

2020-09-16 Why I Invested in EXOS

Hall T Martin: [00:08:14]

My name is Hall Martin, I'm with TEN Capital. We help startups and investors connect for funding, and we're doing a "Why I Invested" webinar today, which is listening to why existing investors invested in the company - in this case, EXOS - and tell other investors about it. And we have other investors following the deal and want to hear your story. So, to go ahead and kick off, can you guys give us, you know, Scott and Paula, can you give us a little bit of background as to what you guys invest in and what you look for in deals, just to give others context?

Scott Robinson: [00:09:05] Well, Paula came across the opportunity through Trade Way and what we first looked at, we were looking at business growth and potential [00:09:16]. Space and rockets, are a fast-growing industry, even more so now with Blue Origin and SpaceX and all the interest that's going on in the Space Force. So, there's even more potential, I think, now, than there was when we first invested several years ago. [00:09:30] Also, the potential areas with research - particularly to do with medical applications, stem cells, I'm sure we can go into that later if there's questions about that - the education, and now even the military with the introduction of Space Force. Also, [00:09:50] we looked at personnel and with EXOS we found there was a perfect combination of people that had extensive rocket backgrounds through [00:09:59] Armadillo and all the successes they had there with designing rocket engines for their own spacecraft, and through the Rocket Racing League, where people actually flew on vehicles that were powered by rockets made by Armadillo. And then with a business background and the contacts that John Quinn and David Mitchell have, [00:10:24] it's just really impressive what EXOS has been able to put together. The [00:10:28] other thing that's really important to us is fiscal responsibility. [00:10:33] EXOS treats every dollar as if it were their own, and they are very, very conservative when it comes to spending a [00:10:41]nd what they've done so far is extremely impressive to us. They've done far and way more than what other companies have done with much less. They do a lot of their own tools and parts manufacturing in-house, and then when they come up with needing more money, they only ask for what they need and they're very specific on what their needs are and what they're going to do with that money, and that's just very impressive to us as potential investors and now as long-term investors. The other thing

about a company that we look for is their transparency, and [00:11:19]EXOS is very transparent. Everything [00:11:20] they've virtually done has been posted on YouTube for anybody to see, both their successes and even some of the challenges that they've had, everything is just right there. And the communication, John Quinn is always available through email in spite of how busy he is. He's always been available through emails and even phone contacts, and, they're also very communicative through their website, Facebook - they have an investor's page - and that's just very important to us as investors, not only when we first started looking at EXOS, but even as ongoing investors.

Hall T Martin: [00:12:01] Well, great, great. Well, let me switch over to John and give us a quick recap about EXOS and what you guys are doing there for those who are not familiar with it.

John Quinn: [00:12:11] Well, you know, it goes back - if I have to start kind of through the evolution - the Space Shuttle program. You know, absolutely phenomenal, first demonstration of reusability done by our government. We got 27 flights out of each space shuttle, right? \$1.28 billion per flight. Didn't quite meet its goals, right? I mean, the objective was, "Reusable is less expensive". It gave us the capability we never had, the Space Station wouldn't be there without it, but it wasn't what we're looking for. So, flash forward to 2015, and Blue Origin takes their New Shepard to space and back. And then they launched Blue Origin 2, their second rocket, and it goes to space and back, and then 60 days later, the same vehicle goes to space and back again. Phenomenal evolution. Now we know Jeff Bezos puts \$1 billion a year into that company, right? So with about 3,500 people, he put a rocket in space and brought it back in one piece and turned it around in 60 days. Super impressive, didn't quite catch up with the Space Shuttle. We turned that one, the Atlantis, actually in 54 days. So, the turnaround got better, right? And then come along five years later, and Elon Musk on July 7th of this year, flies a flight with a Falcon 9 for \$62 million and he turns it around in 51 days. Team of about 6,500 people and obviously they're doing other things, but we're moving in the right direction because now he can refurbish it - based on the online numbers - for \$15 million and do it in 50 days. So, let's now talk about EXOS. The rocket behind me is our SARGE vehicle, much smaller, total team of about 20 guys. Now we've flown that rocket four times - and you get to see the YouTube video on flight four where we lost the [00:14:27] vehicle - but the first four flights, the turnaround from flight one to flight two to

flight three, we spent less than 1% of the cost of the vehicle. [00:14:39] So, 25% is a great thing, but I would still argue we're making remanufactured vehicles, not reusable. 1%? Now maybe when we go to orbital, we're going to have our challenges. Our target is to be able to do it for 5%. When we can go to space with a vehicle, bring it home, and then go back to space with that vehicle for under 5%, we're starting to get to where reusability counts and we can put mass into space very effectively. And that's where EXOS is going.

Hall T Martin: [00:15:14] Well, great, great. Well, appreciate the background on that and it sounds like you have a great team that's been there and done that before. Can you tell us a little bit about the team and what you guys have come from? And you talked about coming from the Space Shuttle days, but in more detail, what has the team done in the past?

John Quinn: [00:15:31] So, yeah, the team goes back about 20 years, as was already mentioned. Armadillo Aerospace was kind of their founding back in the year 2000, competing in the Google XPRIZE, won \$1 million in a Lunar Lander Challenge, won a couple of rounds, they won first place in the first round. They were beat out by this little company, Lockheed Martin - you might have heard of them - in the second round, but, they were a team of about 10 guys, and here they are competing up against Lockheed Martin in the Lunar Lander Challenge. So they took second place to them because they were nine inches further away from target after that lunar ascent and descent. So, phenomenal background. My favorite story, Rocket Racing League. They contract X, Y, Z company for 36 months to take and put a rocket-propulsion system on the back of a canard aircraft, and 32 months in, they say, "You know what guys, we're not going to be able to make it in time to put you in the air for the Tulsa Air Show". They come around to John Carmack who is running Armadillo Aerospace back then, it was his \$1 million a year project and said, "Hey, can you guys do it?" And this team that's now EXOS Aerospace, in 60 days built up a propulsion system and they had one little requirement from Len Fox and Dave Morris. Before they got in the aircraft, they wanted to see it start 1,000 times, right? Rocket engines are once and done, right? That's the convention, that's what we're used to. So, 32,768 pounds of fuel later, they hit 1,000 ignitions, and those guys got in those aircraft and flew with rocket propulsion in the Tulsa Airshow, did hundreds of in-air relay to the rocket engines, and again, that's the type of reusability we're looking for. And the coolest statement of all is when Len Fox - now this is a guy

who used to launch off of aircraft carriers in an F-14, right? And he said, the kick of that propulsion system - of the rocket engine - was more aggressive than the kick he got when being thrown off of an aircraft carrier by a catapult. So, pretty impressive technology, amazing stuff. But really, again, the reusability. And, while we're not looking for human-rated on the SARGE in our orbital vehicles, the engines have the reliability to do that. So, our guys developed the engines, the recovery systems, virtually everything on the vehicle. And so, [00:18:16] the team is just phenomenal and just a perfect melding of talents. [00:18:21]

Hall T Martin: [00:18:22] Well, that's great. Appreciate that. Back to Scott and Paula. You talked about why you decided to invest, that was great, and the team, what you liked about it, but why do you think this company will be successful? What are they doing that's going to put them on the other side of a winning score there?

Paula Robinson: [00:18:41] Well, I think that it's because there's just no choice but that for them, I mean, [00:18:53]they just ooze success, and they ooze confidence, and they ooze knowledge. [00:18:56] When I first met John and heard about this, I went to an actual seminar that they had at the facility, and after hearing what these guys had already done through Armadillo, like Scott and John have already said, and also seeing rocket engines sitting around like doorstops at the facility, and then hearing each of them talk about their experience and how they already have had success with Armadillo, I mean, it's already happened and we've already had success with EXOS. So, basically, when we invested, my thought was - and I told John this - I'm investing in you. [00:19:40] We're investing in you because you have the knowledge, you have the vision, you have the enthusiasm, the creativity, the contacts, the discipline that, these [00:19:52] guys are so disciplined and they are very creative. They dream stuff up on napkins at restaurants sometimes, or they used to, they may not be doing that now, but they did a few years ago.

John Quinn: [00:20:04] That still happens.

Paula Robinson: [00:20:06] Yes, yes. And so, [00:20:07] it's just the creativity, and the vision, and the discipline, it's just truly just inspiring. [00:20:18] It's why I think they're going to succeed, they already are succeeding.

Scott Robinson: [00:20:22] Also, if I could add a little bit of something, there's a passion there that you very rarely see. The people that are involved in this and do the design and the launches, this is something they were born to do, you can tell. I could tell that from talking to them, just the amount of passion and the drive they have, they were just born to do this. And, as an investor, I've never felt as appreciated for them, because the way that it was expressed to me, is that there was a gratitude there that as investors we're allowing and we're providing a way for these people to do what they were born to do. [00:20:57] There's just no question in my mind that this is what these people were born to do and they were made for this. [00:21:03]

Hall T Martin: [00:21:04] Go ahead John.

John Quinn: [00:21:07] I said that is so well put. You know, he summed it up in one beautiful, eloquent sentence. The guys are doing what they were born to do.

Hall T Martin: [00:21:18] Good, good. So, Paula and John, it's always great when things are going well, but what challenges did you see the company overcome that made you think, well, this is the right group. Was there a particular time or incident that brought that to light?

Paula Robinson: [00:21:35] Well, COVID, we weren't sure when COVID happened how things were going to go because Italy was in the making, and, of course, Italy was shut down, and so, we were a tiny bit concerned. But, again, they just have so much creativity and there's so much innovation that they find other ways to keep going. And, we also were a little concerned with the fourth launch, we were watching that on YouTube Live, I mean, we have watched, we went to one launch in March 2019, but we have obviously, actively watched every single launch and read virtually every article that is out there on EXOS or watched videos over and over again. And so, when we saw that, you know that, as you might imagine, that was hard to watch as it was for everyone there, I'm sure. But then it's like John, I think it was John that said, "Well, it's rocket science, you know, it happens". One of them, I think, said that, and, it was like, we'll overcome it. I mean, it's just inevitable in the field that in this business that you're going to have challenges like that, and that was probably the biggest challenge to date. For us it was. I mean, we've invested again since then because, again, we watched their - I guess resilience is the [00:23:05] word - they're just so resilient that they just keep

finding new ways to make money, they find new ways to keep things going, they're just not stuck in a rut at all. [00:23:20]

Scott Robinson: [00:23:20] And I think that's the advantage of a small company, too, is you can be more nimble and flexible to meeting the needs of the market and I think EXOS has done an excellent job of doing that.

Hall T Martin: [00:23:31] So, what excites you most about the opportunity? What do you hope to see them accomplish at that final stage?

Scott Robinson: [00:23:38] The biggest thing for me, there is a story. The first time I toured EXOS, we were talking with some of the engineers - and I can't remember the person's name - but, we were listening to the story and the potential there specifically as it relates to stem cell research, where there's good evidence that you can put a person's own stem cells into space and have it activated, and then when it comes back, that those stem cells can potentially be used to do things such as cure diseases and even heal organs. And, this engineer was telling us about this and it's kind of a world-changing thing, and Paula said, "Oh, wow, if that really comes to fruition, we're all going to make a lot of money". And this big engineer's eyes teared up and he said, "No," he said, [00:24:34] "this will change all of humanity". That's what the potential is. [00:24:38] And of course, the money will follow that. Any time you come up with something that's innovative and that will change the world, as an investor the money will follow that. But that's what this guy's concerned about, is coming up with something that will literally change the world or has that potential. And John can probably go if there's other questions regarding that, I think John could do a better job of filling that in.

John Quinn: [00:25:01] Yeah, [00:25:01] the biomedical world is going to learn how to do micro-gravity science aboard our SARGE rocket. [00:25:07] And, I have a biomedical-vice-president friend who was interested in the company early on and she said, "We don't need five flights, we need 50 flights to figure out how to do the science. Put me in space 50 times with 20 or 30 experiments on every flight, and then we'll tell you how long we need the payload to be up there". So, the problem that we're going to solve is, SARGE is a suborbital vehicle, is going to tell us how to do the science, and then Jaguar, our LEO launcher, is going to go to space, it's going to put a payload up there for 2-3 weeks, and then it's going to bring it back to the launch site, and [00:25:51]

it's going to be a manufacturing process like no other that we have the capability to do today [00:25:57] because you can't create the micro-gravity in the vacuum of space on Earth, you just can't make it manually. So, with that capability, we've already flown over 67 experiments that were biomedical research on those first four flights. From the first three, we got phenomenal feedback and I saw a university go from having 20% cell survival on flight one, to a 90% cell survival on flight three because they improved their methods of doing biomedical research. And that was just with three flights. Imagine where it would be with the 50 that this vice president on this very large biomedical firm said we had to be at? Imagine where we could be at 50 flights, which for us is less than a year from now, we could do a couple of flights every week, and I think that's what's going to change the world, and that's ultimately very near and dear to us because one of the experiments is what killed one of our founders' mothers. So, near and dear to our heart, very much a kind of passion that drives us to make humankind better through this process and all the while living out our passion to do what we feel we were created to do.

Scott Robinson: [00:27:26] Exactly.

Hall T Martin: [00:27:26] So Scott and Paula, are you able to help the team or help the project in some way? If so, how?

Scott Robinson: [00:27:31] The launches that we attended to, we had some small jobs. I ran an ATV, I guess, and ran tools back and forth between the launch pad and I guess where their base was. I think Paula did a few things as well.

Paula Robinson: [00:27:51] And then, early on, I was involved a little bit in the education portion of EXOS, and I believe there are some plans for the near future for me to begin to help with some of the more clerical duties to relieve some of the stress and to give time back to John and Phil and Russ. So, I think that's in the works.

Hall T Martin: [00:28:17] Ok, great. And then a question for you John is, besides biomedical research, what other applications do you think the vehicle will be used for?

John Quinn: [00:28:27] You know, we kind of have three legs on our trading table. Picture a three-legged table, you pull any one leg out and the table falls over, right? So

we always want to have three legs there. Obviously the biomedical research - or what we call Space Aid is the name of the program - is one leg. Then we have Space Build, which is actual space manufacturing. The board in your PC, right now let's say it costs a \$1,000 and it's eight inches by eight inches. If I were to take that to space and heat it up, I could make that board one inch by one inch because the vacuum of space will pull all the imperfections out of it, and I can bring it back to Earth. I can stack about 300 of them on our rocket, take it to space and bring them back and basically make grade-A wafers out of those grade C or D - and don't quote me on the actual classification of the wafers - but, we can make things better in space. [00:29:30]Earth is a horrible place to manufacture things. It really is. [00:29:34] We have contaminants in the air, we work around all these things that space naturally does. So, that would be the second one is space manufacturing. And then ultimately, we had to pivot because of COVID, and it moved us in a different direction that we always had in the plan, which was to Department of Defense and hypersonic research. Our SARGE rocket does Mach 4.1 right now, so, to imagine it being a reusable hypersonic test vehicle for sensors and different payloads, is just kind of an easy fit if we just make it a little bit lighter. [00:30:18] So, we submitted that idea to the U.S. Air Force and Missile Defense Agency, they picked up on it, paid us to do a study, and now we're moving on towards a phase II to see if they want to actually build the vehicle as a prototype and see how that can work. [00:30:35] So, those are kind of the three primary legs. And, all along from day one, we've had a concept for a national charter enterprise. We believe suborbital vehicles are the way that we train the future space workforce on how to operate liquid-fueled rockets, because the ones that are going to space and taking heavy payloads up, they're not solids, they're liquid-fueled vehicles, and [00:31:05] for a very, very small price, we can fly a flight to do that type of training. [00:31:10]

Hall T Martin: [00:31:12] Well, great and so, Paula and Scott, last question for you is, what else do you think the other investors should know about this deal that we haven't covered already? We covered quite a bit, but are there any final closing comments you'd like to put in?

Paula Robinson: [00:31:26] I'd just like to say again that I just think somebody would be hard-pressed to find, we don't have one, we have a whole team that is innovative, and creative, and they just, [00:31:44] like COVID, they just find other ways to keep going. They [00:31:47] adapt, they mold, they're just so, and the resilience in just not

being stuck in a rut, and being just so innovative and creative is, I think, one of their greatest strengths, in addition to having all the obviously the prerequisite knowledge to build rockets. I mean, they're so knowledgeable, but there are a lot of knowledgeable people that do not have just the innovation and they just haven't lost their sense of wonder and their sense of, let's try this, it just keeps coming. [00:32:27] We just continue to be blown away by some of the ways that they have maintained solvency during COVID and especially with COVID. [00:32:39]

Scott Robinson: [00:32:40] And I'd just like to reiterate the four points, [00:32:42] business and growth potential, transparency, personnel, and fiscal responsibility. EXOS just, by far, checks every one of those boxes [00:32:51] and Paula and I, we will continue to support EXOS in every way that we can, both financially and in whatever ways we can be utilized.

Hall T Martin: [00:33:04] Well, that's great. And John, finally to you, what else should the investors know that we haven't covered so far?

John Quinn: [00:33:11] Paula and Scott are the kind of people that we need too because, you know, seeing a rocket plant in the ground after the fourth flight, to the guys it is part of the job, right? We look at SpaceX, we say, you know what, they lost 14 vehicles in a very short amount of time to get where they were. We got four flights before we lost our first one and honestly, it was time to kind of say goodbye to our one because we needed to move on to the next one so we could do some of the creative things that they had come up with that you just need a new build to do [00:33:54]. So, we'll keep innovating, we'll keep leveraging NASA technologies that come out to incorporate it with our vehicle, and [00:34:03] we're not going to be the biggest by far, however, [00:34:09] I challenge anyone else to be more innovative and creative to keep the company progressing more than our team. [00:34:17] They're just always outside the box.

Paula Robinson: [00:34:20] Yeah.

Hall T Martin: [00:34:20] Well, great. Well, John, Scott, Paula, thank you for sharing your thoughts today. Appreciate the insights into this company and where it's been and where it's going. Want to thank you guys for joining us now, and we'll get this out to the

investors who are not here today and tell more of your story and what you have going there. Appreciate it.