STATEMENT OF

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BEFORE THE

SENATE COMMITTEE ON ARMED SERVICES

20 MARCH 2018

INTRODUCTION

USSTRATCOM is a global warfighting command, setting the conditions across the globe as the ultimate guarantor of national and allied security. Our forces and capabilities underpin and enable all other Joint Force operations.

USSTRATCOM is globally dispersed from the depths of the ocean, on land, in the air, across cyber, and into space, with a matching breadth of mission areas. The men and women of this command are responsible for Strategic Deterrence, Nuclear Operations, Space Operations, Joint Electromagnetic Spectrum Operations, Global Strike, Missile Defense, Analysis and Targeting, and Cyberspace Operations (until USCYBERCOM is elevated). Nearly 184,000 Soldiers, Sailors, Airmen, Marines, and Civilians support the USSTRATCOM mission, providing an umbrella of security for the United States and its allies every day. These critical capabilities are an integral part of our combat operations and enable warfighters across all domains to preserve the peace and when called upon, dominate in conflict and win.

This past year, USSTRATCOM began restructuring in alignment with our warfighting mission. We now have an air component and will soon have a maritime component. Due to the command's unique responsibilities, we are also leading doctrine with our new Joint Force Space Component Commander.

Our new Command and Control Facility is moving toward completion and will support the long-term viability and credibility of our strategic deterrent force. From this new facility, we will conduct strategic planning, warfighting operations, aid the President's nuclear response decision-making process, provide global situational awareness to the National Command Authorities and combatant commands, and, when necessary, deliver a decisive response in all domains.

The focus of this command remains to deter strategic attack on the United States and its allies. USSTRATCOM stands ready to respond to threats anywhere, anytime across the globe. We acknowledge that we cannot do this alone and must continually work towards enhancing our alliances and partnerships, in all areas.

The command's priorities remain:

- Above all else, we will provide Strategic Deterrence;
- If deterrence fails, we are prepared to deliver a Decisive Response;
- We will do this with a resilient, equipped, and trained Combat-Ready Force.

GLOBAL SECURITY ENVIRONMENT

The strategic landscape of today is increasingly uncertain, complex, and volatile. Long-term, inter-state strategic competition between nation states is reemerging, rogue regimes are taking actions that threaten regional and global stability, and violent extremist organizations are bent on destroying peace across the globe. Nevertheless, we remain committed to strategic stability with China and Russia.

China continues to challenge in the Indo-Pacific region, and our allies and partners look to the U.S. to provide balance. China's excessive maritime claims and aggressive conduct in both the South China Sea and East China Sea undermine international law and global maritime standards. Moreover, China's continued long-term military modernization of both conventional and strategic forces has implications in the Indo-Pacific region and beyond. They are aggressively modernizing their mobile nuclear forces and re-engineering their long-range ballistic missiles to carry multiple nuclear warheads. China is swiftly developing and testing a hypersonic-glide vehicle capability, a technology used to defeat ballistic missile defenses. China's pursuit of conventional global strike capabilities, offensive counterspace capabilities, and exploitation of computer networks also raises questions about its global aspirations. These developments – coupled with a lack of transparency on nuclear issues such as force disposition and size – impact regional and strategic stability.

Russia continues to pose challenges that require consistent and deliberate focus. Russia's support to forces in eastern Ukraine (which it continues to fight alongside with), occupation and purported annexation of Crimea, operations in the Middle East, and efforts to present itself as the mediator for concerns in Middle East and Asia-Pacific regions reinforce its goal of being seen as a military and diplomatic global power. Russia continues to tout advances in cyber and counterspace capabilities along with improvements in its strategic nuclear and general purpose forces. In June 2017, as part of an effort to destabilize Ukraine, the Russian military launched the most destructive and costly cyber-attack in history. The effects of this attack spread globally and included devastating damage to U.S. businesses. On March 1, President Putin announced Russia's development of six new strategic nuclear weapons systems including an intercontinental-range nuclear-powered cruise missile, an intercontinental-range underwater drone, and a maneuverable hypersonic glide vehicle. President Putin's statements are not surprising and only reinforce Russia's commitment to develop weapons designed to intimidate and coerce the U.S. and its allies. Finally, Russia's violation of the Intermediate-range Nuclear Forces (INF) Treaty with the development of the SSC-8 ground launched cruise missile remains a significant issue as delivery of the treaty-violating system continues.

North Korea remains a dangerous and unpredictable actor in the Pacific region, continuing to develop the capability to threaten the U.S. and allies with Pyongyang's evolving ballistic missile and nuclear weapons program. Kim Jong Un continues to defy international norms and resolutions through

provocative actions including their sixth nuclear test, three tests claimed to be of Intercontinental Ballistic Missiles (ICBM), and the WannaCry cyber-attack. North Korea is progressing in development of Submarine Launched Ballistic Missiles (SLBM) and Intermediate Range Ballistic Missiles. These developments highlight its commitment to diversify its missile forces and nuclear delivery options, while strengthening missile force survivability. North Korea continues efforts to expand its stockpile of weapons-grade fissile material and demonstrated its capability and willingness to conduct destructive cyber-attacks against the U.S. and its allies.

Iran continues to develop ballistic, space, and cyberspace capabilities – and we remain focused on preventing the development of the new threats in the region. While the International Atomic Energy Agency continues to verify Iran is meeting its nuclear-related Joint Comprehensive Plan of Action obligations, we must remain vigilant to any Iranian intentions that indicate it will abrogate its commitments and pursue nuclear weapons.

Ungoverned or ineffectively governed regions remain incubators for those who seek to attack the world's peaceful societies. Transregional Terrorist Organizations (TTOs) recruit and operate freely across political, social, and cyberspace boundaries. The effect of weapons of mass destruction (WMD) in the hands of TTOs could be catastrophic, which highlights the importance of our national nonproliferation and counter-WMD efforts.

THE PROBLEM

Today, our deterrent force is safe, secure, ready, and reliable, but the pace of change in the strategic environment is rapid and demands adapting how we operate in order to stay ahead of evolving threats. Failure to meet the pace of change will result in decreasing U.S. global influence, eroding cohesion among allies and partners, and reduced access to markets contributing to a decline in our prosperity and standard of living. The actions we take today assure continued American primacy in the future.

Our budget, requirement, acquisition, and testing processes are too slow. We need integrated processes that are faster and tolerate a greater acceptance of risk. The velocity of change required to resolve our operational challenges is far higher than we have attained to date. Our culture must embrace competition, seek higher performance levels, and generate urgency in achieving innovative outcomes. We must remember that our military superiority is not a birthright, but rather actively sustained by each generation.

STRATEGIC DETERRENCE

We must look at deterrence through a new lens. We are no longer defined by the bi-polar world of two superpowers that simplified our approach to deterrence. The U.S. is challenged by multiple adversaries with an expanding range of capabilities available to them. With each potential adversary comes a different set of perceptions and internal dynamics. Deterrence is more complex and a 'one size fits all' approach no longer applies. Operations countering one adversary have potential second and third order consequences when interpreted by other potential adversaries or our allies. This multipolar and all-domain environment requires collaboration among combatant commands, other DoD elements, allies, and partners ensuring individual efforts do not adversely affect the globally integrated approaches to each problem set. To maintain military superiority in this multipolar world, we must out-think, out-maneuver, out-partner, and out-innovate our adversaries.

The bedrock of our deterrence is our safe, secure, ready, and reliable nuclear Triad. The surest way to prevent war is to be prepared for it. While the current Triad continues to provide the backbone to our national security, we will eventually consume the last remaining margin from our investments made during the Cold War. Our modernization programs including the B-21 bomber; COLUMBIA-Class Ballistic Missile Submarine (SSBN); the Ground-Based Strategic Deterrent (GBSD); Long Range Standoff (LRSO) cruise missile; Nuclear Command, Control, and Communications (NC3); and life-extended nuclear warheads will provide – without a doubt – the nuclear deterrent capabilities our nation needs, now and well into the future.

Today, deterrence is more than just our nuclear capabilities. Deterrence requires integrated planning for all capabilities, across all domains. This enables the synchronized operation and decisive response to adversary aggression anytime, anywhere. We must make this concept operational for all domain warfighting throughout the DoD. We must normalize space and cyberspace as warfighting domains. There is no war in space, just as there is no war in cyberspace. There is only war, and war can extend into any domain. To fight wars in these domains we must develop the appropriate rules of engagement that allow for rapid response and delegate authority to the appropriate level to operate more quickly.

THE NUCLEAR POSTURE REVIEW (NPR)

The 2018 NPR guides nuclear modernization efforts and establishes U.S. deterrence policy, strategy, and posture over the coming years. This document responds to the threats of today, the burgeoning challenges of tomorrow, and underscores nuclear deterrence as a foundational element of U.S. national strength. The NPR clearly ties to USSTRATCOM's priorities.

The guidance in the NPR is based on the strategic environment of today. As Secretary Mattis states in the document's preface, "We must look reality in the eye and see the world as it is, not as we wish it to be." Our previous efforts to deemphasize the role of nuclear weapons and reduce the size and variety of capabilities within our nuclear force did not have the reciprocal effect on other nuclear-armed states. China and Russia continue to place increased importance on nuclear weapons in their strategy and doctrine as well as expand the number and diversity of their nuclear weapons and weapon systems. We remain committed to strengthening nonproliferation and nuclear security, and we stand ready to reengage on future arms control agreements. However, a commitment to arms control and other reductions cannot be unilateral in the face of ever-increasing threats. This would harm the readiness of our nuclear deterrent, destabilize relations with potential adversaries, and reduce the confidence our allies place in our extended deterrence guarantees.

While our nuclear posture is successful in deterring our adversaries today, we require a mix of yields and improved platforms to credibly deter the threats of the near future. The NPR directs near-term fielding of a low-yield SLBM capability, and in the longer term, pursuit of a modern nuclear-armed sea-launched cruise missile (SLCM). These capabilities are necessary to enhance the flexibility and responsiveness of our nuclear forces to ensure potential adversaries understand they cannot achieve their objectives through force and there is no benefit in the use of nuclear weapons - in any scenario. Russia's increased "non-strategic nuclear weapons" and evolving doctrine of first-use in a limited conflict, give evidence of their perceived advantage at lower levels of conflict. North Korea's burgeoning nuclear capabilities demonstrate the belief that nuclear weapons provide escalation options against the U.S. and our allies in the Pacific. We must counter these dangerous perceptions with supplemental capabilities to our previously planned modernization programs. These enhanced deterrence capabilities ensure adversaries clearly understand U.S. resolve and do not miscalculate the consequences of nuclear use, raising the nuclear threshold and reducing the likelihood of nuclear weapon employment.

The NPR clearly states the role of nuclear weapons in hedging against an uncertain future. While hedging is not new, this explicit statement communicates importance of nuclear weapons in ensuring we are ready and confident to address future threats. As we have witnessed over the past decade, the security environment can change quickly. Technology is constantly evolving, and countries are seeking to use these technologies to advance their own capabilities and diminish ours. This requires an agile, ready force that is flexible enough to meet the ever-changing strategic environment, and men and women who are dedicated to the mission and postured to win.

NUCLEAR WEAPONS AND SUPPORTING INFRASTRUCTURE

To remain a credible nuclear state, the U.S. must have modern facilities and a highly skilled workforce able to maintain a credible nuclear deterrent. Across the nuclear enterprise, many of the specialized capabilities required to complete stockpile work have either atrophied or become obsolete. As a result, the U.S is not capable of producing and/or manufacturing many of the materials and unique components in the quantities needed to sustain the stockpile over the long term.

Re-establishing the capability to produce plutonium pits at a production rate sufficient to support planned weapon sustainment activities must be a national priority. Specifically, USSTRATCOM requires no less than 80 War Reserve plutonium pits delivered to the stockpile per year by 2030 to support future deterrent requirements. Delays in developing a viable plutonium pit production capability will eventually affect our ability to meet the nation's deterrence mission requirements.

In addition to plutonium manufacturing, we require critical infrastructure investments in uranium processing, tritium processing, and lithium component production. Any shortcomings in these infrastructure projects represent a real risk to maintain force readiness and our capability to respond to either a technical issue with our stockpile or adversary advancements in their capabilities.

Modern facilities are of little value without a highly skilled workforce to conduct the necessary surveillance, sustainment, and modernization activities necessary to maintain our deterrent. National Nuclear Security Administration's (NNSA) Administrator and each of our national security laboratory directors have expressed concerns with recruiting, developing, and retaining the workforce essential to sustain our stockpile. The U.S. must have a workforce and industrial base capable of designing, engineering, and producing materials and components necessary to sustain the number of warheads and develop a flexible stockpile to hedge against future risks.

Since the Nuclear Weapons Council (NWC) approved the Long Term Stockpile Sustainment Strategy, we have made solid progress in life extending our aged weapon stockpile. The Navy's W76-1 ballistic missile warhead Life Extension Program (LEP) is over 90% complete and on track to finish in 2019. The B61-12 gravity bomb program is on schedule, on budget, and exceeding operational expectations. This weapon supports extended deterrence commitments to NATO and allows the U.S. to retire legacy gravity weapons that are approaching the end of their service lives. The Air Force and NNSA are progressing with work on the LRSO cruise missile and the associated W80-4 warhead design work to deliver that weapon system on schedule.

Our next significant weapon LEP decision pertains to future ballistic missile warhead modernization. We must determine the appropriate approach for the replacement of the Air Force's W78 ICBM warhead. The NWC's Strategic Plan is examining the feasibility of producing a warhead with

interoperable features for both Air Force and Navy ballistic missile systems. The W78 replacement study will determine the appropriate approach for developing and deploying this much needed capability.

NUCLEAR WEAPONS SECURITY

Protection of nuclear weapons, installations, and personnel is the utmost priority. We continue to work closely with the Navy and Air Force to assess nuclear security requirements and adjust our force posture, training, and equipment to maintain the high standards this mission demands. While we continue to upgrade our security capabilities, there are areas where additional investments are required to ensure the absolute denial of unauthorized access to nuclear weapons.

We need to replace the Vietnam-era UH-1N helicopters that provide security across our vast ICBM complex. I strongly support any effort that delivers a replacement helicopter with the necessary speed, armament, and carrying capacity to meet our security requirements as soon as possible.

Additionally, we need to address the escalating costs of an aging security infrastructure. Our nuclear security program relies heavily on manpower that requires appropriate investments to ensure our existing nuclear security programs are capable of protecting this Nation's most vital assets against a wide-range of technological and human threats.

The continued proliferation of sophisticated small Unmanned Aircraft Systems (sUAS) is concerning. The availability, ease of use, and capabilities of these sUAS vehicles represents a growing threat to our deterrence operations. We rapidly implemented counter-sUAS systems into our security architecture, and continue to refine our tactics, techniques, and procedures to address the developing threat. Pacing this sUAS threat will require vigilance and dedicated investment as these capabilities continue to evolve.

NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS (NC3)

Our nation's nuclear deterrent continues to be as effective as the command, control, and communications capabilities that enable it to function; therefore, we require an assured, reliable, and resilient NC3 system across the full spectrum of conflict. Maintaining a credible nuclear deterrent requires sustainment, modernization, and recapitalization of key systems and capabilities throughout the NC3 architecture that ensures effective command and control of the Nation's nuclear forces throughout today's complex multi-domain, multi-threat security environment. These capabilities must provide assured communications capabilities to the President and nuclear forces throughout all phases of hostilities and under all conditions.

USSTRATCOM requires a robust NC3 capability operating throughout the space, aerial, and terrestrial domains to both effectively execute strategic deterrence operations and provide support for the

President as an essential component of the National Leadership Command Capability. As an example of this, USSTRATCOM is working with the White House, national laboratories, and the private sector to develop decision support capabilities, setting the conditions for timely and informed senior leader decision-making under any circumstance.

In the space domain, we are transitioning from the aging Military Strategic and Tactical Relay (MILSTAR) satellite communications system to the Advanced Extremely High Frequency (AEHF) satellite communications systems. The AEHF satellite constellation system, coupled with requisite ground node and airborne platform Family of Advanced Beyond Line-of-Sight terminals (FAB-T) extends enhanced capabilities to enable collaboration between the President and senior advisors under any circumstances and improves connectivity with the nuclear forces.

Within the aerial domain, we are continuing to replace aging communications systems on the E-6B Airborne Command Post (ABNCP) and Take Charge and Move Out (TACAMO) aircraft as well as the E-4B National Airborne Operations Center (NAOC) to provide assured and worldwide connectivity to the nuclear forces. In conjunction with communications update efforts, the Air Force is pursuing a course of action to recapitalize the E-4B platform, which is approaching its end of service life. The Air Force continues efforts to field a very low frequency (VLF) capability for the B-2 bomber fleet and will leverage that capability to modernize the B-52's legacy VLF systems. These advancements, combined with our extremely high frequency communications, provide bombers with beyond line-of-sight connectivity throughout the spectrum of conflict.

INTERCONTINENTAL BALLISTIC MISSILES

The U.S. relies on ICBMs as a critical component of a credible and effective nuclear deterrent force. ICBMs promote strategic stability as no adversary can defeat our highly responsive and widely dispersed ICBM force with a limited, surprise attack. Additionally, our ICBM force provides the bulk of our day-to-day nuclear alert force with precision and professionalism. Serving over 60 years, our Minuteman force will retire in the mid-2030s, well beyond any deployed strategic missile in the world. We must execute a comprehensive ICBM modernization program to keep the force effective in this rapidly evolving strategic environment.

In August 2017, the Air Force achieved a significant milestone when it awarded the GBSD Technology Maturation and Risk Reduction contract. The future GBSD weapon system will employ modern, proven technology to meet the varied threats of today and incorporate modular architectures able to adjust quickly to advancing adversary technologies. GBSD will employ enhanced security features to counter evolving threats while reducing resource demands. Likewise, GBSD's maintenance processes

employ advanced diagnostic tools allowing us to predict and resolve technical issues before affecting operations.

Finally, replacing 1960 and 1970s technology with state-of-the-art systems will increase effectiveness and provide better platform performance with greater resilience against improving adversary defenses. GBSD will deliver a modern missile system, supported by a fully updated infrastructure, all delivered at lower cost.

BOMBERS AND AIR DELIVERED NUCLEAR WEAPONS

Bombers represent the most visible and flexible leg of the U.S. nuclear Triad. Their presence unambiguously demonstrate U.S. commitment and resolve to deter potential adversaries and assure our allies and global security partners. The bomber's operational flexibility provides the President a number of options in response to a crisis. The combination of stealth and long range denies adversaries the ability to use geography to protect high value assets.

The B-52 will remain in our arsenal for several more decades and is receiving a communications upgrade to ensure command and control connectivity. Additionally, the B-52 requires a radar system upgrade to enhance weapons delivery, improve targeting capability, and improve weather detection and avoidance. Replacing the B-52's engines provides increased combat range, reduced air refueling demand, longer on-station time, and a significantly reduced maintenance footprint.

As our nation's only penetrating long-range strike aircraft, we are enhancing the B-2's survivability to retain the platform's stealth attributes against modern air defenses. Beyond the B-2, the B-21 will ensure we maintain an effective penetrating bomber capable of striking any target around the world even as potential adversaries deploy increasingly sophisticated air defenses.

While legacy gravity bombs and the Air Launched Cruise Missile (ALCM) meet current military requirements, declining sustainability and survivability challenges require a focus on replacement systems. The B61-12 gravity bomb and LRSO cruise missile programs must deliver on schedule to avoid any strategic or extended deterrence capability gaps.

Legacy bombers and their associated weapons are beyond or quickly approaching their intended service life, requiring focused attention and resources to maintain combat readiness. To ensure our air delivered deterrent remains effective, ongoing sustainment and planned modernization activities must remain on schedule.

SEA-BASED STRATEGIC DETERRENT

Every day, a sizable portion of our OHIO-class SSBN fleet is silently patrolling at sea, un-locatable to our adversaries, and ready to respond when called upon. These submarines, and their highly

capable Trident II (D5) SLBM, constitute the most survivable leg of our strategic deterrent force. As such, they send a very clear message to any adversary that they cannot hope to gain any benefit from a strategic attack against the U.S. or its allies.

The robust design of the OHIO-class SSBN, along with a comprehensive maintenance program, allowed its operational life to extend from 30 to 42 years. However, with no engineering margin to extend them further, the OHIO-class SSBNs will retire starting in 2027. To avoid a capability gap in our strategic deterrent, the COLUMBIA-class SSBN must deliver on time for its first strategic deterrent patrol in 2031. Building the COLUMBIA-class SSBN requires highly technical and unique skillsets spanning multiple manufacturing and trade disciplines. As production draws near, we must support our industrial partners' expansion of both infrastructure and training programs to minimize the risk of potential delays.

To avoid two concurrent strategic weapon programs, the Navy extended the life of the D5 SLBM, enabling it to serve as the initial ballistic missile for the COLUMBIA-class SSBN. The D5 SLBM was fielded over 25 years ago, and we must begin a follow-on SLBM program for the COLUMBIA-class SSBN to remain effective to its projected end of life in the 2080s. USSTRATCOM and the Navy will work together in developing the strategic requirements for this follow-on SLBM that continues the unparalleled success of the D5 SLBM.

SPACE

Space is a warfighting domain just like the air, ground, maritime, and cyberspace domains. The DoD, with the National Reconnaissance Office (NRO), is implementing the Space Warfighting Construct. This construct supports the National Space Policy and focuses on the forces, operations, and systems needed to prevail in a conflict that extends into space. As an enterprise, we must normalize how we think of space, operate in it, and describe it to each other. It is unique for many reasons, but the concepts that govern other military operations such as intelligence, maneuver, fires, protection, logistics, and command and control apply just the same.

In April 2017, we re-named the Joint Interagency Combined Space Operations Center (JICSpOC) to the National Space Defense Center (NSDC). The NSDC is a partnership organization strongly supported by both the DoD and Intelligence Community (IC) that develops and improves our ability to rapidly detect, warn, characterize, attribute and defend against threats to our nation's vital space systems. The NSDC directly supports space defense unity of effort and expands information sharing in space defense operations among the DoD, NRO, and other interagency partners. Recently, the NSDC transitioned to 24/7 operations, marking a significant step for the growing interagency team focused on protecting and defending the nation's critical space assets.

In 2016, Air Force Space Command (AFSPC) and NRO developed the joint Space Enterprise Vision (SEV) to advance their shared interest in designing, acquiring, and operating more agile and resilient space capabilities in response to emerging threats. A key goal of the SEV is to leverage synergies in AFSPC/NRO acquisition activities, where feasible, as the two organizations pursue architectures and operational approaches in support of their respective missions.

Multi-national space operations initiatives are paramount in the safety and security of the space domain. As we continue our combined space operations initiative with Australia, Canada, New Zealand, and the United Kingdom, we are expanding the initiative with the addition of France and Germany. I have directed the Joint Force Space Component Commander to transition our Joint Space Operations Center (JSpOC) to a Combined Space Operations Center (CSpOC) by the end of 2018. The CSpOC model envisions a centralized hub for operational planning and tasking with distributed execution through contributing partners.

Exercises and wargames continue to refine how we coordinate today and determine how we will work together in the future. This year, Japan is participating in the Schriever Wargame, joining France, Germany, and our Five Eye partners. GLOBAL SENTINEL, our operational experiment for space situational awareness, increased its international participation in 2017 and now includes Australia, Canada, the United Kingdom, France, Spain, Germany, Italy, Japan, and the Republic of Korea.

Future satellite communications (SATCOM) systems are key to our continued strategic posture in space. We must design and fund replacement systems and remain on schedule for smooth transition of operations to these new systems. We must expand international SATCOM partnerships, strengthen our industrial base response to acquisition challenges, and integrate commercial pathfinder opportunities to leverage space operations.

We must continue to build a robust SATCOM network that includes our allies and partners and leverages commercial SATCOM industries to integrate, synchronize, and share global SATCOM resources. Through multilateral SATCOM agreements Canada, Denmark, Luxembourg, the Netherlands, and New Zealand provided funding for Wideband Global SATCOM-9 (WGS-9) that launched in March 2017. These international partners receive a proportional share of the bandwidth provided by the WGS constellation based on their financial contribution.

The department continues to close the gap in synchronizing terminals and ground infrastructure to match available satellite capability, a time-critical and essential element in operating freely in all other domains. Our protected wideband communications are essential for allowing the warfighter to communicate in contested environments. Our narrowband legacy constellation is approaching the end of its life cycle in a matter of years, and any additional loss of satellites will reduce our narrowband SATCOM capabilities. The narrowband follow-on Mobile User Objective System (MUOS) using

Wideband Code Division Multiple Access (WCDMA) has experienced delays due to program development, waveform challenges, and Service terminal fielding schedules. The fielding of new AEHF Extended Data Rate (XDR) capabilities is improving over time, but delayed XDR terminal programs are hampering the transitions from MILSTAR to AEHF.

USSTRATCOM, in conjunction with AFSPC, Fleet Cyber Command, and U.S. Army Space and Missile Defense Command / Army Forces Strategic Command (SMDC/ARSTRAT), is standing up the SATCOM Integrated Operations Environment (SIOE). The SIOE is designed to leverage key wideband, narrowband, protected band, and commercial SATCOM enterprise capabilities and expertise to improve the Joint Force Space Component Commander's ability to mitigate and fight through SATCOM degradation and continue to support the warfighter in a potentially contested domain. Interim SIOE operations will be located at headquarters SMDC/ARSTRAT and is scheduled for completion in March 2018. SIOE is currently operating in a limited fashion, and we are working on providing additional joint manning positions to bring it to initial operational capability.

In accordance with the direction of the 2018 National Defense Authorization Act, USSTRATCOM will deliver a space warfighting concept of operations (CONOPs) no later than June 11, 2018. This CONOPs will guide the Service’s space capabilities development and acquisition programs.

JOINT ELECTROMAGNETIC SPECTRUM OPERATIONS

Achieving superiority throughout the electromagnetic spectrum is an essential prerequisite for achieving superiority across all other military domains. USSTRATCOM developed an electromagnetic spectrum operational employment guide for standardized and synchronized electromagnetic battle management, and we are working with the other combatant commands on the implementation of this guide in joint electromagnetic spectrum operations planning. In coordination with the Joint Staff, we are initiating development of a Joint Electromagnetic Spectrum Operations doctrine publication, working to re-align electronic warfare universal joint tasks, advocating for advancing joint training in realistic congested and contested electromagnetic spectrum environments, and identifying electromagnetic battle management requirements.

This comes at a time when our ability to maneuver freely within the electromagnetic spectrum is at risk. Many countries have adapted their militaries for spectrum warfare, developing specific electronic/spectrum warfare units and electronic attack capabilities to counter our spectrum dependent systems. The electromagnetic spectrum is not a utility to be managed, it is a maneuver space, the same as other warfighting domains. If we fail to change the way we resource, train, and operate within the spectrum, we risk allowing an adversary to control key terrain in the future.

MISSILE DEFENSE

Missile proliferation and lethality continues to increase as more countries acquire greater numbers of missiles and are increasing their technical sophistication specifically to defeat U.S. missile defense systems. In the past year, we continue to see missile tests from North Korea and Iran as well as other nations that are introducing increasingly sophisticated missiles – all of which cause us and our allies deep concern. Their efforts to advance missile technologies threaten global stability and seek to degrade our ability to project power. In response, we must continue our efforts to advance missile defense forces and capabilities to assure allies of our commitment for a common defense and to deter further aggressions from these regional and transregional actors.

In addition to the NPR, the Department is conducting a 2018 Missile Defense Review (MDR). The MDR is broader in scope than the 2010 Ballistic Missile Defense Review, addressing more than the ballistic missile threat, specifically hypersonic vehicles and cruise missiles.

We cannot be successful in this endeavor by investing solely in active missile defense capabilities – we must strengthen and integrate all pillars of missile defense including the capability to defeat adversary missiles before they launch. We are exploring efficiencies gained by fusing non-kinetic, cyber, electromagnetic, and kinetic capabilities to deny, defend, and defeat adversary threats. Furthermore, we are requesting additional efforts invested in the Department's ability to find, fix, track, target, engage, and assess (F2T2EA) threats and the adoption of corresponding policy and organizational constructs. We continue to gain synergy through integrated missile defense planning, force management, and operations support ensuring global coordination of regional missile defense execution – thereby, matching the best interceptor with the best sensor.

We must strengthen our collaboration with our allies and explore further integration of our collective capabilities toward an effective mutual defense. We are investing in collaboration with our allies across multiple venues, including the USSTRATCOM-hosted NIMBLE TITAN wargame. We conduct this biennial wargame with key allies and in partnership with the Department of State and other combatant commands. We continually explore and experiment with potential collaboration and integration approaches with our allies to inform development of options for operations, policies, and investments.

As an essential element of the U.S. commitment to strengthen strategic and regional deterrence against states of concern, we continue to deploy missile defense capabilities and strengthen our missile defense postures. We operationally deployed the Aegis Ashore Missile Defense Complex in Romania completing the European Phased Adaptive Approach Phase II to defend against threats from the Middle East, particularly Iran. We deployed additional Ground Based Interceptors (GBIs) to meet the objective of

44 GBIs by the end of 2017. We are continuing investments toward our warfighting missile defense priorities, which are essential. Priority missile defense upgrades and capability advancements include:

- Sensor and discrimination capabilities. Continued development of the Long Range Discrimination Radar (LRDR) in Alaska. A new homeland discrimination radar to support the defense of Hawaii. A new Medium Range Discrimination Radar to provide additional precision and tracking. Upgraded and expanded land, sea, and space based detection and tracking sensors.
- Kill vehicles. Increase the reliability and lethality of our interceptors including the development of the Redesigned Kill Vehicles (RKV) for the GBI, completion of testing and deployment of the SM-3 Block IIA capability, and enhancements to the GBI, most notably the Multi-Object Kill Vehicle (MOKV).
- GBIs. Increase the GBI inventory to 64 and complete Missile Field-4 at Fort Greely, Alaska to provide silos for 20 additional fielded interceptors as early as December 2023.
- Capability and capacity. Increase the robustness of regional missile defense capability and capacity including deployment of the Aegis Ballistic Missile Defense and the Terminal High-Altitude Area Defense (THAAD) capabilities and implementation of recommendations from the Department's Joint Regional Integrated Air and Missile Defense Capability Mix (JRICM) study.

Finally, we depend on flight-testing, which is critical in assessing and validating the performance of the operational system in actual flight environments. The high cost of flight-testing often limits the number of flight test opportunities. The Missile Defense Agency strives to maximize opportunities for learning through flight test success or failure. The body of data collected in flight-testing is robust, and we discover unexpected findings with each test. Flight test failures are unplanned, but when failures happen – learning occurs. The root cause of failure is determined, corrective actions are implemented, and the overall capability of the system improves.

CONVENTIONAL PROMPT STRIKE (CPS) / HYPERSONIC STRIKE

Adversary anti-access / area denial strategies are challenging traditional U.S. approaches to power projection. Advancements in adversary integrated air defense systems and offensive missiles inhibit our ability to maneuver within the battlespace. Additionally, our strategic competitors are investing significant resources in hypersonic weapon research and development with the goal of deploying hypersonic strike weapons in the next few years. The Department is pursuing hypersonic capabilities

along several lines of effort, but we need to prioritize and accelerate development if we are to field our own capability in the near term.

New long-range, survivable, lethal, and time-sensitive strike capabilities, such as a hypersonic CPS weapon, will allow the U.S. to achieve its military objectives in these environments. This new weapon class prevents adversaries from exploiting time and distance and provides additional response options below the nuclear threshold. The Navy's successful CPS flight test last October demonstrated the technical maturity required to field an effective hypersonic strike solution within the near future. As our competitors continue to move fast in this area, we must retake the initiative and commit the necessary resources to develop and field hypersonic conventional weapons.

CONCLUSION

USSTRATCOM truly is a global warfighting command, and the strength of this command is its people. The Soldiers, Sailors, Airmen, Marines, and Civilians in this enterprise have the most important mission in the entire Department. We expect them to perform to the highest standard, yet mission success often looks as if nothing happened. The hard work and dedication of the nearly 184,000 men and women supporting the USSTRATCOM mission ensures our nation's strategic capabilities remain safe, secure, reliable, and ready. Sustained Congressional support will ensure we remain ready, agile, and effective in deterring strategic attack, assuring our allies and partners today and into the future.

Peace is our profession…