>> Ladies and gentlemen, please turn your attention to the screen for a message from Senator Mark Warner.

>> Hi, I'm Virginia Senator Mark Warner. I'm sorry I can't be with you today, but I did wanna add my voice to the great success that the export import bank has provided over the last nine decades. As a former governor of Virginia, I know what EXIM does to help Virginia companies export literally hundreds of millions of dollars of goods. I also know, as chairman of the Intelligence Committee, how important it is that America's stay competitive, particularly with near peer adversaries like China and Russia. It's why I was so happy to see that in 2019, Congress authorized your China transformational exports program. CTEP has taken on 10 critical areas. We, frankly, we have to win the technology competition with China. These areas go from advanced batteries to other areas in in financial services to a whole host of key technology issues. I wanna see continued development in that program. I know as well that EXIM will be up for reauthorization in 2026. My hope is we can get it reauthorized much quicker than the last time. But for all of you who do so much for helping American business succeed abroad, thanks for what you do. And please continue to count on me as a supporter.

>> Please welcome our next panel, keeping our Competitive Edge, ai, Public-Private Partnership and Winning the Future. Our moderator is Jenna Ben-Yehuda, executive Vice President Atlanta Council, and she's joined by panelists Thomas Debass, deputy Special Representative, office of Global Partnership, US Department of State, Michael Greenwald, global Head for Financial Innovation and Digital Assets, Amazon Web Services, Vince Jesaitis, head of Global Government Affairs, Arm Technologies, and Karl Mehta, chairman Quad Investors Network.

>> Well, good morning everybody. We're really delighted to have you here for what I think is going to be a very quick half hour because we have approximately three days of content. So we're gonna get right into it. You have everybody's bios accessible to you. We're gonna just start out with a little bit of grounding and policy. Tomas, if you can walk us through, help us understand the kind of governance framework situate us in this moment. What is the conversation in Department of State? You have the digital solidarity framework, the strategy, what does it mean? What is it and how does it set us up for doing this work?

>> Thank you. Thank you, Jenna. So, yeah, in the context of that, actually exactly almost a month ago, May 6th, secretary Blinken launched our, our strategy, the, the International Cyberspace and Digital Policy Strategy. In the central tenet of that is this digital sovereignty, not digital solidarity framework, which essentially counters the whole digital sovereignty argument, which leads to fragmentation in this space. So the department's approach in this space is that that digital solidarity, as the name tells, is it is, has to be a partnership model where governments alone cannot set the, the rules, so to speak, on how we engage in this digital space, whether it's ai, biotechnology, and what have you. And the other thing that's happening is, is the concept of convergence. There is also a convergence, aside from the technology, the, the public interest and the private sector interest, especially solving these huge wicked problems that we face around the world requires collaboration between the private sector and public sector. And we're also seeing a mirroring of that on the digital policy side, where, you know, most of this digital tools, technologies that are coming up are not necessarily coming from government. That's right. It's coming, especially in the us it's dominated by, you know, our, our amazing private sector institutions, be there, be academic or, or corporations. How do we then collaborate together to have a value proposition, especially in emerging markets, that it's about working together with them, not for them, not technologies for these economies, but technologists with them in a, in a way that creates a leveling playground that are based on rules, based on fairness, security, and what have you. So that's essentially the tentative, this new policy that the, the, the secretary announced on, on the digital solidarity

>> Model. Yeah. So it sounds to me, Tomas, like this is really a recognition that this technological revolution is different. Yes. We're not at the start of

the internet. Yeah. The US is not the only, you know, actor in the driver's seat here. That it, it's requiring a level of partnership and engagement that's qualitatively different than anything we've experienced before. Yeah. So Michael, let me turn to you. You're from AWS how do you take this in on the private sector side? I know you've worked with Temas and others in government. How does AWS think about this model and how do you come into this fight?

>> Sure. Well, it's great to be here and thank you for exome for hosting. We have a deep partnership with Department of State and the federal government. And I think even before the AI executive order, we were convening really thought leadership and thought partnership opportunities to understand what are the agency's mission outcomes, what are their goals? How are they working towards what is responsible innovation in the executive order? And so that's something we're gonna continue to foster. And this is early days. So we are working very closely with chief AI officers from across the agencies, NIST and others. And that's really something that we're looking more to do. I think when it comes to workforce development, for example, in ai, we're looking to democratize access to ai, really lower costs and more opportunities. And that's something we're gonna build on in our partnership with Exxon.

>> So Michael, you, you point out something that's I think really critical that I think we're all kind of grappling with is, which is this is not just a US fight. This is something that is playing out all around the world. Yep. And even though we are addressing capacity issues within our country, it's an entirely different dynamic in the global south. And so I really, Carl, I wanna turn to you to draw us into the conversation a little bit about how should we think about digital public infrastructure within ai? How do we think about what this means for those countries and communities that may have a different access identity? And what are those barriers look like and how do we address it so that we can build this community of like-minded partners?

>> Thanks, Jenna. Well, first of all, thanks EXIM and Chair Lewis for the forward thinking to bring AI into this conversation at exim. So I think it's probably one of the first, needless to say that, you know, AI is a transformative technology having impact much more than even electricity had in our lives. And it has already penetrated in our lives much faster than we all thought about it. Let's take a quick survey on how many of you use AI on a daily basis? So roughly about 30%. How many of you actually pay for the premium access to one of the AI open ai? Maybe six, seven. So here's the problem. You know, we have access to ai, but it's not equitable. And we are already seeing the impact of, even in a, in a wealthy prosperous nation of the United States, we are seeing the impact of income divide. How many people have access to the latest greatest, the best AI to help you get ahead in your lives based on what you can afford to pay? What says what you can't afford to pay? So,

>> Carl, let me draw you out on this because you have deep wells of expertise, but what is the difference between a paid and an unpaid version? What does that mean for a large community in a developing country?

>> I mean, there's a, without going into too much into the technical side of it, I mean there is a set of capability in any, you know, the technology business, as you all know, as we all know, it's a freemium business model. And they always try to keep some of their best capabilities for the premium version as opposed to the free version. So people who have to, its, and the broader point here is that when you look back in every waves of the technology, people who first got access to computers, when the computers came out, their income level shooted up even 30 years later, much higher than people who did not get access to computers. Same thing happened in the internet wave. And now we might be at the risk of repeating the same thing with ai, the haves and the have nots and people who have access to it, people who have access to the, the best of the best of ai. So one of the things that in my public side of my role that I worry about and, and, and work on is the equitable access and expanding the access to the two guys in the garage. The every individual and a lot of AI talk and, and announcements and work that's been going on, even in the US it's very

concentrated to a few corporates. I mean, you can name a handful of them, couple of them are here on the stage, sorry, no offense to you guys, but it's like you hear the names of the NVIDIAs, the Microsofts, the Googles, but there's about five companies that basically runs and owns the, the ai. And that's a big risk, right? I mean, I'm a private sector entrepreneur, I'm a tech entrepreneur. So I'm the last person who would generally say this kind of stuff. But I'm saying it because I'm been, you know, in Silicon Valley for 30 years. But we gotta address that there's another concentration risk that we have to address from a geopolitical and a global standpoint, which is China has filed more patents in AI than the United States.

>> Okay. We're gonna come back to you on China because we've got a lot to talk about there, Carl. But first, Vince, let me come to you. Carl's pointed out that we are already confronting some access issues here. How do you think about this? Where is the room for training in this space and how do we bring that skilling into this conversation?

>> Yeah, thank you for the question and, and I agree this is, this is a great panel. 'cause I think AI has probably hit us quicker than anybody even realizes a, a good metric in the commercial marketplace is how quick have applications gotten to a hundred million users? It took Netflix about 10 years to get there. It took Instagram about two and a half years. TikTok was nine months. OpenAI had a hundred million users within two months. Wow. So that just shows like how quickly this technology is proliferating and how many people are using it. You know, I would, I would, I would add that open AI's last large language model, which is called Sora. It's where you put in text and it will create a video based on your text inputs. Took about a hundred thousand GPUs to train that each GPU costs somewhere in the neighborhood of $30,000 a piece. So you're looking at basically $3 billion of infrastructure needs to train something like this. And when Carl's talking about access to, to the tools, to, to build ai, that's, that's a huge impediment. So I thought General Richardson earlier today in her remarks, made some really good points about how the US government has all of these tools that are focused on expanding access, creating new opportunities, but, but maybe they're not all recognized or they're not put together in a cohesive way, specifically on the access. The National Science Foundation has a resource called the National AI Research Resource, which AWS and, and others are, are members of, which is companies are volun, voluntarily making resources available so that those without means to access this $3 billion infrastructure can have opportunities to apply for use of that technology, use of those tools and actually advance advance research in this space. Yeah. So,

>> And and to your point, you know, AWS exactly to this point invested a hundred million dollars to establish a generative AI innovation center because,

>> And where is that?

>> And that is in the cloud and it is lots, yeah, tell me. It's free skills. And so we want upskilling globally to occur, and we want to create as many free opportunities to train people to have access. And that's the most important thing moving forward. And that's a deep commitment that we have.

>> So we've, we've done a couple of things already. We've talked a little bit about the policy framework, the need for cooperation, how we're breaking models, drawing in private sector. There's a requirement to do that. We have big questions regarding access. There's a training need that's massive that comes in behind this. Let's talk a little bit about the compute power required to support all of this. Vince, I wanna come back to you. Can you paint a picture for us about the energy needs here?

>> Yeah, abs. Absolutely. So, so most of the, most of the training for these large language models takes place in data centers. Data centers currently consume about 2% of the US electricity production that's expected to grow by about three fold by 2030. I mean, it's just, just immense. I mean, if, if, if you think about kind of the global demands, they're gonna be comparable to about

25% of total US energy production needed. I

>> Mean, it's pretty wild. I mean, we pretty quickly enter a territory where it's reasonable to ask questions about whether being an AI champion or a a real leading innovator comes at the cost of some of our own climate goals. Yeah. So Tomas, I know you guys are thinking about this. How are you approaching that question?

>> Yeah, it's a great question. I think, I think this happens in every element of technology. We're obviously talking about AI and all that. I remember a couple of years ago, blockchain was the, the topic of the day where we're people are talking about it. I think at the end of the day though, any technology we're talking about, we need to bring it down to the ground in a sense of what are the use cases that are creating the, the, yeah, the climate issues that you're talking about. Could there also be solutions that can counter that, right? Whether it's, I know there's amazing technologies that are coming out of chip design in terms of energy efficiency and what have you. Also, the use cases of these ai, could they then mitigate the broad, it's like the balancing act, so to speak, that happens on that ground. And, and the other thing a aside, I mean, we, as Vince just mentioned, we have a partnership that includes arm and we just signed an an A m, an MOU with Microsoft in, in Morocco, the essence of how do we provide technologies for tackling the climate issue by empowering climate entrepreneurs around the world, especially in the global south, because they need to kind of bring the, the, to the forefront. But I want to point out a very simple thing, not a simple thing, an important thing, which is the question of talent. One of the things the department is recognizing, whether it's on the, the climate issue or any other thing that involves these emerging tech is the issue of talent. Yep. Talent is now the new currency in a sense, because there isn't a lot of expertise in AI where they're still emerging. And the department is really concerned about does agencies, like the department has those expertise. So we've launched a, a Franklin talent Exchange program in recognition that if talent is the currency, how do we exchange it? There are people in our mist that could do a lot of things on the other side, AWS is one of a, it's in the consortium of those organizations. And I just want to kind of think about, aside from the impacts that we're talking about, what powers these technologies are talent, how do we make sure that we are competitive in the strategic global landscape? And

>> Tom's point, and I'll continue you in just a second, Michael, but you're talking about even within the Department of State, bringing in the right kinds of thinkers with these backgrounds so they don't have to go through, are you telling me there's a way to avoid USA jobs?

>> Yes. I mean, it's called there, there's an on-ramp check out FTEP, the Franklin Talent Exchange Pro partnership that we've created. We, we've actually, we're not just allowing folks just to come in. We've recognizing what are the gaps that we have and who can fill it up for us on a temporary cases from six months to a year. And we also consent over here, our brightest and, and, and, and best in a sense of two for that kind of exchange to happen. Absolutely. Talent is a critical issue. Yeah, Michael,

>> I was just gonna say, you know, post the executive order by the White House, the administration pivoted very quickly to set up a website regarding talent. And I think I completely agree. That is the currency and that is the essence of competitiveness for the United States is harnessing that here. And so being able to create, you know, chief AI officers across the administration, yes, many came from internal, but being able to create opportunities for outside people to come back into government and to make it exciting, that's essential. And that's a commitment that we have together. We have something called the Public Sector Innovation Fellows, a program at AWS, and we do it exactly for that reason, to create opportunities to create talent between the US government and AWS.

>> Yeah, I, I think one of the questions is how do we start thinking about how to scale some of these programs because the need is so dramatic, and there have

been efforts underway for so many years to think about how to increase the capacity of talent to flow between the private sector and government. Now it feels like there's a real national security imperative to do that. So I'm gonna come back to you on China. We've talked a lot about what some of the US commercial imperatives are for creating this skilling. Can you give us a little bit, Carl, of the, the broader stakes of these conversations and some of the choices that global South partners may be confronting as they think about how to access various language models and, and other AI technologies?

>> Yeah, sure. And before answering that question, I just wanted to add a point on, on the energy piece, because the amount of what Vince mentioned, the amount of power that this data centers are consuming, it's going to be a big impediment for the scaling ai, because already we are running out of power in many places in the us. In fact, we are close to the biggest data center concentration right here in Virginia where all the telco lines converge. And our grids are not capable, no matter how much we can scale up the generation of the renewable energy through solar, wind, or even nuclear. But our grids are not designed to take, draw that much power. So it creates a crisis for rethinking, re rebuilding the grid management. But AI, as much as the problem for the grid is also the solution to now think about using smart grids and stuff like that. So it's an, i I,

>> I think it's a really important point and, and also opens up some important questions around how do we think about this globally with those countries that have made major energy investments. This is a good entry point also to China and some of those structural investments that have been made. And, and China's, you know, we'll call it entrepreneurship in Africa and looking into some of these, whether it's critical minerals or data centers, Carl draws in a little bit to what the state of play is there.

>> So speaking from a geopolitical standpoint, I think it's now very clear that technology is the power for geopolitics. And within technology, obviously there's a whole set of critical and emerging technologies like quantum and AI being one of the key forefront, which is has tremendous dual use. When we start thinking of how AI can be used as a weapon in automated weapons, it has some far reaching implications and looking at some of our adversaries, how they are getting access to ai. So one of the main concerns is that even though the United States is the fountain head of innovation in ai, and a lot of these technologies have been here, we've been also very generous with giving away the technology. So that has to be a lot of concern around putting some kind of a ring fence on how this technology gets into the hands of people who would come and harm us using our own technology.

>> Well, and I think it's fair to say it, it hasn't all been given away. Some of it has been taken,

>> Has already been taken. Exactly. And

>> That, and that's the dynamic that

>> We're in front. So taking our, our own fundamental innovation, now China is filing more patterns than us, which is ridiculous. Right? On the other hand, you know, I, and we are all big fan of open source movement because that's how innovation happens, and it's the two guys in the garage who gets access to open source. Without Linux and without MySQL and all that, we would not have seen the software industry where it is. So we have to balance these two things, which is how do we ringfence, but at the same time, how do we leave it drive more open source? So that's one. The second thing is we have to, you know, as Thomas mentioned about sovereign ai, that's now, you know, generating a lot of momentum, especially in global South, because they are worried about the data privacy we have, we all know how much we have given up our data privacy just with internet, but we have no idea how much our data, personal data can go away with ai. Right. Today, as we just use even open ai, how much of your own personal information, even through just the, the questions and the prompts, you

are giving a lot of information. So the concern is individual and personal ai, nobody's talking much about personal ai. All the AI benefits that we've heard today where AI is making transformation is more on the corporate level where it is improving customers, customer service, or it's improving, improving operations, operational, operational efficiency. But what about us, like as an individual in our individual capacity, how much are we getting displaced? How much is it increasing our agency and our ability to act and work and, and drive our own personal success? Sure. That part is being ignored. So, so there is whole bunch of these things that the, the global south is worried about that there, I mean, you know, speaking of, you know, countries like India or Africa, they may giving away a lot of their individual citizens' information by using ai. So there is a lot of conversation around creating this sovereign ai, which is going to gather more momentum.

>> So, so Michael, let me come back to you on this. I mean, obviously the, the executive order on AI has a lot to say about some of these issues. Curious for your take on that, on the dual use question on some of the privacy issues and also how AWS is thinking about how to confront these matters.

>> Sure. I mean, a key priority for us in part of that democratizing asset access to AI is we want customers to use their own data to train their own LLMs. So it's, it's their data. And so that's an really important part, not only for security, but for privacy moving forward. And I think if we look at the NIST framework Yeah. And AWS, as long as other, other companies commitment voluntary commitments to that, I think it's clear it's still early days, but there's a deep commitment to what NIST is creating under that safety framework trying to create and then working globally. I mean, I think if you look at some of our allied countries like Australia and the uk, they have followed the US executive order very closely. And so that's an important framework. But I think also when you look at what does responsible innovation look like moving forward, I think agencies are trying to figure out what does that mean for their outcomes? What does that mean for each of them? Because there's different objectives, whether it's, you know, homeland security, trying to use AI to go after fentanyl at the border, a key priority. And so these are the type of the things that agencies are going through domestically and globally. And I think I would just say when it comes to, you know, X'S Mission cloud is the cornerstone of the financial world. Cloud underpins the future of money and really instant payments. And I think it's really important, you know, EXIM is a very special agency and they're a partner with, 82% of their customers are small business owners. And so their commitment not only to their own transformation and modernization and going from on-prem to the cloud with us, but their commitment to their small business customers globally, that's critical.

>> So temas, bring us back to your inbox and your everyday experience of this at the Department of State, we have a dynamic where we have adversaries that are marching with really sharpened industrial policies. Yep. They're controlling modes of production, they're setting their own pretty rigid criteria for how these industries will develop. And they're investing dramatic resources in growing them and maturing them. Yep. The US is working to lead a community of nations that is building a broad open system of like-minded countries. I love the idea, do we have a pacing challenge here? Guide us through that. How do you think about these things?

>> So there's this term that in recent times, secretary Blinken has been talking about, which he calls the diplomatic variable geometry, which I love, which is essentially saying already Carl and, and Michael talked about this, is that the set of issues that we are competing on are very diverse. It's not like we could just cut and paste right? That type of rigor. So what he's talking about on the diplomatic variable geometry is that we can bring in different stakeholders. It's our superpower essentially is the depth of our private sector and the allies that we have around the world. So when you bring all these different shapes, so to speak, in these different challenges that we face, no doubt we can win any competition, right? So that's essentially is what he calls the, the diplomatic variable. Geometry is a recognize, first is humility that we,

governments cannot do this alone. Not when I say governments, not just USG, but our entire allies. Then when we deploy basically this panel right here in a way that they, they all play their respective role purely on a competitive model that we can actually win the resources that are, I mean, we're, we're sitting here at EXIM talking about ai EXIM is that resource that if we view our AI technologies are export products, how could they deploy and do that? My old job at DFC DFCS got much more resources than what I used to be there. Not necessarily that we have all the resources that are needed, but when you combine those USG resources, then the resources of, I mean, some of the, the, the market, I mean, today isn't that video is like splitting or something like that. It's crazy. The type of market caps that we have on AI comp type of companies in itself could be our competitive advantage to compete on those terms. So that's what, when Secretary Blinken talks about that geometry, that diplomatic kind of variable geometry is that I feel confident that if we deploy these resources and our knowhow, our expertise in that manner, there is no in sense competition in that sense because our leadership, our American leadership around the world depends on that.

>> Yeah. I think I missed variable geometry. I I somehow managed to get out of that in high school, so I'm gonna have to take your word for it on some of it. It sounds pretty tough to do. And in, in an environment of so many competing threats, it makes fora like this in incredibly important to bring all of these conversations together. And I think there's been so much progress and you've been a huge architect of that, of bringing the private sector and government into conversations to start speaking the same language. We're close on time, so we're gonna do lightning round. I'm gonna go to each of you. What should our audience here leave with today as they think about, how do you wrap your head around this issue? What is the one thing, Carl, you want folks to take?

>> I'll say two things if, if you don't,

>> You got one, go ahead.

>> Well, so adding on to geometry, I would've a word which is asymetry and AI drives a lot of asymmetry within citizen use of AI within the geopolitical countries that we compete with. So assymetry is a key word. And then I'll put a plug on, read this book, AI for Digital Public Infrastructure. Right.

>> We, we have off the right here, you can get a signed copy. Okay. Vince, over to you.

>> I would just say there's, there's lots of great work going on across the federal government from the chip side, the Chips and Science Act, not just investing in capacity here, but investing in workforce training. National Science Foundation, I mentioned earlier, has the resources to allow researchers to access these tools. And there's everything in between in the stack. I think some of the other speakers earlier have talked about some of the resources available to help find out about these various programs. So I would just encourage people who are interested in this space to look them up and use those resources.

>> Okay. Lots of training needs there, but ways to get after it. Michael,

>> I, I would just look at what EXIM is doing in their own agency with their own digital transformation and how they're working with small business globally. That to me is a prime example of responsible innovation and a true commitment to that. And so I really applaud how ex Exxon's been able to do that internally and externally with their

>> Customers. So you see small businesses as a huge driver in this sector. It's

>> A huge driver. And AWS when we started, we were a small business and now we work globally. So any small business has the potential to scale.

>> Okay.

>> Convergence is the name of the game. What that means is that collaboration, but between the public and the private sector is no longer this kumbaya element of let's work together. It is the bedrock of America's innovation and leadership. So please look to government agencies like EXIM State and DFC and all these institutions as the key partners for you to tackle these global

>> Markets. So folks, you've got it here. We've got convergence, we've got the framework of governance from which to grow these partnerships. We've gotta move across public to private sector lines. Small businesses are gonna be huge drivers of that growth. There's a major training need out there, energy, question mark. But maybe there's a way to do it if we're smart about it and we've gotta make sure that we're not leaving folks behind. Yep. Thank you. Welcome. Appreciate you being with us. Thank you.

>> Thank you sir. Well done.