

Alison Dean (00:09):

Theorem 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 Dean (00:37):

Welcome to The Breakthrough. I'm Alison Dean, VP of operations at Theorem, and today we are talking with Jeff Julian, currently CEO and founder of Lab5 Systems. He is a renowned creative futurist and designer and has worked with many of Hollywood's A-list directors, perhaps you've heard of Steven Spielberg and Ridley Scott, as well as very notable brands like Apple, Samsung, and BMW, to name a few. He continues to broaden his expansive portfolio of work, nurturing creativity to overcome global problems. Jeff sent me several of his favorite quotes, and this one is from Mark Twain, "Go to heaven for the climate, go to hell for the company." Hi, Jeff.

Jeff Julian (01:21):

Hi. How are you? It's nice to see you.

Alison Dean (01:24):

So why is that your favorite quote?

Jeff Julian (01:26):

Well, the most interesting people get up to no good. So they're probably sent into a warmer climate.

Alison Dean (01:31):

All right. Can you walk us through what a typical day looks like for you at Lab5?

Jeff Julian (01:36):

It's pretty crazy. I mean, we started off as a design house so then we've morphed, we kind of call ourselves a creative laboratory, because the projects and the things that we work on range literally across every spectrum, from the physical, as well as the non-physical. An average day is different now with COVID. In some ways, we used to have morning meetings and just get charged and make sure everyone knows what's going on, because I think sometimes we do work in a lot of different projects and we do try and get all of our team across as many of those projects. But I think it's really interesting to basically share what we might be doing for Nike with the people that are doing work for a certain kingdom in Saudi Arabia.

Jeff Julian (02:14):

And I find that really interesting that Tiffany is one of our writers who works across a lot of different projects, but both for her energy, to see some of the other work that's being done, like long after she's done with it, or before it comes her way, it's just a nice balance. Yes, so it's touching base with the guys, and we have people all over the world. We have people waking up in Europe, in the Middle East, and the East Coast, the United States, the West Coast rolls over,

and then we have offices in Australia as well, and then with working in the Middle East, they stop their week on Thursday, and they start on Sunday. And they're a day ahead of us. So we finish up Friday, and their of the week is actually our Saturday, so there's no freedom anywhere.

Alison Dean (02:52):

Perfect. Lucky you, Jeff.

Jeff Julian (02:54):

Yes, that's great. And then we get up to no good. We start making sure that we're spending our time on isn't chasing too many rabbits. We try and crank away as fast and as good as we can and see what happens.

Alison Dean (03:05):

I'd say on the upside, though, when you're in the space of creativity, hopefully, it feels less like the humdrum of work, if you will.

Jeff Julian (03:13):

It has different pros and cons. When I've had jobs that are more repetitive, now, on one hand, you know what's coming, it's kind of like a marathon, and you know what's going on, where we are running a marathon one sprint at a time. So we're sprinting the marathon. So it's chaos. It's crazy. The deadlines are absolutely insane. It's never the same. We're working on Justin Timberlake and Stan's products here, and then literally in the same day, we're talking about redesigning a capital city for a country. I couldn't ask for a better scenario in terms of diversity, but there's never enough time to do anything. And that's where the challenge is around creativity. And most people are creative to some level or another, whether they realize it or not, but I think we're the hyper end of the spectrum, and the hard part is there's no 'done.' It really is just you abandon projects due to time and money.

Alison Dean (04:04):

Wow.

Jeff Julian (04:05):

So they're going to take your homework away from you, so you better be done.

Alison Dean (04:08):

Or at least think you're done. Right. Okay, so given all the things that you have done, what does digital transformation mean to you?

Jeff Julian (04:17):

That's a deep dive. It depends on how you apply that digital transformation in terms of... I think it's always been there. I have a saying that I say all the time, which is form follows function, but it's dictated by ceremony. So whether it's digital transformation, or everything that's going on prior, it kind of almost doesn't matter, because if it doesn't fit into a narrative or a key ceremony of how we want to engage, regardless of the technology, it doesn't matter. Some people have

found being able to work at home actually works better for them, and before... now obviously, we have the digital tools that enable that and I've been doing it for 25 years, but we're seeing this across the board and we're starting to get an economy of scale with a lot of our digital technology. They're starting to make things that we could do but were difficult, become seamless. As much as we always complain about technology letting us down, we stop and think back even one year or five years ago, it's pretty amazing.

Alison Dean (05:13):

I don't disagree with you. I want to know how design thinking plays into digital transformation. That's not a question that I can often ask, but because of someone in your position, I'd be curious how you answer that.

Jeff Julian (05:26):

From a productivity standpoint, early adopters and then people embrace that space. Things that took us a long time, take us no time. But then the questions change. So when I got into the movie business, we used to do all that drawings by hand and paintings by hand, and the director came over and said that's beautiful, but I don't want it at sunset, I want it at high noon. That was a complete redo. Now, it's like a three-hour fix, tops. It's not even a big deal. But then there'll be other questions that fill that space.

Jeff Julian (05:55):

We did a development project for the Navy SEALs, and we got their battery packs they had to wear for certain devices, they were about 40 pounds, and we got them down to 10 pounds. And so they're like, "Oh, thank you so much, this is great. I just saved 30 pounds that I had to carry around." And all they did is add more batteries and more stuff. It sounds like, no, no, no, carry that 60 pounds, whether you like it or not. There's just how much you can get done. And I think technology really is very similar to that. The promise of technology, if you go back to old sci-fi '30s, '40s, from robots, to flying cars, to all these kinds of autonomous things, they're going to free you up, so you have this more utopian free lifestyle. It's done the exact opposite. It just means you can get that much more done in a day, and the expectations have gone up exponentially.

Jeff Julian (06:41):

We literally are having conversations where I got more time to design a city for the movie *Minority Report*, than I'm getting to design real cities in real countries. And you're like, "Hey, this was an expensive movie." I think '99 and 2000 it was like \$150 million, Big Spielberg movie, we're now talking about hundreds and hundreds and hundreds of billions of dollars, and they want this stuff done faster. And I'm like, oh, my God. You're kidding me. The other part of digital transformation that's interesting is just, again, it goes back to the ceremony for me. The ceremony of being able to be in the same office and have those happy accidents, I think we're getting the technology to a point where we can start having those same happy accidents, because I'm not worried about an international phone call after seven hours on the phone every day, starting to add up as a small business, but I can be on something like Slack, or I can be on something like Zoom.

Jeff Julian (07:36):

And yes, it's not the same, but it is a bridge.

Alison Dean (07:39):

Oh, yes.

Jeff Julian (07:39):

And I think if they're used correctly, then they can be really powerful tools. And in some ways, I can shut off the technology. I used to wear a hat that said off and I had another one that said on. And so there were times where I was just like, "Guys, I need to be left alone." Put that off head-on and it was like, don't talk. Unless somebody is on fire, leave me alone. Yes, I can go on for a week on that question.

Alison Dean (08:01):

Okay, I'll look forward to the book then one day. That sounds good.

Jeff Julian (08:04):

Yes. It's being worked on.

Alison Dean (08:05):

Okay good. Perfect. Is there a project that comes to mind for you that is most representative of a digital transformation that you worked on?

Jeff Julian (08:13):

Probably Neom, The City of Neom. So Saudi Arabia has taken 13,000 square miles. The Crown Prince wants to create a country within a country that has women's rights, it's secular, that's open and free, free health care, all these kinds of things. And so we've done everything from being involved in writing the Constitution around how women are going to be treated, and the laws are different, it's not a Sharia law country. So we're literally reinventing a country from scratch. And so one of the problems we've had is architects think building first technology is an afterthought because it's not from their world, especially at the level we're talking about.

Jeff Julian (08:47):

We're talking about some of the most famous architects or starchitects, as we call them. In the world, for them, technology's an afterthought. And we're like, no, it's your foundation. And you have to future-proof yourself. Romans had concrete, and we're running out of it. So we got 25 years left to concrete, and we have no more concrete. So something's got to be done. But with digital technology, it's just exponentially exploding and by the time you put something in, it's out of date. So we have to look at this and go, okay, how do we future-proof a city or an environment that the technology hasn't gone out of date? In our world, it's six months if you're lucky, but we can future proof that, where in 600 years, how do we set that process down so we're not having to throw away all that investment to rebuild it all?

Alison Dean (09:31):

Wow.

Jeff Julian (09:32):

So that's where I come in, where it's like, what is really the bleeding edge, and what's 10 years past that, what's 100 years past that?

Alison Dean (09:39):

Is there any parts of the technology piece that you're allowed to talk about?

Jeff Julian (09:43):

For the most part, we're looking at everything globally, and what's the best and brightest. Who is really the cutting edge of communications? Who is the cutting edge of security? And that's all stuff what we call problems now, but are we even going to be in a position to deal with Microsoft or Apple and these other companies in 10, 15 years? Chances are based on how the last 10, 15 years have gone. There's going to be a whole set of new players. So how do we set up for that unknowable future? It could be anything from, hey, you're not laying your water pipes and your electrical and everything in the ground. You have to make them much more accessible. So how do you hide technology physically, just to make it more accessible? So it is in plain sight. How do you deal with environmental issues like heating and cooling and power and all these kinds of things so that you're not just a zero-sum environment, but you're actually producing? And then, how do you do the architecture and the building environment both from a user standpoint where it is the most livable and desirable kind of living that you want to make?

Jeff Julian (10:45):

Our cities right now are based on roads, well, especially in LA, where a lot of the car industry really kicked off. GM and others dismantled one of the best public transportation systems in the world here in LA, to make a future for the automobile. Concrete lasts a long time, but it's expensive, and it's time-consuming. So we used asphalt because it was plentiful, especially in the area with the petroleum industry. The problem is, it's black, and it eats up half your urban footprint.

Jeff Julian (11:11):

Now, there's a mechanic going, hey, it's radically changed our environment. It has to be repaired all the time, and our whole society is based on it. And so this is where the foreman function has gone backward, where we have built our living environments, not for us, but for cars. What would the world look like if it didn't have cars? In LA, it's hard to comprehend. In New York, having a car is kind of a luxury for the most part. You really don't need it because it's so densely packed. But that comes up with other challenges. If you were to remove that factor and go, what if it was built more in a human-centric part, which is like medieval cities are based on horses and humans, but have other problems? So how do you deal with this when the focus changes? And so it's really interesting. We'll see if we get it right. I wish I could share some of the stuff that we're doing.

Alison Dean (11:57):

Okay. I also want to ask what the most memorable projects that you worked on were and why.

Jeff Julian (12:04):

There are different projects for different reasons. Some projects were fun because I started something I didn't think I could do. I was pretty convinced I was going to fail at it, and everybody told me I would. When I started Art Center, the first semester, I had a teacher that was a designer at BMW, and he was like, hey, I want you to come work with us. And I'm like, I just started. I really don't want to go there and get your coffee and tell that to everyone. At the end of my first year there, I just felt that I didn't have a project that really felt that was challenging me and that was doing something that I really thought could be useful. I had this idea, I always liked mechanical things, and also medical devices, things like that, so I said, I'll design a prosthetic leg. And at the time was very much a glorified sea captain, peg leg and some joined. So I was like, okay, I'm going to start doing this. And one of the problems I found, there was no leg that you could walk on that you could also run on. Part of it has to do with the amount of pressure you put on your foot. So if you weigh 150 pounds, you put about 350 pounds per square inch on your foot when you walk. When you run, it's 3,000 pounds per square inch.

Alison Dean (13:10):

Wow.

Jeff Julian (13:10):

So something that's mechanical, it's soft enough to let you walk and have some flex, is too soft to run on, or it's too stiff to walk on when you can run on it. And so I started on this journey and every doctor was like, I've been doing this for years. You don't know anything about this. This is so over the top complicated. So about 14 weeks later, I had 16 patterns, and if you've ever seen the prosthetic leg that has kind of a boat.

Alison Dean (13:35):

Yes.

Jeff Julian (13:35):

That was me. I invented that. And I sold the patents and paid for a bunch of my schooling. But I almost wasn't worried that I didn't come up with that. I was kind of like, hey, the exploration alone will show my thinking and that'll be good enough to get the job at BMW. It came off and then I got a lot of help and we built prototypes. It was really cool to go down to Rose Bowl and see a paralympic athlete testing a prototype and watch him run and it worked.

Alison Dean (14:00):

That's definitely very cool Jeff. That is very cool. What project comes to mind when I say, what was the most difficult project?

Jeff Julian (14:09):

A lot of them. We did this movie called I, Robot with Will Smith. Originally it was going to be Mel Gibson.

Alison Dean (14:16):

Really?

Jeff Julian (14:17):

Yes. It was a very different movie. That's the thing behind the scenes. It was Ed Norton at one point, it was Will Smith, it was Denzel Washington. So all these different people and then it landed at Will's door. I think that was difficult because I had been on the movie, we had designed most of the movie, and the director had picked a different guy to deal with the vehicles, and he wasn't really a vehicle designer, done in the background, but he had done a bunch of movies with the director and the producer and they were good friends, and so they trusted him. And then about six months to prepare and he didn't have anything at the end of the six months. So he was let go and they basically came to me and said it's your problem now. You have eight weeks to build 40 cars, hero cars, stunt cars, stunt motorcycles, and you have a department of zero, it's basically you.

Alison Dean (15:01):

What?

Jeff Julian (15:02):

Yes. And so I used to have hair. I had worked on a project, which ultimately became the RA for Audi, which was an interesting story. So a couple of years before Porsche wants to take themselves out of the Volkswagen family and go independent, Volkswagen's panicking. So they hired me and a couple of other guys to work on this project, which became the RA and we were going to use Lamborghini engine technology and all this stuff so that if Porsche separated, the day after Volkswagen had their own go-to Porsche killer. And so we had done a little bit of development. So I brought them on board to help with the hero vehicle. But yes, I spent the next nine months flying back and forth between Germany and coming back. So every week of flying to Germany, and then back to the US, and then back to Canada.

Jeff Julian (15:47):

And then also, my father was in the process of dying at the time. So I'm living in Vancouver, dad's dying in LA, spending half a week in Germany, and trying to build all these cars. And the producer was a TV guy, he had done Battlestar Galactica, so some of the sculptors he brought in, but I said, there's a spaceship that looks like a bunch of toasters and stuff all glued together. Where cars are billion-dollar projects where even the most basic, inexpensive car, the surfaces are beautiful and the reflections, and we had a guy helping me sculpt with a chainsaw in the middle of the night, just making cars out of foam, and we pulled it off, but it was absolutely eight weeks of terror and horror.

Alison Dean (16:26):

Do you ever actually want to watch the movie I, Robot?

Jeff Julian (16:29):

Do I have PTSD? No, I don't mind it. I mean, it's funny when you work on a film, and this is something I didn't realize when I started working on movies, is you have memories of scenes that have nothing to do with the movie. So when you watch a movie, the first time you see it is when you see the movie in a finished form. But when you actually work on a movie, you'll see a scene and you're instantly taken out because it was cold that day, but they had great tacos.

Alison Dean (16:54):  
You're right.

Jeff Julian (16:55):  
You have memories because you were there. So it keeps pulling you out. So I always say, the few like the matrix and few other really successful ones, when I can really forget that stuff, then I know everybody did it right. And that's not always easy to do.

Alison Dean (17:10):  
No, it's interesting. You bring that up and it makes me think about my time as a location intern on the film Intolerable Cruelty. And the things that come to mind are definitely not things from the movie.

Jeff Julian (17:21):  
No, but that's the thing that only if you weren't there, you'll see the Audi in you like, oh, it looks like a regular Audi. And I designed this window that I came to regret, but it started the front and just kept going back over the top. To make a glass windshield is one of the most complicated parts of a car. And so we actually make it out of plastics, we had to make a bunch of extra and there are 16 little tiny screws that you can't see.

Alison Dean (17:43):  
Oh, wow.

Jeff Julian (17:43):  
Well, we're in Canada, so it gets hot and it gets cool, so is heating and expansion. So I had to go around there and loosen all the screws so it didn't crack, tighten them back up. And so you're constantly going to laser point at the windshield 24 hours a day, and I'm running around doing this stuff. So it's like stuff like that, that nobody knows. And then the director wanted these spherical wheels. And I'm like, oh, cool. We'll just paint them green and we'll do it in post and make them CG. And they're like, no, it's a million dollars a minute and that's never changed. So when you see CG effect, it's literally a million dollars a minute. So as expensive as the car is, whenever you can get in cameras way, way cheaper.

Alison Dean (18:21):  
Wow.

Jeff Julian (18:22):



So I had to make it where the whole system had hydraulic, and then we had these spinning discs that would rotate in time with the car, so they didn't look like they're going too fast. What's inside, the audience doesn't see sometimes more impressive than the outside.

Alison Dean (18:37):

Oh, yes. Given that you've worked across so many different industries, can you speak to any common threads between all of them?

Jeff Julian (18:43):

I'd say there are probably more similarities than there are differences. There's never enough time. It's better to have a compass than a map. If there's a map, somebody's already done it. You're just following. If you have a compass, you have to trust yourself and rely on that compass that, "Hey, I don't know exactly how long this journey is going to take, I don't know what kind of bumps, but I'm prepared for them and I'm expecting that." As much as you can expect the unexpected. But it's tough. We're constantly in the mindset of a startup, even with big projects and big people. Somebody asked me the other day, "What do we really do?"

Jeff Julian (19:18):

"We do the why, the what, and the how. We don't care where and we don't care when. That's on the client or on you." But the why also goes to the narrative. What is the takeaway? What is the experimental human-centric part of the design that you're trying to achieve? Why are you doing this? And I think most companies don't go through that exercise well enough. So we'll do reverse briefs, we'll talk about that stuff, because if we can get to that core intent, what's the goal of this, what's the takeaway, then we can start making decisions that we know are going to align with the core intent and it supersedes client involvement, because sometimes they're very hands-on, sometimes they're not. Usually, when they don't know what they're doing, they're more hands-on. Those who don't know micro-manage.

Jeff Julian (20:01):

But I'd say if we understand as quickly as possible what the destination is that we want to get to, then how we get there is less important. It's important because sometimes it's more expensive or time-consuming, and so all that stuff matters. But if you clearly have articulated goals, then I think you know when you're getting close, you know when you're there. It doesn't matter what kind of project you're doing, it's always the same.

Alison Dean (20:24):

When I say, was there a time that you can think of when you were the most surprised by something, does anything come to mind?

Jeff Julian (20:32):

It depends because, on one hand, a lot of the space that I think you and I deal in is about innovation. Innovation is not invention. They're interchanged, often in parallel, but they do not mean the same thing. An invention is truly a discovery of something that's never been

discovered before. That is really, really rare. But innovation is kind of like, the ingredients for cooking a new recipe. A lot of times when you're at the research laboratory level, it's not a "Oh eureka!" or "Aha!" moment, it's much more like, "Oh, that's funny. Why did that do that?" I had nothing to do with it, of course, but viagra was a heart medication, and then they ... "Oh, there's this weird side effect." The side effect's worth more than what the medication did. And that happens more often than not, but we were working on a project in Australia, and a good friend of mine, Dr. Paul Dastoor, it's really his project, where we're trying to create a material that would react to sunlight, or photons to be more accurate.

Jeff Julian (21:32):

And what it ended up coming out of it was photovoltaic pigment, basically solar paint, and you can put it in pigment to your jacket, your shirt, and it doesn't have to be in direct sunlight. It's a totally different technology and it's actually cheaper. We couldn't afford some of the materials that we needed to use. Some of these are pretty exotic. And so we had to reformulate it and we ended up basing it on water, which made it completely eco-friendly. There are no solvents or anything to deliver this stuff. And so that's now launched often as getting commercialized and taking off, but that was a complete accident, it was not what we were intending to do at all. I think being open to, hey, don't ever stand too close to the trees and make assumptions about what you're going to get when you're truly in a new space. So some of those things and a lot of it is client-driven, is just crazy. Research just means searching. You're just digging a hole and if you find a diamond, cool, if you find a piece of gold, cool, we're just searching.

Alison Dean (22:27):

Okay, this next question is broad. So let's see where we go. What are some of the greatest lessons that you've learned from the work that you do?

Jeff Julian (22:37):

Be careful about investing too much passion. I think when you're a creative person, you're putting yourself out there all the time. I've had clients where they think I'm sitting back as the CEO, and I'm not involved in actually creating or doing the artwork, doing the designs, and then I have like minions running around that do this. And I have a lot of help. But more often than not, I'm still intrinsically invested in every aspect of it. And so they'll kind of like, "Oh, this one's not very good." Or they're kind of like, oh. Sometimes they know what they're talking about, sometimes they don't.

Jeff Julian (23:06):

It's very hard to be creative. You're being asked to do something it's never been done before. And so you really do put yourself out there. And it can be brutal, depending on who you're dealing with. Sometimes they want to justify their presence in a room and so they say something that really they have no business saying. And sometimes with experience, you get a better sense, you get better at reading people, figuring out where they can go. We had an experiment at Paramount, we did a little movie called World War Z. And we've worked on it and we were done for like a year, and then the studio came back and said, we're seeing test footage and it looks like a bunch of skinny homeless people running around trying to kill Brad Pitt.

Jeff Julian (23:44):

It doesn't really look like zombies, because it's not the iconic... you know. I said, "Yes, they asked us specifically, could you come up with stuff that's really iconic that really stands out that just doesn't look like a bunch of skinny people running around?" We said okay, so we took a couple of weeks, we came back and I got a call, hey, please call the president of the Paramount. Okay. It's either good or it's bad. And he's like, "Hey, Jeff." and I'm already panicked. I'm like, oh, God, what did we do wrong? And he's like, "No, no, no, no. He's like, you did exactly what we asked you to do and you did a great job." I'm like, okay, but-

Alison Dean (24:19):

Yes, I know right.

Jeff Julian (24:20):

... I'm waiting for his end and he's like, "We didn't realize what we asked you to do. And once you showed it to us, we realized what we asked you to do. You want to push it out to the extreme environment." So we had zombies where the newborn babies were still attached to mom and they're dragging her along the hospital. And we had like the soccer guy who had been pushed into a fence, it looked like a Christmas ham. We had some severely disturbing stuff because they said take the gloves off. And so they realized, "Oh, wow, we should think twice about asking you to take the gloves off because we expected you to go from 0-10. We wanted you to go to 12 and you went to like 600."

Alison Dean (24:59):

So does that mean that now when you're prompted in certain environments, do you tend to push back and ask more questions?

Jeff Julian (25:08):

I do for a couple of reasons. One, I'm dyslexic. I'm very careful about, am I reading through the lines? Am I reading the breeze? Did they articulate what they're thinking well enough? And often people don't. If we have a beat, make sure we get on the exact same page. The other reason we do that is when I was teaching, I used to have my beginning class do a project ... designing a lighter, just a simple, little lighter. And a lot of it is because most kids don't smoke nowadays. But it was small, and it's supposed to be relatively unthreatening. And so you give them a brief and designers say, "Oh, this is one for that cigar smoker." They find a niche market, or "I'm going to go after BIC and make a better Bic." The BIC lighter is like an achievement, like the bicycle. And then the really smart kids will sit there and go, well, what am I actually talking about? A lighter is just a portable fire system. You've got a strike or spark, just like you're clicking two rocks together, 30,000 years ago, instead of having a tinder bundle, like a little group of fluid in here that's going to kick-off, and I've got a wick. And so they take the question and go, what you're asking me to do is portable fire.

Jeff Julian (26:13):

So say the match didn't exist, the really brilliant kid will come back and say, hey, I've got a match. And so they take the problem and deconstruct it further, sometimes with the client, because what I find most times is clients are asking you to achieve a six out of 10. And so if you're accepting their brief, you'll never get past that ceiling. If you're lucky, you'll get a six. But if you want to go a 10, or wherever you think you can take it, you've got to challenge their assumptions. And so we call it a rebrief, a lot of people use that terminology, but we really test the thing. And then if we have time, we try and do one that we love, that's really crazy, one that we love that is kind of really pushing their boundaries, and then one that's kind of safe if we have time, but remember they're going to pick the one you hate the most. So make sure the ones you show are ones you can live with.

Alison Dean (27:02):

Given the velocity that technology changes, which you talked about right at the beginning, what recent projects have you learned the newest things and what were those new learnings?

Jeff Julian (27:13):

That's a big one because it's mind-blowing. Like in a movie, we have what's called a pipeline.

Alison Dean (27:18):

Sure.

Jeff Julian (27:19):

So when we do visual effects, before we start with, say, we're going to use this piece of technology, and do it this way. So even if you see a movie that takes two or three years to produce, it's using two or three-year-old technology in a lot of ways. I'd say always kind of behind the scenes. With us, because we're doing concept stuff in our technologies, whether it's software, we just have to be very mindful, like hey, this person's in wonder, and this person's in unreal, and this person is doing here, is to try and be appropriate.

Jeff Julian (27:43):

I always say, use tools, don't be one. It's really difficult, though, because there are so many things that change and it's like, oh, my God, one of my best friends is the CTO for unreal and Epic Games, and I worked with him originally 20 years ago in the Matrix, and he was the VFX soup and figured out all the bullet-time technology and stuff. He's just a mad genius. He's like, oh, have you played with us? I'm like, I haven't had the time. It's not about just playing with the technology, at my level, I have to be a master of the tools to be able to use them. So sometimes I have to take a step back from gobbling up that new juicy piece of technology. But it's hard. And then you find things after the fact, always after the fact that would have made your life just infinitely easier. It's something we have to deal with all the time.

Jeff Julian (28:28):

And I remember when I went through school it was interesting, because you know how you say, what was the point in school where it was all analog, and then when did it become all digital? That line was me.

Alison Dean (28:37):  
Interesting.

Jeff Julian (28:38):  
I had the last hand lettering class that the school offered.

Alison Dean (28:41):  
Wow.

Jeff Julian (28:42):  
And then the next semester that came after me, didn't have that at all. It was incredibly frustrating at the time, but in hindsight, I couldn't have asked for a better scenario, because that lettering class—as painful as it was where you do these huge scripts by hand—you learn about life, it's a masterclass in linewidth drawing proportions, style and rhythm of balance, and it translates to everything. And most of our education now, in school or out, it's tool based, and it's finite, and it doesn't cross over to other aspects. It's like, well, I've learned Excel, I've learned a new Excel, okay, well, I know the quick commands of this one.

Jeff Julian (29:18):  
So it's painful, takes me six months to get over, and then I've done that and now there's something new coming over. I had already changed jobs. It's an act of frustration, versus this tool going to make me better at what I do and defining what it is I do. That's why I say use tools, don't be one, because it's really, really easy to fall into that aspect. Like we used to go to university to learn, they don't anymore. That's not what universities are for. University is to give you job skills to be employable. And the problem is almost all industries at this point because of the digital craziness that's going on, by the time you began to be useful in any way, shape, or form or something, the world's already passed you by.

Alison Dean (29:58):  
Yes. Like I wonder for new systems and new tools, how to do the superclass on something so that the time demand goes away, and you just know via osmosis.

Jeff Julian (30:12):  
It's tough for me, even if you have a team where you don't have to know everything, you have to know how to puppet, or how to be the composer in the front. And it's like, well, I've got an oboe, but I've never heard an oboe. What does that sound like? How do I use that? And so you have to at least have a working understanding to be relevant. And I think there's a disconnect, especially when companies get bigger, that disconnect is exponential. And then you've got to come into problems with communication where they don't understand why this took longer. And then also having the bandwidth that, hey, can I afford to have my guys play the part of their time?

Jeff Julian (30:46):

How do I make it where I'm not running everybody at a blue flame level where they're just barely about to burn out that I'm running at maximum? I need to be able to be efficient about that, then your clients are never going to care about that. And it's harder for small startups, small companies, it's really hard to find that time, but it's critical because what you do on this job leads you to the next one. Have you had the chance to prepare and get ready for that next one so that it makes it easier, or you've got a better way of doing it, or you can be a personnel change or all those kinds of things. So it's a never-ending one. And I think you just have to look at it like, well, we used to do it this way, but look how exciting we could do it this way.

Alison Dean (31:27):

Yes, new learnings, new adventures. So Marina Cortazzo, head of Technology Solutions Delivery for AAG was recently on the podcast, I know you know her. She has this question for you. As a Modern Renaissance Man, that's an artist, inventor, architect, innovator, a futurist, that has developed breadth and depth in so many areas, how do you keep your great ideas and interests from falling by the wayside? How do you keep those that your gut tells you are going to be big going strong?

Jeff Julian (32:02):

Wow, that's a good question. I just love what I do. I think the other thing too, is like when you're working on a project, you're squeezing your resources. You got to feed this punch, you got to put stuff back in there. It's one of the things I adapted early on, was I wind down, I need to calm down for the day, and I look at stuff. I don't look at cars to design cars. I look at architecture, I look at textiles, I look at technology. And I don't know if it's being dyslexic, whatever it was, but because I struggled with trying to learn early on, I had to figure out how to teach myself, because school wasn't doing it for me. And so I have an insatiable to a point of fanatical level of curiosity. And three years ago, I took my daughter to get her hair done, but the salon do the fancy day kind of thing. And I came away inventing a new hairbrush that's been patented. I just was like, well, what about this? And it wasn't that the brush did it better than anywhere else, but what I saw in a salon is, especially with women with long hair, they use these big rolling brushes, you get your hair done and the next person, but they got to clean them out.

Jeff Julian (33:07):

And I saw somebody going through each station and cleaning the brushes. I'm like, how much do you pay that person? How many times do they have to do that a day, for how long? And I said, If I could save you \$15,000 a year, would you buy my brush for \$600? I just ask the questions, of course. Because even if I spend \$2,000 on brushes, they pay themselves. And so okay, here's how you do it. And so it's just constantly curious about stuff. It doesn't matter if it's big or small. But yes, it's a sickness.

Alison Dean (33:35):

And because though I think there's like such an influx of ideas that are probably coming at you, how do you prioritize those? I mean, obviously, you have the ones that are client dependent, but then other ideas, how do those get managed?

Jeff Julian (33:48):

There's kind of almost like two competing elements that we will look at. One is what we call the candle. So I have this in my talk. It's basically T-H-E, and it's a candle that's shaped like a circle. And so the candle being birthed at both ends, it's actually at all three sections. So the T is the technology. Do you have the right solution? Is it possible? Are the supporting elements there that can make it happen? It's not Facebook in the 1960s, where it's still a good idea, but the Internet's not there. Then the one in the middle, that's the quickest to burnout is the human. Is there an actual want or desire? It doesn't mean that your market knows they want this. Like one thing that was key with the time I spent with Steve Jobs was he couldn't care less what his market told him they wanted.

Jeff Julian (34:32):

He says if the market's telling us what they want, we're reacting, not leading. We want to give you a product that you didn't know you couldn't live without, iPhone, etc., etc. Is there a human desire? And then the E is the ecosystem. And so in the case of something like Google Glass, where they had to buy a bunch of patents I had done in the '90s at Oakley, they had the technology, they had an ecosystem. They didn't realize the ceremony of engagement with that technology and so their human candle burnt them out. I told Sergei from day one, and he said, oh, I'll be cool, we can work on this. And I said, it's a fail. It's 100% fail. Because you guys aren't in the right mindset, you think it's a technology play, nothing to do with technology. Until you can make it invisible, you've broken the social bond, you're dead in the water. So there's that.

Jeff Julian (35:17):

And then also, if I come up with something that's a curious problem, I'll do it, but then there's a cooling-off period where I assess. So it's like, hey, I've invented a better pillow, but then I've also got a medical mat. And you go, well, which one's a priority, which one's more sustainable? Because people used to come to me all the time and all they wanted to do is startup, I got this idea. So okay, let's say your idea is great, it's unique, then it's a matter of going, why are you the right person to do it? And then who is your partner? Because anyone who thinks they can truly innovate on their own without completely destroying everything else around them, it's too much to do. So get a partner first, somebody you want to go into battle with. The SEALs of the saying, one is none, and two is one, that is so true for entrepreneurship. I can't even begin to describe. And then you go, if I design a new candle, something as simple as it could be. Why are you designing a medical device? It's super complicated.

Jeff Julian (36:07):

It kind of takes about the same amount of effort to do. There's the same amount of human capital that goes into them. And so if you're not prepared for that, and maybe it's not the right time, so you have an idea that goes, hey, this is a \$100 idea, and this is a \$10 million idea, then you wait up, how long is it going to take? This one's quick, quick to fail, quick to succeed, this one's going to take you time. So you go through this filtering process to assess and prioritize. So it's a long list of, is the market right, how are they there, are you the 30th person in the space or are you first? And first isn't usually good. It's the second rat that gets the cheese. And you can watch somebody else figure out how they fail and how they don't fail.

Alison Dean (36:47):

Yes, that's interesting. Are there things that technology can't or shouldn't try to solve?

Jeff Julian (36:53):

It depends on how you define technology. I mean, on one hand, fire is technology, right? So I know, we always go to silicon and switches and chips and electricity, and all that kind of stuff, but nothing ever goes away. There's just more stuff and some works better, depending on the circumstances than others. But I think we lose a lot when we chase the innovation dragon. Because innovation doesn't really help people. If you really look at it, it helps a very small amount of people. So, hey, that computer now works on my phone, so I don't have to be at work. I can catch up on something I didn't get done. Is it really helping you or now you can't sleep at night, because you're doing it on your phone? The robots at Jeff Bezos, Amazon, who does that really help, the workers that are frantic to try and just hold on to their job, because the person next to them doesn't get tired and doesn't make mistakes? So their opinion bottles. Does that help them? Helps Jeff.

Jeff Julian (37:50):

So I think we're constantly infatuated with innovation and we stopped to think about the why. Look at most innovations that have been predicted in the next 100 years. What are people doing for jobs? We've seen through history, that it's not that innovation releases people to not have to work. If that's the case, you'd have free basic income, it'd be Star Trek. You'd follow your passion, and it'd be a socialist society and all that kind of stuff be very different. There's lots of positivity, but it's anything worthwhile that's hard to do and hard to get, but it also has another side. Atomic energy gives us free clean energy that can power cities, but it also has a downside to industrial farming of animals, lets people that normally would starve to death eat, but ... And so I think there's an onus on the individual to take this up and go, "What's the story that I want to be about and can I make that happen?"

Alison Dean (38:47):

What's the deep thinking on this one? What do you want your direct reports to remember you for?

Jeff Julian (38:52):

Hopefully, it was yes, this is hard, but all jobs can be hard if you're doing them well. But wow, look at what we got to do. Hey, we did this, and we hope for this kind of level of achievement, but it just pushed the needle over a little bit, is kind of the Buckminster Fuller be the fulcrum, not the runner. It's like, hey, they didn't take this up, but I got to sit in a room for a week and a half with a guy and rewrite a constitution for a country. And for a country that doesn't have great women's rights and for kids and education, all that stuff, we get to radically change it, and then talk to the guy who can say yes, what would a healthcare system look like? Because we have amazing medicine, we have a terrible health care system. I mean, it's 18th century.

Jeff Julian (39:31):



So those kinds of things. And sometimes it's the intangibles that make a bigger potential imprint. And it's funny, because with some of the projects we've worked on the last couple years in redesigning our country, now we're starting to hear our voice come back. It's not about taking credit for anything because if you're making a real impact, it's not about credit. You're just never going to get it. But it's interesting to hear our own stuff pitch back to us.

Alison Dean (39:55):

Oh, yes, I can only imagine.

Jeff Julian (39:57):

They didn't know what human-centric was and now it's all they're talking about.

Alison Dean (40:01):

Okay, how has your leadership style evolved through the years?

Jeff Julian (40:05):

Well, I think it's just that for me, a boss is someone that directs and stands back, and a leader is someone out there in front. And so I don't ask anyone to do anything or work harder than I will, that I promise you, I can make it very visible. As far as leadership style, somewhat by example, but it's much more of a team thing. It's like we all have our places to play. I'm not trying to be the quarterback. I'm not trying to be all the positions. I think when you're a startup or when you're a small company, you're much more of a job that has help versus a business. And business to me is something you can walk away from, from a year, come back, and it's running just as well or better. You built a machine, and you might be in charge of the machine, but you're not critical to it.

Jeff Julian (40:48):

I think for a startup if you're looking at that spectrum, that's something to hope for and to try and achieve, but early days, it's much more of a team where you're like, look, I'm able to do more with you than without, and we can get to a point where then it becomes a machine. But the downside to that is you lose some of your characters. And you see this, you see like big architecture firms use that example where the starchitect, if you take Frank Gehry out of Frank Gehry, is it still Frank Gehry? Like we lost Zaha Hadid who was this amazing designer and architect, but she had a shadow partner, that a lot of people don't know about. So her brand is still evolving, continuing, even though she's passed away. But it definitely takes a hit because it was very much she's that star athlete. And that depends on what you want to build. Some famous architecture like, hey, when I'm gone, that's it, that's me. So there's a finite benefit to that. And then there are other people that are looking to build something that is just as good or better 100 years after they pass.

Alison Dean (41:46):

Right. What are the most important lessons that you've learned from your mentors?

Jeff Julian (41:50):

Oh, God, there's been a bunch of them, I'm very lucky that way. A lot is just asking the right questions and learning how to read the room and ask the right questions, and listen. I think a lot of creatives, I would say it's almost part for parcel, you need a pretty healthy ego. I mean, if you think about designing something, what you're saying is that no matter how good whatever it is that was done before you, you can do a better job. That's a pretty arrogant statement. And then also, a lot of times, if you're not doing the same thing over and over again, you're also kind of saying, hey, that thing I know nothing about, like nothing about, I can rock this and do better than anyone else. So it takes a pretty healthy ego. But that's also where you get in trouble because you tend not to listen, you tend not to pay attention. And then giving yourself the ability to have that lateral thinking. I mean, fear is the killer.

Jeff Julian (42:40):

Clients are pretty forgiving. If you go too far out there, they'll go, whoa, whoa, whoa, okay, come bring it back. But if a client feels that you haven't pushed it far enough, they won't call you back. So it's not about scaring them, but it's being appropriate and trying to find what makes sense. And sometimes you undershoot the mark, and sometimes you overshoot the mark, but I think that's where experience comes in, that focuses you in. And if you can get good mentors, they're worth everything. And I find most people that have been there before are very, very generous with giving you their time. A lot of it is just treat people like people. I've been in a room with world leaders, we just talk as if we're an equal. I've been on the phone with the directors and become friends with them. And they're like, how are you friends with this guy or that guy, and then I know prime ministers? I find some of these people really interesting, for better or worse.

Alison Dean (43:31):

Yes, yes, yes. Okay, a few more questions. What projects are especially interesting to you, as you continue on in your career?

Jeff Julian (43:40):

The ones that I really get excited about are the ones that have meaning, and very few do. What's actually the effected change that this is going to do? I worked on the first iPhone, first iPad, and I worked on up to number four, and then I haven't worked on since. It's that disruptive design, where it's truly something new, and you're going to change the game versus something sustainable, where yes, this version is better than the last and this one's better than the last. But I like those big impossible challenges where you're turning sharp angles on things and trying to make big moves. So whether it's a challenge around creating a floating hotel, all the way down to a pillow, or something like that. A pillow is a pillow, right? Is a pillow.

Alison Dean (44:21):

No, I don't agree, but okay.

Jeff Julian (44:23):

No, I don't agree really either. But how many people wake up with neck pains and sores? We're really not supposed to sleep this way. And why not? We've just gone along with a solution

because it's the standard. I love those ideas and I always think that there's always a better way to do that. Those kinds of things get me excited.

Alison Dean (44:43):

This might be a loaded question for you, Jeff. What future innovations are you excited about? Where do you see things progressing?

Jeff Julian (44:50):

I think in a sustainable space, probably one of the most interesting opportunities. It's interesting to see the mindset because most people are looking at it like, "Oh, we're walking away from all these things that make us money." Instead of looking at the new space going, these are the things that are going to save the world and provide jobs and do this. We talked about solar. Everyone's like solar, solar, solar. It's been around for a while, it works, it's commercially available, but it's an ecological disaster waiting to happen. If you look at electric cars, same thing. One of the problems with electric cars is the heavy metals they need to produce those. So on one hand, yes, on this test body, you're doing a great thing. One of the ways I used to explain this, I said, anyone who has a Prius, I apologize. The Prius is the most polluting car that's ever been made.

Alison Dean (45:35):

Wow.

Jeff Julian (45:36):

But people don't think so, because if you buy a Prius, and you use the Prius for its lifespan, you get rid of the Prius, you in this window, have done a good thing. That's true. But to make that Prius, and to get rid of that Prius, which are the bookends outside of you, the batteries are so toxic, the materials have to be sent to China and other countries, they literally can't even be built in the countries where the products are sold. Then you've got a seven-year lifespan. And then what do you do with all these materials when they're done? So in the case of like computers, and all these other things, if you go to like third-world countries, where people are stripping down and having direct exposure because the materials are valuable, but they're dying of carcinogenic cancers, all sorts of ... So I'm not here to say gas is good. It's not. But Ford took an angle of saying, well, what if we make gasoline, but it's so hyper-efficient by using lasers to ignite the fuel, where we have 100% burn off because theoretically, we have 100% burn off, there's no toxicity going into the environment because there's literally nothing left. And then all of sudden, we get 200 miles a gallon. So it's a different way of skinning the cat. So the conversation is a lot more complicated than people realize, but it's something that we don't do.

Jeff Julian (46:42):

I mean, I asked the chief climate scientists at JPL a couple of years back, I did a talk there. I said, "So when's the tipping point? And he's like, "Between 1977 and 1981 was the tipping point for the environment." Everyone thinks '77 it's too late. So what you have is, and this goes to the communication piece, climate change happens all the time. That's true. But it's not global warming, it should be referred to as global acceleration. Because what we have done is that

normal transformation that would take 10,000 years, now it's going to happen in 100 years. What that means is our climate, our environment, the people, socio-economics, animals do not have time to evolve and transform and change to adapt. And Darwin didn't say survival of the fittest, he said that survival, the most adaptable, and that goes to technology. And so the big picture stuff that we're seeing is we're seeing the human civilization go from what's called a class zero society into a class one, class one means interplanetary.

Jeff Julian (47:40):

Now, all these advances in technology and everything else, who are people that that doesn't benefit? If you're a young girl in Afghanistan, you don't really benefit in the last 20 years from the technological advances that we make in our first world. And that's why you see all this kind of real strife going on. And that's something I think technologists and people like us need to be very aware of, that it's not just good enough to look forward, we need at least a rearview mirror, we can see what's going on behind us.

Alison Dean (48:09):

Amen to that. I always punctuate these conversations with this question. Can you speak about a breakthrough that you had recently?

Jeff Julian (48:17):

A breakthrough for me, it's an ongoing thing. I have to learn how to turn off because by turning off when I'm on, it makes me better. That's something that I struggle with. It's so easy to get into the forest on technology because you're solving all these micro problems to make up some big ... but standing back and asking the bigger questions, we just don't do it enough. As far as the big breakthrough, it's maybe not just us, but it seems the more we work with these architecture firms, they don't do this. We work in a completely different way and we're having a lot of success, and it comes down to, why would you spend a billion dollars or hundreds of billions of dollars on a building or a city if you don't know where you're going? That's not been the industry. The industry is, I'm a starchitect, so just like you, I want to buy a BMW, not a Mercedes. So if you hire Frank Gehry, you get Frank Gehry, if you hire Zaha Hadid, you get Zaha Hadid. But being appropriate to the purpose of the place is something they don't do, because they've branded themselves for different reasons, artistic reasons as well as financial reasons.

Jeff Julian (49:22):

But that really puts them in a disservice if we're going to stop building the same things we've been building for 100 years. The human race has to change how we live. Maybe technology can help, maybe it doesn't, but it's got to change. And if we don't change it, it is going to be changed for us. And you're not going to like that. It's a big deal. It's like, I talked to the Admiral of the Pacific that controls the Pacific Ocean. That's his job. He's in charge of everything in the Pacific.

Jeff Julian (49:52):

And he said the thing that makes him stay up at night is global warming. Not what you expect somebody who's an Admiral of the US Navy to say. And he goes, when they say 1% temperature change, what that means is it doesn't snow in the mountains for an extra month or

two and the fire season lasts longer, so the water is contaminated, and then you start getting mass migration. Right now we have migration because of political and opportunities, socio-economic things. But when migration starts to be about resources, those resources kick off wars, then you've got a real problem. I know it's exciting, right? So happy.

Alison Dean (50:30):

Is there anything you want to leave us all with, or should we just leave it there?

Jeff Julian (50:35):

Oh, we can leave it on some upbeat. I mean, the thing that gets me excited, though, is disruption and change are painful, and everyone will resist it, consciously or unconsciously. But it usually surfaces. It's like a forest fire—it burns, it does a lot of damage, but in the end, the regrowth is better than before. And it needs to happen from time to time. And I think, unfortunately, we're going through it now on lots of different levels. The benefit is if you have a kid that's between five and 10, say right now, they have access at their fingertips anytime day or night, to more information and knowledge than you could have accomplished in five PhDs in three lifetimes. So as long as we focus on making them good people who want to go somewhere interesting, man, the barrier to distribution, the barrier to information, the barrier to people, those are gone. They're not going away. They're gone. And so that's really exciting. It's just whether we inspire them enough to step up and realize how good they have it and what really can be done.

Alison Dean (51:38):

Jeff, beautifully said. How was that?

Jeff Julian (51:41):

That was good having a chat.

Alison Dean (51:42):

Thank you so much, Jeff. Thank you for tuning into The Breakthrough brought to you by Theorem. Make sure to hit that subscribe button and leave us a comment. You can find us wherever you listen to podcasts. And for more great content, follow us on Twitter and Instagram @breakthrupod, that's break T-H-R-U-P-O-D. I'm your host, Alison Dean. Until next week.