

New approaches to intellectual property with Babak Siavoshy

[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.

[00:00:36] **Eric Lofgren:** I'm talking with Babak Siavoshy vice president and general counsel of Anduril industries. And he's recently wrote a thoughtful article on intellectual property and defense contracts. And that's what we're here to talk about today.

[00:00:48] Babak. Thanks for joining me on acquisition talk

[00:00:51] **Babak Siavoshy:** very happy to be here.

[00:00:53] **Eric Lofgren:** Cool. So I wanted to set up this conversation with the context as you did in your article. And so everyone, always we're talking about commercial industry research and development is now outpacing government used to be over a third of total, R and D, and now it's like 3%, but then the other side of the coin is also intangibles, right?

[00:01:12] The rise of intangibles. In past firms like Ford, most of the value of Ford was like, in the physical equipment, the capital, everything on their balance sheet and the earnings, but today a lot of value is wrapped up in enterprise software, data, product design these things that, de correlate from those traditional tangible goods.

[00:01:36] So can you just start with, like software is eating the world bring us up to speed on this phrase and what's and Anduril's thesis behind what they're doing.

[00:01:44] **Babak Siavoshy:** Yeah. Like the term software is eating the world comes from a blog post. Marc Andreessen wrote in 2011, marc Andreessen, a kind of venture capitalist.

[00:01:53] Who's been very influential in the business. And the point of his post was that a lot of things that we think of as hardware problems are actually under the hood software problems and. Post is born out through the development of

kind of Silicon valley taking over many other industries that weren't thought of as a software industry is if you look at what Netflix does, what Google does today what some of the large software companies do apple, of course they're building hardware and there's a reason why the iPhone was built by a software company, not by a phone company.

[00:02:26] There's a reason why the Tesla is built by the most advanced kind of consumer car we have is built by Elon Musk and not by Ford. And it's because really the underlying engine of a lot of these technologies are communications software, et cetera, even when the technologies themselves are physical things that you can touch, what makes them work and what makes them work well, It's this software backbone.

[00:02:53] So what does that mean? Does that mean you don't need great electrical engineers, great hardware engineers. No, you need all those things, but the design philosophy is more the software driven even the way you pick your sensors, the way you pick your communications modules and so on. It's very much software driven rather than hardware driven.

[00:03:13] So you need both great software and great hardware, but I think there's been a shift in the commercial space and kind of the software considerations taking more of a driver's seat and the hardware considerations following as opposed to the other way around. And so what that means in the defense sector is that traditionally in the defense sector, you've had shipbuilders and aircraft builders capturing most of the defense budget and making all the really cool stuff that, all of us who like military technology are into.

[00:03:43] And we haven't seen the same shift we've seen in the commercial sector where, you know, those traditional hardware providers have been displaced over time by software providers or software focused companies in the commercial sector. We have not seen that. Shifting the defense sector. Instead, what we've seen is the same ship builders and tank builders and aircraft makers trying to do software and they haven't done it well.

[00:04:07] And I think there's general consensus that, that, that model isn't working. And so when we say software is eating the world in my blog posts, I started by saying look, Marc Andreessen was right. Software is eating the world. But for some reason, that prognostication has just not extended to the defense sector.

[00:04:24] And I think my claim ultimately is that's had some negative consequences or has had some costs. And those costs are that the defense sector

is behind the commercial sector when it comes to certain kinds of software defined technologies.

[00:04:35] **Eric Lofgren:** It seems like at Anduril you guys are actually building out towards a lot more hardware. You guys have bought several companies like area one, their air launch effects. You guys have a unmanned surface vessel for Navy stuff. Did you want to just give us a little flavor of that? You also had a nice blog post Anduril about building out like a factory so did you want to just talk about how you're moving from the software into the hardware?

[00:04:58] **Babak Siavoshi:** Yeah, and I think it's this question of, we build a lot of things that look like hardware. We bought a, as you noted, we bought a robot submarine company called dive there. They're awesome. We're integrating their products into ours.

[00:05:10] We bought area I, which was a air launch defects company swarming drones coming out of black Hawk helicopters, taking out air defenses, those sound like hardware problems. Those are software problems. So what I mean by that is that. The physical items like my iPhone that I'm holding up is hardware.

[00:05:29] There's a lot of very innovative hardware and electrical engineering that goes into the development of an iPhone. However, what makes the iPhone kind of pathbreaking path making an interesting is the operating system and the software on board and the same with air launch effects.

[00:05:45] We're talking about autonomy. We're talking about artificial intelligence. We're talking about sensing, you're talking about network defects. We're talking about, dynamic rerouting of missions. We're talking about expeditionary capabilities that work at the edge.

[00:05:59] We're talking about edge computing, which doesn't need control from us command center. We're talking about true autonomy that doesn't require people with joysticks. To build things that do those things including to build hardware devices that do those. You actually need very good software engineering and you need to design those hardware devices with software in mind first.

[00:06:19] And Anduril on its face looks a lot like a hardware company. We built towers, we built drones, we build submarines. We build, we're going to build vehicles. We're going to be in every domain. And the things we deploy are

going to be hard. They're going to be tangible and you're going to be able to touch them.

[00:06:35] But the way that we're distinctive and different is that these technologies are going to be software defined and hardware enabled rather than the other way.

[00:06:45] **Eric Lofgren:** Can you talk a little bit about how, that software native aspect of your company actually makes you structurally different potentially than like a defense prime.

[00:06:55] you know, software firms tend to spend 10 times more on internal research and development self-funded development type stuff than defense contractors, so I'd like you to comment on that. But also note that I remember seeing stats back in the 1950s where the aerospace companies were putting 20% of revenue to internal research and development.

[00:07:15] It just seems like that's falling apart. What's the difference today and why maybe also, why did the defense industry change over that time?

[00:07:21] **Babak Siavoshi:** Yeah. I mean, Those are two, I think those are two separate but related questions. And so I think inherently, if you're investing seriously in software developer, and you want to win on the strength of your software, then you're going to have the same kinds of capital expenditures, the same, not exactly the same level but same order of magnitude of capital expenditures on, mostly OPEX on software, then you would on hardware.

[00:07:49] So you're going to spend a lot of money developing software, and I don't think the department of defense has wrapped and the traditional contractor base has wrapped its head around that. Then I think, why is it that in the commercial industry, enterprise software companies, consumer software companies that there has been this incredible investment.

[00:08:07] And in software development and software related technologies, right? Communications, et cetera. The reason is because it's profitable, right? Like software is just very good business and it's good business because it provides value to the end user. Uh, And there's, there's a virtuous cycle where we have companies that make incredible nots of money selling products that everyone wants.

[00:08:29] And that creates an ecosystem where we have the best education system in the world for software engineers and those feed into these companies

and those companies feed into the demand and the demand feeds it to the supply. And we have a virtuous cycle where. A lot of people end up with better stuff. A lot of people end up rich, et cetera.

[00:08:47] And that is in a capitalist society that's how things that technology advances that's one of the drivers of this thing. The market on the defense side is very different. There's really no reward for building good software. Historically there hasn't been in the DOD. There's very few successful software companies in the department of defense that focus on defense software.

[00:09:07] And that's not because there isn't a need for good defense software. That's because the department of defense hasn't valued kind of the software capabilities and hasn't compensated people for delivery of that value. So then, there's the second issue you talked about, which.

[00:09:22] Why is the why of the R and D investments into department of defense gone down over time, the traditional base anyways. Look I think there's a lot of answers to that. I think ultimately I personally believe that incentives are what drive behavior. I'm not someone who's going to say people are doing the wrong thing because they're bad or because they don't care about the, it's not that it's like the incentives are wrong.

[00:09:43] There's no incentive to invest your own dollars in R and D if you're one of the top five or six or seven defense contractors in the United States I think it's like a pretty complex set of, of levers that make those incentives come out the way they are. I think they include some of these hardware issues.

[00:10:01] They include the fact that many of the large defense contracts are performed on a cost plus basis where you're actually rewarded for having the government pay for your R and D. And the way indirect rates are paid out like your R and D costs are also covered partially by the government.

[00:10:18] There is just, I think some stagnation in the industry where it's just, there's not a culture. Of in my view, there's not the same culture that you see in equivalent growing industries in the commercial sector where there's just incredible investment, incredible speed incredible kind of dynamism.

[00:10:37] And that's reflected in the R and D rates. I don't think you see that on the, that culturally, even in the defense industry, outside of a few, some of the kind of newer venture back companies that like, like ours that you see out there. And really, I think outside of space X and a couple other companies like that, who do you see in defense?

[00:10:58] That's really inspiring people from a technological perspective. And I think the list is very short and that's a bad thing for the U S because military technology is inherently very cool. Fighter jets space planes. Like we're talking about th every kid who grows up and becomes an engineer, like probably played video games and was probably paying, for me, it was like star Fox and these old games, but these star wars games, whatever these things should really capture the imagination.

[00:11:26] We should really have this very dynamic , drive to build really cool things that achieve and serve like the purpose of national security, which through this incredible backing for an incredible consensus on, but we just don't have that. We have these kind of stilted and slow moving industry where, you become an aerospace engineer at a large defense prime, and you're working on one aircraft, your entire career.

[00:11:51] It's just not exciting and it doesn't have to be that way. And so that's part of what we're trying to change here. I know I'm a little bit off topic, but it does tie into the R and D question, right? I think. In a dynamic industry where there is high incentives, high rewards for innovation, you will see a more R and D investment, more internal R and D investment from companies because there will be rewards for that investment being better,

[00:12:18] it's a true meritocracy, being better gets you rewarded. And therefore the people will invest their own resources to, to come out on top.

[00:12:27] **Eric Lofgren:** you said back there DOD doesn't value software, but then if we want to get to that future, that excites people intellectually, but also in the real world, it's going to have to be based on like software native competencies, I think is what you're saying.

[00:12:41] And , within the defense traditional primes, they have some internal RMS. But it's also expense across there. They're general administrative. So they get paid for that as well. And they're actually just paid okay, how much labor did it cost you to do this?

[00:12:57] And that's the value, that's what I'm going to pay you. Whereas like for a non-traditional, when we think of non-traditionals, usually they first build a product, and then they sell it commercially. And so they've built in those margins in that I R and D kind of expectation.

[00:13:10] And then they can just sell that to government because they've already, you might have some minor modifications, but you've already built out

the pricing model. Anduril it feels a little bit different, right? It's like you guys are a company that's privately financed and building for government.

[00:13:25] So there's not going to be, I don't think you guys. commercial customers for your things that you can price out, they value it because it's a market and then you can sell it to government. So it seems like you guys are in a kind of weird space between the traditional versus the commercial companies that boomerang to government and you guys are different.

[00:13:45] How do you think that impacts you? In doing business with government?

[00:13:47] **Babak Siavoshy:** Yeah. And look, there's a lot to respond to there. And I think that you have hit the nail on the head in one sense, which is that, look, we're building commercial technologies that have at some level commercial applications and that can then be very easily modularized and put towards government use all the way two technologies that basically are using commercial and state-of-the-art technology, but are really for military use only. So we cover the whole spectrum, but you're right. And the reason that we trend towards that side of the spectrum where it's looks like commercial tech for military use is because we think there's a white space.

[00:14:28] There's a need for that kind of technology. I mean, I think just having commercial software vendors who build like a it, it word processing document, and then, oh, you can also sell it to the DOD, it's pretty tragic that just only happened in the last 15 years. There's a long history, as you know of the DOD, trying to rebuild like dual use commercial software from travel software at the word processing internal to itself.

[00:14:52] And those are disasters. I don't think most taxpayers know what's happened in that part of the world. And we've thankfully I think moved on for the most part from that kind of abomination. But we need to go much further. We need to have companies, that have the same aspirations as us, which is , to treat the DOD.

[00:15:10] Like we treat a commercial market, which is move fast, spend your internal research dollars to build something that you believe you have conviction is useful, and then to work with, to sell the customer in this case, the department of defense on the value of that, and then to get rewarded commensurately for the value and to get a fair reward for the value that then creates the spiritual cycle of incentives, where you grow by creating the demand

you create the supply and you grow the market of companies that can provide that value.

[00:15:45] And if you're just relying on the dynamic that you described there, where we'll get commercial entrance into the defense market, because they get to sell some of their stuff to consumers and enterprises. And so we can then like do our normal government thing, which is like really scrutinized their margins and stuff.

[00:16:05] You're just not going to get the outcome you want. You should actually, instead, in my view, create incentives, financial and otherwise, for companies to get rewarded the same way they get rewarded in the commercial market for building advanced defense technology. And I think until we do that as a country and as a kind of department of defense, then we're always going to have this capability gap relative to others who do that.

[00:16:32] It's very easy for other people to do this, we talk a lot about China, Russia as near peers who could do this. And I don't think they've done it as well as others think yet, but the point is that they could, , it doesn't take a lot of industry to just reward people.

[00:16:49] It doesn't take a lot of smarts to just reward people who create good technology. For the military and then incentivize more and more people to do the same. It's like a very basic thing you could do. And I do worry that our near peers and even our allies, might leapfrog technologically.

[00:17:06] If they start doing this more effectively than we do.

[00:17:08] **Eric Lofgren:** Yeah, totally. That seems to be one of the things that we often forget that margins and profit are a reward for innovation and improvement in outcomes. But usually the market, like when I go and I buy something, it's this large interaction of different folks that kind of arrive at a price and I'm almost like a price taker, but I contribute to that in a way.

[00:17:32] But for the government when they're like, that's why commercial pricing is important, right? Oh, you're a commercial product. And so I don't need to think about what the value you're bringing me. The value is been determined by these, market interactions. But if you aren't selling to the market, you're selling to government now you're saying the government itself is going to have to determine valuation of the product, what it's worth to them and a commensurate reward.

[00:17:59] And it's then they have to like, think about either this is the price or what is your cost and what is a fair kind of profit. So how do you think government folks can actually arrive at that valuation? Is there an objective way or like what do you think.

[00:18:14] **Babak Siavoshi:** So it's a really good question. And I think this is like a legitimate challenge, right? I so I'm going to talk a lot. I'm going to say a lot of things that sound like I'm critiquing the current department or the traditional defense brace, but I fundamentally believe these are hard problems and that the solutions don't come easily, they involve changing incentives.

[00:18:31] And so one of the problems you've put your finger on is that, let's say we all agree. We need companies like, like Anduril who are specialists in commercial tech to build military technology. We want collaborative missiles. We want, whatever counter air we want kind of swarming drones, et cetera, that with guns on them that do military things.

[00:18:52] We don't want some drone maker who makes commercial drones too, just also sell us commercial drones. We actually want to create a new generation of companies that build military technology. That's advanced in AI powered, et cetera. Let's say that's our goal. Then how do you determine what a fair price is for an artificial intelligence enabled drone?

[00:19:12] That's a military drone because there's no market for that commercially. And I think that's a good question. I think the problem gets easier to solve if you create a market for those companies, because then you will have market competition. And so we're a little bit in a vicious cycle here where there's no market for companies like Anduril.

[00:19:34] You really have to be a weirdo to do what we're doing. You have to go raise incredible amounts of venture capital funds. You have to decide that you want to work in one of the worst industries from a economics perspective in the history of mankind, which is the defense industry.

[00:19:49] And you have to really care about national security. Cause why else would you do this? Why would you fight with government bureaucracy to make a buck? If you don't have to? No. Only if you really care about this stuff, you just have to be a real weirdo to do what we're doing. We that's bad for the country.

[00:20:03] It's good for us. Cause the few weirdos who make it we'll make out really well, but it's bad for the country. So we have this vicious cycle where we

don't have a market for a kind of advanced military technology. And therefore there are very few players and so there's less price competition, and there's more vendor lock-in and so on.

[00:20:21] But ironically, if you just do the thing that seems scary as the department of defense and just give a few big rewards to a few high performers, what you will end up doing is creating a market. You will create a market where there's going to be a lot more entrance. Cause they see that there's actually a set actually good business to do this work.

[00:20:42] And those new entrance will create price competition, and you'll have much, many more points of reference for what a fair price is. And you'll be able to run creative solicitation models like bay cops, or you could actually just act like a normal enterprise, the us, right?

[00:20:58] Because enterprise enterprises operate. Many governments in many ways. So they, enterprise needs cloud. Cloud's not a great example because it's commoditized, but enterprises need very many bespoke kind of technologies. And this isn't rocket science, right? You could take solicitations for multiple people.

[00:21:15] You can run pilots, you can do bake-offs, there's a lot of ways to do this. And then do price negotiation across different market participants. And, in our experience, government agencies throughout DOD. Many of them are innovating on this front and are doing the things I'm describing now and are I think getting fair prices and good technologies as a result, but there's still exceptions rather than.

[00:21:37] **Eric Lofgren:** Yeah, I if you only have one big winner, take all thing, you have an N of one and I can't make any statistical inference from an N of one. So I, if I have a greater sample of alternatives upon which they're offering different prices and value points, now I can draw correlation.

[00:21:54] And yeah, the government almost like shoots itself in the foot with respect to this.

[00:21:59] **Babak Siavoshy:** What you end up with, right? Is this it's great. And I think that the the challenge for them is the only way you get to an N of more than one is by taking some risks.

[00:22:09] You're going to have to just make some bets on some companies on some technologies that you're not used to making bets on. That is the only way

you break that cycle. What I described as the vicious cycle, there's no trick, there's no acquisition. True. There is no, there's not, there's nothing, there's no cheat code.

[00:22:26] You just have to make the bet. It's going to be a leap of faith. If it doesn't work out maybe there is a political consequence to you, but you just have to do it. And that's the only thing that will fix it. But then once you overcome that barrier, once you have an N of 50 and of a hundred, then things start getting a lot better.

[00:22:44] And some of the conversations you and I are going to have on future podcasts, if we have an N of 50 and of a hundred we'll be overtaken by events at that point. This podcast session was supposed to be about data rights, which is a lot of about the government's kind of concern with vendor lock-in, but **data rights just don't matter if you have 50 options because you won't get locked in.**

[00:23:05] You don't like one, you just go to the other one prices too high I have another competition, 60 people are gonna, solicit a response to the solicitation with kind of mature technology. And you'll be able to make like really strong decision. That's going to both support the taxpayer and achieve our kind of capability gaps.

[00:23:21] So really we need to break through that kind of end of one thing by taking some risks in my view.

[00:23:27] **Eric Lofgren:** you know, A friend who had just commented to me yesterday, it made me think about this, which was, , if the government tries to squeeze profits right there, they would say if I cut a million dollars of profit, then that's a million dollars I can put to more capability.

[00:23:40] But then his point was if you actually have a relatively large profit for a winning firm, then you'll have all this private investment. So actually, are you getting less military R and D by, by pursuing that? Which is a good question, right?

[00:23:55] **Babak Siavoshi:** No, this is answered. I think. There's very little I would respectfully say to folks listening to this who believe that they should study basic economics and it does not work that way.

[00:24:06] We have a great model for how to build a thriving industry that builds the best shit in the world. Just look around you, if this has been solved

and there's no reason, obviously the commercial sector cannot be analogized to military procurement in every respect, right? There's a lot of differences.

[00:24:23] And I think I go deep, pretty deeply into those differences in the piece. But there's a lot of lessons we can take. And yes, I think that managing the profit of firms that produce products for you is just not the right way to go the outcome that we want, which is a dynamic industry that creates the best stuff the most advanced technology and so on.

[00:24:48] And, you know, I think I actually like a good example of this is, when you look at cost plus versus firm, fixed price, contracts, cost plus contracts give you a very high degree of accountability at the level of each hour, right? Each dollar that the government spends, they know that, 30 cents of it is going to your general administrative expenses and 25 cents is going to this worker salary.

[00:25:12] And another 13 cents of it is going through this and so on. So very high accountability at the micro level. unfortunately at the macro level, at the level of a project we've seen this repeatedly, cost-plus kind of contracts lead to cost overruns. There's weird kind of biases that, that cognitive biases or sunk costs fallacies that you end up in.

[00:25:34] Cause you spent five years with highly accountable kind of spending on a rocket ship or something and the contractor comes and tells you it's going to take us another five years to do it. And all the incentives for the folks doing contracting and acquisitions is to give them a pass and let them do that again.

[00:25:49] And you don't get the accountability at the project level that you do with firm fixed price contracts. So a lot of these negative outcomes are a function of the mechanisms and the incentives that the DOD uses. And I think the last thing I'll say on this, cause I want to really hit this point home is that those mechanisms may have been totally fine for a hardware focus world.

[00:26:12] Like I actually think that if you're building, an aircraft carrier, you want to do the thing that, we who care about acquisitions often say as bad, which is define all the requirements upfront, have very detailed instructions and then hire the cheapest labor to put in the screws and hammering the nails.

[00:26:29] That is probably how you should build an aircraft carrier is not how you build a software defined thing though. Software defined thing. You want to get it to an MVP very quickly, and then you want to iterate over and over again

and fail forward to use the parlance until you get to something that works operationally that's useful to the end user.

[00:26:48] And it's a very different process and the acquisition methodologies that are common in DOD from cost plus to the data rights and to the funding mechanisms and so on just are creaking under the weight of these needs for new technologies.

[00:27:03] **Eric Lofgren:** So let's actually now start pivoting into the data rights and intellectual property.

[00:27:09] And again, this, I think this has everything to do with what you're talking about, right? Like the old hardware firms, maybe the data rights things that DOD is coming out with or has had for a long time actually works, but does it actually fit this new breed of firms that the DOD is actively? You know, Everyone's saying it up and down the line, they're trying to actively court these types of companies, but are some of the regulations actually at odds.

[00:27:33] So let's zoom in on the data rights. That the government has and why they're ill suited to these new types of software native companies.

[00:27:42] **Babak Siavoshi:** Do you mind if I step back and take a macro view first and then zoom in on the specific ones?

[00:27:48] So I think that ' cause, I I think it's important to note that I don't actually believe that, acquisition reform is necessarily a solve here. I think in the current acquisition rules as they exist today. There is, there are all the tools that we need to have a flexible data rights regime without any changes.

[00:28:11] The problem is that those tools aren't being used. And so my proposal is really to. Let's incentivize the use of those tools or let's make small modifications that make those tools usable. So an example of this is I'm really talking about the three or four existing kind of templated categories of data rights that exist in the far in this piece.

[00:28:32] But of course the far also lets you specifically negotiate any rights you want pretty much. And someone could very reasonably say to me in response to. Peace. We can already do this. You just need a smart contract officer. Who's willing to be nimble as top cover and can negotiate these specific rights.

[00:28:49] You're talking about it. That's true. I can see that, but that is not how things work in practice and practice. There's an incredible amount of inertia behind these existing categories. The templated way of doing things. And the proposal is let's create, or let's pilot or let's experiment with another templated category of rights that is more flexible and more accommodating of the needs of this software defined world that everyone agrees we were moving towards.

[00:29:15] So with that context, I think the big picture. I have comment that I have is that the, our current outdated approach is it's basically two core screen to protect the government from the things they care about, like vendor lock-in, which are legitimate things to care about. And they're too broad to encourage modern software companies to really invest in defense applications that their products and, in the piece I go through the existing categories and talk to how they work and what the issues are.

[00:29:42] So happy to do that. Now, if you want starting with restricted rights.

[00:29:45] **Eric Lofgren:** Yeah, definitely just get right into.

[00:29:47] **Babak Siavoshi:** we could go through many areas of the the procurement rules where the DOD is just not doing what the rules say. It is, from commercial preference to title 10 and the preference for specifically negotiated rights. Those rules do not reflect what actually happens in practice.

[00:30:06] And I think this is well, understood anyone who's spent any time working in this at least on the contractor side, like they have this experience where they're like looking at the rules, then they're looking at what, an acquisition agency's telling them, they're just doing this double-take over and over.

[00:30:21] And they're like what are you not reading the same thing I'm reading. And that is a very kind of, there's like kind of a, this is the experience everyone has when they start working in defense. And yes. I think the way you chip away at that doesn't have to be acquisition reform. It could be training, it could be many other things.

[00:30:40] It could be creating a few areas where vendors can punish agencies for not following the, their own rules that Congress enacted and that, a president kind of sign, you do all kinds of things. But one thing you could do, and I is what I push on in the piece is actually create something that's like easy to implement, because it's already written out for you.

[00:31:02] And it's the default rule for this kind of acquisition and then put the burden on agencies and acquisition officials to have to move away from that default rule. That is by default, correct. Rather than, put making the default rule something that's not good for software. Like restricted rights.

[00:31:20] Once you start looking at the existing templates for data rights you very quickly realize that they don't make much sense for software. Restricted rights and actually also government purpose and unlimited rights the through line across them as they're very much focused on who funded a specific piece of the development of the software.

[00:31:41] And that makes some intuitive sense. But in part, because software it's pretty easy to write a line of code software, making good software is hard, but it's pretty easy to write a few lines of code. W would you end up having as vendors who are very savvy and work often with the government and both were software and hardware, they ended up like, self-funding some critical component of a bigger system that the government funded most of and claiming either restricted or credit more vendor favorable rights for that piece of it.

[00:32:11] And this results in what the government complains about in the recent DOD report, they **complained about Swiss cheese, data rights**, where they, they paid a billion dollars to build some kind of system. And then one of the vendors like has some critical widget that they self-funded and they own that widget.

[00:32:29] And they basically have them by the throat where they can upcharge the government or charge exorbitant sustainment rates or. Play hard ball when other vendors need their data or their ICDs and so on. And that's a real problem. And that makes these rights, **this kind of funding focused structure, not particularly good for the government in the sense that it doesn't actually achieve their vendor lock concerns.**

[00:32:51] On the contractor side it's not great because one it's weird and it scares away people who aren't savvy enough to play these games. Cause they're stuck dealing with that widget provider who's then not, offering up the data that they would get from any other kind of enterprise where they were trying to build something that works with the widget.

[00:33:09] But also I think would, it would. **Funding focused approach. The data rights leads to is the government over-correcting and structuring a lot of their solicitations to really discouraged things that that result in, in, in proprietary data rights and really to structure solicitations from the get-go in**

ways that exclude companies that spent a lot of money on their IRAD, building a thing and bringing it to the table because the governments really telling them like, no, you gotta give everything up to, to play with us.

[00:33:41] At the beginning of these solicitations. And you end up with the market dynamic that, that we were talking about before at the end of the day, which is instead of, an N of five or 10 responsive solicitations to a military technology, you end up with an N of one really.

[00:33:56] **Eric Lofgren:** Yeah. You had a kind of nice story about that. You basically were saying, and I think a lot of firms have actually, encountered this where there's like a non-traditional they do amazing on this kind of small pilot program. They're forced to give away their data rights as part of that little pilot effort.

[00:34:11] And then they ended up losing on the major production contract. And so what happened? Like they feel like they got taken advantage of to a degree. Can you dive into that and do you feel like that's actually happening to Anduril as well?

[00:34:21] **Babak Siavoshy:** Let's put a pin in that second question.

[00:34:23] But I tell a story in the piece about a solicitation. It's a story that I've seen play out before. Which is the government solicits prototypes for kind of new military technology that software focused in AI or something. And a company comes to the table with a great prototype software that it, maybe a derive that from its core commercial technology and it proposes to adopt it for military use.

[00:34:46] Let's say everything goes well, the government's impressed. They love it. The pilot goes really great. What ends up happening next is sorry, I have to step back. So because of the dynamic we just described with the fear of Swiss cheese, data rights, et cetera, the government will typically set these small pilots up in ways that really discourage vendors from withholding data rights.

[00:35:08] They basically say like, give us government purpose rights or or unlimited rights. It's not exclusive. You can still use it for commercial. You're good.

[00:35:17] **Eric Lofgren:** Yeah, but you hear that's the new guidance, right? They keep saying, you need to get your IP strategy and rights as early in the process as possible.

[00:35:25] That keeps being the thing. I hear it from, the cadre and others. Yeah.

[00:35:29] **Babak Siavoshy:** Yeah. And that's that has costs, that the government isn't internalizing. And so in the costs are that you just scare away your vendors, but yes, so very early in these acquisition processes the government is incentivized and encouraged by the Kadra and by, by others and by DOD policy to maximize data rights or to protect their rights very early in the process.

[00:35:51] And so the vendor who ends up in good faith agreeing to do this work and to offer up their data rights at some point down the line, when the prototype becomes production, this is the scenario where the vendor that everything. They ended up in this weird position where it feels to them like a bait and switch because the government comes and takes their data rights and structures, the whole solicitation around it, and then takes the most traditional looking cheapest labor rate builder of things to, to build out the production capability.

[00:36:23] And I think there's two points I make at the end of that story. One is that actually doesn't work like you're going to get worse outcomes doing that. For a lot of reasons, one they won't have the same expertise on software expertise actually matters, et cetera. But also the incentives are all wrong and so on, but that's point one, but point two is then that software provider that got bilked from the production contract goes out of business or never works for the government, but their friends, other people in the industry.

[00:36:55] They all see what happened. And the next time there is an interest in working on government tech on military tech, they're just not going to participate. And so again, we get stuck in that vicious cycle where you end up with a very small, market incentive for firms to invest in R and D relating to military technology.

[00:37:14] And you have less competition and worse outcomes for the government as a result.

[00:37:19] **Eric Lofgren:** Maybe not a lot of people are aware, but like for commercial data rights, non-trationals now are blanket in the two 12, I think 1 0 2, all non-trationals can be treated commercially that in my mind also means they could be given commercial data rights.

[00:37:36] Is that one happening too what's wrong with commercial? Is that another one of these kind of like templates that doesn't fit the need

[00:37:43] **Babak Siavoshi:** commercial data rights could in theory fit the need. And I think they work well for commoditized technology that that's truly dual use and that you're applying to the government.

[00:37:54] I think there are somewhat awkward fit for military technology. So if I raise capital from a private investor and build software to target missiles in a, in an intelligent way, okay. I self-funded, it. I could have a commercial license applied to it, but it, and the government could accept.

[00:38:13] There's nothing in the acquisition rules that would prevent a contract officer to accept those commercial data rights. But it is fundamentally weird. And the government I think is correct. Do you think that it's weird that you're missile targeting software as a commercial license attached to it? And so I think it's fine if people are willing to use those rights they're extremely flexible.

[00:38:32] You can build anything you want in a license, but they're, they've been treated with distaste. I found in my experience by government contract officers and not always for bad reasons. I think there's a broader point here when we mentioned the deforest policies and so on that the policy.

[00:38:51] Don't matter as much in practice as you might think, because there's a lot of ways that without breaking any laws agencies can structure their solicitations from the get-go to to get full data rights to maximize data rights. In case for any kind of solicitation that they're establishing.

[00:39:12] And a point I raised in the piece that's worth hitting on is that a lot of times there's huge trade-offs that are being made when the government does that. But those trade offs tend to be invisible to the government agencies that are making them. So they might be maximalist about data rights, very early in a solicitation process, but they're not actually.

[00:39:33] Measuring the cost of to speed to field, for example, cause maybe, they're going to get fewer responses to their solicitation from companies that have built something already and that can field that quickly. Maybe they might, there might be cost to the number of companies and the types of companies that kind of participate.

[00:39:52] And again, they're not in my experience, they're not making those trade-offs when they set up these data re rights regimes like early in the process

especially when they're maximalist. And part of my suggestion in the piece is to force acquisition officials to at least document those trade offs, and to make them, and then at least we can hold them to account to their document.

[00:40:11] It still might be wrong, but at least we'll have some historical data we can say, Hey look you were maximalist about data rights and this software project or the software defined. And five years later, we have no fieldable technology. Maybe we shouldn't have done that. And, at least we can have a case study to point to that ties, it has some causal connection between the data rights strategy and the outcome.

[00:40:33] So right now we don't have any of that data. It's just we're just, there's a lot of speculation going on.

[00:40:38] **Eric Lofgren:** what you've talked about in the article and actually elsewhere, you actually, I think, say Anduril recognizes that government has legitimate needs for data rights and intellectual property. Perhaps more and you guys are perhaps more willing to provide those data rights than, a traditional commercial company might feel comfortable doing.

[00:40:57] You do a good job. We've been talking a lot about how the government has been, maximalists like a little bit over aggressive in some respects. But you guys also recognize that need that balance, that trade off. And, so you, in the article, you went pretty nicely and you outlined some ways to think about where that trade space is.

[00:41:16] And so I just want to go down the line here and start with just like account for size. So of course, we always have this mixed funding rule. If the company funds the whole thing restricted, if the government funds the whole thing, at least GPR, but probably unlimited.

[00:41:31] And if there's some mixed, then it's GPR, but GPR has actually a lot of rights for the government and especially in the computer software world. So where is that line? Okay. Not in the \$1 million prototype phase. Government probably shouldn't be getting data rights there. Where's that line in terms of how big a contract or what is a production contract, where your company is now okay, we're willing to have those conversations and discuss that.

[00:41:57] **Babak Siavoshi:** I outlined five principles for what kind of levers you would want to be able to pull in a new category of data rights. And one of them is this account for size lever. And so I think there's a lot of freebies here for both the government and contractors. The government doesn't actually care

about data rights at the prototype phase where they're just like getting a sense of what's in the market.

[00:42:21] They want to see three or four or five or six players come in, show their wares, pick between them and figure out which horse they want to bet on. Based on that basic information there, they actually, the government wants to see as many players as possible. . They don't want to set up artificial barriers to entry by having maximalist data rights.

[00:42:40] They're just doing that because they feel like if one of these goes to production, then we're screwed. If we don't have the data rights. And so really you can in the same calculus happening on the industry side, right? Like industry players see the size of these production, government contracts, programs of record and stuff.

[00:42:57] And most of them in my view would be willing to offer the government kind of reasonable and commensurate data rights for a large contract. I think what they, what scares them away is that they're being asked to sell the farm at the very early stages of these solicitations because of the dynamics we described.

[00:43:14] And you could solve that by having a slide ruler where the data rights scale up with the size of the investment of the relative investment of the contractor and the government, and look, there's a lot of ways you could structure it. And I don't want to be overly prescriptive in what the exact ways are, but you could have something that's more like a bright line rule, like projects under 50 million or something, or prototype projects.

[00:43:38] And they have more vendor favorable rights. And if there's product projects move to production contracts that are X dollars, maybe there's a middle tier, that's more favorable to the government and you can have gates where the government in years, additional data rights as they cross through those gates.

[00:43:54] And those gates would be tied to the government's investment in the vendor and commitment to the vendor. Where I think that if the calculus for vendors was. I get to a prototype and play and show my technology early on and reserve my data rights and the government and my competitors. Aren't going to free ride off of my technology in these early phases.

[00:44:18] But if the government picks me and commits to me for three, four or five years and hundred, 200, \$300 million then I will be expected to give up some of these IP rights because the government has a legitimate interest in

protecting its military technology and having the flexibility to switch vendors after a certain amount of time.

[00:44:38] And so on. Then I think many vendors would take that bet. I think many defenders would take that deal. That is not the deal that's being offered to them today. And so when I say account for size, that's roughly what I'm talking about.

[00:44:50] **Eric Lofgren:** yeah, one follow-up on that. Which of course that makes a lot of sense, but is there also a little bait and switch potentially with the size of the contract?

[00:44:59] Because I know you guys, so you had the a hundred million dollar DIU award and then you had a billion dollar SOCOM award, but these were, I think they were both structured as IDI queues and the DIU report that came out actually said, you guys got a lot getting obligated to those contracts, but I hear a lot of contractors where it's okay, I get a big ID IQ award, and maybe I'm willing, okay.

[00:45:21] I'm willing to give it up, but then they just give me a couple tasks and I never actually got any of the value of the ceiling that was promised or anticipated.

[00:45:29] **Babak Siavoshi:** Yeah. And so these things get very complex very quickly. And I think. This is why I'm not being overly prescriptive about the kind of means I think that it's important to be on the same page about the intent.

[00:45:41] The intent is to promote competition at the early phases of these solicitations, which is in the government's interest. And also to give the government the rights they need for production program of record level amounts of investment. And I think we put three or four or five creative minds in a room and there'll be able to figure out a way to do it, that addresses some of the things you've raised, right?

[00:46:06] Like on dollars, obligated versus kind of options and so on and so forth. So I still think if we make that intent or goal and we can come up with very easily, I think actually with a structure that achieves that, and we really need to get used to experimenting with these. Where, if it doesn't work, we switch it.

[00:46:26] We change a few words here and there and we incrementally improve it. What I'm saying about technology also has to be true of acquisition

where acquisition rules need to be flexible. You need to be able to come up with iterations based on things that change in the market and so on as well.

[00:46:42] **Eric Lofgren:** So let's move on to one of the other levers that you talked about here and, throughout your article, actually, there's a lot of things that when I read them, I was like, man, I just never thought of it like that before, you know, like industry, we tend to think of industry being like, oh, let me just have that unique widget, right?

[00:46:59] Like you just said, so I can just lock in the government when this program of record and never let them go of it. But then you point out, it should be in the interest of industry to actually achieve interoperability so that they can sell that Navy bespoke thing and not make it really that bespoke make it modular and be able to sell to the army and other customers.

[00:47:19] So what's up with that. And what's the, describe this, define the scope. What does that mean?

[00:47:23] **Babak Siavoshi:** This is a really good one, I think is a really low hanging crew. So I think by default, I think software data rights should be tailored to the specific program or use case rather than to the entire federal government for any use.

[00:47:35] And right now, the way it works, if I do a pilot with the third wing of the air force or something to install some software on some thing that they're doing and I give them rights to that software, what I'm actually doing is giving those rights to the entire federal government, forever.

[00:47:53] And in theory, what could happen is that, when I want to sell the same thing or something derived from that thing to the army or to a different part of the air force or to the Navy, then they can say, look, the federal government's already paid for this thing. So you don't get to charge us.

[00:48:10] And we own the data rights and here's why. I say in theory, because in practice, it doesn't work that way. The Navy actually doesn't care what the air force is doing and the army doesn't care what the Navy is doing. It's quite depressing. Actually. There's a lot overlapping work. The bureaucratic obstacles to actually the government efficiently using things they acquired in one branch in one part of a branch for another branch, even if the use is like obvious or extremely high.

[00:48:38] And so this ends up being a thing that scares away a lot of vendors, but should it, because in practice, like there's probably very little risk of their stuff being reused in that way. So my. Proposal and in, in the piece is let's scope these data rights to the agency or the contract or the project where the data rights are relevant, where the technology is being developed.

[00:48:58] So if I'm building you a piece of software for your ship your real concern is that I go out of business in two years, or I try to raise my prices too high two years, and you can't use that software for your ship. Again, you can't switch vendors and you're just forced to either run a whole new solicitation or to pay me more.

[00:49:17] That's a legitimate interest if you're the government. And I think the way to solve that is to say, Hey, as your software applies to this ship, and this use case in this project, we have these broader data rights where look, we can switch vendors. We can give your source code as long as it's specific to this use or whatever for that specific project.

[00:49:38] And. In my view that gets most government agencies like 99% of what they want. I don't think the air force contract officer who's asking for unlimited rights actually cares about getting full value for some future army contract officer who's acquiring a similar capability. I think they care about being able to maintain their ship or whatever they're playing or whatever, and not being locked into this vendor for that project.

[00:50:02] So I think the government gets most of what they want. From the vendor side. It's a lot less scary to be like, yes the government will have my source code as long as they can only use it for this one ship for this one contract. And then the kind of blast radius, the kind of collateral damage from this thing going awry is pretty low and manageable.

[00:50:22] And you're gonna see a lot more vendors participating. So not to get to your actual question is I also think there is a huge virtue to creating narrowly scoped data rights because it creates this incentive for vendors to build something for, the third wing of the whatever air force.

[00:50:41] And then they want to sell that same capability to like the fourth wing and they want to sell it to the Navy or they want to sell to the army air wing. And in those incentives mean that they will make that software highly interoperable. They will have incentives to build kind of economies of scale across these things.

[00:51:00] They'll have incentives to have a shared code base that they're continuously improving, that can serve many different customers, a diverse array of customers. It will incentivize the creation of API to work with systems across diverse customer basis. And you end up with a much more robust and expansive and extensible and less locked in ironically product.

[00:51:23] If you narrow the scope and let vendors to sell piecemeal things. And that's very much a inherent feature of software. And again, to I think that is the important takeaway here is that software is just different. The reason the software Titans of our age have , become so valuable and I've done so well is largely because they have one shared code base that they're selling across many different customers.

[00:51:48] And this feels bad to the DOD because they're saying you're making money, selling the same thing to five different people. How is that fair? One, I would say there's no fairness in the market. The market's the market, it's correct. It gets you the outcomes you want, so you should do it. But also it is fair.

[00:52:05] It's a lot of work to maintain a shared code base. And third, it sets up these very strong incentives to have heavy interoperability across these customers and really what you want. What we want the DOD in my view to go towards is an incentive structure where we do have increasingly robust, shared code bases that are either vendor owned or government owned.

[00:52:30] If they're vendor owned with many kinds of strings attached, then make sure the government's , not locked in for kind of it's legitimate interests, but you want these shared code bases that are constantly iterated. And made interoperable across many different systems. That's, what's worked in the commercial industry.

[00:52:45] And I think that there's no reason to believe that it should be different on the government side.

[00:52:48] **Eric Lofgren:** Yeah. It feels like that's like unintuitive to, defense people. , I want to pay for it once. I want to share it across the whole enterprise. And then you don't realize, oh, the vendors are just gonna, stove, pipe it to the degree possible in stopping doing that unintended con it's

[00:53:03] **Babak Siavoshy:** happened.

[00:53:03] Yeah. And that's what's happened. I think we don't need, it's not a hypothetical. The current status quo is every vendor has the incentive to stove

pipe and create a bespoke piece of both software and hardware and system for an agency so that when they go sell it to the other agency they have, it has to look very different so they can sell it again without being hit with data rights or pricing kind of problems.

[00:53:27] And so let's just stop the performance. And say, we're going to scope this down just through our use case. I think the government also gets a benefit because they can negotiate a lower price. But let the vendors treat the department of defense as a marketplace where they can take a system that works for one sub part of the Navy and sell it to another sub part of the Navy, the same system with minimal modifications and make that thing interoperable across all these different devices, all these different systems, all these different users, you end up with a very robust set of products at the end of that.

[00:54:01] If the commercial industry is any kind of sign up for that.

[00:54:03] **Eric Lofgren:** Yeah. And of course the government also has its predilections towards stovepiping. I have my program, my cost schedule, technical. That's all I care about. Like you, you go stay with your program. I gotta do my.

[00:54:16] **Babak Siavoshy:** And what's happening there. And I think if there's a theme to this kind of discussion we've been having is it's not that people are ill intentioned it's that they have the wrong incentives. there is externalities through their actions because each program cares about their program is maximizing the thing for their program.

[00:54:32] And what they're doing is creating a marketplace that is N equals 1, 2, 3, instead of marketplace, that's an equals 10 20 30, which is what we need to move to the next phase for the department in the past.

[00:54:44] **Eric Lofgren:** Yeah. It's interesting. The strategy here almost sounds like it's really addressing some of this technical lock-in and interoperability without a top-down, Jad to mandate as to what exactly what standards the industry shall use.

[00:55:00] But what other parts of, addressing technical lock-in. We have this traditional government always gets access to form fit function and, omit data. What do you recommend further on the technical lock-in front here?

[00:55:12] **Babak Siavoshy:** Yeah. And to use it another imperfect analogy to the commercial market.

[00:55:17] The internet has centralized open protocols that are heavily defined, but it also has an incredibly dynamic market of private industry building kind of unique applications that use those protocols. And no one would say that there's an internet. It's the least locked in environment.

[00:55:37] That's existed in humanity. The switching there are switching costs. Obviously you can come up with counter examples, but relative to everything else in the world, the internet has the fewest switching cost, where you can find an alternative to almost anything that you want on the internet more quickly than anywhere else in human history.

[00:55:54] I think there's a version of that again, imperfect analogies, but there's a version of that also is true for government. And I think that there's a version of omit data of, and so on that where the government defined some common protocols and standards and shares them with vendors, and makes it very easy for vendors to build to those standards and also requires vendors to build to those standards thereby making it easy for new entrance to make things that are relevant.

[00:56:21] An anecdote that I will tell about this is that there are technical standards that are associated with systems that are highly inaccessible to vendors because they're either locked behind a kind of proprietary information of other vendors, or because they're classified the standards themselves, and very few vendors can then get access to them.

[00:56:43] And those kinds of practices make interoperability a much bigger challenge for the government and data rights. This is the key piece data rights. It doesn't solve those. Standards, setting stalls, those forcing vendors, to provide certain levels of interoperability in the way that you structure your requirements for solicitations solves those.

[00:57:04] But those are all technical fixes. They're not legal or data, right. Fixes. So part of my point in the article, There's a lot of ways to address lock-in, which is one of the core kind of motivators for more expensive data rights that don't even involve touching anyone's IP.

[00:57:16] **Eric Lofgren:** Yeah. And let's real quick, let's wrap up on the last two points, allowing vendors to propose alternative contract structures and weighing the costs.

[00:57:25] **Babak Siavoshi:** Yeah. And so I think these two go together I think that there is a lot of hidden trade-offs that are being made when the government

just insists on broad data rights. And there's a lot of hidden costs to those that insistent and any kind of new category of data rights that we experiment with should make those trade-off transparent, understanding that we'll still make the wrong trade off sometimes, but at least we should go through the exercise of saying.

[00:57:52] This contract structure, this data right structure, we'll have these consequences. We're fine for this kind of system. We're just going to eat that cost and we're going to do it anyways. And like that exercise is extremely valuable and I think we should force acquisition officials to do it. So explore, allow vendors to propose alternative contract structures.

[00:58:12] And I think the question comes up when I talk about these trade-offs where like how are we going to do this research? The answer is easy. Have the vendors do it for you. It's part of the solicitation project, having proposed different contract structures and the benefits and costs of each.

[00:58:26] And then you take as your action to evaluate some of these and discount them or giveaway to them. Let's go through a good faith kind of exercise of measuring different acquisitions and contract structures against each other. One that's the rage right now is as a service or contractor on contractor operated.

[00:58:46] And there's a lot of different variations on these. And often there's a, trade-off inherent in doing a, as a service kind of SaaS looking thing versus the alternative. And often the cost trade off is you get something quicker. There's less maintenance costs. The upfront cost is going to be lower, but maybe over 10 years, the, your total cost of ownership might be higher if you continue that as a service thing.

[00:59:09] So that forces you as the acquisition official to decide whether speed to field is important to you or total cost over 10 years is important to you. It may be that you're willing to spend more over 10 years to get the capability in six months. And to have no development risk and no maintenance cost and not to have to maintain server farms and not to have to hire kind of programmers and security people, maybe that's worth it to you.

[00:59:36] And so I think you should ask vendors to tell you why their model, their proposed model is good, or why it's bad, and actually make that part of your acquisition strategy is analyzing those and making those trade-offs and, the way the costs, not just the benefits of data rights really is speaking to that as well.

[00:59:55] I think data rights should be always thought of as a trade-off. They should never be thought of as anything other than a trade-off there's always a cost, period to greater data rights. Many times those costs will be worthwhile. There may be systems where we just need all the data rights from the get-go and we're just, we understand what the costs are and we're just.

[01:00:17] Great, write it out and tell us what the costs are. Sign your name on the line saying I'm okay with those costs. That is the correct way to run an organization efficiently and wisely. But in many other cases, I think we're losing value because people aren't owning the decisions that they're making.

[01:00:34] They're just saying we need all the things we need all their rights. And they're not left holding the bag when they only get one response and end up with a cost plus contract where they own all the data rights, but they're five years over budget, five years over schedule, and they don't have a deployable capability.

[01:00:52] And you and I could both probably off the top of our heads, the named five or six programs where that's been the case and like the person making that data rights call is just not left holding the bag on that when they were part of the kind of series of decisions that led to that outcome. So I'm saying, put it on them to think about this, to make the trade offs explicit.

[01:01:11] And to own the decisions they're making. And I think we will get better outcomes. At the end of the day, those outcomes will not necessarily be that the government gets bureau data rights. They'll just be that we're making better trades that hopefully result in better technology for the department of defense.

[01:01:26] **Eric Lofgren:** Yeah, totally. The I guess another part of that speed to field as you intimated there and reliance on contractor funded efforts is that by narrowing that cycle time, you actually know who's accountable for what and who, you don't stretch that whole thing out. And now you had, successive Kaos and they've all no one's accountable for any of it.

[01:01:44] I actually, I want, circle back on the asset service, you brought that up. The SOCOM effort that you guys were awarded for 1 billion, there was a little segment in there. It said that the counter UAS contract was looking at stuff as a surface. And I was like what does that actually mean in practice here?

[01:02:01] Like in terms of the contract, I think it was still an IDI Q contract. How was that being managed and what does asset service, for counter UAS,

we're used to it for cloud and there's pretty established there. What would that look like for counter UAS or some of these other kind of real-world things?

[01:02:16] **Babak Siavoshy:** Yeah. Without speaking about a specific contract, but we have sold hardware systems and capabilities as a service throughout the deal. And the DOD has really actually appreciated and doubled down on this concept and what actually looks like is not that complicated.

[01:02:34] It's even with cloud, you're actually paying for hardware, right? There's no kind of a theoretical cloud. It's like server farms that Amazon, or whoever is maintaining and they're doing physical things and they have humans walking through them. You just get the outcome, which is you can store your stuff and you can access it and you get compute and so on.

[01:02:52] And it's very similar to that. It's you agree on SLS you're agree on capabilities and you hold us responsible for achieving those SLS and those capabilities,

[01:03:02] **Eric Lofgren:** the SLA

[01:03:03] **Babak Siavoshy:** service level agreement, service levels. Yeah. We will detect XYZ. We will respond in XYZ time and the system will achieve.

[01:03:13] XYZ outcomes. And so what we what makes sense,

[01:03:18] **Eric Lofgren:** is it like on a, what kind of basis? Like every time is it on a per minute basis or like a per interset basis? What is the, I guess the structure of the service combination? It's probably complicated. I'm sure. I'm sure it's complicated, right?

[01:03:30] **Babak Siavoshy:** It doesn't have to be right. I think you can have, let's just talk about counter UAS in the abstract. You can have you can say, Hey, I want a system that can defend a base. That's this size from this kind of threat that could detect the threats from this distance. And that can counter threats in these four ways.

[01:03:47] And that it'll have a 98%, 99% of time that it will operate in an expeditionary environment that it will only require one user to maintain. And so you can start defining these con ops relative to the needs of the customer and. The difference between the, as a service model and more traditional models is you hold us to those outcomes.

[01:04:12] It's up to us to achieve them. If we want to surge and have a hundred engineers sprinting for two weeks to get through something, you don't get a bigger bill. But if we find a way to become really efficient and we make a higher profit margin as a result, that's also our problem.

[01:04:28] And everyone's happy. And I think that's the virtue of the, as a service model. It's just it's really high accountability. It's like these are objectives. We are paying for the objective. We were paying for the outcomes we were paying for the, yes. It's not like how many drones you shot down.

[01:04:42] It's really like we're paying for the capability. So often we call it capability as a service because you're defining the service, you're defining the thing you're buying in terms of a capability. And you have ways of measuring that capability. And we don't get paid if we don't offer the capability.

[01:04:59] But if we offer the capability and if we do it efficiently, we get rewarded. And I think that sets up an incentive structure. That's highly creative to creating like very dynamic environment because Hey, the other feature of, as a service contracts that you've probably seen in the cloud context and elsewhere is they tend to be.

[01:05:19] You can really start playing as the government contractors against each other. You can say okay, deployer as a service thing, if you don't, haven't met your outcomes in two or three years, or in one or two years, I'm going to on-ramp someone else to do a bake-off and to deploy their stuff and see if they can do it.

[01:05:36] Now, think about how different that scenario is. If you purchase the bare metal, the networking, if you hired some Fs field service representatives that you're paying hourly to maintain these systems, and then the prospect of on-ramping and other contracts. Is like what to do, what you have to buy more metal from them, or are you going to transfer the rights to the metal you bought to them?

[01:06:00] Or are you going to start a whole new solicitation? It gets very ugly very quickly, and you get stuck in the sunk cost fallacy and all the other kind of poor incentives that we see throughout the DoD. And so the, as a service model in our view, anyways, gives you a way to hack that as an acquisition official.

[01:06:16] You get something fielded quickly, you hold the contractor responsible for the services. A lot of the bureaucracy that is necessary to do things like, Hey, we need an extra computer to run this, is invisible to you. It's

just handled by the contractor, right? Like I don't have to ask DOD for permission to buy another computer to run the kind of DevSecOps part of this.

[01:06:37] I just have to meet certain security requirements. Then if I have to buy a 70 computers. I go buy them myself. It happens very quickly. Conversely, if I can run it very efficiently, then I get rewarded. And that kind of incentive structure has worked well for our customers. It's worked well for us.

[01:06:53] It's not limited to software cloud. We can do it across a number of different kinds of capability sets probably has its limits. I don't know if you can have missiles out of service or stuff like that. You probably there's limits to it. But I think we can do a lot more with it than we're currently doing.

[01:07:07] And to to put a positive note on it, actually I've seen in our experience has been DOD has been very for thinking about the customers we've worked with in particular, in the special forces community have been very forth for thinking about this stuff. And I think it's because they have a real need and an immediate need.

[01:07:22] **Eric Lofgren:** Great. . So real quick here, as we wrap up. If you guys are building this capability and selling it as a service, you also talked about how you're building open for government. Do they have like specific standards that they request in this solicitation? Or how do they orchestrate if they want like a new module from a different company pay that, that separate company or do they have to route everything through you guys and then anything you want to wrap up on?

[01:07:46] Yeah.

[01:07:47] **Babak Siavoshi:** So I'll say two things. Just to go back to the GPR discussion where I said, let's put a pin and kind of how we handle it. We handle it exactly how I described in my piece, in our conversation, which is that we're coming to the table with incredible amount of private, R and D.

[01:08:01] And we expect the government to recognize that and not ask us to give all that up. For every little pilot that we do to show up, show our wares, to show how we can meet their needs. However, we come to the table from the very beginning with the understanding and the promise to the government that if we're particularly solicitation, they **commit to us.**

[01:08:21] **And we ended up being the kind of the solution they choose, we will give the government the rights they need to to run a military system, which**

often are going to be, greater than the rights that a commercial enterprise or consumer would expect in the same circumstances.

[01:08:36] And so that also goes for interoperability and so on, like a lot of the systems and services we're providing, part of the capability that we're providing as a service is interoperability. And I think interoperability gets thrown around a lot. It's in every vendor's deck, but it actually does have a real mean.

[01:08:54] And for the types of technologies, we're talking about the way you achieve interoperability is through a software baseline and a software system that makes it very easy to integrate other systems. And that includes other software systems, right? So all these things have to work together. And no, we are not a kind of centralized repository where the government has to go to us to do things.

[01:09:19] We just happened to be in our view, the easiest way you get a new system integrated into your kind of broader suite and the easiest and cheapest way to have an effective integrated capability. And so if the government agrees with that, they tend to use us to do that. If they don't we can integrate with another centralized system and it works just as well, but.

[01:09:41] Our entire philosophy in business is based on being able to integrate these different systems together very quickly. And the reason we are fast is because that is effectively a software problem. The reason we can have our submarines integrate with our towers, integrate with our group one drones, integrate with our group two drones, integrate with our unit tube, launched drones.

[01:10:02] This goes, we've been through this exercise ourselves. We get rewarded if all our things work together. And so we've really built that muscle. And I think the key takeaway, I think that's relevant to our discussion is that is a software problem. Integration of different systems on a single plane of glass or across communications platforms and so on.

[01:10:22] Those are software problems. And so you need to really have the facility to build and deliver advanced software to do those well.

[01:10:29] **Eric Lofgren:** Babak Siavoshy, thanks for joining me on acquisition talk.

[01:10:33] **Babak Siavoshy:** Thanks Eric. It was great being here.

[01:10:35] 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.