

National Institute for Deterrence Studies & Peter Huessy Seminar

Missile Defense Meets Its Moment with Frank Rose

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Webinar Transcript

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Abstract

In this Huessy Seminar, The Honorable Frank A. Rose examines how recent conflicts have validated the operational effectiveness of missile defense while exposing critical vulnerabilities in U.S. and allied capabilities. Drawing on lessons from Ukraine and the Middle East, Rose argues that missile defense systems have proven highly effective in intercepting incoming threats and blunting adversary coercion strategies, but face growing challenges from saturation attacks, evolving technologies, and insufficient interceptor capacity.

The discussion highlights key risks, including vulnerable sensor infrastructure, an unfavorable cost curve in countering low-cost threats, and increasing collaboration among adversaries. Rose outlines a forward-looking agenda centered on expanding interceptor inventories, modernizing global sensor networks, accelerating emerging technologies such as directed energy, and strengthening allied integration. He also emphasizes the importance of "left-of-launch" capabilities and sustained investment in the defense industrial base.

Ultimately, the seminar concludes that missile defense is now a central component of modern deterrence and alliance security. While it cannot replace the strategic role of nuclear deterrence, its continued evolution will be essential to maintaining stability and countering increasingly complex and coordinated threats in the years ahead.

Executive Summary

In this Huesy Seminar hosted by the National Institute for Deterrence Studies (NIDS), the Honorable Frank A. Rose argues that recent conflicts in Ukraine and the Middle East have fundamentally validated the effectiveness of missile defense, marking a decisive shift in both operational reality and strategic debate. Missile defense is no longer theoretical—it works. However, adversaries are rapidly adapting, employing drones, cruise missiles, and ballistic missile salvos in coordinated saturation attacks designed to overwhelm defenses and coerce political outcomes.

Rose identifies several critical lessons shaping the future of U.S. and allied missile defense. These include the strategic use of missile attacks as tools of coercion; the demonstrated high effectiveness of missile defense systems; insufficient interceptor inventories for sustained conflict; vulnerabilities in fixed sensor infrastructure; and an unfavorable cost-exchange dynamic in countering low-cost threats. He also highlights the growing sophistication of adversary tactics and the accelerating missile threat from North Korea.

To address these challenges, Rose outlines a comprehensive set of policy and investment priorities. These include expanding interceptor production through multiyear procurement, strengthening the defense industrial base, and developing resilient, integrated sensor architectures—particularly space-based systems. He emphasizes the need to invest in cost-imposing technologies such as directed energy and AI-enabled systems, as well as “left-of-launch” capabilities to disrupt threats before launch. Enhanced allied integration and burden-sharing are also critical to building scalable and effective defense networks.

At the strategic level, Rose underscores that missile defense complements—but does not replace—the U.S. nuclear deterrent, which remains essential for deterring peer adversaries. He concludes that missile defense has reached a pivotal moment: its success is proven, but future effectiveness will depend on the United States and its allies adapting faster than their adversaries. Failure to do so risks ceding the advantage in an increasingly contested threat environment.

Unabridged Transcript

(Note: there will invariably be some word errors in the following transcript.)

00;00;04;21 - 00;00;28;26

Kimberly Cherington

Welcome everyone. We're so glad you can be here. I'm Kimberly Cherington on behalf of the National Institute for Deterrence Studies, we want to thank you for taking the time to join us this morning for this important discussion with the honorable Frank Rose. Welcome to those joining us live. A special thank you and welcome to some of our sponsors who we see on the call today.

00;00;28;27 - 00;00;53;09

Kimberly Cherington

Lockheed Martin, TechSource, and Northrop Grumman. We encourage you to submit your questions throughout today's presentation using the chat function or the Q&A button at the top of the screen. We will address these in the dedicated Q&A portion of today's seminar. We have two upcoming live events I want you to be aware of in Washington, DC at the Capitol Hill Club.

00;00;53;10 - 00;01;22;20

Kimberly Cherington

Rear Admiral Weeks will join us on Thursday, June 25th to update us on the sea-based deterrence and modernization of the submarine leg. Dr Uzi Rubin, Israeli defense engineer, analyst and former head of Israel's missile defense program, will join us at the Capitol Hill Club on Friday, July 24th. We hope you can join us. If you happen to be in DC on those dates.

00;01;22;20 - 00;01;34;17

Kimberly Cherington

These intimate, in-person seminars offer a unique opportunity to engage directly with these distinguished leaders to ask questions, participate in the discussion, and enjoy breakfast provided by NIDS and our gracious sponsors and donors. We hope to see you there. In partnership with BRF, NIDS presents the fifth Annual Nuclear Triad Symposium, which will take place on June 18th at Louisiana State University in Shreveport.

00;01;53;12 - 00;02;18;14

Kimberly Cherington

You can find more information on that, our speaker line up, the registration for this live symposium, all on our website, along with all of the events that I mentioned today. And we update that weekly, so make sure to follow us. You can follow us on LinkedIn, X and subscribe to our newsletter on our website to receive those updates.

00;02;18;16 - 00;02;55;28

Kimberly Cherington

Today we welcome the honorable Frank Rose. He's president of Chevalier Strategic Advisors, advising organizations on geopolitics, national security issues and defense technology. He previously served as the Principal Deputy Administrator of NNSA from 2021 to 2024. Earlier, he was Assistant Secretary of State for Arms Control and Deputy Assistant Secretary for Space and Defense Policy, leading the US policy on nuclear deterrence, arms control, missile defense, and space security.

00;02;56;05 - 00;03;18;21

Kimberly Cherington

He also served on the House Armed Services Committee and the Department of Defense. We are so honored to have you, Sir. And now I'm pleased to introduce our host and moderator for today's discussion, Mr. Peter Hussey, president of Geostrategic Analysis and a senior fellow here at needs. Peter, over to you.

00;03;18;23 - 00;03;45;27

Peter Huessy

Thank you very much, Kimberly. And I want to welcome our sponsors and our friends that are attending this seminar. Also want to welcome, of course, our president, Jim Petrovsky. And Curtis is on here. He's

our vice president. Welcome, Frank. Years ago started attending these seminars as an attendee. And as he told me, he learned a great deal from him, which is great to know.

00;03;45;27 - 00;04;21;25

Peter Huessy

But then he graduated to a speaker in his various positions within the US government. I always found Frank to be one of the fairest commentators on missile defense issues, including within the context of nuclear deterrence. What I've asked Frank to come and talk to us today is where have we been on missile defense? Where are we and where should we be going, and what are the implications for U.S. security on this, which, Frank, if anybody knows an enormous amount about this issue.

00;04;21;25 - 00;04;31;17

Peter Huessy

And, Frank, welcome on behalf of NIDS and our sponsors and our attendees, I want to thank you for coming over and talking to us today. So over to you, sir.

00;04;31;20 - 00;05;03;22

Frank Rose

Well, Peter, thanks again for having me. It's such a pleasure to be with you. As I mentioned to you in the green room, you know, I've been coming to your events since the mid 1990s. I've learned so much. So thanks so much. So let me begin by saying that for decades, the effectiveness of missile defense was vigorously debated by opponents and supporters in seminars in general.

00;05;03;23 - 00;05;35;17

Frank Rose

But honestly, I think the debate over the effectiveness of missile defense is over Ukraine. Israel in the Middle East, I think have answered the question in combat. What we have learned over the past several years is that missile defense works, but our adversaries are adapting fast. The question for me now is whether we will adapt faster to stay ahead of them.

00;05;35;17 - 00;06;04;08

Frank Rose

So, my talk today is titled Missile Defense Meets Its Moment, and it has two parts. First, I will outline what I think are the key lessons that we've learned over the past several years with regards to missile defense. Second, I'll offer some thoughts on what those lessons mean for the future of U.S. and Allied missile defense policy programs and budget.

00;06;04;09 - 00;06;26;12

Frank Rose

Now, these are my views, and I'm sure some of you will disagree with what I have to say, which is totally fine. And I look forward to having a discussion in the Q&A session so we can explore these issues a bit more. So for me, there are several lessons that we've learned over the past several years regarding missile defense.

00;06;26;14 - 00;07;00;26

Frank Rose

Adversaries are using ballistic missiles, cruise missiles, and drones as tools of political coercion and terror since the beginning of the war in Ukraine in February 2022. Russia has used mass volleys of ballistic missiles, cruise missiles and drones to attack Ukraine's critical civilian infrastructure, especially its power grid. The objective of these attacks has been clear to terrorize the Ukrainian population.

00;07;00;27 - 00;07;31;17

Frank Rose

We have also seen Iran employ a similar strategy in the Middle East over the last several months. Even though the Arab Gulf states were not directly part of the joint U.S. Israeli attacks on Iran, they were never less targeted by drones and missiles. The objective was clear pressure the Arab Gulf states to place political pressure on the United States to end the war on terms favorable to Iran.

00;07;31;19 - 00;08;07;26

Frank Rose

Iran has also struck numerous civilian targets in Israel, with the objective of inflicting pain on the Israeli population. And all these examples, missile defenses have played a key role in blunting these attacks. And if you, crane in Iran, are today's laboratory, China is tomorrow's pacing challenge. Second thing that we've learned. Missile defenses have been proven highly effective both militarily and politically.

00;08;07;26 - 00;08;40;00

Frank Rose

If you asked me 20 years ago whether missile defense defenses would shoot down between 90 and 90% of incoming threat missiles, I would have been quite skeptical. However, based on the initial public publicly available data released by the United States in various Gulf militaries, those numbers do appear to be broadly accurate, though it will be important to reassess them as more data becomes available.

00;08;40;02 - 00;09;26;15

Frank Rose

Now, missile defense has not eliminated every air and missile threat, but it has brought critical time. It has also blunted the efforts by aggressive states to use missile defenses to force a premature political resolution in both the Ukraine and Middle East conflicts. Three. And this is something that's very important to me. If there is one thing that we have learned over the recent conflicts in Ukraine, in the Middle East, is that we lack sufficient theater missile defense interceptor capacity.

00;09;26;20 - 00;09;55;12

Frank Rose

This should surprise no one. Almost 20 years ago, when I served as a professional staff member on the House Armed Services Committee with responsibility for missile defense, interceptor inventories were already falling short of operational needs. Both the House and Senate Armed Services Committee were very clear that the Department of Defense was not procuring sufficient FAD and SM3 interceptor inventory.

00;09;55;13 - 00;10;27;23

Frank Rose

Indeed, a then a then recent Joint Capabilities Mix study concluded that the United States needed roughly twice as many SM3 and FAD interceptors just to meet minimum operational requirements identified by the

regional combatant commanders. Those concerns were acknowledged by the Department of Defense, but they were ultimately set aside nearly two decades later after repeated warnings in multiple crises.

00;10;27;24 - 00;11;04;05

Frank Rose

The gap identified back then has still not been closed. If anything, it has grown. We built for peace time efficiency. We now need war time scale. This is especially true if we ever come into direct military conflict with a peer competitor like China. A major contingency in the Indo-Pacific, particularly one involving large ballistic missile cruise missile salvos, would place unprecedented demands on interceptor inventories.

00;11;04;07 - 00;11;46;22

Frank Rose

China has invested heavily in missile forces designed to saturate and overwhelm defenses. Any serious planning scenario must assume extended engagements in high expenditure rates of interceptors. Number four land-based radars are vulnerable to drone and missile attacks. Another key lesson we have learned is that land based stationary radars are vulnerable to missile and drone attack. Recent conflicts have demonstrated that fixed land-based sensors are now targets from day one.

00;11;46;25 - 00;12;24;06

Frank Rose

Iranian missiles and drones reportedly damaged or destroyed, disrupted multiple US and partner sensors across the region, including in Jordan, Saudi Arabia, Bahrain and the United Arab Emirates. The Iranians are not stupid to the contrary. They know how to fight an asymmetric war effectively, and they clearly understand that missile defenses are enabled by good sensors. Knock out the sensors and you seriously degrade the effectiveness of the missile defense system overall.

00;12;24;10 - 00;12;57;24

Frank Rose

This is a clear vulnerability that demands attention. Five, missile defense has a cost curve problem. The wars in Ukraine in the Middle East have demonstrated that we face a significant cost curve problem in which our adversaries, like Russia and Iran, use cheap drones such as the Shaheed, and force us to use far more expensive air and missile defense interceptors to engage them.

00;12;58;00 - 00;13;30;05

Frank Rose

The analogy is simple. You do not want to use a \$4 million Patriot interceptor, or a \$1 million AMRAAM missile to intercept a \$25,000 drone. The good news is that the Ukrainians have shown us how to deal effectively with the evolving drone threat, and have sent teams to the Middle East to help the United States and the GCC partners.

00;13;30;07 - 00;13;55;03

Frank Rose

My concern is that we in the United States will fail to learn from the Ukrainians and integrate those lessons into our budget, strategy and doctrine. You know, sometimes we Americans think we know the answer to all the defense problems facing the world. In my view, that's not necessarily true. And I think we have to learn a lot from others.

00;13;55;04 - 00;14;28;09

Frank Rose

You know, it reminds me of a decision in the early 2000 when we were engaged in the Iraq War, and the US Army eliminated much of its short-range air defense capability for to free up additional ground personnel for Iraq. Now, that may have been a good decision back then, but once you lose a capability, it is really difficult to reestablish that capability.

00;14;28;11 - 00;14;53;20

Frank Rose

You know, it reminds me of a story when I was with my mother about 15, 20 years ago, we were in France and having dinner, and I said, why did you and dad ever get married? They've been divorced for 40 years now. You have nothing in common and her response was, it seemed like a good idea at the time, and that was kind of like our decision to decimate our SHORAD capabilities.

00;14;53;23 - 00;15;29;24

Frank Rose

Number six, adversaries are conducting sophisticated saturation attacks with missiles and drones designed to overwhelm defenses. The Russians seem to have perfected these sophisticated saturation attacks in their war in Ukraine. And the Iranians have demonstrated a similar capability with their attacks on Israel in the Gulf states. These types of attacks, combining ballistic missiles, cruise missiles and drone swarms are likely the future of warfare.

00;15;30;01 - 00;16;06;20

Frank Rose

Our adversaries are learning in real time in our sharing those lessons with one another. The only question that I have is are we learning and integrating those lessons faster? And I think the jury is out. And then my final lesson, though it is not directly related to the wars in Ukraine, in the Middle East, is this the ICBM threat from North Korea is real and growing.

00;16;06;21 - 00;16;48;00

Frank Rose

For years, we debated in the United States whether North Korea or another rogue state would develop an ICBM and a nuclear warhead capable of reaching the continental United States. While the Iranian ICBM program has not advanced as fast as we anticipated, the North Korean threat is here and now as the 2026 DNI Annual Threat Assessment noted, quote, "North Korea has successfully tested ICBMs capable of reaching the entire homeland."

00;16;48;02 - 00;17;17;15

Frank Rose

End quote. The report also notes that, quote, North Korea is committed to expanding its strategic weapons program, including missiles and nuclear warheads, to solidify its deterrent capability. End quote. So, so far in my remarks, I have outlined what I believe are the lessons for missile defense that we've learned over the past several years, both the good and the bad.

00;17;17;16 - 00;18;01;26

Frank Rose

But as my former boss, the late congresswoman and Undersecretary of State Ellen Tauscher, taught me, you do not just diagnose problems, you offer solutions. With that. Here are some of my key recommendations. First, I think we need to replenish and expand theater missile defense, interceptor inventories. The rapid depletion of U.S. and Allied theater missile defense interceptor stockpiles, particularly Patriot, THAAD and SM3 interceptors driven by the conflicts in Ukraine.

00;18;01;26 - 00;18;51;11

Frank Rose

Israel in the Middle East underscores a critical strategic vulnerability. Effective missile defense depends not only on advanced systems, but having sufficient magazine depth for sustained combat operations. In my view, Congress must authorize multiyear procurements to provide industry the predictability needed to expand capacity, reduce unit cost, and accelerate production timelines. Investment should also be made on workforce development, resilient supply chains, and access to critical materials required for interceptor manufacturing.

00;18;51;13 - 00;19;45;29

Frank Rose

Now, the encouraging news here is that the Department of Defense recognizes the urgency of this challenge. Under the leadership of Deputy Secretary of Defense Steven Feinberg, serious steps are underway to strengthen the defense industrial base and restore depleted interceptor inventories. However, this is going to take time. My second recommendation is we need to enhance global sensor architecture. Persistent high fidelity tracking is the foundation of credible missile defense without accurate continuous tracking data, even the most advanced interceptors cannot perform effectively.

00;19;46;05 - 00;20;35;13

Frank Rose

The states, in my view, must accelerate the development of next generation sensor architectures that integrate space, air, sea, and land-based systems into a seamless global network. This should include continued investments in the hypersonic and ballistic missile tracking space sensor overhead, persistent infrared satellites, and next generation early warning radars. Existing ground and sea-based sensors in Europe, the Pacific and the Arctic should be modernized for higher resolution tracking and fused into a single battle management system capable of real time data sharing and engagement coordination.

00;20;35;15 - 00;21;10;28

Frank Rose

As we have seen in the Middle East, fixed land-based radars are becoming more vulnerable to drone missile strikes, set cyber attacks, and potentially sabotage in a high end conflict. These static assets may be amongst the first target. That reality strengthens the case for resilient, proliferated space-based tracking radars and distributed orbital sensing layers that are far harder to suppress or destroy.

00;21;11;05 - 00;21;54;24

Frank Rose

Space based tracking is no longer simply an enhancement. It is becoming an operational necessity. Three investing in emerging technologies to break the cost exchange trap, where defenders rely on expensive interceptors against cheap offensive systems. The United States and its allies must accelerate the

investment in breakthrough technologies such as high energy lasers, high power microwaves and autonomous AI enabled interceptors.

00;21;54;26 - 00;22;40;09

Frank Rose

These capabilities are no longer theoretical. Israel recently demonstrated the first official combat intercept using the ion beam laser defense system, highlighting the growing maturity of directed energy solutions. And Ukraine has demonstrated its ability to effectively defeat large swarms of drones integrated with ballistic, cruise and hypersonic missiles. Similar efforts in the United States should be rapidly expanded through DARPA, the Defense Innovation Unit, and the Military Services, with the goal of achieving operational deployments as soon as possible.

00;22;40;12 - 00;23;16;15

Frank Rose

These technologies offer the prospect of low cost, scalable defenses against drones, cruise missiles, and swarm attacks that would otherwise exhaust traditional interceptor inventories for develop and operationalized left of launch capabilities. The most effective missile defense may be preventing a missile from launching in the first place. Left of launch approaches seek to disable or disrupt missile threats before they leave the ground.

00;23;16;21 - 00;24;06;25

Frank Rose

This includes cyber operations, signal jamming, spoofing, sabotage of command and control systems, and other means of degrading and adversaries launch architecture. U.S. Cyber Command and the Intelligence Committee should develop dedicated kill chains for hostile missile forces, particularly in regions such as the Middle East and the Indo-Pacific, and integrate those options into theater, defense planning, legal authorities, and policy frameworks governing preemptive cyber operations should also be reviewed and clarified, so these capabilities can be employed rapidly when required.

00;24;06;28 - 00;24;44;12

Frank Rose

Five. We need to strengthen allied integration and birding sharing with regards to theater missile defense. Missile defense is not solely on national mission. It is an alliance mission. Building interactive, interoperable architectures with allies is both a strategic and economic imperative. The United States should prioritize joint development, co-develop, co-production, and integrated deployments with close partners such as Israel, the United Arab Emirates, Japan, and NATO.

00;24;44;14 - 00;25;27;08

Frank Rose

I mean, on that point, you know, I would say the work that the United States has done with Israel and the Gulf states on missile defense over the last 20 years has reaped tremendous benefits over the last couple of months. Indeed, if you're interested, I wrote a piece in Defense One back in early March talking about the work that we did with the Gulf states 20, 15 or 20 years ago to have this integrated approach to missile defense in the region.

00;25;27;09 - 00;26;10;15

Frank Rose

Now, while there is certainly more work to be done, I think if you look at how effective those capabilities have performed, it is a real, real bright spot. You know, shooting to kind of turning to kind of national missile defense. I think we need to accelerate the deployment of the next generation interceptor or NGI. The program is designed to replace the legacy ground based midcourse system with vastly improved discrimination tracking and multi object kill capabilities.

00;26;10;17 - 00;26;42;05

Frank Rose

Under President Trump's Golden Dome initiative, I think NGI should become the number one priority for. And you know, the Missile Defense Agency should be granted stable long-term funding and streamlined acquisition authorities to avoid the bureaucratic delays. Yes. You know, and furthermore, I think early deployment sites in Alaska and California should be modernized to accommodate the NGI infrastructure.

00;26;42;05 - 00;27;22;29

Frank Rose

And we may also want to explore the option of making the NGI a mobile capability that could be deployed, a flexibility deployed flexibly to meet evolving threats. The program should also prioritize testing against hypersonic glide vehicles in complex decoy environments. And given the expanding North Korean ICBM threat. Serious consideration should be given to increasing the number of interceptors beyond the current number deployed.

00;27;23;01 - 00;28;03;07

Frank Rose

Seventh, and finally, I think we should rely on nuclear forces to provide strategic deterrence against Russia and China. Missile defense. However, advance is not a substitute for the fundamental deterrence provided by the US nuclear triad. Therefore, my view is that the US should fully modernize the triad. Sentinel ICBMs, B-21 bombers, LRSO cruise missiles, the Columbia class subs, as well as update the Department of Energy's nuclear infrastructure.

00;28;03;09 - 00;29;12;01

Frank Rose

We should also examine what additional capabilities may be needed in the new strategic threat environment we face, especially when dealing with the emerging threat from China's strategic nuclear buildup. You know, for me, two key priorities that would be on my list when we look at additional capabilities would be one, improving the ability to penetrate heavily contested air and missile defense environments with our strategic systems like the D5 and the Sentinel, and developing an air launch nuclear cruise missile that could be deployed on the F-35 fighter to eventually replace the B61 12 gravity bomb, which would provide the F-35 a standoff capability that would make it more survivable.

00;29;12;03 - 00;29;47;11

Frank Rose

And from my perspective, Homeland missile defense should remain focused on limited threats, deterring the strategic forces of peer adversaries depends, in my view, on credible, in survivable US strategic nuclear forces. So let me conclude by saying missile defense is no longer a niche capability or a future aspiration. It is now central to deterrence, crisis stability and alliance security.

00;29;47;13 - 00;30;30;27

Frank Rose

Recent conflicts have demonstrated its value beyond doubt, but they have also exposed the scale of the challenge ahead. America and its allies cannot afford to mistake recent success for lasting advantage. Adversaries are building larger salvos, cheaper drones and more sophisticated strike packages, and better ways to blind or overwhelm defenses. The systems that performed well in today's conflict will face far greater stress in tomorrow's.

00;30;31;02 - 00;31;07;22

Frank Rose

The lesson is clear missile defense has met its moment. Now, the United States and its allies must match that moment with urgency. Investment in strategic resolve. If we fail to adapt, our adversaries will shape the next battlefield on their terms. If we succeed, we will strengthen deterrence, protect our citizens, and preserve the credibility of our alliances that have underpinned security for generations.

00;31;07;22 - 00;31;13;16

Frank Rose

And with that. Let me stop there and turn it back over to you, Peter.

00;31;13;18 - 00;31;26;24

Peter Huessy

Thank you very much, Frank. Excellent remarks. We have a couple of questions. The first one was, should we use missile defenses to protect our ICBM fields?

00;31;26;26 - 00;32;07;01

Frank Rose

You know, my general view is. No. I think that the focus of our strategic missile defenses against Russia and China should be. Well, let me rephrase that. We should use strategic deterrence. I have always been quite, I would say, concerned when we say we are going to use our missile defenses in the strategic roll. Call me old fashioned, but I think missile defense should primarily be at least strategic.

00;32;07;01 - 00;33;01;28

Frank Rose

Missile defense should primarily be focused on protecting against rogue and unauthorized threats to deter Russia and China. I think we need to rely on our strategic deterrent. That said, with regards to kind of theater missile defense engagements, I absolutely think we need to be prepared to take on Russia and China's theater missile drone capability. Their strategy is very clear, as we have seen in both the Middle East and in Ukraine, to overwhelm the defenses and make it difficult to operate.

00;33;01;28 - 00;33;43;13

Frank Rose

And as I mentioned in my opening remarks, these countries are sharing the information amongst themselves in real time. If you've not seen this report yet, I highly recommend it. Mick Ryan, retired officer in the Australian Defense Forces, wrote in a report for the Lowy Institute out of Sydney, Australia, talking about these sharing networks amongst Russia, China, North Korea and Iran.

00;33;43;16 - 00;33;58;04

Frank Rose

You know, they're evolving quickly. And again, I'll come back to that point. My hope is that we will be doing that with our allies. The jury is up.

00;33;58;07 - 00;34;06;05

Peter Huessy

We have a question from Hannah Dennis, who's with the Congressional Research Service. So, your answer, Frank, is going to go to every member of Congress.

00;34;06;06 - 00;34;09;20

Frank Rose

That's fine. So, I don't work for the government anymore.

00;34;09;22 - 00;34;25;23

Peter Huessy

I know she asked the following interesting question. Can you speak on personal requirements for theater, radar and missile defense systems? Will we see a growing need for missile defense personnel? What is the training? Lead time? Concerns about force protection?

00;34;25;26 - 00;35;01;23

Frank Rose

Yeah. No, I think you know, Hannah, I think that's a great question. I think fundamentally it will be driven by force structure requirements. Okay. My guess is that one of the lessons that the United States and its allies will take from these recent conflicts is we don't have not just enough interceptors, but sufficient for structure. Let me give you an example.

00;35;01;26 - 00;35;38;24

Frank Rose

Fads and the anti two radars. According to press reports, several of those radars may have been damaged or destroyed. And we only have a limited number. So what that tells me is, boy, this is a limited capability. If we are in high tempo operations, we need some resiliency. So, we're going to need not just more interceptors but more package that packages in general.

00;35;38;24 - 00;36;06;10

Frank Rose

And that, as you know, has a back end. You just can't you just can't develop the capability. You need people to man it. You see that picture back there. That's George C Marshall. And one of the things I've been doing in my retirement is I give tours of his home in Leesburg, Virginia. You should come up on a Saturday or Sunday and I'll give you a tour.

00;36;06;11 - 00;36;39;13

Frank Rose

But I always tell a story of Marshall's first meeting with President Roosevelt in 1938, when he's deputy chief of staff of the Army. He goes over to the white House with the Secretary of War, the head of the

Bureau of the budget, to talk about the Air Corps budget for the following year. And then at the meeting, the president says we have to have 10,000 new airplanes produced next, next year.

00;36;39;13 - 00;37;16;02

Frank Rose

And the president goes around and everybody says, yes, Mr. President, great idea. Yes, Mr. President. Then the president gets to Marshall and Marshall says, Mr. President, I disagree with everything you just said. We can purchase all this extra force structure. But if we don't have the pilots and the pilot training, if we don't have the mechanics to work on these planes, if we don't have the new airfields and shelters, it's not going to make sense.

00;37;16;03 - 00;37;49;28

Frank Rose

So, Hanna, coming back to your question again, I think the lesson that I take away from this war is we need more theater missile defense infrastructure, large, not just interceptors. And if you're going to staff that, you're going to need additional people. You're going to need trainers, you're going to need expanded schools. So yeah, it's not just about producing interceptors.

00;37;49;28 - 00;38;10;28

Frank Rose

It's about producing that entire, I would say, supporting structure. And sometimes we forget about that. These systems don't just consist of the interceptors but the people, but the sensors but the training etc., etc..

00;38;11;01 - 00;38;35;18

Peter Huessy

It's an interesting I would like to. You might want to contact some of the major aerospace industries that were facing an enormous shortage of personnel with respect to engineers, welders in the industrial base. And they went out and went to the schools and said, if you trained people the way we would train them and then make a commitment to they can work for us afterwards.

00;38;35;18 - 00;39;00;24

Peter Huessy

We'll pay for the whole freight, the school, the care, everything. And they trained well over close to 20,000 people, young, young people in this business just over the last couple of decades. Extraordinary achievement. And I'll be happy to put you in contact with the folks that have told me this. Frankly, I have a couple of questions here is from Rich Levy says.

00;39;00;24 - 00;39;08;13

Peter Huessy

Does arms control have a credible role in support of the modernization efforts of air and missile defenses?

00;39;08;15 - 00;39;37;18

Frank Rose

Yeah, I mean, what I would say about kind of the future of arms control is that I think arms control, as we have thought about it over the last 30 years since the end of the Cold War, is dead. Okay. That, in my view,

is not coming back, but I do see a potential role for arms control going forward.

00;39;37;18 - 00;40;16;27

Frank Rose

But it will be a different type of arms control. It won't be like new start where you have counting roles. It will probably be more confidence building measures in political agreements. Now you know, he asks a really good question. You know, do we put our missile defense capabilities in that arms control mix? And I have to be honest with you, I think the Russians and the Chinese would absolutely demand that we do that.

00;40;16;28 - 00;41;13;02

Frank Rose

I think we need to be very, very careful about limiting our missile defense capabilities, especially given the evolution of the threat and the need to effectively and quickly adapt. So I so the answer to your question is, you know, I think there is a potential role for a new type of arms control in the future. However, while the Russians in the Chinese would certainly want to capture US missile defense capabilities in that any, any type of future agreement, I think the United States would need to be very, very cautious about limiting our capabilities.

00;41;13;04 - 00;41;44;27

Frank Rose

That's been my view for a long time. Are there things we could do with regards to transparency and confidence building with regards to missile defense, especially strategic missile defense? Yeah, I think there's some room there. But any real hard limitations on our capabilities, in my view, I think that would be a mistake in the new security environment we're facing.

00;41;45;00 - 00;42;05;27

Peter Huessy

Frank, our vice president is asked an interesting question. I'll read it to you. Curtis writes do the multiple missile and drone attacks on Israel in 2024 and 2025, the Gulf states in 2026, and Ukraine calling to question the effectiveness of deterrence by denial theory.

00;42;06;00 - 00;42;18;05

Frank Rose

Well, you know, that's a good question. You know, obviously, the attacks, the missile defenses didn't deter the attack.

00;42;18;08 - 00;42;25;07

Frank Rose

Which does not surprise me, but I would say a couple of points.

00;42;25;10 - 00;43;09;06

Frank Rose

One, they, as I talked about in the context of my opening remarks, I think what missile defense allowed us to do was manage the political situation and prevent, you know, and prevent through terror attacks on the population from forcing us to a premature political solution that was unfavorable to the United States. So, I

don't think, you know. So that would be my view.

00;43;09;06 - 00;43;45;17

Frank Rose

I don't think it was ever designed to quote, you know, deter them from use. Okay. The missed their strategy was very clear from the get-go. Okay. Use integrated swarm drone swarm cruise missiles, ballistic missile and hypersonic missiles. In the case of Russia, to inflict so much pain and terror on the population, especially the Russians in Ukraine, to force a solution on their terms.

00;43;45;17 - 00;44;58;20

Frank Rose

And there was a great article by Ken Barron in, a defense one yesterday about how the Ukrainians have used their counter drone capability and their other technologies to deny that political objective. And I wrote and you'll find in the if you go up to the top of the chat, I wrote some commentary on that on LinkedIn yesterday talking about how the Ukrainians and have used technology in a very close Whitson view of, you know, using technology to when a war on your political terms and that, you know, generally is how I have viewed kind of the missile defense battle in the Middle East and in Ukraine as using these capabilities to deny the enemy

00;44;58;24 - 00;45;26;16

Frank Rose

Its political objective. So, while it didn't necessarily deter Russian and Iranian missile and drone use, it did help prevent the Russians and the Iranians from achieving their political objectives with these types of attacks. So that's my answer to that.

00;45;26;18 - 00;46;00;10

Peter Huessy

You know, I hear you. I've been interested in the commentariat, including the media, have switched to Russia's going to win. And the only question is how much does Ukraine concede versus Ukraine is taking back territory? Yeah. And what's fascinating is reading. I have a friend who is Chris Osborn who runs a website called Maven Warrior, and he was the Army's chief technology advisor for years.

00;46;00;10 - 00;46;49;28

Peter Huessy

And he points out the Ukraine is using robots to hold territory, which is kind of interesting. But I asked this question before you finished your remarks. I wrote it down. It goes to what you were talking about. Let me read it to you. Yep. Despite launching some 100,000 drones, rocket and missiles at Israel, the US and US allies in the Middle East region, most attacks have not gone directly after population centers per se, but instead have involved a sort of hybrid counterforce strategy, which may indicate the absence of counter value strategies being adopted by our adversaries, which in fact would enhance the value of missile drone defenses and air defenses.

00;46;50;00 - 00;47;03;08

Peter Huessy

I'd like your comment on that and not. And you agree with me. I'm just curious whether they then go back to or go to counter value because the jury is not in yet.

00:47:05;13 - 00:47:17;10

Frank Rose

Tax on our radars and our facilities and so forth. Haven't given them what they want. Do they change tactics and say, okay, we'll just we'll burn a city to the ground?

00:47:17;12 - 00:47:53;18

Frank Rose

You know, Peter, it is a good question and I don't know the answer, but let me just provide you a few of my observations. First, I think the Iranians in particular have had a certain amount of counterforce in their targeting, especially against our radars. And I talked about that in my speech. Exactly. They have, but they also have done some attacks on population centers in Israel and to a lesser extent, the Gulf.

00:47:53;18 - 00:48:23;04

Frank Rose

But, you know, they were also looking at some energy infrastructure that's also a counter value. I don't know if you can go back and forth whether energy infrastructure is kind of value or counterforce target. There are arguments for both. So, the answer is, you know, I don't know the answer. Now if you take that and you go to Ukraine, it's a very different strategy.

00:48:23;06 - 00:49:04;22

Frank Rose

The Russian attacks on Ukraine have been primarily counter value attacks to go after and terrorize the population. Yes. And so, I think the answer to the overall question is, I think we are seeing a mix of strategies with the various capabilities. But I'll come back to the point I tried to make very clear in the remarks is that the Russians, the Chinese, the Iranians, in the North Koreans, they are sharing information.

00:49:04;23 - 00:49:32;29

Frank Rose

Okay. They've got to do loop. So, if you see it in one theater, there is a very good chance it's going to end up relatively quickly in the next theater. Honestly, I don't think we have a choice. I think we have to try to defend against all the threats. But, you know, but the challenge is we only have limited interceptor inventory.

00:49:33;01 - 00:50:05;27

Frank Rose

So, that is one of the reasons why I think we have to really address this cost curve issue. And I'll come back to the point. The Ukrainians, I mean, they are doing a great job. You know, over the last week, the Russians have pounded Kyiv. Okay. But not much of the Russian capability has gotten through because of the effectiveness of the Ukrainian counter drone capabilities.

00:50:05;29 - 00:50:34;08

Peter Huessy

Interesting. However, in addition is that Ukraine was told very specifically don't go after the Russian energy infrastructure because that will really get a mad. And now they have. And guess what Russia keeps announcing. They just announced they're not going to export any aviation fuel through November. And they

also announced that through July they won't export any.

00;50;34;10 - 00;50;47;04

Peter Huessy

Diesel fuel. So their inventories are such that they have to use it for domestic purposes. I think the Iranian the Ukraine strategy has been quite extraordinary, quite creative.

00;50;47;05 - 00;51;21;04

Frank Rose

Yeah. Peter, I absolutely agree with you. Another thing that I have observed over the last couple of months is the improvement of Ukrainian strike, long range strike capability. They're not dependent on us or the Europeans anymore for long range strike. They are developing their own. They are using it in. The objective is very clear. Okay, I'll come back to cloud suites.

00;51;21;05 - 00;51;58;23

Frank Rose

Okay. They are using this technology in a way to meet a political objective. The way you end a war is not saying, oh, please be nice to me. You impose cost on your adversary. And one of the things that we have seen the Ukrainians able to do is one start to really impose cost on the Russians. I mean, the fact that the Russians had such a scaled down Victory Day Parade tells you something. Okay. And number two, going back to the question about denial, it's not necessarily deterrence by denial, but by deploying these effective missile and counter drone capabilities, they are denying the Russians the ability to achieve their strategic objectives in the war. And one thing I just add, going about the effectiveness of missile defense that surprise me.

00;52;33;24 - 00;53;04;08

Frank Rose

We have seen Patriot batteries shoot down Russian hypersonic capabilities in Ukraine. Okay. That shows you how good the defense isn't perfect. But if you had told me 15, 20 years ago Patriot was going to shoot down Russian hypersonic capabilities, I would have said, you've got to be kidding. So again, I mean, I come to the point it's really met this moment.

00;53;04;08 - 00;53;30;24

Frank Rose

But, I mean, we shouldn't sit on our laurels. I mean, we definitely I mean, people who have spent their careers working on missile defense and taking a lot of arrows. Peter, you and me, I've got all the arrows in my back from the left and the right. They should definitely give themselves a pat on the back, because the work that they did has paid off.

00;53;30;27 - 00;53;50;13

Frank Rose

You know, I've had over the last couple of months or so, I've had interactions with CQ Brown, the former chief of staff of the Air Force, and Dave Golfing, another former chief of staff of the Air Force. You know, I worked with both of them when they were the Air Force Central Command commanders on integrated air and missile defense.

00:53;50;14 - 00:54;22;13

Frank Rose

And my note to them is, hey, you know, that work we all did. It's really paid off. Additionally, I wrote an article for Defense One on European missile defense a couple of weeks ago. And the point I made is that back, I think in early April, the Iranians fired a 4000 kilometer missile at Diego Garcia. One of the missiles was intercepted.

00:54;22;13 - 00:54;51;08

Frank Rose

One of it, I think, fell short. But what it says is that the Iranians now have the capability to range all of Europe. But the difference, because we did what we needed to do at the time, under pressure internally here in the United States and from Russian objections, we have capabilities there now. So the Iranians don't get a free shot, but we have to adapt.

00:54;51;11 - 00:55;06;01

Frank Rose

I mean, this is not a time to sit on our laurels. This is a time to understand the operational impacts and adjust our strategy, budgets and programs appropriately.

00:55;06;04 - 00:55;26;25

Peter Huessy

Well, I had a question for you. I'm going to ask it later on offline, and I want to turn it over to our president, Jim Petrosky. And we have a couple of minutes left. And Jim, if you have a question or comment to Frank, and then I'll pass it over to Kimberly to close us out. Yeah.

00:55;26;25 - 00:55;48;22

James Petrosky

This is a very timely subject. And for those in the audience, if you haven't been watching the news and all the number of people are writing about this, we're sort of in a turning point. So Frank gave us some great insight into what's going on. Frank, in a show prep, you and I talked about it, whether this is evolutionary or whether it was strategic in the way that things are changing.

00:55;48;23 - 00:55;59;19

James Petrosky

Just have a minute here. But I'd like the audience to hear your condensed response, because we're down to three minutes. I'll turn it over to Kimberly here, but go ahead. I thought it was great.

00:55;59;25 - 00:56;36;25

Frank Rose

You know, my general view is at the beginning of this war in Ukraine. I thought the Ukrainians were toast, but they faced an existential threat. And when you face an existential threat, you evolve quickly. Now, luckily for the Ukrainians, they've had an innovative culture, and they were able to do a couple of things. One, to quickly evolve their technologies and quickly have a decisive loop, as a board would call the loop.

00:56;36;26 - 00:57;00;03

Frank Rose

I mean, you know, he really the Ukrainians have really got in the Europe. Secondly, in many ways. And Walter Russell Mead said this in an article in the Wall Street Journal a couple of weeks ago. They have created a real state. The war has created the Ukrainian state. The Ukrainian state at the beginning of this war was a shell.

00:57:00:04 - 00:57:31:16

Frank Rose

But through this existential threat, they have evolved to me. So I don't think it was strategic. I think they evolved. But it's not just the weapons, it's the people. It's the knowledge, the bureaucracy, the things that they are able to do. We can't do right now because it's not because we don't have the foresight or the knowledge. It's because our own damn institutions make it to heart.

00:57:31:22 - 00:57:51:28

Frank Rose

We are more focused on oversight, compliance and regulation, and we're not focused enough on deploying capabilities to our troops to meet the threat. And if there's one lesson that I've learned over the last year or two, it's that.

00:57:52:01 - 00:58:03:03

Frank Rose

Thanks, Frank. Yep. When your backs against the wall, it's amazing what you'll do. All right. Well, good. Hey, thank you very much. Thank you. To the audience. Turning to close this out.

00:58:03:06 - 00:58:45:12

Kimberly Cherington

want to extend our appreciation to you, Mr. Rose, for being here today. And thank you for your continued good work. If you are new to NIDS, we are a 501 three nonprofit organization supported by generous donors and dedicated to advancing peace and stability through a strong national security and nuclear deterrent. A special thanks to those of you who donated or pledged to NIDS during Deterrence Matters Month, which was May, and helping us to continue to bring these timely and critical programs highlighting the importance of our deterrence force and the people who keep our nation safe.

00:58:45:13 - 00:59:01:11

Kimberly Cherington

Please share our content with your network and help us spread the word. We thank you for your support and being part of our growing community, and we will see you next time. Have a peaceful day and a peaceful weekend. Thanks for being here.

00:59:01:13 - 00:59:03:20

Peter Huessy

Thank you again my friend. My pleasure.

00:59:03:22 - 00:59:04:28

Frank Rose

Great work. Thanks so much.

00;59;04;29 - 00;59;06;05
Peter Huessy
Thank you very much.