

Robert Chisena (00:01)

Cardiovascular disease is the number one killer of individuals in the world, really. So once we demonstrated that this tech worked, then we started to focus on, there something that we can go start a business around so that we can take this technology and have a lot of other people benefit from it?

Ryan Newman (00:22)

This is Dare to Disrupt, a podcast about Penn State alumni who are innovators, entrepreneurs, and leaders, and the stories behind their success.

I'm your host Ryan Newman and on the show today is Robert Cicena. Robert is co-founder and CTO of Amplitude Vascular Systems or AVS, a medical device company focused on safely and effectively treating severely calcified arterial disease. Robert's research encompasses both biomedical science and design, including medical device manufacturing.

cardiovascular mechanics and safety and efficacy studies of diseased tissue. He has authored or co-authored over 14 publications and is named as an inventor on five patents. Robert graduated from the Penn State Shrier Honors College and College of Engineering with a bachelor's degree in mechanical engineering. He went on to receive his PhD in mechanical engineering at the University of Michigan.

Welcome Robert to Dare to Disrupt. This is a first for us on the show. You're our first guest who's built a medical device startup. Thanks for joining us today.

Robert Chisena (01:29)

Thanks for watching.

Ryan Newman (01:30)

Well, I'd love to start at the beginning as we always do. And so would you please share with our listeners where you grew up, your, how you spent your early formative years well before you ever came to Penn State.

Robert Chisena (01:41)

Yeah, so I'm a Long Island, New York boy. I grew up just 45 minutes outside of New York City. I sort of grew up amongst a family of physicians and as much as I tried to kind of exit that path and had the tendency to suck me back in, I grew up around some very innovative physicians. While I didn't take the physician route, I did really stick with the medical path.

Ryan Newman (02:05)

So it's always a question of children of doctors and the path they take as students. Would you say from a very early age, there was this sort of gravitational pull that you have to go into medicine yourself? And was that something that your parents were explicit about or something that you just sort of felt was implied?

Robert Chisena (02:21)

actually

a push away. The medical industry was, as I was growing up, was changing quite a bit. I think my folks and my grandparents sort of lived in the age of personal medicine where you have this really keen one-on-one interaction with your patients. And it's since shifted probably more for efficiency purposes. I mean, there's just such a larger body of people that you need to go treat and a smaller subset of physicians to go treat them. You kind of get less of that.

personal one-on-one interaction with your patient. So they recognize the times were changing and so they pushed me away actually.

Ryan Newman (02:58)

How about that? And as you were growing up, were some of the other things that you were excited about or interested in in school sports wise or academics?

Robert Chisena (03:06)

Yeah, I mean, I always loved school. I always loved learning about new things. I was always outside, whether it was working on fixing a small internal combustion engine with my dad, mostly the lawnmower so I can go lawn again. Or, you know, just playing sports. I was always into reading as well. It was a big, big part of my life.

Ryan Newman (03:25)

So you're growing up on Long Island and of course there's this idea of New York exceptionalism. Nobody ever leaves New York. To a New Yorker they would say, why would you ever leave? And so you have to decide where you want to go to school. Did you think about New York schools? Or were you thinking at the SUNY system? Or how were you thinking about school and what ultimately led you to a place like Penn State?

Robert Chisena (03:43)

I always felt like I would come back. It was always in the back of my mind that I would be back, but I was going to go do my thing for some time. And by the time I came back, you know, I'd be ready to stick it out here, but also come back with some accolades and something to work on. Going to Penn State was kind of love at first sight. I stepped on campus for the first time and I knew I wanted to go there. I knew that mechanical engineering was my path. Only a little later on my junior year did I realize that

fusing the medical side with research was really my career path.

Ryan Newman (04:18)

So you mentioned stepping foot on Penn State and falling in love with it. How did you hear about it growing up? Was it mostly sports related and you have friends or family that went there? Cause it still is a little bit of a drive from Long Island.

Robert Chisena (04:28)

I was researching colleges and my brother had a journal magazine that ranked all these colleges. And I remember him circling Penn State and writing football exclamation point. I didn't know much more than that when I first stepped on campus. And then you get there and you see all of the resources and facilities, not just dedicated to football. Just in the engineering school alone, there was a massive amount of resources. Even the first two years, I didn't realize that I hadn't tapped.

majority of it. That's kind of the next part of the story where I jumped into research.

Ryan Newman (05:01)

So you get to Penn State, you arrive on campus, sounds like you went to a couple football games. How did you find settling into your coursework and what were some of your early formative experiences like once you're on campus at Penn State?

Robert Chisena (05:12)

Yeah, I knew going into engineering, a lot of it was dedicating my time to making sure that I understood and built the right foundation. And that's kind of tracked through my whole life. I like to make sure you spend a lot of time upfront building the appropriate foundation and then you can go build on top of that. Of course, you know, the great football games, this was maybe at a depressing time in Penn State's career, but we got through it nonetheless. Made me more resilient, but you know, the football games were still great.

camping out in front of Paternoville was still a

Ryan Newman (05:42)

Amazing. So you're, you're in school, you're immersed in engineering and how did you start to, once you got comfortable expand your wings, expand your horizons, you mentioned getting into research, sort of the second half of your Penn State experience, maybe if that was defined in a different way than your first half, can you talk about why and how and how you sort of dug in?

Robert Chisena (06:00)

Yeah, that's kind of the path to my career, I'd say. After my sophomore year, I decided to go and do a co-op in South Carolina at BMW. So basically car manufacturing. I loved it. It was great. It just wasn't right for me. I came back. I had learned a lot between my three or four internship experiences and the co-op. I came back that junior year, was laser focused on what I wanted to do. I started a fluids course. I met Professor James Bursseur. Great.

fluids instructor, very tough, very tough man. But I think I excelled in that course and he noticed that and he had these research opportunities available, but he wouldn't give out research opportunities unless you were part of the Schreyer Honors College. I had no idea what that was at the time. And so I researched it and figured out how to get in. And within a few months, I was doing research with him. That kicked off my research path.

Ryan Newman (06:52)

Amazing. Now, when people hear the word research, it's sort of all-encompassing. It can mean a lot of things to a lot of people. For you, what were some of the defining characteristics and teachings that came away from, the research you were doing and B, the lessons you learned from that research?

Robert Chisena (07:08)

So the research part of it, I felt like I excelled. the technical piece, I feel like I excelled at. All of the aspects outside of that, you know, I remembered part of Shryers, you have to write a dissertation and that whole process was challenging. You know, you're writing a hundred page thesis in a short period of time and trying to manage course load. That was challenging. And then right after the thesis was due, I was supposed to give a presentation at the Applied Physics Society on my research topic.

I was very appreciative that such a prestigious society would listen to me. I was giving my practice presentation to Professor Purser and he was very candid with me that I did not do a good job. Those sorts of learning experiences were things that I recognize I wasn't the

best at and that I would need to work on. You know, in addition to sharpening my technical skills, it was also sharpening my other skills that were going to be needed for my journey.

Ryan Newman (08:01)

amazing. I'm thinking back to my own honors thesis work and my thesis advisor, Dr. David Shapiro would use a red felt pen. And on those first drafts, I had to get back the paper and had more red on it than black or white. I can relate. great learning. Sometimes you have to be stripped down to your core to be able to then be built up into something higher. Sounds like that was the case for you. So you're pursuing all of this.

Robert Chisena (08:13)

yeah, it was painful.

Tough love.

Ryan Newman (08:27)

engineering work, you're doing this fluid research, you're doing a lot of interesting things from a research standpoint. You're an entrepreneur. So where did the entrepreneurial bug first start? And when did you start first sort of scratching that itch in terms of entrepreneurship?

Robert Chisena (08:38)

Yeah, so the research was actually just interesting. It kind of ties the whole story together. The research was on compliance measurements in tubular organs. So think about your esophagus or your cardiovascular tissue. These are all tubes, plumbing systems, in other words, the flexibility of those plumbing systems is actually quite important. So we'll make a note of that. That was something that would be important later on. Did this research, extremely interesting to me. At the same time, I was also going to explore.

the various entrepreneurship programs that Penn State has to offer. As I was learning about this field, I became enthralled by it. Got me up in the morning, there's something that I knew I wanted to go explore more. Where I really started was kind of combining my engineering experience with medicine. Hershey is a world renowned hospital and they have a really interesting group called the Surgical Innovation Group there.

You know, out of the blue, just decided to take a trip and set up a meeting with those folks. They had these incredible projects. was eye opening to enhance the state of surgery. And so one project in particular was how do you create an endoscope, which is a device that kind of goes into your body, the plumbing system of your body and perform operations on it. So you think about, let's say, going to operate on your trachea. If you have like a cancerous lesion in your trachea, you need to traverse a pretty tortuous path.

So you needed to be flexible, this endoscope. And then once you arrive there in order to perform an operation, you needed to be a stable platform. So that was kind of the engineering objective. This project started right at the end of my Penn State experience. So I was kind of developing the technological aspects of this after I had graduated. I did this in conjunction with applying to graduate school. That was always what I felt would be important to be able to make these devices and convince people of.

the technology and the science behind it. That whole December through September was developing this technology around endoscopes and flexible but rigid platforms.

Ryan Newman (10:41)

And I understand that you were part of the first cohort of the Penn State summer founders actually won in 2015 a \$10,000 prize from that work.

Robert Chisena (10:50)

Yeah, that's right. So it was a really innovative approach to spurring entrepreneurship at Penn State. And it really kicked off my entrepreneurial spirits. I use that money really focused way we developed this technology. In fact, we have a working prototype of this robot that was able to accomplish the task that it was assigned to do. So basically

maneuver and backwards looking orientation and then, you know, do some, do some operations with it. So we filed some patents on the endoscope.

That was called Michelangelo Robotics. I think I was reading Agony in the Ecstasy at the time, sort of recognized Michelangelo's brilliance in being able to do things where you didn't always have the ability to see. The story goes, he's building the Sistine Chapel, you know, he's looking up at the ceiling and he's always constantly getting paint in his eyes. And so without really being able to see, in other words, you know, going through these pathways in your body and not being able to...

perfectly see what you need to do, but still performing an operation successfully. That was kind of the impetus, the background behind the name.

Ryan Newman (11:54)

amazing. So the idea was you had pursued this particular device, you had worked on a name to create it, you were spending time on it, but it sounds like you at the same time felt like that more schooling was really necessary. What was the ultimate deciding factor to continue and pursue more school and put that initial medical device kind of on the back burner, as opposed to saying, this is the business and school's over and we've got a school can wait. We're going to sort of take the lead with this business right now.

Robert Chisena (12:21)

So I worked on this for two years, the technology piece of Michelangelo. I worked on it two years through the initial part of graduate school. And it was sort of balancing a lot, both schooling and developing this technology. What I found was it was difficult to convince a physician of what you're working on after you start working on it.

Once you've established the technology and you're trying to find a place to put it in much more difficult, as opposed to the physician comes up with the concept and is willing to spend the time and effort in building out the technology and the company behind it. You have that backing. You have a physician that would use this every day in their practice and

they're driving the clinical gestalt behind their technology. Whereas as the engineer, you're developing the technological piece and even the business piece at some point.

Ryan Newman (13:10)

And so you step foot on Michigan's campus with a real focus in mind of what you're there to do. You're there to essentially further your advancement of medical research to be able to support the underlying foundational claims that would allow doctors then go and use the different types of aspects of what you wanted to do. Did you have a particular focus area Robert that you wanted to actually hone in on or were you broad-based in your thinking at first? And if so, how did you sort of narrow your focus over time?

Robert Chisena (13:35)

It was definitely broad based, still mechanical engineering, which in general is a sort of a broad field of engineering. On the research side, you have two pieces of research. One that's funded, that's going to be your main project. That's what's going to pay for your schooling. And that in and of itself was actually a very interesting topic. It was developing these orthotics and prosthetics in a kind of a rapid prototyping. Doing that for folks that need orthotics and prosthetics the same day.

So that was the main topic. Super interesting. Rehab is huge area currently. That's your main focus. And then on the side, you really go focus on what you expect to do in the next part of your career. And to me, that was working with physicians to solve surgical challenges. The main reason why I chose Michigan was you have the medical school right adjacent to the engineering school. And what you get with that are physician innovators that are trying to solve challenges every day, much like the surgical innovation group at Hershey.

You have these individual physicians that recognize a problem and they take time out of their busy schedule to go find engineering labs and engineering students to go work.

Ryan Newman (14:43)

And so this interest to solve surgical challenges, where did that interest take you in terms of your research and with whom did you collaborate with at University of Michigan to continue to advance your own interests?

Robert Chisena (14:54)

Right. So, this is where the full circle comes in. A physician by the name of Hitenna Gurum at University of Michigan, who's currently their chief medical officer. Brilliant guy, great to work with in terms of his ability to see beyond what he does every day and see the future. So he had a longstanding partnership with my lab, Professor Albert Chi's lab at Michigan, where they were doing work on how to treat calcified tissue. The majority of their work surrounded these

Now, in other words, like a drill bit going into your arteries and actually shaving down the calcium to increase the compliance of these vessels. He had this concept where instead of using this technology that was very difficult to handle, workflow was complicated and you always kind of needed some surgical backup, using the standard type technology, which is a catheter and a balloon and creating some pulsatility inside of that balloon. Think of it like an impact hammer. And his concept was instead of

pushing with a regular balloon or almost like hugging the calcium, creating these impacts to break up this very hard material and then restore the compliance of the vessel, you would get a better result. We brought this concept to our lab and I started working on it with him and the rest is kind of history.

Ryan Newman (16:07)

Right. Now, when we talk about restoring the compliance of a vessel, I'm thinking of a ship, but the reality is what you're talking about and the role of calcium is really the calcification of arteries, which was the leading cause of heart disease, which is one of the leading causes of death in the country. Can you tie what it is you're talking about to the health and vitality of a person and more importantly, the longevity of that person's life in response to the way in which these procedures can potentially have tremendous impact on the livelihood of an individual?

Robert Chisena (16:36)

sure. mean, cardiovascular disease is, as you mentioned, is the number one killer of individuals in the world, really. So really what's happening is you have these blood vessels that take blood from your heart and transport that blood to various important regions in your body. So that blood delivers oxygen, delivers nutrients to your heart, to your peripheral vessels or your legs, and to other important areas in your body. Over time, and because of certain health habits, you

can develop what's called atherosclerosis or the narrowing of those blood vessels. As you narrow the blood vessel, the amount of blood reduces that you get to these distal extremities. The effects of that are pretty brutal. In your legs, an amputation has a really poor rate of longevity, poor prognosis. In your heart, you can get myocardial infarctions or a heart attack. And those things can have devastating effects to a human. The necessity to treat these things

acutely or at the time that the patient is experiencing symptoms is very important. Angioplasty, know, ballooning of these vessels to expand and restore the opening of these vessels is a common procedure today. What's difficult is when these lesions or these closures of the artery become hardened. What actually happens is you get this calcium depositing in the wall of the vessel. It's almost as hard as bone or the asphalt that you step on outside.

And so you have this really tough material next to quite sensitive soft tissue in the vessel. And the goal is how do you break up that calcification such that you restore the flexibility of the vessel without damaging that surrounding tissue, ultimately restoring the blood flow to the extremities.

Ryan Newman (18:23)

Amazing. And so you're in the lab, you're doing this great work, and at what point did an idea come that maybe there's a business here and how did you think about taking it from that next step?

Robert Chisena (18:33)

So the first step was proving that this concept that Grim had was viable. And so that took about a year. Once you're able to deliver the technology or demonstrate that you can deliver this, this energy to the tissue, you have to prove that it's actually going to do something to the tissue. And so that took another year. At the end of these two or so years, when you realize that the technology is viable, that's when you start to think about what is the potential in the market. What we found when we were doing research was.

There were about a million percutaneous coronary interventions or angioplasties in the heart per year and about 600,000 in the peripheral arteries. About half of each of those are related to treatment of calcium and maybe the under treatment of calcium. So there was a huge need. We recognize the huge need in just the U S market alone for this, what we call lithotripsy technology or intravascular lithotripsy technology. That's difficult to say. Well, so we'll say IVL going forward.

Once we demonstrated that this tech worked, then we started to focus on is there something around this that we can go start a business around so that we can take this technology and have a lot of other people benefit from it.

Ryan Newman (19:44)

do you actually export a technology out of a research environment, out of lab environment into a going concern as a business?

Robert Chisena (19:52)

The most important thing taking it out of university is having a great office of tech transfer. From there, once you've sort of spun the technology out of the university, I think the next part is finding your path for how you want to fund the company. You can pursue the non-dilutive route. So SBIRs, STTRs, so government funded non-dilutive capital, or you can go the venture capital route. We tried the non-dilutive side. It was probably too slow.

for what we needed to do and what we wanted to accomplish. And so we decided that venture capital was the right path for us. Found the probably the best venture capital group

for us at the time, which was Biostar Capital, Michigan based, a group of physicians and business folks that have a large broad network of physicians that invest and also contribute to technology advancement. These folks have funded us along the entire journey.

Ryan Newman (20:49)

And so you now have this going concern. You've raised outside capital to a degree. Give us an update of where's the business today and how are you thinking about the future?

Robert Chisena (20:58)

Yeah. So, so AVS, which stands for Amplitude Vascular Systems is in the process of completing our peripheral pivotal trial. So we're running a large study in the U S treating patients with calcified peripheral disease. And we're about a month or so away from completing the enrollment, which is, which is really great with great safety endpoints we're seeing that that's nice to see, you know, all of this work going into treating patients and the outcomes.

looking pretty good. The second part of this is starting coronary work. Basically you're going in to treat a very sensitive part of the body, which is the heart. And so the scrutiny that you're up against is extremely high. You have a high bar of safety and so you have to go prove that you're a safe technology. We've done an extremely large amount of work to go and prove to ourselves and to the regulators that we're a safe technology. And so that trial should be starting in the back half of this year.

Ryan Newman (21:57)

And as you think out to what's gotten you to this point, what has been the biggest pressure points or, or tensions you had to overcome to be able to arrive at this point that sets you up for hopefully success in the future.

Robert Chisena (22:11)

I think the biggest one is we have a different mechanism of action than a competitive technology. so convincing folks that this technology is effective and is safe at what it does was a challenge. was a hill that we had to climb. I think that we've done that. think feedback from physicians is that this technology is extremely powerful and it's both powerful, but it's also safe at what it does.

It's efficient, physicians are in and out of procedures really quickly. And I think those things combined have really been driven home over the course of the past few months with physician feedback.

Ryan Newman (22:45)

We're now going to go to the rapid fire segment of the show, Robert. And what will happen is I'll ask you a few questions and you'll just tell me the first thing that comes to mind in a sentence or less. That makes sense.

Robert Chisena (22:56)

Sounds good. All right.

Ryan Newman (22:58)

What's the first thing you do in the morning?

Robert Chisena (23:00)

first thing that I do in the morning is say hello to my new daughter. I was about seven months old.

Ryan Newman (23:06)

What's your favorite thing about Penn State?

Robert Chisena (23:08)

My favorite thing about Penn State is the ice cream. And I was told to say that by my wife. She's an ice cream fanatic. Yeah, I'll just leave it at that. My favorite flavor is probably mint chocolate chip. Best advice I ever received was life is tough. Just keep going. Superpower as a founder is I think building a great team and then looking after them.

Ryan Newman (23:18)

and favorite flavor.

Best advice you've ever received.

your superpower as a founder.

What's one myth about launching a startup that you think needs to be debunked?

Robert Chisena (23:42)

The myth about starting a company is, I have a long answer for this. We can get into it after, but it's not entrepreneurship. I'm maybe not a big fan of that word. It's not easy. If it's something worth working on, better be willing to spend 10 years of your life doing it.

Ryan Newman (23:57)

What's your favorite way to unwind after a long day?

Robert Chisena (24:01)

favorite way to unwind is having a good hearty meal and maybe going for a walk. you doing? I wasn't building a startup, I'd probably be traveling the world. do. Disruption means not doing what everybody else has done and truly understanding the problem, building that foundation and then going to create your own new path that answers somebody's problem.

Ryan Newman (24:05)

If you weren't building startups, what would you?

What does disruption mean to you?

Thank you, Robert, for taking the time to share your entrepreneurial journey with me. I'd now like to hand things over to a current Penn State student, Marzia Moeman. Marzia is a PhD candidate in Engineering Sciences and Mechanics Department at Penn State, specializing in neural engineering. She's working on a neuro tech startup, developing personalized 3D printing neural implants for neurological disorders with applications in therapy and brain computer interfaces.

Marzia recently participated in both the InvenPenn State I-Corps Regional Short Course Program and the NSF I-Corps National Teams Program. Marzia, I'll now hand the interview over to you. Thanks.

Marzia Momin (25:08)

for the interaction. Hi Robert, it's great to meet you. To start us off, like as someone is building a Metix startup, one thing I often think about is how to find the right team. People who are not only just skilled, but also committed, respectful and aligned with the mission. I'd love to hear your perspective, like how did you go about building a team you could trust and grow with?

Robert Chisena (25:12)

Great to meet you Marzia.

Yeah, that's a great question. You're going to be sticking with those people for about 10 years. So you're going to find the right ones. So I think the question should be split into two parts. The first one is founding team. And then the second one is folks that you want to bring on from an employee perspective. So the first one, the founding team, it is anybody

that will materially contribute to hitting milestones for your company. In my case, the founding of the company was a major milestone and

Who is that person that you're going to be with? For me, was Hitenirgirm. He came up with the concept and I knew that he was a physician that was going to follow the technology along the entire journey. Finding that person is extremely important. As a founder, maybe not the only thing you should be thinking about, but maybe the top of mind things that you should be thinking about are value inflection points. Who are the people that are going to help you get there? It may just be you.

Or could be additional folks that are going to drive those value inflection points. And then to answer the second part is who are the folks that you bring on after you've established the business? Those are people that are aligned with you, that share your vision, or that at least understand your vision. There's two types of people. There's experts that know key areas and also can maybe wear several other hats. And then there are people that are go get stuff done people.

Maybe they're experts or maybe they're not, but you need those two types of people in your organization. People that have been down the road before, and then you have people that go get stuff done and any roadblock in the way, they're going to knock it out of the way so that the organization can keep.

Marzia Momin (27:14)

moving. Since you come from an engineering background, I'm curious, like, did you ever feel the need to pursue formal business education like MBA as you took leadership roles? Do you feel like engineering can grow into responsibilities through experience and self-love?

Robert Chisena (27:34)

I certainly learned a lot of those, a lot of the concepts that I think are learned during an MBA growing this business. The thing that I supplemented with just my own personal time and interest in learning it was, it was finance, P & Ls and understanding how the finance side of

a business works. The more mathematical components of it, how to build a budget and how to track, in a startup's case, mostly losses, but eventually profits as well, and then cashflow and how you're burning cash.

Marzia Momin (28:04)

Yeah, raising funding, especially non-dilutive funding for mid-tech startups can feel challenging in the early stages. What strategies and mindset shifts would you recommend for securing dilutive funding or building early financial runs?

Robert Chisena (28:20)

So I think, you know, funding your company is a really challenging question. It is obviously very specific to your company. The non-dilutive route we tried, we just found it was extremely slow working with the government, extremely variable due to the breadth of reviewers that you may have reviewing your application. What we did find helpful was there were certain agencies. I think one of them was the BBC, I think, where they, this group helps you write the application.

and hone in on things that reviewers are looking for. And so those are certainly worth it if that's, if that's your path. And non-dilutive funding is great if you can get it. You have to kind of match your non-dilutive funding path with how quickly you need to get to market. If you have a competitor that's got something similar to yours or is already making money and you're trying to displace them, you may want to think about something other than non-dilutive funding. But if you're developing a

really novel technology that's never been used and you're trying to find a market fit for it, then maybe non-dilutive funding is right for you. In our case, venture capital was important because we were trying to displace somebody that's already on the market and we wanted a speed to market was extremely important. In finding a venture capital group, we found that it was really important to align with folks that weren't just going to provide the monetary aspect of an investment, but also the

bringing on the appropriate leadership team, bringing in physicians that would provide feedback, provide mentorship, provide more than just the, again, the monetary piece of investment.

Marzia Momin (29:57)

So the navigating ~ if-deal regulations and thinking ahead about reimbursement can feel overwhelming for early stage founders like me. Based on your experience, what would you recommend we keep in mind early on to set ourselves for success down the road?

Robert Chisena (30:17)

Yeah, just going back to the interview with Ryan, I think the most important thing you can start to do is build the foundation, right? Remember, a regulator is maybe new to your technology, maybe understands the space, but maybe doesn't understand your technology. And so you're trying to tell the story of what your technology does and why.

you think it works, the evidence behind it. So you've done significant level of preclinical work, you have theory, and then if it's appropriate, you have ~ actual clinical data. So you create this foundational package that is then going to be transferred to the regulatory agency that you're working with to convince them that it's a safe and effective device.

Marzia Momin (31:02)

And the last question is looking back at your time as a student and an emerging entrepreneur, what advice would you give your younger self or someone like me who is trying to build a startup while still in a school?

Robert Chisena (31:16)

Yeah. I'll give you a funny answer and then I'll give you my real one. The funny answer is I wouldn't give myself any advice because going into this blind is probably the only way anybody should ever go into it. ~ It is extremely challenging and the highs are often very high but the lows are often very low and sometimes they happen all in the same day. So,

you have to be very stable in order to ride those waves. That's my facetious answer. My real answer is

Know what your milestones are upfront and consolidate them from very detailed plans to very, very high level actionable objectives. So one of AVS's important milestones early on was how do we get our device into a living human being? For AVS, that was a major, major inflection point, right? That's what drives the company's growth, that drives the ability or the interests from other investors.

And so how do you get there? There's probably hundreds or thousands of decisions that occur leading up to that, but that is the one thing I need to go do and wake up every day to go do. Whatever else to get there is important, but everything that you're going to do has to be laser focused to hitting that objective and that milestone. That's what I would have told myself, my younger self.

Marzia Momin (32:40)

Thank you so much for sharing your insights and this has been an incredible help for someone like me, who is still learning and growing in business space. I really appreciate your time.

Robert Chisena (32:50)

Thanks Marzia.

Ryan Newman (32:51)

That was Robert Cicena, co-founder and CTO of AVS. This episode was produced and edited by our executive producer, Katie DiFiori. If you're listening on Apple podcasts and enjoyed this episode, please consider leaving us a rating and review. It helps more people discover the show. We'd also love for you to share this episode with one person who might be inspired by Robert's story. Make sure to follow Dare to Disrupt on your favorite podcast app so you never miss an episode.

Thanks for listening.