

Ep.45 - Charlie Tyson (fixed)

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SPEAKERS

Announcer, Ed Clemente, Charlie Tyson

A Announcer 00:01
Welcome to The Michigan Opportunity, an economic development podcast featuring candid conversations with business leaders across Michigan. You'll hear firsthand accounts from Michigan business leaders and innovators about how the state is driving job growth and business investment, supporting a thriving entrepreneurial ecosystem, building vibrant communities and helping to attract and retain one of the most diverse and significant workforces in the nation.

E Ed Clemente 00:28
Hello, I'm your host Ed Clemente. Welcome to the show. And today we're fortunate to have Charlie Tyson. He's the technology activation manager in the office of future mobility and electrification. Welcome to the show, Charlie.

C Charlie Tyson 00:41
Thanks, Ed. Happy to be here.

E Ed Clemente 00:43
Yeah, well, it's, I'm glad. I'm waiting to hear what you're going to tell us. And so for the purpose of, you know, we know that you attended the Consumer Electronics Show. And I want to make sure that people really understand what it is. But could you first kind of tell us what the show is about just in general, for someone that's never been there?

C Charlie Tyson 01:04

Yeah. And thank you for having me. I'm really excited to share to your audience about the Consumer Electronics Show, and specifically, the one in 2022, that just concluded last week. So my name is Charlie Tyson, as you as you mentioned, I'm with the Office of Future Mobility and Electrification through the MEDC, along with the State of Michigan. So we're trying to create a stronger state economy through improved mobility and transportation, trying to create investments and high-paying jobs when it comes to advanced automotive and the movement of people and goods, but also trying to improve how people get to their medical appointments or get to, to school or whatever it might be, we want to try to find a way to improve the quality of life by improving transportation options. So Consumer Electronics Show 2022, CES, wasn't specifically focused on automotive, but it's definitely it's become a huge trend at the at the show. So CES is essentially like Disney World for global innovators. Think about, you know, top corporations, emerging startups, investors, you name it. This is a kind of one of the biggest events of the year when it comes to technology and innovation. It's now hit 50 years. But it's really a big opportunity for us, within MEDC and the Office of Future Mobility and Electrification, to highlight what Michigan's doing to be a leader in mobility, we put the wheel the world on wheels, but it's important for us to not just sit back and let other parts of the world kind of take our poll position as a leader in automotive. So we're out there highlighting the different successes, the auto industry and the mobility market Michigan has made, but also meeting with companies learning about what they're working on, and how they can support communities and improving transportation and improving the quality of lives for Michigan residents.

E

Ed Clemente 03:01

Yeah, and I think the last 10 years, you've seen more and more auto announcements, whether it's, you know, on the electrification side of things, or just in general, new car companies starting up, I mean, you got quite a gamut of folks who are in this mobility space there now, right?

C

Charlie Tyson 03:18

Yeah, you definitely, from what I hear, CES 10, 15, 20 years ago, was very heavily focused on consumer electronics, right, that's the name of the conference. And that's still a big focus, you see many of the big corporations and manufacturers like Apple and Sony sharing the new widgets in different devices, which is really fun to see, but there's a huge trend and definitely a lot more activity when it comes to automotive and mobility. You see a lot of the big automakers, tech startups, etc., talking about not only what's currently being worked on when it comes to battery and extending ranges, but also what the future will look like when it comes to autonomous vehicles and how it can truly, positively impact the way people and goods move about.

E

Ed Clemente 04:07

Well, it's funny, you mentioned that because I remember when I started at the MEDC, I called you up once about the drones for ships that was being done in I think you went to Northern Michigan, right? Or did you go to Michigan Tech? I can't remember, Northern? [NMU] Yes. And why don't you just tell a quick story what that is a little bit that ties into this because I think it fits a little bit with the CES format.

C Charlie Tyson 04:30

Yeah. So you know, you're you're always sharing really interesting stuff to me Ed, so I think you're alluding to the Aerial Mobility Corridor that was recently announced, announced last week. Is that correct?

E Ed Clemente 04:42

That was one and we can tell that one first, I just remembered another one. Go ahead.

C Charlie Tyson 04:47

Yeah, absolutely. So we see mobility as multimodal. Automotive is obviously a huge focus for us here in the state of Michigan from an economic development standpoint, from job opportunities, you name it, but we see especially over the last few years, an opportunity to view mobility as more than automotive. It's how we move people and goods from point A to point B by air, land or sea. I say, the Great Lakes, of course, since we're here in Michigan, but with that, with that, the State of Michigan our office has worked with MDOT Aeronautics Division to put out a study and identify a private private sector partner to conduct a study to help us understand how we can enable what's called beyond visual line of sight drones. So being able to get this approved approval from the FAA, will really kind of unlock an economic development opportunity for companies looking to deploy their technologies and their drones in Michigan. When it comes even, for example, UPS, Amazon, even smaller companies being able to operate a drone beyond visual line of sight to move vital packages and medical supplies to areas that may have supply chain bottlenecks, but also to areas that maybe are highly remote. Looking up at, for example, in northern Michigan, being an NMU alumni, I always think about what we can do to leverage mobility solutions to address challenges facing more remote and honestly beautiful parts of Michigan.

E Ed Clemente 06:22

And I think there were probably a lot of drones, I believe, at the CES too as well. Right? A lot of different formats for those two.

C Charlie Tyson 06:29

Yeah, absolutely. You'll see small drones that, you know, just consumers will use but also, you're even seeing some automakers invest in advanced aerospace companies to develop what's called it, eVTOL, electric vehicle takeoff and landing. So this will take some time of course, but essentially, the goal is for drones that are the size of vehicles to be able to take off vertically, and operate from a hybrid propulsion system or an electric propulsion system and kind of go from point to point within cities, moving people and or goods. So you're looking, you're seeing not only tech startups, but even big automotive companies looking at different partnership opportunities in different modes of future transportation.

E

Ed Clemente 07:18

You triggered something else by that. But electrification, you know, I noticed even in your title there two different words, two different nouns, I guess, nouns or verbs. But so what is the electrification, kind of like at CES too? Is there a movement in that area too?

C

Charlie Tyson 07:36

Yeah, absolutely. This this year was definitely heavily focused on electrification, you saw some announcements from GM. There were other different types of emerging tech startups from all over the world looking at or sharing their different battery technologies or, you know, software solutions for in-vehicle displays to help you identify where charging stations are so that, you know, drivers don't have range anxiety. So there's different solutions coming to the market currently, that can really make an impact right now. And based on where the industry's going and how we want to create a more environmentally friendly transportation system in Michigan. It was a great opportunity for us to talk all things electrification at CES this year.

E

Ed Clemente 08:21

You know, and you also just triggered something else. You mentioned General Motors, which is headquartered in Michigan. Were there other Michigan based companies there?

C

Charlie Tyson 08:30

Yeah, absolutely. You see a lot of different tier one automotive suppliers that are looking to invest in startups, but also partner with other corporations. But for example, you know, in my role, and also due to the passion I received from or I learned, I learned to passion when I was at NMU, going through Invest@NMU. This is a program that was partly supported by MEDC and it helps entrepreneurs take their ideas from what we what we called napkin to market. So I really find a lot of passion for working working with entrepreneurs. So I say that because there are a few companies out at CES from CES 2020 that were from Michigan, for example, Dunamis Energy, this is a Michigan-based company that is woman owned, diverse certified business. They are kind of manufacturing or beginning to manufacture and develop innovative electric vehicle charging stations. Their team was out at CES this year 2022. And they were working with working on trying to establish partnerships with automakers. So that was a really exciting team to see out there. We also had another company, Adastec Corporation, they recently set up their headquarters in Detroit. They're from originally Turkey and then San Francisco, but they saw a huge opportunity in Detroit due to our automotive cluster, due to the progressive economic development support. So they've actually set up their team in Detroit, and are working with Michigan State University to deploy their full size on semi autonomous transit bus on Michigan State's campus. So their team was out there, MSU was there talking about this, really, first of its kind in the US deployment of autonomous technologies.

E

Ed Clemente 10:19

So when you go there, do you get a chance to talk to other Michigan-based companies? Do you try to visit them? Or do you...?

C Charlie Tyson 10:27

Yeah, definitely. You know, there's a lot of time spent prior to the conference, you know, identifying who's going to be out there, which partners and universities will be out there. And that helps you plan out your week. I learned when I first attended a CES that you can plan, you can plan for days and weeks, but there's going to be things that change on site. So you're, I spend a lot a lot of my time going to pre-scheduled meetings with Michigan companies, but also companies from Israel, and Silicon Valley, and Boston, from all over the world trying to meet with companies that are, that have unique backgrounds, unique technologies, understanding what they need for support and how we can essentially bring them to Michigan, because we know the state of Michigan is one of the best places for startups to grow and to partner with emerging technologies and the auto industry and communities, transit agencies, we try to create an ecosystem here in Michigan, that is very attractive for startups and companies of all sizes to, for that matter. And so we're out there promoting that, trying to just connect with companies that want to move to Michigan.

A Announcer 11:33

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E Ed Clemente 11:50

The governor kind of created the Office of Future Mobility and Electrification, correct, was that it was about jobs to try to attract talent. Did you get a chance to do any talent things like, is there companies out? Do people bring their resumes? Do they, you know, is it like that kind of activity too or...

C Charlie Tyson 12:08

You know, I think there are some tracks, they call them different tracks at CES, where there's presentations and different exhibit areas. The one thing I can point to when it comes to talent is having universities out there. In past years, we've had Michigan Tech University this year, Michigan State University was out there talking to companies that may need to hire and we want them to hire Michigan employees. We want them to bring their operations to Michigan and work with our universities to identify, you know, very knowledgeable and successful future leaders. So having the universities out there is really helpful. I didn't get a chance to go to any presentations related to talent. But I know that there's an opportunity to go check out CES 2022s website and learn more.

E Ed Clemente 12:55

You also, I just remembered what I did send you a long time ago, but it was at Northern, and it was the autonomous, I think water vehicles or I might be saying it wrong. What is the name of that program up at Northern?

C Charlie Tyson 13:09

Yeah, there's, that's actually through Michigan Tech University. Northern Michigan University has a cybersecurity program that's really unique, and cyber is a huge factor that spans many, many industries. But the one that you're mentioning is the Great Lakes Research Center through Michigan Tech University. They are one of the leading global maritime testbeds. We want to leverage our assets here in Michigan, Michigan Tech does that with the Great Lakes and their engineering talent. So they're testing to make freight and shipping more efficient, utilizing the Great Lakes. They're looking underwater surveying, search and rescue, working with companies globally to partner with Michigan entities. And my team, we spent a lot of time going out finding companies that need to do testing. When it comes to maritime, so then we like to connect them to our experts at Michigan Tech University to do that testing that's needed. Solar powered boats, a startup out of West Michigan, LilyPad, they recently received a Michigan Mobility Funding Platform Grant to deploy their solar powered and semi-autonomous recreation boat, so that's mobility too. We need to think about it more than just ground-based transportation.

E Ed Clemente 14:24

I think Michigan might have more boat licenses than any other state in the country, I think. I don't know we might be, I think because we have so many inland lakes too, it probably helps with the Great Lakes too. So was there anything you sort of liked just as you as the person who's just sort of intellectually curious? Like, what did you find sort of interesting out there too, as well?

C Charlie Tyson 14:47

Yeah. So as much as I get my interest from gadgets and technology from my father, he's always been able, you know, going out and trying to get the newest phone and whatever it might be as much as I do like technology for when it comes to consumer devices. I'm really interested in looking at what is transforming industries. That's why, you know, that keeps me up at night. And I think that provides us a big opportunity to innovate here in Michigan. So one really interesting thing I saw was BMW. They have they have, they announced a really, they show they demoed a technology that could actually change the color of a vehicle with kind of a switch of a button. And right now it goes from black to gray to white. But over time, that, you know, you could essentially change the color of your vehicle to many different colors. And that's pretty cool. And then also, John Deere announced their fully autonomous tractor, which was really cool. We have a huge agriculture industry here in Michigan, a main economic driver for our state. And so, you know, when I saw that, I'm like, how can we work with Michigan farmers and producers to understand maybe they have labor shortages, or they have, you know, inefficiencies? How can we work with industry like John Deere and their fully autonomous tractor, leverage their technology, their investments, potentially into work with Michigan agriculture stakeholders?

E

Ed Clemente 16:09

Yeah, no, I saw actually, it's funny. You said those two, I saw the car that changes colors. And it's pretty neat. Like, you know, I can imagine for safety factors too that might even be more viable, like at nighttime for driving around or during storms. And, and I thought that the autonomous tractors, I'm surprised, I thought I've been hearing about that for quite a few years. But it sounds like this is actually I should say, rubber meets the dirt. But the yeah, for farming now. And that's just kind of really changed things. Because it's some pretty big projects. I think that the picture, I saw the one I don't know, if they had that big giant tractor at the show, did they?

C

Charlie Tyson 16:51

They didn't unfortunately.

E

Ed Clemente 16:53

Um, well, you know, I think that we're close to the end of the show here. I just want to ask you a couple more questions. But you're, you're a younger guy. So what would you tell yourself, maybe if you went back to high school to say, what would you go into a career wise now? Or do you think you pick the right career?

C

Charlie Tyson 17:14

You know, I feel very lucky. I did, you know, up my game, if you will, when it came to doing the best I could in classes during college at NMU during my undergrad. But I feel very lucky. I think the different programs that are available for students, get involved. I definitely saw value in you know, signing up to present when it wasn't, it was more of a volunteer opportunity to present during a class or getting involved in a local program within the university. Kind of go above and beyond when it comes to things that could help you gain experience, you know, teach you whether you might like something or not when it comes to your certain fields. So I definitely spent my, you know, part of my undergrad as involved as I could. And that kind of led me to, again, Invent@NMU where I found passion for economic development and entrepreneurship and was able to get my foot in the door with MEDC and work for the Pure Michigan Business Business Connect programming. I can see myself in economic development long-term, I feel very fortunate.

E

Ed Clemente 18:17

I wish I would have saw that when I was in college. The last question I'll ask you, what's your favorite spot in Michigan? I know you're an outdoorsman.

C

Charlie Tvson 18:25

Oh gosh, that's a great question. I can't be too specific because there's a few spots that are a bit of a secret, but I love all things. Upper Peninsula. I love Northwest Michigan. I'm a big outdoorsman, as you said so I just love getting out there spending time along Lake Michigan, or Lake Superior. I guess if I had to say one, I would say Pictured Rocks National Lakeshore. It's a beautiful National Lakeshore that we have in Michigan. If you haven't been up there, it's not that long Lake Drive. And we hope you can take electric vehicle there sooner than later.

E Ed Clemente 18:58

Yeah, good plug. And by the way, you did a great job on our report for 2022 CES. Once again, our guest was Charlie Tyson with the MEDC. He's a Technology Activation Manager with the Office of Future Mobility and Electrification. Thanks again, Charlie for doing the show today.

C Charlie Tyson 19:15

Absolutely. Thanks a lot Ed, take care.

E Ed Clemente 19:17

Join us next week as we chat with Quenton Messer, Jr, CEO of the Michigan Economic Development Corporation on the state's momentum closing out 2021 and moving into the new year.

A Announcer 19:29

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