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TRANSCRIPT

Event

**“MTCR Reform: What’s a Missile?”**

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CSIS EXPERTS

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Heather Williams: Welcome to HTK, a series devoted to discussing strategic forces issues of the day. HTK stands for Heather, Tom, and Kari, but for defense wonks out there it also stands for “hit to kill.”

I’m Heather Williams, director of the Project on Nuclear Issues here at CSIS. I’m joined today by Tom Karako, director of the Missile Defense Project, and Kari Bingen, director of the Aerospace Security Project.

On September 15th the State Department announced that it would begin treating the export of unmanned aerial systems the same way it has long treated manned aircraft, as opposed to treating them as missiles. This is a reinterpretation of the 1987 Missile Technology Control Regime, or MTCR, which regulates the export of such technologies. Given the widespread proliferation of missiles and drones in recent years, MTCR has been the subject of several updates during the last three administrations and has been the topic of bills introduced in Congress.

(Video clip plays.)

Rep. Bill Huizenga (R-MI): Oftentimes the MTCR produces a strong presumption of denial on these covered technologies, even when exporting to our closest allies.

(Video clip ends.)

Dr. Williams: How do these changes strengthen the U.S. industrial base and advance U.S. technological leadership? And how can they help U.S. efforts to build partner capacity in the context of strategic competition with China? Do they go far enough or is more needed? Tom Karako recently published a commentary on these changes entitled “A Marie Kondo Moment for the MTCR.” We look forward to hearing his thoughts and the discussion that will proceed. We will also ask audience questions so please submit those via the homepage. Tom, let’s start at the very top. What is the MTCR? And what just happened? And why is this important?

Tom Karako: Yeah. Look, this is a – this is a really fun topic for me. I’ve spent a lot of time on it over the years. The Missile Technology Control Regime began in 1987, but really its roots go back a lot further. You know, in the Cold War we were doing a lot of nuclear arms control, but I think it was in 1978 in the Ford – in the Carter administration - when ACDA, Arms Control and Disarmament Association, was floating an idea that, you know, maybe we ought to be thinking about missiles as more akin to the nuclear payloads that they carry, as opposed to just another form of a delivery system.

And so that was – that was a little genesis of what the ACDA report then called making ballistic missiles weapons of ill-repute, right? Thinking of them is more akin to the nuclear objects worthy of nonproliferation attention. But a lot has changed in the past forty years. A lot of technology. Obviously, the geopolitical situation has changed massively. The MTCR has done a whole lot of good. It has kind of created a de facto norm whereby the United States and, frankly, some of our closest allies can wag our finger at each other from time to time to say, hey, you're not supposed to be exporting that sort of thing. We also use it to kind of tell our adversaries that we don't want you to get those – that kind of capability. It was the basis, for instance, for the Libya agreement in 2004, in terms of what missiles they ended up being allowed to keep and not. And it has been very useful to stem or raise - impose costs, and, frankly, even roll back some missile programs around the world.

But, as you may have heard, drones and missiles have now become extremely widespread. We see them ubiquitous. What were once weapons of ill-repute are now weapons of choice. And they're just – they're everywhere. And think about how far we've come, the object and purpose of the MTCR, the original intent, was essentially to help in the Cold War context especially stop the proliferation of ballistic missiles, other missiles, to Soviet client states, right? Scuds especially. In fact, in 1987 the Scud was really the only widely proliferated ballistic missile that kind of fit the MTCR criteria. Of course, that began to change very, very quickly thereafter. And so, it solved some really important strategic problems of the day in the Cold War.

You know, 1987, again, was a long time ago. This was when the United States, Ollie North was selling arms to Iran. CompuServe hadn't even renamed itself to be American Online yet. Super Mario Brothers was the game of choice if you had a Nintendo. It was, it was a while ago and it was a different age. The commercial, the geopolitical, the technological underpinnings that existed then are just so different – so different now. And so, I suggest in this paper that we really need to take a very, frankly, an opposite perspective today. That, you know, think about in the policy circles today in Washington, everybody is constantly talking about scaling up production and building partner capacity on missiles and munitions. And so, in a way, it's diametrically different from where we were before.

Part of that is that precision guidance has changed the perception and really the nature of missiles and drones as delivery systems. It is the prospect of really effective tactical and strategic effects without a WMD attached to it. You don't have to have a large warhead to compensate for inaccuracy. Iran, lots of other folks, have tons and tons of cruise missiles and drones that have precision effects without that sort of

thing. And that, again, is what has made them – made them weapons of choice. And this is important. What is at stake here? This is about aiding conventional deterrence. If you don't want nuclear proliferation, you better get serious about conventional – I say conventional missile and UAV proliferation to our closest allies and partners.

And I want to pull up here one image that I actually just got in yesterday. And this is an image of some flags. This image warms my heart. I'm going to print this out and put it on my wall. I love this image. Let me give you a little background. 2016, I gave a talk and wrote something that said, you will know that the pivot to the Pacific has begun when you see an Australian and Japanese flag hanging over the Tomahawk production line in Tucson, Arizona. These are those flags. Right below these flags they are assembling Tomahawk missiles. You can pat the belly of the airframe, and you look up and you see these flags. It warms my heart, because it has taken a very long time to get there, but, lo and behold, giving that kind of long-range capability to our closest allies is just really, really important.

So now, in terms of the loosening up of MTCR restrictions over time, in the first Trump administration I would say it was very much a halfway house. They basically said, slower-moving UASes, below 800 kilometers per hour – so think blimps, rotary wing, and some other fixed-wing UASes – had a lower standard of restriction, called category two as opposed to category one. The Biden administration actually did an executive order in January of this year, the very tail end of the administration, that really looked at especially loosening flexibility for certain recipients, and kind of directives for the licensing of that sort of thing.

The most recent, this month, change by the Trump administration kind of picks up where they left off in the first one, which is to say, OK, we're going to treat all UASes as aircraft. And you know what? They are aircraft. And I think it just makes really good sense. And the more I've kind of thought about this over time, I think you begin to appreciate that missiles just aren't that special. Drones just aren't that special. They're ubiquitous. They're everywhere. They're the most common thing on today's battlefield. And it just makes a whole lot of sense to not treat them as these weapons of ill-repute. So, lots to say here. This is certainly a pet rock topic of mine. But I think it also says a lot about kind of the future of arms control, and how we ought to be thinking about that.

Dr. Williams:

Mmm hmm. Yeah. Obviously, I have a lot of thoughts on the future of arms control that I want us to come back to. Kari, I was hoping to pull you in also to talk a bit about more the bigger geostrategic context that

we are in, entering this era of great-power competition. So how do you think that loosening the MTCR might boost U.S. competitiveness?

Kari A. Bingen: Well, it's funny, Tom said, hey, 1987, the circumstances were very different than it is now. We do still have Super Mario Brothers, as my kids can attest to. (Laughter.) But it looks very different today than it did nearly 40 years ago. And, Tom, I really loved your piece. And harkening to this Marie Kondo thing that you write, you know, if it doesn't spark joy, you write, you know, send it on – send it on its way, or tidy it up. And when we look at MTCR, it's become self-defeating, right? Is the reason why we had it was to stem the delivery of WMD via missiles and missile-related technology, you know, pull back on the delivery systems.

But what has happened in the ensuing decades? I mean, it led to the Koreans, an ally of ours, relying on Russia for space technology. Who are the leading exporters of armed drones today in the global marketplace? It's China, it's Turkey – there's a reason there's a Turkey drone on the screen here – but it's China, it's Turkey, it's Iran. So our companies are not in that fight the way – in that marketplace the way we like them to be. And, oh, by the way, as we've seen over the last year or so, you know, it looks like Russia will be sharing missile and space technology with the North Koreans. North Koreans are providing munitions to Russia. The Iranians are providing drones to Russia. So the whole intent behind the MTCR, I think, is really – has been undercut.

For me here, the bottom line is that our policies are not keeping pace with technology and the pace at which the technology is evolving. So I think the policy guidance issued here – where it's no longer just a strong presumption of denial but we're going to look at this, we're going to get things moving, and treat UASes as aircraft – I mean, it's a strong step in the right direction. I'd like to see us go even further. And hopefully we'll come back to space, but I do think it's a strong step in the right direction.

Dr. Williams: So do you think it would be fair to say that with the MTCR the U.S., to some extent, was fighting with a hand tied behind its back, because obviously Russia, China, Iran were not totally observing these limits. And so in the geostrategic competition, in some ways, this was something that was holding us back. Do you think that's fair?

Dr. Karako: I think that's right. I think it is important to remember this was put in place in the same year as the INF Treaty, right? And, you know what? The INF Treaty went away in part because of the global, from Russia and other places, demand for missile strike capability of that

intermediate range. And so, yes, I think it, is to Kari's point, self-defeating on the – on the commercial side. It's self-defeating on the nonproliferation side. You know, I mentioned before that actually it's been nice to have kind of a norm for these 500 kilograms and 300 kilometer kind of thing. But I don't think that the Iranians or the North Koreans were agonizing over MTCR norms when they were sending drones and missiles to Russia to use in Ukraine. I don't think Russia's agonizing or China's agonizing over it, in terms of how they think about this.

So I think the only place that this is – I mean, look, I may be overstating this. But I think the degree to which we have had a hand tied behind our back has sparked joy in Moscow and Beijing, but it's not sparking a whole lot of joy, I think, for us in our pursuit of, again, the pivot to the Pacific, the scaling up of production for our allies and partners. And so I say, anything that gets in the way – anything that gets in the way of, frankly, massive quantities of missiles and munitions to our allies, we need to thank it for its service and send it on its way.

And actually there is a bill making its way through Congress – it was introduced now two years in a row from the Foreign Affairs Committee – that would – that would legislatively get rid of the strong presumption of denial that is at the heart of the MTCR guidelines. And it would – I think it's actually a pretty good way to get after this. So we'll see what happens on the Hill. It could be done through the executive branch, going beyond what the Trump administration just did. But legislative options, I think, is a good – it's a hammer but, frankly, we may need a hammer to beat this back.

Dr. Williams: Well – go ahead.

Ms. Bingen Well, and I was going to add to that is so are some of our policy objectives here. It's we want to and this administration wants to strengthen our industrial base. We want to maintain U.S. technology leadership. But here's where that hand tied behind your back manifests itself. You know, many of these leading U.S. technology companies, whether they be your traditional primes, many of your scrappy startups, and companies growing, have phenomenal technologies. Our allies and partners want the technology. They want access to those weapon systems, because they're helping us in the fight, right? And they're helping deter abroad.

The challenge we have, though, is in many cases, and I hear it from U.S. government folks all the time, hey, we don't want to be the anchor tenant to these companies. What anchor tenancy means is the U.S. government is the sole or primary customer of those weapon systems,

of that technology. Well, the best way for the U.S. government not to have to be the sole customer of all these companies is you let them sell abroad. And we're not talking China here. I mean, I want to be very clear. We need to maintain a high wall against exporting our advanced technology to China. Very clear on that.

But for our allies and partners who are in the fight with us, who we're interoperating with, exercising and training with, et cetera, I mean, there's an opportunity here. And they have – there's a demand signal there. They want our stuff. And when they buy our stuff, you know, that is revenue that goes back into our companies, helps to keep them afloat, because if they don't have that revenue, I mean, there's a risk that some of them dry up. And we're, frankly, seeing that in the startup world right now. But that's revenue that they plow into more advanced R&D product development to keep them on the leading edge. And it's not just the government that they're solely banking on, it's a more diversified set of customers.

Dr. Karako:

And it is building our partner capacity. You know, there always is a risk that the more you spread something out, it'll show up – and we see headlines about, oh, you know, Western ships or parts showing up in Russian drones in Ukraine. Ahat is going to happen. There's no perfect drawbridge to be pulled up. You know, frankly, I think it's hubris to think that we can do that. I think it's also hubris to think that, well, if we just tie our hands, that the demand signal will go away. Well, actually – to your point – it's actually just spurred the creation of new suppliers. And so it's had some perverse effects.

But, you know, every administration we come in and we say, we want our allies and partners to do more. We want our allies and – the Trump administration, we want them to spend more and to build up capabilities so that we're not having to do everything. Well, help us help them. Help them do that sort of thing by removing the restrictions. And there's so many, especially in Australia. You know, AUKUS is – on paper it's so good because they say, hey, we're going to tear down all the walls, supposedly, ITAR and MTCR, and this kind of stuff. Well, it hasn't been going as well as we hoped, in part – and, frankly, Kirk Campbell was noting how MTCR has been impeding AUKUS and AUKUS pillar two, for instance.

And so I just find it very difficult to wrap my head around working through the MTCR, as opposed to without. I think it's also important that just because you were to get rid of something doesn't mean that it's the wild west. It doesn't mean that all end user restrictions go away. Again, treating these things as we would fighter aircraft, guess what? We have all kinds of restrictions on fighter aircraft in terms of human

rights, in terms of things like that, in terms of technology protection, security protections, all that sort of stuff. So I think it's important to not see this as kind of a security blanket, that as long as we keep this in place that we'll be OK. We can hunker down. The reality is always a little bit more complicated.

Dr. Williams: Yeah. I think you're anticipating an observation I was going to make, which is about we can anticipate the criticisms of this. You know, this is yet another guardrail that's coming down, yet another arms control obligation that the U.S. is abrogating and walking away from. And I'm reminded of some remarks by, I think, friends of the show, Pranay Vaddi and Vipin Narang, in some speeches that they gave here where they talked about how hard they tried to preserve arms control. And obviously colleagues in the State Department and elsewhere in the Biden administration, but also even in the previous Trump administration, who really tried to preserve what was left of U.S., Russia, and other strategic arms control efforts.

But, Tom, as you say, I don't think Putin really cares about norms. Putin and Xi don't seem particularly restrained by those things, and haven't been restrained by this. And it kind of – it begs a bigger question, what is the point of these agreements? What is the purpose of arms control? And arms control, from my perspective, is really a product of its time and its moment. It has to keep up with the technology. It has to keep up with the strategic environment. And it's meant to be a management tool. And if it's no longer sparking joy, if it is no longer managing competition in the way that it was intentionally meant to, then it does have to evolve and have to adapt. And just thought I'd see how you respond to that, and the idea that – you know, how would you respond to critics who say, oh, just another arms control agreement that the U.S. is walking away from?

Dr. Karako: I would say, yes. And we're not walking away from it just yet. I think you kind of hear me saying that maybe we should, but I think that's what some of the recent National Defense Strategy, National Security Strategy have said to view the role as it is and not as we'd like it to be. You know, to your point, Heather, about it being a product of its time, you know, the oldest arms control agreement – the first arms control agreement the United States ever got into was in the early 1800s. It was the Rush-Bagot Agreement. And this is what demilitarized the Great Lakes, between us and then British Canada. It's still on the books, but it still limits whether we can have certain numbers of ships and warships on the Great Lakes. So sometimes they can persist, and yet they still seem like an anachronism.

You know, what's the – what's the worry about this? What do we have on there? But it's fine. But I think it's a product of its time, but it's also for a specific purpose. And I think that what I'm struck by is, frankly, the lack of vision and the lack of imagination to do anything new here. It's just considered untenable and too hard to come up with some new arms control vision that is tailored to a specific problem, right? Instead, we've got these old agreements from decades and decades ago on life support, sort of artificial – (laughs) – artificial life support, as opposed to adapting them or coming up with something new. And that's, frankly, what amazes me, is where's the big ideas for truly new concepts of arms control, as opposed to just hanging on to stuff from the '60s, and '70s, and the '80s?

Dr. Williams: And we need that in the nuclear space as well, I think. I mean, is there a space perspective to bring into all this as well?

Ms. Bingen: Absolutely. But where I was going to go s, I really liked your framing of, you know, arms control has to evolve, and evolve with the times, and really, you know, where technology and where capabilities are headed. You know, it's not an end in and of itself. It's a means to an end. So, you know, your point on what are the big ideas out there, you know, what are – are there folks, you know, within your next generation community, within the technology base, thinking about, you know, what are the kind of creative technology solutions that we can bring to bear to verify different types of arms control constructs? I mean, Reagan was a – he was a fan of arms control. So I don't necessarily want to throw the baby out with the bathwater, but it has to be a means to an end. So what is that end? And let's be creative about it.

Dr. Karako: What are the ways and means? I don't even think there's clarity on what are the ways and means. You know, in arms control sometimes you say, you know, you either blow stuff up or put a fence around it. I don't think we know what the stuff is, the objects we want to blow up or put a fence around. People talk about AI and intermediate range missiles and drones, a lot of this just because it's scary. And I'm going to go even wonkier here. It seemed like a good idea at the time in 1899 and 1907, The Hague declarations.

It seemed like a good idea at the time to regulate the emerging technology of the day, this scary thing called hot air balloons. And Hague Declaration 14 restricts the delivery of ordinance from hot air balloons, because it seems scary. Well, that immediately became anachronistic when something showed up called airplanes. And, you know, Katie bar the door. It's still on the books, though. And so, I think a lot of it is kind of emotional, that something seems scary, so we ought to think about how to regulate it. But I don't think there's sufficient

clarity. And this is why, you know, 1950s, we didn't really have any arms control then. We were in the wilderness, as it were. I think we're kind of in the wilderness now. And we have to figure out – figure our way out.

Dr. Williams: And it feels like a moment of opportunity for that visionary thinking about arms control as well, because of the next generation who really care about these issues, because of new technology, but also because the president has opened the door on it. At least on the nuclear side, his repeated calls for denuclearization. No one's quite sure what that means just yet. But to me, it has signaled an interest within the administration in taking on a leadership role on trying to adapt to this new era of competition and technological competition. And so, I would say for everybody listening, this is your call for some visionary ideas about the future of arms control.

Ms. Bingen And where the technology has gone, I really like your point. It has become so much more – and I'll use the word dual-use – but in the space arena, you know, Tom, you reminded me, I know this is largely a discussion on MTCR and the relaxing of an approach to UASes, but I'll tell you space is right on the heels. And related to MTCR is ITAR, the International Traffic and Arms Regulations. But these are defense-related technologies that are – also there's a high bar to exporting them. Let's look in the space world and what's happening in the startup community. You have commercial companies now building radar satellites to be able to image the ground day and night. You have companies that are collecting signals and locating those signals off, like, Chinese fishing vessels across the vast oceans. This is commercial technology, and yet they're still limited by ITAR.

But when you think of what space – the applications of these space capabilities today, it's no longer just for military intelligence purposes. You know, you're seeing it in Ukraine for evacuation route planning, war crimes documentation, maritime domain awareness, countering illegal fishing. Many of these things are not purely defense, and yet we still treat the data and information coming from these satellites as defense, and therefore we can't even sell it – or, there's a very high bar to selling it to our allies and partners. This is to counter illegal fishing. Why is that treated in the same way as defense weapons systems?

Dr. Karako: Because it's always been that way.

Ms. Bingen: Because it's always been that way.

Dr: Karako: Inertia, yeah.

Ms. Bingen: Yeah.

Dr. Karako: Yeah. We're scared of upsetting the apple cart and doing something wrong.

Ms. Bingen: So there's a much broader – again, I'm very encouraged by this step. And I hope that it's one of many steps that tackle MTCR, ITAR, even foreign military sales, FMS, reforms as well.

Dr. Karako: And I'll say, look what department just did, cancel JCIDS. You know, you talk about something that wasn't sparking joy?

Dr. Williams: JCIDS. Can you spell the acronym for the listeners?

Dr. Karako: Oh, goodness. It's the defense acquisition process, that's very bureaucratic and cumbersome. And it's the most common joke in the Pentagon is if we only get China to adopt our acquisition processes that would slow them down a bit. But so the secretary of defense just said, we're going to cancel it. We're going to replace it with something else. It's TBD in terms of what that something else is, but I think sometimes you have to blow the system up before you can put it back together again. Just because you blow the system up doesn't mean that it's going to be not functioning. And that's kind of how I think about this stuff.

Dr. Williams: So, we've got some questions in. And this is a fantastic – I love talking about envisioning futures of arms control. And I want to bring us back just a little bit to the nitty gritty details. One of the questions was, what specifically comes next? What does this competition look like? Does there need to be any more laws and regulations? Is this just increased production, increased partnership? What does the partnership – what do the partnerships look like in practice? So, can you kind of just maybe give a breakdown of what do you think will be the next steps that have to happen or are most likely to happen?

Dr. Karako: Well, for me, I think that the – let me put it this way. As I've been thinking about this in recent months, on the one hand, like I said, the most common thing is talking about scaling up production of missiles and munitions. And you got this strong presumption of denial for missiles and drones. The phrase that comes to mind is "cognitive dissonance." And I think kind of recognizing this cognitive dissonance, that we have been tying our hand behind our back, is the beginning of wisdom here.

The second thing is, and this is nothing surprising, nothing original, is go read the last couple National Defense Strategies. It identifies what the pacing threat is, China. And I want to see proliferation embraced as

policy. I want proliferation as policy to be unabashed. It is literally the logical consequence of saying we need to get more missile munitions to our allies. It's just that we like to talk in euphemisms sometimes. And I think we need to embrace that. And also think through the logical consequences of that in terms of ITAR and, you know, fixing the AUKUS thing – or, excuse me, implementing AUKUS the way it was intended. And anything that gets in the way, I think we need to let go.

Ms. Bingen: And, you know, policy changes are good, but policy changes are only as good as the implementation that follows. You know, and a lot of this will fall to the State Department. So ensuring that they have the people in place, the resources in order to quickly work through these – the requests and approvals that hopefully are likely to come. And then ultimately, to Tom's point, you know, you want to see scaled-up production. You want to see weapon systems and technologies being delivered to our allies and partners.

Dr. Karako: Two things. One, the implementation guidance is – you're exactly right about that. And when Trump 1.0 loosened up on UASes, it was glacial for that to be implemented. I'm not sure it has really ever been implemented as it was intended. And so high level, above the State Department, probably White House guidance say, no, no, we really mean it. Go now and loosen up UASes. I'm hopeful. I'm hopeful about that. But then you said "production." And here's another potentially fatal flaw in the heart of the MTCR guidelines is it has very high barrier to transferring production facilities to allies and partners. So I don't just want to sell Tomahawks to the Australians. I want to help them build them. And that's a hard barrier to overcome with this framework.

Dr. Williams: So, to summarize, in terms of next steps, scaling up production delivery to allies and partners, proliferation as policy, implementation guidance, and then actually implementation. Kari, I think you made a really important point about having the people, resources for the whole interagency to deliver on this, but then also helping allies and partners to develop their own production.

Dr. Karako: And the vision thing, vision thing for arms control. That's the hard one. That's for you. (Laughs.)

Dr. Williams: Well, I'll take that as an action item.

We are getting a couple questions here that are – seem to be – it's concern about this change might increase risks – might increase risk during conflicts, during crises; in particular, continued proliferation of these technologies by our adversaries. And so I'm just wondering, Tom,

I think I'll start with you again on this one, can you think of any tools, whether arms control or not, to mitigate any of those risks?

Dr. Karako: Hmm. Well, the risks are not specified here, but I can name a couple of them. One is, you know, technology leaking, for instance, and then that getting captured. I'll just say these are so not special they've almost become commodities. You see Ukraine making millions, millions of drones. And you see Russia doing the same. Like, at that point it's just a function of are you producing more than the other guy? It's not, oh boy, they'll get some secret sauce on this rotary wing drone, for instance. So I think the national security risk of technology leakage also needs to be offset by the national security risks of working with one hand tied behind our back. That's one risk.

Another risk is of escalation. And that is – you know, somebody asked me this yesterday. Well, we're going to give more missiles and drones to our allies, and that has the risk of them, you know, escalating a conflict in a way that we want like. Look, we trust our allies. Keep going back to the fighter aircraft metaphor. We trust our closest allies with the F-35, OK? If they want to pick a fight with China, they can use the F-35, or an F-15 to do that. And so having heightened scrutiny on drones and missiles I think is it's artificial. And it no longer makes sense, because these things – for the delivery of nonnuclear weapons, they're not that different from the capabilities of a fighter aircraft. And if we trust them with that, why can't we trust them with something else?

Dr. Williams: Hmm. Kari, any risk reduction ideas on your side?

Ms. Bingen: I love that. You know, heck, we trust our closest allies and some other partners with F-35s, and yet we don't trust them with Reapers and Global Hawks, or satellites and data, right? That just – it defies logic. So I think that, you know, it's really interesting. Because what this is really teasing at is just this tension between our national security interests and our economic security interests. And I'll tell you, I used to be the person at the Pentagon that would say, hell no. You know, but I have evolved as well. And I recognize that the world has changed. The diffusion of technology has changed. And I also recognize that when we fight, we fight in coalitions.

I mean, 20 years in Iraq and Afghanistan have taught us that. We don't do things alone. And that is the reality. So, I do think, you know, part of our national interest is having a strong industrial base, leading in advanced technologies. And I would far prefer our allies and partners to have our kit and, frankly, be dependent on us, and working with us in co-production, co-development, et cetera, than to go to others. I mean, the fact under MTCR that the Koreans went to the Russians to help

them with their space launch vehicle, I don't want to see in this day and age our allies and partners going to China. They have a choice. And I'd much rather them work with us, for a variety of different benefits, than to go to China.

Dr. Karako: I would say, it's the global supply and demand signal for lots of long-range precision fires, and the means to contend with them. And so you saw Turkey. What did Turkey do? They went and bought the S-400. But they were looking – they were originally going to buy a Chinese system. They ended up going, not with Patriot, but with the Russian system. It is very much a global market. And, to your point, it's helpful for alliance management and for keeping folks on the same page and in the same tent if we have commonalities.

Ms. Bingen: Well, and this is where, I mean, let's leverage technology in other areas. Let's leverage technology. Let's leverage, you know, AI, to help us do the technology monitoring that – you know, the end use monitoring better than the manual way that we do it today. So, there are other things that we could be able – we could do to mitigate some of those risks.

Dr. Karako: Yeah. To get after those risks.

Ms. Williams: And I think that's a really exciting new approach to a lot of the arms control challenges that we're talking about. Just for your – a lot of the questions that are coming in do you seem to want to lean in on the arms control side of things here. And I just do think it's worth noting, you have to have a willing partner to do arms control. And Russia and China just have shown no interest in doing any major new arms control agreements. You know, over the weekend, Putin signaled that he might continue to observe the New START limits after they expire in February 2026, if the U.S. reciprocates. I think there's a bit of a ruse there. Russia has been violating arms control agreements – it's a serial violator – for the past few decades. And China just refuses to come to the table. They had one dialogue with the previous administration but otherwise have just really refused any sort of engagement.

And so, I think that we're also coming up against a moment where even if you wanted arms control, you don't have a willing partner to do it, to kind of have those agreements with. And so, we do have to be looking for these more creative approaches to risk reduction. How can we use technology for unilateral monitoring, for example, as part of national technical means? Is there some sort of reciprocal verification that we can do, maybe outside of traditional treaties, and some more informal agreements? But working with allies and partners seems like it's just going to have to be a really crucial part of that going forward as well.

Dr. Karako: Yeah. Seeing the world as it is, and not as we'd like it to be, sometimes means looking upon ugliness. And I think coming to grips with what you just said in terms of, the Russians and the Chinese are not likely to be doing anything here. So therefore, what is the problem we're trying to solve by restricting ourselves? It may be plausible that there's utility there, especially in terms of working with our allies. We want to make sure that, let's just say, European companies don't sell stuff to the bad guys. But that's the hard work of diplomacy, is getting everybody on the same page that China is a threat, getting everybody on the same page that Russia's a threat. A piece of paper is not going to accomplish that. It's the hard work of blocking and tackling to get that – to get that done.

Dr. Williams: I think that's the perfect point to end, on a moment of a little bit of inspiration and a call for fresh ideas and action. On behalf of all three of us and our programs, thank you all for tuning in. Thanks as well to the CSIS streaming and broadcasting team. Stay tuned for more joint discussions between the CSIS Missile Defense Project, Aerospace Security Project, and Project on Nuclear Issues. Thank you.

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