LUCAS PETERS

NFT METAVERSE & DEFI

3 BOOKS IN 1

THE COMPLETE GUIDE TO INVEST AND BUILD WEALTH IN A DECENTRALIZED WORLD - HOW TO LEND, TRADE & INVEST IN CRYPTOCURRENCY AND DIGITAL ASSETS

NFT, Metaverse & Defi

The Complete Guide to Invest and Build Wealth in a Decentralized World - How to Lend, Trade & Invest in cryptocurrency and Digital Assets

By Lucas Peters

DEFI

The Complete guide to Save, Trade and Invest in Cryptocurrency Altcoin Peer to Peer (P2P) Lending & Yield Farming after Bitcoin and Ethereum

By Lucas Peters

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INTRODUCTION

Decentralized finance, or DeFi, is a means for making financial commodities available to the general public over a decentralized blockchain network. As a result, rather than going via intermediaries like brokerages or banks, it is open to anybody. In addition, unlike a bank or brokerage account, DeFi does not require a Social Security number, government-issued ID, or proof of address. Instead, DeFi refers to a system in which sellers, buyers, lenders, and borrowers connect peer to peer or with a strictly software-based intermediary rather than a firm or organization conducting a transaction using software developed on blockchains.

To achieve the goal of decentralization, various protocols and technologies are employed. A decentralized system, for instance, might be made up of blockchain, open-source technologies, and proprietary software. Smart contracts make these financial products possible, which automate

agreement terms between sellers and buyers or borrowers and lenders. DeFi solutions are intended to eliminate intermediaries between transacting parties, regardless of the technology or platform used.

Although the amount of money and trading tokens trapped in smart contracts in its ecosystem has been constantly increasing, DeFi is still a young industry with a nascent infrastructure. As a result, DeFi is subject to little or no regulation or control.

• Decentralized finance, or DeFi, intends to eliminate intermediaries between parties in a financial transaction by utilizing technology.
• DeFi consists of stablecoins, a software stack, and use cases that allow for app development.
• DeFi's use cases and infrastructure are still being developed.

What Exactly Is DeFi?

The use of technology in financial services isn’t new. Nowadays, technology is used to complete most banks and other financial services organizations. However, technology's role is limited to a facilitator in

such transactions. Companies must navigate the legalese of several jurisdictions, competing for financial markets and differing standards to complete a transaction. DeFi, with its stack of standard public blockchains and software protocols on which to build them, puts technology at the forefront of financial transactions.

DeFi is associated with blockchain and cryptocurrencies. However, it has a far broader scope. Therefore, it's vital to understand the existing condition of the finance ecosystem to comprehend the thought processes that resulted to the development of decentralized finance.

Modern financial infrastructure is built on a “hub and spoke” model. London and New York, for example, serve as operational hubs for the financial services industry, influencing economic activity in spokes— financial powerhouses or regional centers such as Milan or Mumbai, which may not be as globally important as hubs still serve as nerve centers for their respective economies.

Economic hardship or prosperity radiates outward from hubs to spokes and the rest of

the global economy. This interdependency paradigm is repeated in the functioning of global financial services corporations. They have headquarters in hubs across the world and local branches, partnerships, and investments. Because of the size and scope of their operations, they are subject to a phalanx of laws and regulations in each of their financial jurisdictions. Their reach has made such institutions systematically critical to the global economy's stability and must maintain or build new financial services infrastructure.

Though this model functioned successfully in the previous century, the financial crisis and, subsequently, the Great Recession exposed its inadequacy. A domino effect of tumbling economies and the commencement of the global recession resulted from the balance sheet difficulties of a few significant banking institutions.

Decentralized finance makes use of technology to disintermediate centralized models and allow anybody, regardless of age, ethnicity, or cultural identity, to access financial services from anywhere. DeFi services and apps are generally based on

public blockchains, and they either replicate existing products built on common technical standards or offer novel services tailored to the DeFi ecosystem. DeFi applications, on the other hand, give consumers more control over their money through personal wallets and trading platforms that cater to individuals rather than institutions.

CHAPTER 1:

DEFI WELL EXPLAINED

Decentralized finance, or DeFi, was coined in a Telegram conversation in 2018. That's when a group of software engineers and entrepreneurs struggled to develop a name for their movement of automated, blockchain-based financial services capable of displacing traditional banks.

DeFi has increased in popularity over the last three years. A crypto wallet allows a user to exchange digital assets, obtain loans, and purchase insurance, among other things. More than 10 million users have downloaded MetaMask, one of the most popular digital wallets used to access these networks, which has almost $90 billion in collateral.

The foundations of decentralized finance can be traced back to the 2008 bitcoin whitepaper, which laid out the groundwork for a unique virtual money system; a few years later, Ethereum was born. In her book

The Infinite Machine, Camila Russo, creator of the crypto news service The Defiant, writes, "Bitcoin wanted to be peer-to-peer money." “Etherum wanted to be peer-to-peer everything.”
DeFi is a combination of encryption, finance, and software development, and it has its jargon and lexicon. So let's break it down.

What is DeFi?
DECENTRALIZATION
Decentralized finance is defined by the fact that it is decentralized. For instance, bitcoin: The original crypto asset is essentially a decentralized ledger (the blockchain), with transactions stored in databases on many distinct computers. Cryptography is utilized to secure that one record (which is scattered over numerous databases), and the computers keep track of each other to verify it hasn't been tampered with.
Bitcoin's decentralization is part of what makes it so difficult to destroy. It's nearly impossible for anyone to go rogue and change the virtual coin's rules because no single entity is in charge. Similarly, even if a

government attempts to prevent a group of computers from supporting bitcoin, the digital asset may continue to function because other computers on the network preserve a comprehensive record of transactions and continue to run the show.

This notion is taken a step further with DeFi. Blockchains, such as the Ethereum network, which Canadian-Russian programmer Vitalik Buterin suggested in 2013, are used in decentralized exchanges and lending systems. Unlike the bitcoin blockchain, which was established to log bitcoin transactions, Ethereum's blockchain was meant to host applications. Consider Ethereum as a decentralized computer for which software developers may create decentralized apps (dApps). Ethereum's processing power is compensated in ether, which is presently the second-most valued crypto currency behind bitcoin.

The Ethereum network, like bitcoin, is difficult to shut down or corrupt.

GOVERNANCE

DeFi companies' decision-making, or

governance, is frequently decentralized, from the fees they charge users to the products they supply. (Think of DeFi as direct democracy if the US political system is representative democracy.) A decentralized program may be driven by a single person or a small number of individuals at first. Still, as the project gathers traction, they frequently seek to step back and transfer it to the community that uses it. This transition might take the shape of a decentralized autonomous organization (DAO), which has its rules and regulations written in computer code and may issue governance tokens, which allow currency holders a say in decisions.

PEER-TO-PEER

The ability for two users to conduct digital payments directly to each other was one of bitcoin's fundamental advances. Of course, this is quite easy to do using metal or paper money in the physical world. However, before bitcoin, the only method to do so electronically was through a bank or a payment service like PayPal.

Going via these third parties creates a digital

trace that may be tracked, and those firms might be "censored" by the government, meaning they could be forced to block transactions for political or other reasons. Bitcoin was created as a digital form of currency for peer-to-peer payments to circumvent this.

DeFi apps can also be peer-to-peer. For example, an order is processed via several intermediaries in a standard stock-trading transaction, including a broker and an exchange. At the same time, the shares are kept at a custody bank, which is responsible for preventing the securities from being lost or stolen.

A DeFi exchange (DEX), on the other hand, does not have such middlemen. For example, suppose you trade crypto tokens on Uniswap, a decentralized exchange based on the Ethereum network. In that case, those assets will wind up in your crypto wallet thanks to Uniswap's automatic programs known as smart contracts. As a result, fewer parties will take a percentage of your transaction.

NFTs and ICOs

Since its inception 13 years ago, blockchain has permitted a succession of digital gold rushes. Two of them are nonfungible tokens (NFTs) and initial coin offerings (ICOs):

INITIAL COIN OFFERINGS (ICOS)

ICOs are a type of crowdfunding, and they are frequently used to raise fund for open-source software initiatives.

ICO investors receive a unique token in return for their money, which may or may not grant them access to the software's unique features... or nothing at all.

ICOs can sound a lot like a stock offering—too much like a stock offering for the US Securities and Exchange Commission; coin offerings may not have the guardrails like auditing and disclosure that an initial public offering would be expected to provide in the regulated stock market.

According to CB Insights, ICOs raised more than $7 billion in 2018 before plummeting by over 95% to $371 million in 2019, the most recent year for which data is available, as regulators cracked down.

NONFUNGIBLE TOKENS (NFTS)

NFTs are similar to limited-edition trading cards, but they're only available online. Blockchain enables people to create unique digital goods such as art and collectibles, just as it enables users to establish ownership of their bitcoin holdings. One of the most well-known NFT sales was a collage by Beeple (also known as Mike Winkelmann), who sold it for $69 million at a Christie's auction. Unlike MP3s, which can be copied and pasted indefinitely, NFTs are intended to be unique and only have one owner at a time.

ICOs provided businesses and software developers with a method to acquire money without the support of an investment bank or the backing of a venture capital company, according to Matthew Leising, author of Out of the Ether. Similarly, NFTs can provide a new revenue stream for musicians and visual artists. "NFTs are fascinating because they've demonstrated that a digital item can be scarce," adds Leising.

What Are the Components of DeFi?

DeFi's components are comparable to those

of existing financial ecosystems in that they require stable currencies and a varied variety of use cases. DeFi components include stablecoins and services such as crypto exchanges and lending services. Because smart contracts encapsulate the conditions and behaviors necessary for these services to exist, they offer the architecture for DeFi apps to run. A customized code, for example, is included in a smart contract code that describes the exact terms and conditions of a specific loan. Collateral may be liquidated if certain conditions or circumstances are not satisfied. TRather than a bank or other business doing it manually, this is done through a code.

A software stack contains all of the components of a decentralized finance system. Each layer's components are intended to perform a specific function in the creation of a DeFi system. Composability is a defining property of the stack because the components from each tier may be merged to build a DeFi program.

The DeFi stack is made up of 4 levels, as shown below:

• Settlement Layer (also known as Layer 0): The settlement layer serves as the foundation for all subsequent DeFi transactions. It is made up of a digital money or cryptocurrency and a public blockchain. This money is used to settle transactions on DeFi applications, and it may or may not be exchanged on public markets. The settlement layer includes Ethereum and its native token ether (ETH), which is exchanged on crypto exchanges. Tokenized forms of assets, such as the United States dollar, or tokens that are digital representations of real-world assets, can be used at the settlement layer. For example, a real estate token may represent the ownership of a plot of land.
• Protocol Layer: Software protocols are pre-determined standards and guidelines that govern certain processes or activities. Similar to real-world organizations, this would be a set of principles and practices that all players in a certain industry have agreed to follow as a condition of operating in that sector. DeFi protocols are interoperable, which implies that many organizations can use them to build a service or app at the same time. The

protocol layer provides liquidity to the DeFi ecosystem. Synthetix, a derivatives trading platform built on Ethereum, is an example of a DeFi protocol. It is employed in the creation of digital replicas of real-world items.

• Application Layer: As the name suggests, the application layer is where consumer-facing programs are kept. In these apps, the underlying protocols are abstracted into simple consumer-focused services. Most of the bitcoin ecosystem's apps, such as lending services and decentralized cryptocurrency exchanges are housed under this layer.

• Aggregation Layer: Aggregators integrate numerous apps from the previous layer to give a service to investors in the aggregation layer. For instance, they might make it possible to transfer money seamlessly between different financial instruments to maximize profits. Such trading actions would require a lot of documentation and coordination in a physical setup. On the other hand, a technology-based structure should smooth the investment rails, letting traders swiftly switch between different providers.

Borrowing and lending is an example of a service on the aggregation layer. Cryptocurrency wallets and banking services are other examples.

The Current State of DeFi

The development of decentralized finance is still in its infancy. As of March 2021, DeFi contracts have a total value of more than $41 billion. The total value locked is computed by multiplying the amount of tokens in the protocol by their value in USD. Though the overall amount for DeFi may sound substantial, it's crucial to realize that it's only an estimate because many DeFi coins lack adequate volume and liquidity to trade on cryptocurrency exchanges.

Infrastructural mishaps and hacks continues to plague the DeFi ecosystem. Scams also abound in the fast evolving DeFi infrastructure. DeFi "rug pulls," in which funds are drained from a protocol and investors are unable to trade, are prevalent, however there are well-established procedures that can considerably lessen the risk.

The dispersed and open nature of the decentralized finance ecosystem may cause issues with present financial regulation. The current laws are founded on the concept of distinct financial jurisdictions, each with its own set of laws and norms. The decentralized nature of DeFi's transactions raises serious regulatory issues. For instance, who is culpable for a financial crime that occurs across protocols, borders, and DeFi applications?

Smart contract is another area of concern for DeFi regulation. Apart from Bitcoin's success, DeFi is the best example of the "code is law" idea, according to which law is a collection of rules created and enforced by immutable code. The smart contract algorithm is pre-programmed with the essential constructions and terms of service to conduct transactions between two parties. However, software systems might malfunction due to various factors.

What if a system crashes due to the erroneous input? Or if a compiler (the program that compiles and runs code) makes a mistake. Who bears responsibility for the changes?

These and many more questions must be answered before DeFi becomes a popular system.

Advantages and disadvantages of DeFi

The strength of DeFi can also be its weakness:

• Decentralization makes DeFi harder to censor or eradicate, but it needs a lot of processing power. Maintaining a database and records over a network of numerous machines slows down transactions and can increase transaction costs. The most popular blockchain for DeFi apps is Ethereum; the massive quantity of processing is currently pushing up costs and slowing down the network. However, other chains like Solana and Avalanche are gaining traction as Ethereum developers strive to figure out how to make it more scalable. "It's very difficult to get performance out of blockchains," says Emin Gün Sirer, a Cornell University computer scientist and Avalanche adviser.

• DeFi eliminates middlemen such as

custody banks responsible for keeping assets (typically digital tokens) secure. That means you won't have to worry about a financial institution going bankrupt and taking your tokens with it or about the government seizing and confiscating your tokens. On the other hand, you and your passcode are the only ones who can keep your assets safe. If you lose (or someone steals) that passcode, all of your valuables are lost forever.

• The DeFi upstarts frequently claim to be open to everybody. Without typical financial credentials like identity or a credit score, you might be able to secure a loan or trade virtual coins. That liberty has the potential to bring financial services to sections of the world that haven't previously had them or where they are too expensive or vulnerable to fraud or confiscation. However, the drawback is obvious: If no one keeps track of who uses a service or where they are, criminals might use the systems or run counter to regulations. The regulatory crackdown has already begun.

• Although blockchains have proved difficult to crack, the smart contracts and apps that operate on top of them are only as smart as

the individuals who created them. The code is usually open-source, which means it's available for everyone to examine and modify, making it more vulnerable to hackers. Much more programming code is audited for bugs and vulnerabilities these days. An increasing number of people understand the importance of formal verification (a process that uses algorithms to analyze other algorithms for flaws). However, according to Cornell's Sirer, a lot of money is still going into code that hasn't been shored up in that way.

Three dApps you should know about

UNISWAP

Hayden Adams, a mechanical engineer from New York, founded Uniswap, a decentralized exchange (DEX). The concept came from Ethereum co-founder Buterin's blog articles about creating an automated market maker and decentralized exchange. According to CoinGecko, a crypto-data website, Uniswap now enables $1 billion or more in daily crypto trade, and its governance tokens, UNI, have a market value of roughly $12 billion.

Stani Kulechov, a law student, established

AAVE in 2017. (originally called ETHLend). The platform enables users to lend and borrow crypto tokens; according to Defi Pulse, users have put up nearly $14 billion in collateral for loans on the network.

MAKERDAO

MakerDAO is a lending and borrowing platform based on the Dai stablecoin, pegged to the US dollar. MakerDAO was formed in 2014, with Rune Christensen as a co-founder. MakerDao claims to be one of the largest decentralized apps on the Ethereum blockchain and the first DeFi application to gain widespread popularity on its website. Users have put up around $6 billion in collateral on the system.

CHAPTER 2:
DEFI LENDING AND BORROWING PLATFORMS

Decentralized Finance (DeFi) aspires to fill the void left by traditional banking. As a result, it has become one of the most popular movements to emerge from the crypto markets. It now functions as a new financial service enabler, meeting the conditions for broad adoption of Blockchain and cryptocurrencies.

Some of the most significant advancements in the bitcoin business have occurred due to the increase in DeFi lending platforms. As a result, it is the fastest growing industry and has steadily increased for several years.

Its rise to prominence began in the summer of 2020 when the prices of several DeFi platform tokens skyrocketed. There are many top DeFi lending platforms to select from, but do your homework before settling on one.

Top 15 DeFi Lending Platforms (2021)

DeFi Lending and Borrowing

DeFi lending services, like traditional peer–to–peer lending platforms, allow users to lend their assets to others. They receive interest payments in exchange. Because these platforms mostly trade in cryptocurrencies, they exclusively get cryptocurrency interest payments. DeFi platforms function without the use of middlemen; the financial gains are paid directly to the users.

The benefit of this platform is that anyone may take out a loan without going through any KYC or AML checks, and they also don't have to reveal their identity to a third party. This increases the accessibility of financial services.

DeFi services are more secure than centralized lending platforms because of the use of Blockchain.

You must provide collateral worth more than the loan value because DeFi platforms are anonymous.

Why Decentralized lending?

The leading Ethereum DeFi platforms have given a whole new meaning to the term "finance." It provides lenders with a variety of loan options and benefits. The following are some of the benefits of decentralized lending:

a) Hedge Funding- The crypto market is so diverse that it sends most investors packing. As a result, if you don't want to get burnt in the market and want to avoid price volatility, DeFi gives you the option to keep crypto for a certain period. It also allows traders to invest crypto for cash to meet other needs without having to sell it.

b) Earn interest by retaining crypto assets- You don't have to sell your crypto assets to avoid the bears; instead, you can lend them out at good interest rates that are specified in a contract. You earn money plus the interest within the specified time.

c) Less paperwork- Unlike traditional centralized banking, DeFi systems do not need a lot of paperwork. It's a simple process that just a few clicks on a Decentralized application.

How does DeFi Lending work?

Decentralized lending is as simple as lending money to someone by placing your hand in your pocket. However, the smart contract and decentralized program represent your mediators and negotiators. Let's see an example: if you want to give a $30000 loan using DApp, all you have to do is click a few buttons, and you're done.

Because you must choose any DApp application that gives a smart contract and borrowers, the entire process is extremely quick and uncomplicated. You must choose the loan's interest rate, enter it into the app, and the loan will be approved. Once you've found the borrower, the smart contract would automate both the loan and borrowing arrangement.

Best DeFi lending platforms

Selecting the right platform is essential as a borrower or a lender. Always consider the important elements, such as interest rates, and check whether they contain the assets you want to borrow or lend, as well as the level of safety and security.

Here is a list of the best DeFi loan platforms, compiled after extensive study, from which you may select one that best suits your needs:

BEST DEFI LENDING PLATFORMS

Whether you're a borrower or a lender, selecting the right platform is important. Always consider the important elements, such as interest rates, and check whether they contain the assets you want to borrow or lend, as well as the level of safety and security.

Here is a list of the best DeFi loan platforms, compiled after extensive study, from which you may select one that best suits your needs:

1) Aave

It's a non-custodial, decentralized, open-source liquidity market protocol in which you may participate as both a lender and a borrower. It is based on Ethereum and allows users to borrow money through a simple and

user-friendly interface. In addition, it renders a dual DeFi token model, i.e., LEND and aToken.

The aToken model is an ERC-20 token in which lenders' interest compounds. At the same time, LEND is a governance token in which you can receive various loans and lending services like uncollateralized loans, Flash loans, rate switching, and more.

History

Aave, formerly known as ETHLend, is a London-based startup founded by Stani Kulechov in 2017. It changed its name to Aave in September 2018, and the mainnet launched in January 2020. Aave began with $60,000 worth of ETH tokens, exchanged for LEND tokens during an ICO.

It now has more than $5 billion in its smart contract; this is because with them, you can start collecting money right away, and it multiplies in real-time.

2) Maker

It's a decentralized borrowing and lending

platform quickly becoming one of the greatest DeFi lending systems available. Maker is also known as the MCD (Multi-Collateral DAI) system. It has over $7 billion tokens locked in smart contracts.

MKR and DAI are the Maker's major assets, and both are ERC-20 tokens. Once the smart contracts are in place, DAI is linked to the dollar for lending and borrowing.

DAO is an Ethereum-based decentralized lending service that supports the DAI, a stable token tied to the US dollar. It also allows users with access to ETH and MetaMask to lend in the structure of DAI.

History

It was created in 2015 to combat the volatility of cryptocurrency. It was built on Ethereum and is backed by MKR governance token holders, who have the right to decide on the protocol's future by voting for or against a proposal to change the platform.

Maker offers a 9.05 percent interest rate, a

4.6 percent interest rate, and a 30D average rate to its users. You can borrow on the Maker protocol if you have ETH, USDC, BAT, or WBTC.

3) Uniswap

It's one of the most popular decentralized exchanges built on the Ethereum platform. It allows users to exchange between ETH and ERC-20 tokens on-the-chair or earn a fee by giving any amount of liquidity; consequently, token swaps are done through liquidity pools. The good news is that there are presently no restrictions on Uniswap.

ERC20 tokens are exchanged using a simple user interface secure, undamaged, and non-custodial. On this platform, you can trade any ERC20 token or earn a fee by providing liquidity to the process. You can either add liquidity to an existing pool or create a new one.

Every liquidity pair is represented by an ERC20 token that is unique and easily transferable. So, setting up a liquidity pool on Uniswap is simple; all you need is a token

pair for markets. Then, the market makers set the exchange rates who use the standard product market maker mechanism.

History

Hayden Adams founded this decentralized lending network. It started in November 2018 and has been slowly increasing since then.

There is now $4 billion worth of Ethereum tokens in Uniswap liquidity pools.

4) Compound

Borrowers and lenders can use this decentralized money market technology to secure their crypto assets into the contract. It is built on the Ethereum blockchain, allowing holders of digital assets to borrow and lend crypto in exchange for security.

It differs from other DeFi lending services in that it uses cookies to keep tokenization assets locked in their system. Additionally, users can add assets to their liquidity pool and earn compound interest.

Compound allows consumers to take out over-collateralized loans and manage several assets, in addition to being thoroughly reviewed and formally verified. It puts aside 10% of interest payments as reserves, with the remainder to liquidity suppliers.

History

It is a San Francisco-based platform with a large investor base established in September 2018. In May 2010, the compound was modified to include the procedure. They moved towards decentralization in May 2020, delegating control to COMP token holders.

They currently have more than $6 billion in liquidity pools, making it one of the most well-known DeFi platforms available.

5) InstaDApp

It's a secure smart wallet for decentralized financial transactions. The good news is that it is a multi-purpose platform that effectively handles digital assets. InstaDApp allows users to optimize, manage, and position assets to maximize profits across various protocols.

You can use this platform to get various services, including borrowing, lending, leveraging, swapping, and more. It's similar to a bank in that it allows you to combine services to meet your needs. In addition, it offers users a user interface to manage their DeFi investments and migrate to cheaper loan platforms with lower interest rates, such as Compound, Maker, and others.

They also provide you with a DeFi protocol smart wallet portal. The most appealing aspect of InstaDApp is that it is completely free to use; all you need is enough ETH to cover the transaction cost.

History

In August 2018, Samyak Jain and Sowmay Jain created InstaDApp. It first appeared on the Ethereum mainnet in December 2018 and was updated in April 2019.

Over $1 billion has been secured in InstaDapp smart contracts thus far.

6) dYdX

It's an Ethereum-based non-custodial trading platform aimed at seasoned investors. It introduced margin trading, derivates, and options to the blockchain, ubiquitous in currency markets and traditional investments.

dYdX is a platform for lending, trading, and borrowing DAI, ETH, and USDC. It also allows users to trade cross margin and isolated margin utilizing a perpetual market contract of BTC/USDC with 10x leverage. The good news is that, unlike other DeFi lending platforms, it does not have a native token and instead charges trading fees in the supported coins.

They provide loans with a 125 percent collateral requirement and a 115 percent self-liquidation requirement. dYdX trades more than $35 million each day, making it one of the world's largest decentralized exchanges for crypto-assets and derivates.

History

dYdX is based in San Francisco and

employs 25 to 50 individuals. Financial services, blockchains, and cryptocurrencies are among the products it promotes. Antonio Juliano debuted it in October 2018. Their exchange runs on open-source code accessible to everyone.

7) SushiSwap

Ethereum-based software aims to encourage a network of users to manage a marketplace where users can buy and sell crypto assets. It is extremely similar to UniSwap, except for the open-source code.

It also achieves its objectives through a series of liquidity pools. You can also create your liquidity pool by offering any combination of ETH and ERC20 tokens, as well as swapping one token for another. Users must lock up their assets in smart contracts, and traders trade cryptocurrencies from those pools; thus, the user experience is quite simple.

SushiSwap is unusual in that it allows users to exchange cryptocurrencies without

requiring the services of a central operator administrator. Therefore, the decisions associated with it are made by holders of its native cryptocurrency.

History

SushiSwap was founded in 2020 by Chef Nomi, a pseudonymous individual and co-founders of sushiswap and 0xMaki. They built their basis on the open-source code developed by UniSwap. They then enticed more users to join their platform by giving Sushi token prizes for securing cash in a Uniswap pool. The funds in that pool would be transferred to SushiSwap once the code for SushiSwap was ready.

SushiSwap's trading pools have a total value of nearly $4 billion. It has developed to become one of the most popular Ethereum DeFi platforms, allowing you to exchange digital assets without the need for any intermediaries.

8) Dharma Protocol

It's decentralized debt tokenization and

financial application based on the Ethereum blockchain. Borrowers, moneylenders, and other fund managers can trade and share information here. It's a feature of decentralized finance solutions that aims to make financial services more accessible to the general public.

It comprises a Dharma Settlement contract, which is modeled after traditional financial instruments and stakeholders. Four major agents run this network: borrowers, relayers, lenders, and underwriters.

Simple operators are both borrowers and lenders, relayers are agents who assist borrowers in locating creditors to repay their debts, and underwriters are agents who detect the risk of default and shape the debt issue's conditions.

History

In 2017, Nadav Hollander invented the dharma protocol. Its decentralized lending platform was created to democratize access to financial products. They enable a daily transaction limit of $1000, and dollar deposits

earn roughly 2.7 percent APR through the compound protocol.

A total of USD13 million has been set aside in the protocol.

9) Curve Finance

It's a decentralized exchange and liquidity pool based on Ethereum that allows for efficient stable currency sales. It allows users to trade with little slippage, consistent coin swaps, and a low-fee algorithm. Curve Finance also creates revenue for liquidity providers by providing liquidity to other protocols such as Compound.

This protocol's liquidity is distributed over seven curve pools: Compound, BUSD, Y, REN, PAX, sUSD, and sBTC. Each pool issues its ERC20 tokens to liquidity providers, which may be traded for various distinct assets.

History

Michael Egorov established Curve Finance, which was recently launched in January 2020. This method was created to provide the most efficient stable coin trading.

Curve Finance has established itself as one of the leading DeFi lending platforms, with over $4 billion in digital assets secured in its liquidity pools.

10) Balancer

It's an Ethereum-based automated market maker that allows you to acquire a token at the best price and swap it immediately. To make a fee from trading, you can also create personalized liquidity pools or add existing pools.

It differs from other decentralized lending platforms in that their liquidity pool consists of only two assets, whereas Balancers' pool consists of eight digital assets for improved liquidity. Another notable feature is that it allows any amount of tokens in a pool to have any weight.

The pool's design is entirely up to the developer, and it can be tailored to their specifications. There are many types of pools: private pools are for private use only and can only add liquidity from the pool's owner.

Pool owners have no particular privileges with shared pools, and anybody can add

liquidity to them. The charge and weights are specified in here, and they are permanent.

Smart pools are similar to private pools, except that smart contracts control them. Anyone can add liquidity here as well.

11) bZx

It's a decentralized Ethereum-based platform for DeFi lending, margin, and leverage trading. bZx is a fantastic replacement for dYdX. It sets itself apart by offering a token system based on smart contracts. Users can utilize tokenized loans and tokenized positions to trade and lend crypto assets.

It differs from other DeFi platforms in that the relayers match the orders of borrowers and lenders so that borrowers can get margin loans. iTokens, pTokens, and BZRX tokens are the three major ERC20 tokens in their system. The first two tokens are used for lending and borrowing, whereas BZRX is used for governance.

They charge lenders a ten percent fee on

their revenues, which they aggregate into funds to ensure that lenders are protected and covered even if the borrowers default on the loan.

History

Tom Bean and Kyle Kistner, its founders, founded it in 2018. bZx was renamed and expanded to include two new platforms: Fulcrum Trade, which started in June 2019, and Torque, which launched in October 2019. Their team now consists of 13 members, with a long list of influential collaborators and partners.

12) Fulcrum

It’s built on the bZx base protocol that supports Kyber Network Token (KNC), Chainlink (LINK), Ether (ETH), Wrapped Bitcoin (WBTC), and Tether USD. It is one of the most straightforward and effective lend and margin trade strategies.

Lenders and borrowers put orders through a relayer, and the borrower receives the margin

loan after the order is matched with the lender. Because it does not employ a centralized pricing fee, it is a trustless margin platform. The good news is that it is rent-free and permission-free, so you won't have to pay anything.

They also include an off-chain "bounty hunter" tool that monitors the solvency of each margin account; if they detect a possibility of borrowed funds being lost, they commence position liquidation and return to the lender.

History

It was first conceived in August 2017, but it only went online on June 1, 2019. MakerDAO, Kyber, ChainLink, Augur, and Set Protocol are major industry participants. Tom Bean, who is well-known for his work in the automobile business, is the CEO of Fulcrum.

13) Yearn.Finance

It's a decentralized ecosystem aggregating lending platforms like Compound, Aave, and

DyDx. They provide lending aggregation, Ethereum-based insurance, and yield generation.

This system is administered by a 9-member multi-signature wallet, which requires a majority of members to agree on any proposed modifications, with votes recorded on-chain. As a result, to be implemented, modifications must be signed by at least 6 out of 9 wallet signatures.

They ensure that end-users obtain the best interest rates by optimizing the interest accrual process. You can also deposit assets and convert them into tokens via this platform. It rebalances your liquidity provider automatically so that you earn the most return by substituting liquidity with the most advantageous lending service.

History

It was created in July 2020 by Andre Cronje. It fascinated the cryptocurrency community as it rose from $3 to $30000 in less than a month. The platform's governance token, YFI, is awarded to users that provide liquidity using yTokens. It is one of the most

popular DeFi lending platforms as there was no pre-mine before its inception.

14) Synthetix

It is an Ethereum-based decentralized investing platform known as Havven, a stable coin project. It allows users to build and use synthetic assets, sometimes known as "Synths," which provide on-chain access to tokenized, synthetic representations of physical assets.

These synthetic assets mimic the value of real-world assets and allow crypto holders to trade non-crypto assets on a decentralized currency-based market using their funds. It also has its native token, known as SNX. Users can lock the collateral in ETH or SNX to mint the synths. The good news is that synths are ERC20 tokens that can be traded freely.

Synthetix allows users to trade over 30 synths that reflect a various commodities, gold, dollars, stocks, bitcoin, and indices, to expand the platform's existing derivate offerings. Trades are also conducted on the non-custodial platform but on a peer-to-peer

basis.

History

It was formerly known as Havven, but due to changes in strategy and rebranding, the name was changed to Synthetix, with a mainnet debut in February 2019.

To present, Synthetix has roughly $2 billion in its liquidity pools.

15) CREAM Finance

Individuals and institutions can use it to get financial services because it is a decentralized lending platform. You must deposit an amount of cryptocurrency worth greater than the amount of cryptocurrency you'll be borrowing in USD to borrow funds through Cream Finance.

Cream Finance is a permissionless, open-source, and Blockchain-independent protocol that supports Ethereum, Binance Smart Chain, and Fantom. It recognizes the proper borrowers utilizing proprietary technical solutions and makes money available only a few clicks.

"It is a loan platform based on compound

finance and an exchange platform based on Balancer Labs," according to cream finance's website. This implies that the cream financing protocol is based on source code from various DeFi lending systems, such as UniSwap, Balancer, and others.

History

It was founded in August 2020 and is currently one of the world's most popular Ethereum DeFi platforms. Jeffrey Huang, the creator of Cream Finance, refers to himself as the "Semi-benevolent dictator of Cream." The firm is now transforming into a community-governed decentralized independent corporation.

CHAPTER 3:

DECENTRALIZED EXCHANGES

DEXs are peer-to-peer markets where cryptocurrency traders can transact without entrusting their assets to an intermediary or custodian. These transactions are made possible via smart contracts, self-executing agreements written in code.

DEXs were intended to eliminate the need for any authority to supervise and allow trades within a given exchange. Peer-to-peer cryptocurrency trading is possible on decentralized exchanges. Peer-to-peer refers to a cryptocurrency marketplace that connects buyers and sellers. They are often non-custodial, meaning that users retain control over their wallet's private keys. Users may access their cryptocurrencies via a private key, a sort of sophisticated encryption. After login into the DEX with their private key, users may immediately see their crypto

balances. They will not be forced to provide personal information such as names or addresses, which is ideal for those who value their privacy.

Automated market makers and other innovations that handled liquidity-related difficulties helped lure users to the decentralized finance (DeFi) area and contributed significantly to its growth. By optimizing token prices, slippage, and swap fees, while providing a better rate for consumers, DEX aggregators and wallet extensions fostered the expansion of decentralized platforms.

What are decentralized exchanges?

Decentralized exchanges use smart contracts to allow traders to execute orders without a middleman. On the other hand, centralized exchanges are run by a centralized institution, such as a bank, which is otherwise engaged in financial services and aiming to earn a profit.

Centralized exchanges account for the great majority of trading volume in the cryptocurrency industry because they are

regulated businesses that store users' assets and provide easy-to-use platforms for newcomers. Some centralized exchanges also provide deposit asset insurance.

The services supplied by a centralized exchange are equivalent to those provided by a bank. The bank protects its customers' accounts and provides security and monitoring services that individuals cannot provide on their own, making money transfers easier.

Decentralized exchanges, on the other hand, allow users to trade directly from their wallets using the trading platform's smart contracts. Traders are accountable for their money and are liable if they lose them due to errors like losing their private keys or transmitting payments to the wrong locations.

Customers' deposited monies or assets are issued an "I owe you" (IOU) that may be freely sold on the network via decentralized exchange portals. A blockchain-based IOU is simply a token with the same value as the underlying asset.

Popular decentralized exchanges have been created on top of popular smart contract-

supporting blockchains. They're constructed on top of layer-one protocols, which means they're immediately on top of the blockchain. The Ethereum blockchain is used to power the most prominent DEXs.

How do DEXs work?

Every trade incurs a transaction cost in addition to the trading fee since decentralized exchanges are built on top of blockchain networks that allow smart contracts and where users maintain custody of their assets. To use DEXs, traders interact with smart contracts on the blockchain.

Automated market makers, Order books, DEXs, and DEX aggregators are the three basic forms of decentralized exchanges. All

of them employ smart contracts to allow users to trade directly with one another. The initial decentralized exchanges employed order books similar to those used by centralized exchanges.

Automated market makers (AMMs)

An automated market maker (AMM) system based on smart contracts was developed to address liquidity. These exchanges were partially inspired by Ethereum co-founder Vitalik Buterin's article on decentralized exchanges, which described how to perform trades on the blockchain through token-holding contracts.

These AMMs use blockchain oracles, which are blockchain-based services that supply information from exchanges and other platforms to establish traded asset prices. Instead of matching buy and sell orders, these decentralized exchanges' smart contracts employ liquidity pools, which are pre-funded pools of assets.

Other users finance the pools, and they are entitled to the transaction fees charged by the protocol for executing transactions on that pair. These liquidity providers must deposit

an equivalent amount of each asset in the trading pair to earn income on their cryptocurrency holdings, a process known as liquidity mining. If they try to deposit more of one asset than the other, the smart contract that runs the pool invalidates the transaction.

Traders can utilize liquidity pools to execute orders or earn interest without needing permission or trust. These exchanges are frequently evaluated according to the amount of cash locked in their smart contracts, known as total value locked (TVL) because the AMM approach has a drawback when there isn't enough liquidity: slippage

Slippage happens when a platform's lack of liquidity causes the buyer to pay above-market prices on their order, with larger orders facing greater slippage. Large orders are prone to slippage without deep liquidity. Hence a lack of liquidity might prevent rich traders from utilizing these platforms.

Impermanent loss, which is a direct outcome of depositing two assets for a certain trading pair, is another risk that liquidity providers face. Trades on the exchange might reduce the amount of one of these assets in

the liquidity pool when one is more volatile than the other.

If a highly volatile asset price increases while the quantity they hold falls, liquidity providers incur an impermanent loss. The loss is temporary since the asset's price can still rise, and trades on the exchange can bring the pair's ratio back into balance. The pair's ratio describes the proportion of each asset held in the liquidity pool. Fees gathered from trading can make up for the loss over time.

Order book DEXs

Order books keep track of all open orders and sell orders for specific asset pairs. Buy orders indicate a trader's readiness to bid for or buy an asset at a certain price, whilst sell orders indicate a trader's willingness to sell or ask for the item at a specific price. The spread between these numbers determines the depth of the order book and the market price on the exchange.

Order book DEXs have 2 types: off-chain order books and on-chain order books. DEXs using order books holds open order information on-chain, while users’ funds stay

in their wallets. Traders on these exchanges may be able to leverage their positions by borrowing funds from lenders on the platform. Leveraged trading raises a trade's earning potential while also increasing the risk of liquidation since it increases the size of the position with borrowed money that must be returned even if the traders lose their bet.

On the other hand, DEX platforms that keep their order books off the blockchain only settle trades on the blockchain to provide traders with the benefits of centralized exchanges. Exchanges can save time and money by using off-chain order books to make sure deals are performed at the prices consumers want.

Using off-chain order books helps exchanges lessen costs and increase speed to ensure that trades are executed at the user's desires.

These exchanges also enable users to lend their funds to other traders to provide leveraged trading opportunities. Loaned funds accrue interest over time and are protected by the exchange's liquidation

process, which ensures that lenders are compensated even if traders lose their bets.

It is vital to emphasize the importance of the order book. DEXs often suffer from liquidity issues. In addition, traders often adhere to centralized platforms since they effectively compete with centralized exchanges and pay extra expenses due to the fees needed to transact on-chain. While DEXs with off-chain order books lower these costs, smart contract-related risks arise due to the need to deposit funds in them.

DEX aggregators

DEX aggregators employ various protocols and techniques to solve liquidity-related issues. These platforms effectively aggregate liquidity from several DEXs to reduce slippage on large orders, reduce swap fees and token prices, and provide traders with the best price in the shortest amount of time.

Other main goals of DEX aggregators include protecting consumers from the price effect and reducing the likelihood of failed transactions. Some DEX aggregators also leverage liquidity from centralized platforms to improve user experience while being non-

custodial thanks to the use of certain centralized exchange integrations.

HOW TO USE DECENTRALIZED EXCHANGES

You do not need to sign up to use a decentralized exchange, and you do not even need an email address to connect with these services. Traders will instead need a wallet compatible with the exchange's network's smart contracts. DEXs' financial services are accessible to everyone with smartphones and internet connections.

Because each trade will involve a transaction charge, the first step in using DEXs is to pick which network a user wishes to use. The next step is to choose a wallet compatible with the chosen network and fund it with the network's native token. A native token is a token used to pay transaction fees on a particular network.

Wallet extensions that enable users to access their funds directly in their browsers make it easy to interact with decentralized

apps (DApps) like DEXs. These are installed similarly to other extensions and need users to import a current wallet or create a new one using a seed phrase or private key. In addition, password protection is used to secure the system better.

Because they come with built-in browsers ready to engage with smart contract networks, these wallets may also include mobile applications so that traders may utilize DeFi protocols on the go. In addition, users can import wallets from one device to another to synchronize their wallets.

Following the selection of a wallet, it must be funded with the tokens used to pay for transaction fees on the chosen network. These tokens must be purchased on centralized exchanges and identified by their ticker symbol, such as ETH for Ethereum. After purchasing tokens, users must simply withdraw them to their control wallets.

It is important to avoid moving funds to the wrong network. As a result, users must transfer their funds to the appropriate account. Users who have a funded wallet can connect it through a pop-up

window or by clicking the "Connect Wallet" button in one of the top corners of the DEX's webpage.

BENEFITS OF USING A DEX

Trading on decentralized exchanges may be costly, particularly if network transaction costs are high when the trades are made. However, there are some benefits to adopting DEX platforms.

Token availability

Before listing tokens, centralized exchangeswill have to personally evaluate them and adhere to local regulations. Decentralized exchanges can include any token minted on the blockchain upon which they are built, implying that new projects will likely list on these exchanges before their centralized equivalents.

While this might mean traders can get in on projects as soon as possible, it also means that DEXs can be used to list all kinds of scams. For example, a "rug pull," or usual

exit scam, is common. In addition, when the price of the tokens used to create liquidity on these exchanges rises, the team behind the project dumps them, making it hard for other traders to sell.

Anonymity

On DEXs, users' identity is protected when they swap one cryptocurrency for another. As a result, users do not require to go through a conventional identification process known as Know Your Customer, as they do on centralized exchanges (KYC). KYC standards require traders to provide personal information such as their complete legal name and a photo of a government-issued identity certificate. As a result, DEXs draw a considerable number of users who prefer to remain anonymous.

Reduced security risks

Because DEXs do not handle their assets, experienced bitcoin users who custody their funds are at a lower risk of being hacked. On the other hand, traders keep their cash safe and only interact with the exchange when

they want to. As a result, only liquidity providers may be at risk if the platform gets compromised or hacked.

Reduced counterparty risk

When the other party in a transaction fails to meet their contractual duties and defaults on their portion of the bargain, this is known as counterparty risk. This risk is minimized since decentralized exchanges operate without middlemen and are based on smart contracts.

To guarantee there are no other risks while using a DEX, users can quickly run a web search to see if the exchange's smart contracts have been verified and make decisions based on other traders' experience.

DISADVANTAGES OF USING DEXS

Despite the benefits listed above, decentralized exchanges have several disadvantages, including a lack of technical understanding required to interact with these exchanges, the number of smart contract

vulnerabilities, and unvetted token listings.

Certain knowledge is required

DEXs can be accessed using crypto wallets that interact with smart contracts. Users must not only know how to utilize digital wallets, but they must also comprehend the security concepts involved in keeping their funds safe.

The relevant tokens for each network must be loaded into these wallets. Without a network native token, other funds may become stuck since the trader will not pay the fee required to move them. Therefore, you'll need certain knowledge to choose a wallet and fund it with the right tokens.

Furthermore, preventing slippage can be difficult even for experienced investors, if not impossible, when acquiring tokens with low liquidity. Slippage tolerance on DEX systems is frequently modified manually for orders. Additionally, regulating slippage is a technical process, and some people may not completely comprehend what it entails.

Traders who lack particular understanding might make a various mistakes that can result in a loss of funds. Withdrawing coins to the

wrong network, incurring excessive transaction fees, and losing money due to temporary loss are just a few instances of what might go wrong.

Smart contract vulnerabilities

Smart contracts on blockchains such as Ethereum are open source, and anybody can review their code. Furthermore, smart contracts of large decentralized exchanges are reviewed by reputable firms that help secure the code.

To err is human. Therefore, exploitable defects can still get through code reviews and audits. Auditors may even be unable to anticipate future vulnerabilities that might result in liquidity providers losing their tokens.

Unvetted token listings

Anybody can list a new token and combine it with other tokens to provide liquidity on a decentralized exchange. This makes investors vulnerable to frauds like rug pulls, that make them think they're buying a different token.

Some DEXs mitigate these risks by requiring users to check the smart contract of

the tokens they want to purchase. While this technique is effective for experienced users, it reverts to specialized knowledge issues for others.

Traders can learn as much as they can about a token by reading its white paper, joining its community on social media, and checking for prospective audits on the project before making a purchase. In addition, this form of due diligence aids in the avoidance of frequent scams in which malicious actors exploit unsuspecting users.

Decentralized exchanges keep evolving

The first decentralized exchanges surfaced in 2014, but popularity grew as decentralized financial services based on blockchain gained traction. In addition, AMM technology helped alleviate the liquidity issues that DEXs had previously experienced.

Because there is no single organization authenticating information normally supplied to centralized platforms, it is difficult for these platforms to execute Know Your Customer and Anti-Money Laundering checks. Nevertheless, regulators may still try to impose these checks on decentralized

systems.

Custodian regulations would not apply to these services since those that do allow user deposits still need users to sign blockchain messages to move funds off of their platforms.

Users may now borrow funds to leverage their positions, lend funds to earn interest passively, or supply liquidity to collect trading fees on decentralized exchanges.

More use cases may be generated in the future because these platforms are based on self-executing smart contracts. For example, flash loans, which are loans acquired and repaid in a single transaction, are an example of how decentralized finance innovation can create previously unimaginable products and services.

CHAPTER 4:
YIELD FARMING

Yield farming is a method of generating extra cryptocurrency with your existing cryptocurrency. It involves you lending your money to others through smart contracts, computer programs. You get fees in the form of cryptocurrency in exchange for your services. Simple enough, huh? Well, not so fast.

Yield farmers will employ more complex tactics. hey constantly move their cryptos between multiple lending platforms to maximize their returns. They'll also keep the top yield farming practices a closely guarded secret. Why? The more individuals are aware of a technique, the less effective it is. Farmers compete for the best crops to farm, making yield farming the wild west of Decentralized Finance (DeFi).

In the blockchain world, the Decentralized Finance (DeFi) movement has been at the forefront of innovation. What sets DeFi

applications apart from the rest? They are permissionless, which implies that anybody (or anything, like a smart contract) with an Internet connection and a compatible wallet may interact with them. They also don't generally necessitate trust in any custodians or middlemen. In other words, they are untrustworthy. So, what new applications have these properties empowered?

One of the new concepts that has emerged is yield farming. It's a novel approach to earn rewards with cryptocurrency holdings utilizing permissionless liquidity protocols. Anybody can earn passive revenue by taking advantage of the Ethereum-based decentralized network of "money legos." So, yield farming might influence how investors retain their assets in the future. Why keep your assets if you can put them to better use?

So, how does a high-yield farmer care for his or her crops? What type of returns can they expect? And where should you start if you become a yield farmer? I'll explain all these.

WHAT IS YIELD FARMING?

Yield farming, also known as liquidity mining, is a strategy for earning money from cryptocurrency holdings. In basic words, it entails securing cryptocurrency and reaping the benefits.

Yield farming and staking are similar in some way. However, there is a great deal of intricacy behind the scenes. For example, it frequently collaborates with liquidity providers (LP), who provide funds to liquidity pools.

WHAT IS A LIQUIDITY POOL?

It's simply a smart contract with funds. LPs are compensated for supplying liquidity to the pool. This reward might come from the underlying DeFi platform's fees or another source.

Some liquidity pools pay out in

multiple tokens. These reward tokens can then be put into other liquidity pools to get more rewards, and so on. You can see how extremely complicated methods might evolve very fast. However, the basic concept is that a liquidity provider puts funds into a liquidity pool in exchange for rewards.

Yield farming is basically done on Ethereum with ERC-20 tokens, and the rewards are usually also ERC-20 tokens. However, this might change in the future. Why? Most of this activity is now taking place in the Ethereum ecosystem.

On the other hand, cross-chain bridges and other advancements may one day allow DeFi apps to be blockchain agnostic. They may be able to run on other blockchains that support smart contracts.

Yield farmers would often transfer their funds between different techniques in order to get high yields. So, DeFi platforms may provide extra financial incentives to attract more capital. Liquidity attracts additional liquidity, just as it does on centralized

exchanges.

WHAT STARTED THE YIELD FARMING BOOM?

The launch of the COMP token, which serves as the governance token for the Compound Finance ecosystem, has generated a rise in interest in yield farming. Governance tokens provide token holders with governance rights. But, if you want the network to be as decentralized as possible, how do you distribute these tokens?

A popular method for launching a decentralized blockchain is to distribute these governance tokens algorithmically with liquidity incentives. Liquidity providers will be motivated to "farm" the new token by contributing liquidity to the system.

While the COMP did not invent yield farming, it did help to popularize this method of token distribution. Other DeFi projects are already coming up with innovative strategies to bring liquidity into their ecosystems.

WHAT IS TVL (TOTAL VALUE LOCKED)?

So, what's a decent approach to assessing the state of the DeFi yield farming industry as a whole? Locked Total Value (TVL). It calculates the amount of cryptocurrency locked up in DeFi lending and other types of money markets.

TVL is, in some ways, the total liquidity in liquidity pools. It's a useful statistic for assessing the state of the DeFi and yield farming markets as a whole. It's also a useful indicator for comparing different DeFi protocols' "market share."

Defi Pulse is a nice spot to keep track of TVL. For example, you can see which platforms in DeFi have the most ETH or other crypto assets locked up. This can offer you a general idea of where yield farming stands right now.

The more value is locked, the more likely yield farming will occur. It's worth noting

that TVL can be measured in BTC, ETH, or USD. Each will offer a distinct viewpoint on the current situation of the DeFi money markets.

The notion of yield farming is inextricably tied to that of an automated market maker (AMM). In most cases, liquidity providers (LPs) and liquidity pools are involved. Let us look at how it functions.

Liquidity providers deposit funds into a liquidity pool. This pool is utilized to power a marketplace where users may borrow, lend, and trade tokens. Fees are charged for using these platforms, subsequently distributed to liquidity providers in proportion to their share of the liquidity pool. This is the cornerstone of an AMM's operation.

However, the implementations might be substantially diverse - not to mention that this is a novel technology. Therefore, it’s beyond doubt that new ways will emerge to improve the present implementations.

Aside from fees, issuing a new token might provide a further incentive to deposit funds to a liquidity pool. For instance, a token may

only be available for purchase in small amounts on the open market. However, it may be accumulated by supplying liquidity to a certain pool.

The protocol's unique implementation will determine the distribution rules. In the end, liquidity providers are compensated based on the liquidity they offer to the pool.

The funds deposited are often stablecoins pegged to the USD – while this is not a prerequisite. USDT, USDC, DAI, BUSD, and other stablecoins are among the most often utilized in DeFi. Some protocols will create tokens to represent the coins you have put in the system. If you deposit DAI into Compound, for instance, you will obtain cDAI, or Compound DAI. If you deposit ETH to Compound, you will get cETH.

As you can imagine, there are several layers of intricacy to this. For example, you could transfer your cDAI to a system that creates the third token to represent your cDAI and your DAI. The list goes on and on. These chains may get quite complicated to understand.

HOW ARE YIELD FARMING RETURNS CALCULATED?

In most cases, the predicted yield farming returns are calculated annualized. This calculates the potential returns over a year.

Some commonly used metrics are Annual Percentage Yield (APY) and Annual Percentage Rate (APR). The difference between them is because APY takes compounding into account, but APR doesn't . In this case, compounding refers to reinvesting profit to generate higher returns. However, be aware that APY and APR may be used interchangeably.

It is also important to keep in mind that these are merely projections and estimations. Even short-term gains might be difficult to foresee. Why? Yield farming is a highly competitive, fast-paced industry with rapidly changing incentives. If a yield farming approach works for a time, a lot of farmers will take advantage of it, and it will

eventually stop yielding high returns.

As APY and APR come from the legacy markets, DeFi may need to develop its measures for computing returns. Weekly or even daily predicted returns may make more sense due to the quick speed of DeFi.

WHAT IS COLLATERALIZATION IN DEFI?

Typically, if you are borrowing assets, you have to put up collateral to cover your loan. This effectively serves as debt insurance. How is this relevant? Depending on the protocol through which you are supplying your funds, you may need to watch your collateralization ratio.

If the value of your collateral falls below the protocol's necessary level, it may be liquidated on the open market. What can you do to save your company from going bankrupt? You can add more collateral.

To emphasize, each platform will have its

own set of restrictions, including a mandated collateralization percentage. Furthermore, they often employ the idea of over-collateralization. Borrowers must thus deposit more money than they wish to borrow. Why? To lessen the chance of a substantial quantity of collateral in the system being liquidated in a major market crash.

Let's imagine the loan process you're utilizing demands a 200 percent collateralization ratio. This implies you can borrow 50 dollars for every 100 dollars you put in. However, it is safer to offer more collateral than is necessary to limit liquidation risk further. As a result, many systems would utilize extremely high collateralization ratios (such as 750%) to protect the whole platform from liquidation risk.

THE RISKS OF YIELD FARMING

Yield farming isn’t easy. The most successful yield farming technique are quite

complex and should only recommended for advanced users. Yield farming is better suited to people with a lot of capital to deploy.

Yield farming isn’t as easy as it seems, and you'll most certainly lose money if you don't know what you are doing. We've just gone over how to liquidate your collateral. But what other risk should you be aware of?

Smart contracts is a risk of yield farming. Due to the nature of DeFi, many protocols are invented and developed by small teams with little resources. This increases the chances of smart contract bugs.

Even with bigger protocols verified by reputable auditing organizations, vulnerabilities and bugs are identified on a regular basis. Due to the immutable nature of blockchain, this might result in the loss of user funds. So, bear this in mind while securing your funds in a smart contract.

Furthermore, one of DeFi's greatest advantages is also one of its greatest disadvantages. It's all about the notion of reusability. Let's have a look at how it affects yield farming.

As previously indicated, DeFi protocols are permissionless and can connect with one another without difficulty. This means that each component of the DeFi ecosystem is significantly reliant on the others. When we say these programs are composable, we simply mean that they can work together.

WHY IS THIS A RISK?

If one of the building blocks fails to function properly, the entire ecosystem may suffer. This is one of the most significant risks to yield farmers and liquidity pools. You must trust not just the protocol into which you put your fund but all the others it may be relied upon.

YIELD FARMING PROTOCOLS AND PLATFORMS

How can you earn these yield farming rewards? There is no one-size-fits-all approach to yield farming. Yield farming

tactics might change by the hour. There will be restrictions and risk specific to each platform and approach. If you want to go into yield farming, you'll need to learn about decentralized liquidity protocols.

The fundamental concept has already been established. You put money into a smart contract and get money back in return. However, there is a wide range of implementations. As such, depositing your hard-earned money blindly and hoping for large returns is typically not a good idea. Instead, you must maintain control over your investment as a basic guideline of risk management.

So, what are the most often used platforms among yield farmers? This isn't a comprehensive list; rather, it's a collection of practices that are essential to high-yield farming.

COMPOUND FINANCE

Compound is a computer-based money market that enables users to borrow and lend money. Anyone with an Ethereum wallet may

contribute assets to Compound's liquidity pool and start earning rewards right now. The rates are modified algorithmically based on supply and demand.

One of the most important processes in the yield farming ecology is compound.

MakerDAO Maker is a decentralized credit platform that allows users to create DAI, a stablecoin algorithmically tied to the US dollar. Anyone can create a Maker Vault and store collateral assets like BAT, ETH, USDC, or WBTC in it. Then, they can generate DAI as a debt against the collateral they've secured. The stability fee, which MKR token holders decide, accrues interest over time on this debt.

Yield farmers can use Maker to mint DAI to utilize yield farming techniques.

Synthetix

Synthetix is a method for creating synthetic assets. Anyone can use Ethereum (ETH) or Synthetix Network Token (SNX) as collateral and mint synthetic assets against it. What is a

synthetic asset, exactly? Almost anything with a reliable pricing feed. This allows the Synthetix platform to accept nearly any financial asset.

In the future, Synthetix may allow various kinds of assets to be utilized for yield farming. Do you want to put your long-term gold bags to good use in your yield farming strategies? Synthetic assets might just be the way to go.

Aave

Aave is a decentralized lending and borrowing mechanism. Interest rates are modified based on current market circumstances using an algorithm. Lenders are compensated with "aTokens" in exchange for their funds. When you deposit these tokens, they instantly begin earning and compounding interest. Other advanced features, like flash loans, are also available through Aave.

Yield farmers rely significantly on Aave as a decentralized loan and borrowing system.

Uniswap

Uniswap is a decentralized exchange (DEX) system that enables trustless token exchanges. To form a market, liquidity providers deposit the equivalent of two tokens. Then, traders can trade against that liquidity pool. Liquidity providers get fees from trades that take place in their pool in exchange for providing liquidity.

Due to its frictionless nature, Uniswap has become one of the most popular platforms for trustless token swaps. This is useful for high-yield farming strategies.

CURVE FINANCE

Curve Finance is a decentralized trading technology that makes stablecoin swaps more efficient. Unlike other related protocols such as Uniswap, Curve enables users to make high-value stablecoin exchanges with little slippage.

Curve pools is an important element of the infrastructure of the yield farming ecosystem, as you might expect given the quantity of stablecoins.

Curve and Uniswap are two liquidity protocols that are comparable to Balancer. The main distinction is that custom token allocations in a liquidity pool are possible. Instead of the 50/50 allocation needed by Uniswap, this allows liquidity providers to establish unique Balancer pools. LPs earn fees for trades that occur in their liquidity pool, just like they do with Uniswap.

Balancer is a significant breakthrough for yield farming systems because of its flexibility when establishing a liquidity pool.

YEARN.FINANCE

Yearn.finance is a decentralized network of lending aggregators, including Aave, Compound, and other businesses. Its objective is to maximize token lending by discovering the most lucrative lending services using an algorithm. Upon deposit, funds are converted to yTokens, rebalanced regularly to optimize profit.

Farmers who want a system that

automatically determines the optimal methods for them would find Yearn.finance handy.

We looked at the newest craze in the cryptocurrency world: yield farming.

What else may this financial decentralization revolution bring? Unfortunately, it's hard to predict what new applications based on these present components may emerge in the future. Trustless liquidity protocols and other DeFi technologies, on the other hand, are unquestionably at the leading edge of finance, computer science, and cryptoeconomics.

Without a doubt, DeFi money markets can help to establish a more accessible and open financial system that anybody with an Internet connection may access.

CHAPTER 5:
RISK MANAGEMENT STRATEGIES FOR DEFI

The cryptocurrency economy has been completely altered by decentralized financing (DeFi). As a result, traders are interested in this segment because it is both a viable infrastructure project in the crypto business and a way to benefit from volatile token fluctuations.

At the same time, this volatility comes with significant risk. So let's take a look at a couple DeFi market tactics that might help mitigate these risks.

In 2021, overall funds invested in DeFi protocols are expected to increase from $20.1 billion in January to more than $106 billion as of the time of writing this book. Furthermore, the average daily trading volume on decentralized exchanges (DEX), a key component of decentralized finance, increased by 100%. It surpassed $2 billion in

Q1 2021, but stayed below $1 billion in Q4 2020.

Decentralized finance allows investors greater control over their money, thus investors have been drawn to it from the start. While decentralized finance began with loans and credit, it has now expanded to include at least five fully functional, linked segments: blockchain, loans and credit, decentralized exchanges (DEX), insurance, and decentralized derivative platforms.

Despite its relative stability, the DeFi sector is nevertheless a dangerous investment. The high volatility of numerous project tokens surely draws new investors. However, a high return also entails a high level of risk. In DeFi, there are several successful risk management strategies.

This reduces the chance of a single item losing a large amount of value in the portfolio. The market cap to total value locked (TVL) ratio may discover prospective tokens. Tokens with the lowest correlation of these values might be regarded cheap,

implying that there is reason to believe these assets will "catch up" and rise in value.

Traders may thus stabilize their portfolios for the medium and long term by purchasing these cryptocurrencies.

Choose projects on other blockchains, such as Ethereum or Binance Smart Chain, to further diversify your risks. Another alternative is to use negatively correlated tokens, which means that if one token is particularly volatile in day trading, you should balance it with a more stable asset. For example, the Uniswap (UNI) and Zilliqa (ZIL) tokens are rather stable assets.

It's even better to diversify your portfolio by adding an insurance project, because the need for capital protection in the decentralized financial ecosystem is only going to expand. Nexos Mutual, Cover, Etherisc, and Opyn are some of the projects that offer DeFi insurance. If an unpleasant event occurs unexpectedly, having these tokens in your financial portfolio will allow you to considerably mitigate the impact.

STRATEGY 2: STAKING

With stake-able tokens, you can also reduce the risks of value loss. Certain DeFi projects' cryptocurrencies allow users to benefit just by keeping them. Users of the international cryptocurrency exchange CEX.IO, for example, may earn up to 16% yearly interest on their tokens. And when the price of the currency rises, so does the reward from staking. For example, if a trader buys $100 in ZIL at $0.20 per coin and earns a 16 percent staking interest, they will receive around 580 ZIL at the end of the year. If the price has risen from $0.20 to $0.40 during that period, the trader will receive $232 when they cash out. The profit increases to 132 percent instead of 20 percent when the coin's price increases.

You can invest in stablecoins that enable staking, like as Dai, to safeguard your portfolio from large fluctuations. As a result, the passive income from your tokens may both boost your overall profit from investing in the DeFi sector and protect you from any losses if the market falls. Traders can also

restrict their losses to the amount of their staking reward potential. Traders can simply terminate their positions as soon as the losses on their holdings approach the profit they would gain from staking.

STRATEGY 3: HEDGING

When traders purchase an asset on an exchange, they instantly establish an opposing position in the underlying derivative in the classic hedging format. Such derivatives could be options, futures, contracts for difference. So, if a trader buys UNI on the exchange, they would sell a contract for difference for the same amount to hedge the risk of the asset losing value. Finally, if the value of UNI rises, the losses on the contract for difference will be reimbursed by the rise in the value of the cryptocurrency. If the price of UNI falls instead, the difference will be offset by the CFD's opposite position.

Specialized platforms offer derivative trading, and CEX.IO Broker is one of them. You can use it to profit from price swings in

cryptocurrencies without having to acquire them in person, as well as to hedge assets you own. A contract for difference allows traders to avoid the uncertainty, technical risks, and complexity associated with DeFi by participating indirectly. In addition, the platform uses automatic protection orders, such as stop-loss and take-profit, to manage risks.

CEX.IO has built a complete trading and capital management environment. It enables users to profit from DeFi market movements to the fullest extent possible and, if required, to employ measures to protect their capital properly.

Right away, users are presented with a full solution. First, there's portfolio diversification: there are a lot of DeFi currencies to invest in and trade. Second, staking, for example, provides a larger yield than the network's rewards: for example, ZIL staking pays 16 percent interest, whereas the network pays just 14.2 percent. Finally, at CEX.IO Broker, DeFi coins can be traded as derivatives.

CEX.IO Broker's versatility allows you to

establish up to ten accounts as part of a single user account and test alternative tactics independently of one another. A demo account is available for people who have never worked with the cryptocurrency market before. Traders can go to a genuine account and start trading the currency pairings they choose if they are confident in their abilities.

CEX.IO Broker is a margin trading platform that allows you to start trading with less money than you would with spot trading. This allows you to leverage your trading capital to grow your trading capital.

CHAPTER 6:
DEFI FLASH LOAN

A loan from strangers without the user having to sacrifice any of their money? It is possible, but only under one condition: the lender must be repaid in the same transaction that provided the funds. Doesn't that sound weird to you? What can you do with a loan that has to be repaid in a matter of seconds?

It turns out that smart contracts can be called in same transaction. So if you can make more money with your loan, you can return the money and pocket the earnings in the blink of an eye. But it's not that simple.

There's a lot of talk about recreating the traditional banking system on the blockchain in the cryptocurrency world. Skeptics may be disagree with the concept, yet there is some intriguing infrastructure being created in that area.

Indeed, the goal of DeFi (decentralized finance) is to create a permissionless, decentralized, and transparent financial

ecosystem based on blockchain networks. Cryptocurrency revealed that it could be done with money. Every day, systems like Bitcoin are used to send and receive money worldwide.

The next generation of DeFi technologies delivers an extra degree of protection. You may now take out crypto-backed loans, swap digital assets with confidence, and keep wealth in coins that match the price of fiat currencies.

In the next section, we'll look at one type of loan in particular — flash loans. These are extremely interesting features to the emerging decentralized finance stack, as we'll see shortly.

How do regular loans work?
Most of us are familiar with how a traditional loan works. Even so, it's worth repeating so that we can compare the two afterward.

UNSECURED LOANS

An unsecured loan does not require you to put up any collateral. In other words, you haven't agreed to provide the lender with any assets if you don't return the debt. For instance, let's say you want a $3,000 gold necklace with the Binance emblem on it. You don't have the money right now, but you will when you are paid next week.

You have a conversation with your pal Bob. You tell him how much you want this chain and how it will boost your trading game by at least 20%, and he agrees to lend you the funds. But, of course, on the condition that you return him as soon as your paycheck arrives.

Because Bob is a nice buddy, he didn't charge you a fee when he loaned you the $3,000. Of course, not everyone will be as generous – but why should they be? Bob has faith in your ability to repay him. Another person may not be familiar with you, so they are unsure if you will run off with their money.

Unsecured loans from institutions usually

need some form of credit check. To determine your ability to repay, they'll look at your credit history (credit score). They could assume you're quite reliable if they discover you've taken out multiple loans and paid them back on time. So let's lend them some money.

The institution then provides you the money, but there are conditions attached. The strings in question are interest rates. To acquire the money now, you must accept that you will have to repay a larger sum later.

You may be familiar with this model if you use a credit card. If you don't pay your bill for a certain amount of time, you will be charged interest until the whole balance is paid (and additional fees).

SECURED LOANS

A good credit score isn't always enough. Even if you've paid off all of your debts on schedule for decades, borrowing large sums of money merely based on your creditworthiness would be difficult. You'll need to put up collateral in these situations.

When you ask someone for a large loan,

they may be hesitant to accept it. Instead, they'll insist that you place some skin on the table to reduce their risk. If you don't pay back a loan on time, your asset - anything from jewelry to property – will be taken over by the lender. The assumption is that the lender will be able to recoup part of the value they've lost. That, in a word, is collateral.

Assume you now want a $50,000 automobile. Bob believes in you, but he refuses to offer you the money as an unsecured loan. Instead, he requests that you put up some collateral in the form of your jewelry collection. Bob can now take and sell your collection if you fail to repay the loan.

HOW DOES A FLASH LOAN WORK?

Because you don't provide any collateral, we'll term a flash loan an unsecured loan.

However, you do not need to pass a credit check or anything like. You just ask whether you may borrow $50,000 in ETH from the lender, and they say yes! You've got it! After that, you're free to go.

What's the catch? A flash loan has to be paid back in one transaction. That's not particularly intuitive, but that's just because we're accustomed to a transaction structure in which funds are transferred from one user to another. Like wWhen you pay for products or services, or when you deposit tokens in exchange, for example.

If you know anything about Ethereum, you'll know that it's a very versatile platform, which is why some people refer to it as "programmable money." So, for example, you may think of your transaction "program" for a flash loan as consisting of three parts: receiving the loan, doing something with the money, and repaying the loan. And it all happens in the blink of an eye!

Let's simply put it down to blockchain technology's brilliance. The transaction is sent to the network, and those funds are temporarily lent to you. In the second part of

the transaction, you can do some stuff. Whatever you wish to do, just make sure the cash is returned in time for phase three. If they aren't, the network will reject the transaction, and the lender will receive their money back. They've always held the funds in terms of the blockchain.

That explains why you don't have to provide collateral to the lender. Instead, the repayment contract is enforced by code.

What's the point, though?

You probably think why you'd take out a payday loan at this point. You can't exactly buy a Lambo if all of this happens in one transaction, can you?

That isn't the goal here, though. Let's look at the second part of the transaction when you do something with the loan. The goal is to put the money into a smart contract (or a chain of smart contracts), make a profit, and then return the money to the original lender at the end of the transaction. The objective of flash loans, as you can see, is to profit.

There are a few scenarios in which this may be useful. Meanwhile, you can't do anything off-chain, but you may use DeFi protocols to generate additional money with your loan. Arbitrage is one of the most common uses, where you take advantage of price differences between different trading venues.

Assume that a token costs $10 on DEX A but $10.50 on DEX B. Buying ten tokens on DEX A and reselling them on DEX B would profit $5, assuming no fees. This type of activity isn't going to get you a private island any time soon, but you can see how trading high volumes may help you make some money. If you bought 10,000 tokens for $100,000 and sold them for $105,000, you'd make a $5,000 profit.

You can take advantage of arbitrage possibilities like these on decentralized exchanges if you get a flash loan (through the Aave protocol, for example). Here's an illustration of what it may look like:

Obtain a $10,000 loan

Use the loan to purchase DEX A tokens.

On DEX B, resell the tokens.

Payback the loan (plus any interest)

Keep the profit

Everything is done in one transaction! In reality, however, transaction costs, along with intense competition, interest rates, and slippage, make arbitrage profits razor-thin. To make the activity lucrative, you'd have to figure out how to take advantage of pricing discrepancies. You won't have much luck competing against thousands of other people trying to achieve the same thing.

FLASH LOAN ATTACKS

Cryptocurrency, and by extension, DeFi, is a field that is still in its infancy. However, when so much money is on the line, it's just a matter of time until vulnerabilities are revealed. We witnessed an illustration of this with the infamous 2017 DAO breach on Ethereum. Since then, 51 percent of procedures have been targeted for financial benefit.

In 2020, two high-profile flash loan assaults resulted in the theft of about $1,000,000 in value. Both attacks followed a similar pattern.

The first flash loan attack

In the first instance, the borrower took out an ether flash loan on dYdX (a lending DApp). The loan was then separated and delivered to Fulcrum and Compound to two other lending platforms.

The attacker utilized a part of the loan to short ETH against wrapped Bitcoin (WBTC) on Fulcrum (based on the bZx protocol), forcing Fulcrum to buy WBTC. This information was sent to Kyber, a DeFi protocol that completed the order on Uniswap, a major Ethereum-based DEX. However, because to Uniswap's lack of liquidity, the price of WBTC skyrocketed, implying that Fulcrum overpaid for the WBTC it bought.

At the same time, the attacker used the remainder of the dYdX loan to take out a WBTC Compound loan. Then, with the price of WBTC surging, they swapped the borrowed WBTC on Uniswap and profited handsomely. Finally, they paid back their dYdX debt and kept the remaining ETH.

It appears to be a significant effort, and it

may be tough to follow. The basic conclusion is that the attacker manipulated the markets using five separate DeFi protocols. All of this happened when it took for the original flash loan to be confirmed, which is incredible.

Have you identified where the problem was? It was part of Fulcrum's bZx protocol. The attacker deceived the market into believing that WBTC was worth a lot more than it was by manipulating the market.

The second flash loan attack

It was a bad week for bZx. It was attacked again only a few days later. The criminal obtained a short-term loan and turned a portion of it into a stablecoin (sUSD). Stablecoins, as you surely know, track the price of fiat currencies. After all, it has USD in its name.

Smart contracts, despite their name, aren't really clever. They have no idea how much stablecoins should cost. As a result, when the attacker placed a large order to buy sUSD (with borrowed ETH), the price on Kyber

doubled.

Instead of $1, bZx thought sUSD was worth $2. Because their $1 coin had the purchasing power of $2, the attacker took out a significantly larger ETH loan than would typically be permitted on bZx. Finally, the attacker paid back the first flash loan and fled with the rest.

ARE FLASH LOANS RISKY?

Right or wrong, this attack vector is amazing, if only to highlight how far attackers may go. It's simple to look back at their methods and conclude that bZx should have gotten its data from a different price oracle. However, the fact is that this type of theft is cheap: the attacker doesn't have to put much money into it. Therefore, they couldn't pull it off since there was no financial incentive.

Individuals or groups wishing to influence the market in the past need massive sums of cryptocurrencies. However, with flash loans,

anyone may transform into a whale for a few moments. And, as we've seen, it just takes a few seconds to make off with hundreds of thousands of dollars worth of ether.

On the other hand, the rest of space will benefit from the two attacks. Is it likely that someone else will carry off a similar stunt now that everyone is aware of it? Perhaps. Oracles have several flaws, as seen in the second attack, and they will take time and effort to be free of such vulnerabilities.

Overall, there isn't a fault with flash loans; the vulnerabilities that were exploited were in other protocols, and the flash loans were just used to fund the attack. Given the minimal risks for both borrowers and lenders, this type of DeFi financing might have a lot of intriguing applications in the future.

Flash loans are new to the DeFi space, but they've already left an indelible mark. Uncollateralized loans, which are only enforced by code, bring up a whole new universe of possibilities in a new financial system.

Although the number of applications is limited, flash loans have established the groundwork for innovative new decentralized financial applications.

CHAPTER 7:
DEFI OPTION TRADING

In traditional markets, options are a well-known sort of derivative. They are a representation of a contract between a buyer and a seller.

Contracts come in a variety of formats and are used for a various purposes. The use of options to hedge is the one that Pods is most interested in.

DeFi Options are contract rules that can be transferred from traditional finance to a basic ERC20 within the DeFi ecosystem (Decentralized Options). However, many details must be handled and altered in order to get there.

The inherent composability of DeFi Options, as well as its reach, are its key benefits. DeFi options are available to anyone in the globe, and they may be linked to any asset that has an ERC20 representation.

As a result, DeFi options are an important step toward democratizing access to complex

instruments (such as options), which may assist boost portfolio stability and returns. Users can now access such content in a game-changing fashion for the first time in history.

Disclaimer: DeFi is a highly experimental technology with significant risks that should not be overlooked. When utilizing DeFi protocols, be mindful of this and never give funds you are not prepared to lose.

UNDERSTANDING DEFI OPTIONS

What are options?

Options are one of the most frequent forms of derivatives in conventional finance, and they are a contract between the option buyer and seller. At the same time as it represents an obligation for the option seller to purchase or sell the asset from/to the buyer, an options contract gives the buyer the chance and choice to buy or sell an asset at a pre-determined price (called the strike price).

It's akin to a financial instrument having pre-determined criteria, such as "if this, then

that."

What are calls and puts?

Calls and puts are the two forms of options. Each one denotes a specific action that will be guaranteed to occur in the future if a certain condition is satisfied.

The buyer of a call option has the right to buy the underlying asset at the strike price, whereas the buyer of a put option can sell the underlying asset at the strike price.

What are American and European options?

The buyer's contract can be exercised in two ways: American or European.

The buyer can exercise his right to purchase or sell until the contract expires with American options. When the option's exercising type is European, on the other hand, the contract buyer can only exercise his right after the option's expiration date.

Users can only exercise their DeFi Options during the exercise window in our implementation.

What are physical and cash settlements?

An option can be exercised in one of two ways: cash or physical settlement.

The cash settlement occurs when both parties agree that just the counterparts' payout disparity will be offset. The principal result is that the owner of the underlying asset will not change. Let's look at an example to see what I mean:

Adam offers Sam an American put option with ETH as the underlying and a $1500 strike price. When the price of ETH falls below $1000, Sam chooses to exercise the option. Instead of delivering 1 ETH to Adam, Sam receives the strike price minus the spot price (1500–1000), which equals $500.

As the name implies, the physical settlement occurs when the underlying asset in custody is sent from one counterpart to another when the option is exercised. In this situation, Adam would have paid $1500 to Sam, and Sam would have sent 1 ETH to Adam, as in the previous example.

Physical settlement is currently used in our DeFi Options. This implies that every time a user wants to exercise their options, they must submit the complete value of the

underlying asset to the contract to obtain the contract's collateral.

What is the premium?

The premium is the market price of the option. It indicates the option seller's remuneration for writing and selling the contract. It may also be thought of as the expense incurred by the option buyer in hedging his present position. The fee is paid in advance.

There are several ways to price the option, and in Pods' protocol, the Black-Scholes model was adopted for European pricing options.

What is the strike price?

The strike price is an option contract element. The price at which the underlying asset will be exchanged if the option is exercised.

In the case of call options, the strike price is when the option buyer will pay to acquire the underlying asset from the option seller. For put options, the strike price is when the option buyer will sell the underlying asset to

the option seller.

What is the underlying asset?

The underlying asset, generally the volatile asset, is being bargained to be bought or sold if the option is exercised.

When we mention that the underlying option is ETH, we mean that if the price falls below the strike price and the buyer exercises his right to sell the option, the ETH is the asset that will be sold to the option seller at the strike price.

The same reasoning applies to call options, except that instead of being sold, it will be purchased at the strike price specified by the option buyer.

What is the collateral asset?

In the case of Pods, the collateral asset is the item that the option seller must lock in the contract to ensure that the transaction is honored once the option buyer decides to sell or purchase.

The collateral asset in the instance of an ETH: USDC put option would be the second asset since the option buyer would sell the

ETH for the agreed-upon price in USDC.

The collateral asset in the case of call options on ETH: USDC would be ETH since the option buyer would exchange his USDC for the option seller's ETH.

When is it worth it to exercise an option?

Assume Danna has purchased a European put option on ETH: USDC with a strike price of 1800 USDC that will expire in a matter of hours. How can she determine if exercising the option will be lucrative for her or not?

An option might be out-of-the-money, in-the-money, or at-the-money in the market.

Let's have a look at what they signify.

In-the-money

This is a circumstance where the option holder will profit by exercising the option.

When it comes to putting options, we can state that if the strike price is greater than the spot price (market price of the asset), the option buyer will profit.

Condition for in-the-money options at expiration.

That indicates that if she exercises her

option, she will sell the asset to the option seller at a greater price than the market, as agreed. So, if the strike price of the ETH is presently 1000 USDC, Danna should exercise her option in order to make an 800 USDC profit.

The result of executing in-the-money options per option exercised.

Long Put Profit/Loss Graph — It can be seen that with put options, the loss is limited to the premium, and the profit is restricted/limited till the underlying asset's spot price falls to zero.

Out-of-the-money

When exercising an option is not lucrative for the option buyer, the option buyer may lose money.

Let's look at Danna's example again, but this time with the spot price at 2000 USDC. Why would she sell her ETH for less than what the market is willing to pay for it? If she executes her option in this situation, she will sell her ETH for 1800 USDC, losing a possible profit of 200 USDC.

At-the-money

This refers to when the strike price is equal to the spot price.

Condition for at-the-money options at expiration.

In this instance, the option holder should primarily assess whether or not to maintain the underlying asset, which in Danna's case is ETH.

Graph of Long Call Profit/Loss — As the price of the underlying asset rises, it is clear that the loss is limited to the premium, and the profit is infinite for call options.

Trading and Pricing

One of the most significant distinctions between traditional and DeFi options is where they may be traded and how they are actively valued.

Options are generally traded within orders books in traditional markets, and markets include a large network of market makers who regularly price and place orders for various options markets.

The price and trading venue of our DeFi

options are handled differently by Pods Protocol. Options are represented as ERC20 tokens in our protocol and exchanged in our Options-Specific AMM.

The Automated Market Maker, or AMM, is how the DeFi space manages buy and sell orders to reposition order books. The protocol can ensure liquidity for trades at any moment by creating liquidity pools for options and stable coins. Fees from a trading activity are paid to liquidity providers.

The Options AMM provides single-sided liquidity while pricing options algorithmically using market conditions and Black Scholes.

To calculate a derivative price, general derivatives pricing formulas employ one or more market variables (such as the spot price of the underlying asset). According to Black Scholes, external factors are integrated with calculated features (such as time to expiry and risk-free rate) and internal elements (such as implied volatility) in our model's price discovery process to generate the current premium. In addition, it accounts for a programmed update on the implied volatility

of each option based on the pool's circumstances.

The protocol allows for numerous unexpected flows due to the options AMM features.

For example, one of them uses options tokens to provide liquidity to the pool while also generating fees. As a result, the hedge purchase cost is reduced, and options tokens get wiser within themselves.

COUNTERPARTY RISK AND COLLATERALIZATION

At the moment, our protocol necessitates complete collateralization. Therefore, there is no counterparty risk as a result of this. Counterparty risk is a well-known risk in conventional finance that refers to the danger of the other party defaulting on the contract. For example, it is the seller in the case of option contracts.

For example, in the case of a put option, the seller must lock in the collateral asset (the

stablecoins). Then, when the option is purchased, the buyer pays the premium up front, and when it is chosen to be exercised, the buyer must give the Pods option token as well as the underlying asset (let's say ETH) to our contract. After then, the smart contract will send each counterpart the asset that was agreed upon in the option contract. Because the smart collateral ensures that the seller receives the underlying and the buyer receives the collateral asset, the transaction was completely trustless.

BEWARE OF RISKS

DeFi is a very experimental technology that comes with several drawbacks. Be aware of the risks and never invest or allocate assets in DeFi that you are not willing to lose.

Why DeFi options are game-changing

DeFi options are:

Composable

Collect bits of different protocols (such as Aave in our example) to make its use more efficient.

It is easy to integrate

Because DeFi options are represented as ERC20 tokens, it is possible to build on top of them.

Trustless

There's no need for middlemen. The task will be done through smart contracts.

Prices are changed using an algorithm.

Trading is also accessible around the clock, seven days a week.

Anyone on the planet has access to it.

Hedging solutions can be accessed without being an options trader, a private banking client, or an institution.

And it may now be traded like never before, with no boundaries and no limits.

CHAPTER 8:
TOP TEN DEFI PROJECTS TO WATCH IN 2022

Consumers and billionaire investors alike notice the flourishing peer-to-peer crypto network, which is becoming a typical feature of a broad crypto portfolio. It sounds intriguing.
DeFi focuses on offering the ease of peer-to-peer transactions to investors in an increasingly digitized financial environment. DeFi platforms use smart contracts, which are digital contracts that exist on the blockchain, to provide a place for lending, borrowing, saving, trading, and earning interest-free of the normal bureaucracy and minutiae.

The DeFi network's objectives are simple:

Get rid of the paperwork.
Smart contracts are processed digitally using blockchain technology, so there is no paperwork and no waiting for transactions to

clear at the bank.

Remove the middlemen.
The blockchain eliminates the need for human intermediaries by automating the contract process, removing the need for outside mediators such as attorneys to process agreements between parties.

Increase the tempo.
DeFi makes doing business more speedy and fluid from the beginning to the end by eliminating the need to rely on several parties or cope with transaction wait times.

Equalize the opportunity
Many of the financial opportunities DeFi platforms are often only available to big financial entities such as hedge funds and banks. DeFi is bridging the gap between the individual and the financial oligarchy.

THE TOP 10 DEFI PICKS FOR 2022

The world of DeFi is growing by the day, but

there are a few projects we're looking forward to in 2022.

1. Aave
Aave (AAVE), formerly known as ETHLend and launched in 2017, is one of the first DeFi platforms on the market. Aave is a decentralized liquidity platform that allows users to borrow assets while also receiving incentives for their deposits. It connects lenders and borrowers in a decentralized environment, allowing for a fair lending system. Staking the AAVE coin on the Aave DeFi platform can also earn you points and discounts.

2. Avalanche
Avalanche (AVAX) bills itself as the "fastest smart contracts platform in the blockchain industry" while also cementing its position in the growing NFT space and establishing connections with other blockchain initiatives like Chainlink (LINK), the Graph (GRT), and SushiSwap (SUSHI). Furthermore, due to its capacity to enable cheaper transactions a fraction of the time, the project sees itself as a

direct competitor to Ethereum. In addition, avalanche just received $230 million in financing to assist its DeFi initiatives, making it an attractive place for DeFi projects to establish itself.

3. Cardano

Because of its excellent energy utilization data and proof of stake protocol, Cardano (ADA), one of the world's largest blockchain projects, is commonly referred to as the "Green Blockchain." In addition, Cardano revealed recently that its recent $100 million investment in decentralized finance, NFTs, and blockchain education is boosting the ecosystem.

4. Chainlink

Chainlink (LINK) is a decentralized oracle service that uses oracle technology to connect smart contracts with facts from the real world. In addition, chainlink has announced the creation of a Programmable Token Bridge, which enables new DeFi blockchain connectivity. This will enable DeFi expand appropriately and avoid the bottlenecks that

plagued prior blockchain projects.

5. Polkadot

The Polkadot relay chain supports an internet where separate blockchains may communicate information and transactions in a trustless manner. As a result, polkadot, and applications that use it, will be quicker and more scalable than Ethereum's present offering. In addition, it helps the network's overall growth and potential by serving as a foundation for DeFi projects to build on.

6. Terra Luna

Terra Luna (LUNA) is a smart contract platform for the future generation that mixes decentralized finance with the concept of stablecoins. Its platform offers stablecoins, which provide instant payments, cheap costs, and seamless cross-border trade. Luna serves as the ephemeral backbone that checks Terra, its stablecoin twin. When you combine the growing popularity of DeFi with the serious attention stablecoins are receiving from both consumers and governments, LUNA is one to keep an eye on.

7. Polygon

Polygon (MATIC) is a decentralized application ecosystem and Ethereum Layer 2 scaling solution that is widely used and expanding. It has interoperability, scalability, and security characteristics. Polygon essentially adds a few traffic lanes to Ethereum's heavily used Layer 1 freeway. The Ethereum blockchain now houses the bulk of DeFi projects. So, lower Ethereum congestion means quicker speeds and greater benefits for the DeFi ecosystem.

8. Solana

With its proof of history idea, Solana (SOL) is redefining consensus procedures (how platforms validate transitions - "yes, that trade happened."). This implies that all transactions are confirmed accurate by a time stamp on the blockchain, rather than mining or staking on the platform to validate them. Solana is Ethereum's major rival because it offers rapid transaction speeds while being a Layer 1 platform, which means it doesn't require the help of another platform to

complete these transactions.

9. Synthetix

Synthetix (SNX), a fast-expanding decentralized exchange, allows crypto to be exchanged for equities, currencies, commodities, and other assets that are still controlled by Wall Street, London, and Hong Kong's traditional financial institutions. Its main distinguishing feature is that it allows users to create their synthetic assets, known as "synths," which may be used to trade fiat, derivatives, cryptocurrencies, and other asset classes. Examples include euros, USD, Bitcoin, Tesla stocks, gold, etc. . This means that users may bet on the price of an asset without really holding it, making Synthetix one of the most popular DeFi products on the market.

10. Uniswap

Uniswap (UNI) is a decentralized exchange that allows users to buy and provide liquidity straight from crypto wallets at a minimal cost. Its AMM (automatic market maker) offers enough liquidity on its platform, allowing for

high traffic and quick trading. Uniswap's native token, UNI, may be available on investing platforms outside the DeFi network.

CHAPTER 9:

HOW DEFI IS REVOLUTIONIZING THE FINANCIAL INDUSTRY

Individuals and organizations are already beginning to investigate decentralized finance due to the significant increase in cryptocurrency investments (DeFi). So let us look at this growing market.

As you already know, Decentralised Finance (DeFi) is based on the peer-to-peer idea, which eliminates the need for middlemen. DeFi democratizes finance and substitutes conventional centralized institutions like banks, brokerages, and NBFCs by relying on peer-to-peer philosophy and self-executing "smart contracts" on the blockchain network (Non-Banking Financial Companies).

DeFi is a blockchain-based smart contract platform that requires no human interaction. This decreases the likelihood of mistakes

while also increasing efficiency.

A DeFi protocol makes use of smart contracts, which are computer programs that operate on the blockchain network. The source code for most DeFi projects is open to everyone in the world to see and audit. Users of the DeFi protocol may use their wallets to connect with these smart contracts and transfer cash, borrow, lend, or use any of the DeFi's services.

DeFi projects on the blockchain network offer quick and affordable access to finance, as well as efficient lending and borrowing, as well as decentralized crypto and synthetic stock markets. Some DeFi projects, such as Uniswap, have evolved into extremely efficient worldwide financial markets that cater to both people and institutions due to their decentralized character. DeFi also eliminates intermediaries, allowing for more efficient and low-cost financial services.

Anyone with an internet connection may observe, audit, and see all of DeFi's transactions because it runs on a blockchain network and is typically open-source. In addition, blockchain data is immutable,

which cannot be modified once it is on the blockchain network. This results in a code-based, trustless financial system. One such example is a Decentralised Exchange (DEX).

DEX'S GROWING POPULARITY

Decentralized Finance (DeFi) has succeeded to bring about a significant transformation in the financial industry in recent years. As a result, transactions on DeFi and Decentralized Exchanges (DEXs) on the blockchain network have exploded in popularity, with disintermediation as the key idea.

DEXs can have deep liquidity by offering asset-specific liquidity pools instead of order books on centralized exchanges, thanks to a technique known as "Automated Market Makers" (AMM). Users can provide liquidity to these liquidity pools and earn significant passive incomes through trading fees.

Unlike centralized financial services like traditional banking, DeFi firms don't need

intermediaries or custodians to perform crypto asset purchasing, selling, lending, and borrowing. Instead, DEX users can engage directly with the blockchain system to make transactions or get services. Users may keep their cryptocurrency ownership and have total control over their assets in their wallets, thanks to the DEX's non-custodial design. DeFi and DEXs utilize "smart contracts," self-regulating computer code that runs on a blockchain network.

The Ethereum blockchain network is used for most DeFi projects since it is the first to provide an infrastructure that allows developers to create such decentralized apps (DApps). However, other blockchain networks such as Solana, Cardano, Polkadot, and others are in development and are gradually making the DeFi field more competitive.

DEXs and DeFi projects are steadily becoming a profitable choice for SMEs and startups in the FinTech field throughout the world, despite their complexity and steep learning curve. DeFi and DEXs across the globe provide easier access to cheaper credit,

easy lending and borrowing operations. They are transforming the face of traditional financial institutions, thanks to reduced entry hurdles compared to traditional finance.

EXTENDING TO THE INSURANCE INDUSTRY

The insurance business has been one of the most influential DeFi use cases. While the current insurance system is hampered by complex paperwork, audit systems, and bureaucratic claim procedures, smart contracts can make it far more efficient. Insurance coverage for cryptocurrency on the blockchain network is also available through DeFi startups such as Nexus Mutual, Opyn, and VouchForMe. Inflationary pressures and falling interest rates in fiat currencies have made it difficult for middle-class individuals throughout the world to save and invest. DeFi projects like Dharma, PoolTogether, and Argent have provided risk-free savings and investing alternatives with no-loss saving mechanisms.

Since it supersede traditional banking systems, borrowing and lending protocols have become one of DeFi's most important uses. Compound and PoolTogether are two DeFi projects that focus on the peer-to-peer (P2P) borrowing and lending sector. Transactions have become quicker thanks to distributed ledger technology (DLT), particularly in the case of cross-border payments, where the cost of transactions and delays generated bottlenecks for both senders and recipients. DLT has democratized banking by allowing anybody to take out loans and even lend fiat against cryptocurrency collateral. In addition, the DeFi ecosystem has allowed tokenization, which allows for the creation, issuance, and management of digital assets on a blockchain network. This has lead to the emergence of a new type of economy. For instance, digital assets are being tokenized in the form of NFTs to create, store, or trade value. With the rise in DeFi adoption, more DeFi-based prediction services have emerged, allowing users to exchange value by predicting the result of future events.

REVOLUTIONIZING THE GAMING INDUSTRY

DeFi allows people to bet on world events using platforms like Augur. DeFi technologies have also found a large market in games and eSports. Game developers may now use deFi tokens for in-app purchases and loot box features. By allowing players to exchange unique tokens and allowing developers to establish their ecosystems and economies, collectible and trading games have become popular blockchain genres.

The aforementioned benefits of utilizing DeFi account for its rapid rise in recent years, with a market valuation of $128 billion. While decentralized exchanges provide numerous ground-breaking benefits, they also come with certain drawbacks. Unlike traditional banking, DeFi investments are not subject to regulation or insurance. Other crypto assets are used to secure DeFi loans. However, in the event of a downturn, the value of these assets may plummet, and they may even be liquidated. In addition, centralized systems may be used to recover

lost data and account information such as passwords. If the seed phrase is lost when trading on DEXs, the user information and hence the funds may be irreversibly lost. Therefore, users must first assess the apps they're considering to verify they're secure and well-tested, as with any investment decision.

To sum it up, while centralized systems continue to dominate market activity because to user-friendly interfaces, security, regulatory control, and insurance options, the rise of DeFi has made room for decentralized crypto exchange protocols. DeFi will have to improve its capabilities and become more robust in terms of security and scalability as more individuals enter the digital asset industry. This has already begun with the upgrade of the Ethereum network to Ethereum 2.0. DEX will very certainly make cryptocurrency trading more fair, private, and independent in the near future, hence speeding up the evolution of decentralized finance and its supporting systems. The most recent developments and trends in cryptocurrency investing appear to bode well

for Decentralized Exchanges.

CHAPTER 10:

MANAGING RISKS IN DEFI TO CONTINUE EXPONENTIAL GROWTH

The DeFi ecosystem has evolved at a breakneck pace in the last few months. We've witnessed everything from overnight successes to abrupt crashes, all of which were fuelled by speculative capital flow and technological problems. Many people are comparing DeFi marketplaces to the 2017 ICO craze. This piece is not intended to point out unsuccessful schemes or criticize yield farmers; rather, it is intended to propose ways to help the innovators who are working hard to construct the financial future. This section will outline the elements of a risk mitigation approach for people seeking to live securely in the decentralized digital world.

Every breakthrough technology has a group of innovative creators, ardent supporters, eager adopters, and optimistic spectators

hoping for it to succeed and realize the goal. Occasionally, the path is easy with few stumbling blocks. However, the approach frequently brings unique obstacles that necessitate a blend of technology and support ecosystem development.

DeFi and cryptocurrency apps have grown in popularity, but they still lack full legality and technological maturity. However, regulatory bodies are becoming increasingly aware of their potential. For example, we've seen US authorities allow banks to hold custody of digital assets, and the Financial Conduct Authority of the United Kingdom just granted DeFi platforms an Electronic Money Institution license.

Many security assessment firms have joined the firm to make the solutions safer. In addition, new crypto-native insurance mechanisms have evolved to decentralize and automate underwriting. Even yet, there is a higher-than-normal risk for both consumers and investors when dealing with digital assets. The technological and financial models' intricacies make the journey even more difficult. This requires a DeFi risk

management framework that provides a holistic picture of the risk environment and risk mitigation strategies.

Technical Risks

To begin conceptualizing this paradigm, it's necessary first to comprehend the risks associated with DeFi. The technological challenges of constructing decentralized financial products are the key source of risk. When it comes to hacking smart contracts, the most exploited areas have been mistakes and defects in the code and front-running on transactions. In addition, there is no support number for users to call to reverse transactions when all trust is delegated to the code.

Quantstamp, ConsenSys Diligence, and OpenZeppelin are security auditing organizations specializing in smart-contract security audits to minimize risk. Finding tools to hold audit companies more accountable for the security of their audits is an intriguing idea developing in the DeFi ecosystem. For example, providing them with ongoing rewards by giving them stakes in their audit systems, such as governance tokens. In

addition, DeFi Score is a useful tool for determining the magnitude of the risks associated with particular platforms. However, keeping up with the influx of new initiatives in the field necessitates the development of more community-driven platforms that can assess risks more quickly than centralized scoring.

Financial Risks

The second area of risk is linked to DeFi solutions' financial complications.

Because of the supply and demand imbalance that impacts pricing, digital assets are equally exposed to traditional financial risks. The incentive structure of several of the platforms that give the front doors to the DeFi world, such as multi-collateral stablecoins that are affected by market volatility, is closely linked to this. Another financial risk stems from oracles providing erroneous data due to a lack of liquidity and a massive price drop on a centralized exchange that serves as an oracle.

Every week, we've seen new platforms start with millions of dollars in locked capital but no security audit or review of their financial

models. New DeFi experiments like yield farming, according to Vitalik Buterin, are unsustainable because platforms will not continue to 'print coins.' Moreover, most of these platforms are difficult to explain to ordinary retail investors who are only interested in the benefits of risking their funds and are unaware of the risks.

Regulatory Risks

Another approach to looking at DeFi threats is to consider where you are globally and what sort of technological and financial tools you have access to. To avoid the consequences of many governments' regulatory stances during the 2017 crypto and ICO boom, blockchain ecosystem players must work closely with regulatory authorities to keep them up to date on the latest developments and informed on the various steps people are taking to secure the industry. According to Jason Somensaato of 0xproject, self-regulatory methods will require collaboration by identifying projects with best practices in security, financial design, and legal framework.

DeFi, despite all of the risks in its current

form, can be a godsend in emerging nations where native currencies and government policies are distrusted. Participating in a global financial movement may be a better option in some locations. Crypto-assets offer protection against turbulent geopolitical systems, but they must be treated with prudence due to the considerable risks involved.

Apart from the technological, financial, and legal risks, some human faults or flaws pose a significant risk, such as losing your wallet, private keys, or losing access to your soft wallets due to SIM changing. These challenges are more broadly connected to cryptocurrency management than to the expanding DeFi business, but they must be acknowledged when discussing DeFi risks.

DeFi Insurance for Risk Mitigation

Insurance has a significant part in technological advancement, even though it is rarely mentioned. In many industries, the larger concept of insurance has been critical in driving innovation. For example, in the real estate market, insurance indirectly makes properties safer. Insurance inspections in the

United States have been seen to make insured properties substantially more secure against hurricanes. This is because insurance inspectors assess the quality of building to prevent underwriter losses in the event of a disaster. These basic concepts can be applied to the crypto realm, and insurance might help mitigate some of the financial and technological risks associated with DeFi.

Companies like Opyn and Nexus Mutual are pioneering innovative insurance models in DeFi. Protective Put Options, which give incentives to those willing to sell protection, is one of the techniques that Opyn advocates against volatility and flash crashes. Many novel concepts, such as insurance markets, volatility oracles, hedging one crypto-asset with another, financial payoffs, and so on, may be implemented thanks to the flexibility of the options.

Nexus Mutual offers smart contract insurance and enlists the help of the community to underwrite claims. The financial innovation is that when more individuals purchase the insurance, the native token gets more value, yet there is a minimal

breach of the platform contract. In addition, external investors and auditors can be added to the mix to help further secure the platforms, insurance purchasers, and underwriters.

Risk Management with Conflux Network

The most important aspect for today's developers and entrepreneurs is to create future-proof and secure apps. To be future-ready, you must build on a network that can grow for retail financial use cases. Conflux Network is developing the protocol as a next-generation blockchain to solve some of the security flaws plaguing previous blockchains. The blockchain uses a proprietary PoW algorithm and has a built-in Staking Contract to provide miners with additional incentives to keep the network secure. In addition, conflux virtual machine provides Re-entrance Protection, which assures that an attack is impossible while calling a contract by invalidating codes to be executed in re-entrance calls.

CHAPTER 11:
HOW TO SPOT SCAMS IN DEFI

Scammers are discovering new methods to take advantage of the exciting financial developments made available by DeFi as more people get interested in them.

DeFi is an unforgiving environment, with few options for recovering cash or holding malicious actors responsible. However, if you know what to look for, you can reduce the risks of being taken advantage of by scammers.

Decentralized Finance (DeFi) is brimming with fresh ideas. Unfortunately, it seems like new DeFi projects are emerging by the minute, and it’s extremely difficult to keep up, let alone DYOR.

We tend to discuss how blockchains are permissionless, which is another way of saying "public." No authorization is required to use, develop, or create projects. While cryptocurrencies such as Bitcoin have

inherent worth, they also have disadvantages.

Anybody can launch scammy or deceptive initiatives, and there is nothing to stop them. But, technically, nothing - as a community, we can assist each other detect certain common characteristics that distinguish genuine innovations from phony gimmicks.

So, what should you watch out for?

What is the goal of the project?

This may seem to be a ridiculous question, especially if you're new to DeFi. The vast majority of crypto assets, on the other hand, do not add anything new to the table. Sure, there's plenty of interesting innovation - after all, that is why we are all here! However, a lot of new ventures aim to cash in on the interest in DeFi without even trying to innovate.

So, one question you could have is whether or not this initiative tries to accomplish anything unique and original. Is their effort contributing to the new digital economy? What sets it apart from the competitors? Is there a unique value proposition?

These are basic, common-sense questions.

However, by simply asking them, you can immediately eliminate a significant portion of scams.

Development activity

Developer activity is another thing to consider. Again, DeFi is inextricably linked to the open-source ethos.

So, if you have a basic understanding of coding, you may examine the code for yourself. The beauty of open-source is that if a project generates enough interest, others will definitely contribute. This will likely reveal whether or not the project is malicious.

You can also take a look at the development activities. For example, is new code being released regularly by the developers? While this measure may be manipulated, it can still determine whether the developers are serious or just looking for a quick buck.

Smart contract audits

The term "audit" is frequently used when it comes to smart contracts and DeFi. Audits are done to guarantee that the code is secure. Although audits are an essential element of smart contract development, many developers

launch their code without them. The risk of utilizing these contracts might be greatly increased due to this.

It's important to remember that audits are expensive. Therefore , genuine projects will generally afford audits, but fraudulent projects cannot.

So, if a project has completed an audit, does it mean it's completely safe to use? Unfortunately, the answer is no. Audits are necessary, but no audit can provide perfect security. Always consider the dangers of investing in a smart contract.

Are the founders anonymous?

The cryptographic environment is firmly entrenched with the anonymity (and pseudonymity) that the Internet allows. After all, we'll most likely never know who Satoshi Nakamoto was, the person (or group) who invented the first cryptocurrency.

On the other hand, teams with anonymous founders represent an extra risk to consider. There's a significant risk that they won't be held accountable if they become con artists.

Even while on-chain analytical techniques advance, it's still different if the founders' reputation is related to their real-life identities.

It is essential to remember that not all projects conducted by anonymous teams are scams. There are several examples of legitimate projects with anonymous teams. However, when assessing projects, you should still consider the consequences of team anonymity.

Are projects with anonymous founders a bad idea? No. Is it difficult to hold projects with anonymous founders accountable for malicious behavior? Yes

How are the tokens distributed?

Token economics is a crucial thing to consider when looking at a DeFi project. Scammers can profit by inflating the price of the token while holding a significant amount and then selling it on the open market.

What if, for example, 40-50-60% of the circulating supply is sold on the open market?

The token's price plummets, losing nearly all of its worth. While some may not regard a large founder allocation to be a red indicator in and of itself, it can lead to issues down the road.

You must also examine how the tokens are distributed in addition to the allocations. Is it done through a private pre-sale open exclusively to insiders who receive a fantastic price and then promote the initiative on social media? Is this an ICO (Initial Coin Offering)? Are they launching an Initial Exchange Offering in which a crypto exchange stakes its reputation? Are they releasing tokens through an airdrop, which will certainly result in a lot of sell pressure?

There are several factors to consider when it comes to token distribution strategies. In many circumstances, obtaining this information is challenging, which might be a red signal in and of itself. However, if you want to gain a whole view of the project, you'll need this information.

How likely is an exit scam?

Yield farming is a new technique for launching DeFi tokens. Many new DeFi

projects use this distribution strategy because it can help the project achieve positive distribution metrics. The idea is that users put their money into smart contracts in exchange for a piece of the newly created tokens.

I am sure you see where this is headed. Some projects will just take the funds from the liquidity pool altogether.

Furthermore, new altcoins are often listed first on automated market makers (AMMs) like Sushiswap or Uniswap. If the project team is already providing a considerable level of liquidity on the AMM for the market pair, they may simply withdraw it and dump the tokens on the market. So, the token price frequently declines to zero. This is known as a rug pull because there isn't much of a market left to sell in.

DeFi scams abound, whether you wish to participate in the wild west of yield farming or just use decentralized protocols to exchange and trade. Hopefully, these broad criteria will make it easier for you to identify fraudulent projects and bad actors.

CHAPTER 12:

DIFFERENCE BETWEEN ALTCOINS AND SHITCOINS

While Ethereum and Bitcoin are the most well-known cryptocurrencies, there are approximately 1,500 others (according to coinmarketcap.com) to choose from; The Great and The Good sit in a world of cynicism, pluck, and chance.

There is a cryptocurrency called Shitcoin. However, the phrase – as a descriptor – is significantly broader, and the fact that Shitcoin exists is a better descriptor than the coin itself. Shitcoin's existence reflects a sense of humor, irreverence, dynamism, and opportunism in the lower-value ends of the cryptocurrency world. This is the realm of altcoins in general, which may define any cryptocurrency that isn't Bitcoin or Ethereum.

Shitcoin

Many die-hard Bitcoinistas believe all other

cryptocurrencies to be shitcoins, making the word "altcoins" superfluous. But, once you get past the Bitcoin zealots, things start to make sense. Shitcoins are the scam cryptocurrencies at the most liberal end of the spectrum - the market is uncontrolled, and some coins have gone through an ICO just to disappear, leaving investors with nothing and the inventors with all the proceeds. Something to be aware of.

To widen the circle of shitcoins even more, one may add those cryptocurrencies that lack the requisite security measures to fight against attacks, leaving investors with nothing. Depending on how conspiracy-minded one is, the difference between the two aforementioned groups may be a distinction without a difference. If shitcoins are the ones that end in tears, then all cryptocurrencies between them and The Big Two are altcoins. Though not quite.

Some cryptocurrencies, such as dogecoin, may just be marketing initiatives that don't offer any new technology, usefulness, or business model. Dogecoin is sometimes referred to as a shitcoin since it is a

cryptocurrency whose efforts aren't entirely sincere. There are some cryptocurrencies whose efforts are sincere but not very good or well performed. Others can be transformed into shitcoins by "pump and dump" purchasing patterns triggered by groups of people getting together to acquire a cryptocurrency, leading others to jump in. Once the price is inflated, they sell their investment, causing it to fall.

This can tarnish a cryptocurrency's reputation, partially because already-weak coins are chosen as victims; surely, many who live more fully in this world maintain a romanticism of the wild west and believe that such reckless behavior is typical. In essence, calling something a shitcoin means they don't think it's a cryptocurrency worth investing in, although they might be from any point on the cryptocurrency ideology and/or analysis spectrum. There are entire conversation threads dedicated to debating the definition of shitcoins.

Altcoin

For the sake of this piece, altcoins are defined as any cryptocurrency whose goals

are honest but not well-conceived or accomplished. This is an area where a lot of intriguing things are happening. For example, most cryptocurrencies start by 'forking' litecoin and altering the code. Simply said, forking is the process of taking an existing cryptocurrency's code and applying it in a new method. It's popular in the business since it's easy, especially when building your cryptocurrency from the start. But one simple truth betrays why all-but-Bitcoin being deemed shitcoin doesn't hold together and why it mustn't: Ethereum was once small enough to be labeled a shitcoin. Still, it now offers a substantial technological edge over any other cryptocurrency.

The squabbling among crypto traders will almost certainly continue, but it's helpful to think of the altcoin world as one large experiment. Of course, many altcoins may not provide any technological innovation that Bitcoin does not already have. Even still, getting the whole Bitcoin community to agree on what to update is difficult. So instead, altcoins serve as a trial ground for new ideas, whether they are practical for larger

cryptocurrencies.

"Read the whitepaper," is a popular adage among cryptocurrency investors, though they are often dripping with self-indulgent language and material and fail to provide any important information concisely. There are actual alternatives to the established modus operandi available, whether you want sophisticated checkpoints (Feathercoin), I2P with TOR (Anoncoin), an exotic prime number chain (Primecoin), a decentralized DNS system (Namecoin), or censorship-free data storage (Datacoin).

The world underneath The Big Two seems to be a mess, an unruly mess at that. However, Bitcoin and Ethereum have shortcomings – like processing speeds and CPU resources – that they will have to address, and the solutions may well come from the frantic, gun-slinging gin joints of altcoins. Or challengers appear.

CHAPTER 13:
SEVEN INDICATORS EVERY DEFI INVESTOR SHOULD KNOW

It can be challenging to keep up with the avalanche of new ideas in the DeFi arena, expanding rapidly. Fundamental analysis evaluates whether a business is overpriced or undervalued for investors and traders to make more informed judgments about their investments.

Do you want to know how to calculate the "intrinsic" worth of DeFi assets? Then, continue reading to discover some of the most effective measures for doing so.

Decentralized Finance (DeFi) evolves at such a breakneck speed that keeping up, much alone evaluating new ideas in a timely manner, can be challenging. In addition, the lack of a consistent technique makes it much more difficult — there are several ways to assess and compare DeFi technologies.

But don't be worried. We will go through some of the most widely utilized indications that might be useful in DeFi. Because a large quantity of data is publicly available on-chain, any trader or investor may easily use these indicators. Spencer Noon's discussion encouraged us to compile a list of them on this page.

1. Locked Total Value (TVL)

Total Value Locked (TVL) is the total amount of cash locked within a DeFi protocol, as the name suggests. TVL may be considered all of the liquidity in a money market's liquidity pools. In the context of Uniswap, TVL refers to the amount of money put in the protocol by liquidity providers.

TVL is a good measure to determine the general level of interest in DeFi. In addition, TVL may be used to compare the "market share" of various DeFi protocols. This is particularly beneficial for investors seeking discounted DeFi projects.

It's also worth noting how multiple denominations may be used to measure TVL. The TVL locked in Ethereum projects, for example, is usually quantified in ETH or

USD.

2. P/S ratio (price-to-sales ratio)

The Price-to-Sales Ratio (P/S Ratio) relates the price of a company's shares to its sales in a more traditional business. The stock's cheap or overpriced status is then determined using this ratio.

Because many DeFi protocols are already profitable, a comparable metric may also be used for them. How can you use it? You will need to divide the protocol's market capitalization by its revenue. The main premise is that the lower the ratio, the less valuable the technique is.

Remember that this isn't the only approach to figure out how much anything is valued. However, it can provide you with a rough estimate of how fairly the market values a project.

3. Token supply on exchanges

Another option is to monitor the supply of tokens on cryptocurrency exchanges. Sellers that wish to sell their tokens often do so on centralized exchanges (CEXs). Users on

decentralized exchanges (DEXs) now have a growing number of options that don't need them to trust an intermediary. On the other hand, centralized venues tend to have significantly better liquidity. This is why it's essential to monitor token supply on CEXs.

Here's a simple token supply assumption. Sell pressure may be larger when there are many tokens on exchanges. Because whales and holders don't keep their money in their wallets, they may be looking to sell them.

With that said, things aren't so simple. For example, many traders will utilize their holdings as collateral for futures trading. As a result, submitting a large balance to exchange does not always imply that a significant sell-off is on the horizon. Nonetheless, this is something you should keep an eye on.

4. Token balance changes on exchanges

We already know that keeping track of token supply is useful. However, merely looking at the token balances might not be enough. Examining recent changes in such balances can also be beneficial. For example, large token balance changes on exchanges

can typically indicate a rise in volatility.

Consider the polar opposite of the issue we just discussed concerning token balances. If large holdings are being removed from CEXs, it might imply that whales are accumulating the token. Why would they withdraw their wallets if they planned to sell soon? This is when keeping track of token movements comes in handy.

5. Unique address count

While it has its limits, an increase in the number of addresses owning a certain currency or token should indicate higher usage. On the surface, it appears like having more addresses means having more users and increasing adoption.

However, this is a gameable metric. It's easy to generate hundreds of addresses and distribute funds to them, giving the impression of broad use. You should compare unique address count to other aspects, just like any other metric in fundamental analysis.

6. Non-speculative usage

So you're interested in investing in an

emoji-based token that promises high returns, but does it truly work? If the main aim is to increase value, it could earn the Charles Ponzi seal of approval, but it won't last long.

To determine the real worth, you must first understand what it is used for. In an ideal world, you'd count the amount of transactions that aren't carried out only for the sake of speculating. This can be tricky, but a good place to start is looking at transfers that do not take place on centralized or decentralized exchanges. The goal is to ensure that the token is being used.

7. Inflation rate

Wow, a limited-edition token! Isn't it an good sign?

Not necessarily. The rate of inflation is another significant measure to watch. Currently, a limited supply does not guarantee a limited supply in the future, especially if more tokens are being minted. However, Bitcoin has a continually decreasing inflation rate, which should potentially prevent the depreciation of existing units in the future.

That isn't to say that every system should

strive for the same level of scarcity as Bitcoin. For example, inflation isn't inherently bad in and of itself, but too much of it might lower your slice of the pie. Because no defined proportion is regarded as "good" or "bad," it's important to consider the amount while considering other metrics.

If you are an experienced cryptocurrency trader, you'll notice that many of these indicators are also employed in fundamental research for "conventional" cryptocurrencies.

Markets are illogical, unpredictable, and prone to severe volatility, as they always been. But, above all, doing your research is vital to success.

CHAPTER 14:

HOW TO MAKE MONEY WITH CRYPTOCURRENCY

So you're interested in Bitcoin and want to convert it to cash. You've certainly heard of folks who made millions of dollars by getting in early and selling for a high price. Perhaps you have friends that make a living from bitcoin mining.

Everyone enters the cryptocurrency market with the goal of making money, but not everyone is successful. Many people either quit up or lose money due to their lack of understanding of how to generate money using cryptocurrencies.

CTA

The crypto market is still in its early stages of growth. However, as the value of crypto-assets rises, more individuals enter the market. These newbies are always trying to figure out how to profit from cryptocurrencies.

The good news is that there are a lot of methods to profit from cryptocurrencies. Since 2011, the bitcoin business has seen a constant increase in developer engagement, social media activity, and the number of start-ups launched.

Can You Make Money With Cryptocurrency? Yes, you can make money with cryptocurrency. However, because of the inherent volatility of crypto assets, most of them are high-risk, while some need subject skill or knowledge.

One of the methods to generate money using cryptocurrency is to trade cryptocurrencies. Despite the daily average volume of cryptocurrency trades being only 1 percent of the foreign exchange market, the crypto market is volatile. So, there is the possibility for short-term trading.

Even though the cryptocurrency business is still small, it has a lot of room to develop. Along with some of the more well-known cryptos, such as:

Bitcoin
Cardano
Ethereum
Tether
VTHO
ElonGate
AMP
Dogecoin
Iota
Safemoon
Stellar
Moonshot
Polygon
Shiba Anu

Similarly, there are many crypto-buying platforms, such as Binance, Robinhood, and Coinbase, giving you lots of alternatives when it comes to generating money with cryptocurrency.

Apart from the obvious trading method, there are quite a few methods to make legal money using cryptocurrency.

6 Strategies for Making Money with Crypto

Strategies for making money with crypto depends on 3 mechanisms:

To begin, you can invest or trade on a cryptocurrency exchange. You can do this without holding any cryptocurrency at all, similar to how you can invest in gold on the stock market.
Secondly, you can lend and stake coins to the system or other users using the currency you currently own.
Lastly, you can participate in the blockchain system by receiving or mining coin incentives for your efforts.
Here are six techniques for generating money with cryptocurrencies based on these three mechanisms:

1. Investing
Investing is a long-term strategy that entails buying and keeping crypto assets for a lengthy period of time. Crypto assets, in general, are well-suited to a buy-and-hold strategy. This is due to the fact that they are extremely volatile in the short term yet have tremendous long-term development potential.

The investment technique demands the selection of more stable assets with a lengthy lifespan. For instance, Etherum and Bitcoin have a track record of long-term price growth and may thus be considered secure investments.

2. Investing

Trading is meant to take advantage of short-term opportunities, whereas investing is a long-term strategy focusing on buy-and-hold.

The cryptocurrency market has a high degree of volatility. As a result, asset prices may move significantly in the near term.

You should possess the necessary analytical and technical abilities to be a successful trader. To make correct predictions regarding price rises and falls, for example, you'll need to analyze market charts on the performance of the listed assets.

When trading, you can take a short or long position based on whether you predict an asset's price to rise or fall. This means that regardless of whether the cryptocurrency market is bullish or bearish, you can profit.

3. Lending and Staking

Staking is a cryptocurrency transaction verification mechanism. You hold coins when you stake, but you don't spend them. You keep the coins in a cryptocurrency wallet instead. Your coins are then used to validate transactions on a Proof of Stake network. Doing so, you will be rewarded.

To put it another way, you're lending coins to the network. This permits the network's security and transaction verification to be maintained. As a result, you'll get a reward that's equivalent to the interest a bank would pay on a credit amount.

The Proof of Stake algorithm selects transaction validators based on the number of coins you've pledged to stake. So, it consumes far less energy than crypto mining and does not necessitate the purchase of expensive hardware.

You can lend coins to other investors in exchange for interest. Many platforms facilitate crypto lending.

4. Crypto Social Media

You'll be rewarded for generating and curating content on several blockchain-based social media networks. In addition, you are often awarded the platform's native coin.

5. Mining

Cryptocurrencies mining is a way to generate money using cryptocurrency **as** the early adopters did. Mining is still a vital part of the Proof of Work system. It is where the cryptocurrency value is generated.

If you mine a cryptocurrency, you get rewarded with new coins. **However, y**ou'll require technical know-how and initial investment in specialized hardware to mine.

Mining is a subset of running a master node. It necessitates knowledge and a large initial and ongoing investment.

6. Airdrops and Forks

Airdrops and free tokens are issued to raise awareness. **For example, a**n exchange might do an airdrop to build a large user base for a project. You can get a free coin by participating in an airdrop, which you can use to buy items, trade with, or invest in.

A blockchain forks due to upgrades or

changes in protocol that create new coins. If you have coins on the old chain, you'll receive free tokens on the new one. This implies that you received a free coin because you were in the right place at the right m**oment**.

CONCLUSION

DeFi platforms are having a moment, and they're receiving a lot of love from both consumers and investors. Every day, DeFi funds raise millions of dollars to support initiatives, enhance and build platforms, and expand the already robust network. These improvements pave the path toward financial equality by making critical and previously inaccessible financial instruments more accessible. DeFi bridges the gap, removing the previously limited economic development barriers to the privileged few. DeFi's future has already here, and it's for everyone.

NFT FOR BEGINNERS

The #1 Guide to Invest in Non-Fungible Tokens and Make Money Online with Digital Art & Crypto Collectibles + Metaverse Secrets

Lucas Peters

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INTRODUCTION

NFTs are rapidly sweeping the world of digital art and collectibles. Digital artists' life is being transformed as a result of massive sales to a new crypto-audience. And celebs are jumping on board as they see a new way to communicate with their audience. However, digital art is merely one application of NFTs. They can be used to indicate ownership of any one-of-a-kind asset, such as a deed for a digital or physical item.

Chapter 1:

THE NFT WORLD

There has been big news about NFTs since the announcement of the $69.3 million sale of Beeple's EVERYDAYS: The First 5000 Days at Christies. Non-fungible Tokens (NFTs) are gaining popularity right now, and you may have heard of them or not.

Music, art, toilet paper, tacos, and other digital assets are being sold for millions of dollars. Because they exist in digital form, their worth is subjective, and you can't exchange a piece of it for something else because nothing else like it exists.

NFTs are actually exchanged online utilizing cryptocurrencies like Ethereum. Portrait of a Young Queen Beyoncé, Nyan Cat, Jack Dorsey, Twitter co-first founder's tweet, and others are among the well-known NFTs.

You might be perplexed as to why someone

would pay a large sum of money for a simple GIF or tweet that they could easily save or screenshot. Surprisingly, people are willing to spend so much since NFTs have their own verification, allowing the owner to demonstrate possession.

This book will provide you with further information about the buzz around NFT Assets' coveted digital tokens.

What is an NFT?

NFTs have been around since 2014, but they've just lately gained traction as a way to buy and sell digital art. In fact, more than $174 million has been spent on NFTs since 2017.

Non-fungible tokens (NFTs) are simply collectible digital assets, as previously stated. It represents music, films, art, and in-game stuff, among other things. NFT, like art, is valued as a long-term investment that may be bought and sold online using bitcoin.

Furthermore, like Ethereum and Bitcoin, this digital token is a type of cryptocurrency. It's also distinct from the two conventional coins due to its rarity and inability to be exchanged like-for-like, hence the term "non-fungible."

In contrast to other crypto coins, NFT's file provides more information. NFTs might take the shape of a music file or a piece of digital art, and there are many distinct types. Anything unique and precious that can be kept digitally is included. NFTs are identical to real collector's items, with the exception that instead of an oil painting on canvas to hang on the wall, you'll get a JPG file.

NFTs are one-of-a-kind because they have unique identifying codes. In contrast to other digital creations, which have a virtually infinite supply, these digital tokens create digital scarcity. Because these assets are in such high demand, limiting their supply boosts their value.

Nowadays, the vast majority of NFTs are digital works that already exist in various forms elsewhere. This is a collection of password-protected versions of digital art that have already been shared on Instagram. For example, The EVERYDAY: The First 5000 Days was sold for $69.3 million.

Surprisingly, the full collection of NFT materials is available for free online. This begs the question of why anyone would

spend millions for something that can be downloaded or screenshotted. NFT collectors have possession of the original item, which is safeguarded by digital-in authentication and serves as proof of ownership. This is what gives the digital bragging rights to the owners instead of the real item.

What Are NFTs and How Do They Work?

NFTs do exist on the Ethereum blockchain, and these individual tokens store additional data. This additional information, which can be in the form of film, music, or art, is extremely valuable. As a result, they're available in a variety of formats, including movies, MP3s, JPGs, and GIFs.

NFT assets, on the other hand, have value and can be sold and bought just like real art or any other sort of art. The value of these digital assets is then determined by the market and demand. There are also various digital NFT art replicas on the market, all of which are blockchain members.

An art print can be created, used, sold, and purchased, but it does not have the same value as NFT. When you right-click and save an NFT image, don't brag that you've hacked

the system and are about to become a fortune, because the downloaded file contains no data that belongs on the Ethereum blockchain.

What is the difference between a cryptocurrency (Cryptocurrency) and a non-fungible token (NFT)?

NFT assets and cryptocurrencies such as Ethereum and Bitcoin are both created using the same code. The only thing they have in common is that. What is the reason for this?

Cryptocurrencies and actual money are both fungible, which means they may be swapped or sold for one another. This basically implies that one Bitcoin is valued the same as another Bitcoin, and one dollar is worth the same as another dollar, making crypto a secure way to complete Blockchain transactions.

Things are different with NFT since each token has a digital signature and so cannot be swapped, hence the term "non-fungible." EVERYDAY: The tweet from Twitter co-founder Jack Dorsey that sold for more than $2.9 million, for example, is not comparable to the tweet from Twitter co-founder Jack Dorsey that sold for more than $2.9 million. The film The First 5000 Days was a box

office success, grossing $69.3 million. Both, on the other hand, are NFTs.

What are NFTs and how do they work?

NFTs are a part of Ethereum and other blockchains, and they are the backbone of cryptocurrency processes. NFTs are made up of digital objects that represent tangible and intangible stuff such as collectibles, music, art, films, GIFs, digital sneakers, videogame skins, virtual avatars, sports highlights, and tweets, among other things.

Simply explained, NFTs are the digital version of physical collector's artifacts. You will not receive a physical oil painting to hang on your wall, but rather a digital file.

Furthermore, because a collector has exclusive ownership rights, each NFT should only have one owner at any given moment. Furthermore, because of its unique data, it is very straightforward to verify NFT ownership as well as any token transfers between owners. As a result, NFT authors can keep special information in their metadata, such as their signatures.

What is the purpose of NFT?

Content providers and artists may monetize

their work using NFTs and Blockchain technology. Artists no longer have to sell their work through auctions or galleries because they may sell it directly to a consumer as an NFT. Because they don't have to pay fees, selling as an NFT is more profitable than selling through auctions. Even yet, when the art, music, or film is sold to another person, they can earn more money through royalties.

Other forms of NFT exist, as previously stated. As an example. Taco Bell and Charmin are two companies that auctioned off themed NFT art to raise money for charity. Charmin sold non-fungible toilet paper, while Taco Bell sold art (NFTP). Other NFTs sold this year include NBA Top Shot, LeBron James Highlight, and Nyan Cat. As time goes on, it's projected that more NFTs will emerge, as celebrities distribute their artwork, music, and movies as securitized NFTs.

Why is NFT Important?

NFT is significant because it allows users to buy and sell digital goods like digital sports cards, music, and art. NFTs, unlike

cryptocurrencies, contain unique identification codes and are hence non-transferable.

NTFs provide a better possibility for investors or consumers to invest in a wholly new asset class, and for content creators, they provide a new channel for their art, music, and a new revenue stream. NFTs are much more valuable than other commodities like records and tickets.

More musicians have joined the NFT bandwagon as a result of the rising demand for securitized things, and there are now more releases, such as Kings of Leon's "When You See Yourself" album.

What is the best way to get NFT Tokens and where can I get them?

If you have a digital wallet where you can store cryptocurrencies and NFTs, you can quickly start your own NFT collection. The next step is to buy cryptocurrency based on the NFT provider's base currency; for example, if they prefer Ether, you can get it. You may buy them using your credit card on services like Robinhood, PayPal, eToro, Kraken, and Coinbase, and then transfer them

to your preferred wallet. To put it another way, you must have cryptocurrency in your wallet before purchasing for any NTFs.

When you buy cryptocurrency on these exchanges, you'll have to pay a fee, so keep that in mind when looking for possibilities. Some of these sites feature unacceptably high hidden costs, such as petrol fees in addition to the transaction fee, conversion fees, and price variations during the day. However, some sites provide better rates than others, necessitating further investigation.

There are various NFT platforms, some of which sell specific things and others that sell generalist items. So, before you create an account with them, you need to know what kind of digital asset you're looking for.

Due to the rising interest in NFT kinds, designers are releasing them in drops, similar to how event organizers sell tickets at different times. As a result, some early buyers will hurry to buy as soon as the drop begins, while others will wait.

Some of the NFT marketplaces with the most NFT collectors and creators are listed below.

Foundation

This is an invitation-only platform where artists are invited by another member. The designer can then submit their wares when they have been invited and have paid the entrance fee or purchased gas to mint NFTs (the cost of turning the art into NFT on the Blockchain).

Chris Torres, for example, is the developer of the Nyan Cat, which was marketed on this site. This cat GIF from 2011 sold for roughly $600,000, which is a higher price and a good thing for an artist trying to make a living from their work. As a result, if the demand for NFTs continues to rise, collectors are likely to make more money in the future.

OpenSea.io

This peer-to-peer website allows you to create an account and search for rare digital objects and collectibles. On this platform, you can search for NFT pieces in a variety of ways, including by sales volume, which will lead you to new artists.

Rarible

This is an open marketplace, similar to OpenSea, where content providers and artists can sell NFTs. This democratic platform

allows NFT holders to voice their opinions on fees, community regulations, and other features in exchange for RARI tokens.
super rare, Nifty Gateway, VIV3, NFT ShowRoom, Axie Marketplace, and BakerySwap are some of the other sites.
The NFT platforms, like any other marketplace, include fraudsters or impersonators who list art that doesn't belong to them or that they haven't given permission to list. Furthermore, the verification processes differ from platform to platform. There is no buyer protection on Rarible and OpenSea because owner verification is not required. As a result, you must exercise caution when purchasing NFTs or engaging with platforms that lack rigorous verification procedures.

Who Makes Use of NFTs?

There are a variety of participants in the NFTs market, and many more are on their way. It began with artists, marketers, and gamers looking for new methods to share their wares or give the general public more

ways to support their work.

NFTs allow artists to earn a lot of money in exchange for their work. Musicians, for example, are selling the originals of their work, as well as short video snippets of their music and their rights.

Brands are turning to NFTs as a new source of revenue, as Taco Bell did when it sold taco-themed GIFs and photos in a matter of minutes. NBA's digital collectibles were sold as trading cards featuring basketball player moments. This plan is aimed at diversifying the company's revenue stream, and virtual accessories, jewelry, and clothes for usage on social media will be added to the list of NFTs in the near future.

In addition, Twitter co-founder Jack Dorsey sold his first-ever tweet, indicating that tweets have value. You can acquire digital real estate or 3D items such as furniture. For

example, SuperRare sold a digital home called "Mars House" built by Krista Kim for $500,000, describing it as the "first digital house in the world."

Is Investing in NFTs Profitable?

NFTs have an unknown future; they are also new and have limited past performance to assess them on, making them a risky investment. You can't disregard them, though, because you can buy them in little quantities.

Investing in non-traditional assets is entirely a personal choice. One person may decide to purchase NFTs because they have extra cash. Another person may purchase an item because it is meaningful to them.

Furthermore, the value of NFT assets is established by what buyers are prepared to pay for them rather than by technical, fundamental, or economic variables that often impact stock prices. As a result, an NFT

holder may be obliged to resell it for less than the original purchase price.
Furthermore, because NFTs are collectibles, they are subject to capital gains taxes, much like stocks. The sole difference between the two investment options is that equities have a lower long-term capital gains rate than NFTs. Furthermore, the latter may be subject to a higher collectible tax rate, and the cryptocurrency you used to pay for the NFT may be taxed if its value has increased since you bought it. To put it another way, you should consult a tax specialist before adding NFTs to your portfolio.

What Are the Potential Pitfalls of Investing in NFTs?

NFTs, like any other investment opportunity, are not without risk. Because this is a new trend in the market, consumers will need to give it some time to appreciate its value, and they will need to invest prudently.
Some of the issues linked with NFTs are as follows:
When demand falls, the value and price of

these trendy digital collectibles may diminish. Buyers' willingness to pay determines the value of an NFT, not any fundamental, economic, or technical indicators.
The genuineness of an NFT artwork can be a major concern as well. It's a difficult chore to make sure you're buying from the appropriate person who owns the piece. You should look for a reputable site with a thorough verification process.

NFTs' future is unknown, and no one knows how long this trend will continue. However, celebrities and artists such as Snoop Dogg, ASAP Rocky, Lindsay Lohan, and others are likely to join this avenue. People are paying a lot of money to join the trend, but when they choose tangible objects over digital ones, things can slow down.

Controversies Surrounding NFTs

While there is a lot of money in the NFT market, there is also controversy around these trendy digital collectibles, particularly in regards to the environment.

Making NFTs takes a lot of energy, and environmentalists are concerned about the massive impact this trend would have on the environment. The production of some of these NFTs uses up to 192 kWh of electricity.

While artists have vowed to create carbon-neutral artwork, such claims will not be verified by bitcoin systems. For example, Bitcoin, Ethereum, and other cryptocurrencies are based on a proof-of-work system that secures users' financial records while also using a significant amount of energy.

Many firms are hesitant to join the NFT bandwagon because of the environmental implications. However, because businesses and individuals are diversifying their revenue streams, these NFT debates will not persist indefinitely. In addition, the art and design community is ravenous for NFTs, which sell for exorbitant sums of money. The original goal of NFTs was to allow artists to establish digital ownership of their work; nevertheless,

the fact that they are growing increasingly elitist is causing conflict.

Because the buy-in costs for NFTs are prohibitively expensive for many people, and the price of a single artwork is exceedingly high, the public perceives the market as a playground for the ultra-wealthy. It also makes the majority of artists feel marginalized, despite the fact that this realm was designed to give them more control over their work.

What are the potential benefits of NFTs?

Depending on the platform on which they are built, NFTs offer a variety of benefits to content creators, sellers, and customers. The smart contract is automatic with NFTs in Ethereum: Once a smart contract is posted on the blockchain, the code cannot be modified, and the transaction cannot be amended once the criteria have been met and verified. This gives both artists and purchasers peace of mind.

In honor of the creator

Thanks to blockchain technology and NFTs, artists and content creators have a one-of-a-

kind opportunity to monetize their work. Artists, for example, are no longer reliant on galleries or auction houses to sell their work. They can sell it directly to the consumer as an NFT, allowing them to keep a larger portion of the profits.

Most art items are often physically sorted, putting them in danger of being stolen or reproduced. By allowing artists to preserve records of the actual copy on the blockchain network, NFTs may be able to address some of these flaws. On top of that, NFTs establish an ecosystem in which artists may prove they own their work by recording metadata on-chain.

Most websites that offer NFTs also allow content providers to add a royalty scheme to their content's later sale. They may gain a percentage of sales if their art is sold to a new owner as a result of this. The artist, moreover, gains every time their NFT changes hands. This is a desirable feature because most artists do not receive subsequent proceeds after their first sale.

NFTs provide proof of ownership in the digital realm for collectors. There was no means to establish the ownership or authenticity of digital artworks or valuables before the introduction of NFTs. The non-fungible token purchased using NFTs is truly owned by the investor. When a digital asset is tokenized, it gains value since it is feasible to confirm its legitimacy and ownership, as well as the ability to buy and sell it multiple times.

With NFTs, a copy may be confirmed using a unique identifier embedded in the NFT, and the ownership history for that copy can be kept. It's simple to track because it has a unique identification and a blockchain record of the work.

Furthermore, the principle of'scarcity' already exists in the digital realm because of blockchain technology and NFTs. This is due to the fact that each NFT is unusual, one-of-a-kind, and indivisible. The intrinsic value linked with the acquisition of an NFT for a collector is that they are supporting an artist whose work they love.

It also provides access to non-financial

transaction (NFT) services provided by decentralized finance (DeFi). DeFi services are provided by several NFT initiatives, such as Hoard Marketplace, which allow users to purchase, sell, loan, or rent NFTs. Developers can use the platform to connect digital art, in-game objects, and domain names to the Ethereum blockchain.

Other possible benefits of the NFT eco system include growth opportunities and value preservation, which allows artists to preserve their work while still earning money. NFTs have enormous growth potential, providing more options for creatives and investors to enter the sector. Because the NFT business is booming, most NFTs are only going to become more useful and innovative as time goes on.

There are also the advantages of utility. Businesses and individuals can use NFTs to acquire and safeguard value in both actual and virtual objects. When you hold an NFT on the blockchain, you can benefit by flipping it or selling it on the secondary market.

The disadvantages of NFTs

While the advantages and benefits of NFTs clearly create a positive picture for their future, these marketplaces also face a number of problems and dangers that should be considered before entering the area.

First and foremost, there is the risk of the market. The market for non-ferrous metals (NFTs), such as digital art and collectibles, is booming, but that doesn't imply they're a secure bet. Investing in NFTs entails a distinct set of risks. Their future is uncertain, and we don't have a lot of data on which to base our assessments. When investing in NFTs, investors should be aware of the young market's volatility, illiquidity, and fraud.

Investing in art is typically a subjective act, but there is a risk that it will lose its value. The NFT market is extremely volatile, in part because there are currently no procedures in place to assist individuals in pricing these digital assets.

When it comes to NFT liquidity, every seller must find a buyer who is willing to pay a specific price for a one-of-a-kind item. If a collector has spent a lot of money on a 'Top Shot' moment and the market begins to drop,

this can place them in a tough situation.

The uncertainty in calculating the value of NFTs is another danger. The authenticity, inventiveness, and perception of owners and purchasers all have a role in the value of NFTs. The value of an NFT is mostly determined by what someone else is willing to pay for it, resulting in variations. As a result, rather than fundamental, technical, or economic indications, demand will dictate the price.

There's also the potential for infringement on intellectual property rights. When someone buys an NFT, they just acquire the right to use it, not intellectual property rights. Copyrights, trademarks, patents, moral rights, and the right to publicity are all examples of individual ownership rights to a particular NFT that should be considered in the metadata of the underlying smart contract.

The burgeoning NFT sector is attracting cybercriminals, posing a variety of fraud, cybersecurity, and hacking dangers. There have been a few cases of fraudulent websites where NFTs hosted on the platform vanished and were found to be infringing on copyright

and trade secrets.

Impersonators have also taken advantage of some artists, listing and selling their work without their permission. Furthermore, persons who own an NFT do not necessarily own the original digital content version.

Copyright theft, copying of popular NFTs or phony airdrops, and NFT giveaways are all risks associated with cybersecurity and fraud. There's also the potential of smart contracts being hacked, as well as the issues of NFT upkeep. This is currently viewed as a major concern in the NFT ecosystem. As a result, users may end up purchasing phony NFT tokens, which have no value as an asset.

Furthermore, because there is no clear precedent for regulating NFTs, they are associated with jurisdictional problems. Without any monitoring body, decentralized peer-to-peer transactions on blockchain-based NFT platforms might lead to AML and CFT issues. Regulations and intermediary oversight are required for these platforms since NFT can challenge the traditional FATF norm.

Challenges

There are also the many problems that NFTs may face, which may limit their adoption. Some of these issues are more fundamental in nature.

One of the most fundamental challenges for the NTF market is integrating these tokens into an unsuitable legal framework. The lack of regulation causes numerous stumbling blocks in the implementation of NFTs. There is still uncertainty about how NTFS should be classed and consequently regulated. As a form of security or something else. NFT is a term that has no defined definition and can be used to describe a wide range of assets. They are one-of-a-kind, non-transferable, and non-fungible. It's becoming more difficult to develop a solid foundation for NFT compliance as the type and number of NFTs grow. Many of the existing legislation relating to NFTs are currently stuck on determining the best definition for NFTs. Different countries, such as Japan, the United Kingdom, the United States, and the European Union, have different techniques of classifying NFTs.

The lack of a uniform, universal

infrastructure for NFTs, in addition to regulatory hurdles, may limit their adoption. The verification processes for creators and NFT listings, for example, differ amongst platforms, with some being more strict than others.

For new entrants to the NFT market, access to NFTs might be a considerable hurdle. While NFT marketplaces are simple to use, content creators must pay fees for the NFT's creation and maintenance. Typically, these fees must be paid with a cryptocurrency stored in a digital wallet. NFT marketplaces are also only popular for particular categories of digital content; for example, only a few writers sell their work through NFTs at the moment.

The impact on the environment

Another disadvantage of adopting NFTs is the environmental impact of the cryptocurrency sector. Proof-of-work techniques are currently used in the mining of the most popular cryptocurrencies, which necessitate a large amount of energy from strong computers.

What's next: a bubble or the future?

The non-financial-transactions (NFT) business is booming. Every day, new use cases are lured to the NFT market by the numerous benefits and enormous profits that may be made.

However, the dangers and challenges that this market faces will necessitate regulatory involvement. It is obvious how important it is to consider the legal and regulatory issues associated with NFTs. As the NTF market grows and expands into new use cases, it becomes increasingly important to have an international regulatory organization for non-fungible tokens to ensure that they are properly regulated and legalized. The conclusion will likely have a significant influence and will determine the future of NTFS.

However, it is still unclear how this will be handled.

Chapter 2:

THE DIFFERENCE BETWEEN FUNGIBLE AND NON-FUNGIBLE TOKENS

Cryptocurrencies have always been linked to blockchain technology. If you're new to the world of blockchain, you're probably under the impression that it's solely good for creating crypto assets. The genuine potential of blockchain technology, on the other hand, goes well beyond cryptocurrencies.

Governments, businesses, and individuals can now store IDs, real estate data, and certifications, as well as other critical information about real-world assets, on blockchain. Students may easily have their diplomas issued as a digital record on the blockchain, which would be accepted by authorities all around the world. So, what factors have aided mankind in accomplishing

such a remarkable feat?

In recent years, this is where the issue between fungible vs non-fungible tokens has gained traction. Non-fungible tokens are being heralded as the blockchain economy's future. However, fungible tokens or existing cryptocurrencies are frequently pitted against them. Let's clear up some confusion by examining the distinction between fungible and non-fungible tokens.

What Are Tokens and How Do You Use Them?

The definition of tokens is the first thing you should consider when determining the differences between fungible and non-fungible tokens. Tokens are concrete or visible representations of a sensation, truth, or characteristic in the real world. In everyday life, people come across a variety of tokens.

A hotel key card, for example, is proof of payment to the hotel for a room. The office ID card serves as verification of your company's employment. A driving license, on the other hand, certifies that an individual has completed the appropriate training to drive in their nation. As a result, a token also

symbolizes a specific entity in the crypto world.

The token can be used to store money, voting rights, stakes, or anything else. Surprisingly, a token is not limited to a single function and can be used to address a variety of functions in its local ecosystem. A token could be used to represent a company's utility or value. In a public sale, the corporation can sell the tokens to investors.

The Importance of Tokens

So, what is a token's purpose? The answer to this issue is crucial to fully comprehend the fungible vs. non-fungible token argument. A token isn't limited to a single function and can be used for a variety of things in its original ecosystem. The following are examples of possible functions:

Tokens can be used as entry points for blockchain applications, and users will require tokens to use the decentralized app.

Individuals' qualifications for possessing specific voting rights could potentially be represented via tokens. EOS blockchain coins, for example, can be used to vote on block makers.

Tokens can also be useful for enhancing the user experience of their owners. Enhancement tokens for user experience can help improve the user experience within the confines of a certain context. For example, in the case of the Brave web browser, users with BAT or other Brave-related tokens may be able to augment their customer experience by using their tokens to add adverts or other attention-based services related to the Brave platform.

Most importantly, the use of tokens as currency aids in the identification of fungible and non-fungible tokens. Tokens can be used as a store of value for internal and external transactions in a certain ecosystem, and they provide a unique monetary system that includes digital assets.

The exchange of value is another important use of tokens. In fact, in the blockchain ecosystem, tokens have typically been utilized for value exchange. As a result, tokens may be useful in the development of an application's internal economic system.

It's also worth considering the use of tokens as a means of identifying who owns a specific

business. Tokens can indicate ownership of something unique to a single user, and this use lays the groundwork for the dispute over fungible vs non-fungible tokens.

Token Comparing Foundation for Fungible and Non-Fungible Tokens

Without a question, blockchain is the best technology for managing various forms of digital assets. Its immutability and security characteristics make it excellent for managing digital assets. It is hard to write any unique information to fungible tokens, which are the most often used ones in the blockchain until now.

Cryptographic tokens, on the other hand, that are one-of-a-kind and can store data rather than value, may be the best option. Non-fungible tokens are those that are defined on the Ethereum platform using ERC standards like the ERC-721 standard. As a result, it is clear that the distinction between fungible and non-fungible tokens derives from the emphasis on data storage. Consider the definitions of fungible and non-fungible tokens to lay the groundwork for comparing them.

In economic terms, fungibility refers to an asset's or good's ability to be interchanged with another asset or good of equal value. Currency and money are the most common instances of fungible assets. For example, a $5 bill in one person's possession has the same value as a $5 bill in another person's possession. Similarly, two $5 dollars from one person are worth the same as a single $10 bill from another.

Gold is another fungible asset, as one ounce of gold in one country has the same value as one ounce of gold in another. The issue over fungible vs non-fungible tokens stems from the fact that fungibility is written into Bitcoin and other cryptocurrency programming. The most significant feature of a fungible good is that it is standardized, and its units are not unique.

NFTs, on the other hand, function as a unique token version with no interchangeability with other tokens, as discussed in the debate between fungible and non-fungible tokens. NFT has certain characteristics that plainly indicate that it cannot be replaced or exchanged for another token of the same

type.

Non-fungible tokens vary from cryptocurrencies in that they have no intrinsic value. Non-fungible tokens, in fact, derive their value from the assets or things they represent. NFTs use a variety of token standards and employ a variety of smart contract types. Non-fungible tokens are seen as cutting-edge instruments for creating a blockchain-based virtual economic environment.

Fungible and Non-Fungible Tokens Have Clearly Defined Differences

Now that we have a good understanding of what fungible and non-fungible tokens are, it's time to compare fungible and non-fungible tokens. Let us consider the characteristics that distinguish fungible and non-fungible tokens.

Interchangeability

Fungible tokens, as you may have guessed, are totally interchangeable with one another. Fiat currencies are the most well-known example of fungible assets. To make payments for particular things, you can transfer fungible assets from one owner to

another. Exchanging fungible assets, on the other hand, have no meaning because they have the same worth. Payments and balance tracking are common uses for fungible tokens.

Binding fungible tokens to an organization's account balance in a specific payment account is one of the most recognized instances of practical blockchain use cases of fungible tokens. As a result, token transfers could be used to fulfill payments. Users can also query the resultant token balances to perform periodic netting and settlement.

Value Transfer

Another important distinction is between fungible and non-fungible tokens, which relates to the fact that each account maintains a balance based on the tokens it owns. Using direct transactions or swap mechanisms, it is simple to move tokens to other Ethereum accounts. When using token transfers, the source account is debited with the amount of the transfer, just like when using bank

transfers. At the same moment, a credit of the same amount is applied to the beneficiary account.

When comparing fungible and non-fungible tokens, it's clear that non-fungible tokens, or NFTs, offer a distinct value proposition. NFTs are one-of-a-kind tokens, and each one has its own unique ID for distinguishing it from other tokens in the same smart contract. Because each token is treated differently, each non-fungible token has a unique owner. As a result, their values may change.

Certain NFTs can represent one-of-a-kind tributes with a proven scarcity. As a result, NFTs are in high demand, with more buyers and higher value than those expressing common features. Furthermore, NFTs may be used to facilitate both ownership transfer and trading. For example, John may swap tokens representing a batch of Scottish whisky for tokens representing a batch of Bordeaux

wine.

The assignment of a non-fungible token to a real estate property is one of the most noteworthy use cases. After paying off the mortgage, users can transfer NFTs from the bank's Ethereum account to the house owner's Ethereum account. As a result, it presents a new type of use case for blockchain in the real estate market.

Standards for Ethereum Tokens

Token standards are the next key thing to consider when distinguishing between fungible and non-fungible tokens. If you want to build a healthy ecosystem, you should build decentralized apps on top of Ethereum that can communicate with one another seamlessly. Can you find various smart contract structures in two different tokens, such as Token Beta and Token Alpha, on the other hand? For the interaction between the two tokens, developers must analyze both contracts.

Furthermore, developers must lay out the precise methods by which tokens can communicate with one another. This factor, however, does not help with scalability. It

will be tough to narrow down all conditions and qualifications for assuring that transfers can proceed via all tokens if there are 100 different tokens with 100 separate smart contracts.

As a result, a large number of sophisticated calculations for token transactions may be encountered. As a result, token standards emerged as a viable option for distinguishing between fungible and non-fungible tokens. As a result, the choice to standardize the rules regulating the underlying architecture of tokens is unquestionably a yardstick for distinguishing fungible from non-fungible tokens.

Fungible Tokens Use ERC-20

The precise collection of rules is known as ERC-20, and ERC stands for 'Ethereum Request for Comment.' ERC-20 is built on the foundations of totalSupply, approve, allowance, balanceOf, transfer, and transferFrom. For ERC-20 tokens, these are the required rules and functions.

Tokens, on the other hand, could have the three possible attributes listed below. A symbol, a token name, and a decimal up to 18

are among the features. The ERC-20 is a fungible standard because of these properties. As a result of the standards, fungible tokens are required to have the following attributes, which determine their place in the fungible vs non-fungible token dispute.

1. One token can be replaced by two fungible tokens of the same type.
2. Fungible token governance is governed by similar underlying rules.
3. Fungible tokens are easily divided, allowing people to pay back a bigger amount with smaller fractions.

Non-Fungible Tokens Use ERC-721

However, ERC-20's constraints result in significant inconsistencies, prompting the introduction of the ERC-721 token standard. The ERC-721 token standard may be used in the development of non-fungible tokens. Surprisingly, the ERC-721 token standard is very similar to the ERC-20 token standard in terms of functionality. The similarities between ERC-20 and ERC-721 are mostly due to the following factors:

1. Developers might quickly transition without needing to master a new set of skills.

2. Users might have a better time holding tokens in regular wallets and trading them on exchanges.

The ERC-721 interface has two different methods with different functions, such as transfer From and ownerOf. The ownerOf function is used to find out who owns a token. The transfer from function can be used to transfer token ownership.

The following table illustrates the differences between fungible and non-fungible tokens.

Criteria	**Fungible Tokens**	**Non-Fungible Tokens**
Interchangeability	Fungible tokens are easily interchangeable although there is no additional value associated with interchanging fungible tokens.	Non-fungible tokens are not interchangeable as each of them represents unique assets.
Value Transfer	Value transfer depends on the number of tokens in the ownership of a person.	The value of the unique asset represented by NFT is helpful in their value

		transfer.
Divisibility	Fungible tokens can be divided into smaller parts and the smaller parts can help in paying off the larger sums.	NFTs are not divisible and have their value as a whole entity.
Token standards	Fungible tokens depend on the ERC-20 standard.	Non-fungible tokens leverage the ERC-721 standard.

Finally, both non-fungible and fungible tokens are clearly accurate in their own right. The distinction between fungible and non-fungible tokens will have a significant impact on the blockchain ecosystem's future. Non-fungible tokens have a clear benefit over fungible tokens in terms of security and immutability. Users may contribute more information and context to the metadata during the asset tokenization process.

However, because non-fungible tokens are so new, users may have a hard time believing them. They are, on the other hand, more widely accepted in the blockchain ecosystem,

with notable uses in gaming and art. As the discussion over fungible vs. non-fungible tokens heats up, new developments could have a big impact.

Chapter 3:

THE HISTORY OF NFT (NON-FUNGIBLE TOKEN)

History

Depending on who you ask, the phrase CryptoArt conjures up a range of feelings. CryptoArt and NFTs bring together the realms of time-based media art and blockchain technology to create a decentralized, provably scarce, and authentic form of art that is also pro-artist. At the time of writing, January 19, 2019, our pals at Artnome created an outstanding piece defining what CryptoArt is. Please take a look at it for a more detailed outline. We will, however, provide a pleasant and brief backstory for those with little time.

What are the Benefits of Non-Fungible Tokens?

There are numerous reasons for this. A non-fungible token (NFT) is a one-of-a-kind

digital asset that may be represented on the Ethereum blockchain, making it scarce, verifiable, and valuable. Artists and creators now have a new platform to display their work or collections thanks to the arrival of NFTs. As a result, the art world is undergoing a transformation, allowing artists to make and sell their work while giving collectors complete transparency into the authenticity and provenance of their purchases.

Digital art, collectibles, a creative extension of the music, a synergy between all three, or wholly new and uncharted compositions are all examples of NFT assets. Using NFTs, creators continue to push the boundaries of creativity in new and innovative ways.

"Can't I just screenshot the NFT without buying it?" many people wonder. True, but you won't be able to sell it for the same price as the original. Similarly, finding a collector for a photograph of the Mona Lisa would be difficult. Every time the NFT changes hands on the secondary market, the new owner and the price paid are automatically recorded on the blockchain, which is a decentralized digital ledger of transactions that no one can

change and that everyone can see. By making these certifications of authenticity publicly viewable online, NFTs may certify the origin of any object to which they are linked.

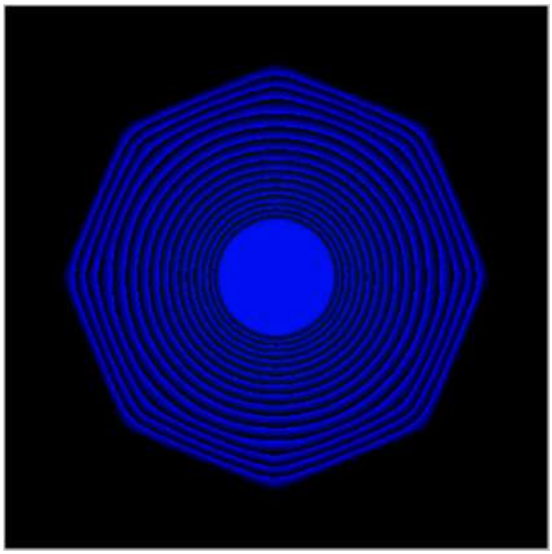
"What you're buying is code that emerges as graphics," said Donna Redel, a professor at Fordham Law School who teaches courses on crypto-digital assets. "You're purchasing art in a different format." You should also take in mind Jake Brukhman, the founder of cryptocurrency investing firm CoinFund, said, "You're not buying the picture." "You're purchasing the picture's property rights." By design, NFTs are tools that artists can use to verify their work without having to deal with the legacy art world's typical machinations (provenance). NFTs allow artists the freedom to determine their own rates for their creations - and control of their secondary market - thereby democratizing access to new marketplaces for artists all over the world, thanks to their ability to generate scarcity of digital work.

Who was the first to invent the NFT?

So, where did this technological craze originate? On May 3rd, 2014, the history of

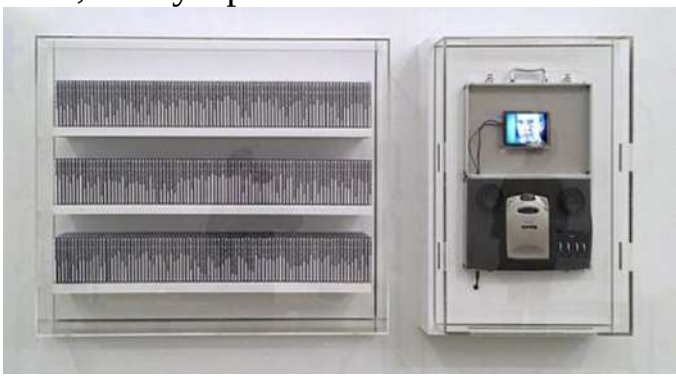
NFTs and the guy who invented them, Kevin McCoy, began. He created "Quantum," a non-fungible coin, long before the crypto art industry exploded.

Quantum is a pixelated image of an octagon filled with shapes that share the same center, with larger shapes surrounding smaller ones and hypnotically pulsing in brilliant hues. The one-of-a-kind "Quantum" art project (2014-2021) is currently for sale for $7 million.



McCoy is a one-of-a-kind character. He and his wife Jennifer have made a name for themselves as top-tier digital painters

throughout the years. "The NFT phenomenon is ingrained in the art industry," McCoy argues. "It arose from a lengthy history of artists experimenting with new technologies." Rather than engaging in public bidding wars, McCoy prefers to sell their work through galleries or one-on-one. The Metropolitan Museum of Art currently has its work "Every Shot, Every Episode" on exhibit.



Who has the ability to make NFTs?

An NFT can be created by anyone, including artists, entrepreneurs, art advocates, corporations, authors, videographers, social media personalities, and even regular Joes and Joannas. No prior experience is required, and anybody can mint an NFT as long as they can verify they developed or legally own the

content.

Non-Fungible Tokens Have a Long History

CryptoPunks, Rare Pepe, and CryptoKitties are examples of cultural phenomena that inspired the CryptoArt category. These works of 'art' became famous as a result of viral network effects and the willingness to spend significant sums of money to own them.

2012-2013: Colored Coins

Let's get started on this trip, which involves many individuals, artists, and initiatives.

NFTs were inspired by a "colored coin" that was first released on the Bitcoin network in 2012-2013. Colored coins are blockchain-based tokens that represent real-world assets and may be used to verify ownership of everything from precious metals to cars to real estate, as well as equities and bonds. The original concept was to use the Bitcoin blockchain to store assets such as digital collectibles, coupons, property, company shares, and more. They were described as novel technology with a lot of untapped potential for future applications.

2014: Counterparty

Counterparty was founded in 2014 by Robert

Dermody, Adam Krellenstein, and Evan Wagner as a peer-to-peer financial platform and distributed, open-source Internet protocol based on the Bitcoin blockchain. By permitting asset creation and providing a decentralized exchange, Counterparty allows anyone to create their own tradable currencies. It covered a wide range of ideas and possibilities, including meme trading without the risk of counterfeiting.

2015: Spells of Genesis on Counterparty

In April 2015, Counterparty teamed up with the Spells of Genesis producers. Not only were the makers of the Spells of Genesis game among the first to issue in-game assets onto a blockchain using Counterparty, but they were also among the first to initiate an ICO. By establishing their own in-game money, BitCrystals, the founders were able to assist support the development of Counterparty.

2016: Trading Cards on Counterparty

New tendencies began to emerge in August of 2016. Counterparty partnered with Force of Will, a popular trading card game, to launch their cards on the platform. Force of

Will was the fourth most popular card game in North America, behind Pokemon, Yu-Gi-Oh, and Magic. Their entry into the ecosystem, where they had no prior experience with blockchain or cryptocurrencies, demonstrated the value of putting such assets on a blockchain.

2016: Rare Pepes on Counterparty

In 2016, memes made their blockchain premiere. In October of 2016, memes began to appear on the Counterparty site. People began to contribute items to the "Rare Pepes" craze. Rare Pepes is a popular meme that showcases an unusual frog mascot. What began as a comic figure is known as Pepe the Frog has grown to become one of the most popular memes on the internet. With the rise of Ethereum in early 2017, Rare Pepes began to be exchanged there as well. Portion's founder, Jason Rosenstein, co-hosted the first live Rare Pepe auction at the first Rare Digital Art Festival alongside Louis Parker. With the Rare Pepe Wallet, CryptoArt was founded, and it was the first time that artists from all over the world could submit and sell their own work. It was also the first time that

digital art could be considered valuable in its own right.

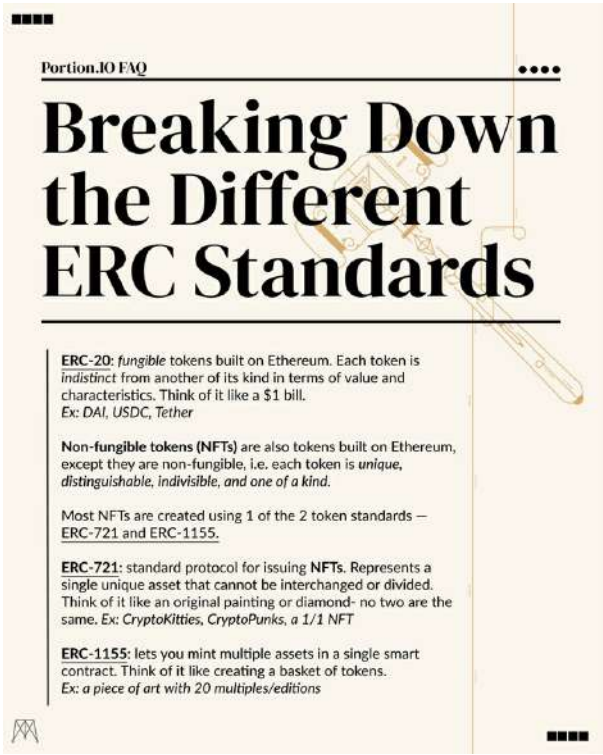
2017: Cryptopunks

As the Rare Pepes trade increased in popularity, John Watkinson and Matt Hall, the founders of Larva Labs, created unique characters generated on the Ethereum blockchain. No two characters would be the

same, and the total amount of characters would be limited to 10,000. The project's name, Cryptopunks, refers to a Bitcoin experiment from the 1990s and can be regarded as a mix of ERC721 and ERC20.
Cryptopunks by Larva Labs

The most common Ethereum Token Standard, ERC20, provides rules that allow tokens to interact with one another, but it isn't ideal for producing one-of-a-kind tokens. ERC721, for example, was designed to be the Ethereum blockchain's standard for non-fungible tokens. ERC721 allows a single smart contract to track the ownership and movement of individual tokens.

ERC20 vs. ERC721 vs. ERC1155 is a comparison of the different ERC standards.



ERC721 was used to get CryptoKitties NFTs off the ground. They are a virtual game based on the Ethereum blockchain that allows participants to adopt, breed, and trade virtual cats. They were extremely popular and were featured on major news outlets such as CNBC and Fox News. CryptoKitties was established by Axiom Zen, a Vancouver-based firm, and it immediately became

popular, attracting money from top investors as a result of its rapid growth. CryptoKitties was eventually spun out by Axiom Zen and renamed Dapper Labs.

Cryptokitties

2018-2021: The NFT Explosion

NFTs gradually gain public recognition between 2018 and 2021 before erupting into general use in early 2021.

The ostensibly hidden movement that swept the crypto community has been gradually evolving into more popular art. On Valentine's Day 2018, artist Kevin Abosch joined with GIFTO for a philanthropic auction, marking a turning point in the transformation. The relationship resulted in a $1 million transaction for The Forever Rose,

a stunning piece of CryptoArt.

Mr. Abosch continued to raise the stakes when he launched a concept called "IAMA Coin" that combined the Ethereum blockchain with his blood. Abosch isn't the only artist who has embraced this fascinating way of expression. It's steadily gaining appeal among artists eager to test their creative limits.

The NFT market is more efficient and liquid than traditional asset transfer techniques. Several platforms have emerged online, each with unique features for both makers and collectors. The main area of disruption is centered on minimizing centralized fees, which may be as high as 40% for traditional art brokers and auction houses. The largest marketplace for art, music, domain names, collectibles, and trading cards is Opensea. Mintable's platform is designed to make the minting process as simple as possible for creators. The portion is portraying itself as an NFT platform that connects NFTs, DeFi, and DAOs, with the community in charge of the governance token $PRT. Other systems, such as Niftex, allow users to purchase fractions of

NFTs, known as "shards," which are ERC20 tokens that represent a portion of a full NFT.

What We Think

Portion feels that this intriguing new medium has a promising future. We believe that any artist can and should use blockchain technology at some time in their career. Portion envisions a world where artists may expand their creative freedoms and find new audiences eager to acquire and admire their work by putting artists first.

What's Next?

While the history of NFTs is fascinating, the future of the technology is brimming with possibilities as the new area evolves from raw and experimental to extremely useful and mainstream. NFTs may soon be a technology that is essential to everyday life due to tokenization, programmability, collaboration, royalties, and more direct relationships between artists and collectors. Just a few years ago, concepts like DAOs, token-based meta-verses, community-owned financial protocols, and NFT art were small-scale experiments. As global collectives on the internet, they now represent multibillion-

dollar communities that mix protocol-driven design, economics, and governance. It's difficult to foresee the future, but in the case of digital art collecting, it's reasonable to say we haven't even scratched the surface of what may emerge in the coming decades.

Chapter 4:

MARKETPLACE FOR NFT

Non-fungible tokens (NFTs) had been around for a long, but it wasn't until 2021 that they were widely known.

The cryptographically unique tokens represent a title of ownership over the digital property like as art, music, or videos—but it was the digital art scene that ignited the NFT market, with headline-grabbing sales like Beeple's $69 million Christie's auction grabbing global attention.

Since then, fans have leapt on every new NFT fad, spending hundreds of dollars (if not millions) on games like CryptoPunks, Bored Apes, and Loot.

However, you might be asking where you can get these NFTs.

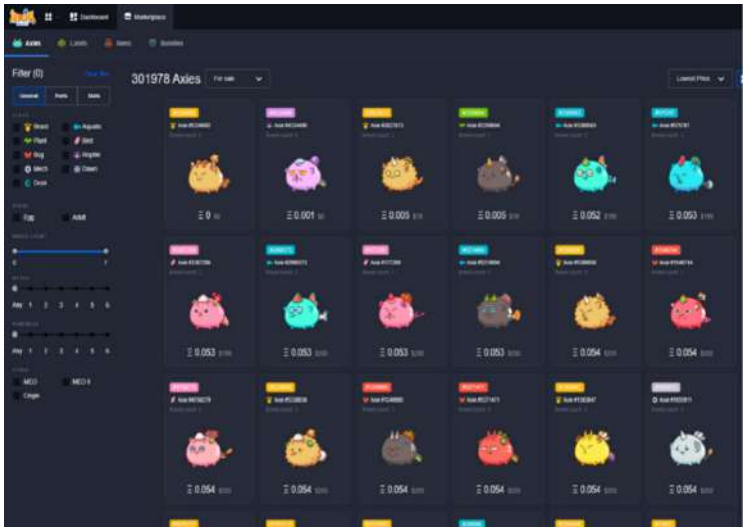
NFT marketplaces have sprung up like a thriving virtual high street, selling digital art and collectibles at all price points. The

following is a list of some of the most popular platforms.

1. Axie Marketplace

The NFT-powered video game Axie Infinity hosts the second-largest NFT marketplace, with a cumulative trade volume of more than $2.1 billion on Dappradar. It solely deals in Axies, cute Pokémon-style digital critters that players may purchase and sell on the Axie Marketplace.

You can also make new Axies using the game's built-in breeding mechanics, which you can then sell on the Marketplace. Unlike art NFTs, which are acquired solely for the purpose of collection, Axie Infinity's NFTs have a purpose: they may be used in-game to combat monsters and other players, earning tokens that can be used to produce new species. The NFTs developed by Axie Infinity have proven to be so lucrative that some players in the Philippines and Indonesia make a life breeding and trading them.



For novice users, Axie Infinity is one of the most difficult NFT services to use, and you'll have to jump through a few hoops before you can even start playing.

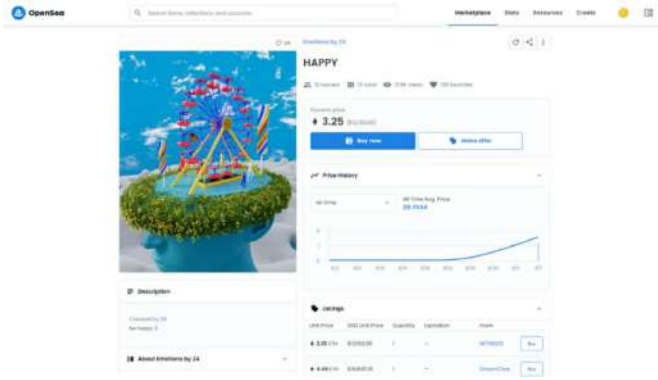
You'll need to set up a Ronin wallet, transfer ETH into Ronin, and buy at least three Axies on the Axie market in addition to an Ethereum wallet like MetaMask (which will set you back several hundred dollars). This isn't ideal for casual passers-by, but it's not beyond a seasoned crypto user's capabilities.

2. OpenSea

The world's first and largest peer-to-peer NFT marketplace is OpenSea. It has a total

transaction volume of over $6.5 billion at the time of writing, according to analytics platform DappRadar, allowing NFTs of anything from in-game items and collectibles to artwork, music, GIFs, and more.

The quickest way to sign up is to connect your MetaMask wallet, however alternative wallets such as Coinbase Wallet, Bitski, Formatic, and others are also supported.



Purchasing an NFT is a straightforward process after you've connected; you only need to browse through the various collections or search for something that catches your eye, then submit an offer and wait to see whether it's approved.

It's also simple to upload your own NFT work. Simply go to the "Create" tab, connect your wallet as a creator, and upload your

NFT, complete the description, and wait for the millions to pour in.

Larva Labs/CryptoPunks

One of the first demonstrations of NFTs on the Ethereum network was CryptoPunks, a sequence of 10,000 randomly produced characters with a pixel art look and different features. While they were originally freely available, they are now only available for purchase.

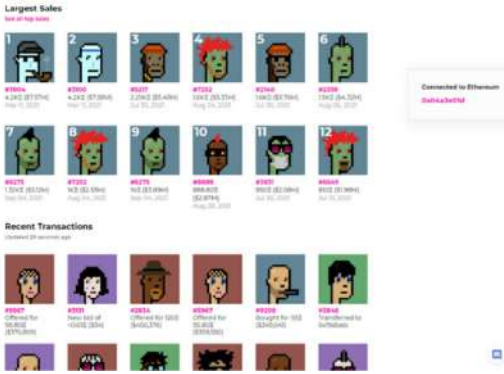
What Do CryptoPunks Do and What Are They? Ethereum's NFT Sensation

The market for crypto collectibles exploded once non-fungible tokens (NFTs) became widespread in 2021, with $2.5 billion in transaction activity in the first six months. The following is the...

This entails visiting CryptoPunks founder

Larva Labs' marketplace, where the majority of sales are made. The cheapest Punk now costs 94.99 ETH (about $285,000), while the most valuable one sold on the marketplace (number 3100) sold for a staggering $7.58 million. That explains Larva Labs' total trading volume of $1.3 billion.

To begin, simply connect your MetaMask wallet, browse the available Punks (those with red backgrounds are for sale), and place your bid.

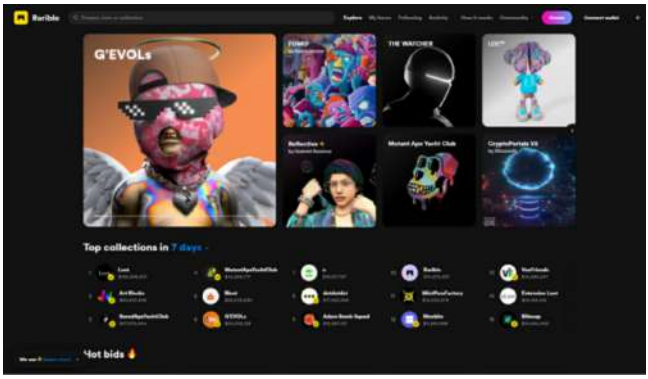


The most difficult part of the operation is convincing yourself to spend such a significant lot of money, but that's entirely up to you. After all, the observer determines the value of art.

4. Rarible

Rarible is a community-run website that sells

a variety of digital art and collectibles. It's one of Ethereum's most popular NFT exchanges. It currently has the fifth-highest all-time trading volume, according to Dappradar, with $210 million changing hands.



Just like on OpenSea, you can buy and sell any type of material. Sellers can also create several NFTs for a single image to sell it more than once.

Rarible's user interface, which is simple enough for relative crypto rookies to operate, will feel at home for those who have dabbled in similar NFT marketplaces like OpenSea.

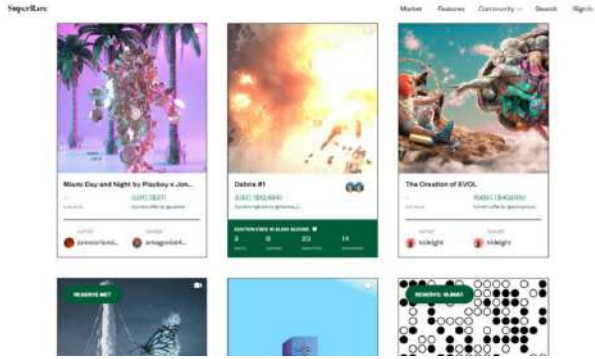
You can log in with MetaMask, Coinbase Wallet, MyEtherWallet, or any other WalletConnect-compatible mobile wallet. After you've signed up, you can use funds in

your wallet to buy, or you can top up your wallet with fiat cash via bank transfer or debit card.

5. SuperRare

SuperRare's UI is significantly more pared-back and straightforward than Rarible's, which overwhelms you with a bewildering array of flickering GIFs and live auctions.

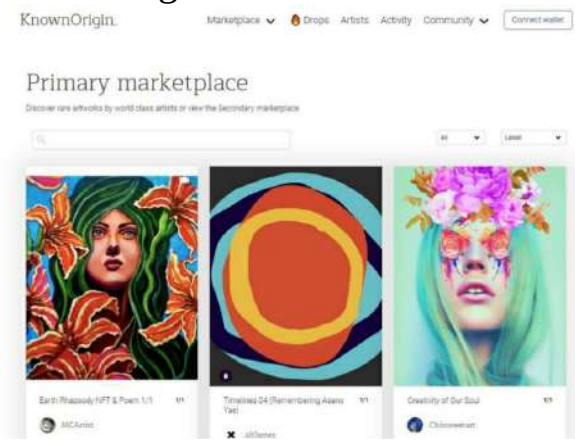
It's also a lot more curated, as it describes itself as a social network dedicated to the creation and collection of crypto art. It works closely with artists, requiring submission and vetting of work before it can be offered; in other words, quality over quantity.



To sign up for SuperRare, you'll need a compatible wallet like MetaMask or Formatic. There is one more stage in which you must create a login and password that is

tied to your wallet address, but it only takes a few seconds and you'll be browsing the platform's exclusive NFTs in no time.

KnownOrigin



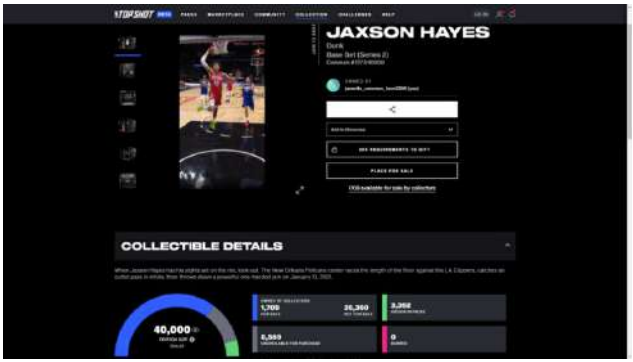
KnownOrigin, like SuperRare, promises to deliver a more curated, gallery-like experience for the discerning NFT enthusiast. Its all-time trade volume is under $6.9 million. All of its artwork files are stored on IPFS, which gives the underlying assets some protection. With a heavy focus on digital art, this is a marketplace that avoids the wackier features of the NFT universe, therefore no wacky avatars or charming monsters will be found here.

7. NBA Top Shot Marketplace

NBA Top Shot is a collection of digital trading cards based on NBA video highlights that were one of the first NFT series to gain traction with the general audience. When you buy a pack, the clips are stored in your protected, encrypted blockchain-verified wallet, where you may view them or resell them on the NBA Top Shot Marketplace.

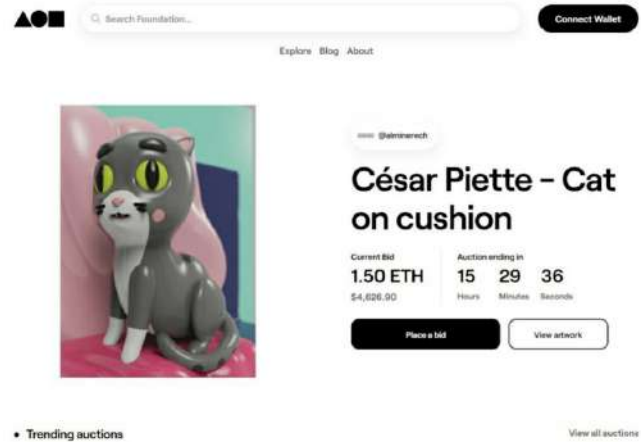
NBA Top Shot's popularity stems from the fact that its creators, Dapper Labs, made it simple for the average user to get started. To sign up for NBA Top Shot, simply link your Google account to Dapper, then input your phone number for SMS authentication.

Following that, you'll need to complete a few account-creation processes, including choosing your preferred team. After that, you can sign up for a fresh pack drop, which will put you in a virtual line to acquire one. After another SMS verification, you can pay using an existing crypto wallet, a Flow wallet, your Dapper money, or, more conveniently, a credit card.



At the risk of sounding like a broken record, KnownOrigin is simple to use. Simply connect your wallets, such as MetaMask or Formatic, and you'll be able to start bidding on your own NFT assets in no time.

6-Foundation

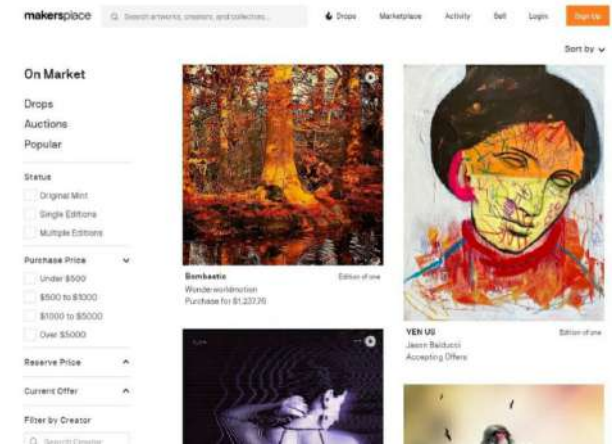


The Foundation, which touts itself as a "creative playground" for artists, has a total

trading volume of slightly more than $79 million at the moment. Nyan Cat's NFT, Edward Snowden's debut NFT, and an audiovisual digital collectible created by producer Richard D. James, best known as Aphex Twin, have all happened there.

Once you've connected your MetaMask or another software wallet to WalletConnect, you may access Foundation's marketplace with ease. On timed auctions, you can place bids exactly like you would on a regular auction site.

6-MakersPlace



MakersPlace is another specialized NFT marketplace that boasts a number of unique digital fine art collections. Despite its small

size ($23.5 million at the time of writing), it features a number of one-of-a-kind objects that add to its exclusivity.

In February 2021, the site was taken down after famed crypto artist Beeple offered a collection of NFTs for $1 each. T-Pain, Shakira, and Rage Against the Machine's Tom Morello have all signed up for the website, which has hosted a number of NFT drops by performers.

Making an account on MakersPlace is straightforward, and you can save time by logging in with your Google or Facebook accounts.

You'll have to choose five artists to follow as part of the registration process, and you'll be able to buy their creations with either your MetaMask ETH balance or (more easily) your credit card. If you're a creator, you'll have to fill out an online form to request an invitation to join the platform, which the curators will assess.

The site features artists like The Weeknd, Grimes, and Eminem, as well as a carefully curated collection of NFT releases that are released on a bi-weekly basis. It also has a

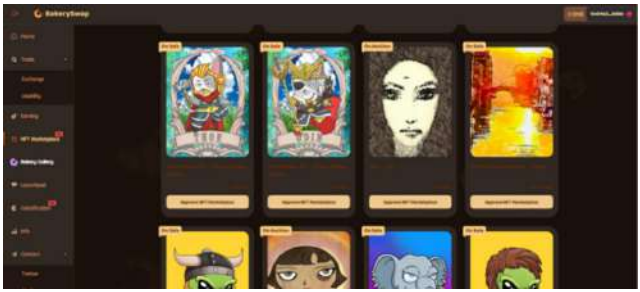
marketplace where you may browse curated collections, verified artists, and a bigger selection of unconfirmed artists' work.

Getting started is a relatively simple procedure because of Nifty Gateway's direct connection with Gemini. To get started, you'll need to sign up for an account on the website (and use Stripe to authenticate your identity if you wish to sell NFTs).

You'll need to fund your account, either with a credit card or by sending ETH to a deposit address. After that, you're ready to purchase NFTs from the marketplace.

You can also link your Gemini exchange account to your Nifty Gateway account, allowing you to make purchases and withdrawals using your Gemini exchange account balance (your Gemini account can be topped up using bank transfer, wire transfer, crypto deposits, and trades).

11. BakerySwap



BakerySwap is a smaller NFT exchange than OpenSea, which is understandable given that most NFT exchanges are based on Ethereum, whereas BakerySwap was one of the first to launch on Binance Smart Chain (BSC). The NFT marketplace, for example, is a feature of the site that allows users to trade and swap liquidity assets directly with one another.

The NFT marketplace is simple enough to use, requiring only a MetaMask connection. Because this platform is based on the Binance Smart Chain, NFT assets can only be acquired with BNB rather than the more commonly used ETH.

12. Solanart

The most recent NFT mini-boom took place on Solana, a competing blockchain to Ethereum. Collections like Aurory, Degenerate Ape Academy, and SolPunks have seen trading volumes of hundreds of

millions of dollars on platforms like Solanart. Unlike OpenSea, Solanart is a curated collection of NFT collections with a limited number of NFTs for sale.

The NFT Revolution is underway.

Solana

Purchasing Solana NFTs with Phantom Wallet

August's NFT resurgence was dominated by Ethereum, the most popular blockchain network for crypto-collectibles like CryptoPunks and Art Blocks. Despite the billions of dollars in trade activity, though...

To start buying Solana NFTs on Solanart, you'll need to download a Solana wallet like Phantom or Solflare and load it with Solana from your favorite exchange. Phantom features direct integration with the

cryptocurrency exchange FTX, making it simple to deposit funds from that exchange.
It's as simple as going to your chosen NFT, connecting your Solana wallet to the marketplace, and then putting in your offer.
Binance NFT Exchange is number 12 on the list.
Binance NFT marketplace is an NFT platform supplied by Binance, the world's largest crypto exchange, as you might think. To draw the exchange's enormous user base to its platform, the business plans to develop an NFT marketplace with exclusive offers and collaborations.
If you already have a Binance account, you'll be pleased to learn that it will automatically work with Binance NFT. After you've gotten in, all you have to do is bid on any products that catch your eye. You can use ETH, BNB, or BUSD, depending on what the developers have listed.

Chapter 5:

THE METAVERSE

You may have heard about something called the metaverse in recent months. Perhaps you've heard that the internet will be replaced by the metaverse. Perhaps we're all meant to live there. Perhaps Facebook (or Epic, or Roblox, or a slew of other smaller firms) is attempting to seize control. Is it possible that it has something to do with NFTs?

The metaverse, unlike a lot of other topics covered on The Verge, is difficult to explain for one reason: it doesn't always exist. It's half a vision for the internet's future, half a clever technique to capture some present trends in online infrastructures, such as the rise of real-time 3D worlds.

But let's get down to business. Will you start using augmented reality glasses to view your Facebook feed in Fortnite? Will you be

invited to a cyber-brunch instead of a traditional brunch by your friends? It's time to jump in and figure things out.

THE METAVERSE, AT LAST. RIGHT, IT ALL BEGAN AS A SCIENCE FICTION THING?

Correct. In his 1992 novel Snow Crash, Neal Stephenson notably created the word "metaverse," which referred to a 3D virtual environment populated by avatars of real people. Metaverse-like systems can be found in a variety of other science fiction genres (some of them predating Snow Crash). However, along with Ernest Cline's 2011 novel Ready Player One, Stephenson's book remains one of the most popular references among metaverse fans.

AREN'T BOTH THOSE BOOKS SET IN HORRIBLE DYSTOPIAS?

The metaverse of Snow Crash is an outgrowth of Stephenson's satirical corporation-dominated future America, despite its cool appearance. (In a virtual nightclub, the protagonist is a master hacker who engages in katana fights.) The story's self-awareness will not persuade readers that

this isn't supposed to be entertaining.) In Ready Player One, the OASIS is a metaphor for the virtual world, and Cline portrays it as a near-utopian source of escape in a dystopian future.

On one side, building the virtual worlds of Snow Crash or Ready Player One is less frightening than dubbing your technology "Skynet" or your vitamin drink "Soylent Green." On the other hand, science fiction stories can conjure up a convincing image of "the metaverse" without explaining how or why it exists.

THEN, WHAT EXACTLY IS THE METAVERSE?

A true "metaverse" has no universally agreed-upon definition, save than being a nicer version of the internet. Matthew Ball, a venture capitalist and author of the comprehensive Metaverse Primer: An Introduction, is regularly quoted by proponents of the metaverse in Silicon Valley.

"The Metaverse is a vast network of persistent, real-time rendered 3D environments and simulations that support

identity, objects, history, payments, and entitlements, and can be experienced simultaneously by a virtually infinite number of users, each with their own sense of presence."

Facebook, perhaps the largest tech company with a stake in the metaverse, puts it more succinctly:

"A'metaverse' is a collection of virtual environments where you can create and explore with others who aren't physically present with you."

There are also more general metaverse taxonomies, such as one created by game designer Raph Koster, who distinguishes between "online worlds," "multiverses," and "metaverses." Online worlds, according to Koster, are digital locations centered on a single major theme, ranging from sophisticated 3D settings to text-based ones. Multiverses, such as the OASIS in Ready Player One, are "many separate worlds connected in a network, which do not have a shared theme or ruleset." A metaverse, on the other hand, is "a multiverse that interacts more with the real world," including

augmented reality overlays, virtual reality changing rooms in real stores, and even apps like Google Maps.

If you're looking for something a little snarkier and more impressionistic, consider digital researcher Janet Murray's description of the current metaverse as "a magical Zoom meeting with all the playful release of Animal Crossing."

BUT WAIT, PLAYER ONE ISN'T A METAVERSE, AND VIRTUAL WORLDS DON'T HAVE TO BE IN 3D? SOME OF THESE DEFINITIONS APPEAR TO BE IN CONFLICT WITH EACH OTHER.

This is a wise observation.

HEY, I JUST READ AN ARTICLE THAT SAID WE'RE ALL GOING TO LIVE IN THE METAVERSE, AND I'M NOT SURE WHAT THAT MEANS.

Right now, people in the tech industry who talk about "the metaverse" are mainly referring to digital platforms that contain the following:

Feature sets that are similar to those found in older web services or in real-life activities

Personalized avatars with real-time 3D

computer graphics
A wide range of social interactions between people that are less competitive and goal-oriented than standard games.
Users can create their own virtual items and environments with the help of this feature.
People can profit from virtual commodities because of links to outside economic systems.
Designs that appear to be well-suited to virtual and augmented reality headsets, even if they often accommodate alternative gear.
However, "the metaverse" is probably not a fixed collection of attributes in the most current debates. It's a dreamy term for a future digital world that feels more physically connected to our bodies and lives.
IS FORTNITE REALLY A METAVERSE? OR WHAT ABOUT THE FACEBOOK HORIZON? OR ARE THEY ALL PUT TOGETHER IN THE METAVERSE?
People like Tim Sweeney (CEO of Epic Games) and Mark Zuckerberg (CEO of Facebook) frequently argue they're merely developing one component of a broader interconnected metaverse, analogous to an individual social network on the modern

internet. "The metaverse isn't a single product that can be created by a single corporation." The metaverse, like the internet, exists whether Facebook is there or not," according to a recent Facebook statement.

THE METAVERSE IS LARGER THAN ANY SINGLE SERVICE UNLESS CALLING THAT SERVICE THE METAVERSE IS CONVENIENT.

However, the term "metaverse" is often used colloquially to refer to a single platform that fits the aforementioned qualities. Second Life has been referred to as a metaverse, a virtual environment that isn't a regular game. Fortnite's user experience has been dubbed a metaverse by Sweeney because it is a virtual 3D area that combines game and non-gaming features. "Some people refer to what we're constructing as the Metaverse," says Roblox CEO David Baszucki.

There are possibly numerous freestanding multiverses if you favor Koster's "multiverse" definition. Minecraft by Microsoft receives less attention these days than Roblox, yet it allows for similar activities through modding. Lower-profile businesses, like The Sandbox,

also include a complicated cryptocurrency-based economy.

WHY IS IT EVEN NECESSARY TO USE THE TERM "METAVERSE"? MOBILE APPS, WEBSITES, AND ALL KINDS OF INFRASTRUCTURE SERVICES ARE ALREADY COVERED BY "THE INTERNET." CAN'T WE PLAY IN VIRTUAL WORLDS AS WELL?

Matthew Ball likes the name "metaverse" since it distinguishes itself from today's internet. In a phone interview with The Verge, he said, "Using the metaverse as a distinctive description allows us to appreciate the enormity of that transformation and, in turn, the chance for disruption." "It's a lot more difficult to say, 'We're late-cycle into the last thing and want to change it,'" says the author. But I believe that knowing the next generation of computing and the internet helps us to be more proactive than reactive, and to think about the future as we want it to be rather than as it is now."

A more cynical interpretation is that the "metaverse" allows businesses to avoid the negative connotations that come with "the

internet" in general and social media in particular. In a recent piece about Facebook and the metaverse, researcher Joan Donovan told The Washington Post, "You can dodge regulation as long as you can make technology look fresh, innovative, and interesting." "Before the government catches up, you can run defense on that for several years."

There's also a simple reason: it sounds more futuristic than the "internet," which excites investors and media (including us!).

IN THE '00S, DIDN'T WE HAVE A WHOLE METAVERSE HYPE CYCLE AROUND SECOND LIFE? WHAT HAS CHANGED NOW?

True, a lot of new "metaverse" phenomena aren't all that new. Nearly two decades ago, people in Second Life were becoming digital land barons and selling virtual objects. In that society and others, schools and corporations have established satellite campuses. CyberTown and other social 3D environments before Second Life. Early virtual worlds, such as text-based multiuser dungeons, or MUDs, appeared in the 1970s.

Many ancient worlds have also influenced the utopian forecasts that we see now in the metaverse.

THE VIRTUAL WORLD OF 'FORTNITE' IS NOT THE FIRST TO INSPIRE UTOPIAN PROJECTIONS.

One explanation for the resurgence of the hype cycle is that graphics technology and internet connectivity have evolved dramatically since the inception of Second Life in 2003, for example. Many video games use a "live service" concept, in which the makers update the game on a regular basis to entice players to return, giving the impression of a living, breathing, ever-changing environment. Non-metaverse games, such as League of Legends and Overwatch, make significant changes to gameplay years after their initial release, treating the experience more like a virtual place than a static game. From there, it doesn't seem that distant to in-game concerts and fashion shows.

Simultaneously, virtual and augmented reality have moved closer to mainstream use,

even if VR remains niche and AR is still in its infancy. According to one estimate, Facebook has sold roughly 8 million Oculus Quest 2 headgear, with several dozen VR games grossing more than $1 million. Those are small figures in comparison to phone and console sales, but they are enormous when compared to the virtually non-existent home VR market ten years ago. Apple is rumored to be working on virtual reality and augmented reality headgear, and Chinese company Nreal has successfully produced full-fledged consumer AR eyewear at a low cost.

WHY NOT HAVE A VIRTUAL UNIVERSE? POP CULTURE IS OBSESSED WITH CINEMATIC UNIVERSES, SO WHY NOT HAVE ONE?

Another factor could be that modern pop culture is based on enormous and highly intertextual media franchises controlled by a few businesses, which portray their massive intellectual property catalogs as shared universes. This enthusiasm has led to visions of "an internet paradise where superhero IP

held by different firms can finally kiss," as Verge editor Liz Lopatto puts it. (Ready Player One is based on this notion.)

If you believe the metaverse shouldn't be controlled by a few corporations, new technologies such as cryptocurrencies and non-fungible tokens (NFTs) may be able to help you create less centralized virtual environments. These metaverse visions are similar to Web3, a term that refers to decentralized internet services that provide consumers more personal control over the information they share online.

OR IS IT POSSIBLE THAT WE ARE IN THE MIDST OF A GLOBAL PANDEMIC THAT HAS KEEP BILLIONS OF PEOPLE FROM CASUAL REAL-WORLD HUMAN CONTACT FOR MORE THAN A YEAR?

That's another option.

NFTS IS CONSIDERED TO BE PART OF THE METAVERSE. WHY?

NFTs are complex in and of themselves, and you can learn more about them here. NFTs are a way of recording who owns a specific virtual good, and manufacturing and

transferring virtual goods is a large element of the metaverse, so NFTs are a potentially valuable financial architecture for the metaverse, according to the reasoning. Alternatively, if you buy a virtual shirt in Metaverse Platform A, NFTs can establish a permanent receipt that allows you to redeem the same garment in Metaverse Platforms B through Z.

Many NFT designers are selling collector avatars such as Cool Cats, CryptoPunks, and Bored Apes for exorbitant prices. Currently, the majority of them are 2D art utilized as social network profile images. However, there is already some overlap with "metaverse"-style services. Polygonal Mind, for example, is developing CryptoAvatars, a system that allows consumers to buy 3D avatars as NFTs and then utilize them across numerous virtual worlds.

IS IT AS EASY AS IT SOUNDS TO USE THE SAME AVATAR OR ITEM IN DIFFERENT WORLDS?

Raph Koster, on the other hand, believes it is one of the metaverse's most difficult difficulties.

Right now, designers can let individuals "move" goods between realms in a few ways. One option is to create all of the worlds on a single platform, such as Roblox, where users can equip their avatars with virtual gear and utilize it across several experiences. However, this does not hold true in universes that are more technologically and visually distinct. Even if you ignore issues like file format support, something as simple as a 3D hat model might look okay on a Lego-like Roblox character but appear out of place on a pixelated Minecraft avatar. In one universe, an object may have a specific ability (such as playing music) that is not supported in another.

'SNOW CRASH' WAS ACCURATE: AVATARS ARE DIFFICULT.

Another alternative is to generate a distinct version of the same asset for each world

manually. For example, Master Chief avatars appear in both Fortnite and Halo, but each game's design is unique. (You can't just take a Bruce Wayne model from the Batman: Arkham series and put it in a Lego Batman game; Warner Bros. can't just take a Bruce Wayne model from the Batman: Arkham series and put it in a Lego Batman game.)

Users may see this strategy as seamless, but it can be a lot of work for developers and not always worth it. While adding a popular character to a popular game may benefit both Epic and Microsoft, does Microsoft really want to create its own version of every single Fortnite skin for Minecraft just so gamers can use avatars from another company in its world?

A third alternative is to have users or third-party designers upload their own 3D models with a certain set of attributes, which is offered in the popular virtual environment VRChat. Uploading a model, on the other hand, necessitates more effort and technical knowledge on the part of users. (This is

arguably the closest analog to Stephenson's Metaverse, in which a good avatar necessitates either a lot of money or a lot of technical abilities.) Meanwhile, the developers relinquish some control over their space's style. If businesses approach them with offers for licensed characters or merchandise, they may discover a world already populated with knockoffs.

This may or may not change in the future. Epic may, for example, aim to create a shared item library for their popular Unreal Engine. New AI visual filters could alter a single 3D model to match a variety of world designs, similar to how existing ones transform selfies into anime. However, any solution would necessitate a level of collaboration that we haven't seen before.

IS THE METAVERSE SOMETHING LIKE THE INTERNET? CAN IT SUBSTITUTE FOR THE INTERNET?

That is exactly how it is being discussed! Mark Zuckerberg defined the metaverse as "an embodied internet" in an interview with The Verge, describing it as "an improved version of the internet" where individuals can

have "new experiences that you couldn't necessarily accomplish on a 2D app or webpage."

In The Washington Post, Tim Sweeney imagines the metaverse as "a kind of online playground where users may join pals to play a multiplayer game like Epic's 'Fortnite' one moment and watch a Netflix movie the next." If you imagine a place where you can view films, play games with your friends, and shop for items, it will resemble the internet.

THE METAVERSE'S KEY PROMISE IS "PRESENCE"

One of the metaverse's main characteristics is the sensation of being physically engaged with places and people rather than observing them through a window. For some people, using a tool like Spatial or Facebook Horizon to assemble your peers around a virtual table feels more natural than looking at a grid of Zoom thumbnails.

However, many of the parts appear to be

more likely to supplement rather than replace the internet. If you want to see how an outfit would appear on you, a virtual dressing room makes sense. It doesn't have to be a full-fledged virtual store, simply a simple means to flip between flat and spatial experiences. The mobile internet, for example, has seen a flood of app-based services supplement or even replace traditional websites — but hasn't rendered desktop-based solutions useless.

There are some notable advantages to a text-heavy, non-real-time internet. High-end computers, gaming consoles, and virtual reality headsets with rich virtual landscapes can be costly. Moving an avatar to a real-time 3D world may be inconvenient for people with mobility limitations or slow internet connections. Screen readers can help persons with low or no vision access text on websites, but navigating an environment based on visuals can be difficult. These challenges can be mitigated with the help of accessibility professionals, but there is still a long way to go before they are resolved.

WILL THE METAVERSE, LIKE SOCIAL

MEDIA, BECOME JUST ANOTHER FORM OF ADVERTISING?

Tim Sweeney, for example, claims that he does not want it to. According to Sweeney, today's social media has "imprisoned" companies and users in walled gardens and assaulted them with advertisements. Designers make money that isn't based on advertisements by selling digital goods in their own worlds and allowing the company to take an (often surprisingly huge) portion. New choices such as NFTs are seen as a viable alternative to ad-supported systems by proponents, despite the fact that NFTs may have detrimental side effects of their own.

FINALLY, A WAY TO MINGLE WITH BRANDS

However, the term "advertising" is a bit of a misnomer. Sweeney's idea of a world beyond commercials, Fortnite, is nonetheless jam-packed with large pop culture characters and brands creating brand recognition – in the same Post interview, he pictured auto firms dumping models of their automobiles into the metaverse for people to test-drive. The

metaverse has been described as "an expansive, digitized communal area where people may interact freely with companies" or "a sphere of culture and digital identity for brands to further uncover their maximum potential" in media coverage, with varied degrees of skepticism.

Fans of Snow Crash, in which brands have overtaken states, and Ready Player One, in which pop culture franchises have all but overrun reality, may not be surprised by this. Fortunately, even if it doesn't sound like much fun, there's still time to help define the metaverse's future - assuming it ever happens.

Chapter 6:

BLOCKCHAIN TECHNOLOGY USE CASES IN REAL ESTATE

Have you heard about the benefits of blockchain technology in the real estate industry? Or do you believe that traditional businesses will be unable to benefit from this technology in any way?

Indeed, blockchain development trends have made their way into the real estate business in recent years and are currently on the increase. It's because this technology delivers a slew of new features and benefits, ranging from increasing the security of purchase and sell transactions to automating property administration and implementing smarter decision-making.

As a result, blockchain has the potential to

completely revolutionize the commercial real estate industry, making it more modern and inventive. In this post, we'll show you how your real estate company can benefit from blockchain adoption before your competition.

WHAT IS BLOCKCHAIN AND HOW DOES IT WORK?

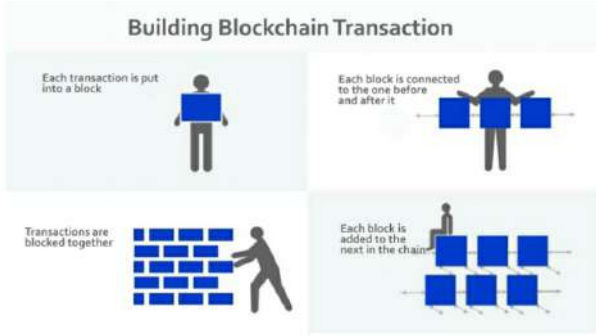
Before we go any further, let's make sure you know exactly what we're talking about when we say this term.

In a nutshell, blockchain refers to a continuously expanding set of documents known as blocks. Even if you are a highly competent hacker, each block includes encrypted cryptography data that is nearly impossible to modify. Each block has a timestamp, a slew of transactional data, and a cryptographic hash of the block in front of it in the line. As a result, cryptography is utilized to link the blocks together.

Blockchains are extremely helpful because they are exceedingly resistant to data alteration. They have been a favorite for numerous businesses, including real estate, due to their security capabilities.

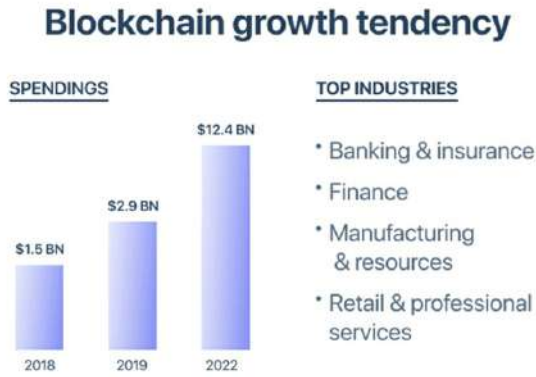
WHY SHOULD YOU BE CONCERNED

ABOUT BLOCKCHAIN IN REAL ESTATE?



If you're still unsure about the genuine influence of blockchain on the real estate business in the coming years, take a look at some blockchain development figures for the coming years. That way, you'll be able to completely comprehend the technology's capabilities.

As shown in the graphic from the Worldwide Semiannual Blockchain Spending study, global blockchain spending hit $1.5 billion last year but is expected to double this year to $2.9 billion, with an 88.7% CAGR e.g. growth rate.



However, investment in the blockchain is expected to climb even faster over the following three years, reaching $12.4 billion with a 76 percent CAGR. These figures show that blockchain use is growing at a rapid pace around the world.

In addition, a growing number of various industries have begun to use this technology to increase the effectiveness of their services and save money. For example, in recent years, many healthcare providers, as well as firms in other industries, have moved their focus to blockchain development. So, let's take a look at how blockchain distribution varies by industry:

$1 billion in the banking and insurance

industries
$700 million in the finance industry
$653 million in manufacturing and resource industries
$642 million in retail and professional services, including real estate
As a result, one of the industries that can benefit from blockchain adoption for the sake of corporate growth is real estate.
Learn more about how we create real estate applications and websites.

WHAT ARE THE MAIN PROBLEMS SOLVED BY THE BLOCKCHAIN APPLICATION IN REAL ESTATE?

As you may be aware, the commercial real estate business has seen a decline in growth over the last several years. It's because it's had to deal with a number of major issues that have remained as roadblocks to the market's progress. While blockchain development aids in the creation of solutions to these problems. So, let's have a look at some of the most pressing real estate issues and how blockchain technology might assist to solve them:
Transparency is lacking, and operations are

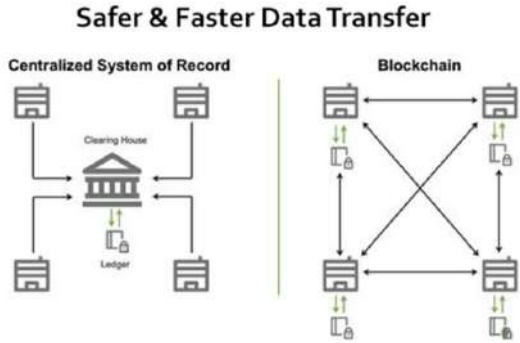
slow.

One of the most serious issues in real estate is the complete lack of transparency among contractors, which leads to corruption, fraud, and money laundering while also impeding the industry's growth.

One of the key advantages of blockchain in real estate is the ability to create shared secure databases.

The records of leasing, purchasing, and selling transactions become public knowledge, ensuring that realtors do not trip on one other's toes. Multiple listing services, which compile property-level data from brokers' and agents' proprietary databases, are an excellent example of why this new technology is so important.

Many independent parties can utilize the blockchain-enabled database at the same time, but only those who should have legitimate access to it. As a result, only real estate management contractors such as owners, tenants, lenders, investors, operators, and a variety of other service providers can have constant, reliable access to and the ability to edit or add needed information.



Because real estate parties now have common access to and use the same blockchain technology, they no longer need to be concerned about data integrity.

As a result, blockchain allows all stakeholders to construct a platform for safe, transparent, and speedier communication, automation, tokenization, and real-time data access, all of which are highly appreciated in real estate.

Data Management or Unsecure Titles

Another issue in real estate is poor record-keeping, which is necessary for quick business procedures.

All entities acquire digital IDs with blockchain that can't be misplaced or appropriated. As a result, things like property titles, liens, and finance can be kept in more

transparent records. This technology now enables the disintermediation of title corporations via blockchain.

Transactions that are both slow and unsafe

Many real estate transactions are subject to conditions, take a long time to complete, and must be transferred safely. As a result, blockchain allows for more efficient transaction processing. A purchase-and-sale transaction, for example, could be contingent on title clearances or loan approvals. Real estate companies can use blockchain to see if transactions have been completed and terms have been met.

Another issue with real estate is that it needs to be safer and malware-free. While blockchain addresses this by giving a better level of data encryption protection. For example, as we built for the Extobit bitcoin exchanger project, it allows encrypting all data transactions in the database to prevent any data breach.

Another example of why blockchain is worth using is a Swedish tax agency that employs it as a solution in real estate transactions, complete with an explanation of how it

works.

As a result, real estate businesses may be confident in transaction security and speed when employing blockchain technology.

IN THE REAL ESTATE INDUSTRY, REAL-LIFE EXAMPLES OF BLOCKCHAIN TECHNOLOGY APPLICATIONS

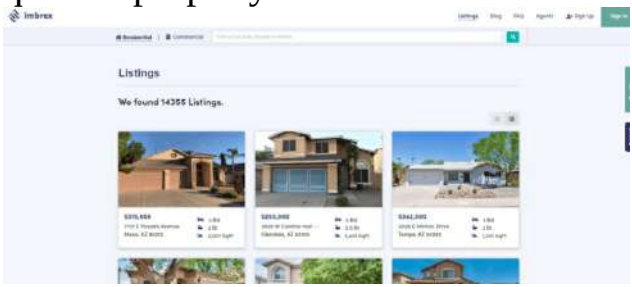
Keeping in mind the major issues confronting the real estate business, we already know that blockchain development solves these issues by enabling a level of connection and security among real estate companies that has never been feasible before.

But first, let's look at some real-world instances of blockchain applications in real estate and the commercial outcomes they produce:

1. Real Estate Tokenization: Increasing Real Estate Liquidity and Lowering Crowdfunding Barriers

Another industry where blockchain technology is having an impact is real estate. Tokens indicate a specific number of shares in certain real estate assets that may be issued, bought and sold using bitcoin on

blockchain systems. This results in a far quicker property sale.



It's worth noting that this approach lowers the barrier to entry for ordinary property investors. Commercial property investing from abroad becomes more manageable as well. Simply, properties can now be exchanged on exchanges like stocks.

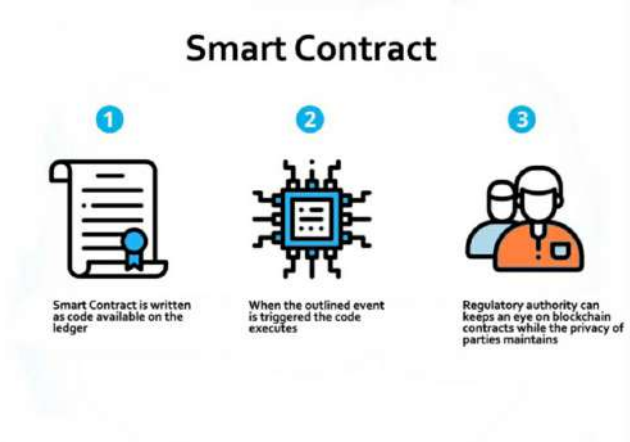
Due to its ability to boost real estate liquidity, blockchain has the potential to change the whole commercial property market.

Take, for example, Imbrex. Imbrex is a real estate blockchain firm that uses the Ethereum blockchain. It provides free access to a wide, rotating market of properties for sellers, buyers, and agents. They even get paid for supplying the data that keeps everything working.

For example, you can invest in any listed property overseas through this site without

having to be physically present here.
Ordinary investors may soon be able to lay a claim to assets that they would not be able to purchase via current methods, owing to commercial real estate technology businesses.
2. Smart Contracts: Contract Digitization and Fee Reduction
Smart contracts, which are extremely valuable in the financial and banking industries, are one of the most profitable blockchain technologies. However, the real estate market, which deals with a large number of transactions, can profit progressively from this technology.
With this type of technology in place, a property transaction that used to include practically limitless documentation may now be completed online between buyer and seller. That transaction has a better level of transparency and security than previously conceivable.
All of the transactions are automated, needing very little human intervention. Once set in action, anything built on the blockchain becomes self-executing. There is less time and effort on the part of the principals, as

well as lower costs and no risk of fraud.
It's also worth noting that, according to one tenant poll, more than 55 percent of renters are unsure about the security of their lease arrangement. In most jurisdictions, negotiating a rental contract might take a long time and require legal assistance. A smart contract can be created and executed using blockchain technology. This builds trust among all parties involved and reduces the need for expensive legal counsel.



Chromaway, a blockchain realty firm that has teamed with Telia, a Swedish telecommunications giant, is an example of a blockchain realty company that leverages blockchain technology. Their goal is to

eliminate all barriers to the digitization of real estate contracts and mortgages. Because of blockchain security features, these types of papers can be authenticated beyond a shadow of a doubt once the technology is in place.

Even if they have no prior experience in this field, blockchain technology allows anyone to design a smart contract. They can e-sign agreements that bind both parties to the contract's terms, making what was once a cumbersome and time-consuming process much more efficient.

3. Transaction Security and Control Secured and Faster Payments with Less Fraud

Real estate blockchain applications can help lower the danger of fraud. You might be dealing with someone who is seeking to buy your property, or you might be trying to buy theirs. You don't know them, therefore there's no reason to put your trust in them blindly. You don't have to with blockchain technology in place. Because blockchain eliminates the potential of anything shady happening, property transfers no longer need to go through third parties.

To date, the real estate sector has required

extensive documentation and the involvement of many intermediaries. As a result, property financing and payment methods have become delayed, expensive, and opaque.

When considering how blockchain may be utilized in real estate, one of the first things that come to mind is how it can be used to simplify payments and increase the security of real estate transactions. In both rental and purchase cases, blockchain may be used to prove that parties have the monies required for the transaction.

Financial and payment systems will soon be secure and transparent thanks to the widespread use of blockchain technology. They will be archived so that either party can refer to them at any time.

4. Property Management Automation Reduces Administrative Costs and Time

In the real estate industry, blockchain technology will remove human paperwork and the requirement for various software systems. For betterment and up-gradation, all of this will be replaced with blockchain technology. The entire property management procedure will be effective and efficient

thanks to the usage of a single decentralized application with blockchain-backed smart contracts.

5. Transparent Data Tracking & Analysis ➜ Better Decision-Making

Blockchain is a distributed ledger that lasts as long as the network does. As a result, all information about the property or the building's history is recorded, accessible, and transparent to all future owners and investors. The blockchain has the potential to make real estate investing more equitable for all parties involved.

Furthermore, the combination of blockchain technology and Bid Data allows for more accurate tracking of consumers and owner histories across borders and banks. As a result, the danger of default is reduced. Big-data real estate players can now more correctly evaluate data and make real-time decisions based on their findings.

EXISTING BLOCKCHAIN DIFFICULTIES IN REAL ESTATE

At this time, the most major obstacles to blockchain in real estate are technical and legal issues. Blockchain real estate ventures

will not be able to take off until this technology has been thoroughly researched and mastered. The market continues to face challenges due to a scarcity of personnel with experience in blockchain development.

Another concern is legal, as legal regulations and all states have yet to implement blockchain. While some blockchain technology is now in use across a variety of apps, some users are wary of them because it is not yet legal. Expect blockchain to become a true staple of the real estate business once it becomes more broadly recognized and understood.

It's possible that blockchain will not become an industry-standard in real estate for another 10-15 years. It is, however, on the way, and as the parts start falling into place more quickly, expect a comprehensive revamp of the industry that will benefit everyone involved.

Furthermore, there are many things that have yet to be learned about leveraging the blockchain in conjunction with AI, Machine Learning, Big Data, and IoT technologies to provide answers to numerous challenges that

exist in the real estate sector today.

At this time, blockchain real estate transactions may appear unfamiliar. They do, however, offer a wide range of practical uses in the fields of security, data accessibility, and the other aspects already discussed. As a result, you can expect this technology to completely disrupt the real estate or another industry sector in the next years.

The Ultimate Future of Real Estate NFT

So, we've all heard about NFTs, or Non-Fungible Tokens, and how they're causing havoc in the world right now. Almost everyone is talking about it, yet most people have no idea what NFTs are. If you're unfamiliar with NFTs, they're Digital Tokens or Crypto Tokens in the form of a Digital Asset, which can range from original artwork to trading cards and collectibles, music and films, and operate as a digital certificate for ownership of the NFT Token and the Digital Asset linked with it.

NFTs are essentially digital collectibles that are backed by blockchain technology. While NFTs don't have many purposes outside of acting as a digital certificate and backing up a

digital asset like artwork or digital collectible, people are still experimenting with them, and the real estate business is one place we are seeing some outstanding NFT projects.

Because NFTs are most commonly linked with digital objects, such as digital artworks, paintings, music, and movies, there haven't been many application cases in the physical world where NFTs may be used in genuine physical products.

Decentraland: A New Housing Market on the Verge of Explosion

NFTs are, as we all know, Crypto Tokens. NFTs, or Non-Fungible Tokens, are Crypto Tokens, just like Bitcoin and Ethereum. The word "Non-Fungibility" distinguishes the two. This means you can have two Bitcoins and share one with a friend. You each have one bitcoin, and the value of each bitcoin remains constant. This is referred to as fungibility.

In the case of NFTs, however, an NFT cannot be exchanged for another because no two NFTs are similar. As a result, they can't be copied, recreated, or replaced. This allows NFTs to be rare and distinct from one

another. This is also why the art community was the first to take notice of NFTs because the notion is quite similar to and makes sense in the art world.

Consider this: NFT means "one-of-a-kind" in a single line. When you buy an NFT, there is only one of them, and no one else can make one like it. Similarly, in the world of art, there is only one Original Mona Lisa and no duplicate. Because of its rarity, the Mona Lisa is one of the most expensive paintings in the world. NFTs are aligned with the art industry's rarity.

Beeple, a digital artist, just sold his Digital Collage of all of his artworks, titled "Beeple's Everydays: The First 5000 Days," for a staggering $69 million dollars in 2021. While many celebrities, such as Mark Cuban and Gary Vaynerchuck, have already invested in and started their own NFTs. The band King's of Leon recently released their new album, and they've also sold NFTs of it, which include exclusive artwork for the buyer.

NFTs, on the other hand, can be anything, including memes. Many memes have recently been tokenized into NFTs and sold for a high

price. The Nyan cat Meme is the most well-known, having sold for more than $500,000 dollars.

NFTs have recently made their way into real estate, or what is known as virtual real estate. In the game Decentraland, an entire universe of Virtual Real Estate Market has been built by accident.

Decentraland is a game that allows users to buy and sell Digital Real Estate in the form of NFTs. The land is simply a non-fungible token, and when players buy one, they are given a deed that certifies their ownership. Players, on the other hand, purchase land using a crypto-currency known as MANA or MANA Coin in their case.

Using the Ethereum Blockchain to keep track of who owns what on the Digital Land.

Simultaneously, users can participate in the game, visit the land marketplace, and purchase plots of land on which to build their own homes.

Not only that, but gamers can also rent or sell their land to other players. Although it may be too early for the Real Estate Market to align with NFTs, many people have already

seen great success, and there are players on Decentraland who are actively buying, selling, and flipping Virtual Real Estate Properties.

Krista Kim, a contemporary artist, sold her NFT Minted Digital House for 288 ETH (about $500,000 USD). The house owner can now use the digital file on other NFT platforms, sometimes known as Metaverses.

While some Decentraland players are generating over $100,000 - $1 million dollars by buying and selling Virtual Land NFTs.

Are you interested in learning more about how non-profits are empowering the real estate industry?

NFTs are causing a lot of rage these days, from art to fashion to nearly everything. If you've been under the impression that NFTs are solely for digitally made products, you need to broaden your horizons. Real-time properties can likewise be purchased and sold as NFTs.

The real estate business isn't immune to the impact of NFTs on the investing sector.

What Characteristics Can NFTs Have?

In most physical stores, you will receive

tokens that can be used to purchase the item(s) for which you have made the payment. NFTs work on the same principle. If you hold an item (anything) and want to trade it in the NFT marketplace (at any time), you will be a token of ownership, referred to as NFTs in technical terms. I hope you now have a better understanding of the significance of NFTs.

NFTs — The Ultimate Way To Preserve Property Ownership

Nowadays, protecting an individual's work is challenging due to the proliferation of counterfeit acts - whether it's an artwork, music, a script, or anything else. The ultimate approach to preserve ownership is to add one's assets to the blockchain network by converting them into NFTs.

When you convert an asset into an NFT, you get a one-of-a-kind token that can't be tampered with once it's uploaded to the blockchain network.

NFTs In The Real Estate Industry

You'll recall from the introduction that NFTs aren't limited to digitally made works. Here's a full explanation of how NFTs have

infiltrated the real estate market to back up that claim.

Let's say you have a property or several properties that you wish to convert to NFTs and publish on the marketplace platform to see if they can be sold. You can advertise your real estate property, such as land or a house, on the marketplace, lock your ownership, and sell when you're ready, just like any other digital asset.

NFT-Based Real Estate And Fractional Ownership

One of the hottest trends in the industry, fractional ownership, has been making headlines. Previously, if a property was turned into an NFT, it may be owned, sold, or purchased in its entirety. There are no options for dividing the property into smaller pieces and selling them to other customers.

But that isn't the case currently. NFTs of any type can be fractionalized, which means they can be broken down into smaller pieces and sold to various customers.

You could have suspected that fractionalization is used in the real estate sector. After transforming a piece of land or a

house into an NFT, the owner can divide it into a number of ERC-20 tokens, allowing buyers to possess a portion of the property.

NFTs And Lending

Why not include a provision for mortgaging properties in NFTs, which allows for joint ownership of a single property? If a person owns an NFT-backed real-time property, he or she can borrow money from the lending platform. Even the cryptocurrency business includes lending systems where users may borrow money based on the value of the coin they own.

"Time is more valuable than money," says the narrator. You can always obtain more money, but not more time."

Examples Of NFT-Based Real Estate Sales That Are Revolutionary

In 2017, Michale Arrington, the founder of TechCrunch, purchased an NFT-based condo on Propy, a real estate platform, before the concept of converting and trading NFTs gained traction. Arrington sold his NFT-based apartment, which he bought in 2017, for 36 ETH at auction in 2021.

Mars House NFT, a computerized home,

recently sold for $500,000. The Mars home NFT is a three-dimensional digital model. You can also take a virtual tour of the Mars residence, which is currently circulating the internet.

NFT Development Company

Sorts Of NFT Development Solutions

Entrepreneurs are testing the waters and launching their NFT marketplace platforms due to the burgeoning popularity and increasing rate of investors. You learned how the real estate business is benefiting from the penetration of NFTs in this article.

Let's look at some of the other areas where NFTs are used and how investors might profit from the market.

Gaming

Users can exchange a range of gaming properties dependent on the type of game, making the gaming industry one of the clear winners from NFT engagement. If it's a card game, for example, participants can gather a deck of cards and trade them. All of these operations will take happening on the gaming platform, which will also serve as a marketplace.

Music

We were talking about how content providers fight to keep their work safe. It also applies to lyricists and composers of music. They may now tokenize their work by effortlessly transforming songs, lyrics, albums, BGMs, and other media into NFTs.

Art

Because it is a pioneer, the NFT-based digital art trade does not require any explanation. Beeple's artwork Was a ground-breaking NFT sale that aided in the popularization of digital art.

Fashion, infrastructure, video, and other businesses have all profited from the good impact of digital collectibles.

Digital real estate vs. physical real estate

Although registering individual physical homes as NFTs is still impossible, digital real estate can be registered using NFTs. Because it resides in a virtual realm that is the financially regulated equivalent of the Wild West, digital real estate has no regulatory restrictions.

Virtual environments, commonly referred to as "the metaverse" or "sandbox platforms,"

exist where users can interact with and construct nearly anything they wish. Minecraft, for instance, is a well-known platform with possibilities for digital real estate. Roblox (NYSE:RBLX), Decentraland (CRYPTO:MANA), Axie Infinity (CRYPTO:AXS), Upland, Cryptovoxels, and Somnium Space are all popular platforms.

Virtual real estate lots, like real-life real estate, are specified chunks inside the platform's designated space. Depending on the platform, there is a limit to how many parcels are available, which generates scarcity in the same way as there is only so much land in the actual world. Decentraland, for example, contains 90,601 distinct plots, each of which is exchanged as a type of NFT known as LAND and acquired using the cryptocurrency MANA.

What are real estate NFTs and how do they work?

Real estate NFTs function in the same way as any other NFT. They're bought using the seller's preferred cryptocurrency, stored in a digital wallet, and, if speculative, sold for a profit to a buyer with the correct amount of

money.
FO token investments are similar to stocks in that they represent a share in a real estate project rather than a single physical or virtual commodity. Because ownership is just a portion of a corporation, profits are paid out like any other type of share-based investment. For example, if you owned one of ten tokens in a real estate business that invests in apartment buildings, you'd get a check for 10% of the net profit at the end of an earnings cycle (unless you had a different agreement in place).
You have the right to severability, as with other NFTs and shares, which means you can normally sell those tokens whenever you choose. Some real estate crowdfunding platforms require you to hold your shares for a particular amount of time, and NFT-backed platforms will almost certainly have a minimum hold time as they grow in popularity.
NFTs are used in mortgages.
NFTs aren't extensively employed in mortgage products yet, but they may become more popular in the future. LoanSnap has

provided the first NFT mortgages in the form of home equity loans, utilizing its Bacon Protocol. They process loans similarly to traditional mortgages, but instead of producing mortgage notes with liens, they issue NFTs.

Only a few NFT mortgages have been issued thus far, and they are not yet available for mortgage notes or crypto investors to evaluate for their portfolios. LoanSnap, on the other hand, wants to release bHome, a stablecoin that will reflect fractional ownership in one of the NFT mortgage notes. By providing finance for future borrowers, investors will also enable the creation of more NFT mortgages.

Real estate NFTs' benefits and drawbacks

Because real estate NFTs are so new, it's difficult to assess their strengths and flaws. A number of initiatives are presently underway to help investors better understand where NFTs may and cannot be used in the real estate business.

We do, however, know a few things. First, like any other NFT, real estate NFTs guarantee easily traceable, secure ownership

records for a wide spectrum of real estate investments. Second, they will enable the buying and sale of real estate in virtual worlds, which are rapidly becoming a new frontier for investing.

Real estate NFTs, on the other hand, like anything else in the crypto realm, isn't guaranteed, and their value can drop to zero at any time. For a long time, real estate NFTs tied to virtual real estate will be particularly dangerous investments. NFTs that represent fractional ownership in real-world investments should have a higher degree of stability.

The future of real estate NFTs

It's difficult to make forecasts at this point because the coupling of real estate and NFTs is still so new. In theory, NFTs can make it simple to transfer ownership of real estate investments or virtual real estate but don't anticipate them to be used to transfer entire properties anytime soon. The few complete units sold with NFTs were sold as part of a bundle. For example, a residence sold in Ukraine was included in the sale of a company that was the true NFT.

Holding entire real estate properties as NFTs is quite challenging under current real estate regulations. It's conceivable that things will change when blockchain technology and other crypto tools become more effective for things like establishing mortgages and providing crowdfunding opportunities. Look for ways to keep portions of mortgage debt, construction projects, and other group assets as NFTs until then.

How To Buy And Sell NFTs The discussion that follows will focus on the importance of NFTs and provide an explanation of how to buy and sell NFTs.

Non-fungible tokens have recently swept the collectible and digital art worlds. All of a sudden, any type of digital artist is discovering new ways to promote their work and earn a good living doing so. Not only digital artists, but also celebrities and other international corporations are vying for a piece of the digital asset pie. The rapid spike in popularity of non-fungible tokens (NFTs) is due to a record-breaking auction of a non-fungible token or NFT art for $69 million Ethereum.

NFTs are currently being used by digital artists such as Beeple to release their work, and blockchain can check whether the pricing is genuine or not. However, NFTs aren't just for digital art. NFTs can be used in a variety of ways, including as ownership of rare and unique objects or as another type of asset. It can also take the shape of a tangible object, so NFTs aren't all digital.

Investing in non-fungible tokens differs from cryptocurrency investing. Every NFT is unique, and each will have its own set of appraisals and prices. To buy and sell NFTs, some form of media must be attached to them in order to raise their value. Because of all the attention paid to NFTs, many people are now unsure how to buy and sell them. As a result, the focus of this book will be on the process of using NFTs as a form of investment, as well as how to buy and sell NFTs to take advantage of this new opportunity.

How to Purchase NFT

If you want to learn how to buy NFT, there are a few steps you must do. Before you can purchase any NFTs, you must first determine where they are being offered. There are

marketplaces where you may buy and sell NFTs because it is blockchain-based token. So, before we go any further, let's have a look at some of the most popular markets.

Where can I get NFTs?

You may buy and sell NFTs on a number of different internet marketplaces. However, not all marketplaces sell the same collectibles or works of art. As a result, you can buy a specific type of collectible depending on the marketplace you choose. Most of these marketplaces have a large selection of NFTs to choose from, but each platform operates differently.

If you're not sure where to get NFTs, these are some of the marketplaces where you can buy and sell them:

OpenSea

OpenSea is a fantastic Ethereum-based NFT marketplace. Users can also use cryptocurrency to purchase non-fungible tokens. It has a wide range of items, from artwork to video games. You will, however, need a blockchain wallet such as Metamask to use this site. Metamask, Trust, Coinbase, Argent, and other blockchain wallets are

supported by OpenSea. This is one of the most popular places to buy NFTs.

SuperRare

Another nice place to acquire NFTs is SuperRare. All of the pieces are one-of-a-kind, and users may sell and buy tokens through various platforms. Furthermore, because this platform is based on the Ethereum network, you will need to purchase Ether in order to make a purchase on this site.

CryptoPunks

CryptoPunks is currently one of the brightest stars in the industry. It differs from other NFT marketplaces in a few ways. In actuality, these are mostly photos with a resolution of 2424 pixels. Algorithms are used to generate all of the photos automatically. The majority of the photographs are of girls and boys dressed as punks, but there are a few exceptions, such as zombie punks and alien punks. In any case, each punk has their own portfolio where you may view their attributes, ownership status, and whether or not they are for sale.

This is akin to CryptoKitties, where each item is one-of-a-kind. Similarly, each and every

punk is unique. You can buy punks, bid on them, and then auction them for a higher price in this marketplace.

Rarible

Rarible is a token-based blockchain digital transformation platform that is comparable to OpenSea. You can also produce, purchase, sell, and bid on art items in this marketplace. All you have to do is upload your digital stuff to this platform, create an NFT, and auction it. People who want to acquire these digital photographs can place bids on them, and the image goes to the highest bidder. For selling purposes, you can also make many NFTs for a single image and sell it multiple times. Furthermore, you may be paid a commission on resales.

Sorare Sorare is designed exclusively for soccer cards. This website allows you to buy and sell limited-edition digital soccer cards. Currently, there are 125 clubs listed on the marketplace, with more being added every week. If you're a soccer enthusiast, Sorare is the NFT marketplace for you because you can buy soccer cards from your favorite players.

Let's get started with your account now that you know where to get NFTs.

Making an Account and Funding It

You can create an account on any NFT marketplace. However, you must first link to your blockchain wallet before you can buy or sell anything. Because the majority of NFTs are Ethereum-based, most marketplaces accept Ether as a form of payment. You'll need a crypto exchange account to acquire Ether, and then you'll need to send the cryptocurrency to your blockchain wallet.

You can connect your wallet to your NFT marketplace account once you have enough funds. That's all there is to it! You can now purchase NFT whenever you want!

Blockchain Wallets

To buy and trade NFTs, you'll need a blockchain wallet that supports ERC standards like ERC-721 and ERC-1155, as you probably already know. Both of these are designed specifically for NFTs. However, because ERC-1155 is a relatively new protocol, several popular wallets may not yet support it.

To assist you, we've compiled a list of

blockchain wallets that you may use to store your NFTs and other cryptos in order to purchase NFT. These wallets are supported by the majority of NFT marketplaces.

MetaMask

MetaMask is one of the most popular Ethereum-based decentralized finance applications. In reality, you may use this wallet as a browser plugin for Firefox, Chrome, and other browsers. Metamask allows you to access your assets as well as other Ethereum-based coins.

You can also use MetaMask to access the test network if you're a blockchain developer. MetaMask also lowers the barrier to entry for anyone interested in Ethereum by providing an abstraction to consumers. This is also where you can keep your NFTs. Furthermore, the device stores and encrypts all of your private keys. You have access to the keys at any time and can accept or reject NFT sales.

Coinbase Wallet

Among the NFT platforms, the Coinbase wallet is another popular option. It accepts several currencies, as well as other types of digital valuables, and provides secure storage.

There is one significant difference here. Instead of utilizing solely addresses, you can use your Coinbase wallet name to make transactions. In actuality, it is available as a separate app, which makes it even more convenient to use because you can install it on your mobile devices.

Purchase your NFT

This is the final stage in the process of purchasing NFT. The purchasing process is straightforward once you've funded your wallet and account. Most NFT marketplaces include an auction mode, in which you can place a bid and wait a set length of time to see if you won the piece. An auction might last for days, and if you're serious about buying something, you'll have to outbid the highest bidder.

Buying an NFT from the major marketplace, on the other hand, is a good idea because the resale value is rather high when you sell it on another platform. There are, however, some disadvantages to it. In any event, it's difficult to forecast how the NFT will be evaluated because demand can fluctuate at any time.

Now that you've learned how to purchase

NFT, it's time to learn how to create and sell NFT on these exchanges.

How to Make and Sell Non-Financial Transactions (NFTs)

You have two options when it comes to selling NFT. To begin, you can purchase an existing NFT artwork and then resell it on another platform. Second, you can make your own NFTs, auction them off, and sell them on other platforms. The procedure for purchasing NFTs has already been discussed. So now we'll talk about how you can make your own NFT.

How Are NFTs Created?

Creating NFT is, in fact, a pretty simple and straightforward procedure. To do so, you'll need to register with a marketplace that allows you to create NFTs. Users can buy, sell, and even generate NFTs on marketplaces like Opensea or Rarible. The finest thing is that the ERC-721 coins may be created without any prior understanding of blockchain or cryptographic hashing.

Your image, video, 3D models, or any other item will be converted into NFTs via the platform. It's not the same as asset

tokenization. In order for an NFT to be useful, the media must be linked in some way. The reputation of an artist is what gives an NFT it's worth.

How much does it set you back?

Some platforms will typically charge you a nominal fee for creating NFTs. In Opensea, however, there are no charges associated with creating an NFT. There is simply a one-time gas price for making your first NFT, and everything afterward is free. You'll need "gas" to create the tokens if the marketplace uses Ethereum NFTs.

Ethereum gas prices will vary based on the network. The greater the petrol price, the more individuals there are on the network. We recommend trying it out on the weekend when there are fewer people on the network.

Is It Possible For Anyone To Make An NFT?

There are no restrictions on who can manufacture an NFT or gain access to the marketplace. Everyone is welcome to attend. An account is all that is required to buy or sell NFTs. Buying is a lot easier than selling because you already know how much that token is worth. When you're making your

own NFTs, though, the valuation isn't the same.

Not everyone can go out and construct an NFT and expect a good return on their investment. It's a little like how real-life artists work. It is more difficult to sell if you are not well-known.

On the other side, the numerous sites' hidden fees might grow extremely complicated. Even if you are able to sell one, the hidden costs can sometimes equal more tokens than you are receiving in your sales. As a result, you'll have to sell your tokens at a loss in this instance. Before you start minting your NFTs, we recommend completing extensive research on the platforms and building a fanbase.

Selling NFTs: A Step-by-Step Guide

It's time to figure out how to cash in on your NFT collections. To sell NFT, log into your account and look for the item in your collections. Once you've located them, simply click on them to show a "sell" button. Once you've found this option, click it to go to another page where you may set the auction's pricing and terms.

In each marketplace, the procedure is slightly different. If you sell your NFT, one of the most popular tokens you'll receive is Ether, also known as ERC-20. Platforms such as Opensea charge a royalty fee in exchange for a commission each time your original work is sold.

You can begin your activities whenever you choose now that you know how to make and sell NFTs.

Lastly, I'd like to express my gratitude to all of you who have taken the time to

The popularity of non-fungible tokens is rapidly increasing. It's a new approach to sell digital valuables online while maintaining their authenticity. Despite the fact that it's a brand-new front in the blockchain ecosystem, we may presume it's here to stay based on its tremendous popularity. Many sectors are already using blockchain solutions utilizing this new type of currency.

We've covered all you need to know about buying and selling NFTs, and we hope it was useful. In any event, if you're interested in learning more about the blockchain technology that underpins NFTs, you should

enroll in one of our blockchain certification courses.

Chapter 7:

WAYS TO GENERATE PASSIVE INCOME FROM NFTS

Renting out your NFTs, especially ones in great demand, is one way to generate passive revenue.

Some card trading games, for example, allow players to borrow NFT cards to increase their chances of winning. Smart contracts manage the parameters of the arrangement between the two parties involved, as intended. As a result, NFT users typically have the choice to choose their chosen rental agreement period and NFT leasing rate.

reNFT is an excellent example of a platform that allows users to rent or lend NFTs. This gives lenders the ability to

establish maximum borrowing periods and daily rates, which currently vary from 0.002 to 2 wrapped ethereum (WETH) on average.

The ERC-20 version of Ethereum's native coin, ether, is known as WETH (ETH).

NFT royalties

NFT creators can specify terms that impose royalty costs anytime their NFTs change hands on the secondary market thanks to the underlying technology that powers them. In other words, even after selling their masterpieces to collectors, the makers can earn a passive income.

They will be able to receive a part of the NFTs' sales price indefinitely if they do this. For example, if a digital artwork's royalty is set at 10%, the original creator will receive 10% of the total sale price each time the artwork is resold to a new owner.

It's worth noting that these predefined percentages are frequently specified by the authors while minting the NFTs. Smart contracts, which are self-executing computer programs that enforce commercial agreements, also regulate the

entire royalties distribution process. As a result, as a creator, you won't have to worry about enforcing your royalty terms or keeping track of payments because the process is totally automated.

Stake NFTs The ability to stake NFTs is one of the benefits of the marriage of NFTs and decentralized finance (DeFi) protocols. Depositing, or "locking away," digital assets into a DeFi protocol smart contract to create a yield is referred to as staking.

While some platforms allow you to use any NFT, others require you to buy native NFTs in order to gain staking token incentives (which are usually priced in the platform's native utility token).

Platforms that make it easy to stake NFTs include:

- Kira Network is a social media platform that connects people
- NFTX
- Splinterlands
- Only1

Part of the benefits provided to

stakeholders is denominated in governance tokens in some situations. These protocols provide token holders voting rights over how their ecosystems develop in the future. Most of the time, coins obtained through staking NFTs can be reinvested into other yield-generating protocols.

To earn NFTs, provide liquidity.

It is now feasible to contribute liquidity and get NFTs in exchange to establish your position in a specific liquidity pool, thanks to the ongoing integration of NFTs and DeFi infrastructures.

When you offer liquidity on Uniswap V3, for example, the automated market maker (AMM) will issue an ERC-721 token, also known as LP-NFT, which represents your part of the total amount locked in the pool. The token pair you placed, the tokens' symbols, and the pool's address are also carved into the NFT.

You can sell this NFT to swiftly liquidate your liquidity pool stake.

Adopt yield farming enabled by NFT.

NFT-powered goods can now be used to farm for yields, as NFTs are soon becoming

a key component of AMMs. Return farming is the process of mixing different DeFi protocols in order to get the most out of your digital assets.

As seen in our example, the LP-NFT tokens offered as liquidity provider tokens on Uniswap can be utilized as collateral or staked on other protocols to create extra yields. Consider it a technique to earn a yield on top of a process that already generates one. This possibility opens up the possibility of a multi-tiered income-generation strategy that is suitable for yield farmers.

Keep in mind, however, that NFTs and the smart contract technology that underpins them are still in their infancy. As a result, many of the apps that provide the promise highlighted in this book are still in the development stages. As a result, before using any of the above-mentioned strategies, it's a good idea to finish your homework and understand the risks.

Chapter 8:

NFT & MUSIC

Platforms like Spotify and Soundcloud have given musicians new ways to sell their music and gain notoriety as digital trends continue to overrun the traditional industry. NFT then introduced a blockchain-based solution that allows musicians to reach out to new audiences while also earning more money in a novel method.

Musicoin was one of the first projects to respond to changes in the music industry by offering a free platform for musicians to receive direct payments from their fans. Raible, Nifty Gateway, and OpenSea dominated the market and began the NFT frenzy, and these platforms also provided a wide selection of NFT products in a variety of formats.

Since late 2020, NFT has been conquering the music industry. With many shows on

hold as a result of the epidemic, musicians are becoming increasingly interested in earning more royalties from streaming platforms. Non-homogenized tokens (NFT) play a role in this, as they provide new ways to monetise music by promoting the record's uniqueness.

The NFT music business continues to expand as demand develops and new initiatives emerge. Customers would be entitled to their unique copy through NFT distribution, and musicians will be able to keep their private keys to their music or movies on the blockchain.

In December 2020, Deadmau5 was the first major player in the industry to go the NFT way, auctioning off a collection titled "Rarez." The collection did not include any musical pieces, but it did include artwork, stickers, and other humorous objects. Later that month, he sold a single copy of In Titan's Light for an incredible $80,000.

Mike Shinoda of Linkin Park sold a 37-second audio clip of "One-Hundredth Stream" for $30,000, and Monstercat, the electronic record label, swiftly joined in,

selling the Varien-produced soundtrack for almost $500,000. Despite not having produced any NFT songs, Shawn Mendes has made over $600,000 through the sale of other artifacts.

Dance duo Disclosure debuted their new song N.F.T-N.R.G. on Twitch, and the NFT version quickly sold for a profit of $69,000. On the sale of 33 NFT titles, 3LAU, a well-known electronic producer, made $11.6 million.

Finally, Kings of Leon, the first major hit band to sell an entire album in NFT format, has sold over $2 million and is on its way to doing so again soon.

NFT will not eliminate all of the artists' financial difficulties as a result of the epidemic, but it will provide them with new possibilities.

MUSIC INDUSTRY GROWTH POTENTIAL + NFT

In recent years, non-homogenized tokens have made a lot of commotion in the art world. In the music industry, the NFT storm impact has arrived just in time. NFT's music business earnings topped $22 million

in February 2021, according to data compiled by Water & Music.

One of the best ways to understand the NFT music business is to follow some of the significant early companies that have formed in the field and are leading the way as music NFTs expand rapidly. MUSIC NFT sales have increased 150 times in the last six months, according to WATER AND MUSIC DATA. Every artist and record label seemed to be vying for a piece of the pie.

A few examples are concert (virtual and physical) ticket sales, sample packs, unreleased song previews, artwork, and other types of music NFT. The technology's potential uses will soon expand beyond what it is currently used for as the popularity of music NFT develops.

What are the benefits of purchasing NFT music?

When You See Yourself is available on Spotify, Apple Music, QQ Music, and YellowHeart, among other streaming services (a blockchain-based streaming platform).

When the audio source is available on regular platforms, many consumers wonder why they need the NFT version.

The novelty effect

The $50 bundle includes electronic record download access, a limited-edition Goldeneye vinyl, and a one-of-a-kind NFT album memento, making NFT undoubtedly distinctive and hip for some. The NFT Yourself series includes an auction of six "golden tickets" that provide fans lifetime access to the first four rows of their events, and the underlying blockchain technology of NFT allows golden tickets to be transferred straight to fans' digital wallets.

In the music industry, NFT albums are still a relatively new concept. Trying to describe them to someone who has never heard of them is like trying to explain the Internet to someone who has never seen it in the 1990s. By purchasing NFT recordings from their favorite bands, they may be able to grasp this new notion in the most direct way possible.

Limited and Rare

NFTs, or "non-homogenized tokens," are

the foundation of the fan economy. They are often limited or unique. They are rare and valuable since they come from idols. Most artists will produce limited edition tracks or albums, giving fans one-of-a-kind digital goods, artwork, and a musical experience.

Despite the fact that NFT is a digital asset, the logic for buying it is the same as buying physical goods. Many fans will want to acquire limited edition vinyl even if an album can be played for free or at a low cost online.

The popularity of NFT is similar to that of marketing-driven companies in various ways. Although ultimate t-shirts aren't very unusual, they are one-of-a-kind in that they are only available to a restricted group of people. NFT is a status symbol and a souvenir because of its rarity, limited availability, and collector's edition vinyl.

It's not uncommon for rare and exclusive tunes to cost a lot of money. Once Upon A Time In Shaolin, the Wu-Tang Clan's lone record, was purchased for $2 million by Martin Shkreli, a former CEO of a

pharmaceutical business. Discogs recently sold an obscure single by British DJ Scaramanga Silk for over $40,000, making it the most expensive vinyl record ever.

Exclusive Permissions

Some artists are using NFT to give a one-of-a-kind experience for their fans, complete with front-row seats, personal artifacts, and more – all in all, a rich and unique experiment. So, the next time you buy an NFT from an artist, keep in mind that you're obtaining a one-of-a-kind item.

The Goal of the Investment

Some people purchase NFT assets as an investment, expecting that their assets would maintain or improve in value in the future, allowing them to profit from a resale. Because of their volatility and uncertainty, NFT assets are riskier than traditional investments, but many investors are willing to take that risk.

NFT is a hybrid of "digital asset + authentication certificate," as previously said, and it has a lot of promise for any use case that connects real-world NFT. Musicians may be able to better retain

followers, develop new communication techniques, and improve royalty revenue while cutting traditional expenditures by using NFTs, which can be authenticated and extremely secure. Simply said, NFT+Music is the process of connecting music — songs, albums, and so on — to NFT.

What role does NFT play in musicians' empowerment?

NFT offers musicians the exciting prospect of cutting out some of the industry's intermediaries and third parties while tokenizing their work in a brand new way. Mike Shinoda, Linkin Park's co-founder, auctioned off a 37-second trailer for an unreleased song, complete with audiovisual NFT animation, for a whopping $30,000.

The issue is that the song's complete version is about to be sold to a major DSP entertainment company, and most musicians aren't going to make much more than $10,000 after DSP and record label fees, plus marketing costs. The majority of musicians' managers, record labels, publishers, and other industry professionals

make far more money from their music than the performers themselves, leaving them with a small share of the pie.

While electronic artists like 3LAU, Deadmau5, and others were among the first to enter the NFT music market, musicians from other genres, including Kings of Leon, embraced the expanding industry.
This also broadens the range of possibilities for musicians. NFT, the world's first beat sampling package was recently released by Grammy-nominated musician Illmind. Anyone can listen to it, but ownership and access are only given to the highest bidder. This business model has the potential to revolutionize how music is licensed and sold.
For record labels, publishers, and their lawyers, licensing and transferring music rights is now a time-consuming process, and manually clearing samples for usage or transferring copyright might cause the album's release date to be delayed. With rapid and secure document transfer, NFT makes licensing and transferring music as

simple and quick as shopping online.
"YellowHeart's goal is to create a symbiotic relationship between artists and fans by allowing them to sell their music and tickets directly to fans," says the company "YellowHeart's CEO and founder, Josh Katz, stated.
"With NFT and smart contract technologies, we're changing the way fans connect with artists." We're ecstatic to be collaborating with Kings of Leon on a transparent, fan-friendly experience that puts the artist and the fan in control."
Because the New Crown virus has ravaged the music industry, there is a growing understanding that NFT could be a new technique for reducing digital piracy while simultaneously supporting artists in generating revenue.
How can the NFT assist record labels?
Shawn Mendes' manager, Andrew Gertler, has cemented his position as an industry leader by collaborating with STRODY, a creative direction agency, to launch STRODY. Exchange, a new NFT music marketplace. Gertler and Mendes have

dabbled in the NFT business before, selling exclusive items like Mendes' Fender digital signature guitars.

IAMSOUND, a creative studio, record label, and management agency, collaborated with 88Rising and Zora to host the first NFT art exhibition in February 2021, which featured Toro y Moi, Yaeji, and Mura Masa. One of the best-selling artworks, Yaeji's computerized pet fish, went for the equivalent of $27,000.

Warner Music Group has been a long-time supporter of NFT. In September 2019, Warner's Innovation and Emerging Technologies division invested in Vancouver-based Dapper Labs, the creators of CryptoKitties, well before the NFT music mania took off. Cryptokitties is the world's first non-homogenized token gaming platform, allowing users to buy and sell virtual cats. A year later, the two companies collaborated with Muse, a Warner Music Group rock band, to create two limited-edition NFTs inspired by the group.

As a marketing channel, NFTs

Coca-Cola, Microsoft, and Nike are among the world's most well-known brands that have entered the NFT space, indicating that these digital assets are the key to a new marketing paradigm. Consumer-facing businesses can use this cultural shift to shift away from monetizing content through intermediaries like streaming platforms and toward a creator-led strategy that relies on person-to-person networks.

Unique gifts, exclusive tickets, and digital vouchers can be utilized to increase brand visibility and awareness through customers as unique digital assets gain value through trading on dedicated NFT platforms. This new decentralized paradigm can provide widespread and customized reach through the digital equivalent of word of mouth, much as targeted ads on the internet altered the marketing industry.

While the trading platforms that facilitate these transactions are still in their infancy, new and increasingly complex platforms based on a variety of blockchains are launched every month. Whereas the Ethereum blockchain has been used for

many NFTs to date, lower-value, more granular NFTs are more likely to use platforms with lower transaction fees, assuring widespread dissemination of all types of NFTs.

The music streaming paradigm is being shaken up.

Another example might be found in the music industry. With the fall of physical and digital downloads, music artists are increasingly reliant on streaming revenue, which favors intermediaries such as streaming platforms and record companies. Because the average artist revenues from streaming are so low, NFTs provide musicians a way to reclaim control of their music using smart contracts integrated into the blockchain that underpins NFTs.

Smart contracts can be written to take a variety of automated activities once particular circumstances are met, without the need for an intermediary to verify them. As a result, musicians can tokenize their own tracks while also specifying a percentage of any resale earnings. Music fans can hold fractionalized shares of song

royalties in this fashion, forging an unparalleled bond between musicians and their followers.

As the epidemic has demonstrated, live performance revenue, which accounts for a significant portion of a musician's earnings, can fluctuate dramatically from one day to the next. NFTs, which include things such as digital merchandise, virtual companion pieces to visual artworks accompanying songs, and many others, can provide a diverse income stream for musicians.

Transactions and tickets

While corporations are already using NFTs for marketing and music artists are using them to interact with their fans, there are a plethora of additional ways the technology may help us live better lives.

The world of event ticketing is one such example. Ticket fraud and black-market resales cost event organizers millions of dollars each year, and it's estimated that $15.2 billion in "scalped" ticket proceeds don't help the music industry, live performance, or sports industries, or even benefit audiences. NFTs' proprietary

blockchain protocols offer a solution to the problem. The purchase of any NFT ticket creates an immutable record on the blockchain, which the event host can readily verify. Unauthorized secondary sales or wallet transfers are also easily detectable.

The NFT tickets can also enable a number of choices, such as resale splits and unique material for ticketholders, using smart contracts. In this sense, tickets can become collectibles in and of themselves, generating value when traded on marketplaces after the event. The crucial interface that makes NFTs such a useful breakthrough is the overlap between collectible value and real-world application. The token revolution is well underway, even if depictions of NFTs as a time-limited bubble are still common. The technology's versatility and applicability are evidently already recognized by businesses and customers alike, making widespread future uses of NFTs inevitable. From marketing models to ticketing systems and custodied physical asset

transactions, the technology's versatility and applicability is evidently already recognized by businesses and customers alike, making widespread future uses of NFTs inevitable.

NFT MUSIC PLATFORMS

Suppose the preceding overview has given you a basic grasp of the NFT music industry. In that case, we'll look at two well-known NFT music platforms, ROCKI and Audius, to help you better understand how NFT music platforms can empower fans and performers.

AUDIUS

Audius is a decentralized streaming platform that uses many nodes to verify that the artists completely control the music. The platform, which has over 3 million monthly users, is intended to replace Spotify and SoundCloud and opens up new options, including putting its own NFT library into the network.

The platform bills itself as a "cornerstone of the creator economy" and a meeting place

for artists and fans. The Audius passport, which allows users to connect to the Web 3.0 ecosystem, is also supported. Permissions are not required to use the network. As a result, artists can draw from a vast collection of previous music to create new works with a fresh look and feel. Participants in the network can also run nodes, contribute, and get rewards.

Audius, unlike ROCKI, does not sell NFTs. Instead of introducing a "collectibles" component that permits participating artists and a specific level of users (both musicians and users must have at least 100 Audio tokens – roughly $240 at the time of writing) to participate. - To be eligible to use the Collectibles function, you must have a Silver Tier account (roughly $240 at the time of this writing). This is a fantastic chance for musicians to promote and sell their NFT collections and for consumers to discover and buy digital products they enjoy.

Audius' Collections feature is similar to Lazy.com's NFT gallery, except it has a separate music site. Audius can be used to

exhibit a range of NFTs, but only on a music-centric basis. Audius is now compatible with the NFTs of SuperRare, OpenSea, Zora, Rarible, Foundation, Catalog, and KnownOrigin, and is expected to work with them in the future.

- Audius features a decentralized storage solution and ledger accounts for sharing audio and metadata, as well as an efficient token economy powered by Audius platform tokens ($AUDIO), third-party stable coins, and artist tokens, as well as a decentralized storage solution and ledger, accounts for sharing audio and metadata.
- The mechanism that can be programmed.
- Users can utilize the discovery protocol to query metadata efficiently.
- A decentralized management mechanism allows artists, node operators, and fans to vote on

platform modifications and upgrades individually or collectively.

- Users can also acquire new tweets by refreshing the Audius platform, recommending popular music based on their likes, follows, and retweets. The platform is also available as an application. Boss Up Remix, the platform's #1 hit at the time of writing, has already gotten over 4k plays and several likes and retweets for its catchy tune.
- $AUDIO, Audius' native coin, improves network security, grants unique feature access, and encourages community autonomy. Each user can share, monetize, and listen to audio over the Audius protocol. By actively contributing to the network, users who hold $AUDIO can earn a voice and participate in decisions concerning the platform's future

direction.

ROCKI

The largest music platform on the Coin Smart chain is ROCKI, a digital music streaming service and payment network that intends to reward musicians directly through its in-app native token $ROCKS. The site uses a hybrid user-centric paradigm in which artists can be compensated in cryptocurrencies. ROCKI is unique in that it is the first platform to reward both artists and listeners for their involvement.

On the ROCKI platform, ROCKI has launched two unique music NFTs: the ERC721 "Royalty Income Rights" NFT and the ERC1155 "Exclusive Listening Rights" NFT. "Its one-of-a-kind hybrid subscription model allows musicians to make money from streaming." With the help of French streaming behemoth Deezer, the subscriber-centric pricing model, also known as the fairest payment model for internet streaming, has attracted extensive media

attention.
ROCKI provides musicians with additional revenue streams while also increasing audience interaction and value. The next step in ROCKI's evolution includes exclusive listening privileges for music NFT releases and royalty income rights for music NFTs on the platform.
On ROCKI, musicians may exploit their current fan base, regardless of their initial audience size, by introducing Music NFT and a unique payment approach that allows musicians to have revenue available even when the epidemic is still raging.
ROCKI is attempting to address the following issues:

- By eliminating middlemen and third parties, fans and artists can form direct interactions.
- Working with independent artists, who are the fastest expanding category of musicians, who own their songs.
- Use blockchain to handle processes such as transparency,

security, no-trust contracts, and financing.

- Pay streaming royalties using a hybrid basis, and give the musicians the majority of the subscription money.
- Reward listeners and encourage more people to join in.

Meanwhile, through Bounce. Finance, the business successfully auctioned off royalties from Israeli progressive house DJ Guy J's tune COTTON EYES, which sold for a record price of 40 ETH.

Guy J Cotton Eyes

The new exclusive music was sold for a record 40 Ether (about $24,880 at the time of writing) using the decentralized auction mechanism Bounce—finance, with the right to 50% of future ERC721 revenues from work.

The platform's native token, ROCKI, pays musicians and listeners for early engagement. The token's attributes encourage token holders to utilize it as a tool rather than a speculative asset to learn

about the platform's features. ROCKI also gives individuals and collectives that can assist in the operation of the platform tokens. Furthermore, ROCKI tokens are a vital aspect of the platform's development and are designed to foster an active and positive community.

The portal gives artists and musicians who have been affected by the new crown epidemic a much-needed source of cash. Although the network is currently in beta, it already contains hundreds of independent artists and over 30,000 tracks as of December 2020.

Furthermore, ROCKI broadens the notion of "fan-centric" by awarding listeners ROCKS tokens to listen to sponsored and curated music on the ROCKI platform. Listeners can earn ROCKS tokens by making playlists, offering feedback, and organizing social events on the streaming platform, which is a first.

NFT'S ENABLING SOLUTIONS FOR THE

MUSIC INDUSTRY

Intellectual Property

It is common knowledge that digital assets may be copied, exchanged, and stolen: seed downloads and audio leaks surely reduce the music industry's income, posing a threat to established distribution and monetization strategies. Creators, gallerists, curators, and other stakeholders in the music industry are striving to generate and capture the value of "digital scarcity" by investing in NFT. The value of an NFT song isn't just in the sound; it also allows consumers to have unique ownership of the song file, with ownership transferred directly from the artist to the buyer via the Ethereum blockchain.

Those hundreds of speculators flooding the NFT market, pushing up the price of NFT assets such as JPEGs and GIFs, hope that the novelty of NFT music media would continue to accumulate value in the secondary market over time, allowing them to make more profit through resale.

NFT can transmit intellectual property

ownership such as songs, recordings, and samples more easily, swiftly, and securely than currently, as proven by the successful selling of Illmind sample packs. The transfer of ownership on the blockchain can be registered and processed in seconds using "smart contracts."

Flexibility and convenience

The convenience of NFT is one of its most important qualities. Fans only need to create a digital wallet to access and receive content, participate in auctions, and win competitions. Purchasing exclusive music projects is now as simple as purchasing online. Musicians can also create an account, upload their work, enter information such as willingness prices, and wait for people to bid on it.

Furthermore, artists have a lot of freedom regarding what they want to sell, whether digital or tangible. Albums, sound clips, digital works, merchandise, and concert tickets are all non-homogenized tokens that musicians might use to promote their work. Fans are willing to pay for this novel and thrilling experience, and performers are

free to "sit back and enjoy" it.

Additional sources of income for musicians

The new crown virus has wreaked havoc on the music business. NFT is a potential new source of money that could compensate for this loss while allowing fans to directly support artists.

Most independent musicians receive little to no compensation since streaming platforms like Spotify typically assign 90% of royalties to only 2% of musicians. According to Citigroup research on the music industry, barely 12% of all revenue is distributed to original musicians. As a result, NFT Music will eventually become the paradigm for independent performers of all genres.

In the best-case scenario, musicians can easily profit from the secondary market and receive a predetermined percentage of future digital music production income. In principle, it also encourages investors to look for undiscovered talent in the music industry, investing in promising musicians like stocks and profiting when they become well-known.

Decentralized and secure

With no middlemen, digital transactions are safe and quick, and NFT connects musicians and fans directly. On the other hand, musicians trade NFTs for concert tickets, limited-edition events, digital content, merchandising, and music instead of digital currency. The highest bidders are transferred immediately into digital wallets through secure transactions, and fans participate in auctions for these tokens.

Musicians can raise revenue for the content they auction and keep it entirely in these exchanges, which do not involve third-party record labels. Fans pay money for exclusive content, the proceeds are safely held in their digital wallets, and the auction proceeds can be digitally transferred to the musicians.

Furthermore, the NFT music industry is permanent, surviving outside of any media platform, thanks to the in-blockchain encoding. It is extremely difficult to steal or commit other abnormalities after a file has been encoded as NFT. NFT music will last nearly indefinitely as long as the

blockchain is operational.

Creators are not distracted by the ever-changing diversions of Spotify, YouTube, and other platforms. They can allow their original invention to achieve its full potential and sell it to people who respect and value originality.

Ticketed Events

Inefficiencies, Robo-programming, scalpers, hidden surcharges, counterfeit tickets, and other issues have long plagued ticketing for live and virtual events. According to CNBC, 12% of those who purchase concert tickets have been scammed. However, NFT, which is based on blockchain, reduces the risk of fraud by making ownership transfer records transparent and ticket verification simple. Smart Ticketing can incorporate non-transferable information in its computer code to prevent ticket transfers if ticketing businesses forbid resale and scalping.

Future Obstacles

Creating Scarcity

NFT can inspire new art forms; however, if the value of art is only based on its scarcity,

then distribution and artist access are critical.

Physical scarcity is not the same as digital scarcity. The number of tickets sold for NFT live shows must also create scarcity, and the artist can determine the number of tickets sold. Limited seating is an example of scarcity in live performance, a limitation imposed by physical conditions. Still, the number of tickets sold for NFT live shows must also create scarcity, and the artist can determine the number of tickets sold. NFT works on the premise that if you make something that isn't scarce, the value will follow. However, an excessively high price may create a sense of isolation and turn off many fans. The scale must still be considered when deciding on the level of scarcity.

Emerging Musicians

The market for NFT music tokens is frequently driven by demand for a single musician's work. Fans of well-known or established performers might easily be attracted to the auction and join in the bidding. However, for new artists, creating

this demand requires a lot of time and effort. New musicians have fewer opportunities to gain from this new genre of music.

So far, there have been few emerging musicians that have entered the NFT industry. Logically, young artists haven't surged in popularity because NFT sales are generally driven by status and hype rather than level. Furthermore, several markets purposefully exclude lesser-known artists. The most widespread NFT exchange, openSea.io, and other growing NFT music platforms frequently charge significant upfront fees for casting or releasing work, raising the hurdles to access.

Bubble

Will this be the start of a new bubble? Is there anything we're overestimating due to NFT's present popularity? If the price of selling NFT is determined by excitement and scarcity, the risk to individuals who acquire NFT as an investment product is enormous once interest dwindles.

A song or album with an NFT label can cost hundreds of dollars, and NFT music

goods are no longer just music or MP3s. Still, they have evolved into a collector's item category, selling for considerably higher rates. Additionally, some musicians are generating NFT-tagged copies of their work. In principle, it makes each piece unique, but its worth might be substantially lowered in practice. If you're a collector looking for an asset that will hold its worth and grow in value over time, look for unique pieces, not just copies with the NFT label attached.

Sale Model

NFTs can be bought and traded on the open market. The bulk of music NFTs are sold via auction; however, some are offered at a set price. The seller's preferences determine which technique takes precedence. Many fans are put off because most markets do not take credit cards or regular cash payments.

However, if you are serious about purchasing NFT, the easiest method is to regularly monitor the tweets of your favorite performers. The majority of auction news for musical compositions is

tweeted ahead of time.

Intellectual Property

While Illmind's NFT sampler pack may show the potential benefits of using blockchain to transfer intellectual property ownership, there is still a lot of ambiguity. Smart contracts in decentralized systems are expected to encounter challenges that will need to be uncovered and fixed along the road, given the technology's new arrival and the great complexity of global copyright law.

Environmental issues

Writing new transactions for the Ethereum blockchain consumes a lot of energy right now. Large computer networks compete to be the first to develop complex mathematical solutions that add new transactions, or "blocks," to the blockchain to ensure its security and authenticity. These existing "proof-of-work" processes unilateral value efforts above all else, resulting in a lack of server interoperability. In 2018, Ether utilized as much energy as the entire country of Iceland to verify its blockchain. While programmers are

working on a new consensus method, it is more focused on rewarding Ether's investors than increasing computer capacity, which will take another year. Purchasing a concert video, for example, could consume enough energy to power an entire city.

The future has arrived.

This growing market is steadily gaining awareness as more firms see the potential of the NFT music industry. A catalog is currently developing a business model comparable to Bandcamp, where artists can submit, collect, and trade unique digital entries. NFTs on the marketplace will be certified and supported by the artists themselves, according to the business. Catalog's worth comes from the fact that it establishes a one-to-one entry market based on consistency and exclusivity.

XLR8R, a well-known electronic music publishing house, has cited the growth of its NFT market. TUNE.FM will also start its marketplace in the meanwhile. More marketplaces are currently being built, such as STURDY.exchange, which was

discussed earlier. Each marketplace has its value proposition for assisting artists in connecting with fans and monetizing their creative works.

If you're a musician looking to get into the NFT sector, you can create limited and significant NFTs to ensure that backers are purchasing genuine and one-of-a-kind things. This will increase their value and foster a close and trusted relationship between the two parties.

In a nutshell, NFT will harm musicians and the music industry. It provides musicians with more autonomy, decision-making ability, and a new money stream, which is critical now that the epidemic is far from ended. At the same time, it lets fans experience the excitement of owning their loved ones' global singles, as well as providing more fans with a closer connection to musicians and safer, more secure access to verifiable NFT assets.

Chapter 9:

TOP 10 BEST NFT MARKETPLACES FOR MUSICIANS

The year 2021 is gradually becoming recognized as the Year of Non-Flammable Technologies. The notion of NFTs isn't entirely new; it's been around for a while. However, this is the year in which the concept has begun to gain traction.

NFTs are digital items whose sources can be verified without being duplicated or changed after they are created, in case you didn't know. This is a significant step forward for digital products, as they can now be tracked. People developing digital products and then having them copied by someone on the internet has been a significant concern for the last 20 years or so. Many people have begun

to question the worth of digital products as a result of this.

However, thanks to blockchain technology, this is already changing. And it's beginning to alter the musical landscape - pun intended. Artists now have the opportunity to take complete control of their work and profit directly from it. Artists can now move away from having a record company take the majority of their revenues thanks to music NFTs.

Some exchanges allow users to create their own NFTs. In other words, they can certify their digital asset (such as a previously unheard song or hit) by having the platform develop and verify the relevant code. The artist can then sell the NFT after this is completed. As a result, the key question is: which platforms are the best for selling music NFTs?

We've got your back. Here is a complete list of the top ten NFT music marketplaces.

1. OpenSea

OpenSea is by far the most popular and commonly utilized NFT platform. This includes NFTs in the music industry. It has

been built and operated in such a way that its market niche is relatively open. What we mean is that any NFT you want to produce or sell, you can do so on OpenSea.

You can think of them in the same way that you would Amazon. On Amazon, you can buy practically everything; their niche is incredibly broad. The OpenSea marketplace is free to use and includes a location to mint NFTs. It has over 4 million product offers, giving it an excellent venue for musicians to begin selling NFTs.

2. NFT Showroom

This is a platform that uses the Hive crypto-currency as its foundation. The NFT Showroom platform is extremely affordable and simple to set up, making it an excellent platform for artists to showcase their work. The NFT Showroom is noted for having more unusual items for sale. If you're a musician with some unpublished material, this could be the place for you. Please keep in mind that they just sell NFTs and do not provide a minting service.

3. SuperRare

This is a non-traditional marketplace that bills

itself as "Christies meets Instagram." It is still in its early phases, and only a small number of artists are now allowed to participate. However, here, artists are chosen by hand, giving them the opportunity to achieve some exclusivity. Just keep in mind that you will receive 85 percent of the total amount spent.

4. Nifty Gateway

This is an excellent NFT marketplace designed to make NFTs more accessible to everyone who is interested. Artists such as Grimes and Deadmau5 have sold their work on this portal. It's fairly vast, and it's geared for music NFTs. Overall, it's an excellent site to listen to music NFTs.

5. Rarible

This is a more specialized NFT platform for artists that want to create smaller NFT collections rather than general music NFTs. If this is the type of NFT you're interested in, it's probably worth looking into. It's also a platform that aims to establish a decentralized authority system. This means that the platform's operation will ultimately be determined by its users.

6. Foundation

This is a brand-new NFT platform that aims to provide a venue for artists to personally experience the creative economy. The platform operates by allowing artists to invite other artists to join it. It's a pretty exclusive club to be a part of. A person cannot just walk in and participate; they must be invited. If you want to raise your NFT prices, this is something you should strive for.

7. MakersPlace

This is an extremely specialized platform for one-of-a-kind NFTs. It's a platform for artists who want their followers to be able to purchase extremely limited-edition collections. It allows artists and their followers to engage on a more personal level.

8. Mintable

The most notable distinction between this platform and others is that it allows for gasless minting. When building an NFT, allows you to avoid paying gas fees. However, be aware that it also provides the opportunity to receive up to 5% back on secondary sales.

9. Decentraland

As you might guess from the name. You are aware of the company's objectives. It also applies to the music sector, making it an excellent choice for music NFTs. It places a strong emphasis on establishing a virtual world (part of the metaverse) where people may manufacture and trade digital goods. It's worth a look because it has a lot of advantages for vendors in terms of clientele.

10. NFT Tone

NFT Tone is the last but not least in our list of NFT marketplaces. An NFT marketplace dedicated solely to musicians looking to sell audio files as NFTs. As a result, artwork covers and signatures, among other things, are not included. It has extremely low minting fees and even takes USD as a form of payment.

As can readily be seen. There are a plethora of platforms available for selling music and related digital files as NFTs. Do your homework when it comes to picking the platform that is right for you. To begin, figure out what you'd like to sell and how you'd like to sell it. After that, consider which of the platforms listed above is ideal for you.

Chapter 10:

NFTS IN SPORTS

Although we are all aware of the concepts of blockchain, Bitcoin, and cryptocurrencies, a new phenomenon has just swept the globe. NFTs are a newcomer to the sporting world and beyond.

In the same way that cryptocurrencies have surged in popularity in recent years, a new trend tied to a blockchain is gaining traction: NFTs. Athletes, artists, celebrities, and influencers use these tokens to provide unique experiences and sell them to their audiences.

NFTs are extremely valuable and in high demand. Take a look at the numbers: the market capitalization of NFT is $17,9 billion as of May 28, 2021, and it shows no signs of slowing down. But, in terms of token popularity, are we nearing the pinnacle, or

will we see an even bigger spike shortly?

While we don't have extrasensory talents to forecast the future, we are willing to investigate the notion of NFT right now to assess the technology's potential and determine what can currently be tokenized in the sports business. Without further ado, let's get this party started!

What is an NFT?

The term "non-fungible token" refers to a type of data that is held on the blockchain. Each token ensures that a digital asset is unique and cannot be replaced, unlike Bitcoin and other cryptocurrencies.

When Ethereum, one of the most popular blockchains, gained support for NFTs as part of the new ERC-721 standard, they became technically possible. This is the primary reason why the Ethereum blockchain platform has created the vast majority of NFT tokens.

When CryptoKitties debuted in 2017, the NFT became mainstream for the first time. Although it is no surprise that people are crazy about cats, some may find this fixation with digital kittens unexpected. Dapper Labs

launched CryptoKitties, a virtual blockchain game that allows users to adopt, raise, and trade virtual cats. Each kitten is one-of-a-kind, belongs to the player entirely, and cannot be duplicated, taken away, or killed.

Although CryptoKitties was built on the Ethereum blockchain, the network was immediately overburdened and couldn't keep up with the tremendous demand from NFT fans. As a result, developers opted to build their blockchain, which would be easier to scale and would allow them to lower transaction costs. As a result, they've created Flow, and their programming language, Cadence and CryptoKitties, is currently migrating from Ethereum to Flow.

The Flow blockchain has emerged as a new platform for developing decentralized apps, particularly in NFTs, gaming, and digital collectibles.

Since then, a lot has changed, and NFTs have gone from a niche interest to a worldwide obsession. An NFT can now be used to represent artwork, concert tickets, social media posts, images, GIFs, videos, music, and other items that you might not have

thought could be tokenized.

THE SIGNIFICANCE OF NFTS FOR ATHLETES AND THEIR FANS

Next to tokens is a player clutching a winner's trophy.

Any fan of a band, a football team, or the Harry Potter novels enjoys collecting merch and memorabilia and will jump at the chance to attend a Meet & Greet, a performance, or a match (as soon as the pandemic is over). As a result, it's only natural that NFTs are so popular among collectors and aficionados.

An example from real life

The NFT model appears to be a good fit for the sports business. The NBA is well aware of this: since the public beta phase began in October 2020, the NBA Top Shot platform has produced $500 million in sales and over 800,000 members.

Basketball fans may buy, sell, and trade officially licensed video highlights ("moments") with their favorite players through NBA Top Shot, a blockchain-based

trading card system.

Benefits for fans

Assume you bought an NFT with Michael Jordan's slam dunk on it. What are you hoping to get out of this purchase?

You don't acquire the copyright right now if you buy it through NBA Top Shot, and you can't utilize it outside of the blockchain. The token can't be borrowed or divided, either. In this situation, the buyer is limited to the actions permitted by the current owners, the NBA, and Dapper Labs.

You might be asking why such platforms continue to grow in popularity and attract new members. This is a real concern, and the answer is that you can buy and save moments in your collection knowing that you have the official highlight version.

Most of the time, we can get the files we desire for free, but their rarity makes them valuable. The fact that you purchased a certain item, as well as information about the item's creator, is tracked and securely stored on the blockchain. For fans and collectors, such transactions are equivalent to purchasing writer's manuscripts or original artwork.

NFTs may be resold and benefited from, therefore they can be thought of as an investment. Having a one-of-a-kind NFT backed by a genuine item can be a joy and a once-in-a-lifetime emotional experience for some.

Benefits for athletes

NFTs provide a more beneficial financial model for athletes and their supporters than advertising or sponsorship. It's also a new method to engage with fans and provide them a one-of-a-kind experience, such as the chance to buy one-of-a-kind things, personal images, or even a ticket to a live event.

Indeed, today's generation places equal importance on digital and physical goods. As a result, it's no surprise that many individuals would rather pay for digital photos or GIFs than download them for free, especially if they know they'll get something special.

The physical scarcity of cards, for example, distinguishes the collecting card business. The combination of scarcity and genuineness draws fans in, allowing athletes to get closer to them.

Initiating an NFT project also presents a

marketing opportunity for leagues and sportsmen. They can build up NFTs and handle them like eCommerce, but with a lot more features, such as selling official league and team products. NFTs are, in general, a win-win situation for sportsmen and their fans.

Why are NFTs so expensive, and why are they getting more expensive?

When a collector purchases a very valuable stamp, picture, or coin, we may wonder why people are prepared to pay such exorbitant prices for these items. This, however, has become the standard since we've become accustomed to the idea that original, unique, and well-known tangible goods are valuable and can be resold for even more money.

Authenticity, one-of-a-kindness, rarity, and popularity add to an item's worth, making it more expensive. Except for the technology and technique of storing information about a product's authenticity and purchase, nothing changes with NFTs.

NFTs are built on blockchain technology, allowing you to inspect and verify the item's legitimacy, increasing its value. As a result,

fans and collectors can buy genuine (mostly digital) things without leaving their homes, avoiding the risk of buying a fake.

Artists, entertainers, actors, and athletes tokenize their paintings, songs, collectible game cards, and even tweets to secure their copyrights and make money. For example, when you buy a video clip, you don't get the broadcast rights or a physical copy. In reality, the buyer just owns a few lines of code, but they serve as proof and a form of digital certificate proving they are the rightful owner of the one-of-a-kind digital item.

The token's value will naturally rise if the NFT includes a personal encounter with a celebrity athlete, a match ticket, or a Meet & Greet.

What do we tokenize using NFTs in sports?

The following is a list of sports-related items that could be tokenized.

Many athletes, celebrities, and influencers have noticed the NFT craze and want to be a part of it as well. Statistics gathered from NFT markets on the Ethereum blockchain show a huge number of sales made within a month, from April 15 to May 15, totaling

52,752 tokens traded and $11.4 million spent on completed purchases in the sports industry. Isn't it impressive?

Let's look at what leagues and players can do to become non-fungible tokens and how they can benefit from the NFT trend.

Games and collectible cards

You can make your marketplace a league or a team, and it will serve as a platform for selling your sports club's exclusive collection of NFT cards. You can also create an online game where NFT cardholders compete against one another or form teams to compete in virtual competitions.

If an athlete wants to create collectible game cards, they can schedule a special photoshoot and have exclusive photographs printed on them. Another possibility is to create cards with highlights from their careers. Each card must feature a different image and be one-of-a-kind.

SORARE

Sorare is one of the most well-known NFT virtual sports games. Nicolas Julia and Adrien Montfort created this Ethereum-based

fantasy soccer game in 2018. FC Bayern München, Liverpool FC, Real Madrid CF, AC Milan, Valencia CF, and more world-famous soccer clubs are among the 138 fully licensed clubs on the platform.

Players can establish teams, get awards based on real-world soccer fantasy league scores, and buy, sell, trade, and manage virtual teams using digital player cards in the Sorare game. Some are licensed digital collectibles that are rare, super-rare, and one-of-a-kind.

GIFs and video clips

We often think of a great athlete's career highlights or legendary pre-game rituals like LeBron James' chalk toss when we think of them. Consider how these one-of-a-kind experiences could be translated into valuable NFTs and added to a fan's digital library.

NBA Top Shot: Highlights on digital cards

The NBA Top Shot platform has already adopted the idea of issuing NFTs with highlights. The following is how it works: first, the NBA cuts the moments, and then Dapper Labs, the platform developer, chooses which ones to sell. The highlights are then packaged into digital packs and sold on the

internet.

The video's quality, the player's stardom level, and the card's exclusivity determine every moment's price. Once a fan purchases a pack, the movies are stored in their wallet for "showcase" or resold on the NBA Top Shot Marketplace.

SportsIcon: NFTs with iconic moments

An additional NFT platform Former NBA champion Andrew Bogut and Roham Gharegozlou, CEO of Dapper Labs, lead a recent investment round for SportsIcon. Chad Hurley, the creator of YouTube and previous CEO, was also on the list of investors. SportsIcon intends to work with many athletes to create NFTs of memorable moments from their sporting careers. NFTs will be used to both current film and original content created by athletes and digital artists.

Photographs and personal documents

On the phone, a person demonstrates an NFT market.

Images from an athlete's or a team's archives that have not been released on the Internet can be converted into NFTs. Childhood photos, early training days, performances,

and even a first football match can all be included. This gives value and exclusivity to the token for fans and other potential buyers.

There's good news for sports photographers: you can sell your work as an NFT and preserve your copyright and reproduction rights. Even after the photo has been sold, you can continue to post it on social media, sell prints based on it, and so on.

LeBron’s picture as an NFT

OpenSea, one of the largest NFT marketplaces, houses unique digital objects and crypto-collectibles worth hundreds, if not millions, of dollars. For example, the "Statue of LeBron" is valued at 10,000 ETH (about $35 million) as of May 17, 2021. Photographer Kimani Okearah authenticated the photo, which was taken in February 2020. If a buyer is found for the photo, they will be given exclusive non-commercial rights to the one available copy of the shot and the raw file.

Memorabilia

Sports equipment, prizes, outfits, and accessories worn by notable sportsmen are examples of NFTs. You can create or join an

existing marketplace for your club, post any goods there, and share it with your followers. You can also collaborate with the designer to reproduce tickets for major sporting events and sell unique digital replicas as NFTs.

Warriors' ring and ticket stub collection

The Golden State Warriors, a San Francisco-based NBA franchise, have done just that, releasing their NFT collection of limited edition digital reproductions of championship rings and ticket stubs. "You were there for the games, and you were there to celebrate the championships." "Now you can own a piece of history," Warriors tweeted.

Warriors Championship Ring NFTs and Commemorative Ticket Stubs NFTs designed by artist Black Madre are part of the NFT series.

Warriors didn't stop at selling artifacts; they intended to provide their fans with an unforgettable experience. The winner of the inaugural edition of each ring will receive a real Warriors Championship Ring. If a fan purchases all six NFT rings and completes the collection, a Warriors Championship Banner NFT will be unlocked.

The highest bidder on the ticket stubs will be invited to a Warrior-for-a-Day event, which will feature the opportunity to sign a simulated one-day contract with the team and two tickets to a Warriors home game. The Warriors Historic Moment Showcase NFT will be unlocked by purchasing all ten ticket stubs and collecting the entire set.

Essentially, it's a combination of collectibles and creating incredible memories that people will never forget.

Meet-and-greets, online meetings, and in-person encounters are all options.

Getting to a Meet & Greet or any other type of gathering, whether online or offline, is every fan's fantasy. Meanwhile, this is a terrific method for athletes to communicate with their supporters and thank them for their support.

If you want to do so, you can issue NFTs that will function as tickets for a Meet & Greet - a meeting with a group of your supporters (up to 15 individuals). Because these NFTs can't be reproduced or traded, sports fans will have a one-of-a-kind opportunity to ask their favorite athletes questions, interact with

them, and snap pictures with them.

The same is true for exclusive online and in-person encounters. Of course, an online meeting isn't the most appealing option for fans, but during a global epidemic, even a simple event like this will make athletes and their supporters very happy. Exclusive token owners and athletes can connect via Skype, Zoom, or other services.

Furthermore, guest passes and show openers can be tokenized and sold on exchanges.

Gronk's collection comes with a meeting.

Rob Gronkowski (nicknamed "Gronk"), a tight end for the Tampa Bay Buccaneers of the National Football League, has developed his own Rob Gronkowski Championship Series NFTs. Gronk's four historic championships are commemorated in his OpenSea collection, including five limited-edition NFT collectible cards. Each card is a one-of-a-kind gift that Gronk has digitally signed and numbered.

A one-of-one Rob Gronkowski Career Highlight Refractor Card is the true gem of this collection. Anyone who purchases it will be invited to a Meet & Greet with the

footballer and given tickets to a game the following season.

In March 2021, Gronk presented his blockchain-based memorabilia. With all NFTs reflecting verified digital ownership of each of the 349 cards sold out, his collection yielded over $1.6 million in revenue.

NFT for charity

Various NFTs can be issued by well-known athletes, with proceeds benefiting charities and those in need. From every angle, this is a win-win situation: NFT collectors and sports fans will be able to obtain the items they desire, while the most vulnerable people of society will gain greatly.

Pelé's charity drive and the Ethernity Chain

One of the best instances of a blockchain-based charity project is Ethernity Chain. This Ethereum-based platform enables athletes, artists, and other producers to create limited-edition authenticated NFTs (A-NFTs) and collectible cards, which may be rewarded and used to raise funds for good purposes.

Let's pretend you want to buy a $100 collector card. In this scenario, up to 90% of the money, or $90, can be donated to charity,

with the remaining 5% — the transaction fee and another 5% – going to the Ethernity Chain platform.

The legally licensed collection of Pelé's A-NFTs was just released by Ethernity Chain, marking the first time this iconic soccer player's collector cards have been available digitally.

"Thank you so much, Ethernity Chain, for your concern. The proceeds from this project will benefit the Pelé Foundation, which will benefit a large number of individuals," the soccer icon tweeted.

As a result, Pelé's NFT collection raised $750,000, with 90 percent of proceeds going to the Pelé Foundation, which empowers and educates children fighting poverty across the world.

And there are many more tokenization options!

Next to tokens is a soccer player autographing a ball.

As more athletes and celebrities become involved in the NFT realm, the number tokenized and sold as NFTs has also grown.

You thought that was the end of it? Not!

We'll keep on and give you a quick rundown of some other potential NFT uses.

Digital autograph

Giving an autograph today may provide a fan with much more than simply the joy of holding one. Athletes can create personalized NFT signatures that are only distributed to their most enthusiastic supporters regarding non-fungible tokens. Fans may elect to purchase these digital autographs later or keep them in their collections.

Emojis, stickers, and avatars

A graphic designer can make cartoon avatars, stickers, and emojis that can be animated for athletes, sports teams, and leagues. They can be acquired in NFT form by sports fans once they have been tokenized.

Animations, drawings, and paintings

An athlete can use unique drawings, paintings, or animated visuals to popularize the NFT market and promote their team or brand. It will be of high value and in demand if crafted with your hands and is one of a kind.

Social media posts and quotes

Quotes can also be used as NFTs, but they

must be vibrant and memorable. A photo, GIF, or video clip from the athlete's library may be included with the quote. As a result, the token will represent a one-of-a-kind and limited-edition digital item that fans will be ready to pay for. NFT tokens can also be used to exchange social media posts. The holder of such a token gains ownership of the post.

Packages and tickets

A one-of-a-kind NFT ticket will grant access to various events, ranging from watching games to touring the stadium during rehearsals and training. Fans can easily buy an NFT ticket, although doing so can be stressful because only the fastest customers will receive one. Another possibility is to auction off the tickets. The highest bidder will win a pass to a certain event in this situation.

Leagues, clubs, and athletes can sell NFT packages. Several NFT items will be integrated into this collection, such as a signature + a photo with an athlete, collectible game card + in-person meeting, memorabilia + online meeting, and so on.

The possibilities for minting NFTs are

endless, as almost any notion a sports team or individual athlete has can be easily realized.

The NFT market is changing at a breakneck pace. NFTs are currently experiencing a true boom, with many well-known sportsmen, celebrities, artists, and designers from all over the world jumping on board.

NFTs now allow athletes to promote their names while also opening up new chances and ideas for communicating with fans. This is a chance for sports enthusiasts to get their hands on digital memorabilia and one-of-a-kind tangible objects, as well as meet their favorite athlete.

Although NFT is still a "new" technology, it already appears to be very promising, as it offers sportsmen and innovators benefits they could never have imagined previously. Given that the NFT craze does not appear to be slowing down, it would be a huge mistake to pass up the opportunity to try NFTs.

PixelPlex isn't a brand newcomer to the NFT sports scene. We are willing to assist athletes, sports teams, and innovators interested in starting their non-fungible token adventure. We have considerable expertise and

experience in blockchain technology and the development of non-fungible tokens.

THE ULTIMATE GUIDE FOR TOP NFT SPORTS PLATFORMS

Non-fungible tokens (NFTs) are the most marketable blockchain implementations, which is clear to see. Apart from allowing the gathering of digital assets on the blockchain, they also offer the opportunity to improve some of our most addictive interests, including art, sports, music, and gaming. We'll focus on the growth of NFT sports apps in this guide and several major platforms supporting this growing field.

Why Do NFTs and Sports Go Together?

The average sports fan uses the same justification to justify their devotion to an athlete, a sports organization, or a team: It's more than simply sports. While there is some truth to this, it is difficult to explain to non-sports people the logic behind such a remark. Fans of the game can recall when they would collect and trade sports cards to construct a

collection of the most valuable athletes. With the implementation of NFT sports, every die-hard sports fan now has yet another reason to root for one or more franchises, athletes, or teams. Why is this the case?

What Role Do Non-Fungible Tokens and Crypto Have?

NFT enables a new level of fandom in which supporters are given additional tools to participate in a more immersive sporting world while also being rewarded for their enthusiasm. NFTs are one-of-a-kind and non-replicable, just as limited-edition sports memorabilia. The scarcity and uniqueness that blockchain provides are increasingly being seen as a method for sports teams to improve fan involvement and, as a result, build a more vibrant economy.

Fans worldwide may interact with their favorite sportsmen and cheer on their team's thanks to tokenizing sports moments or trading cards. Fans may now, more than ever, explore new income opportunities by monetizing their knowledge of the sport and their loyalty to teams.

Fans can easily transact on sports NFT

platforms using cryptocurrency, and their proof-of-ownership is irrefutably recorded on the blockchain. This allows fans to genuinely own the digital sports collectibles stored in their wallet address. Aside from sports collections, blockchain technology also enables popular applications like fantasy sports and sports betting.

A Lot More Than Sports Memorabilia

This thrilling possibility is one of the key elements driving the desire for sports collectibles and memorabilia; it's worth noting. Previously, exchanging sports items and memorabilia for money, such as cards, autographs, signed jerseys, and so on, was a bit of a hassle. Thanks to NFTs, sports fans can now verify the legitimacy of such things on the blockchain and conduct peer-to-peer swaps in seconds. NFTs' tamper-proof and distinctive properties protect the ownership and the appeal of rare sports memorabilia.

While this is self-evident, some solutions have taken things a step further by establishing active economies that track fan opinion and sports franchise success. I've included a few of these platforms below,

along with the attributes that distinguish them.

The Most Popular NFT Platforms in Sports

Sorare — Fantasy Football on Ethereum

Sorare has put together a set of NFT football trading cards that players can use to design their fantasy team and compete for more NFT cards and Ether. Sorare is legally licensed with over 150 football teams at the time of writing, including big names like Real Madrid, AC Milan, and Juventus.

On Sorare, there are two types of digital trade cards. The first is what Sorare refers to as Commons, which are handed to you at the start of your employment to help you form a team. The second set consists of tokenized cards with a limited supply. When you compete in the platform's fantasy football tournament, tokenized cards give you points.

You can put together a five-player squad using the digital trading cards in your deck and earn money based on how well the players perform in real life. In essence, the card will automatically reflect the real-time stats of featured players in football matches, determining the number of points you win.

You receive points based on how well your roaster's players perform on the field. The advantage is that you now own the NFT cards you've gathered. As a result, you can sell them on NFT marketplaces to other gamers. Sorare's NFT cards are valued according to their rarity.

La Liga, the local Spanish league and one of the most prestigious globally, established a collaboration with Sorare on September 9, 2021. This is a significant milestone because it allows fans on Sorare to trade digital trading cards of La Liga players from clubs such as Real Madrid, FC Barcelona, Atlético de Madrid, and others. By the end of 2022, Sorare hopes to have partnered with all of the world's top 20 leagues.

F1 Delta Time — Formula One Collectibles

Formula One fan can acquire NFT vehicles, racing tracks, drivers, and tires through F1 Delta Time's blockchain ecosystem. F1 Delta Time players, like Sorare, aren't just collecting these digital collectibles for the sake of collecting. The ultimate goal is to use NFT assets to compete in tournaments.

The value of F1 Delta Time's collectibles lies

in the restricted availability of specific digital things, as we've come to anticipate from NFT platforms. There are also different levels of rarity for these things. As a result, the price each will command in secondary markets will differ. These NFT items may be purchased with Revv, the platform's native utility token.

NBA Top Shot Collectibles — NBA Highlights

The NBA is one of the most well-known sports organizations to have jumped on board with the NFC obsession. The NBA has been able to transfer special basketball moments to the blockchain by teaming with Dapper Labs. The complete collection of NBA Top Shot collectibles is made out of the tokenized video of basketball highlights. The platform distributes tokenized basketball moments with varying rarity levels to make it more thrilling while also creating a vibrant economy around this product. It's worth noting that the value of any collectible is determined by several elements, including the NFT's rarity and the sentiments of fans or collectors. When these two factors come into play, NBA NFT moments can sell for

hundreds of thousands of dollars, as one LeBron James dunk highlight that sold for $377,000 did. NBA Top Shot is unique in that collectors may purchase these NFTs using traditional payment methods. This eliminates all of the complications found on other NFT sites that just offer the ability to buy collectibles using cryptocurrency. This has helped NBA Top Shot grow in popularity to the point where it is now one of the most valuable NFT marketplaces.

NFL Moments and Heroes — NFL Dapper Labs

The National Football League (NFL) and the National Football League Players Association (NFLPA) have announced a collaboration to generate limited-edition digital video highlights of historic NFL Moments from the season's top plays. This movement uses Dapper Labs blockchain technology to take NFL sports fanaticism to the next level.

Joe Ruggiero, the NFL's Senior Vice President of Consumer Products, stated:

"We believe that blockchain technology has a lot of potentials to improve the NFL fan experience in the future, and we're thrilled to

have Dapper Labs as one of our first collaborators in this field."

Aside from current season highlights, the league's 300 million global fans can collect video clips of some of the greatest plays in NFL history, as well as sports cards of current and legendary NFL players.

Dapper Labs is behind NBA Top Shot and other popular NFT products, including CryptoKitties, Cheeze Wizards, and Ultimate Fighting Championship (UFC) memorabilia. Dapper Labs also sells Dapper, a platform that allows collectors to buy and store digital assets and Flow, a blockchain that focuses on decentralized programs (DApps), gaming, and digital assets.

Korean Baseball Collection —Dugout

The Korean baseball league's NFT marketplace is called Dugout. You collect limited editions of NFT-based baseball cards of Korean league highlights, similar to NBA Top Shots, which you can resell to make money. You can either buy packs of cards and try to uncover valuable NFT moments in them, or you can purchase your favorite moments on the platform's marketplace.

Regardless of how you go about it, the truth remains that the cards you gather are entirely yours.

Tokens for Sports Fans — Socios

Socios is a rapidly growing NFC fandom site where users may purchase fan tokens for their favorite clubs to vote on team activities. Having fan tokens, for example, may allow you to choose the team's music, warmup kit design, and team bus design, among other things. The socios.com platform is powered by Chiliz (CHZ), a digital currency.

Football teams, in particular, have come to recognize the amount of fan engagement that this option delivers. As a result, it's no surprise that teams like Manchester City, Juventus, and Barcelona are giving their fan token holders more decision-making power. It's worth noting that the more fan tokens you have, the more weight your vote has.

Socios recently announced a collaboration with the Ultimate Fighting Championship (UFC), the world's largest mixed martial arts organization with over 625 million fans worldwide. Through increased involvement, discounts, and prizes, our relationship brings

UFC fans closer together.

Horse Racing on Blockchain — DeRace

For the perfect horse racing environment, DeRace issues DNA-enriched NFT horses. In this game, players gather horses, breed them, then race them for a chance to win all of the participants' fees as well as a portion of the bettors' investment. As a result, we can conclude that DeRace allows you to participate in horse racing as a racer, a bookmaker, or an abettor. The bookmaker owns the track where these races occur, and bettors rely on blockchain technology's demonstrable fairness to ensure that bet results are transparent, verifiable, and fair. DeRace, in particular, is intended to allow horse breeding. In essence, each horse has its characteristics and DNA that influence its appearance and racing ability. If breeding appears to be too difficult, you can purchase NFT horses on the DeRace or secondary NFT marketplaces.

THE ULTIMATE GUIDE FOR TOP NFT SPORTS PLATFORMS

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NFT enables a new level of fandom in which supporters are given additional tools to

participate in a more immersive sporting world while also being rewarded for their enthusiasm. NFTs are one-of-a-kind and non-replicable, just as limited-edition sports memorabilia. The scarcity and uniqueness that blockchain provides are increasingly being seen as a method for sports teams to improve fan involvement and, as a result, build a more vibrant economy.

Fans all across the world may interact with their favorite sportsmen and cheer on their teams thanks to the tokenization of sports moments or trading cards. Fans may now, more than ever, explore new income opportunities by monetizing their knowledge of the sport and their loyalty to teams.

Fans can easily transact on sports NFT platforms using cryptocurrency, and their proof-of-ownership is irrefutably recorded on the blockchain. This gives fans the opportunity to genuinely own the digital sports collectibles stored in their wallet address. Aside from sports collections, blockchain technology also enables popular applications like fantasy sports and sports betting.

A Lot More Than Sports Memorabilia

This thrilling possibility is one of the key elements driving the desire for sports collectibles and memorabilia, it's worth noting. Previously, exchanging sports items and memorabilia for money, such as cards, autographs, signed jerseys, and so on, was a bit of a hassle. Thanks to NFTs, sports fans can now verify the legitimacy of such things on the blockchain and conduct peer-to-peer swaps in seconds. NFTs' tamper-proof and distinctive properties protect not only the ownership but also the appeal of rare sports memorabilia.

While this is self-evident, some solutions have taken things a step further by establishing active economies that track fan opinion and sports franchise success. I've included a few of these platforms below, along with the attributes that distinguish them.

The Most Popular NFT Platforms in Sports

Fantasy Football on Ethereum — Sorare

Sorare has put together a set of NFT football trading cards that players can use to design their fantasy team and compete for more NFT

cards and Ether. Sorare is legally licensed with over 150 football teams at the time of writing, including big names like Real Madrid, AC Milan, and Juventus.

On Sorare, there are two types of digital trade cards. The first is what Sorare refers to as Commons, which are handed to you at the start of your employment to help you form a team. The second set consists of tokenized cards with a limited supply. When you compete in the platform's fantasy football tournament, tokenized cards give you points.

You can put together a five-player squad using the digital trading cards in your deck and earn money based on how well the players perform in real life. In essence, the card will automatically reflect the real-time stats of featured players in football matches, determining the number of points you win. You receive points based on how well your roaster's players perform on the field. The advantage is that you now own the NFT cards you've gathered. As a result, you can sell them on NFT marketplaces to other gamers. Sorare's NFT cards are valued according to their rarity.

La Liga, the local Spanish league and one of the most prestigious in the world, established a collaboration with Sorare on September 9, 2021. This is a significant milestone because it allows fans on Sorare to trade digital trading cards of La Liga players from clubs such as Real Madrid, FC Barcelona, Atlético de Madrid, and others. By the end of 2022, Sorare hopes to have partnered with all of the world's top 20 leagues.

Formula One Collectibles — F1 Delta Time

Formula One fans can acquire NFT vehicles, racing tracks, drivers, and tires through F1 Delta Time's blockchain ecosystem. F1 Delta Time players, like Sorare, aren't just collecting these digital collectibles for the sake of collecting. The ultimate goal is to use NFT assets to compete in tournaments.

The value of F1 Delta Time's collectibles lies in the restricted availability of specific digital things, as we've come to anticipate from NFT platforms. There are also different levels of rarity for these things. As a result, the price each will command in secondary markets will differ. These NFT items may be purchased with Revv, the platform's native utility token.

NBA Top Shot Collectibles — NBA Highlights

The NBA is one of the most well-known sports leagues to have gotten on board with the NFC craze. By collaborating with Dapper Labs, the NBA was able to transfer special basketball moments to the blockchain. The entire NBA Top Shot collectibles collection is made out of tokenized basketball highlights footage. The network provides tokenized basketball moments of varying rarity to increase the adrenaline factor while also establishing a thriving economy around the product. It's worth mentioning that the value of any collectible is determined by a variety of factors, including the NFT's rarity and fan or collector sentiments. NBA NFT moments can sell for hundreds of thousands of dollars when these two factors come into play, as one LeBron James slam highlight that sold for $377,000 did. Collectors can purchase NBA Top Shot NFTs using regular payment methods, which makes them unique. This removes all of the difficulties that can be found on other NFT sites that only allow you to buy collectibles using bitcoin. As a result,

NBA Top Shot has grown in prominence to become one of the most valued NFT marketplaces.

The NFL Moments and Heroes — NFL Dapper Labs

The National Football League (NFL) and the National Football League Players Association (NFLPA) have announced a collaboration to generate limited-edition digital video highlights of historic NFL Moments from the season's top plays. This is a movement to use Dapper Labs blockchain technology to take NFL sports fanaticism to the next level.

Joe Ruggiero, the NFL's Senior Vice President of Consumer Products, stated:

"We believe that blockchain technology has a lot of potentials to improve the NFL fan experience in the future, and we're thrilled to have Dapper Labs as one of our first collaborators in this field."

Aside from current season highlights, the league's 300 million global fans can collect video clips of some of the greatest plays in NFL history, as well as sports cards of current and legendary NFL players.

Dapper Labs is the company behind NBA

Top Shot, as well as other popular NFT products including CryptoKitties, Cheeze Wizards, and Ultimate Fighting Championship (UFC) memorabilia. Dapper Labs also sells Dapper, a platform that allows collectors to buy and store digital assets, as well as Flow, a blockchain that focuses on decentralized programs (DApps), gaming, and digital assets.

Korean Baseball Collection —Dugout

The Korean baseball league's NFT marketplace is called Dugout. You collect limited editions of NFT-based baseball cards of Korean league highlights, similar to NBA Top Shots, which you can resell to make money. You can either buy packs of cards and try to uncover valuable NFT moments in them, or you can purchase your favorite moments on the platform's marketplace. Regardless of how you go about it, the truth remains that the cards you gather are entirely yours.

The official website of Dugout may be viewed here for further information.

Sports Fan Tokens — Socios

Socios is a rapidly growing NFC fandom site

where users may purchase fan tokens for their favorite clubs in order to vote on team activities. Having fan tokens, for example, may allow you to choose the team's music, warmup kit design, and team bus design, among other things. The socios.com platform is powered by Chiliz (CHZ), a digital currency.

Football teams, in particular, have come to recognize the amount of fan engagement that this option delivers. As a result, it's no surprise that teams like Manchester City, Juventus, and Barcelona are giving their fan token holders more decision-making power. It's worth noting that the more fan tokens you have, the more weight your vote has.

Socios recently announced a collaboration with the Ultimate Fighting Championship (UFC), the world's largest mixed martial arts organization with over 625 million fans worldwide. Through increased involvement, discounts, and prizes, our relationship brings UFC fans closer together.

Horse Racing on Blockchain — DeRace

For the perfect horse racing environment, DeRace issues DNA-enriched NFT horses. In

this game, players gather horses, breed them, then race them for a chance to win all of the participants' fees as well as a portion of the bettors' investment. As a result, we can conclude that DeRace allows you to participate in horse racing as a racer, a bookmaker, or a bettor. The bookmaker owns the track where these races take place, and bettors rely on blockchain technology's demonstrable fairness to ensure that bet results are transparent, verifiable, and fair. DeRace, in particular, is intended to allow horse breeding. In essence, each horse has its own set of characteristics and DNA that influence its appearance and racing ability. If breeding appears to be too difficult, you can purchase NFT horses on the DeRace or secondary NFT marketplaces.

Chapter 11:

VIDEO GAMES NFT

Keeping crypto-collectibles in your wallet isn't the same as playing NFT games. In an NFT game, NFTs will be used in the rules, procedures, and player interactions. An NFT could be used in a game to represent your unique character or avatar, for example. NFTs are also found in digital items discovered during the game. You can then sell or trade your NFTs to other gamers for a profit. You can also profit from NFT games by employing a newer, play-to-earn model, which we'll go over in greater depth later.

So, how do you include NFTs into a game environment technically? Developers create smart contracts that define the rules for exchanging, producing, and implementing NFTs in games. Smart contracts are self-executing pieces of code that run on a

blockchain.

CryptoKitties, for example, is structured by a small number of core contracts. Their gene science contract is the most well-known, as it governs the random mechanics that generate new cats. Initially, the game's code was kept under wraps. Players who were interested even devised algorithms to calculate the chances of specific cat features showing up. Players could use this information to improve their chances of creating a valuable rare breed.

What are NFT games that you may play to earn money?

Play-to-earn NFT games allow players to make money while they are having fun. A player is usually awarded tokens and, on rare occasions, NFTs, with the longer they play, the more they earn. The tokens you obtain are frequently required in the game's crafting process.

The token technique is usually more reliable because tokens can be gained consistently through gameplay, whereas NFT drops are more random. Users in low-income nations have flocked to play-to-earn as an alternative

or supplement to fixed income or social security.

One of the most well-known play-to-earn games is Axie Infinity. You must either make an initial investment of three Axies or get a free Scholarship from another participant to play the game. You can acquire Smooth Love Potion (SLP), an ERC-20 token traded on exchanges after having a Starter Team and accomplishing tasks and challenges.

SLP is used by breeders to develop new Axies, which results in a market for the item. In the Philippines, Axie Infinity gained in popularity, and many users began to rely on its play-to-earn model to make ends meet. Many participants make between $200 and $1000 per month (USD), with some earning significantly more depending on market conditions and time involved.

In-game, what are NFTs?

NFTs earned in-game are an additional way to get money while playing NFT games. Rather than fungible ERC-20 tokens like SLP in Axie Infinity or SKILLS in CryptoBlades, you obtain NFTs, which are collectible things. NFT games have typically made

money using this gaming technique. The worth of things varies depending on its cosmetics, rarity, and gaming functionality.

CryptoKitties is an example of a game that relies purely on NFT collectibility within the game. It's hard to keep playing and produce steady money without the element of chance. Both play-to-earn and in-game NFTs are found in the majority of contemporary NFT games.

What is the revenue model for NFT games?

The amount of money you can make playing an NFT game is determined by the game's mechanics and market demand. You'll earn money from other players who value the NFTs or cryptocurrencies you earn in the game. You'll need to sell your items on a market, exchange, or auction house to make a profit. Value is generated from the NFT or token's collectability or in-game utility in NFT games. These two elements elicit speculation as well.

Is it possible for me to lose money while playing NFT games?

Playing NFT games might lead to financial loss. The exact quantity is determined by the

type of game you're playing, the mechanics of the game, and the worth of the NFTs you're dealing with. Losing money does not always imply that you are being conned. Because NFTs are speculative and market forces determine their value, your losses are likewise determined by market forces. Only invest what you can afford to lose, just like any other cryptocurrency investment.

Is it possible for me to lose my NFTs?

Because of the high value of some NFTs, it's usual to be concerned about losing them when playing a game or interacting with the blockchain. Whether you bought your NFTs or earned them in-game, you must ensure that they are kept safe. In summary, if you're not careful, you could lose your NFTs. However, if you follow the best practices we'll discuss later, your odds of losing them are slim.

There are a few ways you could lose your NFT:

You try to send it from one wallet to another that doesn't recognize your NFT token standard.

You've been a victim of a scam or fraud, and you've sent your NFT to a con artist.

When you grant rogue smart contract access to your wallet, it steals your NFT.
As part of the game's regulations, you lose it.
Except the last, you can avoid the instances described above by improving your understanding of NFTS, blockchain technology, and scams in general. You wouldn't use PayPal or internet banking unless you knew how to use it properly, and the same is true with NFTs. If you don't want to lose your NFTs, you should:
Confirm that you are not falling for a scam if you are sending your NFT to another wallet. The most popular ones are listed in our guide on 5 Common Cryptocurrency Scams and How to Avoid Them.
Learn about the different types of tokens and blockchains that your wallet or platform can support. The most popular NFT token protocols for Ethereum are ERC-721 and ERC-1155, while the most popular for Binance Smart Chain are BEP-721 and BEP-1155 (BSC). Always double-check that you're sending them to the correct place, and never assume that they'll get along.
You should only interact with smart contracts

from trusted projects. If you allow a smart contract to connect with your wallet, you should know that the contract may take your money.

Make sure you understand the rules of the game you're playing. You can trade with other players or utilize NFT consumables in some NFT games. For example, these could be objects or potions. To avoid any unpleasant surprises, familiarize yourself with the game.

NFT popular games

There are many NFT games to choose from, most of which are based on BSC and Ethereum. Others are entirely focused on NFT collectibility, while others offer more traditional video gaming experiences.

Axie Infinity is a fictional character created by Axie.

Axie Infinity is built on the Pokemon model, featuring collected animals and battles, as previously stated. Axie Infinity is an Ethereum-based cryptocurrency that allows users to profit by selling Small Love Potions (SLP), Axies, and Axie Infinity Shards (AXS). You may buy and trade SLP and

AXS on Binance.

Sorare

Sorare is a collectible fantasy football game with real-life soccer players that can be traded. To construct a five-player soccer squad, you can use free cards for beginners or buy tokenized cards. You can earn points to level up for every game you win, the goal you score, or another event you complete.

Gods Unchained

Gods Unchained is a tradeable NFT card game built on Ethereum, similar to Magic: The Gathering or Hearthstone. To face off against other players, gamers build decks with a variety of abilities and strengths. As you continue through the game, you'll discover in-game items to use or sell. You'll start collecting Flux if you win Ranked games, which you may utilize to build powerful NFT cards. After that, you can either sell your cards for a profit or reinvest in new cards to keep the cycle going.

The worldwide gaming industry is divided into three segments: mobile, PC, and console gaming, all of which are worth hundreds of billions of dollars and expanding. While

incumbents in the sector benefit from this strong growth, participants generate little long-term value for themselves. Players enter gaming venues that offer a tiered-access user experience after investing in expensive consoles, PCs, or mobile devices. In these classic games, money only flows in one direction: players must pay to access in-game material and unique features.

Blockchain-enabled games, on the other hand — many of which are decentralized applications (dApps) — place a greater emphasis on providing value for players. This dynamic creates a paradigm shift, allowing players to better understand and appreciate the utility and worth of items obtained through in-game purchases, regular gameplay, or promotional events. When a player buys an armor upgrade in a traditional game, the sole benefit is better gameplay in that specific game. However, in a gaming environment that uses cross-platform non-fungible tokens (NFTs), the same armor can be tokenized in a way that turns in-game purchases into transferable assets that can be swapped for money or other digital assets.

These NFTs may be generated and deployed in various gaming settings thanks to the underlying blockchain networks. Blockchain-based games can drastically extend gaming economies, introduce new gaming categories, and fuel the development of new games because NFTs are unique and can be engineered to retain value beyond the game in which they originated. To understand how this process might play out, it's first necessary to comprehend NFTs.

Non-Fungible Tokens 101

The blockchain gaming business isn't the only one that uses non-fungible tokens. These tokens can be used to represent both digital and physical assets, such as artwork, real estate, collectibles, and even personal identity. As a result, NFTs offer diverse applications that appeal to various sectors and use cases, and their adoption is rising. NFTs have three distinguishing properties that set them apart from most other digital tokens:

Non-fungibility: Each NFT is a cryptographic token that symbolizes something unique or non-fungible, which means it cannot be exchanged for another NFT. The metadata

provided within each NFT exists as a permanent, unalterable record on the blockchain. This record, similar to a certificate of authenticity, describes what the token represents, as well as the token's ownership and transaction history (title). Many cryptocurrencies, such as bitcoin (BTC), ether (ETH), and other utility tokens, on the other hand, are fungible, which means that one BTC is effectively equal to any other.

Rarity: The rarity of NFTs is one of the most essential characteristics that makes them valuable. In the CryptoKitties game, for example, players collect and breed digital cats, each of which is represented by a unique NFT. Some CryptoKitties are rare collectibles, which drives up their value among collectors who recognize their rarity. In 2018, a CryptoKitty named Dragon was sold for 600 ETH, which was almost $170,000 at the time.

Cryptocurrencies, such as bitcoin, are broken into smaller units because of their fungibility and intended usage as a medium of exchange. Most NFTs, on the other hand, must be

bought, sold, and kept as a whole, and hence are inseparable – just like you can't buy 10% of a concert ticket or 60% of an airline ticket.
We can now look at the advantages of employing NFTs in online gaming now that we've gone through their qualities.
The Benefits of Gaming NFTs
Although many NFTs use Ethereum's ERC-721 token standard, they're also common on other networks, including TRON (Blockchain Cuties), EOS (EOS Knights), and NEO (NEO) (Blocklords). The following are just a few of the many advantages of decentralized gaming:
Traditional in-game purchases are one-time, non-transferable investments that are bound to a single gaming universe. In gaming, however, using NFTs provides gamers ownership over their in-game assets rather than game developers. Using blockchain technology, gamers can save in-game purchases, sell them to other players, or transfer them to other compatible games.
Collectors prize uniqueness and authenticity, and the scarcity of in-game NFT purchases can be validated thanks to the immutable

records incorporated into the blockchain network. The number and uniqueness of each NFT and its history are verified by this decentralized public ledger.

Traditional online games rely on centralized servers for interoperability. As a result, in-game elements are contained within closed systems that do not communicate with one another. On the other hand, decentralized games are built on separate blockchains that serve as the backbone architecture for other interconnected games. As a result, game assets represented by NFTs can be created to work in various contexts. Two games created on the Ethereum network, for example, might potentially share in-game assets such as cars, armor, or even complete characters.

When a traditional online game closes down, users often lose all of their in-game purchases. NFTs, on the other hand, are held on the blockchain and exist independent of any one game platform. As a result, in-game purchases can be bought and sold independently of the game, and new games can be created to work with a blockchain system already in place. Furthermore,

blockchain-enabled game assets cannot be copied or manipulated because each NFT creates a permanent record upon the issue.

The Blockchain and NFT Gaming Industry's Future

However there are advantages to using NFTs in gaming, there are also substantial challenges to overcome. NFTs, in particular, must be made more appealing and accessible to general consumers who aren't necessarily tech-savvy. Because NFTs have intrinsic value, there's a chance that some of them will be primarily employed as speculative assets. This possibility may encourage players to buy in-game assets in the hopes of later selling them for a profit rather than using them as intended within the gaming ecosystem.

Despite these obstacles, the potential for profit in the gaming sector will encourage more non-blockchain-focused firms to experiment with NFTs, most likely through partnerships with third-party blockchain initiatives with the technical skills to bring their vision to life. Simultaneously, the widespread popularity of gaming dApps will almost certainly contribute to additional NFT

infrastructure upgrades and new solutions that enable general use.

Chapter 12:

MINTING YOUR FIRST TOKEN AND EVALUATING COMMERCIAL NFT PROJECTS

When I read about a $69 million NFT sold by an artist known as Beeple, I became interested in Non-Fungible Tokens (NFTs).
I couldn't understand why a digital image could be sold for such a high price when the same image could be found and enjoyed for free online. I immersed myself in the worlds of NFTs, blockchain, and the evolution of art to make sense of it all.
As a result, a quest for discovery began.
Since then, I've been more aware of NFTs' potential for securing and enforcing ownership and originality of digital creations that would otherwise be easily copied and resold.

The prestige that comes with owning an original work of art is prized by serious art collectors. The same is true for traditional artistic pursuits such as paintings, sculptures, and rare books when it comes to digital art.

We can admire the artistic aspects of a painting by enjoying its print, but owning the original canvas imparts status. A $10 poster of the Mona Lisa may be purchased online, despite the fact that the original is priceless.

Michelangelo's David can be seen at the Galleria dell Accademia in Florence. We can purchase a miniature duplicate and admire the craftsmanship from the comfort of our own homes. The original, however, is undoubtedly the one in Florence, which validates its monetary (and cultural) value — reproductions are a poor substitute for the genuine article.

We can read George Orwell's dystopian masterpiece '1984' for a few dollars in a paperback. For a genuine first edition, collectors are willing to pay thousands of dollars. Possessing the original article confers prestige.

Where original works are easily replicated

and distributed, an NFT corresponding to the original item allows its owner to verify their ownership and the item's provenance without a doubt. It's what enables certain digital products to command exorbitant prices despite being easily replicable.

“99% of NFTs won’t be good investments.”

NFTs' dramatic rise in 2021 indicates an increasing public understanding of the technical notion. Many people appear to be making a lot of money and doing so rapidly due to well-timed investments in popular NFT initiatives. Celebrities and novices alike are investing in high-profile projects, promoting NFTs online, and profiting handsomely as a result.

Snoop Dog has been one of the most outspoken supporters and collectors of NFTs. He's revealed his interest in well-known initiatives like CryptoPunks under cover of his Twitter pseudonym 'Cozomo De'Medici.'

NBA star Steph Curry has purchased a share in the 'Bored Ape Yacht Club,' one of the most well-known NFT ventures, for the equivalent of $155k for an NFT that cost its previous owner roughly $2k. Other NFTs in

the collection are now selling for more than $1 million.

Entrepreneurs like Gary Vaynerchuk have jumped on board the NFT gravy train in the thick of the frenzy. At the time of writing, his Veefriends NFT project had nearly $100 million in traded volume. Despite this accomplishment, Gary Vee advises anyone interested in investing in NFTs to be cautious:

Many speculative investments are being driven by the 'all-time returns' he alluded to — the allure of life-changing earnings, even if they take a decade to emerge, is alluring. However, this potential must be balanced against the risk of being duped, choosing a project or platform that will fail or entirely vanish, or just picking a dud.

I've been debating with myself for a few weeks about whether I should risk missing out or becoming engaged.

I recently succumbed to FOMO and decided that now was the time to make my first investment in an NFT enterprise, despite the danger of failure and financial loss. It felt like a natural progression in my ongoing

knowledge and experimentation with NFTs.
If you're thinking about doing the same, here are a few things to think about.
Choosing a winner (or, at the very least, avoiding a dud) There are three ways to own an NFT right now:
Make your own — You can also create an NFT based on one of your works, such as a photograph, artwork, film, or piece of literature. This isn't the first time I've done anything like this. It won't make you much (or any) money until others find your creation intriguing, but it isn't a tough procedure.
Buying one from a marketplace is comparable to buying art from a dealer, auction house, or eBay. NFTs are exchanged on exchanges like OpenSea, where you may explore and buy entire collections of NFTs.
Mint one as part of a project — This is the best way to get a fresh NFT right at the start of a project, as well as the best chance of making money if you chose wisely. It's analogous to commissioning an artist to make a limited-edition painting for you.
Getting an NFT from a new project is the best way to get in on the ground floor and

potentially boost your investment's worth. The challenge is finding potential businesses that will last and grow in value.

What defines a non-financial-to-financial-to-finance

In this sense, NFTs are primarily about the artwork. The first criterion should be whether or not the NFTs created in a project are attractive to the eye.

It's all in the eye of the beholder when it comes to beauty.

Consider CryptoPunks, which is possibly the most well-known NFT collection. It's a limited-edition collection of 10,000 24x24 pixels; one-of-a-kind 'Punks' created entirely within the blockchain. Each is one-of-a-kind, with a combination of attributes and characteristics assigned to it by a computer algorithm when they were minted.

The CryptoPunks are enjoyed by many, and the designs have become synonymous with the very concept of NFTs. Not everyone will appreciate the simplistic designs or even consider them worthy of the label 'art' — but they are enjoyed by many, and the designs have become synonymous with the concept

of NFTs. In New York and London, CryptoPunks have been displayed on billboards and bus shelters.

The project's rarity and desirability

If you like how they look, the next step is to determine whether the project is just another opportunistic artist mass-producing a series of JPEGs or whether the individual NFTs have quirks and attributes that make them uncommon and desirable.

In a traditional setting, artists can attain such rarity by releasing a limited edition, numbered series of prints or selling a restricted number of original artworks.

Typically, projects sending a series of NFTs will set a project limit (10,000 CryptoPunks, for example). Each NFT in that series will be one-of-a-kind and programmatically generated at the time of minting to include a set of distinguishing features and attributes. Some qualities will be extremely rare, making NFTs with these traits more sought and thus more valuable.

This is best appreciated through the use of a website like Rarity. Tools, an online library of current and upcoming NFT projects,

includes the most well-known NFT collections.

Projects can be analyzed using Rarity. Tools and sample NFTs inside projects can be evaluated to learn about the characteristics that indicate attractiveness and worth within the series.

A few facts to remember about this project that will help you judge its future potential:

It has a restricted issue of 7,777 NFTs, of which 2,024 have been minted and issued to date. This shows that the project has a minimal issue size (once completely allotted) and that multiple investors have already invested (with a little under a third of the NFTs already minted).

With 610 owners of CryptoSaints to date, there appears to be a pretty substantial investor base, indicating that many investors have purchased multiple NFTs.

The total traded volume is high – at current rates, the 53 ETH traded volume equals nearly $200k in liquidity linked with The CryptoSaints so far. For example, when compared to CryptoPunks, this isn't a lot, but it shows that money is going into the project,

which will help it survive in the long run.
The NFTs in the project are already ranked by rarity, revealing that some have intrinsic value far above what was paid to mint them. By examining the individual samples of the NFTs shown on Rarity. Tools, we can see the characteristics that differ from one NFT to the next. The scarcity of certain of these characteristics is what distinguishes one NFT from the next.
What makes some of the NFTs in the series more appealing than others?
We may learn more about these characteristics by clicking on a certain NFT (note that each NFT project will define and rank its traits about NFTs in the series).
Check out this one for the series' #3 rarest NFT (at the time of writing):
This NFT looks to be uncommon in The CryptoSaints project, not because of its aesthetic attractiveness (at least in my opinion!), but rather because the features it exhibits are largely uncommon. Because of the following characteristics, the NFT in issue is now ranked #3 out of 2024:
Greg's face (we can see that just 44 of the

2024 NFTs minted so far in the series have this face)
Doge Puppy is an item (just 2 of the 2024 NFTs minted so far are holding this object)
Potter = Robe (97 out of 2024 have this)
Diamond Hands = Yes (27 out of 2024 have this)
The other two NFT features are rather common (a halo is seen in 2006 out of 2024, and NGMI = No is seen in 1981 out of 2024).
Because of this combination of characteristics, the NFT is considered extremely uncommon — but it also hints that rarer combinations are yet to be minted, which means that potential buyers may still create one that is far more desirable (and valuable).
There's still a chance of minting a one-of-a-kind!
Examine the project.
Rarity. Tools will provide you with a solid foundation of knowledge about a project. However, before making the jump and ordering one of their NFTs, it's a good idea to do some additional study.
The project page on Rarity. tools will include

links to the project's website, Twitter account, and, if available, a Discord channel where collectors and creators can connect.
Take a look at the project's webpage.
This is the project's creators' sales page, and the website should include other information such as the minting price, the project's roadmap, and the founders' biographies.
It could signal that a future reduction in NFTs is planned for all those invested in the initiative. It could be used to explain the creation of virtual galleries or games for its NFT holders. It might be used to describe any of the creators' subsequent endeavors.
Treat it as though it were a sales and marketing tool geared toward acquiring investors. Gather as much information as you can from it.
How active are they on social media platforms like Twitter and Discord?
It is in the best interests of both the artist and the investor to sell and promote the idea. Within the NFT community, Twitter is widely utilized to promote hype and interest in the project.
Is the project's official Twitter account active

and receptive to community questions? Is there proof that the investor community is actively approaching the project as a long-term investment rather than a 'pump and dump'? Are there any high-profile investors in the project whose names you can find on Twitter?

Although there is no alternative for excellent project foundations, social media buzz is an important aspect of a project's long-term success and should be evaluated at the onset.

Chat in the project's Discord channel is the same way. Is everyone delighted to be a part of it? Are the founders open about their future intentions and eager to share them? Is there a sense of community among collectors, or are the project's NFT owners motivated by short-term profit?

Time to invest?

After you've done your research (and there's no such thing as a "minimum" or "maximum" amount that will guarantee success), you may be ready to invest.

It's a risky move, but for many NFTs I've looked into in recent weeks, the initial minting cost per NFT (at least on the

Ethereum blockchain) is less than 0.1 ETH. When you add in Ethereum gas fees, the entire cost of an NFT is under $300, which isn't an absurd amount to risk (depending on your risk appetite and means).

The final decision is yours, but given the general opinion that we're still very early in the development of NFTs, it appears that now is the time to act, especially since the costs of entry into the area are still quite low.

Chapter 13:

NFT BUSINESS IDEAS YOU CAN START TODAY

10 NFT Business Ideas For Entrepreneurs
I've compiled a list of my top ten company ideas for entrepreneurs looking to break into the NFT market. Please keep in mind that this isn't a complete list. When it comes to potentially profitable NFT ideas, the sky is the limit as a budding industry.
1. Write An NFT-Themed Blog
The internet is in severe need of well-written and informative NFT information. Any blog that covers NFTs and the news surrounding them has a vast potential viewership. After you've built a loyal readership, you can monetize the site with adverts or affiliate links.
2. Create An NFT Online Course
Consider establishing a course or masterclass

to help novices learn about the NFT ecosystem and how to mint, create, and sell them if you know a thing or two about it. Depending on your degree of experience and investment, you may charge participants for a week-long Bootcamp or a semester-long course.

3. Become An NFT Broker

The number of NFTs purchased and sold is at an all-time high. Naturally, safe, encrypted markets and brokerages that allow buyers and sellers to examine, commission, and transact NFTs are in high demand.

4. Create a newsletter for the NFT

There aren't many, if any, NFT-related newsletters that go into depth on the topic. You could have a highly profitable company on your hands if you can condense all of the newest NFT news, press releases, large auction sales, and market developments into a brief monthly or weekly newsletter.

5. Create An NFT Forum

More forums for NFT producers, sellers, and enthusiasts to discuss their projects are needed on the internet. Creating an NFT-only forum that competes with Bitcointalk might

be incredibly profitable, especially if you run banner adverts.

6. Compose an NFT eBook

It's not unheard of for a blockbuster cryptocurrency ebook to bring in six-figure royalties, if not seven figures. Consider self-publishing an ebook on NFTs if you're a talented writer who can cover the subject from all sides while providing concrete guidance to individuals who want to get started with NFT investing.

7. Create NFT Collectibles

NFTs, as a digital medium, are ideal for conserving and authenticating collectibles. You could, for example, make NFTs out of genuine collectibles like sports trading cards or autographed photographs.

8. Create an NFT service with a white label.

A Shopify-like service that can bring a project to life with little to no extra development is needed in the NFT sector. You might become one of the most popular white-label platforms in the blockchain business if you can establish an off-the-shelf NFT solution to aid in developing NFT ventures.

9. Work as an NFT Artist

Nothing stops you from creating digital art, even if it's abstract, even if you're not the world's most talented physical artist. The artwork can then be turned into an NFT and sold on sites like Reddit, DeviantArt, and Wetcanvas.

10. Develop an NFT App

Users will want apps that allow them to buy, sell, trade, or even mint NFTs. An app that looks like Bid Beacon or BiddingOwl but is solely focused on the NFT market might be a very profitable endeavor if you take a commission on every transaction.

THE NFT MARKET IS EXPANDING non-fungible tokens traded on an NFT exchange are not interchangeable with fungible things. Most NFTs are now digital, and producers may discover new revenue streams that allow them to provide their followers something unique and unusual.

NFTs include Jack Dorsey's first tweet and the animation 'Nyan Cat,' in addition to Beeple's $69 million NFT. According to a survey by prominent tech-tracking group L'Atelier BNP Paribas and nonfungible.com,

the NFT business will be worth $250 million in 2020.

Furthermore, by 2020, the NFT markets are expected to develop at a rate of 299 percent, according to the analysis. Furthermore, according to CryptoSlam, NFT marketplaces have made over $1 billion in sales. As a result, you can understand why the importance of NFT and an NFT economy is critical to contemplate.

What is an NFT Marketplace's Purpose?

It is apparent that blockchain technology and NFTs can provide the ideal platform for artists and content creators to get compensated for their work. Artists are no longer reliant on auction houses or galleries to sell their work. An artist, on the other hand, may simply sell their work in NFT to a buyer. This also helps artists receive a larger share of the revenue.

Intriguingly, NFTs allow for royalties, which entitle the original artist to a share of subsequent artwork sales. Many people who want to learn about the finest NFT marketplace also want to start building their own NFT collection. Buyers interested in

NFTs may be looking for a means to get their hands on them. So, let's have a look at how NFTs are made available for purchase and sale.

You'll need a digital wallet to hold NFTs and bitcoin in order to pay for transactions on your chosen blockchain platform.

Purchase cryptocurrencies like Ether or the currency supported by your selected NFT service.

PayPal, Coinbase Wallet, eToro, and Kraken are just a few of the sites that accept credit cards for cryptocurrency purchases.

Users could transfer cryptocurrency from exchanges to wallets of their choice.

What is an NFT Marketplace, and how does it work?

After completing all of the above processes, you can search for an NFT marketplace to sell or buy NFTs. The significance of NFT marketplaces in bridging the gap between buyers and sellers is critical. In some circumstances, NFT marketplaces may additionally provide extra tools for quickly creating NFTs.

NFT artworks can be sold on specialized

platforms by artists. Buyers could look for NFTs on the market and then place a bid on what they wanted. As a result, every NFT developer or fan should check out the NFT marketplace list to make sure they're getting excellent deals on the artwork, collectibles, and other digital goods.

List of Top NFT Marketplaces

NFT marketplaces are an important element of the exciting new trend of NFTs, as you can see. NFT markets have made it easier and more flexible to access NFTs while simultaneously addressing traditional income difficulties for creators. All of the debate over NFT exchanges, however, ultimately boils down to one question. For optimum value, NFT inventors and purchasers would naturally seek solutions to the question, "what is the best NFT marketplace?"

The rapid rise of several NFT marketplaces, in particular, is a key source of concern. A clear outline of some of the most well-known NFT marketplaces, as well as a full description, can be highly useful in this scenario. Here's a rundown of some of the most well-known NFT marketplaces that

might be able to help you break new ground in the NFT world.

1. Nifty Gateway

The second most frequent response to the question "What is the best NFT marketplace?" is Nifty Gateway. It is without question is among the most reputable high-end NFT crypto art trade markets. Nifty Gateway's collaborations with top producers, companies, athletes, and artists benefit the company. The collaboration delivers crypto art collectors just one-of-a-kind works.

When it comes to crypto art marketplaces, however, getting recognized on Nifty Gateway is rather challenging. As a result, this platform is open to top artists, companies, and celebrity makers. Silent auctions, "Buy It Now," and timed auctions are among the three auction methods supported by the site.

Nifty Gateway also enables royalties, as artists can choose what percentage of secondary sales they want to receive. It accepts credit cards, debit cards, and Ether payments as a top NFT marketplace (ETH).

2. OpenSea

According to current industry standards, OpenSea is the best NFT marketplace and the largest among NFT markets. Art, sports, virtual worlds, censorship-resistant domain names, collectibles, and trading cards are among the non-fungible token types available. The fact that OpenSea includes ERC1155 and ERC721 assets is an intriguing feature.

It allows you to buy, sell, and learn about unique digital assets like Decentraland, Axies, CryptoKitties, and ENS domains, among others. More than 700 digital art projects, trading card games, name systems like Ethereum Name Service or ENS, and collectible games, are available on OpenSea.

One of OpenSea's primary features as an NFT marketplace is its item mining tool. Creators can use the minting tool to further enhance their things and establish their NFT collection. OpenSea is the ideal platform for game developers and digital collectibles makers working on their smart contracts.

3. SuperRare

Another interesting NFT marketplace that springs to mind among the greatest

alternatives is SuperRare. The website is primarily intended to serve as a marketplace for users to trade in one-of-a-kind, limited-edition digital art works. A SuperRare network artist creates authentic artwork.

The artwork is then tokenized as a crypto asset or collectible, owned and traded on the platform. Many industry insiders laud SuperRare for introducing a new way of interacting with art, culture, and collecting on the internet. The establishment of a social network above the marketplace is a standout feature of SuperRare.

Digital collectibles can be suited for a social context because they are coupled with a transparent record of ownership. SuperRare is designed for new artists to the game yet has a flair for invention and inventiveness. It supports Ether, the Ethereum network's native cryptocurrency.

4. Foundation

Foundation is one of the most well-known NFT marketplaces that has recently made headlines. For many crypto art makers, it has become the premier NFT marketplace. Foundation's distinguishing characteristic is

the availability of community-curated collections. Creators and collectors alike invite new artists to join the Foundation through a collaborative approach.

As a result, after selling their first NFT, creators can quickly utilize the "Creator Invites" function. Foundation is open to any artist with the desire to leave a mark and stand out as a unique creator. It accepts Ether payments and promises to introduce a brand-new functionality that guarantees a 10% royalty on secondary purchases.

Cargo

Among the big players you could identify as the best choice for an NFT marketplace, many good competitors go unnoticed. Cargo is one of the entries on this list that would be a great choice for a novice to the NFT. It allows payments in Ether and applications from everyone.

The most striking feature of Cargo is the absence of NFT auctions. The artists make all of the pricing selections. It also has a 'Split Royalties' option, which lets you specify up to 15 distinct Ethereum wallet addresses.

Based on its ease of use, the answer to the

question "What is the best NFT marketplace?" may take you to Cargo. It can provide designers with stable and cost-effective NFT mining and trading options. Cargo's 'Magic Minting' feature also helps to save money on gasoline, illustrating its value.

Rarible

Any discussion of the top NFT marketplace would be completed without the term Rarible. It's a simple and user-friendly NFT platform with few obstacles to entry for artists. As a result, Rarible can assist individuals just starting out in the field of NFT.

However, it suffers from a little setback in user experience due to a perplexing layout. Rarible is unique in that it comes with its own token, RARI. RARI can be utilized to reward active platform users.

It is based on the Ethereum blockchain and supports WETH, ATRI, and DAI in addition to RARI and ETH. Transaction charges are 2.5 percent. Rarible is a reliable NFT marketplace for royalties since artists may choose how much of the proceeds from secondary sales they want to keep.

7. Mint-worthy

In 2021, Mintable will be delisted from the NFT marketplace. It's a fully functional NFT marketplace where you can trade almost anything, from art to music to video game stuff to collectibles. One of Mintable's most fascinating features is its gasless minting option.

It's built on the Ethereum blockchain and exclusively accepts Ether as a form of payment. There are three sorts of auctions: public, private, and online. Auction types include scheduled auctions, Buy It Now auctions, and classic auctions. Creators may be able to collect a 5% fee on all secondary sales using royalties. If you're interested in NFTs, especially if you're a beginner, Mintable is the platform to use.

Myth Market

Although there isn't much to say about Myth Market, it isn't a single NFT marketplace. Myth Market is a collection of versatile and simple-to-use online marketplaces that serve a variety of digital trading card companies. GPK.Market, Heroes.Market, Shatner.Market, GoPepe.Market, and KOGS.Market are among the current

highlights on Myth Market.

Each of the featured marketplaces is unique to each collectibles brand. You can exchange Garbage Pail Kids cards on the GPK. Market, for example. As a result, Myth Market provides a strong indication of NFT marketplaces' future potential.

9. Enjin Marketplace

Enjin Marketplace's reputation as the greatest NFT marketplace is well-known in numerous circles. It has the potential to allow for the exploration and exchange of blockchain assets. Enjin Marketplace, in particular, is the best option for Enjin-based NFTs. It has so far recorded over $43.8 million in Enjin token expenditures on digital assets. According to reports, there are roughly 2.1 billion NFTs accountable for such large spending.

The Enjin Wallet makes it simple to list and buy gaming collectibles and products. A 'Projects' page featuring Enjin-based blockchain projects is available to creators. Game item collections, community-supported collectibles, and gamified reward systems could be among the projects. As a result, if Enjin Marketplace is your chosen NFT

marketplace, you'll be able to identify excellent prospects.

10. KnownOrigin

KnownOrigin, the final NFT marketplace on this list, is a specialist crypto art platform. It is difficult for creators to be accepted on the site due to medium to serious difficulty. KnownOrigin, on the other hand, does not require creators to have a significant audience or be recognized as established artists to be approved.

The KnownOrigin 'Trending' function is a potential technique for promoting creators. In the KnownOrigin landscape, the feature aids in highlighting the identity and work of creators. KnownOrigin is unquestionably a top NFT marketplace for newcomers, albeit it favors artists having a distinct and solid work portfolio. It allows artists to get 12.5 percent of secondary sales royalties.

Chapter 14:

THING YOU SHOULDN'T DO AND THINGS YOU SHOULD DO WHEN INVESTING IN CRYPTO OR NFTS (NON-FUNGIBLE TOKENS)

We understand that diving into something new might be frightening, so we've put together some helpful hints for investing in crypto or non-fungible tokens (NFTs).

The majority of the advice given below is common knowledge. Because, to be honest, investing in crypto or purchasing NFTs isn't all that different from a lot of other internet activity. As a result, a lot of the advice is similar. However, it never hurts to be reminded of proper internet behavior. So, without further ado, here are our top crypto

investing dos and don'ts.

1. Do your homework

There's a reason this is number one. It is your obligation to conduct enough research regarding the companies, coins, services, and other entities with which you are investing in cryptocurrencies or purchasing NFTs. Sorry for being so'mum' about it, but this is your money, and it deserves to be taken seriously. As a result, take your time and conduct as much research as you believe is necessary. And don't rely on a single source of information...which gets us to tip number two.

2. Don't take everything you see on social media at face value.

We adore social media, and we adore the majority of the people we meet there. But...there are folks on there who have their own agendas, and those agendas aren't always to assist you out. It's to take advantage of other people's ignorance and scaremonger for personal gain. There are certainly a lot of folks there who have good intentions but are simply misguided. In fact, the category of well-intentioned people vastly outnumbers

the fraudsters, but even those who wish to help out don't always have all the information. So, if you come across something that sounds interesting, strange, or incorrect, go back to step 1 and conduct your own investigation.

3. Don't give out your keys, passwords, or bank account information.

Isn't it simple? Surely it's self-evident? No, not if you're new to crypto and NFTs, which is what a lot of people are hoping for. If you're not familiar with the language (pro tip: check out our crypto dictionary for an overview of common words), someone asking for your private key (which is unique to you and should never be shared!) to arrange a bitcoin or NFT transfer may seem quite normal. It's not the case. Stop and check things out if somebody asks for information from you, especially if it comes out of nowhere. Some information can be provided, but your private key, banking information, login information, or anything else should never be, and if something seems fishy, be merciless and reject until you can check more. (Hint: if someone is pressuring you to

provide information for a 'limited time offer,' it's probably a fraud.)

4. Always remember the old proverb, "If it looks too good to be true, it generally is."

Scammers rely on people's desire for excellent offers and their inability to investigate them. Make sure you're not one of them. A fair amount of skepticism is the best defense. If an offer appears that appears to be too good to be true, investigate it. Ask people in your local community groups whether they've received similar offers or if they know anything about the person or corporation making the offer. It's quite acceptable to be cautious.

5. Participate in crypto communities.

It's quite beneficial to have a network of people who have already been there and done that, especially when you're just getting started. If you're new to crypto and NFTs, it's a good idea to join a few online communities to get advise, learn more about the industry, and have some fun. As previously said, these can be useful resources for gathering information and double-checking assumptions, as well as interesting and

enjoyable locations to communicate with like-minded people. Terra Virtua has a Discord server and a Telegram channel, both of which are full of amazing people who are always willing to share their knowledge. You may also keep up with NFT news and developments by following us on Twitter, Instagram, and Facebook.

6. Don't put more money into something than you can afford to lose.

This, along with the phrase "previous performance is no guarantee of future results," is common investment advice. Both are important to keep in mind if you decide to invest in crypto or NFTs. Because cryptocurrency is such a volatile market, everything can change on a dime. And, no matter how much people pretend to know what is a "sure bet," the truth is that no one knows for sure. It may not be the best investment for you if you are not comfortable with that degree of risk.

7. Check and double-check the information of anyone or company who approaches you.

This one may seem like a rehash of the last two, and it is, but it is so crucial that we don't

mind repeating it. If anyone approaches you with an offer, whether it's an individual or a firm, go back to step one and DO YOUR RESEARCH.

It's understandable if it sounds like common sense. But, because we all know how exciting and fast-paced the crypto world is, it's easy to get caught up in all the excitement. We'll give you one last piece of advice: don't haste! Cryptocurrencies and NFTs aren't going away, so don't feel compelled to participate by friends or the media if you're not ready.

Remember, this is supposed to be enjoyable, so take advantage of all the crypto and NFT options available!

Chapter 15:

TIPS FOR MORE PROFIT FROM YOUR NFT PURCHASE

Your NFT can be sold.

Rather than buying and selling your non-fungible token right away, you can buy one and hold onto it for a while until you see a significant increase in sales/sale prices or a steady and consistent increase over time. The key to successfully reselling your NFT is to keep it for as little time as possible.

Following a continuous increase in sale prices or a sudden jump, it may be a good idea to sell your NFT. You might not make any money or even lose money if you wait too long. Keep in mind that you must ride the wave, but that every wave must finally stop.

Your NFT should be flipped

One of the most common ways to benefit on a purchase is to flip an NFT. To flip your NFT, simply purchase one and immediately resell it for a greater price. The advantage of flipping a non-fungible token over a typical asset like a house is that it does not necessitate any remodeling or updating. It's as easy as purchasing something and then selling it.

Look for an NFT that has a consistent rising sales trend if you want to have the best possibility of flipping it. Furthermore, if you have the opportunity to buy a low-cost NFT from a well-known developer, you may be able to sell it for a large profit right away (ROI).

Hold Onto Your NFT

If you're in the NFT space for the long haul and not simply looking to make a quick buck, investing in a long-term NFT could be a good idea. If you can find an NFT with underlying value for a low price now, it could be worth a fortune in the future. The most important aspect of this strategy is to ensure that the non-fungible token you buy has real worth and isn't just a fad.

Anything considered valuable, exclusive, or one-of-a-kind could be a smart long-term investment.

Unlockables

Assets kept on a decentralized storage network are known as NFT Unlockables. When someone buys a non-fungible token with these unlockables, they gain access to a variety of benefits, including:

- Calls from Exclusive Sources
- Social media followers
- VIP access to live performances
- Deals on merchandise
- Physical Goods
- Meetings are held every month.

When it comes to NFT unlockables, the options are unlimited. I recommend purchasing NFTs with valuable unlockables if you have the opportunity. You can take advantage of all the perks even if you don't resell it!

Invest in what you believe in.

It's critical to purchase an NFT that you're passionate about. In general, if you are

interested in a subject, you will have a superior understanding of that subject. This means you have a better chance of buying something profitable since you know better. It's not just the right thing to do, but it's also the right thing to do. You may either jump on the bandwagon and start buying trendy items you know nothing about, or you can make a more informed decision and support someone who makes something you truly enjoy. It's entirely up to you, but I only purchase items that I enjoy.

Overall, if your primary goal is to profit from NFTs, you must research to guarantee that you purchase an NFT that will deliver a return on investment.

NFT Categories With Potential Profit

There are many different kinds of non-fungible tokens to choose from, and the list will only get longer. Here are some of the most popular NFT categories that may be purchased and profited from:

- Art
- Photography
- Music

- Gaming

Art

Thousands of digital art NFTs are available for purchase. Look for one that has the potential to be valuable in the future. Also, anything you think would make a wonderful memento.

Digital art is fantastic because you can make it and send it to someone else right away. It is now possible to purchase a portion of digital artwork. That's exactly what the $69 million buyers of Beelple's work did. He sold several people shares in the artwork. Genius!

The good news is that if you're a creator, you can not only sell your work, but you can also set up NFTs so that you automatically receive a percentage of all secondary sales, which is known as royalty. Previously, as an artist, you could not receive any proceeds from secondary sales in the art world, but that is no longer the case.

NFTs can be utilized to make programmable art as well. Programmable

art refers to artwork programmed to exhibit dynamic qualities based on how the code is implemented on the blockchain. A digital marketplace called ASYNC art is one location where you may make programmable art. You can not only make your master copy there, but you can also add individual layers and change their attributes.

Individuals can contribute to the art as a group, and different group members can control their activities. As a result, NFTs allow for collective art. Your art can be displayed on online marketplaces such as OpenSea and SuperRare, where it can be bought and sold once it has been created.

Gaming

With the purchase and sale of in-game objects, money is made on popular video game platforms. Games like Team Fortress 2 and Dota 2 on the Steam marketplace, for example, are extremely popular and sell quickly.

Crypto Kitties is another NFT phenomenon. Crypto Kitties are being purchased and bred to sell them. Another

attractive specialty to profit from is in-game stuff.

Furthermore, because it is decentralized, there is no limit to the types of game things that may be sold or the amounts that can be sold. Axie Infinity, one of the most popular games, has seen some high-ticket transactions. In other games, such as Gods of Change, Skyview, and others, cards can be swapped or sold for other cards.

Music

NFTs have enormous potential in the music industry! You may get lifetime VIP access to events, meetings, phone conversations, and more, but that's just the beginning. Consider this: music artists can suddenly use non-fungible tokens to fund their careers. This means that record label deals may no longer be necessary for musicians, and the artist may keep a larger portion of the profit for themselves.

Additionally, NFTs enable the artist and the audience to connect on a much deeper level than previously possible. When it comes to minting tokens, musicians have a lot of

flexibility in terms of what they can put on them.

To learn more about how non-fungible tokens are changing the music industry as we know it, watch this exclusive YouTube interview I did with Famous Dyl (Platinum Hit Artist): Dyl talks about the Crypto Rich Deluxe NFT and how CyberScrilla.com is transforming the music industry.

Photography

Kate Woodman was paid $20,000 for a single NFT photo lately. Because photographs are now digitized, they are suitable for NFTs.

Moments are captured in photographs, and some of these moments are significant to people. You can purchase photos or create your own NFTs to sell on multiple marketplaces.

The best aspect is that as a photographer, you don't have to give up your copyright or reproduction rights. You're simply transferring ownership of the NFT component to the buyer. You can continue to exhibit that photograph or image, sell prints of it, and license it to businesses.

You'll need to decide whether you'll buy or make NFTs after you've decided whether you'll buy or make them. The next step is to sell them on online markets.

Best Tip To Sell Your NFTs For Profit.

Identify The Marketplace You Want To Sell On

If you have NFTs that you purchased and want to sell, you can do so directly on the marketplaces. However, you should inquire about the fees that will be charged. You can go to prominent market spaces like Nifty Gateway, OpenSea, and SuperRare once you have the digital asset you wish to sell.

You have complete control over the number of editions you wish to sell. It isn't necessary for there to be only one edition. You can have multiple editions of the same digital asset, and each will be distinct and have its token id. Please keep in mind, though, that having more can potentially lower the value of your asset.

Once you've done this, your digital item can't be replaced or copied in any way. As a result, no unique abilities or talents are required. You can benefit from locating or

constructing an NFT that appeals to people in a specific niche.

Set a reserve bid, which is the lowest price you're willing to sell it for. This is similar to auction websites such as eBay. Don't overprice it or underprice it. Look for a reasonable profit margin, and it will sell.

Finding solid digital assets that have underlying value or that you believe will have worth in the future is one method to profit from NFT. Invest in NFTs that you are confident will yield a profit when sold. Once you've purchased these, you can resell them on a marketplace for a considerably higher price. You can also utilize a variety of advertising methods to increase bids.

Chapter 16:

GUIDELINES AND NFT TIPS

You can filter the Ranking by 24 hours, 7 days, and 30 days. This is a fantastic method to find out what's hot right now.

The Floor Price is the starting point for determining the price of an NFT in the collection. Many of the Top NFTs are quite expensive, costing between 1 and 8 ETH.

When viewing the collection, a blue check indicates whether OpenSea has confirmed it.

You'll need to link a wallet, such as Coinbase or MetaMask. I've tried both and found them to be pretty comparable.

Keep at least $150 on hand for the Ethereum Gas Fee.

DO NOT SHARE THE KEY TO YOUR WALLET WITH ANYONE! Be wary of anyone that offers to help you in Discord

because they could be a scammer.
With NFTs, there's no assurance that you'll make money — you could lose everything!
How to Choose an NFT
I used the OpenSea ranking system when I first started. I felt more at ease purchasing something that had already received a high rating. Parallel Alpha was the source of my first NFTs, and they were ranked in the Top 3 at the time. New projects are generally less expensive, but they may lack a huge following and cannot be confirmed. Here are some more suggestions to get you started:
Join Discord Server.
You can join a Discord channel for most NFTs. This is an excellent method to learn about the project, its creators, and how to get involved. You can view how many individuals are in the Discord and how many are online and read through the posts. Is the Discord server up and running?
Check Twitter
Twitter is a fantastic method to stay up to date on the NFT project. You can check how many followers they have, how many

people like their posts, how many people comment on them, and so on. This is a fantastic approach to determine how engaged the NFT collection is.

Website/Project Roadmap

On the project website, most NFT projects offer a roadmap for their future ambitions. You can view their marketing, growth, and new product plans. To entice new participants, several initiatives include prizes in their roadmap. They may also have upcoming online events, new releases, or game development plans. This will offer you an idea of where the project will likely go in the following 6–12 months.

Ethereum Gas Fee

The Gas Fee must be paid when purchasing an NFT on OpenSea with Ethereum. The gas charge is a payment made to cover the cost of computer power used to process and validate Ethereum blockchain transactions. The cost of gas varies depending on the time and day and can range from $30 to $150 or more. I've heard that petrol prices are usually lower between the hours of 2 and 7 a.m. EST. When I first started buying

NFTs, they were usually around $30, but they are much more expensive today.

Minting an NFT?

You can mint an NFT when an NFT project is brand new and being launched. This means you'll obtain an NFT at random from the collection. Minting takes place on a given day and at a specific hour. Popular collections sometimes sell out in a matter of minutes, so you may not be able to get one at all. My transaction with 8 Bit Universe was pending for 15 minutes when I tried to mint an NFT. Because I was unable to complete the minting process, I canceled the transaction to avoid incurring fees. I ended up purchasing two NFTs from the 8 Bit Universe project on OpenSea for a fraction of the price of mint.

Startup Risks

Small Tech startups come to mind when I think of NFT projects. They have a lead developer, a person in charge of operations, and a person in charge of marketing. Many NFT projects are led by two to three persons, making them feel like a small business. Others will have more as they

expand and hire more developers, operators, and marketers. Investing in a non-performing loan is similar to investing in a business! Investing in such a small "business" comes with its own set of hazards. Many NFT ventures, in my opinion, will fail, collapse, and disappear. When analyzing an NFT, look into the team that is running the show!

Scams

In the NFT space, there are a lot of con artists. They may send you a Discord or Twitter DM in an attempt to "assist" you. Do not divulge personal information to strangers on the internet. Do not give out your private key to anyone else. Do not give out the QR code for your wallet to anyone. Please be cautious as some people will attempt to obtain your personal information to steal your NFTs and Ethereum.

Ideas for NFT Projects

Here are the NFT initiatives in which I am currently investing. Please remember that this is not financial advice. My holdings of NFTs are subject to change at any time.

- Secret Society of Whales
- 8 Bit Universe
- Lonely Alien Space Club
- Koala Intelligence Agency
- Parallel Alpha
- Art Blocks Factory

Chapter 17:

STEP TO SELLING AND BUYING NFT

The dilemma of how to manufacture and sell an NFT is on many artists' minds right now. Due to the eye-watering amounts that some pieces of NFT art have sold for, non-fungible tokens continue to make headlines – and generate controversy. Understandably, you're asking if NFTs provide a way for you to profit from your creative work. If that's the case, this post will walk you through exactly how to produce and sell an NFT.

First and foremost, a reality check. Yes, some NFT art has sold for millions of dollars, the most notable being Beeple's Everyday - The First 5000 Days, which sold for $69 million in March 2021 through Christie's. More than a dozen NFTs have sold for more than $1 million, and dozens more, including The EverLasting Beautiful by FEWOCiOUS

(seen above), have sold for hundreds of thousands of dollars (you can see more examples in our selection of the best NFT artwork).

These are rare occurrences, and even if you can duplicate their accomplishment, most of the money is unlikely to flow to you. NFT artists are charged a variety of fees by the companies that enable transactions and the platforms that generate and maintain NFTs, both upfront and after every sale, and they may even leave you out of money depending on the price your work fetches. Before you get started, make sure to read our explanation of what NFTs are.

Are you familiar with NFTs and eager to learn more? If you wish to produce and sell an NFT, then keep reading as we lead you through the steps. The first step is to select an NFT platform on which to create and sell your NFT, as well as a payment wallet with which to fund and receive payments.

There is currently a slew of online venues where you may create and sell NFTs. OpenSea, Rarible, SuperRare, Nifty Gateway (see image above), Foundation, VIV3,

BakerySwap, Axie Marketplace, and NFT ShowRoom are some of the most popular NFT auction platforms. MetaMask, Torus, Portis, WalletConnect, Coinbase, MyEtherWallet, and Fortmatic are available payment platforms.

We'll use the NFT platform Rarible and the cryptocurrency payment platform MetaMask to demonstrate the process in this guide for demonstration reasons. This isn't meant to be a recommendation for either of them. You might want to look at any of the platforms mentioned above and the many other options available and compare the fees and services each gives.

1. Buy some cryptocurrency

The Ethereum cryptocurrency, Ether, is accepted by the majority of platforms

The first and most important thing to realize is that you'll have to pay a platform to'mint' (i.e., create) an NFT of your work. Most sites prefer to be paid in Ether, the native cryptocurrency of Ethereum, the open-source blockchain platform where NFTs initially debuted.

Be warned that the value of Ether

(abbreviated as ETH) can vary rapidly, much like bitcoin and many other cryptocurrencies. The price of one ETH has risen from under $1,000 to $4,800 in 2021, with numerous peaks and troughs along the way, and it has been known to fluctuate by hundreds of dollars in a matter of hours.

To purchase Ethereum, you'll need to build a "digital wallet" and link it to your preferred NFT platform. There are other digital wallet services available, but we'll utilize MetaMask, which is available as a browser extension and a mobile app for demonstration reasons. Skip to step 4 if you'd rather use another provider or if you're already familiar with digital wallets and have your own.

2. Create a digital wallet

To use MetaMask to build a digital wallet, go to its website and click the blue 'Download' icon in the top-right corner. We chose to install the browser extension because we're using a desktop computer, but there is also a mobile app.

The MetaMask website is a good place to start

You'll be prompted to confirm your desire to

'create a new wallet and seed phrase.' Don't get too worked up over what a "seed phrase" is (it's essentially a list of words that saves blockchain data). If you say yes, all you have to do now is agree to the terms, create a password, and go through certain security precautions to have your account set up.

3. Fill your wallet with cash

After you've created your MetaMask wallet (or any other digital wallet), you'll need to fund it with ETH. It's simple: click the 'Buy' button and choose 'Buy ETH with Wyre' from the drop-down menu. You'll be directed to a page where you may purchase ETH with Apple Pay or a debit card. Note that if you don't want to spend any money just yet, you can skip this step; it will just take a bit longer.)

04. Use an NFT platform to connect your wallet.

The majority of digital wallets operate similarly. Regardless of which option you choose, once you have some ETH in your wallet, you can go to the NFT platform and create your NFT. Again, we're using Rarible for demonstration purposes, but there are

many more NFT platforms to select from.
Rarible is one of several digital collectibles marketplaces.
Rarible.com is a great place to start. A button labeled 'Connect wallet' can be seen in the right-hand corner of the screen. Click here, and you'll be prompted for your wallet provider, which in our instance is MetaMask, on the next screen. You'll be given the option to connect your wallet to Rarible via a popup. Accept the terms of service and confirm you're over the age of 13 by clicking 'Next,' then 'Connect.'
5. Upload your file
Hooray! You're now ready to start working on your NFT. At the upper right, click the blue 'Create' button.
Following that, you'll be given the option of making a one-of-a-kind piece or selling the same item multiple times. We'll go with 'Single' in this scenario. The digital file that will be converted to an NFT must now be submitted. Rarible accepts PNG, GIF, WEBP, MP4, and MP3 files up to 30MB in size.
To show this, we created a hilariously terrible

work of art based on David Hockney's classic London Underground art. You'll see a sample of what your NFT post will look like on the right after you've uploaded your (hopefully much better) digital file.

7. Hold an auction.

In the next area of the form, you'll need to decide how you want to sell your NFT artwork. There are three options accessible in this situation. 'Fixed price' allows you to set a price and sell it immediately to someone (similar to eBay's 'Buy it now' feature). Individuals can put bids until you accept one using the 'Unlimited Auction' option. Finally, a 'timed auction' is an auction that takes place for a specific amount of time. We'll use this option in our example.

The difficult part now is agreeing on a minimum price. If you set it too low, the exorbitant fees may eat into your profit, potentially putting you in the deficit after a transaction. We'll set the price at 1 ETH and offer people seven days to submit their bids.

You'll then be given the option to 'Unlock once purchased.' This allows you to provide your ultimate purchaser with a full, high-

resolution version of your art and/or supplemental content via a secret web page or download link. The 'Choose Collection' option below that is the most confusing. This is a really technical issue about how the blockchain is set up. We recommend that you leave the default setting of 'Rarible' alone.

8. Describe your NFT

You can now add a title and a description to your listing. If you want to improve your chances of selling your NFT, take some time to think about it. Following that, you'll be asked to decide what proportion of royalties you want to claim on any future artwork sales.

Again, it's a balancing act: a higher percentage will net you more money per sale over time, but it will also deter people from buying your art in the first place because they will be less likely to profit. Finally, there is an optional field where you can enter your file's properties. Now that you've completed that, you're almost done.

09. Pay the invoice (but be warned)

You'll be required to link your wallet to pay the listing fee when you click 'Create Item.' If

you have enough money in your wallet, don't worry: you won't have to start over. To contribute funds to Rarible, simply click the wallet symbol in the top-right corner of the screen.

CONCLUSION

It's possible that the listing fee is low: in our instance, it was only $5.91. However, this is only the beginning of your legal troubles. You must agree to pay an extra fee to generate your NFT before proceeding, which in our case would have been $42.99. If someone buys your NFT, there will be a commission fee as well as a transaction cost for sending the money from the buyer's wallet to yours. When we tested Rarible's website, none of this was readily obvious to us.

We'd be happy to plainly and simply explain how to determine the possible cost of developing and selling an NFT. Nonetheless, due to the puzzling nature of blockchain technology, rapid volatility in cryptocurrency values, and a lack of transparency on the platforms themselves, this is impossible. You don't have much of an option but to take a chance and wait to see how much you'll be charged overall if you make a sale, hoping to still make a profit.

METAVERSE

Everything you Need to Know about the Future of Decentralized Finance (DeFi), Blockchain Gaming, NFT (Non Fungible Token) and Cryptocurrency

Lucas Peters

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INTRODUCTION

Technology often delivers unexpected outcomes that no one foresees. On the other hand, the most significant advances were frequently predicted decades ago. Vannevar Bush proposed the "Memex" in 1945, a single device that would hold all books, records, and communications and mechanically connect them by association. This idea was then utilized to construct the concept of "hypertext" (a term coined two decades later), which aided the development of the World Wide Web (developed another two decades later). Although the "Streaming Wars" has only recently begun, the first streaming video was broadcast more than 25 years ago. Many of the characteristics of this so-called war, such as essentially endless supplies of content, interactivity, dynamic and targeted marketing, on-demand playback, and the benefit of combining content and delivery, have been speculated about for decades.

In this way, the broad contours of future solutions are frequently anticipated and, in some ways, decided upon well before the technical competence to generate them. Still, it's difficult to foresee how they'll come together, whose characteristics will matter more or less, what governance models or competitive dynamics will drive them, or what new experiences will emerge. Much of Hollywood recognized that the future of television was online when Netflix started its streaming service (IP TV had been deployed in the late 1999s). The issue was timing and how to package such a service (Hollywood required another ten years to realize that all its channels, genres, and content needed to be consolidated into a single app/brand). Many in the media industry are still baffled by the popularity of video game broadcasting and YouTubers and the notion that the best way to commercialize material is to give it out for free and charge $0.99 for optional $0.99 things of no consequence. The acquisition of media conglomerate Time Warner by landline internet behemoth AOL was announced in 2000 to bring media and

technology/distribution closer together, but it was abandoned in 2009 after failing to deliver many benefits. Nine years later, it was then purchased under the same premise by AT&T, the mobile internet behemoth.

While many technologists anticipated a "personal computer," its attributes and timing were so unpredictably unexpected that Microsoft, rather than IBM, dominated the PC era in the 1990s. While Microsoft anticipated mobile, it misjudged the operating system and hardware role, resulting in the global rise of Android and iOS (and Microsoft's shift from the OS layer to the app/services layer). Similarly, Steve Jobs' computing goals were always "right," but they were established too early and on the wrong device. Email and instant messaging were the two most popular uses of the early Internet, but it wasn't until the late 2000s that the value of social apps/networks was acknowledged. Similarly, all of the conditions for creating Facebook existed before to the year 2000; however, Facebook did not arrive until 2005 - and even then, it was by chance.

Many in the technology community have imagined a future state of the Internet, if not a quasi-successor to it, called the "Metaverse," since the late 1970s and early 1980s. It would transform not only the digital world's infrastructure but also much of the physical world, as well as all the platforms and services that sit on top of it, how they work, and what they sell. Although the Metaverse's full vision is difficult to define, appears unbelievable, and is decades away, the pieces have begun to feel very real. And, as is customary with this type of change, the journey is as long and unpredictable as the payoff.

As a result, several of the world's tech behemoths have made the Metaverse their newest macro-goal. Epic Games, the creators of the Unreal Engine and Fortnite, has made it their explicit goal, as I stated in February of this year. It's also the driving force behind Facebook's acquisition of Oculus VR and the recently announced Horizon virtual world/meeting space, as well as a slew of other initiatives, including AR glasses and brain-to-machine interfaces and

communication. Similarly, the tens of billions of dollars that will be spent on cloud gaming over the next decade are based on the belief that such technologies will underpin our online-offline virtual future.

Many of the same objects may be seen in the offices of Big Tech CEOs. However, a copy of Neal Stephenson's Snow Crash, which first described and essentially coined "Metaverse" and "Avatar," is likely to be the most well-worn. There are numerous explanations for this.

Debating the meaning of "the metaverse" is akin to debating the meaning of "the internet" in the 1970s.

The framework for a new way of communication was being laid, but no one knew what the finished product would look like. While it was true that "the internet" was on the way at the time, not every image of what it would include was accurate.

On the other hand, the metaverse concept is surrounded by a lot of marketing hype. Facebook, in particular, is in a vulnerable position due to Apple's decision to limit ad tracking, which has hurt the company's

financial line. It is impossible to separate Facebook's vision of a future in which everyone has a digital wardrobe to browse because the company intends to profit from selling virtual garments.

Chapter 1:

WHAT DOES 'METAVERSE' REALLY MEAN?

Here's an experiment to demonstrate how ambiguous and perplexing the phrase "metaverse" may be: Replace the phrase "the metaverse" with "cyberspace" in a sentence. The meaning will not change 90% of the time. Rather than referring to a specific type of technology, the word alludes to a wide shift in how we interact with it. It's highly possible that the term will become obsolete even if the technology it initially defined becomes widespread.

The metaverse is made up of two technologies: virtual reality, which is distinguished by persistent virtual settings that exist even when you are not playing, and

augmented reality, which combines physical and digital world features. However, it does not necessitate that those areas be only accessible through VR or AR. A virtual environment accessible through PCs, game consoles, and even phones, such as Fortnite, might be metaversal.

It also refers to a digital economy where users can design, buy, and sell products. It's also interoperable, allowing you to transport virtual things like clothing or vehicles from one platform to another in more idealized metaverse scenarios. You may buy a shirt in the mall and then wear it to the movies in real life. Virtual identities, avatars, and inventories are already confined to a single platform on most platforms, but a metaverse might allow you to create a persona that you can carry with you wherever you go as easy as transferring your profile image from one social network to another.

It's difficult to understand what all of this implies since you might say, "Wait, doesn't it already exist?" when you hear descriptions like the ones above. The Environment of Warcraft, for example, is a persistent virtual

environment where people can buy and trade things. Rick Sanchez may learn about Martin Luther King Jr. through virtual experiences like concerts and a Fortnite exhibit. You can put on an Oculus headset and enter your virtual world. Is that the definition of "metaverse"? Is it just a few new types of video games?

In a nutshell, yes and no. To call Fortnite "the metaverse" refers to Google as "the internet." Even if you spend a lot of time chatting, buying, learning, and playing games in Fortnite, it doesn't mean you'll learn everything there is to know about the metaverse.

Science fiction is where the most common concepts about the Metaverse originate from. The Metaverse is usually depicted as a kind of digital "jacked-in" internet — a manifestation of true reality but grounded in a virtual (often theme park-like) world, similar to that depicted in Ready Player One and The Matrix. While such experiences are likely to exist in the Metaverse, they are constrained in the same manner that films like Tron portrayed the Internet as a true digital

"information superhighway" of bits.

We don't know how to define the Metaverse, just as it was impossible to envisage the Internet of 2020 in 1982 — and much more difficult to express it to people who had never "logged" onto it. On the other hand, core traits can be discovered.

1. Be persistent – That is, it never "resets," "pauses," or "terminates," but rather continues endlessly.
2. Be synchronous and live – while pre-planned and self-contained events will take place, the Metaverse will be a live experience that exists in real-time for everyone, exactly like it happens in "real life."
3. Allow for an infinite number of concurrent users while maintaining each user's sense of "presence" – everyone can be a part of the Metaverse and engage in a certain event/place/activity at the same time and with their agency.
4. Be a fully functional economy — individuals and businesses will be able to create, own, invest, sell, and be compensated for a vast array of "labor" that produces "value" that is valued by others.

5. Be a hybrid of digital and physical worlds, private and public networks/experiences, and open and closed platforms.
6. Provide unprecedented data, digital items/assets, content, and so on interoperability across each of these experiences — for example, your Counter-Strike gun skin might be used to paint a pistol in Fortnite or gifted to a buddy on/through Facebook. A automobile created for Rocket League (or even Porsche's website) might be carried across to work in Roblox in the same way. Today's digital world functions similarly to a shopping mall, with each store having its own unique ID cards, currency, proprietary units of measurement for commodities such as shoes or calories, and distinct dress codes, among other things.
7. Be inhabited by "content" and "experiences" developed and operated by a vast array of contributors, some of whom are self-employed people, while others may be informally organized organizations or commercially oriented businesses.
8. A few other concepts could be fundamental to the Metaverse, although they aren't

universally accepted. One of these concerns is whether individuals would have a single digital identity (or "avatar") to utilize throughout all of their interactions. This might be beneficial, but it's unlikely since each of the leaders of the "Metaverse age" will still require their own identification systems. There are a few main account systems available today, but none of them spans the full web, and they usually stack on top of one another with restricted data sharing and access (e.g., your iPhone is based around an iOS account, then you might log into an application using your Facebook ID, which itself is your Gmail account).

9. There's also a discussion over how much interoperability is necessary for the Metaverse to genuinely be "the Metaverse," rather than merely an evolution of the Internet as it now exists. Many people also wonder if there can be just one operator in a true Metaverse (as is the case in Ready Player One). Some claim that a Metaverse's definition (and success) requires a strongly decentralized platform built mostly on community-driven standards and protocols

(akin to the open web) and a "open source" Metaverse OS or platform (though this doesn't rule out the presence of dominant closed platforms in the Metaverse).

10. The Metaverse's basic communications architecture is another concept. While the Internet today is based on individual servers "talking" to one another as needed, some believe the Metaverse should be "wired" and "managed" around constant many-to-many connections. There’s no consensus on how this would work or the extent of decentralization that would be required.

11. It's also useful to consider what the Metaverse is frequently compared to, albeit wrongly. While these comparisons are most likely a part of the Metaverse, they aren't the Metaverse themselves. The Metaverse, for example, isn't...

A “virtual world” – Virtual worlds and games with AI-driven characters, as well as those populated with "actual" humans in real-time, have existed for decades. This is a synthetic and fictional universe, not a "meta" (Greek for "beyond") universe with a single goal (a game).

1. A "virtual space" – Digital content experiences such as Second Life are frequently referred to as "proto-Metaverses" because they (A) lack game-like goals or skill systems; (B) are persistent virtual hangouts; (C) provide near-synchronous content updates, and (D) feature real people represented by digital avatars. These, however, are insufficient characteristics for the Metaverse.
2. "Virtual reality" (VR) - VR is a method of immersing oneself in a virtual environment or area. A sense of presence in a digital world is not enough to constitute a Metaverse. It's the same as claiming to live in a prosperous metropolis because you can see and walk about it.
3. A "digital and virtual economy" - Too, is already in place. Like World of Warcraft, individual games have had functional economies for a long time, where real individuals trade virtual products for real money or do virtual jobs for real money. Furthermore, platforms like Amazon's Mechanical Turk and technology like Bitcoin are built on the employment of

individuals/businesses/computing power to complete virtual and digital work. We are already trading at scale through purely digital marketplaces for purely digital things for purely digital activities.

4. A "game" - Fortnite contains numerous Metaverse elements. It (A) mashes up IP; (B) has a consistent identity that spans many closed platforms; (C) is a portal to a diverse range of experiences, some of which are entirely social; and (D) rewards content creators, among other things. However, like with Ready Player One, it remains too limited in terms of what it can do, how far it can go, and what "work" can be done (at least for now). While the Metaverse may have some game-like aims, feature
games, and use gamification, it isn’t a game in and of itself, nor is it focused on specific goals.

5. A "virtual Disneyland or theme park" – Not only will there be an endless number of "attractions," but they will also not be "planned" or "programmed" in the same way that Disneyland is, nor will they all be about fun or entertainment. Furthermore, the

engagement distribution will have a very long tail.

6. There will be a "new app store" – Nobody needs a new means to access apps, and doing so "in VR" (for example) would not unlock/enable the kinds of value promised by a successor Internet. The Metaverse differs significantly from today's Internet/mobile architecture, paradigms, and objectives.

7. A "new UGC platform" — The Metaverse isn't just another YouTube or Facebook-like platform where countless people can "produce," "share," and "monetize" content, with the most popular content accounting for only a small portion of total consumption. The Metaverse will be a location where proper empires are established and where these well-capitalized corporations may fully own a consumer, control APIs/data, and unit economics, among other things. Furthermore, like with the web, a dozen or so platforms likely control a major portion of user time, experiences, content, and so on.

(In other words, think of the Metaverse as the Nightmare Before Christmas - you can walk into any event or activity and potentially

fulfill practically any of your needs, from a single starting point or planet populated by everyone you know.) This is why hypertext is so important. However, it's critical to understand that the Metaverse is not a game, a piece of technology, or an online experience. It's the equivalent of claiming that World of Warcraft, the iPhone, or Google is the Internet. They include digital environments, devices, services, and websites, among other things. The Internet is made up of a variety of protocols, technology, tubes, and languages and access devices, information, and communication experiences. The Metaverse will be as well.)

Chapter 2:

WHY DOES IT MATTER?

Even if the Metaverse falls short of the extravagant expectations of science fiction authors, it is predicted to create trillions of dollars in value as a new computer platform or content medium. The Metaverse, in its final form, serves as a gateway to most digital experiences, as well as a crucial component of all physical ones and the next major labor platform.

The advantage of being a significant player in such a system is self-evident — the Internet has no "owner," but virtually all of the largest Internet enterprises are among the top ten most valuable public companies in the world. There will undoubtedly be far greater economic benefits if the Metaverse acts as a functional "successor" to the web, with far more reach, time spent, and commercial

activity. Regardless, the Metaverse should provide the same range of opportunities as the web, with new companies, products, and services handling everything from payment processing to identity verification, hiring, ad distribution, content production, and security, among other things. As a result, several incumbents are likely to lose their seats.

In general, the Metaverse has the potential to change how we allocate and commercialize modern resources. Developed economies have changed for centuries as labor, and real estate scarcity swelled and waned. Would-be laborers living outside of cities will engage in the "high value" economy through virtual labor in the Metaverse. We will see further alterations in where we live, the infrastructure created, and who performs specific duties as more consumer expenses goes to virtual goods, services, and experiences. Consider the concept of "Gold Farming." Many "players" – often employed by a larger corporation and often from lower-income nations – would spend a workday gathering digital resources for sale outside or inside the game not long after in-game trade economies

formed. In the West, these sales were typical to higher-income players. While most "labor" is menial, repetitive, and limited to a few applications, the variety and value of this "work" will expand in tandem with the Metaverse.

BUILDING THE METAVERSE

The Metaverse will necessitate a plethora of new technologies, protocols, enterprises, breakthroughs, and discoveries to function. And it won't appear out of nowhere; there won't be a clear "Before Metaverse" and "After Metaverse" distinction. Rather, it will emerge gradually over time as various goods, services, and capabilities connect and meld. However, it's useful to consider three key factors that must be in place.

(One way I try to think about these three categories procedurally is through the Book of Genesis - first, establish the underlying universe ("concurrency infrastructure"), then describe its laws of physics and regulations ("standards and protocols"), and finally, one must fill it with worthwhile content ("Content") that evolves and iterates against selection pressures. In other words, God does

not make and design the universe as if it were a small model, but rather allows one to expand across a mostly empty tableau, etc.)

Concurrency Infrastructure

At its most fundamental level, the technology does not yet exist to support hundreds, much alone millions, of individuals sharing a synchronized experience. Consider the Marshmello concert in Fortnite in 2019. 11 million people in total watched the event in real-time. They did not, however, do so in tandem. In reality, there were over 100,000 Marshmello concert instances, each of which was slightly out of rhythm and limited to 100 players. Epic can certainly handle more today, but not into the hundreds of thousands, let alone millions.

Not only does the Metaverse necessitate infrastructure that does not already exist, but the Internet was never designed for anything remotely similar to this. It was, after all, created to transfer files from one machine to another. So, most of the Internet's underlying systems are based on a single server communicating with another server or an end-user device. This model is still in use

today. Although billions of individuals are on today's Facebook, each user has their connection to the Facebook server and does not share it with anybody else. As a result, when you access content from another user, you're just getting the most up-to-date information from Facebook. Text conversations were the first pseudo-synchronous applications, but you're still feeding primarily static data to a server and pulling the most up-to-date data from it when/where/how/as needed. The Internet was never intended for persistent (as opposed to continuous) communication, let alone persistent communication synchronized in real time with many other people.

The Metaverse requires something more akin to video games and video conferencing to function. These encounters operate because of persistent connections that keep each other up to date in real-time and with a level of precision that other programs don't require. However, they rarely have a large number of concurrent users: most video chat systems have a limit of a few individuals, and after you reach 50, you'll have to "live stream" a

broadcast to your viewers instead of sharing a two-way connection. These encounters don't have to be real, and they certainly aren't.

To that end, one of the reasons the battle royale genre has only lately been popular in video games is that it is only now possible to play live with so many other players. Although some of the most popular games, such as Second Life and Warcraft, have been around for more than two decades, they essentially faked the experience by "sharding" and dividing gamers into distinct "worlds" and servers. For example, Eve Online can have over 100,000 players "in the same game," although they are spread across multiple universes (i.e., server nodes). As a result, a player only sees or interacts with a small number of other players at any given time. Furthermore, getting to another galaxy necessitates quitting from one server and loading another (which the game manages to "conceal" narratively by forcing players to travel at light speed to span the immensity of space). And if/when Eve Online reached battles with hundreds of players, the system ground to a halt. And it worked because the

game's gameplay dynamic was primarily built on large-scale, pre-planned ship-based conflict. These slowdowns

It would have rendered the game unplayable if it had been a "fast-twitch" game like Rocket League or Call of Duty.

Like the appropriately called Improbable, several companies are working hard to overcome this challenge. However, this massive computational issue goes against the Internet's core design/intent.

Standards, Protocols, and their Adoption

Standards and protocols for visual presentation, communications, graphics, file loading, data, and so on make the Internet work as we know it today. This includes everything from well-known brands to obscure ones. The WebSocket protocol, which underpins almost every form of real-time communication between a browser and other servers on the internet, assigns GIF filetypes to it.

S&Ps will need to be even broader, more complex, and resilient in the Metaverse. Furthermore, because interoperability and live synchronous experiences are important,

we'll have to prune some existing standards and "standardize" around a smaller set of standards per function—for example, today's image file formats include.GIF,.JPEG,.PNG,.BMP, TIFF, WEBP, and others. Even though today's web is based on open standards, much of it is closed and proprietary. Amazon, Facebook, and Google all use similar technologies, but they're not designed to work together in the same way that Ford's wheels aren't designed to fit into a GM chassis. Furthermore, these businesses are adamant about not integrating their systems or sharing their data. Such actions may increase the "digital economy's" overall value, but they also weaken their hyper-valuable network effects, making it easier for users to move their digital lives elsewhere.

This will be extremely difficult and time-consuming. The more valuable and interoperable the Metaverse becomes, the more difficult it will be to reach an industry-wide agreement on issues like data security, data persistence, forward-compatible code evolution, and transactions. Furthermore, the

Metaverse will require entirely new rules for censorship, communication control, regulatory enforcement, tax reporting, the prevention of online radicalization, and a slew of other issues with which we're still grappling today.

While standard-setting usually entails face-to-face meetings, negotiations, and debates, the Metaverse's standards will not be established in advance. Meetings and opinions change on an ad hoc basis in the standard process, which is much messier and more organic.

Consider SimCity as a meta parallel for the Metaverse. Ideally, the "Mayor" (i.e., player) would design their mega-metropolis first, then construct it from the ground up. However, you cannot simply "create" a 10MM person metropolis in the game, as you cannot in real life. You begin by focusing on a tiny town and optimizing it (e.g., where the roads are, schools are, utility capacity, etc.). You build around this town as it grows, occasionally but prudently demolishing and replacing "old" areas, sometimes only if/when a problem (lack of power) or calamity strikes (a fire). However, unlike

SimCity, there will be multiple mayors rather than just one, and their ambitions and incentives will frequently clash.

We do not know exactly what the Metaverse will require, much less how, when, or through which applications and groups existing standards will be transferred. As a result, it's crucial to evaluate how the Metaverse develops rather than just the technology standard it follows.

The ‘On-Ramp’ Experience

Consumers and businesses will not adopt a would-be proto-Metaverse simply because it is offered, just as Metaverse standards cannot be "announced."

Take a look at reality. Making a mall large enough to accommodate a hundred thousand people or a hundred stores does not guarantee to attract a single customer or brand. To meet current civilian and commercial demands, "town squares" form spontaneously around existing infrastructure and activities. In the end, any gathering spot — whether it's a bar, basement, park, museum, or merry-go-round — is visited because of who or what is already present, not because it's a destination

in and of itself.

The same can be said for digital encounters. Facebook, the world's largest social network, succeeded not because it declared itself a "social network," but rather because it began as a college hot-or-not, evolved into a digital yearbook, and became a photo-sharing messaging service. The Metaverse, like Facebook, must be "populated," not simply "populate," and this population must then fill up the gaps in this digital environment with activities to do and stuff to consume.

This is why thinking about Fortnite as a video game, or an interactive experience is too limited and too quick. Fortnite began as a game, but it swiftly morphed into a social media platform. From the 1970s until the 2010s, teenagers would come home and speak on the phone for three hours. They now chat about Fortnite with their buddies, but not about Fortnite. Instead, they discuss school, movies, sports, the news, boys and girls, and other topics. After all, Fortnite does not have a story or an IP; the plot revolves around what happens on the island and who is present.

In addition, Fortnite is quickly becoming a platform for other businesses, IP, and stories to express themselves. This includes, most notably, last year's live Marshmello show. However, since then, the number of similar examples has exploded. In December 2019, as part of a larger in-game audience-interactive event that included a live mocap interview with director J.J. Abrams, Star Wars: The Rise of Skywalker released a clip from the highly anticipated film only in Fortnite. Furthermore, this event was mentioned openly in the film's opening scenes. Weezer created a special island where fans may get an early listen to their new album (while dancing with other "players"). In addition, Fortnite has created various themed "limited-time modes" based on Nike's Air Jordan and Lionsgate's John Wick film franchise. In other situations, these "LTMs" turn a section of the Fortnite map into a mini-virtual world that, when accessed, modifies the game's visuals, items, and playstyle to mimic something else. This has included the Borderlands universe, Gotham, Batman's hometown, and the old west.

As a result, Fortnite is one of the few locations where Marvel and DC's IP collide. You may practically dress up like a Marvel character and converse with others wearing officially approved NFL uniforms in Gotham City. This is the first time something like this has happened. It will, nevertheless, be crucial to the Metaverse.

More broadly, Fortnite has spawned a new sub-economy where "players" can create (and monetize) their content. Digital clothing ("skins") or dances ("emotes") are examples of this. It has, however, quickly grown to include all new games and experiences that use Fortnite's engine, assets, and aesthetics. From basic treasure hunts to immersive mash-ups of the Brothers Grimm with parkour culture to a 10-hour sci-fi epic spanning several realms and timelines, there's something for everyone. Fortnite's Creative Mode, in fact, already feels like a pre-Metaverse. A player enters a game-like lobby and selects from thousands of "doors" (i.e., space-time rifts) that transport them to one of the thousands of distinct worlds with up to 99 other players.

This relates to the game's long-term ambition, which creative director Donald Mustard is becoming increasingly clear about.

Epic Games' Epic Game Plan

Fortnite's capacity to induce numerous seeming competitors to cooperate (or early "interoperability") with one another is the best indication of its potential. Fortnite is now available on every major entertainment platform – iOS, Android, PlayStation, Nintendo, PC, and Xbox – and allows complete cross-play across different identity/account systems, payment methods, social graphs, and generally locked ecosystems. The big gaming platforms fought for years, believing that allowing such an experience would undercut their network effects and lessen the need to acquire their proprietary gear. As a result, even though Sony and Microsoft knew they wanted to, a friend with Call of Duty on PlayStation could never play with a friend with Call of Duty on Xbox.

It's also uncommon for IP owners to allow their characters and stories to be mixed with other IPs. This happens occasionally (e.g.,

several Marvel v DC comic book crossovers and video games). But it's especially uncommon to see it in an experience they don't editorially control, let alone one based on unpredictability (not even the Fortnite creative team knows what it'll do in 2021) and with such a diverse spectrum of IP.

It is impossible to overstate the importance of organic evolution. These parties would never embrace interoperability or entrust their IP if you "announced" your aim to build a Metaverse. But, just as P&G can't say, "oh, Facebook isn't for us," most counterparties have no choice not to engage. They're probably keen to integrate into the "game" — Fortnite has become so popular and distinctive that most counterparties have no choice but to play. Fortnite is an extremely valuable platform.

It's a game called Fortnite. However, please re-ask that question in a year.

Epic is bringing far more to its Metaverse-building efforts than just a convincing on-ramp. Epic Games owns Unreal Engine 2, the second-largest independent game engine, in addition to running Fortnite, which was

ostensibly a side project. Thousands of games (to simplify things) currently use its "stack" of tools and software, making it easy to exchange assets, integrate experiences, and share user profiles. Epic's game engine has become so sophisticated over time that it now supports a range of traditional media experiences. Unreal was used to shoot and render Disney's The Mandalorian, allowing director Jon Favreau to practically enter the digital sets to frame shots and arrange people. Audiences might freely explore most of these sets if Disney wishes – most of the settings and assets already exist. Unreal is increasingly used for live events outside of cinema and television, such as Fox Sports' NASCAR set.

Even Nevertheless, the Metaverse demands everyone, not only well-staffed organizations and technically talented individuals, to be able to generate and share 'content' and 'experiences.' Epic bought Twinmotion in April of last year for this purpose. The company was/is focused on providing straightforward, icon-based software that lets "architecture, construction, urban planning,

and landscaping professionals" create realistic, immersive digital landscapes based on Unreal "in seconds," rather than VFX engineers or game designers. According to Epic Games CEO/Founder Tim Sweeney, this implies that there are now three ways to create in Unreal: the conventional "coding" engine itself, the more simple and "visual" Twinmotion, and Fortnite Creative Mode for users with no experience in programming and design. Each choice is likely to become more competent, user-friendly, and integrated over time. Epic's "Online Services" suite, which allows developers to support cross-play across Sony, Microsoft, Nintendo, PC, iOS, and Android while leveraging Epic's account systems and social graph, is becoming an increasingly essential aspect of the company's portfolio (which has 1.6B player connections). This isn't particularly unusual; Microsoft paid $400 million for PlayFab and spent millions more to support Xbox Live, while Amazon bought both GameSparks and GameLift to provide services to game creators that require a large number of servers and tools to run their online games. Valve

doesn't provide server infrastructure, but its Steamworks solution provides free matchmaking and account services to developers — but exclusively for Valve's core business, the Steam Store. Epic's approach to Online Services is revealed in this way. Epic does not charge, unlike today's market leaders. It's also free to use with any engine, platform, or game. It also scales to the same size as Fortnite's player network, allowing any game to take advantage of the world's largest player graph to jumpstart their userbases. Although such a service has apparent value, Epic believes it is "more valuable if free" since it expands the company's already massive social graph, makes it much easier for additional games to "speak to" one another and allows players to bounce from experience to experience more smoothly. All of this calls into question Epic's dependence on Fortnite to construct the Metaverse. While Epic Online Services is still in private testing, the firm has stated that it would be available to the public in Q2 2020 and support "hundreds or thousands of games." It's also worth noting that all of this

decreases Epic's reliance on Fortnite in its long-term Metaverse-building efforts.

Epic also runs one of the largest (if still tiny) digital game stores, allowing users to access various digital material and experiences. Few customers wanted more digital content fragmentation, and the majority were comfortable with market leader Steam. On the other hand, Epic Games Founder/CEO Tim Sweeney has been outspoken about how today's usual 30% commissions for digital content sales (e.g., iOS, Amazon, or Google Play) are not only usurious but also inhibit the formation of a truly digital world market. Consider what would happen if credit card fees were 60-20x higher than they are now; entire sections of the physical economy would be unable to function (such as a coffee shop or grocery store). Epic costs only 12% for this service (including the 5 percent Unreal licensing fee, too, making it only 7 percent for many customers). Notably, rumors continue that Sweeney sought even lower fees but ultimately agreed with his board at a rate of 12 percent - a figure he concedes does not always cover operating

costs. This isn't to say there isn't a larger business here - running a storefront will undoubtedly contribute to the Metaverse's growth – but Sweeney's efforts appear to be far broader. He actively begs Google and Apple to match Epic's rates, despite the fact that they produce thousands of times the revenue of Epic's young store.

Here's how the 88 percent /12 percent retail battles would go if it were a coin toss: Heads, other stores aren't responding, therefore Epic Games Store triumphs, and all developers triumph. Tails, our competitors catch up to us, lose our revenue-sharing advantage, and other stores may gain, but all developers win.

Chapter 3:

WHO ELSE CAN BUILD THE METAVERSE?

Although the Metaverse has the potential to replace the Internet as a computing platform, it is unlikely to follow in the footsteps of its predecessor. The Internet was created by public research universities and government programs in the United States. This was partly because few in the private industry realized the commercial potential of the World Wide Web, but it was also because these organizations were effectively the only ones with the computational ability, resources, and goals to construct it. When it comes to the Metaverse, none of this is true.

Private industry isn't only fully aware of the Metaverse's potential; however, it also has the most assertive belief in its future, not to mention the most money (at least when it

comes from a willingness to support Metaverse research and development), the best engineering skill, and the most conquest ambition. Companies want to control and define the Metaverse, not just be at the forefront of it. Although there are just a few possible leaders in the early Metaverse, open-source initiatives with a non-corporate mindset will continue to play an important role in the Metaverse and will attract some of the most interesting creative talents. And you will be able to identify each one.

Microsoft is an excellent example. With Office 365 and LinkedIn, the company has hundreds of millions of federated user identities, is the world's second-largest cloud vendor, has an extensive suite of work-related software and services that span all platforms/infrastructure/systems, clear technical experience in massive shared online content/operations, and a set of potential gateway experiences with Minecraft, Xbox + Xbox Live, and HoloLens. To this end, the Metaverse provides an opportunity for Microsoft to recapture the OS/hardware leadership it lost during the transition from

PC to mobile. But, more crucially, CEO Satya Nadella recognizes that Microsoft must be present wherever work occurs. It is difficult to imagine Microsoft not being a significant driver in the virtualized future of labor and information processing, having successfully moved from enterprise to consumer, PC to mobile, and offline to online, all while keeping a prominent role in the "work" economy.

Despite the fact that Facebook CEO Mark Zuckerberg has not stated openly that he wants to establish and own the Metaverse, his preoccupation with it is evident. This is also clever. Facebook, more than any other corporation, stands to lose the most from the Metaverse, as it will create an even larger and more capable social graph, as well as a new computing and interaction platform. Simultaneously, the Metaverse enables Facebook to expand its reach up and down the stack. Despite multiple attempts to develop a smartphone operating system and launch consumer hardware, Facebook is the only FAAMG business solely focused on the app/service layer. Facebook might become

the next Android or iOS/iPhone (thus Oculus), as well as a virtual goods version of Amazon, thanks to the Metaverse.

The Metaverse benefits of Facebook are enormous. It has more daily users, daily usage, and user-generated content than any other platform on the planet, as well as the second greatest percentage of digital ad, spend, billions in capital, thousands of world-class engineers, and a founder with majority voting rights. Its Metaverse assets are also fast developing, with patents for semiconductors and brain-to-machine computing interfaces currently among them. On the same hand, Facebook's track record as a platform for third-party developers/companies to build long-term enterprises, as a ringleader in a consortium (e.g., Libra), and managing user data/trust is bleak.

Amazon is intriguing in several ways. It will always strive to be the principal location where we purchase stuff.' It doesn't matter if it's purchased through a game engine, a virtual environment, or a web browser. Also, the company already has hundreds of millions

of credit cards, the world's largest share of e-commerce (excluding China), is the world's largest cloud vendor, operates a variety of consumer media experiences (music, ebooks, video, video game broadcasting, audiobooks etc.) and third-party commerce platforms (e.g., Fulfilled by Amazon, Amazon Channels), and is developing what they hope will be the first major gaming/rendering engine purpose-built for the cloud.

More importantly, Jeff Bezos, the company's founder, and CEO is passionate about infrastructure investments. The web, for example, is powered by AWS (Amazon Web Services). Rather than buying and selling inventory directly, Amazon sells, packages, and distributes products sold by other firms, generating 80% of its revenue through "Fulfilled by Amazon" (like most retailers). While Elon Musk's private aerospace company, SpaceX, aspires to colonize Mars, Bezos has stated that his goal with Blue Origin is to "build gigantic chip factories in space and just send little bits down," similar to early web protocols and his AWS, so "we could build gigantic chip factories in space

and simply send little bits down." As a result, Amazon is more likely than any other FAAMG business to support a completely "open" Metaverse – it doesn't need to control the UX or ID because it profits from massive growth in back-end infrastructure utilization and digital transactions.

The Internet is a data mine, and the Metaverse will contain both more data and potentially higher yields than the current web. And no one does a better job of monetizing this data on a worldwide scale than Google. Furthermore, the company is the market leader in indexing both the digital and physical worlds (almost 10,000 employees contribute to mapping activities), but it is also the most successful digital software and services company outside of China. It also runs the world's most popular operating system (Android) and the most open major consumer computing platform (Windows). Google was the first to go for the wearable computing opportunity with Google Glass aggressively and is now making a big push into digitizing the home with Google Assistant, its Nest suite of products, and

FitBit, despite its failure. As a result, the Metaverse is likely to be the sole effort to bring together all of Google's disparate investments to date, including Stadia edge computing, Project Fi, Google Street View, massive dark fiber purchases, wearables, etc. virtual assistants, and more.

It's improbable that the underlying Metaverse will be driven or operated by it. True, it runs the world's second-biggest computing platform (and by far the most valuable), as well as the world's largest game retailers (which also means it pays more to developers than anyone else on earth). Furthermore, the corporation is aggressively investing in augmented reality gadgets and "connective tissue" to help the Metaverse (e.g., Apple Watch, Apple AirPods, beacons). However, Apple's mindset and commercial model are incompatible with creating an open platform for creation, where anybody can access the entire spectrum of user data and device APIs. That is to say, rather than the operator/driver, Apple is more likely to be the main method the Western world connects with Metaverse. This, like the Internet, will most likely work

out well for everyone.
Unity will play a critical role if the Metaverse requires a broad interplay of assets, experiences, and shared APIs. More than half of mobile games use this engine, and it is even more frequently used in real-world rendering/simulation use cases (such as architecture, design, and engineering) than Unreal. While filmmaker Jon Favreau was producing and shooting the photo-realistic Lion King in Unity, he produced and shot Disney's The Mandalorian in Unreal. It also runs one of the largest digital ad networks in the world (a nice side effect of powering 10B daily minutes of mobile entertainment). However, it's unclear what role Unity will play in propelling the Metaverse forward. There is no store, no user account system, and no true direct-to-consumer experience. Most of its supplementary (non-engine or advertising) services aren't frequently used. Furthermore, most (though not all) Unity-powered games are simple mobile games rather than Metaverse gateways. However, given its unavoidable effect on standards, playtime, and content creation, it's difficult to

picture it not being acquired and absorbed into a larger technology company with more assets and benefits.

Purchasing Unity used to be difficult to justify. Even though the company is extremely valuable, any potential buyer must keep Unity fully platform-agnostic to maintain market share, developer support, and influence (for example, Google couldn't make Unity exclusive to or best on Android/Chrome without alienating a large number of developers). This isn't to say that converting Unity into a proprietary engine isn't a good strategic move. The value lost as a result of such a decision and the premium required to purchase Unity will very certainly make such a move unaffordable. If, on the other hand, the purpose of a Unity acquisition is to secure a core role in the new Internet, the acquirer will have a motivation to maintain the engine open/available across platforms, and the price will quickly become immaterial.

Valve must have a plausible path to the Metaverse if Epic does. In terms of users, money, and playtime, Valve's Steam dwarfs

the Epic Games Store. It is the owner of a number of the most popular and long-running multiplayer games (Counter-Strike, Team Fortress, DotA). In addition, the organization has a long history of monetization innovation and content (it was the first to experiment at scale with AAA free-to-play games and with player-to-player marketplaces). Likewise, Valve has spent years developing and launching virtual reality technology, earns billions in annual earnings, and is privately owned by a group of programmers who are passionate about open-source technologies and dislike closed environments. Simultaneously, Valve's Source engine has found minimal adoption, and unlike Epic, it does not appear to be focused on bringing its capabilities and assets together to build the Metaverse.

Why Does the Metaverse Involve Holograms?

When the internet was first introduced, it was followed by a series of technological breakthroughs, including the capacity to

connect computers across large distances and the ability to link one web page to another. These technological characteristics provided the foundation for the abstract structures we now identify with the internet, such as webpages, applications, social networks, and everything else that relies on them. That's not even taking into account the convergence of non-internet interface innovations like displays, keyboards, mouse, and touchscreens, which are still necessary for the internet to function.

With the metaverse, there are some new building blocks in place, such as the capacity to host hundreds of people in an instance of a server (future versions of a metaverse should be able to handle thousands, if not millions) and motion-tracking tools that can distinguish where a person's hands are. These new technologies have the potential to be extremely intriguing and futuristic.

Several restrictions, however, may be impractical. When companies like Microsoft and Fa—Meta show fake movies of futuristic concepts, they gloss over how people interact with the metaverse. Virtual reality headsets

are still clumsy, and most people experience motion sickness or physical pain after wearing them for long periods of time. Augmented reality glasses have similar issue, aside from the not-insignificant barrier of figuring out how to use augmented reality glasses in public without seeming like huge dorks.

So, how do IT companies show the concept of their technology without displaying the reality of massive equipment and strange glasses? So far, it appears that their main option is to develop technology from the ground up. Is it the holographic woman that appeared during Meta's talk? I'm sorry to break the news, but even with the most sophisticated versions of present technology, it's simply not possible.

Unlike motion-tracked digital avatars, which are a touch janky right now but might be better someday, regardless of what Iron Man says, there is no janky way of making a three-dimensional picture to appear in midair without carefully regulated circumstances. Perhaps they are supposed to be seen as pictures projected via glasses—after all, both

women in the demo video are wearing glasses—but it assumes a lot about the physical capabilities of small glasses, which Snap can attest to being a difficult challenge to solve.

This type of deception of reality is widespread in in cinematic demonstration of how the metaverse may function. Is this individual using virtual reality gear or simply sitting at a desk? Is this person fastened to an immersive aerial rig or simply sitting at a desk? Another of Meta's demos showed individuals hovering in space—is this person strapped to an immersive aerial rig or just sitting at a desk? Does the person depicted by hologram wear a headset, and if so, how is their face scanned? A person may take virtual objects but hold them in what appear to be their actual hands at other times.

This demonstration raises many more questions than it responds to.

This is acceptable on certain levels. Microsoft, Meta, and any other company that does outlandish demos like these are trying to convey an aesthetic sense of what the future may be like, rather than addressing every technology issue. It's a long-standing tradition

that extends back to AT&T's display of a voice-controlled folding phone that could magically erase people from photos and create 3D models, all of which seemed impossible at the time.

However, this kind of wishful-thinking-as-tech demonstration puts us in a position where it's difficult to anticipate which aspects of diverse metaverse ideas may one day become a reality. If virtual reality and augmented reality headsets become comfortable and economical enough for humans to wear on a daily—a huge "if"—then the notion of a virtual poker game in which your opponents are robots and holograms floating in space may become a reality. If not, you could always play Tabletop Simulator through a Discord video conference.

The gloss and glam of VR and AR also obscures the metaverse's more ordinary features, which are more likely to materialize. For example, it would be trivially easy for software firms to establish an open digital avatar standard, a form of file that contains attributes you would enter into a character

creator—like eye color, hairstyle, or wardrobe options—and allows you to carry it about with you everywhere you go. There's no need to make more comfy VR headsets for that.

Aspects of the Metaverse: Opportunities, Risks and the Future

Metaverse has sparked a lot of debate in the past several years worldwide. People from many walks of life have responded enthusiastically to Metaverse's outreach.

"What's Next?" appeared on the British "Economist" website a few days ago. Metaverse, quantum computing, and virtual internet celebrities are among the 22 emerging technologies worth watching in 2022, according to the article "22 Emerging Technologies Worth Watching in 2022." According to the Commercial Press, metaverse was chosen as one of the "Top Ten Internet Terms in 2021" released by the National Language Resources Monitoring and Research Center on December 6.

According to the Commercial Press article, the term "metaverse" comes from the sci-fi notion of the novel "Avalanche" and

currently refers to the virtual world created by advancements in technology such as XR (extended reality), digital twins, blockchain, and artificial intelligence (artificial intelligence). Internet apps and social life patterns that are integrated. The Metaverse is still a developing and evolving notion at this time. There are many debates around the world over the big and developing concept of the Metaverse.

How to treat the Metaverse?

Shen Xiangyang, a foreign academician of the United States National Academy of Engineering and a foreign academician of the Royal Academy of Engineering, recently discussed the new Metaverse meaning from the four levels of Metaverse in detail. He stated that the Metaverse should be a world that is defined by its openness and that subsequent products will build on it. We will collaboratively depict the outline of the Metaverse planet, which will be more intriguing, realistic, and warmer.

According to Tan Ping, the head of Alibaba Dharma Academy's XR laboratory, Metaverse is the future generation Internet,

which is the full Internet on AR/VR glasses. AR/VR glasses are the next-generation mobile computing platform that will become mainstream, and Metaverse is the Internet industry's presentation on this new platform. In the Metaverse, every type of Internet application will have its presentation. Metaverse's technical foundations are organized into four layers: holographic construction, holographic simulation, virtual-reality fusion, and virtual-reality linkage. The first two layers use virtual reality (VR) to create a virtual environment, while the third and fourth layers use augmented reality (AR) to establish a hybrid of virtual and actual worlds.

The Metaverse, according to Zheng Weimin, an academician of the Chinese Academy of Engineering and a professor at Tsinghua University's Department of Computer Science and Technology, is a world made up of data, and distributed data storage has become the primary means of ensuring the Metaverse's long-term operation. Simultaneously, there is a hazy confluence of rights between data producers, managers, integrators, users, and

other roles in the process of utilizing data, making it impossible to confirm the property rights of data pieces, leading to widespread data abuse. Blockchain is the foundational technology and architecture for resolving this set of issues. According to Academician Zheng Weimin, computing power and data are the foundations for the growth of the Metaverse and the digital economy. Digital governance, financial technology, smart medical care, and smart manufacturing are examples of Internet innovation industries that demand processing capacity. Various industries have amassed a vast amount of data as my country's digital economy has grown, establishing a solid foundation for data lemmatization and marketization.

According to Nvidia CEO Jensen Huang, we want to recreate industries and plants in the Metaverse and the power infrastructure in the actual world. We can cut waste this way, which is one of the reasons why Metaverse will benefit businesses economically. They will be willing to spend billions of dollars to acquire artificial intelligence capabilities.

What’s the chance?

TSMC Chairman Liu Deyin recently noted that the semiconductor industry's development has increased in tandem with global digitalization. AR might supplant smartphones in the next ten years, and VR could supplant computers. People will progressively encounter both the actual and virtual worlds. Metaverse's hardware requirements will continue to expand as it combines.

The founder and CEO of Ark Invest, Cathie Wood, believes Metaverse will be a trillion-dollar potential with far-reaching implications for the economy. This is a fantastic notion that, like technology, is likely to pervade every sector in ways we can't even comprehend right now.

According to Haim Israel, metaverse is a significant opportunity for blockchain technology, research managing director, and global strategist at Bank of America. Metaverse will also help mainstream cryptocurrency. The Metaverse is "the place where we will begin to use cryptocurrency as a form of payment." As a result, existing coins may experience excessive volatility.

Certain types of stablecoins are predicted to dominate. Traditional payment businesses will be more interested in cryptocurrencies if cryptocurrencies are widely used in Metaverse, and there is expected to be a lot of interaction between the two.

According to reports, a special subject on digital economy was discussed at the 27th meeting of the Standing Committee of the 13th National People's Congress of Jiangsu Province on December 6. According to Gao Qing, deputy head of the Jiangsu Development and Reform Commission, Metaverse might represent a new direction for future Internet development or a digital economy. The next stage of growth. It is necessary to integrate the application of network and computing power technology, display technology, Internet of things technology, artificial intelligence technology, blockchain technology, and many other cutting-edge digital technologies to support the Metaverse's open, anytime, anywhere, immersive, and other characteristics. Gao Qing also stated that to expand the digital economy, we must take risks and take

advantage of new chances. We must aggressively promote Metaverse from idea to reality, accelerate the integration of digital technology to empower the real economy, and accelerate the digital transformation of our province's economy and society through the expansion of the Metaverse industry. It is vital to continue increasing support for metaverse development at several levels, including technology, standards, application, and law, and to lay a firm foundation for metaverse development.

Although Metaverse may take a long time to launch, Morgan Stanley believes that the following growth of NFTs and numerous social games would provide tremendous revenue prospects for the boutique industry. According to Morgan Stanley, around one-fifth of players on Roblox, a gaming platform that is presently considered a Metaverse pioneer, change their game avatars every day. By 2030, social games are estimated to generate $20 billion in revenue for the digital luxury goods market. Various digital luxury items and collectibles may obtain a stake of more than US$25 billion in the US$300

billion NFT market. Morgan Stanley claims that the company's numerous forays into the realm of NFT and social gaming have aided in developing new consumer groups and a better understanding of this emerging market. For NFT and Metaverse games, the brand is in the idea verification stage. The evidence reveals that the present tests are all successful; the next step is to figure out how to make it happen.

Microsoft CEO Satya Nadella expressed his interest in Metaverse on November 19th, saying that he will continue to apply full-stack thinking to embrace new development opportunities like Metaverse. The Metaverse, according to Nadella, connects the physical and digital worlds, bringing people, things, and fields together in the commercial and consumer Internet. Because integration may be conceivable, it should not be seen as a distinct consumer market or an enterprise-level market phenomenon. It is required. In some ways, the epidemic's popularity of video conferencing has given us some experience with a 2D Metaverse. Beyond time and space, the 3D Metaverse is

unquestionably a significant growth direction. What risks should be vigilant?

Shen Yang, Executive Director of the New Media Research Center of Tsinghua University's School of Journalism, presented the team's "Metaverse Development Research Report 2020-2021" at the "China Development Forum Young Entrepreneurs Summit" on December 6th. Metaverse, according to Shenyang, is the most advanced kind of mobile Internet currently available. However, because the Metaverse sector is still in its infancy, it exhibits the immaturity and instability associated with developing industries, and there are numerous potential concerns. The Metaverse industry as a whole is currently in a "sub-healthy" state, with at least ten key risk factors. The industry and the market must return to sanity as soon as possible. Capital manipulation, public opinion bubbles, ethical restrictions, monopolistic tensions, industry involution, computing power pressure, economic risks, addiction risks, privacy concerns, and challenges with intellectual property protection are among the 10 primary hazards.

360's founder, Zhou Hongyi, spoke about Metaverse. He stated that this concept is really popular. Because of the high stock price, many people have finally found a new way to make money. Metaverse, in my opinion, is a virtual reality of fiction. It has created an entirely online universe separate from the offline world. It will take some time. Second, I observe Facebook's thoughts and follow their futuristic fantasies. I believe This does not depict humanity's future. I believe it indicates humanity's demise. It suggests that everyone will live in an imaginary space if we get rid of reality and do not go through such rigorous efforts to reach a goal in reality. I've spoken with some colleagues in the United States. They believe that the Metaverse's highest destiny is the integration of brain-computer interfaces. You can generate limitless numbers by activating your brain waves as long as you close your eyes and lie down in bed with a tube for nutritional solution inserted. In the movie "The Matrix," will illusion and image finally replace the human battery? Human society will not progress as a result of the Metaverse. To

overcome the energy crisis, humanity must tackle the challenge of nuclear fusion. Only until mankind has solved the riddle of cosmic navigation will he be able to leave the planet.
Multiple companies claim to be doing Metaverse, but they are many Internet products, many of which are merely mobile products, not "Metaverse," according to Professor Shen Yang of Tsinghua University's School of Journalism and Communication's New Media Research Center. "Now that the metaverse is already boiling, I'd like to add to it." I hope that people of the era can use and satisfy steadily improving technology, from processing power to communication technology, algorithms, and final products. The phrase "metaverse" is the newest buzzword in the IT industry, especially since Facebook changed its name to Meta last month to reflect its business transformation. To be clear, no one has heard of Metaverse. Because the concept is still in its early phases, no one knows what it will look like. Its development, however, must be demand-driven. Metaverse has been enlisted by IT heavyweights such as Meta,

Microsoft, and Nvidia to investigate the application of various technologies in various settings. But, whatever the case, The ideals on which these products are built must, in the end, fulfill the demands of people. Products that do not match customers' needs will almost certainly be phased out of the market.

On November 15, Russian President Vladimir Putin said at the 2021 "AI Journey" International Conference (AI Journey 2021), according to press reports: "I'd like to point out that the term metaverse was coined 30 years ago by a well-known figure. According to the science fiction writer's vision, people have escaped from the imperfect actual world to the metaverse. For us now, such a notion is far too dismal. I don't think there's any reason to follow this route." Putin "We need to leverage the metaverse's function so that individuals may communicate, work, learn, and conduct joint innovation and commercial initiatives together no matter how far apart," he continued. Putin believes that this is critical for technology companies, creative industries, virtual reality and mixed reality equipment manufacturers, and even legal

scholars who must formulate the economic and social norms of this "new world." "This is a difficulty," he said. This includes safeguarding the safety of persons in cyberspace and the safety of their virtual avatars in the "Metaverse," according to Putin. With the help of virtual worlds, technology developers claim that individuals would travel through space without ever leaving their homes. "This allows individuals to communicate with others on different continents," Putin remarked.

How long has it been on the ground?

Hon Hai Chairman Guo Taiming recently visited the press conference of the iCareDx medical technology exhibition, a startup firm founded with personal investment, and voiced his thoughts on the concept of "Metaverse" at the event, according to news published on December 5th. According to Terry Gou, the Metaverse concept will take 5 to 10 years to implement, and associated applications are still a long way off. Although there are several R&D opportunities in the development process, the emphasis is overly placed on the application side. The "user

experience" still has a lot of space for improvement, so talking about application explosion isn't feasible right now.

Disney CEO Bob Chapek and Kraft CEO Robert Kraft conducted a meeting in Boston on November 16th. The two sides addressed Metaverse, with Chapek implying that Metaverse will be Disney's future. He claimed that Disneyland and the Disney+ internet platform gave the corporation unequaled Metaverse building capabilities. He claims that this three-dimensional canvas will bring the physical and digital worlds together seamlessly and unrestrictedly, allowing for more creative thinking. He feels that Metaverse is the next generation's development path. He also predicted the future, predicting that in the Metaverse, fans will eat lunch with Disney princesses.

According to Zuo Pengfei, deputy director of the Institute of Quantitative and Technological Economics of the Chinese Academy of Social Sciences' Informatization and Network Economics Research Office and secretary-general of the Chinese Academy of Social Sciences' Informatization Research

Center, we are about 10-20 years away from realizing the Metaverse's basic scenario. The Metaverse will have a huge impact on five aspects of our lives and social and economic development: the first is to improve social production efficiency through technological innovation and collaboration methods; the second is to birth a slew of new technologies, formats, and models, as well as to promote traditions. The third is to promote cross-border derivation of the cultural and creative industries, which greatly stimulates information consumption; the fourth is to reconstruct working life styles, as much work and life will take place in the virtual world; and the fifth is to promote the construction of smart cities and innovative social governance models.

Chapter 4:

WHAT'S THE METAVERSE LIKE RIGHT NOW?

The paradox of defining the metaverse is that it necessitates the definition of the present in order to describe the future. MMOs, which are basically virtual worlds, digital concerts, online avatars, video calls with people all over the world, commerce platforms, are already available. So, there has to be something novel about them to market these objects as a new way of looking at the world.
If you talk about the metaverse long enough, someone will likely bring up fictional works like Snow Crash, which coined the term "metaverse," or Ready Player One, which portrays a virtual reality world where everyone works, shops, and plays. When mixed with the broader pop-culture concept of holograms and heads-up displays

(basically everything Iron Man has utilized in his previous ten movies), these stories serve as a creative reference point for the metaverse—a metaverse in which tech corporations may offer us something new.

That type of panic is as much a part of the metaverse as any other. It's no wonder, however, that proponents of NFTs—cryptographic tokens that, in a sense, operate as certificates of ownership for digital items—are enthusiastic about the metaverse notion. Sure, NFTs are bad for the environment, but if these tokens can be considered the digital key to your Roblox virtual mansion, then they're worth it. You've just transformed your meme-collecting pastime into a vital component of the internet's infrastructure (and maybe increased the value of all that cryptocurrency you own.)

It's important to remember all of this because, while it's easy to compare today's proto-metaverse concepts to the early internet and assume that everything would develop and expand in a linear fashion, this isn't always the case. It’s not certan people will want to sit in a virtual workplace without their legs or

play poker with Dreamworks CEO Mark Zuckerberg, much alone that AR and VR technology will ever become as common as smartphones and PCs.

It's possible that any true "metaverse" consist primarily of interesting VR games and digital avatars in Zoom calls but predominantly of what we presently refer to as the internet.

Making Money In The Metaverse

New technologies are exploding out of control, and enormous sums of money are being exchanged. Artists and small businesses are being hailed as forerunners of a new era.

You'd be forgiven if you didn't know everything. The phenomenon I'm describing takes place in a parallel universe.

The "metaverse" is a merging of our physical and digital lives brought on by advances in internet connectivity, augmented reality/virtual reality, and blockchain. It's the conclusion of all of our science fiction fantasies—what 'Tron' and 'Ready Player One' envisioned, but which is already happening.

If that sounds intriguing to you, it's no surprise that people are making significant investments in the space. The metaverse's chosen money, the non-fungible token, has received almost $400 million in funding (or NFT). That 40 million dollars change hands per month, and that the most costly NFT transactions in history have all occurred in the last few months. Last week, Christie auctioned off a piece of Beeple's digital art for more than $69 million via NFT.

Many people don't understand Upland by any traditional metric. It's more than a virtual game; it's a communal experience, but why are tens of thousands of people spending their hard-earned money on it? One reason could be that it's so unusual.

Upland is a decentralized application (dApp) that allows users to purchase, sell, and trade virtual real estate using real-world maps. You may go to Upland in New York City to see who owns the Empire State Building or the New York Stock Exchange, for example. If you have enough in-game currency, you can even bid for them yourself.

This concept is intriguing on its own. But it's

the way Upland's in-game economy operates that makes it more than just a toy. Players begin by purchasing UPX, the native token, using fiat money to purchase their first properties. Over time, as Upland grows more popular, market prices for these properties will naturally rise. Virtual landlords have the option of holding or cashing out for fiat.

Although Upland homes are virtual, they are extremely real investment assets. Consider the New York Stock Exchange. In comparison to other Upland properties, you'd think the Stock Exchange could bring a decent amount of UPX. But do you think it's worth the entire $23,000? That's how much it sold for in December of last year. It is now even more valuable.

Even still, the financial aspect of Upland's attractiveness does not entirely convey it. We spoke with Dirk Lueth, one of the platform's co-founders, to get the full picture of this story. We asked him how much money players can make on his platform and what they like about it. He narrowed it down to five factors:

• Excited about the perspective of rebuilding

the world and eventually making a living in it
• Fun to find properties that have a special value, meaning or emotional attachment
• Finding like-minded people
• Enjoying the community, making friends
• Thrill to flip properties
• Excited about the perspective of rebuilding the world and eventually making a living in it

Upland's development team wants to expand its environment in the coming months and years by adding 3D property construction features and allowing users to manage businesses in-game. They're also working on a feature that will allow players to incorporate NFT artwork into their virtual properties, boosting their value the same way that physical art does for real estate.

"I'm extremely thrilled to bring more real-world brands into Upland, and finally to introduce some location-based services and features to begin blurring the actual world with the Upland metaverse," Lueth said.

Why Are Established Brands Getting Involved?

The metaverse is still mostly unknown, with only the most forward-thinking technologists

taking note. How much longer will it be like this? According to Lueth, more traditional game publishers are dabbling in blockchain. It will be extremely difficult for them to avoid disrupting their business model.

Because businesses recognize the marketing and direct money potential, we'll see more NFTs for everything (plenty of consumer goods will get NFTied and appear in metaverses). As more industries enter the space, some may experiment with new types of products and business models using their brands.

Lueth's enthusiasm for the metaverse's future is palpable, but he is cautious about projecting how long it will take for popular adoption. In both cases, he's probably correct. The ceiling is high, and the timetable is lengthy.

Nonetheless, a few well-known figures have begun to dangle their toes in the metaverse. Take, for example, Sotheby's, which recently sold an NFT painting for a staggering price.

There's also Atari, which is synonymous with the early days of gaming. The business has recently leapfrogged the entire current

generation of gaming by establishing its cryptocurrency, Atari Token, in a move few could have predicted. I chatted with Fred Chesnais, the company's CEO, who had a daring idea for the project.

"With the Atari Token, we're laying a foundation for other legacy gamers to build on." We're going where previous legacy gaming firms haven't gone before. "We're pursuing the most cutting-edge blockchain technology that will genuinely connect blockchain with gaming for a next-generation virtual experience," Chenais added.

Atari Token's mission is to become the cryptocurrency token of choice in the video game and entertainment sectors. It will help developers and gamers successfully monetize their digital assets by providing a market for rapid and straightforward token transfers, backed by the promises of smart contract technology.

Atari's recent cooperation with Enjin, possibly the largest cryptocurrency firm in the blockchain gaming space, is one example of how it works. The two firms have collaborated to develop an NFT fashion line

where users can use their cryptocurrency to purchase Atari-branded clothes.

Atari intends to expand its presence into other markets in the future, such as Africa, where mobile game creation is booming. They're also in the process of developing immersive and powerful virtual and augmented reality games. Chesnais is very enthusiastic about it.

"It's a desire to build (as many as feasible) various digital worlds in addition to the real world. People are more aware than ever of the genuine value that virtual worlds provide. People have been lured to digital interactive experiences ever since Atari launched the business with PONG," said the Atari CEO. "This, together with NFTs, which allow users to own their in-game assets while really empowering artists, is driving more interest. And this upward tendency will continue. We're still in the early stages."

Visual Business Models Aren't the Only Thing

Jason Fox, CEO of EarBuds, was another CEO we spoke with on the new metaverse business models succeeding. After being on

the field and wondering what Cam Newton was listening to inside his headphones, Fox, a former NFL player, came up with the idea for the startup. That's how the concept of creating a social music app occurred to him. While his company isn't on the visual side of the metaverse, audio and voice are becoming increasingly significant.

"As Clubhouse and other social speech apps have grown in popularity, audio is becoming an increasingly important aspect of how we connect electronically. But this is about more than just voice - music is an important aspect of our identity in the real world, and we know it's also important for how people express themselves online. Listening to and finding new music has always been a group activity, but streaming has transformed it into a more personal one, typically guided by an algorithm. "With EarBuds, we're reintroducing music as a social experience."

Chapter 5:

FUTURE OF THE METAVERSE ECONOMY

The CEO of IMVU sees the metaverse coming.

The team behind IMVU provided some of the most insightful thoughts on metaverse economics among the pioneers we spoke with.

With seven million monthly active users, IMVU is considered one of the world's largest 3D avatar social platforms. They have a marketplace with over 50 million items, a native cryptocurrency (VCOIN) that has already generated millions of dollars in income and has recently raised $35 million in funding. All of this puts it in the top tier of metaverse businesses, gaming or not.

Daren Tsui, their CEO, quickly pointed out

the larger context and climate that allowed IMVU to grow when we chatted with him.

The term "metaverse" first appeared in Neal Stephenson's 1992 book Snow Crash, but the concept of a virtual simulation where people can interact with one another had already existed (for example, Tron in 1982). "As related technology advances over time, the realism and capabilities of virtual experiences have dramatically improved, drawing more users to connect in the virtual world," said Tsui.

There is little doubt, according to Tsui, that the pandemic has prompted many more people throughout the world to look for a safer and more effective method to socialize online. They've discovered a fun and exciting way to connect and communicate with new acquaintances in real life.

COVID-19-induced social separation makes sense as a driver of interest in virtual social platforms. Tsui, on the other hand, is focused on the long term. The epidemic, in his opinion, is driving more people to "seek for" something like the metaverse, but the

"dramatically" better "realism and capacities of virtual experiences" is the reason they're staying—coming back, spending money. When the pandemic is done, that won't go away.

We can see what he's talking about, thanks to Upland, Atari, EarBuds, and IMVU. Upland is already offering an unrivaled investment-platform-slash-gaming experience that will be nearly unrecognizable in just a few years if all of the things they're experimenting with are implemented. Atari's vintage gaming knowledge is being used in a new, cutting-edge approach to in-game item trade. IMVU has created a virtual environment that people want to be a part of. They may be attracted to the pandemic, but they're also attending virtual events and purchasing avatar items because it's entertaining and immersive.

Tsui put it quite succinctly. When asked when our physical world and the metaverse will collide to create something even bigger, better, and more memorable than what exists today, he simply stated, "It's not

if, but when."

UNDERSTANDING THE METAVERSE THROUGH REAL-WORLD EXAMPLES

The phrase "metaverse" has been bandied about in recent months, particularly when Facebook announced its rebranding as Meta. Meta is a social technology startup with the mission of "bringing the metaverse to life." Many people in the metaverse were intrigued by this.

The name and concept aren't new in and of themselves. In truth, concepts and examples of the metaverse have been around for several decades. In Neal Stephenson's 1992 novel Snow Crash, the characters utilize computer avatars to explore a digital world or engage with each other to escape their dystopian reality; the term "metaverse" was coined.

David Gelernter first proposed the concept of a digital twin, or a virtual duplicate of something that exists in real life, in his

book Mirror Worlds in 1991. Dr. Michael Grieves, credited as the inventor of the digital twin software concept, first applied the digital twin concept to manufacturing in 2002. In 2010, NASA employed digital twin technology to simulate space capsules.

The metaverse appears to be upon us, but what is it, and what impact could it have on our daily lives?

Here are few examples that help you understand the metaverse, how it works, and where it might be headed in the future.

Understanding the Metaverse through Real-World Examples:

It's difficult to narrow down a precise definition of the metaverse.

The metaverse is a loosely defined virtual universe where users have access to digital avatars that allow them to "live" in this virtual reality. People can communicate with friends, acquire and sell digital assets, go to virtual locales (which may be entirely imagined or have real-life parallels), and more in the metaverse.

The metaverse promises a world of limitless possibilities, similar to the OASIS

in Ready Player One, where the user's imagination is the only limit.

To put it another way, the metaverse is a virtual universe that exists in addition to or as an extension of our physical world. It's made up of interoperable technologies like virtual reality and augmented reality, and it works on a functional digital economy powered by digital currencies or cryptocurrencies—and no, digital currencies and cryptocurrencies are not the same things.

Furthermore, there is no single, distinct metaverse. There are a lot of iterations in the metaverse. For example, if you're playing Fortnite, you can enter a metaverse. If you use Facebook Horizon, you can also access a distinct metaverse. On the other hand, the metaverse is designed to be interoperable, which means you'll eventually be able to access assets acquired on one platform and use them on another.

Metaverse Examples that Help Explain the Metaverse

The metaverse's concept and the possibilities it opens up are just incredible.

Here are some real-world instances of the metaverse and where it will help better describe this parallel reality.

THE METAVERSE IN POP CULTURE

- Ready Player One

Ready Player One is almost frequently used as an example when discussing the metaverse. There is, however, a valid reason for this. Ernest Cline's science fiction novel from 2011 presents a vivid image of what the metaverse might look like and how it might function.

In the novel, set in 2045, people turn to the OASIS, a massively multiplayer online simulation game (MMOSG) with its virtual world (and currency) where they can interact with other players, visit different locations, play games, and even shop, to escape a world ravaged by war, poverty, and climate change. The OASIS is a world where anything can happen—people's imaginations only constrain "reality," and anyone can be whatever they wish.

If all of that is too much for you, watch the 2018 Steven Spielberg film adaptation, which gives a decent look at the book's metaverse.
Facebook is well on its way to launching Facebook Horizon, its own version of the OASIS in the real world. The Oculus Rift or the Oculus Quest 2 headgear must enter this virtual world. Users can explore, play, create, and engage with other players in this vast digital environment.

- Fortnite Concerts

What began as a game has swiftly evolved into something more complex and capable of providing a wider range of experiences.
Players in Fortnite can create their worlds and embark on adventures. They can play with other Fortnite gamers in the community. The game's crossplay feature allows players to play it on various platforms, including Xbox, PC, Playstation, and mobile phones.
Fortnite has evolved into more than just a game, with players able to hang out and

attend in-game concerts. Travis Scott, Ariana Grande, and Marshmello were among the performers who performed. Fortnite's developer, Epic Games, raises the stakes by launching the Soundwave Series, which includes music from musicians all around the world. The Series gives gamers access to in-game interactive experiences.

Games and Social Networks in the Metaverse

- Second Life

Second Life is an online environment where users may create digital avatars and explore the world, connect with other users, and sell products and services using the Linden Dollar, the in-world money.
Second Life is a forerunner of the metaverse, in which users can interact with one another and the digital world in a shared virtual realm. It has been around since the late 2000s and allows users to explore the metaverse's potential.

- The Sandbox

The Sandbox is a virtual metaverse where people can create and play in virtual environments. It also allows them to control and profit from their in-game experiences. Non-fungible tokens, or NFTs, can be used to buy and trade lands and assets in The Sandbox metaverse.
NFTs are virtual tokens that are generated on the blockchain. This makes them one-of-a-kind, indivisible, and non-transferable, allowing you to own your in-game assets digitally.
This demonstrates the metaverse's rising acceptance of digital money. In a digital future, we will be able to perceive, use, and define money in ways that are currently unimaginable.

- Illuvium

Illuvium is a 2022 release that is described as an open-world roleplaying game based on the Ethereum Blockchain. Illuvials are deity-like beings that may be stored on

Shards, and players hunt and catch them here. Players in Illuvium essentially collect NFTs, which symbolize each Illuvial. You'll also be able to accumulate in-game products that you may sell on third-party NFT marketplaces.

Chapter 6:

AUGMENTED REALITY (AR)

Augmented reality is a technology that combines real-world aspects with digital enhancements. For example, you may be in the real world yet see a dragon perched on your neighbor's car if you use augmented reality.

It's already used in a lot of games and navigation systems. Pokémon Go is one of the most popular AR applications, allowing players to hunt for, fight against, and capture Pokémon that "appear" in the real world using their phone's camera.

AR is also employed in navigation systems, in addition to gaming applications. Google's AR and VR technologies allow users to explore the actual world more.

This real-world software aims to provide

users with a more immersive experience, allowing them to get the most out of their smart devices. For example, when you use Google Maps' Live View, you can traverse an area more easily because directions are superimposed on top of your Google Street View photographs.

Another application is the ability to employ augmented reality in Google Search. This allows you to set 3D things in your area and better understand their scale.

Other real-world applications of AR include:

• illustrating plays in football games

• giving you an idea of what a piece of furniture may look like in your room

• bringing historical places to life by overlaying pictures of old civilizations over ruins

AR technology is also finding its way into the classroom. The Metaverse Studio is an augmented reality platform that allows teachers and students to develop augmented reality in their classrooms. It may be used to construct apps, games, and activities to supplement project-based learning.

The Evolution of Augmented Reality

In 2016, the Pokemon Go craze propelled augmented reality (AR) mainstream. Although it appeared to be cutting-edge technology when people worldwide were 'catchin' 'em all,' AR was invented in 1968.

Did you know that the first instance of augmented reality was in 1968?

From the first computer-generated visuals and projections in the 1960s and 1970s to the most recent AR games and Microsoft HoloLens Developer Kit, the usage and potential of augmented reality are constantly evolving. In 2016, the total investment in augmented and virtual reality was €925 million, with no signs of slowing.

AR then and now

Ivan Sutherland built the first head-mounted display system in 1968, which was AR's start. The Air Force used AR to create virtual fixtures, and NASA used it to improve visual navigation testing. Tom Caudell, a Boeing researcher, created the phrase "augmented reality" in 1990. AR and the internet eventually came together in the early 2000s, but interest in the technology didn't take off until 2009, thanks to the smartphone

revolution. Because of the growth in smart wear technologies, augmented reality has recently undergone a second renaissance.

Augmented Reality (AR) in business

Apart from the 'conventional' usage of AR technology in gaming, various new possibilities and benefits have emerged in other industries such as logistics, manufacturing, retail, and many more. AR can benefit any process or business activity that can benefit from a visual overlay.

Businesses are embracing AR's potential. Boeing, for example, conducted an experiment in which a group of factory trainees assembled an airplane wing using AR instructions. The results revealed a 30 percent time reduction and a 90% increase in inaccuracy. Similarly, DHL is testing AR-enabled smartglasses in one of its warehouses to enhance efficiency by 25% and is currently looking into a wider rollout.

Retail is another industry that uses AR technology to improve the customer experience. Ikea has launched virtual furniture, allowing buyers to see Ikea products in their kitchens and living rooms

before purchasing. Lego is working on a Digital Box that allows youngsters to grasp a virtual replica of their toy and turn and shape it with their hands to discover it from all sides.

Metaverse Real Estate

We can't talk about the metaverse without including real estate applications. People purchase and sell properties on digital marketplaces just like they do in the real world. They are, however, trading in cryptocurrencies.

While metaverse real estate is still regarded as "extremely speculative," engineers predict the metaverse will eventually develop its own fully functioning economy. The popularity of virtual real estate has led to the sale of digital assets for millions of dollars. A plot of virtual land in Decentraland was sold for 618,000 mana ($2.4 million in crypto), while a parcel of virtual land in The Sandbox was sold for $4.3 million.

Because of the metaverse's growing popularity, many businesses have decided to

create their digital worlds and, with them, digital properties. The Metaverse Group, for example, runs Decentraland, a virtual environment that its users entirely control. Users can explore lands owned by other users, create artwork and challenges, engage in events to earn rewards, and exchange digital assets using mana, Decentraland's sort of coinage, just like in other virtual worlds.

SuperWorld, a virtual environment where you may buy, sell, and accumulate pieces of virtual land, is another outstanding example of real estate in the metaverse. Mount Rushmore (0.1 ETH), the Taj Mahal (50 EHT), and the Eiffel Tower are among the 64.8 billion distinct parcels of virtual property it has to date (selling for 100 ETH).

Users who buy a piece of virtual real estate become owners of unique digital assets and platform stakeholders who can share money generated by user activities on the land.

What the Metaverse Could Spell Out for Our Future

The metaverse is gradually taking shape. It has found its way into various areas of our lives, from games and movies to real-world

navigation systems. While the metaverse is difficult to define and is still in its early stages of development, we can say for now that it is brimming with potential. What remains to be seen is what else the metaverse has in store for us in the future.

Virtual Reality in Metaverse

Since its introduction to the public, virtual reality has mostly been promoted as a novel and exciting way to play video games. The most popular headgear, such as Facebook's Oculus, HTC's Vive, and Sony's PlayStation VR, boast their capacity to elevate the game experience.

In recent years, there has been a shift toward identifying new and alternative use-cases for virtual reality. Virtual reality is currently being used and tested in various fields, including education, sports, mental and physical health, shopping, and more. The metaverse is a much larger, more aggressive objective for virtual reality recently discussed. Indeed, Facebook has announced ambitions to hire 10,000 people in the European Union over the next five years to

assist in creating a metaverse. So, what is the metaverse, and how will virtual reality be incorporated into it?

Defining the Metaverse

It can be difficult to explain the metaverse, which some people refer to as Web3. This is primarily because one does not yet exist. People have, however, provided their metaverse views, which we shall use as a guide. Consider the metaverse to be an immersive, 3D, and communal virtual reality. Users would be brought into the virtual environment in the same way they would be in a virtual reality video game if they wore a VR headset.

Accessibility

How will users access the metaverse now that we have a fundamental grasp of it? VR headsets are currently the most widely accepted technique of accessing the virtual universe. VR headsets may not be required to enter the metaverse in the future, but for the time being, they are the most promising option. This helps explain why firms like Facebook spend extensively on virtual reality headsets and virtual reality in general. Listen

to our audio episode with special guest Luke Levene, VP of Sales at XRApplied, for additional information on the present state of virtual reality technology, where it is headed, and current VR trends.

Exploring the Metaverse

You might wonder what makes the metaverse so special since we already have virtual reality. Virtual reality and the metaverse have significant distinctions. First and foremost, consider virtual reality as the ship and the metaverse as the destination. Furthermore, users can do much more than play games in the metaverse, which is currently the most popular use case for virtual reality. Users will be able to socialize with other humans worldwide, shop, conduct business, and more in the metaverse.

Furthermore, cryptocurrency will play an important role. Visionaries have expressed a desire for metaverses to have their coins and the ability to pay with other cryptocurrencies. NFTs, unsurprisingly, will play an important role in the metaverse.

The Role of NFTs

The inclusion of NFTs is one of the

metaverse's most important features. Whether it's an image, soundtrack, meme, virtual clothing piece, magazine article, or other kind of digital art, NFTs are commonly viewed as such. However, in terms of the metaverse, NFTs have a completely different application. In the metaverse, NFTs can represent land.

There should be a finite amount of land created in each metaverse. This results in scarcity. According to the rule of supply and demand, scarcity raises value. As in the actual world, users in the metaverse will acquire land in the form of an NFT, just as they would in the real world. They can then keep the NFT for as long as they like and sell it (along with the land) when they're ready.

In reality, land is already being sold in virtual worlds as NFTs. Republic Realm, a digital real estate investment firm, purchased land in Decentraland in the form of an NFT for $913,000. Decentraland is a virtual reality platform built on Ethereum. Minecraft players can now use Minecraft currency to buy land in the game. The land that was purchased was also in the form of an NFT.

Key Players

The traditional tech heavyweights such as Facebook, Microsoft, Amazon, and Snap are the primary players in the battle to construct a metaverse. Additionally, huge firms such as Nvidia and Roblox, who are not household brands but are significantly investing in the metaverse, are not yet household names.

Nvidia is a company that makes computer graphics processors, automotive chipsets, and robotics chipsets and invests extensively in artificial intelligence. On the other hand, Roblox is an online gaming platform that allows players to share games that they have developed and created. Both firms are important participants in the game industry. Thus their involvement in the metaverse movement is not surprising.

The metaverse is a vast endeavor that customers may not be able to participate in for decades, if at all. Virtual reality is a significant part of the process as corporations struggle to turn their dreams for these artificial worlds into reality. Who knows, maybe new technologies will arise when the metaverse is ready for consumer adoption, and virtual reality will be obsolete.

How Augmented Reality Works In Metaverse

People were transported to a kaleidoscopic world of flying fish and friendly robots when Facebook displayed a mock-up of the "metaverse" — apparently the internet of the future.

While even Facebook CEO Mark Zuckerberg admits that such experiences may be years away, other proponents say that a more limited form of the metaverse is now available.

"In some ways, we're in the early beginnings of the metaverse," Peggy Johnson, CEO of Magic Leap, said on Tuesday at the Web Summit in Lisbon.

Magic Leap produces augmented reality (AR) headsets that have already been used by surgeons preparing to separate conjoined twins and factory supervisors conducting site inspections.

In both situations, information regarding what the users saw appeared in front of their eyes.

It may not be as intense — or as bizarre — as the virtual reality (VR) experiences that Zuckerberg hopes to bring to people's homes

in the future. However, it blurs the physical and digital worlds, which is a major concept in the metaverse.

"With virtual reality, you put on a device, and you're transported to another world," Johnson explained. "With augmented reality, you put on a gadget, and you're still in your world, but we're adding digital stuff to it."

In this screen picture from a video broadcast Oct. 28, an avatar of Facebook CEO Mark Zuckerberg is seen carrying a US flag while riding a hydrofoil in the "Metaverse" during a augmented reality and live-streamed virtual conference to announce the rebranding of Facebook as Meta. | VIA REUTERS/FACEBOOK

Many people's experiences with augmented reality have so far been restricted to playing Pokemon Go or experimenting with image filters that place a set of amusing ears on someone's face.

However, the genuine promise of AR is beginning to be realized in health care, according to Johnson.

"You can bring in specialists from all over the world to look at the same thing you are,"

she explained. "You can draw digital lines where you think the incision will be made after surgery."

Magic Leap's initial ambition to bring augmented reality to the masses created a lot of buzzes and approximately $2.3 billion in venture capital funding when it was founded in 2010.

It was originally envisioned that it would transport a killer whale into a gymnasium full of youngsters.

However, when Magic Leap's first headset was ultimately unveiled in 2018, it was met with significant dissatisfaction; the equipment was too cumbersome and pricey for the general public to adopt.

Last year, the company was forced to lay off roughly half of its workforce.

In August 2020, Johnson, a former Microsoft executive, took over as CEO and shifted the company's focus to developing professional eyewear.

Last month, the Florida-based business announced an additional $500 million in funding, with a new headset, the Magic Leap 2, expected to be released in 2022.

The new version is lighter, but it's still designed for people who are used to wearing goggles at work, such as surgeons doing sensitive work or defense sector professionals.

Google Glass, a pair of "smart glasses" that failed to catch on when they debuted in 2014, has resurfaced as a professional-oriented offering.

Johnson believes it will be "a few more years" until Magic Leap or one of its competitors develops an AR headset that can be worn by people all around the world.

However, Johnson believes that this is the point at which AR will truly revolutionize our lives.

She proposed that it might allow us to see restaurant reviews pinging in front of our eyes as we walk down a street, looking at the possibilities.

Have you forgotten who someone's name is? It's no problem. It may appear above their head as they approach you.

"Right now, we're all staring at our phones," Johnson explained. She hopes that augmented reality will better absorb the world around us

— a world with additional information put on top of it.

If the revolution occurs, the market may become overcrowded. Facebook is reportedly developing its augmented reality headgear, and Apple is following suit. Snapchat's developer, Snap, is meanwhile trialing a new pair of its "Spectacles" on AR artists.

Chapter 7:

THE INVESTMENT OF NTF'S IN THE METAVERSE

Why NFTs Are The Vital To Accessing The Metaverse

• Metaverses provide a fair and open economy aided by the blockchain

• The play-to-earn gaming economy will empower players of blockchain games through NFTs

• NFTs are the bridge to the metaverse and facilitate identity, social experiences in the metaverse

• Users can collect in-game tokens to get started

NFTs are ushering in a new era of the digital world - the Metaverse - with their rapidly expanding use cases. Facebook's launch of

Meta, signaling the shift towards a metaverse era, where NFT-based augmented experiences are likely to act as pillars for next-generation social networks, best exemplifies the coming of metaverses on the world scene.

NFTs and metaverses are already intertwined, particularly in blockchain gaming and other interoperable games, where they serve as value carriers for large-scale digital social media. NFT gaming is popular, despite being a relatively new concept, as evidenced by Binance NFT's Initial Game Offering (IGO). This new gaming arm has garnered such positive feedback from gamers and crypto consumers that it has already surpassed $16 million in trade volume in just two weeks, with all IGO's NFT collections sold out.

A metaverse is a digital ecosystem based on blockchain technology. Visual components are provided by technologies such as VR and AR, while decentralized media allows for endless social engagement and business prospects. These environments are scalable, interoperable, and adaptable, and they combine novel technology and interaction

models among their members on both an individual and organizational level.

Communications, money, gaming worlds, personal profiles, NFTs, and other processes and elements are all part of metaverses, which are digital 3D universes. The metaverse's promise is attributed to the freedom it provides; anyone in the metaverse can build, buy, and view NFTs to amass virtual land, join social communities, construct virtual identities, and play games, among other things. This diverse range of use cases opens up many possibilities for monetizing real-world and digital assets, with enterprises and individuals alike able to integrate into metaverse frameworks.

Future metaverses will bring together disparate online worlds, with NFTs allowing cross-chain interactions. To gain a better understanding of the metaverse.

How Will NFTs Impact The Metaverse?

In the metaverse, NFTs can disrupt the traditional social network paradigm of user contact, socializing, and transaction. Learn how NFTs may cause havoc in the digital world.

An Open And Fair Economy

Users and businesses can now transfer real-world assets and services into the metaverse, a decentralized virtual environment. Using novel gaming models with interoperable blockchain games is one method to bring more real-world assets into the metaverse.

One such option is the play-to-earn gaming concept, which engages and empowers blockchain game players. Players can participate in the in-game economies in the metaverse and earn incentives for the value they offer by relying on NFTs, basically earning while they play. In the metaverse, play-to-earn games are also fair since participants retain complete ownership of their assets rather than a single game entity, as is the case with most traditional games.

Suppose you're interested in participating in these in-game financial economies. In that case, Binance NFT's IGO launches provide a selection of in-game assets from gaming projects that players may gather and integrate into various gaming environments. Such in-game NFTs are in high demand, as evidenced by IGO debuts, where all NFTs were sold out

on the first day. Axie Infinite (AXS), My Neighbor Alice (Alice), and many others are examples of successful play-to-earn games.

What is your metaverse financial strategy?

This year, that word has been all over the place. Facebook changed its name to Meta, regarded with skepticism and even outright scorn. NFT (short for non-fungible token) was named Collins Dictionary's word of the year, and such tokens are an important aspect of the expanding virtual universe. Before this version of the future arrived, everyone from gamers to developers to diplomats seemed eager to enter the metaverse.

Should you make a financial plan for the metaverse if it is the future? The mainstream advisor who urges you to spend $1.5 million on a few pieces of digital land will be rare. And it's still unclear how or even if the metaverse will take shape.

But, as we near the end of this year of meta-mania, it's a good idea to at least have a notion of how these new ways of working, playing, and investing can affect your finances. Or, you'll know what to say when someone in your family wonders, "What is

the metaverse, anyway?" around the holidays.
Investments in Digital Assets: Virtual investing opportunities arise from a virtual universe. The value of digital land is skyrocketing. Republic Real Estate, a company that has collected money to buy troubled condos in the real world, created a fund focused on virtual land investors earlier this year. The company intends to buy packages from various online "metaverses" and turn them into virtual hotels, stores, and other purposes to boost their value among cryptocurrency enthusiasts.
NFT art has become one of the year's most popular digital assets. And Thomas Olsen, a partner at Bain & Co., has stated that he believes all assets would be tokenized in 20 or 30 years. "All equities, all bonds will be on a digital asset platform that the crypto experiment is building now,"
Online-Only Shopping and Experiences: Online purchasing will become even more complex if brands have their way. They've already made millions of dollars selling metaverse-exclusive apparel and accessories. It may sound foolish now, but if

you do a lot of your job and play online, the way you look could come to matter a lot more. That's why it'll be crucial to keep track of how and why avatars of all races and genders are valued on the internet. Disparities are already beginning to emerge, with potentially catastrophic consequences.

Remote Work to the Extreme: In 1990, telling someone they needed to plan for the internet to destroy their industry could have seemed gloomy and even ridiculous, but not now. Is it possible that the same is true in the metaverse?

Remote work could become more permanent and immersed due to the meta modus operandi. Facebook, like the major kahuna of workplace technology, Microsoft, wants to transfer its vision of the office to the virtual world. Microsoft is currentl testing a version of its Teams chat and conferencing tool with digital avatars, which will be available in the first half of 2022. Customers will exchange Office files and functionality in the virtual world, such as PowerPoint decks.

Shifting Circumstances in the Real World: None of this implies that the real world will

vanish any time soon. Firms will continue to adapt to Bitcoin, gaming, work, and everyday life merge in the real world.

For instance, we might see corporations relocate to real-world jurisdictions that are more sympathetic to the virtual world. That appears to be the case in Puerto Rico, where cheap taxes have attracted many crypto enthusiasts. If the bankers of the metaverse want to meet in San Juan, that's OK. However, I'll organize interviews with them at the beach rather than by phone. — Wells, Charlie

Who will control the metaverse

Who will pull the strings in what is being billed as the next internet iteration now that Facebook has turned to Meta? Eight digital marketing experts debate if decentralization will succeed or if big tech companies will maintain their walled gardens.

According to early investors, two essential components define a 'genuine' metaverse: decentralization and interoperability.

Decentralization spreads control and decision-making to a network rather than a

single body pulling the strings. Consumers are in charge in this open, permissionless world, able to shape and choose the destiny of their experiences and be sovereign over their own identities and inventions. Decentralization is partly due to blockchain technology, which allows users to monitor the provenance and ownership of digital assets on a virtual ledger and may one day support self-sovereign identities.

Interoperability is enabled by storing data with individuals rather than with separate platforms, allowing users to simply teleport from one experience to the next using the same 'digital twin.'

This is in stark contrast to Web 2.0's closed ecosystems, in which platforms hold client data and digital assets are game-specific. Building 'walled gardens' around client data has enabled internet platforms to create powerful advertising engines that have propelled them to trillion-dollar valuations. In the so-called next iteration of the internet, are these behemoths willing to relinquish control over their most valuable commodity, customer data?

Mark Zuckerberg, a co-founder of Facebook who seeks to transform the social media firm into a "metaverse corporation," recently spoke about the difficulty of interoperability. He said the company needed to strike a compromise between "allowing research and interoperability but cutting down data as much as possible" during its third-quarter earnings call on October 25.

It's a worrying notion for those who want the metaverse to be based on consumer empowerment provided by decentralization, especially given how much money big tech is putting into it. Last week, Facebook rebranded its company portfolio to Meta to reflect its desire to establish the metaverse and has set aside "billions" to do it. While Zuckerberg has stated that the firm supports interoperability, the company's hardware strategy paints a different tale. The company's Oculus VR devices, for example, require a Facebook account to use.

We asked eight experts from across the marketing world for their perspectives on control and ownership in virtual reality in the fourth chapter of Campaign Asia-series

Pacific's diving into the metaverse and how companies can prepare for it. Will big tech or consumers have the final say? Will there be several versions of the metaverse instead of a single, utopian, decentralized world? What value will platforms extract from their most valuable assets, and how will they protect them?

I predict the current walled gardens will focus all of their efforts on gaining control of the metaverse, which means it will cease to exist. And I anticipate that early-stage innovators and businesses will either resist or sell out to the walled gardens. Much will rely on whether those inventors are looking for a quick buck, a greater payoff later via an IPO, or the establishment of a new, decentralized internet 3.0. It could all come down to a handful of as-yet-unknown Lords of the Metaverse making personal life decisions during the epidemic. Make your wagers.

Tessa Conrad, head of innovation, TBWA Asia

It's still early days on this one, and it's a little difficult to wrap our heads around, I believe. The walled gardens we have now would not

exist in a true metaverse, but those walls aren't going anywhere, so what does that mean for the metaverse? I believe that the current walled gardens will become more community-led. Isn't it true that businesses follow the money? And if money starts to flow away from their platforms due to the rise of lesser actors in the metaverse, they will pay heed.

With that in mind, I believe platforms will remain fairly walled but will open up more to cross-platform [in nature] integrations. I believe we will be able to port ourselves similarly with things like our currencies, digital assets, preferences, and avatars, similar to how our IDs are already routinely used across several platforms.

Consumers are more aware of their power than ever before. This is accomplished through their voice, personal communities, platform presence, and financial resources. They have the opportunity to leave at any time, and a flourishing competitive landscape means they will continue to have other options. As a result, we'll have to follow customers' lead, which I believe will be much

more grassroots-driven. This is what we observe when we look at the current condition of DAOs (decentralized autonomous organizations). Voices are powerful on their own, but they are even more so when combined. Consumers are in charge of future advancements, investments, and new worlds because they band together to make decisions. Walled gardens must simply select if they want to be a part of that puzzle through integrations (or entirely opening up their platforms, which is improbable) or risk being left behind.

Michael Patent, founder, Culture Group

I don't think the largest platforms, such as Facebook, are ready to exist in decentralized or interoperable society, and I believe they'll attempt to create their own upgraded version of their world. Other platforms, whether gamified or music-driven, I believe recognize that their most valuable asset is their capacity to allow for fan development, user-generated content, and interoperability. The paradigm shift will be from "my biggest asset is my ability to hold on to this data and monetize it" to "my greatest asset is my ability to be

distributed throughout the virtual universe."

Zoe Cocker, head of brand and Yahoo Creative Studios ANZ

I don't believe the metaverse will be 'owned' or 'controlled' by a single entity. The entire concept of Web 3.0 is based on interoperability, accessibility, and power decentralization. Facebook (or should I say Meta) is the latest in a long line of organizations to make bets on the future of the internet. The metaverse has grown exponentially, outpacing prior versions of the internet and the whole game industry. Take a look at Roblox or Fortnight, which have strong investment and user populations. Roblox was valued at $41.9 billion in March, with over 44.3 million users. While Meta will undoubtedly contribute to the metaverse in terms of attention, jobs, and research and development, I'm wary of it focusing solely on its ecology.

Instead, I'm betting on platforms like Decentraland, a truly decentralized virtual world that a single private corporation doesn't control. Decentraland, for example, hosted 'The Metaverse Festival' last week. Artists,

musicians, NFT badges, digital wearables, creator stations and stalls, and much more will be on display. Everyone is welcome to join in and contribute. Yahoo organized an afterparty with Monkey Shoulder, a scotch whiskey brand, and featured performances by Krafty Kuts and A.Skillz on a branded stage with digital wearables. This is the version of the metaverse to which I subscribe: real collaboration-based innovation.

Laurent Thevenet, head of creative technology, Publicis Groupe Asia Pacific, Middle East & Africa

The metaverse is a broad term that encompasses a wide range of experiences. By focusing openly on it, Facebook (now Meta) joins a set of other ecosystems that have been in that sector for some time, such as Epic Games, Unity, and Roblox. When we examine it closely, it resembles the war between MacOS and Windows in the 1990s, or the more contemporary competition between Google, Facebook, and Apple to retain users within their various ecosystems. The metaverse is a new sort of predominantly immersive experience, necessitating the use

of new hardware such as immersive headsets and glasses. This hardware will most likely only work in selected universes. The Oculus Quest is a fantastic example because it requires a Facebook account to use. This will keep these ecosystems separate from one another, with only a smattering of integration —much like we currently have in the non-metaverse.

According to Facebook, the metaverse is simply an immersive version of its current products. In light of the current social media concerns, it appears that the metaverse should serve as a blank canvas for all. A chance exists to place humans at the center of a new generation of experiences. A 2016 short film attempted to imagine what would happen if digital experiences were stacked on top of the actual world. It's impressive in terms of what technology can accomplish, but it's also horrifying in terms of what it could become. Immersive experiences must be approached with humanity in mind.

Emma Chiu, global director, Wunderman Thompson Intelligence

The metaverse is essentially the birth of a

new tech-enabled society. It will be extremely difficult for a single firm to gain control because the people, or users, will revolt. Companies have been forced to open up so that some video games can be played on various devices from various manufacturers. The people are in charge of the metaverse. The metaverse would not exist if no one participated. So, while corporations compete for possession of the metaverse, individuals will not accept sole ownership.

Alex Wills, chief experience officer, The Mill

The incumbent tech corporations are expected to take similar paths to develop the most enticing regions inside the metaverse that allow for maximal and direct involvement and connection. This is the polar opposite of what the next transition should entail for many. However, just as there were new opportunities for new and existing players to create platforms and experiences that utilize the opportunities that decentralization and interoperability afford during the early days of social media and Facebook's platform.

Dick van Motman, founder and chair, UnVentures

"The state of being useful, profitable, or beneficial," according to the definition of utility, is a commonly used word in the tech sector. Platforms like Facebook began as a service but have since evolved into a so-called walled garden in which they assert control and make a lot of money.

The metaverse is built on the notion of interoperability and putting the user first, which runs as opposed to one-party control and, as a result, poses a threat to the existing large platforms. The instinct would be to create 'miniverses' that follow their rules or gobble up emerging metaverse players in the same way they've purchased Instagram and Oculus Rift. But, rather than continuously altering to provide meaningful utility, that would be putting form over function to protect what has been constructed. A simple rebranding highlights the ambition for continuing control into Meta.

In the end, there is only one permanent and central party in the metaverse: the customer. They'll choose and vote based on who can

help them navigate the new universe easily. It will be owned by those who generate value and collaborate with users rather than controlling them. To put it another way, metaverse is the same as 'metacreator' and 'metaconsumer.'

Chapter 8:

MARKETING IN THE METAVERSE

Digital marketers must stay current with technological changes. Part of this is comprehending the metaverse and its full potential. Marketers need to realize that the metaverse isn't simply a fad; it appears to be here to stay and on its way to becoming the next big thing.

What strategies may marketers use to adapt as the metaverse grows?

First and foremost, marketers must remember the importance of millennials and Gen Zers as a target demographic. Some sorts of metaverses, such as games like Roblox and technologies like VR, are also popular among these generations. Let's look at how marketing can be done in the metaverse with that in mind.

Parallel metaverse marketing within real-life marketing

Create marketing experiences that connect with real-life events or are similar to what your company already does in the real world. In June, for example, AB InBev's beer brand Stella Artois collaborated with Zed Run to create a Tamagotchi-inspired Kentucky Derby experience. They did so because Stella Artois, a brand of AB InBev, is known for supporting sporting events, particularly horse racing. As a result, developing an online platform where non-fungible token (NFT) horses may be sold, raced, and bred appears to be a natural next step for them.

Immersive experience is key

In the metaverse, you can sell virtual advertising. Bidstack, a video game ad tech company, shifted from real-world outdoor advertising to virtual billboard advertising.

However, virtual billboards aren't the only option. Because metaverses are engaging and immersive by nature, it's ideal to capitalize on this by providing a similarly immersive experience with your commercials and

marketing efforts. Instead of merely posting advertising, offer branded installations and events users may interact with.

We've seen early adopters provide immersive experiences to their consumers, such as a Lil Nas X performance in Roblox, Gucci Garden experience visits, and Warner Bros.' marketing of In the Heights with a virtual reproduction of the Washington Heights neighborhood. Collaborations with the Roblox metaverse and other metaverses have recently shown new revenue sources for brands.

Make collectibles available

People enjoy collecting stuff, and the metaverse provides them with yet another platform to do so. You can replicate the experience in the metaverse by providing assets or limited-edition items that can only be obtained in the metaverse.

The Collector's Room, for example, is available in the Gucci Garden Roblox experience. In the metaverse, it allows users to gather limited-edition Gucci products. Gucci made a total of 286,000,000 Robux from the game's initial sales of collectible

products.

Engage with existing communities

The public generally dislikes advertising. As businesses try to break into the metaverse, they mustn't offend those already there. You'll also need the favorable feedback of these users because you'll be marketing to them.

Remember that you can't simply enter a new platform without considering the new format. When businesses collaborate with members of the Roblox developer community to create things and experiences, for example, they gain more traction. Similarly, when O2 put on a Fortnite performance, they teamed up with developers who were already experts on the game.

Consider this a form of influencer marketing. Community members become key aspects of the execution of your campaigns since user-generated content is important.

Continuously experiment

Marketers are living in an exciting moment. While some guiding principles can help

marketers determine what techniques and methods to use, the metaverse is still a relatively young platform with plenty of potential for experimentation. Best practices are still being defined, and paradigms are still being developed in their entirety. This provides marketers a lot of leeways to explore new things and be unique in their approaches.

Other Exceptional Metaverse Cases

• Dimension Studio's experimentation with metaverses for fashion labels generated $6.5 million in sales. They created a virtual production set-up that allows users to go onto a platform, get scanned by 106 cameras, and then be placed into virtual worlds to try on clothes and other items. They are well recognized for Balenciaga's Autumn/Winter 2021 Afterworld game.

• Grand Theft Auto V, an open-world sandbox game, included dress options similar to those worn by Hong Kong demonstrators. Many artists have been reusing virtual worlds for political expression, and Hong Kong demonstrators could take their conflict in the real world into the metaverse.

• Houzz, a home decor website, allows users to create digital photo collections of their furniture and other household objects. Houzz makes money every time someone uses their service to buy something. They developed a 3D viewer in 2017 that allows users to view products in 3D directly through a camera and visually integrates them into their physical area.
• Google Maps demonstrated an augmented reality tool for its walking directions. This feature provides users with precise visual directions and arrows to help them navigate their way to their destinations. Simply point the user's camera in the direction they require guidance, and the AR function will guide them on the right path.

Chapter 9:

TOP METAVERSE INVESTMENTS TO SKYROCKET

Metaverse stocks have become one of the most popular Wall Street trends. The metaverse space is gradually emerging from sci-fi literature and movies to become a reality, thanks to significant advances in virtual reality technology and computational capacity.

In the metaverse, which consists of digital online environments, people may live, work, and play. It's a virtual environment that anybody can share thanks to the merging of virtual and physical reality.

Meta Platforms (NASDAQ: FB) In late October, when CEO Mark Zuckerberg unveiled the company's new name, aimed to

emphasize its focus on the metaverse, it drew the attention of investors. "The defining quality of the metaverse will be a sense of presence — as if you are right there with another person or in another place," Zuckerberg stated. Our role in this journey is to speed up the development of the foundational technologies, social platforms, and creative tools that will bring the metaverse to life, as well as to weave these technologies together through our social media apps."

Companies increasingly focus on developing this technology and expanding the metaverse's boundaries. Bloomberg Intelligence says the metaverse business might be worth $800 billion by 2024.

Investors are scrambling to find safe bets on the arrival of this game-changing technology. In light of such upside potential, I'll go through seven metaverse stocks to buy now that have promising growth prospects.

With that in mind, here are seven metaverse stocks that could pay off handsomely in 2022:

Fastly (NYSE: FSLY)

Immersion (NASDAQ:IMMR)
Matterport (NASDAQ:MTTR)
Meta Platforms
Roblox (NYSE: RBLX)
Roundhill Ball Metaverse ETF (NYSEARCA: META)
Unity Software (NYSE: U)
Metaverse Stocks: Fastly (FSLY)
52-week range: $33.87 – $122.75
The company is based in San Francisco, California. According to Cloudflare, Fastly runs a real-time content delivery network (CDN), which is defined as "a geographically distributed group of servers that work together to offer fast delivery of Internet content" (NYSE: NET). Fastly provides cloud services in delivery, security, compute, and performance.
On Nov. 3, management released its third-quarter results. Year-over-year (YOY) revenue increased by 23% to $87 million. In the prior-year quarter, the company lost $56 million, or 48 cents per diluted share, compared to $24 million, or 22 cents per diluted share. Cash and equivalents totaled $282 million at the end of the quarter.

Fastly provides edge computing infrastructure-as-a-service (IaaS), which brings servers and equipment closer to the point where data is generated. Fastly is well-positioned to gain from the metaverse because it requires a large quantity of data transfer to generate a virtual world in real-time. Its infrastructure helps to reduce decentralization's lag time and latency, and it can transmit 167 gigabytes of data per second across multiple nations.

According to a new industry research analysis, edge computing is anticipated to be valued at roughly $87 billion by 2026, with a compound annual growth rate (CAGR) of 19%. Investors can buy FSLY stock at a reasonable price because of its high growth potential. It's hovering at $49 right now, down 45 percent year to date (YTD). Fastly's stock is trading at 17.1 times trailing revenue, down almost 60% from its peak in late January.

Immersion (IMMR)

52-week range: $6.41 – $16.64

The company is based in San Jose,

California. Immersion is a pioneer in the field of haptics or touches feedback. The company's cutting-edge technology interacts with users' tactile senses. Mobility, gaming, automotive, and consumer electronics all employ its devices.

On November 3, Immersion revealed its third-quarter results. Total revenue fell 5% year over year to $7.2 million, from $7.6 million the previous quarter. Non-GAAP net income, on the other hand, grew 14 percent year over year to $4.7 million, or 15 cents per diluted share, up from $4.1 million the previous quarter.

Cash and short-term marketable securities totaled $119 million at the end of the quarter. Because more than 90% of sales are recurring, the company has a steady cash flow. It is also debt-free.

With its DualSense haptic controllers used by Sony's (NYSE: SONY) PlayStation 5, Immersion cemented its position as a leader in haptic technology. However, the mobility business continues to generate the majority of the company's revenue.

Titan Haptics, based in Canada, signed an

arrangement with the company in August. It will now make its haptic patent licenses accessible to mobile phones and wearable OEMs who use TITAN actuators, which are devices that "create motion by translating energy and signals going into the system."
Since early November, the shares of IMMR have dropped by more than 20%. It is currently trading just around $7 per share, down 40% year to date. Shares are currently trading at 5.7 times trailing sales; therefore, investors should consider purchasing now.

Metaverse Stocks: Matterport (MTTR)
52-week range: $10.45 – $28
The company is based in Sunnyvale, California. Matterport is a firm that digitizes and indexes the world's space data. Spatial data analytics is becoming increasingly significant in business. On their website, Aspectum, a geospatial intelligence firm, offers more information:
"Location is one thing that all data sets have in common. And it is this feature that enables companies and entities to assemble data points on spatial analysis maps in a pleasing

manner."

Matterport began operations in 2011 and went public in July through a special purpose acquisition company (SPAC). Individuals can use its 3D data platform to turn an area into a precise and immersive digital twin, or "digital copy of a real-world place or thing."

Digital twins are commonly used in the construction and real estate industries. Matterport, for example, allows real estate companies to create digital twins of their structures. Prospective buyers or tenants can then take a virtual tour of the property from the convenience of their own homes.

In addition, Matterport for Mobile was just released, allowing 3D capture to be done on mobile devices for free.

The third-quarter results were released on November 3 by management. Revenue grew 10% year over year to $27.7 million. The non-GAAP net loss was $14 million, or 6 cents per diluted share, compared to a non-GAAP net income of $1.5 million, or 1 cent per diluted share, the year before. Cash and equivalents were $149 million at the end of the quarter.

Matterport makes money by selling the tools needed to work in virtual environments. Matterport's platform received over 6.2 million digital twins during the third quarter. Total members climbed by 116% year over year, while subscription revenue increased 36%.

As a newbie to Wall Street, Matterport may appear to be a high-risk investment. However, the stock's huge upside potential may be worth investigating further. Annual revenue is expected to increase dramatically in 2022 due to its significant first-mover advantage.

The stock of MTTR is currently trading at approximately $28, up more than 140 percent in the last six months. The stock is currently trading at 26 times its book value. A possible fall approaching $20 could be a better entry point for interested readers.

Meta Platforms **(FB)**

52-week range: $244.61 – $384.33

Meta Platforms (formerly known as Facebook) has become one of the most well-known digital advertising companies

globally, thanks to its social media platforms and apps. And, as we've already discussed, it has big plans to dominate the metaverse.

On October 25, Meta Platforms released its third-quarter results. Revenue increased by 35% year over year to $29 billion. In the previous quarter, it earned $9.2 billion in net income, or $3.22 per diluted share, compared to $7.9 billion, or $2.71 per diluted share. Cash and equivalents totaled $58 billion at the end of the quarter.

"We made good progress this quarter, and our community continues to grow," Zuckerberg said of the measures. I'm pleased about our plans, particularly those related to creators, commerce, and assisting in the development of the metaverse."

Meta Platforms launched horizon Workrooms in August. Horizon Workrooms allows users to engage in virtual reality (VR) meetings using digital avatars via VR goggles. The company also unveiled a pair of smart glasses that can be used to take images, videos, or make phone calls.

Facebook stock appears to be one of the safest bets in the metaverse with strong

fundamentals. Currently, it is trading about $340, representing a nearly 25% year-to-date gain. At 23 times forward earnings and 8.7 times revenue, shares appear to be less expensive than they were a few months ago.

Metaverse Stocks: Roblox (RBLX)

52-week range: $60.50 – $119

The company is based in San Mateo, California. Roblox is a prominent online entertainment platform where individuals may explore and create 3D experiences created by others. Roblox is popular among players under 18 years old, with 48 million average daily active users as of August.

According to analysts, Roblox's present platform is as near to a social metaverse as it gets for the time being. New content is constantly being created by third-party developers to be included in existing games.

On November 8, Roblox released its third-quarter earnings. Sales increased 102 percent year over year to $509 million, excluding deferred revenue. In the previous quarter, the company's net loss increased to $74 million, or 13 cents per diluted share, from $48.6

million, or 26 cents per diluted share. The company's free cash flow improved by 7% year over year to $170.6 million. Cash and equivalents were $1.9 billion at the end of the quarter.

"We're thrilled that players of all ages from all over the world choose to spend over 11 billion hours on Roblox during the third quarter," CEO David Baszucki said after the news. We're pleased to inform you that the developer community made more than $130 million in the first quarter and is on track to make well over $500 million this year."

After the company released its third-quarter earnings on Nov. 9, RBLX stock soared by more than 40%. The stock reached a fresh all-time high of $119 today. A further decrease below $90 would be a better entry point for interested readers.

Roundhill Ball Metaverse ETF (META)

52-Week Range: $13.75 – $16.70

Expense ratio: 0.75% per year

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may explore and create 3D experiences created by others. Roblox is popular among players under 18 years old, with 48 million average daily active users as of August.

According to analysts, Roblox's present platform is as near to a social metaverse as it gets for the time being. New content is constantly being created by third-party developers to be included in existing games.

On November 8, Roblox released its third-quarter earnings. Sales increased 102 percent year over year to $509 million, excluding deferred revenue. In the previous quarter, the company's net loss increased to $74 million, or 13 cents per diluted share, from $48.6 million, or 26 cents per diluted share. The company's free cash flow improved by 7% year over year to $170.6 million. Cash and equivalents were $1.9 billion at the end of the quarter.

"We're thrilled that players of all ages from all over the world choose to spend over 11 billion hours on Roblox during the third quarter," CEO David Baszucki said after the news. We're pleased to inform you that the developer community made more than $130

million in the first quarter and is on track to make well over $500 million this year."

After the company released its third-quarter earnings on Nov. 9, RBLX stock soared by more than 40%. The stock reached a fresh all-time high of $119 today. A further decrease below $90 would be a better entry point for interested readers.

Metaverse Stocks: Unity Software (U)

52-week range: $76 – $207

Unity Software is a game development platform that enables game developers to produce and commercialize real-time 3D content for mobile phones, tablets, consoles, PCs, and virtual reality headsets.

On November 9, the company's third-quarter results were revealed. Revenue grew by 43% year over year to $286 million. In the previous quarter, the non-GAAP loss increased to $12.1 million, or 6 cents per diluted share, from $8.4 million, or 9 cents per diluted share. The company's free cash flow was $34 million. Cash and equivalents totaled $766 million at the end of the quarter.

"Innovation in data science, vertical

expansion, and making substantial progress in providing RT3D technology and tools to as many creators and artists as possible drove Unity's outstanding performance this quarter," said CEO John Riccitiello.

Unity's technology is used by almost every major player in the worldwide video game industry. Unity's platform has created 71% of the top 1,000 mobile games. If you want to bet on the gamification of the metaverse, U stock is a good place to start.

Unity Gaming Services is a framework that allows developers to produce 2D and 3D content for augmented reality (AR) and virtual reality (VR) devices. In addition, Unity announced a collaboration with Tripolygon, a metaverse 3D modeling service.

It shouldn't be long before Unity turns a profit as it expands into areas other than video games. Industrial applications, film, animation, and engineering projects increasingly use the platform.

Chapter 10:

HOW METAVERSE IS EVOLVING DIGITAL WORLD?

Outsiders frequently mix up Metaverse and Virtual Reality. They believe Metaverse is a new form of virtual reality technology. Some people believe it is the internet's future. Even if these notions are correct, the digital world is evolving. Although it may appear to be science fiction, Metaverse digitally combines personal and business life in a way that is similar to our physical world. However, you may be wondering why this technology is capturing people's interest and why they are investing so heavily in the digital world.

Unlike virtual reality (VR) technology, which we utilize in video games, Metaverse incorporates all potential activities. You can

do everything online, from hanging out with pals to going to the movies, playing tennis, and going to concerts. Take a closer look at how Metaverse will transform our world:

1. Economic Changes

Metaverse will alter the way we do business in the future. It has an impact on how people think when they buy things. As a result, businesses will perform more market research in order to better understand their customers' behavior. The experience of buying things in a physical store is not the same as what Metaverse provides. As a result, every company must upgrade its operations. Customer contacts will undoubtedly be handled by robots and virtual assistants. For data analysis, these bots will be equipped with powerful computing equipment.

2. Cultural Changes

Metaverse will affect cultural standards since it links people from many ethnic backgrounds. People in the Metaverse will have connections and friendships just like they do in the physical world. They do, however, engage through holograms and self-contained NPCs. The Metaverse will have an

impact on the corporate world and will bring customers together in 3D. They won't be able to communicate with marketing people, but they will be able to communicate with bots to get answers to their questions.

3. Shopping Experience

In comparison to physical purchasing, the Metaverse shopping experience is unique. In the Metaverse, virtual real estate, avatar skins, and virtual fashion have great value. People will also invest in enterprises and properties that do not exist physically. Because people will use avatars to represent themselves, the fashion industry will focus on designing clothing for the characters. People would also look for virtual designer clothes and mansions to invest in.4. Entertainment Industry

In the Metaverse, virtual concerts, seminars, and gatherings will be commonplace. Celebrities and brands will use the virtual world to interact with their fans. We now use technology to make purchases and play games. People, on the other hand, would virtually spend time with their pals at restaurants, events, and cafés. Wendy's, for

example, is experimenting with putting their restaurant in the Metaverse so that consumers may engage with their friends there. Ariana Grande's concert in Fortnite Metaverse on August 7, 2021 is another example of a Metaverse entertainment event.

THE EVOLUTION OF INTERNET 3.0 WITH METAVERSE

For the time being, metaverse appears to be more of a branding exercise, an attempt to bring together pieces that are already forming online. It is possible that it will radically revolutionize consumer and business behavior if it comes to fruition as ambitiously as anticipated.

Following Mark Zuckerberg's rebranding of Facebook to Meta, the 'Metaverse' has become a popular issue, but what precisely does this mean? Everything you do on the modern internet experience is currently two-dimensional, i.e. the browse and scroll functions. The Metaverse is a three-dimensional, immersive next-generation version of the internet that is mostly created using augmented reality and virtual reality

technology.
For some, though, this may not be a shocking surprise; the concept of a virtual world has been around us for several years through a variety of platforms.
Every day, millions of individuals spend hours in virtual social places such as Roblox and Fortnite. Gucci, the luxury fashion house, said in March that they will be selling a pair of virtual-only sneakers for £8.99, while Puma, Reebok, and Farfetch all have similar online-only collections.
This paradigm was pioneered by augmented reality apps like Pokémon Go, which debuted in 2016. Snapchat is one of the best-case instances of how the metaverse is already infiltrating the daily lives of millions of people without them noticing it. Their unique filters enable marketers to connect with customers on a more personal level through highly interactive content.
Entrepreneurs are constructing an alternative monetary system utilizing blockchain technology, buying and selling virtual real-estate assets and digital currencies, and the metaverse has made an appearance in

financial institutions as well.

Players can acquire, train, and breed animals that are registered on the Ethereum blockchain in blockchain-based games like Axie Infinity. These digital options have inspired a younger population to look to the metaverse as a viable place to create their fortunes, particularly in the last several years.

As a result of Covid-19, there has been a significant movement in the digital world, particularly when it comes to working remotely. Despite initial fears, the global epidemic has provided limitless chances for growth, collaboration, and creativity.

For both individuals and employers, the future of work appears to be more streamlined. People in this world can customize their avatars (virtual representations of themselves) and use them to visit a meeting room from the comfort of their own homes. On the notion of launching Mesh in Microsoft Teams, Microsoft CEO Satya Nadella said people can communicate on a virtual whiteboard or walk around a virtual 3D model of a car they're developing in that room.

A metaverse will also allow retail behemoths to provide more dynamic in-store experiences. Virtual reality and augmented reality headsets will allow customers to try on things in the store, regardless of whether they are in stock or not. This virtual environment has the promise of allowing enormous overlap between our digital and physical lives in terms of money, productivity, shopping, and enjoyment.

With cryptocurrencies and non-fungible tokens (NFTs) making a genuine influence in global markets, interest in a deeper digital world has exploded. However, suppose the metaverse is simply an extension of the internet that we presently have. In that case, it's also vital to consider the plethora of issues that we have yet to address in our current online presence, such as catfishing, harassment, cybercrime, hacking, and hate speech.

For the time being, metaverse appears to be more of a branding exercise, an attempt to bring together pieces already forming online. It's possible that if it comes to completion as ambitiously as intended, it will revolutionize

consumer and business behavior.

Chapter 11:

METAVERSE: THE EVOLUTION OF A NOVEL TECHNOLOGY AND WHAT IT MEANS FOR THE FUTURE

The Metaverse can further disrupt numerous businesses by delivering virtual reality (VR)-based wearables that transfer individuals to another virtual world from the comfort of their homes.

Suppose the previous century was defined by mass production and the introduction of the Internet. In that case, the twenty-first century may be known for the invention and expansion of the virtual world, or Metaverse, which offers more interactive, collaborative, and immersive than the Internet.

Despite the promises made by many

entrepreneurs experimenting in this field, it has become abundantly evident that Blockchain technology will underlie the Metaverse and help establish a sustainable environment for all participants. While it is reasonable to believe that the Metaverse will influence traditional jobs or activities that are fairly commonplace now, its impact on society and how humans interact with one another will be significant.

When the COVID-19 outbreak swept the globe, damaging economies, the Internet and the resulting Work from Home (WFH) technology aids played a critical role in keeping businesses afloat, and in some instances, rapidly expanding. As a result of the pandemic, certain industries, like education, have seen substantial changes and are now more technology-intensive.

By supplying virtual reality (VR)-based wearables that allow users to experience an alternate virtual world without leaving their homes, the Metaverse can potentially disrupt existing businesses further. People would be able to communicate without having to travel long distances, breathe polluted air, or dress

up for different occasions. Children will study a range of courses and modules at their own pace, expanding their horizons beyond what traditional syllabi provide.

After-work activities such as watching movies or socializing with friends would be available in the virtual world without the difficulties of the actual world.

Outside of the United States and Canada, Together Labs' IMVU platform will offer VCORE, an ERC-20 token that rewards active, global gamers, producers, and earners across the metaverse. With the launch of a new token in 2022, VCORE should give its users access to a new sort of economy in which everyone may contribute to the growth of the metaverse.

"The purpose of our inaugural presale was to interact with and garner interest from the top strategic crypto and metaverse purchasers who are well-versed in our field," stated John Burris, Together Labs' Chief Strategy and Blockchain Officer. "When we release VCORE next year, we will have a powerful one-two punch with our original token, VCOIN, a globally transferable fiat-backed

token, now VCORE to drive the next generation Metaverse economy."

The success of the metaverse, like any ecosystem, will be determined by how simple it is for individuals to transact in it. This is where cryptocurrencies come in, and several projects that utilize them to facilitate real-world and digital transactions have already set the ball moving. Due to the capacity to readily convert fiat currency to cryptocurrencies, people will shift between the real world and the Metaverse with amazing ease.

Using crypto tokens provided by corporations enabling these virtual connections, consumers will be able to buy digital avatars, virtual land, and even throw a party for loved ones. Artists will perform in the Metaverse, receive payment in crypto, and then swap their winnings for physical goods. The Metaverse's growth will enhance the amount of wealth that may be unlocked, perhaps resulting in a rapid global economic expansion.

"Not only has Mint Gold Dust built an NFT platform, but also a whole complementary ecosystem where an artist may mint their

masterpieces, which we call "Gold Dust," and Geo Drop-in AR form all over the world," says Kelly LeValley Hunt, CEO of Mint Gold Dust. A collector may link their wallet to their collection and geo-drop it anywhere over the world to show it off. We think of NFTs for physical items in the Phygital Space as important for wearables, but there's a new notion called ARTourism, in which a tour guide can use a GeoDropped NFT to teach you about architecture, art, and even history, so it's no longer just about wearables. It's about reality and virtual reality's progress, as well as technology breakthroughs and education."

According to Dominic Ryder, CEO of vEmpire, the metaverse has become the inevitable development for how people connect online, and the possibilities are unlimited — There's the Sandbox, which is for gamers and creative minds who want to build experiences; there's also Decentraland, which is becoming a hub for all kinds of events. "Then there's Axie Infinity and Starl, which are two completely different models and platforms, yet equally thriving in that

digital space. I believe the pandemic has accelerated this progression, as almost everyone used to working in an office has been forced to adapt. It will only be a matter of time until those folks spend more time outside of work in the metaverse," Ryder predicts.

An embryonic form of the Metaverse exists today, with digital products such as Non-Fungible Tokens (NFTs) that mirror popular art and digital artifacts drawing both investors and crypto fans. With major players like Facebook, or Meta as it's currently known, entering this space and boldly signaling that the Metaverse is the new future, it'll only be a matter of time before other entities follow suit, resulting in a massive expansion of the Metaverse's boundaries and unlocking

enormous amounts of value previously unknown to investors and consumers.

CONCLUSION

Without a question, the Metaverse will have huge ramifications in our society. It will alter the way we communicate, market, and brand ourselves. In addition, this ground-breaking technology will present new opportunities and difficulties. The metaverse has the potential to unleash great creativity and expand our economic, entertainment, and cultural horizons.