

# HOW TO NFT?

Chapter 4: NFT Universe

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SEPARATE SIGNALS FROM NOISE

**NAVIGATE THE NFT MARKETS WITH CONFIDENCE**

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NonFungible.com

# FOREWORDS

Arriving in the world of NFTs, very quickly we realize that the technical aspect can be a blocking barrier of entry.

Many questions emerge how "how to get my first NFT?" or "what is a wallet?" and it is for this reason that we wanted to share with you this series of theoretical guide on the fundamentals to know about cryptocurrencies, blockchain, tokens or methods to know how to analyze market trends.

We hope that in this way, access to the crypto universe and more particularly that of Non-Fungible Tokens will be easier for you and will allow you to approach this ecosystem without fear.

Initially intended to be a single manual divided into several chapters, we preferred to divide each chapter into separate manuals. Although we recommend starting with the first volume and reading them in order, this way it will be easier for more experienced users to look for more accurate information.

The following is the order in which the chapters were written:

- 1) Basic Knowledge
- 2) Actions
- 3) Buying and selling NFT
- 4) NFT Universe
- 5) Analytics
- 6) DeFi x NFT

We wish you a pleasant reading,

*The NonFungible Team*



# SUMMARY

<b>Forewords</b>	2
<b>1 Metaverses</b>	5
<b>2 Lands</b>	11
<b>3 Wearables</b>	13
<b>4 Art</b>	17
<b>5 Governance Token</b>	20
<b>6 Blockchain and Crypto Gaming</b>	26



# YOUR GO-TO SOURCE TO NAVIGATE THE NFT MARKET SECURELY

Since the start of 2018, NonFungible.com has been the benchmark for NFT Market Analysis and the only platform to offer real-time tracking of nearly 150 projects.

## Explore market and discover projects

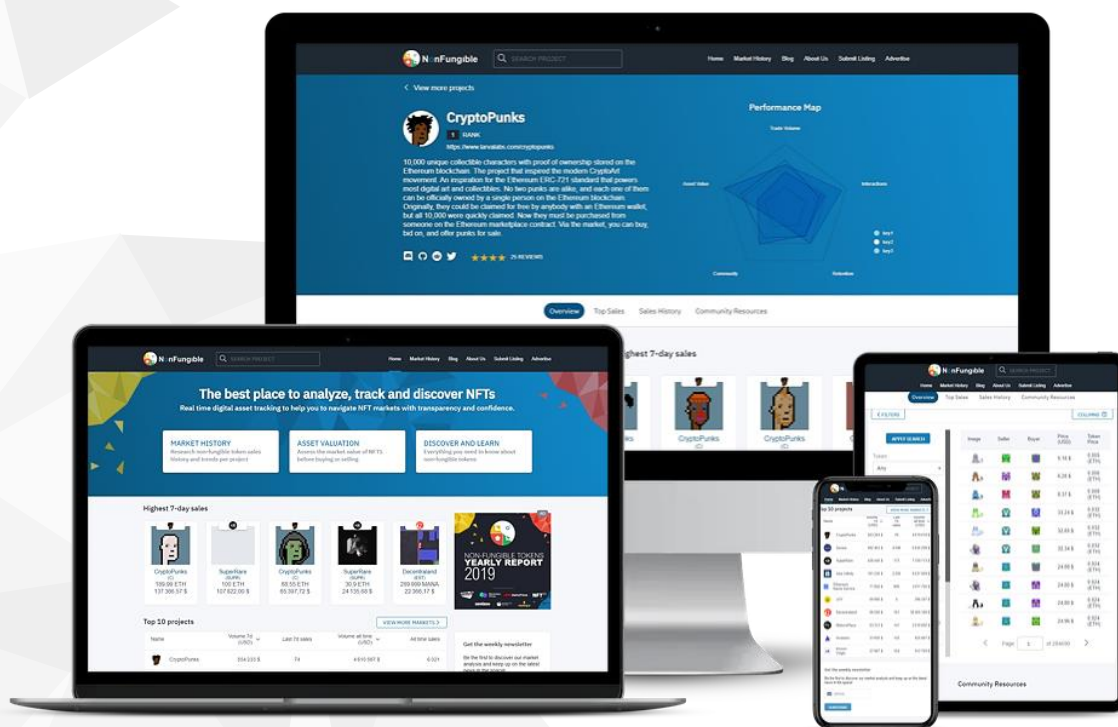
Do you want to understand the trends? Which segment performs best or projects that generate the most volume or even which Crypto-game has the biggest community?

Whether you are an experienced trader or just curious to discover new projects, here you will find all the resources necessary to enjoy your NFT journey!

## Value your assets!

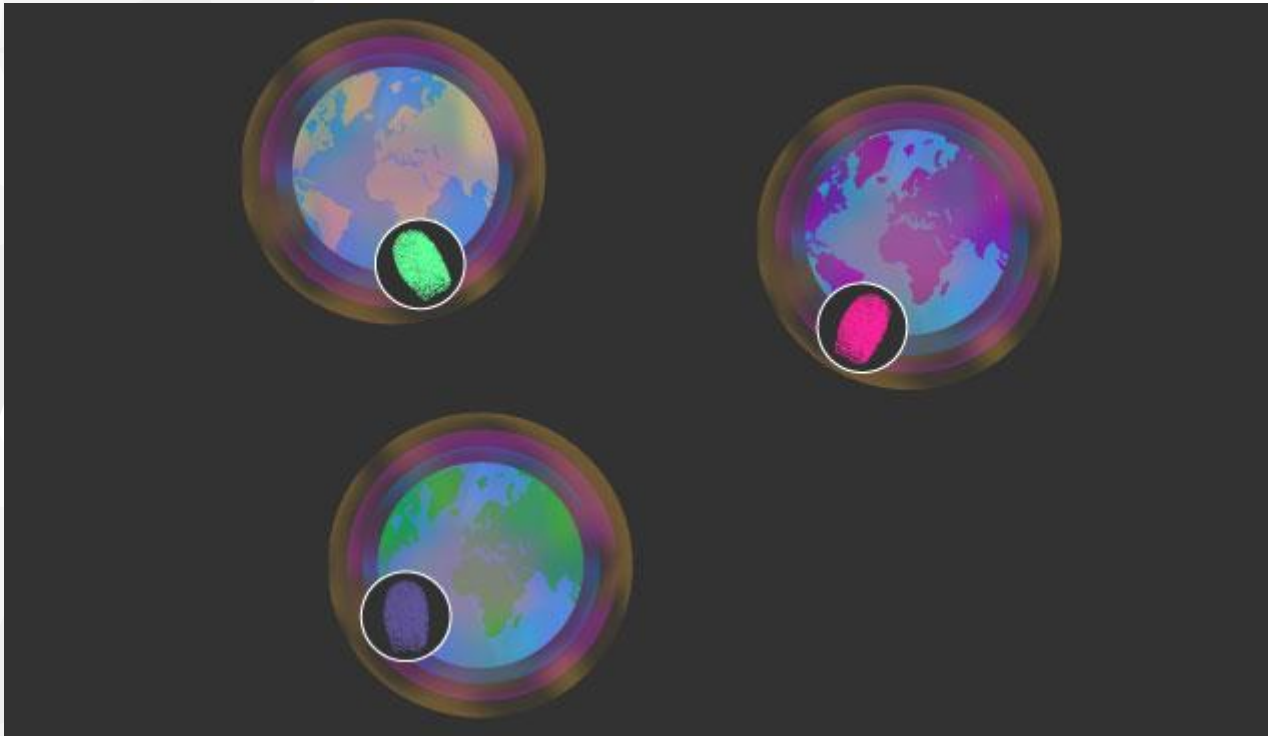
With real-time sales tracking, you can track the rating of any asset, find the average price of tokens comparable to those in your portfolio, or easily research before buying your next Collectible.

Don't be fooled by over-speculation, buy knowingly thanks to the market history of NonFungible.com



# 1 METAVERSES





The idea of humans having deep experiences that engage our consciousness is older than our current technological age. Wished for by some and feared by others, the concept of having a parallel digital existence has been on the mind of many for decades, but how and when it would manifest would be another matter.

Computer based Virtual Worlds have been built since the technology has allowed and Virtual Worlds with their own economies are not a new concept, as the digital age matured so too have the Worlds and in this age of decentralization secured by cryptography new ecosystems of Metaverses are evolving.



## VR and Gaming

The development of the Gaming World has always been closely tied to the development of Virtual Worlds and this symbiotic relationship has been intertwined ever since the 1970's where the origins of today's massively multiplayer online role-playing games were born more commonly known as MMORPG. The internet offered a connectivity not before encountered and early text based online games that were originally known as Multi-User Dungeon or MUD thrived.

### Centralised VR Worlds

There are many virtual worlds, [VRChat](#), [Verbella](#) and others each with their own flavor and user base, [Verbella](#) is centered around friendly spaces to attend conferences, meetings and lectures, whereas in VRChat you are more likely to have a rave!

Some worlds can be viewed in VR and others are web based and since the revolving global lockdowns, interest in socialising in virtual spaces has increased. Virtual worlds and economies are not new as with [Second Life](#), which launched in 2003 and is the largest virtual world built by thousands of creators from around the world and millions of virtual items are being sold on their marketplace.

Even Second Lives' thriving economy has its limitations and like all virtual economies whether functioning within a game or in a virtual world marketplace, discovering a system that is fair, transparent and has verifiable traceable ownership has been out of reach.

### Virtual Financial Reality

VR Worlds that are not blockchain based, ultimately all face similar issues around the true ownership of digital goods and of the Worlds themselves as they are run by companies on centralised servers which have their own vulnerabilities and imposable rules.

One of the problems within both gaming and Virtual World ecosystems has been the difficulty of integrating real world systems in a complementary way into the virtual ones. Monetization is just one aspect of this as there is also cross platform interoperability to consider and that doesn't just mean being able to sell your digital assets across all marketplaces but also for example, to be able to allow your avatar to move through different Worlds.



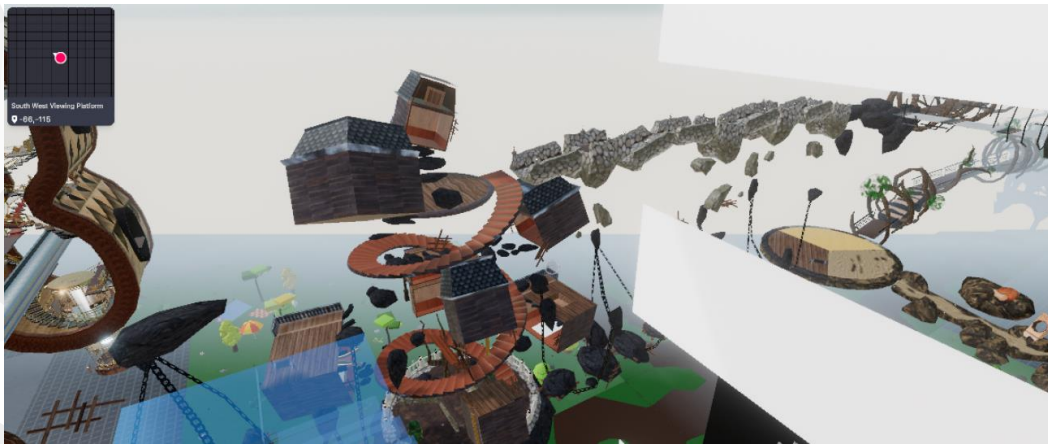
# THE METAVERSES

Blockchain Worlds, otherwise known as Metaverses are digital worlds that run on a decentralised blockchain system. The Worlds have mostly been deployed on Ethereum as dApps.

The Movie remake of the book [Ready Player One](#) by [Ernest Cline](#)

The creation of LAND NFTs held on-chain was an innovation which sparked a digital revolution. Of course VR Worlds have been, and still are, created in many different versions but it was the arrival of the Blockchain and the expansive possibilities it offered that the potential to have real world integration was in sight.

## Decentraland



The Originator of Blockchain Worlds based on the Ethereum.

These various Worlds have flourished since Decentraland's ICO in 2017. The book and subsequent movie Ready Player One was influential at the time and the VR industry was pushing forwards with lower priced entry hardware, Crypto was at an ATH and Decentraland attracted over 25 Million in its initial crowdsale in 2017.





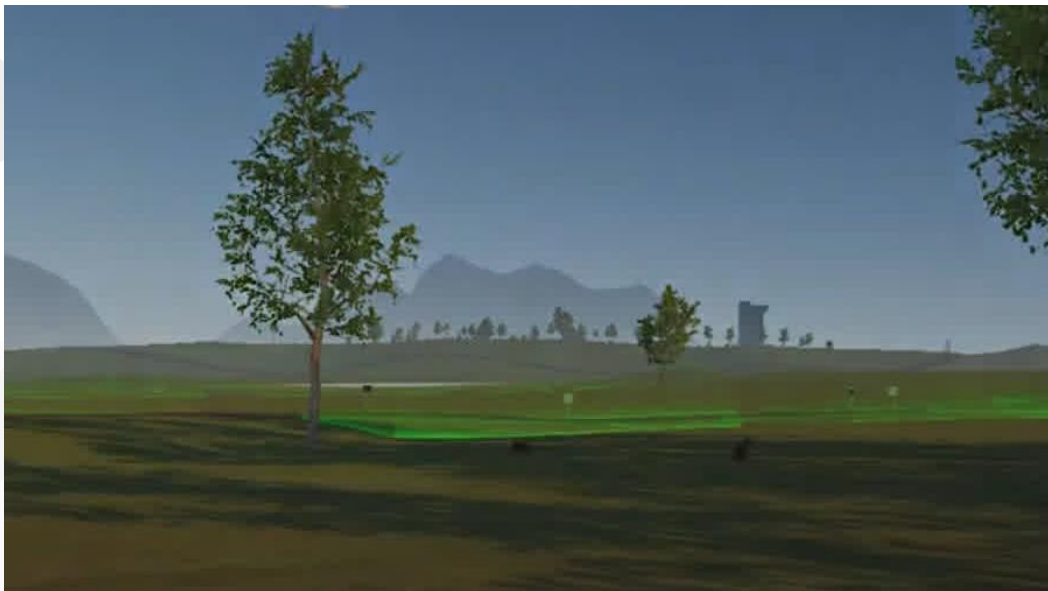
## CryptoVoxels



Launched in 2018, CryptoVoxels quickly became the haunt of all artists in the crypto-sphere. Developed by a small but very passionate team, the possibilities for customizing the desired decor in the LAND are much more permissive than Decentraland!

The graphic style is completely in voxel (like Minecraft) but the game is accessible directly from the web browser of his computer.

## Somnium Space



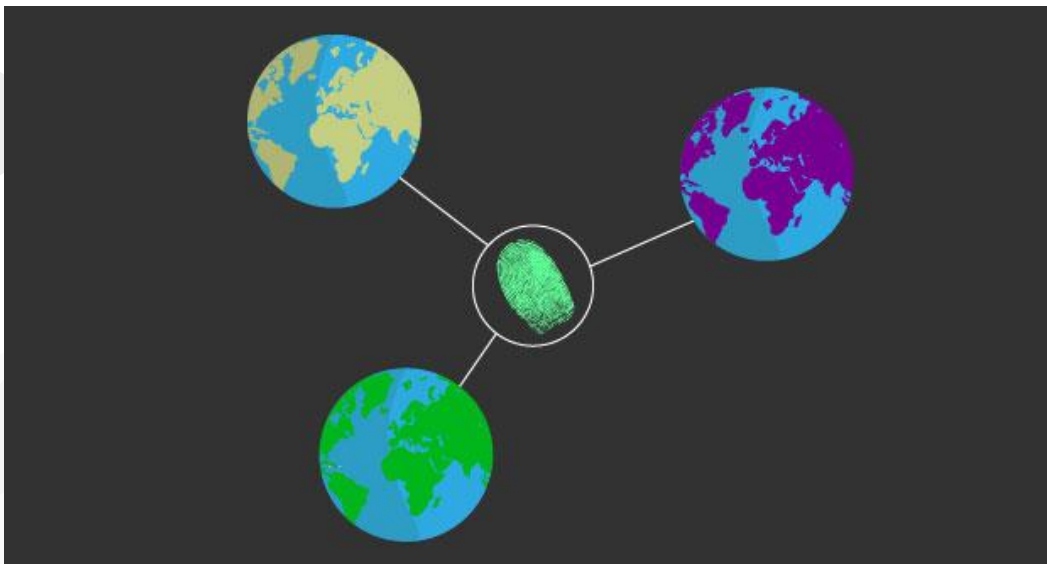
Somnium Space aims above all to create a metaverse focused on Virtual Reality. The total experience can therefore be experienced directly with VR glasses, but it is also possible to access the world of Somnium Space via a browser or an application to install.

## The Sandbox



One of a kind, The Sandbox is a metaverse where you can create video games inside each LAND! The rewards obtainable in the games are in \$ SAND, the in-game token that also serves the overall economy of the ecosystem.

## Interoperability



One of the biggest challenges for metaverses is interoperability with other NFT projects. Indeed, as each NFT has its own smart contract, interactions between multiverses are not always easy to do.

While Decentraland is essentially working on the implementation of other NFTs within its builder to be able to display them publicly on LANDS, CryptoVoxels allows free image uploading which allows all artists to link their artistic works directly to the URL of the desired sales platform.

Another development will be the interoperability of NFTs between several blockchains: Because they do not all meet the same standard, to our knowledge there is no NFT that is interoperable between multiple blockchains.

# 2 LANDS

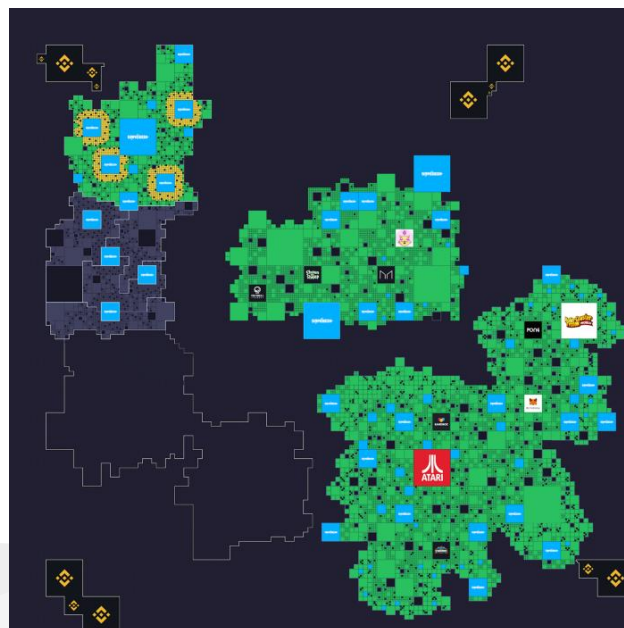


Digital LAND is at the core of any blockchain metaverse, making it possible to trade, loan, rent, develop and build on LAND which is verifiably yours, unique and decentralised, LAND is what constitutes the fabric of blockchain worlds.

The first blockchain based world was Decentraland, their ICO ran at the end of 2017, raising over \$26 Million. Held on the Ethereum Blockchain, Decentraland was the first to create NFT LAND in the form of ERC721 tokens, and they held a digital land auction or 'Terraform Event' during the end of 2017 where you could purchase LAND with their utility token MANA, a ERC20 token.

By the Summer of 2018, Crypto Voxels had issued their own ERC721 Non Fungible LAND token representing a voxel based digital world, where it was a priority to create an environment allowing anyone with any skill ability to easily participate and create.

Since then there have been other Blockchain based worlds which have been created and have issued LAND, some are more VR social orientated worlds with gamified elements, others are out and out games. Somnium Space, The Sandbox, Axie infinity and new projects like Alien Worlds are just examples of the growing number of projects using NFTS as vehicles for their LAND issuance and economies.



LANDS scarcity and uniqueness, combined with its traceability and decentralized nature creates a valuable asset. The potential from owning LAND is more than just digital ownership but also opens the door to a whole host of other opportunities such as the ability to monetize LAND, for instance creators and businesses can sell their own work from a gallery or store from LAND they own and many other possibilities akin to real world ownership and opportunities.

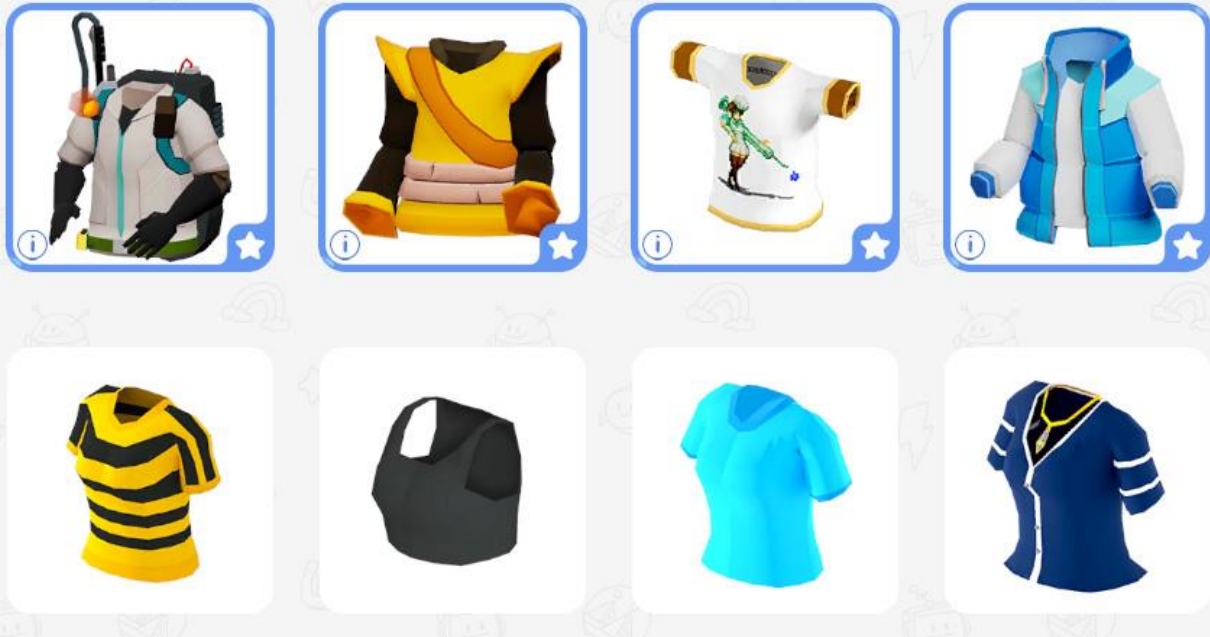
LAND acts as any other ERC721 token does in the way it can be traded on digital marketplaces such as Openasea. Each piece of LAND represents a plot or area within a world, these plots can be grouped together to create larger estates and populated with one larger project, business or game.



# 3 WEARABLES



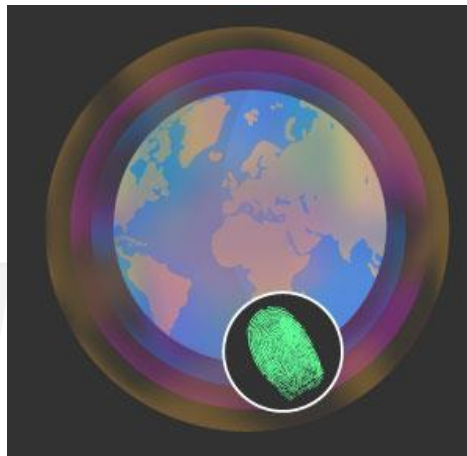




These are basically token backed in-game skins, these NFT clothes and accessories can be traded on digital marketplaces such as OpenSea and 'worn' by your avatar in the Metaverse. During 2020 wearables have been mainly tied to individual worlds, but cross platform interoperability is being explored and will surely be a future development.

As things stand wearables are a growing part of the NFT sector with a good ratio between Primary and Secondary Markets sales attracting investors and collectors alike.

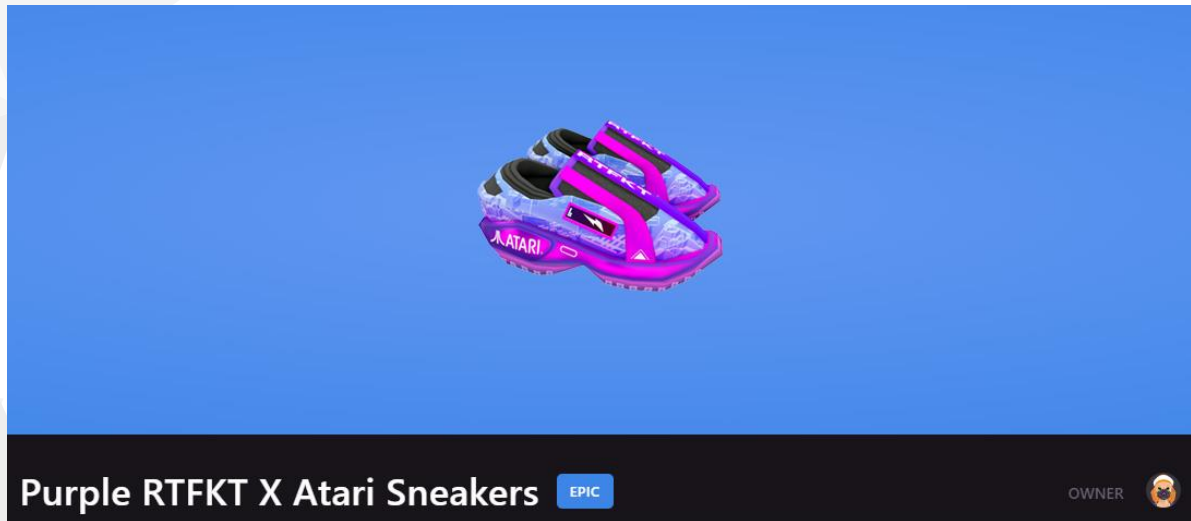
### In Metaverses



Various Blockchain Metaverses have explored different ways to create and monetize the sale of wearables, for instance CryptoVoxles is a voxel-based world and users can create and mint their own wearables with relative simplicity. In regard to the CV Wearables Market it is packed with every kind of wearable style and quality you can imagine with relatively low prices obtained for most except for the work of the most well known and desirable creators.

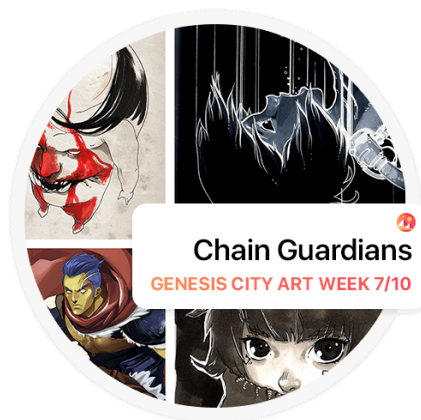
Whereas in Decentraland the process of making wearables requires a high level of technical skill, the ability to deploy wearables in Decentraland has so far only been licensed to knowledgeable community members and most recently, those whose designs were voted for via the Decentraland DAO Community voting system.

## Status



Wearables represent a personal status when they are worn in world and visible in your wallet to other users and it isn't just the most expensive outfit that counts, The standout looks and styles that individuals create from a combination of wearables gains as much respect, if not more, than an avatar wearing a full pre bought outfit even if it is a super rare and expensive set.

## Events



Attending an event in a Blockchain based Metaverse may sound unusual but in practice it is often a heartfield and connecting experience and wearables play a big role in adding personality and individuality to your avatar.

Not only this but one of the attractions to attending an event is in the digital swag you can often pick up for the price of just gas. Many launch events have a certain amount of t shirts available to claim for every wallet/user that attends.



## Utility

Apart from the psychological meaning to their user, wearables also serve a practical purpose in in world, granting the wearer access to special events and VIP areas, in essence acting as a kind of digital 'pass'.

Many wearables also add to an individual games experience, granting the wearer a % bonus for each wearable from the games developers that you wear. These wearables can also be won in the games competitions and either worn to gain a % in game bonus or sold on a decentralised peer to peer marketplace.

This is one aspect of exploring various Play to Earn scenarios where your time and skills can be monetized through playing a game.





# 4 ART

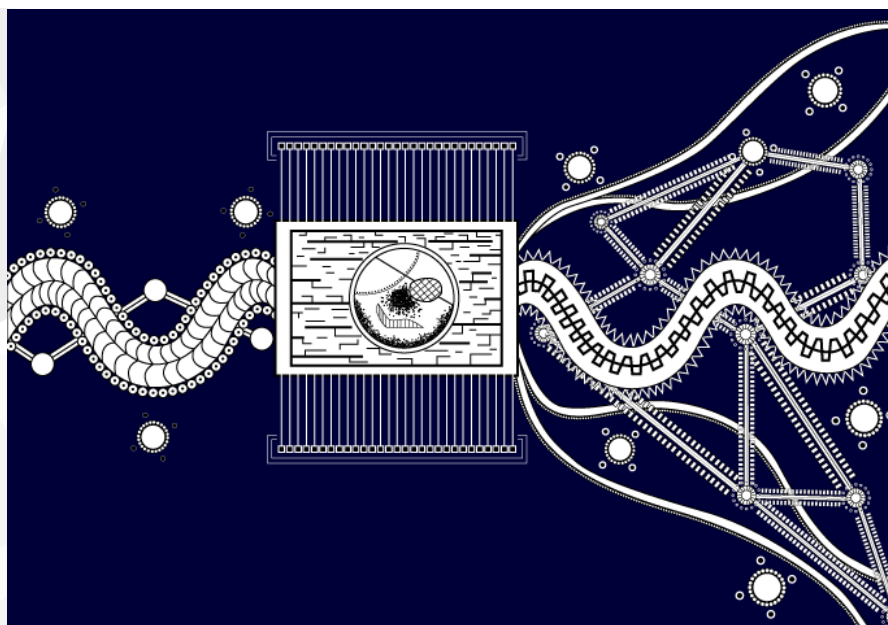




The issue of verifiable provenance and authenticity have been long standing problems within the Art World, also matters of copyright and ownership have been traditionally difficult for both creators and distributors both to uphold and prove.

Using Blockchain technology immutability for creators to protect and track their work have been explored over the years in relation to solving these issues with particular Blockchains being created for this very purpose such as Po.et, but it wasn't until the rise of NFTs that a true solution was insight.

Nonfungible tokens have incited a crypto art revolution, enabling artists and creatives to build their own careers in a decentralised space with no middle man, true authenticity, traceable origin and ownership history. Not only this but the metadata of NFTs enable the creation of truly unique rare digital art works.



Digital Art in itself is not a new concept and has been a maturing part of the multiple Billion dollar Arts Market since technology has allowed. The term Digital Art was first used in the early 1980s when a team of computer engineers created a program named AARON to 'paint' for the pioneering A.I. artist Harold Cohen. Since this time, as the technology developed, innovations at the intersection of computer assisted art and traditional methods have evolved.

Not always the case but one of the issues with establishing a value for digital creations has been the lack of the works physical presence, a video installation or a file holding an artwork can be easily reproduced and redistributed, maintaining copyright and validating rightful ownership are all issues solved by the minting of your works on a Blockchain.

Pioneered by the LavaLabs team, Crypto Punks forged the way for Art on the Blockchain. A set of 10,000 ERC-20 tokens were produced, each an individual AI pixel character which were offered free to claimants. Some Punks are rarer than others with each having an individual set of metadata attributes, some more common than others. That was back in 2017 a market and community quickly developed around them and by 2021 CryptoPunks had reached iconic heights of both monetary value and status as digital antiques of the future.



Since these beginnings the minting of art works as NFTs on the Blockchain has become extremely popular with many different decentralised Marketplaces formulating. Here creators can either 'mint' their own works such as on Mintbase or on platforms where the artist is pre-vetted, such as on Known Origin, helping to promote the artist and giving them added legitimacy.

The future looks bright for Art backed by a nonfungible token system, with many already established digital and traditional artists finding a new home in the decentralised system of Crypto Art.

There are some controversial aspects to putting Art on the blockchain regarding the image and the meta and where it is held, there are some methods that hold more information on chain than others, purely on chain is completely immutable but with Ethereum's gas prices so high it can be very expensive to pay for the transaction to mint. Other legitimate solutions involve an Ipfs bucket held on a centralised server where files are held with only certain meta held on chain. The purists are firm in their belief in things being as on chain as possible whereas many simply don't understand the difference and only see the reduced cost for off chain hosting.



# 5 GOVERNANCE TOKENS



Governance tokens are cryptocurrencies that offer holders a direct stake in the tokens native DeFi platform, Governance tokens are generally integrated with DeFi projects and can be earned through participation in the platform.

Growing in popularity in the Crypto financial economy, Governance Tokens not only give users a direct stake in managing DeFi platforms but also the way they are often distributed as rewards means that the platform's community is consolidated.

## DeFi and Governance

Decentralised finance was one of the most fast-moving sectors in the Crypto space during 2020, accelerating well before the 2021 Bull run, with Billions locked into various DeFi platforms by the start of 2021. One of the central pillars of the DeFi ecosystem is the way in which projects go about distributing their native token. In this setup the token is 'earned' by participation with the project, there are a few ways an investor can earn a platforms' governance token.

This includes staking another currency to their platform, adding funds to the projects liquidity pool or by participating in the projects incentives for which you are rewarded,

As of yet Defi is not completely decentralised and Governance Tokens are a common part of DeFi projects, enabling them to gain a higher level of decentralization, many governance tokens enable investors to influence the protocols decisions.

Governance Tokens function as regular ERC20 (fungible) tokens issued on a suitable blockchain, invariably Ethereum, with their main difference being that the issuing platform has created purpose built applications for its use.

Below are outlined some of the most common elements:

### Voting/Governance

Tokens can be staked to the platform and the user can vote on certain parameters within it, influencing the projectors future direction.

### Rewards

Currently not all Defi governance tokens have a defined rewards structure and there are also many different types of structures. Examples of reward structures are types of stock buyback as with Maker where all interest earned on their stable coin DAI is used to purchase MKR on the open market and then 'burned' diminishing the overall supply and increasing its value. Curve on the other hand offers voting on which liquidity pool gets the most return to users who have staked.

### Airdrops

Some platforms have incentivized growth of their ecosystem by giving away or 'airdropping' a certain proportion of their native token to early supporters, foundation members or for example during events or meet-ups on discord or in a metaverse world like Decentraland or signing up early to their website.





## Buying

Governance Tokens can be bought directly on crypto exchanges and traded just like any other fungible ERC20 Crypto token but governance tokens also have a direct relationship with their native project.

## Earning governance tokens

Tokens can be earned through a number of different methods and there are many different new ideas being explored for their usage. Most common ways to earn is through staking tokens into the platforms liquidity pools or by participating in the platforms incentives.

## Staking

Staking is when a user delegates value to a platform, this can be in the form of adding their native token into a liquidity pool or as part of a liquidity pair or LP.

LP tokens can be created on platforms like Uniswap and Balancer where you stake equal amounts of two currencies like Eth and the governance token and you receive LP tokens in exchange, which you then stake back into the platform.

You can also stake earned tokens back onto the project once claimed.

## On-Chain

Where governance decisions are made through programmable interfaces on the blockchain, with the on chain governance model much of the process is automated for instance with votes being processed through validator nodes in the blockchain.

## Off-Chain

Off chain governance uses already existing compliance and regulatory mechanisms separately from a blockchain and incorporates the results on-chain. For instance certain compliance actions might be manually processed. It can make scaling an issue and also coordinating certain voting can be more complex with offchain instances.

## Summary

Unlike traditional centralised governing bodies and organisational structures, a project using a Governance token has a much more adaptable structure.

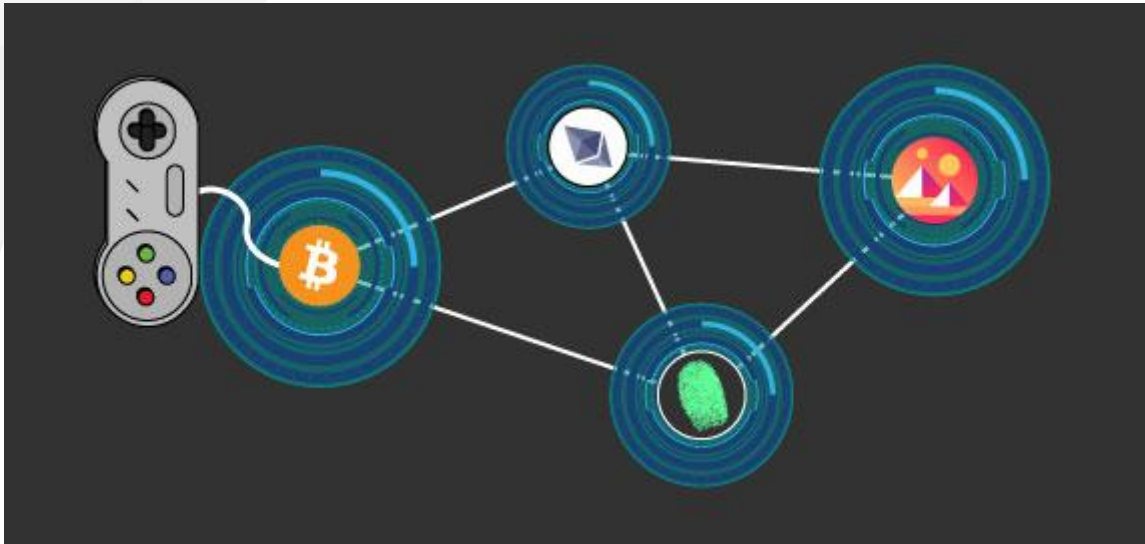
It goes without saying that as projects utilise Governance tokens and explore various methods of distribution and monetization in a phase of development and exploration, there have been projects which have failed, been corrupted or a scam.

Nevertheless the use cases for Governance tokens continues to grow and no doubt in the next few years we will discover what particular methods were the most successful.



# 6 **BLOCKCHAIN** AND CRYPTO GAMING





The traditional gaming industry is a behemoth with many estimating around 3 billion players during 2020. Multiplayer online gaming has exploded over the years as the technology developed and competitive gaming at a professional level, otherwise known as esports, is an extremely lucrative industry and people are spending more and more time gaming overall.

Although there is money to be made for both players and games studios, the current system of monetization is mainly based around sponsorships and funding from advertisers for the professional esports players and for an average player who hasn't got a huge YouTube or twitch following at best earning anything is down to luck, possibly winning tournaments that you pay to enter..of course there are some skills needed for certain gambling games, but gambling comes with its own hazards!

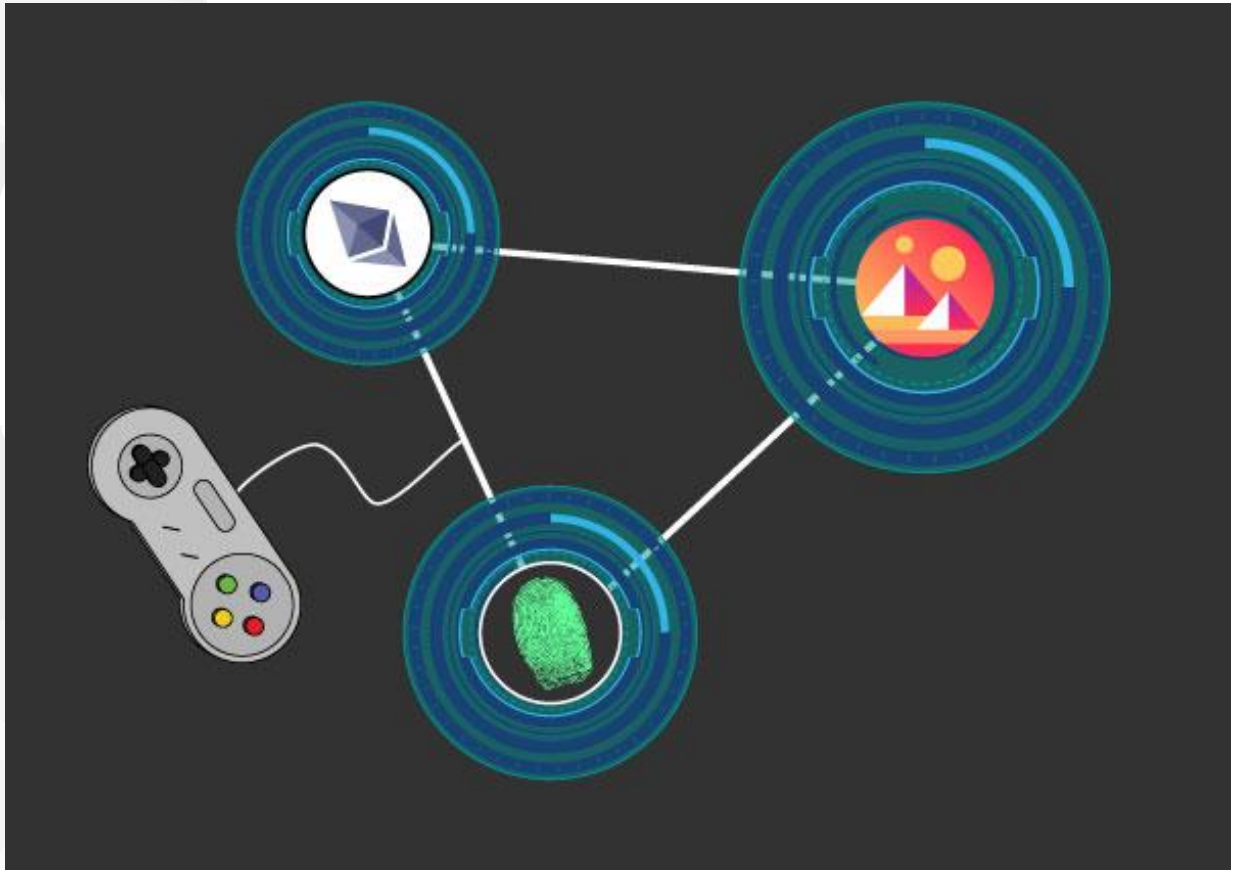
Virtual assets, skins, in game purchases are all commonplace within online multiplayer and other gaming ecosystems but generating real cash revenue for your time and skills spent in-game is another matter.

There is no doubt that economies have already established around games and their assets, players trade their hard earned virtual items peer to peer with other players for cash but there are downsides to this.

For example the majority of game studios prohibit resale and exchange of digital assets, also other players can associate it as cheating and buying your way in as opposed to earning it fairly. Also there is the lack of interoperability between the assets and any other platforms and the trust issue of buying direct from a stranger.







Blockchain Gaming has been heralded as the future of the Gaming industry but as is the same for all transitional shifts in an already established sector, the intersection between Blockchain and Gaming has taken a few years to develop and is still in its infancy.

With its trustless and decentralised nature, blockchain technology was explored in various ways in regards to gaming. During the 2017 ICO period when a Crypto Bull Market was in full force, many new blockchain based tokens were issued by teams. Quite a few projects were launched based around Gaming, the majority issued 'fungible' ERC20 tokens as with Wax on EOS or Funfair on Ethereum, notably Decentraland, held on Ethereum and the first blockchain based virtual world, issued both a fungible token, MANA (ERC20) their in-world currency and DAO voting system governance token and a non-fungible token, LAND (ERC721). The LAND token was unique and represented a 16x16 meter plot of virtual real estate.

Indeed it's hard not to mention virtual worlds when looking at the origins of NFTs in blockchain gaming, the communities of people that were drawn together within Decentraland and very soon after CryptoVoxels, (also held on the Ethereum Blockchain) likely added to the force behind the expansion of NFT projects within gaming. Either way, whether a projects team was inspired by virtual worlds or not, the proliferation of NFTs within Blockchain Gaming projects took firm hold with many various use cases explored.



As big business flows into NFT space, from finance to art and gaming we will likely also see a surge in use cases and each projects individual complexities.

Will Blockchain gamings use of nfts become a gamified virtual earning mechanism for the future? Will non-fungible tokens in gaming bring the fusion of all the different elements of a real world economy together in a cross platform virtual world? The foundations are built that is certain and it seems extremely probable!

The pros:

- Decentralization
- Transparency
- Security
- Control

The cons:

- UX
- Graphics and Performance
- Accessibility





The term "blockchain gaming" is used more and more, especially in a marketing context, to say that the game uses blockchain at a given time. Except that this name can be misleading in the sense that a player will expect a decentralized environment or assets present in the game that will belong to them completely.

In order to clearly differentiate the category of crypto and blockchain games, several elements can be taken into account:

The pros:

- Game fluidity
- Possibility of better graphics
- Immediate rewards

The cons:

- "not your keys, not your crypto."
- Earning dust
- Difficulty withdrawing earnings
- Centralized governance

You will understand, unlike blockchain gaming, crypto gaming aims above all at ease of use rather than decentralization at all costs! Having said that although we classify it as the "cons," earning crypto dust can sometimes be rather lucrative. There are for example some games today that allow you to win satoshis like Turbo 84 or Bitcoin Bounce ... which can be a method of staking sats like any other!

That said, this is pretty much the only cryptocurrency where we're sure winning isn't a waste of time, other games that offer to earn crypto in this way tend to fall for it instead. oversight.



Since the gaming industry began there have been various business models applied to their monetisation with massively multiplayer online gaming and smartphone technology only expanding these various business models further.

Historically, premium games have been relatively high cost to obtain a licensed copy, either in digital or physical form and over the past few years 'free to play' multiplayer games have grown in popularity.

A "pay to win" game model is one that locks the player in at some point in the game and forces them to pay to keep moving forward.

This term is also used when there is too much imbalance between the players, in particular due to access to paid content providing bonuses that are too high compared to what can be obtained by playing the game for free. The players who bought these items (very expensive most of the time) therefore have a strong advantage, especially in the context of PvP and to remain competitive, it therefore becomes mandatory to pay to win.

A declinaison of the "pay to win" is the "freemium" model. This has been seen a lot in mobile games where the first two weeks of play is extremely easy and then the difficulty increases dramatically at some point, forcing the player to checkout to improve their character.

Another concern has arisen in the world of video games over time, that of the not always random distribution of "lootboxes". The concept is simple: buy a box containing a randomly distributed mystery reward. The main criticism of this distribution system is that it approaches casino practices and this has been banned in some countries not for the "risky" side but because of the resale of the items in a secondary market.

'Play to Earn' is not that dissimilar to the 'Pay to Win' model in that the entrance to the game has no initial cost and games have some similar mechanics as 'Pay to Win'. The crucial difference is that 'Play to Earn' models function through blockchain technology which gives players true ownership of the digital assets they earn through participating in the game.

Excuse the pun, but 'Play to Earn' is a real game changer and the more you explore this model, the more exciting the possibilities become.

Participating in a 'Play to Earn' game rewards you for your time and skills, being a loyal user and ultimately winning, gives you real ownership of digital assets. This may not sound a particularly unusual set up until you discover that these rewards are non fungible tokens which you own, they are desirable and have currency value on digital marketplaces where they can be sold. In addition these reward NFTs commonly bestow on the holder in-game bonuses and access to special levels or rooms, making them even more valuable to users of the game and therefore also of increased monetary value.

Giving Gamers the ownership of digital assets not only benefits them but also brings value to the game itself by participating in the in game economy players create value for others players and the game developers for which they are rewarded.

Some can earn in game currency which is tradable in currency pairs on crypto exchanges, games such as Axie Infinity reward \$SLP for putting your cute Axie monsters into battle tournaments and winning and the \$SLP is also needed in game to 'breed' your Axies further utilising the in-game economy. A more complex example is Aavagochi, a game where digital pets can 'farm' and 'mine' digital assets and crypto which again can be sold on market places.

In the current world of multiplayer online gaming Pay to Win has become big bucks for Gaming companies but shelling out hard earned cash to gain advantage over your competitors has its issues.

For instance a dedicated players' time and energy is often superseded by wealthy players' who don't want to spend time grinding in the game and buys expensive upgrades or weapons etc which has created unbalance within online gaming communities.

One of the advantages of Blockchain Gaming is that a game can have its own in world economy that is decentralised, peer to peer, trusted and ultimately players have ownership of the digital assets they have won or earned from gaming which in turn allows them to monetise their efforts independent of the game itself.

In a Play to Win environment it is you who sells the wealthy gamer or collector their new upgrade, an upgrade earned from your time and skills playing in the game.

Play to earn is a form of human based mining, where your personal time and skills spent within a game generates value for the platform and for you.



NonFungible.com is the world's leading platform in NFT data and market analysis.

We have published this series of guides in the purpose to educate people to understand the NFT market and give them the necessary knowledge to develop all tools necessary to navigate in this industry.

These guides will evolve through time as the ecosystem keeps evolving day by day.

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 Dan Kelly | Gauthier Zuppinger

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