

[Transcript] War on the Rocks / Defense and Capital: A Conversation with Raj Shah of Shield Capital

You are listening to the War on the Rocks podcast on strategy, defense, and foreign affairs. My name is Ryan Evans.

I'm the founder of War on the Rocks.

A few weeks ago, I sat down with Raj Shah.

He's the managing partner of Shield Capital and the former head of the Defense Innovation Unit back when it was still experimental.

We spoke about the venture world and investing in defense tech and dual use technology.

It was a fascinating conversation.

You might have just seen that Shield Capital's in the news more recently for closing its \$186 million inaugural fund.

Hope you enjoy the episode.

You really were at, I think it's fair to say, the leading edge of this sort of new wave of innovation in the new defense ecosystem, future defense industrial base, whatever you want to call it.

You were sort of at the leading edge of this when you became the head of the Defense Innovation Unit then denoted with X for experimental, is that fair to say?

It is, Ryan.

We had a lot of us together trying to be the early innovators and push the department and the valley towards capturing this trend.

Who are some of the other early innovators from that phase of your career?

Well, there were several, and I also include my partners in DIU when we started, but I think it originally originated from Secretary Ash Carter.

He was the visionary behind this.

In fact, in 2001, he wrote a paper with Marcel Letra about how commercial innovation and technology is going to be so important to the battlefield and to preserving security.

When he became Secretary of Defense, 15 years later, he implemented it across a range of things including DIU, the Defense Digital Service, the Strategic Abilities Office, so

I think we have to credit him as the original visionary.

And as many of our listeners know, we passed away earlier this year, but stayed very active until very near the end of his life from what I understand intellectually, professionally.

Were you still in touch with him the last few years?

I was, very close.

In fact, he was an advisor to us here at Shield Capital.

He had legions of former students and employees that he continued to mentor and instruct and love, and so it's a tremendous loss to the community.

How'd you start out?

I remember meeting you back when I had never heard of DIUX before, and it was at some conference

at Stanford at the Hoover Institution, probably close to 10 years ago, maybe eight years ago, I don't know.

And I remember being fascinated by this new entity, but tell our listeners how you got started before that in your career.

Sure.

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I grew up in Georgia and went to the Northeast for undergrad, and it was there that I really wanted to serve, and all little kids I liked airplanes, and I never grew up, and so the Air Force told me I could serve and fly jets.

So I signed up for the United States Air Force, started flight school in December 2001.

So I knew I was going to be using what I learned, so I spent a few years on active duty in the International Guard, a couple of deployments, but then I transitioned to the Flu F-16s.

Could you have guessed 22 years ago that F-16s would be a topic of major international discussion and geopolitical importance still?

Exactly.

It's an amazing airplane, and it's going to continue to stay in the fleet.

But then after that, I began to pursue my business career and really loved early stage in entrepreneurship, and after business school ended up meeting a couple of really smart folks at Cyber Command at Fort Mead, and we together launched our first company that helped enterprises protect themselves from advanced threats.

And how did the DIU job come about?

That company, after we grew it, we ended up getting acquired by a big public company called Palo Alto Networks here in Silicon Valley, and DIUX had been started by, again, Ash Carter and then the Deputy Secretary, Bob Work, and in its early instantiation, it wasn't reaching its full goals.

It didn't have the right authorities, it didn't have the right team, it didn't have the right amount of resources.

So Secretary Carter did a reboot.

He called it DIUX 2.0, and I, along with a few others, were recruited to come and transform that organization and really accelerate its ability to achieve its mission.

What were some of the frustrating aspects of that career, that job?

First off, I'd say it was one of the most amazing jobs I've ever had.

The team that we had was just absolutely incredible.

Technologists, military officers and operators, company founders and investors all together to solve what was, and I believe still is, one of the most pressing problems for national security, which is how do we modernize our military?

How do we give our men and women in uniform the best technology in a world where AI and cyber space technology is moving so fast?

So the mission was just amazing.

What made it frustrating was not the mission or operating with our team, but rather dealing with all the constituencies in Washington, between Congress, between bureaucrats in the building that did not want to move as fast as we want to move.

And so interestingly, most of my time, most of my battles, was spent in Washington.

And in fact, when I left after two years, they calculated the number of red eyes I had taken to Washington, and it was almost 60 red eyes in two years that I took to deal with issues in DC.

I'll stop complaining about my travel schedule.

So tell us, for the listeners that are not familiar, tell us what DIU is famous for.

And could you get into sort of the nitty-gritty on the contracts that DIU is most known for

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delivering and how they work and how they're different from the rest of the Pentagon?

Sure.

DIUX and DIU Now's mission was, how do you accelerate commercial innovation for the war fighter?

How do you make them more effective at their jobs?

And so we had a number of tools and missions within that.

But one of the core things that we had was a contracting capability to move very quickly and to help companies move from prototypes to production.

One on our team was the real spark behind this.

Her name was Lauren Daley.

She had been an acquisition officer in the Army, had come out to DIU, and had looked and read the 2017 National Defense Authorization Act, the defense bill, and had found that there were some new authorities that Congress had given the department.

But the department wasn't using.

And so she did research, spent time with the legal team, and had wrote up a whole plan to how to execute that.

And the name of that was Commercial Solutions Opening.

And within the first week of my taking over the organization, we learned about this proposal she had, and we were able to get full buy-in from the department.

But that enabled DIU to move quickly, which was actually more incentives than legal authorization.

DIU had no special authorities, but we were able to meet a company, make a decision, and put them on a contract in under 90 days.

More importantly, if you won a competitive DIU contract, that was then justification for that end customer to put it into production, right?

The Valley of Death is the main...

Not a customer.

You mean, say, a major command in the Air Force, whoever it is.

Exactly.

Navy, Air Force Marines.

They have a technology need, and they have the resources for it.

We help them move very, very quickly to take this young startup and put them into production and cross that Valley of Death.

And this sort of will lead into what you're doing now, but why can't the rest of the Pentagon already do these things?

Because it does have the authorities, right?

They do have the authorities, and it really comes down to incentives.

The Pentagon is full of well-meaning people that care about the mission.

They're good people.

But they're operating under a set of incentives that doesn't encourage that.

If you're a contracting officer at a large command, and you make a mistake, you may lose your job.

You'll certainly be penalized.

But if you end up taking an extra three months, six months, three years, well, there's very

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limited cost to that.

So the incentive structure is to really reduce all risk in the contracting process, which in totality actually creates more risk, because look, our warfighters, they're very innovative and they're determined, and they will go to war with whatever equipment they have. And so this slow process of acquisition actually transfers risk from the cubicles in the Pentagon to the battlefield, where you don't want to take risk.

So after working this problem for the Defense Department, a lot of people might come away sort of crushed and disenchanted, as I often am by the Defense Department.

You've actually doubled down and you've started Shield Capital.

Tell us why you are such a sucker for punishment and why you did this.

Well, I think it's really, really important.

I think the American experiment in democracy is unique, and it is unparalleled in the history of humanity, which is characterized by authoritarianism, dictators, and difficult lives for the citizens.

This experiment, while not perfect, is worth defending and it's worth preserving.

And unfortunately, as recent events in the last two years have shown, there are still authoritarians that don't believe in norms and world norms.

And we're in a world now where these modern technologies like artificial intelligence and cybersecurity are just going to be so critical to preserving democracy.

And the answers are going to come from young companies, from technologists that look and smell differently, perhaps than the folks in the Pentagon.

And we needed a way to encourage them, to support them.

And I also think from a business standpoint, it's an incredible investment opportunity.

These are going to be some really, really important and valuable companies.

And we wanted to, and I wanted to be at the ground floor to support them.

And so this is a venture firm, but what's different about it?

Well, I think, you know, if you look at our tagline at Shield Capital, it's mission matters. Right?

So we want to invest in founders that are really passionate and committed to their own individual missions of their companies.

And look, doing a startup is really hard.

Like it's probably the hardest thing I think one can do.

You're the perennial underdog, you're under resourced, and you have to just move faster and it's lonely.

So you have to have a lot of motivation.

And we want to support those types of founders.

And so I think what makes us different is our laser-like focus on entrepreneurs trying to work at the intersection of commercial and national security use cases.

And we have a phenomenal team here, a large team, that is dedicated to supporting those founders.

How are founders in defense tech and dual use that includes defense customers different from founders that are solely focused on commercial business, commercial-facing businesses?

You know, I don't know that they're that different, right?

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And I think good founders have the same characteristics, right? They're, again, deeply passionate about what they're trying to solve. They have the ability to recruit great teammates, great investors. They're able to work with customers to solve their problems, sell their vision, because it's not all built yet, it's a startup, and continue to grow in adversity. And I think what we're seeing is more and more great entrepreneurs focus on defense because they see both the market need, right, the ability to build a real business, which is important, right?

This is what makes, I think, again, capitalism and our approach different in the US than authoritarianism is, you know, you have to build a business to make it sustainable. But the second part is they also, these founders want to build something that really matters, right, that they can look back and say, boy, this is really meaningful. I've created a great business and I've made a difference in the world. I'm a firm believer in the whatever you want to call it, again, future defense industrial base.

I think it's critical.

I'm not anti-prime.

There's a real important place still for the primes, even though they have their drawbacks.

But one thing I do worry about is, you know, looking in Ukraine, it's a great example of that famous line, you know, the future is here, but it's unevenly distributed. And so the most decisive platform without any doubt, I think, is still artillery, particularly 155.

And production of those shells has been a real limiting point in what we see now in Ukraine's offensive.

Now, drones, of course, have also been really important, but perhaps not as important as artillery.

Do you think more companies should be focusing on applying technology to producing low technology shells faster?

It sort of reminds me of, you don't see a lot of Silicon Valley startups focused on building better physical infrastructure or sort of applying high technology to these perhaps unsexy, but fundamental problems of the physical world as it exists. And I worry that we won't be starting to over leverage on these super high tech capabilities.

Do you think that's fair?

I think there is a role for younger companies to help with that.

You know, I think that some of those, some of that needs to be driven, though, candidly by the buyer, right?

And when you have a single buyer, it makes it hard to have competition amongst buyers and I would say operators of such technology to push forward innovation. You know, I think unsexy areas of manufacturing, supply chain, logistics offer great opportunity for disruption and new companies and new approaches to be had. You've seen that in other industries as well.

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They just take longer because there's some really deep entrenched interests.

The customers have been doing things a long way.

And unless there's some external pressure and competitiveness, it's hard to change.

So I think change will come to even these lower technology areas where there's room for technology insertion that just have longer time horizons.

Yeah, we're so brittle across the board that I think it has to come there.

One of the big limiting factors for a lot of companies trying to disrupt these things, disrupt the defense business and introduce new, exciting technologies to what the US military is able to field.

A lot of established venture firms here in California, where we're recording this episode have not bought in and without naming any, like for example, Sequoia is being slow to do this.

So yeah, fine naming any, but a lot of the sandhill row crowd has been very slow for whatever reason to do what shield capital is doing.

Why do you think that is?

You know, Ryan, I would say things are changing here pretty rapidly.

When I did my first company that I had mentioned, we were all out of Fort Mead Cyber Command NSA.

We knew that technology that we were building would have been valuable to the government, right?

We all had security clearances, but it was so hard to sell to the government that our investors at the time recommended and advised us not to sell to the government.

And after our 10th meeting with some random senior official of the government, we decided to not even pursue it.

That has totally transformed a decade later.

Yeah, while there may not be as many specialist firms like us, all of the major firms now have a partner or two that are focused in this sector, in deep tech, in defense.

And in fact, we have co-led deals with several of them, including Andreessen and John Kallis and others.

So I think it's changing, but we're still in the early innings of that.

Hi, everybody, Aaron Stein here.

Wanted to take a moment out of this conversation to talk to you about Warner Rock Splatium, which is our membership products, where we feature a series of newsletters delivered every day to your inbox from the adversarial, which focuses on succinct analysis about U.S.

adversaries in brief, where we have in depth, but short interviews with experts around a single topic, mid-afternoon map, which is a whimsy, cartographical look at maps and their role around geopolitical events to rewind and reconnoiter, where we touch base with authors who have written pieces more than a year ago and ask them to reflect on what they wrote in light of recent events.

We also have a series of podcasts, two of which the

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Russia contingency with Mike Kaufman and Thinking the Unthinkable with Ankit Panda look both at the Russian military and on Ankit's side, the Third Nuclear Age. We have a slew of other podcasts I host along with Nick Danforth, and we're coming out with five new podcasts.

These podcasts will each focus on each individual military service from the Marine Corps, to the Army, to the Air Force, to the Navy and to the Space Force. Keep an eye out because those are coming this winter, along with other products focused on cyber and AI.

And so with that, I'd recommend you head on over to warontherox.com slash membership, sign up now to gain access, join our tribe and learn about all these new products.

And with that, back to Ryan.

Is Shield Capital mostly involved in early stage rounds?

Are you doing later stage rounds yet?

We are focused on early stage.

So we are seed A investors.

We will go, you know, early as is two individuals and their dog and ready to help build them up to, to starting the scale in the A.

But that's where we think we can add the greatest value to our companies.

And we like to be very involved.

We like to lead rounds with these, with these founders.

How important do you think Andrewle is?

And I'm honestly not sure if you guys invested in them or not, but Andrewle is sort of a pacing company for how well the rest of these companies trying to do this kind of work.

Look, I think it's fantastic that there are a number of very successful companies focused on national security, Andrewle, SpaceX, Palantir, Vannevar.

I think this is really, really important for a whole host of reasons.

Number one, it helps other venture investors understand that there's real economics. Right.

Again, we want to harness capitalism to help national security.

That is the American way.

And so by showing that they can be great returns, you're going to get more capital.

You're going to get more entrepreneurs that will come in to this field.

And now what we're seeing is, as these companies have matured, that many of the early employees, again, that really love the early stage of a company formation are now leaving and starting their own businesses.

And this is the same ecosystem that we saw in enterprise software and semiconductors and in other major industries.

And now it's coming to these national security oriented.

So I think, I think there's a positive feedback loop here with strong network effects, and we're just seeing, again, the early innings of that here in national security technology.

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What are some more things you'd like to see the Defense Department and Congress do to make DoD a better customer?

Because it is hard to work with the defense partners.

The customer still, despite a lot of progress having been made through Sibbers, and even though the conversion rate to phase three is still poor, it's better than it was before, right?

So what else needs to happen?

Look, I think there needs to be a fundamental recognition that the systems that we have are well designed for equipment and hardware that we're going to keep for a long time.

So our system actually works pretty well to buy an aircraft carrier that we're going to keep for 50 years.

It is not well designed for software type systems or low cost hardware that are continually being upgraded.

And then a time clock that is just not our current system.

So I have the pleasure of being on this congressionally mandated commission called the PPBE, the Planning, Programming, Budget, Execution, Reform Commission, that's taking a look at this.

But I think it's incumbent on Congress in particular, right?

They are, they have the power of the purse to say, for these types of systems, we, we implore you DoD and we will give you the tools, flexibility and trust to move quickly enough to really capture and drive how software is developed.

One of the most interesting shifts in commercial software that we've seen in the last generation is going from buying software to buying software as a service.

Do you think that kind of business model will increasingly gain traction in DoD?

Maybe not just with software, but also with hardware.

I hope so.

I think that is a direction we need to go.

We need to understand that there's different models.

There's data as a service.

There's lots of different ways where you don't necessarily have to own everything, right?

The DoD is not the monopsular buyer it was in the fifties.

And so how do we influence private capital and these venture firms, right?

Use your buying power as a demand signal to get a lot of private investment to push technology forward in the areas that you want.

I think that would allow DoD to be more efficient, to move faster and really have the world's leading technology for its warfighters.

This is great.

Before I let you go, could you name a book or two that has been really important in making you who you are?

That's a great question, Ryan.

And let me offer you three that have quite a different range.

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So one is a history of countries in their interaction.

Henry Christian wrote a book called Diplomacy and looks through several layers of conflicts over the years.

And I think it shows, again, the importance for countries to have strength and principles and how important it is to ensure that we have a very strong natural defense to preserve democracy.

Because again, history's natural view or natural progression is not toward self-determination.

The other two books, the second one would be Atlas Shrugged by Anne Rand to again, to show the power of the individual and that it's okay to think differently.

Respectfully disagree on that one, but go ahead.

And then the final one, especially I love to give to entrepreneurs is by Ben Horowitz, the hard thing about hard things to again, show the struggles and determination it takes to build a startup.

Yeah, that last one is not just one of my favorite business books, but it's probably one of my favorite books.

Any one building a company should read that book.

Thank you so much for listening to this episode of the Warner Rocks podcast.

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