Visa Consulting & Analytics

The metaverse as a strategic inflection point

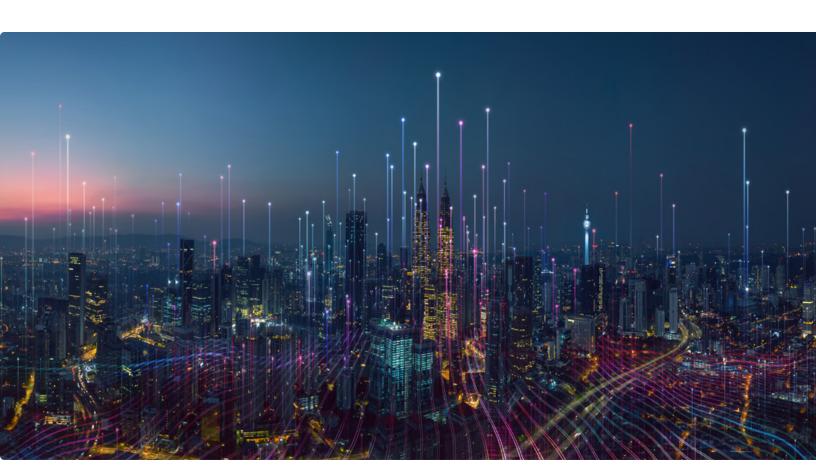


Towards the end of 2021 came a resurgence of interest in the metaverse, opening a door on the subject to many more people.

First, Facebook rebranded to Meta, and shifted focus from social media to a new platform—the meta universe (or metaverse for short). Within a few weeks, both Microsoft and Nvidia updated analysts on their own metaverse ambitions. And, soon after, The Economist magazine announced to its global readership that "something metaverse-shaped lying in the relatively near future is an idea worth taking seriously."1

The metaverse represents a strategic inflection point for today's financial institutions. Its arrival accentuates and accelerates three big trends that were already in play. Financial institutions need to address these trends to enable future success - both within the metaverse itself and across the wider world of digital commerce.

In this paper, Visa Consulting & Analytics (VCA) outlines the key components of the metaverse, three areas for financial institutions to pay attention to, and recommendations for how financial institutions can respond.



1. The Economist, Future of the Internet, 20 November 2021, https://www.economist.com/leaders/dont-mock-the-metaverse/21806354



Emergence of the metaverse: fad or signal?

We are seeing some serious momentum building behind the metaverse. At first it played host to cultural and creative happenings, like the release of BTS' "Dynamite" music video on Fortnite, or the unveiling of Gucci's clothing collection on Zepeto, where users can dress their avatar in pieces from Gucci through in-app purchases. Through 2021, media coverage of virtual events, like graduation and wedding ceremonies gained momentum.² Then, of course, came the Facebook rebrand, pushing the term "metaverse" into the mainstream.

Defining the metaverse

You could think of the metaverse as a 3D sequel to today's two-dimensional internet.

The New York Times said: "Remember hearing about 'the internet'? Get ready for 'the metaverse.' It refers to a fully realized digital world that exists beyond the analog one in which we live."3

Right now, it's too early to say exactly how the metaverse will be manifested. But, as a useful reference point, it's worth looking back to the framework first developed by the Acceleration Studies Foundation.⁴

Types of metaverse

AUGMENTATION

Augmented Reality

An interactive environment where virtual images expressed in 2D or 3D are converged with images representing reality

• Lower engagement compared to virtual reality but better usability in real-life

E.g., IKEA's Place, Pokemon-Go, etc.

Lifelogging

Technology used to record, store and describe daily experiences and information as text, images and videos

• Users can share the records with other users as well

E.g., Facebook, Instagram, Nike Plus, etc.

Mirror Worlds

WORLD FOCUSED)

EXTERNAL

An extended world where the real-life's image and structure are digitally re-created but only with the extended information

· As the technology advances, the simulation will be more like real world and the user's engagement level will increase

E.g., Google Earth, 3D Map, Virtual Tour, etc.

Virtual Worlds

An alternative digital world that is similar to or completely different from reality

• Users can create an avatar and let it participate in social and economic activities just like in real world

E.g., Naver's Zepeto, Nintendo's Animal Crossing, Second Life, etc.

SIMULATION

The common denominator is immersive experiences, generally accessed via virtual reality headsets or augmented reality glasses, in which people work, play, buy, and sell. Several popular platforms already attract millions of users, including Roblox, Zepeto, Fortnite, and Sandbox.

(IDENTITY FOCUSED)

INTERNAL

 $^{2.} Forbes, "Welcome To The Metaverse", Mar 23, 2021, \\ \underline{https://www.forbes.com/sites/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/?sh=151b8c10720c \\ \underline{https://www.forbes.com/sites/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/stephenmcbride1/2021/03/23/welcome-to-the-metaverse/st$

^{3.} The New York Times, "Are We In The Metaverse Yet?", July 10, 2021, https://www.nytimes.com/2021/07/10/style/metaverse-virtual-worlds.html

 $^{4. \,}Metaverse road map.org, \\ \underline{https://www.metaverse road map.org/Metaverse Road map Overview.pdf}$



But is the metaverse simply a fad or temporary trend in the market, like many social media platforms that experienced fleeting popularity?

To address this question, it's useful to dig a little deeper into the metaverse and its three key components:

Three key components of the metaverse – and the creator economy

Component #1

Content

By design, content production and consumption happen in both directions (in contrast to platforms like Netflix, HBO, Disney, which have a one-way model). The content that makes up the metaverse consists of virtual experiences in which users can immerse themselves. Examples include games, but extend to music concerts, brand experiences, and even hiring recruitment campaigns.

Component #2

Platform

The platform refers to the different channels that act as a point of contact between the users and the metaverse. Today, Roblox, Zepeto, and Fortnite are among the best known metaverse platforms.

Component #3

Infrastructure

The infrastructure is the foundation necessary for platform development, content creation, and consumption. That includes the hardware (e.g. virtual reality headset or augmented reality glasses), the software (e.g. game engines or a blockchain), and the **economic systems** that operate within the virtual worlds or experiences.

The most interesting characteristic of metaverse is that it has its own virtual economic system – a creator economy, which enables and incentivizes users to easily create, trade, and monetize digital content, using the built-in tools of the metaverse platform, as well as its own currency – cryptocurrencies in some platforms – that act as their method of payment.

For example, in Roblox, anyone can make real money by creating their own digital content. Using the Roblox Studio, users can create new games, game accessories, or characters, sell them in the Roblox marketplace, and receive payment in Robux, the platform's in-house currency, which can be converted into U.S. dollars at the exchange within Roblox. If the currency used in a metaverse is cryptocurrency, such as AXS of Axie Infinity, it can be freely traded in mainstream crypto exchanges, such as Binance and Upbit.

Users can earn and spend money by producing, distributing, and consuming, just as they would in the real world.





Given this context, Visa believes that the metaverse is a signal for financial institutions. We have identified three key trends for financial institutions to pay attention to.

#1

The increase in importance of millennials and Gen Z – as the new generation of consumers

The typical metaverse user is young – for example, 80 percent of Zepeto users are teenagers, and 54 percent of Roblox users are less than 13 years old. ^{5,6}

So, the metaverse is primarily inhabited by Generation Z, and most of its remaining users are millennials, a digitally active group who spend a considerable amount of time online and are more likely to be cashless and attracted by digital currencies. Expansion of the metaverse will likely increase the significance of millennials and Gen Z consumers as an important customer base for financial institutions and accelerate the transition into financial services products designed specifically for a new generation.

#2

The emergence of the next-generation platform

The metaverse is expected to become the next-generation platform because of its two main attributes: young customer base and unique monetization model.

When a new platform emerges, it is typically younger people who popularize its use. They are then followed by older users who ultimately drive rapid growth.

An example is TikTok's video-sharing social media platform, currently the most popular app in the world, with 60 percent of its users between the ages of 16 and 24.7

Following the initial influx of users to the platform, high-quality content helps to maintain user growth. A monetization model that incentivizes users to participate actively both in content creation and consumption is therefore a strong asset. Many of the most successful metaverse platforms have a creator economy approach, which incentivizes content creation and earns funds.

Again, a good example is Roblox with its surging popularity and its in-built economic system. Indeed, the platform is already home to more than 1.2 million creators who, on average, earn more than US \$10,000 a year.8



 $^{5. \ \} Korea Herald, Metaverse rises to cultural mainstream, Jan. 3, 2022, \\ \underline{http://www.koreaherald.com/view.php?ud=20220103000633}.$

 $^{6. \&}gt;\> Roblox\, Corporation, Form\, S-1\, Registration\, report$

^{7.} Brandastic.com, What is TikTok? Why is it so popular? Sept. 1, 2021, https://brandastic.com/blog/what-is-tiktok-and-why-is-it-so-popular/

 $^{8. \&}gt;\> Roblox\, Corporation, Form\, S\text{-}1\, Registration\, report$



#3 The mainstreaming of digital assets

The popularization of non-fungible tokens (NFTs), or certificates to say that you own something that has been digitally recorded on a blockchain, began with Cryptokitties, a blockchain-based game in which users can create unique game characters and sell them at a high price. The NFT phenomenon has been extending its reach ever since, notably in areas such as art and collectables, encouraging more people and companies to regard them as digital assets or alternative investments. For example, in August 2021, Visa purchased a CryptoPunk – one of 10,000 highly sought-after digital characters on the Ethereum blockchain – for 49.5 ETH, or roughly US\$150,000¹¹. At the close of the year, the global market for NFTs was valued at US\$7 billion. 12

NFTs are just one example of digital assets in the metaverse. Another important example of digital assets in the metaverse is its cryptocurrencies. SAND in Sandbox, MANA in Decentraland, and AXS in Axie Infinity are well known cryptocurrencies, each of which is used and traded in its own metaverse. Ultimately, we believe the metaverse will likely draw many more people to digital assets, including NFTs and cryptocurrencies, and the market size will grow accordingly.

^{13.} Techtimes, Top 12 metaverse tokens, November 17, 2021, https://www.techtimes.com/articles/268107/20211117/top-12-metaverse-tokens-mana-sand-axis-more.htm



^{9.} Decrypt, Beginner's Guide to NFTs, October 22, 2021, https://decrypt.co/resources/non-fungible-tokens-nfts-explained-guide-learn-blockchain

^{10.} Artnews.com, A Collecting Category Emerges: How NFTs Took the Art World By Storm, October 13, 2021, https://www.artnews.com/art-news/market/nfts-collecting-category-1234605598/

^{11.} Visa.com, NFTs mark a new chapter for digital commerce, August 23, 2021, https://usa.visa.com/visa-everywhere/blog/bdp/2021/08/18/nfts-mark-a-1629328216374.html

^{12.} Business Insider, Global NFT market worth \$7 billion, November 19, 2021, https://markets.businessinsider.com/news/currencies/nft-market-worth-7-billion-legal-issues-could-hinder-growth-2021-11

How should financial institutions respond?

The emergence of the metaverse offers a strong rationale for financial institutions to invest in and extend their credentials in all three areas:

#1

Finance solutions for millennials and Gen Z

Providing new finance solutions for millennials and Gen Z present the most immediate opportunities:



Product and service development

Products and services for millennials and Gen Z are critical in this new era. There are many successful cases to learn from, such as UK based Go Henry, a prepaid card/pocket money management service for teenagers, with more than 1.5 million account holders. Also, several large financial institutions now offer a suite of financial service solutions for younger people, such as buy now, pay later, which can directly increase customer acquisition and retention rates.



Sales and marketing solutions

The metaverse represents an interesting marketing channel for millennials and Gen Z. Collaborating with companies that benefit from exceptionally loyal followers, such as those in the gaming, entertainment, and sports industries, can be effective in attracting customer attention and participation. For example, Visa achieved unusually high response rates when video booths and team shirts using the Tokyo Olympics logo were promoted on Zepeto.



Underwriting and risk management approaches

Alternative credit scoring models are being developed for millennials, Gen Z and other segments to fill a gap left by traditional credit scoring models, that used to focus primarily on financial data. For example, alternative algorithm-based credit models can use other types of data to provide a broader view of a consumer's reliability and financial behaviors.¹⁴

Globally, many fintech players specialize in these alternative credit scoring models and see a vast untapped market for their solutions. For example, Cred.ai, a U.S.-based fintech, developed a new credit card aimed at younger age groups featuring its "credit optimizer" – a self-developed algorithm that enables customers to build a credit record by using the card.¹5 The company also plans to license the algorithm to other fintechs, which could become a new revenue source.¹6 Financial institutions can consider this model as a potential new revenue source utilizing their underwriting capabilities.

^{16.} Forbes, The 'Tesla of banking', Startup Cred.ai Unveils Its Al-Powered Credit Card, https://www.forbes.com/sites/michelamoscufo/2020/08/06/the-tesla-of-banking-start-up-credai-unveils-its-ai-powered-credit-card/?sh=724669b53cd6)



^{14.} See, for examples, https://www.juvo.com/ or https://www.destacame.cl/

^{15.} Cred.ai, https://cred.ai/

#2

Next-generation platforms as a data mine

Some financial institutions have already started to build branches in the metaverse platform. For example, in South Korea, KB Kookmin Bank built KB Financial Town in Gather Town, offers advisory services to customers¹⁷, and expects the metaverse to enable new ways of communicating with and serving customers by combining online and offline services in one place.

However, in addition to thinking of the metaverse as a new delivery channel, financial institutions should consider virtual universes as meaningful data sources. If customer spending moves from the current online platform to the metaverse, which existing financial institutions cannot yet access, financial institutions could lose their access to customer spending and activity data. Of course, in some metaverses like Roblox or Zepeto, you can buy the in-house currency - Robux for Roblox or Zem for Zepeto - with credit cards, making credit cards the source of commerce. Financial institutions, however, cannot access the detailed purchase activity data, whether the user buys a concert ticket or a pair of shoes when the actual commerce becomes available.

Especially in a metaverse based on Web 3.0¹⁸ internet tools and infrastructure. which is a vision for a future version of the internet based on the blockchains, the need for alternative data analytics and intelligence will become even more compelling, since users will own their data and have control over whether the platform can access it.

Therefore, financial institutions should consider developing a new platform strategy, including partnerships with emerging metaverse platforms that can provide enhanced user data and have a relevant propositions - such as those involved in shopping.

#3 **Digital wallets**

The metaverse brings another way to facilitate the trading of digital assets such as NFTs and cryptocurrencies, the total market value of which already is more than \$2 trillion dollars.19

PayPal recently launched a new 'super app' and outlined its vision to become a digital wallet platform, not just a payment app.²⁰ And, outside of the traditional payments sector, many other organizations, including big techs and platform players like Samsung, Facebook/Meta, and Rakuten, have developed their own propositions. For example, Facebook rolled-out a pilot for its own digital wallet, 'Novi.'21 Meanwhile, Rakuten, which launched its digital wallet back in 2017, recently announced a new service to top up Rakuten Cash (online e-money issued by the Rakuten group) via cryptocurrency and make payments at on/ offline merchants such as 7-Eleven.²²

With digital wallets becoming a focal point of digital asset trading and having the potential to become a form of digital identity, financial institutions should consider building a strong position in digital wallets and pursuing the associated opportunities.

^{22.} Rakuten, Bitcoin and Other Crypto Currencies Can Now Be Used to Charge E-Money, Feb. 24, 2021, https://global.rakuten.com/corp/news/press/2021/0224_03.html



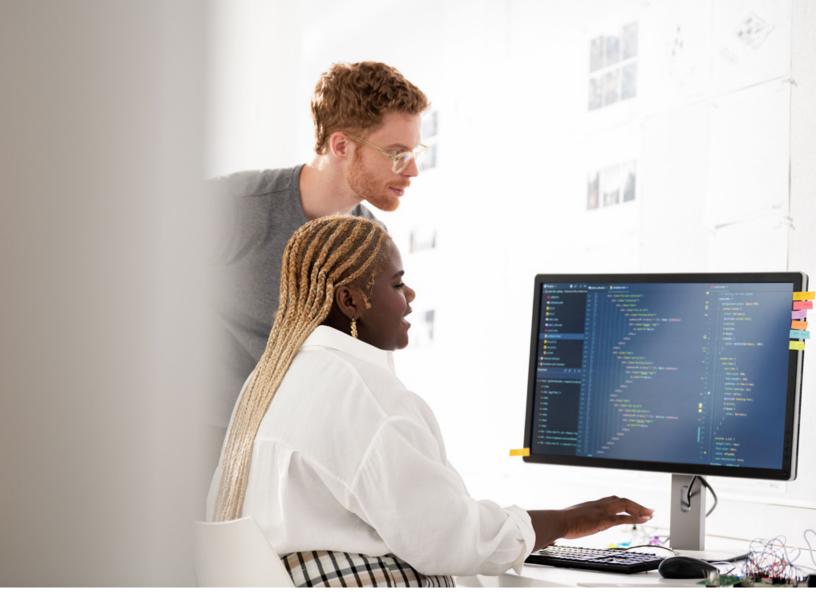
^{17.} Newsbreeze, "Go as an avatar to a virtual bank, video counseling for home workers", Jul 18, 2021, https://newsbeezer.com/koreaeng/go-as-an-avatar-to-a-virtual-bank-video-

^{18.} NBCnews.com, "What is web 3", January 9, 2022, https://www.nbcnews.com/science/science-news/web3-s-silicon-valleys-latest-identity-crisis-rcna9846

^{19.} Bank of America newsroom, "BofA Global Research Launches Coverage of Digital Assets", Oct. 4, 2021, https://newsroom.bankofamerica.com/content/newsroom/pressreleases/2021/10/bofa-global-research-launches-coverage-of-digital-assets.html

^{20.}PayPal, "PayPal Introduces Customers to the Next Digital Payments Era", Sep 21, 2021, https://newsroom.paypal-corp.com/2021-09-21-PayPal-Introduces-Customers-to-the-Next-Digital-Payments-Era-with-the-New-PayPal-App

 $^{21. \ \} The Verge, Facebook's digital wallet finally launches... without Diem cryptocurrency, Oct. 19, 2021, \\ \underline{https://www.theverge.com/2021/10/19/22734487/facebook-novi-digital-novi$ wallet-pilot-program-payments-diem-cryptocurrency



How Visa can help

Visa can help identify strategic initiatives and develop roadmaps to prepare clients for the metaverse era and to connect them to new digital currency products and blockchain networks to be used on metaverse platforms. To this end, Visa is forging a wide range of partnerships, extending settlement services to digital currency transactions and making it easier for clients to offer digital currency capabilities by building Visa Crypto APIs. A digital currency innovation lab has also been established to help clients and partners discover, co-create and build digital currency concepts and pilots. This will support clients in developing their own economic system on metaverse.

Meanwhile, Visa Consulting & Analytics is well positioned to work with clients to initiate a metaverse discovery engagement. This engagement includes strategy formulation, capabilities assessment, business case and go-to-market approaches (including build-partner-buy considerations).

Organizations in all sectors should plan now on how to best capitalize on the opportunities this new digital revolution will bring, just as online marketplaces two decades ago revolutionized the way consumers shopped. One thing is clear: The metaverse will change the rules of the game as we move from an internet of information to an internet of value.





About Visa Consulting & Analytics

We are a global team of hundreds of payments consultants, data scientists and economists across six continents.

Our consultants are experts in strategy, product, portfolio management, risk, digital and more with decades of experience in the payments industry. Our data scientists are experts in statistics, advanced analytics, and machine learning, with exclusive access to insights from VisaNet, one of the largest payment networks in the world.

Our economists understand economic conditions impacting consumer spending and provide unique and timely insights into global spending trends.

The combination of our deep payments consulting expertise, our economic intelligence and our breadth of data allows us to identify actionable insights and recommendations that drive better business decisions.



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