Meychain

WHITEPAPER VERSION 1.1

An interoperable blockchain to power real estate industry

"We build a Blockchain specified for real estate and property management, wherein all parties and developers, first time ever, have the right on network governance and everyone can invest and monetize fairly".

Contents

"Blockchain is the biggest opportunity set we can think of over the next decade or so".
Bob Greifeld, Nasdaq Chief Executive

Abstract

Since the birth of Ethereum, the first significant wave (2017-2018) of cryptocurrencies was crowd-fundraising via ICOs, aimed to develop smart contract platforms and decentralized applications. The second wave (2020) has been led by decentralized finance applications. The third wave (2021) has been observing the booming of NFTs and blockchain gaming as the first massive adoption of blockchain and crypto-currencies.

Crypto market has achieved remarkable growth in recent years, but it still lacks a strong connection with conventional finance. Thousands of blockchains have been built within a few years, a vast of them falling into two separate worlds: public chains for cryptocurrencies and decentralized finance, and consortium/private chains for enterprise practices. Many people believe that blockchain is not just a disruptive technology but a foundational technology. Blockchain is building Internet 2.0 – the Internet of value, where kinds of assets can be stored and transferred on digital platforms without any border or friction. A new era of the digital and sharing economy has just started with blockchain, extending to every industry, for instance, trade finance, e-commerce, real estate, etc.

Strongly believing in the future of the digital economy based on blockchain technology, we aim to build Meychain, an interoperable, scalable Blockchain platform and application protocols to provide new infrastructure and services for the real estate industry.

- Meychain decentralizes the financial infrastructure for real estate, one of the most important industries of the world, enabling capital access for all property holders and investment freedom for everyone.

- Meychain provides a feasible infrastructure and applicable protocols to build specified decentralized finance applications for mortgage and property management.

- Meychain facilitates traditional real estate developers and financial institutions utilizing blockchain & cryptocurrencies with their full power and compliance, then boosting blockchain & DeFi's massive adoption in real practices.

Meychain envisions an interactive ecology of seamless decentralized finance applications based on digital blockchain & cryptocurrencies. Meychain pioneers in the next wave of connecting traditional financial entities with crypto space and promoting Blockchain applications in the conventional real estate industry.

Keywords: *blockchain, consensus, cryptocurrency, cross-chain interoperability, decentralization, decentralized exchange (DEX), decentralized finance (Defi), Ethereum, stablecoin, Proof of Stake (PoS), real estate, non-fungible token (NFT).*

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Key numbers

Numbers	Year	Industry lines	References
USD 8,900bn	2018	Professionally managed global real estate investment market	MSCI
USD 9,600bn	2019		MSCI
USD 3bn	2020	Blockchain Technology Value	marketsandmarkets
USD 39.7bn	2025		marketsandmarkets
10%	2025	Global GDP stored on blockchain	Deloitte
USD 1.7bn	annually	Expenses saved for mortgage in the U.S.	Consensys
USD 80m	2021	Market cap of the Top 5 real estate projects on CoinMarketCap	

Before 1985	After 1985	From 2005	From 2015
	ProTech 1.0	ProTech 2.0	ProTech 3.0
Traditional process with many intermediaries	Software to support process	◉ Online info ◉ Smart home ◉ Sharing economy	◉ Blockchain and smart contracts ◉ Artificial intelligence (AI)

Prof. Andrew Baum, Oxford University

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1 Overview of the real estate market prospects applying Blockchain

Commercial real estate constitutes a significant portion of world economic asset and transaction activity. According to a report from MSCI, the size of the professionally managed global real estate investment market increased from USD 7.4 trillion in 2016 to USD 8.5 trillion in 2017 (Real Estate Market Size Report, 2020). Today's real estate market, however, consists of many siloed and independent networks with transactional friction and opacity between existing systems. The Ethereum blockchain presents a practical solution to realize the following benefits:
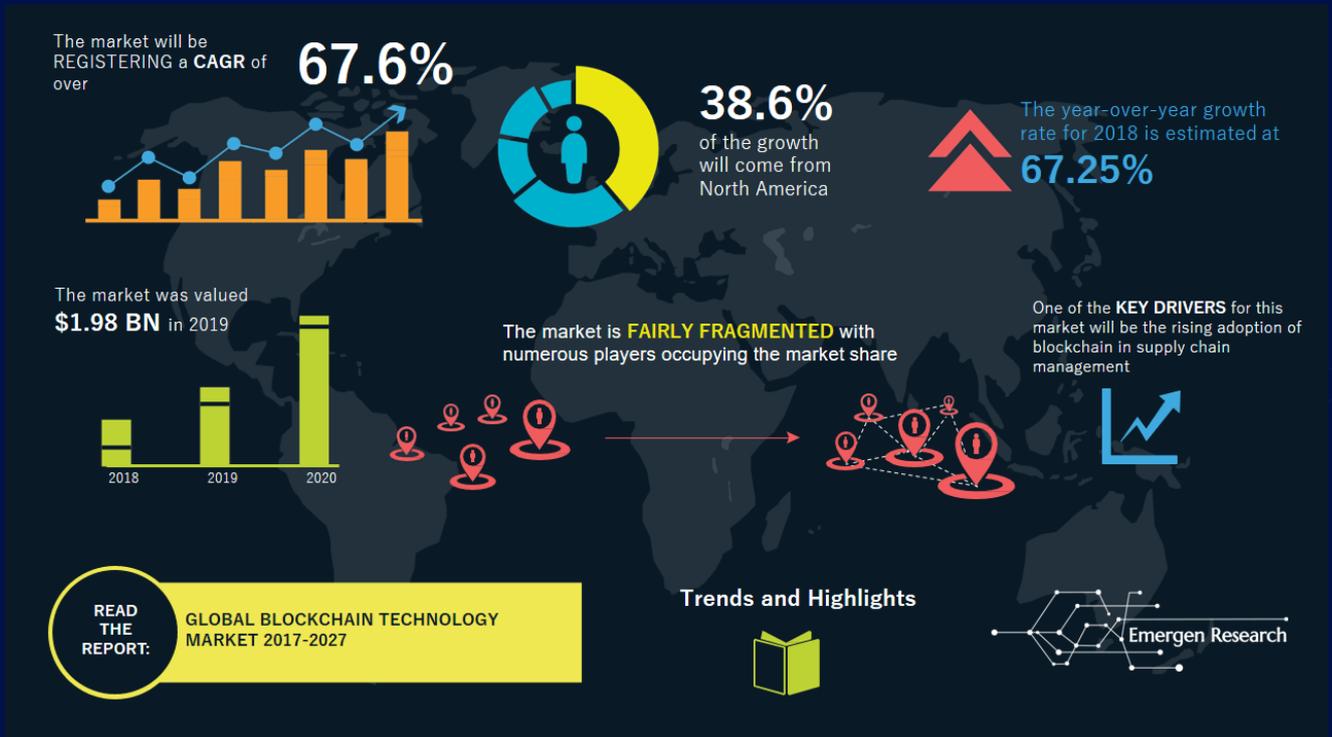
- Tokenization of real estate assets
- Process efficiency for underlying industry operations
- Reduced costs from process automation
- Access to global asset distribution
- Access to broader investor pools due to ownership fractionalization
- Access to secondary market opportunities
- Data accessibility to increase transparency and inform better investment decisions and portfolio management

One of the most exciting ways Ethereum benefits the industry is through the digital tokenization of real estate properties. Digital assets can represent real-world assets such as real estate, real estate funds, revenue streams, governance rights, and more. Once these assets are tokenized, they can be divided into more granular pieces, made accessible to a wider pool of investors, and leveraged to raise capital. Once tokenized, the programmable Ethereum blockchain enables the secure and compliant digitization of the transactions and processes around these assets, including issuance, trading, and lifecycle management.

In the real estate market, the advice, knowledge, and know-how of real estate professionals will remain crucial to commercial buyers. However, the processing of securities, liability management, document processing, and accounting will inevitably change.

According to marketsandmarkets, the global blockchain market size is expected to grow from USD 3.0 billion in 2020 to USD 39.7 billion in 2025, with the compound annual growth rate (CAGR) of 67, 3% for the period 2020–2025 (Consensys, nd). The growing demand for the simplification of business processes and the need for supply chain management applications integrated with blockchain technology will drive the overall blockchain market.

According to Emergen Research, the global blockchain market value will grow from USD 1.98 billion in 2019 to USD 111.58 billion in 2027, with a CAGR of 67.6%.

The market will be REGISTERING a **CAGR** of over

67.6%

38.6%
of the growth will come from North America

The year-over-year growth rate for 2018 is estimated at
67.25%

The market was valued
$1.98 BN in 2019

2018   2019   2020

The market is **FAIRLY FRAGMENTED** with numerous players occupying the market share

One of the **KEY DRIVERS** for this market will be the rising adoption of blockchain in supply chain management

READ THE REPORT: **GLOBAL BLOCKCHAIN TECHNOLOGY MARKET 2017-2027**

Trends and Highlights

Emergen Research

Source: Emergen Research

According to a 2015 World Economic Forum survey of more than 800 executives and media technology experts, 58% of respondents believe that 10% of information on Global GDP will be stored on blockchain (Deloitte, 2017). Bitcoin – the currency attached to blockchain technology along with cryptocurrencies remains a king in the portfolio during the lockdown period that has paralyzed the global economy due to the effects of the Covid-19 epidemic and governments seem to be more open to this technology trend. The market of Blockchain technology and cryptocurrencies is also more diversified and mature (The Blockchain Report 2020).

In the field of real estate, blockchain-based smart contracts are considered to hold great potential in their ability to transform core real estate transactions such as buying, selling property. real estate finance, leasing , management (Deloitte, 2017, p1).

But has the real estate market been ready for Blockchain technology?

Deloitte 2017 report also pointed out that companies need to consider and evaluate five prerequisites before embarking on blockchain adoption for real estate transactions, assessing costs and benefits, thereby assessing the extent of renovation of existing systems and interoperability with different technological systems used by different stakeholders in real estate transactions. The report also concludes that among the core processes of real estate transactions, those related to real estate rental and sale transactions are ripe enough for blockchain technology adoption, as it can take advantage of the inherent benefits of this technology and satisfy the prerequisites for its use (meeting the necessary and sufficient conditions).

2 Blockchain use cases in real estate industry

Blockchain technology affects the real estate sector in different ways. Although blockchain technology, as a public medium for conveyance without third party intervention, seems to be by its very nature a "next step" within the world of building contracts and real estate transactions. There is often a powerful tension between the basic foundations of these concepts and the features of blockchain technology. Around the world; startups, banks, governments, academics, and blockchain enthusiasts are working to overcome these tensions. We discuss three main use cases that stand out (Fibree-Industry-Report).

2.1. Real estate transactions

Blockchain applications often tend to focus on eliminating trusted third parties. In the case of real estate transactions these middlemen have long been under scrutiny. They are considered slow, expensive and ineffective. There is a difference depending on the specific legal framework, but in general we observe applications that focus on banks, notaries and land registries. Countries such as Sweden, the UK, the Netherlands, Estonia, Dubai, Ghana and Georgia have developed applications to facilitate more efficient and smooth transaction processes.

The Georgian use case sheds light on the potential impact blockchain can have on real estate transactions. The Georgian National Agency for Public Registry (NAPR) has built a blockchain add-on to their existing system. In doing so, they want to guarantee the authenticity of a land title. Since February 2017 information on 2 million extracts has already been "authenticated" and stored in a public blockchain. For every title a unique hash code is generated. These hashes are then uploaded on the Bitcoin blockchain. An identical hash on both the blockchain and the NAPR website confirms the authenticity of the title. After completing this proof of concept phase, NAPR is now moving forward to implement a new service they dubbed "TRUSTcontracts".

By blending smart contracts into the transaction infrastructure, they aim to provide a digitally performant system that allows citizens to receive certified documents via a platform that bundles information now still siloed within the different government agencies. Smart contracts will allow the closing of an agreement between two or more parties, the registration of this transaction in the property register, and the transfer of the purchase price. Automating these steps should address financial risks or fraud associated with registration of property when selling and buying.

2.2 Real Estate Tokenization

Real estate is the biggest asset class in the world. At the same time, it is also one of the most illiquid investments one can make. Generally, investing in real estate is hard to access, time-consuming and capital intensive. Tokenization of real estate assets intend to disrupt these obstacles, by taking us from a world where a property is transferred infrequently like several years or even decades, to a new reality where hundreds of transactions are executed within minutes. Tokenization is a broad concept. It might refer to either representing shares in a real estate investment trust with tokens; using a unique non-fungible token to represent a single property, or converting a single property into e.g. 100,000 tokens. All these approaches of real estate tokenization could be more commonly referred to as the "digitalization of assets". Once a real estate asset is represented by a digital token(s) and governed by the transactional rules of a blockchain, some friction of transacting between two or more parties could be considerably reduced.

Analyzing established co-investment solutions like REITs, syndications or crowdfunding, we notice that certain features are important to investors: e.g. diversification, online convenience, and investor control. The problem is that these solutions have technical limitations. Tokenization offers investors a solution that allows customizable diversification, no investment lock-ups, transactional efficiency, low fees, online secondary market trading, fractional stakes, risk control, more transparency, portfolio automation, and last but not least higher liquidity since the tokenized assets have the potential to become exposed to a global economy. Higher liquidity doesn't make sense in every market. Prime real estate markets, like San Francisco, have no liquidity problems. These markets have enough buyers for properties of any size. But in hundreds of smaller markets around the world, properties of a bigger size have only few potential buyers.

Even though the real estate tokenization industry is still in the early stages, tokenized properties of various sizes and types are already coming to the online markets. So how big is the potential here? If we look at commercial real estate alone, globally it is valued at USD 50 trillion. Out of that, USD 2.8 trillion is considered as professionally managed. If we project that in 10 year time, 1% of that value will be tokenized, that creates a market worth USD 28 billion.

2.3 Decentralized Infrastructure

Building a transactional infrastructure brings the question of harmonization again to the forefront. This could be considered as one of the first "lessons learned" by the real estate and blockchain community. Building a new infrastructure requires common standards and definitions. Blockchain is in that regard creating a new momentum for international cooperation. Increased liquidity or seamless transactions require a legal framework that is based on uniform transaction information systems (sale and purchase as well as rental) and improved transparency with digital property passports. Different blockchain related organisations, such as FIBREE, are now leading the effort to create a decentralised infrastructure based on common standards for interoperability.

3 Blockchain projects in real estate: a quick review

According to data at CoinMarketCap 2021, there are 9 projects related to solution products with tokens named on this platform. Propy (PRO) is currently the blockchain project in the real estate sector with the largest market capitalization (nearly USD 44 million), followed by LABS Group with a market capitalization of USD 25 million. The real estate blockchain system is summarized below.

Regarding the blockchain real estate sector, the existing business models are also extremely diverse but focus on the following areas: real estate finance (loan & mortgage; fractional ownership, timeshares); property management; security in real estate transactions (security and fraud management).

Most of the use cases studied are aim to apply real estate encryption solutions (tokenization) to increase real estate liquidity, control risks and share investments. Smart contract application is an important goal applied to digitize contracts, reduce fees associated with real estate transactions, reduce with higher security and faster speed. The presence of blockchain and cryptocurrencies in these businesses manifests itself in several forms: Building a real estate exchange platform with smart contracts, cryptocurrency payment adoption, company tokenization.

BLOCKCHAIN REAL ESTATE ECOSYSTEM

BIG DATA
GEOSPATIAL
FOAM · NAVIADDRESS · REX

ConstrucTECH · MILLENNIUM

HOSPITALITY
ACCOMMODATION
acomobase · LOCKCHAIN (0% Commissions on Bookings) · Trippki

MARKETPLACES & PORTALS
BREM SWITZERLAND · PROPY · ETHEERA SWITZERLAND
The CRYPTO REALTY GROUP · REALISTA · DEEDCOIN

P2P
RENTAL
CryptoBnB (step closer to home!) · stayawhile · Rentberry
bee · zangll
BUY & SELL
CPROP · AQWIRE · EstateX · HCT

PROPERTY MANAGEMENT
crafty · emphy · PRIME-EX PERPETUAL · RXEAL

RECORD KEEPING
PROPY · UBITQUITY · ChromaWay
velox.RE · clicktopurchase

REAL ESTATE MARKETING
PROPIFY · blocksquare

PROPERTY INVESTMENT
PROPERTY TOKENIZATION
ATLANT · BITRENT · Bitproperty · blocksquare
LATOKEN · SHARE ESTATE · HCT · Skye Properties
SwissRealCoin (THE SWISS REAL ESTATE TOKEN) · REAL · INTRO · CRYPTECTUM
EHAB

REAL ESTATE FUND
Brickblock · ZABERCOIN (An Asset Backed Cryptocurrency) · CAVIAR
PROPERTY COIN POWERED BY: Aperture · xred
PROPTHEREUM · Evareium

EVENTS
PropTech Unconference Madrid 2018 · BitcoinCRE · Propteq Europe 2017
FUTURE: PropTech · Realcomm20 · inman
NYC Real Estate Tech Week 2018 · mipim

DOMOTICS & IoT · MODULUM

SMART CITIES
SmartCity · NiQBiX

RE BACKED CRYPTO · PAX

VR / AR
ARCONA · Decentraland · PROJECT DISTRICTS
spectiv · VIMARKET · MARK.SPACE · MOSSLAND

NEWS & KNOWLEDGE
PROPTECH · James DEARSLEY · PROPTECH ACADEMY
inman

ASSOCIATIONS · IBREA (INTERNATIONAL BLOCKCHAIN REAL ESTATE ASSN.)

Finnovating

MARCH 2018
VERSION 1.1

Source: Twitter

☆	313	Propy PRO	$3.23	▼10.89%	▲12.08%	$229,700,169	$2,833,202 / 873,894 PRO	70,850,406 PRO		⋮
☆	793	LABS Group LABS	$0.01411	▼8.99%	▼4.25%	$29,399,795	$928,095 / 65,749,236 LABS	2,082,776,594 LABS		⋮
☆	1771	ETHERLAND ELAND	$0.07504	▼11.71%	▼48.84%	$1,416,660	$55,549 / 740,353 ELAND	18,881,105 ELAND		⋮
☆	1944	IHT Real Estate Protocol IHT	$0.0008347	▼3.91%	▲9.42%	$803,904	$105,506 / 129,806,524 IHT	989,061,136 IHT		⋮
☆	2006	ATLANT ATL	$0.01229	▲39.56%	▲21.86%	$666,698	--	54,175,041 ATL		⋮
☆	5472	United UTED	$0.01321	▼0.13%	▲25.14%	--	$8,929 / 676,033 UTED	0 UTED		⋮
☆	5585	Ecoreal Estate ECOREAL	$0.1393	▲0.14%	▲1.73%	--	$5,308 / 38,308 ECOREAL	0 ECOREAL		⋮
☆	--	Primalbase Token PBT	--	--	--	--	--	--	--	⋮
☆	--	imbrex REX	--	--	--	--	--	--	--	⋮
☆	--	Bee Token BEE	--	--	--	--	--	--	--	⋮
☆	--	SYB Coin SYBC	--	--	--	--	--	--	--	⋮
☆	--	Swinate SWIN	--	--	--	--	--	--	--	⋮

Source: CoinMarketCap 2021

4 How Meychain comes to the market

Blockchain has emerged as a hot technology trend in recent years with a brilliant perspective of applications in various industries. In particular, cryptocurrency now writes its name on global financial markets. Many institutional capitals have invested in bitcoin, ether and top coins, e.g. Grayscale, Micro Strategy, and traditional financial institutions have joined the crypto market since early 2020. Undeveloped and developing nations in Asia, Africa and South America are looking for breakthrough technology to enhance and develop their poor payment & banking systems. Strongly believing in the future of the digital economy based on blockchain technology, we aim to build Meychain, an interoperable, scalable Blockchain platform and application protocols to provide new infrastructure and services for the real estate industry.

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Learning from existing blockchains, it is clear that no solution is perfect, and no single platform can fit everything. Meychain is neither a general framework for operating public smart contract platforms nor strictly specific private blockchains. Meychain builds an interoperable platform specialized and optimized for real estate investment and property management, providing a simple and easy platform for a seamless connection between traditional finance areas and the emerging crypto world.

Meychain Vision

To be the Top blockchain platform and decentralized finance protocol specified for real estate industry and property management, especially in Asia.

Meychain Mission

- Bring decentralized finance to physical assets and traditional investment.
- Enable real estate investment opportunities for everyone around the world.

Meychain Core Values

- Society-centric
- Co-building prosperity
- Sharing economics

5 Meychain architecture & specializations

5.1 Governance

Governance is paramount in any kind of social and economic model, especially in blockchain. Meychain complies with the "Four-Fundamental-Principles: equality, democracy, decentralization and consensus" in the process of governing and operating.

- **Equality:** all network participants (nodes) have the same right and responsibility. There does not exist a single entity possessing sovereign power.

- **Democracy:** each participant has the right and responsibility in executing and supervising operations on the entire network to guarantee the integrity and security of the system; to vote for important upgrades of the system, and for approval/disable an operating role.

- **Decentralization:** the network is maintained and executed by its nodes, and always functions correctly despite any one's absence, or any attack against the system.

- **Consensus:** all activities of Meychain are based on consensus mechanisms, proven to be secure and efficient. Any transaction the consent of the majority is not valid on the chain.

Governance mechanisms on the Meychain Network ensure that only qualified candidates have the opportunity to join the group of network operators, and prevent corruption caused by any single body or malicious actors. To become an operating node, a valid candidate must stake a required minimum amount of native coins to activate its account. By complying with the Four Fundamental Principles and innovative governance schemes, Meychain inherits characteristics of major public blockchains, and has preeminent advantages amongst others.

- **Safety & security:** the chain is safe and resistant against any attack thanks to decentralization and the consensus mechanism.

- **Availability:** the system works in any circumstance, despite the missing of any node.

- **Transparency:** all of the transactions and block data are published and kept the same by all the network participants.

- **Easy upgrade:** Meychain can upgrade easily as long as getting approved by the majority of the network operators. Moreover, a special mechanism allows the Meychain to restore the normal state quickly in the case of being attacked and damaged.

5.2 Meychain architecture

From what Meychain proposed to be, we investigate the latest and most sophisticated blockchain frameworks and architecture designs out there to choose which Meychain will base on. Note that Meychain architecture should provide a suitable platform to build decentralized applications and a complete ecosystem for real estate industry and property management.

The Blockchain Trilemma (termed by Vitalik Buterin) states a trade-off among decentralization, scalability and security. That challenges a lot of developers to introduce a complete solution. Many projects have been introduced in recent years to solve the extremely low throughput of Bitcoin and Ethereum. Most of them focus on scalability while sacrificing fully decentralization. Tron and EOS are notably projects of semi-decentralized models. Algorand claims it's the first pure proof of stake platform solving the Trilemma, but the security and sustainability of its verifiable random function and consensus protocol need long-term public exposure to prove.

Cross-chain interoperability, on the other side, addresses one of the biggest limitations of public blockchains and distributed ledger systems. Each blockchain is sovereign and isolated from the others, i.e. value exchanging and cross-communication among different chains are impossible. This is the motivation for the birth of Cosmos and Polkadot. The projects propose to build the Internet of Blockchain, i.e. protocols allowing sovereign chains exchange assets and data with others.

Cosmos pioneered the concept of zones & blockchain hub, and the Inter-Blockchain Communication (IBC) protocol. Each zone is a sovereign blockchain connecting to Cosmos Hub via IBC. Cosmos doesn't allow chains to communicate directly with each other but via the common hub. This flow may result in overhead for the blockchain if many chains are interacting simultaneously. Tendermint core (a deployable pBFT consensus), implemented by Cosmos and Binance Chain, does not process fast if the number of nodes is large. Moreover, Cosmos requires a fast finality to connect the hub, hence Bitcoin and Ethereum are out of its playground.
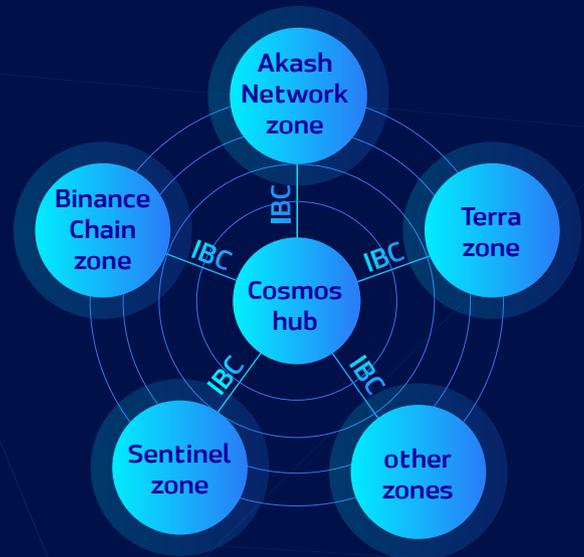
Polkadot approached the inter-chain problem via parachains & relay-chain, and bridge protocol. Parachains are constituent but sovereign blockchains gathering and processing transactions, while the relay chain (the heart of Polkadot) coordinates consensus and transaction delivery between chains. Bridges link parachains with external networks like Ethereum and Bitcoin. Polkadot surpasses Cosmos in the aspects of parallel processing and no specific requirement. Polkadot, in fact, shares many similarities with the architecture of Ethereum 2.0 where shards vs parachains and beacon chain vs relay chain are similar pairs. The only distinguished protocol is the bridge-chain.

Heterogeneous cross-chain interoperability is a significant progress of blockchain technology. However, both Cosmos and Polkadot are invasive models which need active implementation and participation from external chains. If the majority of miners on Bitcoin and Ethereum networks don't install Cosmos IBC or the Polkadot bridge protocol, they cannot communicate back-forward with Cosmos or Polkadot, even.

Rebuilding a new sovereign blockchain from existing codebase is popular in the blockchain space. It is a huge benefit of the open-source world helping to boost technology development much faster than ever. Many examples and successful cases can be mentioned. Binance Smart Chain, Polygon (Matic), Tron are rebuilt from Ethereum. WAX is customized from EOS. Among others, Avalanche is chosen and customized to build Meychain.

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Avalanche architecture has merit between Ethereum 2.0 (Sharding network) and Polkadot (multi-chains network). On the other hand, Avalanche has flexible subnets to build customizable sidechains, and it is the most EVM-compatible platform among interoperable blockchain designs (Polkadot, Cosmos, Avalanche). We will go to the core protocols of Meychain as follows.

5.3 Core protocols

Based on the core blockchain, Meychain ecosystem is built-in with several innovations as fundamental protocols and applications to serve its specific industry:

- Property tokenization protocol
- Decentralized real estate trading platform
- Decentralized crypto exchange
- Decentralized lending
- Cross-chain bridge
- Stablecoin protocol

Property tokenization

Cross-chain swap

DEX for crypto

Stablecoin payment

P2P Mortage & Loan

Crowdfunding
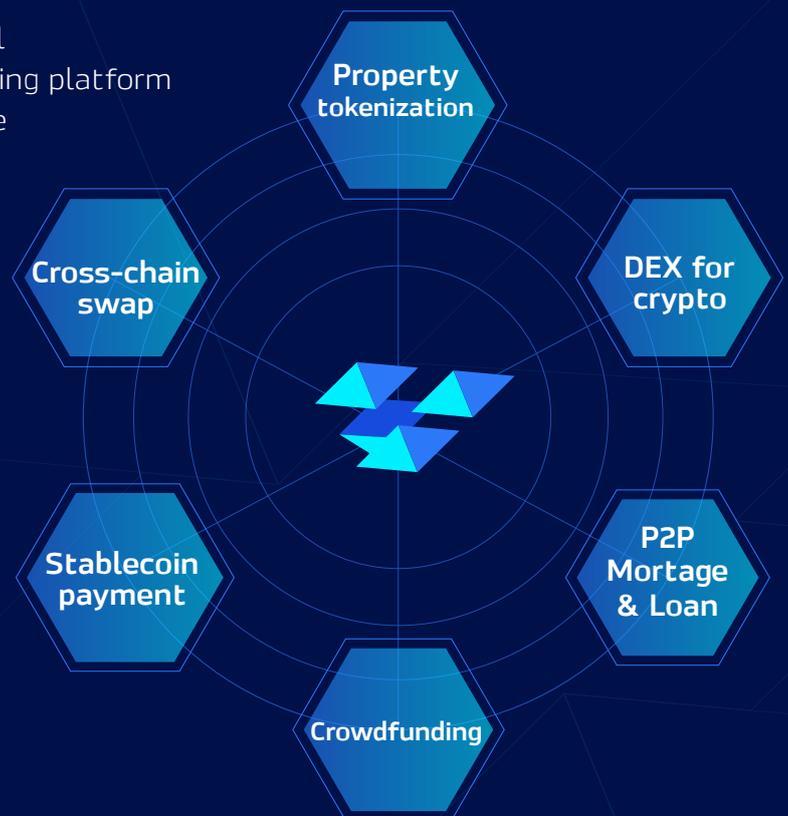
Property tokenization protocol allows fractionalizing and tokenizing a property (house, land) into cryptographic assets on Meychain. Thus, it is open for trading worldwide with cryptocurrencies. The protocol utilizes various token standards: ERC-20, ERC-721 and ERC-1155.

Decentralized real estate trading platform allows tokenized property to be traded borderless for cryptocurrencies around the world, hence enabling investment opportunities to everyone with small amounts of money.

Decentralized crypto exchange provides a seamless trading platform for various pairs of cryptocurrencies in the Meychain ecosystem.

Cross-chain bridge connects Meychain with Ethereum, Binance Smart Chain, and other popular blockchains, then boosting financial flows among different ecosystems.

Decentralized lending offers more financial instruments for users and investors on Meychain ecosystem.

Stablecoin protocol is the essential basis of Meychain which is distinguished among others, and makes the Blockchain more applicable, more efficient in the DeFi space as well as conventional finance. Basically, all stablecoins issued on the chain are backed by cash funds, crypto assets, and physical assets. For cash-backed stablecoin issuance, an acting node on Meychain must contribute to a legal investment fund[2] issue corresponding amounts of stablecoins. Physical assets (e.g. real estate), on the other hand, need notarized contracts from legitimate authorities to be valid among other nodes. Crypto assets are easier to handle because of their transparent nature. For example, whenever an amount of ETH is sent to a collateral contract, then a corresponding amount of USD token is issued based on a defined rate and pricing technique. If any backing basis is missed, stablecoins may have weak liquidity or face certain legal risk. Therefore, Meychain utilizes all the three backing components (cash, crypto and physical assets) simultaneously and complementarity, hence they, together, make all stablecoins on Meychain strongly backed by real value with full redeemability and minimal risk (respectively both legal concern and liquidity). All acting nodes jointly have the right and responsibility of supervision, management and sovereign governance on the audit, issuance, circulation, burning and redemption of the stablecoins. See more technical details in [2].
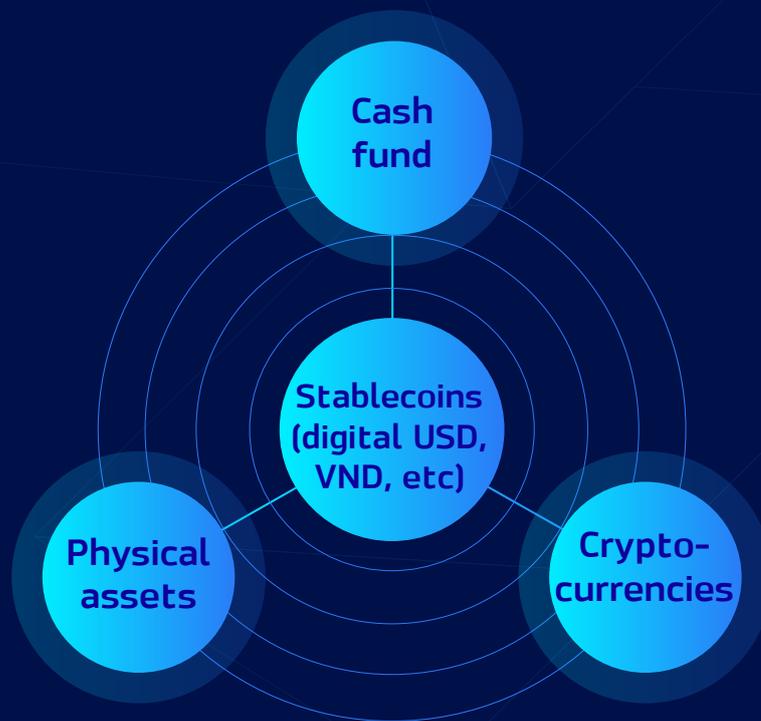
[2] Investment Fund is a legal entity, normally licensed by central banks.
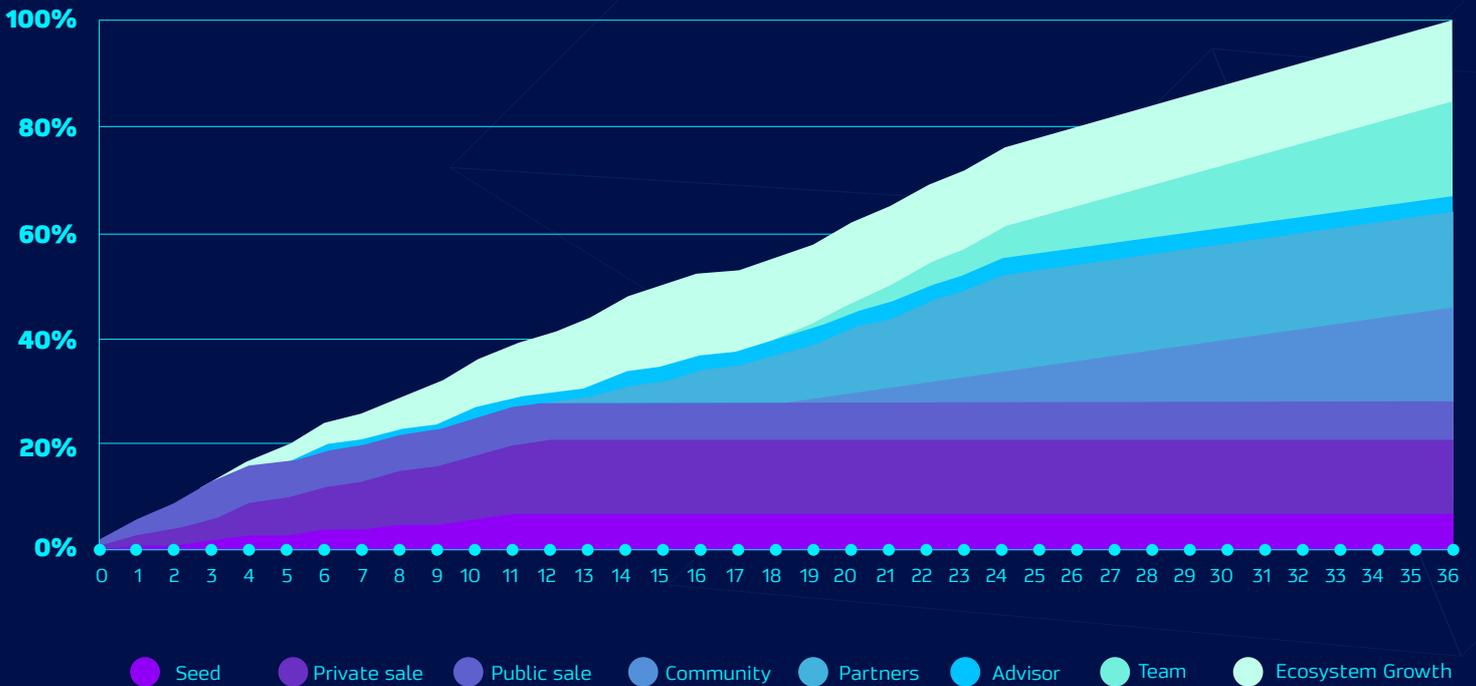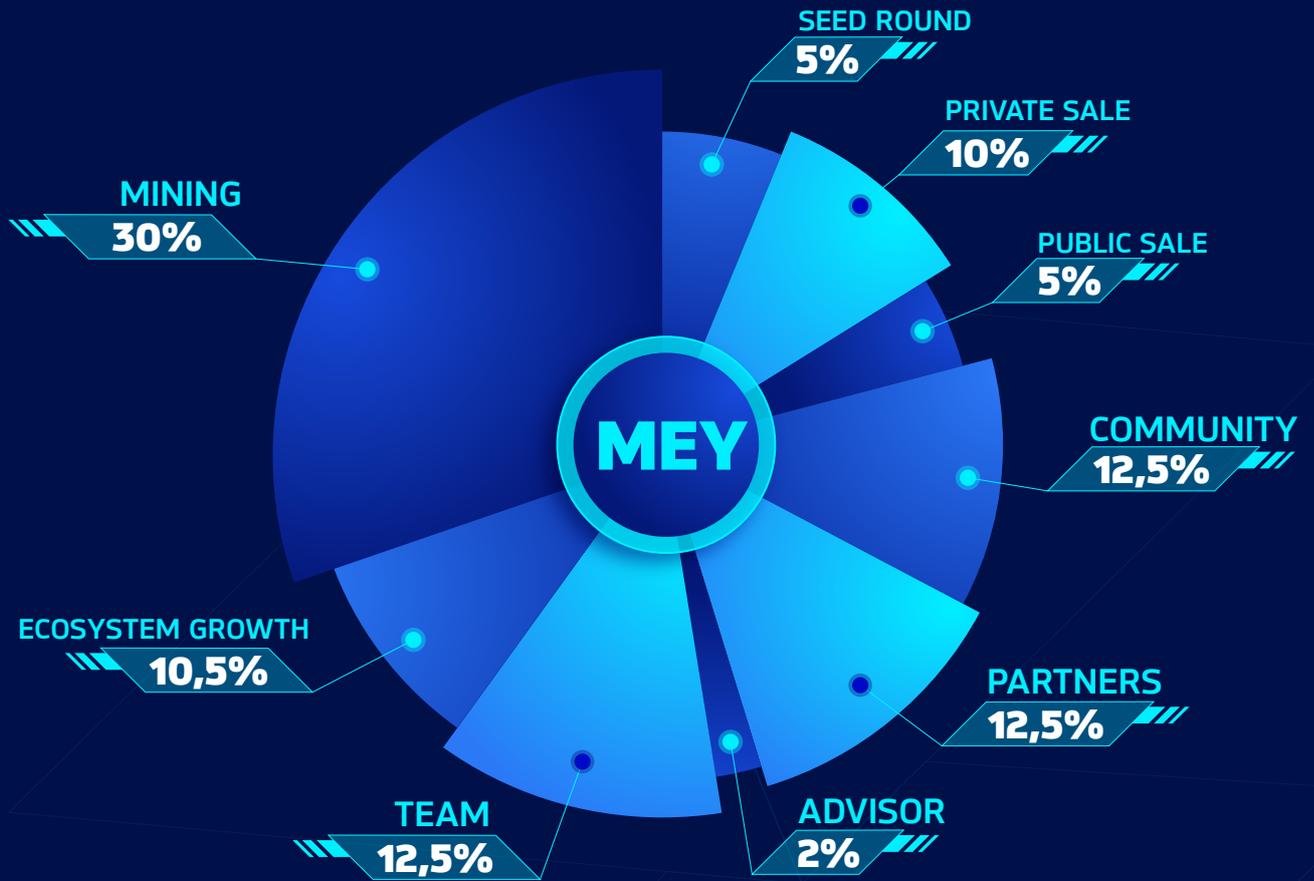
6 Token economics

Meychain generates a unique native token (or native cryptocurrency), exclusively utilized for validators' staking and block reward on the entire network. The native coin is not security-type but represents the intrinsic value of the Blockchain analogously to other crypto assets (e.g. BTC of Bitcoin, ETH of Ethereum), whose price may vary over time. Meychain will pre-mine a certain amount of native coins at the genesis block (i.e. block 0) to use for initial staking of the founding nodes. After that the new coins are generated as a reward per newly produced block and distributed appropriately to all nodes, and the development foundation. The native token names "MEY TOKEN", ticker symbol "MEY".

- Max supply: 2.3 billion MEY
- Premint: 1.61 billion MEY
- Available for mining: 690 million MEY
- Block reward and token inflation: see Section 6.2

6.1 Token allocations & fundraising

MEY will be issued 1.61 billion tokens on Binance Smart Chain for fundraising and initial ecosystem development. At the MEYCHAIN mainnet launch, 1.61 billion native tokens will be generated at the genesis block to swap with BEP20-based MEY tokens.

Allocation	% per total supply	Token Amount	Price ($)	Funded Amount	Lock (months)	Upfront	Vesting (months)
Seed round	5,0%	115.000.000	0,020	$2.300.000	0	5,0%	12
Private sale	10,0%	230.000.000	0,025	$5.750.000	0	8,0%	12
Public sale	5,0%	115.000.000	0,030	$3.450.000	0	10,0%	3
Community	12,5%	287.500.000			18		18
Partners	12,5%	287.500.000			12		24
Advisors	2,0%	46.000.000			3		12
Team	12,5%	287.500.000			18		18
Ecosystem growth	10,5%	241.500.000			3		12
Mining	30%	690.000.000					
Total	**100,0%**	**2.300.000.000**		**$11.500.000**			

SEED ROUND
5%

PRIVATE SALE
10%

PUBLIC SALE
5%

MINING
30%

COMMUNITY
12,5%

ECOSYSTEM GROWTH
10,5%

PARTNERS
12,5%

TEAM
12,5%

ADVISOR
2%

MEY

100%

80%

60%

40%

20%

0%

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

● Seed ● Private sale ● Public sale ● Community ● Partners ● Advisor ● Team ● Ecosystem Growth

6.2 MEY token inflation & block reward

Meychain uses dynamical block reward [3] to avoid deflation or hyperinflation. To that end, the reward rate will be subject to governance, within pre-established boundaries. This will allow token holders to choose the rate at which the MEY coin reaches its capped supply. Transaction fees, denoted by the set F, will be governed eventually. F is effectively a tuple which describes the fees associated with the various instructions and transactions supported in future releases. Finally, staking times and amounts will also be governable.

- Δ : MEY staking amount, defining the minimal stake required to be placed as a bond before participating in the system. The default value on genesis will be 3000 MEY coins.

- δ_{min} : The minimal amount of time required for a node to stake into the system. The default value on genesis will be 2 weeks.

- δ_{max} : The maximal amount of time a node can stake. The default value on genesis will be 52 weeks.

- γ, λ : The two key parameters in governing the minting rate function.

- F : the fee structure, which is a set of governable fees parameters that specify costs to various transactions.

MEY has a capped-supply (max supply) of 2,300,000,000 (2.3B) tokens. The genesis block will have 1.61B
MEY tokens. The rest of the 690M tokens will be minted according to the following Equation 1.

Minting function

R_j is total number of tokens at year j, with $R1 = 1.61B$, and R_l representing the last year that the values of $\gamma, \lambda > 0$ were changed; c_j is the yet un-minted supply of coins to reach 2.3B at year j such that $c_j \leq 690M$; u represents a stakeholder, with $u.s_{amount}$ representing the total amount of stake that u has, and $u.s_{time}$ the length of staking for u.

$$R_j = R_l + \sum_{\forall u} \rho\,(u.s_{amount}, u.s_{time}) \times \frac{c_j}{L} \times \left(\sum_{i=0}^{j} \frac{1}{\left(\gamma + \frac{1}{1+\lambda}\right)^i} \right) \qquad (1)$$

where,

$$L = \left(\sum_{i=0}^{\infty} \frac{1}{\left(\gamma + \frac{1}{1+\lambda}\right)^i} \right) \qquad (2)$$

At genesis, $c1 = 690M$. The values of γ, λ are governable, and if changed, the function is recomputed with the new value of c_*. We have that $\sum \rho(*) \leq 1. \rho(*)$ is a linear function that can be computed as follows ($u.s_{time}$ is measured in weeks, and $u.s_{amount}$ is measured in MEY tokens):

$$\rho\,(u.s_{amount}, u.s_{time}) = (0.002 \times u.s_{time} + 0.896) \times \frac{u.s_{amount}}{R_j} \qquad (3)$$

If the entire supply of tokens at year j is staked for the maximum amount of staking time (one year, or 52 weeks), then $\sum_{\forall u} \rho\,(u.s_{amount}, u.s_{time}) = 1$. If, instead, every token is staked continuously

for the minimal stake duration of two weeks, then $\sum_{\forall u} \rho\,(u.s_{amount}, u.s_{time}) = 0.9$. Therefore, staking for the maximum amount of time incurs an additional 11.11% of tokens minted, incentivizing stakeholders to stake for longer periods. Due to the capped supply, the function above guarantees that regardless of the number of governance changes, we will never exceed a total of 2.3B tokens. Therefore, $lim\,R_j = 2.3B$
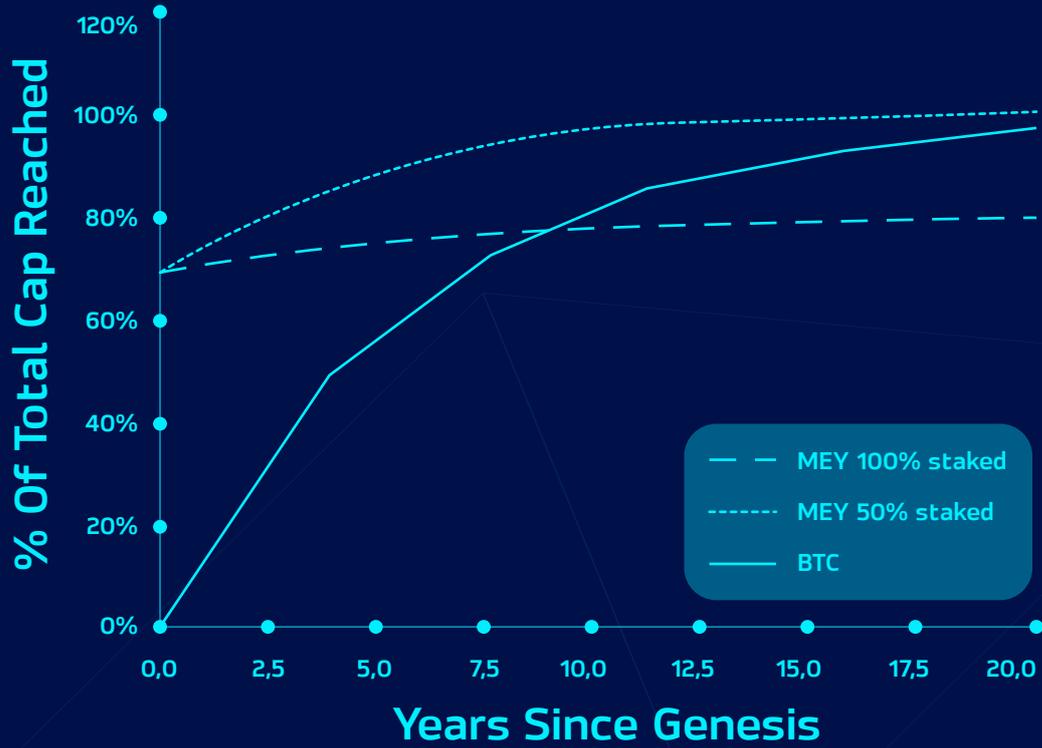
Token emissions between MEY token and BTC, calculated over a 20-year horizon with γ = 1.15 and λ = 1.1.
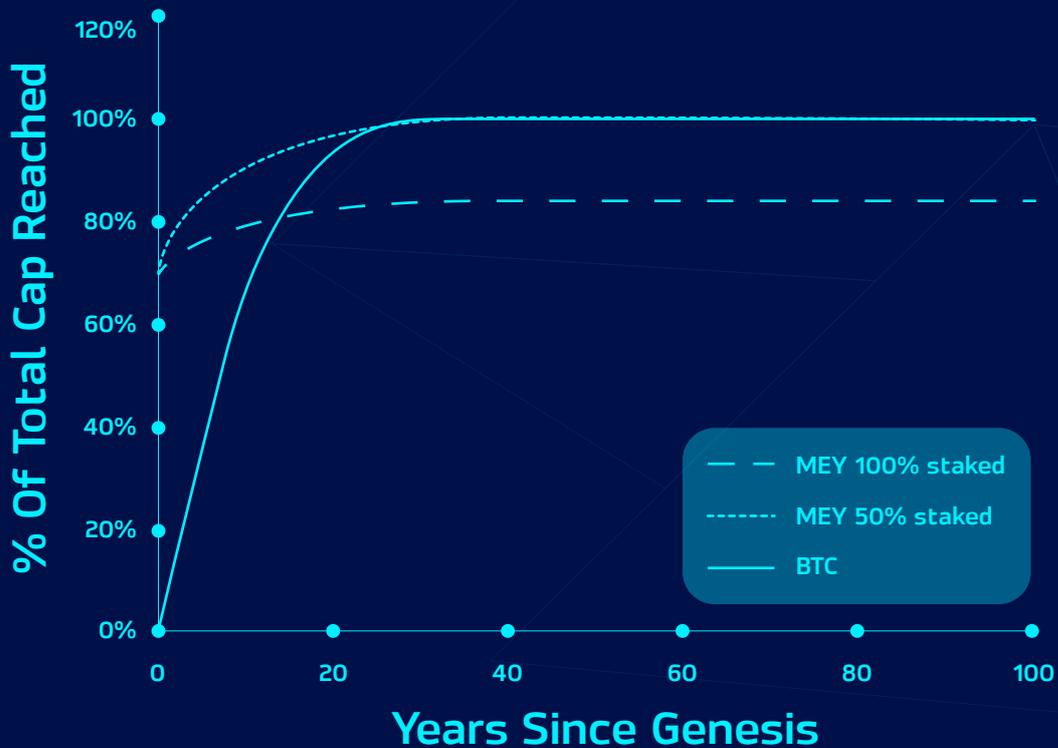
Token emissions between MEY token and BTC, calculated over a 100-year horizon with γ = 1.15 and λ = 1.1.

7 Use cases and the Ecology of Meychain

Meychain Ecology consists of decentralized finance applications in real estate and property investment & management, spanning to various financial areas (both traditional and crypto), based on the core Mey Blockchain infrastructure. Especially, Meychain powers a decentralized exchange protocol that allows swapping and trading all kinds of crypto assets fueled by stablecoins.

Based on the Mey blockchain core, Meychain Ecosystem has various applications on digitized economics and decentralized finance, which are either developed by Meychain Foundation & its partners, or by third party developers. The ecology of Meychain means an open, complete and interactive space of many financial ecosystems. It includes but is not limited to:

- A blockchain hub for property digitization and tokenization, then facilitating property investment & management.

- Decentralized exchanges to trade both kinds of real estate and crypto-currencies.

- Cross-chain swaption: kinds of digital assets can be swapped seamlessly between Meychain and other blockchains.

- P2P-mortgage loans can integrate Meychain's stablecoins and cryptocurrencies for easy transactions and simple accounting.

- Crowd-funding platforms are built on smart contract and Decentralized Autonomous Organization (DAO) mechanisms on Meychain, which gives retail investors more opportunities for real estate investment and governance.

8 Tentative three-year roadmap

Meychain development follows three major stages corresponding with business, technical progress and community expansion.

	Technical progress
H2.2021	• Research market & technology • Whitepaper & technical paper • Fundraising • Property tokenization protocol: testnet
H1.2022	• Property tokenization protocol: mainnet • Platform for trading real estate tokens • P2P-mortgage loan platform: MVP
H2.2022	• Meychain: core blockchain testnet • Meychain explorer • P2P-mortgage loan platform: V.1.0
H1.2023	• Meychain: core blockchain mainnet • DEX for cryptos on Meychain • Cross-chain bridge to Ethereum
H2.2023	• Cross-chain bridge to Binance Smart Chain • Crowdfunding platform on Meychain
2024	• Stablecoin protocol on Meychain • Lending protocol on Meychain

9   Disclaimer

MEY (the unique native token of Meychain) represents the intrinsic value of the chain and is used for network governance and consensus only. It is not designed as a security, financial instrument, or any security-type, not tentative for speculation. The presale funding is used for Meychain development and adoption acquiring, not for profit in any way. Investing in cryptocurrencies and token sales has certain risks and investors should take due diligence carefully themselves. The Meychain Team doesn't intend, guarantee or have any legal duty for any profit or loss of any investment on the project.

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