Season 3, Episode 2, "The Road to Reinvention," Sept. 13, 2022

Mark Pydynowski: The music stopped. Either, like, people were friends, or they became friends, or they relied upon us. But we didn't have the cash, and we knew it was highly unlikely that we're going to be able to raise the cash. So we had to go into survival mode and figure out what to do.

Kurt Greenbaum: From Olin Business School at Washington University in St. Louis. I'm Kurt Greenbaum. And this is *On Principle*. Regular listeners of our podcast may be familiar with the cadence our stories usually take. A business leader shares a challenging moment, a pivotal moment. We explore how they got there. We dig into the solutions, and typically, we learn something from the solution. But this isn't that kind of episode. Today's story is about failure, plain and simple. There's no sugarcoating it. Our guest today latched onto a great idea and just couldn't get it over the finish line. But that doesn't mean we can't learn something from his story.

Mark Pydynowski: My name is Mark Pydynowski, and I am currently a product manager at the small little tech startup company called Meta, which is formerly known as Facebook. Product manager is typically the person who, whether it's software or hardware, will be responsible for grounding our work in the mission of the company. Then explore and prioritize the problem to solve—whether it's a people problem or a company problem. Then identify who are the users or the customers. Then make sure that the team really understands, like, what's the rationale? Like what's the … what's our why for doing this work? Then really support the team to figure out how are we going to solve X problem for Y user. And then also figure out, OK, well now that we have a solution for a problem for a user, how do we know that the solution is actually going to solve the problem? So what are we going to measure qualitatively or quantitatively? And then also being responsible—for anything that goes wrong, the PM falls on the sword, and for anything that goes right, all the credit is given to the team.

Kurt Greenbaum: As Mark mentioned, he works now for the company formerly known as Facebook. But as you'll hear, he's bounced in between the corporate world and the startup world, all while sticking with those core talents as a product manager. His résumé includes stints at Experian, Capital One and the Gallup organization. Meanwhile, he's collaborated a couple of times to launch startups with a business partner, Ramos Mays. I wanted to know what he's picked up over the years as he's compiled such an eclectic résumé.

Mark Pydynowski: The only reason why I even went to corporate in the first place or went to the that management consulting firm was because the startup that Ramos, my cofounder, and I were working on while we were in school failed. And so

I went to a management consulting firm. I really made those decisions based upon, like, following my curiosity, determining how much risk I wanted to take on at a certain point in my life from, like, a life-stage perspective. And also, I would choose some options based upon the people relationships—who I wanted to work with. I remember when I was doing sales, sort of sales, at Capital One, and I was cold-messaging people. My response rate was 70% because my email address had Capital One dot com. So there's the brand.

There's also just, like, what the work is like and sort of where you spend your time doing, right? Like in corporate, you are managing up typically, like, multiple levels. In the startup, you're managing up to your board. In a startup, you're going to be a lot closer to revenue or closer to, like, life-and-death decisions, whereas in corporate, like, you're typically not that close to those things. Startup life is where I belonged, and it's what I enjoyed more than anything else. But I also know that I enjoyed enterprise software, enterprise hardware. I wasn't more ... I wasn't ... I'm not really a consumer guy. I'm much more of an enterprise. And knowing that I would always be selling into corporate or selling into enterprise, spending some time in there and actually understanding what it's like to live and work inside of corporate and how buying decisions are made. I knew it would just help me later on when I was selling into corporate.

Kurt Greenbaum: When did you realize that this was something that you felt like you were good at or that you had a passion for?

Mark Pydynowski: It was Somark, the company that Ramos and I started a year after WashU. It was clear he was the engineer and I was the business guy, and it just so happened, like, with being the business guy, I had to figure out, like, what we are going to build that a customer would actually buy. And so I didn't have a choice. And I realizing, like, OK, like, here's a very structured process, kind of following with the scientific method almost, for figuring out, like, what are customers' problems and how might you actually solve those problems so that they will give you something of value, which is typically money. I enjoy solving problems, but it was never about the product. It's more about just solving a problem. And I also like the challenge of iterating on something that you're building until you truly solve the problem. Like for me, that's a game. It just so happened that, like, that game? They call it being a product manager.

Kurt Greenbaum: So I assume some of that had an influence on your decision to start your own company while you were still in school. It kind of started with a bang while you were still here, didn't it?

Mark Pydynowski: Somark was technically our second startup. I mean, Ramos and I did one while we were still in school, which is when utility was a complete flop. It never got off the ground, which is why I had to go get a real job and join a management consulting firm after school. So Ramos sent me a message and said that he had an idea for a new company to start. And he was a cattle rancher who grew up in southwest Missouri. Yet his undergrad was in computer science and his graduate work was condensed matter physics. Smart kid, a lot smarter than me and a much better baseball player than I was too. And he had this idea to take what he called biocompatible RFID-like ink, basically turn it into a tattoo, tattoo the cattle and then track cattle, just like you track cars with, like, toll pass or I-Pass, you know, as you're going through … as you're going on the highway and paying tolls. I knew nothing about cattle. I mean, I grew up on the south side of Chicago, just a pure city boy. Every night for hours, we'd be talking over Instant Messenger, just trying to, like, work through this, figure this out, and we did that for almost a year. We moved back to St. Louis to start the company.

Kurt Greenbaum: So the city boy and the cattle rancher get together on this idea and let me see if I have this about right. We're going to tattoo cattle with ink that is infused with the materials you need to read data off of that tattoo so that we can keep track of the cattle, identify them, you know, as individual heads of cattle, all of that. That's basically the gist of the idea.

Mark Pydynowski: Yes, it is. And the reason why it was important: There's food and safety concerns like here in the US, but the big driver was export markets. Right? So Japan, Korea, that buy US beef, that love US beef, they want to know that it's safe and that it's age verified and that it's source verified. And if you take the entire supply chain from, like, a cow calf producer that births the calf, until the food processor, or what used to be called a slaughterhouse, if that's the first half and the second half is from the food processor to the dinner table, that food processor to the dinner table, like, traceability is actually pretty good. But that first half was not. The export markets for US beef for Japan and Korea, they were closed because there was a couple of disease outbreaks: mad cow disease and BSE was a couple of, I think one of the other outbreaks. And so the export markets weren't buying US beef. And that's a problem because the prices are going to decrease, margins are going to go to zero, people are going to lose money.

And as part of the reaction to this, the USDA, the federal USDA, mandated what they called the National Animal Identification System. And so the USDA, the federal government, wanted to come in and say, OK, in order to solve this problem so that, one, we can reopen them and that they don't close again, we want all cattle in the US to be identified and tracked. So his idea was like, OK, if we tattoo it, but it's a tattoo that's not simply visible, it can be machine read, like, we can trace these animals, just like you trace cars going through the highways.

Kurt Greenbaum: So how did investors react to this? How much did Somark raise? What was the trajectory?

Mark Pydynowski: The catalyst was we had entered the Olin Cup, which is a business planning competition that the Skandalaris Center for Entrepreneurial Studies hosted. We were fortunate enough to win. We got $50,000 from that. But more importantly, that gave us just the attention, the awareness, a little bit of credibility and introductions to really the angel investor community in St. Louis. Our first round of capital was a convertible debt note, it was probably for like $200,000. But then I think we were able to eventually raise about 1.5 million in, like, our first real round of funding. We’ve learned that the technology was a challenge, like, as it typically is. We're dealing with radio frequency waves, right, which are not terribly friendly at high frequencies, are not friendly with metal, glass and water. And if you think about a 1,000-pound cow that's just running around in all types of rain and snow and sleet and mud, it is pretty difficult in order to get the technology to work and to work every single time without fail. And if it doesn't work, you can't, like, tell the cow, "Hey, excuse me, Mr. Cow, will you please stop, turn around and go do that again?" Most folks in the industry saw the problem and wanted to solve it.

However, most ranchers do not want to be told what to do, right? They're also pretty skeptical of new technology or new ways of doing things. They're typically pretty frugal, right? And they want to get ... they want to know that, you know, their friend down the road has been using this and it works for six months before they're even willing to try it. And then maybe they want a six-month free trial before they even want to use it. Most of the industry was not eager to be an early adopter, number one. Number two, most of the industry actually did not want the National Animal Identification System because if they did, it meant that all of their animals would be identified and therefore there would be a count or an inventory.

Kurt Greenbaum: So hold on. Let's pause a moment here. Remember, this idea seems like a no brainer, right? The government is requiring this sort of ID system to support global exports of US beef. Investors initially like it, but challenges start to emerge. For one thing, cattle exist in challenging climate and sanitary conditions. For another, ranchers may not be that keen to have an accurate count of their cattle. It turns out that cattle are taxed by the head, a number that's been self-reported up to this point. If Mark's technology worked, he told me, some estimates said the number of head of cattle could triple overnight. You think that might discourage ranchers from adopting the technology? So these challenges, these headwinds, as Mark called them, started to pile up. That was just as Somark needed another injection of capital.

Mark Pydynowski: And when we realized that we were really unlikely to raise this round of capital and we looked at our cash position, our runway, our burn rate, we knew that we just could not continue. We knew that our current investors weren't just going to write another check. So we at that time decided that we had to lay everybody off except for ourselves. But we still, I mean, we essentially laid ourselves off because we stopped paying ourselves, and we had to go into survival mode and to figure out, like, what to do at that point. I mean, it was really … it was a gut-wrenching decision every single day, like, I said to myself, “OK, if we're not dead, we're still alive.” And all we had to do was hang on long enough. Just stay alive long enough to figure out something that would get the company going again. Throughout that period, we got a phone call, and I don't know who it is. I decide to answer it.

Kurt Greenbaum: On the other end of the line is a caller from the Jackson Laboratory, nestled beside Arcadia National Park in Bar Harbor, across the Bay of Maine from Nova Scotia. The Jackson Laboratory pioneered the use of laboratory mice as models for human disease. You know, the kind of mice used in preclinical research. Now, the funny thing is, Mark had talked to them early in Somark's work, just as they were starting to show off what their tech could do. But Mark and his partner had their hands full with cattle. They didn't have time for mice. Now, suddenly, the associate director of the Jackson Laboratory was on the phone with a simple question. Could we fund a feasibility study of your technology? Would it work on mice?

Mark Pydynowski: I remember almost falling off my chair because it was just a complete lifeline that was being thrown to us. Yes, we'll do it. Let's figure out, like, what a feasibility study looks like and then let's get it going. And so that was the beginning of the company's turnaround and really a pivot from cattle to mice. The mouse industry, if you will, like, their requirements for the technology were significantly different than cattle. The mice are clean, they're small, they're compliant. You can move them around. They're not covered with snow and sleet and feces and everything else. And the distance that you had to read them at was typically a couple of inches, whereas a cow running through a feedlot, like, you might need 5 or 6 feet that you needed to read them at. And it quickly became clear that our best option was to go after mice and to pause cattle.

And so then we had to go to all of our investors, I think it was probably over 20 investors at the time. They said, I get it, it makes sense. You know, like Godspeed. Like, I may not write you another check, but Godspeed to you, let me know how I can help. And some of them were like, OK, yeah, I get it, like, let me know when you're going to raise your next round and, you know, I'll certainly look at it and probably write another check as well to maintain my pro rata. So we went to Bar Harbor, Maine, to do the feasibility study. We thought we could build a solution to identify and track mice that was going to be much easier than the cattle industry. And we also learned that it didn't need to be the biocompatible RFID-like ink that the cattle needed. A much simpler solution that was sort of a hybrid of two existing solutions would actually work extremely well. In ear tag, they would dye the animal's fur. They would do toe clipping. They would use an RFID implantable chip and then also a manual tattoo on the tail.

However, it was really difficult to apply, and if you didn't do it properly, if you never like a really skilled technician, it wouldn't last. It wasn't going to be indelible. It would eventually fade away. And so we looked at this and we said, "Gosh, why don't we just recreate that tail tattoo, but do it with a machine?" Like basically, like, let's just build a robotic arm that will recreate what a … what a human hand can do to create that tail tattoo. All that new research, the customer validation, the feasibility study. We went out to raise another round of capital, now completely on the mouse story. Then I remember taking a one-way flight to San Diego because Ramos and I moved the company, which is really just he and I, to San Diego.

Kurt Greenbaum: And everything went great. And you lived happily ever after, right?

Mark Pydynowski: We were getting purchase orders and like, it wasn't hard to get purchase orders. I mean, these are from big companies—Amgen, Pfizer, Merck, Johnson & Johnson, Sigma-Aldrich, Taconic, Jackson Laboratory. I had made the mistake, which was like a fatal flaw, like any CEO founder, like always raising capital, right? So that if you ever need to raise fresh capital from a new source, like, you can do it. I didn't do that. I had focused too much on sales and not enough on fundraising. And so at this point where I don't have another lead investor, like, outside investor waiting in the wings for us. Of our two big investors, one of them has decided that they're not going to continue funding primarily because they invested in cattle. They didn't invest in mice. When they invested in cattle, like, they were going to be a distributor for our products. Like there was also … it wasn't just an investor. They're going to be a distributor. The other large investor has really a decision to make. Do we write a check that's twice the size? Do we go try to find another? Do we tell the ... the company, "Sorry, we'll write another check. But you're just going to have to move slower." And if ... you know, cut the staff in half, or do they shut the whole thing down?

Kurt Greenbaum: As I told you at the start of this episode, this is a story about failure, and this is the point where things really start unraveling. Mark's company had actually gotten pretty good traction, preselling their technology to some big-name laboratories and pharma companies. But progress was slow to actually build the equipment they were selling. They were months behind in fulfilling contracts. Investors were impatient to realize revenue, and while another funding round came, it was a down round, meaning investors would put more cash into the company but at a lower valuation than before. Previous investors would lose a lot of money. It took nearly a year before Somark started shipping product and fulfilling contracts.

Mark Pydynowski: And then the calls and the emails start coming in and like the questions, the concerns from our customers that the tattoos on the mice are fading away. We don't know exactly why this is happening or how to fix it. We are behind plan by at least 11 months. I mean, call it a year, right? In order for us to generate revenue, we need to raise a fresh round of capital. And at this point, like ... I ... like, our board and our investors, I think some have quite a bit of confidence in us simply because of all of the purchase orders that we're able to get from like really big-name customers. And they knew that on the other side of those purchase orders were even bigger purchase orders.

Dedric Carter: You have to sort of think fast and slow in this environment. You have to think more immediately. What are some of the short-term success factors that you want to get your head around? You have to think about the longer term. How do you move the needle substantially and in some ways not just move the needle, switch out the dial.

Kurt Greenbaum: That's Dedric Carter, Washington University's vice chancellor for innovation and chief commercialization officer. His job is focused on advancing the culture of innovation at the university and identifying new opportunities within the entrepreneurial ecosystem. He's also been a startup entrepreneur himself and has a national reputation in the innovation space, serving at times as an advisor for organizations such as the National Science Foundation and the US National Science Board.

Dedric Carter: I grew up in a small town in the South and I've always been a solutions provider, creator, so I fall in love with the problems but in service to the solution. And I really think that innovation and entrepreneurship is that sort of curiosity and the ability to take the leap of faith and to try and to create something new and novel around interesting problems. If you look at what's happening now in the world, there's no better time to be thinking about how you solve really big, pressing problems that impact the human condition.

Kurt Greenbaum: Why is it important to have somebody in your role? Why is that important for WashU to be doing?

Dedric Carter: I think that if you don't have someone waking up every morning thinking about how you move the needle in these spaces, it doesn't get done. When I first became a vice chancellor, every morning I woke up and said, "What are the issues? Where are the opportunities? Where we need to do? How are we advancing the strategy and the culture and the opportunities here on this campus?" I teach, both in Olin and in engineering and also soon in the med campus, and it is about engaging with those cultures of students as well who push us in ways that we should be excited to be pushed because they really help to move the needle.

Kurt Greenbaum: You come to this from the other perspective as well. Am I correct, did I read somewhere that you also are a founder of a venture-backed company yourself?

Dedric Carter: Yep. I was on the founding team of a venture-backed firm of SoftBank UK funded. You know, I've always been entrepreneurial and I've … I've had to sleep on couches and find interesting ways to make things occur through friends and colleagues. And so it's not just something that I write about or I teach about it. I've actually done it. And as a result of that, I think it gives me a different perspective.

Kurt Greenbaum: I wonder from your perspective, what makes Mark's story important to hear.

Dedric Carter: In elite institutions, we don't talk about things that happen less than perfect. You know, we show up with our perfect selves and we get into these wonderful schools. And our goal is to try to be as perfect as possible through the time we finish and then reflect that perfectness back to our alumni base. When in truth, if you're going to try something new, novel and different, the chances that it might not hit the mark are pretty high. And so sharing and having conversations about the idea, the formulation, the early-stage thinking about what was … what you were trying to do, how you pivoted and how the times impacted you. All of those things are really important to have as conversations, to be very real for the entrepreneurship base. Because if you don't, then you create this sort of fantasyland where people think, "Well, I just wake up, I have a good idea, and someone gives me money and then I grow it and then we celebrate. We cut a ribbon and we ring a bell." And the truth is, I mean, it's a lonely path. There is lots of nos before there're yeses, and it takes a perseverance and it takes a willingness to do this over and over again to reach some measure of success.

Kurt Greenbaum: In my conversation with Dedric, that word—persevere—came up a lot. In fact, he put it in the context of three Ps that an entrepreneur needs to consider: pivot, pause and persevere. That first P, the one about pivoting, rings like a bell in my head as I think about Mark's story. I can't help but imagine what might have happened if he'd pivoted to mice away from cattle a lot sooner than he did.

Dedric Carter: The decision to go one direction versus the other it sometimes can be mutable. You can always go back and pick up, you can sometimes go back and pick up, and other times you can't. And it can make the difference between a success and, you know, a story that says, "I could have." But the thing is, you can't ... you have to understand that. Know that you ... you know where that pivot moment was and you learned the lesson from it. But you can't redo it. And so, yeah, there are opportunities out there. And you're going to say, "I see that base, I see that line going, I'm going to go this way. I hope it's the right way." That's part of being an entrepreneur.

Kurt Greenbaum: When should you just pull the plug and walk away?

Dedric Carter: Oh, the fun thing is, there's no good answer for that. Pivoting you're going to do all the time. You're going to learn something. You got to put it in. You're going to figure out that you have to keep going. You know, is this good information? Do I need to use this to change? You can't pivot every year on every bit of information you get, data you get. You've got to think about what is your gut say? What is the market saying, where is the market going? And you try to read the direction. So the pivot or persevere is one of those common. The pause is, is this not the right time? It's more of an art than a science. You can ask questions about, are you living, dead or are you somewhere in between? You can ask questions about, do you believe in your team? Do you think the market is going to turn around? You can talk to lots of people, but at the end of the day, you've got to sort of take the factors and figure out what do you think about your baby here? You do in your head, say, if I get caught up in the cycle, and I can't figure it out, I want you to help me make that decision, right? Kurt, I want to come to you, and I want to say, all right, I trust you. Here's what I got. And I don't know. And you'll say, well, here are the criteria you told me before. If you don't know, and then maybe you don't want to live that life. There's no real set criteria for if you pivot, pause or persevere. Some of it is a science. You can look at whether or not you've got enough burn rate. If you think the market is trending in that direction, if you think your customer pipeline looks like a good one, too, you might be able to get there if you trust your team. And some of it's just what is in the ether.

Mark Pydynowski: There's one investor—who's really at this point now is, like, is the main investor—controls the board at this point. I mean, they see the opportunity in ... from a market perspective. And they see, like, the sales. But we have failed, if you will, and recovered so many times that they no longer had confidence in Ramos and I. And they fired us. They put in one or two of their own people to keep the company going. And Ramos and I, you know, after putting in about six years of our life blood, sweat, tears, everything else, we were out of the company that we started. It was hard. I mean, it was all I had known and all I had done for six years. And now, like, I was out, and it wasn't my choice.

Kurt Greenbaum: How did that feel?

Mark Pydynowski: You know, now, looking back, like, I've accepted it, I've forgiven anybody that I needed to forgive—and, like, including myself—so I can talk about it and, like, not get emotional. But at the time, my identity was fired. I was the company and the company was me in a very unhealthy way too. The company, like, it was my business child, you know, like I have two children now and I joke that, like, you know, like Bradley, our oldest, like, he actually wasn't my first child, like, Somark was, but it was my business child. So there's no way, like, I would have voluntarily quit. It was hard. It was really hard.

Kurt Greenbaum: You know, a lot of these podcast episodes for *On Principle*, we tell stories where business leaders or entrepreneurs come in and talk about that pivotal moment that they went through and how they got through it and what decisions they made to do that. And then it's sort of, you know, things turn out and this is not that story. What are ... what are the takeaways here? What are the things that you think listeners ought to walk away with?

Mark Pydynowski: When we'd gotten fired, Ramos and I still had a lot of control. We didn't have control from, like, a shareholder perspective, but we had the keys, if you will. We had the physical keys to the building. We had the passwords to all of, like, the email servers and systems. We had the relationships with all the customers and all of the employees. We had a choice where we could have fought this. We could have held on to the keys and the passwords and, you know, started lawyering up and filing suits and ... and complaints. I remember, like, thinking about fighting and talking about it with a few mentors and advisors and realizing that it would have done a disservice to the employees, some of whom were, you know, lived paycheck to paycheck, a disservice to our customers and to even our angel investors, because it would have created so much stress and problems for the company that, like, the company may not have survived and continued on.

With startups and cofounders, a lot of times you're friends first. And I think the stress of cofounding a company with a friend, at some point, you will get to a decision where you have to choose the friendship or the company. And I would suggest for people who are going to do this, that you make that decision before you start the company. Which are you going to prioritize? And I actually decided—I remember this too—of making the decision that I would prioritize the friendship. And I'm thankful for that because at the end of this, like, Ramos and I are better friends afterwards than we were at the beginning. And, you know, you hear a lot of, like, friendships who become cofounders and then, you know, things ... the friendship gets ruined. And, you know, I value friendships, especially like some of the lifelong friendships with which, you know, Ramos is. Know the prize if you're going to fight, and make sure that the prize is actually worth the cost of fighting.

Kurt Greenbaum: And that's our episode of *On Principle*. I'm grateful to Mark Pydynowski for opening up about this story for us. I hope you found it as enlightening as I did. I also appreciate the time and the insights from Dedric Carter. If you'd like to know more about this story, please look for the show notes for this episode on our website. We'll include links with more information about Mark and Dedric, along with the recording of a panel discussion called "The Other F-Word." You might imagine what that word is. That panel discussion included both Mark and Dedric. Find those links in previous episodes of *On Principle* at our website, onprincipalpodcast.com. As usual, I invite you to subscribe to *On Principle* in your favorite podcasting app so you get updates when new episodes drop. I'd also welcome your comments, questions or episode ideas by email to Olin podcast at W-U-S-T-L dot E-D-U. That's olinpodcast@wustl.edu.

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