Rejolut

2022

WEB 3.0 ECOSYSTEM RECAP

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GLOBAL WEB 3.0 MARKET REPORT 2022

GLOBAL WEB 3.0 BLOCKCHAIN MARKET

The size of the worldwide Web 3.0 blockchain market was USD 1.36 billion in 2021, and it is projected to increase at a CAGR of 44.9% from 2022 to 2030. The expansion can be ascribed to the increasing desire for data privacy through Web 3.0's decentralized identity and the development of the internet's technology. Additionally anticipated to contribute to the expansion is the quick rise in popularity of digital assets like cryptocurrencies and the rollout of 5G and 6G technology. The expansion of the Web 3.0 blockchain business is also being aided by the rising use of linked devices and better transactional procedures.

Source : *www.grandviewresearch.com*

U.S. Web 3.0 Blockchain Market

Size, By Blockchain Type, 2022-2030 (USD Million)

$239.5M $307.3M

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

12.5%
U.S Market CAGR
2022-2030

■ Public   ■ Private   ■ Consortium   ■ Hybrid
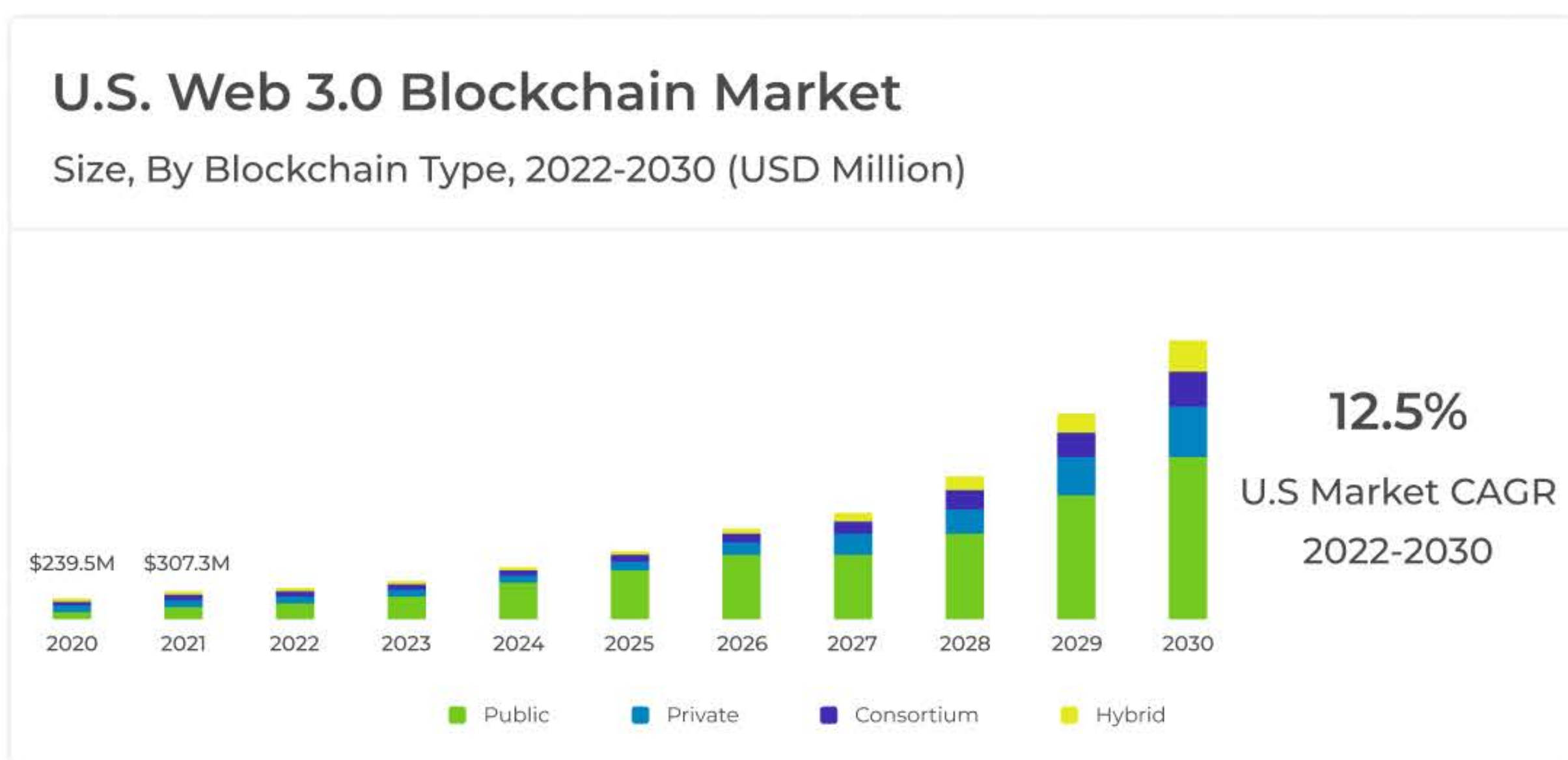
Many players are concentrating on creating Web 3.0 platforms to increase user scalability and flexibility. For instance, to address the underlying issues with scalability, the cryptocurrency exchange platform WazirX introduced Shardeum in February 2022. Web 3.0 is a better internet where applications and websites are in charge of processing data human-likely. Blockchain technology is primarily used to create Web 3.0, which is supported by cryptocurrencies. During the forecast period, these product introductions are anticipated to generate attractive growth possibilities for the sector.

Due to advancements in internet technology, other technologies such as machine learning, big data, and decentralized ledgers are anticipated to propel the industry's growth. There are three stages that the internet has gone through in its evolution. The World Wide Web, often known as Web 1, was the very first iteration of the internet.

It consisted of static pages joined together by hyperlinks. Due to the early stages of content generation, users needed more opportunities to interact with the applications at that time.

People could interact with digital networks and create the necessary information on Web 2. Users might collect information and submit data back to the server to receive more pertinent data and other user-generated inputs. The development of Web 3 allowed users to save the data on a blockchain public ledger, which would be powered by blockchain and artificial intelligence.

The Web 3.0 industry is anticipated to increase due to the expanding use of Web 3.0 technology for numerous business applications, including smart contracts, digital identification, documentation, and exchanges. In Web 3.0, Self-Sovereign Identity (SSI) is a useful method for digital identity. SSI is a technique for establishing identification that bases information control on the user. SSI gives users better control over what information they disclose, protecting their privacy by doing away with the necessity to keep all of their personal information in one place. These advantages of SSI in Web 3.0 are also anticipated to help the expansion.

The industry's growth is also projected to be fueled by the increasing adoption of Web 3.0 cryptocurrencies to automate transactions over the internet. However, Web 3.0 cryptocurrency trading provides better advantages, including decentralization and expansion potential. Additionally, it does not need approval from higher authorities, which is an added benefit. To entice new participants and advance, nations are concentrating on legalizing cryptocurrencies. For instance, Dubai passed the Dubai Virtual Assets Regulatory Authority law in March 2022 to regulate assets based on blockchains.

COVID-19 Impact Analysis

The COVID-19 epidemic is anticipated to benefit the Web 3.0 blockchain sector. Blockchain-based Web 3.0 has completely changed the cryptocurrency market and the system for electronic payments. As a result of the COVID-19 epidemic, countries worldwide have begun to accept technology related to smart contracts, exchanges, and digital identification. Additionally, the business is anticipated to develop as Web 3.0 cryptocurrencies are increasingly used for quicker transactions.

Market Dynamics

Global Web 3.0 Blockchain Market Drivers

Shifting Data Ownership toward the User

Artificial intelligence (AIAI), machine learning (ML), and blockchain technology are the three key pillars of web 3.0. The web 3.0 blockchain strongly emphasizes the security and privacy of personal data and enables users to store data in a decentralized manner. Communication between people and machines has altered due to Web 3.0, which enables frictionless ownership Transmission, cryptocurrency- based payments, and data transfer. People can choose what data they share thanks to blockchain technology for Web 3.0. With web 3.0 blockchain technology, the consumer controls THEIR data, not any third-party source. The user now accepts personal data rather than third-party sources due to this. As a result, blockchain technology has advanced. As the concept of data ownership gains traction, people are turning to web 3.0 blockchains to protect their data and eliminate worries about security and privacy from third-party vendors.

Enhanced transparency

Decentralized blockchain technology is used in web 3.0. All transactions are transparent and fully documented as a result. Blockchain ensures consumers that their data is not tampered with or altered by using information traceability mechanisms. By making every transaction irreversible and recordable, blockchain technology for Web 3.0 increases the transparency of the payment system, which benefits users during audits.

Blockchain technology for Web 3.0 is essential for internet surveillance and control because it can record transactions. People can also keep an eye on governmentrelated activities that use personal information. These procedures are highly transparent, and important sectors have begun using them more frequently in recent years. This technology has helped create a transparent and accountable digital economy by improving accountability. The enhanced openness of the web 3.0 blockchain during the predicted time will substantially impact the demand for web 3.0 blockchain technology.

Web 3.0 Blockchain Market Constraint.

Lack of awareness is a global

The web 3.0 blockchain technology has more advantages than earlier iterations, but its development is constrained by a need for more knowledge about its use and applications. The exploitation of customer data, aggressive business tactics, and unethical AIAI use have all drawn increasing condemnation in recent years from internet firms like Google, Facebook, Microsoft, and Amazon. This has caused attention to shift to web 3.0, which is thought to be more secure, although its development has been constrained by ignorance of its use. Users need to be aware of the web 3.0 blockchain's other applications besides its use in cryptocurrencies. Similar to how

web 3.0 technology is still developing, several important concerns must be resolved before the technology can be effectively utilized. Due to a need for more understanding of Web 3.0 blockchain technology among end users, it is anticipated that this larger reliance on Web 2.0 will persist during the estimated period, limiting the development of the web 3.0 blockchain.

Global Web 3.0 Blockchain Market Opportunities

🔶 Rapid technological advancement

Blockchain is a Web 3.0 technology that is developing swiftly. It offers the end user several benefits, such as reduced operational expenses, better speed, reduced risk of cyberattacks, and personal data control. The integration of blockchain technology with the Internet of Things and the use of blockchain technology in logistics and operations are only two recent examples of significant technological developments. To use the technology to its best potential in surfing, social networking, messaging, and data storage, significant R&D is being done to make it more scalable. Recently, the development of NFT payment systems and digital collectibles has been aided by Web 3.0 technologies. Other technology applications include spatial web design and 3D graphics, among others. The further development of this technology will impact numerous industrial sectors and create tremendous growth possibilities.

🔶 Divisional Analysis

Based on blockchain type, application, vertical, and geography, the worldwide web 3.0 blockchain market has been divided into sub-segments.

Based on blockchain type, public, private, consortia, and hybrid sectors make up the global market. In terms of market share, the public sector held the greatest share and is anticipated to expand at a CAGR of 41.2% over the projection period. Anyone with access to the internet and without special authorization can join a public blockchain. This network, which has no one in charge, is open to everyone who joins and allows them to read, write, and engage. Decentralized and unchangeable public blockchains exist. Users can feel secure knowing their transactions won't be altered or deleted after they've been validated because there is no way to edit them. The most popular cryptocurrencies employ public blockchains, such as Bitcoin, Litecoin, and Ethereum.

Conversely, governments can use them to track medical information or as a voting platform. These systems' basic components are anonymity and openness. The business-to-consumer use case for the public blockchain is predominant. Such elements all contribute to the segment's growth.

Based on application, cryptocurrency, conversational AIAI, data & transaction storage, payments, smart contracts, and other segments make up the global market. With a projected CAGR of 40.1% over the projection period, the payments category is expected to continue to have the highest market share. Blockchain technology offers quick, safe, and affordable options for processing international payments. These transactions use encrypted distributed ledgers, which dispense with the need for intermediaries like clearinghouses and correspondent banks and enable responsible real-time transaction verification.

The second largest market is the private sector. Private blockchains are only reachable by invitation and require prior approval from the blockchain's governing body to be used. They offer several levels of access, enabling people to build, view, and audit the blockchain. Despite not disclosing their data to the public, the organizations, in this case, utilize distributed ledger technology. Private blockchains don't have the same decentralized security as public blockchains. Therefore only the owners can alter the record. On a private blockchain, each user must have a verified identity, which establishes their level of access. These are specific business solutions that make it possible to manage everyone's actions and resources. They make transactions faster and need less energy to maintain. A private blockchain is ideal for corporate and business-to-business applications, managing vendor-supplier relationships, or developing a common infrastructure among enterprises. Such advantages all promote segment expansion.

By vertical, the global market is divided into the BFSI, e-commerce & retail, media & entertainment, healthcare & pharmaceuticals, IT & telecom, and other sectors according to vertical. With a projected CAGR of 45.1% during the projection period, the BFSI category is expected to continue to have the highest market share. The BFSI industry uses blockchain technology in several ways to improve how people exchange values. The transaction is recorded in blocks using blockchain technology, chained together to create comprehensive transaction records. With this technology, transaction records in the bfsi sector cannot be changed or amended after they are added to the ledger.

The second-largest industry segment is media & entertainment. Through P2P micropayments and smart contracts, the Ethereum platform enables THE media & entertainment business to profit from things like content disintermediation from industry intermediaries, reduced IPIP infringement, and direct monetization of all copywritten assets. This technology can log a thorough history of media use and enable effective micropayment pricing structures.

Regional Evaluation

North America, Europe, Asia-Pacific, Middle East & Africa, and South America regions make up the worldwide web 3.0 blockchain market.
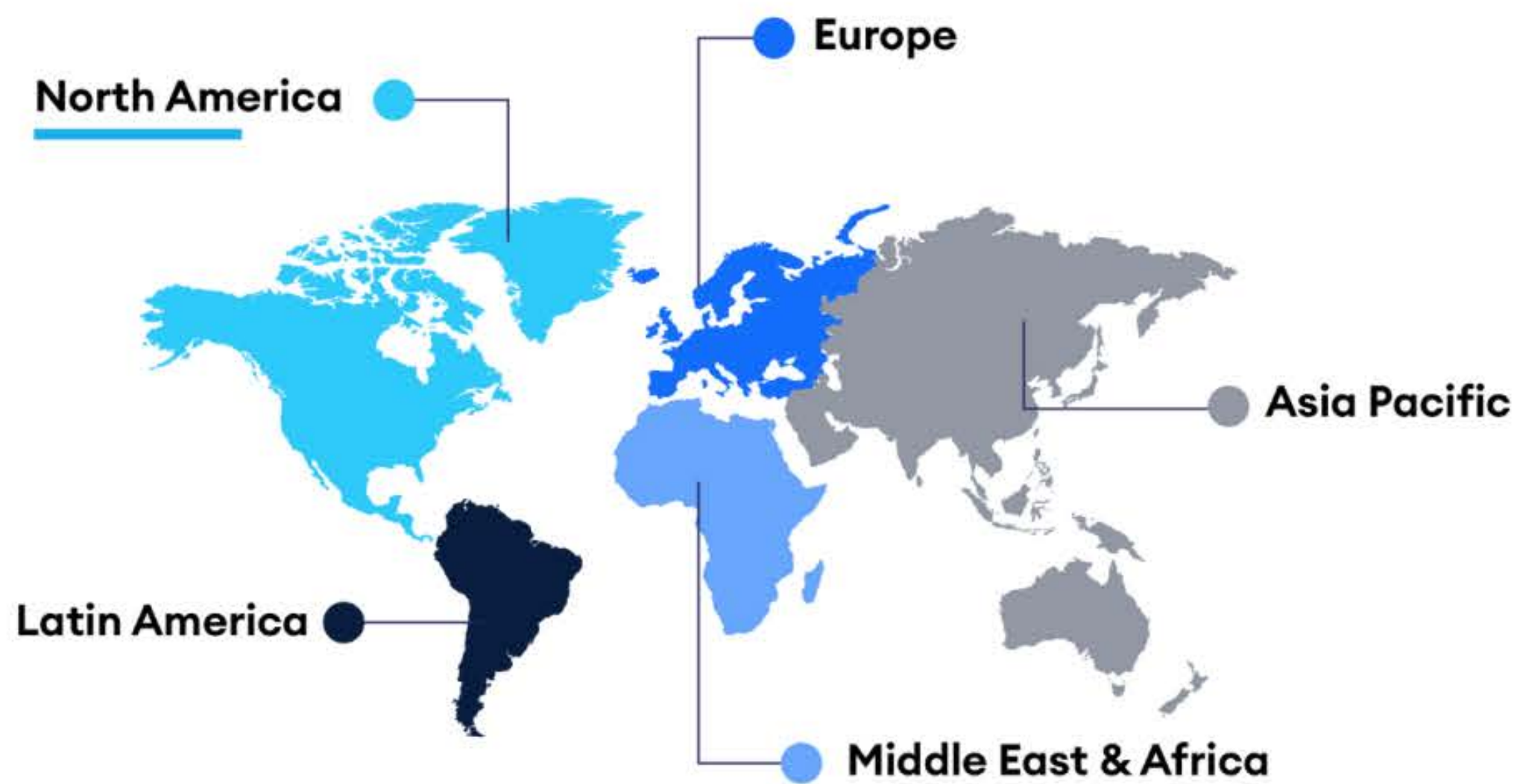
North America dominated the market and is predicted to expand at a CAGR of 41.2% over the projection period. In the global context, North America is projected to lead the adoption of blockchain technology. North America is the second-most active region regarding bitcoin volume transferred on-chain, just behind Northern and Western Europe (NWE) and well behind East Asia. An estimated 14.8% of all cryptocurrency activity occurred in North America. Although the professional market in North America is thriving, it differs from East Asia in terms of how people invest in bitcoin. The blockchain technology area businesses use accelerating the region's market expansion. Blockchain is moving into a new phase of wider, more pragmatic acceptance as many formerly hesitant leaders are starting to see its longterm possibilities. Growing businesses from various industries are expanding and diversifying blockchain efforts. Leaders in a wide range of North American businesses are well aware of the disruptive potential of blockchain, but each is still finding out how to use the technology effectively. Blockchain technology is required to implement payment and wallet solutions, smart contracts, and digital identity detection solutions in government, retail, and BFSI. Additionally, the proliferation of businesses in the area fosters the expansion of the local economy.

The second-largest region in Europe. At a CAGR of 50.5%, it is predicted to reach an expected USD 24240 million by 2030. Blockchain has many applications, making it one of the most disruptive technologies for European and global economies. Additionally, the blockchain's services have expanded far beyond cryptocurrencies, which were the first to make the blockchain widely known a decade ago. Although still in its infancy, blockchain technology has challenges with connectivity to legacy infrastructure, performance, energy efficiency, regulation of digital assets, and others. The initiatives undertaken by the public and commercial sectors across Europe can minimize some of these barriers and provide strong advantages for rapid adoption. The European Commission (ECEC) plans to use blockchain technology to build a pan-European public services blockchain, establish a legal and regulatory framework for applications based on blockchain, and fund significant research and development initiatives. Businesses are willing to engage in the blockchain industry thanks to

favorable regulatory frameworks, a rising blockchain infrastructure market, and other factors. Important first steps toward adopting blockchain technology in Europe include these and other components. Over a third of European blockchain spending is allocated to cross-border payments, settlements, and regulatory compliance. The majority of the growth in Europe's blockchain market up to now has come from the bitcoin industry. Third in size, is the Asia-Pacific region. The Asia-Pacific region comprises China, Japan, India, and the rest of the continent. Compared to the study's other locations, this region has one of the highest levels of cryptocurrency activity. Cryptocurrency use has grown, presumably for routine transactions, especially in India, Vietnam, Indonesia, and Thailand, along with expanding retail operations in Central and Southern Asian nations. Due to the expansion of mining activities, the Eastern Asia region has also made a significant contribution. The Asia-Pacific area produces the majority of freshly created Bitcoin, which helps the Web 3.0 blockchain sector grow.

Key Organizations & Market Share Information

The vendors frequently used partnerships and collaborations in the Web 3.0 blockchain sector to introduce new goods and provide solutions to diverse industries. Blockchain technology for Web 3.0 is in high demand due to its capacity to simplify commercial payment processes. Additionally, businesses pooled knowledge and assets to provide customers with highly integrated solutions. Businesses have expanded their operations in several other areas to cater to a wider audience.

Source : www.grandviewresearch.com

U.S. Blockchain Technology Market

Size, By Type, 2022-2030 (USD Billion)

$1.11B $1.78B

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

84.5%

U.S Market CAGR

2022-2030

■ Public Cloud   ■ Private Cloud   ■ Hybrid Cloud
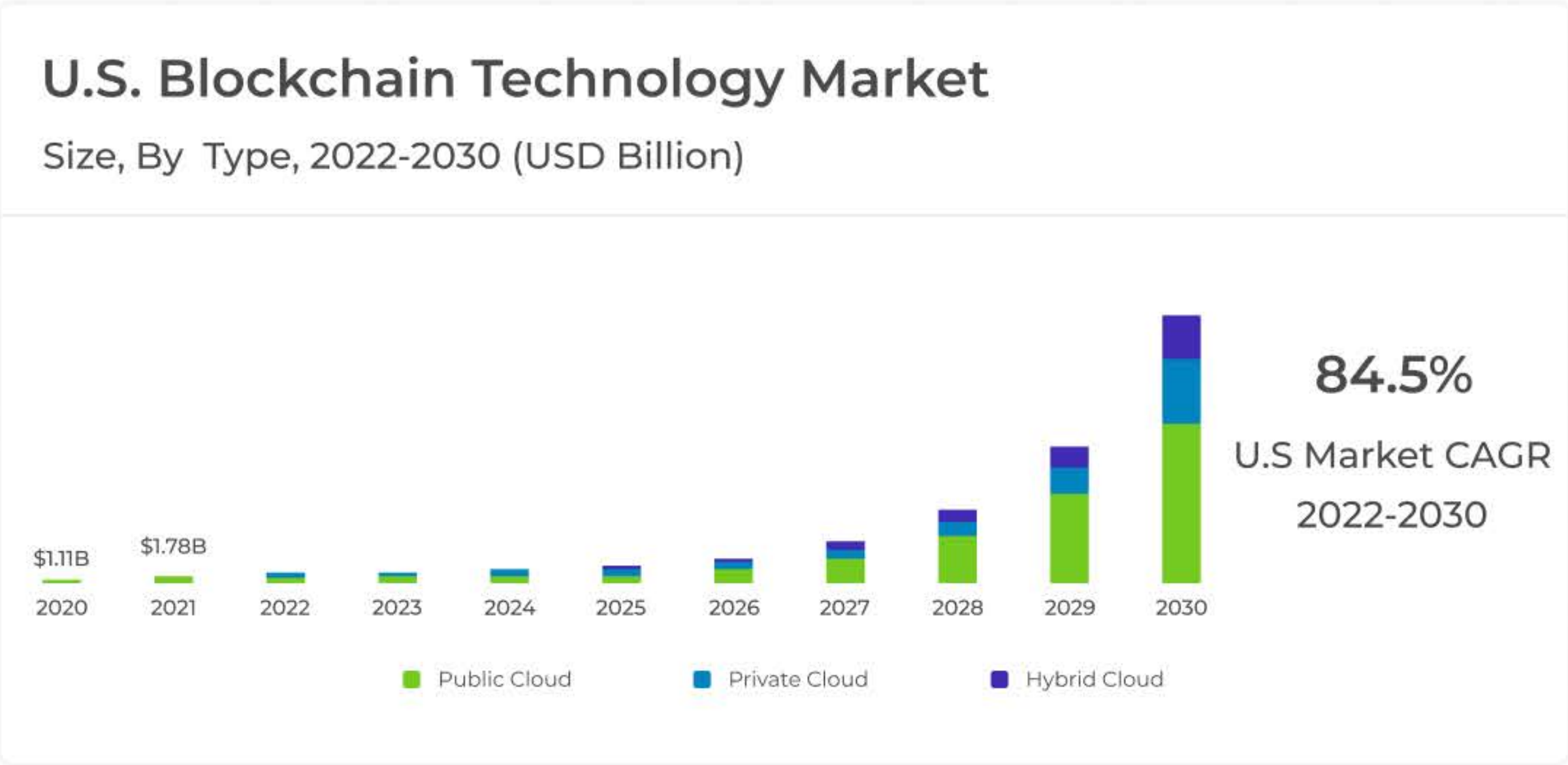
Companies in the blockchain industry are working to incorporate cutting-edge technologies like blockchain and artificial intelligence (AI) into their products. Companies can increase their competitive advantage and consumer experience thanks to improved technologies. Blockchain technology makes a more efficient, dependable, and highly adaptable supply chain network possible.

Partnership Used In The Web 3.0 Blockchain Market

October 2022 - After receiving its Category 4 license as a Crypto Asset Service Provider (CASP) in May 2022, Binance launched its Bahrain platform, Binance. Bh. Bahrain users can access the full range of crypto-asset exchange services offered by Binance on this platform, including direct deposits and withdrawals in local currencies.

BETH and POLYX have been added by Binance as new collateral assets on the Binance Loans platform as of October 2022.

The Energy Efficiency data challenge is the newest project under Ocean Protocol's larger Ocean Data Challenge program, which aims to encourage data analysis and algorithms for solving challenging business problems. Ocean Protocol is a Web3 platform that unlocks AI and business innovation data services. In October 2022, the platform launched the Energy Efficiency data challenge.

Sep 2022: American multinational coffeehouse chain Starbucks and Polygon entered cooperation. Through this relationship, the companies hoped to take customers on an "Odyssey" of Web 3.0 NFT. The consumer experience is a priority area for this program because the acquisition and maintenance of client commitment is the primary focus of this new platform.

Sep 2022: Polygon joined forces with ANKR, a utility token with various applications. With this collaboration, Ankr and a decentralized scaling platform built on Ethereum took a step further to enhance Web 3.0 developers' working environment.

Canon Gaming, the fastest-growing integrated blockchain gaming, and entertainment platform, and Polygon partnered in August 2022. Onigiri and Cosmic Break, two video game titles from Catheon Gaming, would continue to be released within their network thanks to this agreement.

Alchemy acquired ChainShot, a website for learning blockchain technology, in August 2022. With this acquisition, Chainshot, a creator of an initial Ethereum building Bootcamp, hoped to recruit and prepare Web3 developers.

In July 2022, Filecoin partnered with Web 3 data storage provider and nextgeneration investment manager Holon. The ESG report outlines a new benchmark for shares of responsibility for sustainability due to this collaboration.

In July 2022, the consumer electronics manufacturer Nothing and the Polygon Partnership teamed up. Nothing has tapped Polygon Technology through this agreement to deliver non-fungible tokens (NFTs) on its most recent Android-based Nothing mobile device.

Lockheed Martin, an American aerospace, defense, weaponry, information security, and technology firm, and the Filecoin Foundation partnered in May 2022. The goal of this collaboration was to demonstrate the IPFS in orbit. The partnership anticipates that blockchain applications in space would reduce the latency while transmitting with orbiting nodes.

The education and training platform AlmaBetter and Polygon partnered in April 2022. By combining the best elements of trade schools, MOOCs, apprenticeships, and boot camps, the companies hoped to introduce Web3 education for contemporary professions through this alliance.

In February 2022, the World Economic Forum, a global non-governmental and lobbying group, and The Web3 Foundation partnered. Web3 Foundation would help international executives and their communities comprehend the potential benefits of decentralization and its underlying blockchain technology for the world under the terms of this cooperation.

Global Web 3.0 Blockchain Market

Segmentation

Blockchain Type Outlook

- Public
- Private
- Consortium
- Hybrid

Regional Outlook

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East & Africa

Market Segments

Application Outlook

- Cryptocurrency
- Conversational AI
- Data & Transaction Storage
- Payments
- Smart Contracts
- Others

End-Use Outlook

- BFSI
- Retails & E-commerce
- Media & Entartainment
- Pharmaceuticals
- IT & Telecom
- Others

Segmentation Of The Global Web 3.0 Blockchain Market

This study analyzes the most recent market trends in each sub-segments from 2019 to 2030 and estimates revenue growth at the global, regional, and national levels. This article has divided the Web 3.0 blockchain industry study into several regions, applications, and types of blockchains:

Blockchain Type Outlook

- Public

- Private

- Hybrid

- Consortium

Application Outlook

- Cryptocurrency
- Data & Transaction Storage
- Payments
- Conversational AI
- Smart Contracts
- Others

End-Use Outlook

- Retail & E-commerce
- BFSI
- Pharmaceuticals
- IT & Telecom
- Media & Entertainment
- Others

Regional Outlook

North America

- Canada
- The USUS.

Europe

- France
- Germany
- UK

Asia Pacific

- India
- South Korea
- China
- Japan

Latin America

- Mexico
- Brazil

MEA

- UAE
- Saudi Arabia

GLOBAL WEB 3.0 METAVERSE MARKET

The size of the worldwide metaverse market was estimated at USD 47.48 billion in 2022, and it is expected to increase at a rate of 39.44% CAGR to reach USD 678.80 billion in valuation by 2030. North America held the largest share, with nearly 45% of the global market in 2021. A metaverse is a virtual reality environment where people can communicate with one another in a setting created by a computer. Numerous industries, including healthcare, education, real estate, gambling, and the military, have applications in the metaverse. People frequently use the metaverse for business, art, or investments. Approximately 52% of internet users worldwide join the metaverse in search of employment opportunities, followed by 48% for art and live entertainment, 44% for financial investment, 40% for education, 32% for online dating and socializing, and 29% for gaming.

The Metaverse's Function In The Public Sector:

We are actively monitoring the metaverse market and have found a ton of potential in the public sector. Typically, metaverse for government is only thought of as a toptier virtual training tool with a VRVR interface. The actual situation is different, though. Since it uses technology for events, urban planning, construction, tourism, and many other sectors, the government will likely become the biggest metaverse industry stakeholder within the next ten years.

Numerous Fields Provide Enormous Opportunities, Some Of Which Include:

- Infrastructure planning and urban design
- Activities, gatherings, and conferences
- Digital twin-based manufacturing and the metaverse
- Tourism and travel
- Others

New Developments In Training And Strategic Planning:

- Defense and military training
- Training for government employees

- Plans for war, defense, and tactical operations based on the metaverse and digital twin

Many Emerging Metaverse Use Cases Are Aimed At The Government Sector:

Soon, the government will hold meetings, seminars, and other activities in the metaverse. This is already in the works since it would save enormous time, money, and effort.

Additionally, travel and tourism are quickly developing fields. For instance, some emirates in the United Arab Emirates are looking to the metaverse to increase and improve tourism in their areas. A new metaverse city has been successfully deployed in the United Arab Emirates by AI-based ecosystem Multiverse Labs, which is expected to boost the tourism sector there.

Smart cities and infrastructure development initiatives have already begun in certain nations to incorporate the metaverse in various ways. Municipalities and local governments will also be involved in the metaverse ecology. Local governments may interact with municipal employees, laborers, and residents to coordinate efforts, address problems, and streamline various activities.

Our Metaverse Intelligence Covers The Following Topics:

The following points are highlighted in this article's thorough research on "Metaverse in the Government Sector":

- Along with quantifying the market size and revenue streams, most of the metaverse's prospective use cases for the government sector in the following five to ten years.

- Ongoing developments and possibilities for every use case mentioned.

- Investments made in the specified use cases, a study of their attractiveness, and future possibilities.

- What tools, channels, and technology will become more popular as the government sector embraces the metaverse?

- Opportunities for the market for technology and consultancy companies.

Metaverse: What It Is And Beyond The Hype

Users of Metaverse can virtually interact with people no matter how far off they are from one another. It gives users access to a platform with an immersive experience that improves online social interactions and offers many other benefits outside of social media. It enhances various things, including online education, gaming, the use of cryptocurrencies and NFTs, and the working environment. In addition, the metaverse would be able to support emerging firms and offer enormous potential for financial growth in the future. Additionally, the introduction of IoT in the metaverse has aided in overcoming one of its formidable difficulties, namely the transfer of data from the real world to the virtual one. The metaverse will need extremely complex IoT designs, including cloud computing, network design, etc. According to SMR's research, IoT technologies have been embraced by over 84% of companies globally, and the number of IoT-connected devices is expected to increase by almost 18% (or roughly 14.41 billion) by 2022 compared to the previous year. Future expansion of the metaverse market is anticipated to be aided by all of the considerations above.

Global Metaverse Market
Based on Market Share (USD Billion)

$124.04 Bn

$1655.29 Bn

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030
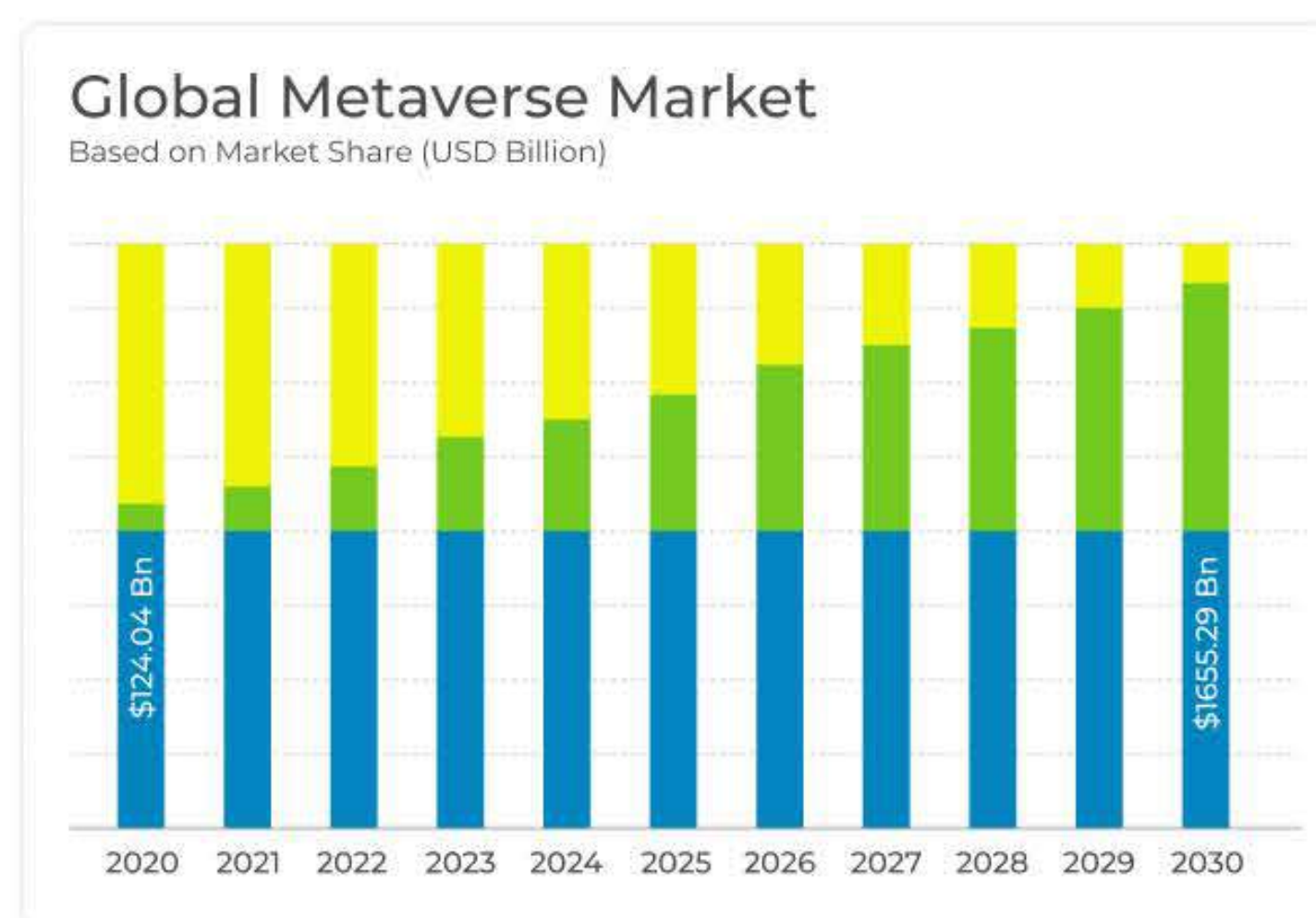
Explaining The Metaverse And Gaming

Segments including gaming and social media, retail and e-commerce, events and conferences, education and corporate, and digital marketing and advertising are all part of the non-industrial market. Avatars will play a crucial role in all facets of the metaverse and enable people to resemble or take the form of any character in the virtual world. For instance, the metaverse will only be accessible through avatars and skins, but it will allow users to enter the gaming world by mimicking any virtual figure. In video games in the metaverse and on social media, avatars will be a paid feature.

The metaverse is expected to be used more frequently in the gaming sector. A functioning version of the metaverse has already been built by gaming companies renowned across many industries for being early adopters. For instance, popular video games like Minecraft and Fortnite, as well as the well-known gaming platform Roblox have incorporated many aspects of the metaverse, including fictional areas where players can congregate to play games and utilize social features like in-game discussions.

Roblox made $1.9 billion in sales in 2021, an increase of 107% from the previous year. In 2020, it increased sales by 112%, which was made feasible by the metaverse development. The creators of Fortnite, Epic Games, raised $2 billion in 2022 from Kirkbi, the investment business founded by The Lego Group and Sony Group Corporation, with each company contributing $1 billion. It also received $1 billion in funding the previous year, in 2021. These figures demonstrate how much money is invested in the metaverse-based gaming sector.

Future Of Gaming With Digital Avatars

In the near future, avatars will be platform-interoperable, allowing users to utilize their skins and avatars on different platforms. This implies that a single avatar will be used to play various games provided by various businesses. Avatars will have a market worth $17 billion by 2027, up from $2 billion in 2022.

Metaverse Offerings (Non-Industrial)

- Avatars (5%)
- Financial Services (26%)
- Virtual Platforms (40%)
- Asset Market Places (29%)
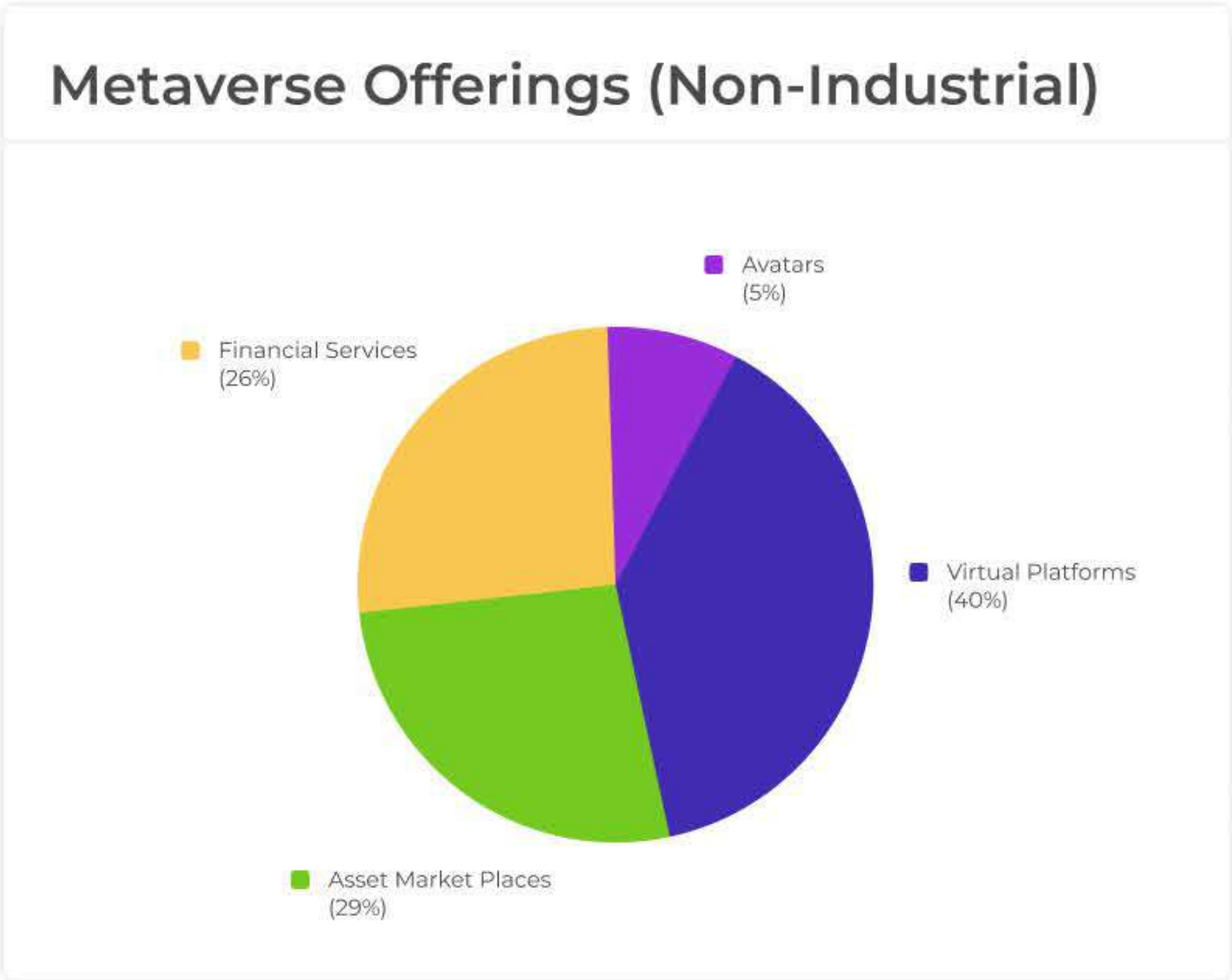
Real Estate And Digital Assets In The Metaverse

Another significant trend gaining traction in the metaverse is the asset market. The market for virtual assets is increasing as the virtual world gains popularity. People are willing to own assets like real estate, buildings, paintings, and other things in the virtual world, which explains why. These are NFT-linked assets with a very high value and little supply. By 2027, the virtual market will be worth over $100 billion as more people invest in virtual assets.

Revenue, By End Use, $Million				
Application	2022	2025	2027	CAGR%
Non- Industrial	48,179	148,764	313,635	45.6
Industrial	13,307	37,522	74,527	41.2
Total	61,486	186,286	388,162	44.7

Key Industry Drivers

The Success Mantra Of The Metaverse: Web 3.0 And Cryptocurrency

- The metaverse industry benefits from the growing usage of new technologies, including mixed reality (MRMR), extended reality, artificial intelligence (AIAI), and blockchain. Companies including Roblox, Facebook, NVidia, Fortnite, Epic Games, Microsoft, Google, USM, Oculus, and RTFKT Akira have already implemented or are implementing metaverse XRXR/extended reality systems and other new technologies. According to research, Qualcomm filed close to 80 patents across 28 patent families for the metaverse, Sony filed close to 87 XRXR patents to 78 patent families, and LGLG Group filed close to 688 extended reality/ERER patents to close to 455 patent families.

- The currency of the metaverse is used for all transactions. Through metaverse portals, cryptocurrency is frequently used to pay for everything, from avatar shoes to NFT. The research found that 53% of businesses invest in cryptocurrencies and 44% in NFTs. According to a CNBC survey, one in ten people invests in cryptocurrencies, which are commonly used in trading various commodities, including NFTs. Since crypto-exchange is available globally, investors can use this currency to offer products directly to customers on the metaverse, favorably altering market trends.
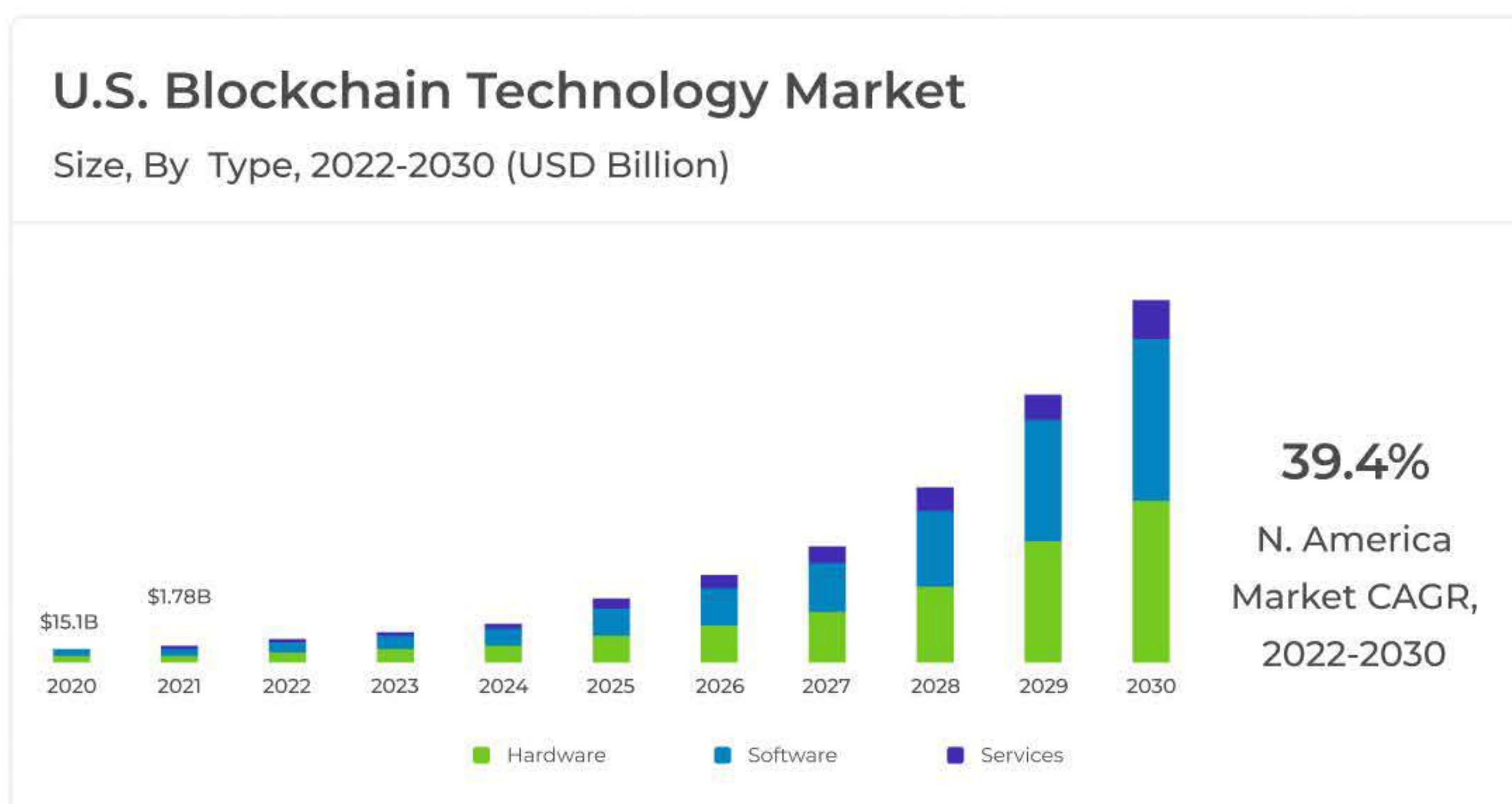
- In the gaming industry, centralized and decentralized metaverses are feasible; however, decentralized projects are given priority because the future has been opened. Additionally, it has introduced Web 3.0 gaming, a brand-new gaming environment that lets players switch between various game experiences with their characters. In online gaming, this concept is sometimes known as "playto-earn."

- Numerous gaming firms offer the option for game-payment systems and offer in-game items like skins and outfits, vehicles and weapons, and props that follow players across platforms in line with web 3.0 gaming (e.g., console, PCPC, mobile device). These games depend on NFT to give their players incentives and tokens. With almost 3 million players and in-game products valued at $2.26 billion, Axie Infinity is the most popular NFT title.

Restraints

The Popularity Of Metaverse And Security Risks

Because many of its users need to be made aware of the service and security alternatives available, the expansion of the metaverse market may be constrained. Cyberattacks against important players like Tencent Holdings, Globant, and others have raised serious security and sensitivity issues. Through September 2021, over 500 million cyberattacks were reported, with more than 1700 attacks reported for each business, according to SonicWall.

Source : www.grandviewresearch.com

U.S. Blockchain Technology Market

Size, By Type, 2022-2030 (USD Billion)

$15.1B — 2020
$1.78B — 2021

39.4%
N. America Market CAGR, 2022-2030

Legend: Hardware | Software | Services

Market Possibilities

Customer Engagement Through The Metaverse In Marketing

- Business-to-business, client meetings, trade shows, product demonstrations, advertising, customer services, etc., are all examples of business marketing. Each of these areas for B2B marketing has significantly enhanced with the introduction of the metaverse. Since most B2B products are commodities, providing excellent customer service through the metaverse can accelerate the industry's growth. Additionally, the metaverse has eliminated several key distinctions between B2C & B2B, such as ROI, Target Audience, etc., providing a wealth of options for future market expansion.

- The metaverse offers an increasing number of professional choices. Because of the growing demand for various goods and services in the metaverse, more employment is being generated, which may accelerate market expansion. According to a study, the metaverse is predicted to generate soon 10,000 jobs in a variety of fields, including research, planning, development, safety, narrative, world-building, cybersecurity, and ad-blocking.

Global Metaverse Market
Based on Product

Software	Services	Hardware
38.46	15.38	46.15

Market Analysis Of Different Segments Covered In The Report

Based On Components

- Software
- Hardware
- Services

Based On Platform

- Mobile
- Desktop
- Headsets

Based On Technology

- Metaverse in Mixed Reality (MRMR)
- Metaverse in Virtual Reality (VRVR) and Augmented Reality (ARAR)
- Metaverse in Internet of Things (IoT)
- Metaverse in Blockchain
- Others

Based On Offering

- Metaverse in Avatars
- Metaverse in Financial Services
- Metaverse in Virtual Platforms
- Metaverse in Asset Marketplaces

Based On Application

- Metaverse in Advertising

- Metaverse in Gaming
- Metaverse in Edge Computing
- Metaverse in Online Shopping
- Metaverse in Virtual Goods
- Metaverse in Online Education
- Metaverse in Conferences
- Metaverse in Social Media
- Metaverse in Digital Twin Operations
- Metaverse in Blockchain Application
- Metaverse in Payments
- Metaverse in Content Creation
- Metaverse in Virtualisation Tools
- Metaverse in NFT

Based On End-Use

- Metaverse in Real Estate
- Metaverse in Education
- Metaverse in Military
- Metaverse in Healthcare
- Metaverse in Customer Experience
- Metaverse in Media and Entertainment
- Metaverse in Fashion
- Metaverse in Manufacturing
- Metaverse in Technology

Regional Coverage Analysis

- Canada
- United States of America
- Mexico
- North America
- Rest of North America

Europe

- France
- Germany
- United Kingdom
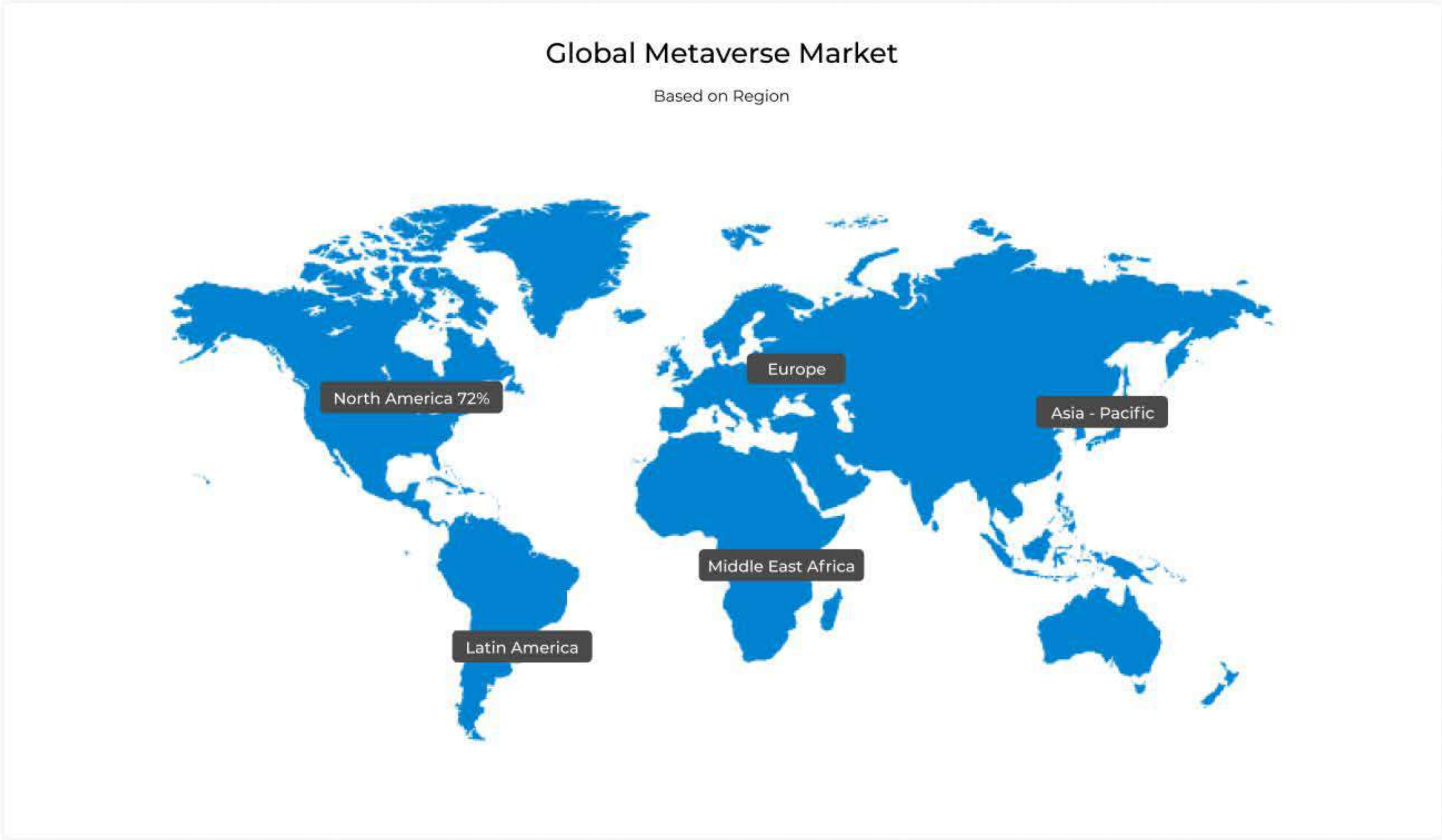- Rest of Europe

Asia-Pacific

- India
- South Korea
- Japan
- China
- Rest of Asia-Pacific

South America

- Brazil
- Rest of South America

The Middle East And Africa

- South Africa

- United Arab Emirates

- Saudi Arabia

- Rest of the Middle East and Africa

Global Metaverse Market

Based on Region

North America 72%

Europe

Asia - Pacific

Latin America

Middle East Africa

Advance Hardware To Lead The Vast Metaverse Experience: Components Insights

With a USD 16.58 billion market share in 2021, the hardware sector is projected to develop at a rate of more than 38% CAGR. The hardware sector is anticipated to generate the most income throughout the projected period due to an increasing effort by companies to build devices that provide a better user experience and enable more user immersion in the metaverse. To improve the metaverse user experience, many businesses are creating hardware. JP Morgan analysts predicted in June 2021 that Meta, Inc. would construct its metaverse hardware using application-specific integrated circuit (ASIC) chips from Broadcom, Inc.
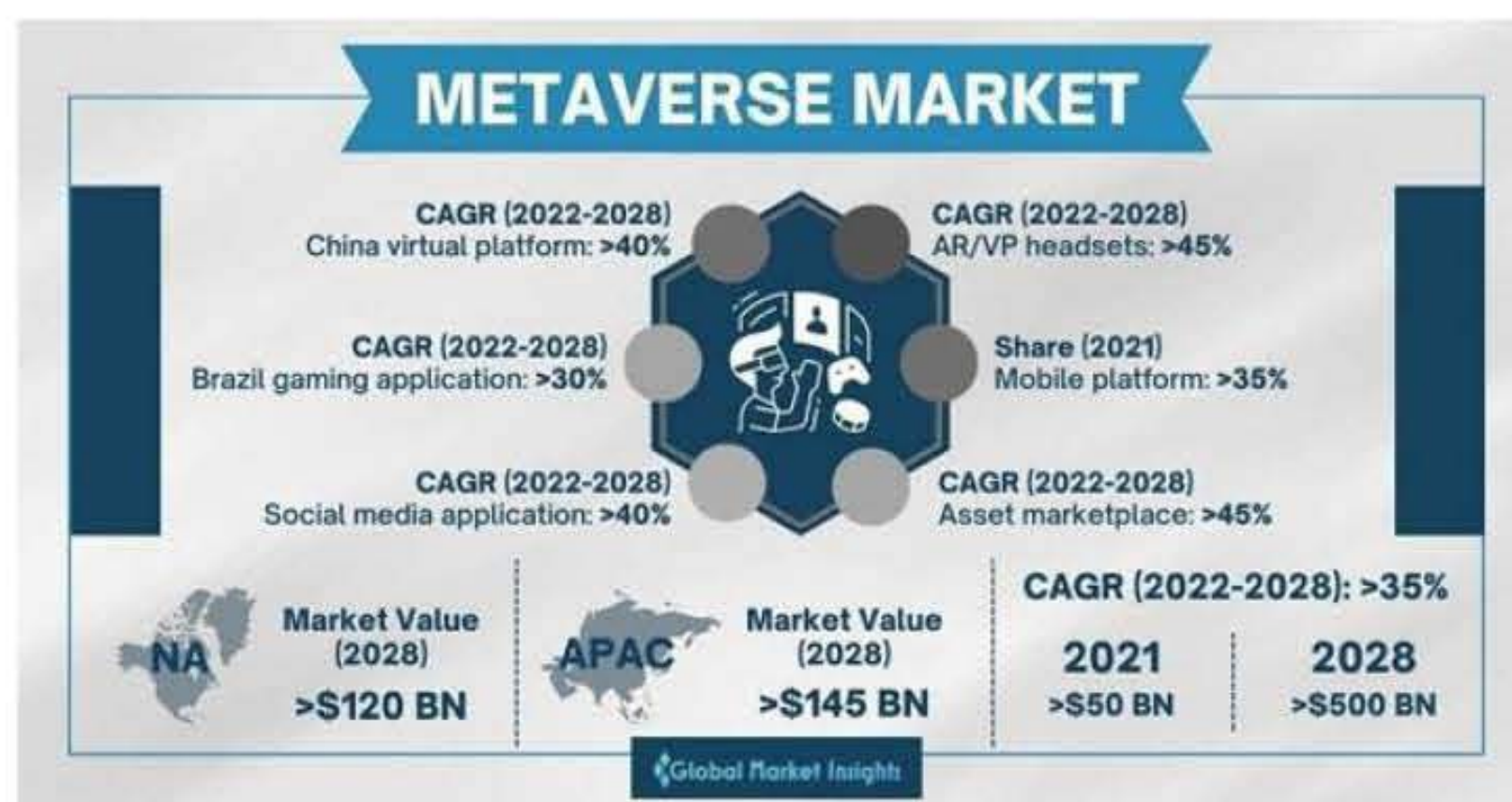
VRVR Headset To Lead The Metaverse Platform

With USD 16.38 billion in revenue in 2021, the desktop sector accounted for the greatest metaverse market size. Currently, the desktop serves as the main portal for accessing the metaverse. The desktop offers quicker access to the metaverse because it has greater storage than a mobile device. The desktop processor makes it easier to enter the metaverse because it has a bigger screen and a physical keyboard. Because the internet connection speed on a desktop computer is fixed, it is faster than the internet connection speed on a mobile device. The expansion of this market sector is driven by more users choosing desktop over mobile due to the latter's several advantages for multiverse entry. A study found that the speed of a desktop fixed internet connection is 29.2 Mbps faster than the speed of a mobile internet connection. Another study found that mobile users make up 47.59% of internet traffic, while desktop users account for 48.88% of it for things like entering the metaverse.

Virtual reality is predicted to grow to be the most important market segment. Virtual reality (VRVR)-based metaverses are very common in the metaverse gaming industry. One of the fundamental components of developing metaverse technology is virtual reality. Due to its ability to create interactive 3D worlds, virtual reality (VRVR) has seen rapid industry growth. Nearly 171 million people use virtual reality (VRVR) worldwide, most of whom use it for gaming since it offers such an amazing, flawless virtual experience. The market for VRVR gaming is expected to reach $12.13 billion by 2022.

Source: *Grand View Research*

Potential Metaverse Market
Opportunity (Total Addressable, USD Trillion)
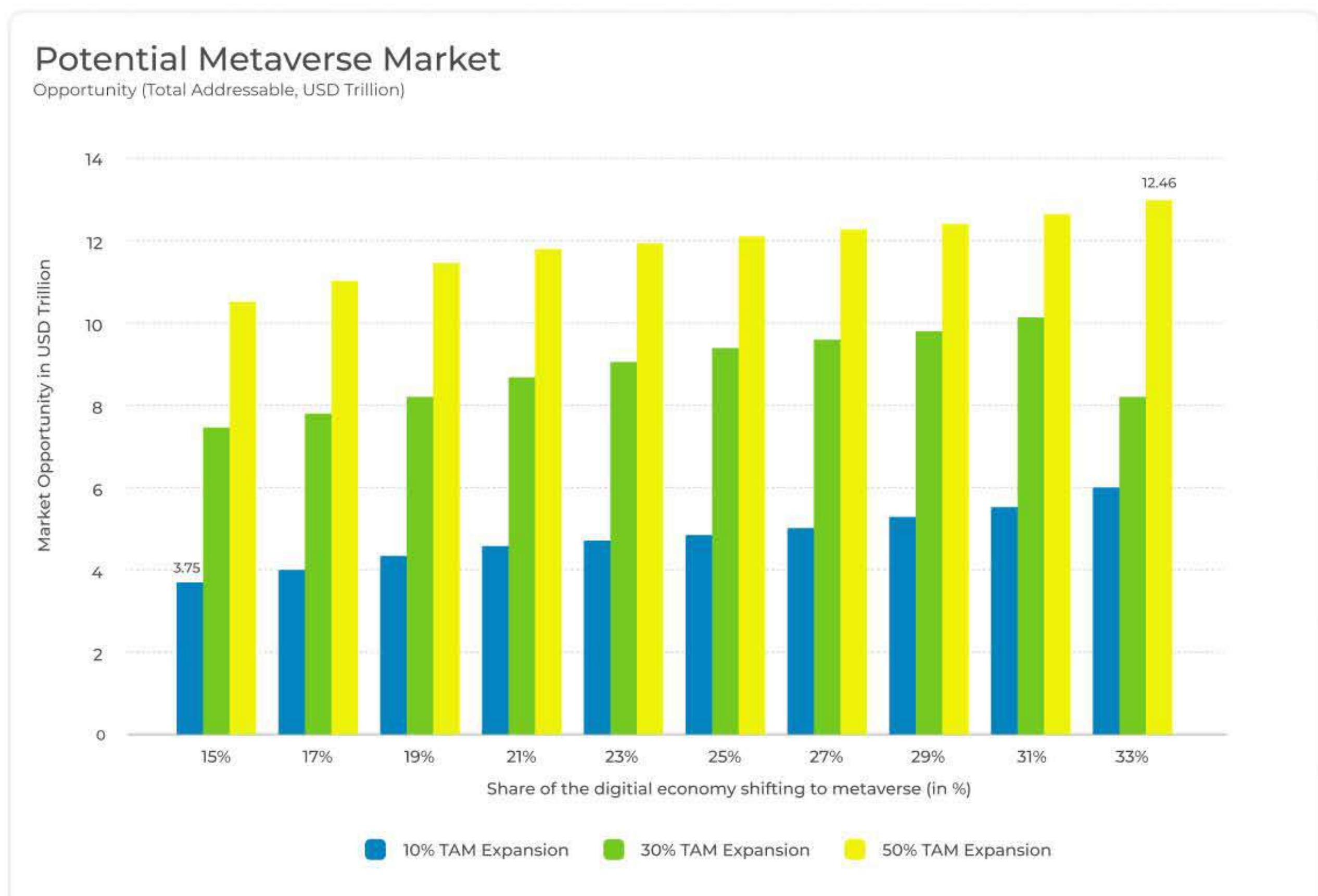
Metaverse Technologies: Popularity Of VRVR, AR, And Mixed Reality

With sales of over 35%, the metaverse segment comprising virtual reality (VRVR) and augmented reality (ARAR) displayed the highest market share in 2021. The gaming business uses Metaverse VRVR and ARAR, accelerating market growth. Virtual and augmented reality devices improve the user experience while reducing expenses for businesses that utilize VRVR for training and education. These elements increased consumer demand for virtual and augmented reality technology, which fueled industry expansion. A survey found that in the United States, about 50 million individuals used virtual reality, and 83.7 million people used augmented reality in 2020. By 2023, it is anticipated that these numbers will increase to 65.9 million and 110.1 million users, respectively.

In terms of technology, augmented reality (ARAR) commands the biggest market share. The development of metaverse technology has been influenced by augmented reality technology. ARAR gaming takes advantage of the surrounding environment. It adds a playing field, in contrast to VRVR gaming, which typically requires a limited space or a separate room to create an immersive scenario. ARAR games are typically played on tablets, mobile gaming consoles, and cell phones. In essence, ARAR refers to any artificial experience that improves the world as we know it.

As the number of phone games keeps expanding, the market for augmented reality gaming has grown. This trend is expected to continue during the following five years. China, the US, and Japan are the main sources of demand for this sector. The hefty initial cost of top-notch augmented reality gaming gear makes it difficult for typical consumers to purchase a console. It has been reported that the growth in revenue for mobile-based augmented reality games has stopped and is only slowly increasing. The revenue for Pokémon Go appears to have dropped by 45% in 2022, and the revenue for Square Enix's Dragon Quest Walk fell by 32% from the previous year. By 2026, it's anticipated that the market will still produce less money than was initially anticipated.

The metaverse market for mixed reality is anticipated to develop at the quickest rate, with a CAGR of 40.4%. The metaverse in the mixed reality market category is expanding rapidly due to the rising use of MRMR for improved involvement in the metaverse. The mixed reality user can view the metaverse and fully immerse in it while still interacting with it with his hands. Mixed reality enables the metaverse to be tailored to the user's surroundings in the physical world. The advantages of mixed reality for the metaverse encourage more people to use it, which propels business expansion. Using mixed reality for onboarding increased staff retention by 82% and productivity by 70%, according to research by Boeing, while productivity in the metaverse increased by 25%.

Recent Advances In Metaverse Technology:

- Tencent's acquisition of gaming smartphone manufacturer Black Shark in January 2022 will advance the metaverse. One of China's top manufacturers of gaming smartphones is Black Shark. After the purchase is completed, it will become a supplier of VRVR headsets to Tencent.

- Microsoft purchased Activision Blizzard for USD 95 per share in January 2021 as part of an all-cash deal for USD 68.7 billion. Across all platforms, gaming is an exciting entertainment genre. This will support Microsoft's efforts to spearhead the creation of metaverse platforms.

- Unity introduced Unity Simulation Pro and Unity SystemGraph in November 2021 to enhance the modeling, testing, and training of complex systems through AIAI and significantly expand the metaverse possibilities.

Developers and producers will use Meta, previously Facebook, to publish updates to its Spark AR augmented reality (ARAR) platform in October 2021 to construct metaverse applications. The business disclosed its aspirations to create a virtual "metaverse," Spark AR's new features will assist in giving apps created on the platform cutting-edge ARAR capabilities.

Source: *Technavio*

Global Metaverse Real Estate Market 2022-2026

Market growth will DECELERATE at a CAGR of
61.74%

Growth contributed by **North America**
41%

Incremental Growth ($8)
5.37

Growth for **2022**
90.74%

The market is CONCENTRATED with few players occupying the market

LEADING WEB 3.0 PROJECTS 2022

LEADING WEB 3.0 BLOCKCHAIN PROJECTS

MAERSK TradeLens helps in digitalizing supply chain information	**BAIDU** Libra Chain offers the infrastructure for internet courts in China	**BOEING** SkyGrid helps in tracking and communications with drones	**CREDIT SUISSE** Paxos Settlement Service enables payments with delivery-versus-payment finality
HONEYWELL GoDirect Trade features a blockchain-based marketplace for aerospace products	**IBM** Digital Health Pass helps organizations with verifying COVID-19 tests of individuals	**ING GROUP** Bulletproofs offer better data security and privacy within any distributed ledger	**MICROSOFT** Blockchain solution for managing xbox managing content rights and royalties
NOVARTIS PharmaLedger offers use cases in clinical trials, patient data and pharma supply chain	**SAMSUNG** Nexledger helps in developing blockchain projects for governments, local hospitals, and airports	**SWISSCOM** Swisscom Blockchain designs, builds, runs and hosts distributed ledger solutions for companies	**TENCENT** FISCO BCOS features a faster and secured banking facility on Webank
VISA Visa B2B Connect offers a faster and secured financial solution in cross-border payments	**WALMART** Food Traceability Initiative helps in ensuring proper food safety standards	**BHP** MineHub digitizes and reduces costs in metals and mining supply chain processes	**SHELL** Features a decentralized passport system for authenticating all parts, equipment and products
METLIFE Vitana offers health insurance for gestational diabetic pregnant women	**DAIMLER** Tracks and reduces CO2 emission in their Cobalt supply chain process	**HSBC** Digital Vault digitalization of all transaction records of private placements	**LVMH** AURA ensures tracking of products to reduce counterfeit luxury items

AP Moller-Maersk

TradeLens, the enterprise blockchain of AP Moller-Maersk, would undoubtedly be mentioned in a list of the finest blockchain projects. The world's largest shipping and logistics company, with headquarters in Denmark, uses its blockchain, TradeLens, to digitize supply chain data. TradeLens was introduced in August 2018, and since then, it has become one of the most innovative blockchain project concepts.

Around the world, it has proven effective in onboarding close to 50% of container ships. In 2020 alone, TradeLens processed around 1 billion shipments, 12 million papers, and almost 30 million containers. The figures for TradeLens in 2020 exceeded expectations by a factor of more than two. Additionally, Maersk and Microsoft worked together to process marine insurance using blockchain technology.

Baidu

China is one of the key global regions showing promising development in the blockchain innovation sector. With the help of its affiliated fintech company, Du Xiaoman Financial, the Chinese search engine Baidu has combined more than 20 blockchain technologies. Libra Chain is the blockchain project idea that has received the most attention among those proposed by Baidu and Du Xiaoman Financial.

Libra Chain currently provides the infrastructure for three Chinese internet courts. The courts use virtual litigation to primarily resolve copyright and e-commerce conflicts. Libra Chain has proved successful in assisting the submission of more than 35 million pieces of electronic evidence at the Beijing Internet Court under the direction of Wei Xiao.

Boeing

Boeing's SkyGrid is another significant industrial blockchain that appears among the top blockchain project ideas for 2022. The Boeing venture arm HorizonX has put a lot of work into creating SkyGrid. It is a drone monitoring and communication air traffic control system powered by blockchain. The FAA's approval of SkyGrid's plan to grant drone pilots low-altitude authorization is the most significant achievement.

A free iPad app for SkyGrid is additionally available. To assist with package delivery and industrial inspections, SkyGrid creates a permanent data record. SkyGrid has the potential to power autonomous flying taxis in the future by utilizing the strength of blockchain platforms like Hyperledger Fabric and Go Direct.

Credit Suisse

Credit Suisse's ability to deploy Paxos Settlement Service amply supports the notion that there is still room for further innovative blockchain project concepts. The big banking company in Switzerland also utilizes Paxos Settlement Service and Enterprise Ethereum's capabilities. Credit Suisse settles US-listed stock trades with broker-dealer Nomura's Instinet using the Paxos Settlement Service.

Participants may benefit from the direct settlement of trades with one another thanks to the blockchain technology the dominant Swiss bank provides. As a result, it can minimize the involvement of traditional intermediaries, accelerating settlement.

Honeywell

Along with other well-known brands in the IT industry, Honeywell has emerged as one of the forerunners of corporate blockchain technology. Over 2 million aviation-quality papers have been successfully transferred to a blockchain ledger platform by this renowned industrial firm. Honeywell has used Hyperledger Fabric's capabilities to successfully migrate documents of aviation quality.

As a result, it can guarantee that all of its clientele will have access to documentation of aviation grade. GoDirect trade is a blockchain-based marketplace that Honeywell manages. GoDirect trade has effectively drawn over 10,000 members while listing old aviation parts worth about $4 billion.

IBM Corporation

One of the first significant businesses to concentrate on blockchain project ideas on a large scale was IBM. The IBM Blockchain is already generating buzz in a variety of industries, and IBM has just unveiled the new Digital Health Pass application. Organizations can use the Digital Health Pass application to validate a person's COVID-19 test results and temperature readings.

Like stadium operators, customers using the Digital Health Pass application can choose their own criteria. Operators of the stadium, for instance, could choose to consider a person's vaccination status. The Digital Health Pass initiative requires the IBM Blockchain and Hyperledger Fabric.

ING Group

One of the first banks to use blockchain technology is ING Group. It uses blockchain systems like Hyperledger Fabric, Corda, Hyperledger Indy, Ethereum, and Quorum to manage a group of

financial institutions. ING Group leads the authentication of digital assets while maintaining compliance with international standards against money laundering alongside other financial institutions.

A more advanced version of zero-knowledge proofs was recently introduced as part of the project Bulletproof. It is an addition that enhances data privacy and security for any distributed ledger platform. In actuality, this initiative towards a better ZKP implementation was started by Bünz et al. at Stanford, Blockstream, and UCL in collaboration with ING.

Microsoft

Regarding possible blockchain initiatives, Microsoft, the biggest tech corporation in the world, is just a little behind. By utilizing the Ethereum and Quorum blockchains, Microsoft has worked with EY to produce one of its prominent blockchain applications.

The blockchain application includes tools for royalties and content rights management. The primary customers of Microsoft's new blockchain system were game producers like Xbox and Ubisoft. When compared to conventional processes, Microsoft's innovative blockchain solution for automatic royalty payments.

Novartis

Novartis has taken the initiative in developing blockchain projects in the pharmaceutical industry. Novartis, one of the top pharmaceutical firms, is a significant participant in a blockchain collaboration established in the EU that aims to combat obsolete or erroneous information on prescription inserts. With the help of Merck, the Polytechnic University of Madrid, and Novartis, one of the most innovative blockchain project concepts in the pharmaceutical industry— PharmaLedger—was developed.

Novartis' blockchain-based technology enables the scanning of medicine packaging and real-time requests for updated data from manufacturers. Scan codes allow patients to access the information as well. The PharmaLedger consortium is searching for cutting-edge blockchain applications to combat the illegal drug trade and counterfeit pharmaceuticals.

Samsung

Samsung SDS, the company's IT division, has created several blockchain initiatives for regional governments, airports, and healthcare facilities. Samsung can leverage the Nexledger blockchain technology to highlight its participation in the blockchain ecosystem. The first entry in Samsung's

list of blockchain projects concerns a one-stop service for handling medical claims. Patients can use the service to submit claims at a hospital reception desk, via mobile device, or at a kiosk.

Swisscom

The multinational telecom company with headquarters in Switzerland, Swisscom, is one of the key participants experimenting with brand-new blockchain project concepts. Swisscom currently has 11 blockchain applications in various stages of development. The well-known enterprise blockchain platforms Hyperledger Fabric, Hyperledger Indy, Hyperledger Ares, and Corda are all used by
One of their most popular platforms is the Swisscom Blockchain. Important blockchain initiatives. This project provides several products, including Swiss Trust Chain, Electronic Seal, and Node as a Service. These goods are designed to provide a better blockchain infrastructure for application development to Swiss businesses and the public sector.

Tencent

Tencent, a Chinese company, is a major player in fresh blockchain initiatives. The blockchain that Tencent has created is its most significant edge when developing new blockchain project concepts. The Tencent-developed blockchain enables the Shenzhen tax department to issue roughly 10 million invoices. Tencent has also launched WeBank, a blockchain startup that provides a unique platform called FISCO BCOS, or Is Credible, Open & Source. More than a hundred Chinese enterprises are members of the Financial Blockchain Shenzhen Consortium (FISCO).

Over 2000 businesses employ FISCO BCOS, an intriguing feature of Tencent's blockchain initiative. It also includes identity, facilitating over 17 million border crossings between Macao and mainland China. WeSign, Tencent's other blockchain
initiative, aids in speeding up the arbitration processing process. As a result, it is used in Chinese courts to record different types of evidence.

Visa

The current diversity of blockchain project concepts also makes me think of Visa. Its greatest asset is the extensive network of Visa access points, which includes almost 70 million retail establishments. The production of digital currencies is becoming more and more of a priority for central banks. Thus, Visa is attempting to take advantage of intensive R&D to guarantee the secure flow of digital currency outside its profit margins.

"Visa B2B Connect" is one of Visa's significant projects. Using Chain's blockchain architecture provides a superior financial option for cross-border payments. This project can provide a cheap, safe, transparent, and quick way to handle all international payments.

Visa has already submitted 159 blockchain-based patent applications for various uses. Utilizing biometrics to confirm a person's identity and enhancing transaction security are just some special applications of Visa blockchain projects. The US Dollar Coin, often known as USDC, is a stablecoin that Visa announced would be linked to speed up business-to-business payments.

MetLife

One of the blockchain project ideas that MetLife is working on is Vitana. A whitepaper on the Vitana project was recently published by MetLife's Singapore-based LumenLab technological development facility. The initiative is focused on parametric insurance.

This project will actually leverage blockchain technology to focus on insurance and other insurance services. This initiative concentrates on gestational diabetes mellitus, which affects pregnant women. It is an extremely dangerous disease that requires additional financial support to be eradicated.

Thus, MetLife is employing Vitana to provide insurance tailored for pregnant women to aid them in overcoming this disease, should it manifest.

Walmart's Food Traceability Initiative could always be included in discussions on potential blockchain project ideas. The retail behemoth uses the Food Traceability Initiative, a blockchain-based platform, to identify contamination and other food safety risks. It can monitor about 500 things, including meat, fish, coffee, and fresh leafy greens.

Walmart assisted the FDA in six different food safety investigations the prior year. It's interesting to note that Walmart's Food Traceability Initiative blockchain application made it possible to obtain thorough details on the initial source of contamination in less than an hour. Walmart also intends to conduct a pilot test for tracking imported items with US Customs and Border Protection.

BHP

The dominant mining company in Australia is an important new player with fresh blockchain project concepts. BHP is using blockchain to digitize a variety of processes. Verifying supplier identities and tracking ESG, or environment, social, and corporate governance, qualities, are two

special functions covered by BHP's blockchain transformation. MineHub is one of the largest blockchain projects that BHP uses. With the help of technology, the business completed the first iron ore trade on the blockchain in 2020 with China Baowu Steel.

Shell

Shell is building a decentralized digital passport system as part of a blockchain project. This one is one of the few blockchain project concepts they have in mind right now. In this project, the business will authenticate all components, machinery, and goods while establishing a system of data streams that will ensure the security and preservation of every piece of information.

Although we are still determining which company Shell is collaborating with on this project, we do know that they are redesigning their supply chain.

Daimler

One of the largest international automakers, Daimler produces luxury vehicles like Mercedes-Benz. They are currently working with Circular on a blockchain initiative to measure the CO2 emissions in their supply chain for cobalt. The main goal is to concentrate on openness and potential remedies to lessen CO2 transmission. More specifically, they want to monitor any secondary material that might be produced due to their cobalt mining.

This initiative uses an environmentally friendly strategy to eradicate CO2 or, at the very least, significantly lessen the greenhouse effect.

HSBC

HSBC has a vision for cutting-edge blockchain project ideas, making it one of the significant players in the financial industry. The London-based bank uses blockchain to increase the effectiveness of foreign exchange flows across its international locations. According to recent reports, the HSBC blockchain ledger has assisted in settlement of around 1.9 million trades totaling approximately $1.7 trillion.

Digital Vault, however, is one of HSBC's most well-known initiatives. It is a blockchain-based platform that digitizes all private placement transaction records. This platform was created by HSBC's Securities Services division (HSS) to give investors access to information as the market expands. Additionally, clients will have access to their private data and assets like real estate, debt, or equity utilizing Digital Vault. Everything is, of course, digital and completely secure.

- **LVMH**

The renowned luxury goods business LVMH is headquartered in Paris. It uses the blockchain's characteristics for product tracking. Most importantly, the LVMH blockchain initiative leverages the AURA blockchain platform to prevent imitating well-known brands like Louis Vuitton and Bulgari.

Notably, approximately 10 million luxury goods have already been registered on the AURA blockchain network. The blockchain platform of LVMH, which was created in collaboration with Microsoft and ConsenSys, creates a new strategy for preventing fake goods and preserving brand integrity.

Why Taking Note Of Blockchain Project Ideas Is Important

Now that we have reviewed the various advantageous possibilities in the best blockchain projects for 2022, it is crucial to consider the advantages of continuing in the same direction. Many individuals think that blockchain technology will largely determine the financial industry's future. The ability of blockchain to reduce costs and speed up processing times allows for the expansion of blockchain project ideas beyond the financial sector.

At the same time, blockchain's advantages for transparency encourage its adoption across other industries. We previously published a list of open-source blockchain projects, with the automotive, tech manufacturing, and financial industries among the top industries advocating blockchain integration.

In addition, major firms in the tech sector, like IBM and Amazon, have developed blockchain systems designed for both direct and indirect customers. On Amazon Web, Amazon offers special blockchain extension services. IBM has created the IBM blockchain at the same time.

LEADING WEB 3.0 METAVERSE PROJECTS

Given that this metaverse wave is already in motion, it is essential to keep an eye on it to take advantage of significant changes. These five projects for the metaverse in 2022 are extremely pertinent;

⬢ KRYPTORIA

Kryptoria is an immersive 4X and RTS game set in an incredible 3D world built using Unity. All game assets including Alpha Citizens, land and weapons are live on the Ethereum blockchain as NFTs. Here players can acquire NFTs and in-game assets through various means, such as purchasing them with real money, earning them through gameplay, or trading with other players. These items may provide special benefits or abilities within the game, or simply serve as collectibles for players to showcase and trade. These NFTs are dynamic i.e virtually any characteristic of a Kryptoria NFT can be updated, post-mint, for marginal gas. So in a way it represents ownership of more than a piece of digital art. Kryptoria is early and as the team iterates, it will provide web2 brands the chance to connect with audiences in Web3 and add their collections to their traits marketplace & it will provide holders with access to IRL collections, discounts and other tangible benefits.

DECENTRALAND

Market cap: $4 billion
Daily trading volume: $1 billion
Native Cryptocurrency: MANA
Value: 1 MANA token=$2.58

Decentraland, a metaverse connected to the Ethereum Blockchain, enables diverse uses of virtual lands. Users of this platform can develop their land parcels and increase their worth by producing content. Then, they may make money off of everything that is there that is theirs.

Decentraland consists of 90,601 pieces of land, each represented by an ERC-721 non-fungible token (NFT) called LAND. Like in the real world, every LAND has precise virtual geographic coordinates. The metaverse is divided into several districts, or divisions, of various dimensions. To create districts, people can exchange their land parcels for MANA tokens. LANDs are likewise not exchangeable in accordance with the fundamental NFT rules.

The structure of this metaverse is that of a distributed autonomous system (DAO). Users can participate in the governance of the metaverse via voting. This suggests that each MANA token holder has some influence over how things are done in Decentraland. It might be the buying guidelines, the ongoing auctions, the available information, and more.

For artists looking for a successful artistic forum on which to express themselves, Decentraland is advised. This is also true for businesses looking to change their marketing mix. Decentraland can be used simply by anyone who wants to have fun or even invest. In Decentraland, there are several ways to make money, including advertising, renting virtual properties, and selling virtual items for MANA Tokens.
Since 2015, Ari Meilich and Esteban Ordano have been working on it, and in February 2020, it was officially unveiled. The Decentraland Foundation, a non-profit organization, is in charge of managing it.

However, it raised $26 million after launching its token during the 2017 ICO boom. Major brands started to appear in Decentraland metaverse crypto initiatives during the most recent 2021 bull run, even in early 2022 or purchased "properties" there.

These companies include Samsung, Adidas, Atari, PricewaterhouseCoopers, Miller Lite, and Sotheby's, which also held its first metaverse auction. In March 2022, Decentraland hosted Metaverse Fashion Week, during which prominent fashion brands such as Dolce & Gabbana, Tommy Hilfiger, Elie Saab, Nicholas Kirkwood, Perry Ellis, Imitation of Christ, and Estée Lauder made an appearance, as well as Samsung, Adidas, Atari, Pricewaterhouse Concerts by musicians like Deadmau5 and Grimes were hosted inside the platform.

THE SANDBOX

Market cap: $3 Billion
Daily trading volume: $1 Billion
Native Cryptocurrency: SAND
Value: 1 SAND token= $3
Users number: Over 30 Million

A virtual world built on the blockchain protocol is called The SandBox. While playing, users can construct, produce, market, and purchase dematerialized things. The SandBox will merge metaverse with NFT by bolstering the "Play-to-earn" concept as a decentralized autonomous organization. "Play-to-earn" is a creative form that allows users to earn through play and is expected to be a major NFT trend in 2022. Players can create, earn, gather, and sell as many digital items as they like. Knowing that any content can be converted into NFT requires being both a creator and a consumer simultaneously. SAND is the metaverse's utility token that permits transactions. We project a three billion SAND token supply for the ERC-20 coin.

Because it has been able to leverage the benefits of the Blockchain system in the realm of online gaming, The SandBox is quite exceptional in its field. This metaverse has established itself in the international video game market thanks to this strategy. The SandBox intends to investigate industries besides gaming, like fashion or concerts in the metaverse. This platform, similar to Atari or Cryptokitties, has attracted the curiosity of many renowned investors. This platform will become even more well-known through collaborations with famous people like Snoop Dogg, who wants to build a digital counterpart of his house in the metaverse. Early in March 2022, the Sandbox published the Alpha Season 02 version of the game, offering players up to 1000 SAND prizes and many spectacular new experiences.

AXIE INFINITY

Market cap: $2 Billion
Daily trading volume: $551 Million
Native Cryptocurrencies: AXS & SLP
Value: 1 AXS token= $48.39
Users number: 2 Million daily active users

Axie Infinity is a virtual environment with a lot of promise and is recognized for having the highest-priced virtual land sales in the metaverse. The Axie Infinity metaverse, like The SandBox, employs the Play-to-earn concept, which blends cryptocurrencies and NFTs with earnings from play. The volume of transactions on the metaverse can be greatly increased thanks to this paradigm.

The blockchain-based, Ethereum-based game Axie Infinity aims to organize Axie's life into an empire. Axies, the game's creatures, must already have been obtained to play. These axes will get you entry to the game, where you can purchase land plots, establish your kingdom, engage in commerce, increase the worth of land, etc. Similar to Pokemon, axies are raised and trained to battle other axies that belong to other network users.

Both axes and pieces of land are exclusive in accordance with the NFTs scarcity principle. Users who own axies or plots of land can increase their income by raising the value of their assets. Because the Axie Infinity game features native coins, transactions there are straightforward. These are the Smooth Love Potion (SLP) and the Axie Infinity Shard (AXS) (SLP).
It is clear why "Play-to-earn" type games are so popular. The AXS token's value has increased as a result of this trend. This game-specific utility token for Axie Infinity is now one of the most promising cryptocurrencies, as it is a popular choice with traders, investors, and players. There are already partnerships between this metaverse and significant organizations like Samsung Next and Fabric Ventures.

BLOKTOPIA

Market cap: $119 Million
Daily trading volume: $9 Million
Native Cryptocurrency: BLOK
Value: 1 BLOK token= $0.014

Bloktopia has used the wave of the identity shift from the Facebook group to Meta to become popular as one of the metaverse initiatives. A virtual world called Bloktopia promises to be more realistic and futuristic. This platform seeks to connect the metaverse with virtual reality headsets. It will be possible to engage with users worldwide and evolve in this futuristic virtual environment. A 21-story simulated building is also present. This number refers to the 21 million Bitcoins (BTC) currently in use on the cryptocurrency market. Well-known cryptocurrency companies like Binance NFTs and BitBoy are already present on the first floor.

This universe aims to provide its users with the most interactive virtual environment imaginable. So everyone can build their avatar, interact and exchange ideas with others, market advertising space, resell virtual land, and trade dematerialized commodities. It will also include more realistic instances, such as jogging, singing, generating interactive scenes, posing various difficulties, competing, etc. Users of Bloktopia will eventually be able to host events here for recreation or attend others. We use the best WWE moments as an example in this scenario (World Wrestling Entertainment).

Speaking of metaverse initiatives, this one is very exciting. Since its introduction, the cost of its native token has increased by at least 750 times. Along with the game, there are several other highly intriguing features, such as the multi-crypto Wallet, which enables you to store different dematerialized commodities. In this metaverse, the REBLOK, for instance, is a real estate asset whose value will rise over time. Conversely, REBLOK is a medium that can generate income through adverts. Therefore, Bloktopia is a metaverse presenting a wide range of income prospects.

Bloktopia's Beta release is scheduled for March 2022. Users of this edition will be able to test the first six levels of the building in this futuristic world.

STAR ATLAS

Market cap: $69 Million
Daily trading volume: $9 Million
Native Cryptocurrency: ATLAS
Value: 1 ATLAS token= $0.032

Star Atlas is set in a futuristic universe, specifically the year 2620. This virtual reality game simulates a political structure called Polis, where players must conquer and explore different regions using virtual tools, virtual people, and political power.

Users can win many incentives from NFTs as the game advances. It is a unique virtual set among metaverse initiatives built on the Solana blockchain. The game will be able to defend itself against absurdly high gas prices thanks to this blockchain.

Star Atlas now has two versions: one with a conventional virtual game and one with a blockchain game, thanks to the inclusion of the ATLAS token. The game's POLIS asset is another one that can be used to get advantages in terms of game governance. As in several metaverses, purchasing virtual lands, gaming characters, and other virtual assets will be possible using NFT. In this metaverse, users can create various characters, giving the virtual world more life. Players will also be able to design hidden areas where they can appear to have vanished to other metaverse users. Star Atlas' metaverse adaptation is still in the planning stages. However, its gameplay and existing traits are highly positive for the future.

The market boom for metaverses, NFTs, and cryptocurrency, in general, is steadily approaching. Virtual worlds will soon offer practically all real-world interactions. Metaverses already have a significant impact, but this will only increase in the future.

LEADING WEB 3.0 PROJECTS

As 2022 draws to a close, it's a great moment to look back on some of the most intriguing cryptocurrency projects of the year, many of which are linked to Ethereum. Some of these projects' general strengths or shortcomings will probably alter, while others will be spot on, given how quickly the crypto industry may develop.

Noteworthy Projects Of 2022

Siki

SIKI is a blockchain-based multimedia platform dedicated to building a more sustainable entertainment ecosystem. It uses Polygon as its distributed public ledger due to its aligning values i.e the low gas fees & speed of the network. As a music and social streaming platform it puts the power back into the hands of talented creators. With SIKI, independent artists can upload their music directly to the platform, and they retain complete control over their work. Artists can earn a fairer share of the revenue generated by their work through streaming royaltiestips, subscriptions and sales of the NFT collectibles. In addition, SIKI offers a number of features designed to help artists build their careers which include everything from promotional tools to live streaming capabilities., tips, subscriptions and sales of the NFT collectibles. In addition, SIKI offers a number of features designed to help artists build their careers which include everything from promotional tools to live streaming capabilities.
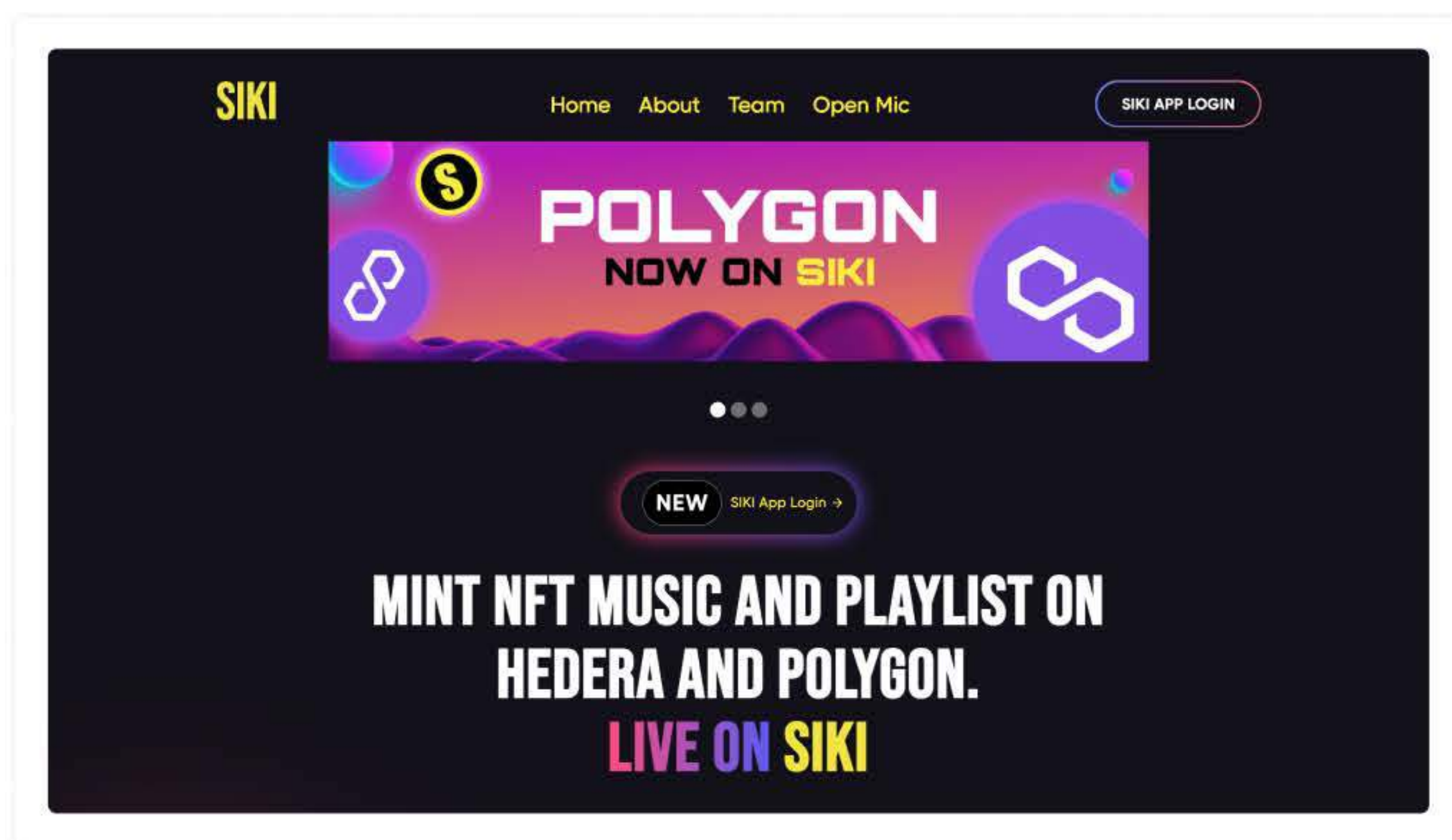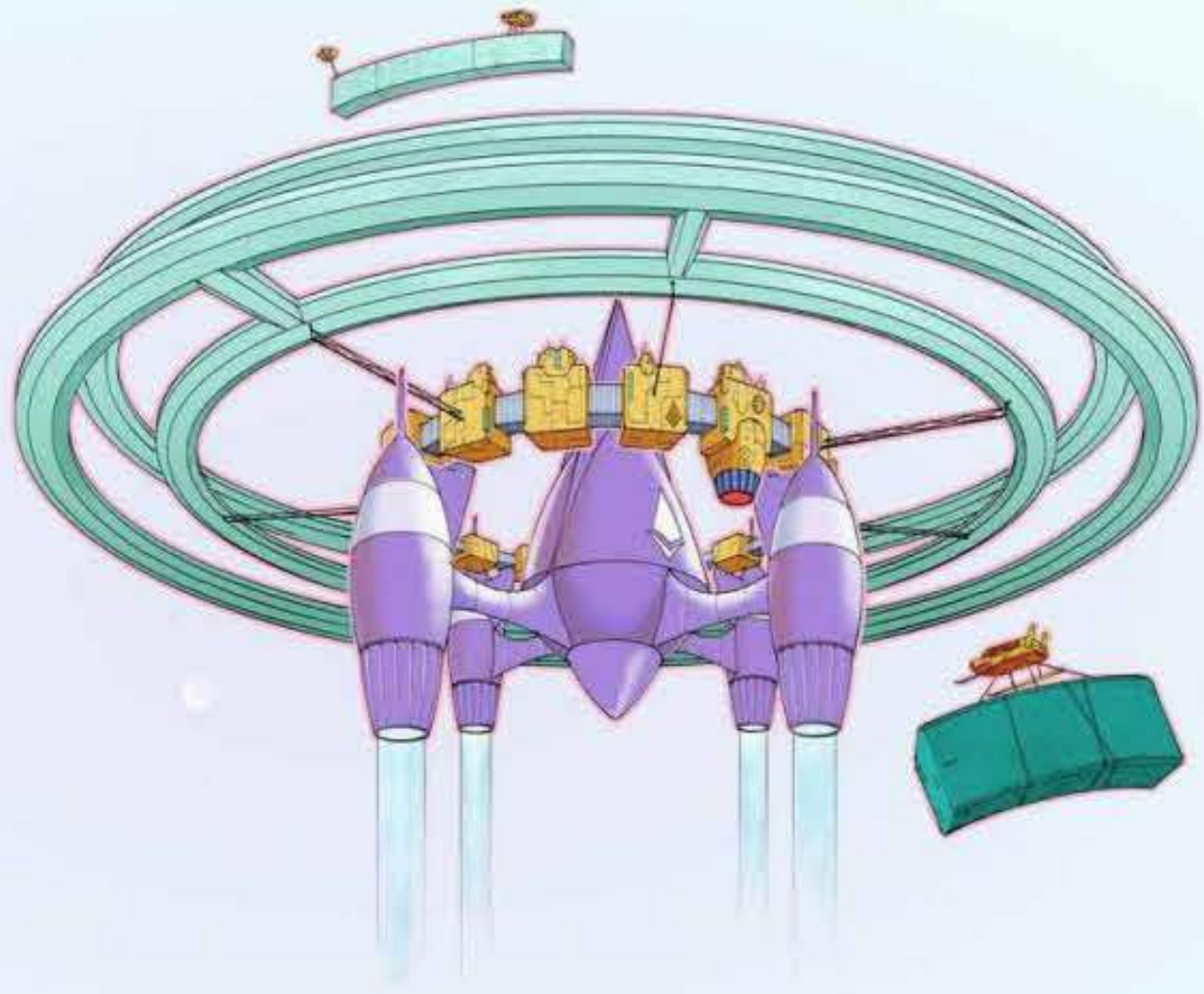
The Merge

Nothing unexpected here. Anyone with a tangential interest in cryptocurrencies is aware of The Merge, the Ethereum network's important transition from a proof-of-work to a proof-of-stake mechanism, or, in the words of the Ethereum Foundation, "the most significant upgrade in the history of Ethereum." Despite its significance, Ethereum's price fell 15% in the days after the historic upgrade.

UPGRADES / MERGE

The Merge

- Ethereum Mainnet uses proof-of-stake, but this wasn't always the case.
- The upgrade from the original proof-of-work mechanism to proof-of-stake was called The Merge.
- The Merge refers to the original Ethereum Mainnet merging with a separate proof-of-stake blockchain called the Beacon Chain, now existing as one chain.
- The Merge reduced Ethereum's energy consumption by ~99.95%.

Page last updated: October 21, 2022

Despite the fact that there are many energy-efficient crypto initiatives, cryptocurrency has a bad reputation because it is thought to be terrible for the environment. In Ethereum, the switch is expected to result in a 99.9% decrease in the energy required to run its blockchain, from 112 terawatt-hours per year to 0.04 terawatt-hours per year. Another alteration Goodbye, miners. Validators have taken their place, as have those who stake 32 ETH or more, who are no longer tradable.

The "Shanghai upgrade," the following significant Ethereum upgrade, is anticipated to occur in 2023. Remain tuned.

DEX Screener

Look no further than DEX Screener if you're seeking a strong screener that can scan the broadest range of coins, blockchains, and DEXes. It is not only free to use, but it also requires no sign-up, no KYC, and no wallet login.

You might wonder what a crypto screener is. A crypto scanner is a tool that searches through publicly accessible cryptocurrency data, as its name suggests. By including a DEX screener, you'll have access to cryptocurrency-related data from several decentralized exchanges, offering valuable insights in one simple location. Although the project began in late 2021, we are bringing it into the current year because there is, at best minimal activity and market awareness of new projects at the end of the year.

Their user design makes it clear that DEX Screener is for those who adore statistics. It covers any scanner's widest range of DEXs and offers pricing for more than 1,000 currencies and tokens. Utilize the standard metrics to analyze cryptocurrencies and chains, including price, volume, market capitalization, liquidity, transactions, and price movements (5M, 1H, 6H, and 24H), all with adjustable ranking and filtering options and free access to technical analysis indicators and

charts. Users can also gain from DeFi-related data, such as token pool statistics, establish a watchlist, set up alerts, identify patterns in the DEX market, generate multicarts for price comparisons, and follow new pairs.

🔶 Sudoswap

The following decentralized NFT marketplace, Sudoswap, is built on Ethereum and continues the decentralization theme. You might be shocked that Sudoswap operates very differently if you exclusively use OpenSea for NFT-related purposes. While Sudoswap uses liquidity pools to buy and sell NFTs, OpenSea uses an off-chain order book approach.

In the summer, Sudoswap revealed that they had been hard at work creating a brand-new NFT marketplace run by their SudoAMM, which they said would revolutionize how NFT traders transact.
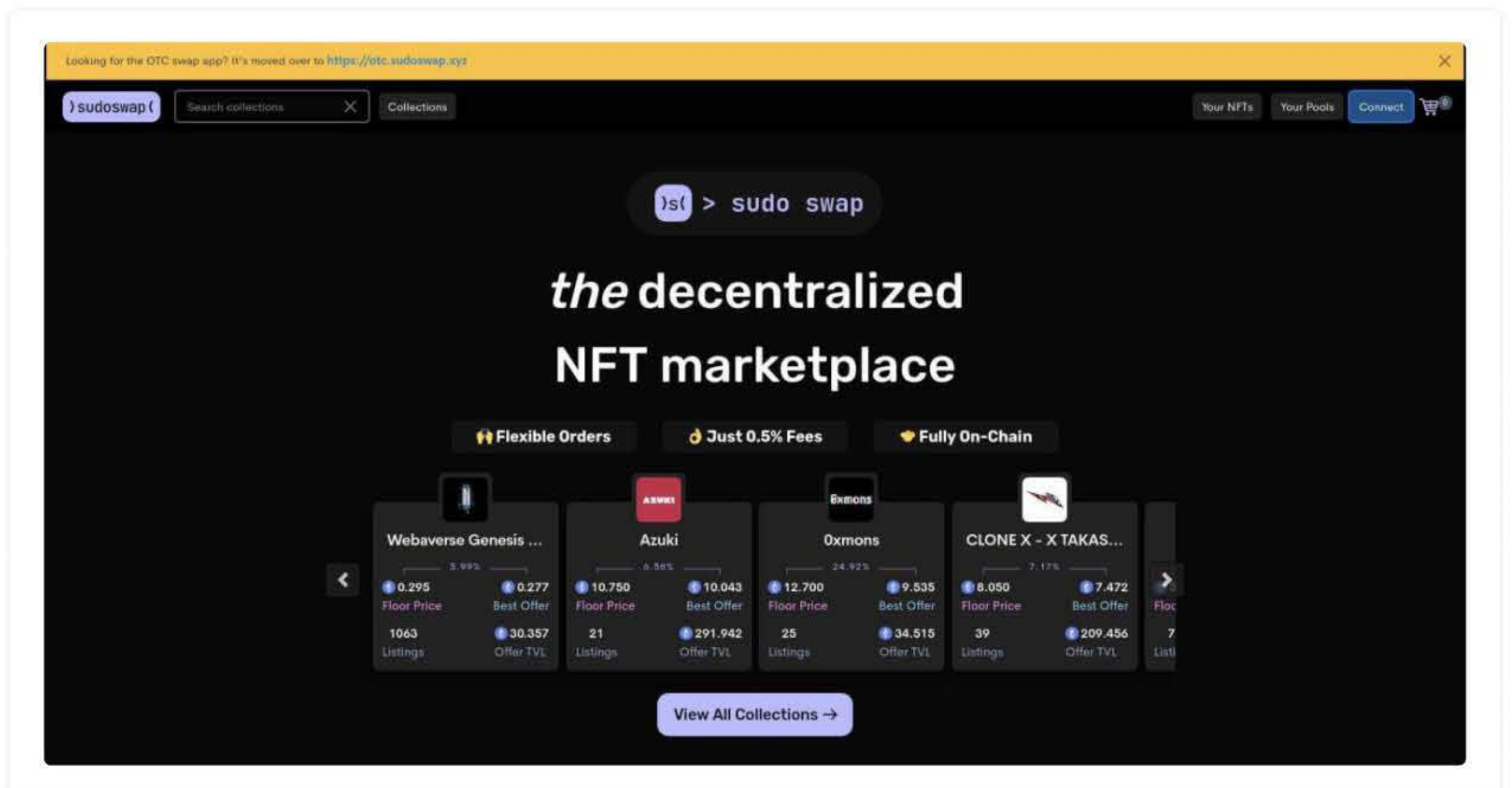
The Following Features Are Among Them:

- 🔵 A 0.5% protocol fee is charged for using the new NFT marketplace; this money goes to the protocol treasury. Users can purchase and sell their NFTs in bulk, which helps them save on petrol.

- 🔵 Since the market is decentralized and on-chain, anyone can showcase goods listed on Sudoswap (on-chain groups such as DAOs will enjoy easier participation in NFT markets).

- 🔵 Smart contracts that are adaptable let sellers make changes right away.

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Three different liquidity pool kinds are available on Sudoswap: buy-only pools, sell-only pools, and buy-and-sell pools. Now, for each of these pools, there are two possible bonding curves: an exponential or a linear curve, where prices go linearly up or down or by a specific percentage as events happen.

Soulbound Tokens (SBTs)

The aim is soul for some at the vanguard of Web3 advances. "Soulbound Tokens" (SBT), proposed by Ethereum visionary Vitalik Buterin, Puja Ohlhaver, and E. Glen Weyl, are essentially non-transferable digital tokens, if their vision is achieved, will include a person's social identity in a decentralized community.

Use Cases of Soulbound Tokens

| NFT Ownership | DeFi Lending | Sybil Resistance Attacks | Soul Drops | Academics Credentials | Digital CV |
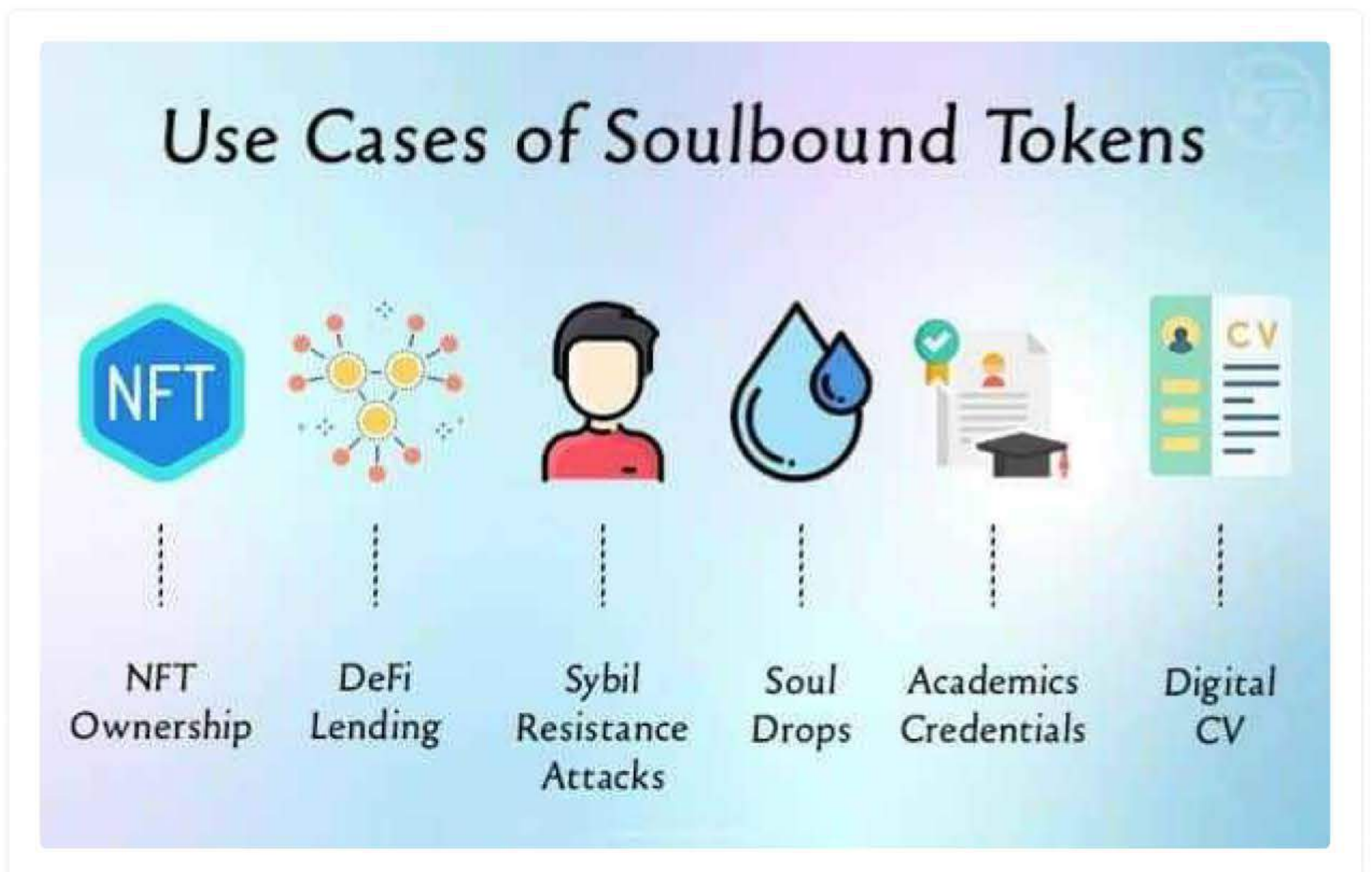
The three collaborated on a whitepaper from May 2022 called "Decentralized Society: Finding Web3's Soul," in which they proposed a decentralized society (DeSoc) where self-governing users can utilize Soulbound tokens (SBTs) as personal credentials in various facets of their existence.

According to the abstract of Buterin, Ohlhaver, and Weyl's whitepaper, "Today, Web3 focuses more on communicating transferrable, financialized assets than encodes social ties of trust. However, many fundamental economic activities—like lending without collateral and developing personal brands—are predicated on long-lasting, non-transferable bonds. In this article, we show how non-transferable "soulbound" tokens (SBTs), which reflect the ties, qualifications, and affiliations of "Souls," can encode the real-world trust networks to establish provenance and reputation. More crucially, SBTs open up new markets with decomposable, shared rights and ambitious applications like community wallet recovery, Sybil-resistant governance, decentralization procedures, and creative markets. We refer to this more diverse ecosystem as the "Decentralized Society" (DeSoc) because it is a co-determined sociality in which Souls and communities come together bottom-up as emergent features of one another to co-create a variety of network commodities and intelligence.

Although study into the notion is ongoing and the tokens themselves are not intended to be bought or sold, some potential use cases include certification of an individual's employment history or academic credentials, digital ID cards or memberships, and medical information.

It would be interesting to watch if SBTs gain popularity in 2023 and beyond because the crypto sector has always had a healthy dose of idealism.

Arbitrum

Because Ethereum was known for its high gas costs and slow transaction speeds, Off-chain Labs created Arbitrum in early 2022, a layer-two (L2) roll-up solution with fast speed to address scalability.
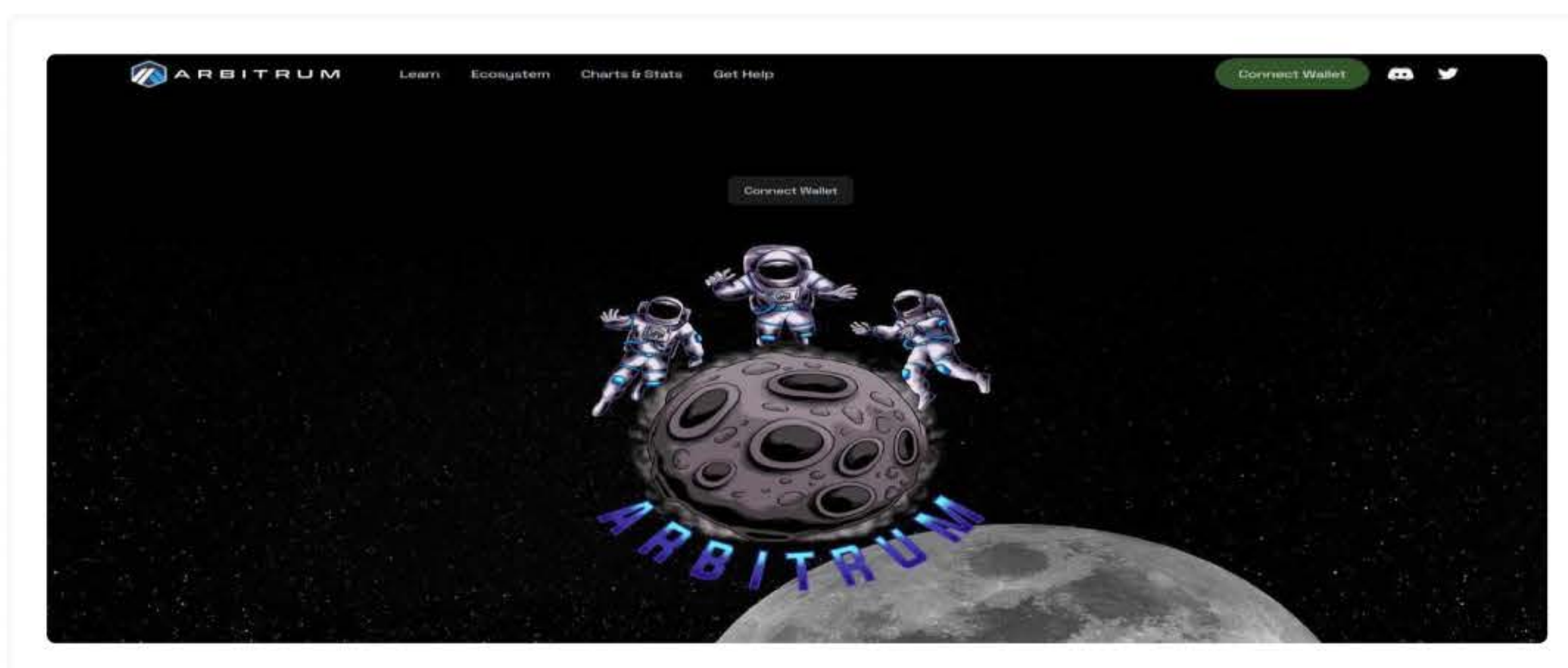
The Project's Development Team Describes It In Their Gentle Introduction To Arbitrum As Follows:

- "Arbitrum is a set of technologies meant to help Ethereum grow. You can utilize Arbitrum chains to perform Ethereum-related tasks, including using Web3 applications and deploying smart contracts, but your transactions will be cheaper and quicker. The Arbitrum Rollup protocol, our flagship offering, is an optimistic roll-up system that inherits security on par with Ethereum.

- Low cost, a strong ecosystem, robust development tools, and excellent EVM (Ethereum virtual machine) compatibility are some of its highlighted benefits. With transaction processing finished in layer 2 (L2) and data kept on the main Chain, Arbitrum is seen as an "optimistic roll-up," allowing smart contracts from Ethereum to scale. This is accomplished by exchanging messages between smart contracts and the Arbitrum second chain layer.

- At the end of May 2021, Arbitrum released its Beta version, and a little more than a year later, in August 2022, the Arbitrum Nitro update became live.

- But despite losing some of its purposes due to Ethereum's Merge above, Arbitrum is still a crucial crypto project for 2022.

Layer 2: zkEVM and zkSynch

Optimistic roll-ups, like the Arbitrum above, and zero-knowledge roll-ups, sometimes known as Zk roll-ups, are different. In the opinion of many in the field, one of the more intriguing solutions to the issue of Ethereum's scalability is what is referred to as a zero-knowledge Ethereum virtual machine (zkEVM).
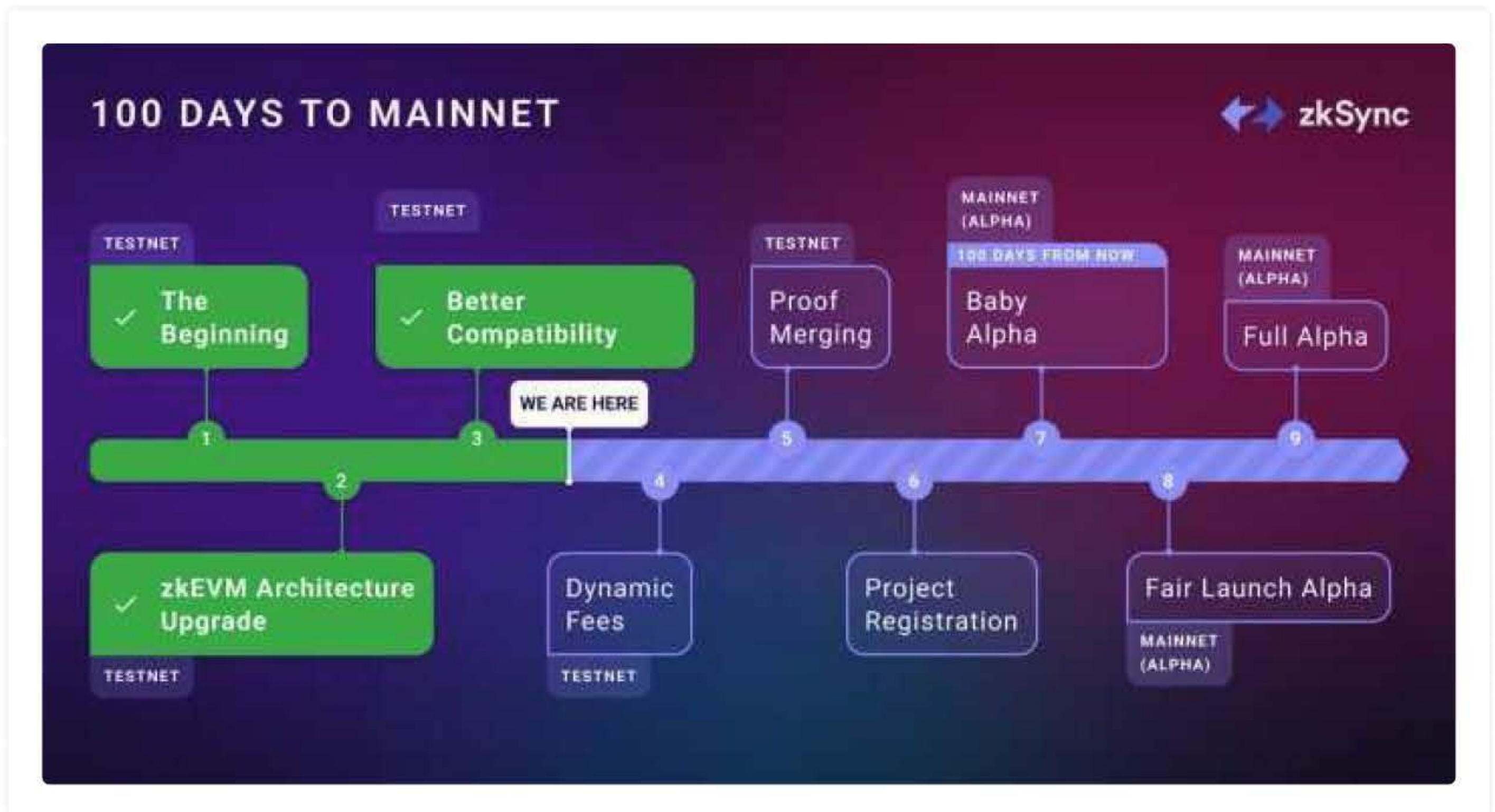
Why Is A ZkEVM Important, And What Does It Do? We're Delighted You Asked, Though. Let's Hear It Right From The Source, So To Speak:

- A virtual machine called zkEVM executes smart contracts in a way appropriate for zero-knowledge-proof computing. It is the secret to creating an EVM-compatible ZK Rollup while retaining the tried-and-true code and expertise accumulated through years of Solidity development. Our zk-EVM maintains EVM semantics while being ZK-friendly and compatible with conventional CPU architectures.

- zkSynch 2.0, an EVM-compatible ZK roll-up being developed by Matter Labs and driven by zkEVM, is another jigsaw component (version 1.0 is already being used for payments). The advantages include a 50x reduction in transfer costs.
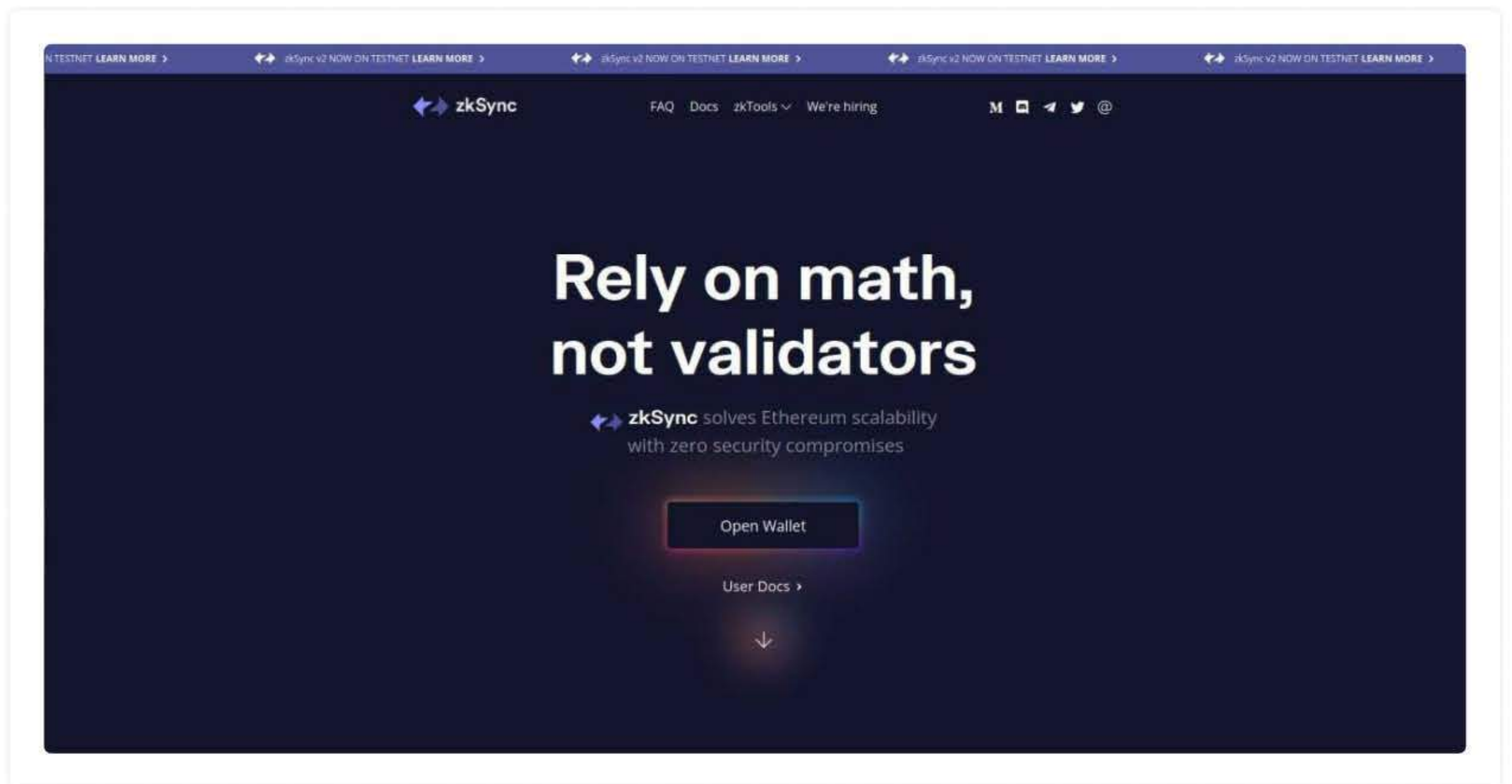
Given the intricacy of zkEVM and ZkSynch, it is outside the scope of this summary to provide in-depth explanations; nonetheless, readers who are curious about the details might consult zkEVM's FAQs as well as zkSynch's overview.

Across Protocol

A cross-chain bridging method that provides quick, secure and economical transfers is called the Across Protocol. It is referred to as "a new bridging approach that combines an optimistic oracle, bonded relayers, and single-sided liquidity pools to deliver decentralized instant transactions from Rollup chains to Ethereum Mainnet," to be more precise.
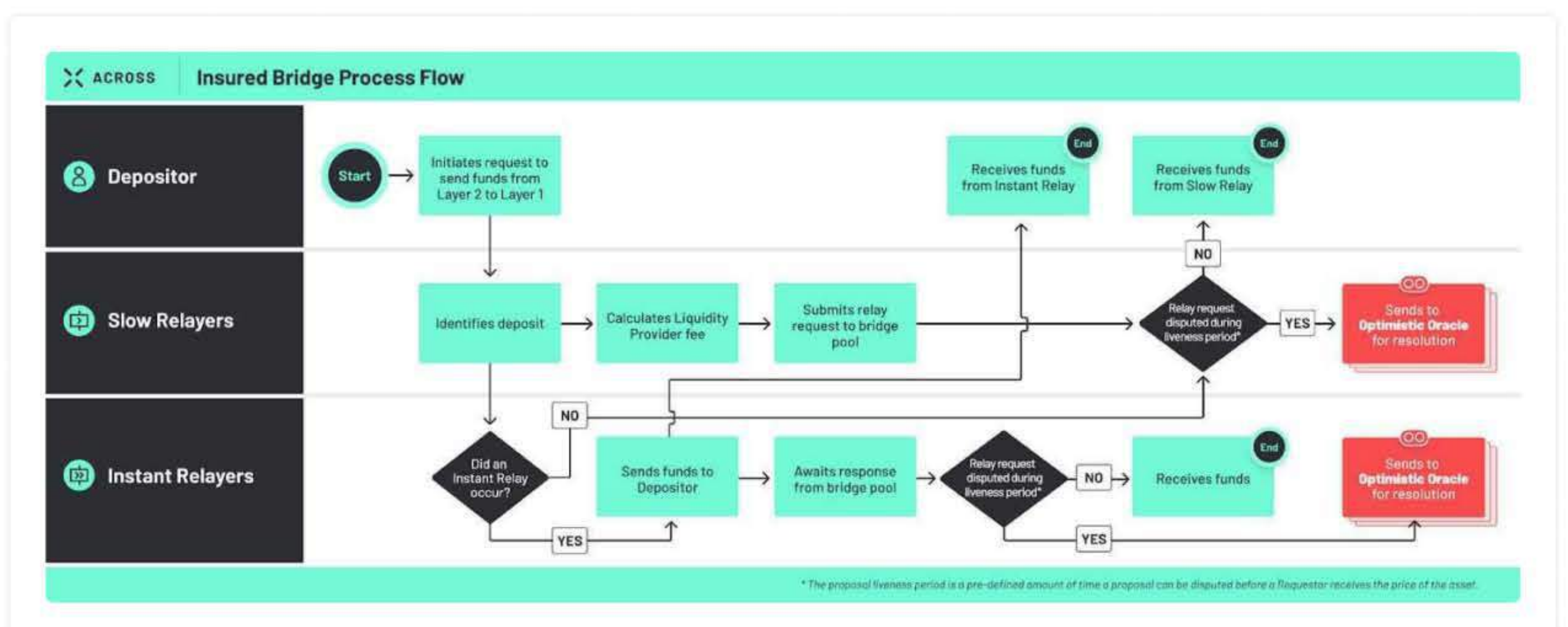
The developers of Across outline its many advantages, especially in speed, effectiveness, and cost savings. Users can often get payments in two minutes or less, and there is almost instantaneous bridging and availability of assets for usage on the mainnet and L2s.

Optimistic roll-up methods attempted to alleviate Ethereum's unacceptably high gas fees, but a lengthy wait (about seven days) rendered transfers from L2 to L1 ineffective. Because of the innovation offered by Across, transfers between chains are now possible at previously unimaginable speeds.

There Are Three Different Kinds Of Fees Related To It:

- (Protocol-determined) costs for liquidity providers: While liquidity providers must wait for the bridge slow relayer to migrate tokens from L2 to L1, customers who bridge tokens from L2 to L1 have instant liquidity on L1.

- Charge for slow forwarding (set by the user).

- Instant forwarding charge (user-set): Users who want to accelerate up withdrawal of funds and pay more fees can choose the instant forwarding charge option.

In conclusion, Across is a bridge mechanism that combines a bonded relayer, a single-side pool, and UMA's Optimistic Oracle to allow for low-cost, nearly instantaneous transfers of assets from Layer 2 to Ethereum.

Ethereum is the word that best describes the character of new crypto initiatives in 2022. Even though it wasn't represented in the price of Ethereum, 2022 was very much a year for all things Ethereum, from the Merge to scaling solutions and a few other things in between.

As the year concludes, the market will likely see a different level of bullish excitement than it did at this time last year. However, as the cryptocurrency industry expands and matures, many new crypto projects for 2023 show great promise.

NFT MARKET SIZE REPORT 2022

Blockchain-based NFTs are ownership certificates for special assets. These unique assets, also known as non-fungible tokens, frequently take the form of works of art but also have a wide range of additional use cases in gaming, collectibles, and financial applications.

In the form of a completely transferable digital token, NFTs allow for real estate ownership, and there is still much-untapped potential in this market. Users can register distinctive names to conventional blockchain addresses using the Ethereum Name Service (ENS), which is just one example of how NFT technology is utilized to promote widespread use.

This article provides users with an overview of these irrevocable digital certificates of ownership adoption status and highlights crucial information.

NFT Market Information
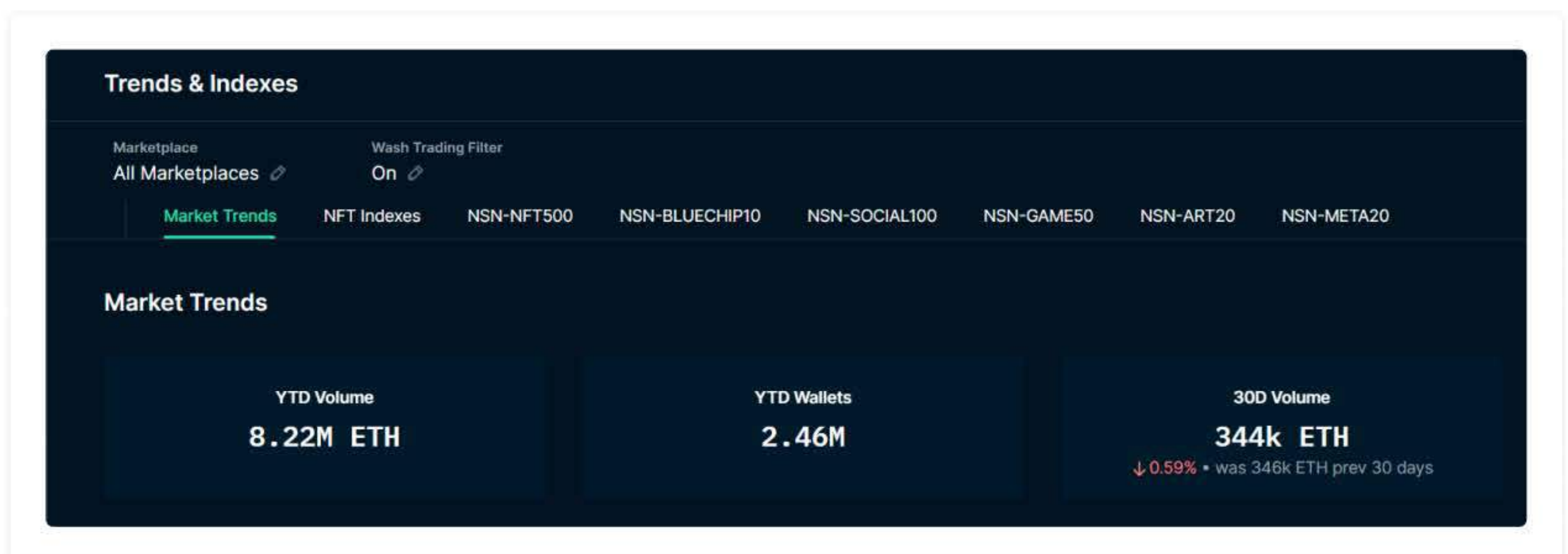
As of today, in 2022, the Ethereum NFT market has seen 8.22 million ETH traded in over 2.46 million different wallets, according to Nansen's Trends & Indexes dashboard.

The market capitalization of the NFT sector exceeds $11.3 billion. This is comparable to and higher than the Gross Domestic Product of several minor nations, like Kosovo, Togo, and Somalia, to help understand. Surprisingly, the NFT market's overall worth exceeds the value of all the products produced in numerous country states!

This information comes from a report released by Verified Market Research (VMR), which also anticipated a compound annual growth rate of 33.7% over the next eight years and a total market size of $231 billion for the NFT sector by 2030.

Collectibles are currently the main factor driving NFT growth and demand. They first entered the art and music sectors before quickly moving on to the film, sports, fashion, gaming, metaverse, ticket sales, supply chains, and luxury goods sectors. NFT technology is widely used and steadily expanding outside its fad of gaining societal influence.

NFT Ownership Information

Surprisingly, 50% of all reported NFT sales are for amounts under $200, demonstrating that most NFT growth occurs at the grassroots level and that persons with annual incomes of less than $25,000 invest at a pace equivalent to those with annual incomes of over $150,000.

Since April 2022, there has been a consistent flow of about 250k wallets per week interacting with NFT platforms on Ethereum, according to Nansen's Trends & Indexes dashboard. New mints and OpenSea, the largest NFT marketplace, account for most of this trading.
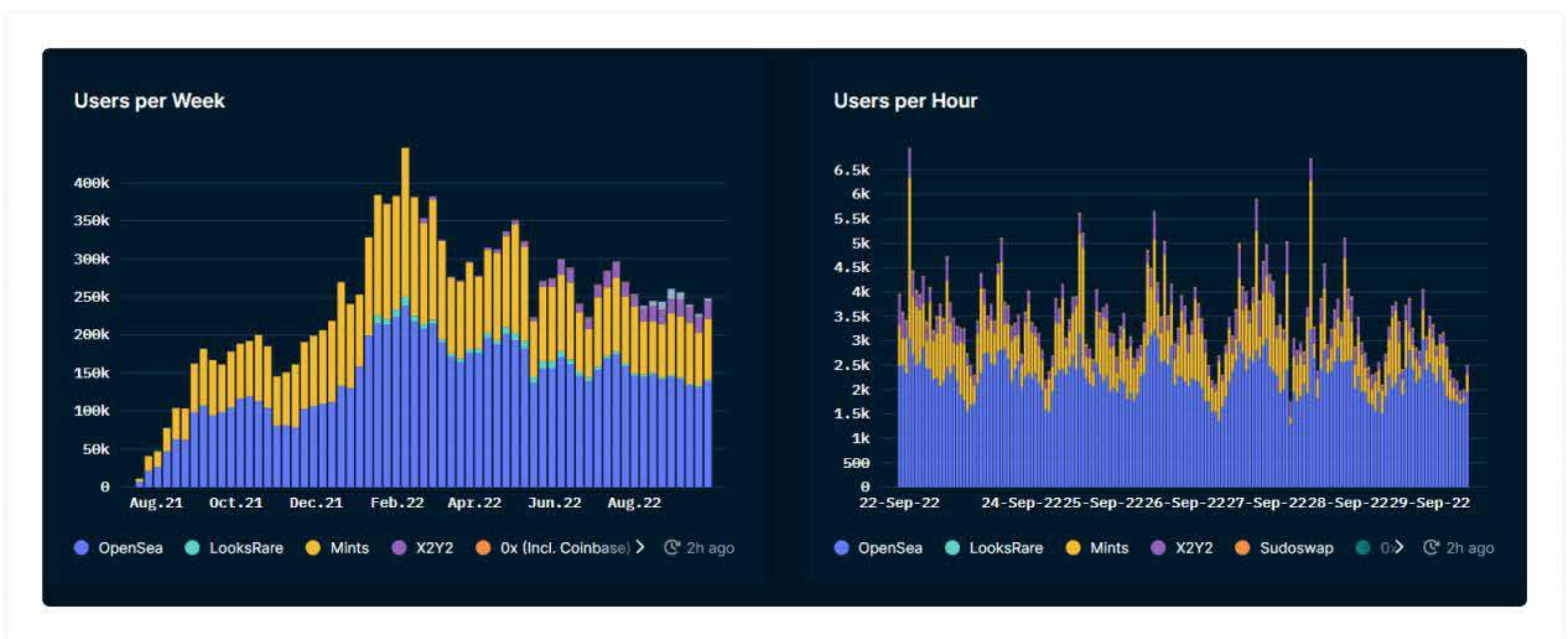
Southeast Asia is where NFT usage is growing the fastest; according to Finder research, 32% of people in the Philippines, 26.6% in Thailand, and 23.9% in Malaysia are NFT owners.

Nigeria, where 21.7% of the population does not yet own an NFT but expects to do so, has the highest expected adoption rate.

An NFT is owned by 4% of Americans, a 100% increase from the previous year, and Californians are the state's biggest NFT purchasers. But most people worldwide still need to learn what an NFT is. When asked, about 80% of people in the United Kingdom and 70% of people in the United States did not know what an NFT was.

NFT Growth Figures

NFTs saw an explosion and parabolic expansion in 2021. A staggering amount of money entered the sector, fueled by a blazing bull market. NFTs have persisted despite scathing criticism from opponents focused on two key issues—the environment and the speculative bubble—and the bear market is forcing the industry to work toward better utility.

In comparison to Q2 of the same year, NFT trading volume increased by more than 700% in the third quarter of 2021. On various markets, thousands of NFTs are traded daily, with weekly trades averaging between 15,000 and 50,000. Since 2017, when the weekly amount of NFT trading was capped at less than 100 NFTs, this number has dramatically increased.
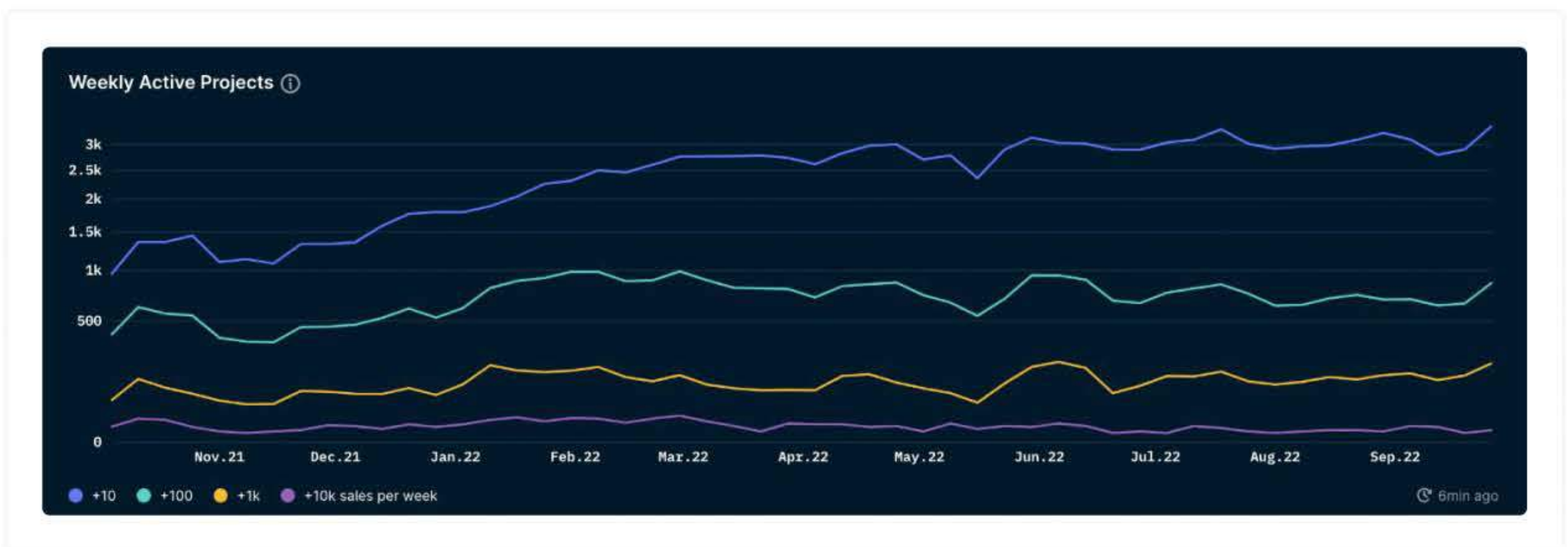
In September 2022, 350,000 ETH were traded on OpenSea, which recorded 1.85 million transactions and 300,000 unique wallet addresses engaging with smart contracts. Additionally, despite the declining aggregate volume, the quantity of unique users and transactions is stable.

Nansen's Contract Activity dashboard highlights the developing pattern of persistent NFT investors continuing to be active in the industry by showing strength and volume returning to smaller projects.

The overall market capitalization of NFT increased almost tenfold between 2018 and 2020, according to data compiled by Statista. Sales from initiatives like NBA Topshot came close to $1 billion. Sales of NFT increased by a factor of 131 between Q1 2020 and Q1 2021. And the market for collectibles is still expanding at the highest rate within the domain of digital assets.

Source : www.grandviewresearch.com

U.S Non-Fungible Token Market

Size, by type, 2020-2030 (USD Billion)

34.0%

U.S Market CAGR, 2022-2030

$0.02B $4.1B

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

■ Physical Asset   ■ Digital Asset
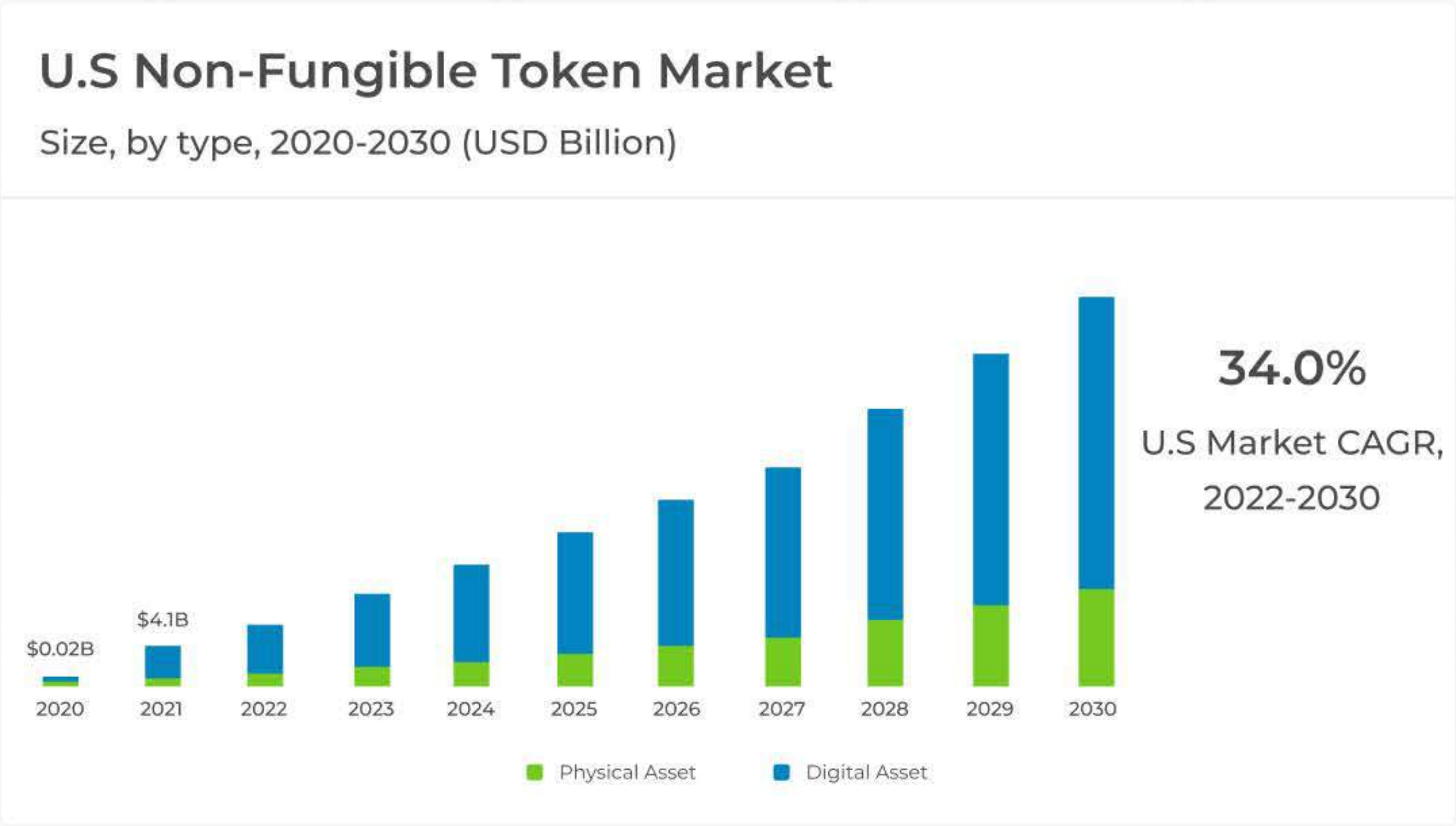
NFT Art Sale Information

The first NFT, dubbed Quantum, was created by digital artist Kevin McCoy and programmer Anil Dash in May 2014. A few years later, this NFT brought $1.4 million at auction. However, it falls far short of the top NFT sale, a series by digital artist Pak called The Merge that went for $91.8 million. The second most expensive NFT sale was to Beeple, who fetched an astounding $69.3 million for an NFT named "Everyday: The First 5000 Days."

Nansen Art-20	YTD Change (ETH)	YTD Change (USD)
Methodology	**-3.27%**	**-65%**
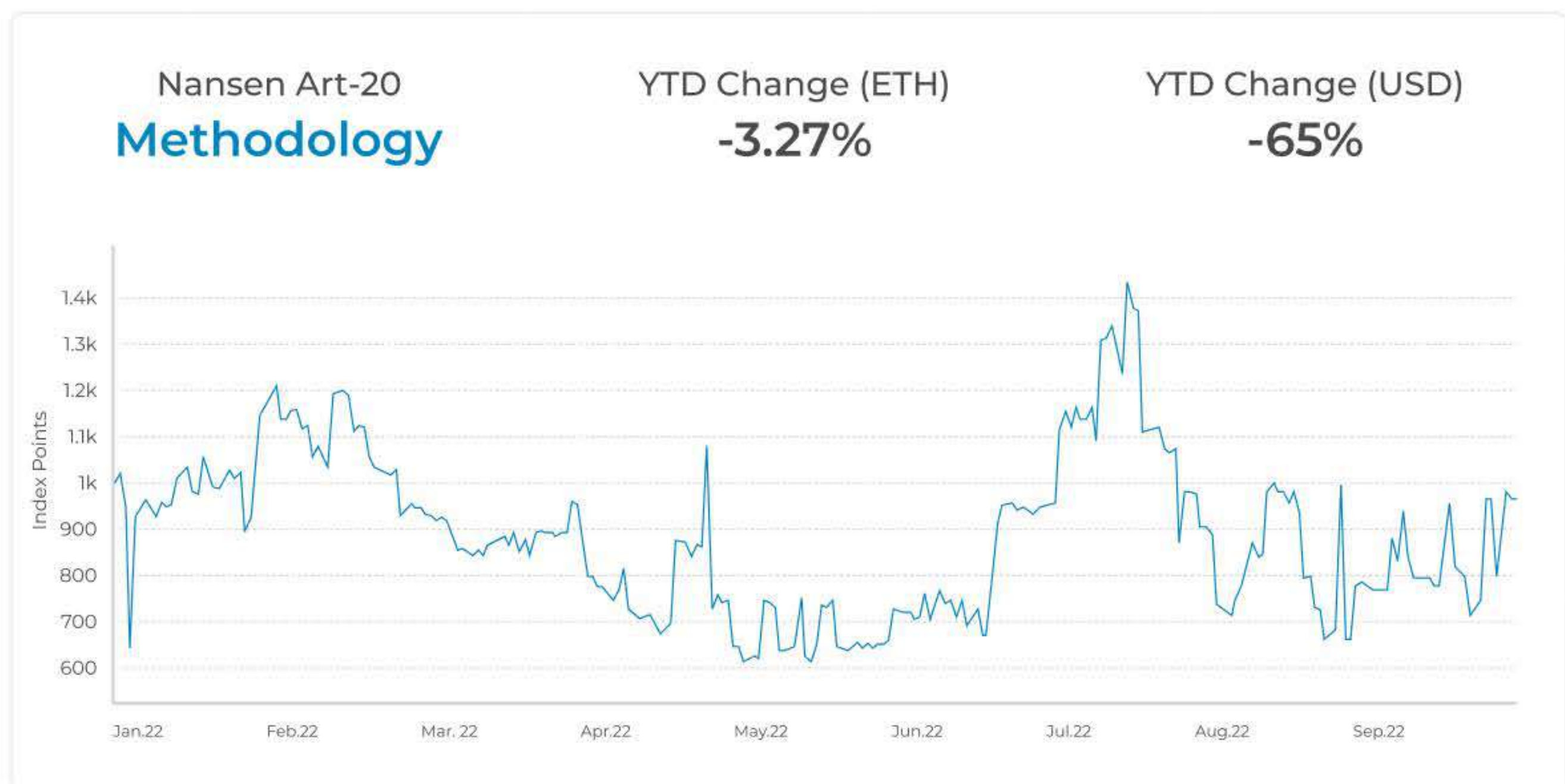
Nansen's Art Index provides a more thorough analysis of NFT Art value. This index is rebalanced every 90 days to create a picture of all the transactions inside this sector because these collections often have a lesser supply or exist as one-off items.

24H Most Expensive Purchases

NFT ID	NFT Collection	Buyer	Seller	Marketplace	Price (ETH)
2924	CryptoPunks	Blue Chip NFT Holder	Danny	CryptoPunks	3,300
127	Bored Ape Yacht Club	Blue Chip NFT Holder	Blue Chip NFT Holder	OpenSea	84
9244	Bored Ape Yacht Club	Blue Chip NFT Holder	OpenSea User	OpenSea	83
7180	CryptoPunks	"CopperRaven_c" on OpenSea	Medium Uniswap V3 LP	CryptoPunks	80
8624	CryptoPunks	daz.eth	"MR703" on OpenSea	CryptoPunks	75
5172	CryptoPunks	thecatalyst.eth	"ape123" on OpenSea	CryptoPunks	75
7709	CryptoPunks	benteo.eth	NFT Collector	CryptoPunks	68
4951	CryptoPunks	"DoubleRecursionVault" on OpenSea	"VMeth" on OpenSea	CryptoPunks	67
6834	CryptoPunks	"DoubleRecursionVault" on OpenSea	"punksOTC2" on OpenSea	CryptoPunks	67
4789	CryptoPunks	thul.eth	punk8756.eth	CryptoPunks	67
2378	CryptoPunks	Private Transactions Sender	Sfermion: NFT Wallet	CryptoPunks	66
8800	CryptoPunks	Blue Chip NFT Holder	Blue Chip NFT Holder	CryptoPunks	66

1 ⌄ of 42 pages ‹ › Showing rows 1 to 12 of 500 | 1h ago

NFT Collections, of which the Bored Ape Yacht Club and CryptoPunks are two iconic examples, account for a sizable portion of total NFT sales. Since its beginnings, the 10,000-person troop of primates' collectibles has witnessed a total trading volume of over $2 billion, with an average sale

price of $75,000 per item. According to NFT, the pixelated punks had a comparable overall volume and an average sale price of $107,000. Additionally, five of the ten most expensive NFT sales in history have been CryptoPunks, demonstrating the significance or social value of these NFTs.

Nansen effectively demonstrated the popularity of these two collections by having them frequently represent the day's most costly sale.

The most popular subsector at the time of writing is still collectibles. Still, utility NFTs are a solid second, and the recent volume increase for the Ethereum Name Service has further narrowed this gap.

The third-largest NFT sale was for "Clock," a digital counter showing how many days Julian Assange has been detained in London's Belmarsh Prison while awaiting extradition to the US. This piece, a part of a bigger NFT collection called "Censored," sold for the equivalent of $52.7 million.

Global Non-Fungible Token | NFT Market 2022-2026

Growth Difference
(Base year - Final year)

$147.24

2021
base year

2026
final year

The market is **FRAGMENTED** with several players occupying the market share

One of the **key drivers** of the market will be the **increasing dem and for digital artworks**

Key Players

· Asynchromous Art Inc.
· Binance Service Holdings Ltd.
· Dapper Labs Inc.
· Decentraland Foundation
· Enjin Pte. Ltd.

Market Segmentation By Application

· Collectibles
· Sports
· Arts
· Other

43%

of the growth will originate from **APAC**

NFT Gaming Information

Play-to-win games that used NFTs dominated most of the NFT boom. On Ronin, an Ethereum sidechain, big protocols like Axie Infinity generated millions in trade volume. Users purchased NFT sneakers to join the lifestyle app Stepn, based on the Solana blockchain. Despite the fact that NFTs are traded on a growing variety of blockchains, including Avalanche and BNB Chain, the majority of activity at the moment is concentrated on Ethereum and Solana.

The NFT Gaming industry has experienced the biggest decline in value and volume in 2022. Some detractors might contend that this reflects that NFT gaming ventures prioritize financial incentives over fun.

According to data acquired by centralized exchange ByBit, 1.3 million unique wallet addresses were engaging with game-related smart contracts in 2021, indicating a 46X increase in daily users compared to 2020.

9.4% of Americans have participated in play-to-earn NFT games, but India has the highest adoption rate, with 34% of respondents reporting doing so. Adoption is still more common in Latin America and Asia, where people employed these games as a full-time source of money during the pandemic.

Men under 35 years old remain the main demographic for NFT gaming. According to Finder, nearly 18% of Americans in this age group claimed having played an NFT-based game; this percentage fell to 7.3% for that 5% of people 55 and older and between the ages of 35 and 54.

NFT Statistics Right Now

NFTs are regarded as high-risk assets because of their distinctive features. As capital moves up the risk ladder to safer assets, this asset loses the most in a macroeconomic climate that is becoming more risk-averse.

Nevertheless, NFTs are still developing despite these circumstances, mostly due to utility applications and ventures into the metaverse. The NFT space shifts away from speculation and into a building stage as risk appetite wanes.

The secondary market, which accounts for 80% of overall trading volume as the primary market contracts, is where most NFT trading occurs. With Yuga Labs acquiring CryptoPunks and MeeBits, two of the most lucrative NFT collections, the market's centralization continues to grow. This indicates that projects owned by Yuga Labs own more than 30% of the overall NFT trading volume.

A blockchain analytics company called Nansen combines on-chain data from millions of wallets with market alpha to provide investors with the information they need to remain ahead of the competition. Investors may keep an eye on the whole market and target particular collections based on changes in their floor price thanks to the NFT Paradise dashboard.
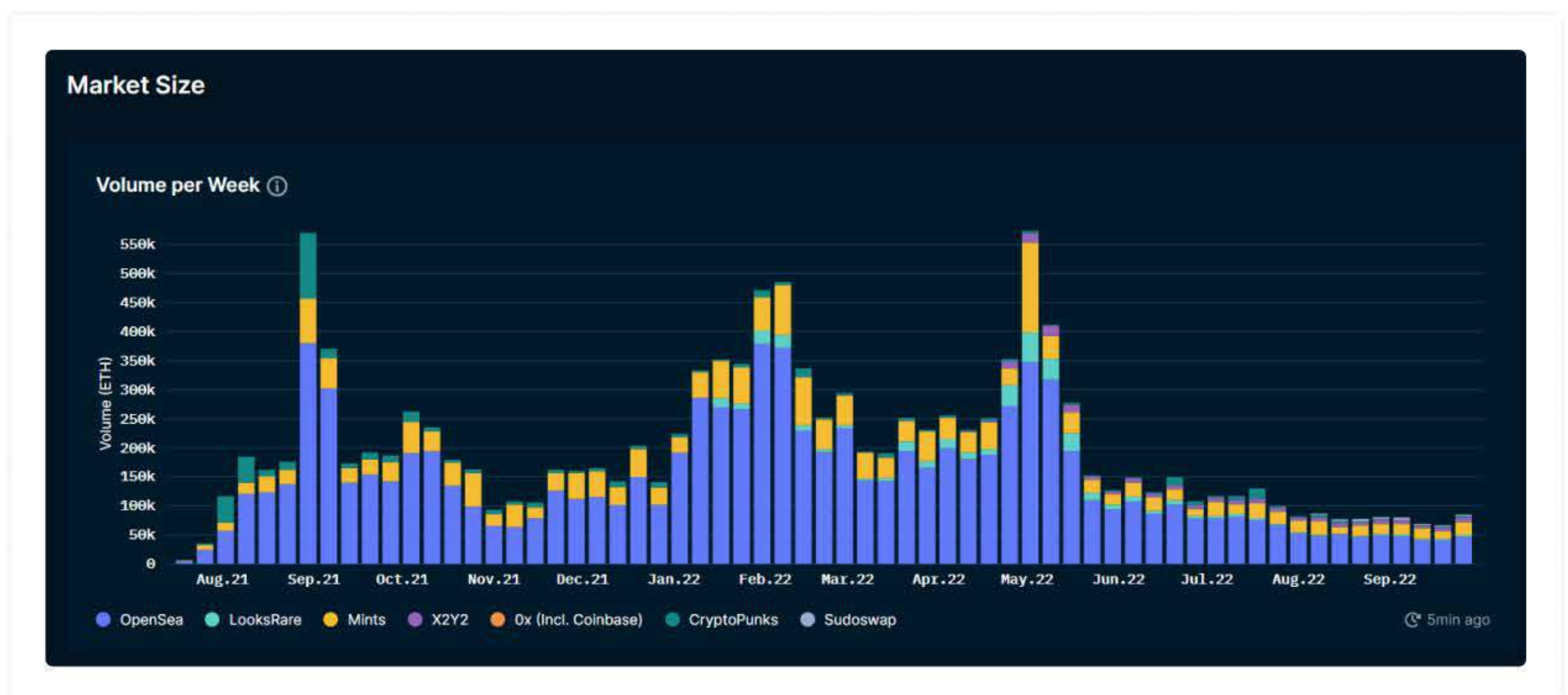
The NFT Trends & Indexes dashboard clearly illustrates the general trend of the NFT market, with the largest weekly volume of 2022 occurring in May and declining due to the capitulation of digital assets. Though reduced volumes result from NFT pricing retreating to a more sustainable level, transactions and users per week indicate that interest in the space is still strong.

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Weekly Active Projects ⓘ

3k	
2.5k	
2k	
1.5k	
1k	
500	
0	

Nov.21 Dec.21 Jan.22 Feb.22 Mar.22 Apr.22 May.22 Jun.22 Jul.22 Aug.22 Sep.22

● +10 ● +100 ● +1k ● +10k sales per week   ⓒ 6min ago
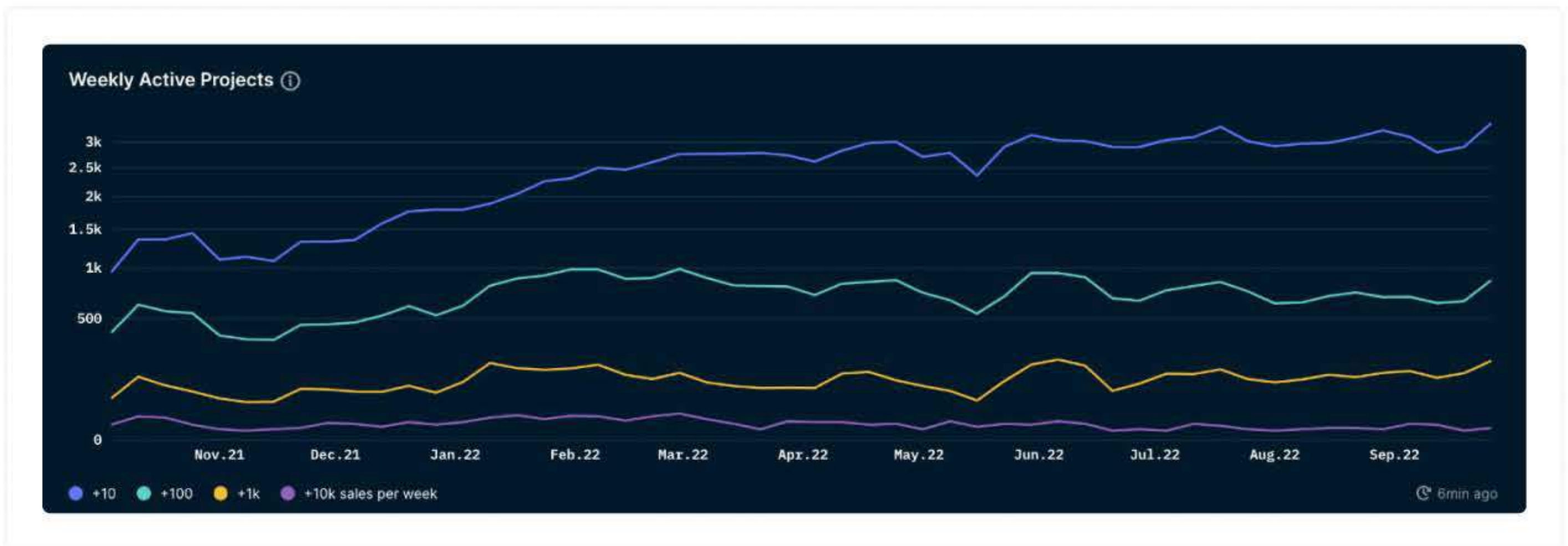
Global Non-Fungible Tokens Market Trends

3.0 USD BILLION 2022

13.6 USD BILLION 2027

CAGR 35.0%

The global Non-Fungible Tokens (NFT) market is expected to be worth USD 13,679 million by 2027, growing at CAGR of 35.0% during the forecast period.

Americas is estimated to hold the largest market share of the global NFT market in 2022 and the Asia Pacific is projected to grow at the highest CAGR during the forecast period.

EUROPE

The market growth can be attributed to the increased influence of celebrities for NFT adoption and rise in digital artworks.

The global post-COVID-19 NFT platform- marketplace segment is estimated to grow from USD XX million in 2022 and reach USD XX million by 2027 to grow at the highest CAGR of XX%.

Countries are showing huge opportunities for the NFTs due to the presence of the maximum number of NFT vendors in the market.

The media and entertainment end user segment offers great opportunities in the NFT market and is expected to hold the largest market share during the forecast period.

Source: Investor Presentation, Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

TOKENIZATION MARKET SIZE AND GROWTH ANALYSIS

Analysis Of The Tokenization Market's Size And Growth
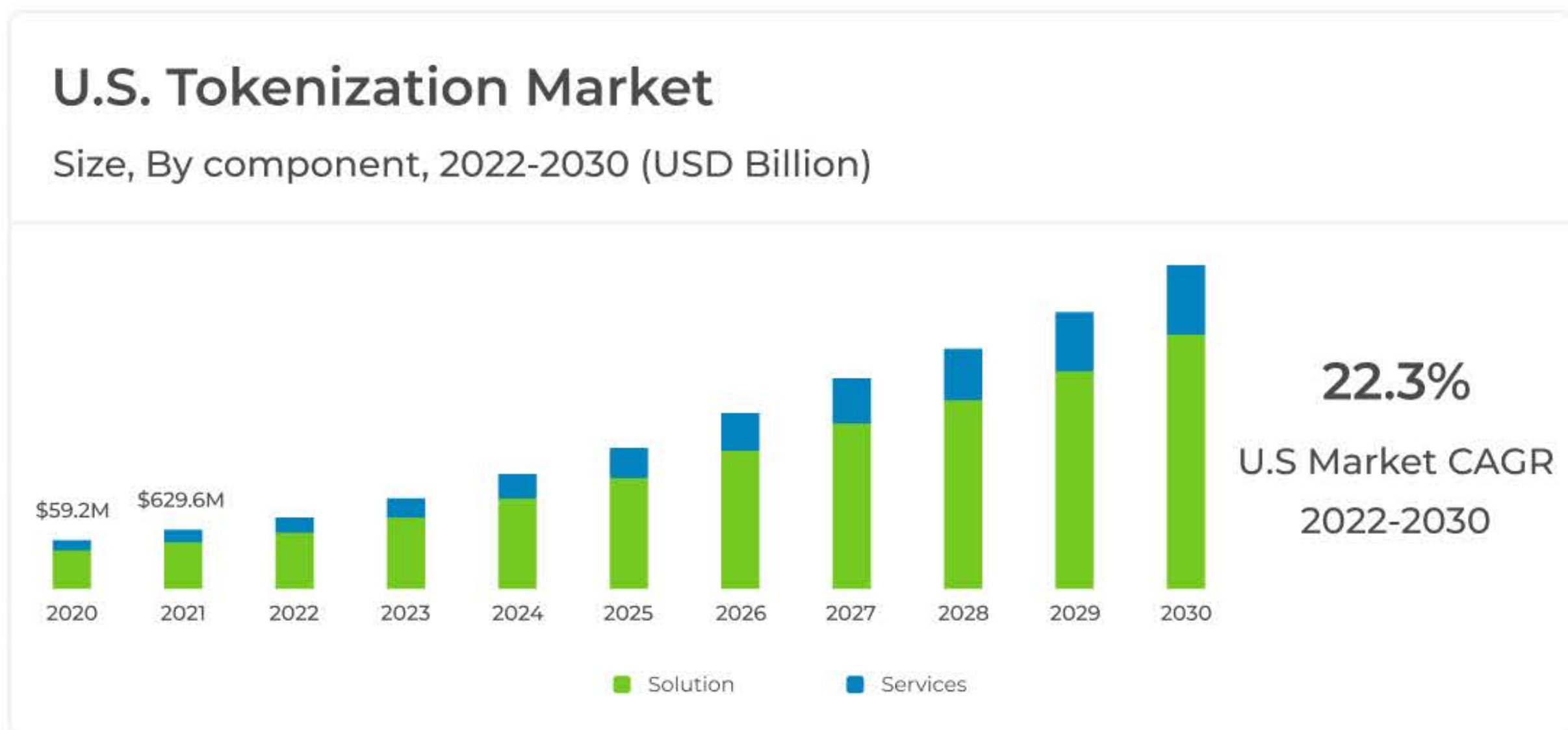
According to estimates, the size of the global tokenization market was USD 2.03 billion in 2021, and it is anticipated to increase at a CAGR of 24.09% from 2022 to 2030. The expansion of computerized operations and the digital handling of all sensitive data are factors in the industry's growth. The growth of both simple and complex digital payments has accelerated. Thanks to technological breakthroughs, modern data security solutions and services are now available on the market. When both occur simultaneously, the market expands in direct proportion to technological improvements. Almost every economic sector experienced temporary disruption or closure at the start of the COVID-19 epidemic. After the initial global lockdown, businesses began digitizing their procedures to ensure no disruption would result in additional delays or process halts. Because of digitization, businesses now routinely handle incredibly sensitive customer data. While businesses quickly digitized their services, this technology proved to be an excellent tool for ensuring critical data security. Demand and an influx of digital payments were the main drivers of the industry expansion during this historic event.

Source : *www.grandviewresearch.com*

U.S. Tokenization Market

Size, By component, 2022-2030 (USD Billion)

$59.2M $629.6M

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

■ Solution   ■ Services

22.3%

U.S Market CAGR

2022-2030

This technology is most widely employed in the information technology, banking, financial services, and insurance sectors. The development of digital payment infrastructure and services by banks and payment applications has been sped up thanks to technology. For instance, following a Reserve Bank of India regulation for the sector, the mobile payment platform PhonePe deployed this solution in December 2021 and removed all card-on-file details from its service. This technology has

developed a substantial and competitive market for itself for no other reason than the advantages and data security it provides to the sectors. No matter the business, every company managing sensitive data strives to integrate this technology into their procedures, fostering the growth of the sector as a whole.

Furthermore, the banking, financial services, and insurance sectors dominate the market. The technology as a data security solution has also become standardized due to the recent installation and extensive standardization of digital services. The entrylevel application and execution of this sector have decreased and become more uniform globally due to technological advancement. These industries frequently handle and exchange sensitive data regularly, which calls for security measures to prevent leaks and harmful attacks. For instance, evil hackers illegally gained access to Radius Financial Group's server in February 2022 and stole the data of over 10,000 customers, resulting in a data breach.

In addition, the sector is growing in prominence in developing countries like Brazil and India. Businesses and solution providers see an opportunity due to the rapid adoption of digitalization in developing nations. Governments and regulatory bodies in emerging countries are establishing legislation that forces corporations toward this answer, along with technological and data digitization improvements. The sector is thriving thanks to this regulatory drive.

Partition Insights

Over 80% of the revenue in 2021 came from the solution component category, and this segment is expected to continue to dominate during the forecast period. Data security is becoming increasingly important as the market assists sectors in their transition to complete digitization. The solutions component sector is crucial for businesses needing immediate data security solutions. The category aids industries in adhering to the rules established by regulatory organizations. The industry can advance data security for many industries by using the solution component.

Source: *Technavio*

Global Tokenization Real Estate Market 2022-2026

Market growth will **ACCELERATE** at a **CAGR** of
22.49%

Growth contributed by **NORTH AMERICA**
37%

Incremental Growth ($8)
3.60

Growth for 2022
21.67%

The market is **FRAGMENTED** with **SEVERAL** players occupying the market
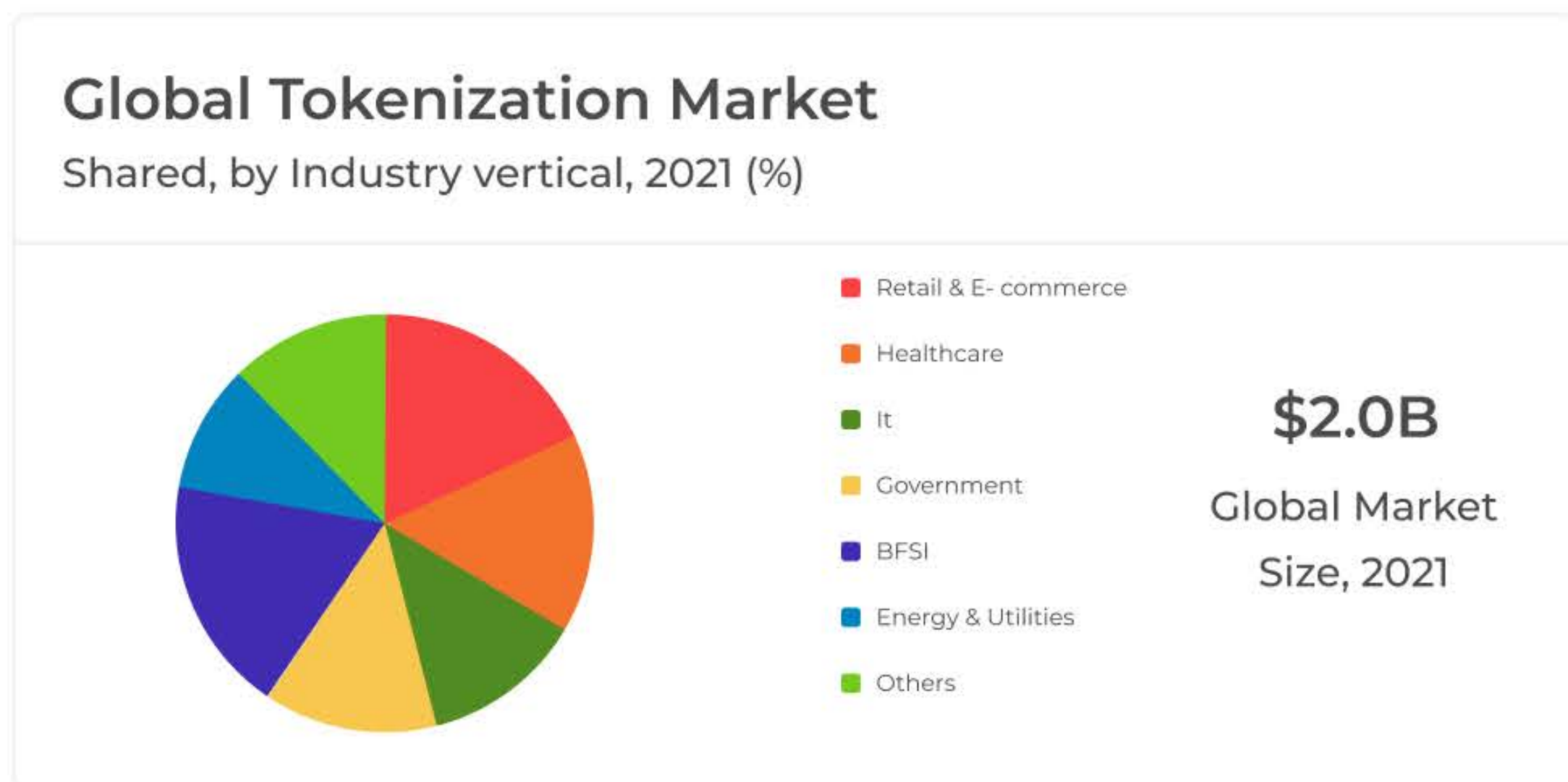
However, since more sensitive data is quickly and frequently digitized, technology is a never-ending process. The services component segment has grown in popularity as a result. From 2022 to 2030, the services component category is anticipated to grow at a noteworthy CAGR of 25.20%. Companies frequently provide their software, which may incorporate some other technologies for increased data protection, and the technology as a service component is supplied on a subscription basis. To be standardized, modern technology service components must also work with various hardware and digital services.

From 2022 to 2030, the retail and e-commerce segment is anticipated to grow at a CAGR of 22.73%. Due to the importance of data security, this industry is investing extensively in the market. A significant number of transactions are repeatedly carried out when purchasing online. Retail and e-commerce firms utilize tokenization to secure payments while securing consumers' sensitive payment data to make this simpler and more effective. The retail and e-commerce sectors increasingly accept tokenization as the standard.

Source : *grandviewresearch.com*

Global Tokenization Market
Shared, by Industry vertical, 2021 (%)

- Retail & E- commerce
- Healthcare
- It
- Government
- BFSI
- Energy & Utilities
- Others

$2.0B

Global Market Size, 2021

Regional Perspectives

The region with the highest revenue share in 2021—more than 35.0%—was North America. The rate of adoption of digital technology was the highest in the area. The majority of Americans conduct business using an online payment method. The regional market is also influenced by North American market patterns, such as buy now pay later for cryptocurrencies. Additionally, U.S.-based companies like Visa and Mastercard, which predominately offer payment networks for online transactions, contribute to the market's expansion by doing so.

Tokenization Market
trends by region

GRAND VIEW RESEARCH

35.0%
Revenue Share
2021

● Largest Market   ● Fastest Growing Market

Source:
www.grandviewresearch.com

The highest CAGR, 27.52%, is anticipated for the Middle East and Africa between 2022 and 2030. The Middle East makes significant investments in data digitization and technology. Due to its geographic centrality worldwide, the Middle East area is significantly investing in all global enterprises, including digital services that employ tokenization to safeguard sensitive data. This helps connect the worldwide markets. The Middle East and African markets are at the innovation stage, making them considerably more reliable for tokenization.

The second-highest CAGR during the forecast period is anticipated for Latin America. The usage of tokenization technology has become more commonplace in Latin America due to aggressive innovation penetration and data digitization. Given that the modern technical and digital revolution has only recently started in that region, Latin America presents huge growth prospects. Additionally, the region receives foreign investment in the data and technology sectors, which promotes business expansion.

Key Organizations & Market Share Information

There are several top-tier players on the market, many of whom have subsidiaries operating in the same sector. As a result of the market's high entry hurdles, the majority of small-level players are low. As technology advances, sensitive data is handled more digitally and with data security solutions. Large and medium-sized businesses predominate throughout North America and Europe.

Even if there are few alternatives, there is a lot of competition. Technology advancements enable businesses to guarantee the protection of critical data while boosting overall productivity. Even though it needs substantial investment, the market is getting more broad and standardized because of the ongoing advancement of technology. The tokenization movement has crossed international borders in many global markets due to globalization. Even governments and regulatory

bodies are using this technology in their services to handle sensitive data of individuals because of the growth potential and real-world use cases.

Several Significant Participants In The Global Tokenization Market Are:

- Fiserv, Inc.
- Micro Focus International plc
- Visa, Inc.
- American Express Company
- MasterCard, Inc.
- Thales Group

GLOBAL SMART CONTRACTS MARKET REPORT 2022

From 2022 to 2028, with a compound annual growth rate (CAGR) of 24.2%, the global market size for smart contracts is projected to increase from USD 315.1 million in 2021 to USD 1460.3 million by 2028.

Rising applications in numerous end-user sectors are important market drivers for smart contracts.

The development of blockchain technology will accelerate the market for smart contracts during the anticipated timeframe of expansion.
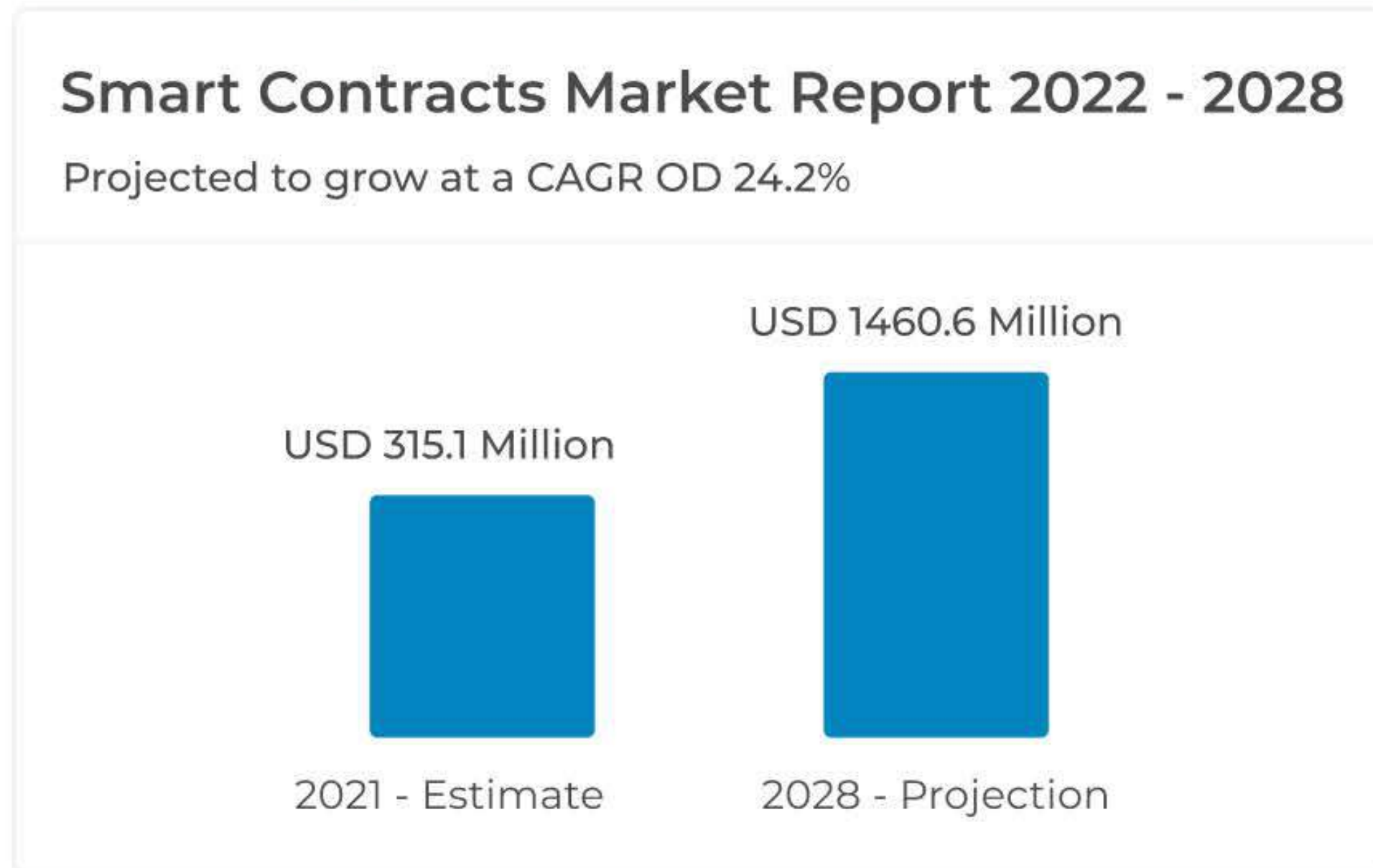
Market expansion will be fueled by rising consumer knowledge of smart contracts' advantages in the upcoming years.

Governments worldwide are implementing smart contracts to reduce the cost of contract administration by requiring less human participation. As a result, it is expected that the smart contract market will keep growing over the forecasted time frame.

A new technology called smart contracts can increase productivity across many different industries. Some advantages are efficiency, speed, security, transparency, and accuracy. These advantages will probably cause the smart contract business to grow. More companies will be able to embrace technology as it develops to reduce costs and speed up secure transactions.

Blockchain technology is used to generate smart contracts, but due to the lack of standards and interoperability among blockchain platforms, creating smart contracts can be challenging and potentially error-prone. This is anticipated to hamper the growth of the global smart contract industry throughout the anticipated time frame.

Smart Contracts Market Report 2022 - 2028

Projected to grow at a CAGR OD 24.2%

USD 1460.6 Million

USD 315.1 Million

2021 - Estimate

2028 - Projection

Market Trends Affecting Smart Contracts

Increasing Use Across Several Industry Sectors

On a blockchain, smart contracts are computer programs that automate numerous procedures and systems. As the data can be matched with the transaction conducted, tax collection will accelerate, and the system will become more effective. Governments can store important digital information about citizens on a single encrypted element, making it convenient and simple for people to access. In the same way, smart contracts can be used to transfer payments in the financial and insurance industries, enable error checking, and keep patient-specific private health records. Supply chains will gain from lessening the burdensome documentation that raises the possibility of fraud or loss. These elements will propel the market for smart contracts to expand during the anticipated time.

🔶 Blockchain innovation

The blockchain stores smart contracts as code in one of the blocks. Because the contract's terms cannot be changed and are constantly monitored, ensuring immutability, contract management costs are decreased with little human involvement. No one can tamper with the verification because it is done regularly. The dispersed functionality and lack of a third party guarantee quicker contract completion and fulfillment. This is anticipated to accelerate the demand for smart contracts shortly.

Beneficial Elements

The benefit that smart contracts could offer to diverse sector stakeholders is enormous. Due to the lack of brokers or other intermediaries, it offers speed, safety, and cost savings. The manual filling is avoided, and all required information is securely secured. Without any help from people, time management is successful. During the forecast period, this is anticipated to accelerate the expansion of the smart contracts market.

Negative Effects

Changes to smart contracts are challenging. Any programming flaws can quickly add time and frustration. The lack of interchangeability and standards further exacerbates the issue. It is anticipated that ambiguous language and loopholes will enter the system. This will impede the market growth for smart contracts in the next years.

Market Share Analysis For Smart Contracts

Due to its widespread use in public sector businesses and government organizations for speeding up and simplifying operations, the government sector is anticipated to continue the lead in the smart contracts market share.

There are two types of blockchain segments: public and private. Public blockchains are entirely free and heavily adhere to decentralization. Private blockchains, however, only allow certain certified members to participate.

Due to growing digitalization and the presence of major companies, North America is anticipated to hold a disproportionately large market share for smart contracts.

Leading businesses in the market for smart contracts include:
Coinbase is a cryptocurrency trading platform with headquarters in the United States owned by Coinbase Global, Inc. Since it has no physical headquarters, Coinbase is a remote-first business. By trading volume as of March 2021, the company, founded in 2012 by Brian Armstrong and Fred Ehrsam, was the biggest cryptocurrency exchange in the United States.

The world of digital assets is evolving quickly, according to Bitfinex. A forwardthinking and adaptable strategy is required to keep up with the rapid technological progress. Bitfinex provides cutting-edge digital asset trading services to consumers and global liquidity providers.

Many people would only be able to use the highly complex utility solutions that Monetas - Mpnetas creates with their expertise. The cryptocurrency best investment solution Monetas is developing is a crypto token that users may use with no restrictions across a range of utility solutions while maintaining their security and privacy.

Smart Contracts Market By Type

- Public Blockchain
- Private Blockchain
- Others

Smart Contracts Market By Application

- Financial
- Government
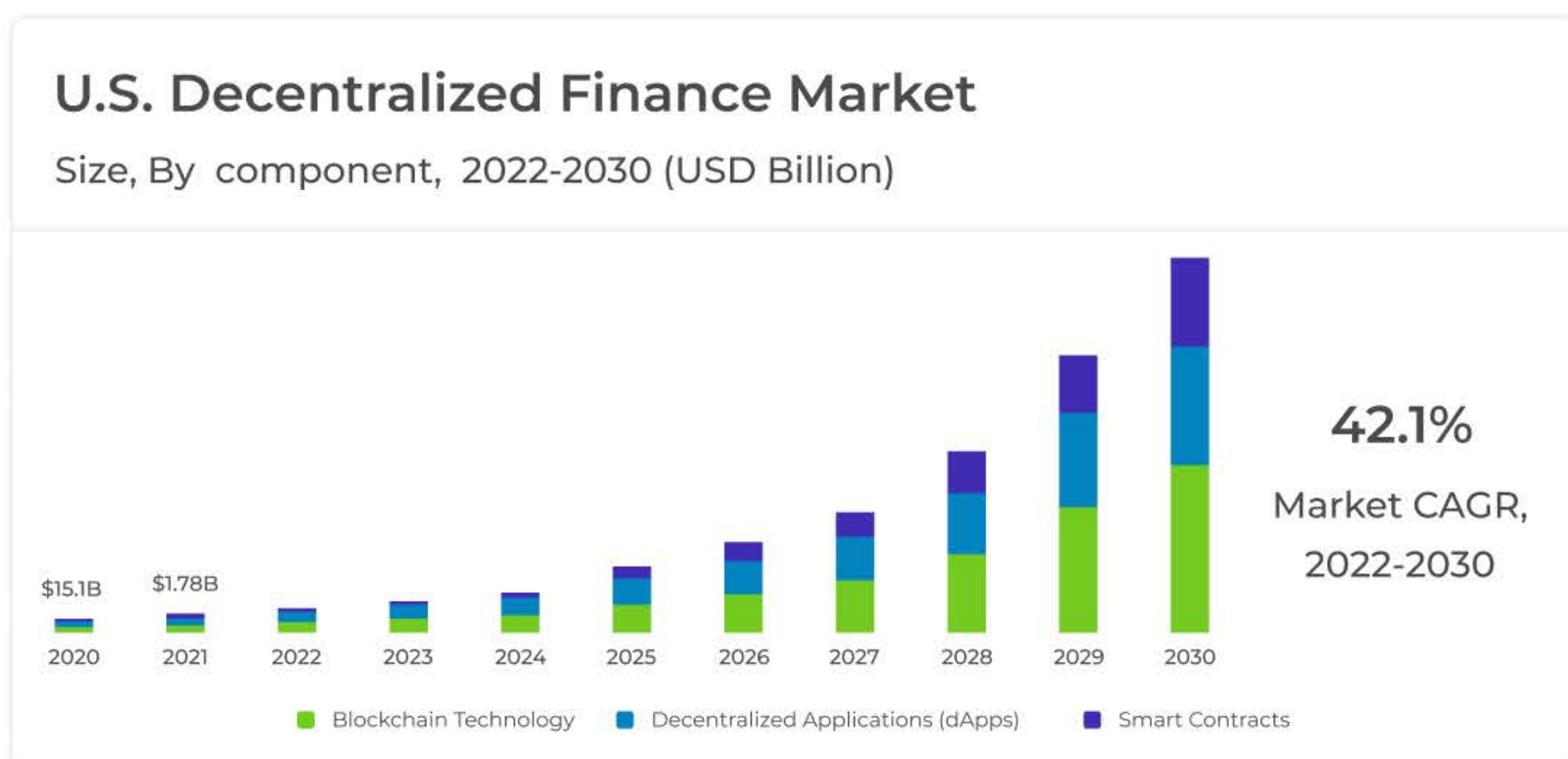- Insurance
- Healthcare
- Supply Chain
- Others

Smart Contracts Market By Regions/Countries

- North America
- Europe
- China
- Japan
- Southeast Asia
- India
- Central & South America

DECENTRALIZED FINANCE MARKET REPORT

The size of the worldwide, decentralized finance market was estimated at USD 11.78 billion in 2021, and it is projected to increase at a CAGR of 42.5% from 2022 to 2030. One of the main reasons influencing market growth is the financial sector's significant shift due to the adoption of DeFi (Decentralized Finance). The interaction between DeFi and decentralized platforms on the blockchain has drawn more attention during the last five years. The capacity of DeFi to remove intermediaries from financial operations has expanded adoption. DeFi has also had the greatest influence in the insurance sector because convoluted processes, paperwork, and audit systems plague the traditional system.

Source : *www.grandviewresearch.com*

U.S. Decentralized Finance Market

Size, By component, 2022-2030 (USD Billion)

42.1%
Market CAGR, 2022-2030

■ Blockchain Technology   ■ Decentralized Applications (dApps)   ■ Smart Contracts

Efficiency was raised by the deployment of DeFi platforms, which contributed to the sector's success. An increase in e-sports and gaming has also been cited as a key driver for DeFi platforms since developers use DeFi tokens for in-app purchases. Since they let users trade tokens and create their ecosystems, trading games and collectibles are becoming more and more well-liked genres on the blockchain. Users might place bets on topics like sports, economics, and global events on DeFi platforms like Augur, for example. The adoption of blockchain-based prediction systems is anticipated to create growth potential for the industry throughout the projected period.

The advantages offered by DeFi technology providers are encouraging the sector's growth. The system ends with banks and other financial institutions controlling money, financial goods, and financial services. Furthermore, it does away with the service usage fees that banks and other financial institutions charge. DeFi platforms are also expected to be used more frequently because of their accessibility, as they are open to using by anybody with an internet connection. The DeFi platform offers the option to trade tokenized versions of investments like equities and mutual funds, as well as the capacity to send money anywhere in the world and store it in cryptocurrency wallets.

Users only require a smartphone. Thus there is a huge room for revenue development in this industry. Additionally, in recent years, these platforms have grown in popularity among crypto enthusiasts, which is anticipated to support industry expansion. DeFi platforms have several cutting-edge benefits but also come with some hazards. Infrastructure and rules for DeFi are still being created. Therefore, unlike traditional banking, investments conducted on DeFi are neither governed by nor covered by insurance. Additional crypto assets back DeFi loans. However, in a downturn, the value of these assets may drastically decline or even be liquidated. However, as more people enter the digital asset business, DeFi systems are expanding their capability and bolstering their security & scalability. With the switch to the Ethereum 2.0 network, this process has already begun. In the near future, DeFi platforms and exchanges are anticipated to enhance the secrecy and independence of cryptocurrency trading, spurring the growth of decentralized finance and the systems that make it possible

Impact Analysis For COVID-19

With the advent of blockchain technology, the COVID-19 pandemic outbreak has caused a revolution in various businesses. During the outbreak, the market's main driver was the requirement for streamlining and automating supply chain applications and corporate procedures. Loans on DeFi platforms have climbed more than seven times since March 2020 to USD 3.7 billion, according to the DeFi Pulse. At a time when central banks all over the world have decreased interest rates to support economies that the pandemic has negatively impacted, investors are looking for gains.

Partition Insights

In 2021, the blockchain technology sector led the global market and was responsible for more than 41.35% of total revenue. Blockchain technology can replace the underlying principles of the current decentralized business models by reducing transaction costs, fostering distributed trust, and boosting decentralized platforms. Decentralized financial services, which are often more inventive, interoperable, decentralized, borderless, and transparent, are made possible by blockchain technology.

Blockchain-based decentralized financial services can foster creativity, expand business and innovation opportunities, boost financial inclusion, and enable open access. The smart contracts market would expand significantly throughout the anticipated time frame. DeFi protocols and apps are built on top of smart contracts. A smart contract can act as a custodian with predetermined guidelines for who, when, and how these assets can be received. Additionally, it expedites decentralized financial activities, including lending, investing, banking, and insurance. Furthermore, smart contracts enable centralized finance platforms to become decentralized, which is expected to generate special chances for the sector's expansion.

Application Perspectives

In 2021, the data & analytics category dominated the global market and was responsible for the highest revenue share of more than 18.0%. DeFi protocols provide important advantages for data analysis and decision-making. DeFi protocols to aid in risk management and create economic prospects because they are open to data and network activity. Users can compare yield and liquidity and assess platform risks by using a variety of dashboards and tools with the assistance of the capabilities provided by DeFi platforms.

Over the projected period, the payments section is anticipated to increase at the fastest rate. Peer-to-peer payment is the primary use case for the DeFi sector and the blockchain ecosystem. Blockchain technology allows users to securely and immediately exchange cryptocurrencies with one another, doing away with the need for middlemen. Large financial institutions can improve market infrastructure and provide better services to their wholesale and retail customers with the help of DeFi payment solutions. Furthermore, it encourages underbanked and unbanked areas to have a more open economic structure.

Regional Perspectives

In 2021, North America dominated the industry globally, with more than 34.85% of the total revenue. The supremacy is attributable to well-known competitors like Compound and Uniswap. Additionally, North America has one of the largest cryptocurrency markets in the world, which is positive for the uptake of DeFi systems. DeFi transactions made up 37% of all transactions in North America from July 2020 to June 2021, according to Chainalysis's 2021 Geography of Cryptocurrency Report, with users contributing over USD 276 billion in cryptocurrency to DeFi platforms.

On the other hand, Asia Pacific is anticipated to see the greatest CAGR during the projection period. This can be ascribed to Asia's robust economic development and quick adoption of new technologies. There are various examples of DeFi platforms and other businesses using blockchain technology in the Asia Pacific region. Huobi Global, a corporation that operates a digital asset exchange, introduced Ivy Blocks in June 2022. This new investment arm specializes in DeFi and Web3 initiatives. Industry participants' strategic actions like this support the expansion of the region.

Techniques Used In The Decentralized Finance Market

The most recent version of Compound's decentralized finance (DeFi) lending platform, Compound v3, was made available in August 2022. The amount of supported tokens that may be borrowed and used as collateral on the system will decline due to limited production.

Aave introduced the overcollateralized stablecoin GHO in July 2022. Customers can borrow stablecoins from this product while understanding the yield on their locked assets on Ave.

In July 2022, Decentralized Web3 protocol Pocket Network and Aave partnered. This collaboration aims to give the business access to on-chain data from several blockchains using Pocket's distributed network of more than 44,000 nodes. The collaboration would support programmers in creating dApps powered by Aave and give them instant access to trustworthy blockchain data via Pocket Network.

In June 2022, Balancer unveiled Optimism, an Ethereum Layer 2 scaling solution. This offering would scale DeFi liquidity while lowering gas prices. Due to Ethereum's difficulties, users of decentralized finance would face a high barrier to entry in the form of expensive fees.

Bancor published Bancor 3, its third version, in May 2022. The primary goal of this product is to provide a DeFi liquidity solution that will enable stable on-chain liquidity and sustained yields for all ecosystem participants.

Dec. 2021 saw the release of Boosted Pools on DeFi protocol Aave by Balancer Labs. This item is a well-liked lending and borrowing mechanism that would raise the yields on decentralized finance.

In November 2021, SushiSwap partnered with Telos, one of the world's busiest blockchain platforms. Through this agreement, clients on both platforms could trade cryptocurrency assets while benefiting from Telos EVM's scalability, speed, and security against front running.

Aave released Aave Pro in July 2021. With the help of "whitelisted" customers who have passed Know Your Customer (KYC) standards, this product would run separate permission pools.

Badger DAO unveiled the Badger Bridge, a Bitcoin-to-Ethereum bridge, in April 2021. With this bridge, Bitcoin (BTC) owners might instantly transfer their coins to Ethereum and place them in yield-bearing vaults.

# DEFI SUMMARY MARKET REPORT

CAPITALIZATION OF THE MARKET

The DeFi ecosystem has experienced explosive growth since the beginning of 2020, and by the end of that year, its market cap will have surpassed $26 billion. The maximum point of this expansion, which peaked at $199 billion, occurred throughout 2021.

DeFi, however, has retreated, approaching the $40 billion threshold since 2022 was marked by significant economic upheaval and a bad market in cryptocurrencies.

■ Total Value Locked (TVL)

Although the graphic might deceive you, we may observe almost the same picture as before when we examine the entire value locked in different procedures
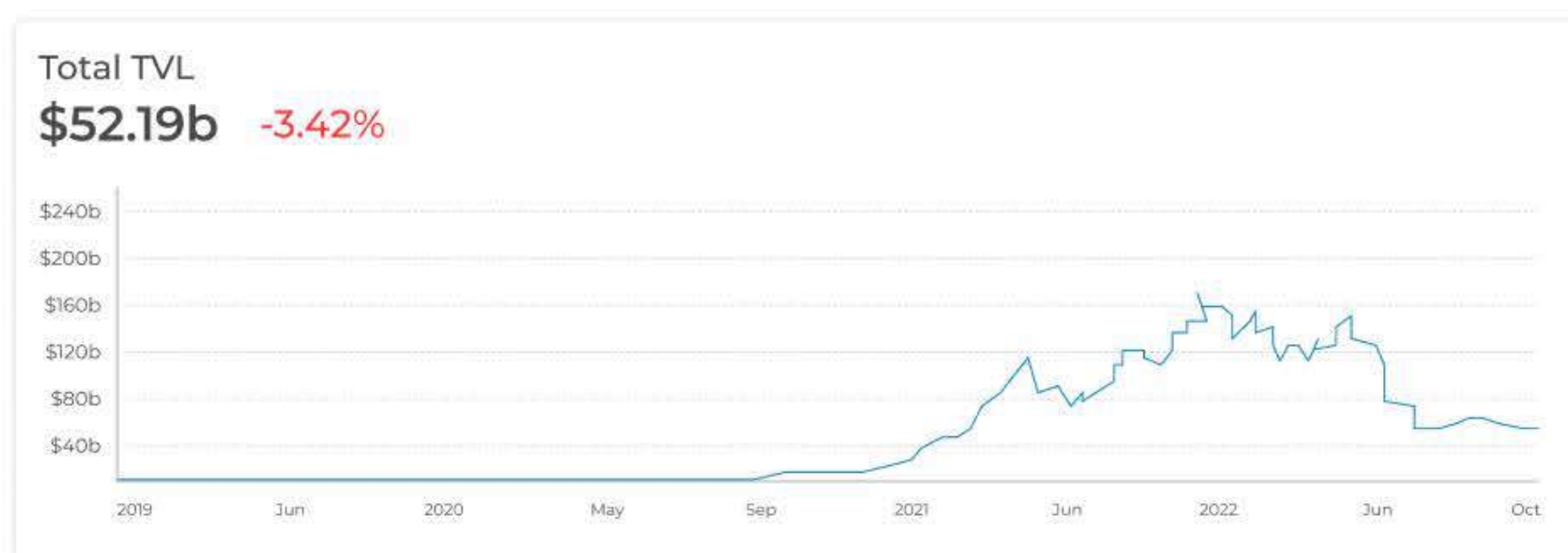
Even while the market cap of the DeFi ecosystem has been tracked by the dollar value of tokens locked inside of its protocols, if we take price swings into account, the number of actual cryptocurrencies locked has remained constant. The value of DeFi in TVL per dollar is currently higher than ever. This indicates that during the bad market, people still used less-priced cryptocurrencies to lock their money in DeFi systems.

Addresses Participating in DeFi

If we look at the number of addresses participating in different protocols, we might see a different picture. The data demonstrate a consistent rise throughout 2020 and early 2021, as well as throughout 2022, notwithstanding the onset of the bear market. This rising trend is steady, most likely due to the continued participation of numerous DeFi protocol early adopters and power users and the gradual return of new users as the market becomes more stable.

Personalized Ethereum Addresses

It's vital to consider the number of unique addresses communicating with Ethereum because most DeFi protocols are now based on this platform.

The data demonstrate a consistent rise over time, demonstrating that despite the pessimistic outlook, people continue to interact with and operate within the ecosystem.

Source : *Etherscan.io*
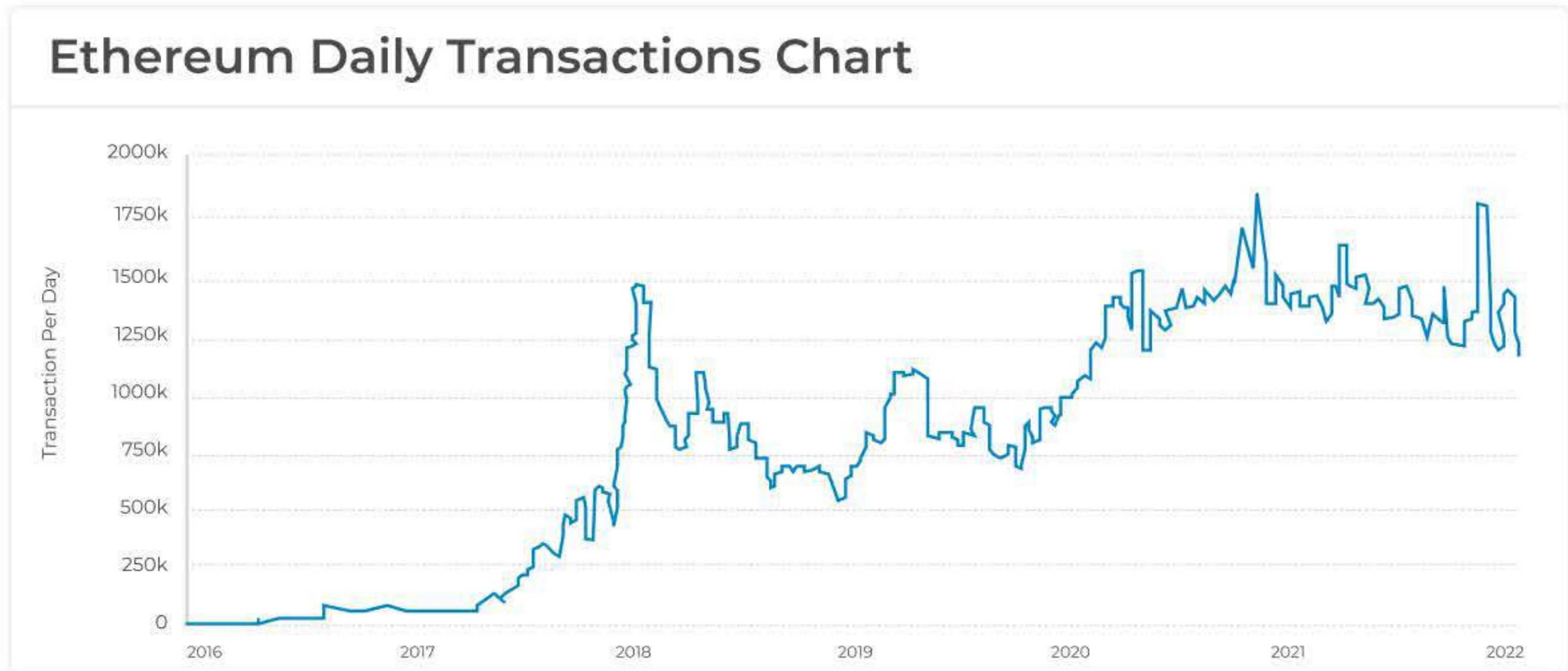
Ethereum Unique Addresses Chart
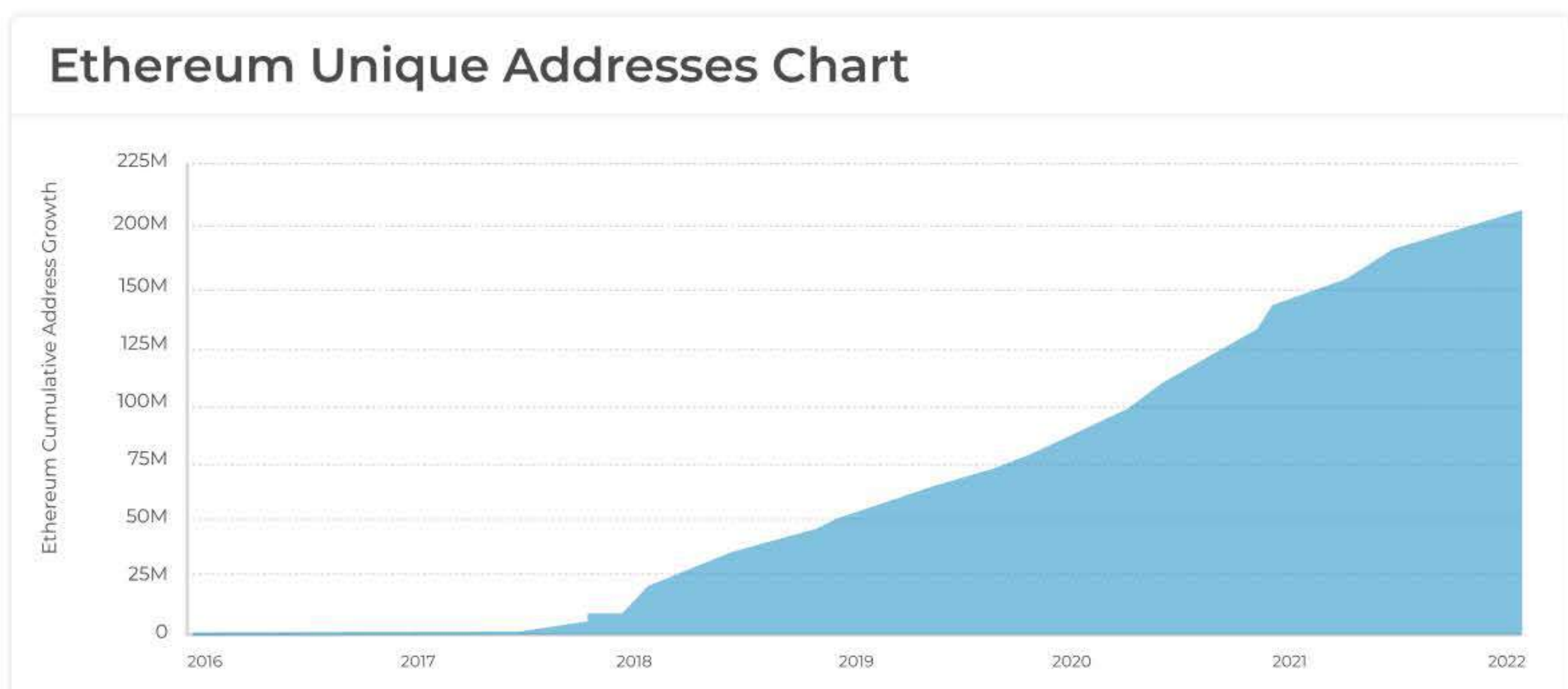
Daily Transactions on Ethereum

Despite minor variations, the average number of transactions per day on Ethereum shows that there has been a consistent upward trend.

This is yet another excellent sign that, despite uptrends and downtrends, people are using the blockchain, and a sizable portion of transactions are probably linked to the DeFi ecosystem.

Ethereum Daily Transactions Chart

Fees for Ethereum Gas

In 2022, we expect a gradual decline in the average gas price for Ethereum's gas costs. There are several explanations for this. The decline in the value of ETH, which led to a reduction in its circulation as individuals turned more frequently to other cryptocurrencies for daily transactions, is one of the primary causes.

The aggregate gas fees on Ethereum decreased due to the weak market's small slowdown of DeFi.

The average gas price is currently 22 Gwei, while the peak is expected to be around 500 Gwei in 2022.

Ethereum Average Gas Price Chart
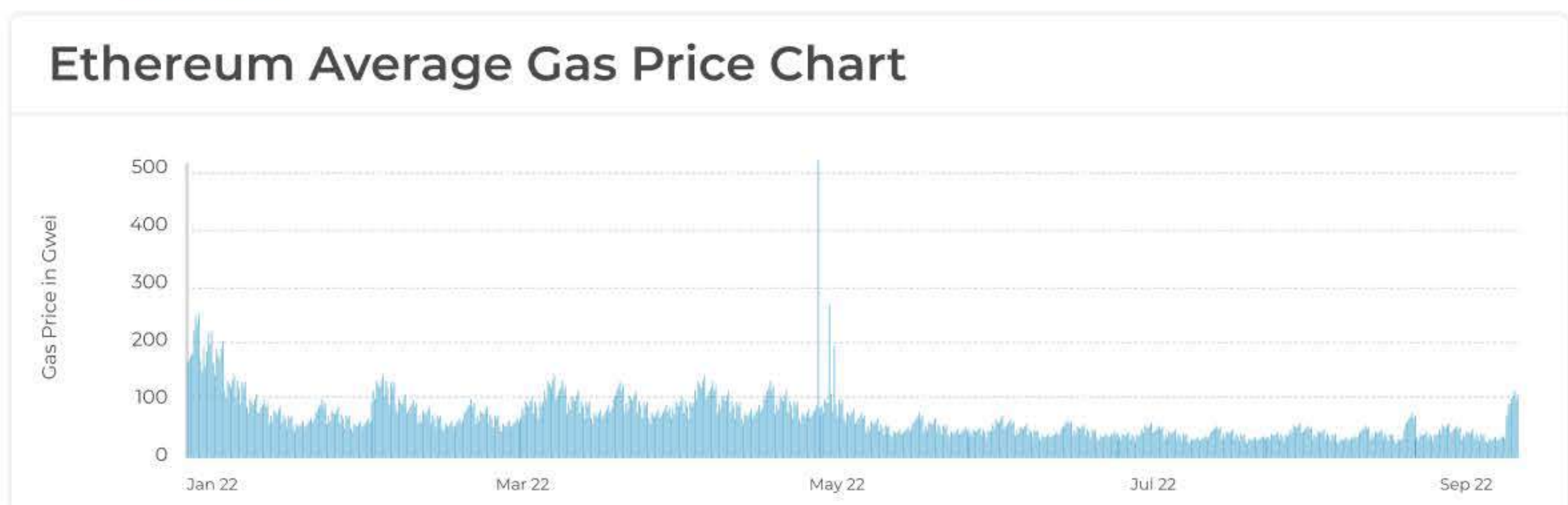
Significant Ethereum Users

The number of Ethereum whales on CoinStats shows few differences between Q3 2021 and Q1 2022 and Q4 2021 and Q2 2022.

This indicates that, despite the market slump and Ethereum's declining value, the number of actual whales stayed steady. This is particularly relevant when we consider that, in terms of monetary worth, holders would need a lot more ETH to qualify as whales today.
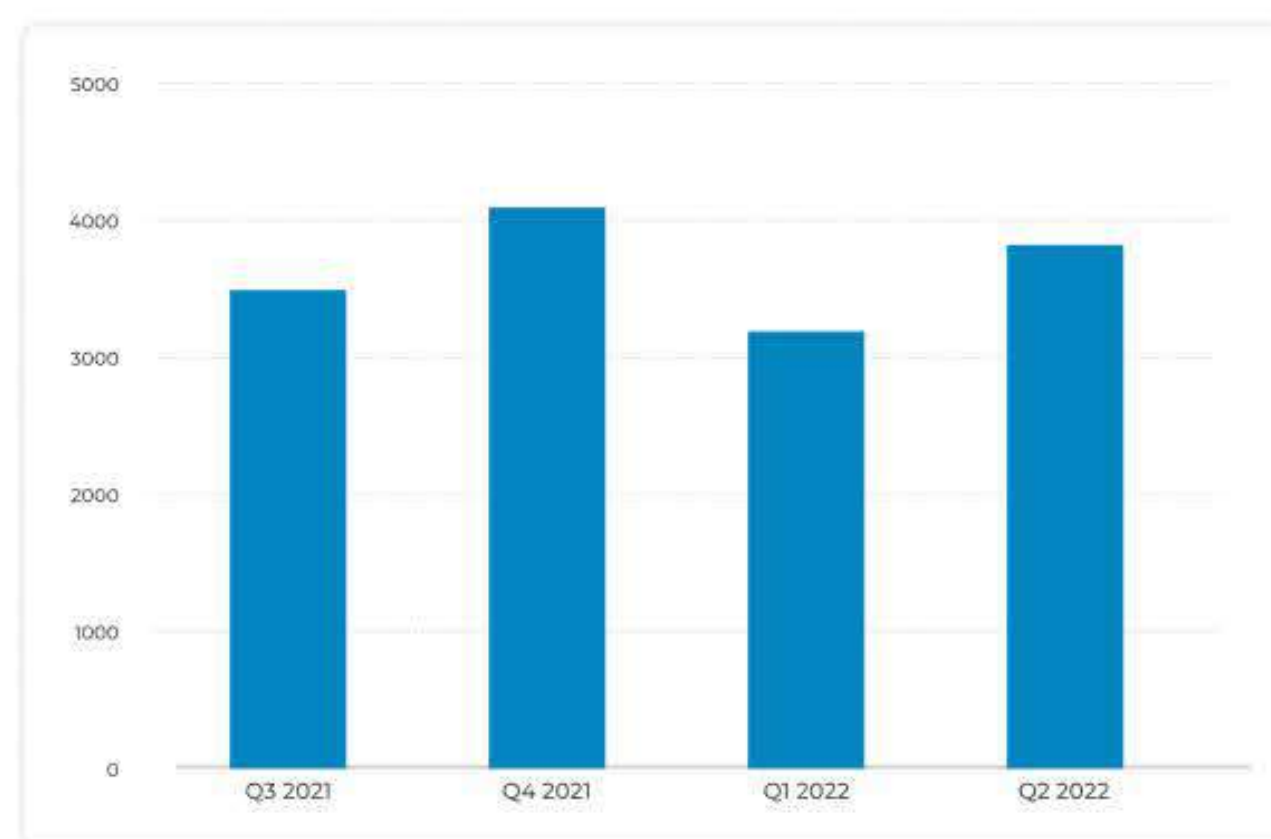
Source : *CoinStats*

Switching from Ethereum to Proof-of-Stake

Ethereum has switched from a proof-of-work consensus algorithm to a proof-of-stake one, as is well known. Although the shift was lengthy and unpleasant, it was largely seamless.

Although it's possible that this incident didn't directly affect DeFi platforms and protocols, it's important to note that it might enhance interest in Ethereum and, consequently, in DeFi protocols based on it.

This is because the blockchain will support much more transactions once Ethereum 2.0 is fully operational (and the switch to the PoS consensus method is just one part of it). The architect of Ethereum 2.0, Vitalik Buterin, has mentioned a throughput of 100,000 transactions per second. Due to dramatically lower fees, if Ethereum even comes close to it, DeFi may be used more widely.

Additionally, since users won't need to purchase expensive mining equipment, they can stake their ETH and participate in the network's consensus without worrying about the entrance hurdle for Ethereum's blockchain validation's "passive income." As a result, there can be a spike in new users and an increase in the price of ETH (which would, in turn, lead to an increase in the value locked in DeFi protocols).

The Development Of Additional Blockchains

The exponential growth of DeFi protocols has created a demand for comparable services from other blockchains. While Ethereum remains the preferred blockchain for most DeFi protocols, other chains are steadily catching up.
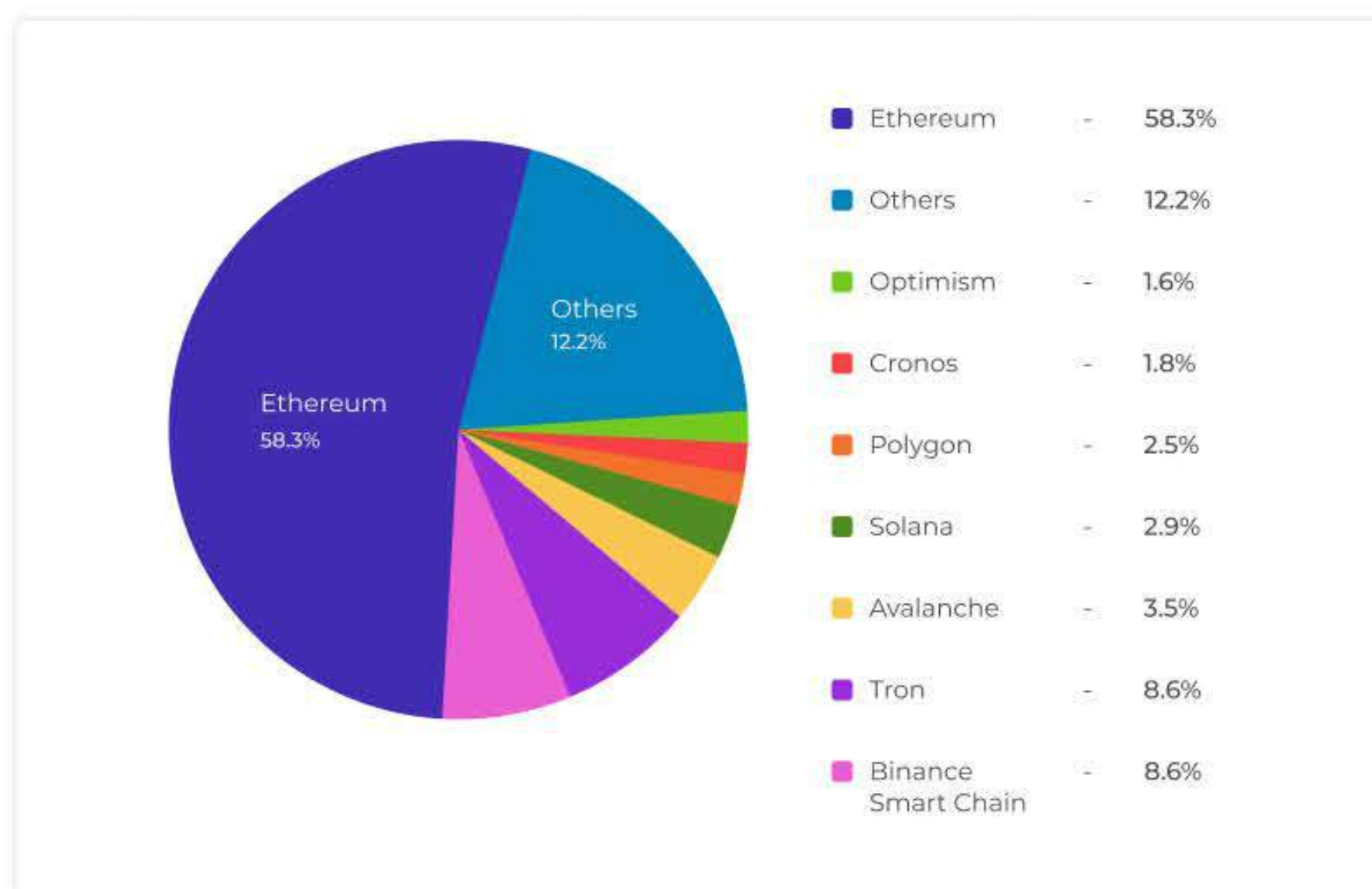
The market is currently waiting for Polkadot and Cardano. Still, some of the more famous ones are Binance Smart Chain, Avalanche, and Solana, as well as layer two solutions like Polygon or non-EVM blockchains like Cosmos. These protocols provide services comparable to Ethereum but with far cheaper costs. This is because they employ a different consensus process (PoS as opposed to PoW), which uses less computational resources and is, therefore, less expensive to operate.

In addition, these protocols have a higher transaction throughput than Ethereum, which is crucial for the DeFi protocols' ability to scale.

In the upcoming months and years, there may be a large transfer of DeFi protocols to these other blockchains as more and more people explore alternatives to Ethereum.

Tron and Binance Smart Chain are getting closer to the 10% threshold when we look at the total value locked by blockchain. This value is insignificant because it demonstrates that non-Ethereum blockchains are being taken into account.

Source : *CoinStats*

Ethereum	-	58.3%
Others	-	12.2%
Optimism	-	1.6%
Cronos	-	1.8%
Polygon	-	2.5%
Solana	-	2.9%
Avalanche	-	3.5%
Tron	-	8.6%
Binance Smart Chain	-	8.6%

LEADING USE CASES OF WEB 3.0 BLOCKCHAIN

Finance

🔶 **Reliable Crowdfunding**

One of the main obstacles to crowdsourcing is accountability. There are advantages and restrictions to projects you fund with your hard-earned money. Investors typically need more understanding of the project they are willing to fund.

At the moment, blockchain may be the perfect business partner for novice investors. The data is kept under the highest level of security and transparency using block storage. There is no shortage of pertinent information regarding the company, its employees, and its future goals. Smart contracts also work as escrow accounts for buyers and sellers. After the agreed-upon work target is met, the contract releases a portion of the locked-up funds. On the other hand, project creators use blockchain to boost support while spending the least money.

Some well-known blockchain-based crowdfunding platforms include Wefunder, Coinstarter, TallyCoin, Gitcoin, Meridio, QuantumRE, RealBlocks, PancakeSwap, GameFi, Pledgecamp, etc.

🔶 **Transacting Internationally**

Sending money across international borders may come at a hefty cost. Customers must pay fees to payment service providers like Visa and Western Union in exchange for their services. International transactions are now more economical, thanks to blockchain than they were before.

Ripple is one of the most popular blockchain platforms for quickly and cheaply moving money throughout the globe. Its native currency, XRP, ranks among the top ones in terms of market cap. The network attempts to make cryptocurrencies more accessible to the general public.

🔶 **Quick Loan Lending**

Banks and other financial institutions can be very expensive and time-consuming when lending money. In certain developing countries, there is no working banking system where they can borrow money. Every person is given more power by blockchain since it gives them access to a secure payment system. By taking a good blockchain course, you better understand the infrastructure for processing payments on a blockchain network.

P2P lending between lenders and borrowers is made possible by the decentralized cluster without the intervention of a centralized financial institution. Individuals can transact in a decentralized market using an anonymous identity with blockchain. Private keys are used in digital wallets to ensure the security of locked money during all transactions. Since no reduction is given to banks or intermediaries, the interest rate is also low.

Celsius, AAVE, Binance, MakerDAO, YouHodler, CoinLoan, and other leading blockchain-based lending platforms are just a few examples.

Guaranteed Insurance

Insurance is one of the most dangerous industries. Each year, insurance fraud results in the loss of thousands of dollars. This happens when the applicant's information is inaccurate, or the insurance company's security is breached. The use of blockchain technology can reduce insurance fraud. Using the technology for creating smart contracts, businesses can manage insurance claims, automate and expedite payment processes, and check the application of cybersecurity regulations.

Block-entered data has a valid timestamp and cannot be changed. This verifies the accuracy of the applicant's source of information and prevents any data tampering. In the case of health insurance, the blockchain's recording of medical data, such as reports and hospital bills, aids in payment verification.

A blockchain solution for the insurance business was developed by IT giant IBM in collaboration with Cateina Technologies and fifteen Indian insurers.

Market Trading

Trading stocks is one potential use for blockchain technology. Several major stock exchanges, including the London Stock Exchange, have adopted blockchain for stock trading. Blockchain simplifies the procedures for stock investment registration, issuance, and trading. Technology facilitates transparency at every point.

Tourism

Cooler incentives

Businesses in the tourism industry offer their customers a variety of incentives and prizes. These marketing techniques help businesses keep visitors to their websites. Free lunch coupons and

shopping discounts may seem enticing initially, but they have lost some of their allure over time. Nowadays, people prefer incentives that offer them long-term benefits. Blockchain loyalty tokens are quickly gaining traction in the tourism sector. They give token owners several advantages and a respectable chance to make extra money.

Customers of the French travel agency Sandblock can create unique loyalty tokens that can be exchanged for delectable rewards. Coins can be used as coins or traded by their owners for fiat money.

Simple Payments

Avid travelers frequently stress over making hotel and flight reservations. Undoubtedly, making and paying for reservations is the most important and time-consuming part of planning a journey. However, you may expect that things will become simpler with blockchain. Using cryptocurrencies and other blockchain based payment channels enables rapid transfers without the risk of data theft. Hotels occasionally offer incentives to customers who use bitcoins. This may provide you with additional benefits.

With the aid of blockchain technology, Winding Tree connects tourists with lodging establishments, airlines, and tour operators. LF is the portal's standard currency.

Real Estate

Keeping records

Real estate requires an open interface to protect, store, and use records as needed. The process's important phase is document verification. Blockchain technology offers the real estate sector a secure, open, and verifiable platform. Exclusive ownership rights to the land are granted to the buyers while all integrity and security measures are upheld. Since all information is stored on the blockchain, it can be tracked by the parties involved. Digital signatures and smart contracts ensure that the locked transaction is fair.

Ubitquity was one of the first SaaS providers in the real estate industry. Because it is based on the blockchain network, the service provides a reliable source for secure record-keeping. The users get complete ownership of the property following the trade with no involvement from a centralized authority.

Buy and Sell Land

The buying and selling of land are very expensive. As a result, it requires an ecosystem that is just and transparent and meets all verification standards. On a blockchain, data is secure from unauthorized access. Real estate transactions using a blockchain network are secure and traceable for both parties. No party may change the data or lower rewards after the transactions are logged on the decentralized ledger. Cross-border transactions are incredibly straightforward when using blockchain technology.

Real estate can be bought and sold using a platform called Propy, supported by blockchain technology. Scams involving payments and paperwork, widespread in the real estate sector, are intended to be stopped.

General Registry

Blockchain has the potential to function as a strong decentralized network where property owners can securely keep their physical and digital goods. One can register and record their possessions as assets on the ledger. Digital signatures, smart contracts, and cryptography support the asset.

Secure Personal Data

Identity theft and the theft of personal data are now common issues in the online age. Sadly, new victims of these meticulous frauds come in daily from worldwide. Identity theft, data manipulation, and document fraud have cost people a lot of money. Blockchain can help by maintaining private information on an unchangeable record. Users can use services that enable them to do so on a blockchain network to save their critical data there.

Civic is a well-known blockchain-based platform with a digital wallet and an electronic identification card. It facilitates P2P crypto transactions, identification verification, and health condition monitoring. Their online personas are entirely under the individuals' control. Customers that use the platform are free to share their ID and data with others.

Logistics

Maintaining an open and reliable supply flow is a crucial aspect of the logistics industry. Thefts, data silos, or a lack of communication can occasionally hamper it. Here is where blockchain technology

can aid in the expansion of the sector. Large volumes of data can be stored, operations may be automated, and data sources can be verified using the decentralized ledger. It can boost self-assurance, ensure transparency, and generate the greatest output for the smallest investment.

DHL, a major international transportation company, employs blockchain-enabled logistics to access the data. All shipment-related records are updated on the blockchain network. The immutability, integrity, and security of transactions are ensured by blockchain technology.

Entertainment And The Media

Digital media is a multibillion-dollar sector that is growing. The sector's continued growth is also producing loopholes. Data privacy, copyright theft, fraud involving intellectual property rights, and other issues are growing in importance. Blockchain technology offers a simple solution for privacy and security concerns in the media and entertainment industry. Using a blockchain to manage artist royalties makes it straightforward to maintain track of payments.

Steam is a social networking platform that makes use of a blockchain network. Users can win significant cryptocurrency rewards by submitting their original works to the platform. The contributors receive cryptocurrency tokens for each contribution as Steem shareholders.

Healthcare

Integration of blockchain technology into the healthcare sector can increase productivity and cut expenses. On the blockchain, our medical records can be digitally stored and accessible at any time from anywhere in the globe. By barring unwanted individuals from accessing them, smart contracts safeguard them. The patient can easily provide the doctor access to digital files when necessary. Everything is still tamper-proof, so there is no risk that the records will be stolen or confused with those of another patient. By using their digital signatures as IDs, users can access and exchange their medical records with professionals.

Blockverify uses blockchain technology to track the supply chain for medical supplies. Utilizing the portal, customers can track products as they move through the supply chain and confirm their legitimacy.

Market

Selling and purchasing real estate for marketing and advertisements can be difficult and expensive. However, this problem can be partially eliminated using blockchain technology. Through an interface provided by blockchain platforms like Thrive, buyers and sellers can acquire advertising spaces for the lowest possible prices. Users can also earn some passive revenue by reviewing websites or providing data. Customers are also able to peek behind the curtain thanks to technology. They can follow the product from the beginning of the supply chain to the conclusion. Owners can use the data recorded on the blockchain network to obtain comprehensive information about the product's inventor and the concept behind its genesis and to confirm its validity.

To provide users with a P2P trade platform, the online marketplace Openbazaar deals in blockchain and cryptocurrencies. Sellers do not have to pay any fees to place their products. The vendors have complete freedom to exchange their collections without using middlemen.

Transport

Transportation companies can use blockchain technology to gain access to location data, which is crucial for rental companies and airline operators. Popular service provider XYO Network provides precise location information via several networked resources. The program enables car rentals to recover misplaced items, airlines to find misplaced baggage, or e-commerce companies to deliver goods to the most remote locations.

A different website called Parkgene functions as an Airbnb for short-term parking spaces. It enables individuals to rent out unused parking spaces to those in need. By using the website, users can find these locations.

LaZooz is a community-run ridesharing service that leverages blockchain technology to improve the convenience of renting a vehicle. The interface pairs passengers with people who share their interests and syncs available seats with travelers in real-time. Digital tokens are awarded to both the drivers and the passengers.

LEADING USE CASES OF WEB 3.0 METAVERSE

🔶 **Remote Employment**

The pandemic has only overtaken this mindset, which has recently altered substantially in the workplace. Many businesses today permit or even promote remote work for their staff members. And while there are many benefits to this, there are some drawbacks. Being productive and staying in touch with your colleagues while working remotely is one of the hardest difficulties. Both of these can benefit from the metaverse. It can be applied to many other things, such as online teamwork and team-building activities.

🔶 **Tourism**

Undoubtedly, the pandemic caused losses and setbacks for the travel industry, but virtual travel's potential could result in the birth of a brand-new tourist market. Before scheduling an in-person contact, visitors can start their trip planning by conducting trip research via 5G and virtual, augmented, or mixed-reality metaverse platforms.

With VR headsets, virtual reality tours, and 360-degree videos, the travel and tourism industry has gained ground in the digital world. People will continue to augment their real-world trips with virtual ones, and a world like this will improve these experiences.

One can explore simulations of well-known locations and structures in their original condition in the metaverse, which also offers virtual tours of actual communities and digital representations of real properties. The use of digital avatars makes traveling there just as entertaining as it is in the real world. Users can converse, move as a group, and share experiences in a virtual setting, which can foster the development of strong bonds.

🔶 **Entertainment**

The future of online entertainment is the metaverse. The entertainment might range from sporting events, concerts, and television shows to social networking websites and online gaming. Because these events are frequently more engaging and participatory than real-world equivalents, fans typically have a more intimate experience.

The metaverse has made the future a reality. Using your virtual personality and avatar to enjoy and achieve what you want online rather than in the real world lowers physical boundaries so that millions of people can enjoy immersing themselves in live gigs without leaving their homes.

New Age Learning

A metaverse is a place with lots of material that can be a center for education. The metaverse is a potentially constrained learning environment that grows learning hubs. The metaverse has the potential to be one of the technologies used to increase the use of remote learning, a strategy that is already more widely accepted. Educational institutions can also use the metaverse reality to produce more engaging media experiences.

Wearing virtual reality headsets allows students and teachers to communicate visually with one another from anywhere in the real world. Then a metaverse school's visual potential appears. The teacher can share new information with the class and demonstrate it to the students in a fully immersive 3D setting. Based on their lesson ideas, educators can design virtual landscapes. Virtual reality can enhance traditional instructional approaches in the classroom by allowing pupils to explore historical sites or carry out dangerous experiments in a secure setting.

E-Sports and Gaming

One of the key factors influencing the creation and application of the metaverse is the video gaming industry. To look into new and inventive ways to deliver games to the metaverse, gaming businesses are investing heavily in R&D.

Games that use the metaverse give players a more immersive and realistic gaming experience, which is why they are becoming increasingly well-liked. The development of metaverse projects will be necessary for the next wave of play-toearn games. Users participating in blockchain or NFT games in the metaverse can accumulate a variety of in-game collectibles to trade with other players or on the open market.

A centralized or decentralized Metaverse is possible; however, since the future is decentralized, decentralized projects are given priority by game developers. Because of the genuine material in metaverse games, businesses now have another channel to access new marketing chances. The adverts in the metaverse are subtle; they might show up on character apparel or billboards in-game, for example. The gaming industry currently offers businesses fantastic prospects for product placement.

On Social Media

Metaverse technologies will alter social networks as we currently know them. Social media platforms are transforming from a two-dimensional world into a digital metaverse. The metaverse provides users with a substantially higher level of immersion that feels like in-person engagement, in contrast to conventional messaging services and social networking.

As a first step toward the MetaVerse, social media businesses like Facebook, Tinder, and others are introducing new VR capabilities. Social media's interconnection and information distribution aspects will change due to the different communication laws that apply in a metaverse.

Private Online Environments

In the MetaVerse, Private Digital Spaces will likewise be quite common. People will have access to New Age online forums and digital real estate. These will act as Private or Restricted Digital Spaces. The center of digital scarcity and exclusivity will be the metaverse. The value of games like The Sandbox and the Decentraland locations has increased thanks to digital terrains and borders.

Finance and Banking

The banking and finance industry has a history of being an early user of new technologies, and the metaverse is no exception. Banks and other financial institutions use metaverse to enhance customer service, save costs, and expedite procedures.

Identity verification is the most typical Meta-verse use case in the banking and finance industry. Banks and other financial institutions can use metaverse to quickly and easily certify the identity of their customers. In the fight against financial crimes like money laundering, this is vital.

Manufacturing and Heavy Industry

Businesses can use the metaverse to create a virtual factory in the manufacturing sector. Industries could modify their production flow in real-time and see it from beginning to end. Additionally, this would enable businesses to train new staff without requiring them to be physically on the assembly line.

Companies might also use metaverse to create an online storefront for their products. Before making a purchase, customers may view the products to get a feel for how they function in this way. In the end, using the metaverse to create a virtual marketplace where businesses exchange goods and services might be advantageous for the industrial sector. This would aid businesses in growing their markets and increasing their profits.

Healthcare

Another sector that the metaverse might change in healthcare. Using a metaverse in the healthcare sector promotes collaboration and communication between many groups, which speeds up innovation. For instance, via metaverse, clinicians can securely exchange patient data

and medical records with other medical professionals, researchers, and pharmaceutical companies. This would improve information exchange and speed the development of new cures and treatments.

In the metaverse, where VR and AR technology enables applications like cognitive therapy, support groups, psychiatric examinations, rehabilitation, and even physical therapy utilizing haptic sensors, digital treatments are already gaining popularity
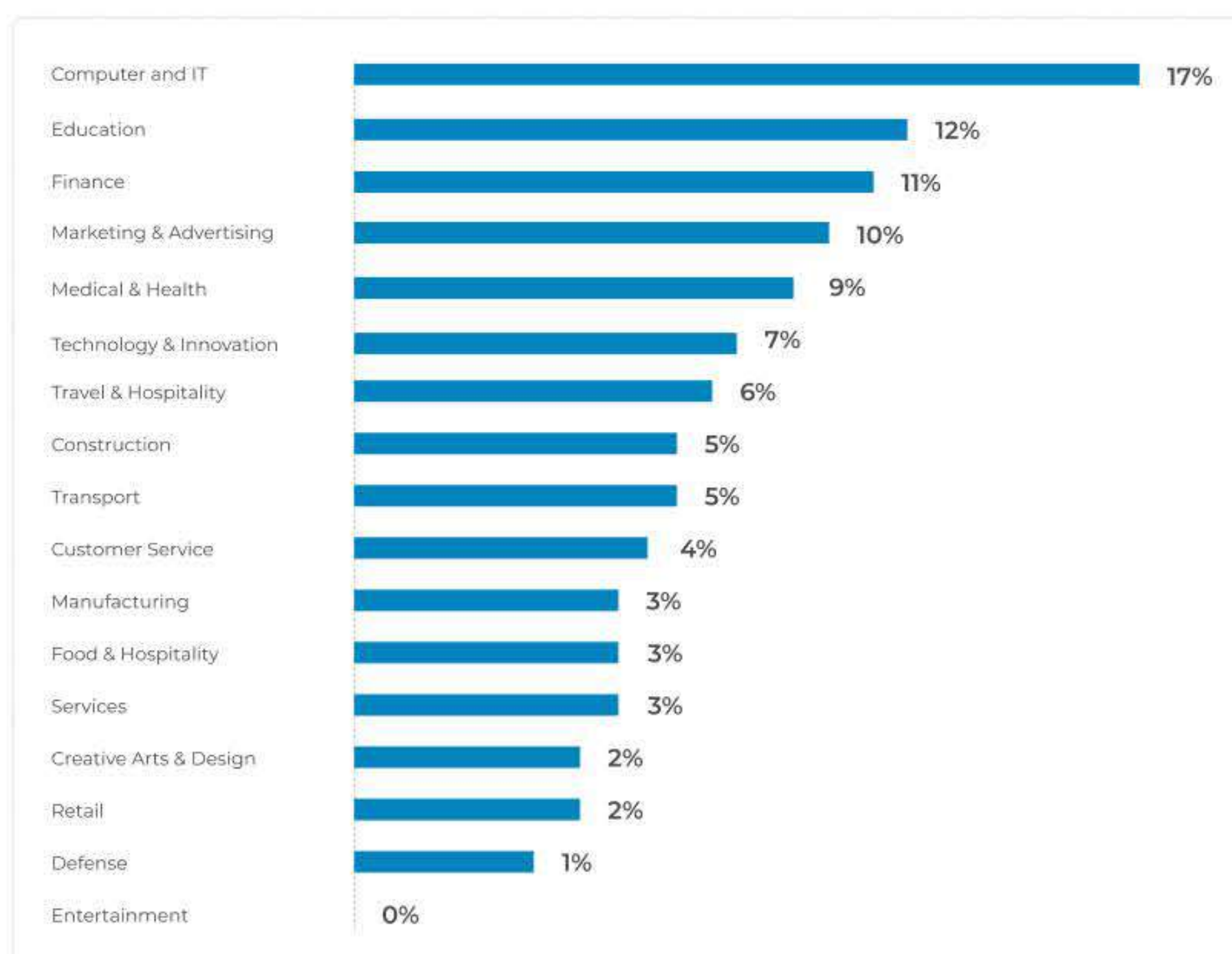
The metaverse is useful for challenging surgical procedures and improving patient care. Augmented reality (AR) will soon be used in sophisticated surgical procedures like robotic surgery. Additionally, use technology such as smart glasses for accurate diagnosis. Conclusion: Using Metaverse in the healthcare industry has the potential to revolutionize how treatments are delivered and potentially save lives.

Virtual Clothing

Another industry is using the metaverse's opportunities in the fashion industry. By allowing consumers to buy special clothes from renowned fashion companies in the virtual realm, the fashion industry is examining the potential of the metaverse technology and the virtual world. Gucci's development of the Metaverse Design on Roblox serves as an illustration.

Users have already shown interest in the fashion designer's offerings on the metaverse by spending $4,000 on a Gucci bag there.

By enabling consumers to have exclusive ownership over digital fashion collections through NFTs, blockchain technology can add a new dimension to virtual fashion initiatives, enhancing their appeal.

Industry	Percentage
Computer and IT	17%
Education	12%
Finance	11%
Marketing & Advertising	10%
Medical & Health	9%
Technology & Innovation	7%
Travel & Hospitality	6%
Construction	5%
Transport	5%
Customer Service	4%
Manufacturing	3%
Food & Hospitality	3%
Services	3%
Creative Arts & Design	2%
Retail	2%
Defense	1%
Entertainment	0%

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Advertising

Another logical application that results from the ability to buy or rent virtual estate in the metaverse is advertising. The virtual world is currently one of the most cuttingedge strategies that businesses may explore to engage with new people and increase the visibility of their brand. Brands can use the metaverse's high-traffic virtual places as billboards, virtual influencers, Metaverse events, and other opportunities.

As an illustration, companies like Coca-Cola, Samsung, Balenciaga, and Adidas are developing advertising campaigns in the metaverse to increase their visibility in the virtual world and draw in more customers.

Virtual Weddings

It may be difficult for some people to imagine, but weddings in the metaverse are also growing common. Nowadays, getting married in the real world is a costly luxury that is frequently limited by several reasons, including time, location, and more. People can now get married in a virtual reality where they don't even have to be in the same room during the ceremony or reception, thanks to initiatives that resemble the metaverse.

The first Metaverse wedding is also a reality, but most people still need to accept the idea. Although they are not enforceable by law, metaverse marriages are recognized through meta-marriage certificates.

Occupational Uses

Digital twins will be crucial to the growth of the metaverse, especially for commercial applications.

For instance, the German engineering company Siemens wants to stake a claim to the metaverse. The business is concentrated on the energy, infrastructure, and transportation sectors, where it already has a significant presence. To promote the use of digital twins to offer process improvements, Siemens is integrating Nvidia's Omniverse with its Xcelerator open digital business platform and partner ecosystem.

Metaverse Applications In Various Sectors

1. Gaming
2. Travel & Tourism
3. Education & Learning
4. Remote Working
5. Real Estate
6. Healthcare
7. Banking & Finance
8. Social Media & Entertainment

LEADING USE CASES OF WEB 3.0 CRYPTOCURRENCY

Online Transactions And Payments

In the upcoming web3 era of the internet, cryptocurrencies will be crucial to the development of the digital economy. A new generation of investors, business owners, and IT enthusiasts are jumping on the cryptocurrency bandwagon every day, attracted by the decentralized nature of cryptocurrencies and their low transaction fees, privacy, and security.

Any e-commerce site or retailer that accepts cryptocurrency can be used to make payments. To complete such transactions, all you need is a cryptocurrency wallet. Starbucks, Tesla, McDonald's, Visa, Mastercard, Pepsi, and over 15,000 other businesses worldwide enable their customers to utilize cryptocurrencies as a legitimate form of payment.

Bitcoin Banking

The quickly developing crypto finance sector is encroaching on typical banking activities like borrowing, lending, and crowdfunding. With substantially higher interest rates and accounts, cryptocurrency banks provide similar services to regular banks, including interest-bearing accounts, term deposits, credit cards, collateralized loans backed by crypto asset deposits, and more.

Several of the biggest names in banking, including Goldman Sachs, JP Morgan, and Barclays, have already adapted their services to handle digital currencies. They offer services, including savings accounts and cryptocurrency interest accounts.

Keeping Value

Because cryptocurrency can hold and transfer value through time and place, it serves as a store of value. For instance, "digital gold" is widely used to describe Bitcoin. To protect themselves from the war's escalating inflation, civilians in Russia and Ukraine have started swapping local cash for Bitcoin and other cryptocurrencies. Given its incredible growth, bitcoin has the potential to overtake oil and gold as the leading store of value. In the upcoming years, it's even anticipated that BTC may displace gold as the market leader.

Tokenization Of Assets

Physical assets can now be tokenized and connected to digital tokens thanks to cryptocurrencies; among the things that can be tokenized and represented as cryptocurrency tokens are commodities, equities, real estate, art, and copyrights. Tokens that are backed by real physical assets have inherent value that is linked to that item.

Real-world assets like real estate have more market liquidity thanks to asset tokenization. Additionally, enabling investors who were previously shut out of the market asset digitalization. For instance, a cryptocurrency bank in Zurich converted Picasso's masterwork Fillette au béret from 1964 into 4,000 tokens for sale to more than 50 investors.

Bitcoin Gaming And Government

In the current era of play-to-earn NFT-based games, cryptocurrency and gaming are a great mix. Using cryptocurrency, clubs, private groups, and online gaming platforms can better manage their policies.

The list of use cases presented above is not all-inclusive because bitcoin platforms and associated utilities are extensive and are still growing quickly as they permeate more and more global companies and sectors. Cryptocurrencies are a hybrid invention that the world has to embrace if it continues on its road toward digitization and progress. They are not just payment networks or digital money.

LEADING USE CASES OF NFT

Voting

Election-related issues are not the most significant global problem, but major voting machine fraud remains a possible menace. Non-fungible coins could be used to establish a decentralized voting system that is more difficult to manipulate. Each voter could receive an NFT that could be used to cast a vote, and the results could be recorded on a blockchain. There are currently NFT game development businesses working on this.

Monitoring Donations

It is frequently difficult to track the destination of charitable donations once they are donated. Donors might receive a token indicating their contribution, which would subsequently be transmitted to the charity of their choosing using non-fungible tokens. The charity might then use the token to demonstrate how the contribution was used for administrative expenses, specific programs, or other purposes. This would promote accountability and openness in the philanthropic giving process.

Supply Chain Administration

Another application of non-fungible tokens is in supply chain management. RFID tags have been utilized to track things along the supply chain, but they are generally costly and readily broken. NFTs could be used to track objects because they cannot be lost or damaged and are more cost-effective. This would be advantageous for businesses that require reliable inventory tracking.

Fashion And Apparel

Luxury firms have adopted non-fungible tokens (NFTs) to improve sales and connect with clients more interactively. Balenciaga, for instance, released an NFTbased digital collection entitled "The Afterworld" that could be viewed in augmented reality (AR). Customers might view digital clothing in augmented reality and then purchase it with cryptocurrency.

Additionally, other fashion brands are experimenting with NFTs. CryptoKitties' developer, Dapper Labs, has collaborated with prominent fashion brands such as Gucci, Prada, and Louis Vuitton to organize virtual fashion shows where users can purchase and sell virtual apparel and accessories. These events provide customers with a new method to interact with premium brands and allow them to track client preferences and trends.

Gaming

NFTs have gained significant popularity in the gaming sector. In-game asset ownership is one of the most prevalent NFT use cases. This means players can possess digital assets stored on the blockchain, such as guns, armor, and other virtual goods. This provides gamers with full ownership of their in-game items.

Several companies are currently utilizing NFTs in this manner. Decentraland is an example of a virtual environment where users can buy, sell, and exchange real estate and other assets. Another well-known example is the game Cryptokitties, which allows users to gather, breed, and trade digital cats.

The Social Token

Social tokens are a prominent NFT use case that has recently received much attention. These are crypto assets issued by content creators, celebrities, and influencers as a reward for their fans and following. The concept behind these tokens is that they may be used to purchase unique content, gain access to special events, or express support for someone's work. Even though the notion is still in its infancy, a few companies are already generating social tokens.

Civil, for instance, is constructing a platform for journalists to build social tokens. Paris Hilton and NBA player Spencer Dinwiddie are among the celebrities who have created their social tokens. Future implementations of non-fungible tokens will be fascinating to observe.

Collectibles

Collectibles are an additional non-fungible token use case. Multiple companies have created platforms where individuals can buy, sell, and trade collectibles. These objects can range from digital artwork to tangible items such as baseball cards and action figures. OpenSea is the most popular platform for buying and selling collectibles, as it lists many products.

Popular items include CryptoKitties, virtual cats that can be bred and exchanged, and NBA Top Shots, digital souvenirs including NBA game highlights. Observing how the collectibles market evolves as more individuals develop an interest in nonfungible tokens will be fascinating.

Occasions And Ticketing

The usage of non-fungible tokens for events and tickets would benefit society. For instance, a concert or sporting event may be tokenized so that each ticket is an NFT. Since tickets will reside on a blockchain, this would reduce scalping and make it easier to transfer them.

Additionally, NFTs could be used for loyalty programs. For instance, a consumer may accumulate points as an NFT. These points could be redeemed at the company's store or website for discounts or freebies. In addition, because NFTs are recorded on a blockchain, the points cannot be compromised or stolen.

Real Estate

The market for non-fungible tokens is still in its infancy, but there are already numerous possible NFT applications that would be beneficial to society as a whole. One such application is in the real estate sector.

With NFTs, property ownership might be recorded on the blockchain, thereby increasing its security and transparency. This would lower the likelihood of fraud and ensure everyone has an equal opportunity to buy or sell the property.

Virtual Universities

One of the most common applications of non-fungible tokens is in virtual worlds. NFT game production companies utilize them to build digital assets that can be used in online games and other virtual environments. These assets may include everything from in-game goods to clothing and accessories for avatars.

Some virtual worlds contain built-in marketplaces where users can purchase and sell non-fungible tokens (NFTs). Other systems, such as Ethereum's blockchain-based game CryptoKitties, enable peer-to-peer trading of NFTs.

Using NFT use cases in virtual environments offers numerous advantages. First, they enable players to possess digital assets that may be utilized across numerous games and platforms. This gives them greater control over their digital possessions and may result in a more active secondary market for virtual commodities.

The Conclusion

Non-fungible tokens (NFTs) are a new sort of non-exchangeable and non-fungible digital asset. NFTs are utilized in various contexts, including video games and virtual worlds, art, collectibles, and real estate. While the use cases for non-fungible tokens are still evolving, numerous businesses and organizations are already employing them in novel and intriguing ways.

LEADING WEB 3.0 MARKETPLACES 2022

district0x

Districts are decentralized organizations supported by the d0xINFRA standard opensource framework, consisting of front-end libraries and Ethereum smart contracts. Districts can use the essential features that d0xINFRA offers to run an online marketplace or community. Users can rank peers and build reputation, submit listings, filter and search via listings, send invoices, and collect money, among other things. The open and extensible nature of the d0xINFRA framework enables districts to be changed and given more functionality with the aid of auxiliary modules.

opensea

OpenSea is a decentralized marketplace for digital commodities supported by a blockchain like Ethereum, such as collectibles, games, and other products. No central authority ever has possession of your items on OpenSea because you can purchase or sell any of these things using a smart contract.

canYa

A blockchain-powered global P2P marketplace for services. You can employ qualified specialists and locals almost anywhere in the world, thanks to CanYa.

🔸 CanYa Coins

CanYaCoins are the fuel that drives the CanYa ecosystem. With CanYaCoins, you may pay for services, gain access to premium app features, and get rewarded.

🔸 Cryptocurrency

A single, automated, trustless payment system that accepts many cryptocurrencies, including Bitcoin, Ether, Dash, and Monero.

- **Electronic Wallet**

  Need more options? Add your credit card or withdraw money directly into your bank account to pay for services. Discover the power of cryptocurrencies in your day-today activities.

- **Decentralised**

  Decentralized storage, decentralized computation, decentralized governance, and payments. CanYa was created to be decentralized in the future.

openbazaar

A different approach to online business is OpenBazaar. It's a peer-to-peer program. Thus there are no costs and restrictions because no middlemen are needed. OpenBazaar uses a peer-to-peer network to connect individuals directly. Instead of being kept in a single database, data is dispersed throughout the network. OpenBazaar is free, open-source software; it is neither a business nor an institution. It was created to give everyone access to unrestricted buying and selling.

bitjob

BitJob's technology combines Ethereum Blockchain with the advantages of microgigs and freelancer-focused auction sites to create the first hybrid blockchain project that enables peer-to-peer connections between employers and students.

An independent platform created using the Ethereum blockchain. This fantastic application, which does away with the need to trust server admins blindly, was made possible by Ethereum. Because of its transparent qualities, we now have robust authentication, identity, verifiability, voting, reputation, and micro-transactions for our payments and affiliate fee distribution.

wax

Anyone can run a fully functional virtual marketplace using the decentralized WAX platform without investing in infrastructure, security, or payment processing. The 400+ million online players who already collect, purchase, and trade in-game goods are the target market for WAX, created by OPSkins, the world's largest online marketplace for video game assets.

bitbay

BitBay is a financially and technologically focused business with Polish funding that has found success internationally.

swarm.city

Trade occurs when two or more parties exchange goods or services for money or other valuable assets. Both the capacity for communication and the transaction capacity are necessary. With the help of Swarm City, people can interact and conduct business fully decentralized. Swarm City utilizes the Ethereum Blockchain and is based on the Ethereum Platform. Tokens, a key component in creating trustless networks, are used by Ethereum-based projects as units of exchange within their ecosystems. The medium of exchange in Swarm City is the Swarm City Token (SWT).

safex

For the first time in history, Safex is a decentralized marketplace that alters the trade paradigm toward cryptocurrency commerce.

People can now participate in the developing global market that rewards crypto assets and provides a haven to exchange dispersed cryptocurrency for products and services.

Decentralized cryptocurrency would be widely adopted to create a peer-to-peer marketplace with an embedded cryptocurrency that is anonymous, has a merit-based emission rate, and is simple to acquire and use by a large number of people. Through Proof of Work mining, Safex creates a network where digital money is distributed properly. Because of the emission rate, it is desirable to earn the currency through commerce and productivity. Every action in the ecosystem, including exchanging money and trading goods and services, is done through a chain of linked transactions recorded in blocks at regular intervals. Connecting balance transactions in a chain creates a blockchain. Technologies that provide privacy provide security, allowing all participants to benefit from integrated trust and transparency. This offers users a haven for accumulating online money.

powerledger

Through this platform application category, retailers can enable customers (or, in an unregulated environment, the customers themselves) to merely trade electricity with one another and receive

payment in real time from an automated and trustworthy reconciliation and settlement system. There are numerous additional immediate advantages, including choosing a clean energy source, trading with neighbors, profiting from the transparency of all trades on a blockchain, and extremely low-cost settlement costs. These advantages contribute to lower power bills and improved returns for investments in distributed renewables.

LEADING WEB 3.0 NFT MARKETPLACES

Binance

On the Binance NFT marketplace, NFTs can be created, purchased, and sold (Nonfungible tokens). It started operating in June 2021.

Music, digital things, films, website domains, and physical objects are some examples of these NFT assets. Additionally, it enables users to move NFTs across two blockchains.

Crypto.com

Leading NFT marketplace Crypto.com gives people a risk-free, dependable option to purchase, sell and digital exchange assets. The market at Crypto.com has seen over 150,000 trades. PEG, JPG, PNG, GIF, WEBP, and MP4 are all supported. Permits authors to get royalties from resales.

OpenSea

One of the well-known markets for NFT art and antiques is OpenSea. You can find uncommon art forms like virtual pets and land on this NFT platform. You may purchase NFTs from OpenSea using a variety of digital currencies, including ETH and DAI.

Nifty Gateway

An NFT marketplace called Nifty Gateway uses drops to release albums by renowned artists. These collections are only temporarily available. You may see the countdown indicating when the next drop will occur on this NFT webpage. The royalty charge artists will accept on second-hand sales is entirely up to them. This NFT platform keeps 30% of each secondary sale and a 20% fee.

Rarible

The ERC-20 RARI token is what "owners" of the community-owned NFT marketplace Rarible use to transact. Raible gives active network users RARI tokens as currency on the NFT market.

Foundation

The ERC-20 RARI token is what "owners" of the community-owned NFT marketplace Rarible use to transact. Raible gives active network users RARI tokens as currency on the NFT market.

On this NFT online platform, an automatic timer is attached to each auction. Additionally, artists can look for well-known creators. Details will be sent to them regarding their joining time, the number of creations, followers, social network profile links, website URL, etc. Only Ethereum can be used to make payments on this site.

SuperRare

NFT website SuperRare primarily serves as a marketplace where people can purchase and sell one-of-a-kind and limited-edition digital artworks. Each art in the network is created by an artist and tokenized as a crypto-collectible digital commodity.

Solanart

You may browse the collection and purchase the NFT you desire on the NFT website Solanart. Additionally, it makes it simple to sell the NFTs for collections listed on Solanart. This NFT platform levies a 3% marketplace fee on each transaction's selling price.

Decentraland

In the decentralized virtual world, Decentraland, you can build and sell goods you make and own.

Various digital assets, including wearables, estates, names, etc., are available on this NFT marketplace. In Decentraland, you may purchase and sell virtual properties, give them your touches, and save them in an Ethereum-based smart contract.

The NBA Top Shot

Launched in 2020, NBA Top Shot is a very well-liked marketplace operated by the NBA. You can purchase their unique NBA highlights and acquire them as digital collectibles. Additionally, this NFT marketplace offers a certification that grants the purchaser ownership rights and guarantees the validity of that singular moment.

Makersplace

Makersplace is an NFT platform that enables you to find and gather one-of-a-kind digital inventions. It was founded in 2019. Makersplace gives digital painters, photographers, writers, and creators more control. This NFT market is accessible to everyone. Additionally, it provides a service that makes it easy for all creators to benefit from blockchain technology

KnownOrigin

On the online NFT market KnownOrigin, you can look for and buy unique digital cryptographic works. Artists may showcase, market, and sell every piece of digital art to actual collectors on our NFT platform.

Mintable

A Singapore-based NFT marketplace, Mintable, lets you look for, purchase, and trade non-fungible tokens. This NFT marketplace covers various NFT categories, such as music, games, collectibles, and visual arts. The top NFTs are also highlighted on the homepage of this NFT website.

BakerySwap

On the Binance Smart Chain, BakerySwap is an automated marketplace and decentralized exchange (BSC). It makes use of a local BakerySwap token (BAKE). This NFT Marketplace is a multi-purpose cryptocurrency hub that provides nonfungible tokens, a crypto launchpad, and several decentralized finance (DeFi) services. Additionally, you can utilize NFTs in "Combo Meals" to get additional BAKE tokens.

Async Art

A non-fungible token art market called Async was established in February 2020. You can manufacture your own NFT tokens using this NFT platform in addition to purchasing and trading NFTs. The NFT platform also makes it simple for artists to specify the appearance and behavior of their works of art.

Enjin

Enjin is an NFT marketplace where you can buy, sell, and trade everything from branded crypto-collectibles to the rare digital artwork. The Enjin wallet can also sell and buy collectibles and game stuff.

Aavegotchi

Aavegotchi is a 2020-released online NFT marketplace. This system utilizes a unique fusion of NFTs and decentralized finance (DeFi). It enables you to generate higher returns and sustained earnings from NFTs. Using DeFi methods like dynamic rarity, rarity farming, smart contracts, and collateral stakes, this NFT marketplace can implement significant improvements in the blockchain gaming industry.

LEADING WEB 3.0 METAVERSE MARKETPLACES

Robotica

RobotEra is our top choice for the greatest metaverse platform to invest in 2022. It is a virtual ecosystem akin to Sandbox that incorporates NFT protocols to provide in-game income opportunities. RobotEra uses TARO, an ERC-20 protocol, and the project's native cryptocurrency to manage its in-game economy. It began in mid-November 2022 and is presently in the first round of its presale. By allowing people to interact with its virtual "Taro Planet" environment, RobotEra aims to be the best metaverse project shortly.

Players participate in the metaverse as Robots, which are NFTs created using the ERC-721 smart contract protocols. On the Taro Planet, players can use their Robots to explore its seven continents, building anything from factories to villas and participating in missions and community-wide tournaments to gain rewards.

The seven continents provide a variety of metaverse land plots, also known as NFTs. Players can purchase land to construct buildings, mine for materials, and even produce new NFTs. The metaverse stories can make money by charging attendees for events or businesses for billboard space. RobotEra anticipates that new functionality will grow over time without the requirement for coding expertise. Participants operate with little restrictions on what they may build while the project develops virtual and augmented reality capacity during the first half of 2023.

A token with multiple uses, TARO can be staked on the network to generate passive revenue and gain access to RobotEra's decentralized autonomous organization (DAO), which grants users voting privileges over the network. A token with multiple uses, TARO can be staked on the network to

A token with multiple uses, TARO can be staked on the network to generate passive revenue and gain access to RobotEra's decentralized autonomous organization (DAO), which grants users voting privileges over the network. From a fixed quantity of 1.8 billion tokens, 270 million have been distributed throughout three presale rounds. The price of TARO is now $0.02 per token, but it will rise through the three phases of the presale to $0.032 in the final stage.

Tamadoge

The Tamadoge logo could become one of the top metaverse projects in the long term. In the long run, Tamadoge has the potential to rank among the most successful metaverse initiatives.

From the outside, it is another meme coin and potentially provides returns similar to Dogecoin and Shiba Inu. Still, the Tamaverse project offers much more thanks to NFT ownership, a play-to-earn game, and its metaverse.

Tamadoge seeks to provide a meme coin with long-term utility and worth, in contrast to DOGE and SHIB. While DOGE has an unlimited supply and has 130,000,000,000 in circulation already, TAMA will have a maximum of 2 billion tokens with a deflationary 5% burn mechanism built into each Pet Store transaction.

By the end of the year, owners of TAMA tokens will be able to purchase NFT pets, which they can feed, tend to, and watch grow in the same way that Tamagotchi did in the 1990s. Players can combat other players' pets to receive awards and prizes when fully grown. The dogs will eventually transition from 3D to augmented reality (AR), allowing owners to take them outside and search for tokens.

Our greatest cryptocurrency presale for 2022 was Tamadoge, as the project raised $19 million. TAMA was launched on OKX after the presale ended and blasted to an all-time high of $0.194 - almost 2.000% more than its initial presale price. The price of TAMA is anticipated to increase when general market conditions improve, even though the project is still in production, and the complete game, minigames, and augmented reality are all slated to launch in 2023.

Battle Infinity

In addition to the popular metaverse platform and ecosystem known as Battle Infinity, there is also a Battle Infinity, a play-to-earn (P2E) fantasy sports gaming platform, offers full NFT integration. The "Battle Arena," a complex 3D environment where players may create avatars and interact with one another, serves as the metaverse's hub in the Battle Infinity ecosystem, which is housed on the Binance Smart Chain. Battle Infinity presents several intriguing elements and is one of the best metaverse efforts this year. These consist of the following:

🔶 **IBAT Premier League:**

A built-in fantasy sports competition in which every participant is an NFT. These gamers' performance in the real world generates points, and high-performing users receive incentives.

🔶 **Battle Store:**

This function offers players more opportunities to earn prizes by containing a collection of the top play-to-earn games. Battle Market is the NFT marketplace for Battle Infinity, where players may buy virtual land, update their avatars, and mint digital art. Battle Trade enables users to instantaneously swap tokens in a decentralized fashion, operating similarly to the finest DeFi exchanges.

Battle Stake is the crypto-staking system used by Battle Infinity. It supports solo and pair staking as well as prize crates. These characteristics work together to guarantee that Battle Infinity takes the top spot in our rating of metaverse platforms. The platform is backed by IBAT, Battle Infinity's native coin. IBAT offers various uses, such as speculation and reward distribution.

Battle Infinity has undergone auditing by SolidProof.io and KYC verification on CoinSniper, assuring people who are worried about possible scams. Battle Infinity has many intriguing ideas for the future, including selling NFT land and exchange listings. The Battle Infinity presale raised almost $5 million and sold out in 24 days. Since then, it has been listed on the decentralized exchange PancakeSwap, where the market cap is $60 million, and peak returns to early investors reached 700%.

Decentraland

Decentraland is another well-liked option on our list of the best metaverse platforms. The Ethereum blockchain powers Decentraland, a 3D virtual environment where users can engage with one another and make money off of the material they create. Additionally, users can utilize MANA, Decentraland's native currency, to buy virtual land parcels (referred to as LAND).

LAND parcels are organized as NFTs, allowing users total control over their surroundings. As a result, users can construct 3D environments and even produce games that other users may play.

As a decentralized autonomous organization (DAO), Decentraland is set up so its users essentially "own" the platform. As a result, users can vote on ideas for changes to the governance of things like UI updates or fund distribution. Despite a recent decline in popularity, Decentraland is still unquestionably one of the greatest metaverse platforms worldwide.

The Sandbox

The Sandbox is another of the top 2022 metaverse real estate projects. The Sandbox is a rich 3D environment housed on the Ethereum blockchain, similar to Decentraland, where people may engage with one another, create in-world buildings, and monetize their innovation. With over two million registered members. One of the biggest metaverse platforms is the Sandbox.

The Sandbox's "VoxEdit," a free 3D voxel modeling tool that users may access through their computer, is its most enticing feature. Anyone may design anything using this tool, including houses, animals, weapons, etc. Interestingly, these works can subsequently be categorized as NFTs and made available for purchase on The Sandbox website.

These resources can be purchased from other users using SAND, one of the most popular metaverse coins of the previous year. The Sandbox Game Maker users can create 3D games without prior coding experience. The Sandbox is among the best metaverse platforms on our list due to these factors working together.

Axie Infinity

In contrast to the platforms listed above, Axie Infinity is a platform for the metaverse. Investors flocked to buy Axie Infinity as the project's popularity grew in 2021, sending the price of AXS up by more than 7,300% in a couple of months. Even though the hype has partially subsided, Axie Infinity is still among the top metaverse platforms in the market.

Axie Infinity is a blockchain-based game where players may purchase cute creatures (called Axies) and fight with them. Due to their NFT architecture, these Axies can be traded using AXS on the game's market. Users can breed axies to boost their likelihood of producing more offspring and generating more revenue.

User talent is rewarded in this P2E game, which pits players against one another or AI-controlled Axies. Axie Infinity's developers want the system to grow into a decentralized autonomous organization (DAO), where users will have complete control over platform governance. Many people in the metaverse are thrilled about this; therefore, Axie Infinity will be the focus of attention in the upcoming year.
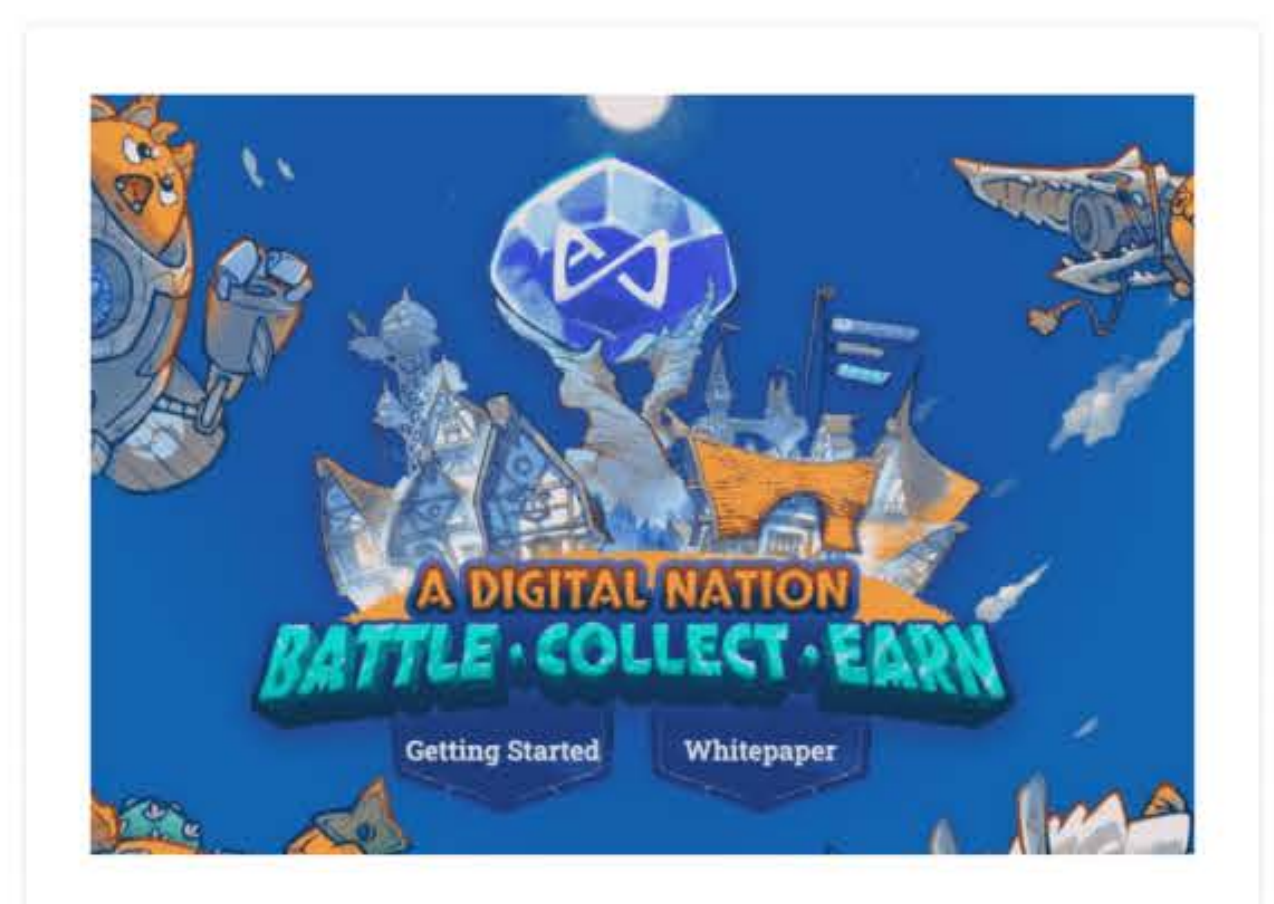
Illuvium

A new metaverse platform called Illuvium is becoming more well-known in the market. According to Binance Academy, Illuvium is an open-world blockchain game featuring a variety of RPG elements. In this game, players fight "Illuvials," which they later capture and use to battle other players.

These illuvial are arranged as NFTs, each with a unique look and set of traits. Illuminates can also be combined to create stronger monsters that let users engage in a fight and get more advantages. Prizes are given out in ILV, Illuvium's native ERC-20 currency.


ILV can be staked in the "Illuvium Vault" or used to buy in-game stuff. Since Illuvium is governed by a DAO, ILV can be used to vote on governance proposals just like some other metaverse platforms on our list. Illuvium may emerge as one of the top metaverse gaming platforms for P2E enthusiasts when the entire game is published sometime in 2022.

Bloktopia

Bloktopia is a 3D metaverse that uses virtual reality to provide consumers with an entirely immersive experience. Bloktopia is a 21-story virtual building that pays tribute to the current 21 million Bitcoins (BTC).

Bloktopia, like other metaverse platforms, lets customers buy allocated places inside the skyscraper that are built as NFTs. The platform employs BLOK as its native money and is powered by the Polygon Network. Owners of space in the tower can rent it out to third parties and receive payments in BLOK.
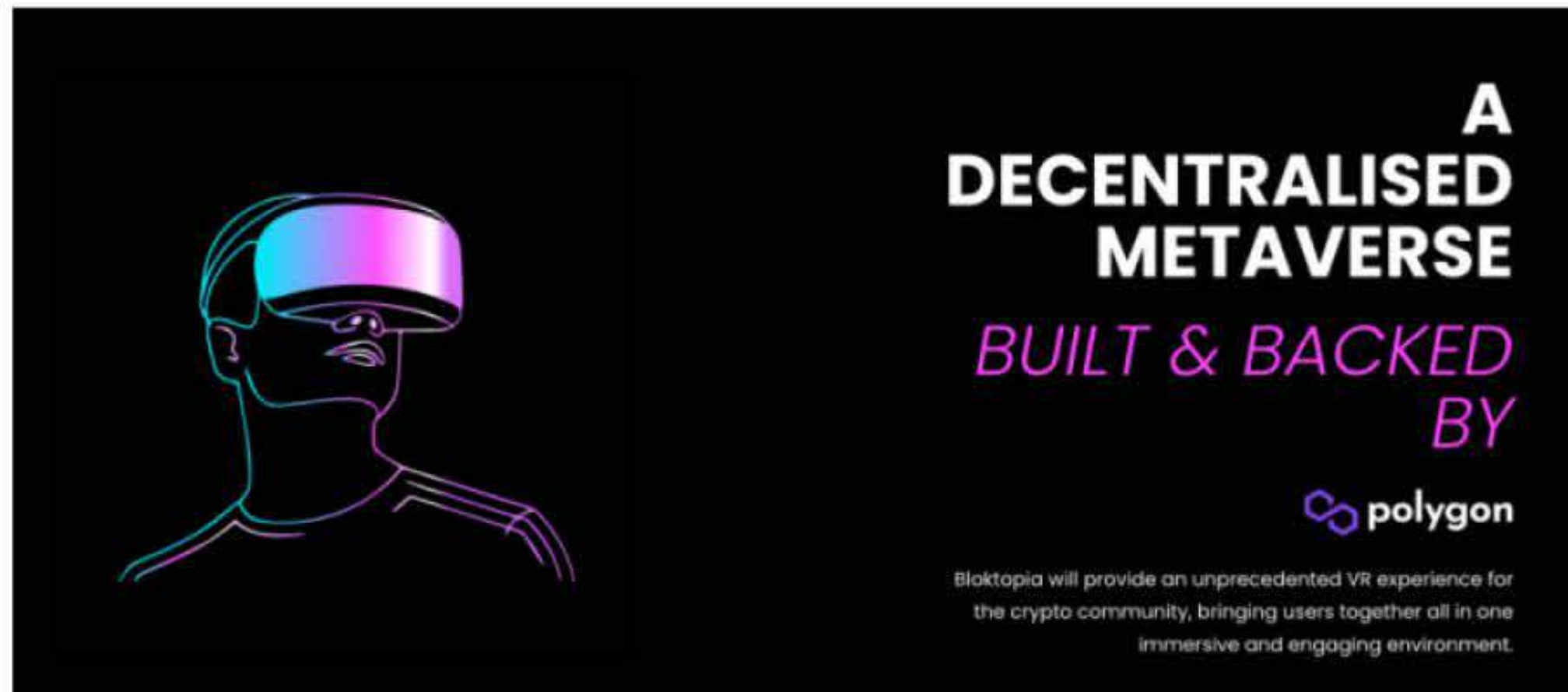
A section of Bloktopia dedicated to crypto-gaming offers various games to appeal to players of all ages. Additionally, there is an opportunity for businesses to buy virtual advertising space within Bloktopia, creating a new self-sustaining economy. Bloktopia even has a virtual auditorium where users can go to promoted events and receive BLOK as payment.

Roblox

Roblox is a platform for the metaverse that ranks well on our list. Since Roblox is not hosted on a blockchain, it differs from the other metaverse sites on our list. Instead, Roblox is an online community where users can interact while playing games created by creators and other users.

Since anyone can make a Roblox game, this platform's potential is limitless. Although some games are free to download and play, their creators may choose to charge money for extra in-game products. The native money of Roblox, called Robux, is used to ease transactions.

Adopt Me! And Brookhaven is two platforms that have drawn millions of users over the past few years. Most of Roblox's games are geared toward kids. According to Yahoo Finance, the Roblox Corporation now has a market valuation of almost $24.8 billion, underscoring the enormous magnitude of this metaverse platform.

Metahero

The metaverse project Metahero is distinct from several others on this list. The Metahero project provides useful technology that enables users to scan real-world things (or people) and transfer them into the metaverse in place of a virtual environment.

Users can shape actual objects as NFTs thanks to the industry-leading 3D scanning technology used by Metahero. Users can now commercialize anything they want using HERO, Metahero's native token.

Since Metahero's technology effectively serves as a "bridge" between the real world and the virtual world, the possibilities for its use are virtually limitless. Given the application of Metahero, many investors have already rushed to buy HERO tokens, which are available on many top cryptocurrency exchanges.

Star Atlas

Star Atlas is a blockchain-based strategic game run on the Solana network, according to CoinMarketCap. The game is set in the year 2620 and uses the Nanite feature in Unreal Engine 5 to deliver a truly immersive gaming experience.

Players can work together to explore the cosmos and conquer uncharted lands in the Star Atlas metaverse. Each player will control their spaceship, which they must maintain and keep stocked with food, fuel, and weapons.

The in-game items in Star Atlas are set up similarly to those in other metaverse games as NFTs, allowing players to exchange them on the secondary market. The platform's native token, ATLAS, serves as the in-game market's native currency. On the other hand, the POLIS token enables owners to vote on governance recommendations made by the development team.

Nakamoto Games

Nakamoto Games is the last platform on our ranking of the top metaverse platforms. A blockchain-based gaming environment called Nakamoto Games includes both user- and Nakamoto team-made games. The Nakamoto Games ecosystem offers various games, including sports, shooting, action, and more. The ecosystem also provides frequent competitions where users can compete with one another for enormous rewards

The Nakamoto Games team has revealed plans to develop their metaverse platform named "The Nakaverse," even if it differs from the others on our list. To further enhance the immersion for Nakamoto Games users, the designers will be selling virtual land parcels within this realm. The ecosystem's native token, NAKA, can be used by users to acquire land.

LEADING WEB 3.0 CRYPTOCURRENCY

The rivalry between different retail networks and marketplaces has peaked. Every firm is trying to find a way to make their customers feel more comfortable in the hopes that this would boost sales and help them stand out from rivals. Therefore, cryptocurrencies could aid in promoting both new businesses and giants by helping them establish themselves at the height of their popularity as the most practical and effective payment method on the Internet. The top cryptocurrencies on the market worldwide are listed in this ranking.

Bitcoin

The first and biggest cryptocurrency, Bitcoin, debuted in 2009. Its current valuation is a staggering $275.1 billion. Bitcoin began to gain market share long before all the other options currently available since it is a parent to them. Therefore, this cryptocurrency, currently the most widely used in the world, was a pioneer in adopting marketplaces.

Overstock.com was the first retailer to accept bitcoin payments. The company's executive Jonathan Johnson admitted he needs to comprehend those rivals who don't take bitcoin. Additionally, Overstock was so enthusiastic about the idea of cryptocurrencies that they announced in August that they would begin to accept payments in roughly 40 other coins. Ethereum, Litecoin, Dash, and other well-known cryptocurrencies are among those.

Users of eBay Inc. and PayPal Holdings have had the option to purchase using bitcoin for a while now. These platforms may now accept bitcoin payments thanks to an integration with their daughter firm Braintree.

Microsoft participates in the adoption of cryptocurrencies. They have accepted bitcoin payments in Windows and Xbox stores since 2014 and are currently working on an Excel 2017 upgrade that will enable bitcoin analysis.

Shopify Inc. is a platform for easily creating online stores. They made it possible for all businesses with online storefronts on this platform, analogous to Etsy, to use the potential of digital assets by introducing bitcoin payments through BitPay.

Ethereum

Although Ethereum is less well-known than bitcoin, it has a sizable user base and is thought to be the second-largest coin (market capitalization: $71.1 billion). Due to its emphasis on smart contracts, it is supported by fewer online marketplaces. But Ethereum is the second most widely used digital currency accepted as payment for products. Along with the previously mentioned Overstock.com, the AlphaBay Dark Web marketplace began to accept ether payments in May 2017.

Bitcoin Cash

Bitcoin was divided into two different cryptocurrencies last year. The upshot of such a "hard fork" was the emergence of Bitcoin Cash (market valuation: $33 billion). The effectiveness of transaction processing is the primary distinction between them. Bitcoin experiences slow speeds and a sharp rally, which makes it challenging for users to use bitcoins to make purchases. Because of its improved underlying technology, Bitcoin Cash eliminates these issues and lowers the cost of transactions. Bitcoin owners accepted Bitcoin Cash freebies. Therefore, those businesses that currently accept bitcoin would quickly add Bitcoin Cash to their list.

For instance, the recent announcement by Steam to stop accepting bitcoin payments on the site cited the blockchain's inability to execute transactions quickly enough. Prices increased more quickly than the blockchain could execute transactions, cutting costs. In response to this assertion, Roger Ver of Bitcoin Cash argued in favor of utilizing Bitcoin Cash to solve the issue while enabling users to make digital currency payments.

Litecoin
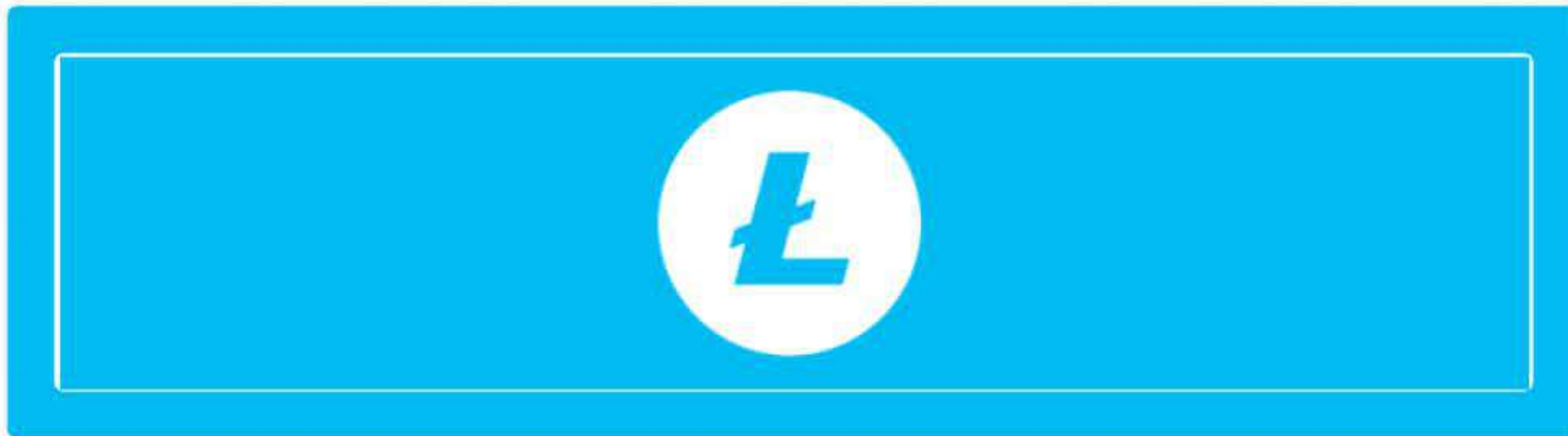
In terms of use cases, Litecoin is the most similar to Bitcoin. It introduced four times more coins into circulation while having a market valuation of $16.5 billion. This cryptocurrency is attractive to merchants because of its quick transfers. They link it with their marketplaces using various systems, including Coinify, BitPay, and Bitrefill.

Ripple

For large financial organizations, Ripple primarily serves as a blockchain solution. They may transmit cross-border payments without paying exorbitant costs and gain rapid liquidity thanks to the Ripple digital currency, XRP. Additionally, the marketplaces appreciate this cryptocurrency, making it one of the most popular.

LEADING BLOCKCHAIN ENTERPRISE USE-CASE IN 2022

Finance And Banking

Regarding enterprise blockchain adoption, the banking sector has experienced the most growth. There are various enterprise blockchains, including Quorum, which offers the blockchain solution that the banking sector needs.

Many ideas are currently being conceptualized or tested through pilot implementation to function in the real world. The change is being participated in by several large trade financing companies. For instance, financial institutions like American Express, Visa, Citibank, JPMorgan, and others always attempt to improve blockchain solutions so that experts and important working groups may collaborate.

With blockchain adoption, the banking and financial sector may save considerably. For instance, they can avoid paying costs when conducting cross-border settlements.

Trade finance has a very promising future. It will affect several trade finance factors.
Let's list the things it will affect so we can better grasp it.

- Worldwide Payments
- Commerce Finance
- Syndicated Loans with Automated Compliance
- Processing of P&C Claims in Insurance

Food Security

One of the main issues in our society is food safety. food produced in factories is what we eat. Before it gets to us, it also goes through a difficult procedure. One of the most significant enterprise blockchain use cases is this.

The whole supply chain may be tracked using blockchain technology. Companies can now trace the origin of the food, as well as who processed it and where, and who was in charge of delivering it. Additionally, it may monitor every other significant aspect of the food, such as the locations where it is kept.

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It might alter the way the food sector operates. IBM is at the forefront of offering participants in the food industry an enterprise-grade platform. The participants can use the platform to ensure they can increase the food industry's transparency.

Food safety has been a focus for IBM for some time. They collaborated with Walmart and tested the idea using Chinese pork and Mexican mangoes. Thanks to its performance, we now have a functioning enterprise-grade blockchain infrastructure for the food business.

The use of blockchain in the food business will have several advantages. The future era will have increased connectivity. Additionally, over time, employing blockchain will be less expensive and more advantageous for those involved in the food sector.

Chain Of Supply

Any firm, whether it operates on the global market or is small, revolves around its supply chain. As it increases their profit and enables them to reach new audiences more quickly and reliably, supply chains determine the success of huge businesses. Using blockchain in supply chain management could alter it. It enhances every aspect and benefits the end users by introducing efficiency, transparency, and traceability.

Briefly put, blockchain has the potential to overhaul the foundation of the global supply chain. Using a supply chain has the additional advantage of eliminating paperwork. Currently, paperwork accounts for 50% of transportation costs. It may occur as a result of incorrect labeling, paper loss, or even the administrative expense of it. Things can go wrong in various ways since there is no foolproof method for managing the supply chain and its numerous components.

Blockchain has the potential to revolutionize all of this since it will introduce three crucial elements: traceability, transparency, and traceability.

Prospects appear promising, which can only aid the various industries' efforts to combat product recalls and counterfeiting.

Retail

Retail is huge! The supply chain is the primary use case for retail, though. The supply chain was thoroughly discussed; however, retail does have additional benefits. For instance, Alibaba is developing a private blockchain network that will enable them to adopt the necessary technology. Due to its size, Alibaba's enterprise blockchain can serve as a model for others. Their current priorities are to strengthen the supply chain and guarantee that they can track the legitimacy of the products. The supply chain is also a priority for other retail companies like Walmart and De Beers.

Automobiles

Manufacturers of automobiles are likewise eager to benefit from blockchain. Due to the rise of autonomous vehicles (AVs), electric cars, and other auto technical advancements, businesses desire to adopt blockchain.

Renault and Volkswagen Financial Services, two major automakers, were operating their Proof-of-Concept in 2017. (PoCs). They were experimenting with telemetry tracking in their POCs.

What is it about, then? All the important data about the vehicle will be recorded, saved, and sent to important parties like buyers, dealers, insurance providers, and more, thanks to telematics tracking! The vehicle's engine usage history, mileage information, maintenance history, and other vital information will be recorded. All parties involved in the process will benefit from this. But the user will benefit the most from it because it can aid in getting insurance or improving car comprehension. Additionally, it will eliminate market fraud because anyone may check the vehicle's history before buying it. Odometer tampering is a popular practice to increase the value of the cars sold.

Public Sector Services

Governments are particularly interested in blockchain technology. After all, it has the power to alter how a government operates. They can improve various aspects of their systems, including managing the IDs of the citizens in a single secure location, by implementing blockchain. Other advantages include lowering costs and improving labor-intensive procedures by identifying the best distribution method.

The government may foster confidence using the blockchain by making the systems transparent. In summary, the blockchain-powered government can aid process simplification, data protection, and system confidence.

A decentralized network can be used by a government driven by digital technology to register people, properties, companies, and other resources. On several levels, it increases effectiveness.

What does the future hold for the government using blockchain, then? Well, quite a few things. Any government, for instance, can develop its GovChain Stack, which includes several essential government operations, such as the management of smart regulations, identities, processes, and finances and budgets.

The government can use blockchain in a variety of ways.

- Education and credentials for the workplace

- Intelligent cities

- Loans

- Vaccination tracking

- Payroll Tax Recovery

Healthcare

Healthcare organizations are constantly looking for more effective ways to manage their workflow. The state of healthcare today is dismal. They employ centralized databases, meaning that the data, patients, and doctors are handled ineffectively. Additionally, there is no genuine connection between the various repositories spread throughout the nation or a specific region.

The struggle continued because patients had to carry their paperwork, adding to the strain. There isn't a single location where doctors can view the patient's medical records. The inability to verify medicine validity is still another significant challenge. Patients suffer greatly since they take substandard medications that worsen their conditions.

All of the issues above can be resolved by business-level blockchain. It initially gets rid of the centralized components of data storage. Patients can now store or access their medical records from any location. Blockchain technology may be used to streamline supply chains, which will help to address the problem of fake drugs.

Blockchain has the potential to alter the healthcare industry fundamentally. Patient consent management, data security in clinical trials, drug tracing, and many others may be impacted.

Insurance

An excellent corporate blockchain application case is the insurance industry. Like other industries, the insurance industry is plagued by various centralized difficulties. Insurance fraud affects the insurance industry and can cost them millions annually. The insurance industry is significant and affects numerous other sectors. The use of blockchain technology in businesses has several advantages, including the ones listed below.

- Health protection

- Fraud prevention and risk management

- Reinsurance

- Insurance for property and liability (P&C)

Energy

Sustainable sources must meet future energy needs. After all, it incorporates the innovation's catalyst. The environment as a whole depends on alternative or renewable energy sources. The energy sector may use blockchain to improve efficiency and guarantee future growth.

The necessary ability to make legacy systems energy efficient needs to be improved. For instance, it is impossible to manage oil and gas effectively using conventional techniques. However, blockchain allows energy firms to track their usage and production.

As blockchain technology can transform even how a single person connects to the energy system, the future of energy seems promising. It will enter conflict with wholesale electricity distribution. Anyone can produce energy via IoT and distribute it around the network. It can significantly reduce the cost of electricity bills.

Peer-to-peer energy trading, electrical data management, utility providers, and commodities trading will also be improved.

Real Estate

The real estate market is always expanding. It now experiences centralization problems. Real estate is a lengthy process because there is a ton of paperwork. Additionally, there are no legitimate means to check documents or find out if someone is a property owner or not.

Blockchain is definitely needed in the real estate industry. Real estate could benefit from cutting-edge technology to keep up with the annual increases in valuation. Any enterprise blockchain can maintain a decentralized database with the appropriate set of functionality for real estate.

Proper land titles and deed records, tokenization, real estate funds, asset management, investor and tenant identities, real-time accounting, and eventually, leasing and payments are among blockchain use cases in this context.

Tokenization has the potential to cause the most disruption of all the use cases. It will give issuers the ability to make sure that distributions are made in accordance with a specific requirement. Additionally, it will lower costs by enhancing execution efficiency, innovation, better management, and so forth.

Distributed ledgers, on the other hand, can also provide access to deeds because blockchain is immutable. This indicates that nobody can alter or interfere with information without the correct access rights.

Commodities And Global Commerce

The use of corporate blockchain will significantly increase international trade. Trade on a global scale has issues. Regulations governing shipment or even certifications may need to change. This is one of the most prominent enterprise blockchain use cases.

A business blockchain can streamline the entire process. It will first make a paperless solution easier. It brings down the price. Additionally, it facilitates easy data transmission between parties and enhances the KYC procedure.

Sports

Business blockchain solutions can also be used in sports. The application of blockchain to enhance various sports sections is where it all starts.

The influence can also vary depending on the sport, but the essential players—teams, athletes, fans, and leagues—will unquestionably gain from it.

The fan identity would be the main beneficiary. With the advent of blockchain, fan interaction has improved. Any fan may directly support their team using crowdfunding thanks to blockchain technology. They have access to digital collectibles as well.

Enterprise blockchain also has a significant impact in the areas of memorabilia authentication, esports development, athlete crowdfunding, and team tokenization.

LEADING PUBLIC BLOCKCHAIN NETWORKS IN 2022

A public blockchain is devoid of restrictions. Anyone can join the network and use the blockchain to participate. The network is neither supervised nor controlled by a single entity because the system is decentralized. Since it cannot be changed once validated, the data kept on the public blockchain is safe. Public blockchains include well-known models like Ethereum and Bitcoin.

Large distributed ledgers can be maintained using public blockchains because of their tremendous computational capacity. Each node must simultaneously solve a resource-intensive, complicated task (proof of work) when the network comes to a consensus to make sure that everyone is on the same page. Even though transparency is beneficial, there is virtually no privacy on the public blockchain.

Bitcoin

The birth of Bitcoin in late 2008 served as the "founding father" of decentralized cryptocurrencies, helping to create the thriving ecosystem of coins and tokens that exists today. Oh, and it was essential in advancing the blockchain ledger's use.

Therefore, it is no surprise that Bitcoin consistently ranks in the top 5 public blockchains.

The fundamental technology that underpins almost all of the cryptocurrencies we see today is similar to Bitcoin's Blockchain, even though Bitcoin is not a blockchain protocol but a means of exchange.

The invention of Bitcoin launched the whole crypto sector, and its blockchain serves as the benchmark for all other public blockchains. The distributed nature of the Bitcoin blockchain makes it incredibly secure; there is no single point of entry, and the cryptographic features built into its blockchain mechanics ensure that datarelated transactions are recorded and stored extremely securely.

Ethereum

On a list of the top 5 public blockchains, Ethereum comes in second. Ethereum, a decentralized blockchain platform introduced in 2015, enables the development of Distributed Applications (Apps) and Smart Contracts without interruption, fraud, control, or intervention from outside parties.

Blockchain's groundbreaking smart contracts technology makes it possible to create automated, self-executing contracts that have been pre-programmed.

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The Ethereum network is the first decentralized blockchain to support smart contracts with many practical applications and use cases.

Vitalik Buterin created Ethereum to broaden the uses of blockchain technology. Solidity, an Ethereum-native programming language, enables programmers to create and share distributed applications on the Ethereum blockchain.

NEO

With a specific focus on digitizing assets on the Blockchain, NEO, originally known as Antshares, is a blockchain platform you may use to create a scalable network of decentralized applications.

The Chinese government's far larger ambition to position itself as the leading force in the blockchain industry includes NEO, which is positioned as the first blockchain platform in China

In contrast to Ethereum, NEO portrays itself as a project that focuses on the smart economy by encouraging the digitalization of real-world assets that allows for peerto-peer network trade, clearing, and settlement as well as registration, depositary, transfer, and trading.

To put it another way, NEO aims to create a natural environment for the digital economy. The non-divisible NEO token, which creates and uses GAS tokens to pay for transaction fees created by applications on the network, is the native currency of the NEO blockchain.

The mining nodes for NEO's Delegated Byzantine Fault Tolerance (dBFT) consensus method are selected by the NEO community and are subject to strict performance requirements as well as a requirement to hold a minimum number of NEO currencies.

The dBFT system has the advantage of using fewer resources than conventional consensus techniques while supporting a substantially larger volume of transactions, estimated at 1,000 per second.

It does, however, come at the expense of centralization, where we are forced to put our faith in consensus nodes to act in the network's best interests.

QTUM

The groundbreaking capabilities of Ethereum's smart contracts and decentralized apps are combined with Bitcoin's technological dependability to create QTUM, a hybrid platform that combines the best of both worlds (dApps).

It is a protocol that makes using smart contracts for business operations easier. Although QTUM is based on the Bitcoin source code (and so is a fork of Bitcoin), the development team has added some abstractions and layers to enable the inclusion of Ethereum's smart contract features.

QTUM integrates several features from the most popular cryptocurrencies—Bitcoin and Ethereum—to promote interoperability and benefit from their key features. The POS consensus method was successfully deployed for the first time by the QTUM blockchain technology. Since QTUM operates on a POS system, the native coin supply chains are unstable and experience a 1% yearly inflation rate.

The QTUM blockchain can accommodate 60–70 transactions per second. It differs from other blockchain systems in that they emphasize the use of smart contracts for practical commercial applications.

Solana

Solana is one of the fastest-growing open-source programmable Blockchain protocols that is used by developers and institutions around the world to build decentralized applications (DApps) and marketplaces. Solana is an uber-fast, secure, and censorship-resistant Blockchain protocol with some unique qualities which led to its mass adoption in building open infrastructure in a flexible manner. For the development of next-generation DApps and decentralized marketplaces, Solana is perfectly suited due to its fully decentralized nature, security, and highly scalable.

Solana owes its origin to 2017 when its whitepaper was published by Anatoly Yakovenko, who previously worked at Qualcomm and Dropbox. Solana has an impressive story to tell since its inception that it has been funded by a $20 million series till mid-2019 and raised another $1.76 million.

The beta mainnet of Solana has the ability to do basic transactions along with smart contract features, which were launched in March 2020. Solana's native token's price is up by whopping 40 times in a short time of 12 months which astonished everyone and there's a solid reason behind that appreciation. The average transaction fee over Solana is around 0.000005 SOL, with an average block time is around 400–800 milliseconds.

Cardano

Cardano is one of the fastest-growing Blockchain platforms based upon the Proof-of-Stake (PoS) mechanism that is built through peer-reviewed research. Cardano was founded to be a third-generation blockchain in 2017 by Charles Hoskinson, who is also the co-founder of Ethereum. Cardano aims to be highly scalable and energy efficient, which older blockchain platforms like Ethereum lack. The Ouroboros consensus mechanism is based on peer-reviewed research by a team

of computer scientists and cryptographers, who aimed to build would be way faster, more scalable, and more secure than existing platforms.

The smart contract mechanism in Cardano comes with a two-tiered structure namely – Cardano Settlement Layer (CSL) and the Cardano Computational Layer (CCL). According to many developers, a new upgrade is planned to arrive named Alonzo and it is anticipated that it will bring several improvements like Ethereum-based smart contract functionality. This would let Cardano run a wide range of existing apps and allow many developers to work on Cardano projects using the universal familiar Solidity programming language.

'Ada' is the native cryptocurrency of the Cardano, that fuels the platform and is used to pay transaction fees, and is staked by validators. These Cardano native tokens run on the same architecture as the ADA cryptocurrency itself but are not created via Smart Contract, which is in the case of platforms like Ethereum. Ada in the future will also function as a governance token in the Cardano platform, which would allow holders to vote on changes and upgrades. The promotion and standardization of the Cardano Blockchain platform are looked after by the Cardano Foundation.

Polkadot

Polkadot is an open-source Blockchain protocol developed by the Switzerland-based Web3 Foundation, as a multi-chain Blockchain technology that works to connect two different Blockchain networks, thereby bridging the gap between them. As, a common issue in Blockchain development is that two separate networks cannot interact directly with each other, for example - you can't send DOT or SOL to a Bitcoin network or vice versa, as they both function independently.

Polkadot was envisioned by Gavin Wood as New Ethereum to overcome many legacy problems and they overcame it through the introduction of "parachains" or parallel chains. As the name suggests these Parachains communicate to with each other by functioning in parallel.

As of now, the project Polkadot is in the development stage, and in the "Prechain Rollout" phase, but still, there are over active 100 parachains over the network. These parachains can compute up to 1 million transactions per second.

Due to Polkadot's governance and NPoS systems not being officially released, the testing of Polkadot's software is done by Kusama - which is a project. If we talk about Polkadot's release, it is said that the Kusama will be combined with the Polkadot platform later, as it gives the developers feedback on the platform and after its release.

Moonriver is another important part of Polkadot, that works to bring compatibility with the Ethereum Virtual Machine (EVM). Moonriver allows users to test their projects and has them verified with the creative power of the Ethereum network, as in creating useful and powerful projects, Moonriver plays an important part.

Algorand

Algorand is an open-source Blockchain protocol that is making itself into the list of top trending platforms due to its great features. Algorand was ideated and created to solve scalability problems users face in the legacy Blockchains like low throughput, and high gas fees. Algorand works to reduce the amount of energy consumption to do the computation, and functions in an efficient way to create distributed ledger with a unified system, without being forked or splitting of Blockchains.

Algorand comes with its unique combination of open-source Layer-1 capabilities, which opens up a world of new possibilities for developers. Currently, there are around 100,000 developers doing Algorand development as summarized by Algorand's CEO Steve Kokinos. Algorand developers are in great demand due to the innate qualities of Algorand in automatically enforcing custom rules and logic that have been provided in Algorand's ASC1s so that Algorand becomes cost-effective and error-free.

Binance Smart Chain

Binance Smart Chain (BSC) is a community-driven decentralized blockchain network driven by Binance for running smart contract-based dApps. Binance Smart Chain was introduced to offer a

decentralized and ultra-fast trading option, which is ideally suited for those planning to build DeFi yield farming applications, DeFi staking projects, and synthetic asset development.

Initially, Binance began as a cryptocurrency exchange but later decided to enter into Blockchain development by launching its own Blockchain protocol. The motto of Binance is to improve the poor user experience which was happening with other DEXs, as Binance offers the best user experience and layout the users with professional transactions. Binance is the brainchild of Changpeng Zhao, who later in 2020 launched Binance Smart Chain as an alternative to the Ethereum Blockchain while having its original qualities of it. Binance Smart Chain is developed as a brand new blockchain platform where Smart Contracts can be deployed flawlessly as being Ethereum Virtual Machine (EVM) compatible.

Binance Smart Chain uses Proof-of-Stake consensus which is more competitive in terms of networks that use Proof-of-Work schemes. Being developed as a parallel blockchain to the Binance chain, it works on a dual chain architecture that helps it receive and send assets from one blockchain flawlessly. Binance Smart Chain has its native token by the name of Binance Coin (BNB). These BNB tokens serve as gas fees on the Binance Chain and Binance DEX platform, apart from staking, and asset transfers.

Public Blockchain Benefits

Authentic Decentralization

With a public blockchain, true decentralization is possible. This is a significant distinction from private blockchains. Moreover, it generates a distributed state because each person has a copy of the ledger.

There is no centralized entity, which is the underlying idea of the entire network. Therefore, it is solely the responsibility of the nodes to maintain the network. They are utilizing a consensus algorithm to update the ledger.

Additionally, both of these characteristics guarantee that the system will always maintain greater decentralization.

Full disclosure

Fully transparent public blockchains exist. These particular blockchain businesses typically construct their platforms so that other users may easily understand them. This implies that you can access the ledger at any time. Therefore, there is no chance of corruption or inconsistency. Naturally, everyone must keep the books and participate in decision-making. Private blockchain platforms cannot offer this.

Immutability

The public blockchain network cannot be altered in any way. The public Blockchain system is essentially hard to hack. All the other nodes will reject any attempt to tamper with the blocks by rejecting the transaction.

Once a block is put into the blockchain, it becomes permanent, and no one can subsequently change or remove it. Therefore, no one is allowed to change or remove a particular block in order to gain from it.

In actuality, organizations generally struggle with change. Whether it takes place offline or online. The benefit is that hashes function as a security mechanism since they lower the likelihood of breaches.

When attempting to modify the blocks, a person may be able to detach from the primary chain, wiping out their modifications.

Complete User Power

The majority of networks are different from public blockchain networks. They typically demand that users follow a lot of guidelines. The regulations are frequently not even just. Since there is no centralized body to keep an eye on users, there is no central authority to oversee their every action.

Furthermore, because these platforms are public, neither a company nor a government agency can prevent you from downloading the nodes and participating in the consensus. Private blockchain networks include this feature, which is absent from public ones. Additionally, you'll see that users of the private blockchain cannot completely enjoy this kind of freedom.

LEADING LAYER 2 BLOCKCHAIN NETWORKS

Layer 2 Blockchain network refers to any overlaying network built on top of the mainnet, supporting the foundation layer 1 blockchain network. Generally, the layer 2 protocols are created as an optimized version for a number of reasons, reducing network congestion, lightening the load, and increasing the throughput of the mainnet. Due to the increasing number of individuals entering a blockchain, a number of issues start like a slowdown of the network, and longer processing times, all of which result in higher fees. Layer 2 blockchain network here comes to the rescue, as they were created to prevent over-dependence or collapse of its layer 1 counterpart. Like consensus mechanisms are the defining characteristic of layer 1, so are scaling solutions to layer 2 networks.

As layer 1 chains are the primary security provider within the context of decentralization, the layer 2 chains have their own security, but to a much lesser degree.

Polygon

Polygon is an open-source Indian Blockchain protocol, which was earlier known as Matic, which aims to provide an interchain scalability solution. Polygon intends to bring the adaptability and scalability of alt chains along with Ethereum's security, liquidity, and interoperability.

The cost of the adoption of Polygon is comparatively much lower, compared to legacy-based networks. Polygon functions on the Proof-of-Stake (PoS) consensus mechanism under which developers are expected to utilize the Matic network to solve the problems by building a decentralized platform with the help of an adapted version of the Plasma framework. The Plasma network framework with finality on the main chain can provide solutions for faster and extremely low-cost transactions.

Polygon is an Ethereum-compatible blockchain network and offers Smart Contract functionality in its Proof-of-Stake (PoS) framework. When a contract gets verified in the Polygon network, the tokens get automatically stored over the MATIC Sidechain and in this process, a specific smart contract by the name 'RootChainManager' now activates the 'ChildChainManager' which is also a smart contract. In this way, the proper measure of bolted or stored tokens over the MATIC network happens.

The native token of Polygon MATIC serves as the base resource of the Polygon system, which gets utilized for exchange payments and also used to store tokens to protect the Polygon network. Polygon's MATIC token has received incredible applause and a cost surge following a tremendous increase in use, but as of now, MATIC tokens are far less available over the trading exchanges. Although, efforts are in progress to make easy availability of the MATIC tokens.

Arbitrum

The Arbitrum is a layer-2 functionality solution, developed by Offchain Labs, which is a New York-based company. Arbitrum aims to solve the congestion and high gas fees that the Ethereum network has been experiencing by improving the way smart contracts are validated.

Arbitrum utilizes the security provided by the Ethereum mainnet and at the same time allows smart contracts to run on a separate layer to reduce congestion within its network. This functionality technique is known as 'transaction rollups' and consists of batches of transactions and records. Further, they are validated on the lower layer to then be moved to mainnet of Ethereum.

Arbitrum compensates nodes that actively validate the smart contracts powered by the Arbitrum chain (known as aggregators) with ETH and they are responsible for adding the blocks to the first layer – the Ethereum mainnet. Although the mainnet of Ethereum has been criticized for reasons like lacking scalability, high gas fees, and slow transaction speeds. Many networks, claimed to solve these issues, but Arbitrum functions as a separate layer of the network, to relieve the ETH mainnet from excessive transactions.

As mentioned, the Arbitrum One ecosystem is a layer-2 mainnet that powers smart contracts that will later be validated by the Ethereum network which is a layer-1 blockchain. The gas fees charged by Arbitrum are to be paid in Ethereum's native token – ETH and it is expected that the fee will be reduced by around 50 times the usual fees that are paid per transaction on the layer-1 network. The interesting thing is that it's cheaper to run Arbitrum smart contracts than to run them on the ETH mainnet directly. As soon as the Arbitrum network launched its Beta version it quickly attracted the interest of DeFi app developers, who are constantly seeking to reduce the fees that users incur for using the Ethereum network at peak times.

Optimism

Optimism is a layer 2 blockchain network solution that functions on top of the Ethereum mainnet, which is a layer 1 blockchain network. Transactions happening on Optimism, get their transaction data posted to the Ethereum mainnet where they are validated. Optimism uses a technology called rollups, specifically Optimistic rollups to achieve this feat.

They're named rollups as they roll up or bundle the data together about hundreds of transactions, be it non-fungible token (NFT) mints, token swaps, or any transaction. Whenever a such smaller number of transactions are rolled up into a single transaction, the transaction fee of the blockchain network that is required to pay comes down to only a single transaction. Further that single transaction cost is conveniently split across the users involved.

These Optimistic rollups-backed transactions are assumed to be valid until they are proven false, or innocent until proven guilty. The potentially invalid transactions can be challenged by submitting a "fraud-proof" and running the transactions' computations with reference to available state data within a stipulated time window. Further, the gas required to run the computation of the fraud-proof gets reimbursed by Optimism.

Optimism launched its native OP token as of now, a total of 231,000 addresses were eligible to claim 214 million OP tokens free of cost.

ImmutableX

Immutable X is a Layer – 2 scaling solution built on top of the layer – 1 Ethereum blockchain. In 2018, James Ferguson, Robbie Ferguson, and Alex Connolly designed and created Immutable, which is the parent company behind Immutable X. The vision behind the development was to offer near-instant confirmation and near-zero gas fees for NFT trading and minting.

It was originally created to lower the costs associated with trading NFTs for their game, Gods Unchained. While the larger goal was to create a blockchain that could host gaming platforms while keeping down costs and speeding up transaction times and evolve into a gaming-specific blockchain.

The whole network is based around the Zero-Knowledge Rollup (ZK-Rollup) technology, under this, the transactions are not automatically added to the blockchain when they're confirmed. Instead, in this technology, the transactions are batched together on the Immutable X network and then moved as a single secure unit of information onto the layer 1 blockchain network of Ethereum.

The process of collecting and confirming transactions off-chain, and then moving it all on-chain in one go, lets Immutable X is able to process around 9,000 transactions per second. All this is possible while keeping gas fees near zero and also makes minting and trading NFTs on Immutable X 100% carbon-neutral.

Immutable X (IMX) is an ERC-20 utility token and it acts as the grease that keeps the Immutable X running smoothly. Users need it for trading on the network, providing liquidity, and building applications. The native token of Immutable X (IMX) has three core uses namely – gas fee payment, staking, and decentralized governance.

ZkSync

zkSync is a Layer 2 blockchain protocol that aims to eliminate Ethereum's inherent congestion with zero-knowledge proofs. Matter Labs' creation zkSync is on a mission to accelerate the mass adoption of crypto for personal sovereignty and zkSync is the solution for transferring Ether and ERC20 tokens. zySync is designed to unlock the full potential of trustless blockchain technology while offering the core values of Ethereum for scaling.

Having already worked on Layer 2 scaling zero knowledge, Matter Labs started working on zySync in 2020 in their Berlin headquarters. The vision was to develop the first EVM-compatible zero knowledge rollup supporting general-purpose applications in Solidity but without costly gas fees or performance barriers.

A key difference between the rollups of zySync and Optimism is the method of verification, as ZK rollups use zero-knowledge proofs to verify transactions and settle. For every off-chain transaction, the ZK rollup operator creates proof of validity using the Succinct Non-interactive Argument of Knowledge (SNARK).

Till now, zkSync doesn't have its native token but Matter Labs has informed us that once zkSync becomes fully decentralized the native token will be available for ZK rollup operators and for staking as a reward mechanism. zySync got its initial funding from the Ethereum Foundation and has already powered over 14 million high-speed transfers till date.

LEADING LIST OF ENTERPRISE BLOCKCHAIN NETWORKS IN 2022

An 'Enterprise blockchain' is a special type of permissioned blockchain protocol that can be used to scale up commercial activities at large. Businesses often indulge in activities like tracking supplies, settling international transactions or exchange of digital information both inside the company and with other companies to streamline their business processes. Here, an enterprise blockchain plays a role in addressing to the needs of businesses and corporations prefer this type of customized blockchain network rather than a plain public blockchain network. Blockchain technology as a whole is a ledger comprised of chronologically ordered, encrypted and immutable blocks that may be used as a single data source across a dispersed network.

The enterprise blockchain network is often a permissioned ledger that is only accessible to a preferably small group of users, and the business corporation has absolute control over users. This ability to limit the users regarding who can see or not see their certain data, corporations believe this mechanism better meets their objectives than a public blockchain network.

Enterprises can also employ various cryptography techniques to prevent nefarious parties from altering the history of earlier transactions. Many well-known global corporates are already adopting enterprise blockchains in their business operation, such as IBM, Facebook, Intel, Walmart, and JPMorgan.

Strato Mercata By BlockApps

Strato Mercata is the first public blockchain network designed for enterprises by BlockApps. Strato Mercata aims to bring the best of both public and private blockchains in order to address legacy business needs and accelerate the adoption of Web3 in enterprises. Strato Mercata is built by the founders of Enterprise Ethereum Alliance and the team helped the launch of Ethereum cryptocurrency and investors of Blockchain as a Service.

Enterprises want to move their blockchain applications to a public blockchain to achieve scalability but are often hindered due to a variety of reasons like data privacy, and lack of information about counterparties.

Strato Mercata serves as a base layer 2 blockchain network that is Ethereum compatible and has been optimized for legacy assets. Strato Mercta lets enterprises decide and determine what information is shared and to whom, but allows limited access to anyone as there are different permission for everyone. There is an approval process the network participants need to follow according to the governing body and KYC.

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Strato Mercata functions on profit sharing basis with the validators, while participants buy equity to get governance tokens. The Strato Mercata is fiat compatible, as there are no separate tokens used for it, and transaction fees are minimal which are set by the governing body.

Quorum

Quorum is an enterprise-focused Ethereum-based blockchain framework founded by J.P. Morgan. Quorum is an open-source permissioned blockchain framework that is forever free to use as mentioned by its creators. Quorum is much faster than legacy-based blockchains like Ethereum and Bitcoin, as it is designed to function as vote-based and uses RAFT algorithms for fault tolerance and IBFT consensus for Byzantine fault tolerance to process per second hundreds of transactions per.

Quorum limits participation to a known set of nodes that have to be pre-approved by a designated authority to be part of the blockchain network. In Quorum you need not incur any cryptocurrency costs for running transactions, as the usage of the gas is set to zero. The ability to process on-chain public and private transactions in Quorum ensures that open transactions are available to be scrutinized whereas private transactions are encrypted with the help of Constellation technology.

Solidity used in Quorum's Smart Contracts lets it set to both private and public, but once a Smart Contract is set as private it can't be changed into public and vice versa. The ability to process higher transaction speed is possible through the usage of private contracts, as they are better than public ones in terms of speed.

Hyperledger

Hyperledger is an open-source project envisaged to support the development of blockchain-based Distributed Ledgers Technology. Hyperledger consists of various tools, frameworks, and libraries for developing blockchains and dApps. Hyperledger is an international alliance, hosted by The Linux Foundation, comprising many leaders in banking, finance, the Web of Things, supply chains, production, and Technology. The team Hyperledger made a clear announcement at the initial stage only that Hyperledger doesn't encourage any sort of cryptocurrency nor do they have any plans for building and native cryptocurrency.

Since the launch of Hyperledger in 2016, it has attracted a wide range of organizations consisting Samsung, IBM, Intel, Microsoft, American Express, Visa, and even Blockchain-based startups like Blockfore. The collective effort includes banking, supply chain management, IoT, manufacturing, and other production-based industries to accelerate the development of cross-industry open-source Blockchain technologies.

Hyperledger works upon the idea of encouraging a collaborative approach to developing various blockchain technologies, that would be part of Hyperledger. Rather than focusing on just one standard platform to do development and this had led to multiple Hyperledger projects:

- Hyperledger Fabric

- Hyperledger Besu

- Hyperledger Burrow

- Hyperledger Sawtooth

- Hyperledger Indy

- Hyperledger Caliper

- Hyperledger Cello

Hyperledger Fabric is thought to be the main base for which Hyperledger which is backed by Linux Foundation as a whole is known for developing solutions or applications with a modular architecture. The Hyperledger Fabric allows elements, such as consensus and membership service providers, to be plug-and-play. Hyperledger Fabric's modular and flexible design already caters to a wide range of business use cases. The ability to use Smart Contracts and configurable consensus mechanism permits functionality at scale while maintaining privacy while supporting different programming languages through the installation of modules.

Hedera Hashgraph

Hedera Hashgraph is based on DLT technology that works on Graph structures where all the nodes communicate their information to each other and their communication is reported by building a graph of connections. All the information or data is stored in form of events.

Well, the Distributed Ledger Database is as simple as a ledger of any transactions or shared contracts that are synchronized and maintained in a decentralized form across different locations and people.

A Distributed Ledger Database stores the information in it securely using immutable using cryptographic techniques and DLTs are much more difficult to attack as all the nodes will have to be attacked and manipulated simultaneously.

To maintain Distributed Ledger Database both Blockchain and Hedera Hashgraph use different types of data structures and consensus mechanisms.

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Hedera Hashgraph functions over the Asynchronous Byzantine Fault Tolerance consensus algorithm, which is capable of securing the platform against attacks. Security, fair conditions, and a high level of performance are some of the main features offered by Hedera Hashgraph that make it stands out as unique in terms.

To achieve consensus Hedera Hashgraph relies upon two consensus patterns: 'Gossip about Gossip' and Virtual Voting.

The Gossip about Gossip terms here means to transfer or sync information from one node to another random node. This mechanism is used to make sure that all data has been circulated to all the members of the network. While the use of Virtual Voting gets possible since the Gossip about Gossip mechanism is being used, it is where each node is already aware of what the other node knows. Therefore, each node can predict what the other node would vote and this results in electronic voting or virtual voting.

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This mechanism does not allow voting messages to be sent across the network, but each member has information regarding what another member would have voted, even without voting.

R3 Corda

Corda is a private and permissioned blockchain-inspired DLT platform that removes costly friction in business transactions along with interoperability and a unique approach to secure data privacy. Corda has been developed on Kotlin language and it enjoys a high level of integration than any other in terms of programming paradigm, as it targets JavaScript and JVM.

Corda has been joined by numerous developers, who choose to build applications over Corda, which is known as CorDapps. Corda offers oracle-supported support which allows developers to confidential data from transactions before verification of your oracle information.

Enabling a variety of companies to transact straight and in a secured private manner utilizing smart contracts, by decreasing transaction and record-keeping expenses and streamlining company operations have become the most crucial quality of Corda. Token SDK for fungible and non-fungible tokens is available over Corda and it is based on the UTXO model.

The governance of Corda focuses on centralization and control of the network, nodes, onboarding, and configurations. Nodes can join one network in Corda and the unified structure provided in Corda controls the network, resulting in easy deployment over Corda

Corda is the first of its kind of Blockchain-based platform built exclusively for enterprise use, and till now it has been chosen for development by over 60 firms from various industries. These companies had been working with enterprise software firms to develop distributed ledger technology (DLT) based on various applications on the R3 Corda platform.

Ripple

Ripple is a popular enterprise blockchain framework discovered in 2012, aimed to connect payment providers, digital asset exchanges, corporates, and banks. Ripple is the creation of Ripple Labs and is not a decentralized blockchain but consists of a strong network of validating servers and ledgers. Ripple allows the transfer of any commodity like gold too through its network named RippleNet minus any chargeback. To validate transactions Ripple uses Ripple Protocol Consensus Algorithm (RPCA).

Ripple currently has plenty of applications and almost 75 clients which are over in different stages of commercial deployment such as minimizing costs in liquidity and many more. Ripple lets you send payments across multiple networks (xVia), and cross-border payments services (xCurrent) without paying a high fee.
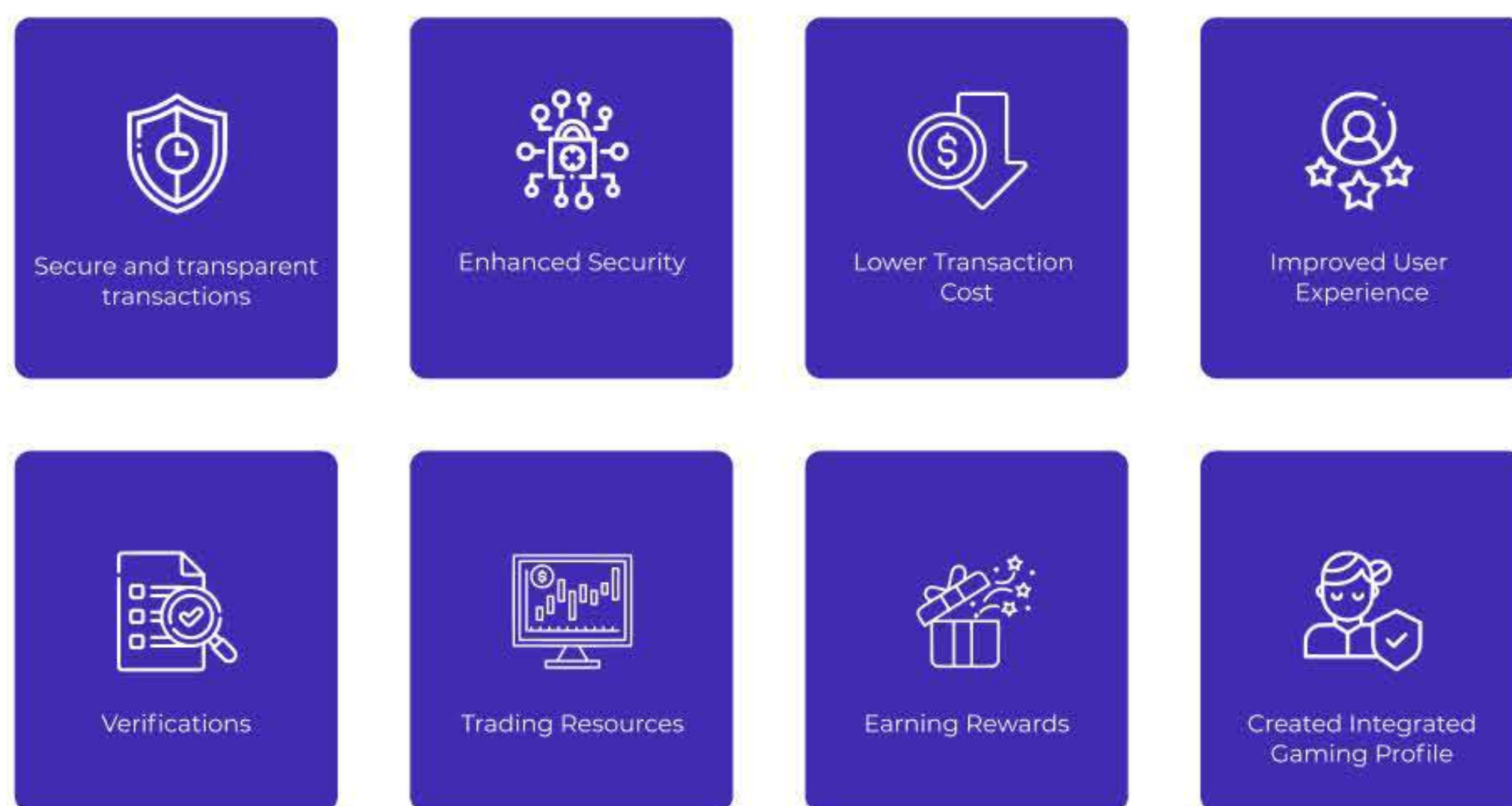
Ripple is growing fast and has already acquired a huge market cap of $34,356,484,594.21.

BLOCKCHAIN GAMING & ITS TRENDS IN 2022

What Effects Is Blockchain Technology Having On The Gaming Industry?

It is clear that Blockchain technology has been around for a while, but recently it has attracted greater attention because of its potential to revolutionize many different industries. It has become the top option for the gaming industry in recent years due to its advantages in several industries.

Among the benefits of blockchain that are revolutionizing the gaming industry and enabling the creation of blockchain games are:

Secure and transparent transactions	Enhanced Security	Lower Transaction Cost	Improved User Experience
Verifications	Trading Resources	Earning Rewards	Created Integrated Gaming Profile

Transactions That Are Transparent And Safe

Blockchain ensures that there are no double purchases or other types of transaction record fraud by being transparent, secure, and immutable. It gives users more assurance when making digital purchases and makes it perfect for games where players exchange private information or virtual goods, like NFTs.

Improved Security

Blockchain can guard sensitive data like player identification, game data, and user transactions from being altered or hacked. It adds an extra layer of security through encryption methods like Secure Messaging and Two-Factor Authentication.

Increased User Satisfaction

Blockchain provides a more efficient, secure, and transparent way to carry out digital transactions and access virtual assets, which can help to improve the entire user experience.

Blockchain gaming gives users more control over their game experience. This trend has manifested itself in various ways, enabling players to design their own gameplay, narrative, and characters. This also allows them to download a variety of video games in various versions from any location without risking the integrity of their gaming experience.

Verifications

All transactions and interactions between parties are made legitimate and authentic with the use of a blockchain gaming platform. This helps avoid fraud, one of the most common issues with modern gaming systems. Because each transaction is recorded, businesses may use blockchain to ensure that no person or entity has been paid twice for the same service or good and utilize it to verify transactions.

Exchange Of Resources

Players can trade in their items for cash or other resources. Due to blockchain's ability to trace every item and its owner, players may transact with complete confidence, knowing that their possessions won't be stolen or replicated. They can also purchase or sell in-game items owned by other players.

Getting benefits, By completing missions and objectives, players can receive prizes in the form of cryptocurrencies. In conventional games, winning players receive points without worth outside of the game. However, consumers can earn cryptocurrencies through blockchain-based games that they can use as real money to buy goods from other gamers or even through e-commerce websites.

|	
Video games will help me connect with other similar interests	84%
Video games will help me to meet new people	80%
Video games will help me stay in touch with friends	77%
It's easy to find the right community within online games	67%
Video games provide a safe outlet for trash talk	44%

Integrating Gaming Profiles

A centralized community where players may access a range of games has been made feasible by the success of blockchain gaming. Users can create a single profile that they can use on several platforms, which enhances user experience and makes it easier to access various games and conduct transactions.

Blockchain Gaming Trends

One of the significant metaverse blockchain gaming and NFT trends to watch out for is the impressive rise of play-to-earn gaming. In a sense, it has expanded the opportunities for blockchain-based games. The blockchain gaming sector experienced a massive growth rate of about 2000% in the previous year.

In addition, in 2021, approximately $4 billion was invested in blockchain-based gaming ventures. Blockchain gaming provides free-to-play games and well-known play-to-earn alternatives, which might promote blockchain-based games. The value advantages of blockchain in gaming would be the main focus of blockchain gaming trends.
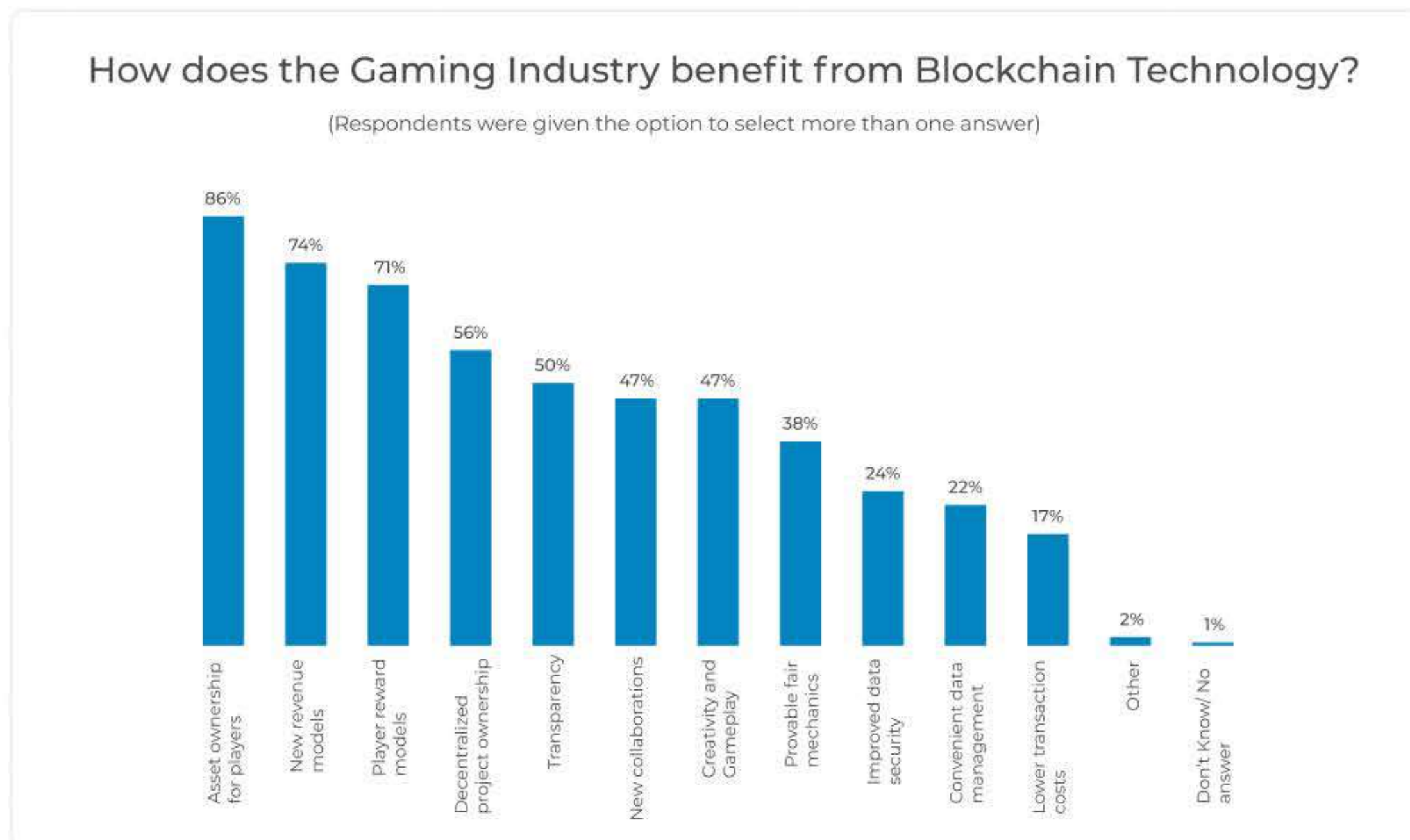
The market size of the gaming industry
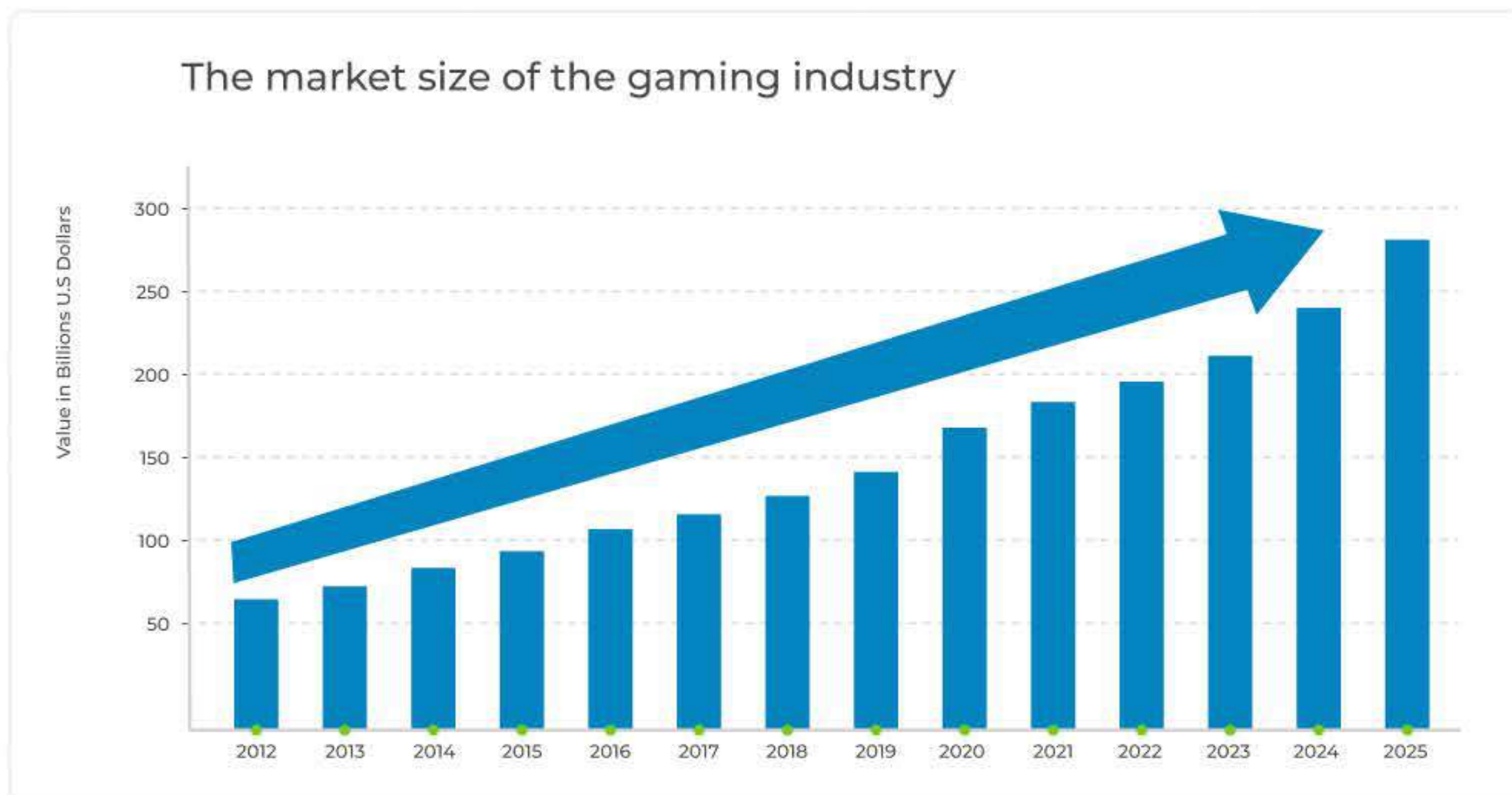
Cryptographic security combined with decentralized networks can provide safe gaming environments. Support for other technologies, such as NFTs, can further assure actual ownership over in-game items and experiences. Here are a few key developments in blockchain gaming to watch out for.

🔶 Play for Cash with Growing Gaming:

Play to Earn, or P2E, games have been the main focus of future projections for blockchain gaming. In actuality, P2E games have helped to support the growth of the blockchain gaming sector. Numerous illustrative cases, including OP Games, demonstrate how web3 gaming arcades are used to acquire, own, and exchange in-game assets.

The assets are transformed by OP Game into collectible NFTs that the owners can utilize in settings outside of the OP Games ecosystem. The platform has also added fractionalized NFTs, which can aid users in exercising co-ownership over preferred assets. Additionally, by utilizing its built-in DAO, the play-to-earn gaming platform offers crucial insights into the governance of P2E gaming platforms.

How does the Gaming Industry benefit from Blockchain Technology?

(Respondents were given the option to select more than one answer)

Category	Percentage
Asset ownership for players	86%
New revenue models	74%
Player reward models	71%
Decentralized project ownership	56%
Transparency	50%
New collaborations	47%
Creativity and Gameplay	47%
Provable fair mechanics	38%
Improved data security	24%
Convenient data management	22%
Lower transaction costs	17%
Other	2%
Don't Know/ No answer	1%

The Axie Infinity example also demonstrates how web3 trends in blockchain gaming may change in the future. While providing the thrill of an arcade game, it promoted the use of NFTs in blockchain-based gaming. Players could raise creatures and engage in combat for token-based prizes. The characters are NFTs, which players with particular distinguishing characteristics own.

The online marketplace Vorto Network is another illustration of a play-to-earn gaming platform. Players could buy digital goods and items in-game using a cryptocurrency wallet. With a real-time tactical task, the Vorto Network game Hash Rush offers players an immersive experience. It is one of the most impressive instances of how P2E games can stimulate the creator economy.

Combined use of social media

The fusion of social media and blockchain gaming would be the following significant highlight. Games built on blockchain technology can act as a complement to or hybrid of social media networks. For instance, the video game Near Lands's an open-world, pixelated land-based design. Interestingly, the game's community experience rather than its gameplay is a significant highlight.

Players might create new objects and characters during their journeys in the game's open world. Another reason to think favorably about the future of blockchain gaming is the Reality Chain example. Reality Chain has debuted on Octopus Network to build a multi-chain, social gaming metaverse.

LEADING NFT MARKETPLACES

There are various NFT markets in the digital world, but some are only the TOP ones. The list of the top NFT marketplaces is compiled based on user count and NFT selling rate. Come on, let's examine some NFT particulars.

The non-fungible tokens are currently what are driving the digital revolution. They have been using a range of development strategies to better themselves. NFTs are proprietary digital assets created with blockchain technology that is not exchangeable or replicable in any way. These digital tokens can replace all kinds of things, including images, websites, trading cards, movies, and works of art. These unique digital tokens are traded on a website known as the NFT marketplace. The NFT market initiates decentralized NFT trading.

The two types of NFT marketplaces are open-type and exclusive-type. In contrast to the open-type NFT marketplace, which deals with all kinds of NFTs, the exclusivetype NFT marketplace deals only with one particular type of NFT. There are numerous NFT marketplaces in the online world. As a result, picking the best one to begin trading NFTs can be difficult. Customers frequently select the best products available. As a result, we have included information in this post regarding the top NFT markets for 2022.

OpenSea
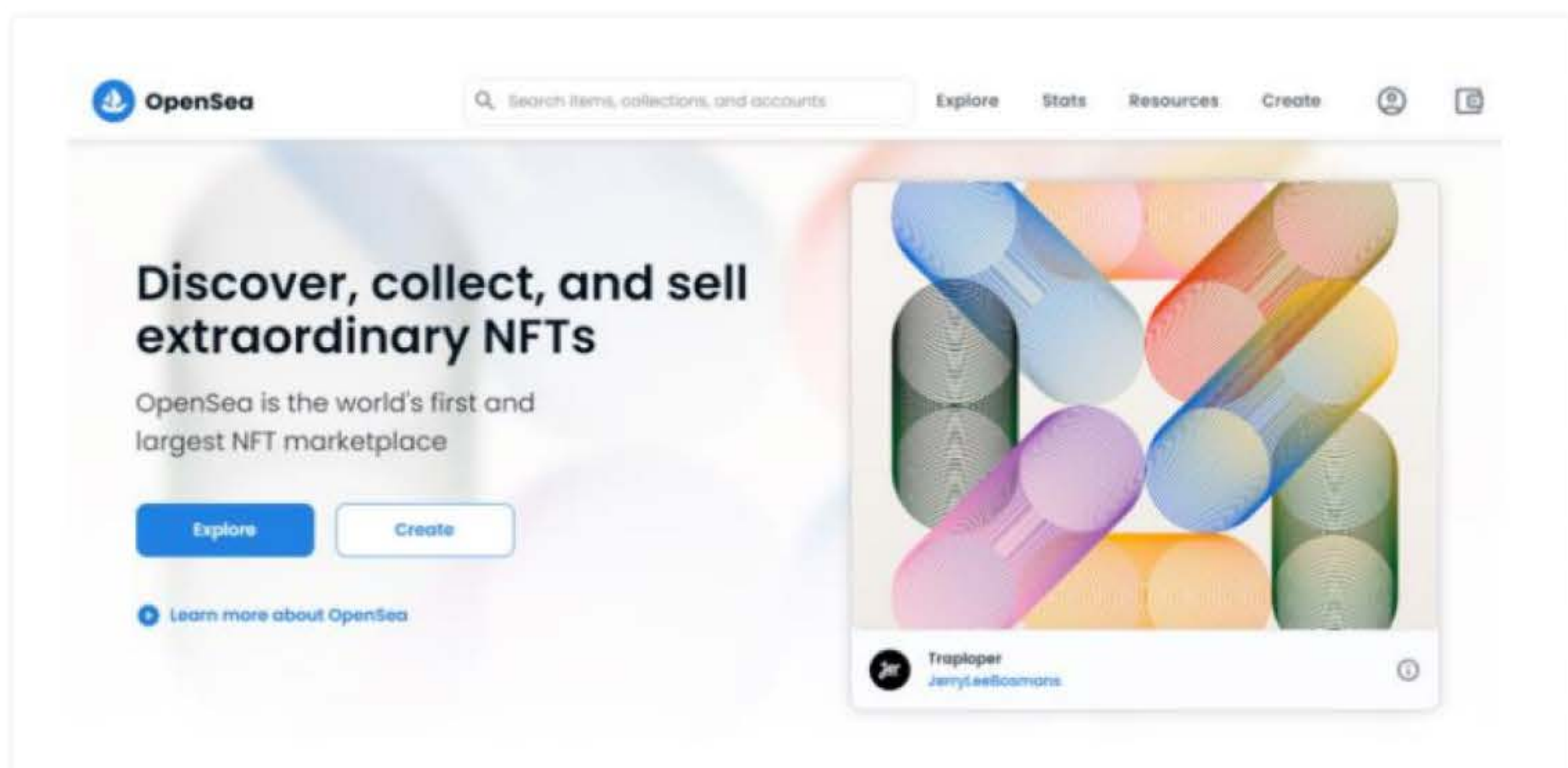
OpenSea is currently among the best NFT markets in the world. The most appropriate statistic for measuring this is the trade volume on the NFT market. On the website, users can mint, buy, and

trade a huge selection of NFTs. These digital tokens are examples of virtual worlds, trading cards, digital art, collectibles, and other items. This market, built on the Ethereum blockchain, is now collaborating with the Polygon network to cut gas costs. With the help of OpenSea, users have access to more than 700 NFT projects, and an incredible 80 million NFTs are currently available for trading. The OpenSea platform allows users to create and edit their seller profiles using a unique architecture. The transaction fee in this manner is just 2.5% for each sale made on the marketplace. By 2022, there will be more than 600,000 users of the OpenSea platform. As a result, it is rated as one of the top NFT markets in the market.

SuperRare
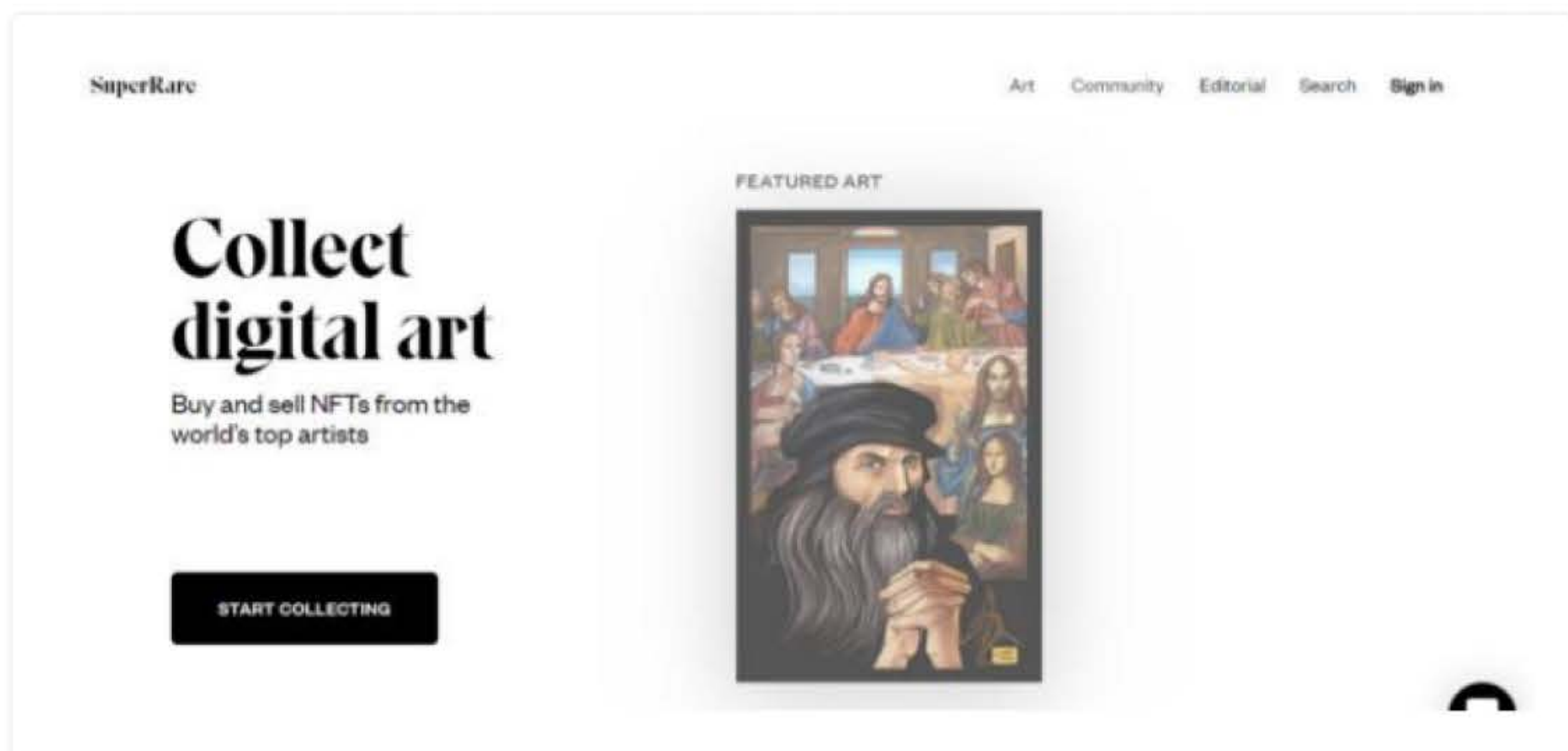
The NFT market SuperRare is built on top of the Ethereum blockchain. In this exclusive NFT marketplace, there are few NFT artists featured. The rare NFT artworks were first created in this market to conserve them in the name of art collection culture. The SuperRare platform is one of the most popular NFT markets in the online world. The digital work had to go through a rigorous review and approval process on this marketplace platform before it could be offered for sale. SuperRare is propelled by the writers' creativity, which ensures that collectors will maximize the value of their NFT collection. This marketplace cannot be compared to OpenSea because it is an exclusive platform and levies a transaction fee of roughly 15% on initial transactions.

Jump.Trade
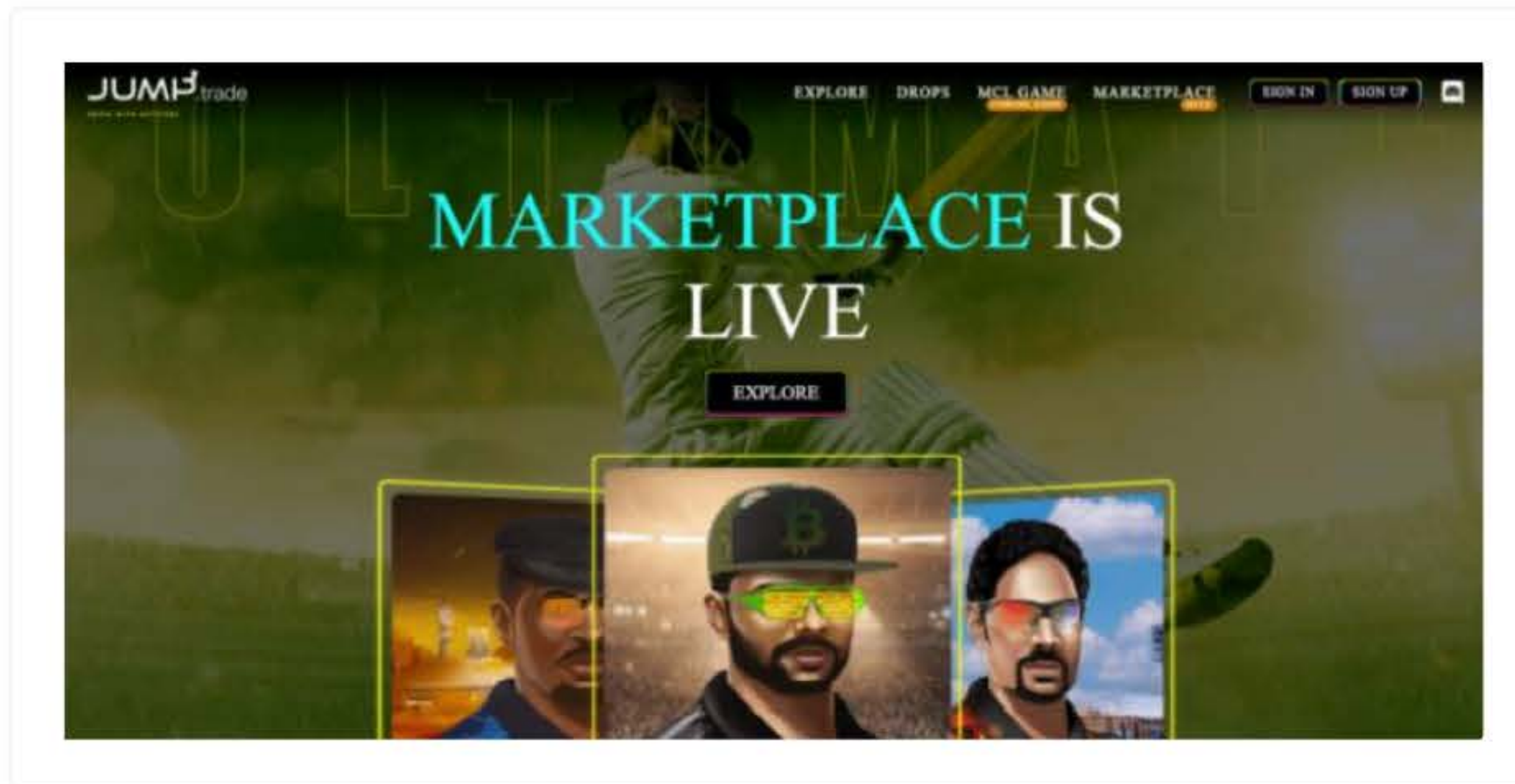
Jump.trade is the best NFT market created on the Polygon blockchain. In this constrained NFT market, a small number of play-to-earn game NFTs, companies, celebrities, and artists exist. This market created rare NFT artworks to conserve them for usage in games, fads, and collections. A lot of hype was created when NFTs were just released on Jump.trade and sold out in less than 9 minutes. The Jump.trade platform is one of the most popular NFT markets in the online world. The marketplace platform required digital assets to undergo rigorous verification and approval before being listed for sale. Jump.trade is powered by creativity and game NFTs, such as the cricket NFTs of the Meta Cricket League. Furthermore, it ensures that collectors will maximize the value of their NFT collection. This market differs from OpenSea because it offers a singular platform for companies, celebrities, and gaming NFTs. The transaction fee is also incredibly minimal on this site.

Rarible
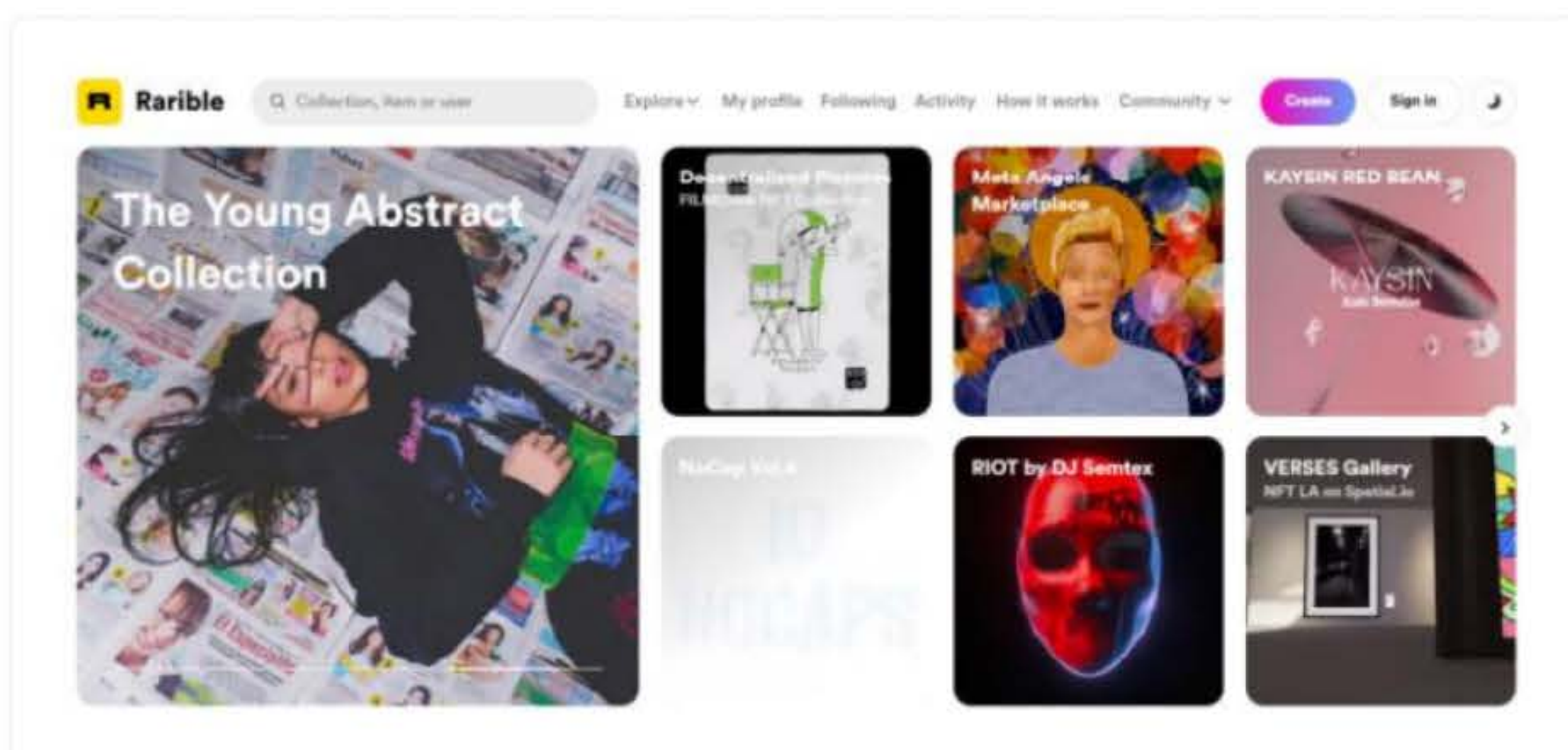
Users can access a range of NFTs for purchasing and selling on the communitybased NFT marketplace Rarible. The platform's intuitive design makes it simple for users to mint and trade NFTs. Rarible supports the Tezos, Flow, and Ethereum blockchains and three others. Thanks to this multi-chain functionality, users can create, buy, and non-fungible trade tokens on any of these potent blockchain platforms in the Rare NFT market.

Axie Infinity

Axie Infinity, a well-known blockchain game, also functions as an NFT market. One of the best NFT gaming marketplaces is this one. Access to the in-game materials is the only purpose of this market. Because of this, it gives individuals the ability to make, exchange, and buy Axies and other in-game goods from the NFT game.
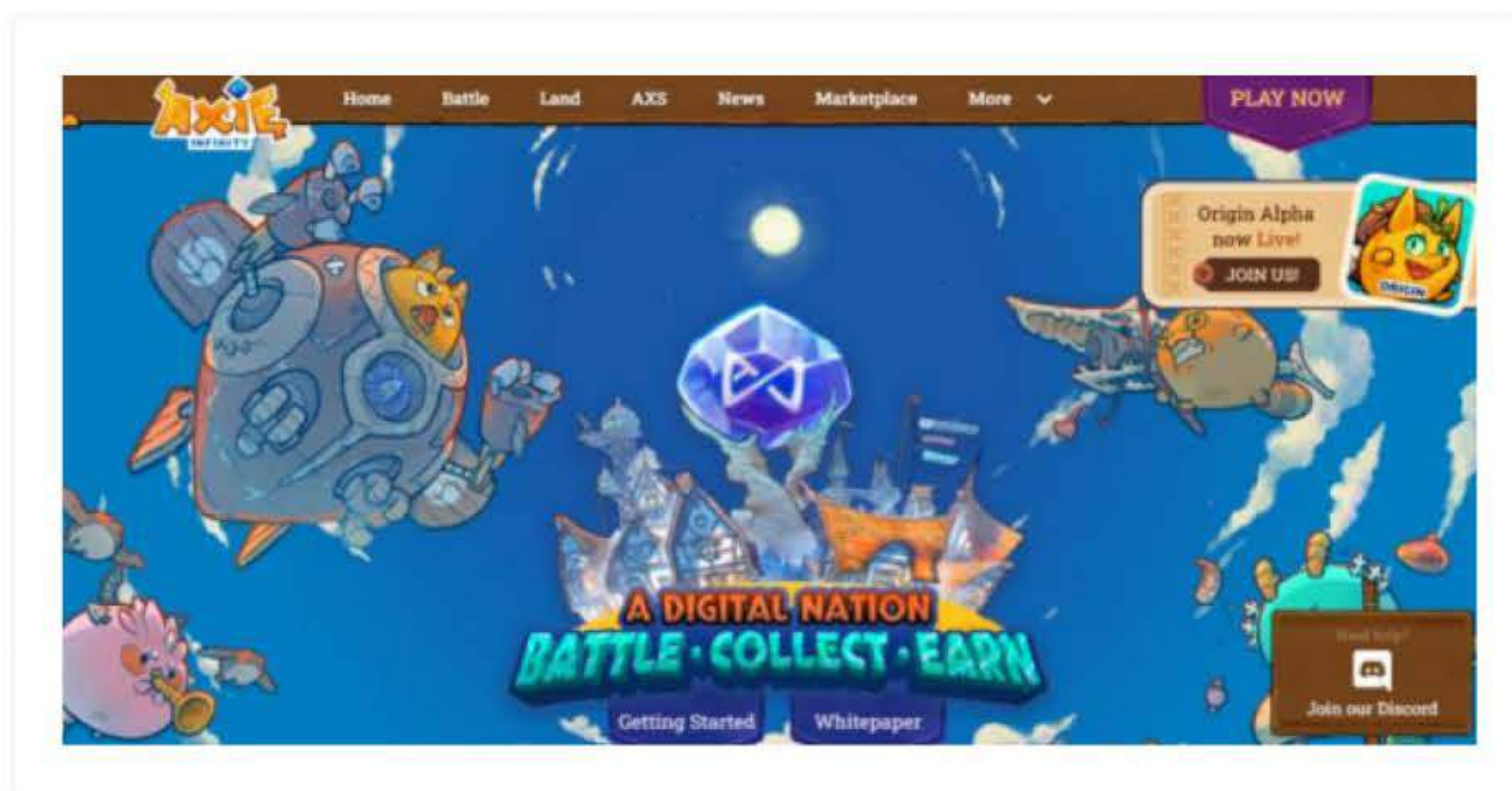
Nifty Gateway
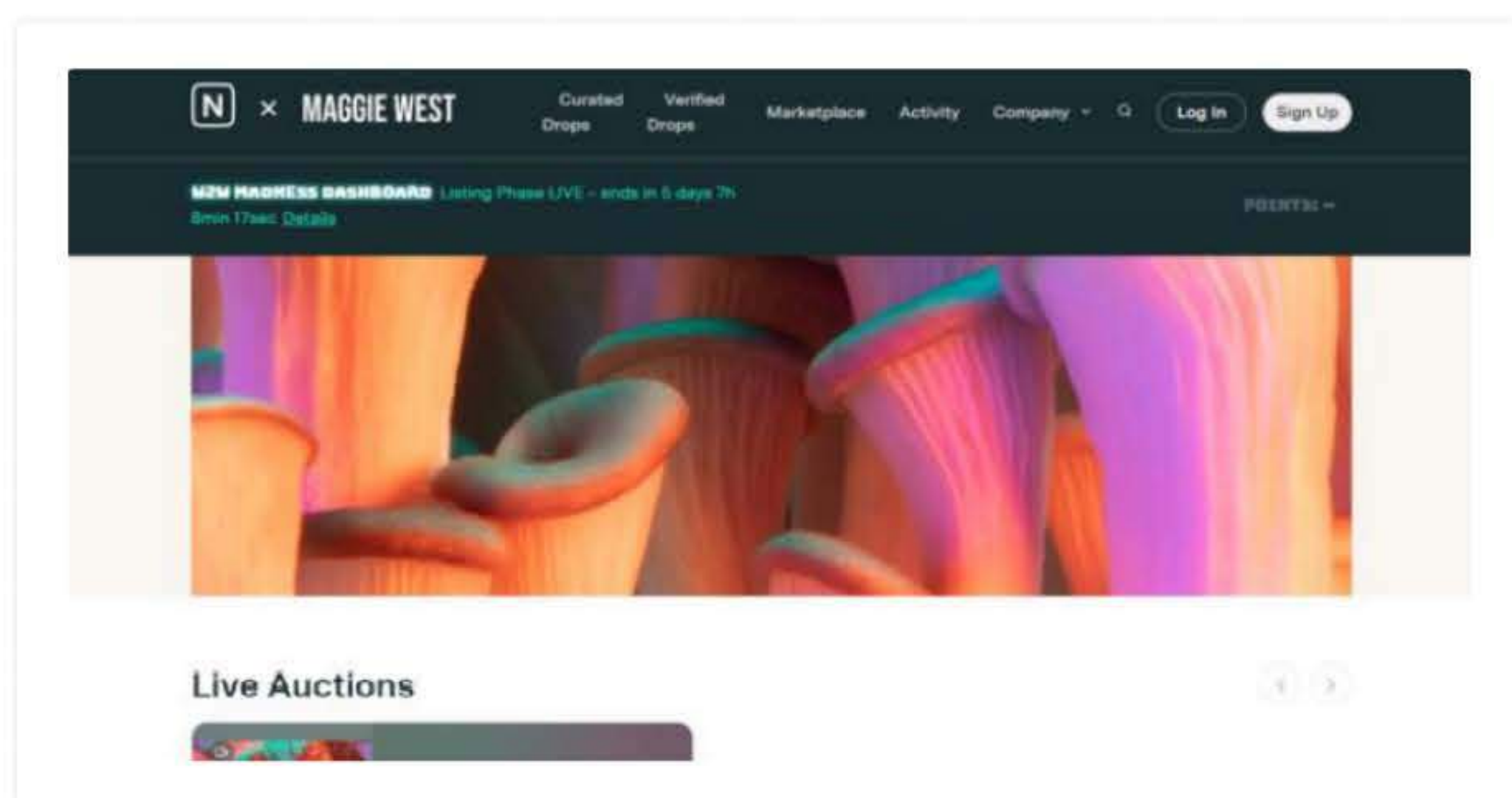
One of the top online markets for NFT is Nifty Gateway. The Winklevoss twins' premier cryptocurrency exchange, Gemini, is in charge of managing this NFT market. On this Ethereum-based marketplace, which is only available for the category of artworks, users can mint, trade, and purchase NFTs. The cornerstone of Nifty Gateway is a sound policy framework that gives originality and creativity the highest emphasis. It is known for having one of the best verification process systems in the world.

Solanart

Solanart is one of the top NFT marketplaces recently hitting the web market. This NFT marketplace is built on the Solana blockchain. Users can mint, sell, and buy NFTs produced on the Solana blockchain through this gateway. Even though the digital market is relatively new, the total trade volume is an incredible $500 million.

Binance

This NFT market is being created on the Binance Smart Chain network. On this NFT marketplace, users can buy, sell, and exchange all kinds of NFT collectibles and pieces of art. The platform's strength is its ability to draw in a broad user base because it was created by the leading cryptocurrency exchange platform Binance. Artists, creators, crypto enthusiasts, and passionate art buyers join the site to trade and generate NFTs.
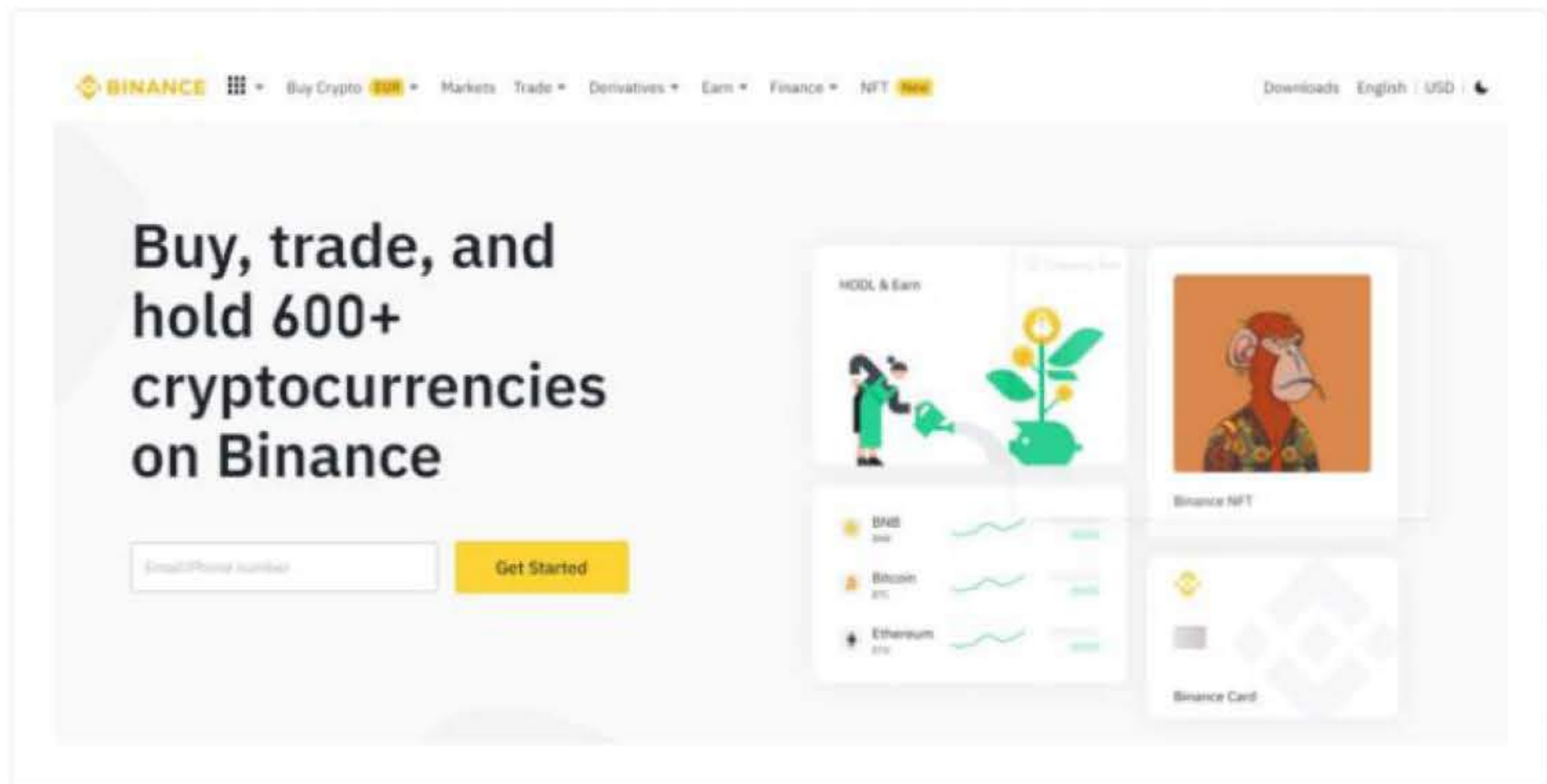
The NBA Top Shot
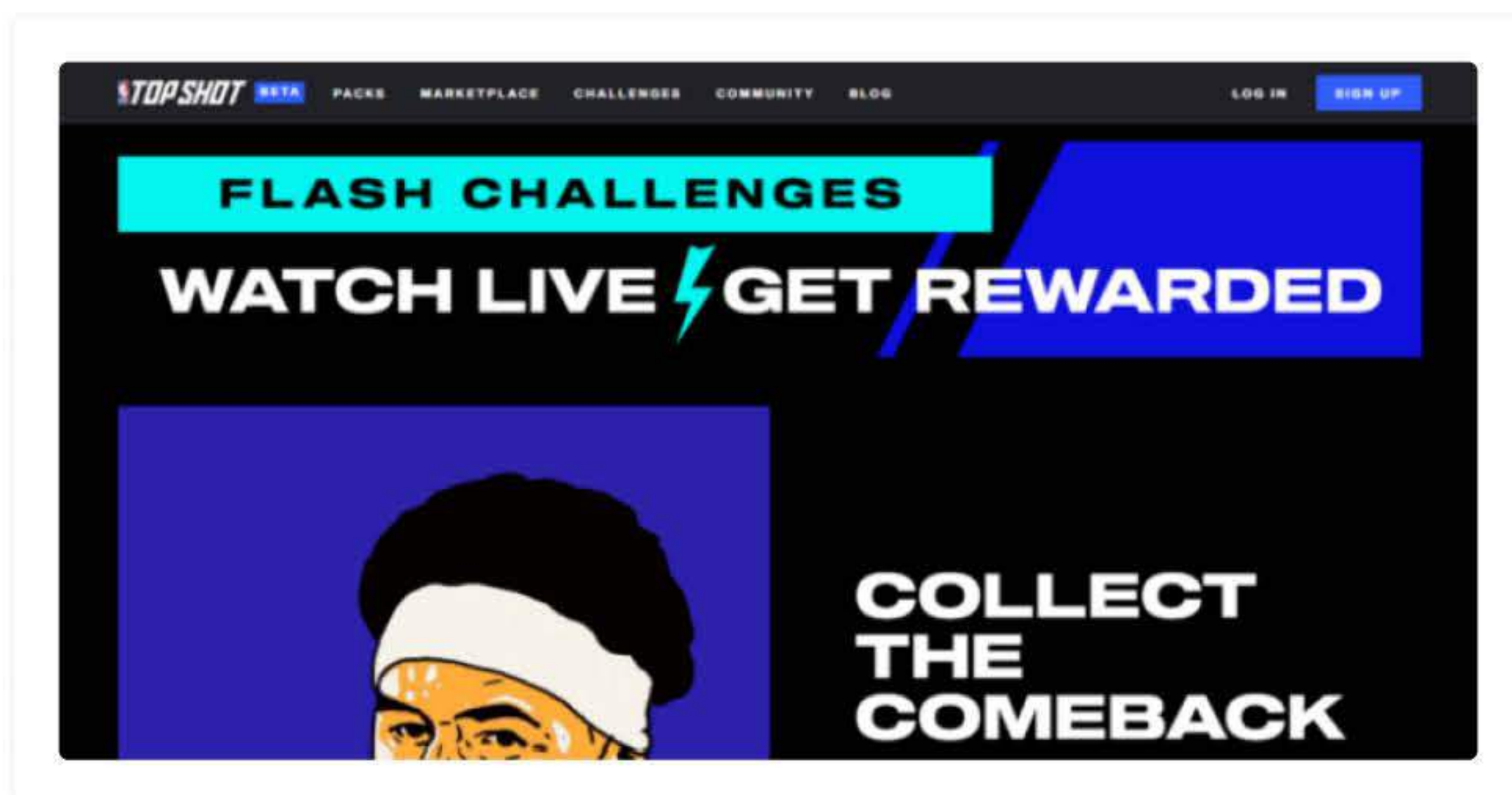
NBA Top Shot is a Flow network-based NFT market where basketball enthusiasts may buy, sell, and trade NBA-related NFTs. The sole focus of this niche NFT market is the National Basketball Association league. As a result, NBA fans can amass astonishing sums of riches there.

Decentraland
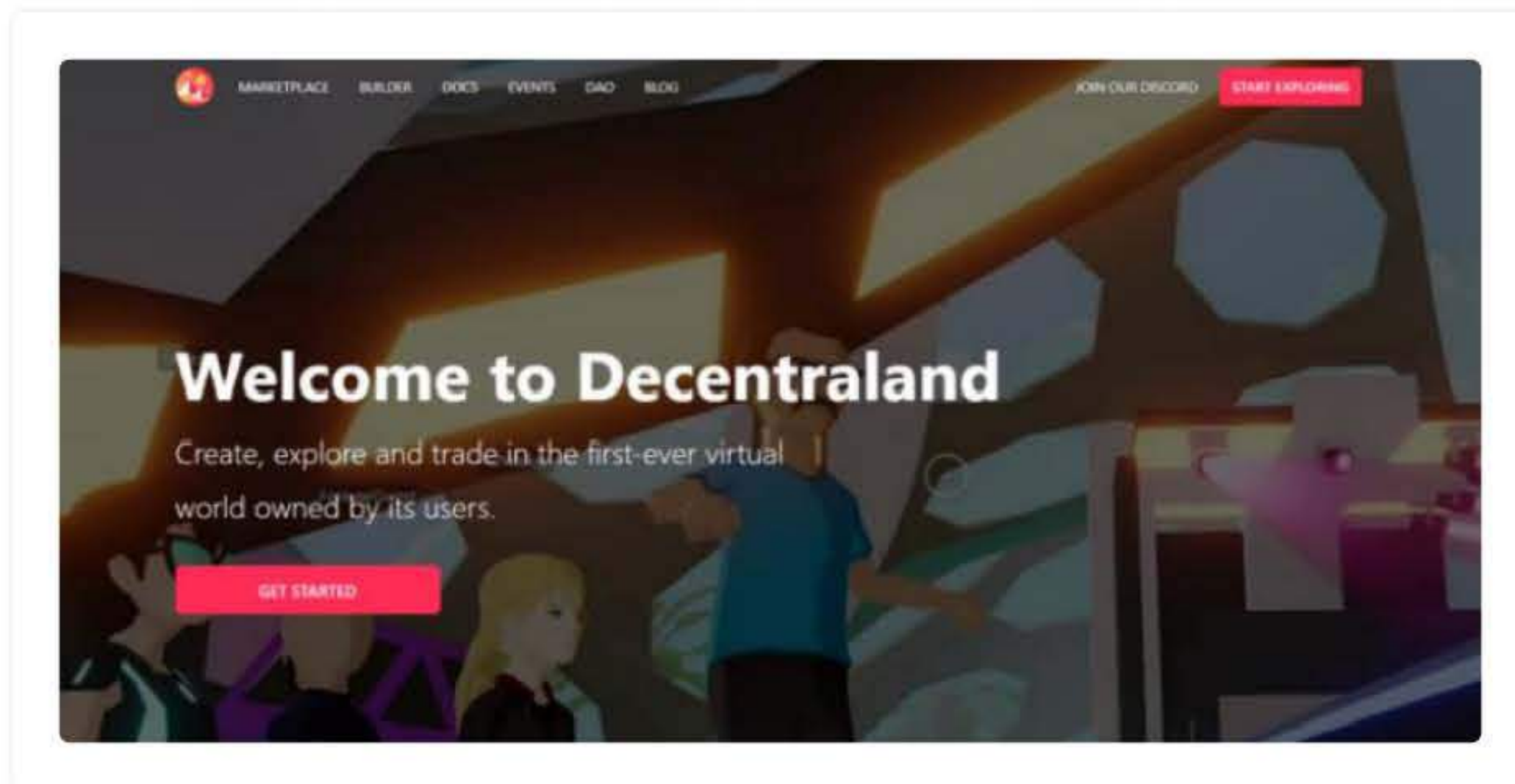
Decentraland is both an NFT market and a play-to-earn game in a virtual world. This NFT market is being built on the Ethereum blockchain. Thus, the NFT creators and collectors can exercise complete control over their works. The digital materials of Decentraland, the game's virtual reality universe, will be completely accessible to players. The native token used on the platform for asset trading is called MANA.

Stashh
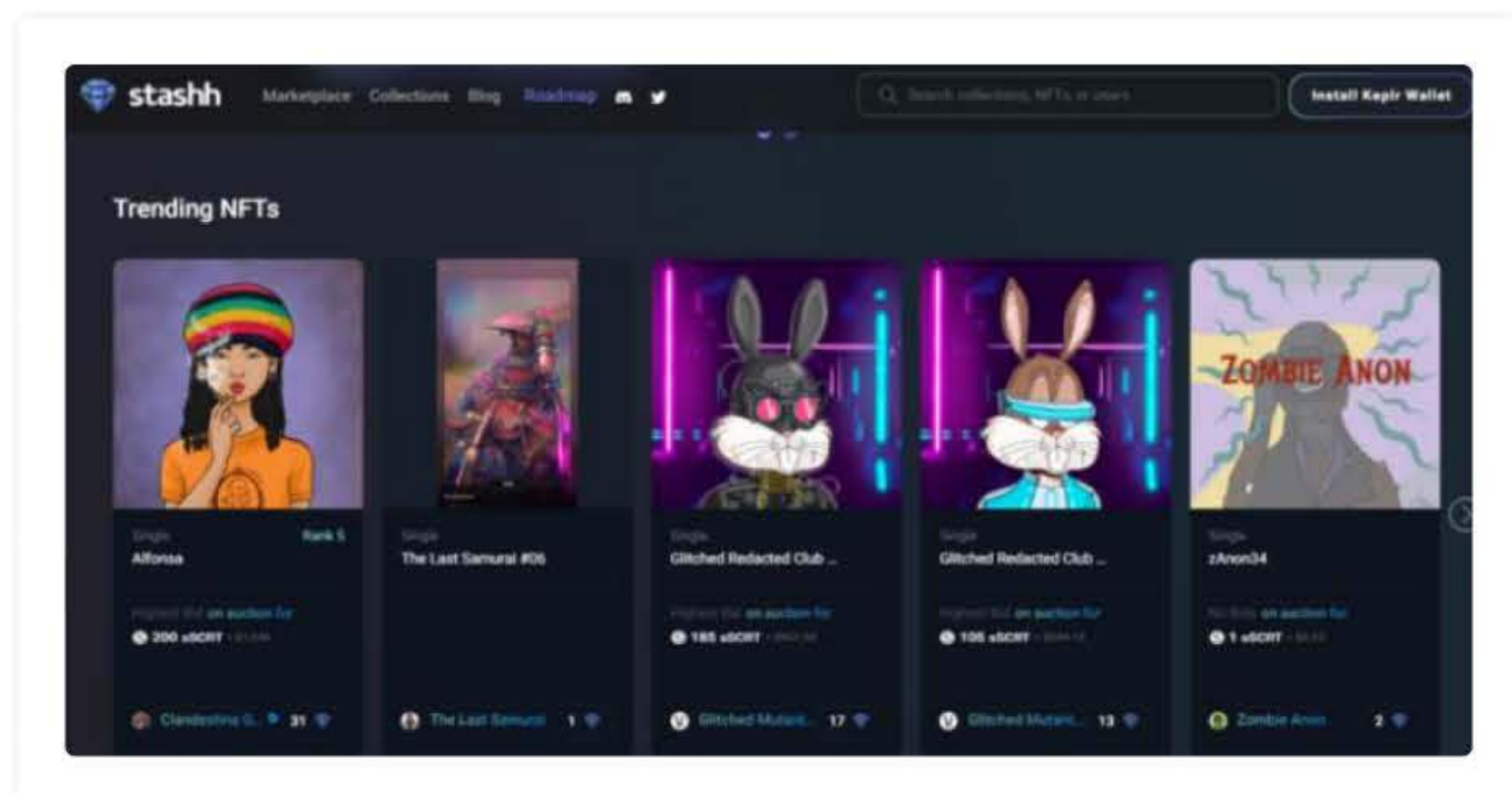
Stashh, one of the major NFT exchanges, is recognized for protecting its users' privacy. NFT creators can start trading with collectors with the aid of Stashh, monetizing their work and safeguarding their intellectual property. It thus allows customers complete discretion over how the trading transaction should go.

The core of non-fungible trading tokens is NFT marketplaces. The NFT marketplace generates revenue by charging consumers transaction fees. Every NFT marketplace has its specific set of rules and guidelines regarding transaction costs. Therefore, the transaction cost can vary based on the platform's user volume. The main way that NFT marketplaces generate revenue is through transaction fees.

WEB 3.0 HACKS IN 2022

Web3 projects have lost more money to hacks and exploits in the first half of 2022 than they did in the entire year of 2021: more than $2 billion.

According to CertiK's blockchain auditing and security research, published in its most recent Web3 security report covering Q2 of this year, this is the case. The study presents a sad image of a cryptocurrency market still rife with hacks, phishing attempts, and frauds. It also highlights relatively recent concerns like flash loan attacks.

The creation of flash loans, a decentralized financing system that gives borrowers access to extraordinarily huge sums of cryptocurrency for very short periods, has produced this fourth kind of threat, which CertiK focuses on in particular. Flash loans can, if used maliciously, be used to purchase up all the governance tokens in a project and vote to withdraw all the funds, as happened to Beanstalk in April, or to manipulate the value of a particular token on exchanges.

According to CertiK's study, a total of $308 million was lost across 27 flash loan attacks in Q2 2022. This is a significant rise from the $14 million losses caused by flash loans in Q1.

Between Q1 and Q2 of this year, phishing attacks also grew in frequency; CertiK recorded 290 in the most recent quarter compared to 106 in the year's first three months. Despite persistent security concerns, Discord became a popular social network for the cryptocurrency and NFT community and was the main target of most phishing efforts.

Even though tens of millions of dollars were lost in so-called "rug pulls," which involve a project's founders stopping work and stealing the funds, this is a slightly more encouraging development. A total of $37.46 million, or 16.5 percent less than the prior quarter, was lost to rug pulls in Q2 of this year, according to CertiK. However, the report attributes a large portion of this decrease to the current crypto winter, which may scare away less seasoned investors who are more likely to be duped by fraudulent projects.

Numbers Of DeFi Vulnerabilities

According to the REKT Database of cyber-attacks, the overall loss from scams, hacks, and exploits for DeFi protocols is $4.75 billion. Only $1 billion of the $4.75 billion lost was reimbursed. Only 21% of all money lost due to cyberattacks has been recovered. Currently, 2,782 attacks have been reported to REKT Database. The most common cyber-attack is a honeypot, followed by flash loans, access controls, exit scams, and exploits.

In the past year, there have been a gradually increasing number of DeFi cyberattacks. DeFi REKT reports that $1.4 billion in total money have been lost so far this year. The most significant DeFi cyberattacks from the previous year are listed below, along with the tokens and protocols they affected.

Ronin

Loss: $615.5 million
Date: March 29, 2022
Type: Exploit

The largest DeFi vulnerability ever discovered was made public by the Ronin Validator Security Breach. The hacker stole 25.5 million USDC and 173,600 ETH from Ronin Bridge in just two transactions.

The Ronin and Axie DAO validator nodes of Sky Mavis were taken advantage of on March 23. The offender hacked private keys and then used them to make fictitious withdrawals. Ronin used a decentralized validator key mechanism, which is important to note. However, a decentralized validation mechanism contained a backdoor that the attacker discovered. They used a gas-free RPC node in particular to get the signature for the Axie DAO validator.

On April 14, the FBI discovered that the exploit was the work of the North Korean hacker collective Lazarus Group. The organization is also known as "Appleworm," "Group 77," "APT-C-26," and "Hidden Cobra," according to the US Department of the Treasury. The US Department of Treasury authorized the ETH address that received the funds. The Ronin exploit is currently the largest DeFi hack.

Wormhole

Loss: $326 million
Date: February 2, 2022
Type: Exploit

The hacker allegedly took advantage of a security flaw in the signature verification process. The hacker earned 120,000 wETH on Solana thanks to this exploit.

155

Beanstalk

Loss: $181 million
Date: April 18, 2022
Type: Flash Loan

This attacker took advantage of a 1-day delay in the $BEAN governance proposal contract to complete a flash loan. The attacker could control more than 70% of all the seeds thanks to the flash loan. The attacker gained access to 32 million BEAN, 500 million USDC, 350 million DAI, and 11.6 million USD. The largest flash loan hack to date is called the Beanstalk attack.
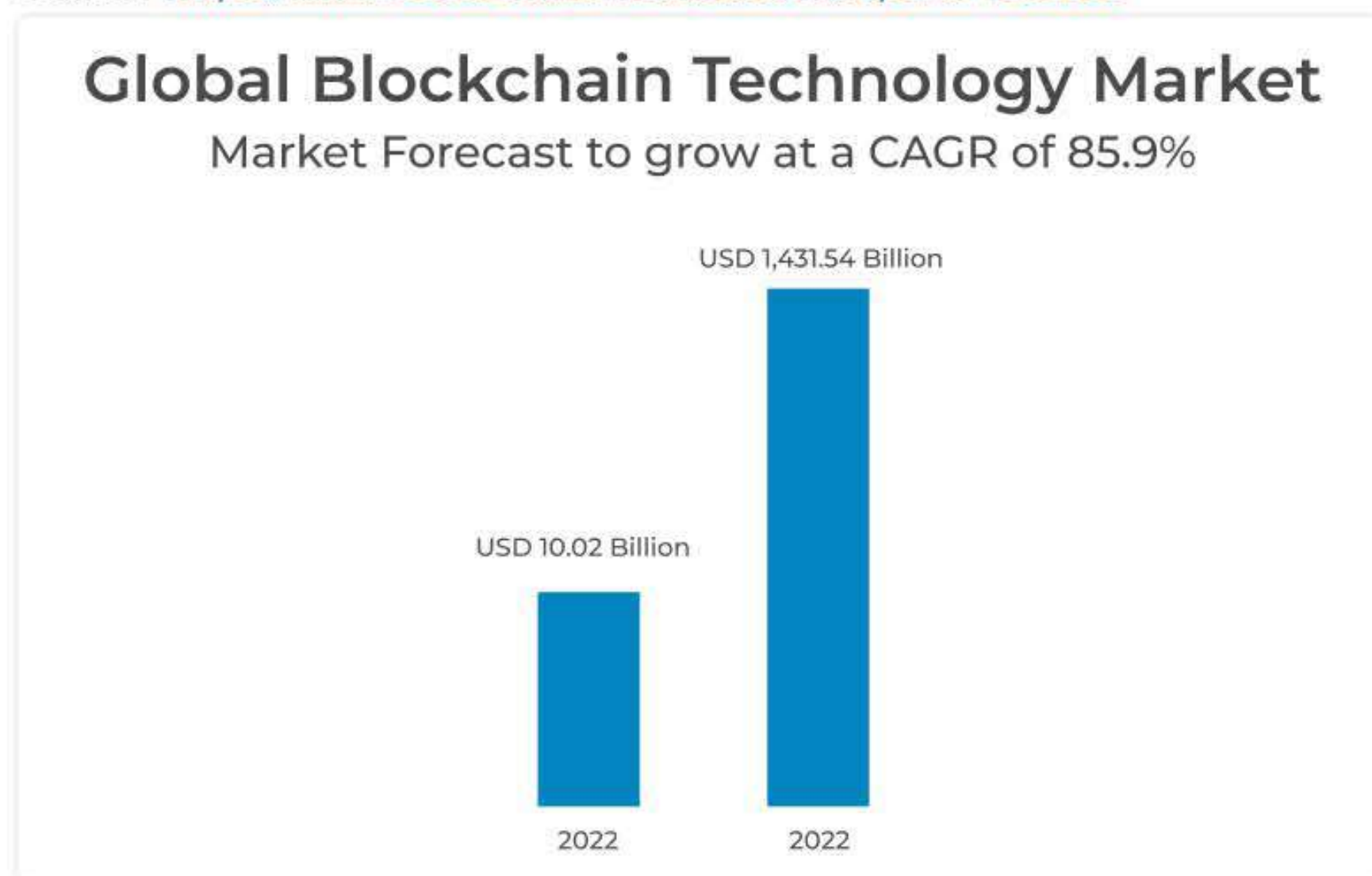
A recent Federal Trade Commission (FTC) investigation found that since early 2021, about 46,000 Americans have reported losing more than $1 billion in cryptocurrency to scammers.

WEB 3.0 FORECAST REPORT

BLOCKCHAIN FORECAST REPORT

By 2030, the market for blockchain technology is anticipated to be worth USD 1,431.54 billion, expanding at a CAGR of 85.9% from 2022 to 2030. The market expansion can be attributable to the BFSI industry's growing digitalization. Additionally, the market is anticipated to be driven by the expanding adoption of contactless blockchain digital ticketing at various events. Additionally, the increasing use of cryptocurrencies is expected to fuel market expansion. This is so because blockchain technology underlies the operation of cryptocurrencies like bitcoin and Ethereum. The advantages of cryptocurrencies, like simple transactions, an inflation hedge, and improved security, are driving up demand.

Source : *https://www.researchandmarkets.com/reports/4852039*

Global Blockchain Technology Market
Market Forecast to grow at a CAGR of 85.9%

USD 1,431.54 Billion

USD 10.02 Billion

2022   2022

In 2021, more than 300 million people utilized or owned cryptocurrencies globally, according to data given by TripleA, a cryptocurrency solutions provider. Due to benefits like protecting sensitive data, lower costs, and better efficiency, blockchain technology is becoming increasingly popular in the government sector, driving the market's expansion. Applications based on blockchain technology are in demand from several government organizations, including the Department of Homeland Security (DHS) in the United States, to improve their data security.

Startups are receiving funding from the DHS to perform research and development into innovative uses of blockchain technology in cyber security. Over the projection period, the COVID-19 pandemic is anticipated to have a favorable effect on market growth. The COVID-19 epidemic is predicted to increase online sales, increasing demand for blockchain technology among e-commerce businesses. E-commerce businesses utilize this technology for supply chain management.

Highlights Of The Blockchain Technology Market Report

- The public cloud sector is anticipated to dominate in terms of type over the projection period. Governments' increasing preference for quick and transparent transactions propels the segment's expansion.

- The infrastructure & protocol sector dominated the market in 2021 regarding components, and it is anticipated to increase significantly over the next few years. Network developers strongly need infrastructure and protocol since it enables them to create unique networks for their customers.

- In 2021, the payments industry led the market in terms of application. The capacity of blockchain technology to streamline payments by lowering the number of middlemen, which helps lower transaction costs, can be credited to the segment's rise.

- In 2021, the large enterprise sector led the market in terms of enterprise size. Influential organizations have quickly adopted blockchain technology to offer digital services across various business channels, accelerating the segment's growth in 2021.

- In 2021, the financial services sector led the market regarding end-use. The financial service companies' growing investment in this technology drove the segment's rise in 2021.

- Throughout the projection period, the growing adoption of technology in developing nations like China and India would present growth possibilities for market players in the Asia Pacific region.

Source : *www.grandviewresearch.com*

U.S. Blockchain Technology Market

Size, By Type, 2022-2030 (USD Billion)

$1.1B $1.78B

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

■ Public Cloud   ■ Private Cloud   ■ Hybrid Cloud

84.5%

U.S Market CAGR, 2022-2030
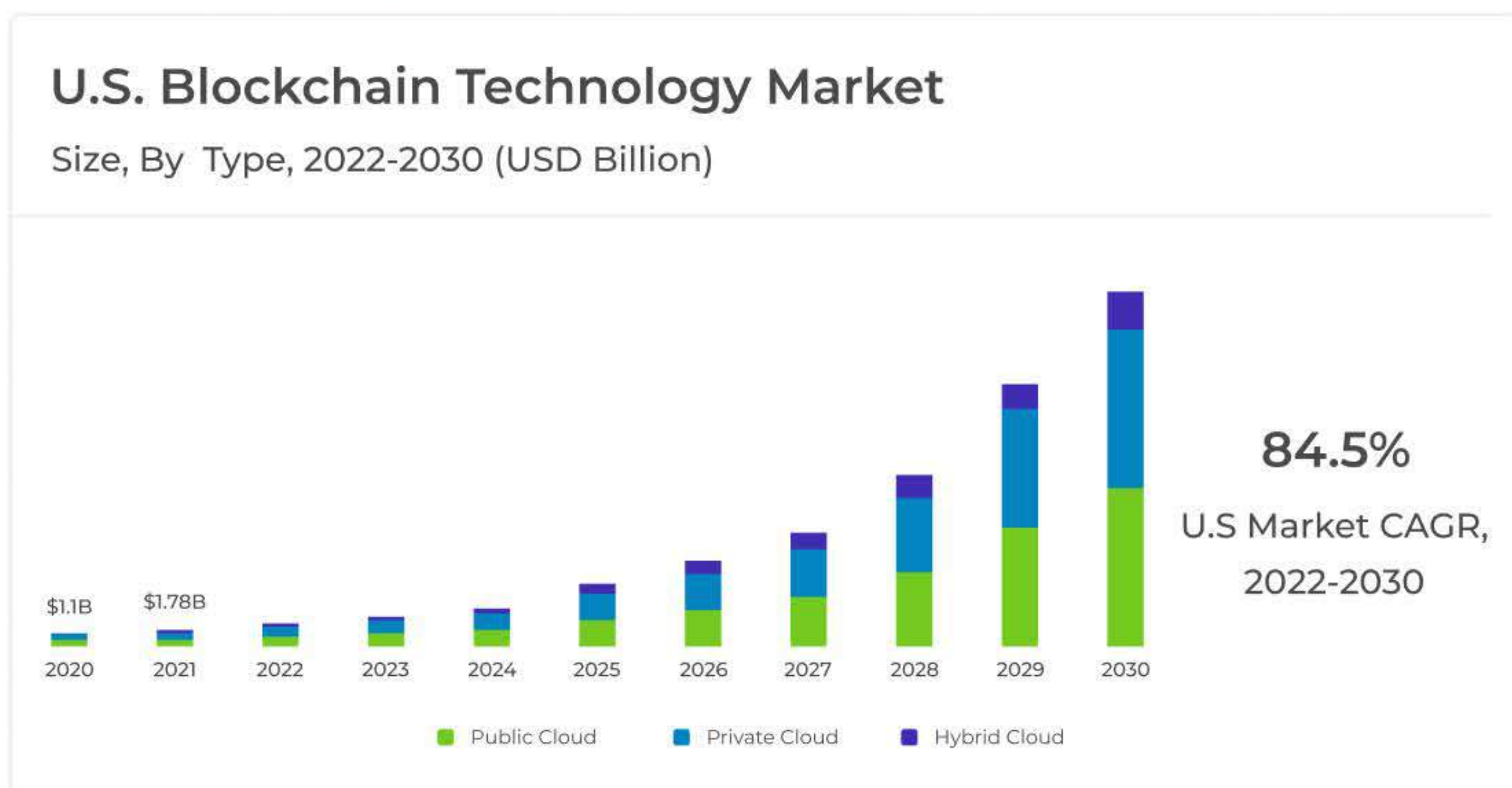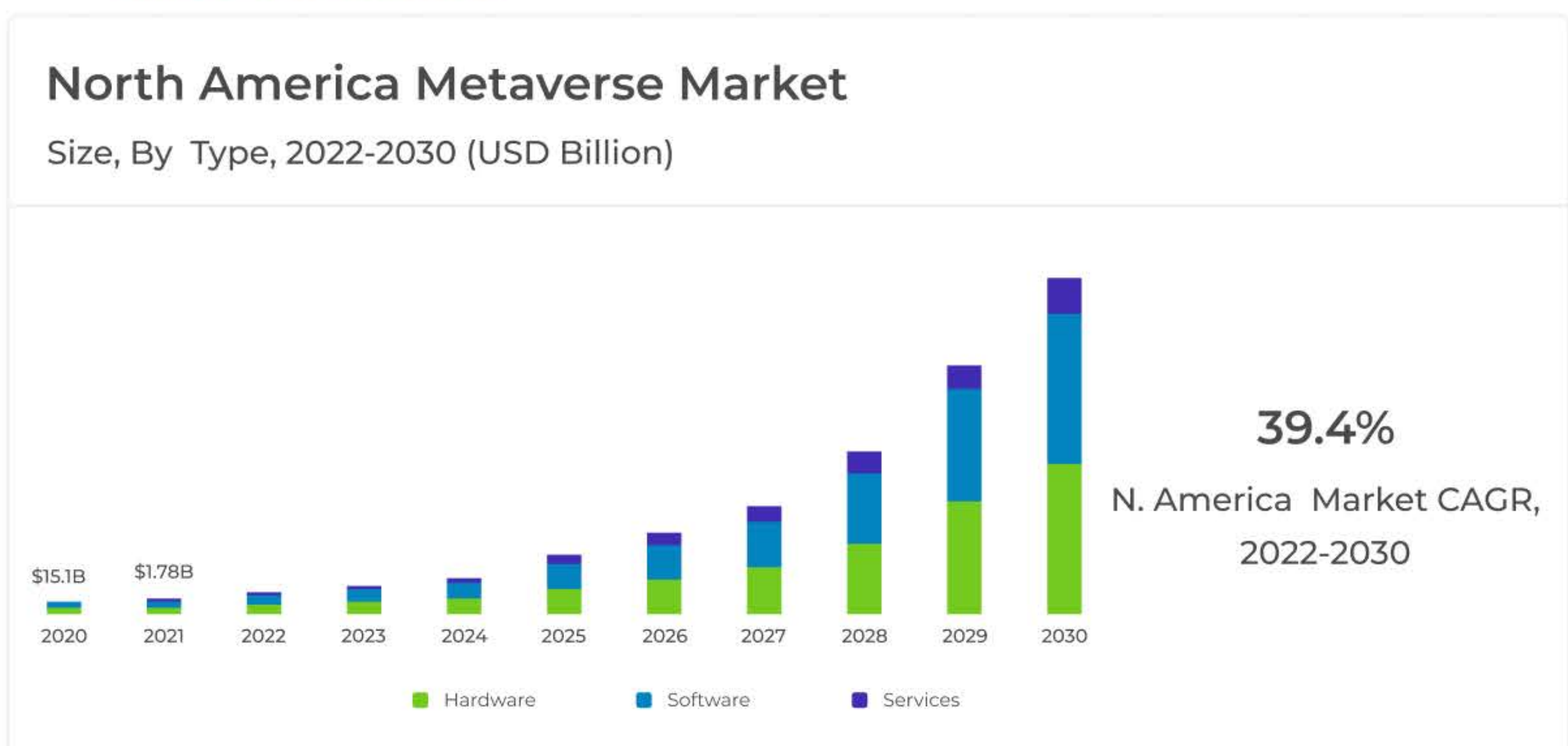
METAVERSE FORECAST REPORT

The nine essential technologies make are networking hardware and cloud infrastructure, data governance and security, blockchain and cryptocurrencies/NFTs, AI/ML, AR and VR, AdTech (Internet advertising), gaming, enterprise apps, and payments platforms up the metaverse.

Consumer use cases are the main emphasis of the metaverse's marketing. Gaming and social media companies are leading the way, but businesses will take the lead in five years. The future of work and ongoing digital transformation initiatives in various industries, including retail, healthcare, and financial services, will be the driving forces behind this change. The metaverse is being promoted by Big Tech, including Microsoft and Meta, as the ideal setting to facilitate hybrid working.

GlobalData predicts that from 2021 to 2030, the global metaverse market will increase from USD 22.79 billion to USD 996.42 billion, with a CAGR of 39.8%. It is the upcoming major trend in digital media, and VR & AR are key technologies fostering its growth. With the help of these two technologies, the metaverse will become immersive, enabling users to interact with virtual things, characters, and settings

An executive-level overview of the global market and thorough projections of key indicators through 2030 are provided in the metaverse market research report. Indepth analyses of the near-term potential, competitive dynamics, and demand evolution by verticals and component stack across significant regional and national markets are provided in the yearly report. The analysis also includes a thorough overview of major factors, such as technological and governmental changes, along with their current and anticipated effects on overall demand.

Source : *www.grandviewresearch.com*

North America Metaverse Market

Size, By Type, 2022-2030 (USD Billion)

$15.1B $1.78B

39.4%

N. America Market CAGR, 2022-2030

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

■ Hardware   ■ Software   ■ Services

Vertical Perspectives

The metaverse market revenue opportunity has been evaluated for industries such as BFSI, retail, education, media & entertainment, aerospace & defense, manufacturing, and others.

Banking, Financial Services, and Insurance (BFSI) market: Through Decentraland the Sandbox, respectively, banks like JP Morgan and HSBC have already made their way into the metaverse. JP Morgan created the Onyx customer lounge to increase social interaction, and HSBC bought a plot in The Sandbox to interact with sports, esports, and gaming enthusiasts. Trading debut for investors interested in equities, cryptocurrencies, and other ventures in the metaverse, eToro offers MetaverseLife, a smart portfolio. Over the forecast period, BFSI is expected to expand rapidly, accounting for a sizable portion of the revenue opportunity in 2021.

Numerous banks now provide digital assets and tailored platforms that can be expanded to meet the needs of the virtual world. Banks can anticipate that these platforms will be developed, supported by new marketplaces and products, and bound to established infrastructure.

Retail Market

By establishing connections with customers, learning about their experiences, and understanding the products they choose to purchase, retailers and brands are already considering how new technology may affect their business. Big brands have taken advantage of the opportunity. During the pandemic, Gucci teamed up with Roblox and developed a Gucci garden with games that gave players a chance to win limited-edition Gucci goods. Additionally, it has offered the limited-edition Dionysus Bag for $4,100 in Robux (Roblox's virtual currency), which is more than the cost of a genuine bag. Gucci uses NFTs and virtual land on The Sandbox and Decentraland as well.

The media and entertainment industry is working toward Web 3.0, connecting people, places, and things. Web 2.0 connected people and transformed many things, such as social media. People, places, and objects can occasionally exist in a completely synthetic virtual environment or a somewhat enhanced version of our real reality. The term "metaverse" encompasses various technologies, including blockchain, augmented reality, virtual reality, artificial intelligence, and 5G.

Despite the market's infancy, brands and retailers must understand the potential effects of this technology, particularly on the development of consumer needs, desires, and expectations and their business model.

Global Metaverse Market 2022-2026

Market growth will **ACCELERATE** at a **CAGR** of
33.26%

Growth contributed by **NORTH AMERICA**
38%

Incremental Growth ($8)
677.98

Growth for **2022**
28.73%

The market is **FRAGMENTED** with **SEVERAL** players occupying the market

Global Mountain Biking Equipment Market 2022-2026

CAGR of (2021 -2026)
4.60%

Growth difference
$3.99 bn

2021
Base Year

2026
Final Year

The market is **FRAGMENTED** with **SEVERAL** players occupying the market sharing

One of the **key drivers** of the market will be the **rising number** of mountain bicycle clubs and events

Key Players

- Active Brands AS
- Endura Ltd.
- EssilorLuxottica
- Fox Racing Inc.
- Gaint Manufacturing Co.Ltd.

40%
of the growth will originated from **North America**

Market Segmentation By Product

- Protective Gears
- Mountain Biking Tools

METAVERSE MARKET

CAGR (2022-2028)
China virtual platform: >40%

CAGR (2022-2028)
AR/VP headsets: >46%

CAGR (2022-2028)
Brazil gaming application: >30%

Share (2021)
Mobile platform: >35%

CAGR (2022-2028)
Social media application: >40%

CAGR (2022-2028)
Asset marketplace: >45%

NA	Market Value (2028)	APAC	Market Value (2028)	CAGR (2022-2028): >35%	
	~$120 BN		~$145 BN	2021 ~$60 BN	2028 ~$500 BN

Global Market Insights
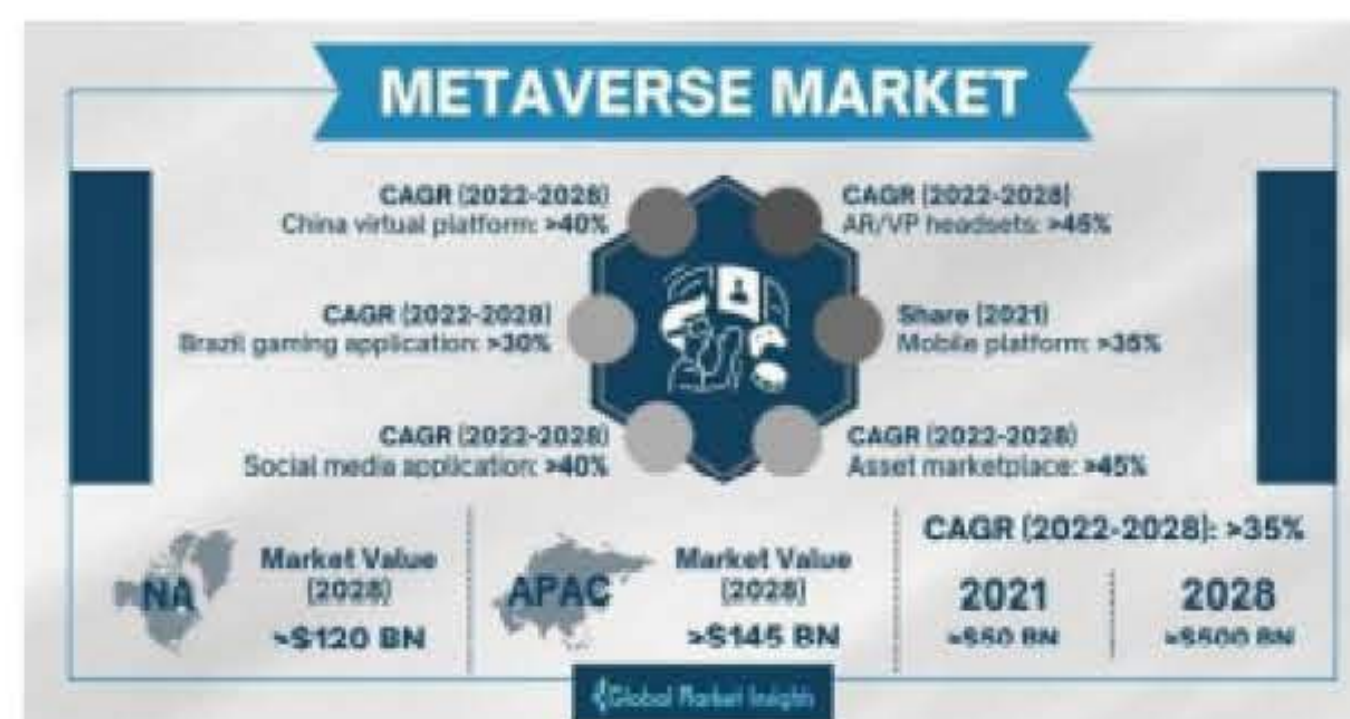
CRYPTOCURRENCY FORECAST REPORT

The worldwide market for cryptocurrencies, valued at USD 4.25 billion in 2021, is anticipated to rise at a CAGR of 12.2% from 2022 to 2030. Virtual currency, commonly known as cryptocurrency, operates excl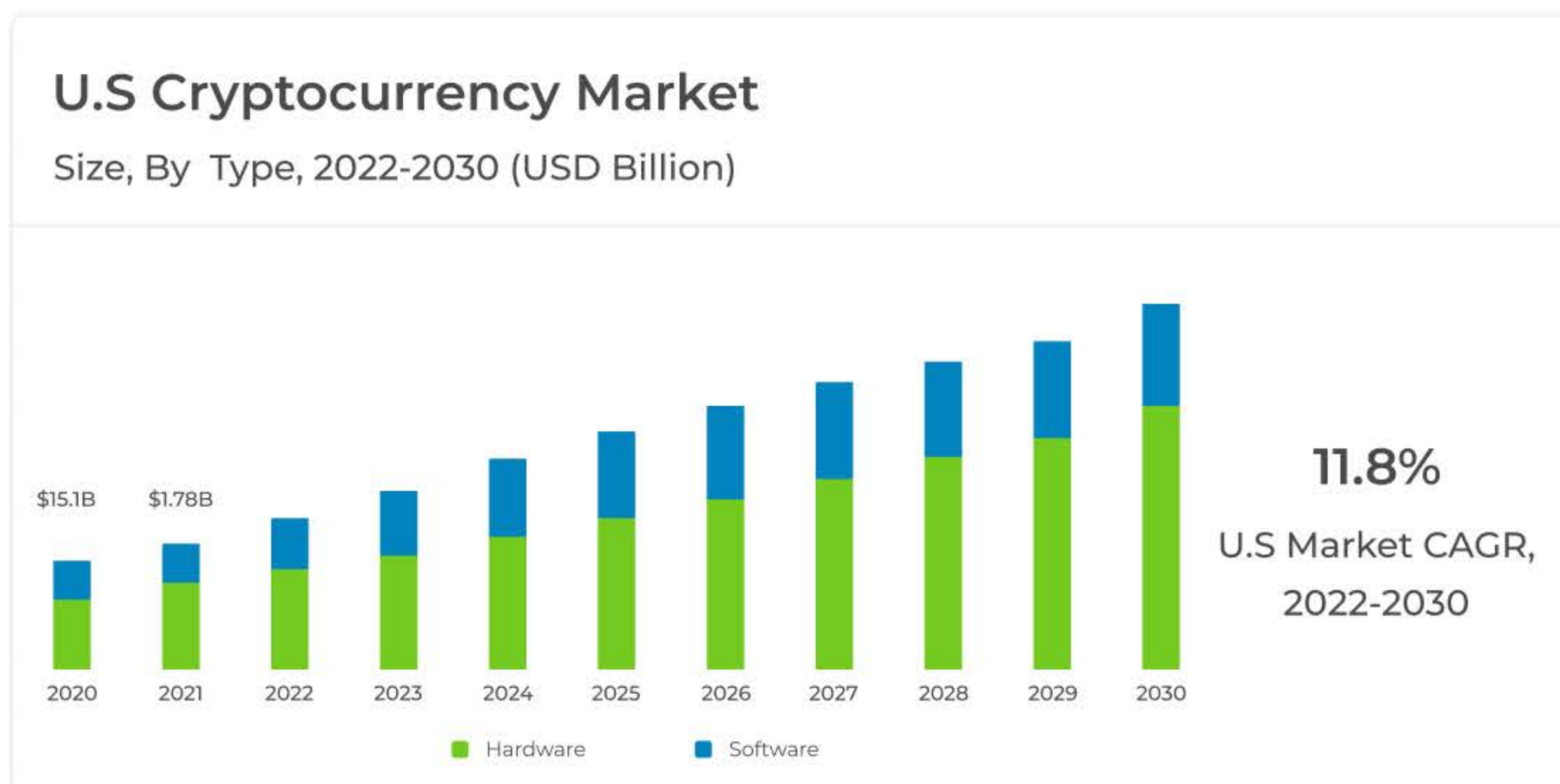usively online and is ungoverned. Transactions are validated by cryptocurrency using distributed ledger technology, such as blockchain. The growing use of distributed ledger technology will fuel market expansion within the projected time. Additionally, the decline in consumer fees and exchange costs is anticipated to stimulate market growth as the use of cryptocurrencies for cross-border transfers rises.

The cryptocurrency business is anticipated to be significantly impacted by recent advancements in artificial intelligence (AI). Numerous companies decided to concentrate on developing AI technology due to the increased popularity of AIbased cryptocurrency platforms. For instance, Los Alamos National Laboratory researchers created an artificial intelligence algorithm in August 2021 to recognize unauthorized cryptocurrency miners who utilize research computers for cryptocurrency mining

Source : *www.grandviewresearch.com*

U.S Cryptocurrency Market

Size, By Type, 2022-2030 (USD Billion)

$15.1B $1.78B

11.8%

U.S Market CAGR, 2022-2030

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

■ Hardware   ■ Software

In addition, the development of cryptocurrencies as a decentralized asset class has drawn investments from private venture firms. For instance, 106 transactions totaling USD 6.1 billion were made in the US cryptocurrency market in 2021. With the rising demand for cryptocurrencies as a substitute for fiat money in developing nations with depreciating currencies, such as Iran, Argentina, and Zimbabwe, the expansion is further aided.
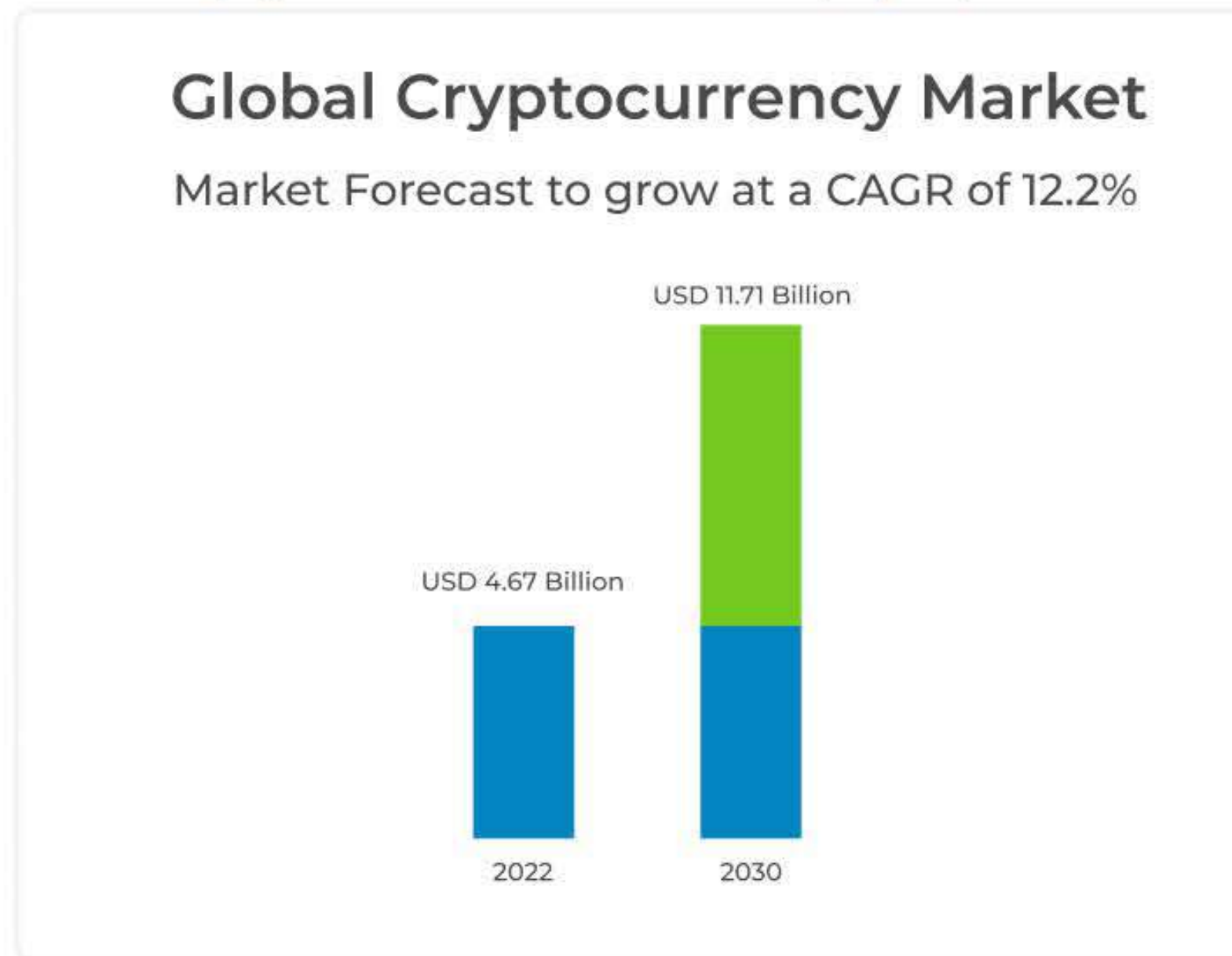
The increasing number of companies that now accept cryptocurrencies as an official payment method is one of the factors driving the expansion of digital currency. Additionally, it is projected that adopting digital currency by well-known companies like Tesla Inc. and MasterCard Inc. will accelerate industry growth. For instance, financial services company MasterCard Inc. permitted its network partners to enable its consumers to buy, trade, and hold digital currency via a digital wallet starting in November 2021. Additionally, the company provided rewards in digital currency to customers who participated in loyalty programs

Source : *Poloris Market Research Analysis*

Cryptocurrency Market Size, By Region, 2018-2030

(USD Billion)

Government agencies throughout the world are concentrating on creating rules to control cryptocurrencies. The European Union drafted the Markets in Crypto Assets (MiCA) law to establish a legal framework for the market for crypto assets. A 30.0% tax on any income derived from the transfer of digital currencies was also announced by the Indian government in February 2022, marking another step toward the legalization of cryptocurrencies. As local currencies weaken, cryptocurrencies like Bitcoin have become popular in high-inflation nations like Argentina, Zimbabwe, and Brazil.

Global Cryptocurrency Market

Market Forecast to grow at a CAGR of 12.2%

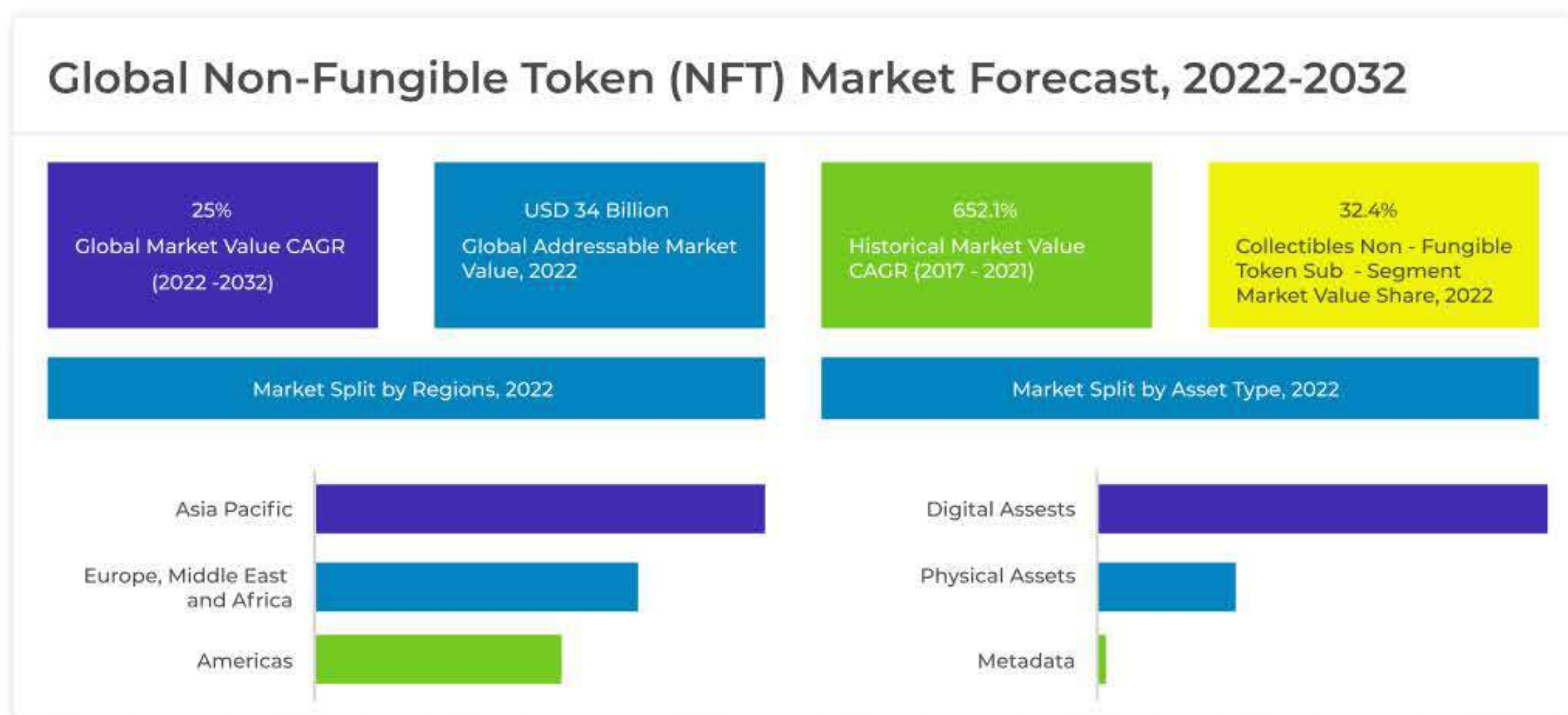USD 11.71 Billion

USD 4.67 Billion

2022   2030

Despite the fact that bitcoin uses cutting-edge financial technology, the absence of laws and a single accepted method for exchanging digital currency is predicted to limit its expansion. The use of cryptocurrencies for illegal reasons worries regulators worldwide, which poses a substantial obstacle to the market's growth. However, law enforcement organizations are working to seize cryptocurrency obtained illegally, encouraging the market's expansion. For instance, the IRS Criminal Investigation seized over USD 3.5 billion in cryptocurrencies in November 2021.

NON-FUNGIBLE TOKENS FORECAST REPORT

In 2021, the non-fungible token (NFT) industry experienced explosive growth, with global revenue increasing by 27,759% yearly. By 2032, non-fungible token sales are expected to increase about 12X globally, reaching a market value of US$ 316.7 billion.
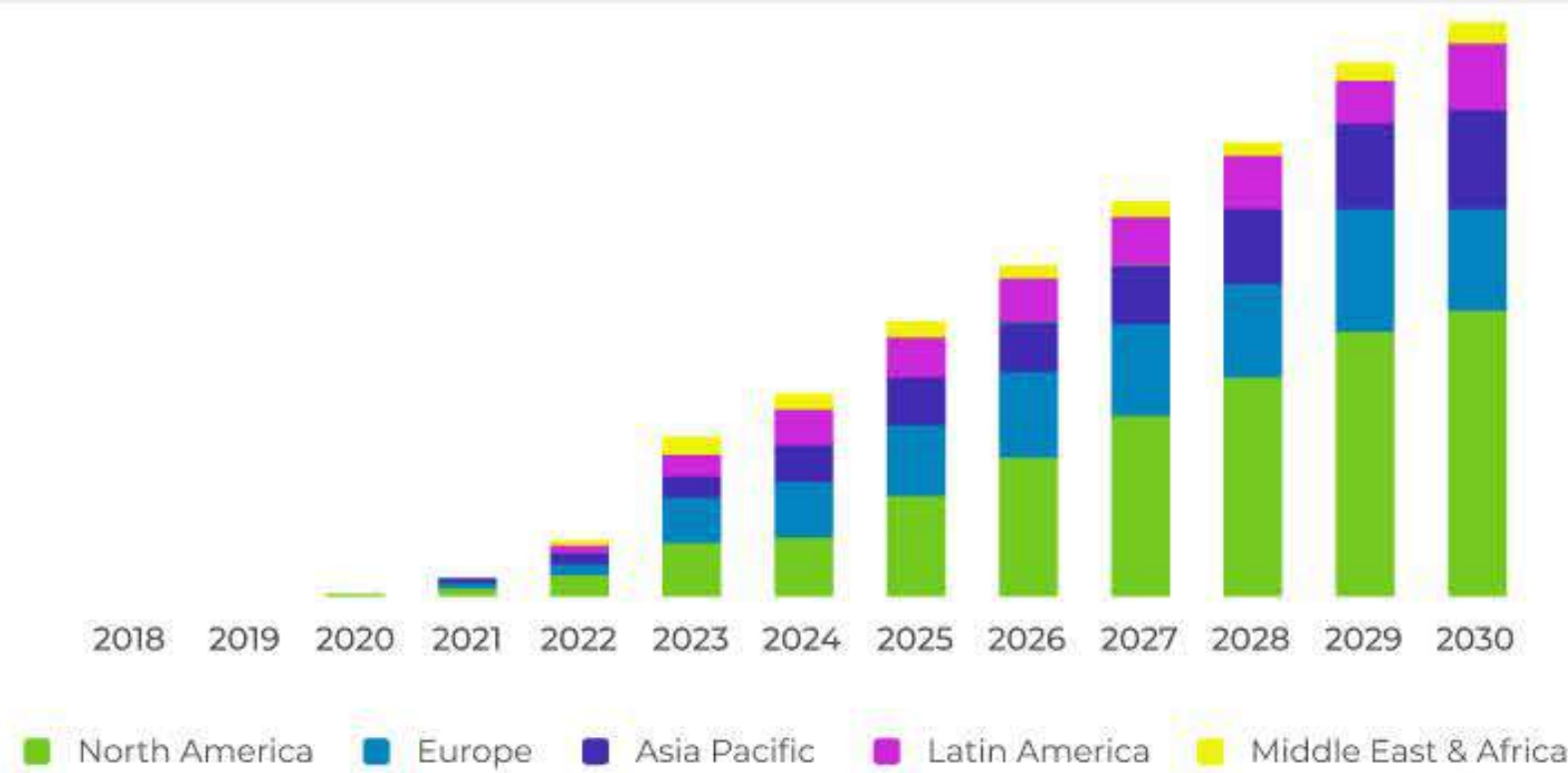
Report Attributes	Details
Non-Fungible Token (NFT) Market Size (2021A)	US $27.1 Billion
Estimated Market Value (2022E)	US $34 Billion
Forecasted Market Value (2032F)	US $316.7 Billion
Global Market Growth Rate (2022-2032)	25% CAGR
America's Market Share (2021)	~ 23.7%
Asia Pacific Market Growth Rate (2022-2032)	~ 15.7% CAGR
United States Market Growth Rate (2022-2032)	~ 37.8% CAGR
Market Share of top 5 companies Key Companies Profiled	~ 26.7% • Art Blocks • Axie Infinity • CloudFlare, Inc. • CryptoKitties • Dapper Labs, Inc. • Dolphin Entertainment, Inc • Foundation • Funko • Gemini Trust Company, LLC • OnChain Labs, Inc. • OpenSea • Ozone Networks, Inc • PLBY Group, Inc • Rarible • SemiDot Infotech • Takun Art & Co. Ltd • YellowHeart LLC.

Source : *FactMR*

Global Non-Fungible Token (NFT) Market Forecast, 2022-2032

25% Global Market Value CAGR (2022 -2032)	USD 34 Billion Global Addressable Market Value, 2022	652.1% Historical Market Value CAGR (2017 - 2021)	32.4% Collectibles Non - Fungible Token Sub - Segment Market Value Share, 2022

Market Split by Regions, 2022	Market Split by Asset Type, 2022
Asia Pacific	Digital Assets
Europe, Middle East and Africa	Physical Assets
Americas	Metadata

Source : *Polaris Market Search Analysis*

Non-Fungible Tokens Market Size, By Region, 2018-2030

(USD Billion)

2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

■ North America ■ Europe ■ Asia Pacific ■ Latin America ■ Middle East & Africa

Source : *Polaris Market Search*

## Non-Fungible Tokens Market

BY TYPE

- Digital Asset
- Physical Asset

BY END - USE
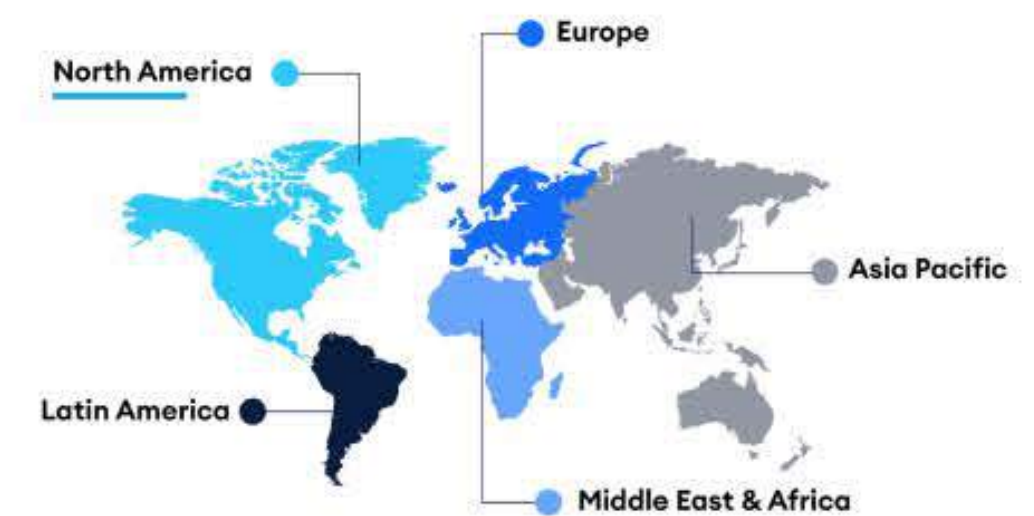
- Commercial
- Personal

BY APPLICATION

- › Collectibles
  - Audio Clip
  - Video Clip
  - Gamification
  - Others

- › Art
  - Fractal / Algorithmic Art
  - Pixel Art

- Computer Generated Painting
- 2D / 3D Computer Graphics
- 2D / 3D Painting
- GIFs
- Others

- › Gaming
  - Video Game
  - Trading Card Game (TCG)
  - Strategy Role Playing Game (RPG)

- › Utilities
  - Domain Name
  - Tickets
  - Assets Ownership

- › Sport

- › Metaverse

$ 18.47 Billion → $506.61 Billion

34.1%

CAGR
(2022 - 2023)

2021   2030
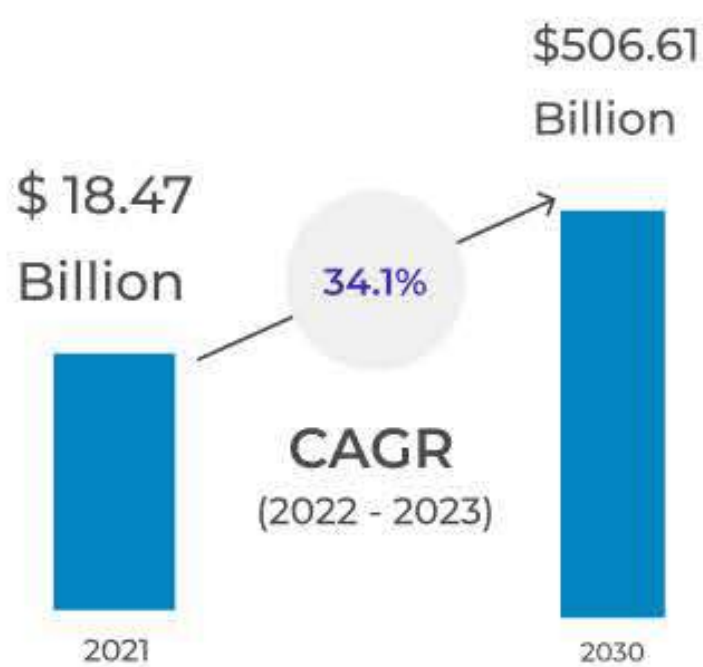
MARKET PLAYERS

- › Antier Solutions Pvt. Ltd
- › Appdupe
- › Cloudflare, Inc
- › CryptoKitties
- › Dapper Labs, Inc
- › Funko
- › Gala Games

- › Larva Labs
- › Onchain Labs, Inc
- › Ozone Netwroks, Inc
- › PLBY Group, Inc
- › Solanart
- › Sorare
- › Takung Art Co, Ltd
- › YellowHeart, LLC

BY REGION

North America
Europe
Asia Pacific
Latin America
Middle East & Africa

# 2023 – A NEW BEGINNING FOR THE BLOCKCHAIN AND WEB 3.0

A blockchain is an excellent tool for companies and customers to democratize services and guarantee data security and privacy. Furthermore, blockchain development is spreading across industries due to the rising demand for cryptocurrencies and Web3 integration. The top 9 blockchain developments and trends for 2023 are outlined in this article. Tokenization, smart contracts, blockchain security, and enterprise blockchain are just a few. Discover how they affect your business by reading on

Top 9 Trends In Blockchain

- Cryptocurrencies

- Asset Tokenization

- Smart Contracts

- Advanced Cryptography

- dApps

- Blockchain as a Service

- Private Blockchain

- Blockchain Security

- Enterprise Blockchain

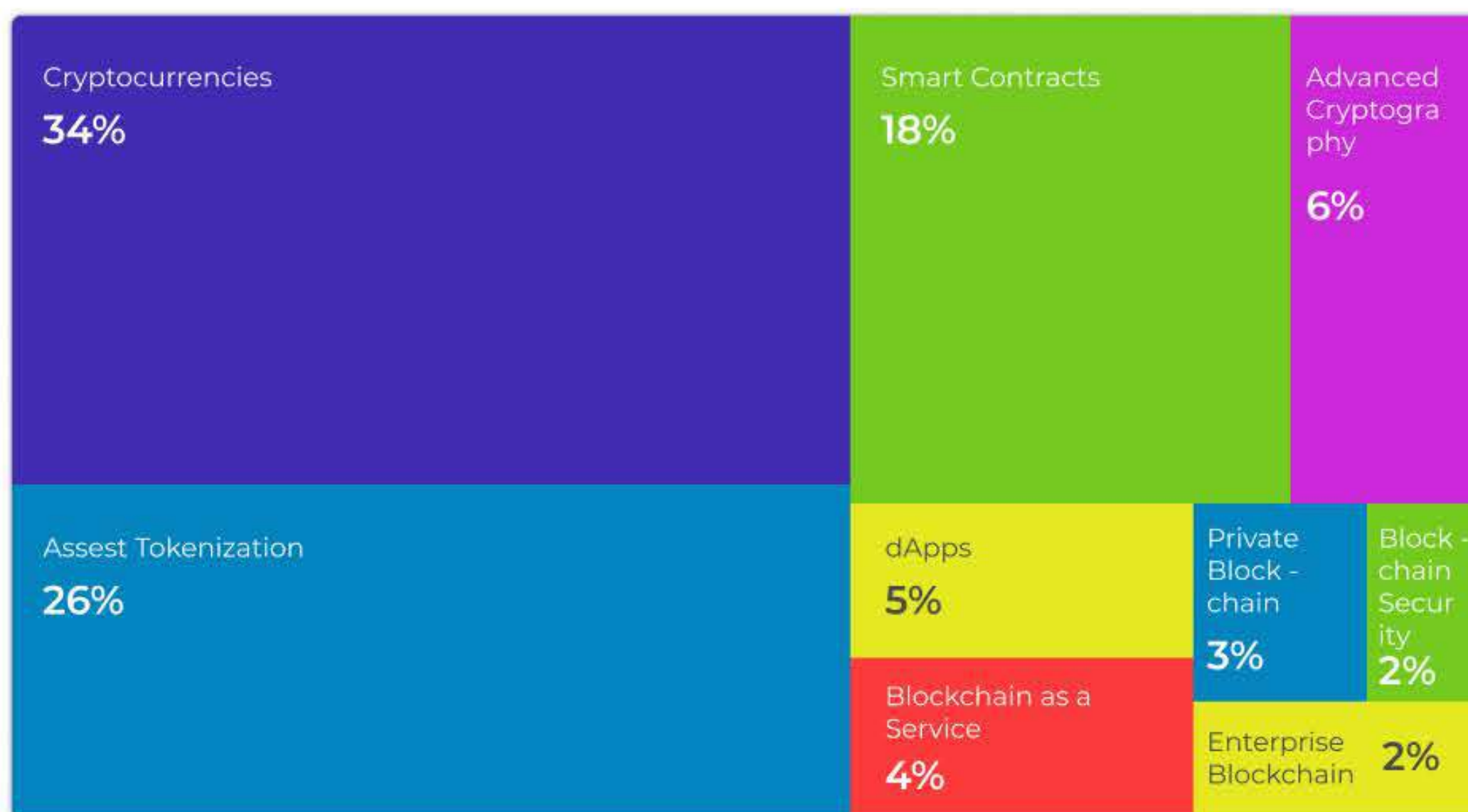## The Top 9 Blockchain Trends' Impact Is Visible On A Tree Map

Based on the Blockchain Innovation Map, the TreeMap below shows how the Top 9 Blockchain Trends will affect the industry in 2023. Start-ups and scaleups are developing solutions for accelerating crypto deployment and transactions. Tokenization increases the liquidity of both tangible and intangible assets, while smart contracts enable sophisticated blockchain transactions. Blockchain developers are developing novel cryptography and blockchain security techniques to further enhance data security and dependability. Private blockchains and other blockchain networks designed for enterprise applications are also gaining popularity. Last but not least, start-ups are creating decentralized applications (dApps) for various use cases on blockchain networks.

167

9 Blockchain Trends in 2023

Blockchain

3 765
Startups & emerging companies analyzed
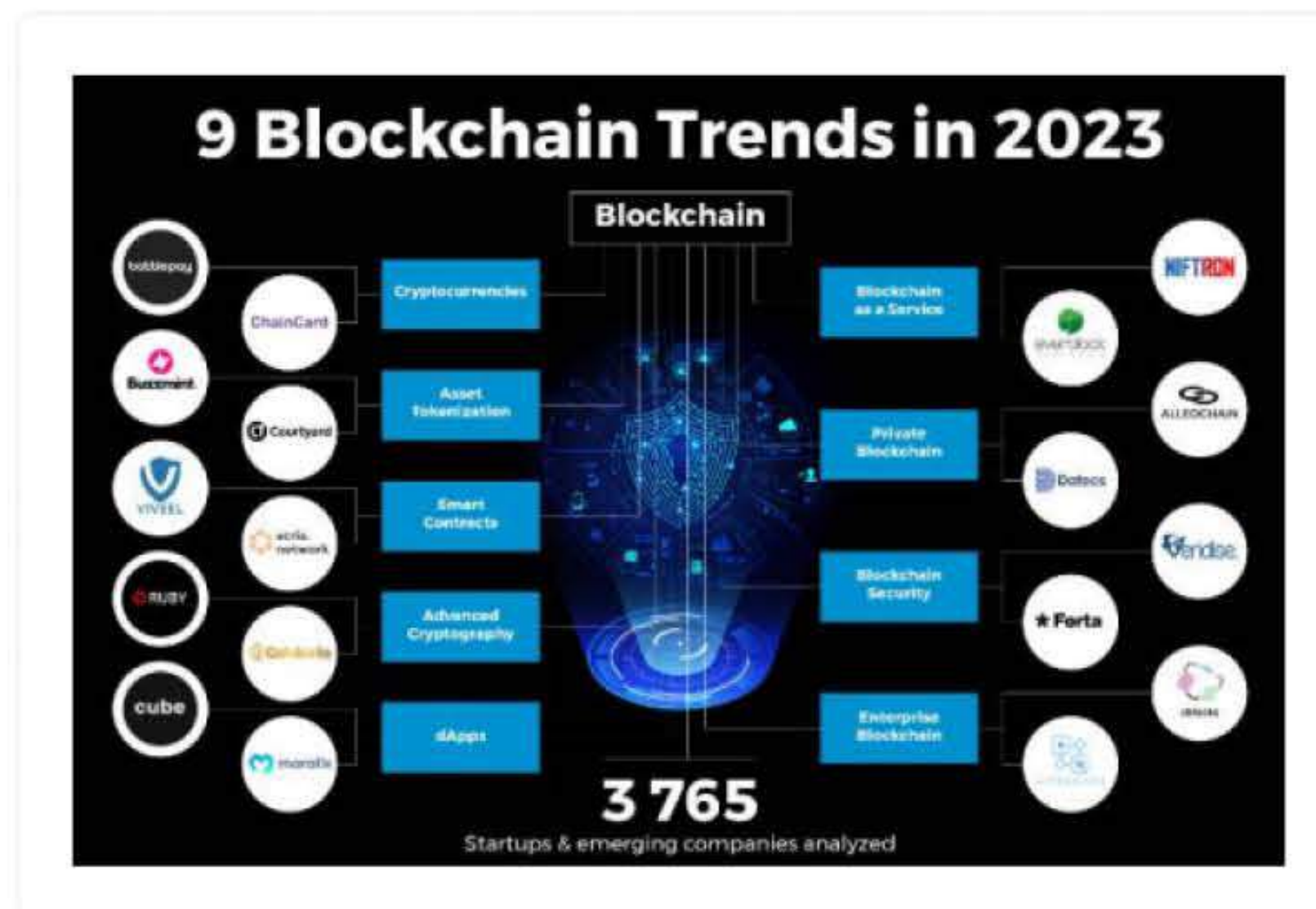
The Global Startup Heat Map covers 3 765 Blockchain Startups & Scaleups. The following Global Start-up Heat Map shows how the 3 765 great start-ups and scaleups we examined for this study are distributed globally. The Heat Map, produced using the StartUs Insights Discovery Platform, shows that the US and Europe are the regions with the most start-up activity.

In the sections below, you may learn more about 18 of these 3 700+ prospective businesses and scaleups and the products they create. These blockchain firms have been carefully chosen based on factors like founding year, location, amount of money raised, and others. Your top choices may look very different depending on your demands.

Impact Of 9 Blockchain Trends

Cryptocurrencies
34%

Smart Contracts
18%

Advanced Cryptography
6%

Assest Tokenization
26%

dApps
5%

Private Block-chain
3%

Block-chain Security
2%

Blockchain as a Service
4%

Enterprise Blockchain
2%

Leading 9 Trends In Blockchain Innovation For 2023

🔶 Cryptocurrencies

Cryptocurrencies use blockchain technology to store transactional data in peer-to-peer networks. They do away with centralized institutions like banks to lower transaction costs and hasten fund transfers. The increasing demand for cryptocurrencies encourages the development of high-performance, environmentally friendly coins with shorter transaction times. Additionally, blockchain adds built-in security to crypto transactions, enhancing the security of financial transactions. Wallet data is vulnerable to attacks since exchanges typically store it on centralized servers. Cryptocurrency exchanges and consumers will be able to lessen this threat and replace fiat money with cryptocurrencies thanks to advancements in Web3.

A UK-based firm called Bottlepay provides a crypto payment gateway. Bottlepay provides a crypto payment gateway. Users can convert GBP or EUR to BTC in any direction after being onboarded through an expedited verification process. The firm does this by utilizing the Lightning network, a payment mechanism built on Bitcoin. Thus, the gateway enables users to use cross-border transactions without fees to pay content providers through social media platforms.

🔷 ChainCard produces web3 Crypto Wallets.

Canadian firm ChainCard creates a Web3 cryptocurrency wallet. It enables users to use cryptocurrencies like BTC and ETH on platforms supporting blockchain and VISA. The wallet also facilitates asset exchange within the wallet and offers customers a return on their cryptocurrency savings. This makes it easier to effectively replace fiat money with its cryptocurrency equivalents.

🔶 Tokenization of Assets

By fractionalizing digital or physical assets into digital tokens, tokenization employs blockchain technology. This is the same idea behind cryptocurrency. However, corporations and retail customers can turn assets like real estate holdings and works of art into digital tokens thanks to blockchain-powered tokenization. Due to the increased liquidity of previously illiquid assets, owners can conveniently sell tokens on secondary marketplaces. This increases investors' access to previously inaccessible assets and offers fresher possibilities for portfolio diversification. Additionally, smart contracts enable a single source of truth by automating token transactions and raising transactional transparency. As a result, tokenization allows all participants to check their holdings and guarantee ethical behavior.

This Global Startup Heat Map illustrates the geographical distribution of 3 765 startups & emerging companies we analyzed for this topic. Data from October 2022.

🔹 **Digital Asset Tokenization is made simple using Buzzmint.**

A firm in the UK named Buzzmint creates a platform for tokenizing digital assets. It makes it possible for businesses and creators to swiftly produce and distribute nonfungible tokens (NFTs) based on their digital assets. The platform additionally enables them to take advantage of current digital infrastructure and stop sending their consumers to other platforms so they may sell their tokens.

🔹 **Using a courtyard Tokenization of physical assets**

The US-based start-up Courtyard develops a platform for tokenizing tangible assets. Users can vault the underlying assets while creating digital twins of physical assets as NFTs. The software securely preserves the transaction and provenance history on the blockchain, enabling them to trade NFTs on any market. This eliminates counterfeits while enabling firms to set up mechanical royalties and sell goods abroad.

🔶 Smart Contracts

All blockchain ecosystems depend on smart contracts because they eliminate middlemen from the governance and execution of all peer-to-peer (P2P) transactions. Start-ups thus provide simple platforms that let companies and blockchain engineers build smart contracts. They often involve less coding, which speeds up the development process. Due to the rise in cyberattacks against blockchain systems, there is also increased interest in solutions that audit smart contracts for weaknesses. Developers of smart contracts can automate security assessments using such platforms. Smart contracts are more effective thanks to contract structure, access control, and cryptography developments.

🔷 Viveel makes it easier to create smart contracts.

Viveel is a start-up from Portugal that develops a smart contract builder for businesses. The start-up's platform uses visual programming and workflow-driven templates to speed up production. Organizations can implement smart contracts immediately after specifying the components and configurations. The platform audited the deployed smart contracts, making them active decentralized apps. This expedites the time to market and enables the quick deployment of smart contracts in blockchain networks.

Acria Network builds Cross-Chain, Real-World Data Networks. Acria Network, a German firm, creates a cross-chain real-world data network. It uses oracle nodes that employ cross-chain technology to cut out middlemen and provide different blockchains access to real-world off-chain data. The network also enables users to use their choice coins as security. Oracle nodes can only be operated by realworld data distributors, ensuring the reliability of the data. Other participants earn staking rewards for adding to the nodes' reputation.

🔶 Modern Cryptology

Blockchain networks use cryptography to encrypt communication between nodes to ensure the immutability and verifiability of transactions. For this, symmetric and asymmetric cryptographic techniques are used by blockchain developers. Compared to the asymmetric approach, which uses public and private keys for message encryption and decryption, symmetric cryptography provides the same key for the communicating nodes. Multi-signature algorithms, for instance, produce digital signatures with the help of numerous parties. Another method for proving information without disseminating it across the network is zero-knowledge proof (ZKP). These methods let blockchain developers maintain security while increasing user and transaction privacy.

Ruby Protocol creates a privacy-focused Web3 protocol.

Start-up in Canada Ruby Protocol creates a decentralized Web3 protocol that prioritizes privacy. It uses functional encryption (FE), which enables users to encrypt data on-chain that owners of authorized private keys can only decrypt. The protocol implements a privacy layer that communicates with the multi-chain ecosystem and functions as a private data management framework and data access control gateway. This makes it possible for NFT-gated access, regulatory-compliant asset ownership, private know-your-customer (KYC) authentication, and privacy-preserving cloud computing.

Goldario offers Tokens Backed by Precious Metal.

Goldario, an Estonian firm, provides tokens backed by precious metals. The start-up tokenizes the eco-cycle of the gold and emerald mining, jewelry production, and retail jewelry industries by combining blockchain and cryptography. This increases the accessibility and liquidity of valuable commodities and the security of trading in digital assets. Additionally, the start-up promotes lower investment thresholds and monitors the development of the businesses they fund to increase transparency.

dApps

Blockchain networks with peer-to-peer nodes and smart contracts allow for decentralized applications. The Ethereum blockchain, for instance, provides specialized tools for developing decentralized apps. dApps provide privacy and development flexibility by removing the oversight and interference of centralized authorities. Additionally, it allows all stakeholders to pay a fair price for applications and services, increasing transparency and monetization possibilities. Additionally, as dApps use decentralized computing and open-source licensing to provide a secure development ecosystem, they never go offline. Last but not least, rapid Web3 integration requires decentralized applications backed by blockchain.

Cube makes dApp Token Staking easier.

An Indian business called Cube facilitates dApp token staking. The start-up's API enables stake access integration for app developers. Additionally, Cube uses asymmetric cryptography and transport layer security (TLS) to encrypt its API calls. It allows for automatic yield tactics like leverage staking and auto-compounding. Developers of dApps can do this to speed up time to market and reduce development time.

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Moralis Web3 provides Enterprise-Grade Web3 APIs.

Swedish firm Moralis Web3 creates enterprise-grade Web3 APIs. The start-up offers APIs for the Solana and EVM blockchains, as well as for NFTs and streaming blockchain data. This enables businesses and dApp developers to speed up dApp prototyping and swiftly grow apps. The start-up also lessens the expense and difficulty involved in developing dApps.

Blockchain as a Service

The versatility and accessibility of cloud-based services promote the service business model for blockchain networks. This decreases time-to-market by enabling blockchain developers to quickly build and host blockchain applications and smart contracts. Blockchain, as a service, spares businesses the expense of hiring programmers for internal network development. Thanks to service providers, they can concentrate on improving features and products for their business while maintaining an adaptable and effective network.

NIFTRON produces blockchain as a Service Platform.

The UK-based business NIFTRON creates a blockchain as a service platform. With the help of it and the start-up's software development kit (SDK), enterprises may use blockchain and create plug-and-play modules for their apps. The software also manages user accounts and transactions and enables users to tokenize different data types. Businesses can reduce their development expenses and time thanks to this.

Blockchain solutions are offered as a service by Everblock

Everblock is a Brazilian firm that offers decentralized storage and smart contracts as a service for the media, education, and healthcare sectors. It enables businesses to use blockchain-driven applications to protect and increase data transparency. As a result, the business helps media companies combat copyright violations, educational institutions prevent document fraud, and healthcare organizations improve patient privacy and data compliance.

Private Blockchain

Permissioned blockchains, known as private blockchains, are typically held by companies and organizations. Private blockchain networks, in contrast to public blockchain networks, have centralized authorities that control network user access. Private blockchains also allow for the reversal or deletion of transactions, and each node stores a copy of the complete blockchain. This gives organizations more control over enterprise data while maintaining the ability to validate and verify transactions. Private blockchains have a lot fewer nodes than public networks. Therefore they can scale much more easily and have higher transaction throughput.

AlleoChain promotes the development of private blockchains.

A Cypriot firm called AlleoChain supports the creation of private blockchains. Businesses may host private blockchains in a secure cloud environment utilizing the start-up's no-setup, no-code technology, which also uses SQL to manage data integration. For added redundancy, the data are also backed up. This makes it possible for businesses to scale blockchain applications swiftly.

Dafecs facilitate the deployment of Virtual Organizations.

Turkish start-up Dafecs creates a platform for the deployment of virtual organizations. It mixes the InterPlanetary File System (IPFS), tokenization, the internet of things (IoT), a private blockchain network, and front-end libraries. As a result, the platform secures stakeholder data sharing, enhancing organizational governance and decision-making.

Security for Blockchain

Blockchain mostly has uses in the realms of investments and financial transactions. Additionally, as organizations and users move toward more blockchain-centric workflows, data integrity and privacy become critical for all blockchain networks. Start-ups create blockchain security solutions to guarantee the security of such networks. They track smart contracts, nodes, and transactions using advanced analytics and artificial intelligence (AI) to look for anomalies. This makes it possible to identify rogue users and stop data or asset theft quickly. Businesses that use blockchain for data management, asset trading, and supply chain management require blockchain security solutions.

Veridise provides Blockchain Security as a Service.

A US-based firm called Veridise offers blockchain security as a service. Employers and blockchain developers can automate security analysis for smart contracts, Web3 applications, zero-knowledge circuits, and more with the help of the start-up's solutions. As a result, they may quickly find weaknesses before using blockchain technology and mitigate them via internal tool development.

Forta produces decentralized Monitoring Networks.

A US-based firm, Forta, creates a decentralized monitoring network for securing and managing blockchain activity. It comprises independent node operators who search through all transactions and changes block by block for anomalous transactions. As a result, the network can instantly identify dangers and anomalies in governance systems, bridges, NFTs, and other Web3 systems, as well as decentralized finance (DeFi) systems. Then, to avoid financial loss and promptly eliminate dangers, it notifies subscribers of notifications.

Business Blockchain

Businesses are cautious about adopting public blockchains like Bitcoin and Ethereum because they need more data control and increased data visibility. Despite the fact that some businesses rely on public blockchains, the demand for private and consortium blockchains is rising. While maintaining other blockchain advantages like security and traceability, enterprise blockchain networks give enterprises better control over their data. This enables businesses to integrate blockchain-based apps while maintaining data compliance. Additionally, blockchain automatically improves company data security, reducing costly data leaks.

Simplifying Enterprise Blockchain Development with AstraKode

A business blockchain development platform called Network Composer is provided by the Italian firm AstraKode. Businesses can create personalized permissioned blockchain networks thanks to it. The platform also includes a low-code approach and automated testing to speed up development operations. As a result, businesses can now host their blockchain networks on the cloud for easier configuration and accessibility.

Zblocks helps construct the dPlat Pro platform for enterprise NFT campaign management, according to the US-based start-up. It connects with customer relationship management (CRM) systems and improves NFT lifecycle management. The technology gives user insights based on NFT interactions and supports multichannel NFT distribution for lower bounce rates. Through these capabilities, businesses may improve client acquisition, retention, and reach across all customer lifecycles (ORM).
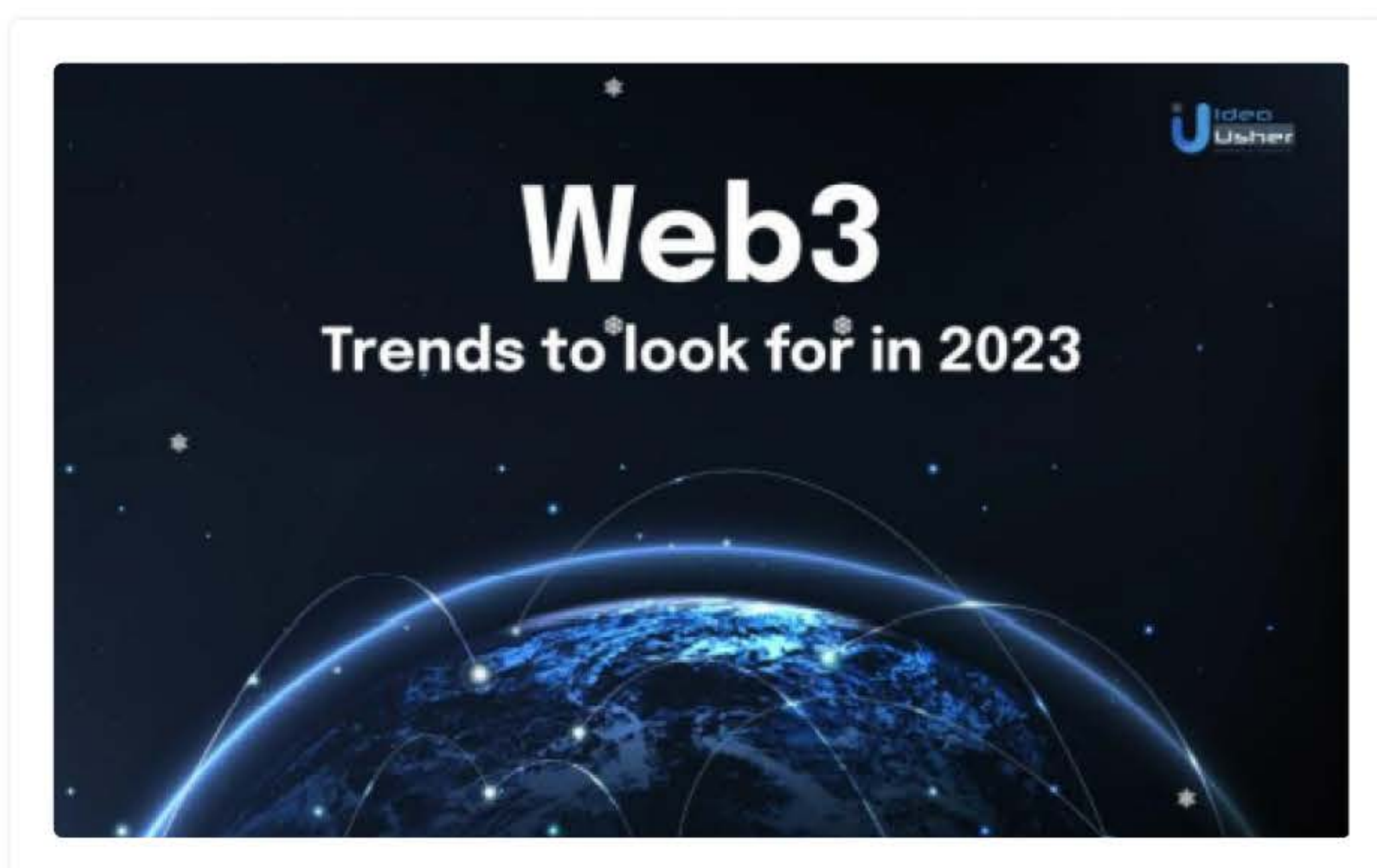
By utilizing decentralized protocols, Web 3.0, also referred to as the next version of the internet, promotes user sovereignty. Users can participate in managing and maintaining the protocols in Web3 and use the platforms for free in exchange for data. With technologies like blockchain, cryptocurrencies, non-fungible tokens (NFTs), and decentralized autonomous organizations, Web3 aims to build genuine online communities and actualize digital democracy (DAOs). But why is Web3 a technology with such great potential, and what are the most recent Web3 trends?

10 Most Innovative Web3 Trends

Many companies are utilizing this technology to strengthen their brands as Web3 continues to employ blockchains, cryptocurrencies, and NFTs to return ownership authority to people.
Some Web3 trends that could develop in the upcoming year include the ones listed below:

Decentralized social networking sites

Decentralized social networking is what Web3 aims to achieve. Tesla's CEO has suggested developing a social network where users would pay a small amount of bitcoin each time they posted a comment to battle trolls and spammers. These concepts were debated during the court battle against Musk's acquisition of Twitter.

According to supporters of Web3, a decentralized social network wouldn't be subject to censorship. Currently, companies like Meta and Twitter control what users can say. Unrestricted free expression on Web3 is a development that needs to be assessed by society as a whole, including politicians and the government.

Industry Will Put More Focus On Cybersecurity

Web3 offers data ownership, transparency, and fewer middlemen but also introduces new security vulnerabilities. Only a few instances include rug-pulling, ice-phishing, and hacking into the logic of smart contracts. Blockchain security will be required due to cryptocurrency losses. According to a 2022 Federal Trade Commission research, over 46,000 consumers have lost over $1 billion due to cryptocurrency theft since 2021. Wintermute, one of the most recent cryptocurrency market makers to be compromised, suffered a $160 million loss.

Likewise, scammers have targeted cryptocurrencies and NFTs. Several businesses are developing Web3 security, data, monitoring, and storage solutions in response to growing industry concerns, which is drawing funding:

DeFi's bug bounty and security platform Immunefi secured $24 million in its Series a round of funding.

A well-known Web3 security company called CertiK has secured $88 million in Series B3 funding.

A cybersecurity business called Halborn earned $90 million in Series funding from clients in the traditional financial sector and the blockchain.

More Web3 security activities will deter fraud and motivate businesses to participate in Web3 initiatives.

Greening the Web

Even the most enthusiastic fans of Web3 have doubts about the company's environmental credentials. The Bitcoin blockchain network used 130 terawatts of power per hour at its peak, emitting 772 kg of CO_2 with each transaction. This is unsustainable, and Elon Musk, the CEO of Tesla, cited the company's decision to leave the technology in his statement.

Since then, Web3 and blockchain technology's energy efficiency has improved. Recent proof-of-stake implementation on the Ethereum network has reduced energy consumption by 98%.

Web3 initiatives will use technology and less energy in 2023 to achieve green goals. According to the World Economic Forum, technology may make it easier for businesses to work together and adopt shared climate change mitigation strategies. The concept of "regenerative financing" (ReFi) aims to support projects that preserve or repair "resources crucial for planetary wellness."

Market Expansion through M&A Deals and Metaverse Investments

The two forces of metaverse-related initiatives and mergers and acquisitions agreements will continue to push investment in the Web3 domain. More than $120 billion, or more than twice as much as was invested in 2021's $57 billion, had been spent just in the first five months of 2022 to develop metaverse infrastructure.

Several factors generate interest from brands and investors alike:

- A growing number of people are turning to mixed reality (MR), augmented reality (AR), and virtual reality (VR) to fill the gap between the virtual and real worlds (VR).

- Healthcare, hospitality & tourism, and manufacturing might benefit from metaverse's digital prototypes and customer experience previews (e.g., accelerate disease assessment and treatment).

- Strong user base from extensive use in social networking, education, entertainment, and training.

- Enhance e-commerce and the customer experience.

As a result, many end-user players, including Meta, Gucci, Nike, Starbucks, and Adidas, are making various forays into the metaverse to test out novel approaches to improve online customer interaction. Additional M&A opportunities will materialize as the metaverse and NFTs continue to soar to hasten the creation of immersive experiences and aid in establishing sizable communities anchored by interesting content. One of the biggest bets is gambling.

NFTs

One of the most talked-about Web3 trends is the use of non-fungible blockchain tokens, which may stand in contrast to cryptocurrencies, which may contain millions of similar tokens. Most people are familiar with NFTs as computer art that has sold for hundreds of thousands or millions of dollars (until the market crashed this year, at least).

According to proponents of a decentralized web3, tokenizing products, data, and ideas in the digital and physical worlds are their ultimate value. Our digital purchases could be unlocked and interacted with by NFTs via the decentralized internet. They may be smart contracts or access codes to our digital metaverse homes.

Utility NFTs will take precedence over "virtual art" NFTs in 2023. This should help them understand this potentially revolutionary technology and how they fit within the Web3 ecosystem.

Increasing Government Regulation and Intervention in the Web3 Sector

Governments will probably regulate new technology as it alters economies, society, and the environment (some argue they must). Wyoming and other US states have passed web3-friendly laws. Web3 businesses will receive favorable tax treatment in exchange for control and regulation. This year, Colorado was the first state to accept cryptocurrencies for taxes and fees.

Web3 and cryptocurrency adoption are priorities for Dubai. The emirate is promoting itself as a natural home for innovation in artificial intelligence, cloud computing, and metaverse technologies, which are closely related to Web3 advancements. It has developed economic measures to entice Web3 enterprises to establish operations on its territory. In 2023, additional nations may benefit from China's Digital Yuan and India's e-adoption rupees of the Web 3.0 standard.

BAAS

Brands as a Service, often known as BAAS, is a recent innovation in the blockchain space. Through a web-based platform, individuals can create digital commodities utilizing blockchain technology. To participate in this heavily regulated sector, businesses and people need access to financial services.

Flux

Web3's non-intrusive data layer is called Flux. Flux is the cross-chain oracle you need if your smart contract requires access to data feeds on anything that is financially secure. Flux can be used to develop distributed projects and Web 3.0 applications.

Software for Low Code Application Building

Thanks to low-code development, a visual drag-and-drop method, businesses can now produce apps more quickly and with much less manual coding. There has been an increasing trend to abandon low-code and no-code app development since Web 3.0.

Cloud Computing

Their geographical locations no longer constrain businesses because of the adoption of cloud computing. We should anticipate a shift away from hastily constructed cloud services and toward cloud-native systems as a measure of risk mitigation in light of the future's unpredictability as enterprises progressively return after periods of seclusion.

CONCLUSION

Web 3.0 will change both our individual and digital societal relationships. Every form of business, from the traditional to the cutting-edge, will be affected by Web 3.0 blockchain technology. The transition from Web 2.0 to Web 3.0 will take time, though. In other words, businesses will get a chance to evaluate their practices and assess where they fall on the decentralization and openness spectrum. Although Web 3.0 is still in the future, organizations must start preparing for it now. With Idea Usher, you may purchase an app that uses blockchain technology or chats with professionals. Planning in advance is a better course of action when the future favors novel approaches and ventures.

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