



## [CG GARAGE PODCAST #256 | VICKI DOBBS BECK](#)

### [EXECUTIVE IN CHARGE, ILMxLAB](#)

**From immigrants to immortal galactic overlords: The business of creating compelling immersive experiences at ILM's cutting-edge new technology division.**

At age 12, Vicki Dobbs Beck started her own business with her mom, selling flowers at Seattle market — and she's been combining creativity with commerce ever since. After leaving Stanford University Graduate School of Business, she got a job at Industrial Light and Magic and became Executive in Charge of ILMxLAB in 2016.

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Chris Nichols We are in great shape. Thank you so much for being here, so this... What I love to start with is some origin stories.

Vicki Dobbs Beck Okay. My origin story is quite long.

Chris Nichols Well, let's do it, we've got an hour.

Vicki Dobbs Beck Okay.

Chris Nichols Where does it start?

Vicki Dobbs Beck Well, actually I'm going to talk about it in my talk on Wednesday, but I think my origin story for Lucasfilm, begins when I was at Stanford Business School. I basically made a choice, a different one than about 95% of my classmates who always went into investment banking and consulting and so forth. I decided I wanted to work for a company whose product was inherently creative, it was my only criteria, it could have been fashion, performing arts, wine, entertainment. I happened to be reading the Stanford daily and I saw this story about a guy named Walt Conti, who worked on Star Trek episode IV and worked on the animatronic whales. I saw that and I was like, "Wow, that's fascinating." Then it talked about the fact that Industrial Light & Magic was in Northern California and I thought this sounds like an interesting place to work.

Chris Nichols Right, and you were at Stanford.

Vicki Dobbs Beck I was at Stanford, and it turns out Walt Conti, was one year ahead of me, Stanford undergrad. I thought we must know people in common, so I started asking around and sure enough, one thing led to another and I finally met someone who worked for Industrial Light & Magic. I actually volunteered to work at ILM between my two years at business school, I volunteered to work for free. I suggested three projects that I thought I could help with and they turned me down and I was like, how do you turn down free help? In retrospect, I really think they just didn't know what to do with me and I think they were a little afraid that I might be more work than, than I could deliver value.

Vicki Dobbs Beck I ended up actually working for the San Francisco Ballet between my two years at Stanford and I was just about to graduate my second year without a job because it was hard to find jobs in the creative industry. Those kinds of recruiters did not come on campus and so forth. About a week before I was going to graduate, I got this call from ILM and I had been checking in with them over the course of the year and they said, "We have an opening and we are wondering if you're interested in coming into

interview, and of course, yes you need to come in this time on this date. I was like, Oh, I would really love to do that, but I have a final project, a group project. It's actually at that time that we have to present. They're kind of like, well, it's then or not at all."

Vicki Dobbs Beck I talked to my group, they were amazing. They just said, "You got to do it, you've got to try." I went up there and interviewed for a very entry level position, it was like a marketing assistant role. I ended up getting the offer, I joked sometimes that I probably had the lowest paying most interesting job in my graduating class. I went in and my boss at the time said, "Do you know anything about writing or creating a marketing report?" I said, or marketing plan. I said, well, I know something about a marketing plan. I just don't know almost anything about the industry. I said, do you have a business plan? She looked at me with this blank stare and I said, well, something that talks about the growth plans in the industry and so forth. She said, not really. I said, well, I'll tell you what, you tell me who to interview, I will talk to them. I'll write something up and even if I'm 100% wrong, it'll give people something to respond to." That's what I did and I ended up writing the first sort of ILM business plan.

Chris Nichols Wow, what year was this?

Vicki Dobbs Beck This was like in 1988, this is a while ago. It's gotten much more sophisticated though since then, but what was great about it is they started moving me around Lucasfilm. Trying to come up with a business strategy for all these new little activities. At the end of that-

Chris Nichols That linked with like Skywalker sound and all that?

Vicki Dobbs Beck It would have been, not Skywalker sound per se, but there was like a location based entertainment group that was starting out. Another was this little group that was inside of LucasArts which was the games division it was called Lucasfilm Learning. I didn't have an educational background, I didn't have technology background, but in any case, Lucasfilm Learning was a real turning point for me. Because the goal of that group was really to innovate in education and to bring together storytelling, high quality media and interactivity. The way you did it back then was with a computer driven LaserDisc player, this is pre-CD-ROM.

Chris Nichols Right, the big ones.

Vicki Dobbs Beck The really big ones, it delivered really beautiful imagery. But it was a really complicated setup, probably too complicated for schools. But we were doing some really interesting prototyping work and I would say groundbreaking in the area. It really became my passion for all the years

that followed and I actually left for four years. I was interested in cross-platform children's entertainment and that wasn't really a place that Lucasfilm wanted to go at that time. Ironically, I worked for Disney, which ended up coming full circle later and then I went back to ILM four years later in a more operational role. Then I moved into strategic planning and I did that for many, many, many years. But I was constantly watching this convergence of interactivity, high quality media and the technology landscape.

Vicki Dobbs Beck Finally, in about 2013 and 14, it really started to come together, that opportunity began to be realized and I was quite inspired by another person who is at the conference, Kim Libreri. Kim, he's very forward looking, he was very much of the mind that I was and the work that he was doing in real time computer graphics and the R&D in that space was I think really groundbreaking in terms of how it applied to entertainment. That inspired me and I stayed alongside it because it was a strategic initiative, it sort of made sense. Eventually we founded ILMxLab in 2015 and a bit after that I took over as executive in charge and had been doing that ever since. I told you a long story actually

## Creative ambitions

Chris Nichols Actually not that long, there's a lot of details I want to go through. I want to know, one, what was something that motivated you, that you wanted to do something in a creative field?

Vicki Dobbs Beck That goes back to my childhood.

Chris Nichols Well, lets find out, because there's several... Here's what I want to get at, I want to know why that happened and I want to know what you can take to help people in the creative field understand why your job makes sense for people wanting to create a thing. Because, ILM didn't have a business plan, they didn't have these things and you brought that to them, that allowed them to grow and people need to know that. What's your creative drive?

Vicki Dobbs Beck I think I actually had two drives when I was really young. I was an entrepreneur at heart when I was young. When I was like 12 I started a small business with my mom, we made dried flower arrangements, which we sold at the public market in Seattle. That entrepreneurial spirit was always with me and then I would do things like, I love to write like fiction. I

write kids' stories and then I would hire illustrators to illustrate them because I wasn't an artist myself. That's kind of where that all began and it just... Well actually I had a really interesting experience at business school. It's probably some of the best advice I ever got. It was in my heart always but in fact the fact that I went to business school is a little unusual in and of itself, except it did feed the entrepreneurial side.

Vicki Dobbs Beck But, I would have loved to have gone into creative writing, for example. I thought that by going to business school, it was probably a safer path and one that would be more likely to yield a career. Then I got through my two years and I was kind of back where I was at the beginning, which is to say, how do I get into this creative field? During the two years, before I worked for the San Francisco Ballet and volunteered to work for free at my ILM, they did have on campus recruiting and I was interviewing for a management consultant role.

Vicki Dobbs Beck I was actually interviewing for a company where I knew the person that was interviewing. He said to me, "Vicky, you have such a creative spirit. I just, I'm not sure I see you in this role. I would really encourage you to do something creative for the summer or in a creative industry for the summer. If you don't, if you feel as you get ready to graduate that you're convinced, management consulting is the path, then let's talk about it and look into a full time role." Honestly, I did what he suggested and I never looked back.

Chris Nichols That's great advice. That's like one of the best rejections you can get.

Vicki Dobbs Beck It was ironic and I really believe, and I say this to everyone, you have to follow your heart. You have to follow your passion because otherwise I think that, you'll never feel that sense of fulfillment. I do feel fulfilled right now. There's a lot of classmates that I had at business school who have done extraordinary things and they've made a lot of money and they have foundations and all of those things. That is not the path that I chose, but I do feel really blessed that I did choose the path that I did because I think that, I love being on sort of the bleeding edge of creativity. In this space it's, immersive storytelling and every day is an adventure, truly there's so much that we're constantly learning, discovering, paving new ground.

Chris Nichols Absolutely. I think that's a very interesting thing and I think xLAB is actually a fascinating thing that you guys have done and that you guys ever been involved with. I'm really curious about your take on it and about what you feel, why did it happen? What was the motivation to make that happen? Honestly, there's a lot of R and D groups out there, but xLAB is the different.

- Vicki Dobbs Beck It is different and I think that, well the first time I put on a VR headset, which was an Oculus Rift DK2, I think people described what it was, but I truly had no idea. You can't prepare yourself to what it's like to put something on and be inside of a world, because for so long we had been separated by a screen, whether you're playing a game or a movie or television. It was a really, really simple and crude example of VR at the time, but it was mind blowing to me and I felt like this is truly a new medium for storytelling. It allows you to connect to place, to worlds and to characters in ways that just simply weren't possible with any other medium. Because, Lucasfilm at its core is about storytelling, it made sense that when there was a new way to tell stories that we should be there and that we should be pioneering. Like I said, it's been a journey, there is no way to describe it other than a journey that is not over.
- Chris Nichols Has the focus always been primarily VR?
- Vicki Dobbs Beck No, actually, we very intentionally, when we founded ILMxLAB, we said we were the immersive entertainment studio.
- Chris Nichols Immersive entertainment.
- Vicki Dobbs Beck Because we didn't want to limit ourselves. A lot of people at the time were setting up divisions and they called them, X, Y, Z...VR. We intentionally did not do that even though VR was a real opportunity at that point. We were equally interested in, augmented or mixed reality, which has been a little slower to come online in the way that we probably would engage. Which would be more with wearables and so forth as well as even just, we did a demonstration at Sundance a few years ago called Hollow Cinema. We were using stereo glasses and projections and it allowed you to step inside a world also. That didn't involve VR or AR, although it actually simulated what VR AR could be like. So really the defining element was more this idea of full immersion.

## Storytelling in VR worlds

- Chris Nichols Okay, absolutely. You were a storyteller, you wrote children's books, you had them illustrated, which is great and wonderful. But let's talk about story in VR because this has been the subject that I've talked about on the podcast now and there are huge challenges to writing story for VR. What

are some, of the challenges that you've found and how have you overcome some of those things?

- Vicki Dobbs Beck I can talk about it in the context of a couple of different examples.
- Chris Nichols That would be great.
- Vicki Dobbs Beck I would say that, we're interested in immersive experiences that are for locations and or for the home. They do have different opportunities and challenges.
- Chris Nichols Sure, because you guys did stuff with-
- Vicki Dobbs Beck The Void.
- Chris Nichols Yes, the Void
- Vicki Dobbs Beck Exactly. One of the things about... I mean actually the first major project we did was Carne y arena with Alejandro Iñárritu. It was a, VR first experience, meaning Alejandro never envisioned it in any other form, like a short film, et cetera. He was intrigued by the medium and what it could do. That experience actually put you into a scene and the scene was of a group of immigrants crossing the border from Mexico into the United States in the middle of the night and getting caught. In that particular case, you're actually an observer and you're in the middle of the scene, it feels like it's happening around you. It is incredibly intense and it was a more linear unfolding of a scene, but there was so much happening in that scene in contrast to a film where, he would choose camera angles, et cetera.
- Vicki Dobbs Beck In this case, you were the one deciding where you were going to look and even though the scene never changed, your experience in the scene changed based on, where you were looking in and how you were engaging. One of the challenges was people wanted you to look in a particular place at a particular time, in a perfect world, but you can't control it. The person themselves becomes the camera and you can do a lot of things. You can use effective use of sound, effective use of light, possibly dialogue, et cetera but you can't control it. I think the power of it comes when you design something that allows you to be in the world but is not necessarily dependent on you having to experience it in a particular way.
- Vicki Dobbs Beck That was our first step and then I would say, probably one of the best examples, Vader Immortal episode one because that we really wanted to create an interactive narrative. Interestingly, we started from a similar

place to where we were with Carne y arena, we thought we're going to let you be an observer. We're going to have the story unfold around you. But we've always been dealing in, real time experiences, which means that they can be interactive. We thought that it would probably be a lot more powerful to put you at the center of the experience, which was a very interesting choice because we were dealing with Darth Vader and this is probably the most iconic character in the Star Wars universe. Yet the story is your story, so it's your story and your relationship with Vader and how that unfolds.

- Vicki Dobbs Beck That was interesting, in and of itself, just to put you at the center. The other thing is that we did use gaze based mechanics, in certain cases we didn't allow something to happen or Vader to deliver dialogue until you were looking at him. The length of the experience does fluctuate based on-
- Chris Nichols What you're doing.
- Vicki Dobbs Beck What you are do and how you do it when you do it. That was very important. The other choice that we made is, it's not a branching story, the story is the same story, but you have to interact with the world and with the characters in order to push the story forward. Again, this was a balance between the narrative and the interactivity and agency and that's been an interesting learning. The other thing about the actual creation process... And this was true really in the void experiences too, is because we come from a film background of course we started in a classic film based way and said, "First thing to do is to write a script."
- Vicki Dobbs Beck One of the things we very quickly realized in both the location based experiences with the void and with Vader Immortal, is that in order for it to be effective, it had to be a highly iterative process. Where you're constantly moving from people who are driving story in the people who are driving the actual interaction and experience design. We had David S Goyer, was the executive producer and writer on Vader Immortal and he'd done Blade, he'd done some games work, et cetera. He actually had experiences in both mediums and we kind of developed new tools for helping the broader team understand what the vision for the experience was more than just a straight up script. There are tools that led to creating this story that were behind the scenes but I think were really important to making it what it ultimately is.
- Vicki Dobbs Beck The other thing that we decided to do very consciously was have it be an episodic. It's three-
- Chris Nichols Three episodes.



Vicki Dobbs Beck Three episodes, and the episodes are about anywhere, I mean, it depends, but episode one was between 45 minutes and an hour of the interactive narrative. It was longer than a lot of... It was about as high fidelity as you could make on these headsets. But one of the interesting things about it is the reason Oculus came in and really funded this and supported this. Is because they were releasing The Quest, which is a tether less headset. Everybody realized once you put The Quest on that it was a game changer, especially with something like a lightsaber. Because the ability to move around in 360 degrees-

Chris Nichols And Dodge things.

Vicki Dobbs Beck And Dodge things without getting twisted in chords, making it accessible to people that don't really have the high powered computer setup, et cetera. It was amazing, it was so much fun to do lightsabers that we did have this momentary dilemma about... Well, literally we were afraid, people were going to... There was a point where you go into a training dojo in the actual experience because you have to use the lightsaber as a tool and as a weapon in experience. But we were afraid, people were just going to stay in the training dojo. They were just going to be having so much fun that they weren't going to actually push through. We consciously decided... And this is not from the beginning, this was like-

Chris Nichols As you go through it.

Vicki Dobbs Beck Well this was, in the creation process, this was somewhere toward the middle of the process. We said, "What if we created two modules?" There's actually an interactive narrative module that's the one that's like 45 minutes to an hour and there's then a separate lightsaber dojo experience. This was something that it was kind of a serendipitous stroke of genius if you will, because I think we stumbled into it. It wasn't like we had this vision from the beginning. We have two modules, one, the interactive narrative, one, the lightsaber dojo and the lightsaber dojo, you can basically wheel the lightsaber to your heart's content. There's like 40 or 50 rounds and it gets extremely hard, I mean I can get to like round five. But for some people who are much more committed and perhaps more game oriented, they can go on for hours and hours. That structure was so successful that we decided to pursue that structure going forward.

## First- and third-person narratives

- Chris Nichols      Sounds like compared to those two different experiences, one is more passive, so third person narrative and the second one is first person.
- Vicki Dobbs Beck      Very much so.
- Chris Nichols      So, the first person narrative, like I always look at VR and it depends on the content but sometimes I feel awkward when I'm a third person narrative in a VR content. Because I'm just observing, but if you're talking about something traumatic that's happening and you're in the middle of it, that's can be very-
- Vicki Dobbs Beck      It still feels like you're there and you feel the sense of chaos, the sense of fear, the sense of tension. I'm not going to ruin the experience, but there is a moment where you wonder if you've actually been an observer at all and that was a very conscious choice as well. I think for us, for VR in particular, it's two true great strengths are the power of presence and the power of connection. I think that we are constantly looking for ways to lean into that and one of the things that... I don't know if this is going to be true forever, but I think it's true right now because VR is still so new. Is that there's a really visceral response to it, something you don't get from a film or television, et cetera.
- Vicki Dobbs Beck      When I, for example, talk about Carne y arena or you know, or even Vader Immortal, when Vader, this door opens a Vader walks toward you and looks you straight in the eyes. He's very overwhelming, I can actually feel it in my body like even as we're talking because it has such a powerful impact from when you do it that it stays with you. It creates a memory in a different way than other forms of media.
- Chris Nichols      Interesting, all right. I can see that. The other thing that I think is interesting is that you basically brought in a game. You brought in the idea of the game to help the story narrative. Although it sounds like when you split those two different stories, the dojo and again, the dojo is do what you want to do, play the game. The other one is like, okay, you're about to have an experience and it's 45 minutes to an hour, but it still relies on input from you, still relies on that.
- Vicki Dobbs Beck      It totally does. I would say the way we usually describe it is we definitely use game mechanics to drive the narrative forward. But we still believe it's not a game at the end of the day, on the narrative piece, the most

important thing was that you experienced it as a narrative where you were the center of that experience.

Chris Nichols It's true. It's interesting that you say that? Because I've been trying to figure this out for years and on the creative side, what does it really mean? There's a game I played, which I absolutely adore and I still talk about it called BioShock Infinite. I don't know if you've heard of it or?

Vicki Dobbs Beck I've heard of it.

Chris Nichols But the story is so good that I wish there was a mode in the game where I don't actually have to play the game. I could just move forward and experience, because it's a linear story, it doesn't change. It's just like what you just described. I really wish there was a moment where I could just experience the whole game as a narrative and that would be really great and still feel, it's still is very compelling. I think there's definitely room for that as medium. What is your thoughts about that medium, because I know you guys won an Oscar for some of that.

Vicki Dobbs Beck That was Carne y Arena, won a special Oscar actually for really visionary storytelling in a new medium. Prior to that, the last time they had given a special Oscar was to John Lasseter and Toy Story. I think that, that Oscar was indicative of how groundbreaking Alejandro's vision was and I think this idea that you're describing, which is essentially of a story mode, for lack of a better term.

Chris Nichols It is, but it's more than that, but that's for black [crosstalk 00:00:28:55].

Vicki Dobbs Beck One thing about Vader Immortal is you don't die, you don't get stuck. You will literally eventually push through so you will experience the narrative. It is true that you have to do something and we've been talking about more of what happens if you just... The way we designed it, it would be hard for that particular experience, to experience it purely as a narrative because the triggers are in your hands if you will. It's certainly Carne y arena was that way, it was a full on story. I'm really constantly intrigued by how people are grappling with what is the right balance between story and interactivity. One of the very first experiments we did was actually on an iPad and it's maybe not immersive as some people would normally think of it.

Vicki Dobbs Beck What it was, was a 90 scene and you viewed it on an iPad and most people would think that it was actually a scene from a film, it looked great. It was a high fidelity scene from Star Wars. What you didn't realize is that it was running in real time. The reveal, was after you watched it, now you can go into that world because the whole world existed and these

multiple intersecting story lines were all happening in real time. Now you could go through into that world and experience it in, a different way. There's a scene where C-3PO and R2-D2 should come out of this hut. The way the cut scene worked is you saw them emerging from the hut. But when you go into the realtime mode, you can actually go into the hut, just before they walked out, in time and see what was happening in there.

Chris Nichols

What was actually going on.

Vicki Dobbs Beck

What was actually going on, because in the cut scene and this is true obviously of television and film is a director made a choice about what you were going to see. What you didn't see as a result because it happened simultaneously. In this case, you could now, you were in this dynamic world literally and you could choose where to be when. We did some other things we experimented with point of view. You can change your, you're going to be in one of the characters' point of view. You could potentially change the environment. We did some light things, you could have a sandstorm and if you chose to make a sandstorm and then you played the cut scene again it would have the sandstorm in it.

Vicki Dobbs Beck

We were just doing some really early experimentation on what would it be like to have a very cinematic, very narrative driven in many cases, iPad experience. It was running in real time, what could you do that was unique. I still think there's a lot of power in that experience. The challenge with it was when we did it, it required one very powerful computer in the cloud to render it. It wasn't a cost effective experience at the time, but already cloud computing and so forth has come down so much in price that we were probably getting close to a time when you could actually do something like that.

Chris Nichols

Well, I think it's fascinating, there's a lot... Because, I think a lot of people sometimes they just... Especially in the early days. What you guys have done something exactly like where it needs to be going, because in the early days people just looked at VR as an evolution of 3D which, is not.

Vicki Dobbs Beck

Not.

Chris Nichols

What it's supposed to be. Because I always use the expression when filmmakers take it on, it's like when the only tool you know how to use is the hammer, then all your problems look like nails. They're always going to like, "Well, I'm just going to edit it this way. It's like, well no." And I think it's interesting that while what you guys have done employs a lot of techniques that the gaming industry has done. You're not necessarily making a game, but you're employing those techniques because, why not you they work.

- Vicki Dobbs Beck Exactly.
- Chris Nichols It's a really interesting idea of what that is. Now, how did you guys come up with the business model? How is this going to work? What are people going to... You said you experienced it through going to a venue, special venue, right? Or you experience it at home?
- Vicki Dobbs Beck Different experiences for each of those. Star Wars secrets of the empire, which is the void experience was designed to optimize what you can do in a location based setting. You control all the environment, you control you can invoke all the senses because you have that ability. You were experiencing it with others. It was a situation where you were with for, so in that case we were really trying to make sure that the experience was fun with people and that we could use this sensory experience. There were transducers in the floor, rumbled, you were on Mustafar, it smelled like lava. It was hot the heat went up and so forth. Two things about that, one is this again, we were designing to take advantage of the fact that it was a location that we controlled 100%.
- Vicki Dobbs Beck That business model was pretty straight forward, because you sell tickets and it was a business model people understood. But also from a creative perspective, we very consciously set that void experience before in time, just before Vader Immortal. In the secrets of the empire, you're on Mustafar on an outpost, you see Vader's castle in the distance. In Vader Immortal, you actually go into Vader's castle and you confront him face to face and you engage with him. But in you know, in time in chronology, secrecy of the empire led to Vader Immortal and there is a light connective tissue between the two that shall be reviewed. That was important from a creative perspective and then like I said, really designing for... What location base is great for is scope and scale and the ability to invoke all the senses and to have a shared experience. What is really significant, I think about home experiences. It gives you the opportunity for extended engagement, which gave us an opportunity to develop a more robust, longer story experience.

## The business side of VR

- Chris Nichols I think that's interesting to do that. I'm going to change subjects a little bit, I may come back to it. There's a lot of people out in the world, especially, if you come to a event about like THU that are very, very creative people and they have an idea that they want to do something independent. They want to go out and it's like, I want to make my own movie or I want to start my own studio. Or I've got the best creative friends in the world, we should all come together and make a business. That's a challenge, what do you think you could give them as advice if they want to do that? Especially since, I'm going to assume in this hypothetical that none of them have any business experience.
- Vicki Dobbs Beck Well, I'm just going back to, I forgot to say that, you asked about the business model and on Vader Immortal, it's actually being sold through the Oculus store on a per episode basis. It's actually being sold. It is challenging right now to do really high quality experiences and expect to make the money back. You have to find partners that have other goals that make sense to engage. In the Oculus case, they were obviously interested in driving Quest sales and it was great to have a really big IP like Star Wars to help do that. At Oculus Connect 5, just really literally about a year ago, I remember Mark Zuckerberg saying something to the effect of there needed to be 10 million devices of one kind in the hands of consumers. Before it was going to really be viable to invest a lot of money in development and expect to get it back. That's a lot.
- Chris Nichols That is a lot.
- Vicki Dobbs Beck I think people have to take a longterm view of this and if I were sort of in the situation that you were describing, I'd probably do two things. One is to create prototypes to try to express the vision that I have for these immersive experiences. That'll certainly help in terms of getting people excited about the possibilities. But it might take time to get the money to, to produce that at a higher quality, or the quality you envision. I do think it is looking for... Even we do this all the time, we're looking for stepping stones. This might be our vision out here in the future, but there are ways to a step our way toward that future, when that future materializes.
- Vicki Dobbs Beck That might be anything from working in a more traditional media where there's more common sources of support. I guess the other thing I would say is that a number of these devices in the new media space literally Epic, HTC, Magic Leap, I don't even know all of them.

- Chris Nichols            Microsoft.
- Vicki Dobbs Beck        Microsoft, I believe that most, if not all of them have grant programs and what they're trying to do is, support the industry, give them industry momentum.
- Chris Nichols            Well, they need content.
- Vicki Dobbs Beck        They need content because it will die without great content. I would also suggest, really looking into these grant programs and applying to them. There are more now than there were say two years ago.
- Chris Nichols            But you're going to get that grant money if you have really good creative.
- Vicki Dobbs Beck        I believe so. I mean, I'm not a part of those decision making.
- Chris Nichols            But you have to make creative choices. You start with a prototype and then you go.
- Vicki Dobbs Beck        I'm not familiar enough with the programs to know exactly what's required. It may be they're just a vision, like just storyboard, some concept art and words. Maybe that's enough, I'm not actually sure. I always think that, and especially in the case of these kinds of companies, they understand how the words and the art translates into experiences because that's what they do every day. In contrast to when you're trying to help someone understand the power of VR, who's never put a VR headset on before, then I think the only way to do it is to you is to get somebody in the headset along those lines. Even internally when we were trying to get people excited about us doing Vader Immortal, we did a test, an internal test, and the test was you're in this prison cell, the door's open, you hear Vader's breathing walks toward you, he looks you in the eye and he delivers some dialogue.
- Vicki Dobbs Beck        What happened is that it was so impact. Our question was, is this as impactful as we think it will be. No one knew for sure, well, it turns out it was so impactful that most people actually didn't hear the dialogue. They just were literally overwhelmed by being in that world, being with Vader. That actually goes back to one of the other things you were asking about in terms of storytelling in VR in particular. Its pacing is really different because we had to slow the pacing way down because people missed the cue, but even we had to create this test to get people behind the idea that this was an important project to pursue for the franchise.

- Chris Nichols That's great advice for people, because I think there's a lot of things that people are... Obviously real time is another thing that's become-
- Vicki Dobbs Beck At THU, they have a whole track on Unreal and one of the things we're doing at ILM is trying to help people learn to work in real time. That they can take all, of the aesthetic and amazing skills they've developed, say on the visual effects side and be able to transition to work into real time. I think real time is just fundamentally going to redefine entertainment for the future and whether it's how linear media is created, because there's lots of virtual production techniques. Or the nature of the actual experience, that is being created. We're talking about where it's interactive in and of itself. I even think about like, I think I should just take some Unreal classes and figure out how to do this, understand what it takes to get it done. That is a great suggestion and I would very much... Anybody that's so inclined should absolutely at least take enough classes to understand what makes this possible and what your limitations are.
- Chris Nichols My company is very aware of that and obviously we make a very well known and very powerful offline render, but we've committed at this point that we are going to need to do real time. We've got our own realtime rates with whatever we develop because that's where we're going and we're committed to Ray tracing number one real time is where we're going. I know that this is going to happen and it's not just... I mean, I know what you're talking about in terms of narrative, but this is for all experienced because we have customers that are architects now. That they just want to see the whole building and everything in real time, completely done and looking good and full and that's possible now.
- Chris Nichols That's really something that I think is so important that real time is going to be a big part of it. You're right, THU I've been to, like I said, this is my sixth THU and every year is more and more and more real time. Starting to get into all the parts of it because before realtime was here, but it was mostly for people in the game industry. Now we're talking about it for literally filmmaking.
- Vicki Dobbs Beck Another interesting area is wellness or health care for example, or education. Because I think that we could bring a lot of what the storytelling and the experiential design, bring it into these other adjacent sectors if you will wellness and education, we could really create transformative experiences.
- Chris Nichols Oh, yeah, we should. I think it's really, really interesting. I want to go step out again and let's not sort of put the realtime and the VR side and let's go back to that studio where these guys want to make something, right?



They want to make movie studio, it doesn't matter. But let's say it's not VR. What are some of the pitfalls that young people can have when they try to start a business and they don't... How do they make a business plan? You said you did one.

Vicki Dobbs Beck Well, I do think reaching out to available resources is a good thing because for people that don't have the training or that's not their instinct, I think it is good to get that expertise from someone else. I mean I think it's everything from like the small business administration to I think there's actually a variety of resources for how should you think about starting a business? But I do think that it's important to be realistic about the pace. A lot of people come in and I don't want to squelch people's dreams because I believe in the dreamer, in everyone.

Chris Nichols No, let's help them.

Vicki Dobbs Beck But I think that you've got to keep the dream alive over time, that's actually the key to success. It means being somewhat realistic. When I was talking about stepping stones before, you have to think about, okay, what do I need to survive? And if I need, X to survive, what are the things that I can do alongside pursuing my vision? It might mean, there are plenty of people who work day jobs, if you will. If you go to LA, you go to a coffee shop and you will see many aspiring writers, et cetera. They all have day jobs, but they still have this dream. I think being willing to do what it takes in order to survive literally is fairly critical, then like I said, also seeking out resources just to help people think through the realities of the business and when it's likely to be real.

Vicki Dobbs Beck I think there's a lot of people who... I talk a lot to people that I meet at conferences, et cetera. We're all facing... Granted, I'm very, very fortunate to work inside of Lucasfilm and to have to be affiliated with IP, like Star Wars. There's just no question that-

Chris Nichols It gives you an advantage.

Vicki Dobbs Beck It gives us a very big advantage. But still we're all looking out into the future wondering when is this going to go from being something novel to something that is a real business opportunity. I actually can't tell you, it's not happening as fast as I thought it was going to. Just my personal prediction, I think it's going to take about 18 months. Between now and 18 months from now to start to really see a pivot point and from a business planning perspective, I'm looking at what do we do for the next 18 months that's going to bridge us. It's going to help us continue to push the state of the art because I think new opportunities will be available once we see that inflection point.

Vicki Dobbs Beck I talked to and track a lot of market industry reports and one of the groups that I track is a group called Super Data out of New York. They are now owned by Nielsen, but the super data portion of it, is really they specialize in AR, VR. Stephanie Illamas who has presented a number of conferences, I was talking to her and she was saying, they see two potential inflection points. One is the introduction of a wearable AR or mixed reality device that actually has broad consumer adoption. It could be Apple, we've talked about it for a while. It could be someone else, but their best guess was sometime, I think it was like very late 2020 maybe into 21. The other was the next generation of these tether less headsets. Not V 1.0 which is great, but it's really when the 2.0 comes out that there's a inflection point and either or both of those, I think will fundamentally change the nature and size of the business opportunity. Going back to my whole 18 month thing this is why I'm thinking 18 months is-

Chris Nichols It's not that much time actually.

## Finding funding for VR projects

Vicki Dobbs Beck It's not that much time but, but when you have a vision and you want to get it out there and you need to make a living along the way, it can feel like a really long time. That's why I say I think it's like leveraging all the avenues, the grant programs the resources, but also being willing to have a day job and hopefully that day job may in some way inform or give you experience that will help help you in the future. It's just, it's such an interesting time. The other thing that Stephanie was saying is that they think that the growth curve of the VR headsets is most like, because they usually track it along other technology's evolution curves. They think it's most like the color television and what happened with the color television is it had this really, really slow ramp. It took seven years before it actually had this very steep inflection point and for seven years.

Chris Nichols Why was it?

Vicki Dobbs Beck Well they said because people didn't think they necessarily needed it because they all have black and white televisions. But the advantage that colored television had is it was really easy to see what it did, because they could have a color television in a store window and you could see that what it's like to have a color picture. The challenge with VR is until you put the headset on you, you don't really understand why you have to have it.

Then you've got the additional element of is there enough content to make it worthwhile. I don't think we have seven years now. I think we're into-

Chris Nichols It has already started.

Vicki Dobbs Beck I'm going to guess we're in year five.

Chris Nichols Yeah, I was going to say the same thing, five.

Vicki Dobbs Beck All of those things, just say to me that there is light at the end of the tunnel. This is not stereo 3D, this is something new and powerful on it's own. But, it will take a little time.

Chris Nichols That's interesting. Well, I think it's fascinating, that what you guys are doing is really interesting, you guys are really solving a lot of problems for people that haven't gotten there yet. It's like the early days of filmmaking, where they haven't figured out, invisible editing. They haven't done all this stuff and you guys are figuring that out and people will look to what you guys are doing is that next point. At some point people may look at some, of the pieces that you guys were doing and saying, "Oh, that's the Citizen Kane of VR. That's the thing that made it happen." It's really fascinating and I think you guys are doing some wonderful work. I know a lot of people that are at xLAB that are really great and I think this is obviously the right place for all of this to start. You guys have some really good IP to work with, it's really helping. It's funny as I haven't seen, what was the first Star Wars, one that you guys did?

Vicki Dobbs Beck Vader Immortal episode one?

Chris Nichols No.

Vicki Dobbs Beck Or Star Wars Secrets of the Empire?

Chris Nichols I think it's Secrets of the Empire at The Void. One of my friends took his son to go see it and he said, "It was really cool because you got to feel the lava and everything. He says, but it was the best part for me is because he took his son who was 10 and much older. He says, I saw my son as a little stormtrooper and it was like something that just like the cutest thing in the world."

Vicki Dobbs Beck That's actually, I hear that a lot because the stormtroopers literally do scale to your size.

Chris Nichols He's like, "He's a little stormtrooper."

Vicki Dobbs Beck He's a little guy.

Chris Nichols Anyway, that was really, really cool. Well thank you so much for doing this. It's been just about an hour and we've had a great conversation and you've revealed a lot of great information. I think it's very exciting, I'm very excited to see your talk as well.

Vicki Dobbs Beck Thank you.

Chris Nichols Are you excited to do it? Are you excited to be at THU?

Vicki Dobbs Beck One, I'm extremely excited to be at THU. I think that the thing I'm most nervous about is, I just really, I want to be able to convey how passionate I am about this space. Do it in a way that is filled with hope and possibility for people, because I believe it's there.

Chris Nichols That's awesome. Well, thank you so much Vicki for doing this.

Vicki Dobbs Beck Thank you.