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CRYPTOUTLOOK

The Top 3 Crypto Trends for 2022

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The crypto space is evolving at light speed. In 2021 we have seen the rise of several Ethereum competitors such as Solana and Avalanche as well as the taking-off of layer two solutions like Polygon and Arbitrum, which enable scalability of the Ethereum ecosystem. Next to technical innovations, 2021 has also been a breakthrough year for non-fungible-tokens (NFTs). NFTs' record prices made headlines around the world and forced many investors to rethink their investment principles and strategies.

But the evolution in crypto will not stop here. Already there are new exciting developments on the horizon, which will shape the future of the space. Below we present the top 3 trends that will set the stage for crypto in 2022.

- Guest contribution by Daniel Jungen and Pascal Hügli

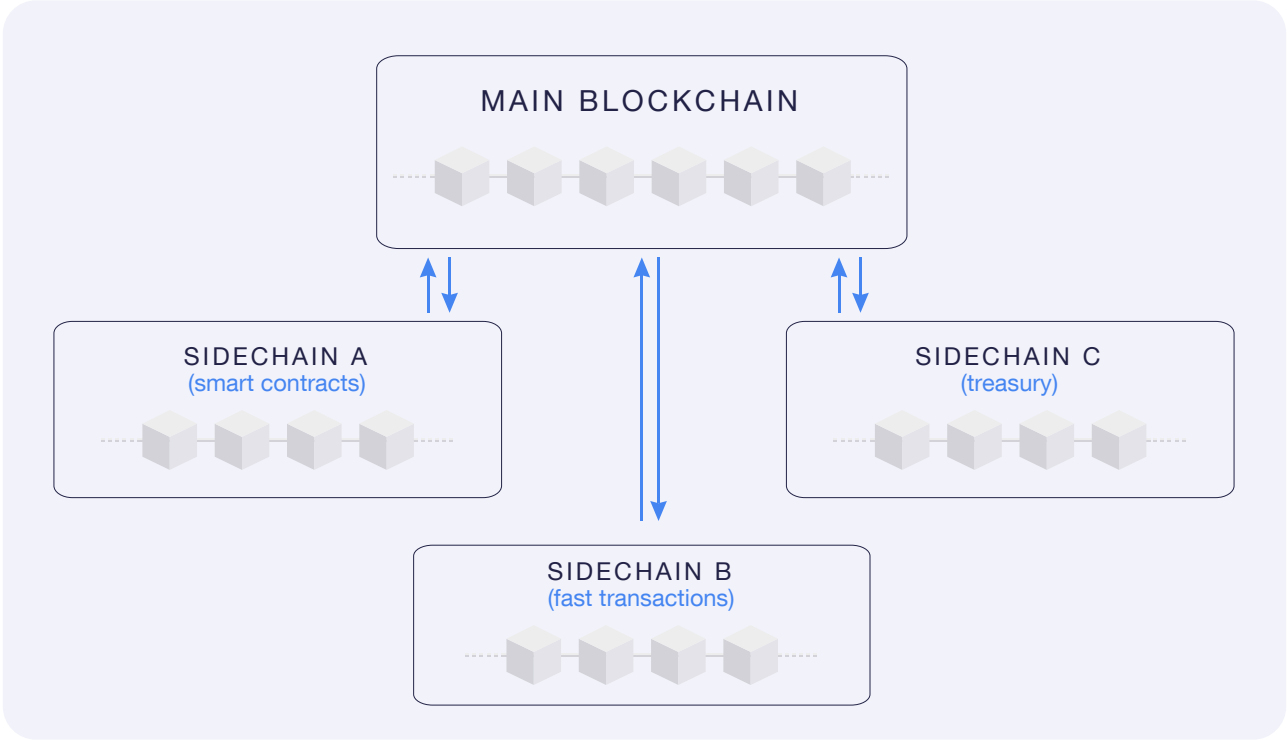
#1 DeFi on Bitcoin

In recent years, all of the successful decentralized finance (DeFi) projects have been developed on smart contract blockchains – first and foremost on Ethereum, but also on Binance Smart Chain, Solana, and others.

Ethereum was developed as the first blockchain with smart contract capabilities, thus profited from a strong first-mover advantage for years. In the beginning, all DeFi projects were launched on Ethereum as there were no alternatives available for developers. Once the chain had established itself as the number one smart contract platform for DeFi, most newly forming developer teams were eager to deploy their projects on the Ethereum blockchain as well. The network effect was in full force and consequently, Ethereum became the king of ICOs in 2017 and still is the king of DeFi today.

Bitcoin on the other was watching the ICO and DeFi boom from the sidelines. Even though Bitcoin was and is still the best known and largest cryptocurrency by market capitalization, the Bitcoin network was left out on DeFi developments due to its technical limitations.

This changed with the implementation of the Bitcoin SegWit upgrade in 2017, which made the creation of Bitcoin sidechains possible for the first time. Thanks to the upgrade enthusiastic developers soon after launched the first sidechains. These chains have smart contract capabilities similar to Ethereum, but inherit Bitcoin's security, settlement assurances, the network effect, and some even a Bitcoin surrogate as their native currency.



Source 1: Horizen Academy

The development of these sidechains made it possible to build DeFi projects on top of the Bitcoin blockchain, allowing developers to offer the same financial services on Bitcoin as other projects do on Ethereum. A prominent example hereof is the Sovryn protocol, a decentralized financial operating system built on the Rootstock Smart Contract (RSK) sidechain. Sovryn is a one-stop shop for DeFi banking services and offers trading, lending, borrowing, and yield farming in a decentralized manner. And thanks to the recent Bitcoin Taproot upgrade which was released in November 2021 the possibilities for DeFi on Bitcoin have improved even further.

Why DeFi on Bitcoin will be important in 2022

Many Bitcoiners believe that the Bitcoin network is the most secure blockchain, which makes Bitcoin the hardest money the world has ever seen. Consequently, it is only logical that they call for DeFi services on the most secure chain in the hardest currency possible. Bitcoin sidechains make this possible and a whole new ecosystem is developing as we speak. Sidechains like RSK, Stacks, Liquid, and Mintlayer, even though they pursue different approaches, are moving full steam ahead with the sole goal of providing the best smart contract and DeFi solutions on Bitcoin.

In the past, it has been difficult to put one's Bitcoins to work without compromising Bitcoin's fundamentals of decentralization and self-custody, as only centralized services enabled the lending of Bitcoin. DeFi on Bitcoin fundamentally changes this and offers Bitcoin lending in a decentralized, self-custodial manner. As Bitcoin is a trillion US-Dollar asset with millions of coins held in cold storage, the potential market for DeFi services on Bitcoin is massive.

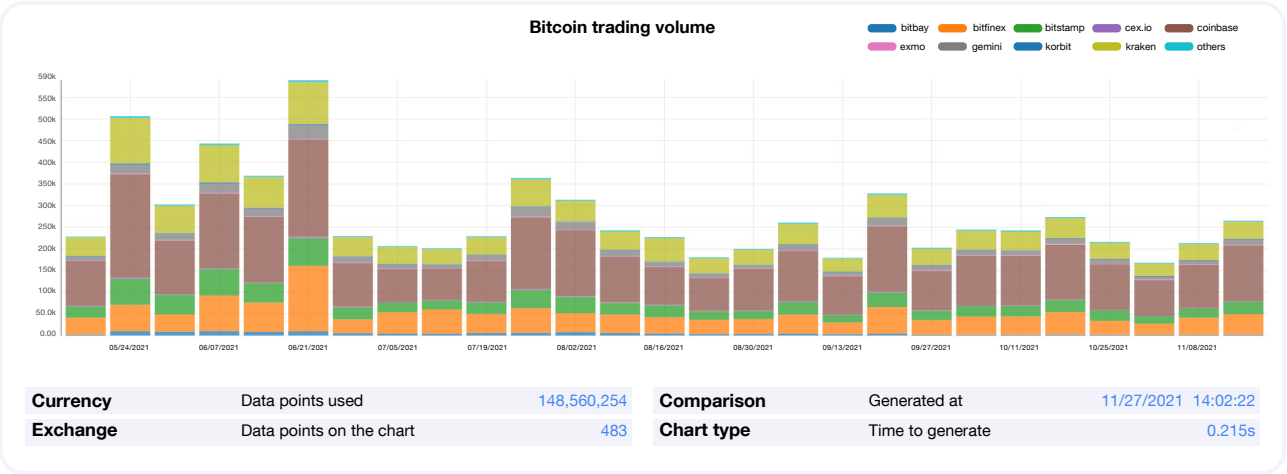
During 2021, Bitcoin and many crypto assets with it were in a bull market. Should the crypto market repeat its typical cycle as it has done several times over the last decade, then the end of the bull market can be expected sometime in 2022. At the end of each prior cycle, crypto assets went through a phase referred to as 'crypto winter' where their valuations collapsed, and the crypto market entered hibernation. Of course, the repeat of such cycles is far from certain. Michael Saylor, CEO of MicroStrategy, an IT company known for its large Bitcoin holdings, argues that now that institutional investors have entered the crypto market, large drawdowns as seen in 2014 and 2018 are a thing of the past.

"...it can be expected that investors will increasingly look for opportunities to earn extra yield on their Bitcoin investments."

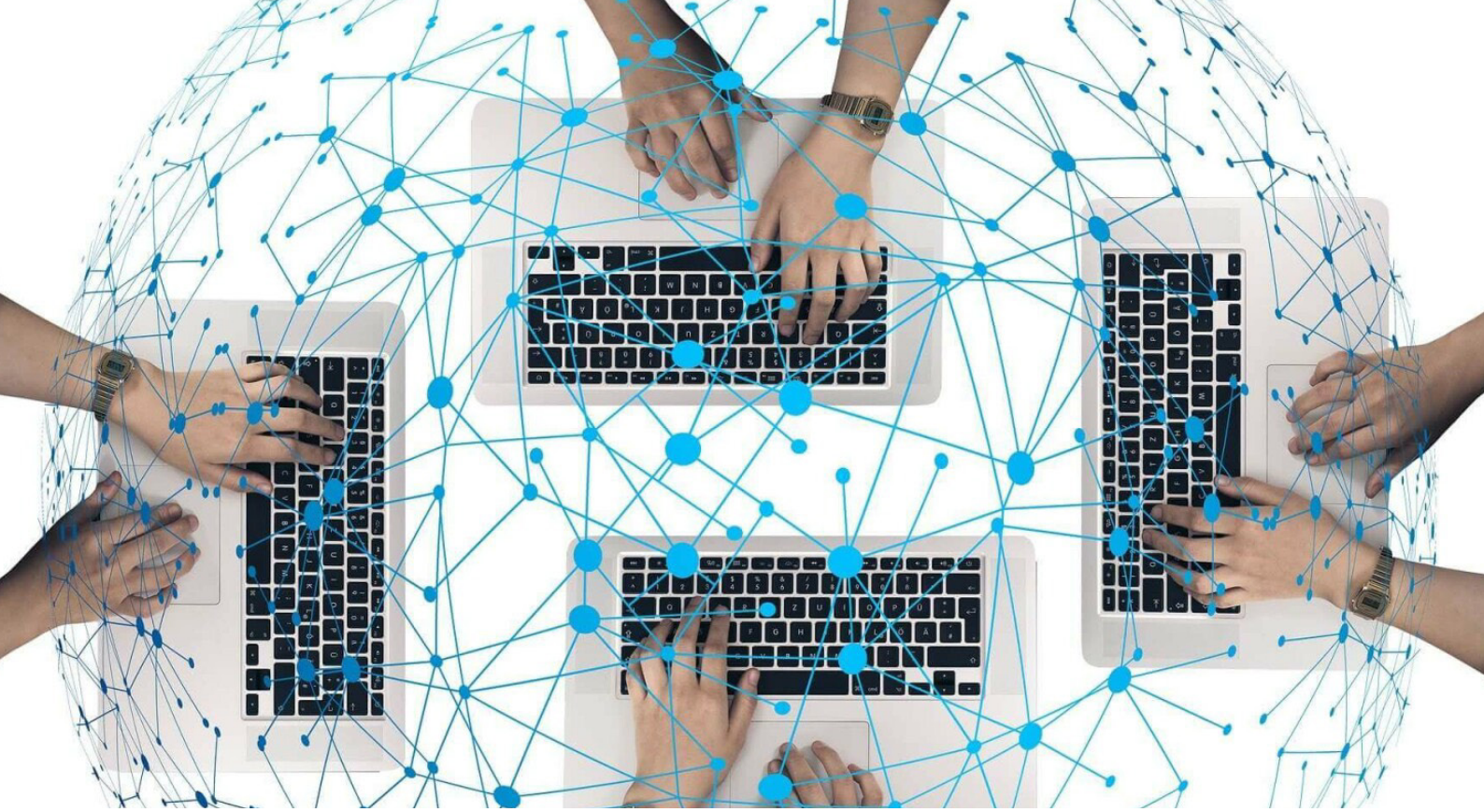
Nevertheless, bull markets do come to an end, or, to quote Ned Stark from Game of Thrones: "brace yourselves, [crypto] winter is coming" Thus, should Bitcoin enter a bear market in 2022, investors will be eager to earn interest on their Bitcoin. A long as Bitcoin appreciates and outperforms the traditional market, the psychological pressure to earn additional returns on Bitcoin investments is rather low. In bear market conditions though, where Bitcoin is underperforming, it can be expected that investors will increasingly look for opportunities to earn extra yield on their Bitcoin investments. Still, many Bitcoiners won't be willing to entrust their coins to a centralized institution. Thus, DeFi on Bitcoin will be the great beneficiary as it offers decentralized lending services while allowing lenders to keep control of their private keys

Crypto Winter

Crypto winter refers to the worst market phase when crypto prices, including Bitcoin and other digital currencies, remain at a low level due to a downward trend. This phenomenon often occurs in the middle of the long-term downtrend in cryptocurrencies.



Source 2 Bitcoinity.org

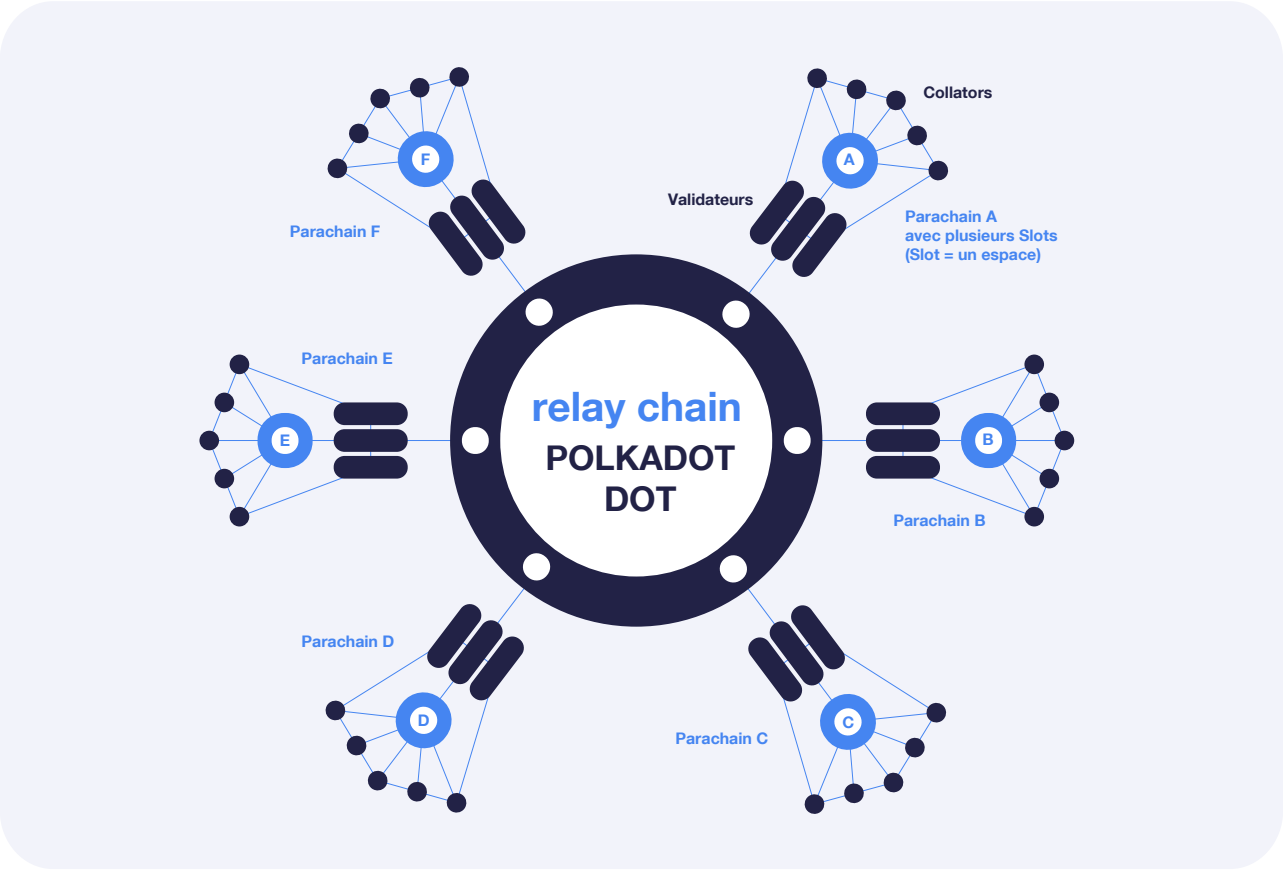


#2 The Call for Interoperability gets louder

Whoever has used services and applications on different blockchains and layers in the past experienced the difficulties this can cause. Investors need several crypto wallets and bridging funds from one blockchain to another can require in-depth knowledge. The same goes for funds that have to be moved from one layer to another, e.g. from the Ethereum blockchain (layer 1) to Polygon (layer 2). Further, transactions involving Ethereum are currently extremely costly. Moving funds from Ethereum to a second layer protocol can easily cost $50-$100 in transaction fees, independent of the amount transferred.

These frictions lead to an unpleasant user experience as funds are spread on different applications and wallets all over the crypto space. Services like MetaMask partly remedy this by offering a wallet service that allows users to connect to different blockchains and layers from the same wallet. Nevertheless, bridging is still required. Other applications like Zapper let you track your DeFi portfolio from one place, independent of the blockchain or the layer the funds have been invested in.

Such services are baby steps toward an interoperable crypto world but are by no means enough to mitigate the challenges a multi-chain world poses. Several projects have started to address the problem on a larger scale. Polkadot is building an infrastructure that connects blockchains through their Relay Chain, allowing attached chains to freely communicate with each other and exchange data.



Source 3 Polkafrance.fr

ICON, another blockchain project, is about to launch a solution through their BTP protocol which allows existing blockchains to communicate with each other in a decentralized manner. It acts as a decentralized bridge, transmitting data in a censorship resistance way from one blockchain to another. Cosmos has built an inter-blockchain communication protocol called IBC, THORChain offers cross-chain liquidity swapping and Quant allows users to connect distributed ledgers systems.

Not only crypto projects have recognized the potential that lies in blockchain interoperability. Established institutional firms are also moving in this direction and are exploring new business models that are made possible through interoperable blockchains. The capability of blockchains to communicate and exchange data allows users to share information with companies while staying in control of that data. Typically mentioned applications are health care and identity management, but potential use cases go far beyond that.

But even though these solutions and use cases exist, they haven't been proven on a large scale and none of the approaches managed to establish itself as the industry standard, yet. But as the call for interoperability gets louder and solutions are in high demand, projects that can deliver workable interoperability solutions have the potential to become highly successful in 2022 and beyond. It is therefore recommended to keep an eye on projects that work on enhancing interoperability in the crypto space.

#3 Metaverse, NFTs and GameFi as the next Internet

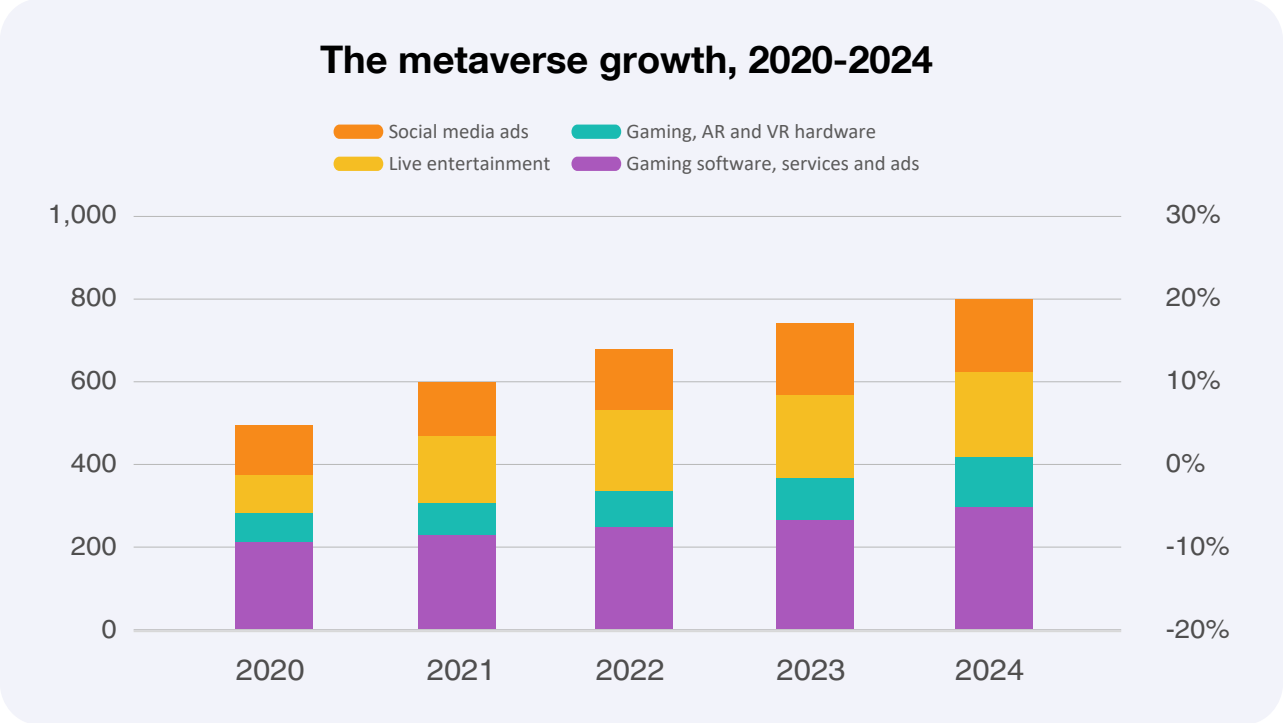
Since Facebook changed its name to Meta, metaverse has been the buzzword of the hour. The metaverse is a futuristic digital world where people can move in a virtual and augmented reality. It's a vision for the future of the internet combined with some current trends in online infrastructure, including the creation of 3D worlds – and it seems to be tightly connected to the crypto space, especially to NFTs.

"The NFT space itself has experienced an explosion in popularity in 2021 reaching an estimated market capitalization of over $40 billion US-Dollars…"

The Metaverse and NFTs

The NFT space itself has experienced an explosion in popularity in 2021 reaching an estimated market capitalization of over $40 billion US-Dollars – and there are no signs that their popularity will vanish anytime soon. Quite to the contrary: NFTs are here to stay, and new use cases and variations of these tokens are springing up left and right. NFTs are used to sell music and art, grant access to restaurants and museums, purchase tradable items in online games or allow ownership in a licensed video highlight from an NBA game – to just name a few of the endless possibilities. NFTs also give artists new ways of monetizing their creations. An example hereof is NFTs that automatically pay a percentage of the sales price to the creator each time the NFT is resold. This lets artists participate in the future appreciation of their creations.

Thanks to the rise of the metaverse, NFTs are getting an additional use case. They will be a significant element of this new world, as they allow ownership within these virtual worlds. And wherever there is true ownership, trade becomes possible which in turn leads to the development of economic systems. Examples are NFTs that represent parcels of land which can be purchased and traded in metaverses like Decentraland or



Source 4 Bloomberg in billions USD

Earth 2.0. On these properties, individuals and companies can build virtual houses and stores or hold virtual live concerts, which can only be accessed by owing a ticket in form of an NFT.

Owning virtual property in a metaverse through NFTs may seem lunatic to some. Comparing it to buying internet domains thirty years ago may help to comprehend the phenomenon better. Internet domains were of little value and use at the time of purchase but can be worth millions of US dollars today. The same goes for virtual property in metaverses. Should the technology and the respective metaverse catch on, then these properties might strongly appreciate in value.

But, and this is crucial to note, not all NFTs are a good investment. Most of them will likely become worthless at some point. The question to be asked when evaluating investments in crypto but especially with NFTs, is: what is the value proposition of this NFT? Why does it have any value besides the possibility that someone might be willing to purchase it as a speculative object at a higher price?

For many coins, tokens, and especially NFTs, this question is very hard or even impossible to answer. NFTs like Crypto Punks and Ether Rocks were the firsts of their kind and thus are likely to have a collector's value in the long term. For many replicas which simply recycled the idea and only varied the design and/or the blockchain, a meaningful long-term value proposition is very hard to come up with. Therefore, we urge caution with NFT investments.

Metaverse meets Blockchain Gaming

Crypto projects pursuing some sort of metaverse vision have also seen a spike in popularity, especially gaming tokens. Their virtual worlds let creators design, share and sell in-game assets – in the form of NFTs. Such projects are especially interesting because they combine the limitless realm of digital worlds, aka metaverses, with the monetary benefits NFTs provide. This allows users to get rewarded for their in-game creativity and skill in real-world monetary values.

The combination of blockchain-gaming, NFTs, and DeFi services, short GameFi, will be immensely popular in 2022 and many new projects can be expected to be launched. Players have strong incentives to participate in games that allow them to earn money (P2E), as the immense popularity of the rather simple blockchain-game Axie Infinity has proven.

The next generation of GameFi projects is expected to bring both the gameplay and the use of NFTs to a whole new level. The combination of games like Fortnite or Apex Legends with blockchain technology and NFTs will allow unprecedented gaming experiences and gives users a glimpse of what future Metaverses could look like.

The Metaverse beyond Crypto

Even though NFTs and the metaverse are a natural fit, the metaverse is by no means bound to crypto assets. A key focus for Meta Mark Zuckerberg highlighted during his recent presentation was education. Part of his metaverse vision is to make learning an immersive experience. Thanks to virtual reality glasses students will be able to virtually teleport to different times in history and 'experience' these epochs in a 3D world. They will be able to bring any object – an animal, planets, an electric car, or a human organ – in front of them to study it. University will be able to teach students practical skills with the help of virtual reality simulations. Medical students can rehearse difficult procedures and architects can design and build buildings in real-world simulations.

> **"For children and adolescents, new teaching environments with a focus on "edutainment" will be developed in the metaverse…"**

For children and adolescents, new teaching environments with a focus on "edutainment" will be developed in the metaverse. This combination of gaming and education promises improved and faster learning. Even though this industry already exists today, its potential has not yet been exhausted and the possibilities are endless.

Conclusion

The last years have brought a wave of new technological innovations, i.e. public blockchains, DeFi, NFTs, virtual reality headsets, improved 3D rendering, GameFi, and many others. But it now seems that the time has come where the rubber is finally hitting the road and these new technologies are enabling practical use cases.

> **"DeFi on Bitcoin offers real-world banking services to anyone and revolutionizes the way we interact with financial institutions…"**

DeFi on Bitcoin offers real-world banking services to anyone and revolutionizes the way we interact with financial institutions. Interoperability connects blockchains and ends the segregation of the different blockchain ecosystems, thus reducing friction and allowing the free flow of capital through layers and blockchains resulting in more innovation. And the metaverse as a combination of technological and financial innovation allows users to expand their lives beyond the physical limitation into the digital realm, where possibilities are far greater and new opportunities await the curious. Welcome to 2022.

Glossary

DeFi

Decentralized Finance, short DeFi, encapsulates financial services and applications that run on decentralized public blockchain networks. This makes them open to anyone and allows users permissionless access without having to go through middlemen like banks and brokerages.

Smart contract

A smart contract is a self-executing contract that is stored on a decentralized public blockchain. The terms of the agreement between buyer and seller are written directly into the code. Once the contract is deployed on a blockchain, the code controls the execution, and transactions are irreversible. Thus, the saying: code is law.

E-Wallet / Digital Wallet

An electronic or digital wallet is a software-based application that securely stores payment information and passwords. Digital wallets allow for easy and quick payments and the execution of monetary transactions. Wallets are also the main interface for using crypto assets and applications. What browsers are to the internet, digital wallets are to the blockchain.

Hot Wallet – Hot Storage

A hot wallet is an e-wallet that is used to manage crypto currencies. A hot wallet stores the private keys to coins and tokens and is therefore also referred to as hot storage. 'Hot' indicates that the wallet is accessible online (app or browser), thus it is considered less secure than a cold wallet.

Cold Wallet – Cold Storage

A cold wallet is an e-wallet that uses specifically designed hardware devices to store private keys. The devices are built in a way that makes it physically impossible for the private keys to ever leave the device unintendedly. Storing private keys in a cold wallet is also referred to as holding them in cold storage. Cold wallets are considered one of the safest ways to store crypto assets.

NFT

Non-Fungible-Tokens describe a specific token type. Each NFTs is unique and non-interchangeable, meaning an NFT is a one-of-a-kind unit of data stored on a decentralized public blockchain. Unlike currency coins and tokens which are fungible, each NFTs only exist once. NFTs are often used to sell unique digital goods like art pieces or membership access.

Blockchain

A blockchain is a distributed database that is shared among members of a computer network. A blockchain stores digital information in strictly chronological order. This makes it an eligible technology to maintain a secure and decentralized transaction history. The innovation with a blockchain is that it guarantees the immutability of the recorded data without the need for a trusted third party.

Crypto

Crypto is an abbreviation for cryptography. The term is used to generally refer to the field of crypto currencies and crypto assets. Cryptography is one of the cornerstones that makes crypto assets possible.

Taproot

Taproot is the name of a voluntary upgrade to the Bitcoin code for nodes and miners. The upgrade was released in November 2021 and brings enhanced privacy, scalability, and smart contract capabilities to the Bitcoin network.

Sidechain

A sidechain is a separate blockchain that runs in parallel to a layer one blockchain like Bitcoin or Ethereum. It operates independently but is connected to the mainchain by a two-way bridge which allows the transfer of assets between the chains. Sidechains are used to enhance a mainchain's scalability and functionality.

Yield Farming / Liquidity Mining

Yield farming – sometimes also referred to as liquidity mining – describes the providing of liquidity on decentralized exchange platforms (DEX) in exchange for liquidity provider fees, interest, and other rewards. DEXs need liquidity to enable swaps between different currency pairs. Returns are measured in annual percentage yield (APY).

Self-custody

Self-custody refers to the ability to truly possess an asset. In crypto, self-custody is synonymous with owing the private keys to your crypto assets. Self-custody is one of the fundamental principles crypto currencies were built on. Private keys held in self-custody allow for absolute and true ownership of digital assets.

Crypto winter

The price of Bitcoin and the prices of most crypto assets with it have moved in cycles in the past. Initiated by the halving of the Bitcoin block rewards every 4 years, Bitcoin's scarcity increases which in return leads to significant price increases. The bursting of such price bubbles is followed by a period referred to as Crypto Winter which is characterized by low valuations and little public interest in the crypto market.

Interoperability

The fast-paced innovation in the crypto space led to the development of many siloed public blockchains ecosystems. Interoperability is the attempt to connect these ecosystems by enabling the free flow of data and crypto assets between them through technological innovation. The end goal is that crypto assets can be used seamlessly and interchangeably.

Relay chain

Polkadot is one of the established projects working on interoperability. They have built a blockchain called the Relay Chain which so-called Parachains can connect to. This system allows the Parachains to exchange data and assets among each other, as they are all docked to the Relay Chain.

Meta

To emphasize its new strategic direction, Facebook has changed its name to Meta. Their vision is to build the next social media space called the Metaverse, which allows for a seamless transition between the physical and the digital world.

Metaverse(s)

In general terms, a metaverse is a futuristic digital world where people can move in an augmented and virtual reality. It's a vision for the future of the internet combined with the creation of 3D worlds. As of today, Metaverses don't necessarily exist, yet.

GameFi / P2E

Gaming and Finance, short GameFi, describes the possibility to earn and trade monetary assets while playing online games. It represents the financialization of gaming. The concept is also referred to as play-to-earn, short P2E. While the concept is not new, blockchain games operating with tokens and in-game assets (NFTs) have brought GameFi and P2E to a new level and made it accessible for a global audience.

Gaming token

Gaming tokens are the native tokens of blockchain-based games and metaverses such as Axi Infinity (AXIE). Often, the tokens are required to participate in the respective game. They enable the purchase and trade of in-game assets and gaming rewards are usually paid out in the native gaming token. P2E allows gamers to earn gaming tokens, which then can be sold against fiat currencies.

In-game Assets

Players of blockchain-based games can own and trade in-game assets. These in-games assets are stored as NFTs on a public blockchain. As a result, gamers truly own them in self-custody, and game developers cannot change or even confiscate them. The possibility of true ownership gave rise to the GameFi economy.

Protocol

Protocols are basic sets of rules that allow data to be shared between computers. They are a crucial component of blockchain technology because they enable information to be exchanged automatically across cryptocurrency networks securely and reliably. Bitcoin for example is essentially a set of rules. Collectively, these rules make up the Bitcoin Protocol – they are Bitcoin. The same goes for other blockchain-based applications.

Cross-Chain

The term cross-chain refers to the interoperability between two independent blockchains. Most blockchain ecosystems are siloed in nature. Cross-chain technology allows blockchains to exchange information and value, thus creating an intertwined ecosystem.

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