Russ Rumbaugh audio raw

Eric Lofgren: [00:00:00] Welcome to acquisition. Talk a podcast on the management technology and the political economy of weapons systems acquisition. I'm your host, Eric Lofgren You can find this podcast and more information, including links, commentary, and articles on acquisition. talk.com. Thanks for listening. .

I'm pleased to have Russell Rumbaugh with me today. He's the systems director at the aerospace corporation center for space policy and strategy. And before that he's worked in various positions in the DOD the hill academia, and he was also an army captain. So Russ, thanks for joining me on acquisition talk,

Russell Rumbaugh: [00:00:53] Eric, thanks for having me on congratulations and all the success you've had with this podcast.

And I got to say already, you've done a better job collapsing in my. Litany of various jobs into a neat little soundbite. So I'm excited to be here.

Eric Lofgren: [00:01:09] you were actually at a OSD Cape as a civilian while I was there as a contractor, so we didn't get to overlap. I was just deep in the bowels of the uh, the cost analysis, group.

we had a little bit of overlapping. We

Russell Rumbaugh: [00:01:22] can talk about our other overlaps as well. You're not supposed to start by admitting we both have a programmatic background. Programmers should the bad guys to most people. Oh yeah.

Eric Lofgren: [00:01:31] And w we'll definitely get into these discussions with some interesting things happening on the hill.

But I want to of start here by, by looking back since I think you have a pretty good, like long view of the department of defense and, there's this kind of nostalgia and this idea that weapons acquisition actually perform better, back in the day when we. The 1950s and all the ballistic missiles and nuclear stuff and, jet aircraft, and there seems to be advances all over the place.

Was it actually working better back then or is that mostly perception or nostalgia or we just throw a lot more money at the problem at the time?

Russell Rumbaugh: [00:02:02] I love how you you've wrapped up that question. I was going to tease you a bit as does anybody ever actually think it works? But you've tipped on a couple of key distinctions, and definitely space is one of those places where we definitely get there was the glory days, right when we were beating the Soviets, but you've picked up one of the key reasons, right? When Bennie Schriever out at the Western development division, He was getting 5% of the entire defense budget.

So absolutely he did amazing things. Aerospace is very proud of being part of that history, but we, as a nation, we're also throwing resources at it, similarly, same timeframe, the Navy's Polaris program that made it up to 4% of the defense budget in contrast our last big crash course, that JEIDDO the IED office. They never got 1%, even a missile defense with the peak of star wars still only got about maybe 2%. So it's a different question, right? That some of that reminiscence is true, but true for reasons we don't always talk about. And then my favorite one is everybody likes to talk about how we were willing to take risk.

We lost 13 Corona emissions before we succeeded. And looking back, that sounds oh, glorious, like you got to take risks. But Richard Bissell at the CIA he thought he was about to get fired. His words for this was, it was heartbreaking and frustrating. So easier to look back on the victory than look forward at trying to make it when it happened.

Similarly, the other, another example I'd used it spoke to balloon again, aerospace. One of our great claims to fame was being part of the creation of GPS, right? We won the Colliers trophy for it, their big aerospace prize every year. But everybody went to kill that thing when it started, it took more than a decade of people being like, this is stupid.

We don't need this. Inertial navigation is great. Now everybody knows how to use it. And when I say everybody, I don't just mean the military services just in our daily life. We use it, but it faced unbelievable obstacles at the time. Some of that reminiscences is letting the glory days fade out.

And if you haven't come across this, the real way to close this question is there's a Harvard study from 1962 Peck and Scherer, and they argue all the programs they looked at were for their development. We're averaging 3.2 times the estimated costs and 1.4 times the estimated time. So man, if in 1962, the programs are already going off the rails.

That's probably a good sign. This isn't a new thing. I think what you get is there's a lot of complaints that are really about how the U S political system works, right? There's multiple stakeholders and get in the way it's never smooth. It's never easy. Even for the Polaris submarine, one of the greatest consensus of yeah, we should do this.

Or similarly with ballistic missiles, like there's still backbiters and complaints about it. I'm not quite convinced that there really was this healthy onboard. Yeah, I think,

Eric Lofgren: [00:04:50] you bring up a couple of interesting programs. Like Atlas and Polaris, and, these things were actually like exceptional programs at the time.

They were like special program offices or whatever. Right. The SPOs. And they were actually thought of as special and unique and broken out from the traditional ways. And Bernie Schriever actually said after the teapot commission, he was like, I'm not going to take this on, unless you give me radical authorities.

And the same thing with Polaris, I love Harvey, Sapolsky's, a book on that program. But like they just ran that thing in a completely different way than we run it today. In terms of how they select it for people. But also I love the chapter nine there, which was like PERT [program evaluation and review technique] and the myth of program management.

So like they had all these exquisite systems that we run today, but they actually like, that was just for show, that was quote unquote pizazz that they would put out there. Just to get Congress off their backing, just give them the $2 billion. It's crazy. How much did they like $2 billion in 1961?

They got a lot of money for that. It was still running in a different way and Oscar Morgenstern. I think he said at the time, like if we had these types of controls that came into the sixties in the earlier years we never would have actually succeeded with the Polaris weapons system. I definitely hear you.

There's it's hard to tell because it was so domineering at that time, the department of defense actually spent 50% more on research and development than the entire commercial industry. So we were just pouring resources down into these things. But it also felt like there was a little bit different of a style of management and Peck and sharer, I think, in their book in 1962, everyone should read that book, by the way.

That's one of the classics of all time when you read it, you're like, oh, nothing has changed. But they said oftentimes, programs got started in that time because someone with money. Trusted someone with an idea. And it was, and they actually said like interpersonal trust was like key in, in that aspect.

Do you still, do you think there's some kind of aspect of interpersonal trust that was going on or different management styles? Or do you think it's really more of a continuation that we see today then there's like a paradigm shift?

Russell Rumbaugh: [00:06:45] I think you can absolutely see the dynamic of interpersonal trust.

I'm just not sure that was really what Trump did there. Let's go back to Harvey's book when he, I love him his point about PERT. I love you bringing it up, but his number one reason for why the player, his system was run so smoothly was because they could ask for however much money they wanted, who was going to say no to the dream weapon that was going to stop the Soviets.

Yeah, they didn't have cost overruns because they asked for $2 billion a year. In again, as you say in 1960s, That is one of the great, one of the great tricks. And that's because we still have the same us political system, right? There were a bunch of veto points. There was disagreement among the services.

In fact, what's different than between now is back then your buddies, the other services might go up to Congress and be like, and that program is stupid, right? You don't hear that very often today. So the greatest critics, military uniform, military officers commenting on other uniformed, military officers.

You don't hear very much. So actually I think it's the other way, but still let's get positive in front of me. Just in space the vice cheapest based operations just today pointed out that the space rapid capabilities office is doing stuff they've never done before. Space development agency. You want to talk about interpersonal trust, right?

That was clearly the baby of one senior official and now is doing super cool technical stuff. And while it's a concept, not everybody will agree with. They're not even trying to win is this concept, right? They're just trying to prove it out technically. So we certainly have those things going right now.

They're not an unknown and yet it helps a lot. How much are we seeing that already with the Marines light amphibious ship, right? How much is that? Because the Navy thinks that's a great idea and how much of it, because the comp coming down, it's like, Hey I need this, let's do this.

Eric Lofgren: [00:08:36] It also reminds me of some of these programs, they're like coddled, like they're special and they're coddle to a degree. But do they just need more money? Cause what we're throwing at the space RCO and the SDA and some of these others, even the Jake, the DIU, these, all these other little ones that are they're sparking up, they're usually in the tens or the kind of low hundreds of millions if they're doing good stuff, like why aren't they getting gasoline poured on it?

Russell Rumbaugh: [00:09:00] First the most important answer to that is I definitely need more money. You should definitely have been pouring. I don't want to pour gasoline on me, but if you're just pouring money out, feel free to send it my way. Everybody's life would be easier if they had bigger margins. The problem is every time you put a dollar, one place, you don't go to put it in another place.

So where are you taking that dollar from? And it's not just political back, right? You can never forget. Engineering is hard. My favorite example, my non-defense example is one of the great cars in my life was my Honda CRX. It was amazing. My father, a little jealous of how great my car was bought the follow-on version, the civic Del Sol, Eric.

It was a total lemon. They pulled it up for two years. This is Honda at like peak Honda, right? This is Honda. When Japanese automotive team is the greatest ever, they have proven that they're the best engineers in the world and they just cranked out a lemon. Not because they shorted it on research dollars, not because they were short on it development it's because engineering is really hard.

Getting that magic in place takes work, let alone all the nuts and bolts that goes with acquisition, like contracting and getting the right people in place, and then doing the hard work of going up to the hill. No, you can't just buy, solve all your problems with money. Although you can hide a lot of problems with money.

Eric Lofgren: [00:10:13] Yeah. I definitely agree with you on the engineering is hard and I think this gets to some of the issues here it's whose decisions are being made and how does that affect the actual engineering decisions on the ground? So I guess in, when I think about, how a lot of science and engineering is done is it, someone's kind of anticipations about what might be, right. and then just going off experimenting and scaling, and there's a bunch of losers, but you pick the winners, Or is it designed by committee, Where you have like a good idea fairy and then that kind of gets added on and everybody signs off when they get their equities met and then it just goes right.

And does that process, that latter process potentially lead to suboptimal outcomes?

Russell Rumbaugh: [00:10:55] Yeah, but so does relying on genius, right? You realize the genius, you rely on genius and you get Howard Hughes. There's a limit to both systems, right? The question is, can we do both? In fact, I wanted to push back.

You pointed out that no longer is DOD, 50% of R and D spending. True, but DOD is still spending as much on R and D as it always was. It's just, now we have a bunch of commercial firms doing it too. And I would emphasize they're not actually doing S and T. That gets a little confused. Google puts a crap ton of money into research and development, but it's all already advanced development.

It is already late in the life stage. It is not fundamental SMT. And that's at one of the companies that comes from like pure thought. We're seeing a lot later in the stages. So while there's a lot more money it is not in beauty does not have as privileged position. It's not the DOD, isn't still shoveling in money, but still you're absolutely right.

I gotta be a little scared when you catch yourself defending the committee system, right? Camel's, I'm not dependent on them, but at the same time, they're bets. And whereas where you can occasionally take advantage of an Elon Musk, which is one of my favorite examples, right?

It's not like the U S military didn't care about batteries. They've known batteries are fundamental to what they do. And they invested billions of dollars into battery research. The problem was they conceived of a battery as one thing. Self-contained and Musk's big breakthrough was not one battery self-contained oh, it's lineup, a bunch of different batteries, and then optimize how they talk to each other.

That's a fundamentally different paradigm shifts. So you absolutely need to create systems that allow for that ingenuity that allow for that innovation. But to think you're going to spend all $700 billion on long. That's not sober either. Oh, most

Eric Lofgren: [00:12:48] certainly not. But that's, what's needed to be made.

And it seems like the department of defense is making all these little bets and we just saw a couple of days ago, there was like this article that was like DOD tech, tourists, not buying stuff, but pretending to that, it wants to outreach to Silicon valley. So I guess there just needs to be an avenue for those things to actually scale at some point, or be able like, so what is that balance?

Like we need we need to walk and chew gum at the same time. But what does that look like?

Russell Rumbaugh: [00:13:14] Yeah. There's a sweet spot. The idea that we're going to get in that sweet spot and stay in it without perfectly like that's crazy, right? Not to take advantage of my space background. But we have these satellites, most of the work has done.

There's gravity whipping them around, but it turns out you've got to do a little bit of station keeping all the time to make sure gravity is doing the work it needs to do to keep that thing

looking around at unimaginable speeds. We're never going to stay in the sweet spot of too little or too much. We just constantly need trying to adapt to it.

But it's doable. Before we say DOD is not doing Silicon valley in my professional life, this is just an unreal example to me. We have these cars, not the cars I own. I'm a single decision maker. And so we can make hard trade-offs and I assure you in my family, no hard trade off has come with.

We should have the high-end self-driving technology where you take the cheap minivan at every turn, because we're a unitary, although it's my spouse and I, we still can manage to be a unitary decision-maker, but if I rent a car. Does it run into the car in front of me, won't leave the lanes. It's amazing.

But back when I was first in the Pentagon DARPA ran the grand challenge, which said, Hey, can you make these vehicles drive through the desert without falling off the road? And the answer was no, nobody could do it. DARPA keeps running it a few years later and you get success. And then the next year, when they move it to urban successes, even faster, they have multiple teams.

When the first try to think that DOD is only on one end of Silicon valley is crazy talk. This is when you break out that that the Google founders were living off a national security science foundation grant during their days at Stanford.

Eric Lofgren: [00:14:52] I guess this, that's a good point.

But here's my view And I call this the boomerang effect because it's we do cool stuff in SNT. There's a little bit more freedom to experiment there and then it doesn't go anywhere. It has to get commercialized. And then it boomerangs back as a commodity that government has later figured out how to buy or make room into its program structure.

But it's not going to like the government seems to be struggling to, adopt these things as they're being rolled out through commercial industry.

Russell Rumbaugh: [00:15:23] I think you're not looking at the total universe there. You're cherry picking some things, no commercial industry is driving forward.

Stealth technology, no commercial industry is driving for, active defense systems on tanks. So there's a lot of things that only DOD is pulled from imaginary into reality. Those tend to be only a handful of things that get a lot of attention or a lot of sustained effort. I think the ages, missile defense system, that's the canonical example not least of which, because it had to weather some skepticism within the Navy, which doesn't mean that the dynamic you're describing isn't real.

And this is there's always this desire to get to leverage commercial, because if you can leverage the consumer, all the work is done to give credit. My, my boss tells the story about when the air force finally decided they didn't need their own telephone networks, that they could live off the civilian telephone network, even at STRATCOM, even an often air force base.

That network requires getting somebody who's going to go up on the plane and fly around while nuclear war happens underneath. But he said, running up to that, there was all this wringing of hands on. Like, how can we possibly trust it to work? How can we possibly do it? It turns out it hasn't been a problem.

Does that mean we need to immediately move our NC three satellites onto a commercial payload? I don't know about that, but it is an example. If you can ride the consumer based, it's going to be better. It's going to be better. We're on zoom right now. It's despite being an enterprise product by focused on consumer, it's just been so easy to use even in the middle of the pandemic, but you're never going to get a consumer-based tank.

And that's why when you get on those military aircraft, you rifle, you walk a ship, it still looks a little bit like it could come out of a world war II movie, even though it's got some really cool stuff stuffed into it. Yeah.

Eric Lofgren: [00:17:11] I guess it. I think you're balancing a couple of points there, I think very well, but I think one of the, I guess macro trends is that commercial R and D is just gonna outstrip defense, R and D.

And if we can't take advantage of the opportunities that, that presents, then that's a severe national security risk, in of itself. And to the extent that you're building potentially new and cool ad-ons to the legacy systems those legacy systems might still just be disrupted, right? If I build a cool new site or some kind of integration with flare on my tank that doesn't mean that these cheap drones can't take it out pretty easily, but the tank is a large weapon system as well.

So it has, and it has room for upgrades and modularity to be something that could defeat those things as well. So I go back and forth on that one as

Russell Rumbaugh: [00:18:00] well. I think you've made one of the key points there and it's about the tape, right? That Abrams turbine in the eighties that take wasn't the best tank in the world.

Great. We literally lost to the bloody German leopards in tank, by NATO tank, firing rounds, the army doesn't boast about this very often, but if you look around the rooms is now clearly the best tank and it's the best tank because they've added on all of that network capability, right? Commanders, independent viewer, the take can go one way, the gunner, the gun can go.

One way the gunner can look a different way. The commander can look a different way. All of which are tied together and can be, and can automatically snap it back together. It is an incredible use of network team, and it's totally dependent on having a massive amount of power to suck up, suck off of the Navy.

You usually get to do this easy, right? Big ship. Usually you can find some, those. You can shove something in the army isn't as successful other places, right? The Bradley the belly suffered a little bit. Cause the reason the Bradley's up on their list before the tank is, but

thinking about how you meld those two together and presuming that DOD either has to do it itself or rely on commercial to do it first, both of those are false, right?

The question is how can we better allow for multiple options? And that is a really hard question, especially given what our political system sends. Hopefully that's sympathetic enough to you there.

Eric Lofgren: [00:19:25] I think my real tagline would be like, how do we provide the department of defense, the ability to manage through real options, and rather than closing off all these options prematurely through a program of record that kind of does it all or joint or multi-mission or whatever it is. I guess my view from Martin Landau and I love Martin Landau from the sixties, but he says when you try to go towards these singular organizational structures with minimal duplication or overlap, you ultimately just lose your ability to detect errors, right?

Because that's like the redundancy and the overlap and the options are error detection, devices, and they also provide you new and interesting options to improve capability. And it gets back to the whole resilience notion that. Started, right? How do you get a resilient system by adding layers of redundancy?

And we've tried to drive down a lot of redundancy throughout the department of defense, because I don't know why it's a good question. And I'd like to get your view on, have we gone too far in that direction or is that just perception as well?

Russell Rumbaugh: [00:20:26] I love your question, not least of which, because you are very elegantly setting up me getting the shell for my paper, which I'm super excited to do.

But one, let me talk about space, right? This is the place where resiliency and redundancy get talked about and we're actually trying to move away from just pure redundancy to resiliency. But space is the only thing where I take it and I put it up and I don't get to touch on again.

We're trying to change that too. We're trying to take advantage of on orbit servicing, but for up until now, and as of right now, Yeah. Once I put that thing up, I just need it to work. And if I needed to work, absolutely. That means a lot of redundancy. How much risk can we take? And that is the question that's that's running.

Everybody has DOD lost redundancy. Your first problem is as soon as you're in a hierarchical organization, you've lost that risk testing. You've lost that error. Correct? And no military realization is going to be anything but a hierarchal organization, it has to be. And in fact, we don't even need to talk with the military.

This is JQ. Wilson's point about government. The U S army is always going to be around. It's not going away. That's not true of the private sector. Things can go away. Motorola went away. How did that happen? What are you talking about? The company that made radios possible, your company that made self service possible.

And it now lives on primarily as patents, Google owns talk about what the private sector could do. You have to remember, there's a whole bunch of universe you don't see anymore because they're dead and they're extinct. And then the public sector, you don't have them. Nothing's going to extinct. We're always saving this thing eventually, no matter how many stupid decisions got made.

And again, I need to be careful with that stupid. I'm not saying that decisions are stupid, no matter how many bets the people made, because they predicted the future incorrectly didn't pay off. So was that error correction ever built into DOD? Does government just can't self calibrate in the same way that the market-based economy can?

. You can add in entrepreneurs, right? It's really fun to watch the, how the hill behaves because they are all a bunch of policy entrepreneurs, but you don't want everybody in DOD to be a policy entrepreneur, or you want some people just making sure our national security is taken care of.

Eric Lofgren: [00:22:44] not really sure how to react to that, but I guess it's also like when I look at them, the military, right? Like the army department. Okay. I think Peter Levine put it pretty well that the military itself is more like an economy than a business and should be running that way. So I don't care what happens to PEO aviation in the army.

I care what happens to the army and their enduring ability to put capabilities into the field. But I don't care about a particular PEO or take home or any of the substructures right. And those things can live and die and they should, and perhaps need more dynamic kind of interactions within there.

Like the markets. Of course we've seen companies come and go on the S and P 500 and that's a pretty dynamic list. And no one would have imagined that when we created the department of defense or the Royal week, like John Kenneth Galbraith was like the man at the time. And everyone was assuming like, oh, we're going to have these big technocratic structures, the bigger the company the further ahead they'll always be in research and development.

And they could not imagine a future with disruptive startups and this kind of recombinatorial innovation that we've seen. And so I guess, how would you react to that? Like that ability within the services to have more, because we're, we have these debates again, like retiring legacy systems and whatever the hell a legacy system is.

There's some kind of yearning for a dynamic force structure in there.

Russell Rumbaugh: [00:24:06] Yeah. Once again, I'm not sure you're allowing enough for creative destruction, right? Sure. In 1950, we look at the big automobile companies and we're like, wow, they're big and they're going to do great things.

They just prove they can do great things in world war two. But if you don't think of Henry Ford as the ultimate startup, as the ultimate disruptor, you're misunderstanding the history of industrial production, similarly

Kodak. They were huge American companies that made the S and P and they're run by 30 because they're unbelievable being disruptive. They're not relying on the fourth generation Ford to run them. They're not relying on a an ossified executive class because there are different kinds of types of. That's the great thing about a market is nobody prejudges it.

That's why it's an amazing dynamic and a very powerful one. What do you do when just your presence is going to interrupt that market? I have somebody who eventually is the decision maker and the only people who's going to judge them as Congress. You're disrupting that dynamic.

I think you've got to, I think you were, you were picking at something interesting. We absolutely create new things, right? The army wants to tell you about army futures command. I just listed off space development, agency space, rapid capabilities office. We have new stuff starting all the time. Good. A job.

Do we do getting rid of the old stuff?

That's a harder question right now. I've walked back into your redundancy question. If we're talking about getting rid of old stuff, aren't we talking about getting rid of the redundant. Don't you want the various stages? Don't you want that?

Yeah.

Eric Lofgren: [00:25:35] That's a good point. You want to keep them around until the new thing can prove out sufficiently enough. There's an overlap period where I still had my flip phone and everyone had a sweet new iPhone. But eventually I got rid of my flip phone. And I went to the new paradigm.

So yeah, you definitely still want the legacy stuff. There's definitely some logic to it, how do you, make room in a finite budget and they just get stuck,

Russell Rumbaugh: [00:25:56] but the legacy organizations, right? Correct. The ones who are maintaining and nurturing, what we're relying on.

You don't want to just burn down with. So not just the stuff, but the people who were advocating for this stuff.

Eric Lofgren: [00:26:08] Okay, so here's, I'll throw it at you a view from Aaron Wildavsky of course, the old budget scholar. And he was also very critical of the kind of programmed budget that we currently have as opposed to how it was previously done.

And he says, Hey, when you look at the traditional way of budgeting, you budget to an organization, that organization has more discretion over the programmatics and the types of things that it does. So if you're a person at the ordinance department, you don't really care. Killing this one type of Howitzer and going for something else, right?

Like your organization is not defined by that previous Howitzer, but when you go to a programmatic budget and then you have this kind of program office followed right fall, the

organization is now following the program. And the program is being predicted and controlled through this elaborate process.

Now the organizations are dependent on the survival of that one system and their identities become wrapped up in it. And then like their own kind of careers are wrapped up in it. And so you get this kind of natural pushback and kind of ossification and they want to stick with what they've known.

So how do you look at that will Dopsie argument?

Russell Rumbaugh: [00:27:16] Keep mine, you've already modified a little bit and you've provided both sides of the argument, right? The value of it. If I say, Hey organization, here's your mission? Here's your money? Just make sure that mission comes through. That's great. It gives them a lot of autonomy.

It's great principal agent. It's great delegation. The problem is once you set them in motion, they just keep coming back and improving the same widget. You asked them to make the first time, how do you provide that autonomy? And at the same time, get organizations to change and move to where you think we're going to go.

Now, you wouldn't talk about the Royal. We who's the we, and what pronoun am I talking about? Who was that? That is saying, oh, you U S military go that way. We can cheat and say, it's the secretary of defense, but you and I are not currently likely to be to be Lloyd Austin's replacement.

So who is this magical weed? That's just going to tell the U S military go, wait,

Eric Lofgren: [00:28:06] sorry. Go which way?

Russell Rumbaugh: [00:28:08] A different way. We created the army. We created the Navy with pretty clear missions, right? And now there's a complaint. They're not going in the right way. You offer both sides to adopt, right?

You want to empower somebody by giving them a clear mission with the resources to achieve their mission, and then just letting them go forth and do great things. But if you do that, they're going to probably stay in the same direction. You started a minute. What if you want to change directions?

You need a whole new organization or can you provide new guide?

Eric Lofgren: [00:28:35] Yeah, That's a good question. I guess my view of that was you more or less had budget ceilings for major organizations who had a general mission, right? If I'm a bureau of ships, I know ship construction is my thing. Whereas like the bureau of ordinance or the bureau of aeronautics, they have their kind of defined things that they were working on.

And they would constantly be looking for also new alternatives and do it through market research, finding out what those new things are and experimenting with them and scaling them with when possible. And they had that kind of, I love the old school, general board

collaborative process that they had there in the Navy to move away from battleships and towards the aircraft carriers.

I think there's a lot of wisdom in that approach and also wisdom in the research and development board in the munitions board of the 1950s. But yeah, I think it's the people themselves, that are working on it that are close, that are the ones best able to judge what the future trajectory might be because they want to contribute their creativity, knowledge, and skills to help push forward themselves.

I think it's mostly a kind of collaborative overlapping network where you have. PEO C four ISR and PEO aviation and PEO integrated warfare systems or whatever they are. They're all like moving in the same direction and working with each other presenting each other with new novel options or opportunities and seeing, what happens in using that social process to neck down or create, or to scale up.

But, that's probably a little bit of a fantasy, more than a reality, or like an actual approach. But I think there is something to learn from those old kind of boarding committee structures.

Russell Rumbaugh: [00:30:08] You ended a little too strongly for me there. W what's talk about what was going on contemporaneously at the same time.

This is when the the us air Corps is taking advantage of the Southern California aerospace industry, right? They, the air Corps is not creating. Oh, arsenals. It's not creating a bureau of ships. There is no bureau of airplanes. It's Hey Collins, what's your crazy idea. Yeah. Yeah. That's interesting. Let's see what happens.

So contemporaneously, we had the same two different dynamics and let's plunge into this debate directly, Eric, right? I I asked her to let me come on because I enjoyed his budget paper from July of last year. So much. I learned a ton about he's now referenced the twice where he's wanting to talk about the boards, the pre DOD way that we did collaboration by lots of committees, not unity of command, but rather just get people in a room and see if they can share notes and come to a common purpose.

And he did it. W what I found really compelling and had just not seen elsewhere was how we talked about how the modern book. System, what we know of as appropriation titles were actually a reform, right? That they were reformed to try to get more like things put together to make it easier to judge.

So I tremendously enjoyed your paper, but Eric was making a much, the same argument he's making right now, which is running at odds with the argument I made in my paper that came out a few months later, a fragmentation of DOD, which was like, oh man, we keep doing budget and organization. What do I mean by that?

We take an organization and say, this is your mission. And here's your budget by which to achieve that mission. Eric's already given a defensive why that can be. But what I noticed is looking back in 2020, we now have a bunch of different animals and DOD. We're used to thinking of it as the three of the four major services for the three major military departments.

And then this other thing, this thing we call the fourth estate, a bunch of weird animals, mainly defense agencies, but also missile defense agency also SOCOM, also defense health agency with its own $60 billion budget. And when I looked and I was like, oh, wait a minute. I'm thinking of it as purely in the MILDEPs.

And also not purely the port, the state, that's not the right way to think about what's going on right now. Because SOCOM's budget, isn't just MFP 11. It's also the personnel costs that are paying for the people who are wearing not SOCOM uniforms, but service uniforms, but who really belong to SOCOM.

Similarly, what about the guard? We now have a four-star general as a member of the joint chiefs of staff overseeing pots of money, distinctly allocated by Congress, not for the army, but for the guard, not the air force, but for the air guard. Again, we have a fairly distinct organization with a barely distinct budget.

What about intelligence? The military forget the national intelligence program. The military intelligence program now is a very clearly delineated pot of money. And we have a single person under secretary of defense for intelligence and security. Who's responsible for overseeing that. So we've got, we've done this multiple times where you've said, Hey, this is really important.

We need to have somebody focused on it and we need to give them money to do it. That's the basic argument of what has happened by argument is that's happened more than we thought. Eric thinks that might be a good idea, right? Or am I don't mean to put words in your mouth. You tell me.

Modify tell me if I've got your argument right. Or how, or if you would say it slightly different,

Eric Lofgren: [00:33:46] sure. Appropriation titles might be segregated by these major organizations, but the real problem is that we have programmed line items at the nth degree underneath them. And that process of getting new line items relies on prediction beyond our means.

And it creates these process long lead processes that not only box out commercial, but that also lead to inferior weapons choice. So I think if the programming that still underlies the whole thing, but in, in essence, I have nothing to disagree with what you said. All of that is true.

Russell Rumbaugh: [00:34:22] Yeah, that was all a long-winded answer to your old Lawsky quote. Okay. Yeah. The easiest way, the way I like to do it is, how much did we spend on nuclear weapons? We're actually not too bad. There's an official answer. That's probably relatively close to the real answer, but it's still not everything.

Because we don't have an organization that is solely dedicated to nuclear weapons, a residual of the 1950s interservice rivalries. Whereas now if you asked me how much did we spend on special operations? I have a pretty hard number for it. I gotta do a little swagging to get those personnel costs, but there is a distinct MFP 11. We just did it with the space

force, right? How much did we spend on space? But the most important thing to go look at is the $17 billion that space force is in charge.

Eric Lofgren: [00:35:03] But I think one of the real problems here is that you can never. A unit functional, and this is the, this was the problem of the programming concept in the first place was that you can never have a unit functional organization, that aligns perfectly with a programmatic outcome. So for example, if you say nuclear is now a program and everything sits under that, and there's like a program or like an organization to go get, that will then, so none of that nuclear stuff will be in SOCOM space force, anything in space. That has to be drawn out, but then space doesn't include the total cost of what's actually in space.

Right? And then you start seeing this dis-aggregation across everything. And so there, in my view, there's never a perfect organizational or there's never a perfect budget structure or analytical structure. But things collapse back into the organizations because no matter what you have to administer by organization is the same thing with accounting and firms.

They have to account for their business units, their people they're objects of expenditure. And then the programmatic thing is often kind of ad hoc or layered on top of that. And I think organization, like the budget should meet with what the administrative hierarchy and structure is.

And then the programmatic should actually be done not through the budget, which is a forward looking plan, but we can tag these things in the back, right? When I have an expenditure for, the N and three communications satellite, I can say that's nuclear it's space. And I can cut and slice that in a million ways and having understanding of where the money went and doing that program analysis.

That was always the land of the comptroller in the past. They did that type of program analysis and it fit with the comptroller because the budget at that point was mostly an incremental change to existing organizational plans. But when you say. Oh the budget is now a forward looking plan of what will be done in the future technical objectives and programs.

Now, like it has to take on all these additional duties and roles and forward looking and that's drawing stuff away from the organization. There's just a little bit of rambling from my point of view. Yeah,

Russell Rumbaugh: [00:37:06] but it's good rambling or it's good rambling. Let's just pull out a few things there.

So first of all I completely agree with your point about the comptroller has been one of the most powerful and useful tools, especially for someone like the secretary of defense. I'm just not sure that was always backward looking right. When the new secretary of defense in 1949 gets his three assistant secretaries.

It turns out his public affairs, his legislative affairs person can't really tell them what's going on, let alone how to get to where he wants to go. But as comptroller. This comptroller has some insight into what people are doing, can array it and can allow the secretary to influence what happens in the future.

So I'm not sure, I quite agree with your sharp break between backwards looking and forward. Looking in fact, even today, one of one of my conclusions in my big paper was the secretary or secretary ruined quarters, powerful powerfuls. We might like to think he's hobbled not away, but let's first emphasize how powerful the secretary of defense is.

And one of the reasons he's powerful is because he does have the tools, including today's comptroller particularly experience pump tour, second timer right now with Mike McC ord in charge who can, and and our buddy old buddies at Cape who can go and get you an answer about, just about any question.

The only problem is it's almost certainly an ad hoc question, right? Because the just ongoing work is just keeping the current inertia going. So only when the secretary is interrupted and is willing to put the effort into going to discover that question. You can do an amazing and us as well, frankly, many cabinet officials would be jealous of that ability.

But since the secretary has had that ability for many decades, it's easy to be like, oh man, the secretary has a hard time getting all of these different organizations to shift direction all at the same time.

Eric Lofgren: [00:39:01] Yeah. I would push back a little bit cause I'll bring up Wilford McNeil who was the first comptroller for forestall and then for pretty much the remainder of the 50.

So the first six secretaries of defense, I believe had him as the comptroller. And I'll just bring out a little quote here from his 19 72 interview. He says that the guy asked him, what was your view on unifying the armed services into one department? I was against it and I'm still against it, sir.

This over centralization is not healthy. and he kind of goes into this a little bit here. It was also Frederick Mosher who was, a budgeter over in the army air forces. He talked a lot about this, what the controller was doing. And program analysis was all about what is and what was rather than what will be.

And those were his kinds of words. So I'm just concerned, who is making the predictions, we know predictions. And when we look at Peck and share right there, there are two principles, were one, the constant presence of uncertainty and to the non-market nature of defense acquisition.

And those two things are, think are like the perfect starting points for any serious discussion of the acquisition system. But I really want to get to this kind of fixation on the budget as like a measure of oversight, because I don't think it is. And we just had a representative. Seth Moulton had a nice little Hudson Institute event with Dan pat.

And he says in terms of oversight, The truth of the matter is that the current system doesn't really give us the oversight that we need. Anyway, we're circling the drain with the system where DOD describes in intricate detail, the way that it isn't buying effectively and then Congress is signs off on that, but never really gets us to whether we're really being agile or fixing it or doing things better.

So I'd like you to respond to that, future versus kind of past orientation of the program analysis.

Russell Rumbaugh: [00:40:49] So I'm not quite accepting your premise that again, I don't see the stark break between the past and the future. Let's first pause and emphasize how important that you have gone to the fundamental question.

What are we going to ask DOD to do next? Is it fight a war with China or wait, is it federal war with Russia? Because those are probably different words. Oh, where in China we're going to fight it. Oh, Is it going to be in central Asia or is it going to be on the coast or wait a minute. If it's in central Asia, is this head-to-head at all?

Or is this through proxies much like we saw in the cold war. It'd be really nice. If you could tell me those answers. Now the DOD would do a lot better planning for it. If you could tell them exactly what they're going to do and when they're going to do it, that uncertainty is fundamental, right? Not only is the uncertainty fundamental, right?

We just don't know what the future is. We can have different takes on what it is. We can have different opinions about what actions we can take, will influence the future for better. Those are political questions, and that is at heart. These are political questions. And how we, who we give budget authority to who we give organizational power to, we are providing them the political power to help make those decisions.

Can we optimize that to get the best question again, we've got this problem that you and I keep using the word we, but it was the wheat, the nation of the United States. Yeah, that's great. Let's all get together and decide what the right answer is. It turns out that's a little bit tricky to do it 330 million people.

But it's what we've all been chasing. And in fact, let's go ahead and do a little brief budget, right? You've done a great job talking about or exploring the sort of pre-programmed budgeting. What DOD does is it's basically program budgeting, right? Since McNamara came in and created PBS, we have this program budget.

We're not just gonna look at the inputs. We're not just gonna look at appropriation title. We're going to look at. Outputs. We're going to look at what a F 16 fighter squadron costs before that was the appropriation time. Let you point out was a reform by itself, but those were inputs, right? But instead of talking, let's talk about all the money that goes into R and D army.

Let's go, let's talk about all the money that goes in the middle of construction arm. Since then, we've already had a full on third generation performance budget, which says, ah, I don't even care about your output. I want to know about your outcome was fortunate enough to be on the budget committee. When the Congress passed the the modernized GIP rug, government performance act, and government performance and results act.

There you go. The results, right? Outcome, not output. And that's 16 squadron is still just an output. What outcome do you want that F 16 squadron to achieve do you want them to

drop bombs on Uday Hussein? Or do you want them to penetrate the Chinese interior so that I'll put tell me the budget committee has already a decade ago.

I'm not sure anybody thinks performance budget is really carried. The day duty provides a lot of piece of paper describing how they're meeting performance objectives, and that doesn't seem to help prep molten very much. We are on the verge or, there's hope for this new model, a digitally based model.

And that's what you were getting at. In fact, you were still, you were talking about tags, right? When I have my AHF, I don't have to say this is an NC three system because it's not an, it's just an NC three system. It's also a protect tactical Satcom system. It also has a bus. We can hang other things on it.

If you want. Trying to simplify it into. One thing is hard to do that gets even crazier with a tank. You know what they've been using tanks for gates, and it turns out it's really hard to move 70 10 gates. You have all your high-school bastions and tank moves back. Probably not how you design a gate from the first place, but man really flexible and really agile.

Can we with digital tools that, that rich tapestry of all the things they can do, maybe it'd be great, right? It's scary though. It's scary because you only get that. If you open up the data to everybody to look at and form their own opinions, the deputy secretary of defense just signed out a memo saying, Hey.

We're never going to get here, unless we all recognize that all of the data in DOD is a shared enterprise asset, right? There's not air force data. There's not army data, there's data, and we all need access to them. That's great. And that offers amazing hope. And I'm super excited to watch this next iteration.

As we try to leverage that data, allowing lots of people to get different looks, different analysis, let a thousand flowers bloom. It's also scary for somebody who. He's currently in charge of an organizations. Like I already know what the answer is. I finally got everybody to agree to, which Congress has now agreed to this for five years.

Please. Let's not crack this decision back open, we're never going to get there. If we just keep reopening the decision, please just let me feel this thing. And I swear it will be okay. That's where you get those tensions. And that's why there's always those scenes you were talking about earlier.

Eric Lofgren: [00:45:49] again I just feel like the budget as a document, as a thing is very different than accounting or obligations right now they're linked, but one is fundamentally Hey, we're going to give you this money to go do something. And the other is this is where I put it. So I just feel again, we could, if you open up the aperture in terms of portfolios on the budget side then you could apply some more, rigor on the back end of where the money went.

, I'm not saying there's past, does it inform the future of the future? Shouldn't inform our path or like what we're doing today, but you should be able to through rigorous analysis of

what you're actually doing to be able to see where you're going and those things work together.

But you don't need to get the detail into the budget necessarily.

Russell Rumbaugh: [00:46:30] Oh, we're going through this right now with space, right? We've just had a dramatic two weeks in a row. The chairman of the house armed services committee asked general rim and Hey, we have charged you with taking us into the future And General Raymond says.

It's yes, I know that. And we're moving to the future right now. In fact, I have created this body called the space force analysis center that is going to take us into the future. The next week house appropriations committee goes, Hey, we're not sure if we're sold about this slack thing.

We're not sure they're going the right direction. So we're going to take all their money. We love what they're basically. SSDP so here's an extra $10 million press STP, but we are not sure SPAC is going in the right direction.

It is those line items that are where you work out, where w where should we be going? And in the U S system, lots of people get to vote on where we should be going. So can you wish away those disagreements? I'm not sure you can write. I'm not sure that's the fault of the inherent in the budget. I think that's got something to do with actually disagreeing about where we're trying to go.

Eric Lofgren: [00:47:29] I totally agree with that. I would actually argue. And I think this is the historical sort of perspective as well that the budget had always been seen. And the weapons choice process had always been a political process. And through negotiation actually in a, usually it was management by exception, that kind of bubbled up to the top. And then you just had people ably defend themselves almost like in court, and decisions were made at the next layer up, but the whole point of the programming system was to get away from that completely. It was supposed to be neutral, third party experts that were going to be able to determine objectively what the correct programmatic course in the future would be.

And so it was the whole intention was actually, and the way that the budget is structured with programs was to get away from the political process rather than embrace a political process. And I think the political process always has to win. Like these questions are always ambiguous and there's always interest involved.

So the, of course the political process will always seat back in, but it was never the intent. And so we're living with a structure that was never intended to do what we need it to do.

Russell Rumbaugh: [00:48:36] Eric, why do you think it was not supposed to be. W because that's what they said. They said, Hey, this is objective nature animals.

I've got a spreadsheet.

Isn't science. That's crazy. That's just his opinion. Just because it's got a lot of math that confuses me. I've got a different opinion. It's not that one from the get go. They said, Hey, wait a minute. This isn't impartial, this isn't objective. This is his opinion. Just because he threw a lot of figures at you doesn't mean he's right about the future of warfare.

So from the get-go, the joint chiefs knew that system was not some neutral objective. What did it do then? What did it do? Most importantly before that system, the number one way to judge the value of a military capability was do these guys have 40 years of experience in the military? Think it's a good thing.

These are world war two, hardened combat blooded generals. They have excelled at managing larger organizations. They have excelled at combat. Obviously we should defer to them, except the problem was all of their answers, where it will, the Navy should build ballistic missiles and the air force ballistic Muslims, and the army should build ballistic vessels.

What McNamara and his PPBS did he create a objective way to evaluate the budget? I don't know. He did create a way to evaluate the budget that did not rely on 40 years of military experience. And that changed where the political power sat. So was PPBS important because it was so brilliantly analytical or was it important because it changed the political basis by which we made decisions?

Yeah,

Eric Lofgren: [00:50:15] I would still push back a little bit. We know for a fact that McNamara hitch and Enthoven, ES Quaid, David Novick, these guys literally said that stuff, right? Like we are getting rid of these opinions and judgments and we are literally going to objectives, really optimize. And if you look at economics at defense in the nuclear age, they have indifference curves and production possibility, frontiers and optimal allocation between strategic defense and bombing and all this stuff, which is absurd to modern ears, but they actually thought it would work.

And they had good reason to maybe think that it would work. So I don't actually blame them for not having the foresight. But then of course, Laird came in with. With a participatory management and he took it back out of their hands and put it back into the 40 year olds, or back into the services, but they still use a lot of the same processes, those processes that still exists from the systems analysis age to just have new names today.

But it's the same thing, essentially. And I guess one of my issues is like the drive that the air force started with. And then that resulted in the PBV was such that it created a structure where you had folks who were not responsible for getting the work done, but making programmatic decisions.

With potentially not the best information available to them. And then handing that off for basically execution. And then you just have contract managers. So you, so it perpetuated and indeed made worse this kind of rotational aspect. And not having these long tenured folks, like a Bernie Schriever like, Admiral Rick over like a red Ray board, I'm in charge of what are essentially Major engineering development programs and challenges. And so I

think, when you didn't have that program structure, you put the decision-making in the hands of people who know best. And then the people who are higher up the oversight view the outcomes of those actions.

It's hard to say what someone should do, but when they actually are doing something and you're seeing that. It's much easier for an outsider to weigh perspective. And definitely during those forties and 50 period, they always had, they brought in scientific advisory committees and all these other people to come in and give like third-party looks right.

It wasn't just like distrust the general. So there, there is some pushback.

Russell Rumbaugh: [00:52:33] So Eric, can we harken back to the start of this conversation? Yes. The special products office admirals came in and said, we're not doing making these decisions about Polaris blend. We're making these decisions because PERT tells us what to do.

You were skeptical that PERT was really an objective neutral analytic way. Correct? Where are we trusting those admirals? Because they had 30 years of experience or because they had this management tool per.

Eric Lofgren: [00:52:59] We trust it. Well, To get the money out of Congress, it was PERT, but they weren't using PERT. They just use that as the quote unquote pizazz and the whizzbang tool. I love their old 1960s terminologies, but the wizbang tools that would get oversight, quote unquote, off their back and open up the spigots. So I, but that was just the, I guess the mantra at the time, people believed in that.

Russell Rumbaugh: [00:53:23] Huh? You mean kitsch, Quaid all believed about PBS. You're trying to have it both ways here, right? I'm not saying they didn't believe that the whole point is they're looking at things. We know how much should we be relying on long-range strike and how much can we be relying on tried and true weapon systems.

There's a debate about what we should do in the field. There isn't an analytic answer. The only way we know that is tell me, when we find out what we actually did, you can't even say what war we fought. Cause there's a decent chance. The next thing we're not military do, isn't actually a war.

Certainly not the war as we imagined. The war I want you to fight is in north Africa, not actually normally to start, please spend five years there or three years there first.

Eric Lofgren: [00:54:03] Yes, definitely. I mean we've, we haven't even hit any of the questions that we've had to go through here, which is, and I think that's great cause we've had a good conversation.

But it is an interesting thing, right? Like it's not like programs never existed. Like of course there were debates at appropriations hearings on programs, even if the program wasn't controlled through the appropriations themselves. And we're actually in this weird phase, I found like a very interesting like interchange between hitch, where basically the Congress was like, why don't we just make every appropriation of program?

Like, why are we going through this weird convoluted reprogramming process where they were actually doing major reprogramming. In big old batches. And they were like, why don't we just bring them out into the open, make them appropriations and hits just said, OMB wouldn't let us. And I was trying to track down their like letters and figure out what the problems were.

But eventually, so that's where we got to the issue. I think program analysis will always be important and you'll make those incremental adjustments to organizations who are probably cognizant for these things. But I don't know. I still, I don't have a good, I don't have a good answer. I still don't know because mine is a little bit of a wish and a prayer.

And I look over to, commercial industry. It's like, well, how do major agile organization? Actually go in a direction and it just seems like they just have people with a lot of standup meetings and this matrix organization, and I'm like there's nothing really special there.

It just seems like really hard to do and you need like good people. And I don't know, it would be nice to experiment with that. And that's what we saw. So I'd like to get your opinion the SAS, the Senate armed services committee is interested in looking at this PBE reform is what they call it.

The planning, programming, budgeting, execution, but really the funding process. And I think a lot of that came from like the national security commission on AI. They were asking for portfolio type stuff and the same from section 8 0 9 panel. You had a nice paper. We, I wanted to get into it.

We might have a little bit of time to talk about the fragmentation and you've brought that up. The fragmentation of the department of defense. What would you like, what are your concerns like, or what are your thoughts about portfolio constructs? And what the Congress seems to be pushing for here, which seems to be, taking a hard look at this PBB for the first time, since the sixties, of course, we've had Goldwater Nichols and 2003, but those were, I don't think as sweeping as they're expecting,

Russell Rumbaugh: [00:56:23] we've been experimenting with portfolio management for 40 years now.

That's what's so comments, you're a special operations. Here's what we think special operations is you commander. So coming you're in charge of, that is what the rise of the MIP is. My portfolio is. Military intelligence and you undersecretary of defense for intelligence and security are going to be the one responsible for looking across the portfolio.

What's important is both of them created budget tools that allowed them to actually influence where the money went. We just did a space force, time to stop thinking about spaces, all these different things. Let's try to consolidate a single portfolio called space and make a chief space operations.

So to some extent, I think we're a long way along this path. I found a joint force quarterly article by the former chairman of the board, Mike Donnely, who I would point out eventually

became a circus secretary. And so might have a little inclination to favor the military departments, but he was lamenting Goldwater-Nichols.

It's Hey, we've got all this idea of joining. This is going to be great, but keep in mind, you used to have these organizations that were responsible for making everything. And every time you take away from that, these are these organizations called the military department. Every time you take away from that, you have somebody taking their eye off the seat

and that could lead to things. We don't like. Absolutely what chairman down there. A secretary Donley soft pedals there is, was Goldwater Nichols justified in saying, man, the army really looks at things only from a land perspective. And the Navy only looks at things from an SI perspective. And yet I rarely have a problem where the president goes.

You don't need a sea solution. Almost always. The problem that president faces are not domain specific. So that tension is fundamental. I love portfolio. If we could get rid of get rid of all of our existing organizational structure and only use portfolios, I'm for it. It seems a little rash to get rid of some of our organizations that have been around for hundreds of years.

And I think that gets at your question about what's the difference between the U S military or DOD or the us government in general and those private sector, right? They can do that. They can fund the mentally realign organization and start moving in a certain direction. Just don't forget that everyone's tall, old role or gives up a 200 year advantage and becomes the patents for group.

There is a risk to that. Don't forget what the universe of cases you're looking at. It's not just the winning companies right now. It's the companies after they failed. It's the companies that got sold off because the bet was wrong.

Eric Lofgren: [00:59:02] Can I ask why do you think there would be a major reorganization with portfolios?

Cause my imagination is just consolidate portfolio elements around the existing program, executive offices, laboratories, and other like lifecycle management centers. And so there's no reorganization. It's just we now have our money and we're able to flexibly allocate it where we think we get the highest value or return

Russell Rumbaugh: [00:59:23] sure.

Matrix organization. Have one personal destruction and have another person looking from the perpendicular direction. Yeah. Great idea. Aerospace is one of the best cases of matrix management I've seen. What happens when your portfolio champion disagrees with the chief of staff, the army about where to move money?

Eric Lofgren: [00:59:40] What would happen? The, the chief of staff is ultimately the boss, right? So like my view is not all discipline has to come through the book. discipline that guy through the administrative hierarchy. Oh

Russell Rumbaugh: [00:59:52] yeah.

Eric Lofgren: [00:59:53] If this is a big issue and there's big disagreements and the general is just look, I'm going this way.

I'm a Senate confirmed PEO, so I should have pretty good flexibility to make decisions, but if I'm just not getting on board, I'm going for this mission. And we know that the army has claim over it. Let's just say and my chief of staff intervenes, and I refuse, why am I still there?

Russell Rumbaugh: [01:00:16] So your portfolios are only within mills within military services portfolio is don't overlap the services,

Eric Lofgren: [01:00:22] a single portfolio overlapping multiple servers. Yeah. In so far as so if you look at SOCOM and they're like a portfolio that does that, but my imagination is that the I guess it, or if you make the, COCOMs make them some like beef, your portfolios, and we've seen with the kind of European and Pacific defense initiatives, it's not really theirs, but you can imagine that if they had some more.

Capability to do the road networking or whatever onsite they could also be. But in general, I would think that no the services like the would be a multi-service one, that's an organization that would be a portfolio and it currently fits. But like for the most part, they would be separate as like the current organizational structures are delivering to a joint war fighting in the COCOMs.

Russell Rumbaugh: [01:01:04] Great. What, what happens. The chief of staff of the army and the commander of central command disagree with each other about what the joint warfighting constructs.

Eric Lofgren: [01:01:12] I'll take a quote from John C. Rice who just amazing book, the management of defense on troublesome issues where sharp differences occur among subordinates, no substitute exists for the consideration of opposing views.

Ably argued. The secretary must be able to examine the proponents carefully convinced them that he is familiar with the consequences of the decision and is intolerant of superficiality and is willing to use his political power fully if necessary in resolving the issues.

Russell Rumbaugh: [01:01:39] It's great. And one of the things that has happened about the reforms is the secretary of defense does have the authority direction and control to make those calls. On the issues that come before them, but it turns out there's more disagreements in the department of defense and secretary of defense has time for, and that's a knowledge problem.

Eric Lofgren: [01:01:58] I hear you too, because it is a hierarchical organization, but like one of the problems is , people are limited in their capacity to understand and have attention as well. And so I'm always trying to consider, you know, the invisible hand context, right? Like how do we using disperse knowledge self coordinate in such a way that we actually arrive at better decisions.

And sometimes it's just going to have to be through straight up administrator. Right or having these multifunctional, like committees or other ways of communication where

people rely on each other, nobody, each other are doing. And then when those disagreements bubble up, then you handle them one at a time, but I'm not really, I don't have a perfect answer.

I just can look at history and look at how other countries do it and just be like there's some wisdom there.

Russell Rumbaugh: [01:02:42] And again, that's the great promise of the new digital tools, right? Y space force is trying to be the first digital service of that gives you the flexibility to keep looking at things from many different perspectives.

Here's hoping Eric, here's helping, we're getting to the point where the tools are so adept and agile, that no matter how many disagreements we come up with, we can very quickly access all the data, put the irreconcilable disagreements about the future in front of a decision maker and get a quick decision.

Here's hoping that ever adjusting debate is finally going to come.

Eric Lofgren: [01:03:15] Yeah, maybe you're the rational, the rationalist here on that front, there was one instance where someone was saying like, Hey, we used to, like, when we found a defect on the line or something, we had an issue in the engineering.

We have to send it up through this configuration management system. It goes to the top and then it goes back down and eventually someone will come look at it and they just decided. We're just going to use Snapchat and I'm just going to snap a photo. And then like things just moved much faster.

So maybe there's some hope for like digital tools to aid in a decision maker, being able to affect himself better and go here and, a more complex organization. Cause we always get into these bouts, right? We have better and better tools to manage the complexity, but then the complexity is running away from us.

Cause if you look back at the time, like in the fifties or like IBM punch cards and we're going to inventory every machine tool. And then when the Korean war comes, we can just like agilely distribute them to exactly where they're needed. And then it was like the complexity out ran that tool, but it was a good tool.

And like we, we keep going back and forth

Russell Rumbaugh: [01:04:14] on it. The problem is the tool creates complexity that you perfect. When I have to call up my configuration management that's a lot of friction. I only do that when there's a real problem. What about those times when I'm like, eh, I don't know, should I call or not?

Oh, it's just a snapshot. Let's take more of those. But the number of problems submitted through configuration management versus the number of problems submitted through Snapchat, almost guarantee are not the same. All of us who live digitally during the pandemic are aware of, oh wow. All these digital tools are great.

And there's a lot more meetings. People want me to attend when I don't actually have to physically get to their meetings. So we're living through that proliferation. That's the question I there, there's some really positive reasons, right? We can just do more. We can see more complexity. That's a amazing and awesome opportunity.

What I wanted to flag was it has a downside. Yeah,

Eric Lofgren: [01:05:06] no, I agree with you. And so we've had a pretty interesting discussion here. I wanted to give you a chance. Is there anything else that you'd like to end on or is there any kind of other points of view you'd like to bring into the fold here?

Russell Rumbaugh: [01:05:19] Other points of view after an hour after talking for an hour, we could pull off any of those and keep going. No, I just want to thank you, Eric. As this conversation demonstrated you have a great command of history and are trying to bring that to these modern resource probably where it's an exciting time to be a part of defense.

It's super exciting time to be a part of space and the defense dynamic with these new possibilities with the DEP sec Def variety memos about the potential for leveraging data. Here's hoping we're about to sail into a whole new world.

Eric Lofgren: [01:05:53] Russell Rumba. Thanks for joining me on acquisition. Talk

Russell Rumbaugh: [01:05:56] big, sir.

This concludes another episode of acquisition. Talk, if you have comments, interview recommendations, or just want to chat, please contact us@acquisitiontalk.com. Thanks again. And until next time. .