



THE FUTURE OF AUTOMOTIVE BUSINESS IN THE METAVERSE

VIDEO TRANSCRIPT

Dominic Briggs [00:00:06] Hey everyone and a warm welcome to another episode of Accenture's Blockchain Mobility Podcast, where we are excited to share interesting insights around blockchain in cooperation with Blockwall, a European venture capital platform focused on Web3. In every episode, we will host different industry leaders, experts and innovators who will share their knowledge and experience to help you keep on the forefront of the latest developments. I will moderate this session today, and I am your host. I am a co-founder and managing partner at Blockwall, and today's episode will focus on the metaverse and its impact on the future of the automotive business. We are very honored to discuss this today with our guest speakers David Palmer, Anthony Day and Nicklas Urban. Before we start, let me briefly introduce you to our guest speakers. So, Anthony, we have known each other for some years now, and David is a digital visionary and global platform innovator. He runs the Vodafone Business and Blockchain Technology Group and has been key to exploring the applications on blockchain in the telecom industry and wider business segment. And he is also the Chief Product Officer and co-founder of the Vodafone Digital Assets Broker Platform, or DAB. Anthony has worked in digital transformation for 20 years and has gained profound experience in blockchain and the Web3 space since 2016. And I still remember when you were at IBM and supported them with NFT for different FTSE 100 private sector clients, the whole digital transformation and blockchain. And you were also a CEO of Deloitte's EMEA blockchain team,

and most recently also were awarded with a LinkedIn Top Voice for innovation and technology for a second time now, for engaging with the community and sharing your insights on blockchain and what to be. Nicklas is an experienced DLT and digital identity expert at Accenture with a focus on actual technology, adoption for businesses and industry applications of blockchain, and has a strong background in blockchain development and experience in DLT and NFT strategy. So, Nicklas brings along valuable insights and knowledge for Accenture's clients. We've been reading a lot about the metaverse. We've heard a lot about the metaverse. And there are so many different definitions being presented in the media. And I know that if you would ask Nicklas and Accenture, they also have a certain definition, which is that it includes an evolution of the Internet that allows users to fully immerse in shared environments and inhabit them, so the Internet of Place, as well as owning assets and identities as users are already used to in the real world. So, with everything that is around Web3, there's a lot about ownership rights. The Internet of ownership and this spectrum of the experience and interaction ranges from our real world to the fully virtual world and everything in between. And Anthony, because he has shared a lot about this also in his social media engagement, what would be your definition of the metaverse? Or maybe you can talk a little bit about what excites you most about it.



Anthony Day [00:04:17] Yes, sure. Thank you, Dominic. Thank you so much for having me on the show. I think that is a very, very good and very expensive definition there from the Accenture guys and I don't wish to try and pick that one apart because I think we're still so early in the definition of what the metaverse means, what it represents, and where it's going to be most useful, that it could almost be any combination of technologies, and you could probably still be directionally correct. What I liked about the definition first is immersive. So, what's different from the Web2 or the Internet that we experience today is the immersiveness of that experience, the ability to have 3D renderings, to have virtual or augmented reality environments on top of the other capabilities that the Internet can provide. I also like the decentralized Internet. When we talk about Web3 and the decentralized Internet or the capabilities allowing us a decentralized control over applications or economies or data or identities, the metaverse isn't necessarily Web3 and Web3 doesn't include the metaverse by default. So, already we're confusing multiple different buzzwords that we're using shorthand, which can be unhelpful to the listener who hasn't spent time immersing themselves in this particular topic. No pun intended. What I would say is maybe think about what the metaverse isn't. What we have today, we already have 3D environments today, we already have virtual reality environments. We've had those since the 80s. We already have decentralized, persistent, always on applications today. Think about it this way. You see a lot of organizations or entities saying, we've entered the metaverse, and all they've really done is they've created a video game, they've created a closed box environment with a set of predefined rules where users follow along a predefined path. Whereas for me, a functioning and useful metaverse is open. It's able for multiple parties to connect to. Maybe the open-source code is

available for all to see. Maybe the ability for others to build on top of that particular platform is available. And also, persistence, right? You don't really want those experiences to be sentient, sensitive, switched off if you're about to create a collaborative and immersive platform. So, I think the same applies to enterprise applications. You can say, we're going to create an application for a manufacturer and a supply chain to collaborate and that application is closed. Those are the only permissioned parties who are allowed to use it. It uses 3D rendering; it uses augmented reality. Is that a metaverse? Possibly. Or is it just an enterprise application that uses certain technologies to make the experience easier, better, faster? You could put many of those things into the category of metaverse. And I think we should try not to risk saying this is what it is, this is what it isn't. All right. There was no prophecy for the metaverse. And I think it's dangerous to consider what it is. Just as long as we explain our thinking out loud, we'll be okay.

Dominic Briggs [00:07:12] David, you have spent so much time in the corporate environment. How do you view this metaverse topic?

David Palmer [00:07:24] Evolving. So, the definition that I have come up with, and I agree with Anthony that this is developing as we speak, and I think the metaverse we would have defined a year ago, it's not the metaverse. I think we'll probably evolve now. But my definition is a digital world which exists alongside the real world. I think the key thing we've got to get across is that it's not going to be a replacement for what we have today, but it will exist alongside what we have today that provides a shared virtual reality experience economy, business model interoperability across users, ecosystems and communities, and that is my definition. My thinking is that I don't think we're going to have one big metaverse. I think there was this view that we



would immediately build this infrastructure, and in this infrastructure, we would have one persistent, highly rendered metaverse that would be all encompassing. And now I think we are going to have several mini metaverses that can be connected where there's interoperability and integration across them and portability. And that will allow, in my view, from an enterprise point of view it has to get started and prove value. Some of these many metaverses will exist and then start with use cases. So, we already have a lot going on with gaming, but I think there will be specific use cases we will start, like for mobility. We will probably go into some of those in this discussion, but that's how I see it now. I don't see one big all-encompassing metaverse, like the many metaverses which allows us to get started now that will be connected with digital identities, with portability of value across them. So that's how I think.

Dominic Briggs [00:09:50] Okay, great. That's interesting to see how this whole space has evolved. It started with crypto. It went on to blockchain and now the new terms Web3 and Metaverse kind of pushed in as it seems to have become this new hype. I mean, if we look at startups or any innovation, the dominant question is why? Why do we need it? Why is everyone talking about it? Maybe you can give our listeners an image. You can start to hear the reason why we should bother and think about the metaverse. What would really change if this was implemented in the full scale?

Anthony Day [00:10:37] That's a really good question, and I think it's worth asking the same of every technology. Why? Why do I care? Why do I care about blockchain? Why do I care about artificial intelligence? Why do I care about quantum? Why do I care about BMW I-Drive? Why do I care about any of the technologies that may be pervasive? I don't drive a BMW, by the

way. I'm a motorcycle guy. But you know, to take an example. Why should there be excitement? Hype is a mix somewhere between excitement and marketing, or justified excitement in marketing. I wouldn't want to overhype any technology, to be honest. But when it comes to the metaverse, why do we think it's important or interesting to individuals is because ultimately it will make people's lives better. Whether that's the jobs that they get to do for when they go to work, when they are working as entrepreneurs, when they are collaborating with friends and family, when they're playing or enjoying leisure time - in any one of those typical user journeys or settings that an individual will experience as a human in the world, for the most part, providing you're connected to technology, you will be able to have an enriched, better, faster, easier, more streamlined, more collaborative, more creative outcome from doing it. And so, it's very, very broad. With the metaverse, what does that do? Instead of taking a 2-dimensional view of something, you may be able to take a 3-dimensional view of something. Although, again, to be clear, the metaverse doesn't have to be virtual reality. It doesn't have to be 3-dimensional. It might be that actually you have a flat screen, and you're traversing through a digital representation of the real world, and you can geo cache where certain equipment has been left in the case of search and rescue or in the case of a maintenance activity for a particular task. We've seen certain augmented reality applications where an engineer can overlay a device, a phone, a tablet onto a particular part of a factory to get a part of an oil rig, and they're able to very quickly get the instructions, identify the flows, the pressure settings, whatever it might be, relating to the job that they're trying to do. For that engineer, it might be the difference between a job taking 10 minutes and 5 hours, or the difference between life and death. Or it might just be the difference between having a more rewarding hour of downtime with your friends and family while you're sat reviewing a wedding video or as you're watching a movie together. Right. There

are very different levels of utility over different levels of business case across all of those particular settings. But the underlying opportunity is that we are making people's lives better.

Dominic Briggs [00:13:12] Agreed. David or Nicklas, do you have anything to add? And especially examples you could maybe add to the story of why it is important to care about the metaverse. Why are we discussing it?

David Palmer [00:13:30] Well, I think we're discussing it because Facebook changed their name to meta and that led to a lot of attention on this. And I think some of the stats are showing the sort of such searches on metaverse explode. But why? I think it's a great question. I think it's a natural evolution of the Internet as we know it now. There's a lot of argument that the metaverse is the next iteration of the Internet. Will it build on the Internet? Will they replace it? I think the truth is, we've got a certain level of productivity and we've got to a certain level of effectiveness and customer experience and to go to the next level where, you can start replacing some of what we do physically and getting the productivity increases from that, you need to do to have a next level of experience. And I think that's what the metaverse will bring. So, for example, what does the metaverse do? It removes the need to travel, it should provide a comparable experience to what you have in the real world. And what does that mean? It means that I can attend the conference without traveling, right? I can have the same sort of experience. I can collaborate on a medical procedure without actually being there. And I think practically, I can experience a car and driving it and the features without actually having to go and physically touch it. Now, that has some solid business benefits that can replace things that we're doing already. And I think it's the next

level of business productivity, certainly in the enterprise space that that will drive. In the consumer space, we have social media and there's a lot going on social media. But what is the next level? There's a lot we can do. When we have the immersive, collaborative experience with each other. So, I think for that evolutionary step, the metaverse seems to fit the bill for. I think that's why we're discussing it. And, some of the stats that we've had from different analysts are sort of putting the size of the opportunity anywhere from \$5 trillion by 2030. So, it's a big opportunity. But I do also believe that in that opportunity, there's a lot of double counting and there's a lot of replacing things that already exist. I maybe don't believe that the opportunity is as big as the analysts are saying, but I think the opportunity is massive, and that is why we're discussing this now. And that's why it's important because people are looking at how you position, how you utilize this and how you augment maybe some of the things we do today with the technology.

Anthony Day [00:17:04] Big word for me was productivity. And the way that we conduct our business lies particularly in B2B. I think everybody assumes that the metaverse is a B2C experience and then it's all going to be game related and we're all going to be floating around in the air with rendering of legs if we have them. The important point for me that you raise their productivity in saying at the moment the typical model of digital communication is flat, 2-dimensional and 3 spreadsheets in emails right through word or if we're lucky, some diagrammatic representation of what we're trying to explain. If we're able to render in 3 dimensions, if we were able to demonstrate in 3 dimensions or if we were able to show, not tell in a more immersive way, the number of wasted meetings, hours, emails, clarifications, etc. (could be reduced). The difference between if you've had meetings that are entirely on Zoom for hours on end, and to being in front of a whiteboard with a colleague for 30 minutes and



the difference in productivity in those 2 different settings. It's the same order of magnitude. What we have to be able to do is make the barrier to adoption for creating and enabling those sorts of productivity experiences easier. But it cannot be that we have to hard code in, hours and hours and hours of learning to use a new interface. It has to be intuitive for the individuals. Once we get to that point, then I think those \$5 trillion plus doesn't feel like an overrepresentation for me.

Dominic Briggs [00:18:29] Okay. So actually, the “why” is, if you relate it to the metaverse, that it could be a new technology like the Internet, or the email was itself when it first came out. And not only that, but it could have a huge sustainability effect, capturing a kind of digital transition which already is going on very exponentially and actually increases that effectiveness and productivity on that side. And maybe, as a transition point, Nicklas, I know that Accenture has this research about the metaverse and asking about automotive industry, that 54% of the executives found that the most interesting Metaverse use cases are centered around products and services for consumers. Where do you see the most impactful use cases? And especially because this is somewhat the automotive podcast as well, a mobility podcast, maybe you can also find some use cases for the automotive industry.

Nicklas Urban [00:19:42] Yes, you're totally right. Especially initially. The whole metaverse was driven by end users, consumers. So that was the reason why they started with social and gaming. And since then, the major focus for the start is actually around consumer use cases. But as today, we actually have to differentiate 2 kinds of them, 2 dimensions of when you're talking about use cases. Of course, we have the external dimension which is all use cases which are consumer focusing, basically the consumer

focus part of the metaverse, but it's also the internal dimension when we are talking about efficiency and collaboration with the company with a core purpose. So then having a look on the more external dimension as a consumer dimension. So, it is a lot about consumer interaction, additional services, or more immersive services that we are providing or the OEM as providing to the customer. Let's think about a virtual showroom. They really can, in a very immersive way, experience a car, try out to configure the car, maybe even personalize a product, which is not possible with just an online configurator. So, you can try it out in the car, you can sit inside yourself and actually have a more immersive view and experience. But it's also about after-sales services to just think about customer support, which will happen in a more immersive way to really support you and be very close to the customer and not just talk on the phone or reading manuals. It also really has an immersive after-sales experience. Therefore, it's not only about having some virtual experience or being a butcher bird, but it is also really engaging with the community, maybe even shaping a new kind of community. One project I'm currently discussing with one of my clients is also how to think beyond current revenue streams, how to interact with customers. People are interested in the brand, but not owning a car. Maybe using the car, but not really the current customer. You also can think about the community of and setting up and create some kind of interaction with those customers or potential customers and having additional revenue streams over just car related services. So, it's about really community engagement and shaping the brand or positioning the brand in the different way in the market. And then, of course, it's also about a more internal dimension When we're talking about efficiency and collaborations in the company especially, it's super important like the global kind of working vertically. So instead of having a huge hole there, draw lines on the ground in order to setup in your production was an assembly line or even just having a virtual map on the computer? You can actually try out



a new setup for production lines and you have a worker with a motion capture suit, so you really have the possibility to try out a new setup and more immersive experience of planning and then combine this. We've heard of planning with the actual assembly line, which is then put into production and some interest in some kind of digital trend and actually include the relaxed data from the actual factory. You then also can use this setup to further optimize your production process, try out updates before the roll out in the actual assembly line to really increase the efficiency and the collaboration on that scale. That's in both dimensions, of course, but currently mostly focused on the consumer dimension.

Dominic Briggs [00:23:48] So I think it sounds like a perfect working ground for a consulting project.

Nicklas Urban [00:23:53] Definitely.

Dominic Briggs [00:23:55] And yes, you touched upon customer use cases and regarding the future of sales, we talked about efficiency, we talked about further progress. It sounds like there's a lot of impact for the entire customer journey from sales to after-sales. Anthony, how would you see this? How would you see us using this potential of the metaverse? Also, maybe you can find some examples also related to the automotive industry to make it more concrete.

Anthony Day [00:24:33] Yes, sure. We're starting to see some today, right? We're starting to see it in the markets, in your marketing or before you get to sales and configurator and so on and so forth. You're starting to see the metaverse being a way for automotive companies to demonstrate flair. To demonstrate creativity. I'm seeing interactive adverts. For

example, Volkswagen, South Africa, (and their) Interactive Metaverse experience. A number of the Volkswagen Group brands have had experiences or immersive experiences where prospective customers or even people who were just interested in experiencing what an automaker might do with a 3D environment. They may have no interest in the car at all, but maybe their automotive fans or whatever else it might be. You're starting to see some of those brands playing a little bit more with technology. I would put that in the marketing category because that's creating halo effect, that's creating early engagement. That's not necessarily productivity, as David described, but you're not necessarily transforming an existing process there. You are creating new experiences. So, I think at that end of the spectrum, pure marketing or pure brand halo effect, that's probably where most people are landing at the moment because it's the easiest. Frankly, you don't have to transform anything. You can just go play. And I could absolutely see the likes of the kind of presales process, the vehicle configurator after sales process, maybe engineers walking virtual tours of the garage. It's prevalent today for Volvo and a number of others do service videos where, if you go in and you have your car serviced or they have some repairs done, they'll take a video; they'll show what they've done to build trust or to add a level of experience on top. That's not necessarily metaverse. That's more just adding an additional channel or an additional media type to the customer experience. But you can imagine where some of those meetings or some of those environments could be done in in more immersive spaces. What I'm interested in from Nicolas is points are around collaboration, so not just do more or do better with existing experiences. How do you do different? So, if you look at Porsche's recent NFT collection, they were looking to sell 10,000 NFTs at a price of 0.911 ETH, which was approximately €2,000, and at that time. That was seen as a spectacular failure. They launched, didn't sell out. The number of prospective buyers for that particular product, didn't achieve the early



expectations. Everyone said this is a failure. Well, they didn't look at it. They didn't look at it as a concept of a new business. But what that what that 10,000 NFT drop for the initial launch was, that's their fundraising round. If they were looking to raise whatever that is, about \$20 million to be able to invest themselves, you know, that's a pretty low cost of capital relative to going to the banks or internal financing to be able to fund development of a digital business that was related to culture or experience is or partnerships. That's another important point about the metaverse here. We should look beyond just the automakers themselves doing things within their own gift. How are they collaborating with supply chain partners, how they're collaborating with brand partners, with content partners? These are all places where you can see applications being developed, experiences being created, and products being sold and monetized. We're still talking about capitalism here, so there has to be a bottom line. It has to be a dollar or euro amount to all of these collaborations and all these ventures. Otherwise, what's the point? So, when you see someone like Porsche creating a digital business, Skoda recently launching its Volt products, which is a little bit mysterious. I'm not sure exactly where that's going to go, but it feels like it's in the same ballpark. And then you're not selling cars. You are monetizing customer relationship or your monetizing brand and the ability to create interesting novel experiences through digital partnerships. That space still super early today, but that's the one above and beyond that I think excites me the most.

Dominic Briggs [00:28:36] Yes. It also enables to monetize some of the other parts of the value chain, right? When you think of the design process and normally you have so many designs being produced entering the garbage bin in the end, because only a fraction would be produced

in the end. And that's something where you can engage with your community earlier in the process. You can stick them to that product for a longer time. I mean, you touched upon the customer use cases, how consumer experience might change there. David, if you think of industrial use cases and trends you have observed, can you find any specifics there you can mention?

David Palmer [00:29:23] Yes. I think in terms of specifics, some of the things we're working on, are for example, I'm part of a broker platform and one of the things we're looking at is what we call the metaverse of things. And I think the metaverse of things is really about the data generated from IoT devices and digital printing and how that can basically feed into the metaverse. You can have digital twinning in the metaverse, real and virtual. But also, if we believe that generative A.I., open A.I. will be a key enabler for the metaverse or a key feature of the metaverse or the key component of the metaverse, then how can the data from the metaverse compete into the model that will then power the algorithms. But I just wanted to take a step back and say: One aspect of the metaverse is immersiveness. I kind of see it slightly differently. I see it as a framework. I see it as a framework which pulls together things to power new experiences, better experiences for consumers, but also new business models. And you know, we asked before: Why? Why the metaverse? Why are we in the metaverse? One of the reasons is that some companies don't have the luxury of not being there. I think that there's a possibility of a complete reset in how you do business. So, when we go to automotive, one of the things we're working on is the virtual showroom. And part of the virtual showroom is replacing physical showroom, right? Or at least replacing some of the real estate and some of the functions that are there that can be done anywhere in the world where



you can have an immersive experience. You remove geography and you're then 24/7 able to provide that at the convenience of your user. So, there are some physical practical productivity benefits from the metaverse even now, which can be done. But actually, you've got to take a step back and say, do mobility companies want to get closer to the customer? I think the answer is yes. And if you're going to get closer to the customer, then you need to have a means to do that. You need to have an ecosystem to do that. You need to have an environment to do that. And the metaverse is a space where you don't need loads of salespeople or physical showrooms. Actually, you know, new customers can come and experience your product, right? And maybe it even allows you to extend what you do. Maybe you become a transport company to, to pull people's identities or all people's goods between different environments. Maybe you become a game, right? You do it, but there's loads of possibilities that the present but new mobility business model eyed for new business opportunities. And I think these are some of the things where we're going to start seeing a reset in the mobility space, because the metaverse is about immersiveness, but it's also a framework to pull AI, Web3, Web2, immersive technologies together, and we're going to see a lot of applications built. Maybe we see the metaverse as a modern day Apple operating system, where it's a canvas and an infrastructure where you can start building applications. But these applications are more along the lines of what Anthony described, truly immersive and collaborative.

Anthony Day [00:33:27] It's pretty complicated when you take them all up, right? We've got an Internet of things, right, so there's a whole world in the evolution of development of things, machine identity, machine transactions, micropayments, which are assets that we can

make use of. We've got a whole existing Internet where content and social media and people's holiday photos exists. You've got intranets and consortia where you have private networks of transactions that are important, but that may have high IT software costs. You've got decentralized Internet where the underlying infrastructure and economic models are more egalitarian or more open, for example, in terms of how they are constructed. And then on top of that, you add the interface layer, whether that's visual or the human interface devices, those are all good things in their own right. But in the metaverse, we're trying to bring all of these things together. And you think the metaverse is easy to explain to people? It's a very complex computer science to weave together, to create or on which to allow people to build applications. Just to give empathy to the problem. I'm 100% bullish on the space, but the way you describe it, David, really triggered for me, this is why people think it's complicated. Oh, this is this is why people struggle to relate to it, because we are inherently weaving together 4 or 5 subdomains that are already in themselves are a little bit being confused.

David Palmer [00:34:52] And this is why I believe that it has to take off with a few key pieces because if we try and build everything together, we'll be here for 10, 15 years and things are to move on. And that's why it's important. I think maybe the question is where we really start? Is it music, gaming, is it automotive, is it virtual, is it a combination of all of those things? But maybe that's the question. Where do we start? What's going to kickstart this? The metaverse, the use of the metaverse, we kickstarted the investment. The hype has been kickstarted by Facebook to changing the name to Meta. But actually, in terms of using it, what is going to kickstart it? One of the barriers is obviously when you see pictures of the metaverse, even my own in my slides, you have the XR, MR, AR glasses. And actually, the problem is there is the cost and the limited

people who have access to them, right? So that's not going to kickstart anything because of the cost and the limited people. Maybe when we're kickstarting, you've got to look at mobile phones, 6 billion mobile phones out of a population of 7 or 8 billion, you know, that will be important. People have TVs, and I think it will be a combination of that. Maybe just like we use phones now for certain things and you can add your headphones, maybe you add the glasses if you want to get a richer experience. But I think what's going to be critical to realizing the metaverse will be how we thought and the value that these initial use cases provide.

Anthony Day [00:36:31] Men from Vodafone said mobile phones will be important.

Dominic Briggs [00:36:37] I have this feeling it's similar to when blockchain started first, we were talking a lot about this and not very concretely, and we focused more on where you could have the biggest effect on. I know that we're early in the process and that corporates not always want to share details and experiences, but do you have concrete examples where we can put some of the facts of the metaverse into numbers already, or whether you've seen time reduction, or any efficiency increase or costs improvement? Are there any concrete examples that you could mention.

Nicklas Urban [00:37:36] Actually there are some examples, so I cannot mention any clients' names here, but if you really talk about business and numbers and cost savings, the major effect currently is actually talking about trainings. So, we have several clients. We really move forward to have some immersive experience when it comes to training and not being able to shut down the machine for a longer time in the factory to really train the people there. So instead of just sitting in the classroom watching videos and

having a look on some photos, they really rebuilt this machine and a 3D world, you have the chance to really experience this machine as a very immersive way to train the people, which on the one hand it saves cost because you don't have to shut down the machine, but also, on the other hand gives the opportunity to really have a much more immersive training. So of course, it's a very first step and talking about the metaverse, it's more coming from the VR-world. But that's what I see with most clients. So, they are starting somewhere, so they are starting with the training and then move forward. So, we now have a 3D model, we have a digital twin of the machine within the virtual setup and the next step, why not also connecting this neutral setup for the actual machine to have a digital twin, which also includes the data from the actual machine of the factory. So that's like one example of how they are starting the journey towards the metaverse. But I can put in a number. Working together as another automotive manufacturer from Germany who want to start their own journey towards the metaverse, starting out and currently planning another NFT project to engage with the community to have their first step to also use it as a foundation to learn what it means to interact with the community, and also what it means from the technology perspective. David already talked about also limitations somehow. And then the next step is why not? If I already have the NFT out there, why not combining it as a physical product but a real car, and maybe also to have the link between the physical world, but just to stand in front of the house, also having a link to the car, which you also can use it to drive around in the metaverse. So that's their very first journey towards learning and starting their own metaverse journey.

Anthony Day [00:40:04] I'd probably look at a capital investment as well as one of the useful metrics here is I realize that that's speculative to some extent, but it's I guess it's a little bit more tangible than a projection because projections can be based on certain assumptions. And the



great thing about being futurist is you can never be wrong today. So, anybody can put out large numbers and feel relatively comfortable that they're not going to have to defend them any time soon. You know, we'll all be retired by 2030 comes around, so that'll be fine. And we can make as many predictions as we like. But if you look at, I'm going to pick a very niche and very specific area here, which is Web3 gaming. And David talked about gaming as an area where there are digital assets, gamification of experiences which White labeled could be reused in other settings - B2B, B2C, the ability to have digital identities, to have trackable traceable assets, to be able to have complete automation of how the settlement and reconciliation in the back office of those assets and associated processes can happen, etc. And ideally, then you get some ready-made integrations with unity, or Unreal Engine, etc., right? \$9 billion approximately. That may be an underestimation, but about \$9 billion was estimated to have been invested in Web3 gaming in the last 12 months alone. Now, depending on how you look at return on investment and return on investment capital, what the value of that investment could be in future, that's a pretty good place to start. So already you've got \$9, \$10 billion worth of future value. Let's say at ten x, you've got then \$1,000,000,000,000 worth of value created by one particular area. You've got a very significant amount of value being created by that early-stage group of digital capabilities that come through decentralized technology and gamification.

Dominic Briggs [00:41:55] I mean, if we think back to the Internet, video streaming wasn't possible from day one. And then that technology was developed as also the infrastructure improved, and it replaced certain other

technologies on the way. Nicklas, we touched upon the boundaries of the metaverse, could you go into more of the limitations on that side and will the metaverse actually extend the experiences we know today?

Nicklas Urban [00:42:29] Yes, so when it comes to the experience and whether it builds some kind of replay victims, you already have that today. So, I guess it's quite similar to what you already see with video chat meetings. Also, that's what we experienced during the pandemic in the last 2 or 3 years. So of course, as we replace some of our physical contact we do have with other persons, but it will, from my perspective, not replace every personal interaction with other people and putting every kind of collaboration to the virtual world. So, it just more of an add on or making an experience more immersive but you still have human interaction since we are still human, we need also interaction of this kind. But of course, it is a nice add on to what we already have today. So, for example, I have a lot of friends who are not living in Berlin, so I'm not able to meet them in person on a very regular basis. So, in the very beginning we met on the phone to keep in contact with each other. Now we have the chance to really have video meetings, to have more immersive experiences and to really meet persons, to collaborate, but also to socialize in another manner. And so, from my perspective, also quite similar, we're talking a lot about metaverse, you have some kind of add on to what we experience today. So, it will not completely replace the physical interaction, but if you think about sales channel, retail of which are also already out there in the market, so does the kind of add on. So, we already talked about the virtual show room that you are able to really use the metaverse as a setup to actually configure cars throughout and have a better option than just going to the retailer. But it's also



some kind of enablement for persons who are maybe not able to have any physical experience. So, let's talk about people living in the countryside who are not able to go to the car dealer and receive a car in person in real life. For them, of course, it's a huge benefit to have an immersive view, an immersive experience and have them try out a car instead of just having a look on the configurator and seeing the car on the computer. There is also a thing about disabled persons who are not able to have in depth experiences on their own because they are physically just not able to have it. They can put on the glasses and have this experience or use another setup to at least have that experience and by that making things possible which are not possible for them in the physical life. So, in kind of conclusion, I would say it is not like we are replacing everything we already know today, but of course it is a super important add on. Also, it will enable a lot of new experience, new revenue streams, but also of course simplify processes and not just a process of this in collaboration and visiting my company also processes which we kind of experience as a normal human being in our leisure time when interacting with friends or family.

Anthony Day [00:46:07] Let's also not forget the guys all around and the augmentation of the driving experience, which I find super interesting to observe, the development of, which is if you guys have seen any video. So, for those who are listening in, they're basically projecting augmented reality on top of a driving experience. So that could be gamification, that could be things flying, could be navigation, it could be, you know, for all those males out there, myself being one of them who are unable to ask for directions, simply sympathetically augmenting Google Maps or Siri or whatever else it is that you have as your in-car navigation system, which is usually underwhelming. But also

challenges, games, typically more, in my view, designed for the racetrack, less designed for the road. I'm sure we're going to see some complications over regulation of augmented reality in the vehicle. Are we actually going to see drivers really using glasses on top of windscreens or are we going to have to see these things appear in a head up display on the windscreen, which as a result then will limit how creative or how immersive we can really be. But I think there's a huge amount of fun that can be done there, maybe just for the passenger, maybe not for the driver themselves, but I really want to see that one take off. Also, I want to talk about motorcyclist because I am one myself. I want to see hollow ride in my motorcycle helmet. BMW did a really good future projection video of a single half lens or something like that. And they had your normal vision on the left-hand side and augmented reality corner mapping system or something like that on the right-hand side. I've wanted to have navigation in my helmet for the longest time, and we still really don't have a strong solution for that. So also, motorcyclists need help too, in the metaverse.

David Palmer [00:48:04] I would add to that. If we take a step back, the metaverse actually should reduce the need to travel. So, if you ask the question about journeys and experiences, upward mobility is providing that. Some would argue that the cost to the environment is improving with the electric vehicle. But one of the things that the metaverse should be able to help with is actually reducing the need to travel in the first place. And that is why diversification is important for mobility companies. Maybe the metaverse question is what mobility is, right? Maybe we moved more towards brands and some of the big brands are providing, you know, mobility and games, right. As well as in the physical and virtual world. But from my point, I



just wanted to say that I think the success of the metaverse, and its application depends on other technologies. And I think one of the couples that we can't ignore is the whole degenerative AI, which has stormed the technology charts to the top this year. But what is what it could it actually mean when you put A.I. with the metaverse and robotics and is the ability to automate tasks that can't be done at the moment that that could be assembly lines because that could be your supply chain. But what it actually means is, you know, there's a lot of projections around that AI could replace up to 300 million jobs, right? But how does it do that? People still need a place to interact with the AI, which is the metaverse and then the metaverse and the AI need to be able to provide a solution or provide a service on top of it. And I think that is a curveball that maybe we hadn't seen last year, which is when you pair up AI with immersiveness and maybe some of the Web3 technologies for portability of money and identity, there's a powerful metric that can come there that could actually replace a lot of jobs as we know them. The question is, what that impact will be on the mobility industry? Is the mobility a solution? Is it impacted? Interesting.

Dominic Briggs [00:50:40] Well, that definitely sounds like there are a lot of opportunities coming our way now that we have touched upon all the interesting new innovative technologies. And probably the combination of all will make the secret sauce. So now coming to an end, I would like to look a little bit in the future and look also at the opportunities for the automotive customer experience. Maybe as a final question, what percentage of cars will be sold through the metaverse in 2030 and why, if at all? You can answer that as a futurist.

Nicklas Urban [00:51:20] I love that question. I think if you relate that to existing data today, I think in the US something like a third or 30% of

vehicles, the settlement or the final purchases made online. So, a third of car sales today, the final payment journey is settled online, not in a physical premise. And if you backtrack then further up that journey, how many of those 30% or how many of those who didn't settle online but were at some point involved in browsing the Website or looking at some content that was sent them over email, etc.? I'm sure it's a lot more than 30%, I would say, for those who are digitally able. And if we believe that immersive experiences developed by OEMs is only going to become more pervasive or maybe even become table stakes, I would say something close to 100% of those who are able to engage with the metaverse will have their car purchase in some way, intermediated by the metaverse by 2028. I'll be out of the game by then, so no one's going to come looking for me.

Nicklas Urban [00:52:27] Yes, I totally agree with Anthony. You just said so. Maybe it's not 100% of the people really using the metaverse to buy than the car since all those people are going another way. But maybe, let's say something around a 70%, as Anthony just said, maybe using virtual configuration, some metaverse experience, doing the configuration, doing the buying cycle, but also including some of those people were actually buying the car and also paying it in the metaverse, not just having a look at the console, actually doing the buying process, not as the dealer anymore, also as part of the metaverse, but most likely 70% of them.

Dominic Briggs [00:53:14] David, what about you?

David Palmer [00:53:17] Uh, I think along those lines, it depends, as Anthony was saying in the beginning, on what the metaverse actually becomes. And one of the things we haven't



discussed is the role that government and policy will take, right? So, if the metaverse is somewhere that we do business and we meet and we work and everyone needs to have a presence there and it becomes mandated, then you could see very, very high numbers in the metaverse, because it is a universal right, it's how I earn an income, it's how I get my message out there. it's how I go to school, it's how I get education, how I get training. If that does not happen and it's a sort of commercial market driven evolution, I would say, 60%. But if we really get behind it, governments really get behind it. And there's policies and redistribution of income and universal rights that then I think we could see even higher numbers.

Dominic Briggs [00:54:17] Perfect! Thank you very much all for participating in this podcast episode. Thank you very much for this discussion. That was extremely insightful. We started off with looking at the metaverse in general and giving it down to Metaverse applications in automotive 3D sounds like a massive opportunity and I am sure we will find solutions to the challenges along the way. So, I am really much looking forward to continuing this discussion and thank you to everyone who has listened in and see you next time. And to all of you. Have a great rest of the day.

David Palmer [00:54:56] Thank you. Thank you.

Anthony Day [00:54:57] Thank you. Bye bye.

Nicklas Urban [00:54:58] Thank you, Dominic. Thanks, guys.

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