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Resilience in the Face of Transformation
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Christine E. Wormuth, 25th Secretary of the Army, U.S. Army
Moderator: **Gordon Lubold**, White House and National Security Reporter, *The Wall Street Journal*
YouTube session: https://www.youtube.com/watch?v=XK8L5vX4ZZw

Gordon Lubold:
Welcome again everybody. How are you? We are here with this great panel. Anja just introduced this topic of resilience is a bit of an inkblot topic because we could kind of go in any number of different directions and people who know me know I kind of bounce around anyway in different ways anyways, so if we'll kind of jump around on a couple of different topics. But generally the way I see resilience in this context is what is in this case, the military allies and tech doing to prepare for the unexpected. And I'll bastardize Bob Gates again, his quote of a hundred percent failure at predicting the future when it comes to conflicts or whatever. I think that's generally true. And so in that context I'm kind of interested in to our panelists, how do you build resilience in your respective ways? Madam Secretary, you obviously for the Army, and Doug, I would hope maybe you could speak about the allies and then Liz from a tech and cloud perspective. And I'm going to get you on a second thing with just the cloud, how do you do that when you don't know what to expect? But Madam Secretary, please.

Christine E. Wormuth:
Thanks Gordon. It's great to be here. I would say the Army right now is very, very much focused on building our resilience, building out our resilience. We are transforming the army. Anyone who's listened to me speak over the last three and a half years has heard me say we are undergoing the period of most profound change in the United States Army in the last 40 years. So we are fundamentally transforming our weapon systems. We are in the process of developing a bunch of new weapon systems that will have broad applicability. We are, for example, developing a long range hypersonic weapon. We are investing billions of dollars in unmanned aerial systems, counter unmanned aerial systems, electronic warfare systems. We are transforming our force structure to reflect I think many of the lessons learned that we're seeing in the war in Ukraine, for example. So we have one formation I would just highlight called the multi-domain task force that really tries to leverage not just kinetic capabilities like long range fires, but also non-kinetic capabilities like information operations space, cyber operations.
And to be able to put that forward into theater, whether it's in Europe or whether it's in Vido Pacific, for example, we're transforming our recruiting enterprise because you may have heard that we've had some challenges with recruiting, although I'm very pleased to say we are doing much, much

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better there. And the last thing I would mention is we are also transforming our soldiers themselves to make them more resilient. A lot of the young people who are coming into our army these days aren't necessarily coming with the life skills that many of you may have been imbued with by your parents. Our soldiers are coming to us not knowing how to manage stress necessarily not knowing how to manage their budget. And so we are really working on making them more resilient both mentally and physically. So we have a whole program called Health and Holistic Fitness, which brings together nutritionists, physical trainers. And not only is it making our soldiers stronger because they have to be warrior athletes, but it's also we're seeing a positive correlation with driving down our suicide rates. So that's incredibly helpful. Those are just some examples of where we're resilient.

Gordon Lubold:
Yeah, and thanks for saying that because in the context of the military, resilience tends to mean resilient of the individual soldier, marine sailor, airman or whatever. And there are strategic obviously impacts to resilience or no resilience in that regard. Doug, can you talk a little bit about how you think in the wake of, or we're not quite in the wake but Ukraine post invasion and we're seeing obviously in Gaza, how you think allies have kind of met this moment or not met this moment and what kind of still needs to be done? We'll get into more specific kind of questions, but I just kind of wanted to give some soft openers as

Douglas Lute:
Well. Well, sure. So first and foremost, I think the last two panels illustrate that there's a laboratory for resilience underway right now and it's in Ukraine and it's societal national resilience on the very personal human level, individual level, but it's also resilience in the face of hybrid attacks and all sorts of unpredicted assaults on Ukrainian society. And so resilience is not just a catch word here at Aspen. It's ongoing today in Ukraine. Look, resilience is not new to nato. I was reminded last week when NATO celebrated its 75th anniversary in a summit format in Washington, and I had the opportunity to go back and read the Washington Treaty, right, the NATO treaty. And it turns out that the third article in this rather short succinct document, talks about resilience. Resilience wasn't used in 1949 when the treaty was signed, but if it were, this would be known as the resilience clause. And we're all familiar with Article five which says an attack on Juan is an attack on all. But before you get to article five in the NATO treaty, you pass through article three, which essentially says that every ally who signs up for the treaty has to do everything in its power in terms of self-help, self-defense in order to resist attack. So actually there's a resilience clause that's at least 75 years old in the NATO treaty. Now that's changed I think over time. When the treaty was signed in 49, it was all about armed attack, right? And today, thankfully we have pretty credible deterrence at the nuclear level and I would argue NATO at the conventional armed forces level has a pretty good dose of deterrence. And you have, I think only to listen to Chris Oli two panels ago to get somewhat reassured with conventional deterrence, but it's below conventional attack that really presents the biggest challenge to NATO today. And these hybrid attacks, tactics like misinformation,

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disinformation, cyber attacks, energy intimidation, election interference, this is the cast of challenges that really I think are going to test our resilience and NATO is well-placed to do some things with regard to resilience in that sub conventional realm, but really this also highlights the importance of national work. So the 32 allies on a national basis and also it highlights the partnership between the eu, which has a much broader mandate in these arenas and nato. So it's not a new concept, but there are new challenges.

Gordon Lubold:
Good. We'll come back to a bunch of stuff that I think there's stuff in there, Liz, I want to ask you about resilience, but first because I think of the cloud as the thing I put my extra photos on and somebody told me about some silly movie called something where everybody, some family loses their photos on the cloud and somehow the premise of the entire movie, I think most people do not understand really what the cloud is other than. And so in this context for the military, for the war fighter or whatever, I wonder if you could just kind of help us understand or help our smart and informed audience understand what the cloud is and then we can talk about what.

Liz Martin:
Happy to. Thank you. Thanks for having us here and thank you Gordon and panel really appreciate being here and hopefully no one has lost their photos in the cloud and if you did, it was not Amazon Web Services. I'd just like to say that to clarify. Thank you. No, just a quick sort of scene setter. I think before we kind of jump into some of the resiliency and security topics. So for folks that may not be familiar with the cloud and how it plays a part, so Amazon Web Services, we have a deep partnership and a long-term partnership that we've had with the federal government, defense department intelligence community with some extremely robust and global cloud infrastructure around the world. And this infrastructure is what helps power workloads and solutions that our customers host, our government customers and our commercial customers host in order to drive speed and agility to getting access to services and capabilities when you need them and how you need them.
So it really drives the ability to adapt quickly as you need resources to spin up or spin down when it comes to technology resources, I think what some folks don't realize is those may feel like really large data centers someplace, somewhere, but there is a massive global infrastructure that connects all of that around the world. So we have a huge global redundant infrastructure making us resilient, right? Because if our offerings and solutions weren't resilient, we would not be in business. They need to be secure, they need to be resilient so that you can trust that you can host your most critical missions in them. So that's a little bit about the foundation of the cloud technology and how we think about our own resiliency. And then I think we're going to talk a little bit more about how industry partners can help to augment the resilient and readiness planning of the department.

Gordon Lubold:

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Good. So let me go to manager, secretary here a little bit to expand a little bit on preparing for whatever comes next. Even though as I think we can agree, we don't always know, but if there was another conflict in another part of the world, the army might not be the primary force necessarily, but you're obviously would be in the fight, but there's a tyranny of distance as we always like to say in East Asia. Can you talk a little bit about the supply, the logistics that are necessary to get a force in place for deterrence, for a fight or whatever, and as part of what the Army's doing is how to get it there faster, compress the timeframes and what other technologies are available to help that be better and faster and easier?

Christine E. Wormuth:
Sure. That's an area that we're very, very focused on. I mean, the first thing I would say when it comes to the Indo-Pacific and the distance is there and they are enormous. I'm about to go to Japan, Korea, and the Philippines and just going over the itinerary with the team and crossing the international dateline, it just always reminds one of just how incredibly vast the distances are. One of the first things that we're doing is trying to put as much forward as we can and we don't have the kind of alliance platform that we do in Europe with NATO in the Indo-Pacific, but we are making progress. And so for example, we're expanding the number of Edca sites in the Philippines to allow us to eventually put more equipment and deployed forces there. Eventually we are Japan and South Korea I think are coming ever closer.
The cooperation levels with those countries, for example with Singapore is just getting ever tighter with Australia. And for example, the Australians have allowed us to leave behind. We had a major exercise there last summer called Talisman Sabre. They allowed us to leave behind some of our equipment sets. And so the more we can get equipment and systems forward, I think that helps us with contested logistics. We are investing in army preposition stocks, for example, wherever we can and trying to look at downloading some of that into the theater. And then we're also very focused on investing in new watercraft because the army, you would be surprised we actually have more ships than the Navy. They're much smaller, but they're designed to move material and equipment and troops around theaters. And we have been reinvesting in watercraft because we see that as something that's obviously going to be critical to logistics and sustainment in the Indo-Pacific.
For example, we have a composite watercraft company in Japan. Those are I think just some examples of what we're trying to do. The last thing I would highlight, particularly with the emphasis in the forum this year on technology and ai, we are also really looking at predictive analytics for our logistics, making sure that we can understand in advance as much as possible what we need, where we need it. And we're doing some amazing things with predictive logistics to support the Ukrainians, but many of the things that we're doing there can be transferred to other theaters around the world.

Gordon Lubold:

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Got it. Are there, well, there's a rhetoric question. I mean, are there opportunities to use technology more and do you want to update us on non-traditional energy sources, for example, that could help the Army get to the fight faster or make sustainment on military bases or other logistics better and easier to obtain for fighters?

Christine E. Wormuth:
Sure. We're doing a few things there. Gordon. I would say one, we're exploring micro nuclear reactors. Actually we have put an RFI out to industry. The reason that that's relevant is that may allow us to have our installations and we're looking more at conus the United States not necessarily applying this overseas of course, but that's going to increase our resilience. It's going to allow us to basically provide our own power if something happens to the electric grid. We're doing a lot to make our installations both here in the United States and overseas, more resilient. And I would say we're also investing in autonomous platforms like robotics so that we can provide, again, some of that sustainment using robots and taking the pressure off of our soldiers to allow them to do other things.

Gordon Lubold:
Got it. Christine mentioned allies when it comes to pre basing or pre, what's the word I want?

Christine E. Wormuth:
Stationing

Gordon Lubold:
Pres, stationing. It's another word anyway. Allies are so important. Doug, you're a NATO guy, but you're also an allies guy. Can you talk a little bit about how you see allies playing a bigger role, especially in the context of a conflict in East Asia? And I don't want to suggest that there's definitely going to be not some kind of war monger up here, but I mean I think that they're preparing for a conflict is the name of the game.

Douglas Lute:
Sure. So first, let's go back to a good example of use of allies and sharing with allies. And here I'd point not to the 32 allies of nato, but actually to that subgroup of the Five Eyes Community, the us, Canada, the uk, Australia and New Zealand. And for several generations we have experimented, we've explored technological advances and information sharing and so forth, especially in the highly classified realm with the Five Eyes first. And we used the Five Eyes as a test bed for adaptations writ large. So for example, two, three years ago, NATO established essentially a director of national intelligence for nato, right? And we've gone repeatedly to Americans and Canadians for that position. So that lead Intel officer in NATO has access to five eyes' intelligence. And I think the same

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is true today. When you look at where we have commercial investments and commercial partnerships with our high-end tech companies, it tends to be first with the five eyes.
So I think there's a model there that we can use. I think the thing is really different though, and the step change here and why AI and resilience is such a persistent theme this week in Aspen is that the introduction of AI and the need therefore for cloud-based secure cloud-based capabilities will amplify all these sub conventional threats that I mentioned earlier. So AI will amplify misinformation and disinformation campaigns, think generative ai, fake videos and so forth, right? Election interference, all of these will be amplified, maybe even supercharged in scale, scope and pace because of artificial intelligence. So in a way, we're on the leading edge of a step change here in of challenges. Look, it's still true today that most of our potential competitors don't wish to compete with us on a level playing field. They still don't wish to compete with us, conventional military against conventional military, and they will be therefore directed to this other area of competition, which is this hybrid area which will be powered by ai.

Gordon Lubold:
Liz, you should probably jump in on ai and then also I just wonder if you could expand a little bit on the redundancies that you guys build in, because I think it's interesting, but also I think is there also at risk to making too many redundancies in a system such as the cloud?

Liz Martin:
Sure, I can hit on both. I feel like you teed me up nicely. I appreciate that.

Douglas Lute:
I'm doing my best too.

Liz Martin:
So first talking about the redundancy or the resiliency. As you think about resiliency of a capability such as our own security is Job zero for us, it is the most important thing, and we have built our cloud from the ground up with security as the founding principle in mind and scale. Then on top of that, right? So within security is that redundancy is that resiliency and is the most important thing for us because our customers trust us to deliver something that they can trust. And so that piece is really important. What I think is interesting and has likely changed over the past few decades is the inclusion of commercial offerings, commercial technology offerings as an optional resiliency strategy for the department. So it gives optionality for global connectivity, it gives optionality for compute resources, it gives a variety of options depending upon what the contested environment is and what the surge needs are that allow for that type of resiliency.
And so to your point about does it perhaps create cracks by making things over redundant, they're actually separate redundancies that are not interdependent, and so therefore it gives layers of protection as opposed to a single brittle surface, which I think is really important. As I'm thinking

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about the logistics and the supply chain example that you just gave, that's a prime example of some of the work that we're doing with DLA, for example, defense Logistics Agency on platforming their systems to help with the resiliency of supply chain across the globe. And so a perfect example of how commercial Cloud is helping with some of those capabilities. I would be remiss if I did not talk about AI ml because of course, right? So thinking about the opportunity there, the government and the department has been leveraging A IML for years. It's not new, right? As you mentioned, there's a lot that's gone into readiness.
There's a lot that's gone into predictive maintenance and the business of defense, if you will, around A IML. And so that's not new. I think it is being highlighted today because of the addition of the generative AI flavor, I think of AI ml. And so as we think about that, there's so much opportunity for the government and public sector customers to really leverage that capability and capacity to increase productivity efficiencies, make decisions faster, and frankly, research and testing types of use cases as well. And there's a lot of opportunity, one for training. I think it's still an area that there's a lot of newness to it, and we have committed to training 2 million folks by the end of 2025. And AWS on this is public sector people, so government customers, education, healthcare customers, nonprofit in generative AI to help boost that knowledge in the workforce as well as have a program to provide $50 million of credits to get pilots off the ground so that folks can sort of understand what the capabilities are and how they might be leveraged in the public sector arena.

Gordon Lubold:
Interesting. I'm going to try to stack a couple of questions at the end here from the audience to make 'em good, but come back to you. But Christine also, when we talk about resilience, I said I would kind of jump around here a little bit. The defense industrial base I think took a hit from Ukraine because the Ukrainians were consuming artillery certainly and other weaponry at a rate that nobody really necessarily expected. Could you talk a little bit about what the Army's lessons learned are thus far, particularly from that conflict and how your, I hate to sound like a cliche, building resilience, but building resilience post this conflict?

Christine E. Wormuth:
Yeah, I think one of the invasion of Ukraine is a tragedy, and the army is all in obviously supporting the Ukrainian armed forces and fighting against the Russians. But a small silver lining for us is, I think it did alert us to the fragility of our own organic industrial base inside the army, but also the broader defense industrial base in the United States. And now that the scales have essentially fallen from our eyes, it has allowed us to put an incredible amount of energy into making that organic industrial base and defense industrial base much more robust. So we in the army are spending over a billion dollars a year to modernize our 23 arsenals ammo plants and depots. We just opened a brand new amazing plant in Mesquite, Texas outside of Dallas.
It has a high degree of automation compared to, for example, some of our plants at McAllister in Oklahoma or Scranton in Pennsylvania. And then of course, we have been working with our partners

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in industry through the supplemental funding that members of Congress have provided to us to really help our partners in industry increase their capacity to produce munitions and to not only increase their production capacity, but increase the speed and volume of munitions that they can produce. So we have, I think, also realized from the conflict in Ukraine as what you said, Gordon, I think the amount of munitions that we're going to be using in a conflict is much, much higher than we realize. I think we're also realizing that future conflicts are likely to be protracted, not short and sharp, and to be ready for that, we have to build up our stockpiles.
So we are spending billions of dollars in the Army budget at least to buy gimler, javelin stingers, 1 55 millimeter shells, pack three missiles for our Patriots, for example, because we know we've got to build up our stockpiles. We have still, I think a lot of work to do. We also really need to see our European allies do more in that area as well, as well as allies in other places. I'm really excited we're going to be supporting the Australians in co-producing GIRs there in Australia, which not only provides an additional source for those munitions, but also again, puts them forward. The production is forward in theater.

Gordon Lubold:
That is to the point of one of my panelists yesterday, the building Pentagon is not always wired the way it needs to be to bring innovation in, to bring technology in, to get startups in the door and then scaled up and all the rest of it. Can you talk, I know you and the chief have been kind of marching out on various technologies or whatever, but could you talk a little bit about how the Army's wired the cost plus tradition of the army? I think in awarding contracts in a cost plus manner that typically, as I understand it, getting slightly smarter on this just in recent days, does not always allow non-traditional companies to get in the door. Can you speak a little bit about how you're hoping to change that if you are?

Christine E. Wormuth:
What we try to do in the Army is use the right kind of contract vehicle for whatever our needs are. There may be times where we need a firm fixed price vehicle, for example. There may be times where cost plus makes more sense. We typically use cost plus contracts when we are undertaking something where we have high technical risk or perhaps our sense of our requirements are not as well defined. And I think when we're looking at some of these major software development projects, cost plus in many cases is a kind of vehicle that works best for us because there is more risk there. But what we're trying to do with industry is put out requests for information and seek input from our partners in industry, including non-traditionals and startups about what they works for them best. Because we want to take advantage of the non-traditionals. We want to take advantage of the startups. The chief and I are very focused on wanting to move faster, wanting to take advantage of all of these new technologies. We've been talking a lot to Congress about how we need more flexibility, both in terms of how we acquire new systems, but also how we budget for

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that so that we can move money around more quickly to take advantage of areas where the technology is changing so rapidly.

Gordon Lubold:
But some of that stuff is at the discretion of the Army, right? Yes. You deciding which contracts how

Christine E. Wormuth:
To do, yes, absolutely.

Gordon Lubold:
Okay. We got, oh, here. Some of you raise a hand. We got, I'll take two or three all at once because we just have a few minutes actually. But I'm interested in what you got to say.

Question 1:
Hi y'all. Thank you so much for speaking with us today. My name is Sue Lodge and I'm a military analyst with the Department of Defense, and I'm secretary actually. Your point about micro nuclear reactors is what inspired this question, but climate change, I was wondering if the Department of Defense and other defense ministries abroad have considered the challenges that climate change poses to resiliency of troops, especially when they're forward deploy. And so as we talk about resiliency, I was just wondering if the topic of climate change has come up or how it's being integrated.

Christine E. Wormuth:
I'll try to be brief. There's a whole dissertation you could write on this. Yes. We are very focused on climate change and all of the different ways it can affect the Department of Defense. The army actually has a climate strategy. We are focused on the impacts of climate and extreme weather on our installations. How do we make them more resilient on how we train and also how we operate, whether it's here at home or overseas. So we are investing in, we have a goal to make many of, most of our non tactical vehicles, meaning not tanks, electric or hybrid in relatively near future, we have a whole building resilience policy again to try to make our buildings more resistant to all of the extreme weather that we see. So this is an important issue that I think all of the services have to grapple with.

Gordon Lubold:
I had one other question I was going to ask, but Yeah, go ahead. Somebody's coming. I think they're right there.

Question 2:

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Hi. Thank you so much for your time. We're now two and a half years into the Russian invasion of Ukraine, and the defense industrial base has still not ramped up capacity in the levels that we need. As you've discussed, the Army is taking a number of steps to try and do that with its own plants and working with traditional industry players to increase capacity. My question is whether we can look to the model of how the US incentivized non-traditional players in the space launch sector by setting aside traditional acquisition pathways to basically produce outcome-based contracting. And that resulted in players like SpaceX and Blue Origin and others kind of traditioning the challenging the traditional players like United Launch Alliance and providing a much better and lower cost opportunity for taxpayers. Do you think that the Army could adopt a similar approach for munition production?

Christine E. Wormuth:
Well, we're already taking advantage of many different, Congress has given us a range of more flexible authorities to be able to acquire and develop material. So my own sense is, and we've also, for example, used multi-year authorities to try to give our partners in industry more of a sense of a continuous demand signal. So I think we are doing everything we can think of at this moment to try to produce more munitions more quickly. Certainly, we're always open to new ideas, and I think if you have concrete recommendations for what more we could do, we would absolutely be interested in looking at that. In many cases, we've got to work within the framework of what Congress allows us to do, so that can sometimes be a challenge.

Gordon Lubold:
I haven't quite gotten my virtual hook yet, so I'm going to ask sneak in one other quick question. We are in a political moment, depending on outcomes in November, we might see a different approach to allies, to NATO to intervention. Obviously this is kind of like really broad question, but how do you build resilience for unpredictability which may come depending on the fall? I'll ask Doug. So he's,

Christine E. Wormuth:
Please

Liz Martin:
Ask Doug,

Gordon Lubold:
I know you two probably don't want to answer this question.

Douglas Lute:
Liz was looking for this

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Liz Martin:
Question. Wait, they've been picking on her for a while,

Gordon Lubold:
Doug.

Liz Martin:
Think Doug is going to take this one.

Douglas Lute:
Well, so there was this NATO summit last week, right? And there was an undeniable sense of anxiety among our 31 NATO allies, in part because they had pretty recent experience of what the sort of challenges NATO can face with the president who doesn't perhaps have the same traditional commitment to the alliance, just as an example. And they're concerned that they may be reliving this, but what they're reassured by is public polling in the United States in particular, I think the Chicago Council on Global Affairs is probably a go-to resource here. That shows that for about 20 years, three quarters of the American public support nato, and then they were reassured by the bipartisan effort to finally agree new appropriations in support of Ukraine in a bipartisan, eventually a bipartisan way. So they're reassured by that, but there's undeniably a sense of angst about, and it's not just who will be elected or who will not be elected, but frankly there's an overarching sense of anxiety about where's America headed, and can we count on American leadership as NATO has by and large been accustomed to doing for 75 years with a couple exceptions. So there's no question that while we're watching very carefully what's going on as we head towards the first week in November, are NATO allies and Indo-Pacific allies are watching perhaps even more closely than we are.

Gordon Lubold:
Okay, great. We could talk more about that, but I think we do now have the virtual hook. Please join me in thanking my panelists and thank you.