operate and the number of weapons in our nuclear stockpile. These reductions were determined based on a careful assessment of the capabilities required to provide the options and effects a President might need to achieve national security objectives. These capabilities include the nuclear weapons, the strategic delivery platforms, surveillance and reconnaissance systems, supporting intelligence, and the systems by which we command and control these unique forces. We must continue to invest in each of these areas even as we reduce to force levels specified by New START.

Many of our current nuclear command and control (NC3) systems were designed for the Cold War and require modernization in order to effectively meet the challenges presented in the evolving security environment. Using new and emerging technologies, we have set a course to transform the Nation’s NC3 architecture to achieve robust and resilient 21st century capabilities. As part of

modernizing nuclear command and control, last year we broke ground on the new USSTRATCOM Command and Control (C2) Facility. Our current headquarters was built in 1957 to support a single mission, nuclear deterrence and operations, with the corresponding C2 technology of the time (the land line telephone). Our greatly expanded mission set, combined with the vastly more complex supporting technology placed increasing demands on the legacy electrical and air handling systems to the point where we suffer numerous electrical, cooling, water, fire detection/suppression, and other basic service interruptions. Your continued support for the new facility is greatly appreciated and will ultimately provide better command and control for all of our strategic forces.

The Triad of SSBNs, ICBMs and nuclear-capable heavy bombers, all with their associated support elements—offers a mutually reinforcing strategic package that provides a credible deterrent to our adversaries, assurance to our allies and partners, and flexibility for the President.

- Because of the extended service life of the current SSBN fleet, it is essential to provide sufficient resources to replace our Ohio-class ballistic missile submarines. Last year's decision to delay the Ohio-class Replacement Program by two years is all the risk I would recommend in this critical program.
- The Minuteman III force is sustainable through 2030 and potentially beyond with additional modernization investment. The ongoing Ground Based Strategic Deterrent Analysis of Alternatives is studying the full range of concepts to sustain this Triad leg beyond 2030.
- Planned sustainment and modernization activities will ensure a credible heavy nuclear and conventional bomber capability through 2040 for the B-52 and 2050 for the B-2. Looking forward, a new, long-range nuclear-capable penetrating bomber is required. USSTRATCOM is working with the Air Force to develop requirements for the next nuclear and conventional capable long-range strike platform and long-range stand-off missile. Additionally, the Air Force is replacing the aging KC-135 tanker fleet with the

KC-46A, ensuring an enduring air refueling capability essential to long-range bomber operations.

Regarding the nuclear weapons themselves, modernization has in practice meant sustainment of the nuclear warheads manufactured twenty-plus years ago. At the same time, the United States has maintained a unilateral moratorium on nuclear testing for over two decades. Thus, the nuclear weapons enterprise faces the complex challenges of certifying the effectiveness and reliability of nuclear weapons without actually testing them with nuclear explosions. Considerable progress has been made toward managing these challenges with aggressive science and surveillance programs, but our future confidence in the stockpile will depend centrally on our continuing ability to attract outstanding people with scientific, engineering and technological talent to this work.

Key Investment: Global Strike

Today, the only prompt global strike capability to engage potentially time-sensitive, fleeting targets continues to be ballistic missile systems armed with nuclear weapons. We continue to require a deployed conventional prompt strike capability to provide the President a range of flexible military options to address a small number of highest-value targets, including in an anti-access and area denial environment.

Key Investment: Combating Weapons of Mass Destruction (CWMD)

USSTRATCOM continues to make progress in our global CWMD efforts by synchronizing planning efforts across the combatant commands through cooperation on regional CWMD campaigns, alignment with Theater Campaign Plans and incorporation of CWMD objectives and concepts in deliberate and crisis action planning efforts with combatant commands.

Identifying and countering WMD requires extensive technical knowledge, capabilities and timely and relevant intelligence. In support of DoD objectives, USSTRATCOM continues to pursue capabilities necessary to detect, interdict and contain WMD. One of my highest priorities in addition to securing and reducing dangerous materials is acquiring the capabilities to monitor and track lethal agents and their means of delivery, and defeating or responding to the use of these weapons. Just this year, we established

and sponsored a new University Affiliated Research Center (UARC). The center will advance cutting-edge defense research in support of USSTRATCOM—as well as the rest of the U.S. government—in the mission areas of global deterrence and combating weapons of mass destruction, along with international space and cyber law. The UARC will help address these challenges by providing unique access to academic perspectives and research methods not currently found anywhere in the DOD, and will help ensure critical skill sets are nurtured, developed and available for DoD to engage current and future CWMD challenges. We are truly excited about this new partnership.

A key element of our CWMD efforts is the continuing maturation of USSTRATCOM's Standing Joint Force Headquarters for Elimination (SJFHQ-E). The SJFHQ-E achieved initial operational capability in September 2012 and is successfully supporting the other combatant commands with WMD elimination expertise and planning. When fully operational, SJFHQ-E will be able to quickly integrate into an operational headquarters, conduct both deliberate and crisis planning, and maintain awareness of the WMD environment.

Key Investment: Intelligence, Surveillance, and Reconnaissance (ISR)

The ISR community is increasingly being challenged to operate effectively in anti-access/area-denial environments. Additionally, our ability to process and analyze data from increasingly capable ISR platforms is a growing challenge. Analysts are dealing with more data on an increased operations tempo that imposes ever-greater demands on analysis and reporting timeliness. Greater efficiencies are clearly needed, and we are seeking them through improved data management, increased computing power and capability to help the analysts, and more effective management of ISR processing, exploitation and dissemination. Our intent is to manage resources globally while maintaining regional and local focus, thus ensuring we can more quickly reprioritize during and between emerging crises and contingencies, guaranteeing knowledge dominance for our commanders. Additionally, we are looking at ways we can reduce these gaps through globally connected, focused integration and by managing the exploitation and analytic resources in a more unified structure.

Key Investment: Electromagnetic Spectrum (EMS)

In August 2012, USSTRATCOM established a federated Joint Electromagnetic Spectrum Operations (JEMSO) Office, staffed by subject matter experts from across the headquarters and our components. This new organization supports all CCMDs with spectrum advocacy, operations, test and evaluation, and contingency planning. The JEMSO Office, in collaboration with the Joint Staff, is driving the development of a holistic JEMSO policy and doctrine that consolidates the activities of electronic warfare and spectrum management in order to significantly improve spectrum-related mission cohesion, agility, and responsiveness. We have created a mission partnership with OSD and the Joint Staff to chart a path forward regarding strategy, doctrine, and best practices to ensure that all facets of the process are built in a cogent and logical manner. Engagement beyond DoD will be vital for success in management of this mission area. The JEMSO Office will support the combatant commands through contingency planning, training, and advocacy for EMS capabilities to enhance combat effectiveness across all warfighting domains. To address the rapid technological advances and significant proliferation of EMS-dependent systems, USSTRATCOM's Joint Electronic Warfare Center (JEWEC) is leading a comprehensive, globally oriented, cross-domain, JEMSO assessment. This assessment will continue USSTRATCOM's effort to inform EMS-dependent capability acquisitions, ensuring our warfighters are armed with the best possible training and equipment to effectively operate in this dynamic environment.

Key Investment: Missile Defense

Ballistic missiles continue to become more accurate, lethal, and capable—remaining a significant threat to the U.S. homeland and a growing threat to our allies and our forces deployed abroad. In response, U.S. and allied capabilities to deter, detect, and defeat these weapons are also growing, with decades of research and development continuing to pay dividends in terms of capability and credibility. Missile defense capabilities address limited threats to the homeland and our regional partners and allies. Ballistic missile threats are likely to grow at least as rapidly as our defensive assets, giving us little margin for error in acquisition and force management decisions. Sustained missile defense investments support deterrence and assurance goals by significantly improving the protection of our homeland, our

forward-based forces, and our allies and partners. USSTRATCOM is committed to future capability development efforts that leverage past successes, address the most pressing and most likely threats, and produce field-tested, reliable assets in a cost-effective manner.

Over the past year, these efforts substantially improved our overall missile defenses. We deployed and integrated radars in Europe and the Middle East, improving threat coverage and available battle space. We concluded a review board and plan to test a revised design of the Capability Enhanced (CE II) interceptor to return it to full mission capability. We increased the number of Aegis BMD-equipped ships. And, we conducted testing and development of future elements of the European Phased Adaptive Approach (EPAA), an effort that improves missile defenses through the acquisition and integration of more advanced capabilities and the expansion of key partnerships.

USSTRATCOM coordinates the integrated air and missile defense Prioritized Capabilities List (PCL) across other CCMDs to improve Service and Missile Defense Agency understanding of prioritized joint warfighter capability needs. To this end the PCL advocates for continued support to regional and homeland missile defense needs. This includes the upgrade of early warning radars and their integration with existing fire control systems for enhanced early warning and engagement. More broadly speaking we must avoid delays in development and fielding of needed missile program upgrades. We must also continue testing individual components in an operationally realistic end-to-end manner, and preserve integrated multinational exercises which contribute to enhanced operational cooperation and increased confidence in our capability and that of our allies. This enhances efforts to provide persistent detection; expand data sharing among the U.S., allies, and partners; field effective defensive systems; and provide appropriately robust joint training. As the Joint Functional Manager for missile defense capabilities, USSTRATCOM recommends the global allocation of low-density, high-demand assets, including force rotations, and force sufficiency—thus making the best use of limited resources.

Key Investment: Space

Space is no longer the exclusive domain of superpowers—the number of countries that share the domain continues to grow as barriers to entry continue to decline. Space is foundational to the global

economy, international strategic stability, and our national security. However, the strategic advantages space provides are in danger of diminishing. America must continue its leadership role to ensure space is accessible, usable, and responsibly preserved for all users. As the CCMD responsible for military space operations, support, and capability advocacy, we remain focused on ensuring intergovernmental collaboration, international cooperation, and access to and shared use of space.

Access to orbit remains vital to national security and the key to achieving it is an industrial base that is capable, responsive and affordable. Diversity in the launch marketplace could prove a positive development, and accordingly USSTRATCOM supports the Air Force's efforts to expand the available industrial base of certified and proven launch providers. The success of companies like Space-X is an encouraging step in the right direction but we must continue to invest in capabilities that assure our access to space.

We must retain a robust and enduring capability to detect, track and analyze each of the more than over 20,000 objects on orbit today. Clearly, there is an international demand for continued and ever-improving SSA, but challenges remain in the form of critical SSA architecture legacy elements that are well past their design life. Addressing these challenges remains a high priority but fluctuating funding profiles and constrained budgets make maintenance of existing forces and infrastructure and timely acquisition of new capabilities more difficult. The Joint Space Operations Center (JSpOC) is enabled by the JSpOC Mission System (JMS) which is being developed to provide key SSA, command and control, data processing, integration, and exploitation capabilities. Continued JMS progress is vital to streamlined data processing integration, information sharing with partners and allies, and understanding of adversary intent in space.

Our assessment of existing on-orbit and ground-based communication, intelligence, surveillance, geo-location, and environmental monitoring assets is acceptable yet fragile. To preclude any gaps in our ability to provide support for the warfighter, we must program and procure replacements to our aging systems in a timely manner.

Key Investment: Cyberspace

The great power of technology – and our reliance on it – means that cyber threats represent one of the most serious national security, public safety, and economic challenges facing the Nation. The ongoing theft of the nation’s critical commercial, civil and unclassified military data by foreign intelligence and security services continues to erode U.S. economic and national security and reduce the competitive edge of the U.S. businesses. U.S. government departments, the private sector, allies and international partners must become more actively involved in securing our collective networks and to preventing our adversaries from inadvertently gaining generational increases in technology through inadequate cyber security practices.

Improving the DoD’s ability to operate effectively in cyberspace requires investment in five major areas: defensible architecture (the Joint Information Environment), trained and ready forces, effective command and control, global situational awareness, and policies and rules of engagement to defend the nation in cyberspace. Of these, the most urgent investment is increasing the numbers, training and readiness of our cyber forces. We are recruiting, training, and retaining the best and brightest our nation has to offer, but the operational demands of cyberspace exceed our capacity to conduct sustained operations. We must continue to grow and align our cyber forces to enable operations and support CCDRs and their components.

It is also essential that we prepare our forces to operate in a cyberspace environment in which expected network resources and data are degraded or unavailable, or whose confidentiality and integrity cannot be confirmed. Toward this end we have made progress in developing joint cyberspace training and certification standards that will serve as the common foundation for training all DoD cyber operators. Sharing of cyber threat indicators and countermeasures must occur in near real-time to enable prevention as well as response. We are fostering close information sharing relationships with the Department of Homeland Security, law enforcement agencies and private sector companies in the Defense Industrial Base, but we need to make it easier for the government to share threat information more broadly. At the

same time we must also establish and develop baseline standards for our critical private-sector infrastructure to help companies take proactive measures to secure their networks.

CONCLUSION

The nation and our military are confronted with an unprecedented confluence of geopolitical, technological, and fiscal challenges that have the potential to threaten the readiness of our military, the execution of our National Security Strategy and the security of our Nation. These challenges may be daunting but they are not paralyzing. We are building our future on a strong and successful past, and your support, together with the hard work of the outstanding men and women of the United States Strategic Command, will ensure that we remain ready, agile and effective in deterring strategic attack, assuring our allies, and defeating current and future threats.