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NFT Utility

A Multifaceted Overview and Use Cases

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Research and Insights

Research Analyst (Operations)
Olivia dela Rosa

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Executive Summary

- An NFT's utility pertains to its real-world application, function, and benefits. It's the quantifiable value that demonstrates the usefulness of the asset. Utility can help increase an NFT's value, which can turn the NFT into a viable economic and financial asset.
- There are four main utility classifications:
    - **Socialisation**: NFTs can appeal to people's desire to form and be part of a community, where ownership can serve as membership.
    - **Art**: NFTs can satisfy the holder's need for artistic expression and inspiration.
    - **Functionality**: NFTs can carry underlying applications, opening endless opportunities for creators in this space.
    - **Tokenisation**: NFTs can transform real-world assets into digitised assets to represent ownership.
- Several NFT projects within the Cronos ecosystem demonstrate utility:
    - **Loaded Lion & Cyber Cubs**: Holders can receive benefits from both the Cronos and Crypto.com ecosystems, such as rebates, early access to new drops, airdrops, and giveaways.
    - **Cronos Cruisers**: Holders can earn rewards from Minted, an NFT marketplace on Cronos.
    - **VVS Miner Moles**: Holders can boost their rewards on the VVS protocol, the leading decentralised exchange (DEX) on Cronos.
- We also explore utility in emerging NFT use cases:
    - **Rentable NFTs**: Enabled by the NFT Rental Standard (e.g. ERC4907), it allows NFT owners to rent out their NFTs without collateral.
    - **NFTs and decentralised autonomous organisations (DAOs)**: Collector DAOs collectively acquire and co-own high-value NFTs. Otterspace utilises non-tradeable NFTs to incentivise member engagement and participation within the community.
    - **Dynamic NFT (dNFT)**: dNFTs are smart contracts that can be triggered by on-chain or off-chain events.

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1. Introduction

The growth of non-fungible tokens (NFTs) in the past few years has been remarkable. It has been a Cambrian explosion since crypto assets reentered the bull market in late 2020, where a new project or collection is introduced every day. The space is estimated to exceed US$7 billion in value by 2028.

Despite their growth, **NFTs have often sparked debate over their inherent value and utility**, resulting in challenges for NFT valuation. There is a great deal of subjectivity and relativity around where and how NFTs' value should be derived, as well as how this value is maintained. One main criticism is how tokens on the internet could be worth any money at all, especially when they are just a representation of ownership of an online image that anyone could download for free.

The value of digital art can be relative and purely subjective, making them highly volatile investments. Auction mechanisms, the nature of the NFT, and the online marketplaces where the NFT is listed can help determine its fair market value. While fair market valuation works well for the traditional art market, the verdict is still out on whether it is the right method for NFTs as well.

On top of valuation, there is the question of utility. **There is a certain disconnect in the market as to whether a highly valuable asset has actual quantifiable use and benefits.**

Another issue raised around NFTs is that they are relatively illiquid. This is a problem for the mass adoption of NFTs as an asset for trading. As DeFi has proven, crypto investors prize liquidity and returns on their investments. However, with unique and non-fungible assets, holders lack ways to obtain liquidity. In other words, there's no guarantee that someone will buy their NFT.

For NFTs to increase in value and be deemed viable economic and financial assets, they have to go beyond collectability and aesthetics. **One way to tackle this is through utility**. A 'utility' element ultimately promotes longer-term ownership for holders. It also provides alternative ways to increase the financial value of NFTs outside the promise of price appreciation through resale.

1.1 What is utility in NFTs?

In economics, utility is defined as the total satisfaction received from consuming a good or service. Meanwhile, **utility in NFTs pertains to the real-world application, function, and benefits of the token.** It's the quantifiable value that demonstrates the usefulness of the asset itself.

Auction house Christie's sold an artwork by Beeple in 2021 for just over US$69 million at the time of purchase. However, aside from providing visual splendour, asset ownership, and social cache, this piece of art does not have any actual utility.

The NFT ecosystem has evolved quickly after the renowned Christie's sale, offering more than just artistic value. It has moved more towards real-world usage in the form of domain names, in-game assets, music NFTs, NFT event tickets, and membership passes, to name a few. Utility can take many forms, from offering exclusivity to unlocking experiences, providing income to building a community of like-minded individuals.

There are four main classifications of NFT utility, which we will discuss in the next chapter.

2. Classifications of NFT Utility

2.1 Socialisation

Enabled by blockchain technology, NFTs can be a vehicle for socialisation and digital inclusion. Utility-driven NFTs appeal to people's desire to form and be part of a community, where ownership can serve as membership.

NFT projects tend to build communities around them, in which members can gather consensus, lay out rules, and connect with like-minded individuals. These shared interests within the community help determine the value of an NFT.

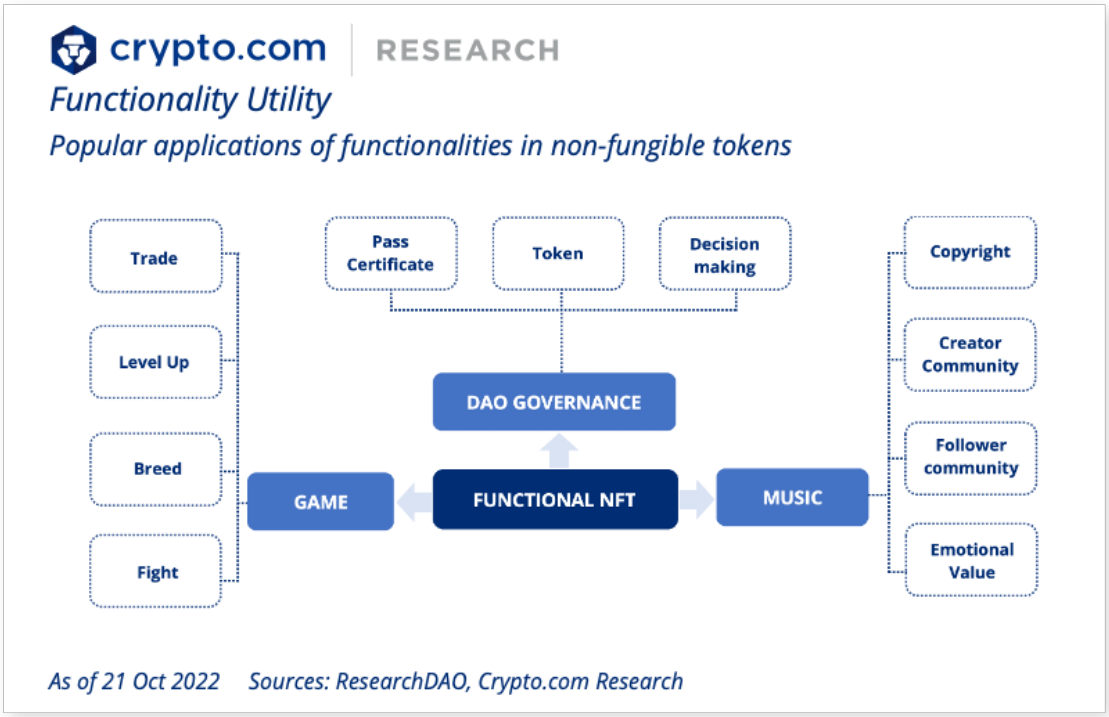
2.2 Art

Successful NFT projects have demonstrated there is value to be derived from a digital artwork's cultural influence and meaning. NFTs in themselves typically have standalone value: **while some art NFTs may not have a specific application, they can still satisfy the holder's need for artistic expression and inspiration.**

This type of NFT audience focuses more on the artistic value of the NFT, rather than its community or usability. These collectors appreciate aesthetics and therefore will seldom engage in trading or be interested in their other applications.

2.3 Functionality

NFTs can carry underlying utility or applications, opening endless opportunities for creators in this space. Gaming NFTs, for example, can help players advance in the game, unlock exclusive equipment and content, or grant rewards. Music NFTs allow artists to share ownership of their music with their fans and earn royalties from resales. Using NFTs, DAO members can make governance contributions and take profits by trading the DAO token.



2.4 Asset Tokenisation

Tokenisation, or **the transformation of real-world assets into digitised assets to represent ownership**, brings a new paradigm that further broadens the horizons of today's asset classes. These tokenised assets provide financial rights and interests in and of themselves, and thus should be regarded as belonging to the asset category. In the coming years, it is likely that the demand to tokenise real-world assets will continue to grow.

The immutable nature of the blockchain technology behind NFTs allows them to validate complex financial contractual relationships, providing provenance that is easily verifiable on-chain. As a result, NFTs have the potential to be credible financial instruments, representing ownership and rights stored in their smart contract.

Within this context, NFTs that provide such financial rights and interests are known as **asset NFTs,** to distinguish them from the more mainstream digital collectible NFTs. Asset-based NFTs today cover a broad range of applications:

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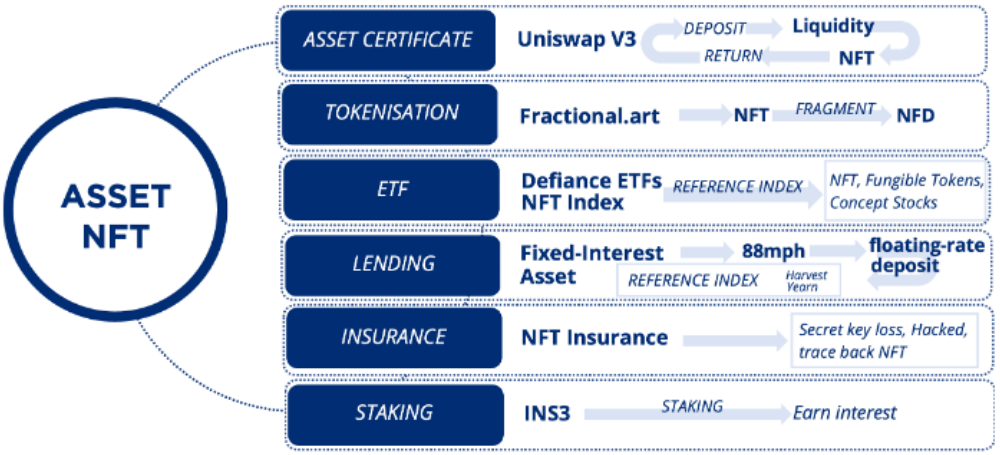
Asset NFT Usage Scenario

Currently asset-based NFTs have a wide range of financial applications



As of 21 Oct 2022 *Sources: ResearchDAO, Crypto.com Research*

3. Where Utility Meets Financialisation and Tokenisation

For NFTs, **financialisation unlocks utility**. In the context of decentralised finance, financialising NFTs involves turning them from idle assets into highly useful ones, enabling them to become more liquid and creating new markets as a result. **The first step to furthering the financial use of NFTs was through asset tokenisation.**

Utility contributes to the provision of liquidity. In a traditionally illiquid market that trades non-fungible assets, financialisation ultimately helps them to reach asset class status. In economic verticals that make extensive use of NFTs, more activity in NFT finance enables increased activity in markets for NFTs themselves.

This finds great use, for instance, in blockchain games, wherein players can earn, own, and increase the value of gaming items or tokens in the form of NFTs as they advance in the game. These assets provide players with an environment where an in-game economy is present, making the experience not only enjoyable but also profitable.

As utilities continue to evolve, we will see more and more financial behaviours emerging, which in the future will have the potential to become the main source of value for NFTs. **Furthermore, the integration of NFT utilities will induce a compounding effect much to the benefit of its users.**

In the next chapters, we will look at the functional and tokenisation utilities of these assets, mainly within the context of DeFi, gaming, and other emerging sectors — starting within the Cronos ecosystem.

4. Use Cases in Cronos

Project	Key Utilities	Sample
Loaded Lions	Crypto.com Ecosystem: • Drop rebates • Early access • Allowlist allocations • Airdrops and giveaways • Additional Crypto.com NFT benefits • Crypto.com partnership collabs • Main App benefits Cronos Ecosystem: • Loaded Lions Game • Mane Net Grants • Cronos project partnerships Community: • Twitter spaces • UGC Campaigns • Loaded Lions Hoodies • Community Activities • Other unique merchandise • In-Real-Life (IRL) Events	
Cyber Cubs	• Utility booster for Loaded Lions	
Cronos Cruisers	• NFT Staking Booster • Exclusive Allowlisting on Minted • Platform fee rebates • DeFi ecosystem integration • $MTD token airdrop	
VVS Miner Moles	• NFT staking rewards and boosted farming • Exclusive VVS privileges for Initial Gem Offering • Aavegotchi game privilege pass	

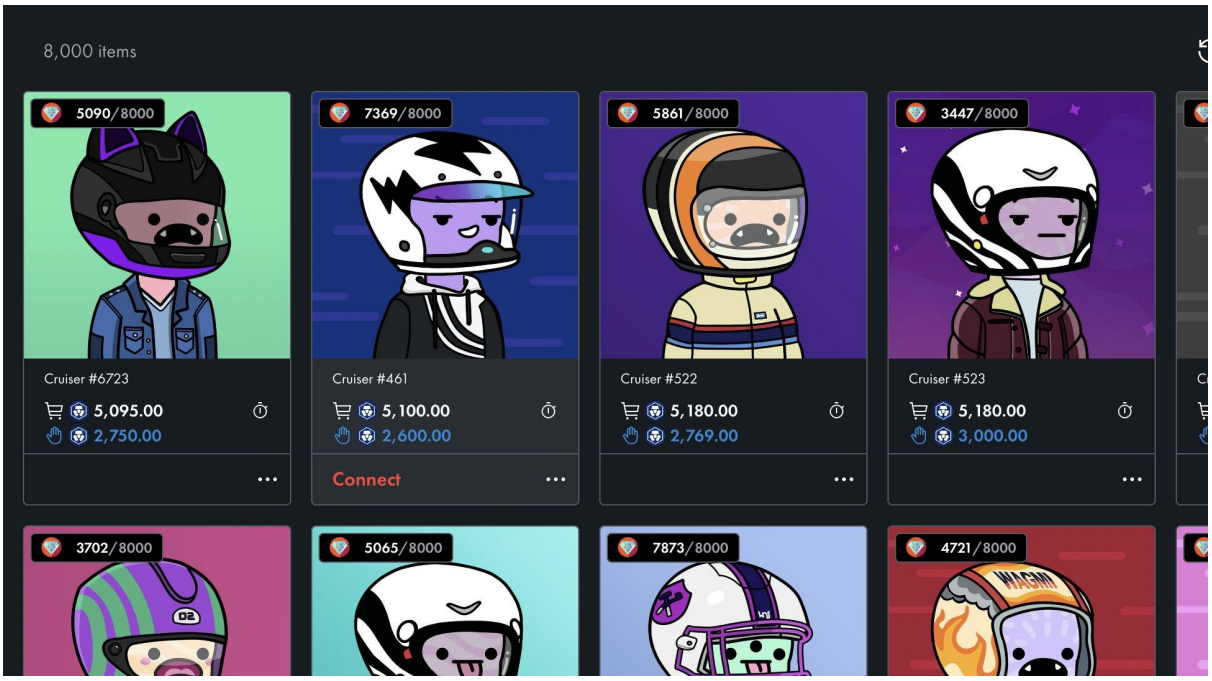
4.1 Loaded Lions and Cyber Cubs

(Image source: @LoadedLionsCDC)

Loaded Lions is the very first platform-owned profile picture (PFP) project launched in the NFT space. Each NFT serves as a key to **The Mane Net**, the exclusive membership for Loaded Lion collectors, granting them access and benefits from both the Cronos and Crypto.com ecosystems. These benefits include access to discounts, special drops, and community events and merchandise. Upcoming utilities for this collection include a Loaded Lions game as well as Mane Net Grants.

Cyber Cubs is the first derivative collection of Loaded Lions. The NFTs function as utility boosters for Mane Netizens: by holding both Cyber Cubs and Loaded Lions, Mane Netizens can get bumps in sweepstake rewards, merchandise perks, extra entries for campaigns, and much more.

4.2 Cronos Cruisers



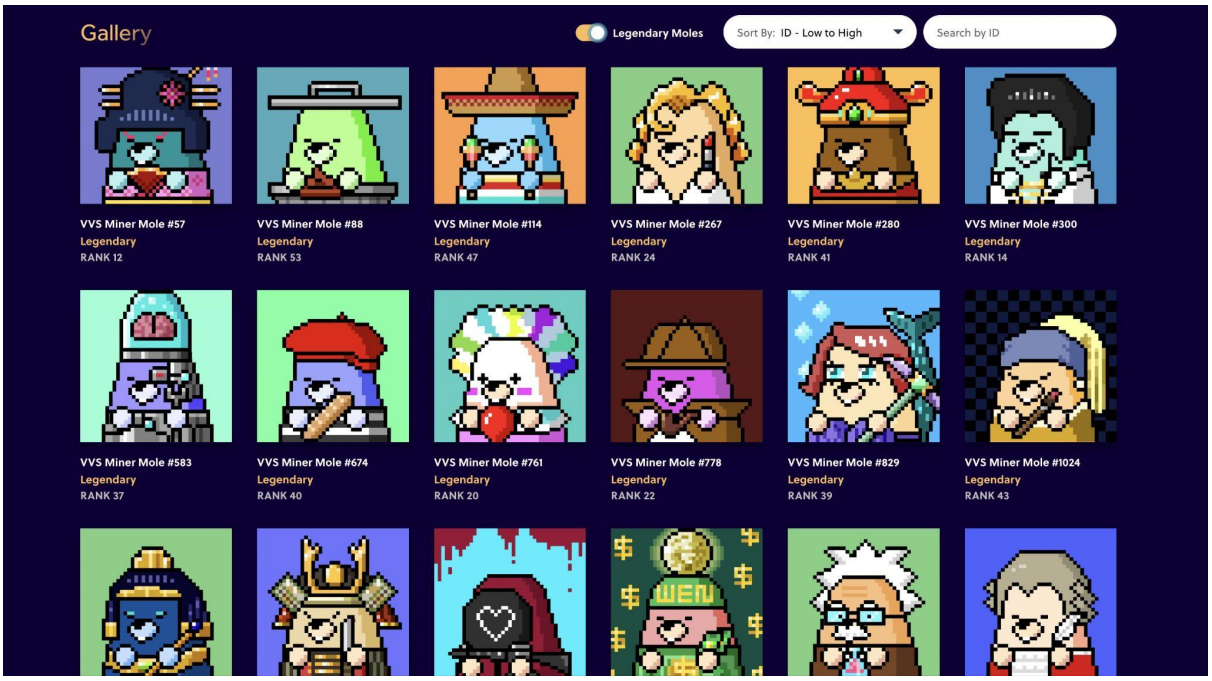
(Image source: @CronosCruisers)

Cronos Cruisers is a collection of 8,000 utility-enabled, algorithmically generated PFP NFTs created in collaboration with Cronos Labs. It is currently listed on Minted, a decentralised NFT platform for collectibles native to Ethereum and Cronos.

As an NFT marketplace, Minted offers various reward mechanisms. Cronos Cruisers holders earn rewards by simply listing eligible NFTs with less than 2x floor price, and can boost their rewards by listing under 1.1x of the floor price. Holders can also earn CRO tokens as platform fee rewards, as well as staking rewards in MTD, the native token of Minted.

An upcoming feature for this collection is its NFT Staking Booster, allowing holders to earn an annual percentage rate (APR) boost on Minted's MTD vault by staking their NFTs.

4.3 VVS Miner Moles



(Image source: @VVS_Finance)

VVS Miner Moles is the first NFT collection launched by VVS Finance. VVS Finance is a leading decentralised exchange on the Cronos chain. Besides featuring 10,000 utility-enabled PFP NFTs, the VVS Miner Moles collection also offers boosted rewards on the VVS protocol.

Similar to Cronos Cruisers's Staking Booster, holders can stake their VVS Miner Moles and earn boosted farming yields — the more Miner Moles staked, the higher the multiplier obtained. Through this feature, the value of a user's liquidity provider token is multiplied in the boosting calculation whilst supplying a higher share of emissions. Holders can enjoy up to a 2.5x boost multiplier.

Aside from the staking booster feature, it also offers other utilities, including:

- *Exclusive VVS Privileges for Initial Gem Offerings (IGOs)*: Holders will get preferential access to VVS IGOs, which allows them to bypass the IGO whitelisting requirements to participate in the basic sale ('Gem Fair').
- *Gateway to VVSgotchi*: Holders can use their NFT as a privilege pass to participate in the VVSgotchi game, where they can earn extra rewards.

5. Other Emerging Use Cases

Other notable use cases for NFTs are constantly emerging. These unique utilities are further expanding and revolutionising the space.

5.1 Rentable NFTs

On 28 June 2022, the Ethereum development team passed the 20th ERC standard, ERC4907, or the new NFT Rental Standard. ERC4907 allows an NFT owner to permit an individual to use their NFT for a designated period of time and eliminates the need for collateral. **It introduces the dual roles of '*owners*' and '*users*' at its application layer, streamlining the NFT rental through an automated '*expires*' function, which enforces the time-limited *'user'* role without any further on-chain operations.**

This new rental standard is what enables rentable NFTs. The concept works similarly to renting in the real world: borrowers can take advantage of an NFT's utility for a certain amount of time, and the lender can earn passive income through an otherwise illiquid asset.

For instance, some blockchain games require players to possess in-game items or character NFTs to advance in the game. Purchasing these NFTs may be costly, especially for players who are just starting out. By renting NFTs instead, players can use them to achieve a specific goal and return them after — all for a fraction of the asset's cost.

One example is the reNFT marketplace. **reNFT is a protocol layer that enables peer-to-peer renting of ERC721 tokens while also generating interest yield.** It works by breaking NFT assets into shards to form a user-defined number of fungible assets. The shards can then be sold and issued in the primary market via an Initial NFT Shards Offering (INO) or traded in the secondary market, such as on an automated market maker.

reNFT uses a Chainlink price oracle to fetch current market pricing for each NFT from OpenSea, Aave to generate interest on collateral, and The Graph to query all blockchain data.

5.2 NFTs and DAOs

5.2.1 Otterspace

Founded in April 2022, Optimism-powered Otterspace aims to **use NFTs that are earned rather than bought to reward certain behaviour and recognise participation in a DAO**. Once contributors have completed certain tasks or behaviours set by the DAO through the application, a contributor earns one non-transferable NFT badge (a soulbound token), which entitles them to a host of benefits.

The badges serve three main objectives:

- *Reputation:* Recognise contributions and rely less on financial incentives
- *Governance:* Give different types of members different levels of governance weight
- *Permissions:* Grant access and permissions to holders of specific badges

The badges have integrations with various projects, including Gnosis Safe.

5.2.2 Collector DAO

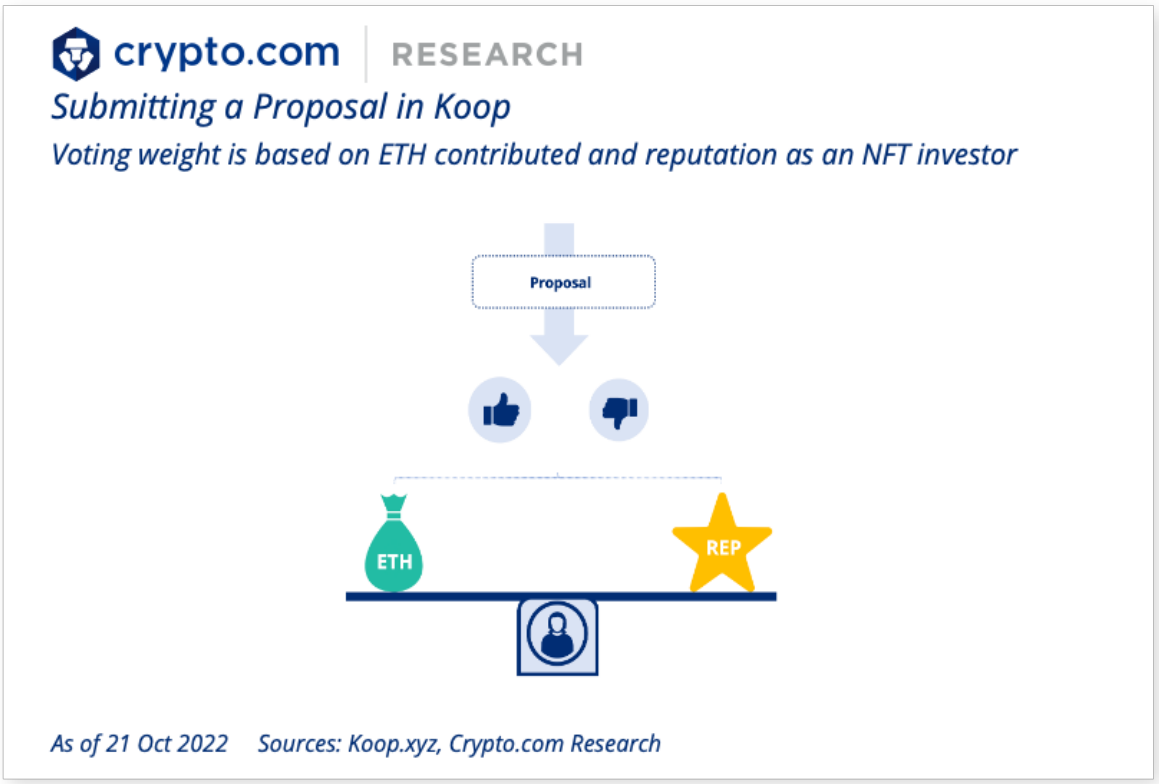
Collector DAOs are a type of DAO that collectively acquires and co-owns NFTs, typically high-value pieces. As they see NFTs as investment opportunities, collector DAOs work by enabling members to vote on which NFTs to buy, pool the funds, and fractionalise their NFT holdings among their members. DAO members can also vote to decide on what to do with the purchased NFT, such as reselling to make a profit or fund another NFT purchase. FlamingoDAO is one of the most popular today, having purchased CryptoPunk #2890 in 2021 for 605 ETH (~$761,888 at the time of purchase).

Some benefits that collector DAOs provide are:

- **Reduced financial risk**: As ownership of the NFTs is distributed among its members, the financial risk is greatly reduced.
- **Social capital**: Membership can unlock benefits such as access to exclusive events, NFT collections, merchandise, virtual goods, or even special tokens.
- **Community governance**: Through collector DAOs, fans and creators can come together to bring ideas to life and decide an NFT project's future.

Koop.xyz is a platform that allows contributors to either join or create their own community (called a 'Koop'). It functions similarly to collector DAOs by allowing people to submit proposals on what NFTs to buy and collectively purchase these NFTs. However, as an organisation, it focuses more on mechanisms that reward communities and creators in the NFT space, rather than investments.

Koop introduces a "people-first" model as an approach to investing and governance, where an individual's contributions to the Koop—rather than their NFT and token holdings—are what is being recognised and incentivised. It moves away from token voting, which can be skewed towards the big players. Instead, voting is weighed based on the individual's ETH contribution as well as their network reputation as an NFT investor. Moreover, members' reputation is determined by the number of NFT proposals they submitted that have passed and that also returned a net positive return to the corresponding Koop.



5.3 Dynamic NFT

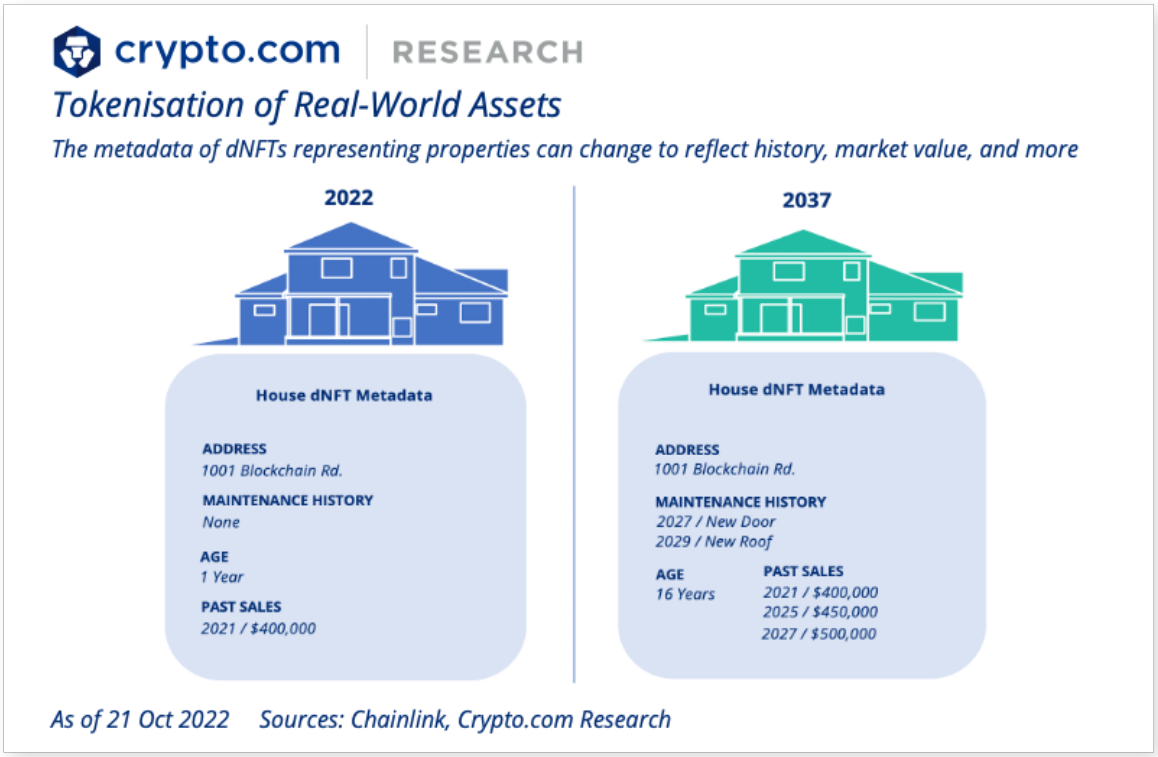
A dynamic NFT (dNFT), or 'living NFT', is an NFT that can change based on external conditions. In a static NFT model, every NFT can be differentiated from another through a one-of-one tokenID and its unique contract address. From there, metadata such as images, video files, or other data can be attached — meaning that it's possible to own a token that represents a unique digital object.

However, this model is limited by the permanence of static NFTs: the metadata attached to them is fixed once they have been minted, creating issues in scenarios that require data to be updated.

With dynamic NFTs, a base NFT is created first, after which smart contracts are then enforced. These smart contracts give instructions on how the metadata should be updated given a triggering event based on external data (mainly through an oracle or an on-chain event). **Within dNFTs, each smart contract can be triggered by on-chain or off-chain events, as well as time, price, or location-based events.**

Blockchain games make great applications for dNFTs. **They enable the creation of cryptographically secure, decentralised, and fraud-resistant trading cards using data that are updated in real-time when the data changes**—or when a new point is scored or a successful assist is recorded, for example. This creates novelty for NFT collectors, and unlocks new utility in NFT-based gaming applications. An example is gaming dApp Aavegotchi, which is pioneering dNFTs powered by oracles through integrating Chainlink VRF to supply it with a source of provable randomness.

Another use case where metadata changes in a dNFT can be useful is in the tokenisation of real-world assets, wherein changing metrics are often required. For example, an NFT representing a property could reflect its maintenance history, age, market value, and more. Tokenising these changing assets, therefore, requires NFTs that have the ability to update with new metadata.



6. Conclusion

Thanks to technologies and innovations that enable NFT utility, there is vast potential for existing use cases to flourish and for new ones to arise. With demonstrable value and applications within the financial and gaming space, NFTs are truly on their way to becoming a real asset class.

References

"Blockchain Research: NFT Liquidity Solutions and Regulation." *HashKey Group*, https://www.hashkey.com/viewerjs-0.5.8/documents/en/blockchain_research/Blockchain-Research-No.232-NFT-Liquidity-Solutions-and-Regulation-1.pdf. Accessed 18 October 2022.

"The NFT Product Report (Part 1): NFT Utilities & Usage Scenario" *Research DAO*, https://mirror.xyz/0xed111Cf8C23AEafe12286Fd60EE670007457Bf87/oEKS1-zQbYUUPaaj_QCg6EGhmYI09Kgsg_dXqRjLSSw. Accessed 18 October 2022.

Shahzad, Ishan. "ERC-4907: The NFT Rental Standard" *Medium*, https://blog.devgenius.io/erc-4907-the-nft-rental-standard-edb60fe6527b. Accessed 20 October 2022.

Murillo, Natalia. "Koop: How does it work?" *Medium*, https://medium.com/koopxyz/koop-how-does-it-work-40a5690725a. Accessed 20 October 2022.

"What Is a Dynamic NFT?" *Chainlink Blog*, https://blog.chain.link/what-is-a-dynamic-nft/. Accessed 20 October 2022.

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