Alison (00:09):

TheoremOne is the leading innovation and engineering firm for The Fortune 1000. We design, build, and deliver enterprise-scale technology solutions and are very excited to present The Breakthrough podcast, an ongoing series where we interview technology leaders to share their experiences and perspectives on what's next in tech.

Alison (00:37):

Welcome to the breakthrough. I'm Alison Dean, VP of operations at TheoremOne. Today we are talking with Rachel Francine, currently CEO and co-founder of Musical Health Technologies, whose music as medicine solution, SingFit, is used and more than 500 long-term care facilities in the United States. Previously, she helped Citysearch, Ticketmaster, and Current TV with their digital evolution. She holds a master's degree in future studies, meaning she can talk at length about the probable, possible, and preferable. Rachel sent me a few of her favorite quotes and here's one. "You cannot predict the future, but you can invent it." So hi, Rachel.

Rachel (01:17):

Hello. How are you doing today?

Alison (01:19):

I'm good. I want to know why that quote resonates with you.

Rachel (01:23):

Like you said, I have a degree in future studies, and in future studies, we talk about the fact that there are, as you said, probable, possible, and preferable futures. We also always talk about the future in the plural, not the singular, because there isn't one future, there are many futures. And I think that sometimes you'll go out there and people are like, “This is the way tech is going to be in 20 years.” And they're practically never, right. Some people might hit one or two milestones of technology evolution and Moore's Law and those kinds of things, but there are so many different social and scientific, and ecological inputs that if somebody ever tells you, "This is the way the future is going to be", I would really question that person.

Alison (02:06):

I think the other thing that thinking that there's just one future does is it takes making the future better out of our hands. It takes the responsibility off of us. So we can't predict the future, but you can invent one, and hopefully a better one because there are lots of fires burning right now. I think it's up to all of us to invent a better future. I concur with you, Rachel. All right. Before we dive into the amazing work you're doing with musical health technologies, I want to quote your LinkedIn page.

Rachel (02:32):

Okay.

Alison (02:33):

So you say, "My career in interactive technologies began in 1996 as a member of the citysearch.com new markets team, and then spent 15 years converting brick and mortar products into scalable digital solutions." So I want you to unpack this for everyone since you experienced a lot. The birth of the internet was happening.

Rachel (02:53):

Yeah. The birth of the commercial internet, anyway. '96 was the first time that a browser was going online, so that you, as a person who didn't really know much about the internet, could go on, pull up a Netscape or something like that, or an AOL and start to navigate some portion of the internet. So that's the time that we're talking about. A lot of computers at that time didn't have a mouse yet, so this is the age of the computer that we're living in. I had moved to Nashville for various reasons, and I had been a writer and I found an ad in a newspaper, of all things, that said, "Writer wanted for web guide." And I thought, I could write a book about the internet, sure. I could research that. I applied for the job and what it actually was, was it was an editor for Citysearch, and Citysearch was an online city guide.

Rachel (03:40):

At that point they actually employed editors, and what we were doing there is we were really digitizing the local city paper, making it easier and have the ability to have more content and more listings, and of course there was a financial model behind it that I wasn't that interested in back then, because all I wanted to do was write and tell people about the city. But what we were really doing was digitizing how people found out information about their city. So in addition to being a city paper, it was also a yellow pages, it was also the menus that got delivered underneath your door. These were the first times that those kinds of digitizations were happening. That job led to things like working on and rolling out cars.com and apartments.com. So before then, Craigslist was probably out, but there weren't a lot of places where you could just go.

Rachel (04:28):

Even the newspapers didn't really have classified ads at that point. A lot of the newspaper groups who had been bitter, mortal enemies were worried that Microsoft was going to take over the classified scene, so they formed this organization together to create cars.com and apartments.com and build up their classified vertical, and I went in and helped you with that. So I brought in all the people. How do you talk to a car dealer about the fact that somebody is going to be buying their car online? How do you list an apartment,

what's the UI for that? It was a really interesting, fun time with lots going on. That was the first phase of it anyway, I'll stop there.

Alison (05:06):

That's a good segue because you've done a lot of things, so I want to know what digital transformation means to you.

Rachel (05:12):

Digital transformation to me means the ability to give access to more people at a lower cost. That's what digital transformation really means to me, and I think why it's important to have and what it should be used for. Digital transformation, I guess, could mean anything from taking sticky notes and putting them online. But for me, that's not the important part of it, unless it has a higher purpose.

Alison (05:38):

Okay, so is there a project that comes to mind for you that's most representative of a digital transformation that you were part of?

Rachel (05:46):

So after Citysearch, I went to a company called anteye.com, which was A-N-T-E-Y-E. This is about four to five years before YouTube ever launched. And really the goal of that company, when you read the business plan, and this was back in 1998-1999, what they really wanted to do is democratize the media. They really did want to have a way that individual artists could get their materials seen. I mean, even early players, like this was pre the Greenlight Project with Matt Damon and Ben Affleck, so this idea that we could break the Hollywood system, to me, was something that I was really happy to be a part of.

Rachel (06:26):

There wasn't a lot of broadband back then, and so it starts with people watching. A lot of people were shooting on video, so it didn't quite do what we wanted at the time and sometimes I look at online content and I wonder what we wrought, but I think the idea that there are creators out there making things and finding their own voice and finding an audience for it, I do think that's digital transformation because I think that that is the dividing line between why couldn't we change the world before, and what is the tool that we have now to make a difference that we didn't before, and that's the digitization of that power of voice.

Alison (06:56):

That's major. When you think of the most memorable project that you've been part of, what comes to mind?

Rachel (07:02):

This one, obviously. SingFit is what I've been doing for the past 10 years of my life full time and something that my dad actually thought of way before I was born, so I've been doing this my whole life. I think that the Citysearch experience was very unique when you talk about memorable, because back then when we were launching new cities, we actually had to go to those cities and set them up. You essentially had a team, so there would be a general manager of that team, there would be a sales lead, a marketing lead, and an editorial lead. After I got hired at Citysearch in Nashville to be an editor, I thought, there could be no better job than this job as an editor in Citysearch, except for going on the road and setting up the new cities.

Rachel (07:44):

So a year later I got to do that job, and that experience of being on the road with this small group of people, who've gone on to do amazing things in the industry, and really all you did was work and sit around and talk about work, but you learned so much, there was an expert in marketing, an expert in sales, an expert in operations, besides the fact that it was just fun, because we were running around the country and setting up the internet and we did have a feeling that there was something new and different going on there. It was a lot of fun with a lot of great people.

Alison (08:14):

I wish that was a TV show back then, like there was The Real World and Road Rules, that would have been a great show to tune into.

Rachel (08:20):

There were a couple people who floated the idea once in a while. I think it was an interesting time.

Alison (08:25):

And now it's just all in the memory banks. Okay. So you created a platform that harnesses the power of music as a medicine called SingFit. I really want you to walk us all through what SingFit does, and you can take us back, obviously, it's your dad's idea, all of it, but I also really want to know the use cases for SingFit.

Rachel (08:43):

The thing that's amazing about singing is that when you do it, when you actively sing, not just passively listen to music, it is really the superfood of physical activity because what happens is you're getting this full brain bihemispheric workout, neurologic workout. This is really important, for example, and has been shown to be important for staving off dementia. So right there, singing, super important for neurological health.

Rachel (09:10):

When you sing, it also regulates all of the good neurochemicals. So serotonin, oxytocin, endorphins, everything that we try to manipulate with all of the antidepressants and anti-anxiety drugs right now, are the things that singing does naturally. This is why people like to sing in the shower. This is why people enjoy singing in the car because it makes us feel good. There are all of these possible applications when it comes to singing and music therapists have used singing for depression and anxiety and all sorts of behavioral health issues, and we're not even really yet getting into the respiratory benefits of singing.

Rachel (09:47):

Obviously, there's respiratory activity that goes on, and there's also a lot of research that actually says when you sing, especially sing together, it increases your immunity. So you can see that there's plenty of different use cases out there for how we can use music to make people healthier? The challenge has been that there are only 7,000 music therapists in the country. In comparison, there are 150,000 speech-language pathologists. There are reasons for why that is, some of it is that really the hard science on music as a medicine didn't really start to get done until about 15 years ago. Oliver Sacks, he wrote a book called Musicophilia, a guy named Daniel Levitin wrote a book called This Is Your Brain On Music, and this really started to open up and reveal that neurologists were looking at how music was being used.

Rachel (10:40):

The problem is, there were only these 7,000 music therapists. So when we talk about digital transformation, as you were talking before, the idea behind the company is, how can we use digital tools in the same way we were able to sell cars in a different way? How can we now distribute music as medicine in a different way? Those are some of the use cases. Everything from keeping you neurologically fit, emotionally fit, physically fit. All of it can really happen with an active music practice.

Alison (11:08):

Okay, so I want you to dig into the development of the platform.

Rachel (11:12):

That's a pretty funny image because what it actually looks like is my dad, somewhere around 1960, driving in his car between his basic training in New Jersey and his opera lessons in New York. And there's a guy in the opera called the opera prompter. This is a live person who would go to the live rehearsals of operas back in the day, they would know where the singers were weak and those very hard, long librettos, and they would go to the performances and actually prompt in the words of the song. The conception moment of the company was my dad, on one of these trips back and forth, where he said, "I want that opera prompter in the car with me", but being that it was 1960 something, he did not have the technological

infrastructure, shall we say, to make that happen at that time. But my dad was something of a, what they now call a serial entrepreneur, but we called a crazy inventor.

Rachel (12:02):

We had a series of businesses over the years where we would have some karaoke businesses and different kinds of things, and my dad really did have an inkling of the fact that we could make this prompting software. He was thinking of it more for music lessons, really, but he also had an inkling of the therapeutic benefits of music and singing and all of the stuff, so it was always sort of guided

towards there.

Rachel (12:24):

To make a very long story, obviously, medium, I took on my dad's technological entrepreneurial side, as we can tell from the beginning of this discussion. My brother got all the musical talent. My brother was a singer, high school bands and this kind of thing, but he had a friend who was in a very bad car accident after their freshman year in college, and his friend was in a coma. The people at the hospital said, "This is it." Andy, as this 18-19 year old kid, read that you have to stimulate the brains of people in comas. He was just learning how to play guitar, we were all pretty sick of him actually at the time, it was the same four Elvis songs over and over at first, but he would go to Shaun's hospital room every night and they would kind of let him in because nobody thought that Sean was going to recover. Sean came out of the coma a few months later, singing Wish You Were Here with Andy. It, of course, changed the course of his life, and Andy would then go to the rehab hospital where Sean was recovering and he would play and everybody from all over the rehab hospital would come over. Somebody there said, "Hey, do you know about this thing called music therapy, by any chance?"

Rachel (13:34):

So Andy ended up going to school for music therapy. At one point, he comes home or we're on a phone call or something, and he says, "Hey Rach, you know how that lyric prompted the idea of dads?" I was like, "Yeah?" And he's like, "It's an evidence-based music therapy practice. It's used for literally dozens of use cases for all kinds of people." So it became this project that we worked on as a family. Every once in a while, we got a little SBIR grant here and there and did some work with the Philadelphia School for the Blind, but then about 10 years ago, Andy and I decided that with the app economy, since we would not have to build hardware anymore, the time was now. This was when I got out of grad school, and I wanted to use the case for a kind of quadruple bottom line approach to business. How can you do really well in a transformative way? And he was really frustrated because he had lines around the block for his music therapy practice, because there are so few of them.

Rachel (14:26):

The first thing we had to do is create the actual app that would simulate that lyric prompting. So the lyric coach, which tells you the words, the guide singer, as well as the music. And as you say, and I am happy to talk about it if you like, it will be therapy for me, part of what is involved in that is music licensing, which is its own special little party.

Alison (14:48):

That's a way to describe it, its own special party. I think we should talk about that, because I think it's interesting, but I also really do want you to unpack if you brought in engineers to build in-house, if you will, or if you found some external team that you worked with, and also what that evolution might've looked like?

Rachel (15:06):

The technology that we use, especially 10 years ago, there's a lot of stuff around the latency in the music and all of the stuff that has to be done very carefully. So there really weren't, especially at the time, people around who had that specialty. What we first did was find somebody who actually made a similar product for a different use case, and we're able to actually get them to develop for us and work along with them. Then we evolved. The codebase is completely different now than it was then, but we still do outsource our technology.

Alison (15:38):

Who, internally for you, is managing your roadmap of future tooling?

Rachel (15:43):

We have a great team and one of the people on the team is named Carlos, and Carlos is like the Swiss Army knife of people. He's amazing, and we came up at the same time so he worked for EarthLink, so that same mid to late nineties mentality. So Carlos manages that for us and we manage some of it together, but really, he manages it day-to-day. We did just have our roadmap retreat, so it's all very fresh, and it was supposed to be an actual untreat, so we were actually all going to go back into the office because we started planning pre-Delta variant. We were like, "Okay, we'll bring everybody in, we'll get a big space, it'll be great," and then the Delta variant came and we were like, "Okay, we'll all be at our computers and we'll do this via Zoom."

Alison (16:32):

Okay. I do want you to give us the high level about music licensing and what SingFit is doing to benefit or just be thoughtful, because I really think you're being extra thoughtful about that layer. Artists do work and they should get paid.

Rachel (16:46):

101%. So many people who work at our company, even not in the music department, but our ops people, are sometimes musicians as well so I don't think I could get away with not paying musicians even if I tried, but it was something that we embedded from the very beginning in terms of how we wanted to run the company, because for me, the crux of the company is the music, especially with dementia, is the fact that these are songs that are embedded in people's memories, so of course the people who now own the licenses, let's say, should benefit from it. When we got started, I basically took our seed round and I split it between development costs, people costs, and music licensing costs, because I knew that in addition to whatever we ended up having to pay for the actual music licensing, the lawyers themselves would be very expensive, and that's what it turned out to be.

Rachel (17:40):

I think that you definitely need to pay the people who own the rights to the music. I think it's just the way that you do it. And we do send out checks every quarter, try to do it quarterly, sometimes it's every six months, but we get the checks out there to people. I would say per play, we're probably paying them more than Spotify. So it's like you said, if you think about it per play, but we have a lot fewer plays. Yeah, I think that it's important and we're looking forward to working with more artists.

Alison (18:10):

Yeah. That's super cool. So I want to talk also about pharma. So, the pharma industry obviously has measured doses based on different criteria for people. So I want to know how SingFit calibrates to the needs of the individuals.

Rachel (18:25):

At the core of everything we do, is the technology that allows for these songs that we licensed legally and pay the artists and all of their licensed representatives for to have in the app, that as we say, allows for the singing to happen. What our goal really is, is okay, who's hands can we put this in to affect what conditions? Just as an example, when we decided to focus on dementia first, we created a product called SingFit Prime. And in that case, the person who is using the actual app is an activities director in a senior living community. We're in 500 of those, as you said, we've trained over 2000 people at this point how to implement this program. What we did in this particular case, and what we do in all cases, is the first thing we did was we said, "Okay, what's the problem?"

Rachel (19:14):

And then, "What is the best music therapy solution for it?" Just as a starting place. So we went into an adult day program, and we asked them what their problem is with dementia. And they said, "It's this stage of dementia when people are starting to socially isolate." The best practice, in that case, is you create a small group. So in this case, what we did, was I had my co-founder who's a music therapist, go and do a group, a small group of what he would do himself as a music therapist, but use the app instead of playing an instrument. There were best practices within that, so for example, even though we're prompting people,

some songs are more easily promotable than others. So we make sure, for example, that there's a limited number of syllables in between phrases, for the songs that will be used for somebody with dementia. We call this song printing.

Rachel (20:08):

So we fill the playlists for that particular product, with songs that are printed in a specific way, and then for this particular solution, we say for people with dementia, you can use this anywhere ideally three times a week, if you looking at this the same way as exercise. If you do it once in a while, it might have a little bit of an effect, but in order for it to really get you running, you want to be doing it three times a week. That's the dosage that you're talking about from pharma, just in terms of frequency. But because there are no side effects, because there are no downsides, we say three to however many times you want to do it. So some of our customers in their dementia communities will use this anywhere from three to 10 times a week. They'll use it in the morning to help increase mood and focus for the day, and then there's something in dementia called sundowning, and this is where people tend to get a little agitated at that time of day.

Rachel (21:04):

What we do in our recommendations, and in our trainings and all of these things for this particular product, is do what you're saying. Three to five times a week is sort of minimum, here are some times a day that you can do this in either to increase focus or decrease agitation. That's just one product and just one set of standards, but there's all kinds of ways to talk about dosage and how you're prescribing singing. It's not the same for everybody. It's really interesting.

Alison (21:31):

I agree. I want to know, have you already assessed how alternate versions of music could be leveraged? Like, if Tom Petty covered a song by someone else, if a different version would have a different effect than the original?

Rachel (21:45):

Talk about unpacking, there's so much in there. We do use rerecords of the songs because the original masters, all the hair would be gray if we were using original masters, but we would like to. We also have been talking to some people about covering some songs, and so that's what I thought you were talking about, getting musicians involved. So there is some of that, that's sort of in the pipeline.

Rachel (22:09):

The other thing that I would say though, in terms of what you're talking about, and it's funny that you would say Tom Petty, because that set my musical tastes forever. But if a Tom Petty version versus a Tom Jones version would be different, I would leave that to more scientific minds than I, but will say, from a business perspective, is that we do look at all of these different alternate versions of the song, and some of

them work better for us than other ones, for reasons of tempo or range or any number of things. There's some people studying it. I won't try to summarize it.

Alison (22:48):

It's so fascinating. We may have kind of touched on this, but I'm curious with your work at Citysearch and cars.com, et cetera, did any of those experiences there shape the development of the SingFit tool?

Rachel (23:02):

Oh, I mean everything. The two things that come to mind was a lesson that I learned at Citysearch. It was such a great place to work and a great time on the internet, because if you were okay with a blank page, people would let you do a lot of stuff, because nobody knew the rules yet. So I always found myself talking to a lot of different departments, working very interdepartmentally. And I had this revelation one day, when talking to one of the developers. Before Citysearch and that technology, I have worked in home videos, so actually been working in tech since the early nineties, but this was the first time I worked with a developer. At some point during the conversation I realized, and look, I don't mean this to be all developers, but what I found was that working in editorial, opinions and feelings about stuff was perfectly acceptable to talk about.

Rachel (23:56):

I find that color too dark or too moody or whatever it is. But when you spoke with the developers, you could not use emotional language, at least the ones that I was working with, I found if I was very binary in the way that I asked questions, I would get more back from them. And I started to realize that, of course it's not like a horoscope that everybody fits into, but that salespeople have their own language. I had always thought that salespeople were interested in money. I thought that's kind of their motivating factor. Now it is very true for a lot of salespeople. But the motivating factor that I found for them was that the money can be a scorecard. It's not just about the money, it's that you often find a lot of athletes and competitors. Everybody's got their own little way of talking and that if you can learn their language and learn what's important to them, I think that that has carried me through my entire career.

Rachel (24:54):

The other thing that I'll say is, it's very hard, now that we're not working from an office, because my entire house is now filled with big sticky pads and little stickies on them because I also learned how to organize myself. As I transitioned from editorial into managerial at Citysearch, that process, someone taught me how to organize myself and it very much involves big sticky pads and sticky notes, and so now my entire home is covered with these. That contributed definitely to the launch of SingFit.

Alison (25:22):

That's actually kind of funny. All right, you hold a master's in future studies, so I want to know what your preferable future for musical health technology is?

Rachel (25:30):

When you work in future, you're always working at least 10 years out. It gives enough time for the change, be it political, be it social, to happen. What I would like is 10 years from now, if a kid goes into the doctor and the finding is the kid has a little attention deficit disorder, for example, that the first thing that that kid gets prescribed is a musical solution, not a pharmaceutical solution. That's what I really want, is I want music as medicine in general, and of course SingFit in particular, to be completely woven into the healthcare system as an equal choice to pharmaceuticals when that is possible.

Alison (26:07):

Amen, hallelujah to that. Yes. Okay. Ellen Snee was recently on the podcast and she has this question for you. Since the evolution of listening to music has allowed for more solo listening due to devices, et cetera, what impact will the move toward solo experiences have on our future and the development of children, in your opinion?

Rachel (26:32):

Well, we talk about this actually internally because most of the other musical programs for dementia on the market, in fact all of them, are music listening programs. The challenge of this from a therapeutic point of view is to create a listening playlist that is going to have the right impact on somebody. The way that I describe it is: it's the difference between going to a dance recital and being in the dance recital. I'm not a particular lover of dance, so it takes a lot for me to go to a dance performance and have it affect my endorphins or my serotonin, or make me feel a certain way. If they actually had me up there on stage dancing, you better believe I'd be getting a neurological, physiological workout. So having a passive listening program is difficult to program and scale really, really well. So there's a lot of these listening programs, which can be good, but as Ellen was pointing out, it can be isolative, and we are seeing the problems of social isolation that are already taking place.

Rachel (27:34):

I was actually on my first plane in 18 months, and I had my headphones on, the guy next to me had his headphones on, and I was like, yeah, I do remember a day you used to talk to the person in the seat next to you, and it was almost required a little bit. I would say that, as somebody who likes to look at preferable futures, the idea would be, is there a way to get passive music listening, individual music listening, to be more of a group activity, to be something that people do together?

Rachel (28:07):

one of the things that I found really interesting was when COVID first hit, so we're talking like March, April, a lot of the stories that were popping up in the news were about the use of music, the spontaneous uses of music as medicine. So there would be people in Italy singing on balconies and people listening to them, or there would be those Instagram dance parties that Halle Berry would show up to. That idea of that Instagram dance party, that really interests me. The idea of solo listening, but still having a way to come together. How do we make it part of our community, because so many people do define their community by the kind of music that they like.

Alison (28:47):

Totally. I think that this is also an opportunity for musical health technologies.

Rachel (28:50):

So many opportunities.

Alison (28:54):

Given your futures studies expertise, I want to know, are there things technology can't or shouldn't try to solve?

Rachel (29:03):

You asked me for a quote, and one of my other quotes was a quote from Hazel Henderson, who is an amazing economist and futurist, and she says, "There is no such thing as artificial intelligence, only machine learning programmed by people." The reason that I love that quote so much doesn't really have anything to do with it being artificial technology or machine learning, but the idea that we all have biases and we are building technology with those biases every day.

Rachel (29:33):

one of the things that I find really challenging, as somebody who's interested in futures it might not surprise the listeners to know that I am something of a sci fi nerd, so I tend to, when I do get out of my shell and talk to people, I tend to talk about scifi. And when there was travel, I used to bump in a lot to the engineers from SpaceX or these places because I would fly out of LA and I would always say, "I'm so interested in space travel, and really interested in the ethics of it and the resource management." They would say, "Eh, we can worry about all that stuff when we get there."

Rachel (30:05):

Now, I did not say this back, but I would say, "Said every colonizing force that's ever come to shore." So I think that we can do anything, but we have to think about it a little bit more and be willing to change. I think it's Jared Lettner, he's been a VR guy from way back and he's doing some really fascinating work on how do you create social media that's actually responsible social media? We all kind of accept that the

commercial web that's evolved is the commercial web that we're going to always have, and I think that we need to understand that things can be better. So it's not about what we build, it's about what we're thinking about when we build it, and are we thinking about it, because we don't actually think about the ramifications of our actions until our prefrontal cortex solidifies. We just need to manage that a little bit.

Alison (30:56):

So interesting. What are the biggest lessons you've learned from being a leader in tech?

Rachel (31:01):

one of the things that I've learned from being a leader in tech and one of the things that I learned from my crazy father, is that anything really is possible. I mean, that is the amazing thing about technology, and you'll get these project management triangles where they'll be like, time, resources, money, you can only have two of them, all of these kinds of things, but with enough time, money and resources, you can build almost anything, which is really incredible.

Rachel (31:26):

I think that's one of the biggest things that I've learned, and I think it has shown me, in my years in it, that I don't have to conform to male leadership standards in order to be an effective leader as a woman. And that's really been a journey that has taken awhile.

Alison (31:43):

A journey that keeps on journeying.

Rachel (31:46):

Without a doubt. It's an interesting journey.

Alison (31:49):

Lord knows. What do you want your direct reports to remember you for?

Rachel (31:53):

Great question. I sometimes think that I am not the most patient leader. I tend to have the idea, see the outcome, and want it executed and not necessarily have to talk about it that much. So sometimes I'm not as patient as I wish I was. However, I like to think that I give people the opportunity to really do what they want to do.

Rachel (32:17):

one of the things I always talk to incoming staff members about is, what are your goals, your big goals overall? Because people are going to be more productive when they're working on stuff that's interesting to them, and so I love having somebody come in and be like, I'm interested in this, I'm interested in that, and then I get a project I'm like, okay, there you go, remote patient monitoring. Go and run with it. You wanted it. That's what I appreciated in the bosses that had. They gave me the freedom to do things and explore and create.

Alison (32:44):

I love that. What future innovations are you most excited about? Could be personally, could be professionally.

Rachel (32:52):

In terms of technologies I'm interested in, of course I'm interested in a lot of technologies that have to do with remote patient monitoring and really being able to understand what's going on in our body when we sing and being able to track outcomes. I'm very interested in the inner net of things and how we're bringing all of that together so that we really can help people get better. I know that somebody's refrigerator is empty. Yeah, it's great if one of my fabulous single friends knows that they're out of milk, but somebody who's just been released from the hospital, it's more important for their doctor or their care circle to know that they're out of milk. Being able to use this technology and bring it all together to me is really interesting.

Rachel (33:32):

And there's also a lot of different kinds of space technologies and things like that, that I'm interested in from sort of a 30,000 foot view. But one of the things that I'm interested in is resource management, because I think that that's one of the things, when you talk about futures, is really important. We know that certain things like, there are droughts going on. There's a lot of technology and investment going around saltwater agriculture, and those are plants that can be grown in saltwater obviously. So quinoa is one of them. 15 years ago when I was in school for futures and people would say, what should I invest in? I'm like, well, that's not really what we do, but given the state of the planet, I would say fake meat would be what I would do. To me, the saltwater technologies and agriculture, that's the fake beef of 15 years ago. That's probably what we'll see because we are going to have to go to a lower water food strategy.

Alison (34:30):

Crazy to think about. Can you speak about a breakthrough that you've had recently?

Rachel (34:35):

A couple of breakthroughs that come to mind is we just released two new products. We have these products, they're both called SingFit Studio, one is for professionals, like speech therapists, occupational

therapists, rehab folks. And the other is for caregivers, all who are working with people with dementia and cognitive decline. I don't know, when you used the word breakthrough, to me, it was very wonderful to get those onto the market.

Rachel (34:58):

The other thing that I would think is at some point I had a breakthrough because I tend to be really sensitive to sound, and I think something in the pandemic made me more tolerant of things, where now sometimes there'll be a sound and I'm like, man, that sound could really bother me, and somehow I think with having to sort of navigate a more sort of complex world of things, and also understanding the disparities that are going on, it helped me break through some of that sensitivity.

Alison (35:33):

That's so interesting. I love that. Is there anything else you want to leave us with?

Rachel (35:38):

In one of my first jobs out of college, I worked, as I may have mentioned before, for a chain of video stores. At that time I thought I had the best job in the entire world because people would come up and ask me for recommendations for movies. And I would say if people are looking for a good movie about one possible future for healthcare that I find to be a preferable future, I would check out the movie, Big Hero Six. It also got made into a series. It's an animated movie about a kid who suffers a loss and comes into contact with a healthcare robot, and the interesting thing about this robot is that it was programmed with empathy first. So when the child is not feeling well or is feeling lonely, the robot does not, like he did with Bactine when the kid got scratched, he didn't just inject him with antidepressants or antianxiety drugs, instead he called all of his friends. So to me, what kind of future do I want from healthcare and technology? That's the future I want. one that's directed by empathy.

Alison (36:47):

All right, well, you've left me with a grin, so I thank you so much. That was a lovely way to punctuate.

Rachel (36:52):

Thank you so much, Alison.

Alison (36:53):

Thank you, Rachel.

Alison (36:55):

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