

## NFT Marketplace – Hands-on to the Digital World of Art



### Genesis Convergence

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Genesis Convergence is Subject Matter Expert in Blockchain and Cryptocurrency.

We offer Crypto Development/Consulting services covering solution architecture refinement, customization, integration, transformation, visualization, and analytics to uncover insights hidden within data and enhance data exploration.

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## OBJECTIVE

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The popularity of online marketplaces for digital collectibles is increasing day by day. If you also want to enter the market, you need to develop a marketplace on your own. We are already aware of Blockchain technology, different cryptocurrencies and many people use various marketplaces to purchase or sell products.

NFT (non-fungible token) is such a marketplace that works as a public Blockchain platform. Although this platform is still not fully mature, its rising popularity is why developers and entrepreneurs create such a marketplace these days.

If you are wondering how to develop an NFT marketplace app like OpenSea, read this document. It covered everything you should know while creating such a marketplace.

## BLOCKCHAIN – DIVE INTO THE FUTURE

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In simple terms, blockchain is a peer-to-peer distributed ledger that stores information and keeps track of transactions.

- Each member of the blockchain community has its own copy of the information.
- The information is recorded subsequently into units called blocks and protected by strong cryptography, creating a chain of data.
- Changes to blocks are not permitted by the blockchain system architecture, so every action and event could be traced to its origins.
- A blockchain could store data on agreements between the parties, their credentials, transactions, and any other information presented in a digital form.
- Since this information is distributed and highly secured, any attempt at fraudulent activity can be seen by the members of the blockchain community.
- This creates trust and transparency for any type of ecosystem that the blockchain is integrated into.



### Blockchain functioning at an ease

Blockchain is a platform that ensures the integrity of the information stored and maintains interactions between the members of the ecosystem. Here's a high-level overview of the way it works:

- Each member maintains their own blockchain node with the full history of all the events and data appended to the network, including credentials, identities, certificates, etc.

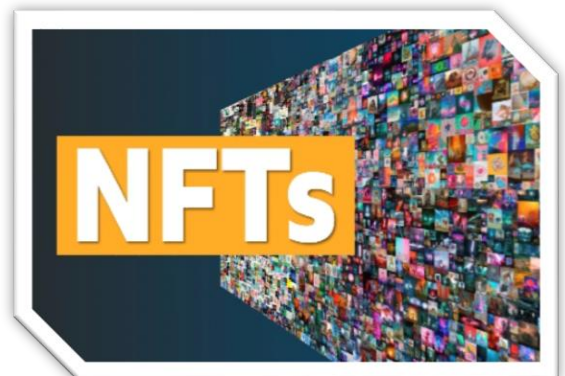
- Every update to the network entails the creation of a new block at the end of the chain. A blockchain protocol dictates how these blocks are recorded, validated, and distributed.
- A consensus mechanism is employed to verify each created block where members of the blockchain network decide if it's valid to be added to the chain.
- Once a block is created and confirmed, it cannot be revoked. All entries on the blockchain are permanent and securely stored. This allows for members of the community to trace the full history of transactions and any other modifications in the blockchain.
- Smart contracts are a special type of agreement between the members of the network that have the conditions programmed into them, making sure that they are met before each party receives what was agreed upon. Smart contracts eliminate the need for third parties and middlemen to be involved in agreement resolution.
- Transactions in cryptocurrency play a very important part in the blockchain ecosystem, providing the incentive for all members of the community to make valuable contributions and participate in the development of the system as a whole.



These key pillars of blockchain technology lay the foundation for its uses throughout different industries, including in education. It has the potential to create a global environment where learning materials, publications, student credits, and transcripts are easily accessible. It can also introduce new and innovative ways for accountability, incentivization, and communication between teachers, students, and other participants.

## NFT – THE MODERN DIGITAL ART

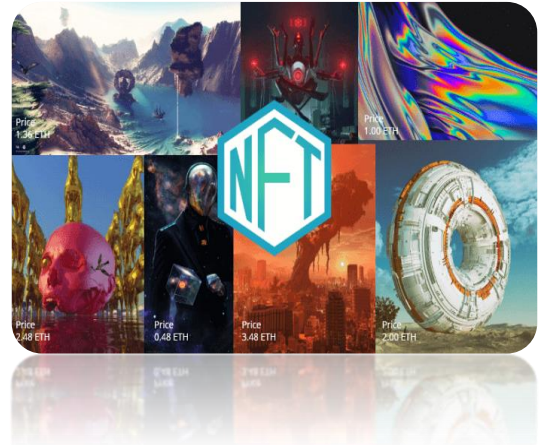
- An NFT, or non-fungible token, is a unique, identifiable digital asset stored on the blockchain.
- An NFT could be a piece of digital artwork, a collectible, or even a digital representation of a real-life physical asset.
- Ownership of an NFT is easily and uniquely verifiable due to its public listing on the blockchain.
- The NFT tokens have unique properties and hold unique values that have no chance to be changed further.
- It does not possess the exact characteristics of fungible tokens like cryptocurrencies and other crypto tokens.
- NFT can be anything digital like art, games, music, and so on.



## NFT MARKETPLACE – THE HUB OF NFTS

NFT Marketplace is an exclusive place to display the creativities, collectibles, or any other forms of digital assets to make them available for effective asset management and Crypto trade-off along with improved Token utility.

- With individual intellectuals getting an efficient stage to showcase their importance and value, displaying, and showcasing the rare collectibles and digital assets are made easy through the Non-Fungible Tokens.
- The NFT Marketplaces are now in trends and serve as the right places for digital content creators to showcase their creativities thereby increasing their revenue through this very means.



## WHITE LABEL MARKETPLACE - FOR MULTI-VENDOR SALES

White Label NFT Marketplace is a pre-built customizable NFT Marketplace Platform operating on blockchain technology and enables you to launch a hassle-free NFT Marketplace Platform.

- The White Label NFT Marketplace is a multi-tested and smart contract audited NFT Marketplace Software operable on distinct blockchains like Binance Smart Chain (BSC), Ethereum, Tron, Polygon, etc.
- The White Label Mode of NFT Marketplace allows customization of the NFT Marketplace based on the Client's requirement.



## NFT MARKETPLACE DOMAINS:

NFT Marketplace Platform that include:

- Art



- Music
- Memes
- Game
- Sports
- Bidding and auctions
- Event Tickets
- Domains

## Art

- Giving artists a chance to tokenize and profit (rather generously) off their artwork is one of the top selling points of NFT art.
- It refers to any type of digital art that is stored on a blockchain.
- The artwork is then owned by the token holder and can be traded or sold just like any other NFTs. NFT art also allows for artists to build a global fan base without the assistance of galleries, distributors, or curators.
- The most expensive NFT art ever sold is “Everydays—The First 5000 Days” by Beeple. It was auctioned off for a whopping US\$69 million in March 2021.

## Music

- From Grimes and Kings of Leon to Lindsay Lohan and the Rolling Stones—musicians have been tokenizing their tracks and selling them as NFTs. Music NFTs witnessed a significant boost this year, with sales increasing from US\$50,000 in September 2020 to US\$27 million in March 2021.
- DJ and founder of Royal, an NFT music platform, noted, “A true fan might want to own something way earlier than a speculator would even get wind of it. Democratizing access to asset classes is a huge part of crypto’s future.”
- Additionally, with NFT music, artists don’t need to rely on record labels to usher in sales from their music. They are free to navigate their music career as they wish.

## Memes

- In case you thought the internet couldn't get more interesting, you can buy and trade memes on the NFT market.
- What's neat is that in some cases, the person in the meme is the actual seller.
- Some of the more popular memes like Nyan Cat, Bad Luck Brian, Disaster Girl, and others are on the list, racking in between \$30,000 and \$770,000.
- The most valuable meme to date is the Doge meme, which sold for a jaw-dropping \$4 million.

## Game

- NFT Marketplaces have aided large-scale revenue streams to the live game streamers.
- The NFT Marketplaces for games help the gamers to make considerable revenue through the buying, bidding, and selling of in-game accessories, in-game attires, rare-game assets, etc.



- With the very enormous number of games in the trends, the application of NFTs comes from the perspective of leveraging revenue to the Gaming community.

## Sports

- NFT Marketplace for Sports can definitely contribute to those fans seeking a specific platform to showcase their fandoms.
- What it really counts is? The fans could get a chance to uphold their favorite player's cards, their stats, their best moves, their collectibles like their wearables of jerseys, T-shirts, shoes, and equipment.
- This will make the fans more curious about the game and get more closure with the team or player desired.

## Bidding and auctions

- Traditionally the bidding was carried out to buy and sell the rarest collectibles.
- These days the Collectibles are showcased and await trade-off through making use of the Non-Fungible Tokens as the basic units of transactions.

## Event Tickets

- Another promising addition among the types of NFTs would refer to event tickets.
- Such types of NFTs allow people attending events such as music festivals and concerts to verify their identity and tickets.
- Event managers could mint a specific number of NFT tickets on a selected blockchain platform.
- Customers could purchase the tickets through an auction and store them in their wallets with easy accessibility through mobile devices.

## Domains

- The answer to 'what are the different types of NFTs?' would also refer to domain names, which have become popular recently.
- Decentralized Domain Name Services such as Unstoppable Domains and the Ethereum Name Service (ENS) are the top examples of domain name NFTs.
- ENS can help in translating long and complex user addresses to a flexible and friendly experience for users with easier onboarding.

We provide world class NFT experiences with ownable digital content.

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## PROTOCOL TOKEN GOING TO USE:

Protocol tokens are cryptographic tokens that are required to use the underlying protocol's service. There exist several types, which you will have to choose from when picking an NFT design, including:

- Binance Smart Chain (BSC)
- Ethereum
- Solana
- Polygon
- Tron
- FLOW
- Tezos

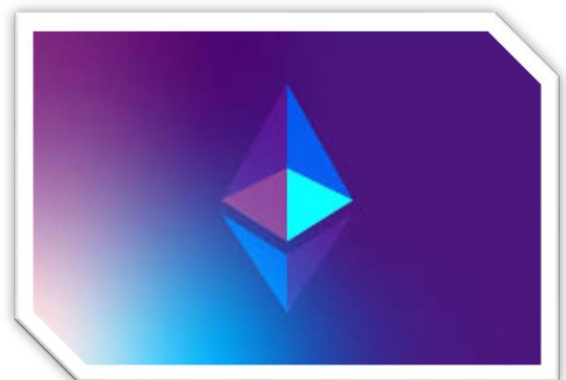
### Binance Smart Chain (BSC)

- Binance Smart Chain (BSC) is a blockchain network built for running smart contract-based applications.
- BSC runs in parallel with Binance's native Binance Chain (BC), which allows users to get the best of both worlds: the high transaction capacity of BC and the smart contract functionality of BSC.
- The aim of the platform is to enable developers to build decentralized applications (DApps) and help users manage their digital assets cross-chain with low latency and large capacity.



### Ethereum

- Ethereum is a decentralized blockchain platform that establishes a peer-to-peer network that securely executes and verifies application code, called smart contracts.
- A sender must sign transactions and spend Ether, Ethereum's native cryptocurrency, as a cost of processing transactions on the network.
- Ether is the native cryptocurrency of the platform. Among cryptocurrencies, Ether is second only to Bitcoin in market capitalization.
- Ethereum was conceived in 2013 by programmer Vitalik Buterin.



## Solana

- Solana is a blockchain platform designed to host decentralized, scalable applications. Founded in 2017, Solana is an open-source project currently run by Solana Foundation based in Geneva, while the blockchain was built by San Francisco-based Solana Labs.
- Solana is a Proof of Stake (PoS) blockchain and also uses a new technology called Proof of History (PoH).
- Solana can process many more transactions per second, and has much lower transaction fees, than rival blockchains like Ethereum.



## Polygon

- Polygon was formerly called Matic Network. Polygon (MATIC) is an Ethereum token that powers the Polygon Network, a scaling solution for Ethereum.
- Polygon aims to provide faster and cheaper transactions on Ethereum using Layer 2 sidechains, which are blockchains that run alongside the Ethereum main chain.
- Users can deposit Ethereum tokens to a Polygon smart contract, interact with them within Polygon, and then later withdraw them back to the Ethereum main chain.
- The MATIC token is used to pay transaction fees and participate in proof-of-stake consensus.



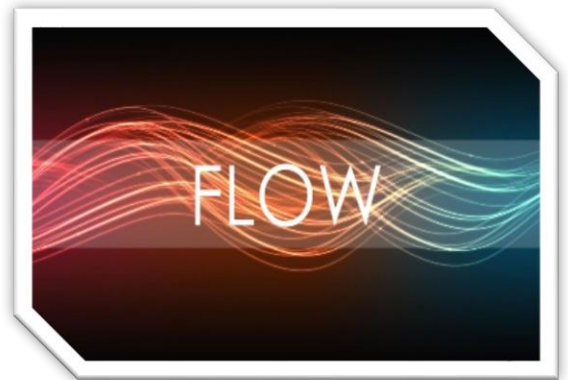
## Tron

- TRON is a decentralized, open-source blockchain-based operating system with smart contract functionality, proof-of-stake principles as its consensus algorithm and a cryptocurrency native to the system, known as Tronix.
- Founded in 2017 by a Singapore non-profit organization, the Tron Foundation, Tron aims to host a global entertainment system for the cost-effective sharing of digital content.
- TRON is an ambitious project dedicated to building the infrastructure for a truly decentralized Internet.



## FLOW

- Flow is a blockchain that is designed for extensive scaling without the use of sharding techniques, providing fast and low-cost transactions that make sense for dapps such as NFT marketplaces and crypto-infused video games.
- Flow hails from Dapper Labs, which decided to solve its blockchain congestion problem head-on by building one primed for games and other interactive experiences.
- Dapper is now using Flow for all its own projects, including NBA Top Shot, but it's open to other developers as well.



## Tezos

- Tezos is a decentralized open-source blockchain that can execute peer-to-peer transactions and serve as a platform for deploying smart contracts.
- The native cryptocurrency for the Tezos blockchain is the tez which has the symbol XTZ.
- Tezos is not based on the mining of tez. Instead, token holders receive a reward for taking part in its proof-of-stake consensus mechanism.
- Tezos had a highly successful ICO, but it was followed by lawsuits and price declines.
- The price of tez reached record highs in early 2020, leading to renewed speculation about its future investment potential.



We offer ready-to-deploy NFT marketplace platform to buy, sell and bid NFTs in the form of digital collectibles

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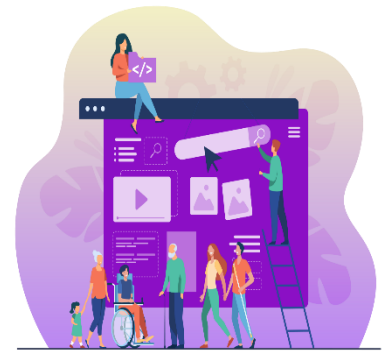
## STEPS TO CREATE AN NFT MARKETPLACE

- Create UI for NFT Marketplace
- Select the Right Blockchain
- Interoperable Wallet selection
- Identifying the Right audiences
- Specifying operational domains
- Define categories and listing
- Choose the base Tokens
- Code the necessary features
- Testing & Deployment in the Server

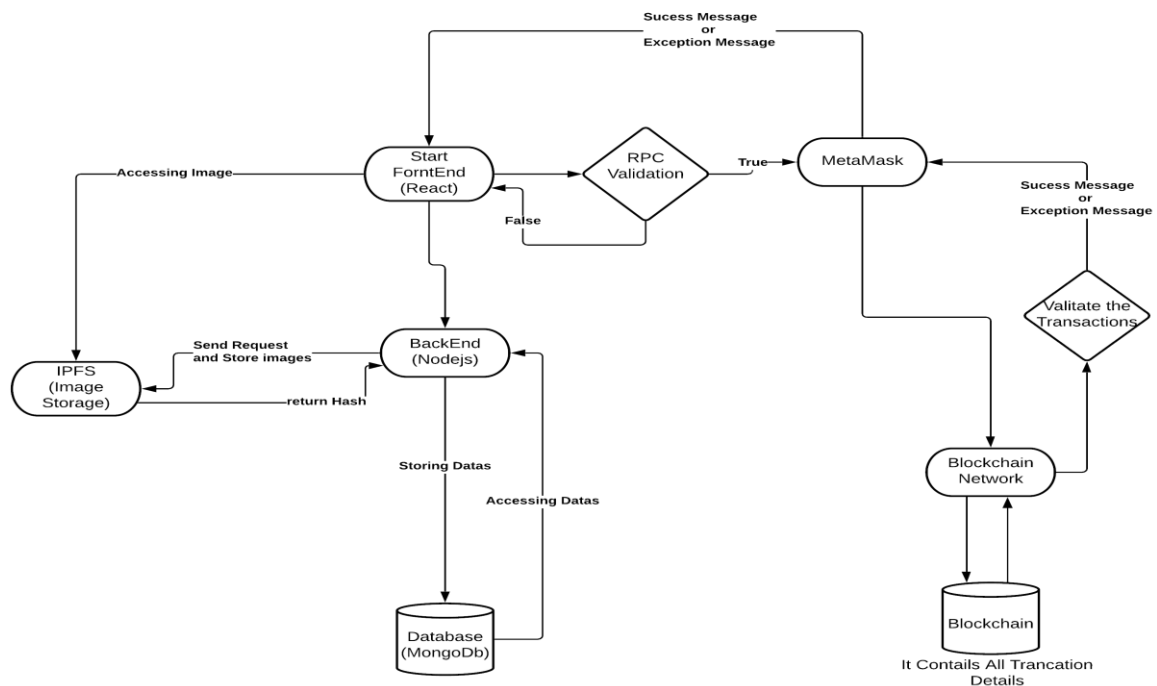


### Building UI Design

- The main process in the development of any web product starts with the development of UI design.
- The UI design is the first impression of your marketplace when a user gets to your platform. Our developers create the best UI design that makes the users access all the options of the marketplace comfortably.
- Our experts develop the finest user interface to attract users after analyzing all the aspects and purpose of the marketplace development.
- Our experts make the next step only after the patron approves the design of the user interface. Once after the approval, the developers start their conversion.
- We follow a microservice architecture for building NFT Marketplace that possesses multi-layer security protocols and exhibits faster transactions.



## NFT Marketplace Architecture



## NFT Token Development

- Developing NFT tokens on various standards of any blockchain whether ERC721, ERC20 or ERC1155 standard.
- The NFT standards are determined with the view of the patron after determining the blockchain network.
- The token is developed to work with all the core functionalities available on the software.



## NFT Smart Contract Development

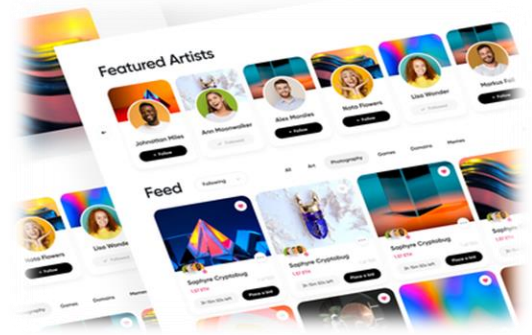
- The NFT marketplace operates on various functions where these functions are developed with various smart contracts.
- All the functions that operate in the marketplace work on the smart contracts from listing to trade of the NFT.
- The NFT marketplaces are decentralized, so to carry out the transactions and the auctions without any interruptions, to verify and other causes smart contracts are developed.





## User Interface Implementation

- After designing the UI, token development, and deploying smart contracts, the front-end and back-end are to be linked to produce the marketplace as a fully developed one.
- Next, the developers work in implementing the user interface that makes the marketplace operable with the right for every command from the users.
- The developers set up the graphical user interface of tabs, menu, and all the buttons required for the multiple operations on the backend which makes the NFT marketplace a product.
- Our developers work with Node.js to implement user interfaces.



## NFT Minting Attribute Inclusion

- The NFT Minting can be categorized in two different ways:
  - Single-mode NFT Minting: Smart contract code can be written for ERC721 (Non-Fungible Tokens) which are unique and cannot be copied.
  - Multi-mode NFT Minting: Smart Contract code can be written for ERC1155(Semi-Fungible Tokens) that can be copied.

## Database IPFS NFT Storage Set-up

- Database storage and IPFS are mandatory for business and research.
- The database assures consistent data and data repetition, effective execution of queries, and high-performance utilization.
- IPFS is a globally used storage system that collects files with automatic version and backup.
- A well-designed database guarantees easy access and retrieval of information.
- It is commonly fancied for its guarded file sharing, quick streaming speed, and encrypted communications.
- At this level, our crew of experts has integrated the IPFS NFT Storage setup and Database into the NFT Marketplace.



## Testing the Project with Test Cases

- The testing phase performs a major role in the NFT Marketplace Development to get the quality output of the product.
- This phase begins once all the core functionalities of NFT Marketplace are developed and integrated on the backend of the platform.



- Here, the whole product has undergone a variety of test cases to locate flaws, malfunctions and resolve underlying issues.

### Releasing in Testnet or Final Deployment

- Once the whole product gets tested, the NFT Marketplace will be migrated to the testnet to monitor its real-time activities such as speed of the platform and functioning flow of specific modules and to get client feedback. Also, this validates the real-time workflow of the platform.
- This is a crucial step that should never be neglected because it assures that the product is ready to use.
- Once the above-mentioned phases get accomplished, the fully tested, robust, bug-free, fully functional NFT Marketplace gets deployed on the client's production server and it is open for people to access.

## NFT MARKETPLACE – TRADE DIGITAL COLLECTIBLES AT EASE

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- OpenSea
- Axie Marketplace
- Larva Labs/CryptoPunks
- NBA Top Shot Marketplace
- Rarible
- SuperRare
- Foundation
- Nifty Gateway
- Mintable
- Theta Drop

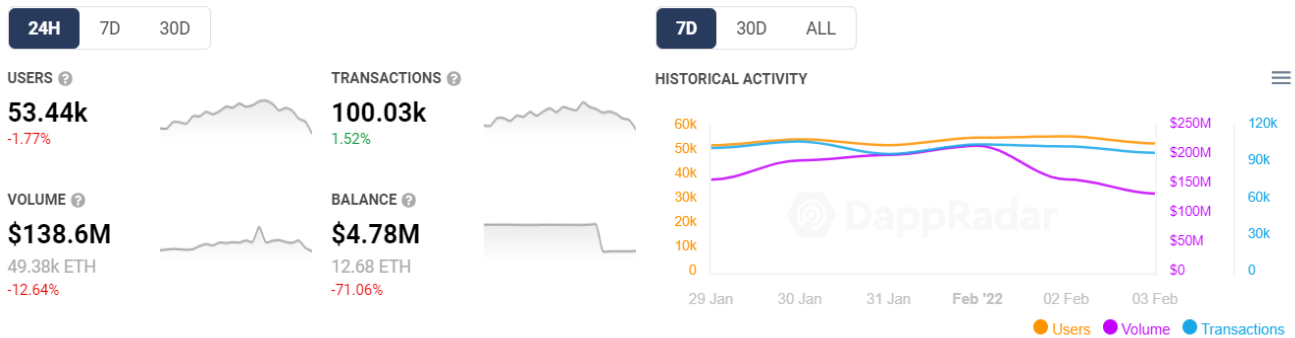
### OpenSea

- OpenSea is an American online non-fungible token marketplace headquartered in New York City. The company was founded by **Devin Finzer and Alex Atallah** in 2017.
- **Founded:** December 20, 2017
- A peer-to-peer marketplace for NFTs, rare digital items and crypto collectibles. Buy, sell, auction, and discover CryptoKitties, Decentralized application.
- A core part of our vision is that open protocols like Ethereum and interoperable standards like ERC-721 and ERC-1155 will enable vibrant new economies.

- We're building tools that allow consumers to trade their items freely, creators to launch new digital works, and developers to build rich, integrated marketplaces for their digital items.

### OpenSea statistics

This data represents the raw on-chain activity of the tracked smart contracts

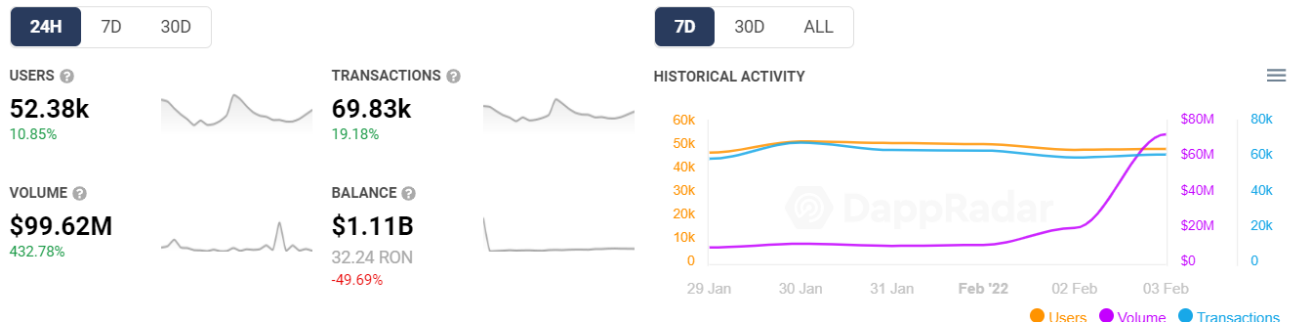


## Axie Marketplace

- Axie Infinity Game Features and the Axie Marketplace Battle is a turn-based card game in which players aim to defeat their adversaries, with each side always made up of 3 Axies.
- Each Axie NFT has different traits which make them suitable for various roles in the game.
- It is based on Ethereum and Robin platform.

### Axie Infinity statistics

Data represents the raw on-chain activity of the tracked smart contracts on Ethereum and Ronin.

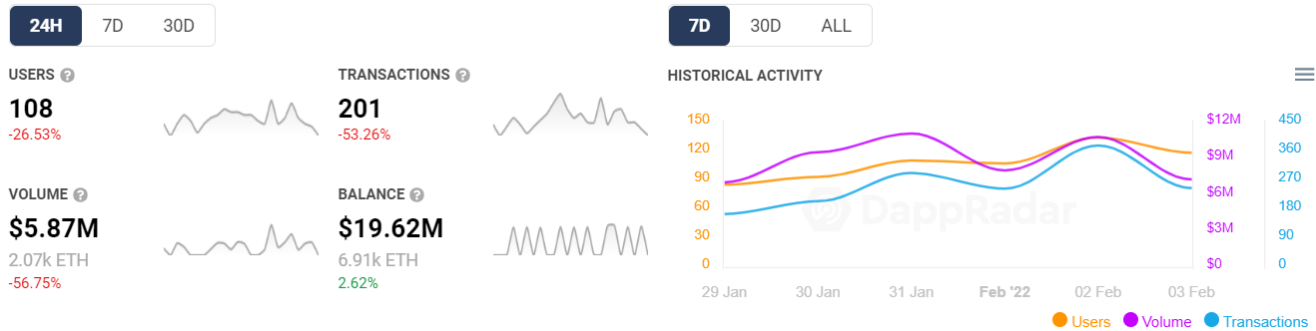


## Larva Labs/CryptoPunks

- CryptoPunks is one of the earliest non-fungible token projects developed on the Ethereum blockchain.
- The project consists of 10,000 algorithmically generated 24x24 pixel portraits featuring random attributes such as the person wearing a hat or smoking a pipe.
- It is a Ethereum protocol base platform.

**CryptoPunks statistics**

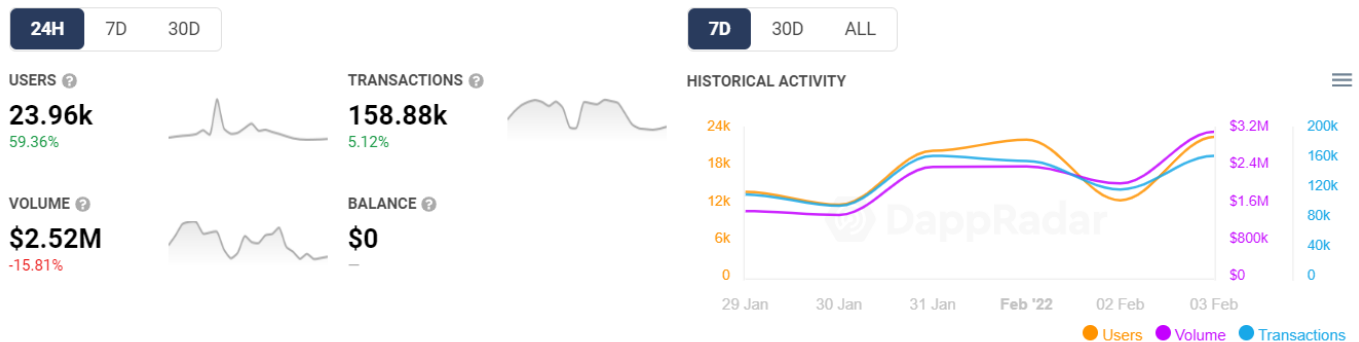
This data represents the raw on-chain activity of the tracked smart contracts

**NBA Top Shot Marketplace**

- Top Shot is essentially an NFT marketplace that allows users to buy, sell and collect influential NBA scoring Moments.
- Moments are minted in Packs much like you'd expect from physical trading cards: you buy a pack, open it up and see what you get.
- It is Flow protocol base platform.

**NBA TopShot statistics**

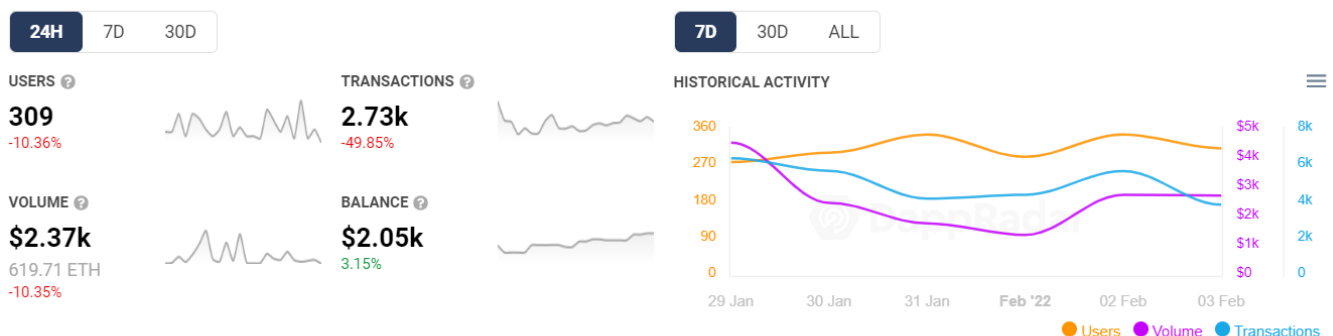
Data represents the raw on-chain activity (incl. trading, gifting, opening packs, and other on-chain actions)

**Rarible**

- Rarible is an Ethereum-based platform that facilitates the creation, sale, and purchase of ownership rights to digital works of art via non-fungible tokens (NFTs). NFTs are one-of-a-kind crypto assets that are used to represent unique items such as collectibles and works of art.

**Rarible statistics**

This data represents the raw on-chain activity of the tracked smart contracts

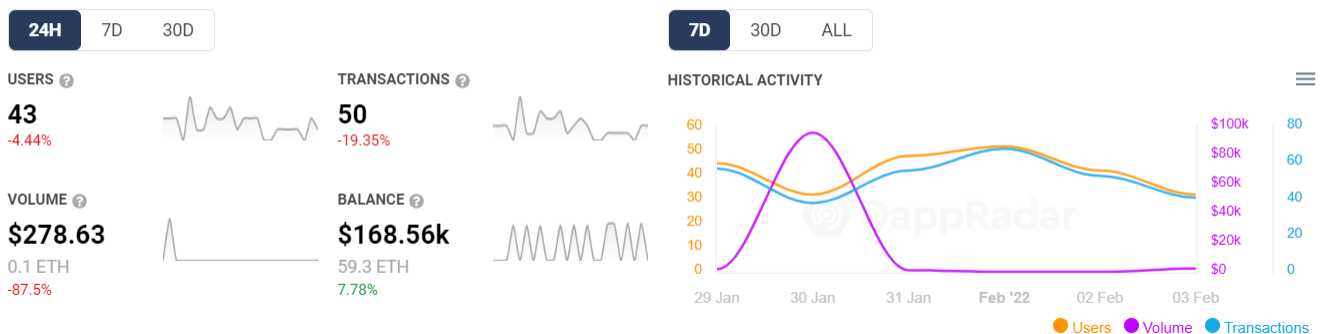


## SuperRare

- SuperRare is a marketplace to collect and trade unique, single-edition digital artworks. Each artwork is authentically created by an artist in the network, and tokenized as a crypto-collectible digital item that you can own and trade.
- You can think of SuperRare like Instagram meets Christies.
- A new way to interact with art, culture, and collecting on the internet
- It is an Ethereum protocol based platform.

### SuperRare statistics

This data represents the raw on-chain activity of the tracked smart contracts

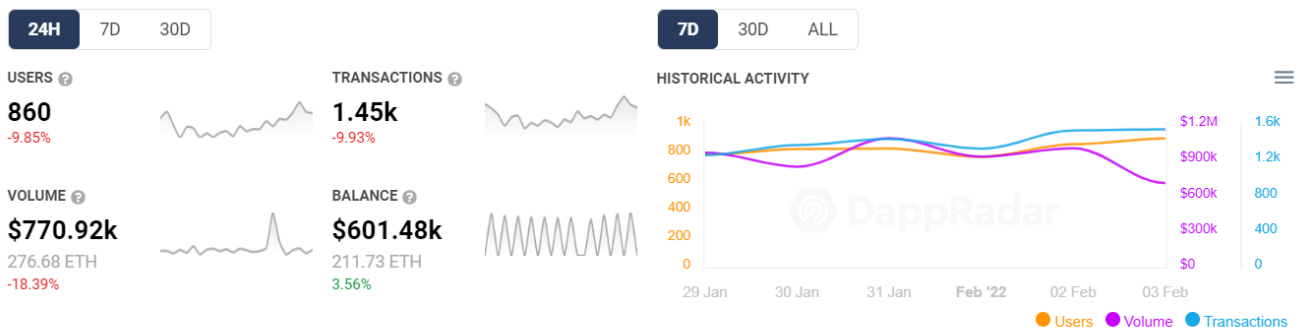


## Foundation

- Foundation is a platform that aims to build a new creative economy—a world where creators can use the Ethereum blockchain to value their work in entirely new ways, and build stronger connections with their supporters.
- Foundation bridges crypto and culture to foster a network of mutual support between creators and collectors.
- We're forging a community-driven path and sharing our tools with the rapidly evolving group of developers who are excited to define this future with us. We want anyone and everyone who cares about the future of digital expression to be a part of it.

### Foundation statistics

This data represents the raw on-chain activity of the tracked smart contracts



## Nifty Gateway

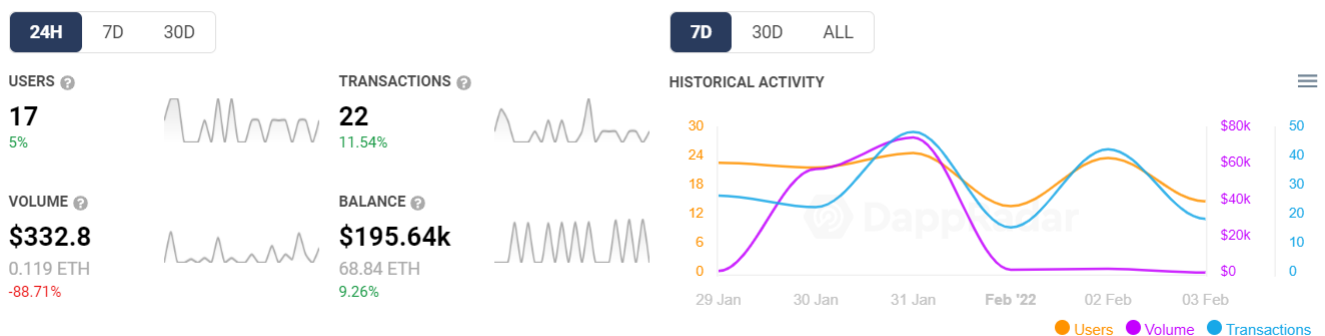
- There are many things that make Nifty Gateway unlike other marketplaces, but one of the most fundamental differences is that we are a custodial platform.
- This means that NFTs on our platform are stored in a secured wallet, powered by Gemini’s state-of-the-art custody technology.
- By doing so we enable collectors to move work on platform (buy, sell, gift) without the cost and hassle of gas fees.
- And in the off chance you lose access to your account, or forget your password - all is not lost, we can help you retrieve these. In addition to custody, a few other things that we think make Nifty Gateway pretty great.

## Mintable

- Mintable — a Singapore-based, Mark Cuban-backed non-fungible token (NFT) platform — is striving to become the world's largest NFT marketplace by cataloging all NFTs ever minted on Ethereum as part of a major platform upgrade.
- Users now are also able to see an NFT's transaction history and seller reviews
- Mintable removes fees, known as “gas,” charged by blockchain participants to link the tokens to their network.

### Mintable statistics

This data represents the raw on-chain activity of the tracked smart contracts



## Theta Drop

- The Theta Drop NFT platform was released in 2021. The marketplace opened with the World Poker Tour digital collectables.
- ThetaDrop is the world's first real-time NFT marketplace, powered by Theta blockchain, the fastest and greenest blockchain built for media and entertainment.

- ThetaDrop is the world's first real-time NFT marketplace, powered by Theta blockchain, the fastest and greenest blockchain built for media and entertainment.

Get your confidential consultation with  
our NFTs expert now.

### Genesis Convergence

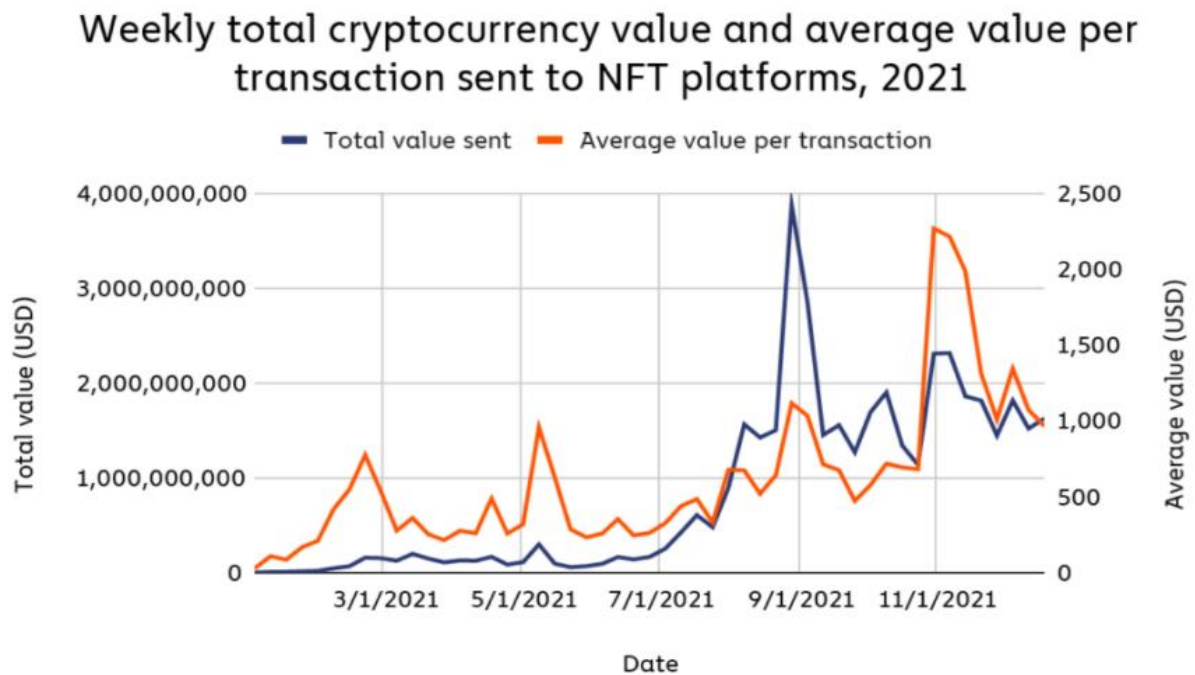
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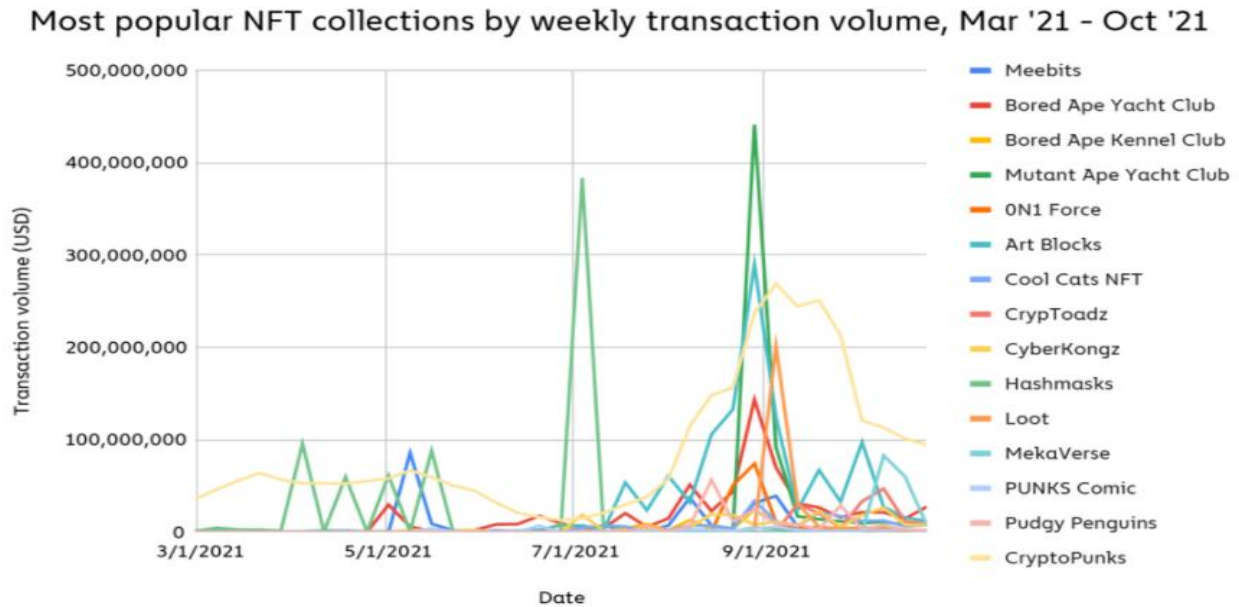
## NFT MARKETPLACE ANALYSIS REPORT

### Transaction sent to NFT Platform



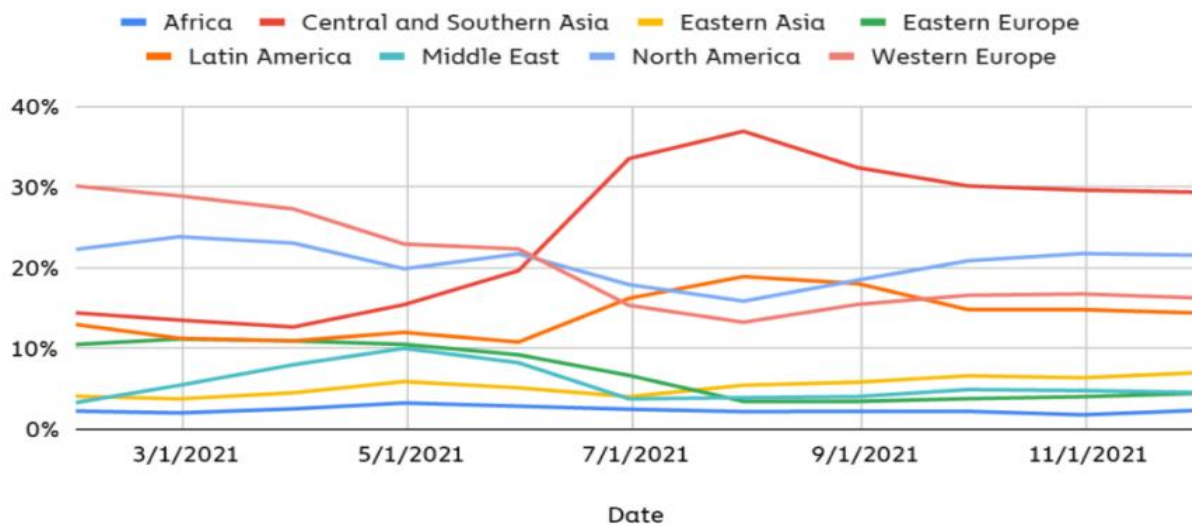


## Most popular NFT Collection Transaction volume



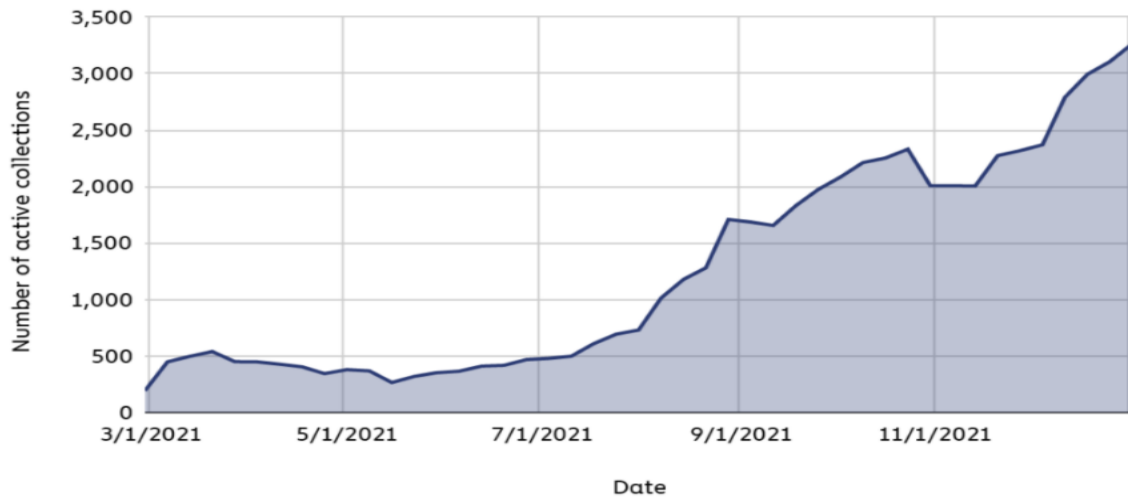
## Monthly share of Web Traffic to NFT Marketplace

Monthly share of web traffic to NFT marketplaces by region, 2021



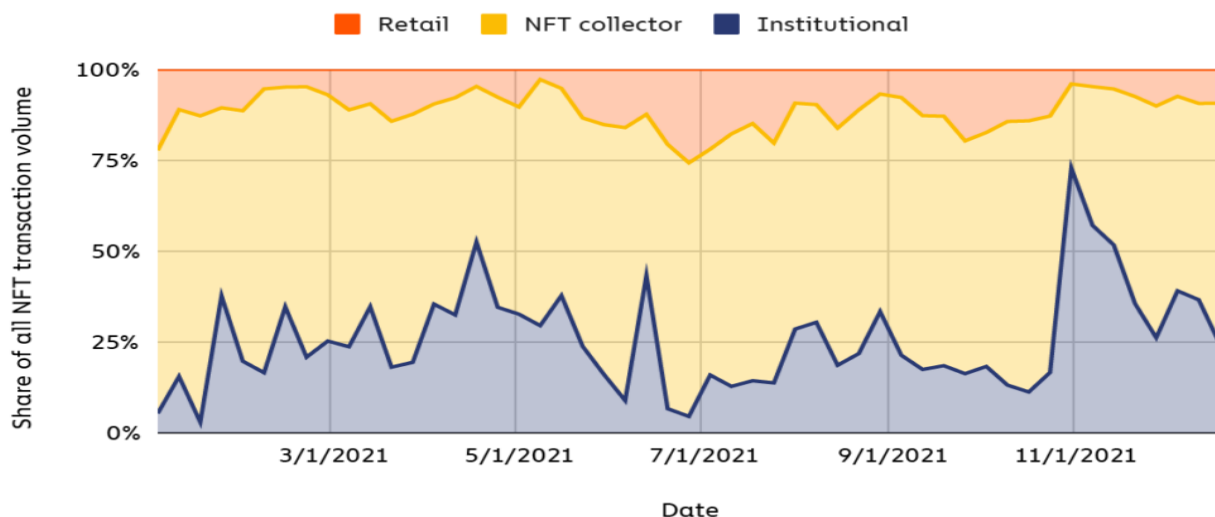
## Weekly number of Active NFT Collection on OpenSea

### Weekly number of active NFT collections on OpenSea, 2021



### NFT transactions are at the retail level

#### Share of NFT transaction volume by transfer size, 2021



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## CONCLUSION

The development of the NFT market is a new trend with an ever-increasing value. As the value of non-fungible tokens rises, the platform attracts more and more users due to its attractive features.

Additionally, investors are increasingly choosing blockchain platforms because of their high trend graphs. Therefore, the opportunities for the NFT market shortly are quite large. And for this very reason — we highly urge you to get your NFT platform built and make millions and billions of dollars using other people's art.

### Contact Us Genesis Convergence

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