

WHITEPAPER

# Tokenization: the contemporary token economy



**AMAZING**BLOCKS



**DETECON**  
CONSULTING

# Outline

<b>1</b>	<b>Executive Summary</b>	<b>3</b>
<b>2</b>	<b>Market Overview</b>	<b>4</b>
<b>3</b>	<b>Appetizer Tokens and NFTs (Non-Fungible Tokens)</b>	<b>5</b>
<b>4</b>	<b>The need for education DLT, Ethereum, dApps, DAO, Ethereum 2.0, Web 3.0</b>	<b>7</b>
<b>5</b>	<b>Tokenizing everything, NFTs, Legal, DAO, Use Cases, DeFi</b>	<b>16</b>
<b>6</b>	<b>Challenges &amp; Opportunities</b>	<b>21</b>
<b>7</b>	<b>Outlook &amp; Trends</b>	<b>23</b>
<b>8</b>	<b>About the authors</b>	<b>24</b>
<b>9</b>	<b>Introduction of Detecon and Amazing Blocks</b>	<b>25</b>

## 1

# Executive Summary /Abstract

This whitepaper is part of a planned whitepaper series by Detecon, Amazing Blocks and MGH DAO and will present a general overview to the reader on Token Economy, DLT (Distributed Ledger Technology) and related current technologies such as DeFi (Decentralized Finance), DAOs (Decentralized Autonomous Organization), NFTs (Non-Fungible Tokens) and many more blockchain-related technologies. There is still a need of education due to the dynamic and fast development of the market and topics. Looking at the current number of crypto wallets worldwide (around 80 million), the figure is still small in comparison to the total world population of 8 billion humans having access to the technology, the necessary knowledge, and usability standards.

The gap of merging technologies and the reality will become smaller in the future, and new technologies will create unprecedented opportunities for humanity. Some examples include Web 3.0, the metaverse or DeFi to name some which will be described in this whitepaper with examples, and will have an impact on our daily life and will close the gap between the current and the future world by highlighting some of the most current and discussed topics in the token economy area. Tokenization or tokenizing assets in this context is disrupting the way we usually tend to invest in, buy into and manage assets. Therefore, tokenizing assets such as real estate, cars, art, luxury goods and other collectibles is a new way to create markets and increase sales.

## 2 Market Overview

The global tokenization market has a tremendous growth in the last years and is heading towards USD 5.6 billion by 2026 (in comparison USD 2.3 billion in 2021) at a Compound Annual Growth Rate (CAGR) of 19,5 % during the forecast period. There are different drivers which are pushing the tokenization market. One of the drivers is the risk reduction by from data breaches. Yahoo Finance has analyzed in February 2022 the different segments and the key industry players. The market growth is underlined by other factors such as “contactless payments and rising demand for cloud-based tokenization solutions and services”. Regulatory and legal topics are as well a factor which ensures a continuous customer experience and maintaining fraud prevention. North America is currently holding the largest market share in 2021 due to different factors such as advanced infrastructure and serving as a home base for the major vendors such as Visa, Mastercard, American Express or Fiserv. Some of the operative key players include TokenEx LLC (US), Protegrity USA, Inc. (US), and Paymetric, Inc. (US). According to analysts, the retail and eCommerce segment has great opportunities to grow by the highest CAGR.

# 3

## Tokens and NFTs (Non-Fungible Tokens)

Investing in and managing assets has traditionally been a rather time-consuming and difficult endeavour with several third parties in between. Because of high costs and large cash invests upfront most of the world's population was excluded from this selective group of people.

Therefore, Tokenizing Assets or Tokenization offers a new way of digitizing ownership rights and doing business, also enabling fractional ownership of assets. In other words, physical and virtual assets (such as real estate or the right to hold a certain valuable collectible or asset) is converted into digital units that can be bought, sold, and exchanged on selected platforms.

In this sense, most cryptocurrencies like bitcoin (BTC) are fungible tokens, which means they can be exchanged and replaced 1:1 (if I transfer one BTC to another wallet and get one BTC from a different wallet in return I still have one BTC – there is no difference because of the replacement, and we are back to exactly where we started).

On the other hand, non-fungible tokens (NFTs) are unique and irreplaceable in its sense – like a used car or artwork – and have a unique value. They are not divisible and not interchangeable. In other words, fungibility refers to the ability to exchange an object for another of the same kind and value and people have figured out that a unique, digital asset can be interesting and even have a significant monetary value.

The increasing popularity of these non-fungible tokens (NFTs) – epitomized by digital artist Beeple's USD6.6 million sale of a Donald Trump NFT and the National Basketball Association allowing fans to buy NFT video clips of their favourite stars, or the recent sale of his collage "Everydays" for USD69 million at Christie's— has opened new markets and has made blockchain-managed ownership of collectibles and other unique assets possible.

Another kind of NFTs are the so-called cryptopunks. Cryptopunks are pixel images of - as the name suggests - punks. The first images were launched as an art project by two software developers, Matt Hall and John Watkinson. They developed an algorithm that extracts exactly 10,000 different 24x24 pixel punk heads. Through their company Larva Labs, they published the collection cards, which are stored as non-fungible tokens (NFT) on the Ethereum blockchain and who occasionally reach sales prices of several million USD.

Aside from cryptopunks, more and more luxury brands like Gucci, Louis Vuitton, LVMH and others jumped on NFTs as tokens offer a way to connect with customers in a new way, telling their stories and reflecting their values. Customers are more likely to be in favour of a brand that connects with them, using a story behind the product.

SUPERGUCCI for instance, is a collaboration between Gucci and Superplastic (the world's top creator of animated celebs, vinyl toys & digital collectibles), offering a series of well-known SuperJanky NFTs.

The most well-known example is the NFT hype from 2021 about BAYC (Bored Ape Yacht Club) created by founders Yuga Labs. With an exclusive collection of 10,000 NFTs, some famous buyers have driven up the price of the comic-style images of bored monkeys in various outfits. The



Figure 1: 1 of the 10.000 Bored Apes

special thing of the exclusive Bored Ape NFTs is a closed club and offering other benefits is organized where also prominent buyers are among the collectors such as Eminem, Gwyneth Paltrow or Snoop Dogg. Yuga Labs itself, the company behind Bored Apes and several other large NFT projects, has received over EUR 400 million in investment. The company wants to use the money to build a virtual metaverse.

The value of Yuga Labs itself is currently estimated at around USD 4 billion. The question of whether the monkeys are really worth it, will become clear in the future when further developments are pushed forward towards the creation of an own crypto currency or giving buyers access to DAOs.

# 4

## The need for education

Tokens in general are not new; they have existed for centuries and represent different forms of economic value. Yet, the more modern exchange of values (assets) and data - both of which can be divided into various subcategories - is a very fragmented market lacking fungibility and standardization.

This is where tokenization finds its role as - with the age of Web 3.0 - we are moving toward the token economy. Within it, any form of value and data will have an identity in the form of cryptographic tokens on a distributed ledger (a sort of bookkeeping system).

It will allow a far more dynamic exchange as well as other benefits such as increased transparency. The contemporary token economy is still in its infancy, though. Sure, it feels like everyone is talking about Bitcoin, DeFi (Decentralized Finance), DAOs (Decentralized Autonomous Organizations), NFTs (Non-Fungible Tokens) and more, but if we look at the total crypto wallets worldwide, we are still at only around 80 million. Imagine what happens when at some point 8 billion humans will have wallets.



Furthermore, while markets are very volatile, the actual adoption - as seen in the wallet increase over the past years - is rather steady which proves that this industry is to be reckoned with. Whether it is IP (intellectual property), data, real estate, collectibles, governance rights, personal achievements, or in-game items within the metaverse - everything will and to a certain extent is already part of the token economy.

In this context of a whitepaper-series, Detecon, Amazing Blocks and MGH DAO will continuously present insights on the token economy to foster education regarding the opportunities this emerging wave of Web 3.0 inherits.

Thus, this first volume of our planned series will focus on a high-level overview of the contemporary token economy and its diverse spectrum of chances, starting with general insights on DLT (distributed ledger technologies) and blockchain.

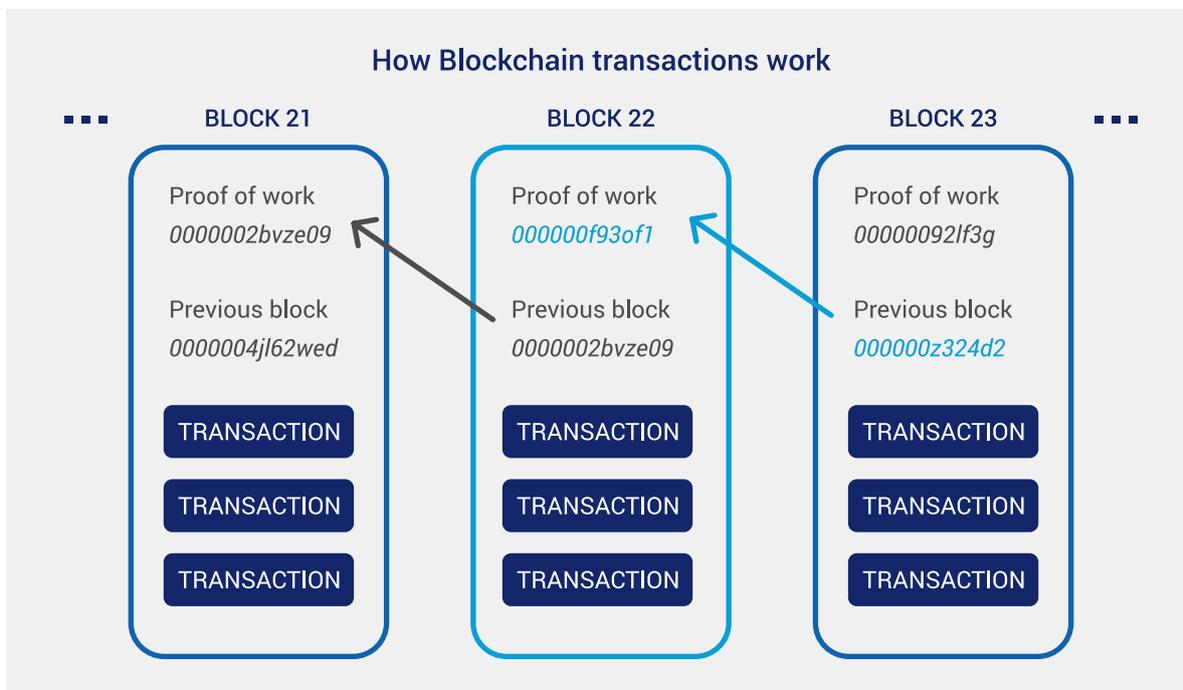
## To get started with: What is Distributed Ledger Technology (DLT)?

Distributed ledger technology - often referred to as DLT in financial and government circles - is a type of database that is distributed across multiple locations, regions, or participants. A distributed ledger must be decentralized, otherwise it would resemble a centralized database, which is what most companies use today.

This means that all participants in the distributed ledger can access all records in question. The technology provides a verifiable history of all information stored in that record.

Therefore, DLT is a digital system for recording asset transactions. For this purpose, the data of a transaction is recorded in detail and stored in several places at the same time. Unlike traditional databases, distributed ledgers have no central data storage or management functionality.

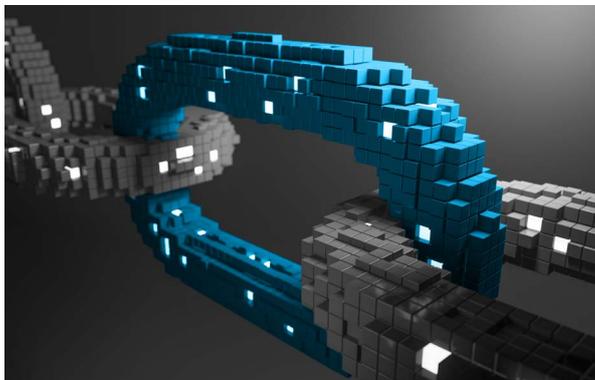
In a distributed ledger, each node processes and verifies a transaction or information, thereby creating a record of that element and establishing a consensus on its veracity. A DLT can thus be used to record static data, such as a registry, and dynamic data, such as transactions.



Source: Detecon



## What about blockchain? Is it the same as DLT?



At first glance, according to the above description of the Distributed Ledger, the Blockchain seems to be the same. However, blockchain is only one particular type of distributed ledger. Most know it as the underlying technology behind Bitcoin, Ethereum, and other cryptocurrencies.

The name blockchain also refers to the fact that transactions or even other data are grouped into

blocks and attached to a chain of already verified blocks.

To enable the chaining of blocks, the blockchain uses a cryptographic signature called hash. In terms of the definition, a blockchain can be described as a distributed ledger, because the information can also be shared with anyone within the network.

In the case of cryptocurrencies such as Bitcoin, this is achieved by allowing other participants to look up stored information on the "chain" in real time without installing specific software.



### Knowledge Nugget

The blockchain is only one particular type of distributed ledger

What makes blockchains fascinating is that they are so much more than a simple data structure. It is possible to use a blockchain to determine rules for transactions or even create a smart contract.

Furthermore, a blockchain is a sequence of blocks. However, a distributed ledger does not necessarily have to exist in the form of a chain. IOTA or Hashgraph are also distributed ledgers, but both systems do not require a chain structure. A DLT also does not need a proof-of-work algorithm to reach consensus. Thus, it theoretically offers better scaling.

### Take away:

- A blockchain is a variant of distributed ledger. This means a blockchain can be called a distributed ledger. However, not every distributed ledger is a blockchain.
- If consensus in a distributed network is not achieved through proof of work or proof of stake, then it is most likely a distributed ledger
- If the distributed data structure is in the form of a chain, where unrelated transactions are combined into blocks that are chained together with hashes, then it is a blockchain

## The future of DLT

Whether distributed ledger technologies like blockchain will revolutionize the way governments, institutions, and industries operate is an open question. Articles in the academic and financial press have raised questions about whether distributed ledger technologies, as they exist now, are sufficiently reliable to be widely deployed. We are just at the beginning of a revolution and from 2022 onwards we will see more and more applications and solutions.

The next few applications and solutions already show significant drivers that will dominate the DLT market as an enabler in the further development. This selection is not complete, but already gives insights in which direction DLT will develop soon.

In the series of next whitepapers, these topics will be discussed separately or in combination with different enabler technologies.

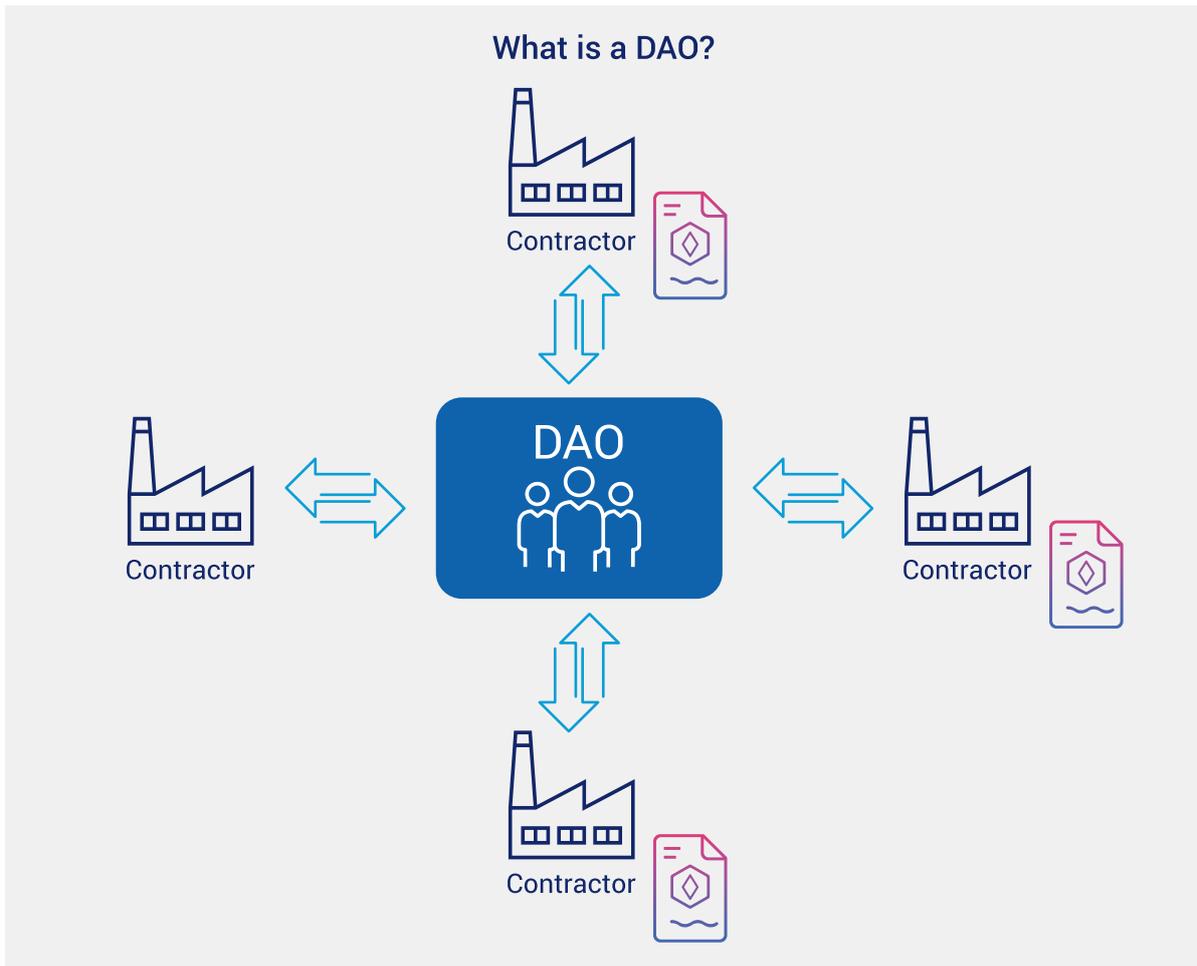
## Decentralized Apps (dApps)

Decentralized applications are the reason why a lot of hype broke out around Ethereum before its release. The applications are tamper-proof and offer an almost infinite number of use cases through the integration of smart contracts.

The distributed concept of blockchains makes dApps virtually fail-safe. The most well-known dApps are DEX UniSwap and SushiSwap, as well as the Non-Fungible Token (NFT) marketplaces Rarible and OpenSea. Video games (Axie Infinity) or decentralized financial applications (Synthetix) are also among the best known decentralized applications.

## Decentralized Autonomous Organization (DAO)

DAOs take organizations to a whole new level. Contrary to the centralized approach we know in the structures of common organizations of our world, the structure of a DAO is based on a Smart Contract. This defines the management and rules of the organization in all facets. It is autonomously run by code based on a set of rules controlled and implemented by a group of people i.e., token holder. So, there is no classic decision maker or board of directors, but the community defines the handling in the smart contract.



### Contractor Code

- Definition of business model
- Operational parameters
- Payment terms



### DAO Code

- Transparent and verifiable
- High security
- Management of voting process
- Tracking of DAO token ownership
- Definition of governance

## Ethereum 2.0 - The final form of Ethereum

DAOs need an underlying technology, the Ethereum blockchain. Regarding the development of Ethereum from its early stages, one of the most important milestones along the way was - Serenity. Many are more familiar with Serenity as Ethereum 2.0. This recent move was a paradigm shift, which transformed the proof of work algorithm used until then into a proof of stake algorithm.

But let's start with what Ethereum stands and can be used for:

Ethereum or ether (just another cryptocurrency, in a sense like Bitcoin) can be used as a means of payment for smart contracts and is the internal currency for decentralized applications on the blockchain. At the same time, the token can be traded on the crypto world's currency markets and is a direct way for investors to participate in the success of the Ethereum platform. Transfers are made from one Ethereum address to another, like other cryptocurrencies.



### Knowledge Nugget: ERC-20 Token

The ERC-20 format is the technical standard for smart contracts in the Ethereum blockchain protocol. With the help of the standard, developers can create their own tokens and place them on the blockchain. These in turn serve as access keys to a digital ecosystem. The ERC-20 standard guarantees the compatibility and interoperability of the token with the various smart contracts of an Ethereum project.

Ethereum has always been by far the most popular development platform for new blockchain technology projects. However, also since early days, the platform has been struggling with persistent scaling issues. While Bitcoin solved these problems by means of a second-layer solution (keyword Lightning Network), Ethereum seemed to lack a corresponding approach for years.

Ethereum 2.0 is supposed to solve this problem, although not all difficulties in connection with scaling could be solved right from the start. In the long term, an innovative technology should provide a remedy - so-called sharding.

Sharding enables parallelization in the processing of Ethereum transactions. Like the change of the consensus mechanism, sharding also means a completely new alignment of the processing logic. Currently, each node in the network stores the entire blockchain to guarantee the integrity of the network. However, each new block increases the size of the blockchain, which decreases the performance of the network over time.

## Smart contracts

Intelligent contracts - or smart contracts - are at the heart of Ethereum. They are to be understood as executable programs, which happen or are executed when a certain prerequisite has been met and allow the performance of credible transactions without intermediaries. They can be developed in the programming language Solidity.

Smart contracts are one of the most important features of Ethereum. They work like a classic contract from the real world. Transactions are trackable and irreversible. An agreement between two parties is written into the smart contract in the form of programmatic logic. As soon as the subject of the contract is fulfilled and a certain amount of ether changes hands, this contract is considered fulfilled.

Use cases range from insurance services (insurance company that puts its data on the blockchain) to access control to peer-to-peer transactions from decentralized exchanges (DEX).

## Web 3.0

Web 3.0 is the next generation of Internet technology that relies heavily on the use of technologies such as machine learning and artificial intelligence (AI). Accordingly, the goal is to create more open, connected, and intelligent websites and web applications that focus on leveraging a machine-based understanding of data.

Current websites typically have static information or user-driven content, such as forums and social media. While this enables the publication of information to a wide group of people, it may not meet the needs of a particular user. A website should be able to customize the information it provides to each individual user, like the dynamics of real-world human communication.

After the static Web 1.0, the social Web (Web 2.0) and mobile Web (Web 2.5) comes the semantic Web or Web 3.0. In short, Web 3.0 stands for the shared understanding of data by people and machines.



### Knowledge Nugget

Web 1.0 - VOICE: communication at scale  
 Web 2.0 – INTERNET: information at scale  
 Web 3.0 – BLOCKCHAINS: internet of value – at scale

Web 3.0 enables the transfer of digital assets via trusted decentralized infrastructure (e.g. via Open Telekom Cloud)

Web 3.0 are often Distributed Ledger Technologies (DLT) that use open-source protocols to intermediate key control points of the web.

Source: T-Systems International GmbH

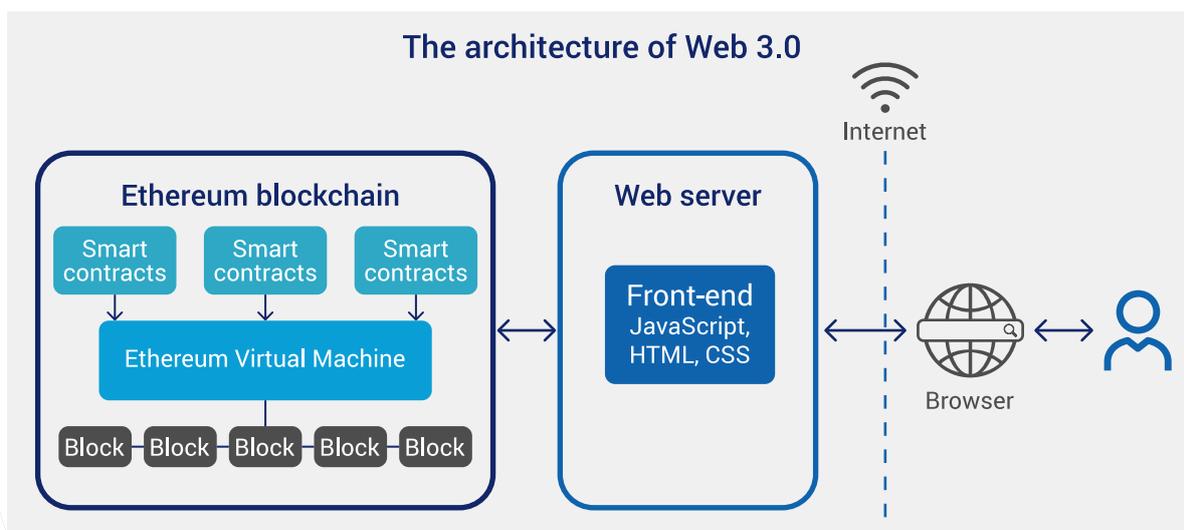
Data volumes are increasing on the Internet as a result of collective intelligence. Big Data is a lived reality. However, we humans cannot utilize enormous amount of data. We need machines to do this, and we need to empower them.

We are often not aware of how we perceive and process data and information. For example, we can do nothing with a pure number-letter combination such as Air Force 1, 07 Trainers or 3070-DFF7J. Only with additional information do we associate it with a running shoe from Nike or a PC from Dell. The situation is similar with machines. To understand our data, they need metadata. In the semantic web, this requires methods of automatic information processing. This includes, for example, the question: Which data and information is important for the current process? This helps the user when shopping on the Internet or a software to plan resources for the next production line.

The challenge in the Semantic Web is to find a common technology to make data understandable for humans and machines. Currently, we are in the research and development phase of artificial intelligence.

In this respect, Web 3.0 is the next generation of Internet technology that relies heavily on the use of technologies such as machine learning and artificial intelligence (AI). Accordingly, the goal is to create more open, connected, and intelligent websites and web applications that focus on leveraging a machine-based understanding of data.

Thus, using AI and advanced machine learning techniques, Web 3.0 aims to deliver personalized and relevant information faster. This can be achieved by using smarter search algorithms and developments in Big Data analytics.



## Current state of the token economy

Overall, the token economy is very accessible and if a certain degree of technical knowledge is present, one can seamlessly migrate to it. However, what it is currently lacking is

- 1) an intuitive UI/UX and
- 2) coherent educational material for beginners

although especially the latter is gradually changing. Nevertheless, in fast-moving tech it is vital that unbiased, neutral information is provided. Moreover, a gradual entry to this industry needs to be provided which will then allow readers to choose their respective fields of interest that they will dive deeper into.

Due to the permissionless property of blockchains such as Ethereum, their respective interoperability and most importantly, the composability of decentralized applications (dApps) thanks to token standards such as ERC-20, DeFi protocols can rapidly evolve and adapt. Therefore, they are far more dynamic when evolving than the traditional world of finance. New features and updates can be seamlessly integrated without having to overhaul existing systems completely. Moreover, this brings the opportunity to reduce intermediaries to a minimum. This will enable investors to save on fees for financial services significantly. Furthermore, monetary means are provided by other users acting as counterparts for lending and borrowing. The decentralized structure enables inclusion and fairness for all participants.

Steadily we are seeing new use-cases for tokenization being adopted and even institutions are starting to integrate tokenized assets - whether it be BTC, real world assets or even at times NFTs - into their portfolios. This proves that the contemporary token economy is gradually becoming mainstream. While the technology is in place, upcoming obstacles will stem from two origins:

- 1) regulation and
- 2) how to best migrate legacy systems and assets to the token economy.

Once they are surmounted, the true convergence of the real economy and the digital one will be completed.

# 5

## Tokenizing everything & Web 3.0: Application Deep Dive

### 1. Use cases

Something a lot of – even so called “experts” – fail to understand is the fact that there is a significant difference between coins and tokens. Both phrases are deliberately used, do however differ greatly. A coin is the native cryptocurrency of a blockchain that is in most cases powering the network by incentivizing resource-providing participants. These participants allocate resources for validating transactions and generally maintaining the network. Depending on whether the consensus mechanism is proof of work or proof of stake this mostly takes place via mining (although a better term would be “weaving” according to experts such as David Orban) or staking. On the other hand, a token is built on top of a blockchain in the form of a dApp - decentralized application. Think of your smartphone’s software (Android, iOS...) as the blockchain and the dApps as your Apps like WhatsApp. The following parts will give high-level overviews of different token applications.

#### a. Real world asset tokenization

Why is tokenization needed? If we look at the contemporary world of legal entities, the following pain points crystallize themselves: High friction through many intermediaries (e.g., lawyers, notaries) involved, time and paper consuming processes, bureaucracy and opportunity costs, onboarding of global investors tend to be difficult and finally a low degree of innovation.

In order to fully understand tokenization, we must first go back to the development of so-called “dApps” on the Ethereum (ETH) blockchain. They are on top of the ETH system and their functionality can be compared to that of smartphones: The cell phone itself or the operating system (iOS, Android) is Ethereum, and conversely installed apps like WhatsApp the respective “dApps”. Within these “dApps”, Ethereum-compatible ERC20 tokens can be issued. The spectrum of application areas and industries is inexhaustibly large for them. Within the Ethereum universe, there is the “native-coin” ETH on the one hand and “dApp” specific tokens on the other hand. They subsequently take over certain functions in their respective subsystems.

This is where tokenization becomes relevant, allowing users to create a digital identity for entities of any kind. The entity is “packaged” into a token with all legal and financial aspects by the so-called Token Container Model. Accordingly, all advantages of ERC20 tokens are integrated. Thus, the token acts as a digital share of a special purpose vehicle (SPV) whilst inheriting all associated rights. However, an everlasting dilemma is prevailing: The “Tokenomy” (Token Economy) has been very unregulated up to now and there are if at all, only rough legal guidelines that hardly provide investors with the necessary security. This can lead for example to unregulated markets with certain economical risks and need some guard rails. Hence the all-encompassing TVTG (Liechtenstein Token Act) can be considered a first-mover attempt, which enables the completely legal tokenization and subsequent administration and disposition of entities in Liechtenstein with EU validity.

Based on smart contracts, the so-called tokenization will be the basis for new business models. With the Token Container Model (TCM), the small state of Liechtenstein has created an ideal explanatory approach for this. Within this framework, a token is to be understood as a “technical container” with the ability to hold rights of all kinds. The container can be “packaged” with a right that represents a real asset such as real estate, shares, bonds, gold, access rights or money. This approach to packaging a right or asset into a container (i.e., a token) may sound trivial, but it allows a separation of

**(1)** the right and the asset on the one hand and  
**(2)** the token, which technically “runs” on a blockchain-based system, on the other hand. In this way, a distinction is made between **(1)** right and **(2)** technology. This tokenization leads to numerous advantages. Tokenization creates the basis for the digital financing and investment economy of the future. The gradually growing fusion of technology and finance is thus driven forward. Companies like Amazing Blocks offer a software-as-a-service that enables you to establish and administer a legal entity nearly entirely remote on your computer.

## b. Non-Fungible Tokens (NFTs)

Anyone participating in the crypto landscape can no longer avoid the topic of NFTs, the topic that we covered in previous chapters. In short, they are “programmable media”. They provide for many an easy gateway to the token economy as they appear to be more “feasible” than say a DeFi governance token. Around 70% of this industry relates to art, gaming, sports and collectibles. NFTs are non-fungible tokens. Behind them are digital units on the blockchain that guarantee authenticity based on the respective cryptography.

On the now highly frequented NFT marketplaces, such as Rarible or OpenSea, pretty much anyone can mint an NFT. You can create an NFT with a non-reproducible signature that is stored on the blockchain. The non-fungible tokens significantly differentiate themselves to crypto coins and tokens: You cannot seamlessly swap one NFT for another NFT because the information stored within it is not identical. Just as you can easily swap two Bitcoins for each other because the value of the coin is the property, the basic property of a token is individuality.

Giving more examples in the artworks field: One of the most popular NFT artwork called “The Merge” was sold on NFT marketplace Nifty Gateway with a record sum of USD 91,8 million and was created by the renowned artist Pak (pseudonym). This artwork is held by 28,983 collectors. Furthermore, NFT artwork collections became very popular during 2021 such as Bored Ape Yacht Club (USD 96,2 million), Crypto Punks (USD 49,5 million), The Sandbox (USD 12,3 million) or CyberKongz (USD 9,58 million). Due to the popularity, the price varies constantly.

Therefore, these prices are a snapshot of the current exchange markets in February 2022. The values are therefore just an indicator to show the bizarre financial impact, the popularity of digital and non-tangible artifacts, and a general hype culture with its possibilities in the current digital age.

### c. Utility tokens (e.g., DAOs)

When classifying a token as a utility token, we refer to specific functions that can be executed when holding it. These functions can be something like “access” to an ecosystem of resources involving services. Further, also governance rights of a decentralized community whose interactions are solely based on smart contracts and hence an algorithm governed by members of that community. Often these tokens are issued as a “future utility token” that is issued to raise funds for a project.

Sometimes, utility tokens are seen as controversial as they are at times structured in the sense that they are quite close to a security: Governance rights and network rewards can be compared to voting rights and dividends within a company. Nevertheless, they are on the forefront of fostering innovation and testing the boundaries of what’s possible in the crypto economy.

The SEC in the US states the following definition of a utility token, which can be seen as “harsh” though:

- no monetary incentives to own the tokens
- no distribution of rewards
- no proof-of-stake rewards
- no burning and thus shortage of tokens (which would be equivalent to an increase in value)

On the other hand, the common definitions on utility tokens within the crypto industry are as follows:

- firmly defined purposes and areas of use
- other platforms or blockchains as a basis (for example, ERC-20 tokens based on Ethereum)
- no independent blockchain
- focus on a niche or particular user group.

#### d. Payment tokens

Payment tokens typically inherit the “utility” of being used to purchase goods or services. They can either have other functions as well and hence be more of a generic utility token with payment attributes, or they can solely inherit the utility of payment. Often these tokens are stable or basket-tokens and in the future especially an increased use of CBDCs - Central Bank Digital Currencies - is expected which would also fall into this category. Stablecoins are always backed by assets akin to the “gold standard”, although in some cases such as Tether critics argue that the backing is not sufficient. On the other hand, CBDCs will solely be a digital form of fiat currency and hence they are not backed. They allow the central bank to have more oversight and implement decisions even quicker than before. As any form of token and coin can be used for making payments, almost every crypto asset could fall into this category.

## 2. DeFi

In DeFi systems, no Know-Your-Customer (KYC) process and paperwork is required. Hence bureaucracy – continuously slowing down innovation – can be reduced and automated using the unique benefits of blockchain technology and with the help of smart contracts. Now, anybody with an internet connection can access financial services. Decentralized finance empowers users to remain in full control over their own assets using non-custodial wallets. One crucial benefit here is that access for the unbanked population to financial products is granted.

Due to the permissionless property of blockchains such as Ethereum, their respective interoperability and most importantly, the composability of decentralized applications (dApps) thanks to token standards such as ERC-20, DeFi protocols can rapidly evolve and adapt. Therefore, they are far more dynamic when evolving than the traditional world of finance. New features and updates can be seamlessly integrated without having to overhaul existing systems completely. Moreover, this brings the opportunity to reduce intermediaries to a minimum. This will enable investors to save on fees for financial services significantly. Furthermore, monetary means are provided by other users acting as counterparts for lending and borrowing. In the DeFi space, they are called liquidity providers (LPs) or lending pool operators and have been the backbone of the current DeFi boom. The decentralized structure enables inclusion and fairness for all participants. Furthermore, the DeFi market outperformed, for instance, BTC during the last rally but remained highly speculative and volatile since not many actual use cases have been enabled for the respective crypto assets.

# 6

## Challenges and opportunities

Much of the early interest in DLT was in its application to financial transactions. This is understandable given that, for example, the cryptocurrency Bitcoin has attracted worldwide attention and is increasingly accepted as a payment method. Banks and other financial institutions became early innovators in this area as well.

DLT proponents, however, say digital ledgers can be used in many areas, including government and business transactions, in addition to financial transactions. Experts believe digital ledgers can be used in tax collection, transfer of property deeds, distribution of social benefits and even voting procedures. They also say DLT can be used to process and execute legal documents and other similar exchanges.

Some believe individuals can use this technology to hold and better control personal information, and then selectively share portions of those records when needed. Use cases include individual patient records and supply chains.

Advocates also say digital books can help better track intellectual property and ownership rights in art, goods, music, film and more.

The contemporary token economy is in a transitional stage. On the one hand, there are coins and tokens that have been sustainably growing over the past 4 - 10 years - take Ether or DeFi protocols such as MakerDAO for instance (Bitcoin since 2008). In technology these numbers mean far more than in other industries and hence prove that the industry is here to stay. On the other hand, there is still a lot of hurdles and it still will require some time till the "real" economy morphs into the digital economy and hence e.g., all assets will be represented in the form of tokens. For this, the following key areas can be glanced at when looking at the challenges and opportunities ahead:

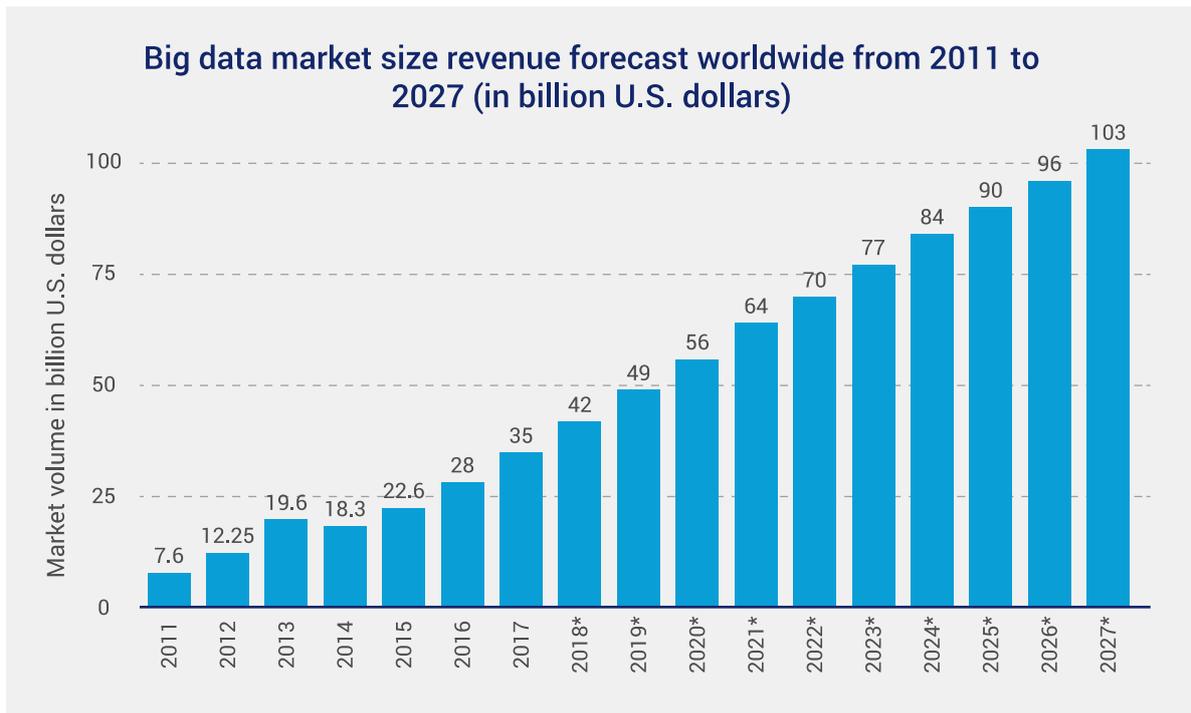
- 1. Regulation:** Here is a struggle between harming innovation vs providing standardization and security for participants that is increasingly becoming relevant as seen with FATF and MiCa proposals.
- 2. Education:** In order to foster a sustainable and innovation friendly mainstream adoption education will be most likely be the most important aspect as it also has an influence on e.g., the regulation as well as making sure that the right projects are supported. In this category there is the struggle between biased opinions vs objective, coherent material.
- 3. Intuitive UI/UX:** In this section, functionality vs intuitive user experience become relevant. Most people will not have to understand blockchain itself or even crypto, they should however be able to leverage the benefits thereof with ease.
- 4. Scalability:** The everlasting issue of scalability is continuously harming innovation. There is a core issue around decentralization vs efficiency. Centralized systems tend to be more scalable (at least as of now) decentralization is though one of the innovations that blockchain and the token economy bring to the table.

# 7 Outlook & Trends

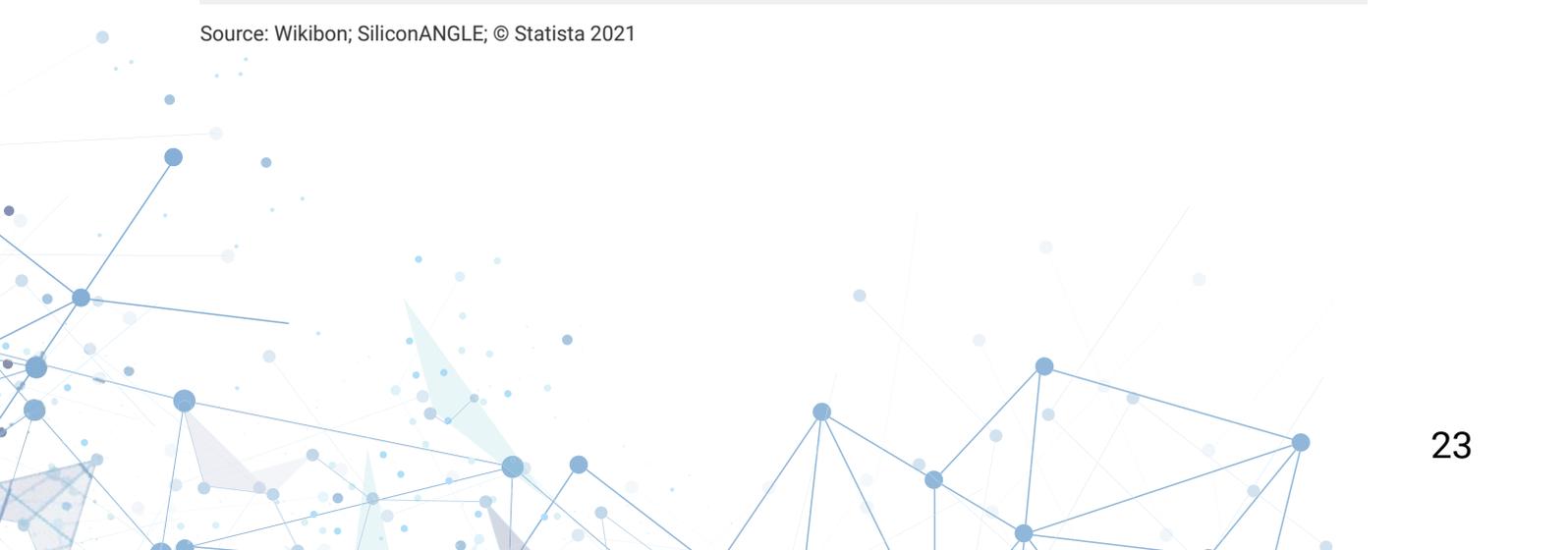


In a nutshell:

- Regulation will provide challenges and might harm industry but also helps validate it
- Solutions to scalability will foster mainstream adoption
- Utility token ecosystems will pick up steam - DAO hype
- NFTs will find more “actual” use cases
- Security tokens will - once regulation is implemented - be one of the next hot topics as they help integrate the real world into the token economy
- Future deep dives into topics in next whitepapers: NFTs, Legal Overview, DAOs



Source: Wikibon; SiliconANGLE; © Statista 2021



# 8

## About the Authors

This article was written in a collaborative effort by Detecon, MetaGameHub DAO and Amazing Blocks.



Tomal K. Ganguly is a Blockchain and Smart Mobility expert with profound experience in the Automotive sector and representing Detecon's Blockchain initiative. He holds a Master's degree in Information Systems from University of Liechtenstein and a diploma in Technical Business Economics from Hochschule Esslingen. During his career, he accompanied various Blockchain projects in large Automobile and tech companies around the globe and is active in the DLT start-up scene. Tomal is member of different Blockchain organizations, participates regularly in panel discussions and educates occasionally on Blockchain topics in universities in the DACH region.

Your direct contact: [Email](#) | [LinkedIn](#)



Wolfgang Krämer is a Blockchain and aviation enthusiast with a corporate finance and corporate strategy background. Wolfgang holds a degree from the University of Cologne in Business Management and a degree in media management from RheinMain University. He spent a lot of his career in Middle East and Far-East Asia, leading projects ranging from the telco industry, IoT, Cloud-/Edge computing, joint ventures to 5G, big data and AI. Together with his colleague Tomal, Wolfgang drives the blockchain activities at Detecon with his specific industry knowledge and is a supporting member and senior advisor for different Blockchain organizations.

Your direct contact: [Email](#) | [LinkedIn](#)



Nicolas Weber is an early stage crypto investor, writer, philanthropist, podcast host and entrepreneur. He is part of the founding team at Amazing Blocks, Founder and CEO of DAC and Founding Initiator of MGH DAO. Additionally, he is the Co-Founder of the Tokenization Working Group at the European Blockchain Association. He previously worked for established companies such as Daimler, Dieffenbacher and Allianz Global Investors.

Your direct contact: [Email](#) | [LinkedIn](#) | [Twitter](#)

# 9

## About Detecon, Amazing Blocks and MetaGameHub DAO

When addressing a young and fast-moving industry such as the token economy it is especially relevant that we maintain a neutral opinion and consider every possible perspective. Therefore, it needs at least one party that is actively working within the industry, mostly a start-up that is on pace with the fast-moving sector. Furthermore, it requires another party that is coming from a more established ground - a corporate entity - that can deliver 1) experience, 2) critical analysis and 3) analyse real word integration based on legacy business models. In this case it is on the one hand Detecon Consulting and on the other hand Amazing Blocks, a tokenization provider offering software and consulting services for the token economy. Furthermore, the MetaGameHub DAO provides expertise from the Metaverse and DeFi space - where many of the beforehand mentioned applications are being utilized.

All involved parties aim to collaboratively foster education within the token economy to provide a seamless and transparent transition into this dynamic space.

**DETECON**  
CONSULTING

Detecon Consulting is a leading, globally active management and technology consultancy headquartered in Cologne, Germany which has been combining classic management consulting with high technology competence for more than 40 years. Furthermore, Detecon Consulting is a subsidiary of T-Systems International GmbH and acts as the spearhead of T-Systems' digitization business as a pioneer for digital transformation. Detecon helps companies from all sectors of the economy to adapt their business models and operational processes to the competitive conditions and customer requirements of the digitalized, globalized economy using state-of-the-art communications and information technology. Detecon's know-how bundles the knowledge gained from successfully completed consulting projects in more than 160 countries.

Detecon is pushing the consulting and implementation of cutting-edge trend and technology topics in its portfolio which include cyber security, analytical intelligence, co-innovation, industrial IoT, and blockchain technology in order to expand the consulting value chain and accelerate the implementation of digital strategies and solutions by means of prototypes and proof of concepts.

**AMAZINGBLOCKS** Amazing Blocks is the first ever AG that tokenized equity in line with the Liechtenstein Token Act. Its expertise stems from providing technology and consulting services for the token economy with its umbrella DAC BV. Furthermore, Amazing Blocks is currently transforming into a DAO that will allow a holistic social network for DAOs and the Open Metaverse. This will be supported by various intuitive aggregation tools.



MetaGameHub DAO is a fully decentralized autonomous organization running on the Ethereum Blockchain. The focus is to merge the emerging trends of the Metaverse and DeFi. Further, MGH DAO strives to foster the convergence of DeFi, NFTs, the metaverse, and AI by combining utility, governance and data within one holistic ecosystem. Through collaborative curation and fair pricing of NFTs, MGH is bringing more transparency and accessibility to the market by providing critical NFT infrastructure and creating a new layer of digital native value. For this, MGH DAO has developed a sophisticated pricing algorithm for NFTs whose data can be sold on decentralized marketplaces such as on Chainlink and Ocean Protocol.

This publication or parts there of  
may only be reproduced or copied  
with the prior written permission  
of Detecon International GmbH.

Published by  
Detecon International GmbH  
[www.detecon.com](http://www.detecon.com)

**DETECON**  
CONSULTING