



## InnoLead IEG Meeting

### Emerging Technology Trends in 2024 and Beyond

January 18, 2024

[Richard Entrup](#) addressed the InnoLead Executive Group and took questions. Entrup is a Managing Director and Head of Emerging Solutions in the KPMG Enterprise Innovation group.

**Background:** Entrup joined the firm in late 2022 as a Strategic Advisor, then later as an FT employee in 2023 to focus on emerging technology and “frontiers” such as Web3/Blockchain, Metaverse/Spatial/Immersive Internet, Generative AI, and others. He explained that in addition to his group, KPMG US maintains an incubator/accelerator called KPMG Studio, as well as a venture capital team that makes minority strategic investments in startups. Before joining KPMG, Entrup advised venture capital firms like Mayfield, Greylock, Lightspeed and others, and was also a CIO, CISO, Chief Digital Officer, Chief Innovation Officer, and CTO in many industries, running IT, Digital, and Digital Transformation, globally.

**The group covered four topics:** Generative AI, quantum computing, blockchain, and the metaverse.

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## Generative AI

- **AI is not new.** AI has been around since the 1940s in some flavor. At Disney/ABC, Entrup said he was supporting Ad Sales systems that were using AI for targeted digital advertising delivery in the mid 2010’s era.

- **Gen AI is Like the Internet in the 90s.** Gen AI has, as we all know, consumed everything over the last year. There has been a scurry within enterprises on who should own it and what the governance model should be. Similar to when the Internet arrived, IT or Marketing didn't know what to do with it, or who should own it, so they created the Interactive Group. Gen AI is in that same early 90s Internet spot. It's still early, and it's what's coming next that will be transformational, just like Uber, eCommerce/Amazon, Netflix, Paypal, etc. was to the Internet."

- **Perils around data governance and data protection.** "Most existing data protection frameworks will suffice, but there are some "net new things" with GenAI/AI that represent great risk, and require a "trusted AI framework," including cybersecurity, bias, fairness, and many other pillars. KPMG has a core competency in helping clients with building a Trusted AI framework."

- **Augmenting humans.** Entrup said he didn't believe that Gen AI will be "a complete replacement of anyone in the short term" and that while "some roles will be replaced...the bulk of jobs will be augmented. You could however be at risk if you're not using AI in your role by someone who is using AI".

- **Starting with efficiency.** Entrup said that Gen AI is not currently driving top line revenue growth in most use cases — yet. Today, it's more about operational efficiencies in all areas of the company. But Entrup predicted "that will change."

- **The Hype Cycle.** Entrup said: Gen AI is at "this peak of inflated expectations on the Gartner Hype Cycle, I think it's going to drop shortly, into the trough of disillusionment, but it's going to come out fast." There are thousands of startups building new Gen AI features and solutions.

- **Regulation will be coming.** The European Union, the US, and even the United Nations will continue to keep an eye on AI. Entrup shared that this is not like 5G, RPA or other "tech du jours" — the TAM is immense on AI and there are geopolitical ramifications since GenAI will change everything, for individuals, companies, and governments, and has some very real risks.

- **Don't wait to start experimenting.** At KPMG, various functions built ChatGPT-like platforms for the firm's advisory, audit, and tax practices in 2023. Entrup: "We trained people internally to start using these tools to get more productive and have a continuous internal training program in place. We also announced a significant Alliance partnership with Microsoft around AI and have commenced a Copilot rollout to staff, so we're drinking our own Kool-Aid."
- **Quantify the impact.** KPMG Studio, an internal incubator, is already measuring and gaining operational efficiencies from using generative AI and seeing significant improvements in their processes.
- **Writer's block is over.** One thesis from Entrup: "Writer's block, or getting new documents, images, videos, etc. started from zero, has just been smashed. KPMG will explore preparing SOWs, RFPs, and other docs in the sales cycle process with Gen AI. There's no more writer's block for anything."
- **Increasing participation.** One InnoLead member observed that ChatGPT and Microsoft Bard allow everybody to feel like they're innovating. They are sparking their imagination in a way that is organic.
- **Gen AI for better forecasting.** Another InnoLead member said she had tried to use Gen AI to improve forecasting but couldn't get data — some people want to hold data hostage and not share it, even if there are positive upsides. Someone said recently: "AI is BS because we can't get the data... there are gaps... it's inaccurate...we can pilot things, but scaled implementation often requires behavior changes."
- **Do you have data you can use?** Most organizations are not mature enough in data strategies and governance frameworks to leverage AI. And many do not have the right skill sets in-house. For example, healthcare data may not be usable, if it's patient data. At professional services firms, client data may be off limits. First-party data that companies can collect, and can be used for AI, is still gold, Entrup said.
- **GPU usage costs are not cheap.** Consider those costs before building AI and data-intensive applications, so you aren't painted into a corner.

- **80/20 rule.** 80 percent of the use cases for Gen AI are applicable to any sector; customer service, MS Office Copilots, DevOps, SecOps, etc., and then there's that 20 percent of GenAI nuance that differs from industry to industry. Media and entertainment for instance could be significantly disrupted from a content creation and labor perspective; as evidence, look at the recent Screen Actors Guild strike last year. AI was a big issue in that. Jeffrey Katzenberg also made a statement recently about the animation category of filmmaking — 90% of it could be done through AI in the next five years or less.

- **Getting started:** Identify one or two real business problems to solve and 'Jobs to be Done'. AI is not a magic tool for everything. Do you have a retention issue? An engagement issue? Do you want to double your revenue? Start small, use design thinking, identify real problems in the business. This is not a giant ERP implementation; start smaller, but you need to get your data in order. The data preparedness is very real and gets real technical, real fast. "You can't go all-in big here since it's early, and could be costly. You've got to start with smaller use cases and measure your success," Entrup said.

## Quantum computing

- **Quantum is coming.** Behind it, quantum computing could be maturing — becoming a commercial reality by 2030. IBM is on a fast pace to get quantum to general availability. Maintaining cryptography and ensuring "quantum resistance" — any mechanism for protecting data could be cracked within seconds with quantum computers — is crucial. Companies will have to inventory assets — like SSL certificates — that may need to be fortified to survive the quantum era.

- **The time to secure things is now.** One InnoLead member said that information that's being recorded now by bad actors could be decrypted 5-10 years in the future. Entrup added that there are governments collecting as much data as they can from the Internet for that reason, "to mine and crack later once quantum is readily available. "

## Blockchain and Web3

- **Blockchain opportunities continue to emerge and are very attractive:** There's a real opportunity here despite recent negativity — it's important to separate Web3 and Ape JPGs selling for millions of dollars, from applications that will deliver business value and growth. Entrup said, "blockchain as a utility provides immutable record keeping transactions that could support a digital receipt (titles, deeds, etc.), but could also support provenance and authenticity of physical goods like art, precious stones, food, fine wine, or any physical asset, where monitoring the supply chain path is critical."
- **Watch out for "decentralization recentralization".** With the recent announcement that the Securities and Exchange Commission has approved Bitcoin-focused ETFs, Entrup said that "it seems like the middleman, which blockchain was supposed to cut out, is very much in the middle. The industry is kind of losing the benefits of a decentralized opportunity to transact directly, P2P, without any middleman."
- **Blockchain in the background.** Starbucks and others will eventually use Web3 for their rewards programs because, as Entrup shared, "it's a really powerful means of digital marketing in support of engagement, conversion, and retention of customers...and it just happens to use blockchain. But the trick is to keep blockchain/tokens/NFTs in the back-end, and not have it at the forefront, like the crypto geeks prefer. Because let's face it, you and I use PayPal, Venmo and Zelle daily but really don't care how they work, we just want to send someone money... I think blockchain will become more pervasive once it operates in that fashion, but there's a way to go."

## The metaverse

- **Defining it.** Entrup said that "the metaverse is like the internet. It's not any one thing. It's an environment of physical space interacting with a digital experience via AR, VR, etc. .I don't even use the word metaverse any more since it's still associated with gaming. I prefer to say VR, XR, immersive experience, or spatial computing — with or

without a VR headset. The second you have to use a VR headset for anything, you're going to lose a large % of the population... but maybe the Apple Vision Pro will change that.”

- **Real business applications exist.** For certain sectors, Entrup shared that there are huge opportunities for immersive training, such as in healthcare for enabling doctors to do remote diagnosis or patient check-ins or provide mental health services; and also on manufacturing factory floors or heavy machinery, where you need a hands-on and real time training.
- **Gamers are already in the metaverse - but they don't call it that.** Entrup shared that there are 3.2 billion people playing games right now and spending billions of dollars on digital goods while not even using the word metaverse. “They're just living in digital environments — playing, engaging, and spending lots of real money,” Entrup said; that's something corporations need to seriously consider tapping into as part of their digital marketing and brand strategy.