

Statement Submitted for the Record

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Open Hearing

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Mr. Chairman and Members of the Committee, thank you for inviting me today.

**The threat to the national security of the United States today is arguably more complex than at any time in the last four decades.** That complexity demands an integrated national security and intelligence strategy that manages risk and protects our vital national interests.

It also demands effective oversight by the legislative branch of government and this committee in particular.

**Complexity of the Challenge**

During the Cold War, for the most part, we faced one conventionally powerful, nuclear armed adversary that was economically stagnant and internally repressive.

Had the Soviet Union rolled through the Fulda Gap, defending Western Europe against the Soviet Union would have been horrific. But the intelligence capabilities needed and the strategy to meet this threat wasn't particularly complex.

The Soviet Union conducted the same exercises, using the same radio frequencies, and the same ports and railheads, pretty much at the same time every year. A large dragon in the forest isn't hard to find.

Free enterprise fueling dominant economies, free people, resilient alliances and a strong military including the strategic nuclear deterrent, combined to deter the Soviet Union which eventually collapsed from within.

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<sup>1</sup> The University of Texas at El Paso is America's leading Hispanic-serving university. 94% of its nearly 25,000 students are minorities, and half are the first in their families to go to college. When it comes to research, UTEP is in the top 5% of American universities and is the only tier-one research university in America that has remained true to its open access mission as a public university. The University of Texas System, of which UTEP is a part, contains 13 universities with an enrollment of more than 244,000 students. With research spending that exceeds \$3.5 billion a year, The University of Texas System is one of the largest public university systems in the world.

Despite our fervent hopes, history did not end when the Berlin wall came down and the Warsaw Pact collapsed. But, for a little more than a decade, America and the west enjoyed a remarkable period of dominance and relative peace and prosperity.

On a cool September morning, that changed.

In the two decades after 9/11, the American military and intelligence community largely focused on the problem of finding and destroying transnational terrorist movements that festered in failed states and, whatever your view of the war in Iraq in retrospect, removing a regime that was no match for the conventional military might of the United States and our allies.

When I visited Iraq and Afghanistan in 2017, I was struck by how effective we had become at combining exquisite near real-time intelligence with precision strike from the air to support indigenous forces on the ground fighting ISIS's self-declared caliphate. We were technologically dominant, and we controlled the rheostat of time.

But our adversaries were watching, assessing our vulnerabilities. Today, the threats to our national security are complex and present.

### **North Korea**

North Korean leader Kim Jong Un clearly views nuclear weapons and the means to deliver them as a way to maintain his relevance internationally and, possibly, his power internally.

It is a measure of the complexity of the current national security environment that his vow to exponentially increase the North Korean nuclear arsenal and the North Korean test of another ballistic missile at the start of the new year didn't garner much attention. The North Koreans conducted some 70 missile tests in 2022 alone.

### **Iran**

We must expect that Iran will continue to threaten U.S. interests in the Middle East, both directly and through proxy attacks while it continues to repress the Iranian people and manage internal opposition. It will spread instability in the region and remains a threat to Israel.

### **Russia**

I expect my colleagues on this panel will provide much deeper insight into the war in Ukraine than I can. We never thought that the Berlin Wall would fall when it did. Up until the eve of the attack on Ukraine a year ago this month, many did not believe that we would see large scale conventional war in Europe again in our lifetimes.

It seems to me that three things are clear about the War in Ukraine.

First, attacking Ukraine was the greatest strategic mistake of Vladimir Putin's more than two decades in power. He has failed to topple the Ukrainian government, united the west against him, caused Finland and Sweden to apply to join NATO, isolated his economy, and inflicted horrific casualties on the Ukrainians and his own people.

Second, Ukraine has illustrated how much intelligence collection and influence operations have changed through widespread availability of smartphones, commercial drones and social media. We must expect in any future conflict that intelligence will be, to some extent, crowd sourced. That can work to our advantage or our disadvantage depending on how we plan for it and how rapidly we will be able to incorporate information gathered into the larger picture reliably. We haven't had to think this way before, and we should be now.

And finally, despite his strategic failure in the first year of this war, Putin remains a dangerous and ruthless despot surrounded by loyalists who have much to lose if Ukraine holds. **Russia is a repressive nuclear-armed kleptocracy. It is in the national interest of the United States to continue to support Ukraine as it defends itself against unprovoked aggression.**

### **China**

In 2008, the Beijing Summer Olympics presented China as an economic and political power on the rise that would respect human rights and international norms. That promise was not fulfilled and today the Chinese Communist Party continues to pursue its vision of China as the preeminent power in East Asia and beyond.

It is an authoritarian regime that has crushed freedom in Hong Kong, extended maritime claims in the South China Sea, and continues to assert sovereignty over Taiwan. But it is a much more complex challenge than the US has faced in decades.

Economically, while China's per capita GDP is significantly lower than the United States, its total economy is now comparable to and growing faster than ours. Moreover it continues to seek and develop advanced technology in a wide range of areas.

Militarily it is pursuing advanced capabilities in air, ground, sea, cyber and space as well as nuclear weapons. And its intelligence capabilities are advanced and global in scope.

This committee should certainly consider in closed session what we learn from the wreckage of the Chinese balloon. We should also ask ourselves why they developed it and why they sent it over the United States. What did they expect us to do in response and what did they want us to conclude from the wreckage? The answer to those questions may not be straightforward.

**While China faces some internal challenges, including an aging population and some dissent, it is the most important and most complex strategic competitor of the United States.**

### **Complex and Present**

This array of potential threats – and particularly the strategic competition with China – is more difficult because the threats are complex and multi-dimensional.

First, from a military perspective, we must think about all modern operating domains. To air, ground, sea, and strategic nuclear we must add cyber and space. Operations in these domains must be integrated to influence the decisions of potential adversaries in a period of crisis and create effects that will deter them from military action or defeat them if deterrence fails.

Second, the speed of operations and the compelling need to glean reliable decision quality information from massive amounts of data very quickly creates both challenges and opportunities. **Collection, processing, exploitation, and dissemination of intelligence will need to happen much faster, from more sources, and to many more users than ever before.** While there are technical challenges to doing so, even more than 20 years after 9/11 there are still bureaucratic barriers that limit machine-to-machine connections between different intelligence entities. Enabling appropriate integration should be a priority for the committee.

### **Economics, Innovation and Technical Surprise**

Third, during the Cold War, the west had a substantial economic advantage which proved, in the end, to be decisive. Today, the competition with China is not just to address their increasing military capability and the potential threaten to their neighbors. We must also compete economically. **It is just as important to sustain a vibrant and growing economy that is advancing discovery and driving innovation in multiple fields as it is to maintain a military capability able to deter potential adversaries.**

**We are not educating enough young people to high levels in science, engineering, technology, and mathematics to meet the needs of the nation.** While we have a long way to go, the renewed emphasis on basic and early stage applied research as well as developing ecosystems that support innovation will help.

And it's not just at the federal level. **The State of Texas is second only to the NIH in funding cancer research and is considering legislation to expand support for research at its universities and legislation to advance the nascent space industry.** Other states are doing the same. Creative partnerships between industry, government, and the academy are showing promise.

Moreover, unlike the competition with Russia in the Cold War and the problem of transnational terrorism since 9/11, America needs to strengthen its intelligence capability in the areas of science and technology to avoid technological surprise. Since the end of World War II, we really haven't faced this problem at scale in the same way we are now.

To the extent we assess scientific progress now, we monitor incremental change in military systems of interest. We focus narrowly on what we know and how it might get a little better next year.

But that is not how or where path-breaking innovation happens.

**None of our intelligence agencies is specifically responsible for scientific and technical intelligence collection, analysis, and dissemination. That is a gap that should be filled.**

### **Space**

Let me linger for a moment on space, which includes important capabilities under the jurisdiction of this committee.

America is the best in the world at space and our adversaries know it. They are seeking to develop the capabilities to deny us the use of space in crisis or in war.

Most Americans don't know what the military and intelligence community do in space. There are no X-Wing Starfighters and, while quite a few military officers have been loaned to NASA, the military and intelligence community doesn't have manned space missions.

In short, our interests in space revolve around the existence of satellites. They give us capabilities that, decades ago, were considered extraordinary if not impossible. Today, average Americans access many of those capabilities through apps on our phones and we take them for granted. But our dominance in space is more fragile than we like to think.

The American military operates between 80 and 90 satellites with another 40 or so operated by the National Reconnaissance Office, which comes under the oversight of this committee. Over 30 of the satellites are GPS – the Global Positioning System – that enable navigation and timing. The blue dot on your phone doesn't come from your cell phone company: it's provided by about forty young Americans who operate our GPS satellites from a military base outside of Colorado Springs, Colorado. Those satellites also provide the exact time for every ATM machine in America as well as the New York Stock Exchange.

About \$1 billion in commerce every day depends on GPS, from farmers precisely applying pesticides with GPS-guided tractors, to users of Uber, Lyft, and Yelp.

Communications is an important satellite mission. The President and military commanders need to be able to command and control military forces at all times – in peace, crisis, and war. That's done in a lot of ways, but satellite communication is one significant way.

We have satellites with infrared sensors that stare at the earth watching for nuclear detonations or missile launches and immediately send information to the national command center in the Pentagon and Strategic Command in Omaha. A screen on the wall shows where the launch came from and, based on the information from the satellite, computers calculate the trajectory and likely impact area of the missile so that, if needed, we can defend the country.

The military has operated weather satellites since 1962 and the information from them was declassified and made available to the public in 1972. We're used to seeing it on the evening news and in the palms of our hands on our smartphone weather apps.

We have satellites that watch other objects in space without being blocked by clouds or the distortion of the atmosphere and, of course, we have intelligence satellites that watch the earth. The National Reconnaissance Office, or NRO, was a classified program jointly run by the CIA and the Air Force until 1992 when its existence was acknowledged.

### **Space: A Warfighting Domain**

Unlike military equipment built robustly for the sea, ground, or air, satellites are very fragile things. They move in predictable orbits or use precious fuel to adjust their orbits and there isn't anything to hide behind.

Moreover, adversaries do not have to permanently disable or destroy a satellite to deny us the use of it. Lasers can temporarily or permanently blind imagery satellites. Cyber capabilities can target space systems and their ground infrastructure. And it's actually not hard to jam the signal from a GPS satellite. It's really just a weak radio signal. If you are trying to listen to a soft voice in a noisy restaurant, it can be hard to hear the voice. Jamming GPS is kind of like cranking the volume to overwhelm that quiet voice.

Our adversaries have watched what we have done with our space capability. It is a strength, but it is vulnerable. We built glass houses in space before the invention of stones.

### **Beijing, Moscow, Tehran, and Pyongyang**

China has a rapidly growing space program and is second only to the US in the number of satellites it operates. Beijing's goal is to build itself into "a space power in all respects". In 2007 China demonstrated its ability to launch a missile and destroy one of its own dead weather satellites – creating several thousand pieces of space debris. Today, they operate lasers, jammers, and a satellite in geostationary orbit with a robotic arm. Geostationary orbit is high orbit about 22,000 miles out in space where satellites match the earth's rotation. The only reason to have a satellite with a robotic arm there would be to reach out and touch another satellite -- likely ours. And satellites don't like to be grabbed, nudged, or shaken.

While Russian space technology has fallen behind the west and their military has declined in many respects, Moscow still has one of the most capable space programs in the world. While they champion developing a treaty to prevent weaponization of space, they continue to develop a range of counter-space weapons. Russia has anti-satellite lasers and jammers and, in the last few years, has conducted two anti-satellite missile launches, including an "inspector" satellite to shadow U.S. satellites. That same "inspector" fired a projectile. They can also destroy U.S. satellites in low earth orbit with ground-based missiles.

North Korea has conducted space launches and has jammers targeting the US GPS system and satellite communications, as does Iran.

### **Space: A Dynamic Theatre**

This committee must steward the overhead architecture for national intelligence collection in a contested domain. That means thinking through, strategically, what is required to protect the capability we get from satellites.

As H.L. Menken wrote, "*For every complex problem, there is an answer that is clear, simple, and wrong.*"

There are some people (and some companies that sell satellites and launches) who argue that we just need to rely on large numbers of low-cost commercial satellites at low earth orbit and just replace them if they get damaged. We should use proliferation of low-cost satellites as one dimension of a strategy, but only for those missions that don't have to survive during crisis or war. It can take about 3 minutes from launch of a missile to destruction of an unprotected commercial satellite in low earth orbit. If you need it in the next four minutes, or the next hour, or tomorrow, it could be gone.

**A multi-dimensional strategy tailored to each element of space missions is more likely to be successful.** We should develop the capability to protect and defend our satellites – the functional equivalent of chaff, flairs, and maneuver. Jam-resistant GPS and technical protection should be priorities. We need to be able to confuse and deceive an adversary and create doubt about the outcome of any engagement, which might cause them to choose to de-escalate in a crisis. We need to understand the capabilities of the attacker and develop the capacity to intervene and stop the attack.

This committee must steward the nation’s ability to look at large areas of the world, frequently and with enough clarity to support difficult decisions of warfighters in tough situations and national leaders in time of crisis.

Sometimes you need to “see” through the clouds.

Sometimes you know exactly where to look and a camera that is already zoomed in is just fine. Sometimes you don’t know exactly where to look and you need to watch a wide area before zooming in.

Sometimes a fuzzy picture is good enough, and sometimes it isn’t.

Finally, if deterrence is to extend to space, we must develop a credible declaratory policy that makes clear what we would do if a nation-state interferes with our vital space capabilities – including our intelligence capabilities.

To be clear, we should not limit our potential responses to the space domain alone. Indeed, a key element of successful strategy against a sophisticated adversary will be operating across all domains at times and places of our choosing.

The integration of training, operations, and planning between the Space Force and the elements of the Intelligence Committee that operate in space improved significantly over the past decade.

One of the most important functions of this committee will be to steward the entire architecture for overhead technical intelligence collection in all phases of crisis conflict when the tendency for the bureaucracy is to request funds to modernize individual programs. **Now, more than ever, systems thinking in support of well-developed strategy by this committee will serve the nation well.**

### **Balancing National Security and Civil Liberties**

One of the most important things this committee will do over the next year is review and reauthorize key elements of the Foreign Intelligence Surveillance Act Amendments of 2008.

After the New York Times revealed the existence of the President’s Terrorist Surveillance Program in December 2005, this Committee led the oversight and legislative action to make the law technology neutral while also protecting the civil liberties of Americans.

In 1978, when the Foreign Intelligence Surveillance Act was first written, almost all long-distance communications were over the air and almost all local calls were on wires. Thirty years later, that had almost completely reversed, but the law hadn't.

For the most part, the work of this committee has stood the test of time.

While I believe the committee should review how data concerning U.S. persons can and cannot be accessed under Section 702 of the Act and reauthorize it, there is another area of concern that deserves oversight and attention by this committee.

**Pre-Prosecution Information**

Most Americans probably assume that information gathered in a law enforcement investigation is tested when a prosecutor must decide that a case is strong enough, and a judge applies fair rules in a courtroom, and an accused American has a lawyer and is innocent until proven guilty.

But there is something else happening that should concern this committee.

Information gathered by the FBI using law enforcement powers is shared with other federal agencies. Those agencies have written policies to defer to the FBI on counter-intelligence matters involving US citizens.

**Law enforcement information can become the basis of administrative decisions that significantly affect the lives and livelihoods of Americans with no independent review, no competitive analysis, and no process to appeal.** I would be happy to elaborate further about this issue in closed session.

Thank you, Mr. Chairman.

I look forward to your questions.

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*Heather Wilson is the President of the University of Texas at El Paso. From 2017 to 2019 she was the Secretary of the United States Air Force and was a Member of the Congress from New Mexico from 1998 – 2009 where she served as the Chair and then Ranking Member of the Subcommittee on Technical and Tactical Intelligence. Wilson served as an Air Force Officer in Europe during the Cold War and was a member of the National Security Council Staff for President George H.W. Bush. Wilson graduated from the US Air Force Academy and earned Master's and Doctoral degrees from Oxford University as a Rhodes Scholar. She serves on the National Science Board that oversees the National Science Foundation, is a Member of the Board of Directors of the space company Maxar(NYSE:MAXR), and Chairs the Alliance of Hispanic Serving Research Universities.*