



**Research Report:**

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# **State of the NFT Market**

In partnership with CryptoSlam

**Q1 2022**



Image credit: Unsplash

# Table of Contents

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- 2 Introduction**
- 3 Executive Summary**
- 4 The NFT Market By the Numbers**
  - Global Sales Volume
  - Buyers and Sellers
- 6 Blockchains and NFTs**
  - Top NFT blockchains by NFT sales volume
- 8 The Rise and Rise of NFTs | Interview with Charles d’Haussy**
- 10 NFT Avatars — A New Identity**
- 11 Trends Driving NFTs Growth**
- 12 Trends Within the Trend | Interview: Helen Hai**
- 13 Asia Primed for NFT Growth**
  - Southeast Asia
  - China
  - Japan
  - South Korea
- 17 Getting Creative | Interview with Audrey Ou**
- 18 Metaverse Set to Boost NFTs**
- 19 The Metaverse Conquest | Interview: Sébastien Borget**
  - The Boost from Blockchain Gaming
  - Collaterals, Vaccine Certificates and Other Use Cases
- 23 NFTs Behind the Pictures | Interview: Reeve Collins**
  - Virtual Real Estate
  - A New Way to Raise Funds
- 25 NFT Marketplace Competition Heats Up**
- 26 NFT Marketplace Rivals’ Arrival | Interview: Zach Burks**
- 27 New Investors and Investments**
- 28 NFT Hacks and Scams**
- 29 Regulations on the Radar**
- 30 Decoupling of NFTs from Cryptocurrencies**
- 31 Challenges to Address**

# Introduction

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In March 2021, a non-fungible token (NFT) in the form of artist Beeple's digital collage sold for US\$69 million at a Christie's auction. It created a buzz among retail and professional investors who began to take a serious look at this new revenue stream for digital artists.

Around the same time, Dapper Labs' NBA Top Shot reached record volumes in its collectibles series comprising NFTs of National Basketball Association highlight clips. In February 2021 alone, NBA Top Shot moments generated about US\$230 million in gross sales with the rarest NFTs fetching hundreds of thousands of dollars.

NBA Top Shot and Beeple kicked off an NFT boom in 2021. Popular projects emerged to congest the Ethereum network, much like how Dapper Labs' CryptoKitties did in 2018.

But unlike the Ethereum congestion of 2018 which had little long-lasting impact, Ethereum's market dominance is being challenged by alternative blockchains. Solana emerged as an alternative for users to mint and sell their NFT avatars without the exorbitant gas fees on Ethereum. Meanwhile, Ethereum sidechain Ronin essentially put food on the table for Covid-ravaged communities in the Philippines.

Ironically, the rise of these Ethereum "killers" has helped the smart contracts leader by decongesting the network and lowering transaction fees to affordable levels.

As the NFT industry enters 2022, the marketplace is being transformed in multiple areas from the rise of alternative blockchains, the entry of new buyers and sellers, new use cases, a surge in funding from investors, demand for better policing and the threat of increased scrutiny by regulators concerned about fraud and money laundering as well as tax evasion.

The NFT business is expected to continue its growth in 2022, but it will be a bumpy ride with many potholes ahead.

"I feel like the bar will continuously be raised by NFT enthusiasts deciding where they will deploy their fiat or crypto," CryptoSlam Founder and CEO Randy Wasinger said. "This will spur innovation, but many low-effort projects will fade away."

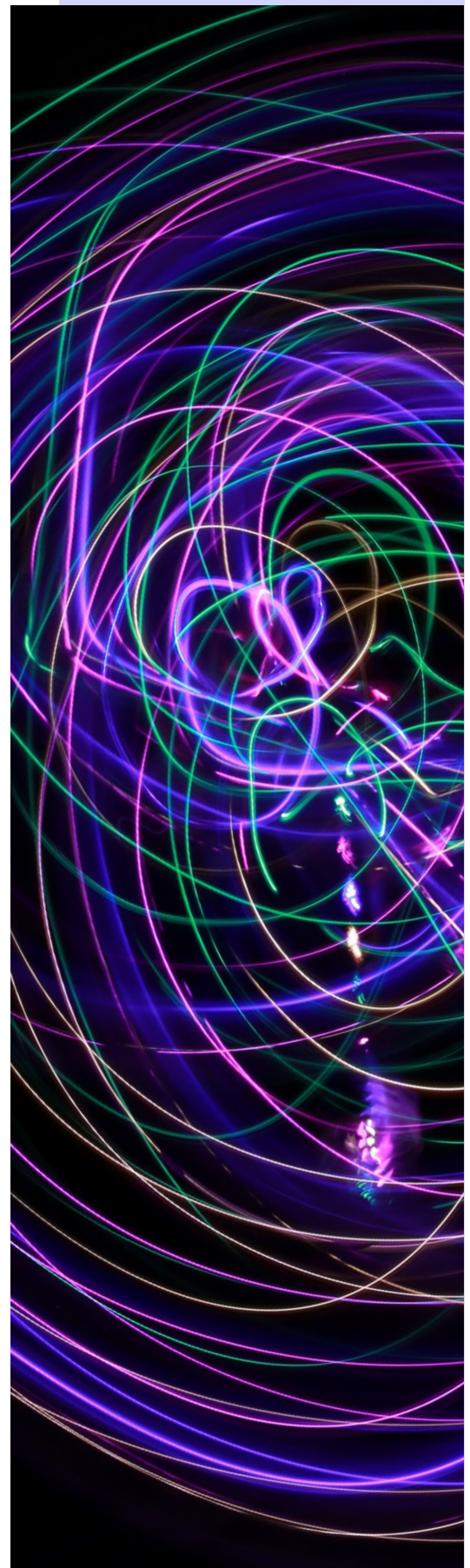


Image credit: Unsplash

# Executive Summary

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NFT sales amounted to US\$18.5 billion in 2021 — a 570-fold increase from 2020 as avatars and digital art gained in popularity and organizations such as the NBA issued NFT collections that attracted an overwhelming response, data from NFT industry data aggregator CryptoSlam showed.

With sales holding above US\$2.5 billion in recent months and reaching as high as US\$4.5 billion in January 2022, the market for new NFTs will likely surpass US\$30 billion this year. “There’s over 3 million people on Coinbase’s waiting list so if the

Alternative blockchains optimized for gaming, digital art and other purposes are taking transactions away from Ethereum, decongesting the network and making it easier for people to get onboard.

Facebook’s move to change its corporate name to Meta in October 2021 increased public interest in the metaverse and the related technologies.

New use case for NFTs have also emerged, which will help grow the market in coming years.

digital art and collectibles have found acceptance as stores of value that can be monetized when needed.

Helen Hai, head of NFT and fan token at Binance, believes traditional markets such as music, ticketing and entertainment will look to NFTs as a means of increasing revenue and improving customer experience.

Of particular interest is revenue participation via smart contracts that involve all parts of a value chain, benefitting composers, artists, musicians, producers and even collectors.

But while there are many opportunities in the NFT space, the industry needs to address concerns about speculative bubbles as well as the negative impact on the environment.

CryptoSlam’s Calpu believes the NFT industry will be able to address the various concerns and realize its potential.

“There will be challenges, including scams, fakes, forgeries, and of course bubbles. But at the end of the day, NFTs are facilitating human needs for ownership, belonging and uniqueness and that is not going away,” he said.

**NFTs are becoming prime uses for identities in the form of avatars. Much like passports connect individuals to a country, avatars represent memberships in communities such as the Bored Ape Yacht Club and Azuki.**

number of NFTs collectors doubles or triples this year we could see a steady rise of at least 50-75% of the current volumes,” CryptoSlam Chief Marketing Officer Yohann Calpu predicts.

Several developments will help drive the growth of NFTs from niche to mainstream in coming years.

NFTs are becoming prime uses for identities in the form of avatars. Much like passports connect individuals to a country, avatars represent memberships in communities such as the Bored Ape Yacht Club and Azuki.

For instance, several universities and governments have started issuing NFTs to counter fraud and forgery, while experts have proposed using NFTs as vaccine certifications.

In Japan, banking giant Mitsubishi UFJ Financial Group has introduced a utility token to replace physical coupons and cards. MUFG’s NFT provides discounts and other benefits to shareholders and can be used to support customers.

Some companies have begun accepting NFTs as collateral for loans and derivatives deals, indicating that

# The NFT Market By the Numbers

## Global Sales Volume

NFT sales amounted to US\$18.5 billion in 2021 – a 570-fold increase from 2020 as the record bid for Beeple’s digital collage and the strong reception for NBA Top Shot attracted new collectors and boosted prices, data from NFT industry data aggregator CryptoSlam showed.

Companies from Gucci and Ray-Ban to McDonald’s and Coca Cola also began to offer NFTs.

With monthly sales holding above US\$2.5 billion in recent months and reaching as high as US\$4.5 billion (data as of February 2022),

the market for new NFTs will likely grow to at least US\$30 billion this year. CryptoSlam has projected 2022 sales volume to rise by at least 50% to 70%, considering the expected 200% to 300% growth in the number of buyers.

The growing interest in NFTs contrasts with other financial markets which have undergone a roller coaster ride as central banks prepare to raise interest rates as inflation hit multi-decades highs.

Bitcoin and other cryptocurrencies, long touted as the safe haven hedges,

have failed to provide investors with shelter as total market capitalization fell below US\$2 trillion in January 2022, the lowest level since September 2021.

According to CryptoSlam, NFT sales totaled US\$4.5 billion in January 2022, just below the market’s all-time high of US\$4.9 billion set in August 2021.

Monthly NFT sales crossed the US\$1 billion mark in July 2021 and have not looked back since.



**US\$666.12**

Average Sale  
January 2022



**US\$4.48 billion**

NFT Sales Total  
January 2022



**923,400**

Unique Buyers



**6,730,843**

Total Transactions  
in January



**768,932**

Unique Sellers of NFTs  
January 2022



Image credit: Unsplash

## Buyers and Sellers

CryptoSlam data shows there were 759,145 unique sellers of NFTs in January 2022, up from 27,963 in January 2021 and just slightly less than the market's all-time high of 791,631 in November 2021.

The number of unique buyers reached a new record monthly high of 910,611, up from 29,581 in January 2021. Buyers on the Ethereum blockchain alone hit a milestone of one million, the highest number since the metric began to be tracked in 2017.

Although the diversity of buyers and sellers has increased, value remains concentrated in the hands of just a few traders and investors. A recent study published by Nature revealed

that 85% of all NFT transactions were conducted by the top 10% of traders.<sup>1</sup>

While “whales”, or investors with substantial portfolios, will likely continue driving impressive sales in the industry, the rise in the number of unique buyers shows that the NFT-curious are warming up to this novel asset class.

Coinbase's soon-to-be-launched NFT marketplace already had more than 3.7 million people on its waitlist at the time of writing. Coinbase has partnered with Mastercard so any cardholder can buy an NFT without the need to use cryptocurrency, removing one of the current pain-points involved in buying NFTs.

### From the lookout:

NFTs are often associated with digital art and collectibles but new uses are emerging.

Axie Infinity is one of the first blockchain games to give us a glimpse into NFTs' potential, having accounted for 59% of all NFT sales in July 2021 when sales crossed US\$1 billion for the first time.

Apes and pixel art are cool, but there's much more to NFTs than meets the eye.

<sup>1</sup> Mapping the NFT revolution: market trends, trade networks, and visual features. <https://www.nature.com/articles/s41598-021-00053-8.pdf>

## From the lookout:

Two blockchains had a strong February 2022 even as overall NFT sales fell to US\$2.9 billion from January's US\$4.5 billion.

BSC, now rebranded as BNB Chain, had an abysmal start to 2022, but has redeemed itself in February by recording US\$1.13 million in February NFT sales, its best-performing month ever.

Avalanche conducted over US\$70 million in sales to smash its previous record of US\$57 million that was set in January. It has also grown to become the world's fourth largest DeFi chain.

Avalanche needs to be on everyone's radar this year.

**As of end-February 2022, Ethereum had topped a million unique buyers which is second only to Ronin, the blockchain where the US\$4 billion play-to-earn powerhouse Axie Infinity lives with its 1.6 million buyers.**

# Blockchains and NFTs

The world's first NFT dates back to 2014, when New York artist Kevin McCoy's animation known as Quantum was originally minted on Namecoin, a blockchain forked from Bitcoin. Quantum eventually sold for US\$1.47 million at a Sotheby's auction in June 2021, but its host blockchain is buried deep in the history of NFTs, rarely visited by today's collectors.

Ethereum is today's most dominant blockchain for most smart contract applications, and NFTs are no exception. The Ethereum blockchain, fueled by its NFT standard ERC-721, has handled over 72% of all NFT sales to date. A combination of high transaction fees and questions over Ethereum's carbon footprint<sup>1</sup> has, however, opened the door to a number of newer blockchains offering cheaper and more environmentally-friendly alternatives.

As of end-February 2022, Ethereum has topped a million unique buyers which is second only to Ronin, the blockchain where the US\$4 billion play-to-earn powerhouse Axie Infinity lives with its 1.6 million buyers. Ronin,

however, is a sidechain of Ethereum. Ronin still uses Ethereum technology while unloading transactions to its own blockchain which runs parallel to the latter.

Axie Infinity developer Sky Mavis built Ronin after seeing Ethereum's limitations, which have become more apparent due to high network congestion as decentralized finance (DeFi) and NFTs surged in popularity. Ronin's birth was also a signal for competing smart contract blockchains to take a bite out of Ethereum's dominance.

Solana is one of those competing blockchains, having risen to prominence in August 2021 when it launched Wormhole, Solana's bridge to other DeFi ecosystems. Due to its cheaper and faster transactions, Solana has become a popular alternative for NFT collectors and game developers. The number of buyers on Solana is currently less than 25% of Ethereum's.

With more blockchains entering the conversation, Ethereum's dominance is no longer uniform across the statistical board. For example, Ethereum ranks third in terms of sellers with 580,000, behind Ronin's 1.16 million and WAX's 985,000. Both seller-leaders benefit from high transaction numbers in blockchain games.

<sup>1</sup> The Climate Controversy Swirling Around Nfts. <https://www.theverge.com/2021/3/15/22328203/nft-cryptoart-ethereum-blockchain-climate-change>

## Top NFT blockchains by NFT sales volume



### Ethereum

Ethereum, nicknamed “world computer”, is the world’s most popular blockchain for smart contract applications. It has the highest amount of value locked in DeFi, and the highest sales volume for NFTs.

#### Launched

July 2015

#### Cryptocurrency

ETH

#### 2022 NFT Sales Volume

US\$6.390 billion



### Ronin

Ronin is an Ethereum sidechain home to play-to-earn superstar Axie Infinity. It is a blockchain optimized for gaming developed by Axie Infinity developer Sky Mavis to avoid Ethereum congestion.

#### Launched

August 2021

#### Cryptocurrency

RON

#### 2022 NFT Sales Volume

US\$209.1 million



### Solana

Solana is a public blockchain that emerged as a popular alternative for DeFi and NFT applications when Ethereum congestion peaked. Its fast transaction speeds and low fees attract investors from less developed nations, and is often on the top of the list for game developers.

#### Launched

March 2020

#### Cryptocurrency

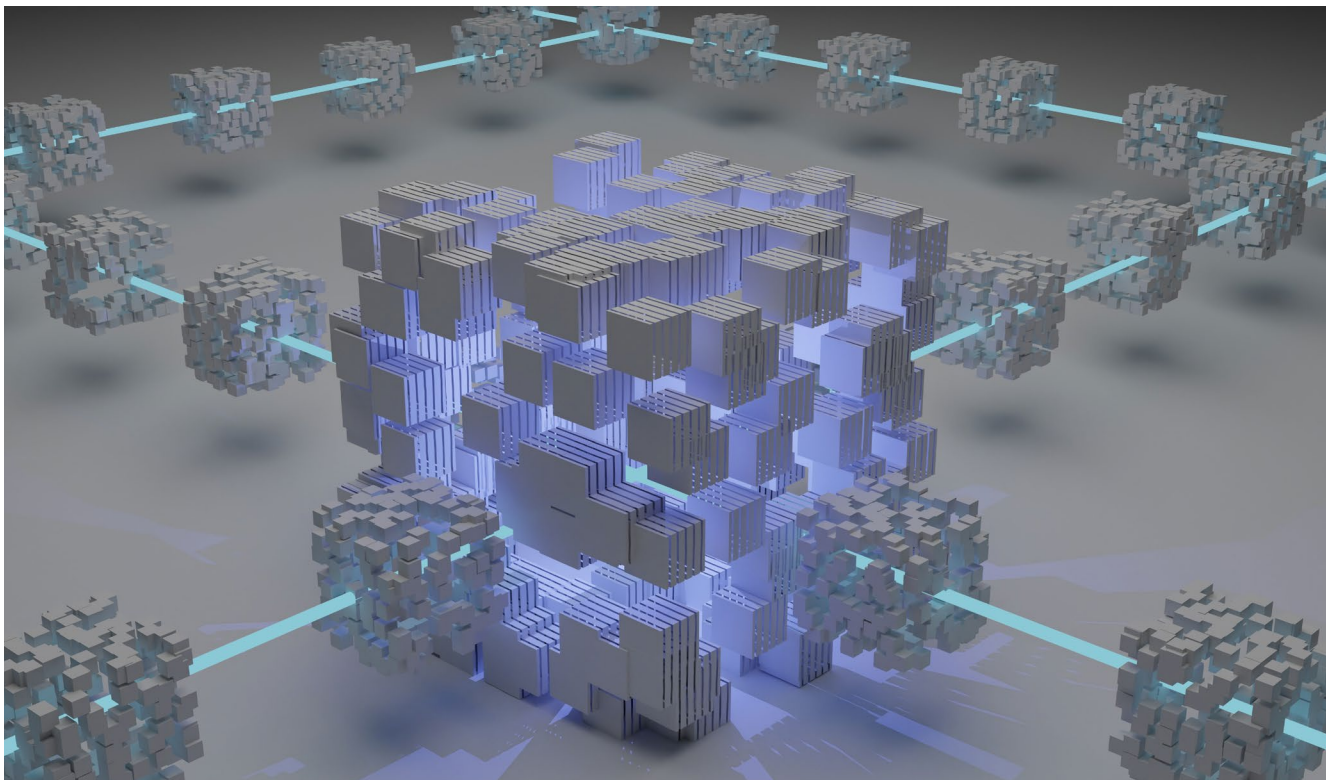
SOL

#### 2022 NFT Sales Volume

US\$350.4 million

Source: CryptoSlam, March 1, 2022

Image credit: Unsplash





## Interview

# The Rise and Rise of NFTs

### Growth drivers of the NFT ecosystem

The growing popularity of NFTs is stunning, having risen from several hundred million dollars in sales when the market first started to around US\$20 billion in 2021. We believe the exponential growth seen around the world can be explained by the product-market fit: NFTs have effectively provided a bridge for millions of mainstream users to begin converting to Web 3.0 through a new asset class that is digital collectibles.

We believe there are a few main drivers of this growth, the first having to do with appealing to a digitally-native generation. NFTs bridge many gaps between the traditional and new worlds — physical and digital, mainstream and crypto — because everyone can resonate with collectibles in the niche they care about. NFTs have proven to be the first crypto use case to truly attract mainstream audiences into the crypto and digital world.

The second driver of growth is economics and speculation. NFT collecting and trading have become more than a hobby for many dealers of NFTs. In fact, the advent of play-to-earn gaming has introduced a way for many people in impoverished nations to make a living after having lost their jobs due to the pandemic. One example of

this is Axie Infinity, a blockchain game that allows users to earn an income through NFTs and cryptocurrencies. In the Philippines, Axie Infinity players can make more than what they used to earn from their regular jobs in pre-pandemic days.

### Ethereum and other blockchains in the NFT space

Ethereum is by far the most relevant blockchain in the world — for NFTs, for developers, for decentralized finance (DeFi) and beyond. Ethereum and Ethereum-compatible chains make up around 80% of total NFT sales. Additionally, Ethereum has over 300,000 developers, more than any other blockchain developer community globally. Ethereum settles 12 times more transactions than PayPal does daily.

Regarding the growth of other blockchains, we believe we're moving toward an increasingly interoperable world. We believe that there will be many computational blockchains because they will form the backbone of Web 3.0. However, not all will play an equal role, as there's a distinction between technology, adoption and community.

Ethereum is the first and primary blockchain for running software, and the idea is revolutionary. It has ushered in DeFi, the creative industries with NFTs and now new organizational structures and gaming collectives.



**Charles d'Haussy**  
Managing Director,  
Asia-Pacific, ConsenSys

The demand for its capability outstrips the supply of computation, and so new chains like Polygon bridge into Ethereum and support additional use cases at lower cost and higher throughput in reliance on the Ethereum decentralization guarantees. Chains like Solana specialize in DeFi use cases and should be additive to the Web 3.0 ecosystem. All of this is co-evolving as the infrastructure is upgraded on the way to Ethereum 2.0 and multi-chain integration. The entire sector is expanding so fast that we are all going to make it.

### Key NFT projects and collections

The projects and collections that have caught our attention span across a few specific categories, including: Popular “cult” crypto collections. There are a number of virally popular crypto NFT collectible projects such as the Bored Ape Yacht Club and CryptoPunks, which each have some 10,000 uniquely generated characters. No two NFTs are exactly alike, and each one of them can be officially owned by a single person on the Ethereum blockchain. There are several others that are in this category of “club” avatars, and new ones are continuously launching every day.

The possibilities for these types of collections are endless, as they represent more than a digital collectible. They represent an access pass, a representation of one's identity and a social "flex." People use these avatars as their social media profile pictures. People use these avatars to feel like part of a club. "Members" of these clubs actually support each other and follow each other. Membership in these clubs, represented by ownership of these tokens, is exclusive and actually offers real value and adds to one's digital identity.

Fan engagement: NBA Top Shot made almost US\$1 billion in historic sales through their video NFTs that capture sports moments.

Digital artwork: the digital artist Beeple secured US\$69 million at a Christie's auction and continues to produce daily artwork for his fans. There are a lot of other examples within digital art...including generative art.

Rights and royalties: Treum has pioneered music rights and royalties through their EulerBeats project, which produces unique, generative songs, (and) which distributes royalties in perpetuity to the original owners.

Brand engagement: Multiple brands are exploring opportunities using NFTs to galvanize their brand engagement and loyalty platforms. These include the world's major cosmetics companies, the largest intellectual property owners, entertainment companies and beyond.

Gaming: gaming has long been known to be a great use case for NFTs and there are multiple examples of blockchain in gaming

both in the Web 2.0 world and the blockchain world. One example is Axie Infinity, which is now the top ranking NFT collectibles of all time, according to numerous NFT analytics sites, with more protocol revenue than Bitcoin and Ethereum.

There are endless possibilities for the world of NFTs, and multiple projects have delivered incredible utility for their communities.

## Environmental and security backlash

With respect to environmental concerns, there will be a major upgrade on Ethereum called "the Merge" (part of the Ethereum 2.0 upgrade), which will address the high usage of energy. Merge is the transition of the Ethereum blockchain to a more environmentally friendly method of confirming transactions and data on the blockchain called proof of stake.

## Membership in these clubs, represented by ownership of these tokens, is exclusive and actually offers real value and adds to one's digital identity.

Proof of stake (PoS) will be:

Substantially more sustainable: Tackling global concerns around crypto's environment impact. It is 99.95% more energy-efficient. If you estimate the energy use of one proof of stake validator to be 50W daily, which is a high estimate, that's about the same as streaming less than four minutes of Netflix.

More decentralized, in line with blockchain essence: More validators,

more decentralization. Proof of stake reduces the technical barriers for anyone to stake and secure the network.

More secure: The ability to compromise the network will be magnitudes more expensive with proof of stake, not to mention that a 51% attacker is identifiable with validator addresses and can be forked away from the network in the event of an attack.

The NFT industry is also empowering green futures with layer-2 technologies that are environmentally and fiscally sustainable, with lower carbon footprints and inexpensive transactions.

# NFT Avatars — A New Identity

## From the lookout:

When 10,000 CryptoPunks were first minted by creator Larva Labs in 2017, it came with a bug in its source code that allowed buyers to instantly withdraw the Ether used in the purchase, essentially claiming ownership of the NFT and the funds that were supposed to be in the sellers' wallets.

Larva Labs airdropped the same copies of CryptoPunks to owners with a bug fix. This version, CryptoPunks V2, eventually became the recognizable pixelated collection we know today.

This classic collection made a comeback, also with a bug fix. Users started trading wrapped versions of these CryptoPunks V1 in popular NFT marketplaces, including OpenSea, the world's largest. The circulation of V1 is challenging the one-of-a-kind feature of February's fourth-highest selling NFT collection, CryptoPunks.

Larva Labs disowned the V1 collection and issued a DMCA notice for OpenSea to delist the collection. The V1 community has fought back, filing a counter-DMCA notice. Larva Labs has since sold the IP rights to BAYC creator Yuga Labs who intends to transfer IP rights to the token holders. The future of V1 has not yet been determined.

NFT avatars are digital portraits, often illustrating animated or pixelated characters. Avatars are algorithmically generated to give each NFT unique identifiable traits, such as a particular hairstyle, mustache, glasses or even laser eyes — a social trend Bitcoiners cite to support the cryptocurrency's climb to US\$100,000.

## Nine of the top 10 NFT collections by sales volume were avatars in February 2022, up from January's eight in 10.

In many instances, the ownership of these avatars represent community membership. Bored Ape Yacht Club is one of the most successful NFT avatar collections in the world, charming world-famous stars such as two-time NBA Most Valuable Player (MVP) Stephen Curry and rap icon Eminem into its prestigious community. In February 2022, the average price for a single Bored Ape was US\$319,947, or 110 ETH.

Nine of the top 10 NFT collections by sales volume were avatars in February 2022, up from January's eight in 10. Azuki, an anime inspired NFT collection that provides owners access to The Garden metaverse, dethroned January champion Bored Ape Yacht Club by selling US\$148 million from its collection. In this metaverse, Azuki NFT avatars become their owners' identity to interact with the community.

The rise of the metaverse may be the catalyst to shift mainstream perception of NFTs from simple pictures to unique assets that represent ownership in the digital realm.

Big brands have already started to connect digital and physical properties. For one, Adidas has partnered with Bored Ape Yacht Club for its upcoming collection of NFTs titled Into the Metaverse. Owners of these NFTs will gain access to four exclusive physical products at no additional cost. The popular

sportswear brand also said its upcoming lineup of physical apparel would complement virtual wearables in the form of NFTs.

With the pandemic accelerating digital transformation, the metaverse may be transitioning from sci-fi luxury into a future necessity.

Questions about the future include how our digital counterparts will look in the metaverse and how that version can maintain a person's uniqueness. So far, NFT avatars present a reasonable option.

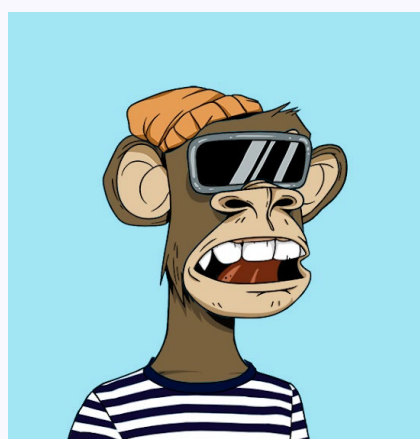


Image credit: Yuga Labs

# Trends Driving NFTs Growth

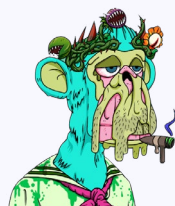
Avatars accounted for most of the growth in the NFT space in 2021, but diverse use cases are starting to emerge.

More niche products are also emerging, including fractionalized property ownership, and DeFi

products made specifically for the NFT ecosystem are expected to grow this year.

Such developments were discussed in detail during interviews with Charles d’Haussy, managing

director, Asia-Pacific, ConsenSys; Helen Hai, head of NFT and fan token at Binance; and Audrey Ou, co-founder and CEO of NFT art platform TRLab. Condensed versions of these interviews are found in this report.



	Bored Ape Yacht Club	Mutant Ape Yacht Club	Azuki	Meebits	CryptoPunks
<b>What is it?</b>	10,000 Bored Ape NFTs programmatically generated from over 170 possible traits	Up to 20,000 Mutant Apes NFTs (spin-off from Bored Ape Yacht Club)	10,000 manga-style avatars; Azuki aims to be identities for <i>The Garden</i> metaverse	20,000 unique 3D voxel characters, Snoop Dogg is a high profile owner	10,000 uniquely generated characters; one of the earliest examples of NFTs
<b>Launched date</b>	April 2021	August 2021	January 2022	May 2021	June 2017
<b>Blockchain</b>	◆ Ethereum	◆ Ethereum	◆ Ethereum	◆ Ethereum	◆ Ethereum
<b>Created by</b>	Yuga Labs	Yuga Labs	Chiru Labs	Larva Labs	Larva Labs
<b>2022 Sales Volume</b>	US\$421.3 million	US\$343.3 million	US\$367.4 million	US\$48.6 million	US\$216.1 million
<b>Floor price</b>	BAYC: ◆ 97 ETH	MAYC: ◆ 21.8 ETH	Azuki: ◆ 12 ETH	Meebits: ◆ 6.1 ETH	CryptoPunks: ◆ 71.94 ETH
<b>Discord Community</b>	146,620	146,620	87,895	54,453	54,453

Data taken March 1, 2022. Source: CryptoSlam, 2022 sales volume refers to estimates for January and February  
 Images: opensea.io, azuki.com/gallery, meebits.larvalabs.com, larvalabs.com/cryptopunks

# Interview

## Trends Within the Trend

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### What major use cases or trends will we see in the NFT space in 2022?

**Trend 1:** Mass Adoption. Currently, we estimate there are around 1 million unique wallets globally that have been used to buy, sell or hold NFTs. We believe this number will rise sharply as more companies and developers create NFTs to engage fans, art lovers and attract other new users. The trend of creating or buying NFT avatars for use as profile pictures will continue to grow as well.

**Trend 2:** GameFi. Traditional free-to-play developers will jump on the bandwagon of blockchain games, NFTs and play-to-earn by the end of 2022. This game genre will no longer be driven solely by crypto native developers.

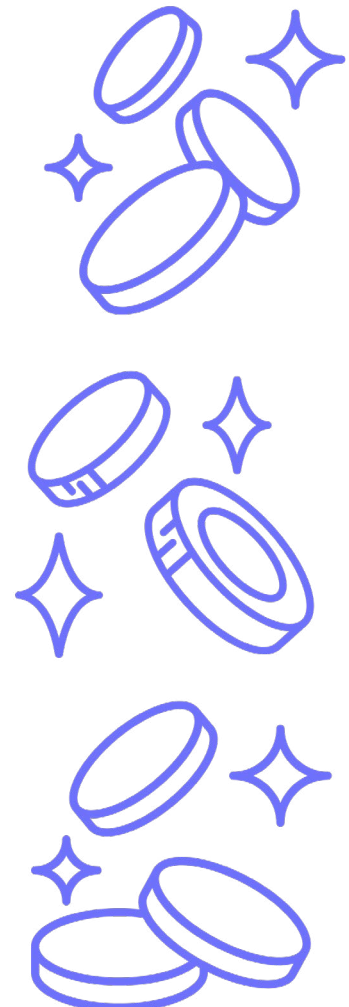
**Disruption of traditional markets such as music, ticketing and entertainment, etc. We will see new NFT models with the potential to disrupt these industries.**

**Trend 3:** Disruption of traditional markets such as music, ticketing and entertainment, etc. We will see new NFT models with the potential to disrupt these industries. One possibility is the emergence of a class of NFTs that allow revenue participation via smart contracts, rewarding every person in the value chain including composers, artists, musicians, producers and collectors/whales.

**Trend 4:** Dynamic NFTs and the integration of real-world events. NFTs started as static images but have evolved to incorporate different features. In 2022, we will see further integration of real-world information such as weather and stock data into NFTs. Basically, any real-world data can flow into NFTs and cause the NFT to evolve.



**Helen Hai**  
Head of NFT and fan token  
Binance



# Asia Primed for NFT Growth

Asia looks set to become the next big market for NFTs, with some experts predicting the region may surpass the West as early as this year.

Global Google search interest for the term “NFT” surged past “crypto” in January, with the search engine’s data showing growth originating in the East.

Data from Taiwan, Japan and South Korea show NFTs are by far

the more popular search term, with Hong Kong internet users searching for “NFT” at 60% versus 40% for “crypto” in a comparison of the two terms, according to March data from Google.

Mainland China’s search behavior appears almost identical to Hong Kong’s, although this is difficult to verify due to China’s internet restrictions which include a ban on Google.

David Gan, a founder and general partner at OP Crypto, a venture capital firm that supports early-stage startups in the digital asset economy, said there was a shift under way from West to East in the NFT market. He cited several “notable” NFT projects with a strong Asian influence, including PhantaBears, Capsule House and Azuki.



## Southeast Asia

- Total online population: 440 million<sup>1</sup>
- Strong Google search interest in NFTs
- Epicenter of Axie Infinity’s play-to-earn boom
- Regulatory stance varies depending on country

Southeast Asia boasts some of the highest rates of NFT ownership globally, aided in part by the popularity of play-to-earn games such as Axie Infinity. MetaMask, a soft wallet of 21 million users, said the Philippines is its single biggest market with Vietnam in third place.

A Finder.com<sup>2</sup> study supports MetaMask’s numbers. Among 28,000 people surveyed across 20 nations, the Philippines had

the highest proportion of NFT owners in 2021, with 32% of adults admitting to owning at least one.

This comes as no surprise as Axie Infinity became a source of income for the country when Covid-19 was at its peak. A new economy blossomed around the NFT game, with players known as “scholarship providers” renting out Axies to those who could not afford the initial set of NFTs needed to join the economy.

Thailand came in second among Southeast Asian countries, the Finder.com survey found, with 27% of correspondents classifying themselves as NFT owners.

Indonesia, the most populous Southeast Asian country, looks particularly promising. In December 2021, a 22-year-old college student, Sultan Gustaf Al Ghozali, uploaded around 933 selfies of himself taken over the course of five years. The collection now has 509 owners

and has a trade volume of 396 ETH (US\$1.12 million).

Bali, Indonesia’s top tourist destination, is also becoming a crypto hub. The nation’s largest crypto exchange, Tokocrypto, recently launched T-Hub, a physical retreat for Asia’s crypto community. Bali has its own physical NFT gallery, the Superlative Gallery, which opened its doors to visitors in January.

With a physical crypto zone, an NFT gallery, friendly visas and a local social media superstar, Indonesia is a sleeping giant in the NFT scene.

Regulations in other parts of Southeast Asia are, however, less favorable. Singapore has tough restrictions on crypto-related advertising, while the Thai Securities and Exchange Commission has banned digital asset exchanges from providing services related to certain crypto-related products including NFTs.

<sup>1</sup> <https://blog.google/around-the-globe/google-asia/sea-digital-decade/>

<sup>2</sup> NFT statistics 2021. <https://www.finder.com/za/nft-statistics>

## From the lookout:

Singapore and Hong Kong were once touted as crypto hubs, but the two Asian financial centers are being sidelined due to unfavorable regulations on crypto trading.

It is unclear whether the tough stance on retail crypto will affect the growth of NFTs, although the Monetary Authority of Singapore has stated that there are no plans to regulate NFTs as of now. The central bank has moved to tax them instead.

Hong Kong, meanwhile, has become a popular NFT hub, with regular physical gatherings, galleries and local artists embracing the new source of income, at least when the pandemic permits.

Despite the difficulty in accessing crypto, Asia's two financial centers may yet ride the NFT wave.



## China

- Total online population: 1.032 billion<sup>1</sup>
- Strong Google search interest in NFTs
- NFTs are not banned but state media has issued warnings against speculation
- NFTs are referred to as “digital collectibles” and there are trading restrictions for such products

NFTs are popular in China, but the market may develop differently compared to the rest of the world due to restrictions imposed by the state.

China, once one of the world's largest markets for crypto-currencies, banned crypto transactions<sup>2</sup> in 2021. The government is, however, watching the industry closely and state media have warned against the speculative behaviors surrounding NFTs.<sup>3</sup>

To abide by government warnings, Chinese tech giants, including Alibaba, have rebranded NFTs as “digital collectibles” which can only be purchased using fiat currency. The tech giants have also imposed lock-in periods to

prevent NFT owners from flipping their products.

For example, Alibaba has a 180-day lock period before NFTs can be transferred to other users for the first time. The receiver of these NFTs must then hold on to these tokens for an additional two years before they can be transferred again.

The half-year lock hasn't curbed speculation. In February 2022, state-backed broadcaster CCTV released 34,000 collectibles on Tencent's and Alibaba's NFT market at 29.9 yuan (US\$4.72) each. These collectibles soon appeared on online resale markets,<sup>4</sup> trading at least 10 times their original prices.

Just weeks prior, demand for NFT-like digital collectibles issued by Chinese state-backed media outlet Shanghai Securities News surged on China's biggest resale market, Alibaba's Xianyu.

AntGroup's NFT<sup>5</sup> arm, which is part of the Alibaba group, has since frozen the accounts related to the resale of digital collectibles.

Beijing is building its own version of NFTs on the state-backed Blockchain-based Service Network<sup>6</sup> (BSN). In a semantic effort to distance

<sup>1</sup> China has 1.032 billion internet users, 73.0% penetration rate. <https://www.globaltimes.cn/page/202202/1253226.shtml>

<sup>2</sup> Industry players scramble, evaluate options as China bans all crypto transactions. <https://forkast.news/industry-scramble-china-bans-crypto-transactions/>

<sup>3</sup> Another Chinese state-run media outlet faults NFT frenzy. <https://forkast.news/headlines/another-chinese-state-run-media-outlet-faults-nft-hype/>

<sup>4</sup> CCTV NFTs hit resale market before transfer permitted. <https://forkast.news/headlines/cctv-nft-hits-resale-market-transfer/>

<sup>5</sup> Ant Group's NFT arm punishes users for digital collectible resales. <https://forkast.news/headlines/ant-group-nft-digital-collectible-resales/>

<sup>6</sup> Year in review: Top China blockchain news in 2021. <https://forkast.news/year-in-review-top-china-blockchain-news-in-2021/>

them<sup>1</sup> from NFTs traded for crypto on blockchains outside China, the Chinese NFTs have been named “distributed digital certificates”

or DDCs. This network will support China’s national currency,<sup>2</sup> the yuan.



Image credit: Yuga Labs

<sup>1</sup> Crypto market suffers mauling as bears go berserk. <https://forkast.news/crypto-market-suffers-mauling-as-bears-go-berserk/>

<sup>2</sup> China to launch own NFT infrastructure by end Jan, BSN confirms. <https://forkast.news/headlines/china-launch-own-nft-infrastructure-bsn/>

## Japan

- Total online population: 117.4 million
- Low NFT ownership despite tech-savvy population
- Government seeking to develop new use cases for NFTs

Japan is home to many innovative tech and crypto firms, and there is strong interest in crypto trading. But NFT ownership is surprisingly low in the land of Hello Kitty and

numerous other cult characters with massive followings.

The country’s NFT market may also develop along a different path, with the government prioritizing NFT-related use cases other than virtual collectibles.

According to Finder.com, just 2% of adult internet users own NFTs.

The growth of Japan’s NFT market may also slow during 2022 amid a backlash that has seen gaming

giant Sega, creator of Sonic the Hedgehog and Mortal Kombat, reevaluate its NFT plans. This followed criticism about its carbon footprint and talk that Sega’s plans were little more than a money grab.

The country, however, remains a pioneer in NFT technologies. For instance, Mitsubishi UFJ Financial Group (MUFG) is leading the way with its MUFG utility token, a form of NFTs that replaces physical coupons and cards, and represents access to shareholder rewards.

## South Korea

- Total online population: 49.75 million
- Strong Google search interest in NFTs
- Government and firms investing heavily in the metaverse
- Entertainment groups incorporating NFTs into their products

Tech-savvy South Korea is a hotbed of innovation in the digital space, with the government, educational institutes and companies leading the way in exploring new use cases for NFTs.

Candidates for the March 2022 presidential election have identified crypto-friendly stances as key strategies to attract younger voters. South Korean President-elect Yoon Suk-yeol issued NFTs featuring videos and images of himself during his campaign.

At least two South Korean universities have started issuing NFTs as graduation certificates, riding the NFT wave while coming up with a novel way to guard against forgery and alteration.

The biggest contribution to NFTs, though, is coming from the country’s world-famous K-pop industry and its tech conglomerates.

HYBE, the company behind K-pop boy band BTS, has teamed up with blockchain company Dunamu to



develop an NFT business<sup>1</sup> to sell BTS content in the form of digital assets.

Cube Entertainment,<sup>2</sup> another major K-pop entertainment agency, has partnered with Animoca Brands on an NFT joint venture to build a music metaverse.

These moves have, however, met resistance among K-pop fans concerned about the NFTs' carbon footprint.

The K-pop companies have nevertheless pressed ahead.

YG Entertainment — K-pop girl group Blackpink's agency<sup>3</sup> — has climbed aboard the NFT bandwagon, partnering with cryptocurrency exchange Binance, which will provide the NFT platform and technology support. Binance has also partnered with SM Entertainment on NFT projects.

South Korea's advance in the NFT space is supported by the country's large virtual reality market, which the nation's science ministry predicts will be worth over US\$2.5 billion by 2024.

South Korean companies are also global leaders in smart TV, with Samsung and LG together controlling around 50% of the global market.<sup>4</sup> Samsung and LG revealed at the 2022 Consumer Electronics Show that their new line of smart TVs will let viewers access NFT marketplaces directly from their living rooms.

Not all NFTs are permitted in South Korea, with blockchain-based play-to-earn games among those that have been banned.<sup>5</sup>

<sup>1</sup> K-pop sensation BTS gets ready to sell NFTs, as label looks to cash in on loyal A.R.M.Y fanbase. <https://forkast.news/k-pop-sensation-bts-nfts-label-army-fanbase/>

<sup>2</sup> Animoca Brands dreams big with K-pop agency Cube to build metaverse and NFTs. <https://forkast.news/headlines/animoca-brands-kpop-cube-metaverse-nfts/>

<sup>3</sup> Binance, BLACKPINK's K-pop agency to develop NFTs, other projects. <https://forkast.news/headlines/binance-blackpink-kpop-nfts-projects>

<sup>4</sup> LG to follow Samsung adding NFT features to flagship TVs. <https://forkast.news/lg-samsung-nft-tv-line/>

<sup>5</sup> Popular NFT games made in South Korea, and banned in South Korea. <https://forkast.news/south-korea-nft-play-to-earn-games-still-banned/>



Image credit: Unsplash

# Interview

## Getting Creative

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### Traditional art and NFTs

Art collectors have become much more interested in NFTs over the past year. Crypto-native NFT projects, like profile photos, are opening an entirely new market to art fans.

The ranks of mainstream art collectors are also expanding, since many young NFT collectors go on to explore other forms of art, including physical art.

### NFTs as a bridge between the physical and the virtual

There's still a big gap between the traditional and digital art worlds, but I believe the gap will narrow as new NFTs pull in new buyers from the physical market. NFTs are the gateway to crypto, and what we're seeing now is just the start.

In 2022, I predict that luxury brands, art institutions, musicians and other creators will experiment with NFTs on a much larger scale than in 2021.

### Copyright conundrums

Many issues remained unresolved in terms of copyright and copyright infringements. This isn't something TRLab deals with closely, because we work with artists directly and don't offer user-generated works on our platform.

Authenticity and legitimacy are incredibly important to all artists, and issues around ownership continue to swirl in the NFT space. One example is the controversy raised around an NFT sale planned by Pablo Picasso's granddaughter and great-grandson: Marina Picasso and her son Florian. The collection was not previously authorized by the Picasso Administration, and therefore would be deemed counterfeit, a complex copyright issue that can't be solved with blockchain technology alone.



**Audrey Ou**  
Co-founder and CEO  
NFT art platform TR Lab

### Outlook for 2022

This year, I see NFTs as a blank slate for exploration. What we believe to be the boundaries of NFT art will be pushed and broken by creators. With developments such as Coinbase's NFT marketplace, more people will become more familiar with NFTs, adding to the ranks of NFT buyers.

The NFT art market is still in its infancy, and this is no time to proclaim or accept a one-size-fits-all position on how to produce, launch, sell or collect NFT art. Beyond art, I see gaming and fashion as a big focus for NFTs this year.

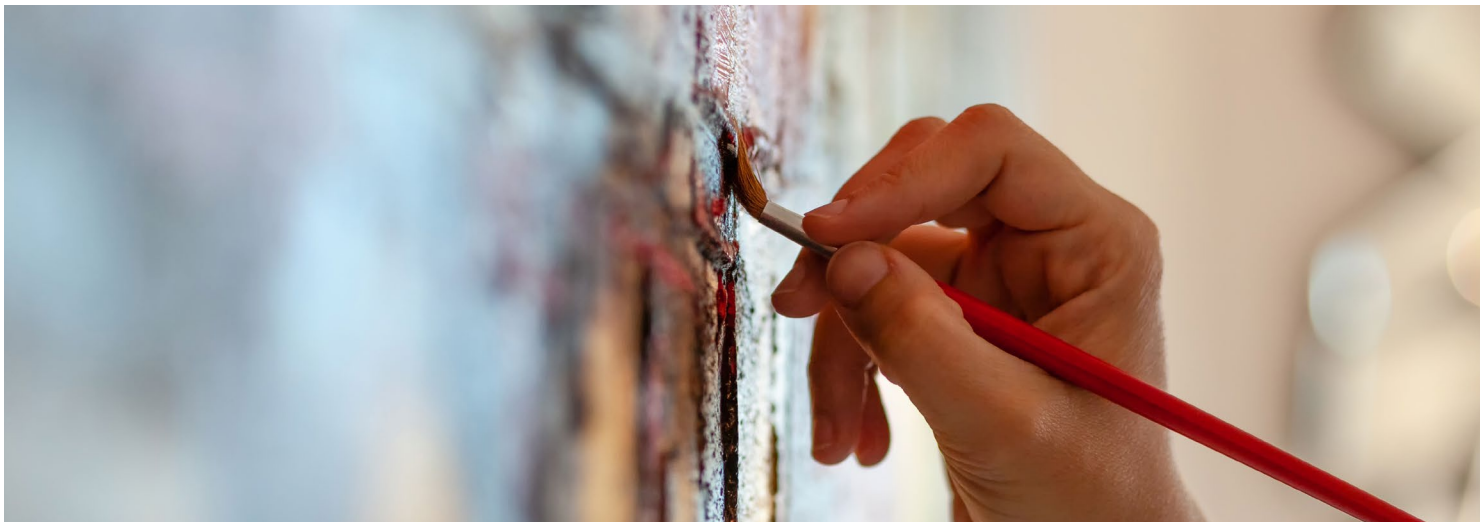


Image credit: Unsplash



# Metaverse Set to Boost NFTs

NFTs are widely expected<sup>1</sup> to gain increased popularity as the metaverse becomes more established, thanks to the technology's ability to provide indisputable proof of ownership.

Ownership of virtual real estate, which involves the use of NFTs, has grown rapidly. In Decentraland, one of the most popular metaverses, property prices have risen 400-500%<sup>2</sup> in the months

since Facebook said it was going all-in on virtual reality in October 2021, even changing its corporate name to Meta.

Consulting company McKinsey & Company wrote in a report<sup>3</sup> entitled "The State of Fashion 2022" that digital assets such as NFTs, gaming "skins" and virtual fashion will edge closer to the mainstream, with popular brands expanding into the metaverse.

<sup>1</sup> NFTs: The metaverse economy. <https://www.ft.com/partnercontent/crypto-com/nfts-the-metaverse-economy.html>

<sup>2</sup> Investors are paying millions for virtual land in the metaverse. <https://cnb.cx/3tn5fiC>

<sup>3</sup> The State of Fashion 2022. <https://www.mckinsey.com/~media/mckinsey/industries/retail/our%20insights/state%20of%20fashion/2022/the-state-of-fashion-2022.pdf>

## From the lookout:

Facebook kickstarted big tech's recognition of the metaverse by rebranding itself as Meta. The company's Oculus 2, priced north of US\$299, is already one of the most popular VR/AR headsets. If all goes as planned, the upcoming Oculus 3 will propel VR/AR headsets into the mainstream with its lower cost and improved features.

Microsoft's HoloLens is also gaining in popularity despite its US\$3,500 price tag.

The wild card is Apple, which has yet to make its VR/AR device announcement. As Apple has historically evaded bulky designs, the next generation of VR/AR devices will likely operate without having to dock phones into headsets.

# Interview

# The Metaverse Conquest



**Sébastien Borget**  
Chief operating officer and  
co-founder at The Sandbox

The Sandbox metaverse is made up of 166,464 unique land NFTs, digital pieces of real estate, that players can own to publish their creations, monetize their games or rent to other creators. These lands will host a wide range of experiences, and their limited number makes The Sandbox seem like a virtual Manhattan when it comes to real estate valuation. Today, The Sandbox counts over 18,500 unique land owners and generates a lifetime gross merchandise value (GMV) of US\$380 million.

One of the reasons that explains the interest in virtual lands in The Sandbox is the possibilities they offer: Users can publish their own experiences and monetize them or just rent out the land to other builders.

In The Sandbox, players and creators have full ownership of anything they create or buy, and full authorship of any NFTs they create. Every creator is free to share, trade or sell their 3D creations while retaining full ownership and getting all the revenue. You can bring your own NFTs to The Sandbox, even if they were created on another platform. Similarly, you can sell NFTs made in The Sandbox elsewhere if you want to. This concept has powerful appeal, but we expect competition from those who want to establish new walled gardens.

Thanks to the accessibility of VoxEdit, our 3D Editor for modeling and animating content, and Game Maker, our #nocode tool, the possibilities are amplified as anyone can build content in a matter of hours or days, unlike in

the real world where the process may take months or years.

Land owners also get access to a global audience, instantly, and are no longer limited by the laws of physics. The only limits are truly your imagination.

We believe that if you offer an even richer set of digital opportunities in a creators' economy but remove barriers to entry — by offering free tools that are intuitive, financial support for creators to help them get started and no buy-in required to start creating — a digital economy can spread even faster. That's our strategy with The Sandbox.

2022 will certainly be an exciting year for the industry as a whole, as many new blockchain-based games with player-owned economies will be launched and bring on new audiences. We also expect further innovations.

We see a transformation in the next 10 years. The economic opportunities

and jobs the metaverse is creating will transform how we'll be working, socializing, playing and earning. Brands like Adidas, Snoop Dogg, The Walking Dead, deadmau5, Atari, Rollercoaster Tycoon, Care Bears, The Smurfs, Shaun the Sheep, and Binance see the value in what we're creating and have partnered us to create voxelized versions of their worlds and characters in the metaverse.

A new generation of players and consumers are interested in virtual goods and brand experiences, and that's why partners like Snoop Dogg are choosing The Sandbox as the space to perform concerts, interact with fans and establish themselves in the digital space.

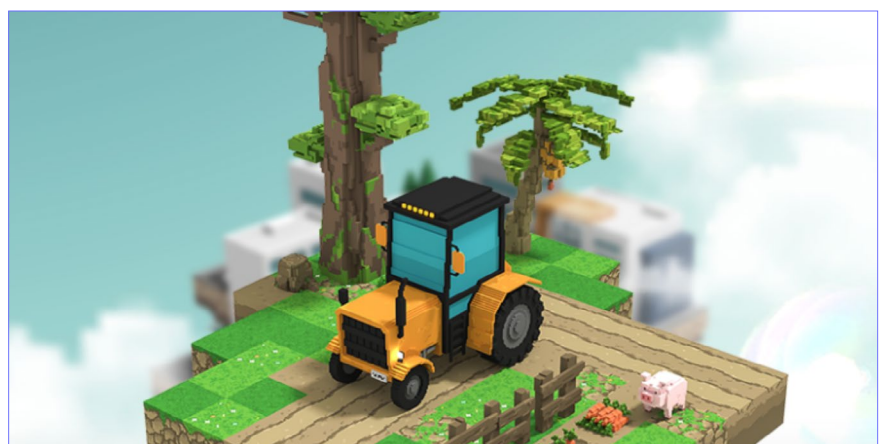


Image: <https://www.sandbox.game/>

## From the lookout:

Unbeknownst to those outside the NFT space, there's a mammoth blockchain game on the horizon.

Even before the launch of Star Atlas, which promises cinema-quality graphics, investors are already pouring millions of dollars to purchase in-game NFT items. The unreleased game's leaderboard shows a player with US\$4 million worth of assets. This player's in-game faction's assets are worth US\$68 million dollars.

The combined asset value of the three Star Atlas factions is currently over US\$166 million dollars — enough for the game to be in the top 20 NFT collections even before the launch.

Star Atlas may become one of the most valuable games of all time or it may fail spectacularly because of all the hype. Nevertheless, it will be an important milestone in the history of NFTs.

# The Boost from Blockchain Gaming

The rise of blockchain play-to-earn gaming<sup>1</sup> has been a catalyst for the adoption of NFTs. According to games market analytics firm Newzoo<sup>2</sup>, the global games market will generate revenues of US\$218.8 billion in 2024. A third of the world's population are gamers and the Asia-Pacific region is the largest market for video gaming, according to Statista.<sup>3</sup> Gamers are accustomed to interacting in a virtual world with game assets such as skins or power-ups. Players can potentially win tokens or NFTs and trade them or sell them on marketplaces for fiat money.

Gaming is seeing an increase in the use of NFTs.<sup>4</sup> Popular NFT-based blockchain game Axie Infinity clocked more than US\$126 million in sales in January 2022 and is the top NFT collection by all-time sales volume, ahead of the avatar NFT collection CryptoPunks which had around half the sales.

Businesses and game developers have seen how blockchain and

NFTs are transforming gaming and are entering this arena. Microsoft in January 2022 announced that it was buying gaming giant Activision Blizzard<sup>5</sup> in a US\$68.7 billion push to grow its gaming business and position itself as a developer of metaverse platforms.

Cryptocurrency platform Binance in October 2021 launched its new Initial Game Offering arm to enable investments in NFT gaming projects. Helen Hai, head of NFT and fan token at Binance, predicts that with the rise of GameFi, traditional free-to-play developers will go into blockchain games.

"This game genre will not be driven by crypto native developers anymore and we will see big developers and publishers enter the space," she said.

As with collectibles, the shift to NFTs has faced pushback due to concerns about their carbon footprint, as gaming giant Ubisoft found out in December 2021 when it launched Ubisoft Quartz, an NFT platform on the Tezos blockchain.

<sup>1</sup> Animoca CEO Yat Siu: Ownership economy 'will be worth trillions'. <https://forkast.news/atari-yat-siu-nft-gaming-blockchain-adoption>

<sup>2</sup> The Games Market and Beyond in 2021: The Year in Numbers. <https://newzoo.com/insights/articles/the-games-market-in-2021-the-year-in-numbers-esports-cloud-gaming/>

<sup>3</sup> Number of active video gamers worldwide from 2015 to 2023. <https://www.statista.com/statistics/748044/number-video-gamers-world/>

<sup>4</sup> Gaming's new tipping point into metaverse matters. <https://forkast.news/gamings-new-tipping-point-and-why-metaverse-matters/>

<sup>5</sup> Microsoft to acquire gaming giant Activision Blizzard in metaverse bid. <https://forkast.news/headlines/microsoft-acquire-activision-metaverse/>

## Popular blockchain games



### Axie Infinity

An NFT-based blockchain game in which players battle, breed, collect, raise and build kingdoms for pet creatures called Axies

#### Launched

March 2018

#### Blockchain

Ronin (previously on Ethereum)

#### Created by

Sky Mavis

#### 2022 Sales Volume

US\$209 million



### Farmers World

An NFT-based blockchain game in which players can farm NFTs, pick tools, breed animals, cultivate crops, buy land to build farms and fight jungle monsters

#### Launched

August 2021

#### Blockchain

WAX

#### Created by

G. JIT Japan

#### 2022 Sales Volume

US\$23.7 million



### Alien Worlds

An NFT metaverse in which players compete using unique digital items (NFTs), earn in-game currency Trilium and travel on missions

#### Launched

December 2020

#### Blockchain

Binance Smart Chain, Ethereum, WAX

#### Created by

Dacoco

#### 2022 Sales Volume

US\$2.7 million

Source: CryptoSlam 2022 sales volume refer to estimates for January and February.



# Collaterals, Vaccine Certificates and Other Use Cases

The next 12 months will see an increase in NFT use cases beyond gaming and collectibles.

One of the more novel shifts in NFT usage comes from DeFi. In January 2022, digital asset trading group Genesis started accepting NFTs as collateral for loans and derivatives deals, in a sign that digital art has found its way into the booming market for complex crypto financial products.

Drops.co provides a platform for retail investors to secure instant loans on NFT and Metaverse assets,

while NFTfi provides market making services for borrowers and lenders.

Universities, governments and institutions have already started issuing NFTs to counter fraud and forgery, while experts have proposed using NFTs as vaccine certifications as well.

Binance's Hai believes traditional markets such as music, ticketing, entertainment will also look to NFTs. Of particular interest is the possibility of revenue participation via smart contracts that involve all parts of a value chain including composers, artists, musicians, producers and collectors.

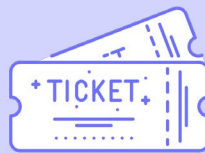
Although NFTs, for now, are mostly images and short video clips, Hai expects to see dynamic NFTs being integrated with real-world data such as changes in the weather or stock prices. "Any real-world data can flow into NFTs and have an impact on the NFT itself," she said.

Rachel Mayers, VP of product at Circle, expects the use cases for NFTs to continue growing at a rapid pace. "Brands and creators will reinforce loyalty community behavior by using NFTs... eventually, everything will be an NFT."

## NFT Use Cases



ORIGINAL DIGITAL ARTWORK



EVENT TICKETS



ORIGINAL MUSIC



IN-GAME ITEMS



DIGITAL COLLECTIBLES



DIGITAL DOCUMENTS

## Interview

# NFTs Behind the Pictures



**Reeve Collins**

Co-founder of BLOCKv, a platform for creating, minting and distributing programmable NFTs

### 1. What are programmable NFTs?

Programmable NFTs are completely customizable digital objects that can be programmed to change their appearance and purpose over time, allowing for the creation of unique objects and collectibles that can change in response to future events.

Picture a massive multiplayer online role playing game like World Of Warcraft, where you can complete your existing armor set by heading out into the real world and collecting a helmet dropped near your home, Pokémon Go-style.

Or, using the Super Bowl as another example, consider a digital collectible released by your favorite team mid-season that changes to a VIP playoff ticket if your team qualifies! The digital nature of NFTs allows us to build these kinds of things, moving beyond the static, unchanging nature of items in the physical world and transcending what was previously possible.

One recent initiative involved pairing the power of BLOCKv's interactive programmable NFTs with Huobi's

eco-friendly, decentralized HECO Chain blockchain.

Themed around the Chinese Year of the Tiger, this specific release allows users to snap a picture wearing a virtual tiger mask or add a New Year photo frame and mint the moment into an NFT in seconds. This NFT can then be shared with friends and family across the globe.

We're hoping that this is the sort of vibrant, cross-cultural experience that will become more abundant in the world of blockchain, as the metaverse is ultimately about connecting people, regardless of physical location.

### 2. Are NFTs a fad or the future?

While I can't definitively predict how the future will unfold, NFTs certainly have a huge amount of potential and a wide variety of use cases that bring a ton of value. Right now, of course, the market is largely centered around digital art and collectibles, but the power of blockchain technology means that any number of digitally

transmittable objects could be transformed. This technology potentially holds the answer to solving enterprise problems like event ticket fraud and the secure transfer of sensitive data, so in my view, this approach can and should most certainly be the future.

### 3. Do you see NFTs as an asset class in 2022?

I do, but then again I have been stating that they would become an entirely new asset class since 2015, I'm very happy to see it finally coming to fruition!

We have still only scratched the surface of what is possible with these digital objects, and there is still a tremendous number of use cases that have yet to be unlocked. The revolutionary and unique nature of NFTs denotes them as a unique form of asset that will continue to grow and expand as they become a more integral part of our daily lives.

**This technology potentially holds the answer to solving enterprise problems like event ticket fraud and the secure transfer of sensitive data, so in my view, this approach can and should most certainly be the future.**



# Virtual Real Estate

NFTs are also transforming the world of real estate: from fractionalizing physical properties<sup>1</sup> for ownership and trading, to virtual land in the metaverse. To provide a flavor of how virtual real estate in the metaverse is faring, the lowest price of a plot of virtual land in Decentraland was 4.5 ETH<sup>2</sup> while a piece of land in

The Sandbox on OpenSea cost at least 3.22 ETH.<sup>3</sup>

Warner Music Group (WMG) is one of the latest corporate giants to move into the metaverse. The American music company said it was creating a music-themed virtual world called Warner Music Group LAND<sup>4</sup> in The

Sandbox metaverse, which will act as a music theme park and concert venue. Music fans will be able to purchase digital real estate in the form of NFTs called "land" in March 2022 that are adjacent to WMG's virtual park.

<sup>1</sup> How you can own a (tiny) part of a Thai beachfront villa for US\$150. <https://forkast.news/how-blockchain-can-help-buy-beachfront-villa/>

<sup>2</sup> <https://opensea.io/collection/decentraland>

<sup>3</sup> <https://opensea.io/collection/sandbox>

<sup>4</sup> Warner Music is ready to play in The Sandbox metaverse. <https://forkast.news/headlines/warner-music-play-sandbox-metaverse/>

# A New Way to Raise Funds

One recent trend involving NFTs is fundraising to support a wide range of philanthropic causes including animal conservation, children, gender equality and education.

American former professional basketball player Shaquille O'Neal recently raised US\$2 million from the sale of his NFTs<sup>1</sup> for his charitable foundation which supports underserved youth.

Animal lovers can purchase NFTs of the animals they love and support conservation efforts at the same time. One example is the NFTs created by TV channel WildEarth that are linked to 25 animals from the Djuma Game Reserve in South Africa.

Around 40% of the value of every NFT sold by WildEarth is directly paid to the custodian of the animals' habitat, and 8% of every future resale goes to the custodian. A total of 1,065 WildEarth NFTs have been sold, with US\$13,900 going to the Djuma Game Reserve, at the time of writing.

Through these NFTs, owners will receive special updates on their animals' sightings, gain access to events on wildlife conservation and engage with the Djuma Game Reserve and the wider WildEarth community.

UNICEF,<sup>2</sup> the world's largest organization for providing humanitarian and developmental

aid to children, launched in January 2022 a collection of 1,000 data-driven NFTs called the Patchwork Kingdoms, with proceeds from the primary sale going to initiatives such as Giga. Patchwork Kingdoms is the United Nation's largest-ever NFT collection to date.

But while Giga, a global initiative to connect every school to the internet, met its fundraising target, Christopher Fabian, co-founder and UNICEF lead, said donors came most from the crypto native community.

"The whitelisting process was not easy for the general public — you have to go to Twitter, then Discord, and go through the process," he said.

**Around 40% of every NFT sold by WildEarth is directly paid to the custodian of the animals' habitat, and 8% of every future resale goes to the custodian.**

<sup>1</sup> <https://twitter.com/SHAQ/status/>

<sup>2</sup> UNICEF invests in blockchain startups for financial inclusion. <https://forkast.news/unicef-venture-fund-blockchain-govblocks-india/>

# NFT Marketplace Competition Heats Up

OpenSea, an NFT marketplace<sup>1</sup> on the Ethereum blockchain founded in 2017, currently dominates the NFT landscape with a market share of over 80% as of February 2022.

OpenSea's monthly trading volume on Ethereum soared to a new record high of US\$5 billion in January 2022, surpassing its previous peak of US\$3 billion reached in August 2021. OpenSea is well funded, having raised US\$300 million in Series C funding<sup>2</sup> in January 2022 at a US\$13.3 billion valuation.

But competition is heating up as rivals and newcomers try to grab a slice of the pie through aggressive marketing tactics.

Randy Wasinger, founder and CEO at CryptoSlam, said he expected to see more NFT marketplaces, both on and off Ethereum.

"As NFT adoption continues to grow, those marketplaces that are already there are going to have success. And there's going to be copycats that come out and do the exact same thing, but maybe with a twist," he said.

On Jan 13, 2022, upstart NFT marketplace LooksRare<sup>3</sup> launched a "vampire attack" to entice OpenSea users to switch to the new platform.

LooksRare airdropped \$LOOKS tokens as trading rewards and achieved sales volumes that were more than five times OpenSea's.

The high volumes were, however, partly due to wash trading,<sup>4</sup> which involves the buying and selling of NFTs between two wallets controlled by one individual or group so as to claim the \$LOOKS.

In a Jan. 29, 2022 tweet,<sup>5</sup> CryptoSlam said it had removed over US\$8 billion in wash sales from its January sales volume figures. The avatar NFT collection Meebits bore the brunt of wash trading, with US\$4.4 billion in wash sales, followed by Terraforms (US\$2.9 billion), Loot (US\$705 million) and Cryptophunksv2 (US\$251 million).

Mintable,<sup>6</sup> a Singapore-based NFT marketplace backed by billionaire Mark Cuban, recently launched its version of a vampire attack by holding a fire sale of nine Mutant Ape Yacht Club NFTs below the collection's floor price. The offer was almost immediately sold out because of the significant discount.

Zach Burks, Mintable's founder and CEO, likened the move to the various sales promotions offered by e-commerce giants such as Amazon and Alibaba.

There is now a long list of marketplaces vying for a slice of the NFT pie including Nifty Gateway, Rarible and SuperRare. Smaller players targeting niche segments, such as Fractal,<sup>7</sup> a marketplace for gaming NFTs, and native marketplaces for specific collections such as Axie Infinity and Larva Labs are also on the rise.

Cryptocurrency exchanges including Binance,<sup>8</sup> Crypto.com and Coinbase are gunning for a piece of the action. Coinbase, the largest cryptocurrency exchange in the United States, is expected to launch its NFT marketplace<sup>9</sup> in collaboration with payments company Mastercard soon.

Yohann Calpu, CryptoSlam's chief marketing officer, welcomed the mushrooming of new marketplaces for NFTs and said niche players would bring variety and choice.

"It's like a new person who just wants to go to a huge supermarket like Walmart to see everything," he said. "But somebody who knows exactly what he wants will go to the marketplace where they may get a better deal," he added.

<sup>1</sup> What is OpenSea and why is everyone talking about it? <https://forkast.news/what-is-opensea-nft-marketplace/>

<sup>2</sup> Announcing OpenSea's new funding. <https://opensea.io/blog/announcements/announcing-openseas-new-funding>

<sup>3</sup> Upstart NFT marketplace LooksRare challenges OpenSea's dominance. <https://forkast.news/upstart-nft-marketplace-looksrare-challenges-opensea/>

<sup>4</sup> Wash Trading: Who, What, Why, and What Should We Do About It? <https://blog.cryptoslam.io/wash-trading-who-what-why-and-what-should-we-do-about-it/>

<sup>5</sup> <https://twitter.com/cryptoslamio/status/1487109286186688512>

<sup>6</sup> Mintable wants to be the world's largest NFT market by cataloging all Ethereum-based NFTs. <https://forkast.news/mintable-nft-marketplace-all-nfts-ethereum>

<sup>7</sup> Twitch co-founder is building a marketplace for gaming NFTs. <https://forkast.news/headlines/twitch-building-marketplace-gaming-nfts/>

<sup>8</sup> World's largest crypto exchange Binance to launch NFT market in June. <https://forkast.news/binance-nft-marketplace-launch/>

<sup>9</sup> Making the creator economy mainstream: Why Coinbase is getting into NFTs. <https://www.mastercard.com/news/perspectives/2022/coinbase-nft-creator-economy-prakash-hariramani/>

## Interview

# NFT Marketplace Rivals' Arrival

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**Zach Burks**

Founder and CEO  
Mintable, a Singapore-based  
NFT marketplace

**The NFT marketplace landscape is getting more and more competitive. What are your thoughts on staying ahead in this competitive landscape?**

The NFT space is definitely the hottest industry on earth right now and it is the fastest-growing industry. There's a lot of competition. At Mintable, we're also growing very quickly. In order to continue to grow, you need to be able to innovate and be able to offer something that is reliable, trustworthy, safe and innovative.

For example, everyone verifies collections so you know they are authentic. But instead of us just doing the same exact thing that every marketplace does, we don't use the word verify. Instead, we use "guaranteed authentic" because that's really what you're worried

about. Just small things like that and then really big things like features and technology improvements to make us different.

**Avatar NFTs are getting a lot of attention right now. Do you expect it to continue to be a trend in the year ahead?**

Profile picture NFTs or avatar NFTs are what is hot right now. They may not be hot next year, like fashion, where what's hot this year ends up being unfashionable within the next six months to a year. What you'll find is that as the NFT space gets larger and larger, different subsections will form.

You're always going to have a subsection for gaming, you're always going to have a subsection for real estate within the metaverse, you're always going to have a subsection for profile avatar pictures. And when you get

hundreds of millions of people involved, each of these subsections is just going to grow rapidly.

**Looking at the wider crypto market, do you see the NFT market decoupling from the crypto market?**

When new people come in, they're only in it for the NFTs. So the prices and trading volume of NFTs react much like how people use their cars in response to the price of gas. As the price of Ether goes up, every transaction gets more expensive. But when prices are down, we see more activity, more trading and more interest in NFTs because it's cheaper to participate.

*This interview has been edited and condensed.*

**Profile picture NFTs or avatar NFTs are what is hot right now. They may not be hot next year, like fashion, where what's hot this year ends up being unfashionable within the next six months to a year.**

# New Investors and Investments

As NFT adoption grows, massive amounts of capital are pouring into the industry.

January 2022 saw the close of investment rounds in several high-profile companies, including NFT marketplace OpenSea, which raised US\$300 million in Series C funding<sup>1</sup> from investors led by Paradigm and Coatue. The new investment valued OpenSea at US\$13.3 billion.

Hong Kong-based Animoca Brands, a prolific investor in NFTs and gaming that is on a mission to build the open metaverse, completed a capital raise of US\$358,888,888, with a valuation of over US\$5 billion. The round was led by New York-based Liberty City Ventures with participation by more than 18 other investors including Kingsway Capital, Sequoia China, Smile Group, Soros Fund Management and Winklevoss Capital.

Animoca's subsidiary, The Sandbox,<sup>2</sup> meanwhile, completed a capital raise of US\$93 million led by the SoftBank Vision Fund 2.

Animoca has invested in more than 150 of the world's most noteworthy NFT and metaverse-related companies, including OpenSea, Dapper Labs, Yield Guild Games and Axie Infinity.

NFT data provider CryptoSlam, which itself closed a US\$9 million strategic seed round funding led by Animoca in January, said NFTs have entered the mainstream over the past year and are now attracting a much wider pool of investors.

"Since 2018, we've been laying the groundwork to provide ultimate transparency for the NFT industry, and this strategic capital raise marks a key milestone for us as we continue to grow along with it," CryptoSlam founder and CEO Wasinger said in a statement.<sup>3</sup>

Jefferies, a U.S. investment bank, predicts the market capitalisation of all NFTs could grow to more than US\$35 billion in 2022 and may exceed US\$80 billion in 2025.<sup>4</sup>

**NFTs have entered the mainstream over the past year and are now attracting a much wider pool of investors.**

<sup>1</sup> Announcing OpenSea's new funding. <https://opensea.io/blog/announcements/announcing-openseas-new-funding>

<sup>2</sup> The Sandbox NFT metaverse platform raises \$93M in Series B led by SoftBank. <https://forkast.news/the-sandbox-nft-metaverse-platform-series-b/>

<sup>3</sup> CryptoSlam Raises \$9 Million Strategic Seed From Animoca Brands, OKEx Blockdream Ventures, Mark Cuban, Others. <https://www.newswire.com/news/cryptoslam-raises-9-million-strategic-seed-from-animoca-brands-okex-21596732>

<sup>4</sup> Jefferies Sees the NFT Market Reaching More Than \$80B in Value by 2025. <https://www.coindesk.com/business/2022/01/20/jefferies-sees-the-nft-market-reaching-more-than-80-billion-in-value-by-2025/>

# NFT Hacks and Scams

As NFTs continue to draw new users, hacks and scams have begun to surface in the nascent industry.

According to blockchain analytics company Chainalysis, the two most popular NFT-related crimes are money laundering and wash trading. The amounts involved are, however, relatively small with Chainalysis estimating that such criminal activities generated illicit profits of US\$10 million in 2021.<sup>1</sup>

Nonetheless, investors and collectors of NFTs need to be on their guard.

In January 2022, hackers exploited a bug vulnerability in the OpenSea NFT marketplace to purchase high-value NFTs from users at well below market prices. Elliptic, a blockchain AML analytics company, found<sup>2</sup> that

no fewer than five attackers exploited the bug loophole to buy at least 12 NFTs: including Bored Ape Yacht Club, Mutant Ape Yacht Club and Cool Cats NFTs.

Illicit actors have also taken advantage of Discord, a popular chat platform used by NFT communities to communicate, to take over or impersonate the official servers of NFT projects including Larva Labs.<sup>3</sup> In December, a hacker infiltrated the Discord server of Monkey Kingdom,<sup>4</sup> an NFT collection founded by entrepreneurs in Hong Kong, to steal 7,000 Solana, or approximately US\$1.3 million, from would-be buyers through a phishing scam.

The NFT industry is no stranger to copyright infringement issues. OpenSea said in a recent tweet<sup>5</sup> that

over 80% of the items created with its free minting tool were plagiarized works, fake collections and spam.

CryptoSlam's Calpu told Forkast: "Plagiarized works have always been an issue and will continue to be an issue within the NFT industry. For that reason, it's important for buyers to check multiple sources of verification that they are in fact buying an NFT with a verified and known author, whether that verification is by the marketplace or by confirmation on social media."

"Just like in the traditional art world, counterfeits and forgeries also run rampant. The silver lining is that with NFT technology it's fairly easy to determine fakes, and plagiarized works," he added.

<sup>1</sup> \$10M in NFT money laundering, fraud likely to grow in 2022: report. <https://forkast.news/headlines/nfts-fraud-us10m/>

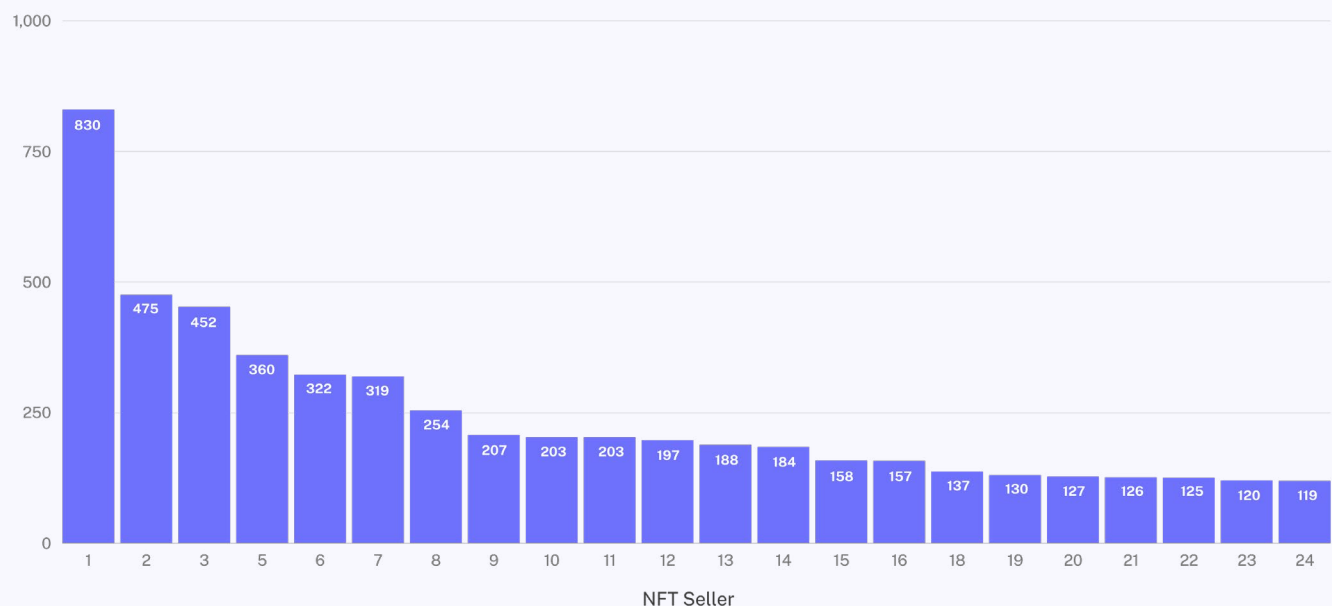
<sup>2</sup> Hackers Exploit Bug to "Steal" \$1 Million in NFTs from OpenSea Users. <https://www.elliptic.co/blog/bug-allows-nfts-worth-over-1-million-to-be-stolen>

<sup>3</sup> <https://twitter.com/larvalabs/status/1451952044579905537>

<sup>4</sup> Hackers infiltrate Monkey Kingdom NFT community, steal US\$1.3M. <https://forkast.news/headlines/monkey-kingdom-nft-hack/>

<sup>5</sup> <https://twitter.com/opensea/status/1486843201352716289>

## NFT sellers by numbers of sales to self-financed addresses, 2021



Source: chainalysis.com

# Regulations on the Radar

While blockchains and NFTs can theoretically eliminate plagiarism and fraud, there is as yet no clear distinction between NFTs that have been inspired by the designs of others and those that are simply copycats.

Nike, for instance, has filed a lawsuit against StockX for selling NFT images of its shoes, while Hermès has sued an artist over the latter's Birkin bag NFTs.

**As companies start entering the digital realm, the rules, regulations and trademarks from the physical world will move into the virtual realm.**

As companies start entering the digital realm, the rules, regulations and trademarks from the physical world will move into the virtual realm.

NFTs may also get dragged into the regulatory maze aimed at preventing money laundering and counter-terrorist financing, although NFTs are generally not considered to be virtual assets by the global Financial Action Task Force (FATF). The task force, however, said

countries will need to consider applying FATF standards to NFTs on a case-by-case basis.

For now, there is little consensus among governments on how to best regulate the fast-growing NFT sector.

In China, the state-backed blockchain network<sup>1</sup> is looking to create a standard for legal NFTs even as other government agencies and state-

owned media outlets warned<sup>2</sup> of the dangers of trading NFTs. In the EU, regulators want to ensure NFT issuers adhere to rules similar to those that apply to businesses in the physical world.

In the U.S., there is no direct state regulatory<sup>3</sup> guidance on NFTs, though a few states have passed laws that could bring NFTs under their purview. New York, for example, has maintained tight control over cryptocurrency usage.

<sup>1</sup> China to launch own NFT infrastructure by end Jan, BSN confirms. <https://forkast.news/headlines/china-launch-own-nft-infrastructure-bsn/>

<sup>2</sup> China state mouthpiece criticizes NFT mania. <https://forkast.news/headlines/china-state-mouthpiece-criticizes-nft-frenzy/>

<sup>3</sup> Key U.S. Legal Considerations for NFTs <https://www.jonesday.com/en/insights/2021/04/nfts-key-us-legal-considerations-for-an-emerging-asset-class>



Image credit: Unsplash



Image credit: Unsplash

# Decoupling of NFTs from Cryptocurrencies

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NFTs are increasingly being seen as an asset class that is distinct from cryptocurrencies, and this is reflected in the rising valuations and trading volumes in recent months. For instance, sales of Bored Ape Yacht Club tokens doubled from December 2021 to a record US\$313 million in January 2022, according to CryptoSlam data.<sup>1</sup>

In contrast, cryptocurrencies like Bitcoin and Ether have seen their

values drop<sup>2</sup> for various reasons including a proposed ban by Russia. When Russia invaded Ukraine, crypto fell along with global stocks and most financial assets.

Mintable's Burks said decoupling is inevitable since new entrants to the market are interested only in NFTs and not the cryptocurrencies they trade in.

"A cryptocurrency, a fungible

token, is a store of value or a utility token, whereas an NFT is more of a membership, or a piece of art, or a collectible... They are totally different as you have a lot more value packed into an NFT," said CryptoSlam's Calpu.

He added that some crypto investors have diversified into NFTs and that the opportunities are growing since fractionalization may enable further use cases.<sup>3</sup>

<sup>1</sup> Bored Ape Yacht Club sales volume data, graphs & charts. <https://cryptoslam.io/bored-ape-yacht-club/sales/summary>

<sup>2</sup> Crypto market suffers mauling as bears go berserk. <https://forkast.news/crypto-market-suffers-mauling-as-bears-go-berserk/>

<sup>3</sup> C.R.E.A.M. Finance's Iron Bank and PleasrDAO execute \$3.5M loan with NFTs as collateral. <https://forkast.news/headlines/creamfinance-ironbank-pleasrdao-loan-nft/>

# Challenges to Address

The rapid rise of NFTs has sparked concerns about speculative bubbles as well as the negative impact on the environment.

As discussed earlier, China permits trading in NFTs so long as there is a holding period after each purchase. The country's state media have also warned against speculative behavior surrounding NFTs.

In places such as Japan and South Korea, NFT issuers need to address concerns about the carbon footprint.

According to research conducted by artist and computer scientist Memo Akten, mining an NFT requires at least 35 kWh<sup>1</sup> of electricity and that the process from clicking on the mouse to claiming the right to produce the block emits some 20 kilograms of carbon dioxide.

**“NFTs are maturing into an asset class that, at its core, functions as the best digital proof of ownership the world has ever seen.”**

For comparison, sending an email produces just a few grams of CO<sub>2</sub>, while watching an hour of Netflix produces only 36 grams, Akten said.

Other studies of NFTs<sup>2</sup> and Bitcoin<sup>3</sup> have found even higher carbon emissions.

While Ethereum is slowly moving away from the energy intensive

proof-of-work consensus algorithm to proof-of-stake, it's still years away from completion. Other networks like Solana already use more energy efficient networks, but the vast majority of NFTs still reside on Ethereum.

There are also doubts about the amount of new revenue NFTs can generate for traditional companies in the consumer space, despite the large numbers that have entered the market.

Bernard Arnault, chief executive of French luxury conglomerate LVMH, said that while the metaverse and NFTs could be a business opportunity, “we also have to be wary of bubbles”.

“At the beginning of the internet in the 2000s, there were all sorts of things popping up and then the

bubble burst,” he said during the company's earnings call<sup>4</sup> on Jan. 27, 2022.

Other challenges facing NFTs include guarding against copyright infringement, which marketplaces such as OpenSea must do more to prevent.

Finally, there is the inevitable

question about taxation, given the NFT market's potential. Chainalysis warned that U.S. holders of NFTs may face billions of dollars in taxes and rates as high as 37%<sup>5</sup> as the Internal Revenue Service starts policing the NFT space.

CryptoSlam's Calpu acknowledges the challenges, but said NFTs would be able to overcome them given the growing number of use cases and the increasing interest shown by brands, celebrities, musicians and other content creators who have the ability to offer new experiences and attract billions of users.

“NFTs are maturing into an asset class that, at its core, functions as the best digital proof of ownership the world has ever seen.” Calpu said. “Combining that with art appeal, uniqueness and censorship resistance, it's not a surprise that NFTs are finding innovative use cases, and seeing more and more unique buyers every day.”

“There will be challenges, including scams, fakes, forgeries, and of course bubbles. But at the end of the day, NFTs are facilitating human needs for ownership, belonging and uniqueness and that is not going away.”

Like cryptocurrencies, NFTs are generating millions in wealth for early adopters. But scams, fakes, forgeries and potential bubbles still give new investors reasons to think twice before going all in on these assets.

<sup>1</sup> The Unreasonable Ecological Cost of #CryptoArt (Part 1). <https://memoakten.medium.com/the-unreasonable-ecological-cost-of-cryptoart-2221d3eb2053>

<sup>2</sup> The carbon footprint of creating and selling an NFT artwork. <https://qz.com/1987590/the-carbon-footprint-of-creating-and-selling-an-nft-artwork/>

<sup>3</sup> Bitcoin causing carbon dioxide emissions comparable to Las Vegas or Hamburg. <https://www.sciencedaily.com/releases/2019/06/190613104533.htm>

<sup>4</sup> 2021 Full Year Results. <https://www.lvmh.com/shareholders/agenda/2021-full-year-results/>

<sup>5</sup> NFT Investors Owe Billions in Taxes and IRS Sets Sights on Evaders. <https://www.bloomberg.com/news/articles/2022-01-14/nft-investors-owe-billions-in-taxes-as-u-s-officials-crack-down>



Seven of the top 10 cryptocurrencies from February 2017 have fallen off the list, with four of them dropping out from the top 50. Today's top 10 cryptocurrencies present stronger utility compared to just a few years

ago in the form of smart contracts, decentralized finance, NFTs, gaming and the metaverse.

As NFTs mature, their function as digital proof of ownership will present

valuable and creative use cases in future digital economies. While digital art and collectibles currently rule the NFT world, this is just the tip of a massive iceberg.





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