![KPMG]

The metaverse is arriving

The implications are game-changing

The term "metaverse" is everywhere. But what does that mean, practically and strategically—for businesses and boardroom discussions? The BLC invited venture capitalist Matthew Ball—CEO of Epyllion, venture partner at Makers Fund, and author of The Metaverse and How it Will Revolutionize Everything (Liveright, 2022)—to share his thoughts on what the metaverse means and how boards can help their companies assess their readiness for this game-changing virtual world that's rapidly taking shape.

KPMG BLC: The metaverse is still a fairly abstract concept to many people. Do you have a relatively simple, go-to example of what the metaverse is and why it stands to "revolutionize everything"?

Matthew Ball: The metaverse is often portrayed as an infinitely sized and diversified virtual plane where we all co-exist. It would be a place of both labor and leisure, commerce and art. Certainly, the metaverse will produce that in some form. But we should really think of the metaverse as a "synchronous," "real-time" and "3D" version of the internet.

Today, the internet is a global networking system that digitally connects millions of individual applications, hundreds of millions of companies, billions of people and tens of billions of devices all around the world—while powering tens of trillions of dollars in spending. Though this system is wide-ranging and powerful, it is almost exclusively asynchronous and static (that is, we are not co-experiencing it, but all receiving static copies of information on the internet), with its content and experiences 2D.

Matthew Ball
Venture capitalist, CEO of Epyllion, author

To "upgrade" the internet to support these capabilities, we will need to overhaul much of what we rely on and which operates the world today: computing systems, networking infrastructure, payment rails, the devices we use and software on top of them, the Internet Protocol Suite, etc. History tells us that such changes typically lead to widespread change, socially, politically, commercially, etc. This is because it changes who accesses computing and networking resources, when, where, why, and how, while enabling us to solve longstanding computational problems and even dream up new ones.

BLC: How should companies be thinking about the metaverse in terms of how it's rolling out—i.e., weighing the near-term "hype" versus the current use cases and the longer-term outlook? Will the arc be similar to the internet or mobile internet roll out? Are there any bellwethers for companies to watch for that indicate the metaverse is starting to disrupt or taking hold in an industry?

Matthew: They should be mindful of the hype. The metaverse will unfold over decades, but narratives reduce to immediacy. Most experts and operators in the field talk about the metaverse in decades, some 5-10 years, but the loudest voices, including those of many press outlets, talk about today or tomorrow. It isn't today, nor tomorrow, or really

overmorrow. But all of the leading signals are growing on a secular basis: time in 3D-rendered worlds, spend on them, the cultural impact of these environments, their technical and creative sophistication, and their deployment outside of leisure.

Mobile is a helpful frame. The first wireless digital network launched in 1991, the first smartphone in 1992, by the late 1990s we had mobile-only protocols (WAP), then BlackBerrys, with many mobile-first media companies and product emerging in Japan in the early 2000s. But it wasn't until 2008, which had both the second iPhone (the first to have both 3G and an app store) and the first Android phone, that, for many, the mobile era truly began. In the years that followed, many new giants were formed specifically for the mobile era—and, of course, matters—but most of today's leaders were at work long before it. To this end, it's notable that many of today's metaverse leaders—Epic , Nvidia , Roblox , Unity —are two to three decades old. Their leadership is no accident.

But for most companies considering the metaverse, such as brands, automotive companies, engineering firms, we are still mostly at the hypothesis, skill-building, and investment/ testing stage. There's no clear business case for doing "Thing X," no "Best Practices A-Z," or "Revenue Y," and that often discourages investment. But in fact, this same stage produces everything strategists love: first-mover advantages, emergent best practices, differentiated but informed perspectives on the future.

BLC: What industries or categories do you think will be most impacted by the metaverse—soonest and/or most significantly?

Matthew: I'm most excited about the potential in education. This sector is not only of critical financial and social importance, but it's also the single sector with the greatest cost increases since the internet's flag day[1]—over 1200%, compared to 600% for healthcare. This is because it has seen no measurable productivity improvements, despite its use of digital technology. We do not teach faster than before, more students per teacher at the same effectiveness, nor with fewer resources overall. And we learned during the pandemic how inadequate remote education is today—the loss of immersion, tactility, a peer beside you, eye contact—all matters. On-demand video and interactive multiple-choice are no substitute for the real thing.

I hope that with virtual simulation, holography, and [extended reality] XR devices, we can make real the Magic School Bus, a dream of children, while also enabling educators to reach more students, at a lower cost, and more effectively, no matter where they are or the resources of the local school district. This latter vision has long been a dream of teachers, as well as government, and parents.

BLC: For a typical company that wants to position itself to capitalize on the metaverse as it unfolds and becomes clearer, what does "good positioning" look like in terms of strategy and proactivity? Are there 2–3 critical questions that boards should be probing with management? And are there specifics that investors will be looking for to gauge a company's posture/readiness for the metaverse?

Matthew: I believe the metaverse is a multi-trillion-dollar transformation that will ultimately affect every country, sector, and business. This makes answering this question tough—it's either too broad, or too specific for a given company. But the core point is that we are talking about a 3D-network which, though rapidly developing, does not yet exist, and which runs through a mishmash of different, not-yet settled, and sometimes incompatible standards. In addition, technological transformation is a recursive process. The "metaverse of 2032" cannot yet be known because it is the culmination of many interlocking technologies, which in turn inspire new innovations and either unearth or create new user behaviors. This is why I said we are mostly at the hypothesis stage.

A few things are possible, though. The first is people. Changing tech, changing times, changing customer behaviors, means that new people are needed from the bottom to the board. Everyone knows this, but it never happens on time or as extensively as it needs to.

Second, executives need to be more than just familiar with the relevant technologies. That doesn't mean spending an hour in Fortnite or buying an NFT [non-fungible token]. It means understanding how these spaces, their tools, their culture and communities all work—and how they change throughout the year and sometimes week to week. When the internet and mobile internet matured, most executives were at least amateur users of its less complicated products (e.g., email). Most [executives] today have no real comfort with Unreal, Roblox, or a VR headset, just a passing

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[1] January 1, 1983, marking the start of the modern internet. Source: Internet Society, accessed August 25, 2022.

awareness of it. And as such, everything about these platforms feels more foreign and harder than they do to those who have grown up using them.

Last, I believe most companies are going to find their Metaverse ambitions are ultimately held back by the technical choices they're making now. Tech debt isn't "new," but data sanitization and system changes are much harder in 3D than 2D text. And so many companies must evaluate whether they're using the tools, services, formats that are optimized for today's use cases (and defined business cases), or those which are more likely to support 3D networks in the future. This is classic disruption—today's vendors are doubtlessly better suited for today's implementations, whereas "tomorrow's" currently underserve them. And so decision-makers need to look beyond the clear business case and BAU processes.

BLC: In the absence of common standards for operating in the metaverse, are there some guiding principles that can help companies navigate user privacy, ethical issues, and reputational risks posed by this largely opaque virtual world? Does most of this fall under the category of data governance, or is that too narrow?

Matthew: What I find most inspiring about this transition is the elevated role of trust building. The Web3 movement, for example, is powered by a belief that the last 15 years of the social/mobile/cloud era was too exploitative. Yes, we received incredible services and often for free, but that doesn't mean the exchange was just, nor that the net impact of the company which provided it was positive. Many outside the Web3 movement hold similar views, even if their answer isn't to go to fully trustless systems such as blockchain.

And so I think generally, demonstrating why you're worthy of trust (through policy/products/ratings etc.) is more important than ever. But this is especially true when it comes to metaverse-specific experiences. Today, most online social platforms provide a window into our "real life" (e.g. Instagram), even if it's heavily curated and designed, or lets us peer through another's. Yet, many imagine that our lives will themselves unfold in the metaverse—that we will work and play, create and express in it, rather than share those typically-offline activities through it. The distinctions here are all blurry, but there's a clear difference between typing on a keyboard into a word processor or peering through a video camera, existing inside virtual space and building a virtual business inside of it. It stands to reason the trust that's required for these sorts of operations will be far greater than those required today, even when you put aside changing societal expectations. To this end, some companies, such as Epic, are voluntarily giving up key parts of their TOS [terms of service] and EULA [end-user license agreement] contracts and placing them under the rights, processes, and enforcement policies of the judicial system.

BLC: Along with your book, The Metaverse: And How It Will Revolutionize Everything, which is a great primer, are there other resources or organizations that you would suggest to help corporate directors stay abreast of the metaverse as it evolves?

Matthew: Start by spending time in virtual spaces—lots of time. Time to the point where a keystroke in Outlook feels as natural as opening a chest in Fortnite.

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