



USER FRIENDLY

User Friendly at CES: Unlocking innovation in start-ups

Host: Hanish Patel, User Friendly host and digital transformation leader, Deloitte Consulting LLP

Guests: Shawn DuBravac, president and founder of the Avrio Institute
Nishita Henry, chief innovation officer at Deloitte Consulting

Hanish Patel: Over the last five years, cloud, analytics, and technologies empowering digital experiences have steadily disrupted IT operations, business models, and markets. Though these now-familiar forces may no longer qualify as trends, their impacts cannot be overstated and their storylines continue to evolve. Recently new technologies have taken up the disruptive mantle, and each is poised to become a distinct force in its own rights. Nowhere are these trends and emerging technologies more present than at the Consumer Electronics Show, and with

more than 1,200 start-ups expected to attend this year, no better place to start the conversation around innovation than with start-ups. Joining me today, from CES 2019 are Shawn DuBravac, (0:01:00) president and founder of the Avrio Institute, and Nishita Henry, chief innovation officer at Deloitte Consulting. Shawn and Nishita, welcome to the show.

Shawn DuBravac: Thanks, wonderful to be here.

Nishita Henry: Thanks for having us.

Hanish Patel: So let's dive right in. Shawn, can you speak to the sheer number of start-ups at this year's show, and being a veteran at CES, how have you seen these evolve?

Shawn DuBravac: CES has definitely clearly become a start-up show, you see them everywhere, most notably in Eureka Park, which is an area dedicated to start-ups, and I think you really see companies across the entire spectrum of technology. You see them in AR, VR, you see them in 5G, you see them in some of these newer areas that are starting to come online, so you really see

them as part of this broad ecosystem that's built out over the last couple of years.

Hanish Patel: That's brilliant, and I'm actually going to draw in on a couple of those. You mentioned AR, VR, and 5G. For the uninitiated, what does that mean in English? (0:02:00)

Shawn DuBravac: When you look at AR and you look at VR, you're looking at how do we take what's being captured in the digital environment and how do you bring it into the physical environment, so as you look broadly at CES, and you look broadly at the tech ecosystem, what you see is a blurring and emerging that's happening between what's happening in the physical space and what's happening in the digital space. I would argue that for the last 20 years as we digitized our environments, we focused on taking what was happening in the physical space and moving it into the digital space. Over the next 20 years as we move into an age of "datafication," we're taking what's happening in the digital realm and moving it into the physical space. So that's where AR starts to come in, that's where VR starts to come in, it's taking information that exists on the digital level and bringing it into the physical level. So you can think of like a Pokémon Go as a very classic consumer-grade experience around AR, but you also have a tremendous number of companies today running pilots around AR in (0:03:00) warehouses and in construction sites, industrial applications, there's a tremendous number of use-case scenarios, and they are looking at what are the ones that are most meaningful. What are the ones that are going to drive efficiencies, drive productivity, those are the areas to really start exploring now.

Hanish Patel: Brilliant, and I want to dig a bit deeper a bit later on in those areas.

Shawn DuBravac: Sure.

Hanish Patel: And also, Nishita, I'd be interested to know in terms of how you've seen that bigger picture evolve, in terms of innovation and start-ups and the things we once thought were pie-in-the-sky but now are household that we're experiencing?

Nishita Henry: Yes, overall from a start-up community perspective, right, you've started seeing things that were on the far end of science fiction, right? Are we really ever going to see flying cars? Are we really ever going to see robots working in factories, right? And yes we are, right, they're actually here at the show today. I was just in the automotive section and saw one of the flying vehicles, electric-powered, that they were just setting up, right. The AI section has the robotics that start from the small computer-based robotics (0:04:00) to actual physical robots in the space actually enabling people to do their jobs better. So there has been a significant amount of change in terms of what's possible to what's actually probable, and so you see a lot of start-ups actually showing you the art of the probable these days.

Hanish Patel: And of those things that you're seeing through those start-ups, what would you say to technologies that are out there that are taking, I'll call it the disruptive mantle, now?

Nishita Henry: Yeah, so you started the conversation by talking about cloud and analytics and digital experience, right, and those are all foundational to the next grouping of technologies, things like blockchain, right. How do we share information more efficiently? How do we disrupt the mediator, right, so that we can actually share information between non-trusted sources just with technology and not have to have an intermediary. There are things like cognitive and AI that are actually now either assisting us with our work, augmenting the work, or just automating it altogether, right. And we're seeing that trend over time as well. And then last, you know, Shawn talked about AR, VR, and digital reality technologies (0:05:00) that are not just Pokémon Go anymore, right, they're actually helping people to train in real-world environments and helping to actually have business applicability.



Hanish Patel: Let's dig in a bit deeper if we could around those areas you mentioned, around blockchain, AI. What innovative things that you are seeing really in that space, and in particular, where are start-ups really pushing it in that space?

Nishita Henry: Yes. I think there's some areas, specifically in blockchain, around real-life use cases. Things like settlements, right, people have to settle all kinds of information, whether it's insurance claims, or whether it's understanding how trade deals work, right, or whether it's health insurance, there are always multiple parties involved in that that don't always trust each other or know each other, and using the blockchain now to actually settle some of those transactions are speeding things up, are making things much more transparent, and are helping the actual user and the citizen, you and me, be able to own our data in a way that we never have been able to before, where companies were owning our data, and I think that's going to transition with the blockchain to be a benefit to all of us. (0:06:00) Things like digital reality, we're just talking about the training piece, one of our customers, a very large retailer, just invested in AR/VR glasses for all of their employees to train them on simulations, things like Black Friday. You can't really simulate that except on Black Friday, but with a VR environment, you really can help your employee understand what it's going to be like, how to help people better, how to sell and move more merchandise, and can really make their processes more efficient.

Shawn DuBravac: And I think building off some of the themes that Nishita was hitting on, you see a broad focus on reliability, so if you look at something like 5G, it's about creating a more reliable network to do new forms of technology. If you think about blockchain, it's about creating reliability and trust in an environment where it might not exist, and so you can start to then create entirely new services from it. So you look at food security, and being able to track food from the source to where you're having it at the restaurant, that's something that blockchain is very well-positioned for, to follow that all along the route that it takes, (0:07:00) and so you get this new

reliability of information, you get a security of information that starts to exist, and you see that, I think, those ideas percolating everywhere. Autonomous vehicles is about reliability, security, being able to share information directly between vehicles, I mean, that's where 5G can come in again, and so you see all these technologies leveraging each other to create entirely new services, and that's really what you see today is these new use-case scenarios coming up building off of something Nishita mentioned, we're moving from what was technically possible to what's technically meaningful to what's interesting and what's useful, and so that's this transformation taking place today.

Hanish Patel: I want to touch on two areas, the meaning for I'm going to come to, but let's talk about reliability. If you're talking about reliability, we all as consumers often go with a household brand, household name, where it is like that's the seal of approval, that's reliable. Where does a start-up play into that? No one has heard of a certain start-up. How does it get to become a reliable part of that ecosystem that you mentioned? (0:08:00)

Shawn DuBravac: I think part of it is building a service that is attractive to individuals, it's building something and those individuals can be consumers, they can also be businesses. I would argue that, well, we are here at CES, which used to be called the Consumer Electronics Show, it is very much a business show today. It's targeting the enterprise consumers of technology and how their business is changing, and so start-ups will play an important role in that ecosystem. Partners play an important role, so they're partnering with some of these brands that we do know, and so that's one-way they're gaining roads. And the other way I think is that they build and bring to market something that is entirely unique and new to the experience, and it will become second nature, I mean, that's the other thing that happens with technology is that we start to do things as if we've always done them. We forget that life was once different, and that happens in a very short period of time. You can think of something like streaming movies over a 4G network, we never did that in a 3G network, it was a horrible

experience. In a 4G network (0:09:00) we do it today as if we've always done it, and so we're going to introduce entirely new things with these new transformative technologies, these new foundational technologies that we never did before, entirely new use-case scenarios, and in that is opportunities for both the start-ups and the existing companies to change the way business is done.

Nishita Henry: And building on that, Shawn, I think you mentioned partnering. I think that start-ups really gain traction by the partnerships and the ecosystems they develop, right, so whether it's partnering with organizations that really know the business very well and in depth to help make that technology meaningful, like we talked about, or whether it's partnering with other start-ups, really in putting pieces of a puzzle together that make it more reliable as well as more meaningful, right. And the other piece is, I think, decades ago when Amazon started, they really started this reliability concept with the review process, right, and so as you and I reviewed products, somebody else was more apt to buy them because of our reviews, right, and I think start-ups work very similarly. It's the reviews, it's the word of mouth, it's the they get the first client (0:10:00), they get the first use case, and it builds on itself.

Hanish Patel: Building off the back of what the two of you just said, I want to ask you both a two-part question. Having walked the floor and seen a lot of these start-ups and all this innovation, what's really wowed you from a perspective of it's actually meaningful, that's going to make a real difference, and what's just wowed you from a science fiction perspective that you talked about earlier?

Shawn DuBravac: That's the beauty of CES. With 20,000 launches here every year, you see a little bit of both of those categories, and a lot of times they intersect in really interesting ways. I think as you look at some of the autonomous vehicles and how that user experience is going to change is really interesting. So for a long time we've been talking about the technology in building out again that foundation of how do we bring to market this transformative experience,

and now we kind of say okay, we get it, we understand how the sensors are going to work, we're building that out, we're improving that, we're seeking security and reliability, but at the same time, now it's what's the user experience look like (0:11:00) and so you see all of these experimentations and these explorations around what's that user experience. So there's dozens today of different use-case scenarios for self-driving vehicles, for autonomous vehicles, what's that going to look like. In the robotics area you see a tremendous number of applications as to hey, here's, we can put robotics here and they can interact with humans in these new ways and we create entirely new ways of doing business, and often it takes decades for businesses to take that and deploy that into their universe and into their system, and when they do it, it becomes very transformative, so you really see that mix happening here at CES. So to me autonomous vehicles, self-driving vehicles is one area where you really see those lines' intersection, both it's here and it's capable, and we know it, and there are self-driving cars all around Las Vegas this week, from Lyft to others, and at the same time you're looking at what's it going to look like in 10 years', 20 years', 50 years' time. (0:12:00)

Nishita Henry: Yes, it's interesting, the whole future of mobility concept in general, right, it's one of those things we've been talking about for a decade because we've been talking about the autonomous vehicles, and you're right, we're now at a point where the physics of it is now possible, right, with things like the 5G networks and what we've developed in order to communicate more effectively, as well as the technology to read and sense things, but what hasn't gotten there yet is a lot of the regulatory, a lot of the policy, a lot of the how are cities actually going to use this to interact with legacy environments and automated environments together, because it's going to be like that for a very long time, right? And so some of those non-tech things are things that actually have to be figured out now where the tech has come a long way, right. And imagine what we can do with traffic, right, with accidents, with the ability to free up people's time. When you think about the

future of mobility, where today we talk about the congestion and not being able to finish all of your daily tasks because you got a two-hour commute back and forth from work, right? So I genuinely believe it has a way to transform our lives and it will transform our lives, (0:13:00) but we've got to get there from the non-tech part of the world.

Hanish Patel: Got it, got it.

Shawn DuBravac: And it's impacting every part of our lives, and that's the piece that I think we sometimes overlook. We see these big technologies like self-driving vehicles, but you don't recognize how that will impact every piece of our life and every piece of business. You think of like drive-thru windows, well, what will a drive-thru window look like when it's got no driver and it's a self-driving vehicle and where does that food go and what's that experience look like and do we need to start to rethink the infrastructure. Here at CES I saw a puck that you would put on a surfboard that will give you real-time feedback on your surf session, so we're in some ways adding in artificial intelligence, we're adding in automation, we're adding in coaching into this environment that has historically forever been an extremely analog experience. You're out in the water on a board that's been hand-carved and now we're adding digital elements to that, and that's the story of the technology today. It's certainly the story of CES is (0:14:00) where do we start to add in these digital technologies, where does data get created, and how does that data get redeployed to create these new experiences.

Hanish Patel: Talking about that experience element that you just mentioned, as well as the augmentation of digital to our physical lives, if I think about CES over the last few years, there is an incredible amount about voice. Last year it was huge on voice, even bigger this year. Gesture, we've heard about those things for a while, right, you know, we've seen the sort of movies just moving around doing it. It feels like we're using technology and the start-ups using digital to some way augment or work very complementary to our senses. Based on that, what do you think is going to

be the next thing? Is it going to be a different sense, is it going to be a taste, is it going to be something different? I mean, I saw smell-elevision downstairs and smelling cookies they're wafting it out, so what is it going to be, where are start-ups going, are they going to be doing a replication of our senses, or do you think voice- and gesture-based is where it's at for now?

Shawn DuBravac: So I see a world where we automate (0:15:00) a number of tasks that we can't even fathom today. For example, here at CES I saw a faucet that was voice activated, you turn it on and off, but you can also then tell it how much water you want, so maybe you just need a cup of water for that cake you're baking or whatever you're cooking, rather than getting the measuring cup out, pouring the water, filling it up, pouring it in, you just say, Alexa, give me a cup of water and then it pours exactly a cup of water into your mixing bowl. Little things like that, automating a little step in baking of a cake, changes the way you live, work, communicate, all these things start to transform because of some of these technologies, and so those are the new use-case scenarios that I think start to develop from all of the experimentation that's taking place today.

Nishita Henry: When you think about kind of the conversation around the Fourth Industrial Revolution, right, that's really around the human-machine interface and how do humans and machines work together to create new environments, just like Shawn was just talking about, but it's everything from sensors that we wear, right, (0:16:00) it's everything from gadgets you may wear on your wrist so that you can move things around when you're not actually physically touching it, it can be towards actually using data, right, more efficiently where it's either up on a heads-up display for you to use and be able to fix your car more efficiently or data that's up so that you know what your child's report card was even if they're lying to you, "No, I see it, it's right here, you got a B," and so it is just interesting and how we'll use that technology much more efficiently and faster. Something I found interesting though is, right, is we talk about all this tech and we

talk about AI and talk about augmentation, a lot of people have this, oh my gosh, are the machines going to take over, right, and I honestly believe we are a long, long way from that because I think machines fundamentally can't do something humans can do, they don't have common sense, they only know what the humans have taught them and trained them to know, and there was an interesting article around, yes, they can beat you at chess, but as soon as you tilt that chessboard or put a new piece on it, it doesn't know what to do anymore, right, because we haven't trained it to do that. And so when we think about how technology is evolving, a lot of it (0:17:00) is and how do we train our computers and how do we try to use less and less datasets to do the training because right now it just takes millions and millions and millions of pieces of data to train it just to do simple tasks, where a human brain actually can only make sense out of three pieces of data and you'll realize, oh, I've seen that picture, it's a fish, every other thing is a fish, but you're able to show the computer that millions of times, right. So really interesting and just we still will need the human mind in order to help our machines perform what we want to do better.

Hanish Patel: Or is that an opportunity for one of the start-ups to really innovate in that space?

Nishita Henry: Right, right, and it is because they will just continue to evolve over time where maybe the computers will eventually be able to do the commonsense piece of it.

Shawn DuBravac: And I think you'll see a continued experimentation around what do we automate and what do we not automate, and there are so many of these things that we don't maybe realize we want to automate, so, for example, here at CES I saw a start-up that launched a band that you would wear while you're riding a motorcycle that will give you alerts to things ahead of your vehicle, and so you think in that type of environment (0:18:00) you may not want a mounted display or even a heads-up display that could be distracting, but you

still want that information fed to you, and so it's a mixing of what's happening digitally, physically, it's all coming together to create a safer environment. Little things like that where that's an example of something I do want automated. And so I think you'll see a lot of examples at CES and beyond as these companies go out in the marketplace around what can we automate, what do we not want to automate, and that's where you get this mixing of humans and robots, you see it in the industrial space, you see it also in the consumer space.

Hanish Patel: So just building upon the examples that you both gave, very strong and clear examples on the consumer side, I'm actually excited about quite a number of those, so I'm hoping one of the start-ups can commercialize them quickly, but what about from an enterprise perspective? Where do you see some of the start-ups can really play to change the way that we work, for example?

Nishita Henry: It's interesting, the whole virtual reality, digital reality space actually started on the consumer side because they thought (0:19:00) as consumers we would pick that up fast, it's easier to talk to an individual, we can really pick that up versus legacy businesses and changing how they operate. However, I think there is a huge shift to moving towards the enterprise because they're seeing, one, there's a lot more scalability that way, right, and the ability to train masses of employees versus individuals to do one thing, so I think that in a lot of spaces from an enterprise perspective, businesses have the chance to really get themselves into the next generation of offerings and transform themselves as a business much better than they were in the past, and frankly, right, if we as businesses aren't disrupting ourselves, someone is going to, right? So it's a real opportunity to say, okay, how can I embrace blockchain to transform my own business? How can I embrace AI to disrupt the way I was providing data to my clients to actually automate it and then let us go into different areas of business? So businesses have to start thinking about how do I disrupt myself with that type of technology and

the technology piece has to think about what's the B2B impact, right, of actually implementing the technology. (0:20:00)

Shawn DuBravac: I completely agree, and you look through history and that's been the story of history, you go back to the early 1900s where we were harvesting ice out of frozen rivers, and we had 90,000 employees doing this with 25,000 horses and we learned how to refrigerate ice and freeze it in the markets so we didn't have to haul in to urban cities and sell it, the companies that engineered that environment, that innovated that environment, they were building the original consumer-grade freezers and refrigerators, they weren't the ones harvesting the ice, it was entirely new companies that came into that space, and so talking about disrupting yourself before you're disrupted by your competitors, I think, is a very important message for the enterprise to understand. And not only can they use these technologies to redefine themselves, but they can redefine the technologies by how they apply it, and I think that is an opportunity that only comes around every iteration of industrial change, industrial age, and so we're at this period where not only do they get to define themselves, but they get to redefine the technology. (0:21:00)

Nishita Henry: And I think it goes from, just to sum that up, from "doing digital to being digital," right, there is one thing just actually saying, okay, I do digital and I do analytics and I do cloud to actually doing it for yourself, right, and say, I've closed my last data center for my company, right, because it's all in the cloud, right. I have put robotics in so that my finance department, right, now can focus on growth as opposed to cost because my robots do all that, right, so it's a very different mind-set from doing to being.

Shawn DuBravac: Yes, and I talk about that as the transition from digitization to datafication, it's not just digitizing your environment and having all of these siloed, data fields but it's taking all of that together and redeploying it to redefine the business, and not only does that redefine the enterprise, but it also redefines the employees.

Hanish Patel: Let me change gears slightly on a question I've got for you guys. I mean, historically, at least here in the US, when you thought about start-ups, when you thought about innovation, you think Silicon Valley, you think some operators in New York, (0:22:00) Seattle is definitely a hub now as well. Is CES becoming a new hub or is CES where they just congregate to show everyone all the cool stuff every year? What's your take on that?

Nishita Henry: Well, I mean, I can start, Shawn, but I think it's certainly, it's certainly global.

Hanish Patel: Definitely.

Nishita Henry: I mean, Deloitte being a global organization, member firms all over the globe, right, we talk to our partners every day, I talk to our partners in China, in India, in Israel, actually our Israeli partnership is here talking about the start-ups that are being cultivated in these environments to solve similar but yet unique problems, and so they all really complement each other. I mean, even in the US, right, yes, we've got Silicon Valley and we'll have that and it's still an enormously hot hub for start-ups but then you've got places like Austin, Texas, right? I mean, the US Army just put their entire Innovation Command down there in Austin, Texas, and so there is so much happening in different parts because I think, one, the technology now enables people to actually start up faster, right, two, it's such an exciting space and it's changing so quickly that new things can come even quicker than they could in the past, right, (0:23:00) and, three, the access to capital still is a consistent theme and consistently enables other companies to start up.

Shawn DuBravac: Yes, I would echo that, I mean, CES is the platform where companies can come and show their innovations before they drive to market, but you're seeing that innovation take place everywhere, and these technologies do enable scaling like we've never seen. So no longer do I have to go buy servers but I can buy access to cloud storage as I need it, so it scales with me, and to be in

an environment where your costs scale with your growth is an incredible opportunity that has never existed in the past. You always had to buy things in piecemeal and then scale up to whatever the threshold constraint was on whatever technology you bought, and that has changed significantly, and so you can have start-ups in all different parts of the world, and you do see them come together, you've got thousands of companies here at CES from outside of the United States, they've all come here because it's become this important platform (0:24:00) for four days in the desert, but it's all about taking that technology globally.

Hanish Patel: And just springboarding off the back of that, what both of you said, the wealth of experience that both of you of working with startups, advising start-ups globally, if I was to have an idea and start something up, what would your advice be to me?

Shawn DuBravac: Do it, definitely. Dive right in! I think now is an awesome time, it's an awesome opportunity to build off some of the things like we're already talking about. Look for those strategic partners that can help scale that business and make those right connections because I think partners will help bridge some of those gaps and help you find the right marketplace, and find the right application and continuously innovate and iterate that technology because it's constantly being redefined by the environment. And going back to my earlier comment, it's about the technology being deployed and then redeployed in entirely different ways, in entirely new ways, and that, I would argue, hasn't happened in the past. So that's what makes this environment different today is that we're able to kind of reposition the technology in entirely new ways (0:25:00). Even blockchain, you would argue, started off so focused on cryptoassets and cryptocurrencies and now it's being redeployed by companies around the globe as a way of providing new services to them.

Nishita Henry: I would just add on and say I agree completely, find the right partners,

find the right team, right, find the right people, find diverse perspectives from different businesses, different backgrounds to bring to your team, and last but not least, don't reinvent it if it already exist unless you're making it better, right. So if it already exists, find the players in the ecosystem that you can partner with, right, or if you really are making it better, right, then it is, what is your business case and what does better mean, right, so that you can actually have a selling point for that, but those are the things I would tell start-ups these days.

Hanish Patel: Let's look on to the last thing around selling point. I'm on the other side of the fence, I'm in enterprise now.

Nishita Henry: Yes.

Hanish Patel: What should I be looking for in a start-up?

Nishita Henry: Part of it is, right, what are they bringing different and unique in terms of ideas on how to solve the problem because a lot of organizations, right, even giant big organizations that have hundreds of thousands (0:26:00) of employees and amazing thinkers are only as good as their four walls, right, so how can they bring those in that have thought about the problem differently, that have tried to solve it for other companies in a different way, that oh, maybe I can apply that to myself, right, how do I complement those skills, though as you're looking for them, right, it's not just about the tech, it's about do they fit into the culture and how would that culturally work with my organization, and how do I bring that in so it works with my legacy environments, because no matter what, everyone has to live with a legacy environment and some people say, oh we'll just separate out the new stuff and put it on the side and let it do its thing so you don't, the legacy doesn't choke it off, well, at some point it has to come together, right, and so you have to figure out how to meld those worlds, and that comes a lot with not just the pure tech but the culture, the behaviours, the incentives that enable people to be innovative.

Hanish Patel: When I think about CES or anyone thinks about CES, tech, tech, tech, tech is synonymous with it, but if you're thinking about all these start-ups and innovation, what's the most non-direct link (0:27:00) that you've seen with technology and innovation and where it's impacted a totally different industry?

Shawn DuBravac: If you look this year, you see technology is showing up in a plethora of new places. There is a yacht on the show floor this year that's taking up the giant area, there is a giant combine from John Deere, they're a first-time exhibitor here at CES, and so you've got AI on the farm now, and you're looking at how sensors are coming together. I saw an oven that bakes bread, has over a hundred sensors on it, it's digitized, and so the idea is you would deploy that technology in a grocery store so that you're always delivering fresh bread to your consumer. We talk all the time about just-in-time inventory, well, how about just-in-time bread showing up right into your customers' arms, a fresh loaf of bread as they walk into the store. So you're seeing these technologies take new forms and show up in entirely new places.

Nishita Henry: And just, you know, the old saying, necessity is the motherhood of invention, right? When you think about the latest romaine lettuce scare, right, and you think about the disruption that caused in the food industry and in all of our lives, (0:28:00) frankly, I mean, we all love romaine lettuce, right, we didn't want to not eat it, and so the fact that they have had to rethink supply chains, right, and how they're now applying blockchain really is, as you talked about earlier, Shawn, to the whole food supply chain issue so we could isolate those problems quicker, right, to a smaller group and not to disrupt the entire chain is really interesting. You don't think about food in that way on a normal basis, right, but you think about the vastness of our population, you think about the concentration of where our populations are, farther and farther away from the food supply itself, right, and how do you get that from the farms to the table in the most efficient manner, in the safest manner possible, requires technology, so I think it's really interesting.

Shawn DuBravac: And I would argue that's a new shift that we're seeing as well. In the past if you were a company, you could deploy a technology, and it would be a competitive advantage for some period of time, chances are your competitors may or may not be using it, but as they use it, then you kind of move on to new technologies, but it didn't really impact others outside of your sphere of influence (0:29:00) but now we see this technology bumping up against every industry. And so when you talk to legacy industries who perhaps relate to the digitization, they say, oh yes sure, I see what happened to the music industry, I see what happened in the movie industry, that will never happen to me, I'm in traditional construction or I'm in some these more, I'm in food services, it's not going to become digitized and yet we start to see how it becomes digitized, so your example of blockchain is a great example where it's impacting the entire supply chain from the person who's growing romaine lettuce all the way through, everybody is touched by that technology, and so the technologies we're seeing come out today are impacting all these adjacent industries, everything is bouncing off of different companies, it's ricocheting across different industries, and so everyone will be impacted by these technologies in the decades to come.

Hanish Patel: No doubt, no doubt. For me the big takeaway, AI at the farm (0:30:00). You heard it here first, everybody. AI at the farm, that's fantastic.

Shawn DuBravac: And I think more broadly you're seeing AI everywhere because you're looking at all of these pools of data that companies have and they're saying what can I do with it? What value can I create for the company? And what value can I create for my customers? So let me apply some traditional machine learning techniques to it, let me see what we can discover, what can we learn about ourselves, what can we learn about the products that we bring to market, the services that we offer, can we make them better? Can we make them more efficient? Can we offer entirely new services? And that's the history of machine learning is, can I make better recommendations, and

we decided, hey, this works really well in a movie distribution model. Now can I make better search results, that also works well, but where else can I apply this technology, where else can I apply these techniques, you needed data, and now we're at a period where you have data in all these new interesting places, and so they're applying machine learning, and I think that's a fascinating time to be looking at technology, (0:31:00) to be watching technology, because you're going to see all these new offerings, these new services arise because of the data that now empowers artificial intelligence.

Hanish Patel: Right.

Nishita Henry: And the data is moving from just having data and information to actually having insights, right, and that's the differentiation that all organizations are going through now, right, is really understanding, all right, I got all this data, what do I do with it, and for those who are either providing services or creating products, right, how do I use that data to tell me more about my consumer itself, so I can be more personalized to them, or how do I use that data to make sure that my services, right, are actually providing value and not just bodies, right, or not just hours, and so there is a shift in the world from that information to insights, and I think people are going to have to figure out how to do that most expeditiously because the vast amounts of data, and the vast amount of information also create a lot of noise, right? And how do you kind of improve the signal-to-noise ratio will be something that will be coming up in the next several years (0:32:00).

Shawn DuBravac: Yes, and I think going back to our conversation about partners, this is a great place to bring in a high-quality partner to help you work through some of this data, work through this information, because you're sitting on it, but your core business isn't always analytics, your core business isn't what do I do with all of this data and how do I create new services, and so bringing in an outside perspective to help

you understand that, I think is the job of every enterprise, to bring in somebody who can help them decipher the information that they've got and figure out how to redeploy it back into the business.

Nishita Henry: Yes, bring in the specialist for the special problems. That's important.

Hanish Patel: I love it, I love it, I mean, there is an incredible amount that the both of you have covered, and I wish we could continue recording, right, and make this a full miniseries, there is just so much to cover at CES. But some of the big takeaways to talk about, insights that you mentioned, just how tech is going all to adjacent industries and just the proliferate of start-ups that we got here is phenomenal, and anyone who is not at CES, they should get out to CES to see all of this (0:33:00). But if they can't, they've

certainly got this podcast as a fast-track way of seeing it. So with that, I do want to thank you, Shawn, I do want to thank you, Nishita, for coming on to the pod and hope to have you both back on pretty soon, as well.

Nishita Henry: Thank you.

Shawn DuBravac: Yes, thank you.

Hanish Patel: Well, you heard it here today, as we broadcast from CES 2019, the place where the impossible is possible. What may have once been science fiction is now a reality, and start-ups are at the forefront of these changes and disruptions. The next step for these start-ups is being able to take those pie-in-the-sky technologies and turn them into meaningful, useful, and reliable solutions. Until next time, this is Hanish Patel, your host, signing off. Happy listening.

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