



# **LONG-TERM COMPETITION AND NUCLEAR DETERRENCE**

**Workshop Summary**

**December 5-6, 2023**

**Center for Global Security Research**  
LAWRENCE LIVERMORE NATIONAL LABORATORY

## Workshop Summary

### Long-Term Competition and Nuclear Deterrence

Center for Global Security Research  
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On December 5-6, the Center for Global Security Research (CGSR) at Lawrence Livermore National Laboratory (LLNL) hosted a workshop titled “Long-Term Competition and Nuclear Deterrence.” This session brought together participants drawn across the policy, military, and technical communities. The workshop aimed to examine how have the competitive strategies of Russia and China influenced their nuclear policies and postures, in what ways can and should the United States compete in the nuclear domain, how can allies join this competition, and what can be done to mitigate the risks of the most dangerous forms of competition.

Discussion was guided by the following key questions:

- How have the competitive strategies of Russia and China to remake regional and global orders influenced their nuclear policies and postures?
- Should the United States compete in the nuclear domain? Under what conditions? Toward what ends?
- In what ways can and should U.S. allies join this competition, if at all?
- How have U.S. nuclear policy and posture been adapted to long-term competition in a disputed multipolar order? What further adaptations might be warranted now and/or later?
- What can be done to mitigate the risks of the most dangerous forms of competition?

#### Key take-aways:

1. To advance his revisionist geopolitical agenda, President Putin re-made Russian military strategy and gave nuclear weapons the central place. Today, Russian strategic thought appears to be in transition as it digests the difficult lessons of the war against Ukraine.

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Although Putin's basic assessment is unchanged, there is significant renewed debate about the nature of modern warfare and the effectiveness of Russia's deterrence posture and strategy.

2. To advance his "China dream," and the vision of a fully modern China "at the center of the world stage, in the dominant position," President Xi has presided over the continued modernization and build-up of China's military capabilities, including changes to China's nuclear posture that invoke questions about whether changes to its nuclear strategy have also been made. China rejects the U.S. formulation of strategic competition, arguing that the two dominant Pacific powers should work toward "new type major power relations." China's leaders have not given nuclear weapons the central place in their military strategy, but the place is obviously changing in ways troubling to the United States and its allies. They view the nuclear balance as ever-troubled by the continued U.S. development of the capabilities needed for damage limitation of a scale to negate China's deterrent.
3. The United States was for a long time reluctant to accept and join the strategic competition brought to it by Russia and China. Having now done so, it has experimented with different approaches. As yet, there has been little convergence on which competitive approach best serves U.S. interests.
4. The role of the U.S. military in strategic competition is to deter and defeat military aggression by strategic competitors. If successful, this forces the strategic competition into the political and economic domains and makes the world safer, while Russia and China try to compete with flawed political and economic models. The 2022 Joint Concept for Competing lays out a clear set of concepts and principles. It emphasizes that the purpose of competition is to subdue the enemy without fighting. It lays out a strategy for countering adversary competitive strategies built in part on denying adversaries the ability to set the conditions for a successful military campaign.
5. From the perspective of U.S. nuclear strategy, a heightened focus on long-term competition brings with it the difficult question of what goal(s) should guide the competitive U.S. response. U.S. nuclear strategy reflects a good deal more thinking about the requirements of deterrence and assurance than of long-term competition. That said, competition has driven the policy interest in being well hedged against potential future geopolitical surprise and in dissuading a sprint to nuclear parity by China.
6. Since the 1970s, U.S. nuclear planning has been guided by the commitment to maintain a strategic force "second to none." This formulation was originally intended to assure the Soviet Union that the U.S. was not competing for supremacy and also to assure allies that the U.S. would not cede supremacy to the Soviets. For quite some time now, allies have been largely silent on this topic, with the exception of Japan. The alternatives to "second to none" are superiority or inferiority. Accepting inferiority would likely reinforce the perception of an America in decline and retreat. Embracing superiority would likely generate additional unwelcome actions by Russia and China. The United States does not need nuclear superiority across the board. But in both its strategic and theater force it

needs capabilities in some key areas that are better than either adversary's capabilities. The United States should tolerate approximate strategic equivalence among the three while also protecting its existing strategic advantages and striving to create new ones, while avoiding competition in areas where it is disadvantaged.

7. This line of thinking does not account for the new salience of China in U.S. defense strategy. The issue for the United States in sizing its force relative to China's is NOT whether to pursue superiority or accept inferiority; rather, it is whether to accept the loss of the superiority it has long enjoyed and to tolerate mutual vulnerability. Japan is adamant that the United States does not cede its superior nuclear position, on the argument that doing so would send a message of appeasement to China, inevitably resulting in a dangerously provocative Chinese military test of the resolve of the U.S.-Japan alliance. "Second to none" may be tolerable to Japan so long as rough strategic equivalence in the quantitative U.S.-PRC nuclear balance is accompanied by a more robust U.S. theater nuclear posture in the region, a more robust hedge posture, and declaratory policy designed to signal to Beijing that nuclear weapons still play a central role in U.S. deterrence strategy.
8. The new ways of war of Russia and China put U.S. allies and partners in the nuclear cross hairs—after all, their political allegiance is the future prize in conflict and their vulnerability to coercion makes them the center of gravity in war. Their nuclear strategies have resulted in significant new threats to U.S. allies and partners and to U.S. military forces in Europe and Asia.
9. Thus, the United States and its allies have been working to strengthen regional deterrence architectures and to improve the effectiveness of extended nuclear deterrence. The results are mixed. Deterrence has been strengthened with the addition of improved non-nuclear means (e.g., BMD and deep precision strike) and new consultative mechanisms. But from a global perspective, the U.S. extended nuclear deterrent is not fit for purpose. Relative to the growing need, that deterrent is too small, too vulnerable to IAMD, too poorly dispersed, and too dependent on strategic systems. The weaknesses may be more political than operational, however. That is, adversaries may have more reason to doubt U.S. resolve than capabilities. Significantly, some important remedial actions are now underway in multiple alliances.
10. Alliances and allies are also key assets in long-term competition. Alliances generate deterrence and allies cooperate to strengthen it. On a widespread basis, and much more than just 3-4 years ago, they are working to raise their nuclear and deterrence IQs. They are increasingly aware of the significant role they will play in assisting the United States to manage the dangers of a world of two nuclear-armed peer adversaries. They also have industrial capacity to turn to collective purpose. Some allies are ready, willing, and able to pick up more of the nuclear burden.
11. The Biden administration has made adjustments to U.S. grand strategy and nuclear policy aimed at favorably managing competition with Russia and China. This reflects its assessment that "deep and substantial cracks have appeared in the post-cold war nuclear

foundation.” It thus seeks to strengthen deterrence through improved integration, increased non-nuclear capabilities, modernization of legacy nuclear capabilities and, the addition of the B61-13. The administration has also heard the findings of the Strategic Posture Commission that the program of record (PoR) is built on outdated planning assumptions and that it is necessary but not sufficient. Accordingly, it now has a broad review underway to assess the sufficiency of the PoR and to determine whether adjustments should be made. The administration is committed to using deterrence strategy to drive capability development, rather than focus myopically on competition in warhead numbers.

12. The administration also judges that “U.S. preparedness for defense competition does not exist in a vacuum. In part, it is a way of demonstrating to adversaries that managing competition through arms control is preferable to unrestrained competition across domains.” Such demonstrations are needed, given that the New START Treaty will likely expire in February 2026 without a replacement. The administration acknowledges that the arms control it may be able to pursue with Russia will be determined in part by China’s trajectory.
13. Whether this mixed approach to competition will prove successful in strengthening nuclear deterrence is debated. It depends on getting the nuclear part right. Doing so requires fully incorporating U.S. nuclear strategy into U.S. competition strategy. It also requires that the United States compete in the nuclear domain to the extent necessary to enable the nuclear element of strategy.
14. It also depends on getting the arms control part right. An arms control strategy built on the expectation that Russia and China will soon (re)discover a shared interest in strategic stability and in cooperating informally and formally to protect that shared interest is highly likely to fail. Sustained, substantive, high-level strategic/nuclear dialogue with both is unlikely. To protect its interest in strategic stability, the United States should put increased emphasis on cooperation with allies and partners to implement “unilateral” measures to help mitigate nuclear dangers.
15. There are two primary risks involved in imposing more nuclear risk on adversaries in a deterrence campaign. One is triggering adversary competitive responses that make us less secure. The other is creating a nuclear balance that is unstable in crisis or conflict due to adversary fears of a U.S. preemptive strike that disarms them. The risk of deleterious arms racing is mitigated somewhat by the fact that one or both of our strategic competitors are already racing. The risk of U.S. preemptive strike is mitigated by the steps Russia and China have already taken to prevent this result.
16. The mainstream in U.S. nuclear policy has shifted a bit as the geopolitical terrain has eroded. The elements of a modified approach have been endorsed in a series of bipartisan reports, encompassing a modest increase in, and diversification of, deployed nuclear forces and diminished expectations for arms control. A more competitive U.S. response brings with it certain risks. But these are manageable. And they pale in comparison to the risks of not competing.

## Panel 1: The Competitive (Nuclear) Strategies of Russia and China

- How do Russia and China conceive the means and ends of strategic competition with the United States (as opposed to the means and ends of deterrence)?
- What role does nuclear competition with the United States play in their strategies?
- How do they assess their progress in that competition?

This panel focused on how Russia and China conceive the means and ends of strategic competition with the United States, and how nuclear weapons fit into that vision for competition. Overall, the role of nuclear weapons is actively debated in both Russia and China. While Russia sees no change in the coercive role of its nuclear weapons, it is figuring out how to improve its capabilities in light of the Ukraine war and the changes in the North Atlantic Treaty Organization (NATO). In China's case, opacity around the purpose of its nuclear modernization efforts makes it hard to understand its goals and activities. Both countries are also trying to understand the implications of potential changes in U.S. nuclear forces and posture, thus, it will take more time to better comprehend their long-term competitive strategies and the role of nuclear weapons in those strategies.

In Russia, there is a consensus among the military leaders, political leaders, and expert community that the world is transitioning into multipolarity, and it presents Russia with new challenges and opportunities. In this transition, Russia's goal is to form a new, more just, multipolar world, and it sees the U.S. attempt to maintain hegemony as an impediment to achieving this goal. However, beyond this general consensus, there is no shared understanding within Russia on the role that nuclear weapons should play in the strategic competition.

The political leadership sees strategic nuclear forces as an important means for security. They support Russia's position as a major player in international politics and allow the country to defend itself with a smaller defense budget. In Putin's view, nuclear weapons will remain central to the country's security and its deterrence goals for at least the next two to three decades. Despite Russia's poor performance in the Ukraine war, Putin sees no need to revise Russia's doctrine and re-assert the credibility of its nuclear forces because he judges that adversaries are unlikely to have the resolve to use nuclear weapons against Russia. However, the political role of Russia's nuclear forces is being debated within both the military and the expert community. There are no authoritative military writings on this issue, but among others, the military is actively questioning the sufficiency and credibility of Russia's strategic nuclear forces. Some in the expert community assert that Russia's nuclear deterrence is no longer perceived as credible by the United States. Thus, they recommend preventive limited nuclear use to reassert the fear in the minds of adversaries, and to limit further escalation by the West in the Ukraine war.

Similarly to Russia, China also believes that the United States is trying to resist a shift in the global balance of power, and it intends to maintain its hegemony. Yet, unlike Russia, China rejects the framing of great power relations as competitive. Instead, it promotes a new type of U.S.-China relationship that emphasizes a win-win cooperation. Its key goal is to get the United States to accept a new order that accommodates, rather than suppresses, China. Currently,

China's primary means revolve around economic development and conventional military power, while the role of nuclear weapons remains unclear.

Evidence based on interviews with the expert community in China and research on the People's Liberation Army (PLA) suggests that China is neither trying to achieve a nuclear parity with the United States, nor working to build a counterforce capability. It is more likely that China is trying to attain a more robust retaliatory capability since its nuclear forces have remained vulnerable to a U.S. first strike up until 2019. While it is hard to tell how much further China would go to build up its nuclear forces, the level of investment in its strategic warfare capabilities indicates that having a counterforce capability is not yet a priority. Moreover, across the Chinese think tank community and the military, there is no evidence for a push to achieve nuclear superiority. Experts regard the U.S. counterforce capability as an insurmountable threat and are more concerned with the possibility that China would accidentally trigger an escalation with the United States. That said, experts have less influence on the political leadership than they had in the past, so the direction in which China's nuclear program will go remains to be seen. As the negative effects of its modernization program are becoming clearer for China's broader foreign and defense policy objectives, Chinese leaders might decide to address escalation risks in the future.

In the open discussion, participants pushed on the issue of how Russia and China might be planning to use their nuclear forces. In one interpretation, Russia has already succeeded in using its nuclear forces in the Ukraine war by deterring the United States and NATO from attempting a large-scale intervention and urging them to act with restraint. The question is harder to answer in China's case since the reason for its nuclear build-up is much more ambiguous, which means that the extent of the build-up and the purpose of it can proceed in a variety of different directions. However, allies in the region, especially Japan, have interpreted China's theater range capabilities as a possible means to coerce U.S. allies to adopt neutrality and rethink their support for the United States. Others argued that China can generate escalation risks by threatening to target U.S. territories since these steps might not trigger as harsh reactions as an attack on the homeland would. Still, without greater investments in warfighting capabilities, China's current nuclear forces would be more capable of influencing political decisions than achieving operational and tactical advantages in a nuclear war against the United States and its allies.

Threats posed by a deepening partnership between Russia and China were mentioned as another area of concern. Both countries have stepped up the levels of military and nuclear cooperation and have indicated that they share the same outlook in terms of security threats. However, there are limits to this deepening partnership. In the Russian case, there appears to be no mentioning of jointly deterring or defeating the United States. On China's end, there is internal division over how close to get with Russia. China maintains a strong emphasis on self-reliance and its leadership believes that it is incredulous to conceive that China and Russia would enter a conflict cooperatively, or in a quick succession (especially with China getting into one after Russia). For the time being, cooperation between the two countries is limited to technology and knowledge transfers.

Finally, in response to U.S. nuclear modernization efforts, Russia and China are starting to think through the implications. There is no doubt on either side that the United States has the means

to achieve its goals. Russia continues to wrestle with the credibility of its own nuclear deterrent, and China continues to be concerned about U.S. conventional long-range strike and ballistic missile defense capabilities. China also believes that the United States is committed to using the defense of Taiwan as a means to contain China and thus, the stakes in the region are not automatically in China's favor. In light of these ongoing changes and open questions, it will take more time to gain clarity on how Russia and China are going to adjust their strategies for long-term competition.

## **Panel 2:** The United States as a Strategic Competitor

- What lessons stand out from its track record of the last decade or so?
- How has the Biden administration framed the competition?
- How is the new Joint Operating Concept on Competition relevant?

From a historical perspective, the United States has been a rather successful competitor. Throughout its history, the United States has had isolationist impulses that were punctuated by periods of active global engagement. This oscillation between isolationism until engagement was absolutely necessary is illustrative of the problem that the United States sometime starts slow and enters the scene too late. But on average, the United States has not been bad at competition. The United States does not do it consistently, and it does not always plan to do it, but when competition was brought to the United States, it usually ended up being a good competitor in the aggregate, despite its own bad impulses.

Today, the argument that United States is in decline is gaining traction not just in Beijing and Moscow but also among allies. These arguments are not new and there might be elements of truth to them. However, this argument loses sight of what the United States has accomplished in the past and how it has overcome several difficult situations. Domestic politics have been tumultuous before, the United States has seen extreme polarization and political paralysis, but none of the past narratives of its decline turned out to be true, and it always managed to overcome the difficulties it was facing. The resilience of American democracy and the resilience of the United States as a strategic competitor has been underestimated before, but in reality, the historical record suggests that the United States is capable of reacting effectively when challenged.

In the current context, the Biden administration has made strategic competition the central feature of its foreign policy. Under the administration, the competition has been redefined, and it is not the same competition as it was conceived in the 2018 National Defense Strategy. It is not competition among near-peers, it is instead a trilateral great power competition, a competition between democracy and autocracy, and also a competition for the future of the international order. This dramatic framing gives the impression that the United States is competing for everything, everywhere, all at once. This is a competition for leadership, influence, technological revolutions, military advances, and allies, friends, and partners. Such a framing implies that the competition is also about demonstrating that democracy is superior to autocracy. In this logic, the United States must show that it is capable of forming and leading coalitions, securing its



supply chains while growing its economy, winning the race for AI, modernizing its military, establishing conventional superiority, and building a nuclear force for the new three-body problem. But this version of competition is dangerous. It encourages policy makers to pay costs and take risks to secure a speculative future that is impossible to inhabit. This fantasy distorts strategy, courts antagonism and flirts with nuclear war. This version of competition arises from fear and anxiety. These ideas are built on realist zero-sum theories of international relations, and they suggest a more confrontational pathway forward. Defining competition in these grandiose terms, claiming that this is about the future of the international order, between incompatible ideologies, fought by revisionist and status quo powers that strive to become hegemonies creates a trap about the inevitability of war, and smothers the substance of competition under the weight of unfounded existentialism.

The Department of Defense is in a uniquely influential position to correct these misguided ideas about competition by accepting the premise that strategic competition is a recurring but periodic feature of international politics, and strategic competition is not continuous. The Joint Operating Concept for Competing is somewhere in between these two interpretations of competition. It simultaneously calls strategic competition an enduring condition, but also suggests that it happens in discrete and identifiable periods, during which a state must attend to it, while there are other periods when a state does not need to respond. These two competing views do not reject the notion that the sole role of the military in competition is to prepare for war, but they struggle to explain what the forces' competitive responsibilities actually are. This makes the document a perfect encapsulation of the tension between recognizing that the conventional wisdom is not quite right, and the compulsion to find a better answer that does not surrender to the idea that today's environment is dramatically different. Competition has been a constant feature of international relations, and today is not that different than yesterday. Rather than speculative pursuits and antagonistic action, the overarching strategy for competition should be clear, nuanced and pragmatic, encouraging and reinforcing responsible state practices and behaviors by using all tools of national power.

Participants asked the panel about what factors in the current era, such as the scale and velocity of the information environment, might distinguish this environment from previous analogues. The panelists cautioned against characterizing the competition as one of democracies versus autocracies, given that not all U.S. allies and partners fall into the former category. Instead, they suggested that the framing could rather focus on the sovereign autonomy of people versus the neo-imperialist actions and postures of U.S. competitors. They argued that extending Article 5 type guarantees is problematic when there is a danger of democratic backsliding. Under the former framework this could create confusion, but using the latter characterization insulates against that risk. Though the panelists argued that the information environment creates new opportunities for adversaries to exploit underlying divisions, the United States and its allies have the potential to overcome this challenge with sustained leadership focus.

Participants noted a rare bipartisan consensus emerging with respect to the views on the competition vis-à-vis China. However, it was also noted that relying too heavily on the military sphere as the primary arena of competition might be misguided, and it could distract from areas that are more suited to advance long-term American strategic interests. Panelists disagreed on the characterization of the present environment and whether it reflects a period of increased

competition requiring ‘steely-eyed engagement’ or if such a framing is hyperbolic and counterproductive. One panelist argued for increasing S&T cooperation with allies and partners while simultaneously strengthening science and technology export controls against adversaries, citing the sanctions imposed on Huawei as a success story. The history of the Soviet Sputnik launch, and the ensuing Congressional legislation was cited as indicative of the Congressional capacity to drive whole-of-government competition in science and technology and to find consensus on export controls.

Some workshop participants expressed uncertainty about China’s capacity for future competition given recent demographic challenges, unemployment, migration, and foreign investment issues within the country. Panelists were uncertain as to the effect of these problems on China’s long-term ability to compete and they were also uncertain about the long-term impact of President Biden’s recent meeting with Xi in October 2023.

It was also emphasized that public opinion plays a crucial role in shaping U.S. engagement, and this is why it is so important to clearly articulate the reasons behind strategic competition. A compelling values-based argument that aligns with the younger generations’ value structures has the potential to engage the public. Participants also noted that existing political fissures provide an environment ripe for adversary information confrontation strategies, and better resilience and security are needed to bridge these gaps. The narratives of American decline may also be part of these adversarial information campaigns. U.S. leadership should be careful not to overreact to these claims while it is devising a thoughtful and strategic response to current geopolitical challenges.

### **Panel 3: Getting the Goals Right**

- Is “second to none” still the right metric? How can it be made to fit a world of two peer nuclear rivals?
- Is superiority possible, desirable, sustainable? Are there forms of strategic advantage that can be seized and held?

Despite the dramatic changes in the security environment, “second to none” is still the right metric but it probably has to be clarified a little bit further in the two-peer context. To compete effectively the United States does not need nuclear forces that are the sum of the Russian and Chinese nuclear forces, and the United States does not need superiority across the board. This is not a simple math problem. Adapting the Cold War term of “essential equivalence” to this new context means that no single adversary can possess across the breadth of its capabilities superiority that the United States would not be able to offset. Maybe this could be labelled as “second to neither but more than either.” Looking at where U.S. strategic and theater nuclear forces stand, there is a need for new capabilities in some key areas that are better than either adversary’s capabilities, but in a quantitative or even qualitative way the United States does not need to match one-for-one across the whole suite of adversary capabilities.

There are two main reasons why “second to none” or “second to neither” still matters. First, for geopolitical reasons—nuclear war planning uses certain metrics that require various capabilities to offset any advantage adversaries might hope to achieve by launching a nuclear attack. Investing in these capabilities sends a message to adversaries that the United States is staying in the game. The second reason is the assurance of allies that requires a credible force structure to defend the U.S. homeland and the territory of allies as well.

In terms of superiority, the United States will need to pursue certain advantages against both adversaries, but not necessarily simultaneously, and certainly not across the board. There are some key areas where superiority is not only possible but also desirable. In this regard, it is not enough to have more capabilities—the United States has to possess qualitatively better nuclear forces and supporting capabilities that enable some kind of advantage. It is better to pursue advantage, and not absolute superiority because if an adversary’s deterrent is completely negated, it is recipe for reckless behavior, or an arms race. While China is rapidly building up its capabilities and Russia maintains the ability to build large numbers of nuclear warheads, the United States has allowed that capability to lapse and it is just now trying to rebuild some of it. Despite the shortcomings in production capacity, it is definitely a U.S. advantage that there is a lot of Cold War knowledge that the United States can draw on, including warhead designs and other demonstrated capabilities. China does not have the same test base, so they are going to face an uphill battle very soon. While warhead production capacity is a strategic advantage that adversaries possess, quality also counts, and in this regard the national laboratories in the United States have a great deal of experience, and there is a lot of potential in the coming decades.

In terms of seeking an advantage, the logical next question is how advantageous is a narrow margin of superiority? In a regional context, even relatively modest numerical advantages, such as in the tens, can carry significance. Small advantages in regional theaters may influence an adversary’s perception of nuclear superiority and their judgement about who would prevail in a nuclear conflict.

The next big question is how sustainable these advantages are. A sustainable strategic advantage requires ongoing investments, political will, and insights into the economic futures of U.S. competitors. At the levels of current spending, the United States is not likely to be able to fight both adversaries simultaneously—some degree of uplift will be needed. The United States should also meticulously assess how to acquire advantage over Russia and China. In the nuclear domain, a crucial component remains a robust counterforce capability, aimed at minimizing potential damage to both the United States and its allies. The primary objective is to dissuade adversaries from believing that victory is attainable in a nuclear conflict.

The effectiveness of deterrence in the context of a two-peer nuclear competition is contingent on two critical factors: the magnitude of the threat presented and the adversaries’ preparedness to absorb potential damage in escalation. The size of each nation’s nuclear force and their respective willingness to endure harm play pivotal roles in strengthening the overall deterrence posture. Within this dynamic, both the United States and its nuclear competitors confront the prospect of significant consequences. This emphasizes the delicate equilibrium between demonstrating commitment and acknowledging the potential for catastrophic damage. This intricate balance underscores the complexities inherent in trilateral nuclear dynamics and the

strategic considerations shaping their respective deterrence postures. Given the diverse regional characteristics, tailored capabilities are imperative in both theaters, ensuring adaptability and swift responses in a conflict.

This raises questions about prioritizing counterforce capabilities in the Indo-Pacific region and balancing them against other theaters. Navigating the dilemmas around nuclear advantage, prompts the question of where U.S. allies fit into this strategic equation. Allies can play an important role in offsetting adversary advantages. The significance of allies, however, varies based on geographical considerations. They can serve as amplifiers of U.S. advantages—in the case of Japan, for instance, Tokyo is strategically assisting in bolstering U.S. conventional and space capabilities. Japan and South Korea provide essential support to U.S. competitiveness by developing capabilities that are aligned with broader U.S. and allied interests in the region. Dialogue with allies also plays a crucial role in this dynamic. Working to synchronize efforts is critical for the United States to maintain a strategic edge over China and Russia in multiple domains.

Various forms of nuclear and conventional advantages come into play when considering deterrence strategies with a focus on counterforce capability and the ability to respond to adversary limited nuclear attacks. Both the nuclear and the conventional elements are crucial to deter China and Russia. In the Indo-Pacific theater, allies such as Japan would prefer if the United States maintained a nuclear superiority over China because they fear that parity would embolden Chinese probing of U.S. resolve, and it could lead to more aggressive posturing. However, they would probably also consider a “second to none” posture sufficient as long as it is accompanied with a more robust hedge and a declaratory policy that makes it clear to China that the U.S. resolve is strong and nuclear weapons remain central in U.S. deterrence policy. Allies also want to see some kind of response to China’s nuclear build-up. Right now, it seems that expanding regional nuclear capabilities alone may prove sufficient without a parallel increase in strategic nuclear forces, but this calculus could shift by the 2030-40s, depending on how much further China’s nuclear forces increase. These considerations are not static, and the evolving geopolitical landscape necessitates a continuous assessment of the situation to devise effective deterrence strategies.

In terms of non-nuclear strategic advantages, the United States already possesses an advantage in numerous areas. The first one is undersea warfare, where the United States still has a significant advantage over both rivals. Even if they are trying to narrow the margins, the United States have had decades of advantage, and it should work to maintain it. The second area is space. In this domain the United States can maintain its strategic advantage particularly due to its robust commercial sector that has become a major player in the past decade. Lastly, in the cyber domain, the U.S. alliance structure, and cooperative mechanisms such as the ‘Five Eyes’ provide a very important strategic advantage to the United States because its adversaries do not have the same alliance structures to rely on. In this domain, allies have important resources and also experience to bring to the strategic competition. Similarly, there are huge advantages in the cyber and signals intelligence areas. The United States and its allies should work together to maintain these advantages and prevent adversaries from catching up.

## Panel 4: Strategic Competition, Extended Deterrence, and Allied Assurance

- How can strategic competition strengthen extended deterrence and assurance?
- How might it erode one or both?
- From allied perspectives, are there viable alternatives to nuclear competition?

This session discussed the need to adapt extending deterrence in an eroding strategic environment. The panelists argued that “adaptation” really is a euphemism for strengthening extended deterrence. Adapting to the new security environment is the joint responsibility of the United States and its allies. It is important to remember just how important allies are to U.S. security—they are the center of gravity across multiple domains of strategic power. Everything the United States does in the world is in partnership with allies. As one participant noted, “alliances are our superpower over Russia and China. Russia and China do not have these benefits. Alliances greatly expand our reach. Russia and China believe they are under threat from all directions, not just from the United States. Indeed, extended deterrence massively complicates adversary decision-making in a crisis because it is difficult to decide how to go to war when you are entangled in a web. This makes that decision much less tidy.” Participants also recalled that extended deterrence works both ways. The only time that NATO Article 5 was invoked in history was in defense of the United States after 9/11, when tens of thousands of allied troops came to the defense of the United States. Both the United Kingdom and the United States commit their nuclear deterrent to NATO. It is therefore unsurprising that extended deterrence is a focal point for ‘Red’ animosity in an attempt to divide the United States and its allies.

In the current environment, the Indo-Pacific represents the most challenging theater for the United States and its allies, and therefore requires the most deterrence adaptation. China’s nuclear build-up is an unprecedented strategic break-out that adds challenges for the United States and its allies not only in terms of enhancing Russian villainy but also in terms threatening U.S. deterrence and assurance in the Indo-Pacific. China’s nuclear break-out is a component of its general expansion, and should be seen as such, and not as a reaction to small U.S. enhancements. Western assumptions thus precede from the wrong anchor point because the Western strategic community generally looks at China’s build-up through Beijing’s historical minimal deterrence posture. But in holistic terms, China has the fastest military build-up, and it is therefore obvious that China would have modernized its nuclear forces sooner or later, regardless of U.S. enhancements. Participants also argued that there is a high probability that China’s nuclear strategy will change as its nuclear capabilities change. As one participant noted: “If all your force can support is a minimum retaliatory strike, then there is no point in going beyond. But now that China seeks to provide a world-class nuclear force, China has strong incentives for going beyond its current posture. Xi (like Putin and Kim) believes deeply in the political power of their nuclear arsenals. So as the balance of power changes, it is natural to assume that they will want political benefits from their nuclear weapons. China’s nuclear posture is just one more tool for them.”

Participants agreed that the U.S. and allied deterrence adaptation needs to be completed as scheduled and perhaps even accelerated. Although the eroding strategic environment means that adapting deterrence should not be controversial, there is a risk that Western societies return to complacency after the Ukraine war. Thus, it is incomprehensible that the United States is not further along adapting its nuclear forces to the new security environment. The pace since 2010 has been too slow. The West is still organizing its thoughts. As the United States and its allies continue to debate “how much is enough,” they must adapt their strategic forces to deal with two nuclear peers at once. If friend and foe perceive the United States as being unable to defend itself, then the credibility of extended deterrence collapses. While one participant argued that the allies are generally content with U.S. capabilities, another warned that an added complexity in the “how much is enough” debate is that different allies have different perceptions of the required force structure to credibly extend deterrence. Sustained leadership focus and close coordination with the allies are thus key to ensuring the continued credibility of U.S. extended deterrence commitments.

Another factor complicating deterrence adaptation is that U.S. military strength declines relatively as China’s strength rises. This relative decline could be perceived as a matter of American choice or as an inability to compete. Relative military strength is just one important variable—and one over which the United States has control. It is thus important that the U.S. force posture changes as the security environment changes. Any failure to act would only exacerbate vulnerabilities.

Determining how best to adapt depends on the following questions: If previous shifts in the strategic balance prompted shifts in U.S. posture, is it different this time? Are there political or geographic constraints that make nuclear adaptation difficult and call for conventional solutions? What attributes of strategic forces must be strengthened to credibly deter a second adversary in conflict with the first adversary? Does the United States think that China believes that it can win a war over Taiwan? As China pushes for strategic parity, will the asymmetry between U.S. and Chinese theater forces increase (as was the case with Russia during the Cold War, and after 2014)? Is there a danger of arms races at the strategic level? Does that also apply at the theater level? How should the United States address asymmetries in theater systems? SLCM-N and DCAs are the only systems on the horizon. How do they meet these criteria? Is later better than never? Will a permanent presence be better? Is forward-deployed better than forward-deployable, because deploying in a crisis could exacerbate a crisis? Is maintaining escalation dominance over North Korea worth the cost? Does China’s break-out impact that calculation? Assuming the United States restores its industrial base, is it sufficient to ensure sustained strategic competition over a longer timeline? How should U.S. and allied capabilities be allocated to ensure effective deterrence in Europe and the Indo-Pacific? To what extent the independent nuclear forces of France and the United Kingdom need to be adapted in a two-peer world?

The eroding security environment thus presents the allies with an urgent need and a formidable opportunity to improve their nuclear IQ. While it is clear that extended nuclear deterrence has been stabilizing, historically, webs of alliances were often considered destabilizing until the advent of the nuclear age. It is important that the allies seize the momentum now to coordinate their deterrence adaptation needs within NATO and the alliances in the Indo-Pacific to ensure that extended deterrence remains stabilizing. To this end, the P3 should collaborate more closely

to improve NATO's nuclear IQ, including on the two-peer problem. There is a clear link between the U.S. commitment to Europe and the Chinese perception of the U.S. commitment to the Indo-Pacific. European participants were thus adamant that the United States must not prioritize the Indo-Pacific over NATO because China might misinterpret such a decision as not keeping American extended deterrence commitments.

Another challenge in preparing for a two nuclear-peer environment is that there is very little common "strategic" understanding with China. The Russia-Ukraine conflict has shown that Russia believes that the United States and the United Kingdom have the intention to follow through on nuclear commitments. That is the result of decades of track 1.5 and 2 dialogues. The P5 process has given a level of frankness in the relationship to threaten each other and understand each other's interests with Russia. But that is not a given with China. China might mistakenly assume that if it achieves nuclear parity with the United States, then it could deter American intervention in a Taiwan contingency. After all, the origin of two world wars in Europe was that authoritarian regimes underestimated the will of democracies to fight. That same misjudgment may be held by China today. Thus, the United States and its allies need to very clearly communicate to China their will to defend themselves.

### **Panel 5: Strategic Competition and the Effort to Strengthen Deterrence**

- To what extent will the current U.S. approach to competition strengthen deterrence?
- Should the United States tailor its approach to reinforce its deterrence objectives? If so, how?
- What risks does it run in a campaign to impose more nuclear risk on adversaries? Can and should they be avoided or mitigated?

The first panelist argued that the discussion about strengthening deterrence should start with an examination of the meaning of deterrence. In essence, the United States is trying to deter a specific decision by a specific opponent under a specific situation. In the nuclear context it means deterring nuclear use by adversaries. But nuclear use might occur as a result of a failure of deterrence in the conventional domain. Throughout this workshop, many participants agreed that the most likely pathway to nuclear use is an escalating conventional conflict. Therefore, U.S. strategic deterrence also has to include a focus on deterring a conventional conflict from emerging in the first place. Conflict with adversaries moves on a spectrum, where on one end there is a low intensity grey zone competition, and on the other end there is an unlimited nuclear war. The spectrum is linked between two nuclear peers, but it is linked in a non-linear way. There are clearly defined points where the nature of the competition changes dramatically. These are the decision points where states try to influence their opponent's calculus. Therefore, the United States has to look at the competition in the grey zone as a first step to influence adversary decisions about escalating to an armed conflict, and as a first step in managing nuclear risks.

The second conceptual issue is competition. Just like in the previous case, this is also a spectrum between running a race where everybody stays in their lane and focuses on finishing first, versus a competition where the participants are trying to win by deliberately injuring each other. As the

United States develops its strategy for long-term competition, it has to also take into account how adversaries are competing, and whether they play according to the same rules.

The current U.S. approach to competition includes three lines of effort: investing in the underlying sources and tools of American power, building the strongest possible coalition of nations, and strengthening the military. Very often, the focus is on the third one, but the other two elements are equally important. The U.S. intent is to compete vigorously while having guardrails to prevent this competition from sliding into conflict. Deterrence is basically the most important guardrail that has many layers. First, it should keep the competition from escalating to a conventional conflict. Then, the next guardrail is about making sure that a conventional conflict does not lead to a nuclear war. Under ideal circumstances, the primary goal of these guardrails is to keep the competition limited, and under the threshold of armed conflict. These analogies were meant to demonstrate that the United States has to simultaneously compete and deter, and these two tasks are closely linked.

The U.S. approach to competition has the potential to strengthen deterrence, but only if the nuclear component of this approach is done properly. The nuclear component of the U.S. approach includes the capabilities and the strategy for using those capabilities. Capabilities and strategy are interconnected; a strategy for using nuclear weapons is constrained by the capabilities of those weapons, so capabilities must be developed to match the needs of strategy.

U.S. capabilities are improving, but not dramatically. A conspicuous example of a new capability is the recent modification of the W76 warhead (W76-2) on some of the U.S. Navy's Trident II missiles, which gives the United States the ability to launch low-yield nuclear weapons from ballistic missile submarines (SSBNs). Prior to the W76-2, U.S. SSBNs were equipped exclusively with high-yield warheads. Aside from the W76-2, the U.S. approach also includes the modernization of its entire suite of nuclear forces to deploy systems that are more capable than the systems they are replacing, but do not add new capabilities.

These nuclear capabilities may be sufficient as part of a broader defense strategy for deterring Russia and China at the higher ends of the escalation ladder, but they might not be enough to deter lower intensity probing and aggression on the theater level. Deterrence would likely be improved if the United States were to develop more weapon systems with low-yield nuclear options. Currently, the United States has just three methods for deploying low-yield nuclear weapons: a gravity bomb dropped by fighter aircraft (B61), a long-range cruise missile launched from strategic bomber aircraft (AGM-86 ALCM), and a submarine-launched ballistic missile (Trident II with the W76-2 warhead). Each of these options have unique disadvantages: gravity bombs require an aircraft to fly almost directly over its target which entails obvious risks to the aircraft, long-range cruise missiles take significant time to arrive at their target and can be shot down if detected in transit, and ballistic missiles are easy to detect and therefore provide adversaries with significant warning after launch.

Given the inherent weaknesses of any one delivery method, developing a wider range of methods for delivering low-yield warheads may improve deterrence. Potentially useful new capabilities include a submarine launched cruise missile (SLCM-N), a medium range standoff



missile that could be launched from a fighter aircraft, and perhaps some form of a medium-range ground launched missile.

Regarding the nuclear strategy piece of the U.S. approach, deterring Russian and Chinese aggression will require a fully integrated nuclear strategy in broader U.S. defense strategy. There appears to be a consensus in the United States that this integration is necessary, but it has not yet occurred. For instance, the 2022 National Defense Strategy (NDS) broke with precedent and incorporated the Nuclear Posture Review (NPR) and the Missile Defense Review (MDR) within the same document. However, even the 2022 NDs is not entirely clear about the role of nuclear weapons in overall U.S. defense strategy.

Figuring out how nuclear weapons fit into the overall defense strategy is becoming more acute with the emergence of a tripolar security environment where both Russia and China are peer adversaries. Faced with two nuclear peers, the United States cannot count on its conventional superiority to counter both adversaries simultaneously. It is generally considered that making up for a conventional disadvantage necessitates greater dependence on nuclear weapons in operational plans (e.g., using nuclear weapons to respond to a conventional attack that cannot be repelled by available conventional assets).

A coherent defense strategy that fully integrates nuclear weapons is important for dissuading Russian and Chinese aggression. If Russia and China understand that the United States has a plan for responding to any aggression—even in cases where it is at a conventional disadvantage—they are less likely to attempt aggression. The existence of such a strategy could also help to discourage further escalation on the part of Russia or China after they have already initiated a conflict. Russia or China would hopefully see that they could not win the conflict by resorting to escalation without suffering extreme consequences.

## **Panel 6:** Strategic Competition and the Effort to Promote Strategic Stability

- What are the prospects that Russia and China will choose to “compartmentalize” concerns about strategic stability and join in dialogue and cooperative measures to reduce risks?
- If faced with their continued obstruction, what can the United States and its allies and partners do to sustain and strengthen strategic stability on their own?
- What forms of unilateral restraint are in their interest, if any?

Promoting strategic stability and seeking cooperative measures in the current security environment faces many challenges. While the United States is prepared to enter into discussions with Russia on how to manage nuclear risks and develop a post-2026 arms control framework, Russia has so far not responded positively. In public statements, Russia has criticized the United States for seeking to compartmentalize arms control from the broader security relationship, and in doing so, failing to address the core problems. Russia is not going to engage in strategic stability or arms control discussions until there is a change in Washington’s approach. In this regard, “compartmentalization” is probably not the right framing, instead the question is

whether states believe that there are mutually concerning risks that can and should be addressed in a cooperative manner. The security landscape deeply affects arms control, and its value is the greatest when relations are the most competitive. The key issue is whether Russia will see the value of arms control to offset risks, as it has done in the past. Although the prospects of this are grim, it is neither in the U.S. or the Russian interest to have an open-ended competition.

Similarly to the Russian case, China's opaque and rapid nuclear build-up is also a clear sign that substantive engagement is needed to understand their motivations and discuss possible risk reduction measures. In the most recent meeting between President Biden and President Xi, the U.S. side emphasized that arms control and risk reduction are essential given the lack of transparency in China's modernization efforts. However, Washington remains skeptical whether these talks will lead to a sustained engagement on strategic issues, or specific risk reduction steps. It is still unclear if China is going to be a partner in these efforts, and whether it is willing to engage substantively on arms control.

This situation is illustrative of Samuel Beckett's play—titled 'Waiting for Godot'—where Godot never arrives. The United States spent the last 20 years waiting for Russia and China to engage substantively on these issues but there is barely anything to show for these efforts. The most recent meeting with China can hardly be considered substantial and the episodic dialogue with Russia has only produced limited results. Dialogue is important but only if it entails more than just exchanging talking points or conveying one-way messaging. Right now, the Russians are preoccupied with the war in Ukraine and strengthening strategic stability is not their top priority. Past proposals for confidence and security-building measures have been repeatedly rejected which suggests that Russia is rather intent on maintaining instability and potentially generating even more of it. With regards to China, the same is true. Five U.S. administrations have tried to engage China in a nuclear dialogue but none of them succeeded. This, however, does not mean that the United States should give up on pursuing dialogue. It is important to have a plan for dialogue, an agenda for arms control, and an offer for engagement, but the United States and its allies cannot put all of their eggs in this basket. Panelists offered two different pathways forward: an arms control approach without adversaries, and a competitive approach.

On the arms control side, if Russia and China continue to say 'no' to U.S. efforts to cooperate, Washington will have to focus on arms control models that do not require adversary participation. The traditional way to think about arms control involves states that adopt mutual restraints and the value of those limits comes from reciprocity. An alternative to this model is when states that share an interest in reducing certain risks coordinate on mutually beneficial behavior or generally accepted rules, and set expectations. The value of this model is that these are mutually beneficial standards that participants can use to put diplomatic pressure on the outliers. Although this model is not perfect, in the current security environment, it is potentially more feasible, and it can also involve new players in the conversation who have not traditionally participated in past arms control mechanisms. These new players can show solidarity against irresponsible behavior which helps to publicly stigmatize the destabilizing actions of adversaries. There is already considerable arms control work in this space that should continue despite Russian and Chinese obstructionism.

Deterrence and arms control are mutually reinforcing tools for preserving stability and avoiding conflict, and arms control can support and enhance deterrence stability in many different ways. First, arms control supports more efficient approaches to deterrence by saving resources and capping arms races in areas that would not advantage the United States and its allies. Second, it can signal when a stronger deterrent signal might be necessary. Arms control requires communication and the development of mutual understanding of threat perceptions, doctrine, and red lines. Traditional deterrence does not provide these insights, they come from engagement with adversaries. Third, arms control also allows collective cost imposition with increased credibility. This is where normative approaches are specifically valuable because they can help to build a coalition and hold adversaries accountable for irresponsible behavior, and they might even deter the adoption of those behaviors. Lastly, arms control approaches can also play a role in diminishing an adversary's ability to use brinkmanship as a deterrent strategy. Transparency and predictability can make it more difficult for adversaries to coerce by threatening actions that are inconsistent with their doctrine and capabilities.

These linkages demonstrate that pursuing arms control is not contradictory to the idea of strengthening deterrence. The second possible pathway forward is a more competitive approach. While this approach acknowledges the importance of preparing for the next dialogue, it puts the emphasis on exploring options to increase U.S. competitiveness and it also requires a reevaluation of past unilateral restraints. In order to protect strategic stability, the United States has adopted a number of unilateral measures, such as the decision to pursue life extension instead of designing new nuclear weapons, the unilateral restraints on missile defense, the commitment to reduce alert levels and maintain open ocean targeting, and the decision to withdraw most forward deployed nuclear weapons after the Cold War. In the past three decades, most U.S. administrations embraced a similar set of principles which demonstrates that there is a U.S. agenda for strategic stability. Unfortunately, most of these measures have not been reciprocated, and these restraints have been judged by adversaries as a sign of weakness that demonstrates a waning U.S. resolve. Therefore, the United States and its allies will need to address these misperceptions by making important decisions about the design of the future theater nuclear deterrent in Europe and Asia, the missile defense architecture, and other non-nuclear strategic capabilities.

While some of these decisions will have to be more competitive, keeping some guardrails is also important. The United States will need to find the sweet spot where it is competitive enough to show resolve, but not too competitive that would drive adversaries towards more dangerous countermeasures. In order to find that sweet spot, it is important to objectively revisit what unilateral restraints have accomplished in the past, and whether they have been reciprocated by adversaries. While the United States has a strong track record of protecting strategic stability through unilateral measures, its adversaries have rather focused on nuclear modernizations, updated their strategic postures, and reset the table.

These developments have made it necessary for the United States to explore what it can do beyond stockpile stewardship, and if the program of record is not sufficient, what more can be done. These dilemmas will also sharpen the domestic missile defense debate, the question about how much is enough in hypersonic strike capabilities, and where to exercise restraint and where to pursue advantages in the space and cyber domains. The United States has also imposed

restraints on allies by controls on specific strike capabilities which also need to be revisited in the current context. It seems that past restraints did not bring the benefits that the United States hoped to achieve, therefore Washington should only maintain those measures that continue to serve its interests in this new, more competitive environment.

### **Panel 7: Strategic Competition and the Future of U.S. Nuclear Modernization**

- Will a better non-nuclear strategic deterrent suffice for the purposes of deterrence and competition?
- Will more nuclear weapons prove necessary? If so, when? If not, why not?
- Will a more diverse and flexible nuclear deterrent prove necessary? If so, when? If not, why not?

The nuclear modernization program, initiated in the early 2010s, predicated upon three fundamental assumptions. First, it was believed that Russia would not assume an adversarial stance; instead, it was regarded as a potential collaborative partner. Second, China had not yet initiated its accelerated nuclear modernization efforts. Third, it was thought that informal, if not formal, strategic arms control would be established with both adversaries. However, by the year 2023, all three of these core premises have proven to be inaccurate. The Biden administration's Nuclear Posture Review has acknowledged a discernible decline in the overall security landscape, prompting a commitment to foster a resilient and adaptable nuclear enterprise in response to the evolving strategic environment.

In this evolving landscape, the possibility of a follow-on New START Treaty is uncertain, and China is significantly investing in not only its nuclear triad but also its theater capabilities that pose real challenges for the United States and its allies. To address this, the Office of the Secretary of Defense has been tasked with assessing the sufficiency of the modernization program to address the two-peer problem and exploring adjustments that can be made without jeopardizing the program of record. The growing number of potential targets in Russia, China, and North Korea may necessitate the re-MIRV of the ICBM force and the restoration of extra tubes on SSBNs. Additionally, the deployment of the B61-12 gravity bombs on the F-35 aircraft will contribute to augmenting deterrence without increasing nuclear weapon numbers. The central risk to deterrence now lies in mitigating the transition risks in the modernization program while sustaining legacy systems.

A non-nuclear strategic deterrent alone will not suffice for effective deterrence. Nuclear weapons will continue to offer unique advantages that no other element of U.S. military power can replace. However, it is essential to recognize that conventional defense also plays a significant role. The United States possesses highly advanced capabilities in cyber warfare and space operations, though these areas are most effectively utilized as supportive elements that enhance the nation's nuclear capabilities. In the event of a conflict, the United States is committed to exploring every available solution and capability before considering the use of nuclear options. Resorting to nuclear force is seen as a last resort, only to be employed if all

other strategies fail to achieve the desired outcomes. Deterrence hinges on instilling fear in the adversary, and this is a distinct characteristic of nuclear weapons. The United States places the burden of nuclear escalation on the adversary while maintaining a flexible strategy to deny them any benefit. As the United States further strengthens its conventional military capabilities, its adversaries may perceive nuclear arms control initiatives as a means to counterbalance potential U.S. dominance. The Russians have consistently emphasized the importance of diversity within their nuclear arsenal. Their inventory includes approximately 2,000 non-strategic nuclear weapons, encompassing air-launched cruise missiles, sea-based nuclear torpedoes, depth charges, and various other options. This comprehensive array of capabilities underscores their dedication to upholding a versatile and adaptable nuclear posture. China also appears to be moving in this direction, further highlighting the global recognition of the value of diverse nuclear arsenals.

The rapid advancement of China's nuclear modernization program is surpassing many expectations, and the United States must now effectively adapt its nuclear force posture to respond to these emerging threats. This necessitates not only increased numbers but also the development of new capabilities. Multiple reports underscore the critical need for nuclear modernization, yet they also highlight that it is currently insufficient to tackle the challenges posed by two major powers. While there is a general agreement on the need for more robust measures, the specifics regarding the required number and characteristics of these capabilities remain a matter of debate. This challenge is complicated by the difficulty for those outside the administration to accurately assess these needs. The situation has evolved since 2010 when the New START Treaty levels were deemed sufficient. With China's rise as a significant threat, the United States needs to expand beyond this number. The United States must prepare for a world in which Russia and China do not necessarily have a jointly coordinated conflict with the United States, but rather a coincidental conflict where one adversary takes advantage of the distraction from a conflict in another region.

The Biden administration, preoccupied with various issues, must now focus intensively on this matter. There is an emerging bipartisan consensus among members of the Strategic Posture Commission, different study groups, and Congress on the urgency of the situation, particularly on the development of the SLCM-N capability. However, the administration has yet to take concrete steps beyond assessing the current nuclear modernization program. So far, it opted against developing the SLCM-N capability, deeming it unnecessary for enhancing flexibility. For decades, various administrations have acknowledged the importance of maintaining a diverse and adaptable nuclear deterrent. The Biden administration has also embraced diversification in its defense strategy, as demonstrated by the integration of the B61-13 into the arsenal. With the Strategic Posture Commission report offering 94 recommendations, the administration faces the challenge of prioritizing these suggestions within the constraints of its resources. This necessitates a focused approach to identify and implement the most critical recommendations, balancing strategic needs with available capabilities.

Over the next two years, the United States must revise its posture to enhance survivability, which could include measures such as returning bombers to alert status and re-MIRVing the ICBM force. In the strategic nuclear domain, there are many options to enhance the effectiveness of U.S. nuclear forces without necessarily developing new capabilities. However, in the theater

nuclear domain, simple adjustments might not be enough. Greenlighting the development of the SLCM-N would be crucial to address regional deterrence challenges. Participants also argued that the national laboratories could explore making existing conventional systems dual-capable, similar to the approaches taken by Russia and China. While the Strategic Posture Commission's report suggested the potential development of road-mobile ICBMs, this idea is still under significant debate. The hesitation is partly due to the focus on completing the ongoing modernization program and the confidence in the survivability of the SSBN force. The upload of current nuclear delivery platforms and maintaining an on-alert bomber force could be interim solutions until the next generation of systems comes online.

The arms control community is currently expressing concerns about a potential arms race involving the United States, Russia, and China. However, to effectively handle the challenges posed by these two major powers and the ongoing modernization program, the United States may only need to implement modest advancements. Drawing from lessons learned during the Cold War, it seems unlikely that small adjustments in nuclear planning and employment guidance would trigger an extensive arms race. In the think tank community, the idea of shifting to counter-value targeting as a means to limit excess nuclear weapons has been promoted by many. Yet, workshop participants generally considered this approach impractical, given the U.S. commitment to adhering to the laws of armed conflict and international humanitarian law. These commitments ensure that any military action taken is aligned with globally recognized legal and ethical standards. The push for a successor to the New START Treaty is closely tied to the ongoing modernization program, requiring a new bargain in Congress between those who call for arms control and those who advocate for nuclear modernization. While no one desires a nuclear arms race, the continued expansion of China's capabilities necessitates a competitive response from the United States. At the same time, a treaty in the vein of New START would not only enable the United States to monitor adversary nuclear forces but it would also impose a limit on their total numbers.

### **Panel 8:** First Principles for Nuclear Competition in the New Era

The question in front of the United States is not whether to compete but how to do so. Albeit a reluctant competitor, the United States has no viable alternative to competition. A failure to compete effectively would further erode deterrence and increase the probability that ideological and geopolitical competition will spill over into direct military conflict.

Competing effectively in the new era will require some important changes. One of the first tasks is changing the mindset. The United States has the financial means, and the technical expertise to compete successfully. Although some changes need to be implemented in the nuclear weapons complex, most of the important building blocks are given. The one missing piece is the mindset and the long-term commitment to competition. This is a relevant theme across the political spectrum, the technical and military communities, and also the general public. Far too often, ideas outside of the mainstream are shut down by labelling them "too escalatory." But escalation is not necessarily a bad thing, it is a tool that can be used to advance U.S. and allied interests. For decades, the United States has demonstrated an escalation-averse behavior, but

the only thing that is inherently de-escalatory is surrender. There are at least two generations of military officers whose instinct in a crisis is to reduce tensions and de-escalate, which adversaries might use to their own advantage to achieve their national security objectives at the expense of the United States and its allies. Changing these deeply engrained attitudes will require re-education and training in deterrence and nuclear war-fighting.

The question of mindset is also relevant in the political space. Given the two-peer problem, the United States will need to invest more in its ability to build new shipyards, more precision guided munitions, and a credible nuclear stockpile with modernized warheads that meet military requirements for the next 30-40 years. These long-term investments will require bipartisan consensus and continuous funding, as well as presidential leadership to demonstrate that this issue is a national priority. The Strategic Posture Commission report was an important first step in this direction. It seems that a new mainstream is emerging that provides some real opportunities to make a headway on improving U.S. competitiveness. Adversaries are watching closely how robust the coalition is behind U.S. modernization efforts, and if the support seems fragile, both adversaries and allies will question the U.S. resolve.

Finally, changing the mindset is also important with regards to the general public. The United States did not choose to compete, the competition is something that adversaries brought to the United States and its allies. Raising public awareness about nuclear escalatory risks can help to generate a better understanding of the threats and gain support. Public messaging should also take into account that there is a generational divide. The younger generation that has no experience with the Cold War is not well versed in nuclear issues, and it is more worried about student loans, the housing crisis, health care, climate change, etc. They did not grow up with imminent nuclear dangers, and getting their support to invest in long-term nuclear competition will require a different type of campaign on nuclear weapons and an explanation why deterrence matters. Building domestic support is essential to maintain the necessary funding for long-term nuclear competition. The public will have to understand that competing is very expensive, but it is orders of magnitude cheaper than fighting, and it is infinitely cheaper than losing.

Another element of nuclear competition is a continuously demonstrated capability to respond in a timely manner. The nuclear enterprise had this ability during the Cold War, but it is largely missing today. The asymmetry between the production capacity of the United States, and Russia and China is a huge problem. If the United States wants to be competitive, it has to rebuild the integrated capability of research, development and production to respond to changes in the security environment on a relevant time scale. The majority of the workshop participants were positive that the United States should compete in the nuclear domain, and they were also overwhelmingly confident that it can successfully compete under the right circumstances. However, there is an urgency to act now. Given how far Russia and China have progressed with their nuclear modernization efforts, it is past the time to study the problem, it is time to act.

In order to define how much is enough, the United States will need to articulate the metrics for sufficiency in the two-peer world. These metrics should be more specific than “second to none” or “essential equivalency.” More clear guidelines will be needed on the objectives and the necessary capability to achieve those objectives. This workshop has discussed objectives such as limiting damage if deterrence fails, restoring deterrence through limited nuclear strike options,

offsetting adversary conventional operations, etc. The United States will need to come to a decision on what kind of force structure is needed to meet all these objectives in the two-peer world. Realistically, the United States will probably never have the full capacity to fight a large-scale war against both adversaries at the same time, while meeting all of the above objectives in multiple theaters, but it definitely needs to do more than the current model. Clarity about the objectives and metrics should provide a sound case for competing responsibly. Transparency about these decisions should also help to reassure domestic and international stakeholders that the United States does not intend to embark on a path to nuclear excess, and it is not competing with the objective to build superiority.

The next theme of the discussion focused on efficiency and sustainment. While supplemental and new capabilities are under consideration, it is essential to keep the current legacy forces as effective as possible. These legacy capabilities need to perform deterrence while the new systems are coming online, and they also need to be capable of war-fighting if a conflict erupts tomorrow. Depending on what happens with the modernization schedule, legacy systems might need to be stretched further and stay in the force much longer than originally conceived. Some of these systems might need to operate in different ways, i.e. bombers might need to go back on alert. All of this means that the first order of business is increasing the efficiency of the current systems, and making sure that they can be sustained as long as the new systems are ready to replace them.

All of the above principles and objectives will require the right workforce. In the past five years, the nuclear enterprise has massively expanded its hiring and now there is a new generation of early career workers who have no experience with the Cold War. The older generation will have to figure out how to transfer knowledge and steward this generation, and then get out of the way at the appropriate time. While this knowledge transfer is important, innovation is also needed because some of the old ways of doing things are no longer adequate. Structural and institutional changes will also be necessary at NNSA to allow for a more flexible and innovative culture that can respond faster to emerging national security needs. Lastly, maintaining a world-class workforce also means that further investments are needed in education, especially in the STEM fields.

The next principle is that success in long-term competition will not exclusively rely on the nuclear domain, and not even exclusively on the United States. The United States has important strategic advantages in other warfighting domains, such as the space domain, which can be used to create new dilemmas for adversaries. Military leverage is a necessary principle to deter attacks and dissuade adversaries from arms racing. Military leverage can also force them to the negotiating table. Therefore, the United States will need to identify what are the strategic advantages that it wants to pursue in nuclear and non-nuclear strategic capabilities, and focus its investments in those areas, while trying to pursue arms control solutions in areas where its adversaries have the strategic advantage.

With regards to allies, they are an important asset in nuclear competition, and it seems that they are more eager to share the burden of their defense. However, in the Cold War period there was a much greater understanding of exactly what is expected from each other in a crisis. In the current environment, much of that understanding is missing, especially in the Asia-Pacific



context. Washington has to work more closely with its allies to achieve greater clarity around nuclear burden sharing and planning in the two-peer world. NATO allies have worked intensely to increase the nuclear IQ in allied capitals, but it should also extend to the general public. Political leaders on both sides of the Atlantic will have to explain that nuclear competition is an increasingly important part of allied foreign and security policy, and they have to figure out how to make their population more comfortable with the idea that investments are necessary in these capabilities.

The last theme of the discussion was the vision for the future. In this regard, several participants emphasized that no matter how bad the security environment degrades, it remains important for the United States and its allies to have a vision and pathways towards peaceful coexistence with adversaries, where there are guardrails in place and mutually accepted rules. Competition does not preclude cooperation, including in the management of competition.



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