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THE FEDERAL CATALYST

Web3 Put Me in the Metaverse (episode 2)

Podcast Transcript

Announcer: Welcome to the Federal Catalyst with Accenture Federal Services, the podcast series addressing critical management and technology issues impacting federal leaders. Each episode goes behind the scenes with our experts and others to discuss the latest research, innovations and breakthroughs shaping how federal agencies achieve their mission.

Kyle Michl: Hello, I'm Kyle Michl, Accenture Federal Services chief innovation officer. Welcome to the federal catalyst. In our last episode, Chris Copeland and I introduced you to our 2022 Accenture Federal technology vision. This is our annual research examining the key trends impacting the federal government in the next three to five years. Over the next several weeks, we'll go explore each of the four trends with the report authors. We start the series today with Trend one, web me. As we discussed in our report, the digital worlds really start to look more and more like our physical world, with richer, more immersive experiences. And the web is no longer two dimensional, but it's 3D, enabling new experiences ranging from fully virtual worlds augmenting our physical world. Adding web three technologies through these environments provide context, ownership, and interoperability. It connects these worlds and gives individuals agency as they explore. The US Army is demonstrating why these technologies are so

important for federal agencies. They're building one of the largest metaverse environments, their synthetic training environment to transform how they maintain readiness through more realistic training. And this is just one example of how federal agencies are pioneers in the Metaverse. To get the specifics, joining me are two co-authors of trend one, web me, Dave Dowling, our Chief Technology Officer for Cyber Security, and E.J. Dougherty, our federal XRB. Hey, Dave, EJ, thanks for joining me for our first trend discussion.

Dave Dalling: How's it going guys? Thanks for letting us join.

E.J. Dougherty: Hey Kyle, thanks for having us.

Kyle Michl: All right, well, let's jump into it. So we keep hearing the term Metaverse, and I've used the term Web 3, and we hear the term extended reality. So there's all these terms out there. Let's start with Metaverse. How are we defining the metaverse, and is it really mature enough for us to be spending time and energy talking about it?

E.J. Dougherty: Now that's a great question to start off with Kyle, and I'm sure you'll see

multiple definitions out there everywhere. But the Metaverse really is, you know, moving away from this, you know, browsing kind of passive experience, you know, into this dynamic, interactive, and mostly 3D, persistent and collaborative. And it is really spanning this, you know, spectrum of, you know, the physical to the virtual world.

Kyle Michl: EJ, that makes sense. So what's an example of that? Maybe I can try to visualize it a little better.

E.J. Dougherty: Well, a great example of the Metaverse is what we call the end floor here at Accenture. So the end floor is Accenture's Metaverse, and it really enables people to connect and virtually meet, you know, with any eccentric person anywhere in the world. Our in Florida include these digital twins of our offices and our studios from San Francisco to DC to Sofia, France as well as these reimagined spaces like even our virtual campus that we call one extension park. So every year Accenture has over 1000 new joiners. So what we've done is reimagined a new space for them to collaborate and meet together and learn about Accenture. So this allows us to build and develop a strong sense of culture and community remotely.

Kyle Michl: Thanks, EJ. That that helps. And I love the example of what we're doing globally with one Accenture Park in the end floor. Dave, what's your thinking there? Other thoughts on how we like to define Metaverse? Clearly there's a lot of swirl out there around the term.

Dave Dalling: Yeah, there are many different ways that it is defined and many different companies consider it something different. To me, Metaverse doesn't really refer to any one specific type of technology, but rather a broad shift in how we interact with technology.

To me, it's more about taking the social aspects of the digital world and making them more immersive, where you can share those experiences with others. It can really be augmented reality, mixed reality. Virtual reality or anything in the connected digital world.

Kyle Michl: So thanks, Dave. And of course, you know, I use that we often hear Web 3 alongside the metaverse. So, what role does Web three play around the metaverse and enhance the web experience? Then maybe you give us your thinking there to start.

Dave Dalling: Oh, sure. So, first off, I will never bet against innovation. Web 3 is not in its final stage. I remember Web 1. I was at college and created static pages for the professors to post coursework and schedules. I never would have thought the web would turn out what it is today. There are problems with web two, especially about privacy, data ownership, and some security that web three can solve. But there are many things from Web 2 that we benefit from, such as seamless experiences and speed, and the availability of data that Web three hasn't fully solved yet.

Kyle Michl: No, thanks for that. I appreciate the history walk back. I remember the early text days on the web as well, where there were no images, and we've come a long way to the rich, immersive experiences you can have in the metaverse. So I'm sure we'll overcome these eventually, but certainly as you know while well it may not be defined and mature enough yet as a thing for the federal government, certainly some of the implications will hit some of the agencies as they think about policy and the future. EJ, anything to add as we think about Web 3?

E.J. Dougherty: Yes, I think of Web 3 also as the next generation of Internet services. So it's providing this persistence layer and application logic and interoperability. And the advancement

of Web 3 standards will provide this foundation for building future metaverse experiences.

Kyle Michl: Got it. So we've got this backdrop of Metaverse, which is coming along, needs to be defined a little bit. We've got Web 3, which is slowly maturing to a future that's maybe a little bit unclear. Our federal agency is able to start taking advantage of these technologies today. I know I spoke of what the army is doing in the Metaverse, and I know we're also seeing agencies like NASA looking to the Metaverse to assist with training astronauts going to the moon. What examples are you seeing in the federal market?

E.J. Dougherty: Hey, Kyle, I can, I can start off here. So I've recently been seeing agencies explore innovative ways that will increase job readiness and continue critical operations remotely, specifically around inspections and maintenance and repair of these high-value assets. Efficiently guiding frontline workers through remote processes and bring expertise from anywhere in the world. Use cases you can think of or kind of on the flight line, you know, instance ID pose on the shop floor or even warehouses or you know for agencies that have oversea posts, for example, in fact earlier this year. The US Army's third ID, or infantry division, hosted a symposium at Fort Stewart showcasing XR applications for training and equipment maintenance and trouble.

Kyle Michl: No, it's great, EJ. I mean certainly a number of different types of use cases from inspections and maintenance and repair. Dave, how do you think about this space and what are you seeing out there?

Dave Dalling: Yeah, I see. Two main use cases when it comes to how the federal government can really leverage this as one is the employee experience and the other is training. There are many ways people learn right? They learn from listening or seeing and doing with extended. Reality we can more easily do the scene and the doing. Aspects of learn. We can also get far more detailed than we ever could before at a dramatically lower cost. For example, I just have to build something in extended reality and then I can duplicate it all over. I don't need to actually have physical assets, multiple computers, you know, things like that to really take advantage. Of the training I can do in extended reality, I can be able to take a tank completely apart, down to the nuts and bolts to see everything about it and how to put it back together again. You're not having a real tank. Really expensive. Having a digital tank, not so expensive.

Kyle Michl: I really like that. Especially, you know, we started on some of the training scenarios. I know that I would struggle to focus when I'm doing CBT's, and maybe we all do to some degree, find myself multitasking and trying to skip to the end if possible if there's a test I need to take. But ultimately, you know, I think the immersion level associated with some of these technologies keeps you. August and then I think there's data out there. So really high percentages of retention when you go through that a, because you're probably not as distracted as I am doing a CBT, but also the level of experience that you're going through is much richer and you've highlighted some great examples that and then you want to step further talking about that digital worker or empowering the worker to do things. I love the tank. Example 2. But even then in the cross those and then by itself the collaboration side where you can spend that energy and I think you use the term engagement, right? The engagement level goes up and if you can do that without traveling or without the OR not being constrained by physical distance, it's amazing. So thanks for those examples. You know one thing that I'd be

curious about because we've been developing some of these for a few years with our clients as well. You know, we use the term ex or extended reality as this unbranded term for things like augmented reality, virtual reality. But now we're also using this term, metaverse. You know what's the relationship between XR and Metaverse? I shouldn't be thinking about this.

E.J. Dougherty: Right. So extended reality is just one example of an underlying technology that's currently enabling the Metaverse. So you can think about XR, you know, it can deliver these distinctive user experiences that are highly engaging, you know, providing this sense of presence which, you know, Dave just mentioned with his experience, you know, at our one extension. So this is the ability and also provides the ability to really blend the physical and digital worlds together. So this is this allows us to empower the workforce with instant access to, say, synthetic training or enhanced visualizations of data that exists across the enterprise and also increases collaboration with. Colleagues and subject matter experts.

Kyle Michl: So, E.J., how do our clients think about this metaverse continuum? Is this like a step scale where I start at one end and I progress up? To the top? What is the purpose of this metaverse continuum?

E.J. Dougherty: So the purpose is you can start anywhere and the sooner the better. So you know back in the day where we had cloud first and. Talking about digital transformation, we really want to think a bit about this as the next digital transformation, you know, for the enterprise or the worker itself. So he can start, you know, with any one of these technologies as your entryway, you know, into building the metaverse, but as these technologies are maturing. And your vision and strategy is evolving that you know, you can then add in these various components and these enablers

to the technology to finally come at that end state of what the maneuvers might mean to you in your agency or organization.

Kyle Michl: Well, EJ, so it's not a start at point A and get the point Z. It's really a build specific to your use case, taking advantage of these. Technologies as they. Mature and that. That's good. Thanks for explaining that.

Dave Dalling: So I'd like to add to that too. You know, so I mean at a century we've done a lot of these implementations with our customers, right? And we've worked through them. And I think one of the best ways to. Really get started. Is what are. The problems you're having, right? For example, some of our, you know, IoT customers are having a problem finding field. You know, field maintenance work. Right. And so we're able to, you know, work with them and say, hey, all right, let's do some augmented reality. And then saying, hey, this is the thing that you need to do. Hey, you see, you know this setting right here. I need you to change that like and actually as if they are there. So I mean you really just need to think through your problems, you know, on your gaps you that, you know, you're trying to solve. I mean we can always come in and you know, do those design sessions and that humans centric design to try to help you come up with those ideas. But I can see there's just so much out there that, you know, so many use cases that we can definitely, you know, bring in

Kyle Michl: Thanks for taking us through the myriad of words here. So we've covered off Metaverse and Web 3, I think we're winning the bingo game so far. So I appreciate the clarifications on each of those and how we going to relate to one another bring in.

Kyle Michl: Thanks for taking us through the myriad of words here. So we've covered off Metaverse and Web 3, I think we're winning the

bingo game so far. So I appreciate the clarifications on each of those and how we going to relate to one another. Have you mentioned earlier about, you know, your, your passion for gaming and I think, you know gaming is a term or not a term, but something that comes to mind when we think about Metaverse, right, the virtual. Worlds and I've got I've got kids that spend probably more time than they should in gaming. But you know what? What always impresses me is the degree and sophistication and quality of the virtual worlds in gaming. So is gaming a good proxy for what we can expect in the Metaverse? How should we be thinking about gaming in the Metaverse?

Dave Dalling: Oh no, 100%. I guess I'm probably one of the first. Adopters of you. Know video games? I remember you know, the first video games being text based. I remember buying my 486 and, you know, playing games on 3 1/2. Now I have, you know, massive, you know, computer games, our computer PC's right here. Xbox is everything that and even virtual reality and I remember like. Just the first time I put on the original HTC headset. Five and I played space pirates, right? You just sit there and concert robots are coming at you and you're shooting and literally I am like hitting the deck, falling on my, you know, my ****, trying to not get shot by these things. It was just so immersive and I was like, I can see where this is going and now I'm playing Star Wars rebel commander, you know, where I am in a cockpit with a stick, and it is. If I am really there, I can't wait until they add the 40 to it. But I'm really excited about, you know, really where we can go with video games. And I feel. Like in this industry, this is really what's going to push the innovation, right? Because that's where there's a ton of money, right? I spend a lot of money on video games with all these microtransactions and things. I'm, uh, ashamed to admit that. It just makes it far more fun. And so I really think that they're going to start pushing the bounds, especially with

those graphics. I remember, like, you know, doing a lightsaber battle with Darth Vader, you know, last. Sweet, you know, I could hear him. I could feel him there. He was right in front of me, you know? I want. Of course. And you know, now there's, you know, Apple and Meta are coming out with even higher end headsets, right? And I cycle all the time. I have a smart trainer that allows me to like do the Tour de France. With the actual hardness like, it will adjust if I'm going uphill, it gets loose if I'm going downhill and it's fun and I get to do it, but I don't really. Get it like do with people. I mean, granted there is things like SWIFT that I do and. I can see people. But the plan is now to add that virtual reality where I can sit there and have the virtual reality and literally be riding with my friends from Japan right next to me and literally be talking to him. That's the hardest things I'm writing. I can't like, type, right? I'm not going to have an open mic the whole time, you know, with my phone, but with virtual reality I'm able to actually ride side by side, right? I actually have customized my bike so it's the exact same bike that I ride inside, you know, the Metaverse, and so I can see just how this is really, you know, going and how immersive and how I guess realistic it is coming and this again just goes back to you know doing like employee events and you know team building events where you can actually go and do that like the trust fall. There's one where you go through out of the elevator and we walk out like and it's uplink, right? It's one of the best things to do to someone that's never put on a headset before. They literally freak out and some people will turn around and walk the other direction and it's like you are in the metrics you, you know you, you have this virtual reality headset on and it's really easy to forget where you're at.

Kyle Michl: I love it—some great examples. I mean to me you your comments bring to mind a term that we've used in the past of liquid expectations, right? As the gaming industry

comes up, our experiences and the people entering the workforce expectations of those experiences are going to be for those types of deep, immersive 3D experiences, much like you're describing and when you talk about, you know, we talked earlier about the Web 3 concepts and talk about spending money will pretty soon that will be well or some type of monetization within that as well? And I think when we transition from that into enterprise use cases, those liquid expectations come with it, right, whether that be citizens, whether that be soldiers and so forth. So I think at the end of the day your examples are perfect because it highlights the value and enthusiasm that comes with this. But I think that's going to transition into the end users of the systems and capabilities and services provided by the federal government.

Dave Dalling: 100% and actually one of my favorite books is Ready Player 1. Right, and this, you brought this up with Web 3? The idea of Ready Player One is a as a single, unified like place called the Metaverse. It's still largely impossible. That is, in part because such a world requires companies to cooperate in a way that simply isn't profitable or desirable. However, with the Web 3, I mean that is kind of the point of Web 3 is that it's taking it out of the large companies and bringing it back down so that we can make that immersive. So right now, until Web 3 comes out, I don't see a ready Player 1 experience happening. And I would love that because, just like I said, it's one of my favorite books and I can't wait for that technically.

Kyle Michl: You just need to remember to go backwards at the start of the race and you'll be all good. So I want to pivot us just a little bit. So we've been talking about the use cases and the relationship between all the different words out there around these technologies and

capabilities. Well, let's talk about how you really get to the development of these. Because, you know, we've all talked about, you know, what we might want to get in the future from these technologies, but how hard is it to really develop these types of, you know, scenarios or simulations that we're talking about? And EJ, maybe I'll start with you. I know you've built a mix of these in your time, whether it be training or simulations and doing different things for collaboration. How do you get the design right now? How do you figure out how to build these in a way that they really serve their purpose for enterprise users?

E.J. Dougherty: Yep, well, Dave actually hit on this pretty earlier on. So just to kind of, you know, foot stomp that again is, is really want to, you know, implement this human centered design, you know, create these techniques that will establish these deep understanding of the user and stakeholders know what their desired outcomes are. We really want to ensure that. These experiences are really engaging in. Yes, and it's also very important when thinking about kind of these designs of these new experiences is bringing together the right skills. Uhm, you know, to create these new user experiences and this can include experts and you know, creative storytelling or spatial UI UX design, you know, 3D modeling and art and even real time 3D software developers. And you know, as we just talked about the gaming industry such as, you know, unity and unreal. And as EXR is mostly a visual medium, it would really stress the importance of having really skilled and detailed oriented 3D artists, as we want to create a level of realism and with high fidelity. Assets and yes, sure, we can perform reality capture scans or physical objects and you know, even spaces like we did, you know, with our own extension or metaverse. But we still need these 3D artists to really bring these

models and assets to life within these experiences.

Kyle Michl: Sounds like a lot of new type of skills that might be needed to pull this off, especially given the talent market. It may be. Is that a little scary? Or we're seeing that folks can adapt from existing skills today and move in that direction, build on existing types of work they're doing today. What's been your experience there?

E.J. Dougherty: So that's a great point. So we still need, you know, the typical, you know, building software applications, you know the cloud edge it you know all that still remains the same. So there are foundation of these, you know, frameworks. New building software is still there. We're just now layering in these more creative skill sets. And you know, there is a lot of technology out there and a lot of resources and upskilling our developers, you know, in Unity and unreal you know that that takes a little bit of time but it's just kind of using your left brain or your right. Brain or I can't picture which? From your creative side, your technical side. But you once again mix the ability of both to really bring these experiences to life.

Kyle Michl: Great insights. We've talked about the importance of functional and technical in the past, and here you're bringing creative and technical together. So it makes a lot of sense, EJ. Thanks for that. So I think we're in the homestretch. I have one more question for you guys that I think would be a good one. Maybe the end on here today, which is around security, because I think all new technologies bring challenges and. Security is often one of the first areas of concerns, especially in the federal market where there's a lot of unique considerations. So David, be curious, given your cyber security background, what would you see is the top risks when we start talking about these

technologies and specifically the Metaverse?

Dave Dalling: So you know, I really did try to think about this and the Metaverse has all the same security concerns that we are dealing with today, right? Hardware, software vulnerabilities, identity management, data security. Some of the ones that I think will be more significant is especially around data security. And identity management, just because it's really hard to verify who's on the other end. Someone could take over your account and you can—I can literally feel it. Think this is my best friend and I have no idea even though it's his account, right? So I think the account security is really going to be one of the biggest things in the data security. And since we're really merging that digital world and that real world. You know, you've got to think broader than just the hardware and the software, right? You've got to start thinking of the physical space as well. And you know I—my kids are playing, you know, and we have a room for where they play VR and when they have it on, I'll like sneak up to them, you know, and be like, boom, you know, of course they jump and freak out, right? I mean, you got to think more, more beyond just the hardware and software. We still have. To secure that the same way we're scaring everything. And the other thing I realize is there's right now, since it's so young, there's not a lot of regulations around the metaverse. So there's a high risk right now of privacy and personal data concerns just because it's not necessarily defined yet. So, for example, you may be giving virtual reality or augmented reality platform companies the permission to record your physical environment, right? I mean, they have the cameras on the inside, the new ones have cameras on the inside to actually record your facial expressions, right? Looking back at you. So you've just got to think about that. We need to add things like personal bubbles, you know, in the Metaverse, right?

Saying, hey, no one's allowed to come in this close to me. I'm, you know, that is still too much. I mean, people are going to have these same personal issues in the Metaverse as they do in the physical world. And so there needs to be that bubble where it has to have permission to come and, you know, come up to you. I have been approached by a couple people and I'm like, who are you? This is weird. And so having that in other ways to hide and block people, right? I mean, verbal abuse is still going to beexcellent conversation. I appreciate both your perspectives across this. If you're intrigued by what you heard, I encourage you to explore our Central Federal Technology Vision. You can find it online at www.accenturefederal.com. of something very prevalent in the Metaverse. So, you know, having the ability saying, hey, I want to block that person and hide that person. Because just blocking them and they can still walk around you, they can still do physical, you know, motions. And so, you know, like things like that you got to really think about. But granted, as the Metaverse becomes mainstream there'll be more regulations put in place and then one of the other big things is around with Web 3 and also the microtransactions. And that's really where it's going to be a major. Parts of this actually, with FarmVille on Facebook, right, people were buying sheep because the more sheep that means that the better you are at the game, right? And so and you know people were trying to steal accounts to, you know, to have that, those extra sheep to show that you're good. You know, it's things like that. There is going to be real digital assets and so that goes to back to the ransomware conversation and the identity theft conversation. So that I mean that's where I see the main things of cyber security or with security around this, it's not just cyber security, but there's far more. That we just need to think about and think through.

Kyle Michl: Got it. Now it sounds like we inherit a lot of the challenges of the real world in this Brooklyn space and we don't necessarily immediately overcome some of the technology challenges of the web today. So definitely some good points there. Well, this has been a really excellent conversation. I appreciate both your perspectives across this. If you're intrigued by what you heard, I encourage you to explore our Central Federal Technology Vision. You can find it online at www.accenturefederal.com. And as I shared in the opening, we're going to continue this conversation over the next several episodes of the Federal Catalyst. Please subscribe to not miss our discussion again. I'm Kyle Michael and I was delighted to have hosted today's show. Connect with me on LinkedIn to share your feedback. Thank you.

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