With Threats from All Directions, Time is Now for Missile Defense

Then:

“What if free people could live secure in the knowledge that their security did not rest upon the threat of instant US retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?”

- U.S. President Ronald Reagan’s ‘Star Wars’ speech, (1983)

Now:

“The entire United States is within range of our nuclear weapons, a nuclear button is always on my desk. This is reality, not a threat.”

- North Korean Dictator Kim Jong-Un (2017)

“No matter who tries to stand in our way... they must know that Russia will respond immediately, and the consequences will be such as you have never seen in your entire history.”

- Russian President Vladimir Putin (2022)

“Every day when they provide Ukraine with foreign weapons brings the nuclear apocalypse closer.”

- Deputy Chairman of the Russian Security Council Dmitry Medvedev (2023)

“Right now there are changes – the likes of which we haven’t seen for 100 years, and we are the ones driving these changes together.”
By their statements, North Korea, Russia, and China’s leaders’ send a clear message: the United States and our allies’ nuclear weapons are no longer a deterrent to a nuclear exchange between nuclear powers. If deterrence is dead as a nuclear defensive policy, missile defense must be revisited as an essential capability for nations to protect their citizens.

Our adversaries have expanded both their nuclear weapons arsenals and fielded larger and more exotic weapon systems. North Korea, Russia, or China could attack Tokyo, Sydney, Paris, London, New York, or all simultaneously, and there is no effective plan in place to defend them. Given our adversaries’ aggressive language and actions, we cannot rely on the doctrine of mutual assured destruction. To do so would be irrational and wholly inadequate. If deterrence is dead - we need the ability to sense and intercept any missile attack launched against us and our allies.

In 1983, Reagan’s speech was decried as fantasy and unachievable. Missile Defense was viewed as costly, provocative, and impossible. The US partnership with Israel to develop, deploy, and operate a layered missile defense system has proven that missile defense is cost-effective, de-escalatory and it works.

In the face of renewed adversarial aggression, the United States and our allies must revisit President Reagan’s vision for a world free of the threat of nuclear holocaust. While there have been many advances in strategic missile defense since the Cold War, more federal investments are needed to meet a new dynamic landscape with technologically driven threats.

**Current & Emerging Threats**

In recent years, our adversaries have invested in advanced missile capabilities that pose a direct threat to the safety and security of the United States. A single strategic nuclear warhead airburst over lower Manhattan could result in a 280 foot deep crater, an estimated 1.5 million dead and 1.8 million injured, and significant blast effects
as far as Newark, NJ. Depending on wind conditions, deadly radioactive fallout could spread as far as Boston or Baltimore.

We know Russia’s ICBM (intercontinental ballistic missile) force consists of 310 missiles that can carry upwards of 1,189 warheads, with over half of the existing missiles being multiple independently targetable reentry vehicles (MIRV) or missiles capable of carrying multiple warheads. Additionally, the most recent public U.S. intelligence estimates suggest that Russia has up to 2,000 tactical nuclear weapons in its stockpile. Existing US missile defense infrastructure could fail if an overwhelming salvo of MIRVed weapons are directed at the U.S. homeland. Furthermore, Russia’s missiles in Kaliningrad support the Assad regime in Syria while posing a threat to NATO allies from both the northeast and south. And Russia has also developed, tested, and deployed several new missile systems including the Avangard Hypersonic Glide Vehicle.

Iran continues to develop and field short and medium range ballistic missile capabilities. These capabilities present a heightened threat, especially as Tehran’s uranium enrichment program continues unchecked. In April 2020, Iran successfully launched its first military satellite into orbit. While Iran’s ICMB program is still in development, Tehran successful launched its first military satellite into orbit in April 2020. This ongoing development is proof that Iran is well on its way to developing ICBM’s that can strike the US homeland.

North Korea remains brazen in expanding its missile program. In the last decade, the Kim regime has unveiled several new ICBM and anti-ship missiles, conducting over 90 launches in 2022 alone. Further, additional data suggests the development of both road and rail-mobile ballistic missile launch platforms which increases the survivability of North Korea’s program. Pyongyang is vastly expanding its arsenal and continues to test systems to demonstrate an ability to reach the US homeland with a nuclear weapon.

What keeps U.S. national security officials up at night, however, is China - our pacing threat who is developing and fielding advanced weapons systems. According to Pentagon reporting, China will likely
have a stockpile of nearly 1,500 warheads by 2035 if it continues with its current nuclear buildout. Further, a congressional notification from U.S. Strategic Command in February 2023 indicated that China now has more ICBM launchers than the United States. In August 2021, the Chinese Peoples’ Liberation Army (PLA) tested an orbital hypersonic weapon that circled the globe before descending and cruising towards its target. Hypersonics fly at five times the speed of sound, are maneuverable in-flight, and can fly at a low altitude, which complicates existing U.S. response and sensing capabilities. The weapon could, in theory, be strategically maneuvered over the South Pole to subvert U.S. missile defense systems, which are primarily oriented to the north.

Standard-launched missile capabilities are not the only airborne threats to US security. Open-sourced reporting suggests that China is working to develop a land-attack cruise missile designed to be fired from a launcher that appears as a commercial shipping container. The system, specifically designed to defeat our Aegis missile defense platform, presents a maneuverable launch variant that complicates standard missile defense practices. Furthermore, drones and swarms of drones of various sizes, ranges, and capabilities can be equipped with lethal payloads, becoming attractive options for state and non-state actors alike. Finally, other slow-moving airborne threats such as spy balloons conceivably pose a direct threat to US security and require consideration on the most effective, low-cost way to intercept.

**Policy History / Current Technical Capability**

To understand our current vulnerabilities, we need to look at our policy history. In 1983, President Reagan announced the Strategic Defense Initiative (SDI) to signal to our adversaries that America and its allies would no longer live under the threat of mutual assured destruction. One of the central components of the initiative was a plan to develop a space-based missile defense program. Testing on SDI-related programs and concepts continued well into the late 1980s, but missile defense took a back seat to other national imperatives, especially after the fall of the Soviet Union in 1991.
A decade later, the George W. Bush administration picked up missile defense as a central component of its national security strategy. The Administration stood up ground-based interceptor capabilities at Ft Greenly, Alaska, and Vandenberg Air Force Base, California in 2004. In 2007, President Bush began negotiations with the governments of Poland and the Czech Republic to host elements of the ground-based midcourse defense (GMD) system that would defend against intermediate to long range ballistic missiles originating from Iran. The initial plan called for up to 10 two stage ground-based interceptors (GBIs) in Poland and a 360-degree X-band radar in the Czech Republic. But these systems were meant to meet the threat from North Korea and Iran, not the emerging threats we face from our strategic competitors.

But in 2009, the Obama Administration scraped the broader Bush European GMD plan and announced the beginning of the European Phased Adaptive Approach. The four-stage missile defense plan intended to incorporate both sea and land-based ballistic-missile interceptors, part of a broader shift from an ICBM-focused defense posture towards a near-term, short- and medium-range missile defense architecture. The Administration ultimately decided to cancel key portions of the plan. Obama’s overarching missile defense legacy left the United States and Europe vulnerable to an array of threats and laid the foundation for potential coercion by near-peer adversaries that our allies now fear.

Yet another decade later, the Trump administration correctly re-prioritized homeland missile defense as a central component of its overall National Defense Strategy in 2018. The Administration’s Missile Defense Review (MDR) directed studies into establishing a space-based sensor layer to detect missile threats, designating an agency responsible for cruise missile defense, and integrating F-35 sensor suites into the Ballistic Missile Defense network. It also directed an emergency action plan to activate the Aegis Ashore site at Kauai, Hawaii within 30 days if necessary.

Now, with the Biden Administration, we have a U.S. policy that is reactionary on missile defense, failing to discuss emerging
technologies such as directed energy in its 2021 MDR, and failing to address the need for an East Coast Missile Defense Site despite a war in Europe and increasing capabilities of our adversaries in the Middle East and Asia. President Biden’s MDR also showed a lack of foresight by failing to address supply chain issues in the defense industrial base, despite weaknesses being laid bare due to the COVID pandemic.

The decisions of the past six administrations have led to our current missile defense posture, which focuses on sensing threats from North Korea and Iran through a variety of ground, air, and sea-based sensor systems, but does not address threats from China or Russia. This infrastructure prioritizes intercepting threats at the midcourse and terminal phases of flight using missile interceptors and sensors responsive mainly to ICMB threats. Unfortunately, these systems were fielded before the emergence of next-generation adversary capabilities, thus leaving us unprepared for today’s threats, let alone tomorrow’s threats.

**Required investments for Future Security**

Given advancements in adversary threats since the end of the Cold War, the U.S. and its allies must invest in a modernized, scalable, and integrated missile defense system which can sense threats early and intercept them at every stage – from initial launch through midcourse to the terminal phase – with a high probability of success. Improved security in this domain comes down to seeing better, thinking faster, and engaging more efficiently.

In addition to the sensors already in place such as GMD and Aegis, we need networked, space-based sensors and radar satellites, which can track all relevant threats including hypersonic cruise missiles. We should invest in artificial intelligence and machine learning systems to develop the ability to track and rapidly parse through the information provided by these enhanced sensors, so the shooters operating our defense systems have as much decision time and as many opportunities to intercept as possible.
Ground, Sea, Air, and Space-based directed energy weapons, and hypersonic railguns could be linked to radar tracking systems and integrated into defense networks, operating at all stages of flight. Our current GMD interception capabilities (which has approximately a 55 percent success rate in flight tests) can be enhanced through the addition of an East Coast Missile Defense Site and programs like the Next Generation Interceptor, which will greatly improve our likelihood of successfully stopping inbound ICBMs and orbital hypersonic missiles. Finally, projects such as the Glide Phase Interceptor and Glide Breaker program show promise of countering hypersonic cruise missiles in their hardest to intercept phase – the hypersonic glide phase. This research and testing must be accelerated.

**Conclusion**

There is no silver bullet which can protect us from all adversarial missile threats. Our adversaries continue to innovate their offensive capabilities and show through their rhetoric and actions the will to use them. Our adversaries’ advancements demand that we invest in our defensive architecture. Different flight profiles, launch locations, and levels of threat require different countermeasures, and all countermeasures should be layered to ensure the greatest chance of success. Investing in these technologies also ensures that our defensive capabilities will be scalable and appropriate to the threat, regardless of the adversary from which it originates.

We must recognize this is a global problem – it's critical that we make these national security investments with our long-term allies. With political and financial fortitude, we can protect our sovereignty and citizens. Together we can realize President’s Reagan vision of a world free from the threat of mutual assured destruction at the hands of tyrants and rogue actors.