**Project: Public Sector Future podcast**

**Detail: Episode XX**

**Talent: AT Ball (host), Ann Rondeau (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 and new technologies in the public sector in order to deliver better outcomes. Today we’re going to be continuing our focus on digital transformation in defense and intelligence organizations, with guest host, AT Ball, who you met in our previous defense episodes.

Today, AT is joined by Retired Vice Admiral Ann Rondeau, who is the President of the US Naval Postgraduate School. She was appointed to this role following a career of leadership and achievement within both the military and academia, and she brings those decades of lived experience and research to the conversation today. It's a really fascinating discussion, and her perspectives cover the historical context for adopting technologies (from the Spartans to Napoleon), how the democratization of information offers us new opportunities for decision making, and calls for a revolution in the relationship between governments and industry. So with all of that on offer, over to AT to guide us through.

**AT BALL:** Well, thank you for that introduction, Olivia, and I’d like to welcome retired Vice Admiral Ann Rondeau, president of the Naval Postgraduate School, to our podcast today.

Ma’am, could you please share with our listeners what is encompassed in that role, and the experience that you had prior to assuming these responsibilities that lead to success?

**VICE ADMIRAL ANNE RONDEAU (RET.):** Well, thanks, AT, and first of all, let me thank Microsoft and the podcast series for the privilege and honor of being with you and your audience today. I’m very grateful for this opportunity.

In my time within the Navy, I had myriad job opportunities. Because at the time, the law was limiting with regard to what women did, I had the extraordinary opportunity of having leaders be very satisfied with my work and helping to mentor me through different kinds of opportunities that were very unusual.

The result is a very eclectic matrix of things that I’ve done with aviation, with surface warfare, with submarines, with strategy and planning, with operational planning, with strategic planning policies, politics. The – the whole thing came into a fully rich career that then my last job in the Navy – well, actually my – one of my flag jobs was as the commander that had under and working with me and forming all of the sessions for warfighting within the Navy.

And then in my last job as an active duty officer was as the president of National Defense University at the time, a university that is certainly still in Washington, DC, that had nine research centers and five colleges and schools.

I then retired from there, went to IBM for a while, for about a year and a half or two years, and due to some personal circumstances of my mother’s health, left that.

Then after that I got an offer to compete to become the president of the College of DuPage the largest single campus community college, I believe, in the country, certainly one of the most supported by the taxpayers as a public school and – and – and a great community college in Illinois.

And then I then got an opportunity to then come to Naval Postgraduate School. Different. Different. So from a National Defense University Graduate School, lots of policy and public policy and strategy, to a community college that was very large, about 30,000 in resident students,

And then to this place, you know, which is a science and technology graduate school for DOD. And that’s what I deal with is graduate work in the science and technology fields.

And I’m a history major, but that’s okay, because I – I’m very familiar with the education field for the government, as well as – as the private sector.

[04:30]

**AT BALL:** As I looked at your background, ma’am, a BA, an MA and doctorates in public service and letters, I was wondering how digital technology became such an area for focus for you, because I, you know, went to NDU as well, fabulous master’s degree coming out of that experience, but it wasn’t focused on technology. And I see you doing so much with technology at NPS. Is this just part of you being a lifetime learner?

**VADM RONDEAU:** Yeah, there’s a couple of things here, AT. I on purpose talk about being a history major, because I went to an undergraduate school that was interdisciplinary, one of the first and most cutting edge schools. It didn’t last because it did – it was so new. It was a terrific education. But as a history major, I was required to take the history of science, the history of music, you know, all of those things.

So I would tell you is that just kind of intellectual curiosity, I’m kind of that lifelong learner. I read early and like to do things. I entered the science fairs and did things, you know. So I was active, and largely as a kid, and then as an adult.

But you cannot read history, whether or not it’s history about war, or societies, or communities or culture, or anything, and not be aware that technology in every single aspect of life has driven either change, and positive, positive creation, or very destructive creation.

So technology is extraordinary. Think about way back even, the Spartans. And you know this, being a good Army officer. Spartans, you know, the short swords, and they refused to adopt and adapt to technology. And of course, then they get beaten in a war with early artillery of longbows and the kinds of weapons that were used by the Thebes. So technology does that.

As well, in wartime, and again you know this, there’s a lot of – of extraordinary technology that is developed, let’s say, for instance, in medicine. Some of the best medicine has begun as field medicine, in some capacity.

So life is full of technology. So I don’t think that anybody who is looking at the world cannot acknowledge that the observation of life is it’s about the observation and the impact of technology, in many ways.

[06:59]

**AT BALL:** Your observations historically in terms of the impact that technological advances have had, even for those of us in the military, certainly important lessons to learn.

And right now, there’s so much focus on digital transformation as part of the next technology kit, to be imported into defense organizations. Are you seeing a real focus on the part of military services to create an imperative to drive the use of more digital tools?

**VADM RONDEAU:** You raised that as in an interesting way. You actually have raised it, in my opinion, in a very sophisticated, nuanced way. There’s an imperative always in societies, and certainly in the military, to think about what is the new thing that will give you the competitive advantage.

That has all kinds of manifestations to – I mean, you study the history of war of the military, and again, of economies and societies, and there’s always going to be this sense of how do we get the next edge, so that we have an advantage in some ways.

So right now, the digital world is that competitive advantage. What is different about this time a little bit, , is the speed and the density of all this. And frankly, the lifecycle is just so much shorter.

So we take the nuclear age and the development of nuclear power, nuclear weapons, nuclear energy, and that had a very kind of its own iteration. But there was kind of a linear aspect to it in some cases.

In the digital world, I think that linearity is – is less common than the nonlinearity in terms of the impact. I’m talking again as a history major. I see that, that there is such a need to say, what is it about the digital world?

I would say that it’s not only though about the – the proficiency of a digital world. It’s also about leadership. One of the things that’s really important today is that leaders need not be the masters of the digital world, but they need to be the exquisite questioners. They need to be exquisitely curious about the digital world.

So that knowledge has kind of gone upside down, knowledge to access to power. The knowledge base is actually almost denser and more current, the more junior you are, which is not the case in the past. The best knowledge was when you had access and seniority and access to more information. And now the access to information has been so democratized, that the digital world makes warfighting or operations or energy development, whatever it is, a lot more democratic with a small d, because everybody has access to something.

So the digital world also demands an extraordinarily new approach to teaming, and to problem solutions, to solutions creation. So I think that data science, AI-enabled tools, what we’re doing here, but what we all are trying to do, gets us to the notion that Microsoft uses. And they use this term; it’s also a term now in the Navy and at the most senior levels of leadership of decision advantage.

So the digital world changes how and who is making the decisions, and at what level. And I think that there is this extraordinary need to understand with discernment. how trustworthy is the data, how trustworthy is the information, and how confident can the decision-maker be in that? vAnd that’s a lot of skill or science instincts, and I think it changes teaming.

[11:13]

**AT BALL:** You talked about the proliferation of information, the nonlinear growth of the data, I think, that military organizations and military leaders have to contend with, and the democratization that emerging technologies like hyperscale cloud and artificial intelligence can offer for defense organizations in order to contend with this amount of data in ways that might lead to decision advantage. And you talked quite a bit about how this democratization empowers junior leaders with access to information that they never would have had before.

Do you think that this offers some enhanced doctrinal adjustments that might need to be made to further the initiative that leaders of various echelons across the force, now with access to information they never had before, might be more empowered to take?

**VADM RONDEAU:** The change that you described is profound and understanding is imperative. We in the military, and you again would know about this, call it command and control. We don’t mean that command in a way that maybe nonmilitary would understand it, but C2, order and discipline within the process of decision-making and who’s involved in it and where it comes in, the timing of it and all those things.

There’s a syncopation to command and control that has usually served quite well, to tell you the truth. I mean, it’s just really an important phenomenon. And to abandon it is disastrous; to change it is essential.

And so there’s, you know, what happens is that there’s a conversation about, you know, the junior folks know more than the senior folks and all that kind of thing. I think that that is a long discussion.

You need to have some ability to see things and to understand things. And the command and control of decision-making has been a profound asset in the American mindset for the military, and as well, frankly, as it is for most operational profession.

But today creating a command and control information system that services the right decision-maker at the right time, at the right rank, for the right effect, should be an objective, but it’s changed.

And so, but what’s not changed, and this is, again, profoundly democratic, and I want to quote one of the great creators, Bran Ferren, who was a creator of Disney Imagineering. One of the things that he said is, I do not think that any amount of algorithmic precision will ever deal with how to account to the best of class of human instincts to win and survive.

So what I would say is command and control is essential for decision-making. But in the end, that has to include some combination of AI, machine learning, and all the other adaptations technologically, alongside in parallel with an exquisite timing with a human ability, and the human value of making decisions in that cycle. So I think that the digital world has changed command and control, but the objective of that is to make really good decisions.

[15:05]

**AT BALL:** Oh, I think you’re spot on in terms of trying to approach this transformation from the standpoint of creating decision advantage at various echelons across the force. Is there an example you might be able to point to in terms of positive outcomes where these sorts of technologies and digital transformation, whether it’s hyper-scale, artificial intelligence, machine learning, is employed in things as simple as creating better gaming, exercising, modeling and simulation capabilities out there to help our leaders gain practice and experience in terms of employing these assets?

**VADM RONDEAU:** So generally, with Microsoft, we have been working with a Space Systems Academic group at Naval Postgraduate School, investigating AI, machine learning to analyze and mitigate signal jamming and interference for environments. We’re calling that the Space Sensor Cloud Network; huge for us, and I can go over that in a minute.

What’s really interesting about it, though, the bottom line is that we continue to explore and improve key future technologies as a part of our working with Microsoft, in this case, through our CRADA, the Cooperative Research and Development Agreement, that NPS has with Microsoft.

Now, all of this is part of the fact that we are really thinking about how you apply these extraordinary sciences to how we think about actions and decisions. For better C2 I would tell you is that, again, we’re trying to work this with Microsoft and others, to tell you truth, a better command and control model allows us to identify and address intentional and unintentional jamming at the leading edge of the network. Now, think about that. That has civilian, commercial, and military applications that will enable reliable command and control, and thereby decision advantage.

The third example, , I want to focus on the Microsoft piece. We’re doing work with other companies also, and I need to be able to ensure that your audience knows that, but with Microsoft, we’re working on GEMS. You know, this is a whole gaming, experimentation, modeling and simulation work that we believe is cutting edge for how we think about decision-making, and how you anticipate, how you get into things you don’t know.

The famous comment is “You don’t know what you don’t know.” GEMS should help us to know better what we don’t know. There’s a paradox there. But you think about that, and what we’re doing with Voltron for wargaming, in direct collaboration with the commander of the Indo-Pacific Fleet, this kind of work is really important.

But I would tell you what else is important in that. We need to have a deep conversation all the time and embed in it discernment and understanding, analytical understanding of what’s in front of you. That’s about competency. That’s about knowing, have some mastery, because you don’t always know even when in front of you, if you don’t have the ability to understand what’s in front of you. So I think that that that’s all part of this.

[18:03]

**AT BALL:** I want to circle back to one of the comments you made about the Naval Postgraduate School and Microsoft working together as part of this Cooperative Research and Development Agreement, what you refer to as the CRADA, exploring how commercial technologies can solve operational challenges. And – and you even directly related it to your ongoing efforts to support the warfighter at NAVWAR, to support the warfighter at PACFLT. And you’ve done this with other companies as well, which is marvelous, and think it should be open to other industry partners as well.

And with this CRADA and the collaboration that is occurring between Microsoft on specific research efforts, some of which you named, I’m sure your goals are to try to pull in the best of commercial technologies, which, by the way, is going to accelerate some of the challenges the military already faces in terms of digital transformation, but providing this sort of expertise to further, you know, Navy and Marine Corps operations, my gosh, and then sharing these insights across the broader military community.

Is there any more important thing that the Naval Postgraduate School could embark on? To me, that just seems like a shift that is quite impactful.

**VADM RONDEAU:** If we have time for nothing else on this podcast, I think this is the driving question for us, because there’s opportunity there and there’s provocation there. And frankly, I’m going to use a term I don’t often use as responsible naval officers, that I think there’s a revolution in front of us on how we think about this. And let me put it into a couple of different terms.

So China vhas implemented a military-civil fusion strategy. Now, think about this now. It is intended to remove the lines between academia, industry and the military, to achieve their stated objective to be the most technologically advanced military in the world, and that they’re going to be the first and the leader for intelligent warfare.

But that is in a command economy. So I would tell you is that I’m not quite sure that they will ever get there, if you’re going to remove the lines with a command economy mind, where it’s an autocracy, and you think about one way and one thing.

I think that this military-civil fusion has a very different look in the United States. We need to have an equivalence to it, without compromising who we are. So we – in my view, we need a radical reinvention of a military-civil innovation relationship to lower the existing barriers.

Our barriers are what are right now are Cold War, very well intended, very successful barriers that we did in the long war, the Cold War in the nuclear age, is really a set of barriers that are not right now. I mean, we are kind of a sumo wrestler in a rugby game. We need to think about those barriers.

So what I would use is defense spending, private capital do use startups, existing prime contractors, federal labs, both civilian and defense academic institutions, and what I would call a new and networked configuration. So I think that the CRADA that we’re in with Microsoft gives us an opportunity to think about that revolution. So I would tell you is that we’ve signed 30 such CRADAs, with partners ranging from Microsoft to Xerox to AT&T and the panoply of other companies.

But I think that what I want us to be thinking about is how do we help transition. And this has been a journey with us with Microsoft. Remember that a CRADA is less transactional and contractual; that is relationships. But instead of a military industrial base, why not think about a military industrial network that really takes advantage of the current environment.

So let’s go side by side, let’s move, let’s push to the left everything in the design cycle. Let’s integrate military cases and address capability gaps from the start. This accelerates development.

And that CRADAs enable, and we’ve seen it with Microsoft, it’s not been easy, but we’ve seen it because of the trust that is implied in in a CRADA, we’ve seen embedded relations that lead to speed of iteration towards what both parties need and want.

And let me give you an example for Microsoft, Voltron. So we recently provided the initial demonstration with alongside Microsoft as a first taste of a future wargaming system for the commander of the Pacific fleet that did real-time analysis, real-time assessment as a prototype. And the demo was part of the GEMS piece. And then it gave everybody a chance to say yes or no in the beginning of that process.

So moving things to the left of the design cycle is part of that new way of thinking that is just not done when you buy ships and airplanes and submarines and that kind of thing. And you know that, again, from your background. That’s almost radical, because it really does change a lot of processes and it implies trust and transparency in a way that the current processes do not always provide.

So in the CRADA process, my observation, and this is my opinion only, not the opinion of NPS, the Navy or anybody else, my opinion is that CRADA has created an interesting friction, which – which is good. It’s a creative friction. A multiple viable product is actually it’s a Rorschach for what each of them thinks that that is.

So that the client says, hey, I need this now, now, now. And I need it, I like it and I need it. And then the other party says, well, we need some more time to really develop it. So that the access to speed feeds a higher appetite for more speed.

So that’s why I call it a very creative friction, because that means that both sides have got to kind of figure out how to reduce the time for development and design. let’s figure out how to do this differently, and so that we can do it, so that we both have lower risk and a high learning yield, and that we’re working on mission versus experimenting.

[25:28]

**AT BALL:** From the perspective of the Naval Postgraduate School, that makes perfect sense, absolutely.

So I just want to return to a couple of comments. One is, I mean, you’re a woman of letters, and words have meaning, and the terminology, military industrial base versus military industrial network, wow, that is so descriptive of where we should be moving to, in order to address some of the systemic problems we have with building cutting-edge technologies, given our current processes that we invoke.

Now, you mentioned China’s initiative to blur the lines between academia, industry and military and certainly the kind of private public partnerships, PPP, you hear that referred to many times, the CRADA, might be ways in which we can try with our system and values to also put the collective effort of those three entities together and forward.

We have an international group of listeners. And although I focus particularly on the US defense and intelligence market, I am a part of our worldwide team. So I have to ask, what role do you see international collaboration with coalition partners playing in this space of digital adoption, and do you see any other countries across the West where this is ongoing in a way that inspires change for us?

**VADM RONDEAU:** I have a very keen and kind of an optimistic, bullish view of that in a number of ways. First of all, the international community; remember what has happened here. There is a rising up of common knowledge and capability.

So you think about some folks who are in very remote places using technology very differently, and in some cases, speeding it along. So I think that international experiences give us a diversity of experience, a diversity of perspective, a diversity of problem solving that are both cultural, they’re intellectual. And I think that there’s this extraordinary diversity that can come in to that that’s really important.

So I think, one, that the international engagement here is extraordinary for what it can come with, for solutions. And there’s a whole history of how that is the case and it’s a whole different topic. It’s a whole history of how that is really important.

Number two is I think that we have a rather moral obligation in some cases to bring the technology that do provide solutions in peace and war to each other. You know, more and more, there’s a discussion about conflict. We’ll go back to a period before Napoleon, where citizens are more affected than ever until Napoleon was army against army on the battlefields of France or Russia, wherever. This is now battlefields are critical infrastructure. This is now the battlefields of energy. This is the battlefield of water. There’s a real obligation to help people to be resilient, to understand energy, to understand all the things that go on.

And number three is there’s a humility on both sides of this. This kind of problem solving does require this paradox of confidence and a little bit of humility. And I think that that’s really important to understand as for decision-makers not to hesitate, because you can’t, and you should not as a leader do anything but seizing the initiative, as you see the need. But I’ll tell you is that it makes us a little bit more cognizant of what things we have got to bring in to all this.

And think about this. At the same time as Ukraine is going to get tanks from the Germans and the United States, swirling all around those tanks is cyber. So this is a multidomain problem that also includes energy and food, and all those things. And we need to understand that there is a virtuous circle of winning if we understand the problems holistically, and not just through set of lens. So I think thatit’s huge that we stay involved.

Globalization has its issues, has good things and bad things. We need to be sure that we’re winning and that we are developing solutions with leaders who are educated to employ technology to the best of human prosperity.

[30:31]

**AT BALL:** What I’d like to move to as we close out is, is there anything in terms of the lessons that you’ve observed? You have a very positive outlook, and is there anything that has surprised you in terms of the positive side of where we’re going with these digital approaches?

**VADM RONDEAU:** I think that one of the positive things is that the digital approaches actually provide an extraordinary platform for creativity that is truly spontaneous for the individual. So often, creativity needed to be paid for by somebody, because you needed the resources, you needed the access to labs, needed all those things. You can now get a seven year old who is creating something. And you always did, you always had a seven year old creating something, you always did. But I think that it’s just a lot more complex, a lot faster now.

And I think that I’m optimistic– and it’s also not age specific. It’s cool. It was cool to see my mother at the age of 71 getting absolutely excited about her brand new computer and working on it and creating things I never knew about. That’s happening to again, the seven year old and the 71 year old. I think that there is an extraordinary, extraordinary brilliance going on. What I worry about is that we’re not capturing it and leveraging it and making it work for the country the way we could better.

But I do think that people, the human spirit is phenomenally creative. And if we give it the dignity and the respect of freedom of movement and of a certain amount of order that is proper, but freedom that is fruitful, gosh, I think that there is a whole new world.

I’m not a dark future person. I’m also not Pollyanna. None of this is easy. And we can go dark if we don’t pay attention.

[32:38]

**AT BALL:** I think you’ve really, really touched on something there. And perhaps there might be recommendations that you might make, with your experience now, to governments in terms of working with large tech suppliers, or even social media companies in order to improve this dialogue in our country.

**VADM RONDEAU:** My team knows I’m extraordinarily committed to a number of things. One is innovation and innovation culture. But two is the respecting of each individual having a role to play, and that anybody matters to this. They all know that. Business has to also be thinking about how it can adapt, and it does.

**AT BALL:** That’s the logical follow-on here. And me as a representative of Microsoft, I’m very interested in what you see as maybe recommendations that we should take, you know, as large tech suppliers to government and defense. What are your recommendations that we should latch onto in order to improve our approach?

**VADM RONDEAU:** You know, there’s a revenue generation piece for business, and there’s a mission success piece for military.

I think understanding that different space, when I talk to military about things, the language is different. When I talk to higher ed, the language is different for the faculty. When I talk to business, the language is different. But I can say the same word, and it has different meanings. I might need to change where I am to in order to bring people to commonplace. So this is part of the creative journey.

I am grateful to my Microsoft buddies who have taught me some things about things. And hopefully, they’re grateful to us for what we are teaching them. I don’t have an exquisitely perfect answer, but I do think I have an exquisitely perfect sense of the culture that is needed, the tone that’s needed.

[34:43]

**AT BALL:** I would tend to agree with you, having listened to you in this conversation. I wish more senior leaders were thoughtful about how technology and people in these processes come together in order to improve not just the landscape within the military and our capabilities, but our society as well.

The lessons that we can take from your conversation about how the military and academia and industry can come together to really improve the digital transformation and accelerate these processes to assist our warfighters out there across the COCOMs, thank you ma’am for that. I know our listeners got an awful lot out of this dialogue today.. Thank you.

**VADM RONDEAU:** And I thank you for the honor and the privilege, and it’s – it’s been a pleasure. Thank you very much.

**OLIVIA NEAL:** Thank you to Admiral Rondeau and to AT for sharing their insights, and thank you to you for joining us today. Check out our show page for links to all of what was discussed today and visit us at wwps.microsoft.com. Please do reach out and send us your questions and your feedback.

As always, you can find me on Twitter. I’m @LivNeal. I’m also on LinkedIn, where you can also find guest host AT Ball. Or you can email us at Ask-PS@microsoft.com.

Thank you and see you next time on Public Sector Future.

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