**Public Sector Future WWPS Podcast Series**

**Episode 67**

**AT Ball [host], Alan Lynn [guest]**

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**OLIVIA NEAL:** Hello and welcome to Public Sector Future. This is a show for anyone who cares about using digital approaches in the public sector to deliver better outcomes. I’m your regular host, Olivia Neal, and today I'm delighted to say that we have a special episode exploring technology and trends in defense environments. For this I'll be handing over the mic to our guest host AT Ball, who you may have heard on our previous defense and intelligence episodes. If you haven't listened to those yet, do go back and check them out, after you've listened to this one.

AT is joined by Lieutenant General (Ret.) Alan Lynn, who has had a distinguished career with the US military, with roles around the world, including as a former Commander of the Defense Information Systems Agency. He shares his perspectives on digital transformation across Department of Defense, the technology, the effects, and the people who are trying to make this happen.

AT, over to you…

**[01:09]**

**AT BALL:** Sir, first of all, I just want to thank you for being our guest today. And if you’d allow us, let’s set some additional context, please share with our listeners a little bit about your career, the roles that you’ve served in, and how that has created an opportunity for digital technologies and transformation to become an area of focus for you.

**ALAN LYNN:** Hey, AT, thank you so much for having me. It’s fun to be here with you. And a little bit about my career. Well, it’s a long career. So hopefully, I’ll try to shorten that for you.

So I started out as an Air Defense Artillery officer. So think about missile systems, there was some ubiquitous communications everywhere, I got excited about communications. And so I wanted to be in the Signal Corps and went to a networking engineering course at Keesler Air Force Base

I went from there to switching systems and microwaves at U.S. Army Europe, did NATO communications for a while, did peacekeeping operations in Bosnia.

I did a little stint in HR, working the Command Programs desk. Then I went into doing communications for all of the Pacific. Then I went to Fort Gordon, which is now Eisenhower, and I ran the IT and Cyber University there and graduated the first Warrant Officer cyber course, which was pretty exciting.

I ran all army communications, as the Netcom Commander, but also the Deputy Commander for cyberwarfare. Then I was a Deputy Director at the Defense Information Systems Agency. Then I fleeted up to be the actual director of DISA, so running DISA.

For those that don’t know what DISA is, it’s about – I heard the current director say it’s the third-largest network in the world, behind the United States and China.

So to give you context on how big of an organization that is, for those in industry, that’s a $10 billion spend each year, and then $8 billion worth of IT contracts all come out of DISA. And then frequency spectrum is part of it. The GEA route to the internet is part of it as well, but you’re also dual hatted as the commander Joint Force Headquarters-DODIN for cyber defense for the Department of Defense.

I transitioned from that. I wanted to do some innovation, so during my career, I was able to do a number of innovations that were fun, like making a top-secret cell phone, little things like that, that aren’t big for commercial companies, but of interest inside of DOD. So I went into Cisco Systems after that

Now I just do consulting, and I’m enjoying that as well with my own small company leading innovators and leaders.

[03:55]

**AT BALL:** Well, that’s one of the reasons why I want to pull you into a podcast like this, Alan, because you have done so much over the history of your career, specifically in the information technology arena and driving a change and being part of that change. And I love the fact that you brought out the way you contributed to the success of others, and you leveraged their successes in the body of work that you delivered for the U.S. DOD.

That narrative you described showed a logical progression of digital transformation and tools. And that pace of that, and recognition of the imperative to digitally transform with the U.S. military, its allies – I love the fact that you’ve done this with our allies, and our not-so-friendly participants in different multinational contingencies, but even the defense industrial base, calling that out, I think is really, really important, given where we are today.

With that context that you set, what sort of trends do you see developing as this process matures and continues and what sort of outcomes do you think we’re going to see? Is there an end state we’re driving towards?

**ALAN LYNN:** Well, I think there’s so much change and change is happening so fast that keeping up is going to be a significant challenge. Obviously, AI is a big topic right now. There’s a lot of things that are going to happen, I think, with AI that are going to be important. And I think there’ll be a data boom associated with that, as well.

So think about the kind of security you’re going to need. I think privacy is going to become a big deal as well. So how do you finesse the data so that privacy, security and even data sovereignty in some countries is critical? How do you interplay, all of that in – between all the different services, the different countries that we’re involved with? I think it’s going to be pretty exciting for everybody that’s working that.

I think a number of our databases for AI vector databases are going to be important. So it’s a different type of database. That’s another opportunity. And then I think the thing that I imagined the industrial base really getting into is AI-specific hardware. So I mean, it’s a bright future, it’s exciting because of all that’s possible.

[06:46]

**AT BALL:** We’re certainly going to get into a little discussion about the proliferation of data. And even, you know, how it’s kind of changing the viewpoint.

So I want to get back to that. But before we do, I just – I have to call out the work that that you did, and you mentioned it, alluded to it a little in your opening. Because on your watch as a DISA commander, you ushered in the Joint Force Headquarters DODIN, the DOD Information Network and pull that into existence against incredible headwinds.

Can you describe at least some of that institutional reluctance to the modernization effort and the consolidation of the enterprise IT into a more consistent management control plane and security protocols?

You were way ahead of your time in this. I don’t think anybody would argue that that’s a requirement now. But when you did this, I know you faced some substantial institutional momentum that you had to overcome.

**ALAN LYNN:** Well, I think a lot of it was education and making sure everybody understood where we were –what it all meant. I came in as the Deputy Director.

First of all, we had to establish cyber as a domain –

**AT BALL:** Yeah, yeah –

**ALAN LYNN:** Just the same as –

**AT BALL:** Of course, nobody would argue with that today. That was a challenge in and of itself?

**ALAN LYNN:** Right, of course, nobody would argue that today, but that was, that was the starting point. It’s like, okay, there’s air, there’s land, there’s sea, and there’s cyber.

And then you would point back to –Estonia, back in 2007 and say – yeah, the start for warfare, it looks to me like it’s going to be a cyberattack first. Take a look at what happened in Estonia in 2007.

It was a bright line that everybody could see there was some significant damage that happened to that country through cyberwarfare.

I think the next big challenge was how do you maneuver in cyberspace? So now - now you have to imagine yourself in a digital space and be able to maneuver in that space and lock down areas within the infrastructure to provide security. Well, then, of course, then you need to create the cyber tools to do that.

We started working on cyber tools, but the other part of cyber defense, and a lot of people don’t think about this, but if you build your infrastructure wrong, you’ve got problems in your cyber defense. So you have to build your infrastructure right. You have to be resilient to a cyberattack. So that became a whole new thing. And then creating tools that would allow us to see the cyber battlefield. That was the Joint Regional Security Stacks, the JRSS, that we stood up, so we could actually see the cyber battlefield.

It was really exciting times. And then of course, you have to develop the workforce, you have to develop a cyber workforce that’s able to actually work and maneuver in cyberspace.

It was really heady times, very exciting, and an amazing, amazing start to what I’m amazed and see happening now.

[10:18]

**AT BALL:** Yeah, I think Estonia was really a precursor. And we saw most recently in Ukraine the opening volleys of that war, were in cyber, in fact, and followed, of course, and coordinated with kinetic strikes very effectively.

I think that argument rests on its proof that we’ve seen over and over again now, and we see that with other state sponsored actors using cyber very, very effectively, in current gray zone operations, as well.

So I think you’re spot on there. And again, in that regard, ahead of your time, in terms of building out the appropriate DOTMLPFP processes.

**ALAN LYNN:**– I think industry misses the fact that the Department of Defense has been working in that cyber field for many, many years, so – they really were leading the charge and things like zero-trust, sound relatively new here, in the corporate world, but in the DOD, we’ve been doing zero-trust for a long time.

[11:43]

**AT BALL:** Absolutely. And I love the fact of what’s going on with DISA right now and this understanding of how important it is for the defense industry to be aligned to zero-trust initiatives, zero-trust protocols. So we’re seeing that now and even DISA allowing access to our secret cloud through a proprietary landing zone that we’ve established that, you know, defense cybersecurity agency approved. And with those approved government workloads, our defense industrial base is now being provided access to our secret cloud.

This is just a huge step forward in terms of recognition of how important it is not just for DOD, but for that defense industrial base who’s providing capabilities to DOD to have that cybersecurity first and foremost in their approach.

**ALAN LYNN:** You know, I’m glad you brought that up because it reminded me that the other part of standing up Joint Force Headquarters DODIN was getting the authorities to actually go out and inspect and make sure that the different entities that were touching the department Defense Information Network, were secure, including the industrial base.

So make sure they had to pass it, all the services had to pass it, all the commands had to pass these tests to see how well they were doing. And that’s trickled down to the industrial base. I think it’s brilliant that we’re now bringing those different entities into secure enclaves. I think it’s brilliant.

[13:31]

**AT BALL:** Yeah, and we’re doing a series of defense industrial base summits or seminars, so to speak, where we pull together senior representatives across the defense industrial base and talk about the approval process and the mechanisms for that to occur. And we help them align to those security protocols that are required for them to join in to that instantiation of secret hyperscale cloud.

If I could, Alan, I want to transition to think a little bit about just some of the cutting edge technologies and how that might impact the Enterprise, certainly will impact the ability of the warfighter, but you served in industry, you’ve served on boards, in addition to, you know, the work that you did while in uniform. What opportunities do you see might emerge with the adoption of some of this emerging technology?

You know, we talked a little bit about hyperscale cloud, but Generative AI you had mentioned. What about augmented reality, mixed reality, manned and unmanned teaming with autonomous systems, the leveraging of space as a domain and space assets to enhance connectivity and security?

What about gaming, exercising and modeling simulation, that sort of virtualization of environments and operations that never before were we able to deliver and now all of a sudden, we’ve got customers asking us, give us more. What are your thoughts on this? How – especially with the pace of change, how do you absorb all of these technologies in a logical and secure way that becomes additive to the enterprise and not just another one-off bespoke system?

**ALAN LYNN:** I would harken back to –let’s get back to the customer. My career has been trying to focus on what the soldier needs, what the customer needs. I think you have to start there. I think this generation pretty much live and die by their cell phone. I mean, that’s kind of the way things are.

I think, as you innovate and develop, I think there’s great opportunities on developing things like augmented reality that help with education, maintenance, training for different systems, just looking through your – your camera, you know, on your phone.

I think that’s the tool that everybody wants to use. And so making that to be your Swiss army knife, if you will, of a lot of different things that you could do on that. But I think gaming and simulation is going to be huge, with augmented reality, as well, to make you feel like you’re in a situation where you’re immersive.

And you did a lot of that when you were flying, I think, and you know, if we can do that in every instance of every job that you get a chance to kind of run through it multiple times before you actually have to do it, I think that would be amazing.

So I think augmented reality is a big one. I think AI and autonomous machines would be kind of a no-brainer to me. Things like, you know, drones, autonomous drones, autonomous vehicles, driverless vehicles give people more freedom to maneuver.

[17:21]

**AT BALL:** I’m glad you brought that up, Alan. You would have loved the way, here at LANPAC, we’re working and briefing some customers on what we’re doing with tactical cloud, and being able, as a result of pushing those cloud-enabled capabilities out to the tactical edge, in order to leverage some Generative AI, in terms of how we give instructions for autonomous systems.

**ALAN LYNN:** That is, especially when you consider how many of those you could launch it at that time, but again, that gets back to that data boom. Now you’ve got to manage all that data. And so –

**AT BALL:** That’s perfect, and that’s the segue to my last question in this little segment we’re on right now. You started this segment with this explosion or proliferation of data. Now, all of a sudden, we potentially have this huge information advantage, because of the data, but how do we turn that into a decision advantage?

**ALAN LYNN:** Yes. So I think there’s a couple things, I think like an engineer, so I would be looking to segregate data into different groups. So if I was engineering, I would engineer it like that. But I think this is where AI can also help. I mean, it’s going to be part of the boom –

**AT BALL:** Yeah, you’re saying perhaps using artificial intelligence to help organize our data so it can more effectively provide decision advantage to a commander.

**ALAN LYNN:** Yeah. I think both AI and cloud, you’ll be able to do a lot of fixing of your data, you’ll be able to find it, you’ll be able to de-dupe it, you know, de-duplicate it. So you’d have the most current information. And then I think you can use it also to secure as well, because as soon as you go the cloud, there’s some security concerns so you need that extra help as well.

I don’t want to say it’s a panacea. I think you need some good engineering, – you probably need some ML thrown in there as well, but I think it’s a huge opportunity to take advantage of the new technology.

[19:31]

**AT BALL:** Yeah. I love that idea. If I could I’d like to shift a little bit more to talk about talent and expectations in the force. And how do we maintain talent? You know, before your time as a DISA district commander, I know, you’re really shook up the Army Signal School, and probably rightfully so. You called this out early, you’ve personally witnessed the rise of a new generation of military leader – you know, those who are comfortable and confident leveraging the digital tools and that we use in our everyday lives, and taking those forward to the job.

But of course, in my mind, I think this adds a lot of expectations, to the military organizations and military leadership to recognize that and adjust to that. And I just would like your take on how we meet the expectations of this younger generation who is very comfortable in the digital world and want to use more digital tools during operations and how this might impact current military programs of record. And of course, the defense industrial base who’s going to deliver these programs?

**ALAN LYNN:** Wow, that’s a tough question. First of all, you really have to be customer focused. You really have to take a look, and spend time with the soldiers, the soldiers in the field, they’re smart, they know what they need, and –you just need to have the leaders listen.

Commanders will take a look at what’s available to them in their home environment, and they’ll demand it. They’ll say, "How come?"

I remember this conversation? So, I –

**AT BALL:** Oh, yeah, I - know where you’re going, Al.

**ALAN LYNN:** Back when we couldn’t have the – we didn’t have videos, right, so we didn’t have video. It was like, why the heck don’t I have video, going on through my tactical system? And so we sat down and tried to figure out high-speed multiplexing card, we had to figure it out, right?

So I think you’re going to have a lot of that, and the Signal Corps has tons of brilliant people in it. Young leaders that are just amazing.

We have talent out there and the leaders just need to listen and take their advice and just try and then work with the industrial base to make it happen.

[21:54]

**AT BALL:** So, you know, I think I already got the answer to the next question I wanted to ask you, and that’s – you know, as a person in the leadership positions you held, how do we respond to that expectation and promote this idea of digital transformation as a thought leader? And I believe your answer is, listen to those that work for you, and try to pull in their ideas.

**ALAN LYNN:** Well, you know, the senior leaders have great ideas, but the junior guys know the problem better than anybody else.

**AT BALL:** Yeah, they’re closer to them.

**ALAN LYNN:** They’re closer to the problems, so if you go down, spend time, and just get past – and I recommend this in the commercial sector too.

I would recommend it to every leader, just get down to the lowest possible level. And if you can sneak down there without them knowing you’re coming even better, without all the entourage just show up.

**AT BALL:** Yeah, this notion of growing and retaining talent. I wanted to get your thoughts about – and the Army’s really good, I know, about growing talent internally, but also, how do we better leverage talent across different sectors, whether that’s academia – I particularly like to pull in talent across the DIB, but also, in nontraditional defense suppliers. People normally don’t associate my company as a defense supplier, and yet we have a huge defense practice. How do we create some asymmetric approaches in order to pull more talent in to assisting DOD?

**ALAN LYNN:** I think it’s twofold. First of all, I would recommend to anybody in industry that’s working with the Department of Defense is to hire veterans, hire people that have walked the walk, talk the talk, know what the people in the field need, and they’re exceptional. There’s just some exceptional leaders out there.

I’d say that was the first part. I would try to bring leaders also that are currently in the military or in the reserves, bring them in and out of key positions in the commercial sector, and then back into the military or government space.

So, this cross leveling of ideas, and same thing with higher level education at whatever level. Bring some students in that are trying to do something and show them what’s happening in the Department of Defense. Show them what’s happening in the Army. Teach, teach them a little bit more about what’s happening and what the problem sets are, and I think both people learn. I think both groups will learn, and you’ve got recruiting on both sides of that equation.

So I think it’s a win-win.

[24:52]

**AT BALL:** Yeah, I’m going to move and talk a little bit about partnering outside of the DOD and whether it’s talent or maybe more formal arrangements – you know, you’ve had an extensive experience, and you called out a couple of the organizations that you’ve either worked in or worked with, since your retirement.

What role do you see partnerships with commercial entities and the DIB play in terms of enabling, perhaps faster adoption of digital technologies to solve some of these operational challenges?

**ALAN LYNN:** Well, I think first of all, the rules have to change. The – in the Department of Defense, when I became a network engineer, one of the best in the country was actually an Air Force School at that time.

So a lot of the big technologists from early on, they were in government, and we still have a lot of great people in government, but a lot of what we need now is in the commercial sectors.

**AT BALL:** Right.

**ALAN LYNN:** But the rules, the rules are still set up as if the government has all the talent. And so you’ve got to change the rules. I’ll give you an example. So you’ll sign an agreement to develop something with somebody, and the government will think about, "Well, this is our patent,"

**AT BALL:** Yeah, intellectual property could become an issue at some point.

**ALAN LYNN:** Yeah, it’s one of the major issues, so the IP is a struggle, and it shouldn’t be, if you want to use the IP in government fine, you’re using IP in government, but that commercial entity should be able to do it – use it anywhere else, but that kind of thing doesn’t exist.

And then you have the other one – let’s say I develop something amazing with an industry partner. As soon as it’s completed, and I want somebody to run it, then you’ve got the contracting laws, where now everybody has to bid for that contract. It’s like, what? You’ve been working for a couple years with me to develop this. And now it goes out for bid, there’s some things that need to be looked at. I mean, nothing’s perfect, but they’re making some really good strides, I think, in this area by new contracting vehicles.

[27:05]

**AT BALL:** Yeah. And we’ve done stuff like that, I think, Alan that you would appreciate, through the use of our cooperative research and development agreement, what we call our CRADA. For example, we’ve done them with the Naval Postgraduate School and in the NDU, where we can pull in academia, industry and government together in order to build out capabilities.

And CRADA itself is written to address, you know, the intellectual property rights that – who gets what as – you know, things are developed as part of that agreement. I think the – doing that in advance is really, you know, the only way to avoid the natural pitfalls that you’re going to have with IP.

**ALAN LYNN:** Yeah, absolutely. Yeah, and kudos to you. It’s not easy. It’s not easy. It should be easier. It should be, you know, an easy cut and paste. But you really have to do your due diligence to make it happen right now.

**AT BALL:** Alan, you’ve spent, like many of our career military officers, and you mentioned some of your contingencies that you participated in. We have a group of international listeners as well. And I’d just like to get your take on the value you see in the efforts that we make with technology to promote interoperability across our regional allies and partners.

What role do you see technology playing in collaboration with coalition partners, and you know, in the space of digital technology and how that’s going to help?

[28:48]

**ALAN LYNN:** Well, yeah, so, I’ve got quite a bit of running time with multinational forces, and you know, to think that one country has all the great ideas is just, that’s nonsense, right? All of our partners have some really amazing ideas and some amazing technologies, and it’s just, getting a forum together so we can see how we can operate together.

Bosnia was a huge example to me on how much commercial helped to synchronize all the different systems, other than the 5040 interfaces that were required by NATO, and making this mesh between a tactical and commercial, I think it’s really, really important because you’re going to need it all. You need all the tools in the toolbox whenever you go with our allies.

So let’s upfront that technology and use cases and develop the platforms that we’re going to use way beforehand, as opposed to land and expand, which I’ve had to do, and so you really don’t want to do it that way. You want to test that out way beforehand, so –

**AT BALL:** It’s usually a little too late, isn’t it? Are there any particular countries, Alan, that you’ve worked with that kind of inspired you, either because of their technology or their people or their processes?

**ALAN LYNN:** You know, you’re putting me on the spot here because I love so many of the allies that I work with. The UK, amazing. Germany, amazing. Japan, amazing. Australia, amazing. Korea, amazing. There’s just so many different – you know, I hate to leave somebody out.

[30:40]

**AT BALL:** I love the fact that you’re calling these countries out because those countries are all areas of particular focus for our efforts as we seek to enhance interoperability through seminars and technology and collaborative engagements for sure.

**ALAN LYNN:** Yeah, so it’s just amazing people all dedicating their lives to their nations. Italy was amazing. I mean, I just – I could go on and on and on. It’s just people in this space that are doing things for their nation that are so uniquely special to me. And I love helping them out anytime I can, so it’s – I don’t know what to tell you AT. That’s a tough question.

**AT BALL:** I don’t want to put you on the spot to choose favorites. Let me close this out and kind of wrap up with you perhaps giving us some of your lessons learned and advice, and you know, I’m thinking about what lessons that you might have captured in terms of advancing the use of digital technologies.

Is there anything that really kind of surprised you in terms of advice that you would share?

**ALAN LYNN:** I kind of harken back to go back to your customer, go back to who it is you’re trying to support? And what’s the overarching outcomes that you’re looking for and making sure you’ve aligned your outcomes with what the desires are of your customer. I mean, it’s kind of common sense, but when you’re in the moment, and in the fight, it can sometimes be a little bit more difficult, but having a game plan going in, and then modifying off of that, I think was kind of my lesson learned.

And the other big thing, if you’re doing communications, what’s your backup plan? If this fails –

**AT BALL:** That PACE acronym stays with you no matter where we go.

**ALAN LYNN:** Yeah, exactly. What’s your primary, what’s your alternate – what – you know, just walk right down it. So, the first idea is going to fail. So what’s your backup plan?

[32:45]

**AT BALL:** I love it, I love it. Alan, with your experience, would you have any recommendations that you would make to senior government officials? Like you served in a very senior role. What recommendation would you give them in terms of dealing with large tech suppliers?

**ALAN LYNN:** I guess the only advice I give – first of all, you know, this new generation of leadership, they’re a lot smarter than we were coming up. So I don’t know that I could give them any real advice.

**AT BALL:** There’s no doubt about that. That’s a fundamental truth that we certainly need to foot stomp in this conversation.

**ALAN LYNN:** But you know, industry has got to make a bottom line, whatever that is. And so understanding that going in, I think, is really important. And then I would give them the advice to really check, check the security of the systems that they’re bringing in. That’s really, really critical, and help industry see those things that need to be secured and help them through that process. I think that would be the advice I would give.

[33:52]

**AT BALL:** Yeah, that’s a great message. I think it’s consistent with your approach as you effected digital transformation even while you wore uniform. As we wrap up, sir, I just really want to take the time to thank you. I know you’ve got a hundred other things you could be doing today, but the fact that you spent time with us and our listeners is really important, and the fact that you were willing to share your valuable perspectives with this audience is important, way beyond the satisfaction I got of getting to talk to an old friend and mentor like this. Before we sign off, Alan, just want to give your closing comments or anything else you’d like to add to our discussion today.

**ALAN LYNN:** AT, thanks so much for having me on. It’s like you said, there’s a special bond between those that have served and so – you know, if somebody calls I’m here and I’ll always be here for them. I’m a soldier for life, but I’m also a lover of technology. So, you’ve hit all my buttons, and I appreciate you bringing me in, and thank you for this time.

[35:00]

**OLIVIA NEAL**: Thank you to our guest, Lt Gen (RETIRED)Alan Lynn and to our guest host AT Ball, and thank you to you for joining me today on Public Sector Future. You can visit us at aka.ms/publicsectorfuture to find more insights on digital transformation in Defense and Intelligence environments, and to find all our previous episodes. Please do send us your questions and feedback, you can find me on LinkedIn, or email us at ask-ps@microsoft.com. Thank you and see you next time.

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