IT Matters - Episode 5

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SPEAKERS

Aaron Bock, Narrator, Curtis Hughes

N **Narrator** 00:07

Welcome to the IT Matters podcast, where we explore why it matters and matters pertaining to it. Here's your host, Aaron bock.

A **Aaron Bock** 00:17

Welcome to the IT Matters podcast. Excited to be here today, we've got a great guest. But before I introduce him, I want to call out that we are going through, I think record highs right now for Charlotte, North Carolina yesterday, where actually two days ago, we cracked 103 degrees from what I saw. So if you are in a part of the country listening, going through this heatwave, we're suffering right there with you. So hope everyone is enjoying their summer. We've got a great conversation today. So I'm gonna introduce our guests. We've got Curtis Hughes, who is currently the CIO at Midrex technologies based here in Charlotte, North Carolina. And I'm gonna start off with I'll let Curtis explain more and tell you a little bit about him. But I love Curtis's tag. He's got it on LinkedIn, you can follow him, but he says he's a digital leader with a passion for culture and people. Curtis, welcome to the show.

C **Curtis Hughes** 01:14

Yeah, thanks, Aaron. Appreciate you having me here. Glad to be here.

A **Aaron Bock** 01:17

We're excited to have you and I'm gonna start off I ask every guest who who comes on this question. But before we go through, I want you to kind of explain if you had a summarize someone you meet new, who is Curtis Hughes, specifically your, I guess, in your professional and personal background? What would you want people to know about you?

C Curtis Hughes 01:39

Yeah, first and foremost, dad and husband and and love my family and love that time. And so really just try to work hard play hard kind of thing and try to find the balance between those two, I think a lot of people coming out of post COVID. And everything going on, I think that's really important to people as well. But I really do kind of like my tagline says, I really do like to sit at that intersection of where technology and people kind of collide. And there's there's everything today's digital, when we'll probably talk more about that. And every company is a technology company, whether they think they are or not. And it impacts our people. And we're seeing that across the board, whether it's culture engagement, how our how our teams can work wherever they are in the world, flex, Hybrid work, all that kind of stuff. So I really like to work on projects, work on challenges and solve problems where we're really impacts people.

A Aaron Bock 02:29

That's awesome. And I know from talking with you before, you're unique, you're a little bit unique, because right now you're a CIO title. And a lot of people who end up in that role have been kind of working their way up. They were director, they were manager, they were on the help desk, you were actually in in an entrepreneurial role. I can't even say that word today. Less in the last 10 years. So maybe, if you could share with our guests a little bit more about that, at that point in your career, what you were doing and kind of how you transitioned?

C Curtis Hughes 03:04

Yeah, I love the the consulting side, I've started a couple of companies and ran those. And I said early in my career, and I try to tell others this as well, when I when I talked to them and people I talked to is, I really tried my entire career, I was kind of one of these people that wasn't defined by a title. Even when I was first coming out of school and software engineer developer, I was interested in what marketing was doing to sell the software, whatever it was. I was just always interested in more than just my, and for better, for worse, I think it's actually turned out better, where it's led me to all these different places, rather than just putting up putting a title on it. I'm a software engineer. I just love technology. I love how it impacts business. I love making businesses better. I love growing businesses. And if I can do that with technology, if I can do that, as a leader of an organization, I just I go where I see challenges I like to build I like to I like to solve problems. And sometimes that's with technology. Sometimes it's not. So yeah, I took kind of my consulting 10 plus years consulting and growing businesses, turn that inward on Midrex. I've been here for the last five years and just kind of pouring that into helping Midrex grow and helping veterans kind of transform from the inside out from a technology standpoint for sure.

A Aaron Bock 04:20

How do you think your consulting background has helped you be a better leader, a better CIO for a technology organization at Midrex?

C Curtis Hughes 04:30

Yeah, it's good question. I think part of it for me was always loved being a smaller companies like I've never been at the huge, huge organizations, many, many 1000s of people, even Midrex is a fairly, fairly small organization. And I think it allows you to wear a lot of different apps like wearing hats. I don't like just wearing one hat. And when you get to wear wear multiple hats and you have some experience, across a variety of things. It helps you just understand when things come you see things from a different perspective and I think that's probably the best. That's where it is perspective, all my experience, up to this point, even though it looks like a winding road, sometimes I think it's been perfect for where I am today and I am an everything happens for a reason, kind of guy. So it's allowed me to have a unique perspective on growing it. A lot of folks that are in technology, especially probably don't think like a business owner, right? How do I manage cost? How do I do, and having that and grown a company manage P&L, how to hire people, how to let people go, when you're starting a company, your HR, your accounting, your everything, right? And so you're just having that perspective has allowed me to take that. And when I speak with our accounting teams, or anyone internally here, as a CIO, it's just helped me connect with those folks more and just understand kind of what the problems they are, they're having.

A Aaron Bock 05:46
Yeah, as a small company, you are all those things, but you pretend to be bigger. So you make email aliases for each one that all go back to you.

C Curtis Hughes 05:54
Exactly.

A Aaron Bock 05:55
And you mentioned sharing your perspective. And I know, I'm excited for our guests to be able to listen your perspective, because I think you really do approach, technology and IT different, differently the way you talk about it. And a lot of people talk about the tech. So before we get down that road anymore, I want to ask the same question that I asked all the guests. So, you're in your CIO, now, you lead the technology department Midrex, you've done consulting for technology, what is information technology to an organization at this point in time? And 2022? What does that mean?

C Curtis Hughes 06:31
Yeah, I think it was, I'm a big quotes guy. And I just, I take bits and pieces here as well. I think it was Drucker that said, and it was back in the 90s. He said, we spent the last 30 years thinking about the technology, and we'll spend the next 30 thinking about the information or something like something to that effect, I'm paraphrasing, but I really do think it is, today, we're in the age of data. And as much as there is technology, data is huge. And when I think of information technology, I really do kind of center in on that information piece. And that was one of the reasons I came to Midrex. And Midrex has been around a long time but but wasn't leveraging

all the information and the experience and all the learnings to take that and pour it back into the organization and do things better. And so I think we used to see data as, as maybe the exhaust like, hey, let's build all this technology. And all this data comes out the end. And yeah, we don't know what to do it. Today, data is the fuel, right? We take that data, and we pour it into things to kind of to kind of drive it. So it's, it's a huge shift. And I to me, I think that's that's one of the most powerful things about information technology today in organizations.

A Aaron Bock 07:38

So we're gonna come back to this because you mentioned data three times, I think, in that cover in that in that snippet, but is kind of a hard question maybe to answer. But how does data so when we talk about technology, we're talking about the data, we're talking about the systems behind it, but you always talk about as a person, people are the crossroads. People are, what drive it and people is what really is driving the change. Why do you say that? Like how does people in tech, like information technology? How do they relate? And why is why are people so important to it?

C Curtis Hughes 08:11

People are what organizations are about and people do, companies do business with people and not not companies and not technology and those kinds of things as well, I think people are at the heart of everything we do. And so I think it's easy to get lost in new shiny technologies, and data and KPIs and all these things. But at the end of the day, I continue to, I'm not always perfect at it, but always try to come back to why does that matter? So what I've heard someone tell me asked me that before, like always, so what. Like, yeah, great. We've got all these KPIs. And we've got all this great. So what, what does that like? What do we do with that? Does that help somebody do something better? Does that give someone insight that makes them change their strategy on how they recruit new employees? What do we use that data for? And how does it impact it? And that's what's powerful to me is I've got all these these tools over here, my garage full of tools. Here's the problems that we're trying to solve as an organization, as people as departments as a business. How do I go there and get my screwdriver, my hammer and come over here and try to solve that instead of just walking around with a hammer saying, Hey, I've got this technology, what problem can I solve with it? And the old adage, right? When you're when you're a hammer, everything looks like a nail. So I really don't ever try to leave with technology and really try to understand, like, what are we trying to solve here? Like, what are we trying to do?

A Aaron Bock 09:23

So we're gonna pivot a little bit. Curtis, I want to go back a little bit in your career. How did you actually get started in technology?

C Curtis Hughes 09:32

Yeah, so it depends on how far you want to go back. But I think I was always one of those kids that like, my parents, I drove them crazy, I'm sure. And now my son I see this in him as well. Like to take things apart, I like to figure out how things worked. And so all through school in

Like to take things apart. I like to figure out how things worked. And so all through school in high school, especially, you're looking at technology computers are the guys okay? I enjoyed working on computers, that kind of thing. It was good thing jobs for sure. And so that's what I did. I focused on computer science and went to school got a computer science degree from here in Charlotte, UNC Charlotte and came out at that time, most folks that came out with a computer science degree, you're basically a software engineering writing software. And so that's how I started is building software, but thankfully got in at a company that was a small growing startup. And so I was able to, like we talked about wear a lot of hats, and that led me to things. I really think it's really a benefit, to see what you really enjoy. I enjoy this. And so I moved from, from writing software to architecting, to designing, UX and interfaces and things like that. So I've done everything from user interface design, to building out full product to writing software across and then leading teams and then growing from there to leading teams of software engineers.

A   Aaron Bock 10:50

Did you always want to be a CIO at some point? Or did that just happen? Naturally or by accident?

C   Curtis Hughes 10:57

Yeah, if you know, me, personally, you know, I don't think there's any accidents. So, I don't think it was an accident. But it was never something that was a milestone, I had always said, when I have my own company, like, hey, if I wasn't running my own company, that's probably the right fit, because I don't want to just sit and write code, or I don't want to sit and just do that. I like the variety that comes with the business side, the technology side, bringing those two together. And I like to sit right in the middle. And I think it's a it's a perfect role for that. So it kind of just evolved, and I knew what I enjoy it. I knew myself, I knew what I was good at and knew what I enjoyed doing.

A   Aaron Bock 11:36

Yeah. So we talk on this podcast a lot about IT matters. Obviously, it's written above my head, what does that mean? So why IT matters, and what are IT matters. And so what we mean by that is, we talked about, you defined information technology, but let's talk about why IT matters. You're a CIO, at a midsize manufacturer with an interesting place in 2022. With the political climate, you guys being international. So why does IT matter to Midrex? Why is it an important function? Why is it going to continue to grow in importance at Midrex?

C   Curtis Hughes 12:14

That's a huge question. I think if you look across the board, and most organizations, and I think I said it earlier is that every company is a technology company, right? And everything's so digital these days. But certainly, technology helps us do things better, faster. So automation is a big piece of some of the things we're working on now, what used to be, five people doing something manually now. And it's not necessarily about removing jobs. It's about putting that unique talent of those people on other creative work that a computer maybe can't do and

automate, right? But the things that happened the same way all the time, how do we automate those things and make us more efficient so that we can scale and grow our company, maybe without having to add a lot of headcount sometimes, and we can grow and do new things. So I think that's a big piece of it. But also, one of the areas I'm really interested in is really that intersection of people so how does technology help us engage with our teammates more? So whether it's internal enterprise social network kind of stuff, even looking at things like sentiment analysis. And how do we stay at the pulse of our teammates, and especially with hybrid work, and how do we bridge that gap and stay connected with our teammates, when they're halfway around the world and we don't see them that often or ever? How do we use technology to close those gaps. And I think that's been one of the amazing things to see over over COVID When people couldn't, then they adopt a team zoom, all these kinds of things. We were using teams before COVID hit, thankfully. But I think there's a number of ways and I talked about the data piece, too. And we're doing a lot more with data now, where we're getting data from, from plants, and looking at that and helping us develop new products and our r&d and how we design these plants and do it differently.

A Aaron Bock 14:00

You mentioned automation. And I think people hear that they hear it on the Superbowl commercial at halftime that everyone talks about automation. If you would be so kind help us understand, within Midrex, for example, give an example of where automation when we talk about it. Give a real life example for our listeners. So they understand what do we automating? I think some people just think it's like this made up thing that just data runs through a robot, but it's not.

C Curtis Hughes 14:29

No, there's a number of them. I think something really simple that people will get is, when I came in a few years ago, every computer and again, we're not a Bank of America, huge company or anything like that, where we've got, 10s of 1000s of computers to deploy, but still a number of computers and things like that refreshes, building all those by hand. So someone going in and you think about setting up the operating system, installing the software. That takes a lot of time. It takes a person almost full time building those things out, staging them up, automating that so going to things where these automated builds go. And it deploys our software based on who you are in the organization. So if you come in, you're in accounting, you get this software. And then there's ways we can do that. Another area, we're using it a ton is on the security side. So with security, and a small team like ours, all the threats that are out there, just because we're small, doesn't mean we don't have the same threats. The bad guys don't care what size you are, they're just coming after anyone. And so how do we look at, threats and things that come through and sift through the noise and so automating some of that, and even using things like artificial intelligence machine learning to figure out what's, what's good, what's bad, so that we can quickly sift that out and say, yep, we know that that's not something to look at, or yeah, this person never does that on their computer, why are they accessing that server? And so we've used automation in that way, so that from a monitoring standpoint, and security standpoint, so that we can see kind of what's going on within the organization?

A Aaron Bock 15:57

Yeah. So you have an organization right now of we'll call it a midsize organization, I don't know exactly how many employees, but if you could go around to each person, and you mentioned automation, how everyone is using technology, two questions, and you can kind of go which whichever way you want here. One, what do you think people not understand about the IT department and technology? And what do you think? If you could talk to each of them and sit down and say, please know this or please consider this? What would it be?

C **Curtis Hughes** 16:32

Yeah, I think a lot of times one of the things that I think people maybe don't understand about technology is the iceberg effect, right? You see the 10%. But there's all this stuff that goes on behind the scenes. So just just to keep everything running and what goes on to to help computers run and all the software work, I think that's a big piece of it, right? Just helping them understand all the bits and pieces that go into it. But also helping them connect the dots. And that's something that I really try to do a lot of here we hold town halls, we hold tech cafes every month, my team and talking about new technology and and why it matters. So we talk about these things. And I think that's probably one of the best places to start is to talk about it. Don't make it some black box over in the corner, where it's just no one knows what kind of goes in and out of it. Why does it matter? What are the things we're doing? Why are we looking at data and launching new dashboards? Why does that matter to accounting or whatever. And I think it really impacts them and helps them do their job better if they know why we're doing certain things, it certainly helps change happen better, right? When someone knows the why and kind of what's in it for them. But I think also just, if I had to sit down and let them know about, things that IT is doing. Really my goal, my team hears it all the time is invisible IT. I don't think IT should be something that's visible, like the best technology is invisible. It does work. We all use things and whether it's iPhone, or whatever it is. And I actually have a KPI and measurement. And we actually measure and kind of like an invisibility index. So based on tickets and things like that, like how visible is technology to our teammates. And I use that to kind of gauge and we change directions and do different things because no one comes into the office to use Excel or Outlook. They come in to solve problems and to do certain things in their group. And for me, technology should get out of the way and just help them do those things better. So I think trying to try to make sure that we were always as invisible as possible, I think is one of the things that I like to do.

A **Aaron Bock** 18:28

Yeah, I want to drill into this a little bit more, because I've not heard of the invisibility index. So you actually track how visible IT is? How many is it? How many tickets meaning if there's less tickets, that means the more invisible you are?

C **Curtis Hughes** 18:44

Yeah, that's the key. Tickets walk up things we hear things we get through our tech cafe. So I try to have a lot of touch points. We do walk through talk through kind of things we walk around. We have all kinds of things I push my team out of, get out of your desk and talk to folks and try to learn so we're always talking to the business in different ways. But yes, certainly tickets is one of those. But every ticket is not obviously something that's visible, something

maybe just be a question like, hey, where do I find something or whatever it is. They can be all kinds of questions. So certain types of tickets. Yeah, we try to track that and say, this is something that shouldn't have been there, right? It's something that was visible that should have just worked and so we try to track that. I wouldn't say it's perfect by any any stretch, but half the time and half the battle is just the intentionality around, let's start using this terminology. And let's try to understand and let everybody on the team try to work to make technology invisible to our teammates and it changes your behavior when you just even think that way.

A   Aaron Bock   19:45

It's interesting. I feel like there's a lot of people out there that might want to when to take that metric and and talk to you about it. So I'll let them hit you up on LinkedIn because I think it's a really fascinating, you hear shadow IT and I think we've all heard shadow IT. I've never heard of invisible IT. You already talked about your consulting for 10 plus years now you're in an organization running IT. How do you think things have changed when considering big projects? So like, take a product officer or take a plant manager right now where you're at, like, 10-20 years ago, I assume decisions were made, IT was sort of an afterthought, go do it, make sure this works, blah, blah, blah. I feel like Today things are a little bit different, you have to consider the technology aspect of it. So how has that changed from what you've seen from your consulting days? where you're at now? Like, how do you have someone who might be in charge of something who doesn't have a lot of technical expertise? Consider IT well, like, what do they do? Well, to make sure that it goes that the technology behind it is thought through properly?

C   Curtis Hughes   20:53

Yeah, make sure I understand the question. So I really think that it all goes back to technology, like manufacturing anything else, it's there to solve a problem. And really, that's probably people get tired of me saying it. But to me, it really comes down to being that simple, like, whether you've got a technical background or not, and trying to understand, I think a lot of times, when technology was coming up, yeah, we were using it to solve problems, but it was, it was heavily focused on the technology. Now, there's so many aspects to it, and especially how it impacts the people. And even today, we hear the term you can call it whatever you want to, but your retention and hiring and those kinds of things as well. But I think to me, it goes back to solving the problem, and what do we try to do to solve the problem? What new problems do we have that we didn't have before? And companies have to keep a competitive advantage, and they have to continue to grow and adapt to that. And I think technology can help them get there, get there faster.

A   Aaron Bock   21:57

Yeah. So you would agree that organizations that take a step back ask the question, what problem does this solve? When we're making a technology decision? You've seen those organizations do IT better. I mean, is that, would you agree with that statement?

C   Curtis Hughes   22:13

Yeah. And I will say the company's data, that consider really that focused on, we hear it all the time, people process technology, data is in there as well. But used to say, in the consulting days, spend 80:20 kind of thing, right? 80% of your time on your people in your process, and 20% of the time on technology, because technology really is, at the end of the day I don't want to oversimplify it, But it is the easy part. Like anyone can do technology, you can implement certain technologies, find someone to implement technologies for you. But understanding how it impacts your people, short term long term, what processes need to change? How do we need to do things differently? Do we need to change our business, because of certain things that are happening and those kinds of things? To me that's like, when an organization comes in, tool first, technology first kind of thing versus someone that thinks about how it's going to impact the people, the processes, how we do business, all the things around the edges. I think they do it better for sure.

A Aaron Bock 23:13

Yeah. We've heard it a number of times before actually a couple things you said, other guests have said like you mentioned in a previous thought, highlighting what impact IT has had for others that don't understand that the iceberg effect. There's 10% They see the rest they don't. I think it's a great practice to help people understand this is what's happening in the background and in allowing people to see oh, this is actually what goes into this, ,but to your point, the planning behind it, the impact of it, but what problem does it solve? And how do we become more efficient before we move into like trends? I guess I'm curious in your personal life, because you've spanned across a number of industries. What technology personally do you I guess, what technology do you like the most what technology has changed your life the most? And why?

C Curtis Hughes 24:02

Yeah, there's hardware there's software there's all kinds of different ways you can look at technology for sure. I'm a I'm an Apple iPhone, it's really the only Apple I use I use these PCs but my iPhone is probably transformed my life and it took so many things and put it in your pocket where calculator, music, whatever it is and so and today just to see how far it's come and the camera. I'm a big photography guy did full photography, but full cameras, all that kind of stuff, kind of amateur photography. You can do so much on the camera on the iPhone now and don't even need like the larger cameras. So I think the iPhone for sure. But from a software standpoint, I think one of the things that I love everybody tells me I'm maybe weird about it, but OneNote. I'm a huge, huge believer in Microsoft OneNote. I've used Evernote and some other tools like that, but I've been using OneNote since about 2009. I would call myself a pretty heavy power user of OneNote and just organization brainstorming all kinds of ways to use that tool. And then I think the last one is just the new things that you can do with voice. Whether it's Siri whether it's Alexa, we kind of go with the Alexa. It's a love hate relationship right now with Alexa, because some of the updates I think they push out on Alexa don't always work the way we want them to. But, it's great tools. it's got a lot of promise that things you can do and driving down the road and speak to my phone and put something on my to do list for tomorrow while I'm thinking of it and not have to write it down or try to remember it. That's pretty powerful stuff, the ways we can use some of the technology.

A Aaron Bock 25:36

My kids like using Alexa to they like yelling at it as loud as they can to play Winnie the Pooh and Disney songs over and over and over. So thank you for sharing. So let's let's kind of transition over to some of the trends and what we're seeing in IT. So I guess you mentioned in a previous thought you talked about cybersecurity, automating it talking about tasks, onboarding and off boarding. What trends are you seeing in let's talk about Midrex for a second through the manufacturing industry? What trends are you all seeing in IT that are going to matter now and in the future? And I can guess one? I think from what you've said data a number of times, but I'm curious to dig into these a little bit more?

C Curtis Hughes 26:18

Yeah, there's a number and they've been out there. They've got different levels of adoption across the organization. I would say we're still trying to get our hands around some of these. But certainly, how do we use AI machine learning those kinds of things for these plants. Some of these plants that we have running for 30-40 plus years, so we don't own and operate the plants, we build them and design them and for other customers, but using that data to help us know how certain components that we designed from an engineering standpoint, function and certain locations and geographies around the world. And we just, using data to do that, what about predictive maintenance, knowing when a component may fail or something based on it's in the Middle East in the desert versus some other place that's very cold, or whatever it is. So, I think using that more to really understand and learn more about the data and the plants and how they kind of operate. And then kind of going into that there's a term, people probably heard it, but this concept of a digital twin, right, so you have a digital version of a physical automotive and using it, manufacturing, steel means steel is always a little bit slower to change, but really in steel and manufacturing, as well like having this this virtual model, that's the exact counterpart or twin of a physical thing. So while we've got the physical plant, and we used to send people over to look at the plant and see where something was leaking, or whatever it is, now how do we take that get get real time data, overlay it on the 3d model of the plant, and we can see this living breathing like plant here in Charlotte seeing it on a screen and how its operating and how its functioning and what's going on and being able to see how it reacts and run simulations, that's one of the biggest things is hey, what if we change this or reduce the diameter of this pipe? Well, that makes it you can do all that in real time, because you've got to fill it, the virtual representation. So that's, that's a big piece, I think, especially around what what Midrex is trying to do that's changing a lot of a lot of what we're doing.

A Aaron Bock 28:18

So you mentioned the ability to have a digital twin, I actually am not that familiar with the concept of a digital twin. So if you don't mind, just for the for the folks that haven't heard it like me, what do you mean, elaborate a little bit more on like digital twin? So you have a physical plant? You have, obviously the digital copy of it, what else can you do with a digital twin?

C Curtis Hughes 28:39

So you have you have the, you design it on on software, right. And so you have the model,you have a digital version of it. And then you have the physical plant that's running and sensors in

the plant. That is you could have vibrations, you could have temperature, you could have sound, whatever it is speeds of motors and all that kind of stuff. So the data is coming off. It's flowing now onto the screen, right? And so you can see on the screen instead of just like yep, I design that compressor. Now you can see what that compressor is running at this mini RPM, or whatever it is. And then what's nice is once you have that, and you have real real data coming in, then you can run like what if scenarios, like I just talked about, where, hey, what if we change this or reroute something here because this new plant needs to do something a little different? Well, how's that going to change how this thing runs, you don't have to guess and try to go through it set up big, you can do it all right there, because you've got data and you've got the digital representation and you can see how the hell that will function in automotive. Like I said, I've been using this for for years and you take wind tunnel data and they can take the digital twin and shape the car, all kinds of stuff like that. But um, you don't need to travel as much you can. You can be a much more proactive around how you make design changes, predictive maintenance, like I talked about. So I think that's one of the powerful things about it, for sure.

A   Aaron Bock 29:57

And I assume that's what's driving you've mentioned data a number of times, like that's what's driving the amount of data increasing and the reliance on data, because you're getting more real time data of real time processes that maybe we haven't had before. Is that true?

C   Curtis Hughes 30:11

Yeah, exactly. And obviously, the more data you have, the more you can train and learn from that data, right? And so data is becoming very important to get data, how fast can we get it? Even data that, hey, it's great. We used to be able to get data and we can get it in batches once a week, well, now we need a daily or now we need an hourly to try to get it and to see these things more frequently. So it's pretty interesting. I think the latest latest Gartner stat as of 2021, was that it's great, but only 11% of businesses have really deployed digital twins at large scale, right. And so it's still some of the larger organizations, obviously, are doing it and doing it well. But it's still, what 10, 11% of organizations out there that are that are implementing stuff like this. So I think that's a pretty big thing that's going to help us in the future for sure.

A   Aaron Bock 30:56

Yeah, that's a low adoption rate. So it seems like so when you go to a conference for your industry? Is everything is it all about automating sensors, how to get the data from the sensors? Is that kind of the trend that you're seeing? or is there other technologies around there?

C   Curtis Hughes 31:14

Yeah, the big things right now, if you go, I don't go to a ton of the iron and steel type stuff. I go to a handful. But a lot of it right now is around for the industry, decarbonisation. So steel making steel, very dirty, very bad traditionally for the environment. How do we how do we

making steel, very dirty, very bad traditionally for the environment. How do we how do we reduce carbon footprint? How do we decarbonize, still make them go into green steel and things like that. So Midrex is smack in the middle of doing that. So that's a big plus. But also, every magazine I get on iron and steel, huge sections in there around AI, machine learning digitisation sensors, just like what you talked about, like data, and predictive and all the ways that we can help things run smart, and they can learn. You can have assembly lines, and steel mills, change how they run based on, no one having to program them that they just learned. They learned that when this happens in this time, that whatever it is, and it's pretty powerful when you can have, technology start to learn from itself and start to start to change how it operates.

A   Aaron Bock 32:18

It's like 94, a little scary, but I guess that's where we're going. So we're changing the subject just a little bit, but it's kind of related, right? So you're talking about, very, I would say, cutting edge trends in your industry. But then you take like the traditional, like what people think of IT, and it's the helpdesk person, that's the person fixing the computer? How does someone start a career in IT? Where would you tell them to start now? And how do they learn about AI and digitization and digital twins? How do they get there to have that knowledge to properly do this for an organization like yours?

C   Curtis Hughes 32:53

Man, it's a good question. It's changed a lot since I came out of school and, I look at it now. And some of the folks were hiring and in school and things. And in, there's so many paths you can take with technology, right? And you can go into data science, and business intelligence, and all that. And data analytics, like I said, when I came out, it was either a software developer, or you're building the hardware, you're like a computer engineer, computer science, and you build the processors, or you build the software kind of thing. And now there's so many areas, whether it's machine learning AI, like I said, data, still writing software and user experience. There's full jobs that are just designing the interface, if you like, the marketing. So for me, it really is true, they say, do something you enjoy, find the things you enjoy. And honestly, there's a technology element to nearly everything that we can do these days, if you're on marketing, and designing and drawing, you can do that technologically, you can be on the front end of designing, take your pick, right and anything you want, whether it's software or not, and really finding out what you're good at. What things are hot right now. But there's also so many more ways to get learning and certifications, whether it's LinkedIn learning or these other ways, like there's so many ways to get up to speed on stuff that just didn't have all those options back when I was coming out. It was, literally, you grab your book that looks like this off the shelf, and you're reading it a night or whatever it is to try to get up to speed now so much is on the internet learning. People can people can get certified on AI and machine learning in a short period of time or date or whatever it is so, I think probably for a lot of people, you got to try things out. That's why I like wearing a lot of hats. I got to see what I liked. And what I didn't like is things really quickly that, Yeah, I didn't like being on the front lines and supporting and help desk ticket stuff. I like building and kind of creating behind the scenes. Everybody's going to be different. Everybody's going to kind of figuring out what they what they enjoy most.

A   Aaron Bock 34:50

It's really interesting. So you just said like there's a number of sources out there that you can go, the YouTube, internet, whatever to go get get the answers. I was listening to a podcast the other day about a guy who's in finance. And he was talking about he started in 19, I think it was like 1986 or 1988, or something like that. And his boss walked in and said, I need you to do blank, blank, blank, blank blank. And he said, The phenomenon that went through my mind and in what raced through my mind about how little I knew what he just asked, was so much more severe back then, because I couldn't just go to Google and type in what he asked and figure it out. I had to literally think through it, ask colleagues, go find a book, or just admit, I didn't know it. And so the amount of like, you can only fake it so far, if he didn't know it. Whereas today, I think we can go out and Google read a quick article and become an expert. I agree with you, it's really do what you're passionate. One of our last guests, his whole, his whole mantra was, you have to have passion for what you're doing for what you do. And I think that applies to any industry. If, let's say, the CEO of your organization, or you're making a prediction, I want you to look five years, 10 years out, right? And someone says, Hey, Curtis, what is our IT department going to look like? What are the things what changes are going to happen in 10 years? And what like, you could talk about the trends that will get us there, and the why, obviously, this is just a prediction, but like, what do you think will change? And where do we think IT departments will be in 10 years for like a manufacturing organization? For example?

C Curtis Hughes 36:28

I think, man, that's tough. I try not to crystal ball too much. But, you got to kind of stay on top of this stuff.

A Aaron Bock 36:35

Indulge me a little bit, if you will.

C Curtis Hughes 36:38

Yeah. I think I think we talked about some of it already, I think things will continue to be automated things will be continued to be commodities, right? I mean, even the ID, even help desk, for me, it's something that I've been looking at here haven't made a ton of progress, because it hasn't been high on the list of things that we were tackling right now. But even with some of the topics we talked about, machine learning and things like that, you could have a machine that that answers 50, 70, 80% of the tickets that come in, because you've already moved most of them, you've answered before, right? Most of them are repeat things or something, a handful, it's the 80:20, right? 20% are probably new problems or something like that. And it continues to learn. So what about a bot or a series of bots out there that these software bots that answer tickets and get rid of the helpdesk and put those people towards other things that are, like I said, more creative and kind of the building of things versus the the tactical, that's really a big focus of mine is like, if it's something that's just very, very tactical, we can automate it, let's automate it, automate the administrative is kind of what I say a lot of the times, like getting rid of all the things it takes someone. because it's not only take time, but it also, people that enjoy building and they're doing all this administrative work kind of grinds on them too, and can lead to burnout and some other things too. So I think letting the automation kind of take hold, I think is a big, big area that we'll see. And then in general, I think

we'll see things become more and more connected. So getting data, we're already seeing it. We get data from machines, and we can see things early and detect them, where we couldn't before. So even, telemetry from some of the laptops that we've got out there and stuff that we've deployed, we can start to see problems and see things going on, before someone even knows it's an issue and stuff. So how do we connect all these pieces to, again, get back to invisible IT and just helping things run better and get things out of the way? It'll be interesting to see how hybrid and this work anywhere? And whether or not that that sticks, and are we going to swing back? And everybody's going to come back in? Or is it? Is it really gonna go? I don't know, this depends on who you ask. I think these days.

A   Aaron Bock 38:48

Yeah, we don't have to make that prediction. Because I know that that's controversial organizations right now. Funny test for anyone at home that to what's the one thing Curtis said, that's really interesting, if you ever want, he mentioned about more things being connected. If you ever want to play a fun game at home with your significant other, whoever you live with, take a guess on how many devices are connected in your house. I remember my wife and I did it. And I said there's only 20 or 30 devices connected. It was a lot higher than that when we ran the actual test. And it was kind of crazy to see how many things were connected. So fun game for all the listeners. Curtis, I really appreciate you being on I want to ask you one final question that we ask all of our guests, and this is really your State of the Union. Curtis Hughes giving a State of the Union in front of a million people and you are leaving your best advice. Whether it's about career advice, technology advice for those don't know, any kind of advice as it relates to technology, what would it be? What would you say?

C   Curtis Hughes 39:49

Million people, wow.

A   Aaron Bock 39:51

Billion people, it can be as many people as you want.

C   Curtis Hughes 39:54

I think a few things maybe number one, Expect the unexpected like things are no longer, except number one success is not linear. And if you look at my background or my history or whatever it is, and just how the world's going and COVID and all these things have proven that, right? Just expect the unexpected and kind of balancing to what you're working on today with kind of where we're going tomorrow. But also being being agile and adaptable. I think the more rigid we are the the worse off we're going to be in the future. I think we really have to bake flexibility and everything. We're everything we're doing. I talked about it already. But starting with the tool first mindset, I think that's me really I say a lot people that know me have heard it a ton. But don't start with the tool, start with the problem, start with the people and and really try to understand that first and honestly, even when I'm hiring, looking at people, technologies are gonna change skill sets are gonna change what I hire somebody for today, they're going to

need to know something different in five years, 10 years, whatever it is, or even sooner. So hire for culture, hire for people, hire for the ability for someone to kind of think creatively and solve problems outside of just technology. And then the last thing is just always keep in the back of your mind and or the front of your mind, the impact that whatever you do has on people, I think sometimes we just forget that we just solve problems and technology and we don't think downstream like, how is this going to affect someone that uses this or someone on my team? Or how do we support it, whatever the people impact may be think about the people impact of what you're trying to do. It'll be much more successful when you do that, and it'll make you think differently.

A   Aaron Bock   41:35

I love it. And I really do appreciate you sharing this with myself over the years and then with our with our listeners, I think embracing the people understanding the technology and the why behind it is super important. And this seems to be a theme on this podcast. So Curtis, I want to be respectful of your time. Thank you very much for joining the IT Matters podcast. This was awesome talking to you today. I always enjoy it. For those listening. What's the best way to get in touch with you?

C   Curtis Hughes   42:02

I think LinkedIn to find me on LinkedIn. Yeah, I think it's /CurtisHughes on LinkedIn. And you can you can look me up or just its not a ton of Curtis users out there. So find me pretty easily here in Charlotte. But yeah, it's probably the best way.

A   Aaron Bock   42:13

Well, thanks for joining us today. Curtis Stay cool. Really, really enjoyed the show and have a great week.

C   Curtis Hughes   42:20

Thanks Aaron. Appreciate it.

N   Narrator   42:23

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