

Intro 00:00:01 Inventors and their inventions. Welcome to Radio Cade, a podcast from the Cade Museum for Creativity and Invention in Gainesville, Florida. The museum is named after James Robert Cade who invented Gatorade in 1965. My name is Richard Miles. We'll introduce you to inventors and the things that motivate them, we'll learn about their personal stories, how their inventions work and how their ideas get from the laboratory to the marketplace.

Richard Miles 00:00:38 Startup culture is a big part of what fuels our economy in our country. Is there a startup recipe for success and a way to pick winners and losers? I'm Richard Miles, your host today. My guest is Russ Donda, entrepreneur, and residence at the Great Lakes, Innovation and Development Enterprise. Also, a lecturer at Case Western University, a founder of Emergent Growth Fund in Florida. Also, a medical device expert, and a participant as an investor or advisor in over 300 startup companies. Welcome to Radio Cade Russ.

Russell Donda 00:01:08 Yeah. Thank you. Thanks for having me.

Richard Miles 00:01:10 So Russ, let's get to the most important question. First is Silicon Valley the best show ever made?

Russell Donda 00:01:14 You know, dollars beget dollars, right? And so they have pumped out a lot of stuff and they've made a lot of people, very wealthy. I think my bottom line on that speaking, maybe more philanthropically is, did all that money ultimately go to good use <laugh> I hope so.

Richard Miles 00:01:33 Yeah. That's an open question, Russ. Let's start by broadly defining what you and I mean by startups, just so we're on the same page and I think for our listeners, so they get an idea. So I'll, I'll give you my definition. Then you tell me how far off I am in my view. Startups is not interchangeable with small business and that's safe, nothing away from small business because obviously it fuels a giant chunk of our economy. It's hard to do, but in my mind, a startup it's a small company based on a new idea and preferably a new idea that can scale, is that what you would define startup as?

Russell Donda 00:02:04 You and I are on the same page. And I would say that that is the beginning of a definition. So let me add a couple more things to it. It is the beginning of an idea, and if the startup is going to be successful, at least in the field, in which I work, that idea should be novel. Secondly, it takes generally a serious plan and then working that plan and working that plan includes the other important component of startups. And that is funding bringing money in to move that startup along. So yeah, I'm with you. And I just added those extra things as I think about it,

Richard Miles 00:02:36 Good definition. I'm perfectly willing to work with that, but let's talk first about the type of people who do this. Seeing on the general level. Most people don't in fact quit their perfectly good corporate jobs to live in their parents' basement and race through other people's money. That's not a natural inclination, but you've seen probably hundreds of different founders and I'm willing to bet that they share some similar traits in terms of personality and character. And again, I know there are exceptions, but if you had to generalize and boil it down to say three or five characteristics, what do you see personally in that founder figure? And I would include in this both successful and unsuccessful founders, are there a common set of personality, characteristics traits that you see?

Russell Donda 00:03:18 I think that there has to be this inherent drive to solve problems or to solve a particular problem. And to believe that, and I'm gonna say, quote, "may" have the solution that drive to say, I've got a problem. And I think I've got a solution, which by the way, is very different than being sure that you have a solution because I've seen too many folks who drink their own Kool-Aid and just refuse to quit when it should quit or to at least pivot. So you have that and you have to be willing to be a risk taker because in the end, when you are doing this kind of endeavor, when you're an entrepreneur in a startup, when it comes to being compensated, you have to look in the mirror. So you have to realize that this is all about what you are going to accomplish, but it's never a one person thing. And that's a huge learning point for many early founders, especially young folks. It's a team effort. Everything requires a team effort. I've never seen anything happen in terms of having to develop an innovation without having that kind of team effort. I mean, if we're looking at attributes, I can tell you that I have seen failure after failure. Not because the idea that was being promulgated was deficient, but because of an inability to adequately convey to communicate the idea, I see that mistake happen all the time. And I see it in presentations routinely.

Richard Miles 00:04:45 One thing that we have noticed in running the Cade Prize and also the Cade Museum as we interact with inventors is like a curiosity or a problem solving. And almost to the person, we we've never seen somebody that starts out. At least I want to get rich. Now that may come later as the product grows and develop. But very few people I think set out to do this sort of as like, this is the way I'm gonna even make a living it's that they're bursting with usually ideas and problem solving. And they've just gotta get it out into the world no matter what the field is. And later on, they do achieve commercial success. Obviously money may come into it big way. I, I think you said it already, but if you don't have somebody that just naturally is always thinking about how do I make a and B go together better or think I've got a better way to do whatever, if that's not a core part of their personality, they're probably not. I'm guessing gonna be a startup founder or have you found something different.

Russell Donda 00:05:39 It is rare to meet with a founder and have their focus on making money from the business. It's rare to experience that at the same time. I think we have to realize that part of what drives these innovations forward is knowing that there's that potential on the other end, when I work with my startups, the entire focus is always on driving toward commercialization. And it's not about selling the company from the start it's about driving toward commercialization and when the time is

right, and we can talk about an acquisition or becoming publicly traded that sort of thing. So yeah, in general, I agree with you.

Richard Miles 00:06:17 When you do talk about finances or that commercialization pass, I'm curious, do you think most of those inventors, even if they're super passionate about idea, do they have a realistic idea of the scale of success it's possible for them or do they all believe they're gonna be the next to Steve Jobs and Bill Gates or are there expectations a little bit more realistic in terms of what commercialization success could mean for them?

Russell Donda 00:06:39 The folks I work with are, are all folks that are less seasoned, right? So it's not like I'm sitting in meetings, although I am on a board with a seasoned group, but it's not like I sit in these meetings with folks that have a lot of experience. So because of their inexperience, they're not able to really think about the scale and what a liquidity event may look like. They have to be taught that they have to be taught that. And there's a process that we look at in that sort of thing.

Richard Miles 00:07:08 Describe for the listeners what your typical day or week is like your director of an incubator. I presume a lot of people come in are doing advanced research that they're not just starting out in terms of their idea. They've probably been thinking about or developing for a while. What sort of things do they need for can computer give them that they don't have?

Russell Donda 00:07:27 So I'm an entrepreneur and resident for glide in the innovation fund. And we do have an incubator there, although I'm not director of the incubator. So, I, I serve as the entrepreneur in resident. So, I'm actually the boots on the ground in working with these folks. And the question is what is a typical day and week? It is typically filled with meetings where I'm either meeting new founders that are seeking funds from the innovation foundation. For example, we have A grants 25 to 50,000 and then B's up to 125,000. And that's four times a year. So, I'm meeting with startups that are always saying they want to apply. So, I engage them, and I go through the process of how I can help them. I have a particular slide order that I think is appropriate to use for investors. And so, there's that process now, whether or not I meet again with those folks, it's up to them. If I think they've got something really hot, then I will certainly pursue them and say, listen, we need meet again. Then the other meetings are meetings for startups that I've continued to work with on an ongoing basis, helping them through the various stages of their commercialization, either as just an advisor or as an active board member.

Richard Miles 00:08:38 Why don't we talk about that a little bit more in detail because my limited experience of doing this is that the problem isn't so much weeding out bad ideas, cause you tend to get very few, truly bad or completely unworkable ideas on the face of it. It's more that okay. They all look interesting and there's usually something to back it up. There might be a prototype. There might be some promising work in the lab, but the holy grail, I guess, for investors or for VC firms, is that at that

stage, is there a rule of thumb in terms of initial metrics, initial vetting that you take a look at a founder or proposal and think like, okay, four outta five of these look really good or not, that would separate them from the pack in terms of how do you decide, like you said, some of them you spend more time with than others or you might not even do a second meeting. What are the things that you decide, okay, this is definitely worth a second or a third meeting when you see them.

Russell Donda 00:09:31 So it's a good question. And I think I've got a pretty good answer for it. So I started off with the consulting business back before there was regeneration technologies and, and my consulting business was called Strategies 2000 and I was working with startups and scientists, other inventors back then, and then met Jamie, Jamie Grooms and ultimately ended Strategies 2000 and became a co-founder of generation technologies. So I did all that. And then I was part of a handful of startups. And then probably I really took a deep dive into being an entrepreneur and residence for the last 10 or 11 years. And for all of this background experience I put together what I think are the five fundamentals, the five keys that every startup has to address in order to work toward success. Number one is in this, you would be shocked at how many startups blow it on this first one.

Russell Donda 00:10:25 Tell me about your IP. Tell me about your prior art search. And you would be shocked at how many people have not done a prior art search. How many people end up filing superfluous patent applications. And listen, I'm not gonna take anything away from patent attorneys, but it's not the patent attorney's job to determine if there's a business based on these claims or a product that can be sold. So there's a real problem with IP. So you've got to understand if you are infringing others, I've had so many people that are already infringing, but the startup idea. So you've gotta understand if you're infringing, you've gotta understand if what you have is patentable. Number two is how does that parlay into a competitive advantage? And I say that because just as many people don't understand how claims give you the protection to make a product is that product that you're protected on actually gonna give you a competitive advantage in the marketplace.

Russell Donda 00:11:25 So we don't have time for examples there, but that's the second thing. Now what we're seeing in the United States is just a mushrooming of IT based app kind of startups. So many of those, there's nothing there that you can actually get a patent on, but yet we still see investors putting money into those things. So you still have to show that you've got some kind of competitive advantage. All right, that's true. Number three is how large is the market in which you're playing. If this is going to be a VC play. So if you're gonna have to raise more than 10 million and it's gonna be a VC play, the VCs wanna see a market of at least 500 million a year. If you're dealing with private angels, maybe you could get by with a couple hundred million a year, if you really have a strong, competitive advantage.

Russell Donda 00:12:09 So that's three, the size, the market, it's gotta be a good size market. Number four is, and this is really crucial. And this is one of the most time consuming parts for the startups to undertake. And that is what is your task and your timeline to get this innovation commercialized? What

are the tasks you need to accomplish? What are the milestones? How long is it gonna take and how much money is it going to take to get to each of those milestones? So in one slide, I have a snapshot of where the business has been, what it's gotta do, where it's going and how much money it takes. That's the fourth key. The fifth key applies to devices, not to software, but it's the unit manufacturing cost. Can you make this at a price which gives you high gross margins, and yet you can sell it, be competitive in the market. So those are the five keys that I look at all the time. And I gotta tell you, it usually stops writing their first or second one. And then they have homework to do.

Richard Miles 00:13:06 That. Sound very familiar from the judging process that we've used in the prize. And what strikes me too, is that a lot of the people with those great ideas, for instance, engineering professor or a biology professor, this is a totally different world for them. They're not used to thinking in terms of unit production cost. They're not thinking terms of how big is the market because their world is. I do research. I publish, I talk about what I've published at conferences. And then I get a grant. I do some more research. That's their world. So what for you is fairly common sense. I imagine for some of your clients, as you said, they come in and this is like, they haven't even thought about it, or they're not even aware that someone else may be doing this work. And I saw you wrote someplace that one of the best early indicators is how open they're to advice, right? Because if they understand this about themselves, they understand they've got these shortcomings in terms of their knowledge base. And they go find somebody, whether it's an advisor or board member, then maybe they can get through that initial desert. So to speak. How often is the case that you find very talented, brilliant people come in and say, I can do this all by myself,

Russell Donda 00:14:12 Probably more than I like to see. And I think I'm generally able to convince the majority of them that this is gonna have to be a team effort, that they're gonna have to loosen their clenched fist and take that equity and share that. And that there's really gonna be nothing more valuable than building that team and everybody pulling together. So I see it, I think by and large, I'm able to talk people out of it, but there are some people that you cannot change their minds.

Richard Miles 00:14:40 What is it that they're afraid of or are they afraid of something or are they just overconfident in their own ability to figure this out? One thing that we've encountered is often you've done with people who have always been the smartest person in the room. They're a brilliant physicist. They're a brilliant engineer. They've always been their top of their class. And they underestimate just how complicated or rather unpredictable that path to market can be. Do you find that as well?

Russell Donda 00:15:04 Yeah, I do find that, but generally I'm able to kind of shed light on some of the daunting tasks that lie ahead. I mean, even just explaining those five keys <laugh> right. I mean, because when you do that task and timeline, as an example, you really need engineers with you, right? Because they're the ones who really understand some of the activities that need to be undertaken to build something, to move something along. But I think that generally we're able to convey this by and

large to folks that this is daunting and that we're gonna need a team. Even if they're just contractors for now, we're going to need that and then build into that. So I probably don't work with people that won't open up to that. Right.

Richard Miles 00:15:43 It sounds like you have a very compelling, tough love speech, right? For the initial inventor who decides, okay, maybe I do need some help here.

Russell Donda 00:15:49 I'm pretty blunt. I've been accused of that many times. And what I tell him is I'm telling you though my opinion, it's just my opinion, but I'm gonna tell you what I think. So you're not gonna hear from someone else that I was thinking something else about you. When you hear me, that's really me.

Richard Miles 00:16:04 You get the original version. Let's fast forward, just a little bit in the timeline. Let's say somebody comes in a company they've done all these five steps. Let's say they're year, 18 months into it. And then they struggle. And this happens a lot, right? Where the startup makes an initially promising start and then they hit a rough patch. Have you been able to isolate or could you isolate maybe the top three reasons why a startup that has a successful launch fails say two or three years into their venture?

Russell Donda 00:16:28 Are you talking failure while they're still in the development stage?

Richard Miles 00:16:31 Pre-market right. They're not actually selling product yet, but let's say they just fall way short of raising the capital they needed. And then the founders part ways are just give up.

Russell Donda 00:16:40 Yeah. I think there are two major issues there that complicate that one is not being able to get the money that you need. That's probably the biggest single thing. And the second thing is not having the right people. So when you have both of those, you are golden generally speaking. And to me, it is really quite amazing to see how companies propel themselves when they bring in the right folks. And I will tell you that those right folks include not mentors and trusted advisors, but it includes a trusted board that's seasoned with startups and that can really offer you strategic input. And my opinion, that's one of the earlier things that every startup should do on that board.

Richard Miles 00:17:22 You know, I spent most of my career in, in government Russ. And so one of the things that surprised me when I started interacting with people in the startup world was the speed at which people come in and go out of these small micro companies. And part of it was like the life from the godfathers, not personal as business, right? If you have somebody who's either not right or underperforming, you cannot afford to keep them one more day or one more week than is necessary, where in government that person can stay for 20 years, but in a startup culture, sometimes it's just not a

fit for that particular culture. And they know it, you know it, and they gotta go. And that happens within days or weeks, as I said, rather than years usually.

Russell Donda 00:17:57 Yeah. And that also leads to a sidebar. And that is the importance of when you're laying out your cap table in your incentives, to be sure that things are based on vesting structure so that someone doesn't get all this ownership and then they're gone, but to vest their ownership over a period of time or based on milestones.

Richard Miles 00:18:15 Right. No, that's a very good point. Let's switch now and talk to the context, or I guess the environment in which startups are created and fostered and thrive, obviously nothing happens in a vacuum. There are other players sort of background structure. What are some of the things in your view that government, or at least, uh, maybe even the broader business community can do. Let's start maybe with the local or state level, let's leave the federal level out of it for the moment. What are sort of things that a city or a state would do if they wanted to see or encourage the development of startup companies.

Russell Donda 00:18:47 That's really a deep subject. It's a great subject to really spend some time talking about. I'm gonna get real fundamental here. You generally have people that are quite open to ideas and are able to think creatively. And you also have people that are not so open and tend to do things as they've always been done in order to have a startup culture, to have a region that is rich in startups. You really need to have a preponderance of people that are not, not closed down and just want to keep doing things the way they've always been done. But you want people who are gonna be open-minded and get excited about solving problems. So you need that kind of people. And you know, I don't want to use the term young people, but we have all of these college age, college grads up their thirties, a lot of folks like this starting businesses.

Russell Donda 00:19:44 So they need to be in a culture that then supports that openness. It is important to have institutions of higher learning or research labs that have a good process in place for releasing innovation into the community, for development, where I am we have, and I'm not gonna name it, but we have a big federal lab and that federal lab does not have a conflict of interest policy so that it's scientists can create startups. It's really sad. Now, maybe it's unusual for a federal lab. I don't know, but all of our universities here have policies and they put out any number of companies, but it's one thing to have a, a faculty member with an idea. It's another thing to be able to match that up with someone who wants to then turn that into a business. Those are the people that you wanna be attracting. There are really younger folks. Obviously, you can attract a certain amount of seasoned people, and that's a good thing too. So, you gotta have policies in place that younger folks are happy with. If you're putting things in place that turn off that crowd, you're gonna stifle your growth, I think.

Richard Miles 00:20:51 Excellent point. I think a lot of people are under the mission impression. Probably a lot of city governments is like, well, all we have to do is say, give a tax incentive or free land or something like that. And we'll attract these innovative companies or startups, but you really put your fingerprints an ecosystem. I think of one creative people, but then also you have to have probably more people like you, Russ, and that they've got the experience to mentor or give advice to those creative people, to channel their energies in a productive direction. And then ultimately you've gotta have capital, right? So, you've gotta have enough people willing to invest either VCs or private equity or other angel investors. So that once you do have an idea, it's often running, they can actually start to grow. And some of the experiences that we've seen is that you might have two or three of those things. So, you might have creative people and you've got mentoring, but then you run outta money or the companies run outta money. And they're the ones that move to Silicon Valley, or they're the ones that move to somewhere else where they can get that constellation. And that's where I think maybe a lot of cities might lose out, but of course they've gotta have the first two to begin with right before they even get to the money part.

Russell Donda 00:21:57 One of the important parts about the money is for example, the innovation fund and the Cade funding is that, that early money that allows you to validate what you're doing, such that you reduce the risk for the next round of investors, I think is really key to engendering that kind of startup culture. We've got it here. This is in Cleveland and a Northeast Ohio area. We have the innovation fund and it has, I don't know the count now, but hundreds of startups it's spun out that have gone on to raise hundreds of millions of dollars. You've gotta have that early funding. So, the service that you are providing through the Cade fund to my way of thinking is really crucial as a first step in that process. But then it does take a whole ecosystem.

Richard Miles 00:22:47 Yeah, you're absolutely right. And that's one of the things that we really are pleased about with the Cade Prize or things like the Cade Prize is we recognize that sometimes there's early days say don't need much, but they do need something. They need to hire somebody or they need to make a prototype or they need to file for a patent. And if they don't have even a little bit of money, they're gonna languish or go very, very slowly Russ, one more thing. We always like to wrap up these interviews, we're talking about the person themselves. So let's talk about a little bit, Russ Donda. Tell us what were you like as a kid? Were you the first guy on your street with a lemonade stand or a bunch of lemonade stands? Did you own a fleet of lawnmowers in your neighborhood? Were there early indications early in your life that you would get into the entrepreneur arena?

Russell Donda 00:23:25 Yeah. I didn't know it at the time, but now reflecting on it, I was quite an arguer. If you told me something and I didn't agree with it, you would hear from me honor. In fact, I got in trouble in school. They had to have parent teacher conferences say he's arguing too much with the teacher. And I remember you're gonna laugh at this one. I shouldn't even tell this, but I remember I was six months old, and I remember being in the crib and I remember looking at the side rail and I remember thinking, why is this holding me in here? And I climbed out and down the stairs, but I was fortunate to grow up in a relatively rural area outside of Cleveland, half an hour outta Cleveland here in countryside.

And so, I've always been exposed to nature. And so, I was self-taught, did a considerable amount of reading in the sciences with nature. And so I actually was on a track for that in my undergrad and switched to business for reasons I, I won't get into, but switch to business. And, uh, now in my life, I get to work with that science, and I get to work with such bright people. And then I bring in the business side of it. So, it's almost as if a lot of what I did as a youngster has come full circle and I feel pretty blessed to be in this position.

Richard Miles 00:24:36 Did any of this run in the family, did either of your parents, were they business owners or in the business arena?

Russell Donda 00:24:42 No, they were not, but they were always, they questioned a lot or I wouldn't call 'em, but this city policy, this government policy, this opinion, they questioned a lot. My father was probably like people that, you know, or have known when I would work with my father alongside him on a car or a tractor or whatever. And there was a problem. He would always say, there's a way to figure this out. And he would use divergent reasoning a lot of times. And you could tell it was divergent reasoning when you looked at the fix <laugh>, but, um, but he fixed it. And I learned early on that there's always a solution. There's always a way to do something. So that's kind of my background.

Richard Miles 00:25:22 <laugh>, that's a great story. I remember reading a book, a great book called Shop Class as Soulcraft. It probably came out at least 10 years ago, a guy named Matthew Crawford. One of the things he talks about was one of the downsides of devices getting more sophisticated or less maintenance required. Take an automobile for instance, right? Whereas before the average person would have to know how to get under the hood and do basic things, change the oil, set the point, the fan belt, water spark plugs, whatever. Everyone kind of knew that some knew a better net. And now you lift up the hood of your car and you can't touch any of that stuff.

Russell Donda 00:25:56 <laugh> I know I don't like that. <laugh>

Richard Miles 00:25:59 So even if you want it to be a problem solver in an everyday way, in that fashion, the nature of sort of modern products, modern devices, you can't open them. You literally cannot open them like your iPhone, right? I guess now we'll be able to fix our own iPhones eventually. Right? I just read somewhere, but otherwise you can't do your own tinkering. And that part of his argument was saying this inability to have the chance to problem solve makes us all less problem solvers, right? Because we're just used to someone else figuring out whatever it is. I thought it was an interesting thesis.

Russell Donda 00:26:26 That's true. That's actually scary because as far as I can see, we need more problem solving more divergent reasoning now than we've ever needed. We are facing not just problems we're facing predicaments.

Richard Miles 00:26:37 Yeah. And what I like about what you do Russ, and this is where I show my bias, cause I'm leaning in this direction as well as you are a problem solver for systems, because really what is a startup, but a system it's a system of relationships between the inventor and the people who come in and help develop the idea and then the market, right? That those are all complex systems that you can't nail down. Any one variable and say, this is the variable, it's a hundred variables and they're always changing. And I think that is what kind of the beauty I think, or the strength of the American economies. We've got a lot of people who are pretty good at that.

Russ Donda 00:27:05 Very good

Richard Miles 00:27:06

Russ, thank you so much for coming up on Radio Cade. Wish you the best of luck with the companies that you're working with, that you're either leading or advising. You're doing great work.

Russell Donda 00:27:21 Thank you, Richard. It was fun. Thank you so much.

Outro 00:27:25 Radio Cade is produced by the Cade Museum for Creativity and Invention located in Gainesville, Florida. Richard Miles is the podcast host and Ellie Thom coordinates, inventor interviews, podcasts are recorded at Heartwood Sound Stage and edited and mixed by Bob McPeak. The Radio Cade theme song was produced and performed by Traci Collins, and features violinist, Jacob Lawson.