

# NFTs

VISA

Engaging Today's Fans in  
Crypto and Commerce



# Table of Contents

---

1. Executive Summary
2. What is an NFT?
3. Unlocking New Commerce and Engagement Opportunities
4. How to Integrate NFTs:
  1. Identify the NFT use case
  2. Determine the appropriate blockchain
  3. Mint the NFTs
  4. Decide how to store digital assets in a long-term sustainable way
  5. Store and access NFTs securely and easily
  6. Distribute across an applicable marketplace
  7. Identify additional opportunities to engage fans
5. Considerations Associated with Change
6. Visa - The Trusted Engine of Commerce
7. Conclusion

## NOTICE OF CONFIDENTIALITY

Case studies, comparisons, statistics, research, and recommendations are provided "AS IS" and intended for informational purposes only and should not be relied upon for operational, marketing, legal, technical, tax, financial, or other advice. Visa Inc. neither makes any warranty or representation as to the completeness or accuracy of the information within this document, nor assumes any liability or responsibility that may result from reliance on such information. The Information contained herein is not intended as investment or legal advice, and readers are encouraged to seek the advice of a competent professional where such advice is required.

# Executive Summary

---

When COVID-19 restrictions put a swift and definitive pause on live sports and entertainment, digital technologies led the way in connecting fans worldwide to the brands, teams, and personalities they love. In this context, non-fungible tokens (NFTs) have emerged as a promising medium for fan engagement.

NFTs are unique tokenized representations of digital files that are exchanged on public blockchains. With more than \$1.5B in NFT transactions generated in the first quarter of 2021<sup>1</sup>, NFTs are gaining momentum through collections of digital-first memorabilia from fan-favorite athletes and memorable moments in games.

While the prices of individual NFTs fluctuate, fascinating use cases for NFTs are still emerging and the groundwork is being laid for the long-term utility of NFTs. This new form factor for commerce has vast potential in the sports and entertainment world, representing a deeper and more dynamic way to engage fans and potential new revenue streams for organizations.

Despite the exponential growth of NFTs, there is still little general knowledge of them and their numerous risks. With its long legacy as a trusted engine of commerce and deep expertise in the field of digital currency, Visa is helping businesses understand their potential entry point into this new arena, particularly as it enables access, for everyone, everywhere. This report shares insights and observations on the NFT landscape, as well as actionable guidance on how to evaluate and scale NFT opportunities.

---

## How to Integrate NFTs:

1. Identify the NFT use case
2. Determine the appropriate blockchain
3. Mint the NFTs
4. Decide how to store digital assets in a long-term sustainable way
5. Store and access NFTs securely and easily
6. Distribute across an applicable marketplace
7. Identify additional opportunities to engage fans

## What is an NFT?

To understand NFTs, it is important to first understand cryptocurrencies.

Think of cryptocurrencies as digital versions of cash controlled by a private cryptographic key—a unique, random string of numbers. In the same way that physical cash exists in a defined physical form and ownership is determined by holding paper bills, ownership of cryptocurrency is determined by holding a private key and using the private key to make transfers.



Cryptocurrencies are issued and exist on a public database maintained by what is commonly referred to as a blockchain. The database is distributed across computers that are running blockchain software. No single entity owns or controls the database, and anyone can access the database, prove ownership, and transfer cryptocurrency via the private keys associated with their crypto wallet.

Like cryptocurrencies, NFTs are issued on a blockchain, and are used to designate ownership of a certain asset. Each NFT is tied to some unique data, typically a digital content file of some kind (or reference thereto) and governed by a “smart contract.”\* The process of converting a media file into a non-fungible token is referred to as “minting” an NFT, and, just like cryptocurrency, the NFT is written to the applicable blockchain database.

Unlike cryptocurrency, NFTs are not fungible, meaning each NFT is unique and not interchangeable with another NFT. In other words, while one bitcoin is equivalent to another bitcoin, no two NFTs are the same. And, just as with bitcoins, the ownership record of NFTs is recorded on a blockchain database.

Because NFTs are new, there is limited information on how existing laws and regulations apply to NFTs. Despite these uncertainties, NFTs are an interesting medium for creators. For the first time, content on the internet in the form of an NFT can be definitively owned by a specific person independent of a centralized intermediary, and this is unlocking exciting opportunities for digital commerce and engagement.

*\*Smart contracts are not the same as legal contracts. Smart contracts are computer code that executes simple if/then functions.*

# Unlocking New Commerce and Engagement Opportunities

## Fans today yearn for digital community.

They want to build stronger bonds with the sports teams and personalities that they love, and they are willing to pay for it.

Sports businesses are being challenged to find ways to harness the latest technology and deliver an experience that meets the behaviors of their fans. Even more so with the limitations of COVID-19, athletes are turning to technology to engage their fans. An estimated \$18B of global sports revenue has been lost during the pandemic<sup>2</sup>, further driving the need to diversify revenue and focus on technology to reposition businesses for growth opportunities and to capture the attention of fans.

## NFTs appeal to collectors, fans, teams, leagues, and talent, amongst others.

They have become a great way for individuals and businesses to capitalize on unique assets, engage fans, and potentially generate revenue, while staying ahead of the curve and keeping pace with innovations in commerce. Because the opportunities for growth with NFTs are still evolving, businesses should define what their end goals are around NFTs. Some of the common ways brands are using NFTs to grow their business include:



### Fan Engagement —

NFTs can be much more than a collectible or piece of art, and savvy brands are recognizing that the most successful and long-term-relevant NFTs will be ones that have ongoing value and utility. For example, NFTs can better connect fans to their favorite teams or brands by offering voting rights to team decisions, access to exclusive offers, and the ability to earn rewards.



### Customer Relationship Management —

Unlike physical goods, NFTs are trackable so it can be possible to see what wallet address they reside in. NFTs can open unique segmentation and engagement strategies based on trackable factors related to the NFTs owned/purchased. This might include the types of NFTs owned, the quantity owned, or the duration they've been held.



### New Potential Revenue Streams —

Because NFTs enable digital scarcity, brands can sell exclusive, limited digital goods. Unlike physical goods, NFTs can include a smart contract that codes in a royalty percentage designated by the content creator. As such, subsequent sales or auctions of the NFT can generate revenue for the original NFT creator, providing an ongoing potential revenue stream as it is sold or auctioned.

# How to Integrate NFTs

There are seven steps to consider for integrating NFTs successfully into a business. Having infrastructure partners that are flexible and able to support multiple use cases, marketplaces, and blockchains through these seven steps is important in considering NFTs. Many of the solutions today are vertically integrated; in the future, the expectation is that there will be more flexible enterprise solutions.

## 1. Identify the NFT use case

First and foremost, there should be alignment on how NFTs will be used. Depending on the use case, there are different mechanisms to design an NFT, like edition size and distribution. Some of the most prominent use cases seen to date include collectibles, art, gaming, and experiences.



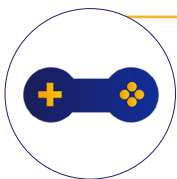
### Collectibles:

The digital scarcity that NFTs enable is a natural fit for collectibles or assets whose value is dependent on there being limited supply. Some of the earliest NFT use cases include [CryptoKitties](#)<sup>3</sup> and [CryptoPunks](#)<sup>4</sup> (10,000 unique pixelated characters), with individual CryptoPunk NFTs like Covid Alien selling for \$11.75 million<sup>5</sup>. More recently, popular brands are creating NFT-based collectibles, like [NBA Top Shot](#)<sup>TM6</sup> moments, which are digital basketball cards, but instead of static images, these NFTs contain video highlight moments from NBA games.



### Art:

NFTs enable artists to sell their work in its natural form factor as opposed to having to print and sell pieces of art. Additionally, unlike with physical art, the artist can receive revenue upon secondary sales or auctions, thereby ensuring they are recognized for their original creations in subsequent transactions. NFT marketplaces devoted to art-based NFTs, such as [Nifty Gateway](#)<sup>7</sup>, sold/auctioned over \$100M of digital art in March 2021 (Crypto Art, n.d.).



### Gaming:

NFTs also provide significant opportunity for gaming thanks to the ownership opportunities they introduce. While people spend billions of dollars on digital gaming assets, like buying skins or costumes in Fortnite, the consumers do not necessarily own these assets. NFTs would allow gamers playing crypto-based games to own assets, earn assets in-game, port them out of the game, and sell the assets elsewhere, such as an open marketplace.

## 2. Determine the appropriate blockchain

Selecting the appropriate blockchain requires evaluating tradeoffs across multiple dimensions including throughput, transaction cost, existing ecosystem of applications, and degree of decentralization. Additionally, while a business may start creating NFTs on one blockchain, there are likely to be many other blockchains that support NFTs in the future and they may want to create NFTs on multiple blockchains. The ideal infrastructure partner would support multiple blockchains and enable interoperability of assets between blockchains.

Ethereum is the blockchain with the most NFT activity, but there are other blockchains gaining traction with NFTs, like Flow.



ethereum

**Ethereum** is one of the largest blockchains, with a robust ecosystem of users, developers, wallets, and applications. Today the majority of NFTs in circulation have been built on top of Ethereum with many of the top projects and platforms. While most NFTs in existence today are on Ethereum, the fees associated with NFT transactions (so-called “gas” fees) can be prohibitively expensive for smaller transactions. Because of this and the fact that Ethereum is so developer-friendly, some companies have begun to build adjacent blockchains or “2nd layer networks” on top of Ethereum that would allow for the transfer of Ethereum-based NFTs to achieve much lower costs, and much higher transactional volume/speed.<sup>8</sup>



flow

**Flow**<sup>9</sup> is another blockchain that is gaining traction for NFTs. While it is smaller than Ethereum, it has notable mainstream brands building platforms, like [NBA Top Shot](#)<sup>TM6</sup>. Flow has been built to increase throughput and reduce the challenges of high gas costs through an energy-efficient blockchain transaction validation approach. Given that it is still in early stages there is a more limited developer and application ecosystem. NBA Top Shot<sup>TM</sup> is currently the primary project on the blockchain.

One of the greatest sources of value of a blockchain comes from attracting a broad set of users and developers. This helps to support and further decentralize the network by running the blockchain software on various computers and add value by building capabilities on the blockchain. Ethereum has an incredibly robust developer ecosystem, and blockchains like Flow are getting more third-party adoption. Although it would be possible to create proprietary blockchain software for the sole purpose of storing NFTs, doing so would limit the ability to realize these benefits.

### 3. Mint the NFTs

After determining what content to use, the NFT needs to be created, or minted. To mint an NFT, a cryptographic key is used to create a token on the blockchain that represents a piece of digital media. Important characteristics, like the name, description, and the edition size can be included within that token. Once an NFT is minted, it is immortalized on the blockchain. It is important to have a minting platform that gives flexibility and control over the features of the NFT.

There are several platforms that can help with the minting of NFTs. It is important to note that the ecosystem for this is in its infancy – the majority of platforms like OpenSea and Rarible are positioned for any creator, often including brand-new creators, but there are platforms focused on supporting brands and larger creators – Bitski has done drops with the likes of Adidas and Levi’s, while Gary Vaynerchuk’s VeeFriends drop was on Nameless – and many more are coming into the space. In creating NFTs, companies are well-advised to find providers who will mint NFTs according to custom smart contracts so that companies have as much control as possible over the parameters of the NFT, including provenance, attributes of the NFT, and storage of the underlying media asset.





## 4. Decide how to store digital assets in a long-term sustainable way

NFTs are either minted to contain the digital content file itself or to contain a reference to the digital content. Accordingly, it is important to understand how the digital content being distributed by the NFT is being stored. Many of the existing platforms that creators can use to create NFTs will host the media files through either decentralized or centralized storage methods described below:



### Directly on the Blockchain

When this occurs, the token as well as the digital content is stored on the blockchain. Because the storage capacity allocated by the blockchain software can be limited, the file size allowed can be rather small. At least for now, many companies find storing digital content on the blockchain directly to be cost-prohibitive.



### Decentralized Storage

When storage files are spread across a distributed network, there is no dependence on a single entity. Developers of these peer-to-peer storage protocols, such as Arweave, offer varying degrees of storage permanence for different price points.



### Centralized Storage

There is also the option to use storage from a central provider like many well-known cloud storage providers today. In this model, the NFT marketplace provides the service of storing the digital content through its relationships with its cloud providers. There is a dependency on the provider and the NFT creator to continue to host the asset – if the media is no longer hosted, the NFT will not point to anything.

## 5. Store and access NFTs securely and easily

Similar to cryptocurrencies, NFTs are stored in a crypto wallet – the digital equivalent to an address. There are several crypto wallets available, including wallets from top exchanges that manage assets on the consumer’s behalf to wallets that give consumers direct control over their assets. To maximize the addressable market, it is important to be able to integrate with many of these wallets, so that NFTs can be delivered to a maximum number of digital addresses.

There are two primary models for wallets – ‘custodial’ or ‘non-custodial’. Consumers that interact with crypto often prefer the ‘non-custodial’ model, as it gives them full control over their assets. As an example, platforms like [SuperRare](#)<sup>10</sup> and [OpenSea](#)<sup>11</sup> integrate non-custodial wallets, which means the consumer is responsible for securely storing the private key that allows them to access and to trade their NFTs. Each of these platforms has connectivity to specific third-party crypto wallets that provide encryption and security to users.

By contrast, including a custodial solution can help provide a broader audience easy access to a business’s platform. If using custodial solutions, it is important that the solution is from a trusted brand with strong security, as it will be responsible for safekeeping the NFTs on behalf of the consumer.



## 6. Distribute across an applicable marketplace

Another important consideration is how to distribute NFTs.

Factors for evaluating NFT marketplaces include: flexibility and control over the branding of the user experience; whether the marketplace allows users to purchase NFTs with fiat currency (dollars) or requires users to use cryptocurrency for purchases (for mainstream appeal, it is important to accept card payments); and the general audience of the NFT marketplace.

Below are some common examples of NFT marketplaces in the ecosystem today (although the NFT economy is evolving rapidly and Visa expects the landscape of marketplaces to do so as well).

**Open Marketplaces:** These are broad marketplaces where anyone can create and sell NFTs. These platforms require cryptocurrencies to buy and sell NFTs. These platforms are 'non-custodial', so consumers must hold and store the assets themselves.

**Crypto Native Curated Marketplaces:** These platforms require contributors to be approved to create NFTs and sell them on the platform. Similar to the open marketplaces, they require cryptocurrencies for payment, and have consumers custody the assets themselves.

**Existing Closed NFT Marketplaces:** These platforms use their own storefront and branding, but will custody the NFTs on behalf of the consumers. These marketplaces often have fiat currency on-and-off ramps and accept card payments and enable withdrawals via ACH or Wire.

**White-Labeled NFT Marketplaces:** There's a spectrum of white-label marketplaces, from those that will provide a white-label storefront to full back-end infrastructure that enables the development of a custody marketplace. Storefronts enable easier integration, although how fiat on-and-off ramps work and how the assets are custodied may be made default. On the flip side, back-end infrastructure providers will provide much more flexibility but will require more technological lift.

Lastly, when intellectual property concerns relating to the digital content stored in the NFT are paramount, companies have collaborated to establish their own marketplaces that allow them to control the initial sale of the NFT, secondary marketplace, and unique features to incentivize keeping the NFTs on this platform. Setting this kind of platform up requires engagement of specialized technology vendors who can help set up and run the platform, which can be very expensive.

## 7. Identify additional opportunities to engage fans

---

Today, selling art and collectibles is the primary use cases for NFTs. While these use cases can generate revenue, there are untapped strategic opportunities that may be realized.

For example, one exciting aspect of NFTs is their composability. As the ecosystem develops, NFTs can be designed in a way that spans multiple use cases. This long-term utility enables deeper fan engagement and ultimately creates more valuable NFTs that generate additional revenue on secondary sales or auctions. This area is rich for potential and can span multiple phases of the customer experience:

- **Loyalty and Gamification:**

NFTs can be used as a reward or loyalty mechanism to incentivize certain behavior. A consumer could buy an NFT in the standard way, paying with a card, and receive the NFT in their wallet. Alternatively, an NFT can be earned by completing a task, such as making a purchase at a specific merchant.

- **Fan Governance and Decision-Making:**

NFTs can be used to enable fans to impact decisions and outcomes of the team or brand. Companies are starting to explore NFT assets that grant fans certain permissions, such as voting rights for team decisions, the ability to compete in games and leaderboards, and earning unique rewards and VIP experiences linked to their teams.

- **Utility Across Metaverses:**

There are opportunities to imbue NFTs with enhanced utility by building functionality that can be used across different applications within multiple metaverses. For example, a previously issued NFT can be turned into an asset in a game release or grant access to future NFTs and experiences, thereby increasing the utility and value of the NFT.

- **Ticketing:**

In addition to being collectables, NFTs can be combined with event tickets to provide access to an event. These tickets can provide verifiable authenticity, provide royalties upon secondary sales or auctions, and even turn digital tickets into unique commemorative assets.

- **Fan Data with Pseudo-Anonymity:**

A fan's crypto wallet and the assets they own reflect that fan. The transparency of public blockchains enables interested entities to know the NFTs that a public key holds, which paints a picture of that consumer without revealing their identity. This can help inform marketing strategies and how to engage with the consumer in an ongoing manner.

---

The NFT space today is nascent and new growth opportunities are emerging often. Positioning for long-term opportunities will maximize value, further enhance the fan experience, and allow for potential business synergies.

# Considerations Associated with Change:

Innovation, particularly in cutting edge areas, is not something that can be achieved on autopilot. NFTs are no exception, with a range of strategic considerations:

## Risk Management:

Many NFTs have high monetary value and given their exchange velocity (digital assets can be exchanged much more quickly than physical assets), there is opportunity for fraudulent activity. To minimize this risk, NFT platforms should leverage KYC and AML procedures, as well as security best practices like two-factor authentication.

## Environmental Impact:

Ethereum, one of the main NFT blockchains, uses a Proof of Work mechanism whereby it maintains a secure record of NFT transactions through a process called mining, which is energy intensive. However, there are other blockchains that use a Proof of Stake mechanism, which significantly reduces the amount of energy required and is a greener solution. Blockchains like Flow, Polygon, and Solana already use this, and Ethereum is working on developing a Proof of Stake model to support NFTs on the Ethereum blockchain. This is a particularly important consideration for businesses focused on sustainability.

## Licensing and T&Cs:

It is important to be clear what rights are bestowed to owners of the NFTs, and whether these are the same or separate from the rights associated with the material object the NFT refers to. These terms are generally provided contractually in Terms and Conditions from the creator or the ecosystem operator's platform rules. Brands with strong IP generally retain all the rights, allowing very limited rights for personal use, while newer crypto-native projects may provide owners greater commercial rights.

## Legal and Regulatory:

Because NFTs are new, there is limited legal and regulatory clarity on how existing laws may apply. Laws that may be implicated include contract, property rights, intellectual property, sweepstakes/promotions, privacy, and securities laws. Furthermore, adding to the complexity, since blockchains operate across jurisdictions, transactions involving NFTs can implicate laws outside the United States. Lawmakers, regulators, and courts are still in the process of evaluating how to treat NFTs under existing laws, and whether new laws are needed to protect collectors, artists, and other participants in the NFT ecosystem. Accordingly, it is highly recommended that businesses consult an attorney that has the relevant subject matter expertise. Due to the regulatory uncertainty, there is risk in any transaction involving NFTs.

## Fees:

There are several fees to consider when creating and purchasing NFTs.

- **Blockchain Transaction Fees:**

When conducting transactions on blockchains, there is an associated transaction fee to compensate for the energy used to make changes to the blockchain. This means that there is a variable cost of creating or selling NFTs on the blockchain. "Proof of Work" blockchains like Ethereum have higher fees than "Proof of Stake" blockchains like Flow.

- **Marketplace Fees:**

Existing NFT marketplaces often charge a fee when sales or auctions occur on their platform, usually ranging between 1% to 5%.

- **Infrastructure Costs:**

Operating a proprietary marketplace rather than leveraging an existing marketplace can provide additional control over the assets, where the files are stored, and how they are consumed, but comes with additional costs. In addition to marketplace sale or auction fees and transaction costs, there are other infrastructure costs like payment acceptance and custody (if storing assets on behalf of consumers).

# Visa - The Trusted Engine of Commerce

---

Visa has long served as a trusted engine of global commerce, enabling the secure and reliable movement of trillions of dollars between individuals, businesses, and governments in over 200 countries and territories. Now, with the rise of crypto, Visa is committed to developing leading-edge emerging technologies at the speed of culture to deliver on its mission: enabling individuals, businesses, and economies to thrive.

Visa's focus in crypto spans the following areas:

## Credentials Everywhere

Visa is working with 50 of the leading crypto platforms to make it simple and convenient to convert and spend crypto with a Visa card, at any of the 70 million merchants worldwide that accept Visa.

While crypto platforms and wallets have traditionally been used to store cryptocurrencies, now they are also storing NFT collectibles and art. Accessibility through multiple wallets will be critical as new wallets and marketplaces pop up. It is unlikely there will be any single ubiquitous crypto wallet, and marketplaces will need to provide consumers multiple options when connecting their wallets. Visa's growing network of crypto wallets is well positioned to help enable this open access and optionality.

## New Digital Currency Flows

Visa is evolving to be a network of networks enabling the secure movement of money across a variety of payment flows. For example, Visa is helping to make it possible for global marketplaces to quickly identify Visa Crypto Partner Wallets that are equipped to safely receive U.S. Dollar Coin (USDC) payouts — giving those marketplaces confidence to pay their sellers in another country. The vision is that those sellers then have more choice, and can use their visa credentials in their digital currency wallet to convert and spend their income at any Visa-accepting merchant.

Additionally, Visa is upgrading its infrastructure to enable settlement in stablecoins, a form of digital currency, starting with USDC over the Ethereum network. Visa continues to push the boundaries of its network making it more accessible to the growing ecosystem of crypto-native companies and connecting to public blockchains, like Ethereum, that are the nexus for crypto financial services and crypto commerce and goods.

## Crypto Value-added Services

### Visa Crypto APIs

For banks or fintechs lacking a digital currency offering and looking to develop one, Visa is helping them become crypto enabled, including providing Crypto APIs to buy or sell crypto within digital banking apps. Today Visa is enabling the purchase of Bitcoin, but this infrastructure can lay the groundwork for a broader set of assets, like NFTs.

### Digital Currency Innovation Hub

Visa launched a global innovation hub where likeminded partners can collaborate on solutions and user experiences in the realm of digital currency and crypto. Partners gain access to industry insights and work closely with Visa's Product, Visa Consulting & Analytics, and Innovation Center subject matter experts to.



#### Discover:

Uncover trends in digital currency and explore growth opportunities



#### Collaborate:

Research, design, and test solution concepts for new digital currency technologies using human-centered design



#### Build:

Develop and pilot proofs of concepts with payment engineering experts

## Blockchain Research

As a leader in digital payments, Visa has the responsibility to lead and contribute to discussions shaping commerce, including the crypto and NFT space. Visa's research team has been exploring the science of blockchain technology for several years and their work has yielded several promising innovations. These include ways to enable new forms of crypto commerce in a safe and seamless manner such as offline digital currency transactions and new forms of privacy preserving cryptography.

Visa is committed to evolving its products and solutions to enable new commerce solutions, including but not limited to crypto and NFTs, and help consumers and its partners understand and engage with these new digital goods. Additionally, Visa is focused on enabling consumers to purchase these digital goods through the mechanisms they are familiar with today, namely cards and the Visa network.

## Conclusion

---

Commerce is evolving, and innovations such as crypto and NFTs are likely to shape sports, entertainment, and other communities going forward. NFTs represent a deeper and more innovative way for fans to engage and potential new revenue streams for organizations. However, there are many considerations to take into account when integrating NFTs because it is a new space.

Visa was built on the vision of electronic enablement of moving money. By connecting its network of thousands of financial institutions, millions of merchants, and billions of consumers to existing networks Visa strives to enable connections to new crypto and blockchain networks offering greater choice, and enabling access, working to create a future where everyone has the opportunity to thrive. Through this global connectivity, and the research, partnerships, and product development Visa is driving in the crypto space, Visa is laying the groundwork to enable adoption of NFTs and other assets in the future.

Contact [NFTcommerce@visa.com](mailto:NFTcommerce@visa.com) to consult a Visa representative to build a custom plan to develop and evaluate NFT opportunities.

---

### Sources:

- <sup>1</sup> <https://dappradar.com/blog/nfts-generate-record-1-5-billion-transaction-volume-in-q1-2021>
- <sup>2</sup> <https://www.sportico.com/business/finance/2021/sports-nft-sales-crypto-1234629061/>
- <sup>3</sup> <https://www.cryptokitties.co/>
- <sup>4</sup> <https://www.larvalabs.com/cryptopunks>
- <sup>5</sup> <https://www.barrons.com/articles/covid-alien-cryptopunk-sells-for-10-million-in-sothebys-sale-01623336573>
- <sup>6</sup> <https://nbatopshot.com/>
- <sup>7</sup> <https://niftygateway.com/>
- <sup>8</sup> <https://cointelegraph.com/news/focus-on-nfts-and-interoperability-push-icon-icx-ark-and-axie-infinity-higher>
- <sup>9</sup> <https://www.onflow.org/>
- <sup>10</sup> <https://superrare.com/>
- <sup>11</sup> <https://opensea.io/>



# Glossary of Terms

**Bitcoin:**

A type of digital currency that is created, distributed, traded, and stored with the use of a decentralized ledger system, known as a blockchain.

**Blockchain:**

A system of recording information in a way that is decentralized and makes it difficult or impossible to change or hack.

**Custodial:**

A trusted entity stores/ holds cryptographic keys that provide access to assets on behalf of the consumer.

**Cryptocurrency:**

A form of digital currency created by solving a complex series of cryptographic equations. Once "minted", the crypto exists on a blockchain and is decentralized, meaning it is not controlled by a singular entity the way all traditional currencies are. (e.g., Bitcoin and Ethereum)

**Crypto Exchange:**

A marketplace to buy and sell assets/currencies. (e.g., Coinbase)

**Ethereum:**

A decentralized, open source blockchain with smart contract functionality.

**Fiat Currency:**

A government-issued currency that is not backed by a commodity such as gold. Fiat money gives central banks control over the economy because they can control how much money is in circulation.

**Fintechs:**

Refers to the integration of technology into offerings by financial services companies in order to improve their use and delivery to consumers.

**NFT (Non-Fungible Token):**

Tokens that are tied to and/or represent ownership of an underlying media asset.

**Flow:**

A blockchain that allows developers to create and trade a particular type of digital asset called a non-fungible token.

**Fungibility:**

Something that is replaceable or exchangeable. (e.g., gold or silver)

**Blockchain Transaction Fees:**

Forms of payment to the miners or stakeholders who help operate the blockchain.

**NBA Top Shot™:**

Home to officially licensed NBA digital collectibles that can be bought, displayed, and sold or auctioned through this new platform. NBA Top Shot™ "moments" celebrate epic game highlights, and include video, action shots, stats, and guaranteed authenticity of ownership.

**Nifty Gateway:**

Started in 2017, the self-described "premier marketplace for Nifties" is home to some of the world's top creators.

**Non-custodial:**

The consumer is responsible for storing the cryptographic keys that control the tokens themselves.

**Non-Fungible**

Something that is unique and irreplaceable (e.g., autographed item).

**OpenSea:**

The first and largest marketplace, similar to eBay for NFTs, with millions of assets organized into hundreds of categories for user-owned digital goods, including collectibles, gaming items, digital art, and domain names.

**Tokenization:**

The process of turning a meaningful piece of data, such as an account number, into a random string of characters called a token that has no meaningful value if breached.

**Stablecoin:**

A new class of cryptocurrencies that attempts to offer price stability and is backed by a reserve asset.

**SuperRare:**

A marketplace to collect and trade unique, single-edition digital artworks.

**Smart Contract:**

Computer code that executes simple if/then functions.

**Metaverse:**

A virtual-reality space in which users can interact with a computer-generated environment and other users.

**API:**

A set of functions and procedures allowing the creation of applications that access the features or data of an operating system, application, or other service.

**White Label:**

When a product or service removes their brand and logo from the end product and instead uses the branding requested by the purchaser.