



Lawrence Livermore National Laboratory 

Deterrence in the 2025 National Defense Strategy Review

Workshop Summary

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Deterrence in the 2025 National Defense Strategy Review

Center for Global Security Research
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On December 10-11, the Center for Global Security Research (CGSR) at Lawrence Livermore National Laboratory (LLNL) hosted a workshop titled “Deterrence in the 2025 National Defense Strategy Review.” This session brought together participants drawn from across the policy, military, and technical communities. The workshop aimed to assess the work done over the past four years on integrated deterrence, to examine future deterrence challenges posed by adversary military modernization efforts and approaches to strategic competition, and to explore how the upcoming 2025 National Defense Strategy can best address these challenges and pursue strategic advantage.

The discussion was guided by the following key questions:

- What can be learned from the experiment in integrated deterrence?
- Why have departures from business as usual proven to be so difficult?
- How can the next NDS review accelerate the adaptation of deterrence, both conventional and nuclear, to new challenges?

Key take-aways:

1. Deterrence should have a central role in the 2025 National Defense Strategy, given the rapidly deteriorating security environment and the mounting dangers facing the United States and its allies and partners. But precisely what role is unclear. Given the eroding security environment and the state of the U.S. nuclear enterprise, there is no time for a lengthy review or a fresh start from scratch. The incoming administration has an opportunity to build on bipartisan efforts to prioritize deterrence and adapt it to emerging challenges through integration. Where momentum exists, the incoming team should reinforce success. Where challenges remain, it should look for useful lessons.

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2. The Biden administration's focus on integrated deterrence has had many positive results. Constructive steps have been taken along each of the main axes of effort: in planning and operations across domains, in coordination across regions, in cooperation with allies, and in coherence in the use of all instruments of national power. Within the Department of Defense, the sustained focus on integrated deterrence has helped motivate a cultural shift that has brought deterrence back into the department's normal business.
3. Despite these accomplishments, many aspirations have gone unmet and much remains to be done. This is a reminder of the enduring nature of the challenge. After all, each administration since the end of the Cold War has set out some agenda for improved integration in support of deterrence objectives. Quite obviously, the challenges do not lend themselves to simple solutions.
4. The interest in integrated deterrence may be enduring, but the label is likely to prove short-lived. Each new administration prefers to set out its own view in its own strategic lexicon. There is also some criticism of the "integrated deterrence" strategy by those who see it primarily as an effort to substitute soft power tools (economics and diplomacy) for hard power (military) tools, and non-nuclear tools for nuclear ones.
5. The 2025 strategy review should begin with a fresh assessment of the security environment—which obviously continues to erode at an accelerating rate. A key driver is the erosion of deterrence. China continues to tilt the balance of power in the Indo-Pacific in its favor. Russia is rebuilding and reconstituting its conventional forces with an economy on a war footing. Like China and Russia, North Korea continues to build up and diversify its nuclear arsenal. Russia, China, North Korea, and Iran are drawing closer together in their efforts to unravel US-backed security orders. They are continuing to build their capabilities and to improve them to enable their theories of victory. They are learning, separately and together, the lessons of ongoing conflicts in Europe and the Middle East to update their ways of war. Their leaders are emboldened.
6. But these developments in the threat account for only half of the equation of eroding deterrence. The other half stems from the failure of the United States and its allies and partners to adapt their military strategies and postures to new circumstances at the speed of relevance. Conventional forces have shrunk and aged. Nuclear forces are being modernized at a slow rate and based on a strategy that many deem to be "necessary but not sufficient." Military adaptations to the new environment are underway, but a new way of war built on new concepts and capabilities suited to the new context has not taken shape. Leaders have conveyed an aversion to risk and escalation, two concepts adversaries have embraced in their own theories of victory.



7. Today, it seems that no adversary seeks direct war with the United States or one of its alliances. But leaders in Moscow, Beijing, Pyongyang, and Tehran have been much more willing than before to directly challenge U.S. interests and U.S. allies and partners and to run military risk in doing so. And they appear to consider themselves to be “men of destiny,” called by history at this moment to set aright historic wrongs. We should expect a moment not far in the future when they ask whether the costs and risks of direct war with a U.S. alliance are bearable and the gain is worth the price.
8. A decision by one or more of them to step onto the road to war with a U.S. alliance would be a major failure of U.S. strategic deterrence. How might this happen? Adversaries may judge United States and allied military capabilities to be inadequate to the task of defeating their theory of victory. They may hear mixed messages and given in to a bit of wishful thinking. Or they may have heard America’s deterrence messages clearly but calculate that they were not credible. After all, autocrats have often made the mistake of misjudging the risk aversion of democracies as a signal of a lack of resolve to defend their interests once attacked.
9. A decision by one or more adversary to escalate a conflict, whether horizontally onto the American homeland or vertically into the nuclear domain, would constitute the major second failure of U.S. strategic deterrence. Such a failure might be avoided by a strong response to the first failure, and it might not. There could be many more such failures in a prolonged regional war in which periodic acts of escalation are used to try to break the adversary’s internal or international political coalitions.
10. The U.S. expert community has thought a lot more about the possible first failure of strategic deterrence than the possible second and follow-on failures. This intra-war deterrence challenge in a confrontation with multiple nuclear-armed adversaries remains poorly understood. The presence of a second near-peer adversary and the likely expansion of conflict into the global commons complicate this picture. Effective strategic messaging will be even more challenging than in the simpler bipolar context.
11. Responding to failures of deterrence is often discussed with the goal of “restoring deterrence.” But this concept has many underlying meanings. It may be about winning the war, preventing further use of nuclear weapons, compelling an adversary to terminate the conflict, or some combination of all of the above. Discussions about intra-war deterrence require precision in language, as well as further explorations of acceptable outcomes other than the status quo in notional conflicts. Wargaming and other structural analytic techniques have a role to play here.
12. America’s first line of defense against such failures is assured retaliation. Though direct nuclear attack on the U.S. homeland is a low probability possibility, it would be of very high



consequence and thus requires a viable solution. More needs to be done to ensure that the U.S. threat to respond to homeland nuclear attack in a manner that would inflict unacceptable damage on any adversary or group of adversaries remains credible in this most extreme of extreme circumstances. More needs to be done to ensure that the U.S. is ready for problems that might emerge in the transition from legacy forces to their modern replacements. A stronger deterrent does not necessarily mean more weapons in the arsenal.

13. The United States will soon face a choice between changing its nuclear deterrence strategy or changing its level of spending. It will be unable to sustain aging forces and transition to modern forces without more funding and without dramatic improvements to both the nuclear enterprise infrastructure and the broader defense industrial base. The choice is stark, and the consequences far-reaching.
14. The second line of defense is deterrence at the theater level of war, both conventional and nuclear. This too requires new capabilities, new investments, and hard choices. Allies at risk in both Europe and East Asia seek rapid further progress in what we have short-handed as CNI (conventional-nuclear integration). In general, they are eager to carry more of the deterrence burden with deep precision strike, BMD, and capabilities in the new domains. But they are also constrained by financial and political factors. They also seek clear and consistent statements of political commitment from Washington, along with demonstrations of political resolve.
15. The need to integrate for deterrence benefits extends into the realm of “peacetime” competition as well. Russia, China, North Korea, and Iran are all competing with U.S.-backed alliances to tip the regional balance of power to their advantage, while Russia and China also compete in a more global context to build a more multipolar system that favors their interests and values. They also compete to seize and hold advantage in key science and technology sectors and in the military application of advanced technologies. The United States and its allies and partners have not been as strategic in their approaches to competition and sometimes think unhelpfully of competition as an end in itself rather than as a means to achieve some condition in the security environment.
16. The new administration faces basic questions about how to conduct its reviews of defense strategy, nuclear policy and posture, missile defense, space strategy, etc. Does it repeat the study architectures and approaches of its predecessors? In pursuit of improved integration, does it again “nest” its reviews of nuclear and missile defense policy and posture within the National Defense Strategy review? The “nesting” experiment is widely seen as having generated modest benefit relative to the effort invested. But a return to separate reviews does nothing to advance integration. Some make a strong case for not conducting a review of nuclear policy and posture at all and instead relying on the results of the Strategic Posture Commission, on the argument that the answers already enjoy bipartisan support and the 12 to 18 months will



only be spent to re-deliberate policy and study the world while it further erodes. But short-circuiting the process in this way reduces the buy-in from those charged with implementing results in departmental programming and planning processes.

17. The new administration also faces a basic question about what, if anything, to say about deterrence in the White House-level National Security Strategy. The commitment to deterrence and to adapting and strengthening it should come from the president. The strategy document should be clear that deterrence is a means, not an end in itself. It should also be clear that deterrence is not the only means to a more secure environment or a more stable peace. The administration should also bear in mind that a strategy involves setting priorities and allocating limited resources to those ends. It is not simply a compilation of all of the wishes of its many appointees or of all the good work being done in each and every corner of government. In setting deterrence as a priority, it must then be invested with the necessary political and fiscal resources. Above all, the strategy should reflect the new leadership's vision of how to protect the United States and its allies and partners and how to improve their position over time.



Panel 1: Taking Stock of Integrated Deterrence

- What has been accomplished?
- Where can further progress still be made?
- What have been the key obstacles to success?

The 2022 U.S. National Defense Strategy defined integrated deterrence as a framework weaving together all instruments of national power—with diplomacy at the forefront—to work seamlessly across warfighting domains, theaters, the spectrum of conflict, and our network of alliances and partnerships. The integrated deterrence framework rested on four pillars: 1) integration of planning and operations across domains, including the incorporation of new technologies; 2) integration of planning and operations across regions; 3) international integration with allies and partners; and 4) integration of military and other tools of national power.

Regarding integration of planning and operations across domains, participants highlighted the need for greater coherence in integration. Nesting of the Nuclear Posture Review and the Missile Defense Review within the National Defense Strategy suggested the need for alignment. There has been significant progress by the Department of Defense (DOD) in integrating the space and cyber in planning and operations across domains. Conventional-nuclear integration has been a priority at DOD, since nuclear weapons have unique attributes but are supported by conventional capabilities to facilitate effective deterrence. However, more needs to be done on conventional-nuclear integration, especially when it comes to hypersonic missiles and other long-range strike capabilities. It remains a question whether the United States has enough expertise on strategic integration and whether senior personnel have achieved fluency in conventional-nuclear integration. There is also a need for continued work on planning for operation under nuclear threat.

When considering regional integration, it must become clear that any conflict with Russia or China would have cross-regional implications and potentially be global. This has led to improved integration of planning and thinking about the constraints and capabilities available across theaters. As a conflict with Russia would have implications for Indo-Pacific Command and Space Command, it is vital to analyze the means required to deter in a second theater or domain. Looking ahead it is important that domains are not becoming too isolated from other departments. This has become a particular concern after the standing up of the U.S. Space Force and Space Command. While some in Congress advocate for an independent cyber force, individual domains should not become too isolated within the department.

The Biden administration made the most progress by strengthening integration with allies and partners while also acknowledging that allies need to step up further in response to Russia and China. Significant work has been done by persuading South Korea to take the risks and implications of a Taiwan crisis scenario more seriously. The United States is pushing Korea to contribute



capabilities in a conflict revolving around Taiwan. Likewise, the United States has pushed NATO member states to take the China threat more seriously. Deeper Russia-North Korea collaboration has woken up some East Asian allies. Participants emphasized the need for more ad hoc groupings on integration such as the United States-ROK-Japan trilateral relationship and Aukus security cooperation and technology sharing. To deter multiple adversaries simultaneously, it is important to cooperate and develop the long-range strike and ISR capabilities of allies and partners in support of their defense and collective deterrent. The discussion also noted that more capabilities input is needed from allies to strengthen integrated deterrence. Although allies have their own domestic constraints, the threat requires a higher level of contributions, and the United States should leverage opportunities for deeper integration of U.S. and allied military industries (e.g., AUKUS Pillar II and the Missile Technology Control Regime [MTCR]).

The panel identified a mixed record on integration of other tools of national power. Increased integration of sanctions, technology restrictions, and export controls as deterrence tools are deemed to be successful in the context of China, particularly restrictions on semiconductors and graphic processor units needed for artificial intelligence. Although a complete integrated deterrence approach would rely on more non-military tools, the Russian invasion of Ukraine shows the clear limitations of approaches that overly rely on deterring high levels of military aggression through non-military tools of national power.

Some participants highlighted that integrated deterrence did not aim to replace hard power with soft power. Instead, this framing helped the U.S. government rethink non-traditional capabilities of deterrence and their role in the toolkit. Simultaneously, credible integrated deterrence requires the pillars of national power to be anchored in military strength through hard-power capabilities (including cyber and space). Yet reliance on capabilities is not enough as adversaries study our actions and lack thereof in response to provocation and aggression. An unwillingness to use force would make conflict more likely, thus underlining the persistence of the paradox of deterrence.

Participants discussed the threat of a massive conventional response to a Russian nuclear detonation over Ukraine as an avenue for analyzing the success of integrated deterrence in Europe. It is not entirely clear what specific action deterred Russian nuclear use, and it is important to keep in mind that a NATO conventional response to nuclear use is a considerable threat to Russia precisely because the United States and NATO are not directly participating in the conflict. However, what are the levers of integrated deterrence if the United States is already directly involved in conflict in a possible Russia-NATO scenario.

Panel 2: Taking Stock of the Current Deterrence Landscape

- What is the intended approach to warhead modernization beyond 2030?



- What challenges need to be addressed between now and 2030 to enable success post 2030?
- What risks are likely to need sustained attention after 2030?

The speed and extent to which deterrence is eroding is largely context dependent. Among the adversaries comprising the modern threat landscape, the erosion of deterrence appears to be slowest or (in optimistic assessments) even reversing vis-a-vis Russia. According to panelists and participants, the war in Ukraine demonstrated U.S. willingness to engage with Russia by proxy while simultaneously eroding Russian forces. While Russian forces have received aid from China, Iran, and the DPRK, this replenishment should not be misconstrued for reconstitution: the need for which could provide the United States and NATO with stable deterrent for the next 5-7 years.

The same trend is not observed for China, against whom deterrence appears to be eroding rapidly. China's military build-up, both conventional and nuclear, presents a pacing threat to the United States whose defense industrial base has hampered its own military modernization plans. Compounding the issue is Xi Jinping's desire to unify China through the invasion of Taiwan, likely within his lifetime. This goal, in conjunction with China's rapid military build-up, has led many to believe China may be incentivized to take advantage of the next few years in what some have referred to as the 'Davidson Window.'

In addition to Russia and China, the panel's discussion also yielded insights regarding the state of deterrence vis-a-vis the DPRK and Iran. Although the DPRK has not been engaged in a military build-up at China's scale, its troops have gained valuable battlefield experience supporting Russian forces in Ukraine. Furthermore, some have speculated that, like Xi, Kim Jung Un may aspire to see unification within his lifetime. Recent political turmoil in Seoul has further deepened concerns that deterrence may be declining in the region. Deterrence vis-a-vis Iran, however, appears to be stabilizing. Israel's destruction of Iran's air defenses and blows to Hamas and Hezbollah, followed by the fall of the Assad regime in Syria, have effectively removed the nation from the battlefield.

Although the strength of U.S. deterrence varies from one adversary to the next, some events have had a weakening effect across the board. Panelists specifically cited a loss of credibility in the eyes of adversaries following the withdrawal of U.S. troops from Afghanistan and again during the initial response to the invasion of Ukraine. Underscoring this lack of credibility is a defense industrial base which has been judged by domestic experts and adversaries alike as insufficient to keep pace with China's breakneck military build-up or the realities of a two-peer nuclear threat landscape.

The likelihood of U.S. adversaries to militarily challenge a vital U.S. interest remains unclear. Perceptions of Putin, Xi, and Kim Jong Un as "self-described men of destiny" have yielded the impression that each man is highly motivated to achieve his own pursuit of reunification, rather than see the task passed on to his successor. Given the 'Davidson Window' discussed above, China may



represent the most likely candidate. While Russia does not possess the military strength required to withstand a NATO response or sustained conflict within the next few years, panelists and participants stressed that this unlikelihood should not result in Russia being placed on the analytical backburner, as avenues for opportunistic advances abound in a two-peer environment.

Aside from adversarial capabilities and intent, U.S. signaling of vital interests and capabilities may also play a role in forecasting military challenges. While vague statements could yield additional contributions from allies, as one panelist suggested, it could also create an environment in which adversaries underestimate U.S. resolve or capabilities and subsequently cross red lines.

Regarding allied alignment, discussions revealed mixed beliefs. One panelist noted that although allies appear viscerally aligned, we have lost vigorous thinking about nuclear deterrence. On the plus side, progress has been achieved in burden sharing and defense spending, with approximately 2/3 of allies spending 2% or more of their GDP on defense. The addition of Finland and Sweden as NATO members is viewed as a geopolitical coup: providing significant air-based capabilities and a large geographic space from which NATO can now operate in the north. Progress has also been made in the trilateral partnership with the ROK and Japan. Meanwhile, efforts to strengthen the alliance between the United States and the Philippines ultimately culminated in the Philippines-Security Sector Assistance Roadmap (P-SSAR). Although one panelist underscored the necessity of the United States and its allies to operate “by, with, and through” the Philippines, additional funding is needed to successfully implement the P-SSAR. Further, the discussion suggested that implementation of the AUKUS trilateral partnership is slowing, with numerous barriers to defense free trade still in place. According to panelists and participants, these issues demonstrate a greater need to generate political will and capture the attention span necessary to effect bureaucratic change and reap the deterrent benefits of multilateral agreements.

Panel 3: Understanding the First Failure of Strategic Deterrence

- Looking to the past, how have U.S. adversaries convinced themselves that they could cross a major U.S. red line and prevail in the matter in dispute?
- How have U.S. adversaries adapted their ways of war to seize and hold a decisive advantage at the moment they step from crisis to war?
- Are there particular weaknesses in the U.S. deterrence posture relative to the demands at this particular transition point? If so, what should be done to eliminate them?

This panel discussion focused on how the United States can strengthen deterrence and the different pathways available for “restoring deterrence” in the case of failure. The group provided varying perspectives on how to restore deterrence and the obstacles to restoring deterrence. There was wide agreement among the group that the U.S. should work to improve regional deterrence, communicate clearly our resolve and redlines, and work to synchronize efforts to strengthen



deterrence across agencies. Participants also emphasized the need for clearer definitions of what it means to “restore deterrence” and the different pathways towards this end – especially in the case of second failures of deterrence.

Capabilities were a major focus of the discussion. Capabilities are critical for assuring retaliation. There was agreement that U.S. and allied capabilities will likely not be the cause of the first failure of deterrence. The United States needs to invest in necessary modernization of the Triad and missile defense. Related, the tension between needing to reveal our capabilities for the purpose of deterrence but also the balance with concealing capabilities for the same purpose. Another point of conversation within the group was concern about U.S. capabilities to mobilize the defense industrial base in the case of a war or situation in which we would need to restore deterrence. There needs to be continued conversation about what capabilities are needed, and questions of where and when. The level at which deterrence fails will determine the posture and capabilities necessary to restore deterrence. Additionally, there needs to be more done to understand how to restore deterrence at lower levels without escalating towards a failure at the strategic level.

The definition of what it means to “restore deterrence” was a point of conversation: what does it mean, and what are the capabilities it requires? More clarity and precision are needed for this term. Some participants argued that restoring deterrence could hinge upon successfully winning a war. Others noted that restoring deterrence is the prevention of further nuclear weapons use. Another group of participants noted that deterrence is restored when the United States can compel an adversary to end the conflict at hand. There was also the perspective that each of these pathways might need to happen to effectively respond to a first failure in deterrence and “restore deterrence.”

Deterrence failures may likely result from miscommunications about or misinterpretations of U.S. interests and resolve. The group agreed that communication and messaging are essential to strengthening U.S. deterrence but also in restoring deterrence following a failure at any level. Participants also discussed the potential need for escalation to meet the goal of “restoring deterrence.” There was an agreement that once deterrence fails, there may be a need to escalate as a response. The United States will need to assure adversaries that we will retaliate in the event of an attack. Communication and appropriate signaling are incredibly important to this end. The United States must be able to effectively communicate resolve during a crisis where deterrence fails which will be challenging in cases where adversaries may willingly misinterpret signaling about interests, resolve, and redlines.

Lastly, the pathologies of adversary leaders were also a major point of discussion amongst the speakers and group. Leaders in Russia, China, the DPRK, and Iran must be considered because they have major implications on how our signals and communications are received and interpreted. The goals of these leaders may be such that they have incentives to misinterpret our signals or ignore them at their own convenience. Additionally, there have been increases in cooperation between these parties – which is a new dynamic to be considered. There should be extra attention given to how to best deter these types of regimes. Given these realities regarding U.S. adversaries,



there was conversation regarding the potential need to provide off-ramps to adversaries to compel them to cease conflict and avoid further nuclear weapons use.

Panel 4: Understanding the New Intra-War Deterrence Challenge

- What is new about the challenge?
- What progress has been made developing the concepts needed for new circumstances?
- What is our theory of victory?

Historically, intra-war deterrence refers to the span of the conflict continuum between the first failure of strategic consequence (i.e., the adversary's decision to step on road to war) and what Clausewitz called the culminating point (i.e., where the adversary either loses the will to fight or becomes so enraged to go all in). This is an old challenge of war. In some wars, enemies fight without throwing everything in. Intra-war deterrence is about persuading an enemy who has chosen war not to use all the means at his disposal to win that war. War termination is a matter of choice, not of compulsion.

Multiple objectives exist around the use of force in intra-war deterrence, including to disincentivize further escalation. There are also various types of escalation one seeks to disincentivize, including both vertical and horizontal. Examples include a decision to go from conventional war to nuclear employment; a decision to employ follow-on nuclear use; or a decision to expand a war from regional in character and limited to global in character and unlimited.

Three lessons from past wargaming are pertinent to the new intra-war deterrence challenge: first, the intra-war period includes psychological coercion. Restoring deterrence is a euphemism for compellence because it is about coercing the adversary to stop nuclear use. As such, it is about psychological manipulation. Nuclear confrontation is fundamentally a form of nuclear communication. Russian Foreign Minister Lavrov recently stated that any war between the United States and Russia would entail nuclear coercion. Thus, the United States needs prepare for psychological coercion. A second lesson highlights the importance of getting communication right because it is difficult to have an adversary receive and understand the message you intended to send. There will be mixed, often unintentional messages – that may will be exacerbated in conflict. What one side believes are clear signals, the other side may find difficult to understand. The best strategy should work theoretically, but it may not work practically. There is no room for nuance. This implies a need not just for concept development, but also for communication strategy development. Third, intra-war deterrence exerts a huge demand signal on the force in numbers and time. These conflicts will likely not end quickly. Rather, we need to prepare for protracted conflicts.



As discussed, the United States faces two leaders at once in Putin and Xi who believe they are “men of destiny” and who are unwilling to leave to their successors a job half-finished. Additionally, both leaders are also in a rough alliance with one another, enabling them to advance common interests opportunistically or in coordinated fashion. They are armed with modernized arsenals of nuclear weapons, multi-domain tools, and theories of victory. These theories of victory hold that an appropriate dose of force would “sober but not enrage” the United States and its allies, forcing Blue to understand Red’s advantage in the underlying asymmetry of interests.

Our way of thinking of setting conditions for durable peace largely stems from World War II, where we fought for unconditional surrender. We were willing to use extravagant means towards that end. But the adversary’s possession of nuclear weapons today takes that option off the table. To paraphrase President Putin, Russia’s nuclear forces mean that Russia cannot be forced to lose. Further novelties of the intra-war deterrence challenge include: the two-peer problem (i.e., for the first time in the nuclear age, the United States and its allies compete with two nuclear peers), creating now problems for intra-war deterrence signaling (e.g., what does a message sent to peer 1 mean for peer 2?); the multi-domain aspect, which creates new opportunities for the adversary to test our resolve; a much-reduced theater nuclear force compared with the cold war that is unfit to meet the challenge of gradual, tit-for-tat escalation; and non-nuclear strategic threat vectors offering additional uncertainty in future conflict. We should assume non-kinetic impact to each other’s homeland, space and cyber impact influencing the populations. We can also use non-nuclear capabilities to fill rungs on the escalation ladder.

There appears to be emerging clarity about the adversary’s decision-points in the intra-war deterrence space: initiate war, escalate, counter-escalate to our response. The question we are less certain is how the adversary might cross the nuclear threshold if they come to this point? Will they use nuclear weapons in a tit-for-tat fashion or will they seek massive nuclear employment (following the “in for a penny, in for a pound” logic).

In assessing the progress, the United States and its allies have made in developing the concepts needed for these new circumstances, the conversation highlighted that many concepts are classified. But in the unclassified realm, the answer to the question of how much is “not much.” In the 1990s, Russia argued that if NATO enlarged, it would need to reappraise all its military concepts. This is what Moscow has done. By contrast, the U.S.’s concept development has not come far. “A notional joint combat operation model” was developed in the early 1990s, roughly resembling Desert Shield and Desert Storm. Despite deterrence being largely absent from this model, it remains in current joint planning publications. The model addresses domination, but it does not account for the problems in front of us. These include: how to deter a horizontal expansion of war, non-nuclear strategic attacks, cross-domain expansion, initial nuclear use, follow-on nuclear use, opportunistic aggression by a second nuclear peer, opportunistic aggression by some other adversary, or how to assure allies in one or more regions? While it is convenient for U.S.



analysts to fall back on language from the uni- or bipolar eras, the old ways of thinking are unfit to address the problems in front of us. In short, our intellectual house is not in order.

As such, it is unclear what our theory of victory for intra-war deterrence is. Depending on who is asked, different answers abound. Many who do not practice nuclear deterrence as a daily activity might say “if nuclear shooting starts, call STRATCOM. If they pull the nuclear trigger, we just retaliate.” This is not a theory of victory. Answers even differ among deterrence analysts. Some observers subscribe to the notion that the United States, as the dominant power, will have a large stake in any conflict, meaning that the United States will be in a pole position to win a competition in risk-taking. By contrast, another school of thought holds that the United States limit its stake by reducing the benefits of an adversary’s attack while increasing the costs of our response.

In sum, there is a need for improved concept development among the United States and its allies, involving a wide range of stakeholders, to raise the strategic and nuclear IQ of the general population. Allied cohesion is particularly important in this regard because the adversary will seek to break the alignment between the United States and its allies in a conflict. Red may perceive the allies to be coercible in ways that the United States might not be. For example, North Korea poses an existential threat to South Korea and Japan but not to the United States. Historically, the United States has considered how allies might be wildcards (and escalate a conflict in undesirable ways), and thus Washington has restricted allies’ access to capabilities. But that legacy thinking is giving way to a new awareness that we need to ask much more of allies, and that burden-sharing needs to pay dividends in a two peer-world. The United States should enable allies rather than restrict them.

Panel 5: Ensuring Deterrence at the Strategic Level of War

- Is deterrence at the strategic level eroding? If so, why and how?
- What needs to be done to ensure that the strategic deterrent remains fit for purpose?
- Can the strategic deterrent be strengthened sufficiently by non-nuclear means to obviate the need for a more robust nuclear force? If not, what new is needed?

Writ large, panelists and participants alike agree that deterrence at the strategic level is eroding. While some contend the extent to which deterrence has declined is only clear in the minds of our adversaries, they acknowledge, nonetheless, that trendlines are not positive. This reality is, in large part, the result of a changing security environment and the reality of a two-peer-plus dynamic in which Russia, China, and the DPRK pose viable nuclear threats. The U.S. nuclear modernization program of record, meanwhile, has remained largely static by comparison and sluggish in implementation.



Following the Cold War, in the wake of a weakened nuclear threat, the U.S. nuclear triad took a backseat to conventional priorities. Compounding the issue are corresponding challenges to the nuclear command, control, and communications (NC3) system. As the United States endeavors to rectify these issues, NC3 infrastructure and nuclear assets alike will remain under threat from non-nuclear adversarial capabilities including cyberattacks and conventional strike. If successful, attempts to undermine U.S. capabilities could support adversarial perceptions of a weak, divided, and declining nation. These realities place the U.S. strategic deterrent far from the minimum goal of imposing unacceptable costs on our adversaries.

Despite these shortcomings, the consensus remains that conflict can be avoided; however, steps can and should be taken in the immediate term to strengthen the nuclear deterrent. First, a sense of urgency should be instilled and reinforced to drive necessary changes in bureaucratic barriers to planning, investment, and implementation. Second, the program of record and its underlying assumptions should be reviewed and revised to accommodate the modern security environment. Specifically, the program should explore the development of a wider range of nuclear capabilities, including SLCM-N. Other options, such as rearming the U.S. Army with mobile ICBMs or SLBMs, could be considered but would require the establishment of a new program: a significant undertaking.

These alterations, though essential, require the support of a robust defense-industrial base, extensive research and development programs, and a network of allies. Although the United States benefits from a diverse technology sector, participants and panelists agreed on the premise that national security is not built on a service-oriented economy. In short, the nation will need to “get back in the business of building.” Kickstarting the defense-industrial base, however, will require significant investments of time and money to attract and train the next generation of skilled labor whose ranks cannot be replenished overnight. Similar long-term investments must be made in research and development. Communication lines between COCOMS and the National Labs exist to express needs and explore “the art of the possible.” Channels like these should be proliferated and communication accelerated to align needs with existing capabilities and reduce costs. Finally, ally relationships should be exercised to their full potential: communicating needs for supplementary capabilities where necessary and reinforcing assurances in return.

Finally, in addition to these efforts, participants agreed that an expansion of conventional capabilities is in order. However, consensus dictates that conventional capabilities, though supplemental, do not obviate the need for a more robust nuclear force. Regarding the nuclear deterrent, panelists concurred that conventional capabilities play an important, but narrow role. While conventional capabilities can raise the threshold for nuclear use, they are ultimately incapable of achieving the same deterrent effect on adversaries. Thus, panelists contended that priority should be given to reinforcing the nuclear triad. It should be noted, however, that emphasis was placed on diversifying capabilities within the U.S. nuclear arsenal, not arbitrarily increasing its



size. Specifically, one panelist asserted that “diversity is far more important for deterrence and stability than numbers.”

Panel 6: Ensuring Deterrence at the Theater Level of War

- What more can U.S. alliances do to strengthen regional deterrence architectures?
- What more can they do to improve conventional-nuclear integration?
- What can the United States and U.S. alliances do to strengthen extended nuclear deterrence?

This panel focused on exploring strategies to enhance regional deterrence architectures, improve conventional-nuclear integration, and strengthen extended nuclear deterrence within U.S. alliances. The discussion emphasized strengthening regional deterrence architectures, particularly through the lens of U.S. alliances and their roles in global security dynamics. Panelists explore the importance of educating both the public and political leaders about the benefits of alliances, especially in democracies. The discussion also highlighted the need for allies to develop conventional strike capabilities, which the U.S. previously discouraged but now supports, as seen with countries like South Korea, Australia, and NATO members. It is clear that there is a necessity for allies to have independent decision-making centers and integrated planning, which requires nuanced discussions at military and civilian levels.

First, the panel outlined some of the recent efforts by allies such as NATO to strengthen nuclear deterrence in Europe given its historic success at collective defense, noting that no state has attacked NATO. Yet that success is challenged by Russia's modernization of its nuclear arsenal and its coercive strategies, as well as the implications of China's deepening ties with Russia. This remains a central challenge for NATO in preparing for potential conflict with Russia, which could involve nuclear weapons. There is both a need and appetite to develop a coherent strategy that integrates conventional and nuclear forces, modernizes nuclear capabilities, and involves more allies in nuclear sharing operations.

The discussion also explored the concept of Conventional-Nuclear Integration (CNI) as a strategic approach to enhance deterrence. CNI can address multiple threats simultaneously and increase the ability of some allies, such as the Republic of Korea (ROK) to deter North Korea. It will become increasingly important to integrate planning for indigenous capabilities and, at the very least, deconflict their use to avoid surprising allies. Training to fight conventionally through limited nuclear use was recommended to ensure allies do not perceive limited nuclear use as a cause for backing down. This strategy may include the deployment of bombers and dual-capable aircraft (DCA), visits to allied ports, and acquiring refueling assets as practical steps towards better integration. Integrated deterrence strategies that involve both conventional and nuclear



capabilities. It will become increasingly critical to establish channels for strategic communication, modernization of forces, and political consultations to manage escalation and aggression.

Panelists and participants explored the potential for more nuclear allies, for an increased role for air and missile defense in deterrence, and for more focus on the psychological aspects of societal resilience in the face of nuclear threats. Further, the discussion also addressed the conceptual nuances of "nuclear sharing," suggesting that the term "conventional nuclear integration" more accurately reflects the strategic realities. The panelists cautioned that the pursuit of independent nuclear programs by allies could precipitate a corresponding response from adversaries, thereby exacerbating regional instability. There are concerted efforts by Russia and China to challenge the legitimacy of extended deterrence, particularly within the global south. While acknowledging the difficulty of persuading certain nations, the panelists reaffirmed the strategic value of extended deterrence as a bulwark against nuclear proliferation. They also contemplated the potential proliferation of nuclear powers in the event of a shift towards offshore balancing by the United States. The overall discussion advocated for a comprehensive approach to deterrence that includes educating publics, enhancing allied capabilities, and fostering close cooperation among nations to address the evolving security landscape.

Panel 7: Competing in “Peacetime” –for What?

- What goals should guide the U.S. competitive approach?
- What is “strategic advantage” and how does one get it and keep it?
- How can the U.S. most effectively negate the coercion strategies of its adversaries?

This panel discussion focused heavily on U.S. goals towards achieving and maintaining strategic advantage during “peacetime.” “Strategic advantage” as a term continues to lack a precise definition. Given this, the conversation was broadly focused. Additionally, participants explored the concept of strategic advantage in contexts other than peacetime, and in a variety of domains but with focuses on cybersecurity, technology competition, and nuclear weapons.

Some of the goals discussed during the panel included: maintaining the status-quo within the international system, maintaining deterrence, and maintaining a favorable distribution of geopolitical power. Most of the discussion regarding goals remained high-level, rather than providing specific concrete goals to be considered. A process towards achieving our goals can be made through following a well-defined strategy. Strategy can be defined as how we allocate limited resources to achieve our aims against a competitor. Speakers emphasized the current situation in which resources are limited, and therefore there needs to be discussion about what goals are most important and the best strategies to implement to achieve these goals. The best strategies consider both U.S. enduring advantages but also systemic weaknesses and advantages of competitors.



Defining strategic advantage is challenging, but clarity can be found within specific domains. For instance, strategic advantage in cyber can be defined as identifying and adopting a force posture that is favorable to achieving strategy goals. When we think about strategic advantage we need to determine where we seek advantage and towards what end – to determine the best strategies forward to achieving advantage. There also needs to be significant thought about how to engage allies on these matters, as they can support efforts towards advantage in a meaningful way.

Some technologies identified by the group as areas where the United States should seek advantage, for the purpose of improving deterrence, included manufacturing, advanced manufacturing, artificial intelligence and machine learning, and more secure technology systems. There was a robust conversation about cyber and creating advantage in cyber due to the importance of using cyber to support other operations and ground strategies.

There was continued discussion about the tension between concealing and revealing capabilities as relates to areas where the United States holds a strategic advantage. The group argued the benefits of both. In some cases, it could be important to reveal capabilities to reassure allies or to credibly demonstrate to adversaries that we obtain an advantage. Revealing though can open the opportunity for countermeasures to be developed by adversaries, chipping away at an advantage. In the case of cyber capabilities, revealing a capability will render it useless. Yet, it will be important to understand fully the capabilities which adversaries hold and how long of a timeline they may have before catching up to the capabilities held by the United States. Participants also raised the importance of an adversary's state institutions and capacity – states with weaker economic and technology development institutions and capacity will be challenged to quickly catch-up with U.S. capabilities. Therefore, state structures can be major barriers to getting and sustaining advantages.

Competing in peacetime requires an understanding of what is meant by “peacetime.” The group reaction to the term peacetime varied. There is a tendency to think about the international system dichotomously, either war or peace – which is largely unhelpful given that during “peacetime” there is typically heightened competition. The group discussed that sometimes government strategies consider competition an end rather than a pathway forward towards achieving a goal.

One example of a strategy to develop strategic advantage is the use of campaigning in cyber. Campaigning is a series of related cyber operations and activities intended to achieve national strategic objectives. It is a process of accumulating cyber effects that can be strategically impactful and requires continued execution rather than a “one-off” operation. In other domains, there may be strategies similar to campaigning which can be employed to develop advantages, and there should be significant thought to what these strategies will look like in different domains.

As with in other panel discussions, the group discussed the need for a clearer articulation about U.S. goals and aims in relation to specific threats and adversaries. Without an understanding of what we are competing for we cannot create appropriate strategies to develop advantages with meaningful impacts for deterrence and overall U.S. defense strategy. The group suggested that along these same lines perhaps we need to define different goals for different adversaries.



Similarly, competition and our competitive goals should be considered on smaller scopes to more clearly develop and execute strategy.

Panel 8: The Process Question: Beyond “Nesting?”

- What should be done to ensure a coherent result to the 2025 policy and posture reviews?
- How should the 2025 NDS review be organized to promote continued integration? Is there a better solution than again “nest” the nuclear and missile defense reviews in the NDS? Did nesting accomplish something useful?
- How important is continuity of policy to successful deterrence strategy?

Participants lauded the Biden administration’s attempt to bring together under the National Defense Strategy (NDS) both the Missile Defense Review (MDR) and the Nuclear Posture Review (NPR). That was a change from the past practice of having three separate, distinct papers with little cross-pollination. At the same time, the Biden approach of “nesting” the nuclear and missile defense reviews in the NDS had some shortcomings in that the documents felt “stapled together,” devoid of cross-references. They need to reinforce each other, clearly demonstrating that they are all part of the same self-reinforcing strategy.

Deterrence is so consequential that it demands a coherent approach. This is why continuing the practice of separate posture reviews is dangerous and contradicts strategy. It would be a mistake to continue the practice of “nuclear escalation is a STRATCOM problem,” or “Europe is a EUCOM problem,” or “the Indo-Pacific is an INDOPACOM problem.” While there will be always be an artificial division of labor within a government bureaucracy, the United States should do everything it can to encourage cohesion. One possibility might be to move from the NPR/MDR model to an annual Secretary of Defense report to Congress. In the past, annual reports dating back as far as Secretary of Defense James Schlesinger in the 1970s, all discussed nuclear, conventional, and missile defenses in one report, in support of national policy. While the conversation acknowledged that this was not a magic bullet, such a format might force the Department of Defense to think more holistically.

Participant debate considered whether the incoming Trump administration should conduct a full NPR. Several alternatives gained traction with participants, including a “light” NPR (e.g., an NPR “Refresh”, following the example of the British Integrated Review Refresh of 2023, which was conducted just two years after Boris Johnson’s Integrated Review in recognition of an accelerated erosion of international security); or a series of statements and/or fact sheets in lieu of an NPR. While recognizing the importance for the incoming administration to provide clear “marching orders,” many participants voiced concern about a full NPR consuming too much time and resources when the severity of the two-peer-plus challenge meant that we do not have this time.



Indeed, the recent report of the bipartisan congressionally mandated Strategic Posture Commission meant that there is no need for the incoming administration to re-examine the international security environment.

The developments the Strategic Posture Commission identified have not slowed; if anything, the erosion of international security environment has accelerated. Rather than conducting a fully-fledged NPR, re-evaluating the security environment, the incoming administration should focus on determining an appropriate response in addition to the program of record. The options mentioned above could enable the incoming administration to hit the ground running from day 1.

Determining adaptation options in addition to the program of record is particularly important considering the many constraints in the military-industrial complex. The incoming administration should thus seek to enhance the modernization program, asking: what does it take to upload? How much should we upload? Should we make a commitment to buy more S21s or Ohio class submarines? How can we reconvert B52s? Washington could focus on getting shipyards up to speed so that they can deliver closer to on time both the Virginia and Ohio class submarines, on uploading land-based Minuteman-III's, and on reconvert B-52 bombers and Ohio class submarines. While these adaptations will take time and money, putting the necessary contractual methodologies in place today is critical. Similarly, the incoming administration must ensure that the modernization effort is properly funded and that the industrial base is in place to support it. The next administration could also invest in conventional capabilities that would deter conflict from the outset, including tankers, hypersonics, and missile defenses. The conventional side is where the Trump administration could do more; on nuclear side, we just need to follow through with, and where possible accelerate, the modernization.

In considering the importance of continuity of policy to a successful deterrence strategy, the conversation highlighted that, like all good social science questions, the answer is: "it depends." There is merit in continuity if the policy goal is the right one. Virtue can be seen with consistency. But if consistency fails to adapt to the international environment, then consistency can be deadly. It is therefore important that United States and allied policies are consistent with our goals and the international security environment. The Strategic Posture Commission provides a case in point, rightly praising continuity of U.S. nuclear policy, support for modernization, extended deterrence, and the triad. It also highlighted discontinuities or breaks from current policy to strengthen U.S. deterrence efforts. Sometimes a deterrence strategy can be strengthened with prudent change, demonstrating that the United States will do whatever it takes to defend itself and allies. Key examples from the Strategic Posture Commission in this regard include the need to 1) no longer treat the PRC as a lesser case; 2) modify the U.S. theater nuclear posture to address new requirements; and 3) deter and defeat coercive missile strikes against the US homeland.



The Strategic Posture Commission also explained the coherence of U.S. deterrence in an exemplary manner. Each part of deterrence supports another. As Herman Kahn noted, "deterrence is a question about who deters whom, from what acts, in the face what threats, in what context, and for what purpose?" The phrase "the United States deters" is therefore shorthand, making the practice and theory of it seem simplistic. The United States does not make nuclear deterrence threats in a vacuum. The United States is making threats on behalf of itself and of its allies. The adversary is making a counter threat, for example through missile defenses, theater capabilities, local/conventional superiority in their forces. If there are breaks in the U.S. deterrence chain, the adversary can gain an advantage, causing deterrence to fail. One such example is a failure to invest resources in the buildup of conventional forces to fight at once in two theaters of war. As the Strategic Posture Commission noted, unless Washington builds up to that level, the United States will need to rely more heavily on its nuclear forces.

Panel 9: The Strategy Question: Getting First Principles Right

- Should the National Security Strategy address deterrence? If so, how? Is deterrence an ends or a means, or both?
- What did the outgoing administration get right and wrong at this level of deterrence strategy development?
- What must the next administration get right about deterrence strategy development?

Panelists agreed that the National Security Strategy (NSS) matters as a policy priorities document, even if it can get outdated relatively quickly in a fast-paced international security environment. The NSS acts as an important way for the President to communicate policy priorities, generate new ways and means, and to leverage existing ways and means. Generally speaking, national security strategies play a critical role for various stakeholders to message and signal to our allies and partners, as well as adversaries. NSS documents are also enshrined into the Goldwater-Nichols-Act and thus mandated by law.

For most two-term presidencies, initial NSS documents take on a more idealistic tone, whereas subsequent strategies are informed by geopolitical events that have transpired and needed addressing by the administration. Participants observed that the development of NSS documents often starts out as a big and intellectually driven exercise but devolves into bureaucratic bargaining, resulting in a large document representing every department and sub-department, thus muddying the importance of deterrence strategies. At times, previous NSS documents have been so broad as to result in an exercise of cumulative box-checking, as one participant highlighted.

Deterrence is a fundamental aspect of any NSS document, as deterring great-power conflict is a major objective of American national security. In this regard, deterrence can be seen as both an



ends and a means, depending on the context. Broadly speaking, any NSS would benefit if more detail and specificity were provided anytime the NSS evokes or references deterrence. It is not helpful if the concept of deterrence is defined too broadly, as evidenced in the term “bolstering deterrence.” For future NSS it is important to identify deterrence as a distinct policy priority relevant for specific global conflicts and rivalries. Thus, deterrence should be tied into specific scenarios as opposed to seeing deterrence as a generic ideal the United States aspires to. As examples, one participant mentioned the strategy of deterring Russia from attacking NATO members, deterring North Korea from attacking the Republic of Korea, or deterring China from escalating in the East China and South China Seas and the broader Indo-Pacific.

The current administration was perceived as getting various things right as well as wrong in its approach to formulating a national security strategy. For one, the current NSS has correctly identified deterrence as a concept that focuses on a few primary adversaries and threats. At the same time, the strategy document wielded the term deterrence too generically as did the previous NSS. The current NSS failed to be specific on contrasting the need for certain nuclear versus conventional capabilities and was not specific enough in the numbers of nuclear bombers and ballistic missile submarines needed for accomplishing the vital tasks of delivering national security and strengthen deterrence capabilities in the various theaters. It was also highlighted that the Biden administration had dropped references to the possibility of a nuclear response to chemical and biological warfare attacks against the United States in its NPR. Some argued such a reference should be reintroduced by the incoming Trump administration. A strategy document is not supposed to freeze policy into place for the consequent four to eight years, instead it is shaped by a dynamically changing world.

Participants recommended that it was important for the next administration to establish a well-defined scope for deterrence strategy. Deterrence strategy should be used to guide the various agencies and force them to come to the hard decisions. It is important to realistically account for national strengths and tools of power, and to regard deterrence as an enabler of these. Ideally, the next administration comes to the main priorities early in the strategy-making process and readjusts the NSS document dynamically afterwards, in order to not miss critical budget windows and arrive more quickly at implementation of the national security strategy rather than losing much time in the drafting stage. One participant remarked that it was not just important to include a section in the NSS that focused on adversarial threats, but also to include a section on adversaries’ threat *perceptions*, since it is the perceptions and misperceptions that shape international competition and outbreak of conflict.

A core challenge of strategy-making remains: how can the United States formulate a coherent strategy when there is absolute certainty that some assumptions and elements are fundamentally wrong and will be proven wrong as geopolitical events unfold. Strategy-makers can address this challenge by articulating priorities broadly and by designing strategy with foundational elements



and a more upwards-pointing perspective. High-level guidance documents cannot be too specific since the details should emerge in the implementation process. In sum, the incoming administration should work toward a NSS document that is clear, crisp, and concise on the major security challenges facing the United States.