JEEVAN: I think big picture, the ability for such a vast team to collaborate. I think OpenSpace enables that. So, there's a lot of issues that an expert who's just not going to be on the site every day could have caught. It could have saved a lot of problems, you know, let's say if you catch a problem early, it costs you a dollar to catch it late, t cost you a million dollars, which is true of everything, right?

Welcome to *No Turning Back,* a podcast hosted by General Stan McChrystal and myself, Chris Fussell. Our goal here is simple: to have serious conversations with serious leaders - so that we can learn from the best and navigate these complex times together. Thanks for joining us.

ANNA: This week, Stan and Chris speak with Jeevan Kalanithi and Michael Fleischman of OpenSpace. Jeevan is the CEO, and Michael is the Co-founder and Chief Scientist of OpenSpace, which provides cutting-edge technology for capturing and mapping job sites.

Jeevan and Michael are accomplished thinkers and "doers" in Silicon Valley. They received their undergraduate degrees at Stanford and Columbia, respectively, before both receiving advanced degrees from MIT. Jeevan and Mike have established themselves in the tech industry (through advising roles and founding start-ups of their own) and have worked together at OpenSpace for three years to transform how teams operate on job sites.

We threw some tricky questions at Jeevan and Mike about building a narrative around new technology, how OpenSpace could have helped with Boston's Big Dig, and how tech start-up leaders are unique. Their technology and perspectives are fascinating – and we think you'll really enjoy the conversation. Now, over to Stan.

STAN: Michael, Jeevan, really happy to have you all here and excited to have the conversation because while we focus on leadership, we're in an era when everything digital and everything artificial intelligence is connected to us now. And so, where we really want to get is into your heads on where you think leadership in that kind of an environment is going. And let me start with a story. I went to West Point in 1972, and I was trained as a civil engineer, but we started with slide rules.

We were the first class issued handheld calculator. So, my touch with digital technology was pretty crude, but I do remember a story, or I remember an experience, in 1990 when the Iraqis had invaded Kuwait and they had surrounded the US embassy in Kuwait and they had not taken it over. We still had the staff and they're besieged.

And so, the command I was part of, the Special Operations Command, was told to work up an operation to go in and rescue the Americans in the embassy. And in preparation for that, one of the things we had, and it was crude at the time, were goggles you could put on operators and SEALs and Delta Force members, and then they could walk through the embassy in an early version of virtual reality. So, if they went down a hallway, if they turn left, they would see what they would see in the embassy. And I remember we were all amazed by it at the time and what it could do to put you in a moment.

But as I looked at what OpenSpace does, I sort of had a deja vu moment.
So, tell us more about OpenSpace. What is it? What's the new opportunity it provides us?

JEEVAN: Yeah. Well, I mean, a lot of ways, all we've done is taken that experience that was accessible to you in the military and, and democratized it, I guess you could use that word, made it super easy for really anybody to have that experience of teleporting into a space where they're not physically there and seeing what's there.

And that's really useful because you know, a picture's worth a thousand words and there's a lot of people whose job depends on managing a real physical space. Construction companies, real estate developers, they make their money, and the product they make, is real physical stuff. And if you think about existing digital technologies are more oriented around documents and words, that's a pretty poor record of what's actually happening in real physical reality.

So all OpenSpace does, is it creates that kind of… if you've used Google Street view, a lot of people have, we've made it a really easy to generate that sort of thing for really anybody. And I guess what I'll add is we didn't invent the idea that "picture a thousand words," people that build real physical stuff would rather see what's there. So, so that's not what we did is evangelize that idea. We've just used technology to make it incredibly easy to do that.

So, with us and OpenSpace, you just take an off the shelf, GoPro style camera, someone that's on the project, say a superintendent, just walks around - which is what they do. That's like the job. You walk around and make sure everything's good. That camera goes along for the ride or technology. Does it takes that kind of simple video file. And it's able to use a lot of techniques from robotics and perception, figure out where the camera is at every single moment in time. And then pin every image. These are taking two times a second to the floor plan.

So then anybody can pull up their phone or on their computer and like virtually visit that project.

CHRIS: How do you - and Mike, maybe we start with you and then we'll love get Jeevan's thoughts as well - how do you think about… beyond just what you are doing inside of OpenSpace but, more broadly, the technology at play here. It's such an important sort of seed change in how we think about being in a physical space, right?

There's a much broader story here that people need to start to understand before the technology flows in the backside. Or maybe you look at the other way, like in the, I grew up in the SEAL teams, right? So that those sorts of units there are incremental changes, and then sometimes, you know, periods of intense changes in the technology leverage.

But what was most important there was the story that, that these units can start to understand, and they wouldn't describe it like that. But if you think of something simple, like fast dropping out of a helicopter, right? There's been a helicopter for a long time. And then someone someday said, "what if we could get them stable enough so that you could put a rope out the side and you get a bunch of operators on the ground really fast?"

And it wasn't just like, "Hey, we can hang ropes from helicopters." It was changing the mindset of how could that affect the way we approach a, a very kinetic situation. What if you could change the rules around speed and massing numbers? "Would that be good or not?"

"Yes, that would be good." Okay. Here's one of multiple options on how we can and do that. Right. So how do you tell that story when people try or trying to get their heads around understanding the implications of what you're working on?

MIKE: Yeah. I mean kind of getting at the question of really kind of building a narrative, I think right, around your technology which is, I think so important particularly for a startup in the early days. Nobody really knows what you're talking about and you have so many audiences you're talking to, not just the customers, but investors, you know, even your mom and dad, just trying to explain what you're doing with your days and trying to get them to understand that. I guess from, from my perspective, I think usually simpler the better in order to try and express that and really focusing in on kind of three things: what is the problem that you're trying to solve? What is your solution? And then what is the, the impact of that solution? What does that really mean for customers, investors for society?

And so, you know, when we talk about that, I think, you know, we really want to try and make that problem as relatable as possible. Something that people can really understand. And I think for our product and our technology in particular, we have a pretty big advantage there just because, you know, anyone who's ever had to do any work on their house or any construction, you know, remodel or had to fix a plumbing, anything like that is going to have a kind of real intuitive sense of the, the friction, the frustration that can come in a construction project.

And then you know, when you talk about the solution, kind of pitching it in a way that kind of captures the imagination. Right. And so, you know Jeevan mentioned this idea of you know, being able to see what happened previously and this metaphor of a time machine that you can just kind of slip into this time machine, roll back time, and instead of, you know, having to take the drywall down so you can see where the electrical conduit goes, you can actually just roll back time and see what was there before the drywall was put up. Much easier, much cheaper.

And then yeah, and then impact again is really just kind of kind of expanding that, you know, you realize if that's easy for your single family home, when you're doing construction, now, imagine what it could mean if you're building an airport or a skyscraper or an aircraft carrier you know, and then kind of you know, really tell the story as it kind of expands out into all the different places that construction touches.

STAN: I immediately go to the story of building of the Brooklyn Bridge. And you remember John Augustus Roebling designs, his bridge, they start the building, and then he, if I remember correctly, he crushes a toe, which turns into an infection, which eventually kills him. But for months he is bedridden. And his wife becomes his eyes and ears on the construction site.

So everyday she'd go and she'd look it out things aren't you come back and describe it. So when I extrapolate this Ford, it's beyond construction, it is how can you take leaders or other experts and

put them on the ground to see what's happening. Maybe it's a construction site. Maybe it's something that's happening in a protest or it's a military putting in a defense, any number of things. So a leader who can't travel there in the moment can virtually be there in the moment. Have you all been thinking in that direction?

JEEVAN: Oh yeah, totally. I mean, so just pulling off what Mike said, and building that story. It's, it's really important to have a simple story that someone can understand and like less than a second.

And these days, a lot of that storytelling can be done by showing them a picture or video of what you're doing. It's a lot more effective than talking about it. So we take advantage of that a lot. It makes a lot of sense for OpenSpace and that's a very visual system. But I think Stan, to your question, when we think about what our impact could be on the future off work in general, it's that disintermediation. It's like being able to directly experience something without the cost of physically being there. And, and, you know, I think that a lot of what digital technology has done over the past 20, 30 years is kind of decoupled and need to physically be there at the time to get the work done. And this has been true for people in offices past 20, 30 years.

You no longer need to… let's say you're writing an article for a newspaper. You don't physically need to print it out, send it to sit next to your editor, they write on it, then you take it back. That is very time-consuming. Computers, of course, change style where you can write it wherever you are, send it over to them by the internet, they can give you comments and so on, so forth.

The problem is we haven't been able to give that same benefit to people that work in real physical reality, which is a lot of people. Right. And so, with the advent of what cameras can do and what computer vision can do, we can finally bring that benefit where you no longer need to be co-located in space and time with the work surface being done. And so, yeah, I mean, for our customers are like, yeah, I'm sure it would be great to have photos of my project so that if I get a question, I can deal with it. And that's why they're like, yes, we need this right away. So it's not a complicated thing for them to understand.

Once they started using it though, they're like, "Hey, you know, I don't even have to actually get in a truck today. This guy call me, I'll just look on my phone real fast and then see like, oh yeah, this is the issue. Go deal with this." And it starts to just change the way they do everything. So that's pretty exciting for us to see it.

CHRIS: Are we fast approaching this moment in - maybe in that space broadly and in others in the construction space, probably - but others of sort of unrecoverable shift, if you don't get on this change at a certain point, it'll just be an order of magnitude behind where the competition is.

You know, I'm at our home, in the mountains of West Virginia. So I think of the extraction industry, you know, is this a John Henry versus the steam engine sort of moment where look at a certain point, you just can't compete anymore if you're not playing at this level. Is that around the corner or is that far off?

JEEVAN: I think it's now, roughly now. And I think for our little space of the world certainly the pandemic hit the fast forward button on this change. You know, I think there can be a tendency for people in our industry to make these bombastic huge statements, which can be pretty annoying. But, you know, if I were to have one, I think when we first started the company, we didn't know if it was going to be a good idea and took that leap of faith.

Right. But I was pretty sure if that, you know, at some point in the future, your builder of the future, they're going to be like annoyed if they can't check out their product from their house, before they head into the jobsite. It'll be frustrating for them to actually literally have to go there for every single issue.

Kind of in the same way, if I were to like, say, "Hey, you need to look that up. You have to go to the library. You can't Google." You'd be like, "What?" You just be like crazy. So, I had that thought - I think we all did, Mike and I, and then I think the pandemic kind of fast forwarded that where it was just, that was 10 years from now, but maybe it's actually two or three.

And just to reflect on that question a little bit more deeply, Chris, I think there's multiple ways of looking at any given topic. Right. And I think when we think about technology as a startup, we think about here, we're writing software, we're building this thing, we're putting it out there and seeing it, people will get some benefit out of it.

And it's just the act of building this thing and getting it out there, which I think it's a very true way of looking at how technology gets into the world. But I think what you're saying is equally true: where technology can be viewed almost as like a force of nature. Where it's just going to happen to you, right? Depending on what the industry is. So maybe if you're in media, the internet happened to you and some companies adapted and some companies didn't. I do think that's true for this world of construction where the technology is just gonna become so easy to have this visual record of things that people will begin expect it and the need to have it. Well, I think for us the issue where your customer is going to ask you for this, they're going to be like, "Hey, Acme builders, I'd love you to build my hospital. I'll be able to see it, right?" My my team be able to look and see what's there.

And if you're like, "No," they'll be like, "Okay, we're going to go with 1, 2, 3 builders. Like, why would we go with these guys? They're hiding something." And so I feel like the overall cultural shift that the technology has created, which is mostly positive, is one that is more around an assumption of collaboration and an assumption of transparency, because it'll be easy enough to expect that with the technologies like OpenSpace and others coming out.

CHRIS: Can you say more, either of you, about the accelerant of the last year? Cause we've had that conversation in a lot of different industries… is that just obviously the physical constraints - so this would be great, right? Cause I can't get out there for all the reasons that we know, but has it also driven more investment in this arena? Has the rate of development gone up? What are the other factors that have pulled it from 10 years to 2 years?

JEEVAN: Yeah. I'll give a quick answer then, Mike, you can totally expand on what I say. Or contradict it if I say something stupid. But yeah, I mean, I think it's a pretty simple story. You know, I got to build a hospital. Okay. Now there's this pandemic. I can't have the same number of people on the jobsite anymore. They'll get each other sick. So, what are we going to do about that? Well, we can't not build this thing. And honestly, like, I think OpenSpace as a company just happened to be a good enough idea, but the right place at the right time, we were like, well, there's this OpenSpace thing - like this will allow the architect instead of flying from Chicago to Las Vegas or whatever. They can go and log in and keep the job site rolling in a safe manner. And so we saw just a huge, huge uptick in that.

I mean, the usefulness of the technology was pretty clear, I think, prior to that, but then it became like, we need to make this change now. I thought it was cool last year, but we really need to do it now. And so, we saw a huge amount of growth of course in revenue, but also just an adoption of the technology, like the amount of data flowing through our system I think tripled like over the course of a month, something like that. And then we will now process like 4 billion square feet of real estate information.

So, it's really, really moved pretty quickly. And so, I think that that feeling of this would be good. I can still solve my problem to, like, this is a necessity shifted and then there's kind of no going back. One thing we wanted to always do leading a company is to like, take your risks head on. Don't be afraid of them. Like, you need to know what the real story is. And one of those could be like, well, people are using it now, but will they use it after the pandemic's over?

So I tried to dig into that. We talked to this one, superintendent. And, you know, this will kind of show his age, but he's like, you know what, once you got Netflix, you don't go back to Blockbuster. It's just like, this is just easier. Like, why would we go back? Even, even when it's easy to get on the jobsite, being able to check out what's going on with that, literally it would be there. It's just an easier way to do things. So that's kind of the acceleration that we saw.

STAN: That's fascinating. Let me ask about the intersection with what we'd call, maybe pure leadership. In the fight in Iraq and Afghanistan, Chris and I experienced the ability using Predator unmanned aerial vehicles. We could watch in real time all the operations were being conducted. And there was this temptation to then move the chess pieces from afar.

We could sit in the command center and say, "Sergeant X, go left, Chief so-and-so, go right." That sort of thing. And yet we learned it felt intuitively from the beginning that that was not the right move. So, I'm going to ask you: what about when this technology becomes the boss becoming to the work site where a surrogate walks around with this camera on and they said, "The boss is visiting today. He's not really here, but he's watching through this camera." How will we respond as human beings to that? Even though he can see, and we can talk to them, or if it's a, she, they're not actually there.

JEEVAN: Yeah, I'll opine on that. I think there's a lot of really interesting stuff there. And I think a lot of these things really boil down to critical nuances is what I would say. So, you know, you could try to solve the problem that we're solving by putting a bunch of cameras everywhere

on a jobsite. Right. And then it would really be this big brother system. It's a lot of practical reasons why that's not going to work because just getting them connected to power and internet, let's say you can do it.

Well, people wouldn't like that because they'd feel like it's invasive. And I think they'd be right to worry about that. The OpenSpace solution is just like you pop the camera on when you want to, you walk around and take it off, so people don't worry about it. And so, it doesn't feel as invasive. And that's like a kind of a subtlety, if you're thinking about the technology really 30,000 square foot view, you wouldn't think about that, but it actually matters a lot to the people on the jobsite.

And then I think to your real question is like, what's the, what's the result I'm getting? Does this help me? Right. So I think look, if you're building a building, like you've got to physically be there sometimes. It's a real thing and a real reality. So we never said OpenSpace that we're like replacing that. We like to think of ourselves as not replacing anything, but it's augmenting people's abilities.

So, we just want to make them 10x more powerful, not replace one thing versus the other, because there's just no substitute for being on the jobsite from time to time. It's just unfortunate if you have to be there for everything. Right. So, I think that's how we, that's how we think about that.

And that's a real, pretty specific view on, on our technology, I guess. But I think broadly, when we think about management through data and using data, it's, it's all great. It's all good. But you can't get obsessed with the data. It's like, what are you actually trying to accomplish? Does this data help you? How does it help you? And in what ways does it become a crutch? And I think weaker organizations will go into crutch mode and stronger ones will deploy it in the way that makes sense for them.

MIKE: Yeah. And then maybe just to add to that a bit, I think, cause, really you're kind of getting at the question of behavior change and how these technologies kind of change the behavior. And there is that element of the boss kind of always being there. But I think another piece, you know, in terms of the behavior changes on the site have to do with kind of more the interaction of the teams that are actually already on the job site on a daily basis. Right? So the subcontractor interacting with the superintendent and you know, one of the things that we've seen is that, kind of, it really in an interesting way, because the you know, we're capturing this data and the video is there.

And this time machine that lets you go back to kind of resolve disputes that might come up in various "he said, she said" moments. What happens is because everybody on the site now knows that there is this single source of truth that exists out there, and that disputes can be resolved by referring to this, you know, going back and checking the tape, look in an OpenSpace and seeing what actually did happen. What happens is you get this kind of - it's almost counterintuitive, this layer of trust that kind of builds or develops on the job side. It kind of like the, that old

expression: "Trust, but verify." It's like the idea that because everything can be verified, there is now this, this this layer of trust that exists.

And in particular, when you're working on you know, these jobsites, which are always very complex with multiple teams interacting, just having that layer of trust actually smooths out a ton of friction that, you know, can occur on these sites and actually just makes everything actually, you know, just people behave better and, and things go more smoothly.

CHRIS: Really hard to predict this, but curious your thoughts: how quickly does this move down market? Like you say, you know, Acme Construction goes after the new medical center. How quickly is this? I'm getting my garage renovated and one local contractor can do this person. Other than that can't, I'm biased toward the transparent relationship.

JEEVAN: I think that's already happening. I mean, the reflection on our own company, you know, people use our technology on like, two-month, three-month renovation of a 5,000 square foot office space. So, like pretty small projects. And I think we've been able to go there because we really focused on making it as easy to use and as simple as possible.

So that's happening, but even in the renovation and garage, I mean, whether it's OpenSpace or not, like, I think. People are just using their phones more. They'll just snap a photo and see what's going on. Right now, I'm having the front of my house repainted. Right. And we had someone help us like pick the colors.

And I was typing the emails like, "Hey, so are we supposed to use Windsor Blue or Milk Mustache or whatever, these crazy paint color names. And, and I was like, "Wait, hold on. I'm just gonna take a a few pictures on my smartphone, so you can see what the heck I'm talking about." And she's like, "Okay, great."

Yeah. So she just draws a little arrow, like, "This part should be Milk Mustache, white. This part should be Windsor Blue." And then the guys here they look up their phone. They're like, "Got it." You know, like without even a phone or easy to use camera, maybe she'd have to come visit. Maybe these guys would have to wait a week.

That's like pretty common. And it's just the way we used to do things. So, I think that transformation of orientation around just being able to see what's there without literally being there. Yeah, OpenSpace does that for construction projects and have a very complete system for doing that. But you know, your phone works in a pinch too for smaller projects.

CHRIS: Yeah, that's interesting. It seems like this an inevitable comparative advantage. Stan, over to you.

STAN: Yeah, we just finished writing a book. And part of the book is on the Boston Big Dig, the massive highway, bury the highway project, which was extraordinary in ambition and extraordinary in cost overruns and challenges and all the things that go with that.

What would be the difference on that kind of a project if something like OpenSpace had been used, you know, extensively, if it had existed and been used?

JEEVAN: Yeah. I'll, I'll speculate on that one. So, first of all, you know, OpenSpace is not a magic pill. No technology is, it's a tool that can help you. And sometimes it can hurt you, but if you use it the right way, hopefully it's more beneficial than not.

So with that caveat, you know, Mike and I actually lived in Boston, we were in grad school at the time, the Big Dig was like, kind of getting finished. Right. So, I remember that quite well. And then after it was done using, I was like, "That's pretty cool." Of course. A lot of pain and suffering to get it built, right.

I think big picture, the ability for such a vast team to collaborate - I think OpenSpace enables that. So, there's a lot of issues that an expert who's just not going to be on the site every day could have caught that could have saved a lot of problems. You know, they say, if you catch a problem early, it costs you a dollar. If you catch it late, it costs you a million dollars. Which is true of everything, right?

And so I think one issue and the Big Dig I remember is like the concrete pour was messed up – they didn't clean up the gravel properly. And you know, you got to think if one of the civil engineers could have just like, seen that. They're like, "Oh wait, stop! You know, we've got to clean this up."

You know, I don't, I don't really believe that most of these errors or mistakes are because people are trying to do bad. They're trying to be evil. That happens. Right. But I think a lot of it's just miscommunication. I had this very wise board member in my first company who said, "You know, people will tend to believe their own version of reality. The one that benefits them, if they lack facts. So they have facts typically get on the same page and move on."

And I think with these big construction projects, without these visual records, there's just no shared sense of reality. Like there's no sense of facts. Someone says one thing, someone says another, who knows. I got to think on a project like the Big Dig, if the people could just go and see what the person's talking about, what they're concerned about, they could in the morning they kind of just click around to see how projects is going. You know, hopefully some percentage of the big issues would have been caught early and corrected before they really sprawled out of control.

MIKE: Yeah, it definitely brings back a lot of memories of being stuck in traffic, staring up at the tiles underneath the Massachusetts Bay asking very similar questions. And I mean, I think collaboration is absolutely key and, and definitely our technology, would have solved that. Another thing that reminds me though that I think Jeevan, you were kind of bringing up this idea that, you know, in these really complex projects and we have some complex projects that we're working on as well - the Big Dig obviously a huge example of that. So much friction has actually introduced by just being such a big project. I remember a customer who's talking about, you know, essentially a complete they'd get a call from a sub saying that there was some issue that

needed to be investigated, but it was like a 45 minutes ride to get to that issue just so they could take a look at it.

And that kind of friction of having to take 45 minutes, that's just the kind of thing that would, you know, make you say, "All right, well, I'll take a look at it later. I've got stuff on my desk to do," or, you know, maybe forget about it. And that can just snowball so quickly on, on these very large these large projects. So just having a way to open your laptop, teleport in, take a quick look and then be able to make that, you know, that triage, that decision and like, "All right, I should go and see an in person," or, "I could just call somebody and have them do it," smooths out so much of that friction that I have to imagine. And I do know nothing about the details of the Big Dig, so I'm curious to see what, what your book says, but I imagine I've got to imagine that these, these bigger complex projects it's just exponential pain for, for things like that.

JEEVAN: Yeah to build off what Mike said that 45 minutes by the way isn't like, I need to get in my car and drive across town. That's, "I am on the job site, I'm in the trailer. But to get to that part of the job site, I have to walk across the lay down yard. And then I have to get them a lift, which is always super busy. I have to wait and get to floor seven and then check it out."

And these are not lazy people. These are one of the hardest working people you'll ever, ever meet. And they work crazy hours, 12, 15 hour days routinely. So it's, these kinds are not doing this, they're not taking that lift ride because they're too lazy. It's cause it's just, they don't have enough time. And yeah. And I think that's a really interesting cause that that's a real thing - like Mike is talking about an actual customer talking to us.

So, we think a lot about like, oh, you can save the plane trip of the architect from, you know, the city to that city. But honestly just saving the walk is huge and has some pretty multiplicative effects on speeding things up and making it more efficient.

CHRIS: Can we take it up to the future of work discussion - just for a moment. I don't know the tech side well enough to know what you're working on maps directly to this space, but I'm sure you're thinking deeply about this, you know, like back in the military environment, there's ops centers set up all around the world.

And so, there were two to Stan's point, that sort of "eyes-on hands-off" model, not just between senior leadership and folks out in the field, but also between these different operational centers. We were hyper-connected relative to the rest of the world, but the bandwidth and tech just wasn't there to do something like what we knew we would really love, which was, "I want the ability to just, you know, tap this wall. And it turns into a flat screen image of this other op center, so that we're sort of joined," and I can look in there and say, "Hey Mike, do you have that latest report?" And that could be recorded and we have timestamps on the coordination between our different, different headquarters. Is, is this the type of technology that's going to get us into that realm, which I think is probably inevitable or is that going to come from a different sector?

JEEVAN: Yeah. You know, I think you're… if I'm keen on what you're saying, there is this, yeah, this general desire to be able to have awareness without literally needing to be there. And

that may be because it's 5,000 miles away and it may be, they're like, "No, we're actually empowering the local teams to see what's going on better than they could before."

Either way, those are both beneficial. Right? When I think about your question, I think about the interplay between different types of technologies: hardware, software, AI, and those sorts of things. So, the idea of that wall is super compelling. That's a big hardware innovation, which, you know, flat-screen TVs are pretty darn good.

You know, you actually can get at that. A lot of our customers, you know, these are not rich big projects all the time. They're like pretty simple projects. They'll have a jobsite trail and there'll be a black screen just sitting there with their project plans. I mean, heck you go to McDonald's, the menu is a cloud screen. I mean, that's pretty crazy, right? But it's cheap enough to do so, you know, the way I think about those types of things is sometimes there's an investment of like custom systems that take a lot of money. And, and people will invest in those, but that can be good, but I tell you it's like the consumer level stuff that people make in mass quantities for some other reason that get co-opted that I think is the way you see change happen more powerfully.

And that's true… so the OpenSpace, I mean, we don't use sophisticated or custom hardware. These are things, I mean, made it like billions of units a year. We just lucked into a clever way to use software to use them. And I think there's a lot of examples of that, you know, prior to OpenSpace, I was working on drones like consumer drones. So we'd make those things physically, but a lot of what we were able to do to make that happen is leveraging what's going on the smartphone. And just sticking it into a box with some rotors.

So, I feel like a lot of those experiences, a lot of those changes that happen under your feet. You're like thinking that maybe it's going to be this big, giant technology project, but then suddenly you're like, whoa, this little thing is just like invited in the store, like at Amazon. Oh wow. We can use that for X, Y, and Z. So we, we think about technology a lot in that, in that kind of lens.

STAN: I'd like to, to bring it to a close with a final question. And this is: you are not just leaders, you are tech leaders. And so, there's a certain stereotype in people's minds of what a tech leader looks like, acts like, and all this kind of thing. Are tech leaders different? Or do you think… is the DNA different? Is the behavior different or do you think it's just a, a small evolution from what we've always done as leaders?

JEEVAN: I'll tackle that one. I think, well, my answer is yes and no, but let me get out of that kind of wishy-washy answer and be more specific. So, and maybe I'll make it, I'll say, I'll say kind of as tech startup leaders, cause that's a little different than someone that is a GM at Google or something.

And I think this is the key difference. The key difference is that you're gonna start something with two people, with three people. And your goal is to get from 3 to 30 to 300 to 3000, right? That's pretty unusual. I think for a lot of leadership roles, you kind of sneer, you kind of get deposited at this level where you as existing business, pretty hard, big head count. You're kind of

navigating that. So I think what you got to do is understand that what worked for you now will not work for you in the next phase and constantly change.

And that's pretty unusual and that can be pretty tough, but I think you got to do it. So, one way I think about the leadership role as you make that migration is when you first start and it's just the founders, you know, you do all the work and you have all the ideas - because who else is going to do it? There's no one else. There is literally three of you. Right.
But then when you get the 30 people, 300, that attitude is fat, right? Actually now you have way more people in your company that are smarter than you. They're actually doing the work. They know what's when they're writing the code, they're talking to the customers and so on.

And so you almost have to make not just a little bit of a shift, 10 degrees this way, almost 180 here. And it's actually, my job is no longer to have the ideas. It's no longer to like, do all the work, it's to like, get myself out of that and to make sure I'm enabling all these teams to have the ideas. And I just need to enable them, like maybe my role at the first was like, have be like the visionary. Now it's more like an editor in chief where I'm not writing the articles, the writers are writing the articles. I'll help them pick the right ones to work on. And maybe I'll drop in a few comments here and there. And I think for technology high-growth technology companies, that's quite unusual, right. To have to have these leadership roles and responsibilities, and you're the same person, right?

So you got to figure out a way to shift what you think is important usually six months before people think you should - so you can stay ahead of the curve. I think that can be pretty tough, but it's pretty exhilarating too. So I feel like that is one big difference when tech leaders versus leaders of like kind of more traditional large organizations.

And then the last thing I would add is you were enabling the thing that allows you to get things done early on is to recognize that you could, the world could do something differently, but not because there's a change in attitudes in society or not because of these other factors that enable the change, but there's something technically different that just came out that could allow people to do something in a new way.

So having that insight is something that in tech you really have to think about that doesn't necessarily apply to other organizations. So, yeah, those are my thoughts on, on that, on the differences between tech leaders and leaders of other types of organizations.

STAN: That's fascinating. Mike?

MIKE: Yeah. I mean, well, certainly I think second, everything that Jeevan said, I think that's, that's absolutely right. And, just kind of pinging on the comment about the, the kind of rapid growth, this idea of starting at 3 and then go into 30, 300, 3000 is the goal really does feel you know, unique, I think, compared to other leadership and particularly large organizations. I think, you know, something that we talk about a lot in terms of making that a reality and what that means is that in many ways, you know, our jobs at the beginning is very much to try and make ourselves obsolete as quickly as possible.

And so, you start out with three and you're doing everything. You're buying the furniture, you know, putting together Ikea desks and it, as well as everything else that needs to happen. And what you just need to do is focus on making it so other people can do those things. Hiring, of course, is incredibly important. And then as you hire making sure the culture that you have at three people can grow and kind of things like trust and communication, you know, don't degrade as you continue to, to increase size overall.

And then you know, think about what are the real levers that you have as you know, with your team as you grow, and not wanting to micromanage, which is, which is hard. You know, when you, when you're growing that rapidly, it can be difficult to let go of things and give that responsibility to others.

But if you kind of keep your focus high and your eyesight on the horizon at the right level and you know, able to communicate the, the high level goals that everybody, you know, needs to follow so we're all on the same page. Maybe help out with prioritization and then, and then really resourcing, make sure that everybody has what they need in order to achieve that. And then just let them go from there.

The benefits of that is not only rapid growth, but also one of the key advantages of, of being a startup is just that flexibility and ability to adapt and, and really switch gears quickly, you know, you're, you're a speedboat, not a battleship is I think the analogy that I've always heard and that just really capitalizing on that advantage is, is something that you know, you want to keep in mind always because there's lots of disadvantages to being a company like that as well going from 3 to 30 and so on. And so keeping your eye on the advantages and, and really trying to make those count, I think is something that we were always trying to do.

CHRIS: Great, great insight guys. And really a fascinating space you're in. Awesome discussion. We appreciate you taking the time and really, but just as folks that are on the receiving end of this stuff, it's just, it's just amazing to think about where this is all heading in the, in the very near future.

And obviously you're all already in the middle of it. So when my when my contractor's got real-time video on his head and feeding my iPhone, I'll reach out and say, thanks.

JEEVAN: Sure.

CHRIS: Great discussion guys.

JEEVAN AND MIKE: Thanks so much. Thank you for having us really appreciate it.

CHRIS: Okay. So great discussion there. Those guys you know, we know a bunch of folks in, in the tech world from the big traditional, you know, Microsoft's of the world to the younger startups. And I think these are two leaders and their organization as a I'm sure their cultures are

sort of a trickle down from there. Their approach represents the best side of technology in my, in my view, which is humble, thoughtful leaders that have been through the game several times.

I think in some ways understate what it is they're developing because they've seen around the corners and they know not to get too excited about stuff would be my assumption. But this is a legitimate world-changing technology that they and others are, are on the brink of really pushing into the market broadly. But they aren't talking about, you know, rocket ships and, and moonshots, they're just sort of humbly approaching the fact that this is what's going to happen next, and here's how we're going to go about it.

STAN: Yeah, I'm struck by the fact that to a great degree, they're selling the idea to people a lot like me, my generation, and what they've done is they've made it approachable. I remember Franklin Delano Roosevelt said a good leader can't get too far ahead of their followers. And what they've done is they've taken artificial intelligence, empowered it with simple cameras and technology, and they've made it something that someone who's not a technologist by background can understand intuitively. And I can immediately see that would be value to me. Whereas if they'd come in and they'd said, "We are going to take artificial intelligence and change the way you manage your building process,: I'd likely be a bit intimidated initially. And instead they've made it something that I can put my mind around and makes it much more approachable.

CHRIS: It's so interesting to think about the cross-domain implications of the data collection that they're talking about. Because you know, here's, here's two leaders that are focused in the construction space for, for good reason, but it's transferable over into the military, into healthcare, into, you know, name the sector where you can not just sort of create the real time presence and the historic record, but collect that data over time and draw out incredible conclusions from that.

And your predictive analysis, which is one of the things we always wrestle with and talk about, you know, in a complex environment, your ability to predict isn't there anymore. Your valuation of risk has to change. But there, there could be some sort of reversal of that when you say, "Well, we can get better. It's never going to be perfect." But over time you can have big enough data sets and a recorded history where you can start to think, to predict likely outcomes in a way that we just can't right now.

STAN: Right. And, and you could also teach. When they talked about this, where you go and you look at different things happening. In many cases, we learn from being next to someone more experienced than we are in going through the experience. And that's a little like finding the landmines by everybody has to step on one. And yet what we can do with this is you could watch the progress of construction, not just what happened, but how it was done.

The steps capture that and suddenly people who are trying to replicate that in the same place can do that very easily. And we do a lot of that on YouTube now with people just taking simple things, but this could be holistic in a way that I think projects could be remarkably easier.

CHRIS: It's probably an obvious to a tech person, right. But the way that it captured the idea of, look, you don't have to always innovate your way through stuff. You can just figure out what's out there in the market and, think about creative, new ways to, to use it. Which again, I think it was a really humble statement. But also sort of eye-opening to think.

Yeah. I mean, that's in many ways that a lot of the stuffs are already out there and it's leaders like this that are going to figure out how to connect the dots and make it all find the new unlocks that that nobody's thought of yet.

STAN: Well, you remember when we were in the counterterrorist fight, we got all that interesting equipment given to us and made available to us. We'd give it to operators and we'd say, see if you can find a way for this to be a value. And I remember they came back with some things, they said, "No, piece of junk, get rid of it."

And then there were other things they'd come up with some really interesting ideas. They said, if we did this, we could produce this outcome and I, and I think there's a great ability to take existing technology and purpose it for something that is a value for you.

CHRIS: Yeah. I think, I think a lot of the tech folks learned the hard way. If you give it to the SEAL teams, the first thing they're going to do is jump in the ocean with it. So "No - it's broken!" … "Well, it wasn't waterproof!"

STAN: That is so true. I think the last point I'd make about this was being tech leaders. And I think what they described was really true. And they basically were talking about a fast growth environment and where the organization that you lead is in constant change. And so the, the point that was so good is not that you've got to mold the organization, but that you've got to remold yourself. You've got to change your style to deal with the context of the situation which will evolve. And that was pretty mature.

CHRIS: Yeah. Yeah. Very mature. A final point I would make, I really liked… we were talking with them a little bit afterwards. And the comments on dealing with investors in a growth stage of you know, cause this is a technology you like to you, I'm not a native of it. You could tell me anything and I'll assume you're sort of directionally correct. But making the point that in a space like that, the best thing you can do is really know it. And be very honest about what's possible and what isn't and build those long-term trust-based relationships that are critical and in any other environment, but you don't hear enough people in the tech world talk about that - of being honest about the realm of possibility, talking with investors and users through a lens that will eventually prove correct.

So again, just, just thoughtful, thoughtful leaders in a really interesting space.

STAN: Absolutely.

CHRIS: Great discussion. We appreciate them for, for taking the time. And all of you for listening in.