



## Survey on Polkadot NFT Projects

# Survey Paper

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# Introduction

Recently, as NFT has gained attention, many NFT projects have emerged. Within the Polkadot ecosystem, NFT projects have emerged in various categories, including art, game, entertainment and e-commerce. As part of Polkadot's NFT project ourselves, we want to understand what NFT projects are doing in the existing Polkadot ecosystem before we start the project.

There are tens of NFT projects in Polkadot. Some top projects are actively developing products and their business, and continue to expand their projects through collaboration with Parity, web3 foundation, and other NFT projects. Some projects started from early 2021's NFT hype, and are uncertain whether further progress will be made thereafter. Therefore, this paper lists only projects where the project progress is clear or the market cap of the project is meaningful.

This paper was prepared to investigate and compare the features, status, use case, and others of the major NFT projects. The projects introduced in this survey paper will continue to be updated in the future.

# NFT Projects in the Polkadot Ecosystem

## Enjin

Enjin is one of the most famous NFT projects in the crypto industry and it is a next-generation NFT blockchain made for games, apps, enterprises, and creators. Enjin is also known as the creators of the ERC-1155 non-fungible token (NFT) standard.

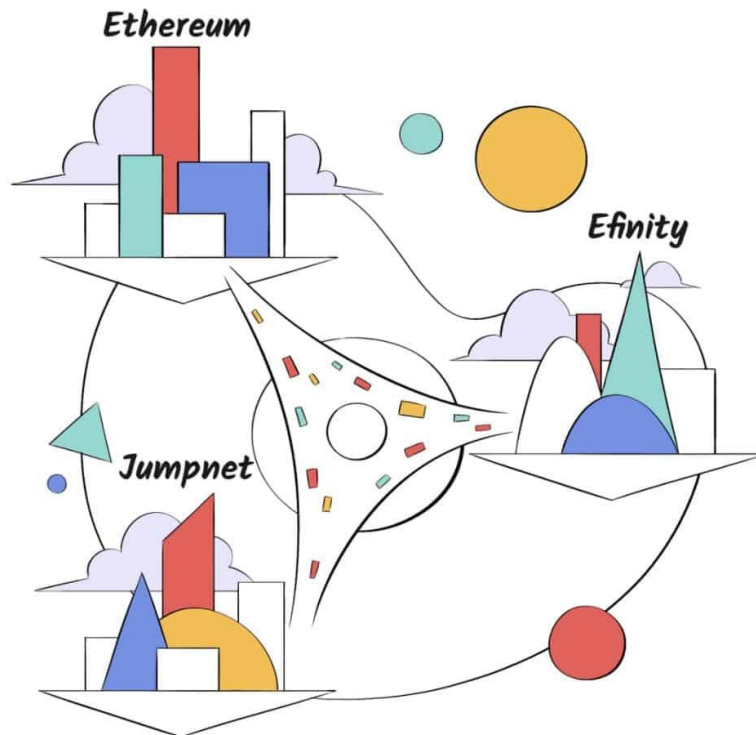
Enjin is so popular in the NFT space that by the summer of 2019, over 66 million ERC-1155 assets had already been minted, totaling 1% of the total ENJ supply locked inside NFTs. Users can later melt the items and receive the ENJ tokens straight to their wallet.

Enjin is actively working on various products and solutions including platform, wallet, marketplace, game solutions and blockchain scaling solution. One of them is JumpNet, and it supports a high-speed bridge between Enjin and other chains with free and instant transactions. Jumpnet supports both ENJ and ERC-1155 NFTs. In addition, everyone can harness the power of JumpNet by minting and distributing Non-Fungible tokens without paying any GAS fees. Main features of JumNet includes:

- Move Enjin Coin from Ethereum to JumpNet
- Send and receive Enjin Coin and ERC-1155 tokens for free
- Mint ERC-1155 tokens for free
- Trade ERC-1155 tokens for free

- Distribute Enjin Coin and ERC-1155 tokens via QR codes for free
- Automatically distribute ERC-1155 tokens from your app or game for free

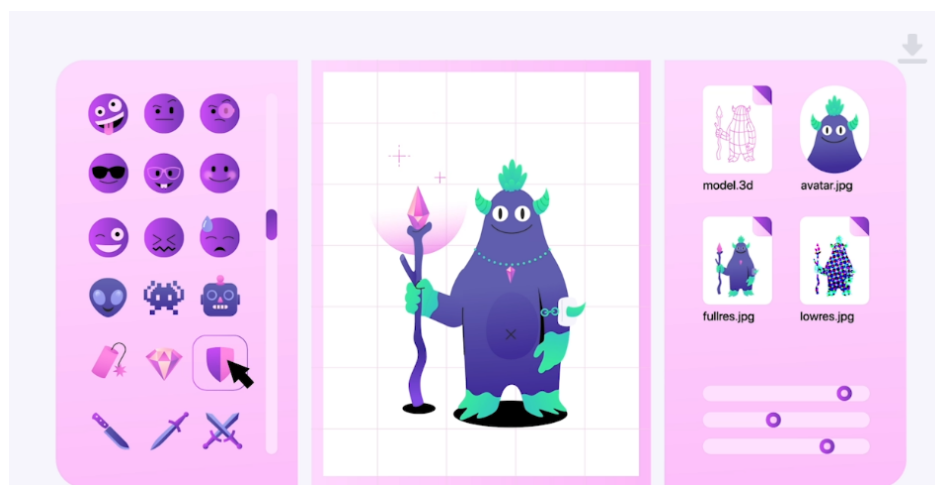
Another Enjin's well-known product is Efinity. Described as the “Multi-Chain Highway for NFTs,” Efinity is multi-chain interoperable, meaning that Enjin supports tokens from any blockchain network, both existing and upcoming.



## RMRK

RMRK is one of the most active projects in polkadot NFT. RMRK is a standardized technique for creating NFTs on the Kusama Relay Chain. RMRK is an association registered in Zug, Switzerland, spearheading the development of the RMRK protocol for creating highly composable “art legos” using NFTs on Kusama. RMRK is revolutionizing the NFT space by creating features such as: emoting NFTs, custom burn messages, NFTs owning NFTs, upgradeable NFTs, and NFTs that can be governed as DAOs.

RMRK has a strong partnership with Kusama and other Polkadot ecosystem players. Especially, RMRK is working closely with Kusama in particular and is working on various developments for Kusama's NFT standard. RMRK has launched its own set of standards and is rapidly expanding across Kusama into dapps, platforms, and chains launching in this ecosystem. RMRK is a part of Kusama's broader NFT strategy and a way to define and propose a standardized and structured NFT for Kusama.



An important roadmap of RMRK includes NFTs 2.0 and it includes:

- NFTs that can own other NFTs
- NFTs that can listen to commands or issue them to their children
- NFTs as DAOs that can, through fractional ownership, be controlled by a group
- NFTs that can react to emotion with conditional rendering logic (send 50 rocket emoji to a picture of a moon, and it can show you a moonbase)
- NFTs that can have multiple resources at once (mint an e-book with an audio version, a PDF file, and a high resolution cover - the environment it's loaded in decides which part to load automatically).

## Unique Network

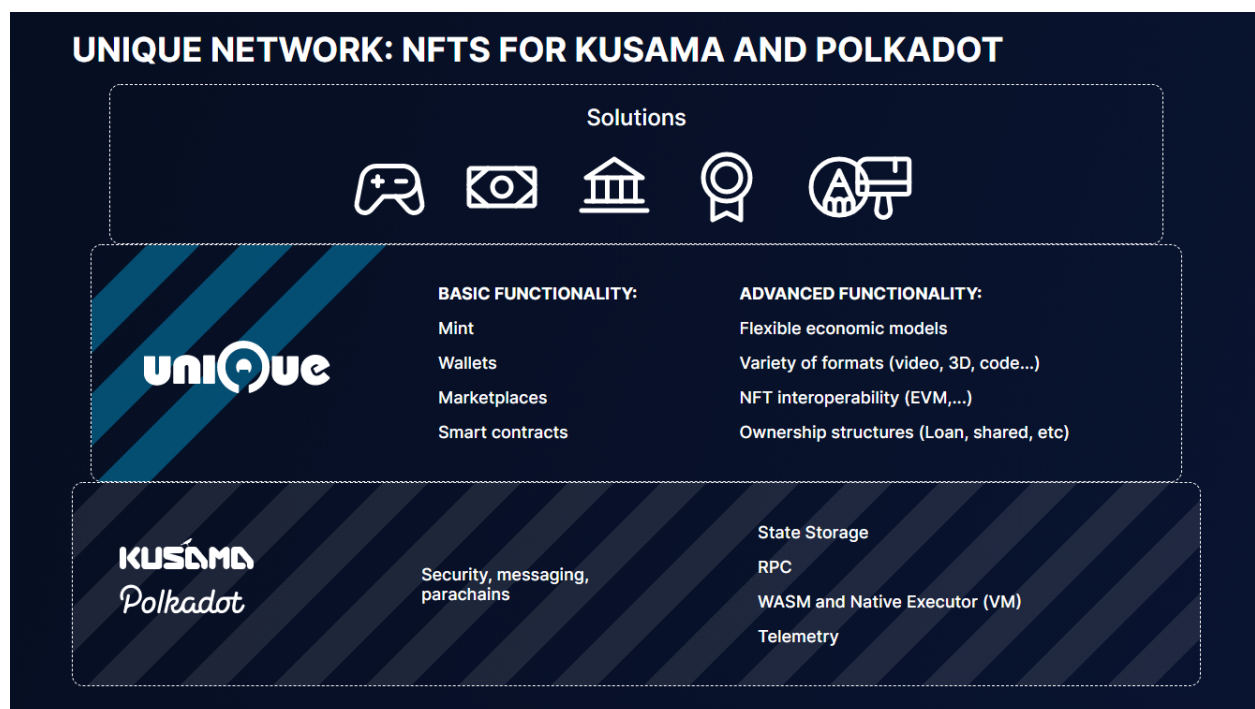
Unique Network is an infrastructure for the next generation of NFTs. As the first NFT chain for Kusama and Polkadot, it offers developers independence from network-wide transaction fees and upgrades. The Unique Network team built Substrapunks, the first NFTs on Polkadot, won Hackusama in 2020, and created Substrate's pallet for NFTs. Unique Network is launching in summer 2021.

SubstraPunks is a substrate based remake of CryptoPunks game, a classic game that inspired ERC-721 Ethereum standard. The first NFT game to go live in the Substrate



ecosystem, Substrapunks are a tribute to Cryptopunks, the early NFT game built on Ethereum prior to ERC721 existed. They are to be a symbol of the power of NFTs on Substrate. They demonstrated freemium gaming, introduced by Unique Network, where transfers of NFTs are sponsored by the game creator and no Unique tokens are needed for users to buy, use or sell them.

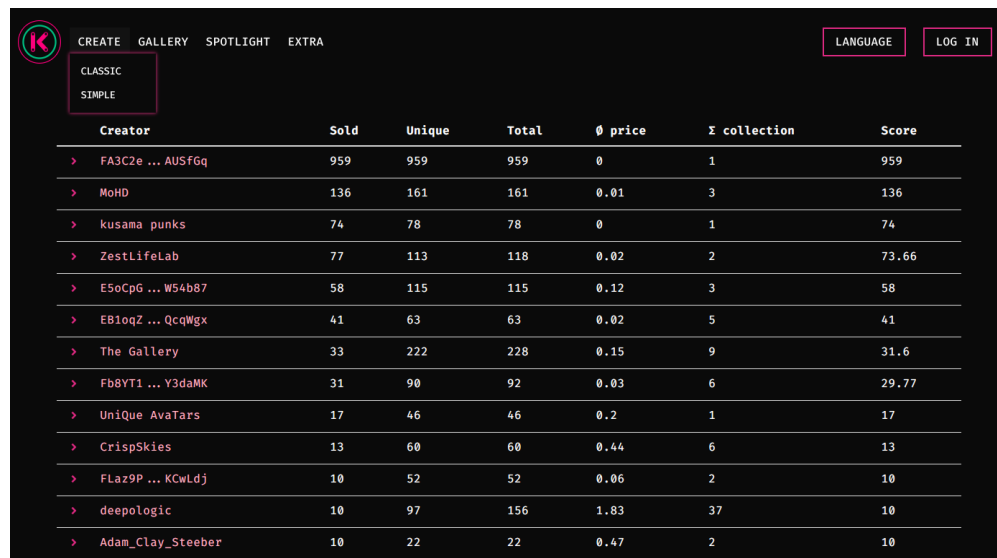
In addition, the Unique Network team is actively developing a variety of products and solutions such as NFT issuance platform, wallet, market place, etc. Working actively with Kusama, Polkadot, and RMRK teams, Polkadot Ecosystem is working to expand Polkadot's NFT ecosystem.



# KodaDot

Kodadot is an NFT explorer and marketplace available on Kusama's blockchain that uses the RMRK protocol to manage and create nfts. Due to Kusama's limitations regarding smart contracts, the on-chain RMRK protocol ensures that information can be added as if it was noted, taking advantage of the extrinsic system present in the Polkadot ecosystem.

KodaDot is an easy-to-use NFT platform and anyone can easily create, buy, and sell NFTs on KodaDot platform. Recently, KodaDot focuses on a low carbon blockchain and supports the carbonless NFT movement, ensuring that the platform can contribute sustainably.

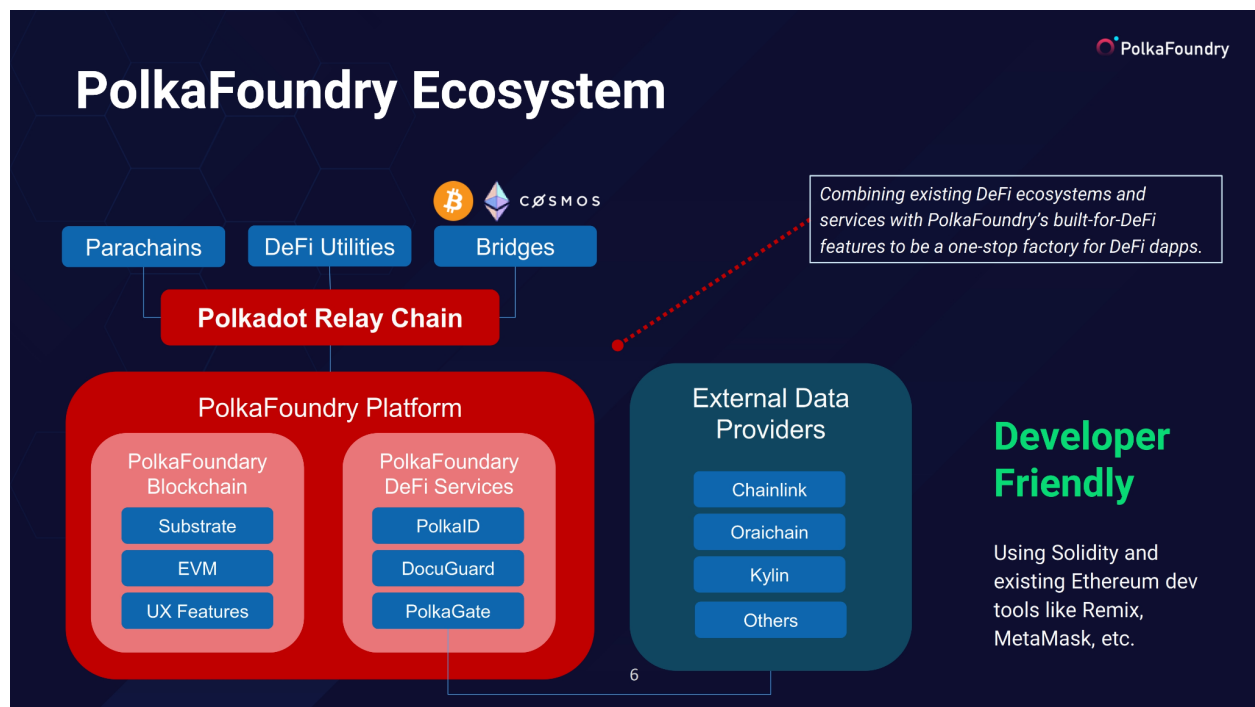


The screenshot shows the KodaDot website interface. At the top, there is a navigation bar with the KodaDot logo (a stylized 'K' in a circle) and links for CREATE, GALLERY, SPOTLIGHT, and EXTRA. On the right side of the navigation bar, there are buttons for LANGUAGE and LOG IN. Below the navigation bar, there is a dropdown menu with options CLASSIC and SIMPLE. The main content area displays a table of NFT creators and their statistics.

Creator	Sold	Unique	Total	Ø price	Σ collection	Score
> FA3C2e ... AUSFGq	959	959	959	0	1	959
> MoHD	136	161	161	0.01	3	136
> kusama punks	74	78	78	0	1	74
> ZestLifeLab	77	113	118	0.02	2	73.66
> E5oCpG ... W54b87	58	115	115	0.12	3	58
> EB1oq2 ... QcqWgx	41	63	63	0.02	5	41
> The Gallery	33	222	228	0.15	9	31.6
> Fb8YT1 ... Y3daMK	31	90	92	0.03	6	29.77
> UniQue AvaTars	17	46	46	0.2	1	17
> CrispSkies	13	60	60	0.44	6	13
> FLaz9P ... KCwLdj	10	52	52	0.06	2	10
> deepologic	10	97	156	1.83	37	10
> Adam_Clay_Steeber	10	22	22	0.47	2	10

## Polkafoundry

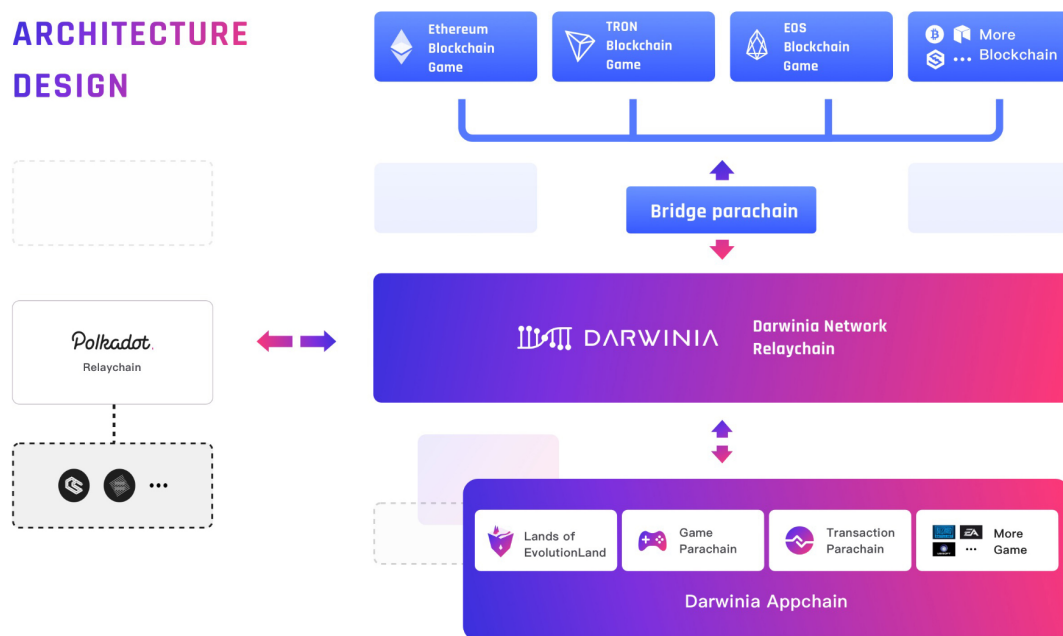
PolkaFoundry is a one-stop dApp factory providing interoperability with DeFi and Web 3.0 ecosystems by leveraging the Polkadot multi-chain blockchain. PolkaFoundry is mainly focused on DeFi products, however, recently announced its partnership with NETify to build NFT stores and marketplaces. PolkaFoundry's user-centric features will make it easier to exploit more opportunities to cross-sell NFTs across various platforms and markets at low transaction fees. By using PolkaFoundry's NFT stores with the tools to create unparalleled e-commerce experiences, users can customize their e-commerce shops through a wide choice of designs and features and easily scale as they grow.



# Darwinia

Darwinia Network is a decentralized cross-chain bridge network building on Substrate, which is the "Golden Gate Bridge" of the cross-chain ecology. It provides the safest general bridge solution, connecting Polkadot, Ethereum, TRON and other heterogeneous chains by cross-chain assets transfer and general remote chain call. Also, its main application areas include Defi, cross-chain NFT trading market, games, etc.






## ARCHITECTURE DESIGN



# PolkaRare


PolkaRARE is a web3 economy that allows any user or a brand to create, trade, and discover NFTs. By leveraging NFT's provable scarcity, transferability, and Polkarare's offerings, Polkarare aims to unlock the maximum potential of NFTs. PolkaRare is a multi-chain NFT project and is currently powered by PolkaDot, Polygon, Ethereum, & Binance Smart Chain and this leads PolkaRare's major features to focus on multi-chain NFT solutions.

- **Multichain NFT marketplace:** Interoperable cross chain NFT marketplace with social features, gasless transactions and 3d art gallery.
- **NFT Wallet:** Multichain wallet to store NFTs and digital assets Collections Rare NFT drops which includes licenced art, music and sports cards
- **NFT COLLATERALIZED LOANS:** Put your NFT assets up as collateral for a loan, or offer loans to other users on their non-fungible tokens.
- **Unlockable content:** Store private files that will not be previewed openly but only unlocked for the current owner. NFT price discoverability protocol Price discovery models that determines the realistic value of your NFT's

	 POLKARARE	 OpenSea	 Nifty Gateway	 Rarible	 makersplace
Low Network Fees	✓	✗	✗	✗	✗
NFT Creation	✓	✗	✓	✓	✓
NFT Trading	✓				
Multi-Token Support	✓	✗	✗	✓	✓
Support Licensed Content drops	✓	✗	✓	✗	✗
Community Rewards	✓	✗	✗	✓	✗
Price discoverability	✓	✗	✗	✗	✗


# Polkamon

Polkamon are exquisitely animated digital collectibles created using blockchain technology. Each Polkamon is backed by a truly unique NFT that is indistinguishable from any other NFT and can be unpacked with PMON tokens. Each collectible is inimitable, authentic and differs in rarity. The Polkamon NFT collection can easily be integrated into modern games, art and other blockchain connected products.




### Ultra-Rare NFTs

**Status: Completed**  
Supercharge your collection by unpacking \$PMON tokens to reveal ultra-rare Polychain Monsters.




### High-Liquidity Token

**Status: Development**  
The \$PMON token adds unmatched liquidity to the project by providing a two-way swapping mechanism between the NFT and \$PMON.




### Hyper-Deflationary

**Status: Completed**  
Each swap & reverse swap burns \$PMON, ensuring a continued increase in scarcity of your NFTs.



### Staking

**Status: Completed**  
Stake \$PMON to receive additional \$PMON rewards for every swap between \$PMON & Polychain Monsters.



### Cross-Chain

**Status: Development**  
Get Polychain Monsters with \$PMON on Binance Smart Chain, Ethereum and various other blockchains to discover extraordinary ultra-rare Polychain Monsters, unique to the network.

## Comparisons

Project	Token	Category	Usage	Market Cap.	Website	Github
Enjin	ENJ	Standard, Platform	games, apps, enterprises	\$1.1B	<a href="https://enjin.io/">https://enjin.io/</a>	<a href="https://github.com/enjin">https://github.com/enjin</a>
RMRK	RMRK	Standard, Platform	general purpose	N/A	<a href="https://rmrk.app/">https://rmrk.app/</a>	<a href="https://github.com/rmrk-team">https://github.com/rmrk-team</a>
Unique Network	N/A	Platform	mint, wallets, marketplaces, game	N/A	<a href="https://unique.network/">https://unique.network/</a>	<a href="https://github.com/usetech-llc">https://github.com/usetech-llc</a>
KodaDot	N/A	Explorer	Explorer, gallery	N/A	<a href="https://kodadot.xyz/">https://kodadot.xyz/</a>	<a href="https://github.com/kodadot">https://github.com/kodadot</a>
Polkafoundry	PKF	Platform, dApp Factory	Market places, NFT stores	\$7.2M	<a href="https://polkafoundry.com/">https://polkafoundry.com/</a>	<a href="https://github.com/polkafoundry/">https://github.com/polkafoundry/</a>
Darwinia	RING	Platform	Multi-chain assets	\$34M	<a href="https://darwinia.network/">https://darwinia.network/</a>	<a href="https://github.com/darwinia-network/darwinia">https://github.com/darwinia-network/darwinia</a>
PolkaRare	PRARE	Platform	Multi-chain wallets, marketplaces	\$1.6M	<a href="https://polkarare.com/">https://polkarare.com/</a>	N/A
Polkamon	PMON	Collection		N/A	<a href="https://polkamon.com/">https://polkamon.com/</a>	<a href="https://github.com/polkamon">https://github.com/polkamon</a>

## Discussion and Conclusion

This paper investigates and summarizes major NFT projects that exist in the Polkadot ecosystem. In summary, a decent number of NFT projects are actively developing, and their businesses are also progressing smoothly. However, small projects started during the NFT Hype in early 2021 do not show meaningful progress on their business and development roadmap.

Therefore, in order to further revitalize Polkadot NFT projects in the future, more opportunities must be created for the relevant NFT teams to communicate and cooperate with each other. In particular, the entire Polkadot NFT ecosystem can be healthier by creating synergy between NFT projects that are led by each category's leading projects followed by other small and medium-sized projects.

The current Polkadot NFT Element Channel\* is a good example. In the future, we hope to have an opportunity to officially create Polkadot NFT groups to further discuss NFT-related standards, roadmap, and development issues.

\*Polkadot NFT Element channel:

[https://app.element.io/?pk\\_vid=fc86dda224ad82a51621375022375818#/room/!WGpXvVOcMAhwULqyvi:matrix.parity.io](https://app.element.io/?pk_vid=fc86dda224ad82a51621375022375818#/room/!WGpXvVOcMAhwULqyvi:matrix.parity.io)



# Frequently Asked Questions

## Why decentralization?

The call for a decentralized “free market” has been growing louder as we begin to realize the strengths of such a system. It isn’t until now that conceptualization has been able to join with innovative technology to create a model that is global, scalable, able to withstand complexity and change, and highly resistant to fraud. Splyt Core is the first and only entity of its kind.

The power in decentralization comes in multiple parts. First, with the right mechanics, many different processes can be automated. Not only does this include tedious manual tasks, but even person to person communication can be avoided by relying on the functions of the system instead. Second, attention and resources aren’t pooled in one area, creating oligopolistic entities that can censor individuals and dictate terms. Finally, new rules and system updates can be decided by consensus, ensuring that only the most efficient protocols are implemented, unmotivated by personal gain.

## Why nonprofit?

The nonprofit, non-stock corporate entity model is well suited to avoid influences that may corrupt its mission of serving token-holders and users through a decentralized protocol. For-profit entities favor maximizing profits, which are not aligned with users and customers, society, or even useful products’ survival. Concepts like profit maximization, executive fiduciary duties, and pressures from forces like hostile takeovers can promote informational asymmetry, aggressive exploitation of steep bargaining leverage,

oligopolistic markets, and psychological manipulation of users and customers through advertising. If true decentralization of control for the benefit of customers is the goal, a profit orientation simply is not the most aligned model for success.

Is Splyt Core a marketplace?

Splyt Core is not a market place. It is a marketplace of marketplaces. Think of Splyt as the TCP/eNFT: the conceptual model and set of communications protocols used in e-commerce. It is a self-enforced system that streamlines tasks and resources within the e-commerce industry. Markets can either plug into the Splyt platform or can start fresh within it.

Why blockchain?

Blockchain is currently the only way to create a platform that is decentralized and immune to data corruption and system-wide hacks. It's not enough to create a fair and equitable economy on theory alone. It's possible to imagine and plan such a concept, but the only way to have it work as intended is for the technology and machinery to be functionally decentralized.

Are eNFT's corruptible? Can someone screenshot my art and steal it?

eNFT's are only as fallible as the blockchain itself, and blockchain is as secure as it gets. eNFT's are stored on the blockchain.

Further, a copy of a piece of digital art could possibly be resold, but without the authentic, verified eNFT to match, no serious buyer will consider it to be a genuine copy. Unverified copies of artwork will have no resale value, so it isn't a serious concern.

What sets Splyt apart from similar projects from the past and present?

Most other companies have been building tech with the expectation that users will completely abandon the current system in favor of their own. But even a flawless, revolutionary platform will never be adopted if users are expected to drop everything and jump ship at the same time. Also, large companies have little incentive to bleed profit during the transition while they're already at the top of their own ecosystem.

Splyt offers a Plug and Play option that is crucial towards bringing this tech to the mass market. Large companies won't face the inefficiencies of a massive change in protocol, but will also be able to keep up with and accommodate the changing landscape.

Why now?

Timing is crucial, and we need to move before this window of opportunity narrows.

On the surface, the US only officially recognized cryptocurrency in 2020. It's as legitimate as it has ever been. More importantly, blockchain technology itself has only recently advanced to the point where it is viable and scalable enough to accommodate widespread adoption.

Upon closer observation, it is clear to see that everyone is now online as a result of Covid. Not only that, but the free time we have been given, along with the increase in

e-commerce, has dramatically increased the awareness around business transparency and the implications of online marketing. Retail giants have cornered the market and are now taking advantage of their position. The public is hungry for solutions.