

Light Paper
(February 2022)

Klaytn 2.0: The metaverse blockchain for all



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The metaverse blockchain for all

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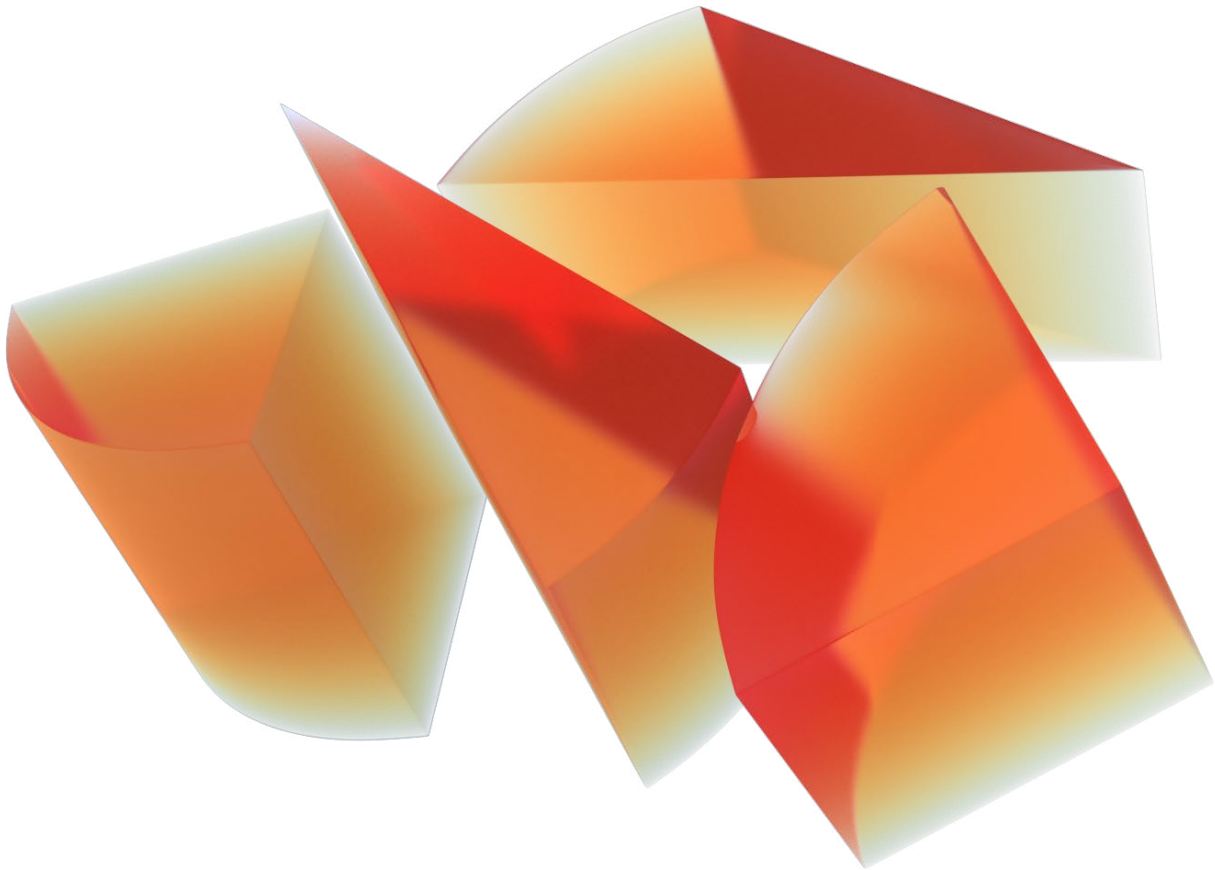
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Why We Are Here

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Here to make a better world through people and technology



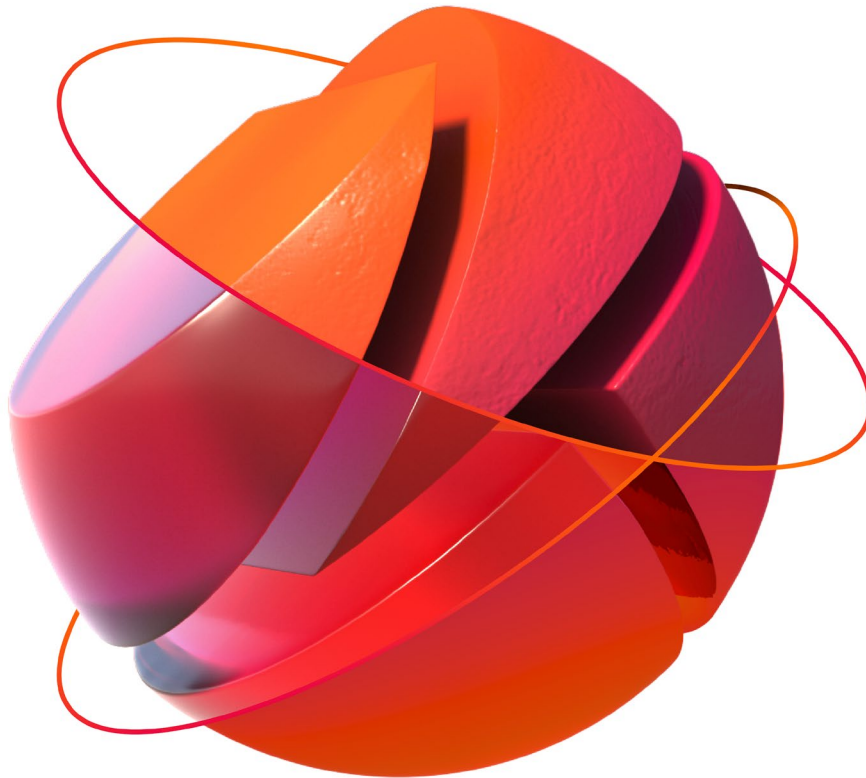
In 2019, Kakao—one of South Korea’s leading software enterprises—created the Klaytn blockchain with the intention of staying true to its mission of making a better world through people and technology.

As an EVM Layer 1 blockchain, Klaytn is designed to be practical and reliable, focusing not just on technology and business, but also transformative change that will empower individuals in the age of Web3.

To that end, the Klaytn Foundation is committed to making blockchain technologies more accessible, to pave the way for more to be a part of the Web3 revolution, with Klaytn as the preferred trust layer that will connect people from all walks of life and all corners of the world.

To build the infrastructure for this collaborative Web3 playground, Klaytn will couple our robust community with powerful infrastructure technologies to discover new opportunities and accelerate the speed of innovation.

We are the trust layer of the metaverse



The metaverse is poised to redefine society, by providing creators and players with a clean slate to define new standards and let their creativity flourish in our dynamic digital future.

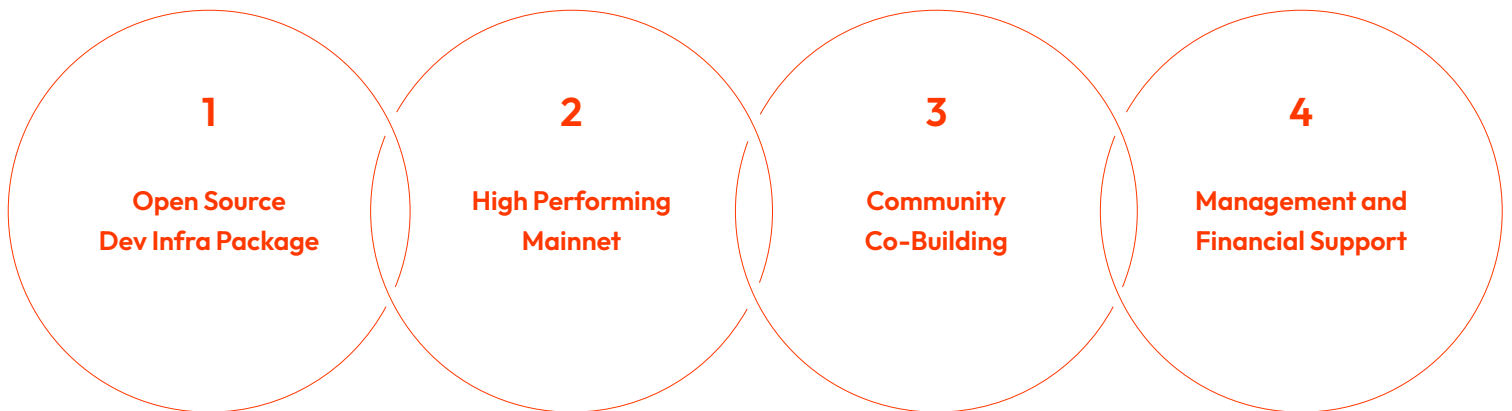
This movement will begin with the underdogs, creative minds, youngsters, and outsiders—everyone who wants to be themselves without facing any prejudice.

This means that the metaverse should not be owned and operated by a central authority. It has to be a world where people are granted genuine ownership and the freedom to express their ideas without inhibition.

As an open source public blockchain project, Klaytn is built to be the fundamental trust layer for the metaverse, respecting the participation and contribution from all communities, empowering and bringing them together in the new world.

'One-Stop' chain for metaverse builders

Our integrated offers for builders



- L2 Solutions
- SDKs
- Smart contract library
- Wallets
- Chain explorer
- Oracles
- Distributed storage
- Bridges
- DAOs
- NFT marketplace
- DEXs/DeFi
- ... + 'Packaging' all of these

- High throughput / TPS
- Immediate finality (~1 second)
- Seamless interoperability with other blockchains (including Klaytn L2 chains), wallets, bridges, and explorers

- Game guilds
- Investment DAOs
- Community DAOs
- Launchpads
- Alliance with global players

- Treasury advisory
- Klaytn Growth Fund
- IP-centric investment fund
- Performance incentives
- GC invitation

Success cases within our ecosystem

Games

MIR4 is a Klaytn-based P2E game by Wemade, which attracted over 1.3 million concurrent players in less than three months since its official release in 170 countries.



Pocketful of Quarters, a gaming tournament platform, enables game players to move across different game ecosystems using Quarters, the universal, game-agnostic cryptocurrency.



Exchanges / DeFi

KLAY is listed on many major global exchanges such as Binance, and has abundant liquidity worldwide.



The DeFi ecosystem on Klaytn has also grown exponentially, with more than \$2B TVL (Total Value Locked).

\$2B↑
DeFi TVL

NFTs

Klaytn is one of the three chains linked to OpenSea, which hosts over 1,800 Klaytn-based NFT projects. Our top 100 projects have a combined trading volume of 10,800 ETH (37M USD).



TOP 10 Klaytn-based NFT projects



Success cases within our ecosystem

Wallets

Kaikas is a browser-extension wallet that is used by many Klaytn DeFi platforms as well as OpenSea.



Klip is a wallet embedded in the KakaoTalk messaging app, connecting its 1.67 million KYC users to various DApps in the Klaytn ecosystem.



Metamask officially supports Klaytn network, and can be easily integrated with projects on our ecosystem.



METAMASK

TokenPocket is a mobile-based wallet that supports public blockchains including Klaytn. It provides reliable digital currency asset management services for nearly 10 million users from more than 200 countries and regions.



Layer 2

WEMIX is WeMade's Klaytn sidechain which hosts the blockbuster MMORPG MIR4. WeMade has also recently announced its plan to onboard 100 games onto its platform.



BORA successfully migrated to the Klaytn sidechain after its acquisition by Kakao Games. BORA has a slew of exciting projects revolving around NFTs and games in store for the future.



CBDC

In July 2021, Ground X was selected as the preferred bidder for the Central Bank Digital Currency (CBDC) pilot project led by the Bank of Korea. The project is implemented on a private version of Klaytn.



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How We Are Different

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Klaytn 2.0's unique strengths



Klaytn 1.0



Klaytn 2.0

Metaverse Package

A comprehensive package of tool sets and supporting ecosystem to make building for the metaverse easier than ever.



Transaction Finality

More TPS and decentralization while maintaining 1-second deterministic finality to ensure your transactions will never be reversed.



Ethereum Compatibility

EVM-based DApps will be able to onboard without any modifications.



Decentralizing Governance

A unique governance structure with DAOs, Builders and Enterprises to deliver decentralization and stability.



Massive Eco Fund

A \$1 billion fund to support high-potential projects with grants, investments and reward programs.



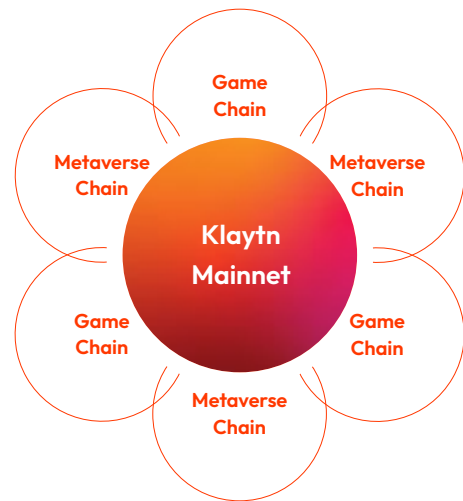
A hassle-free entrance into the metaverse

Lowering the barrier to entry

It is clear that blockchain technology will serve as the critical trust layer for the metaverse.

However, between the fledgling state of blockchain tech and the difficulty of selecting the right tools and components, blockchain development is still filled with hurdles.

That's why we put together an end-to-end package that's designed to help builders of metaverse enter the blockchain world as smoothly as possible.



Klaytn offers end-to-end integration including a built-in L2 solution

Klaytn's Metaverse Package

Primary Infrastructure:

Tool sets for end-to-end blockchain integration and building

1. Customized L2 solution
2. SDKs and smart contract libraries
3. Wallets and chain explorers
4. Distributed storage solutions
5. Oracle support
6. Bridges

Secondary Infrastructure:

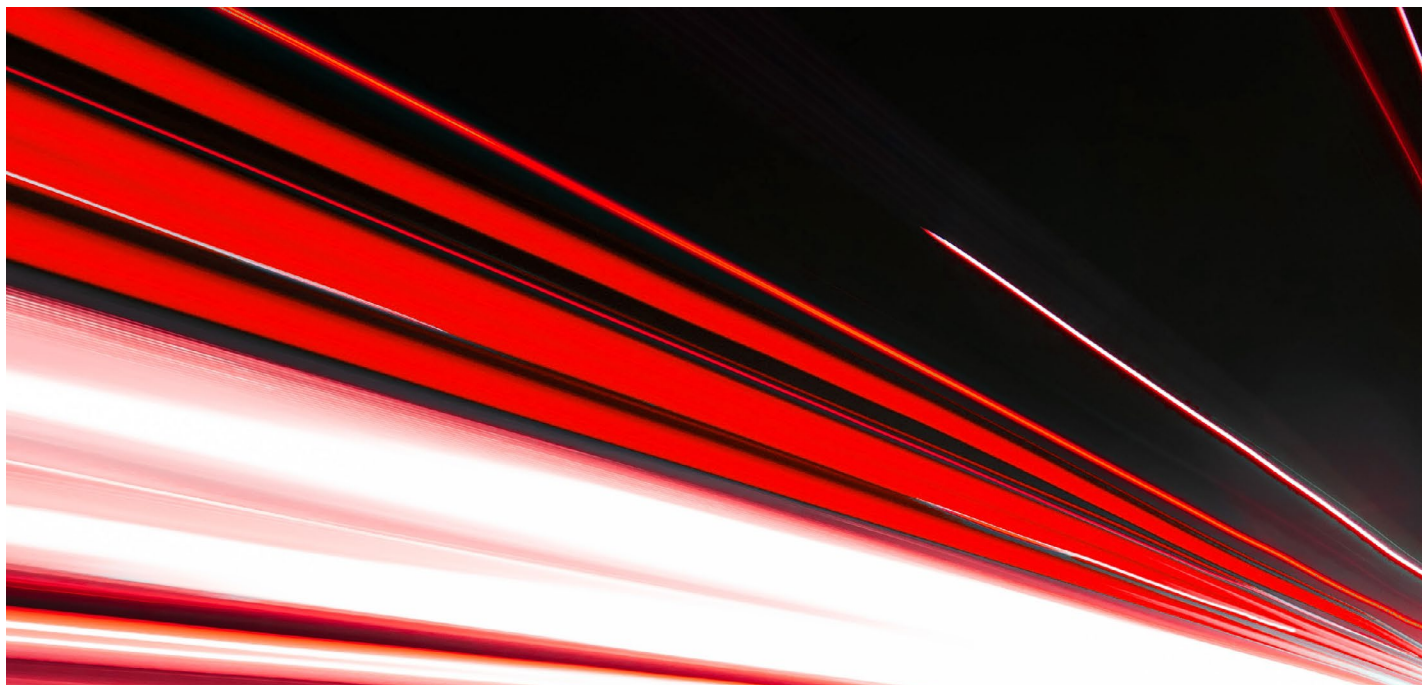
Ecosystem for supporting products and services

1. Integration/abstraction services
2. Stablecoin integrations
3. DAOs
4. NFT Marketplaces
5. DEX and DeFi
6. Traditional finance interfaces

- This package will be managed by our dedicated package manager.
- Builders can easily build and customize Layer 2 as well as create/transfer assets.

With our metaverse package, the complexity of blockchain will no longer get in the way of realizing your aspirations.

Vast improvements with uncompromised instant finality



1-second finality

Even with more consensus nodes, better performance and numerous feature enhancements, Klaytn will maintain 1-second block finality to ensure speedy transactions that will never be reversed.

Throughput (TPS)

Klaytn's performance will be further boosted through a combination of network upgrades and layer 2 solutions, allowing it to handle a massive number of transactions.

Scalability

Klaytn 2.0 will address scalability through service chains, our easily customizable and deployable L2 solution. Other solutions, such as sharding or rollups, are also being planned for the future.

Tiered Network

Klaytn's tiered structure delivers transactions to the consensus nodes effectively by distributing the workload for greater stability. Our nodes are also continuously fortified to ensure seamless operation.

Interoperability

Various ecosystems (such as DEX, Bridge, Oracle, etc) will flourish on Klaytn. The asset transfer or exchange between Klaytn and other blockchains will be much easier.

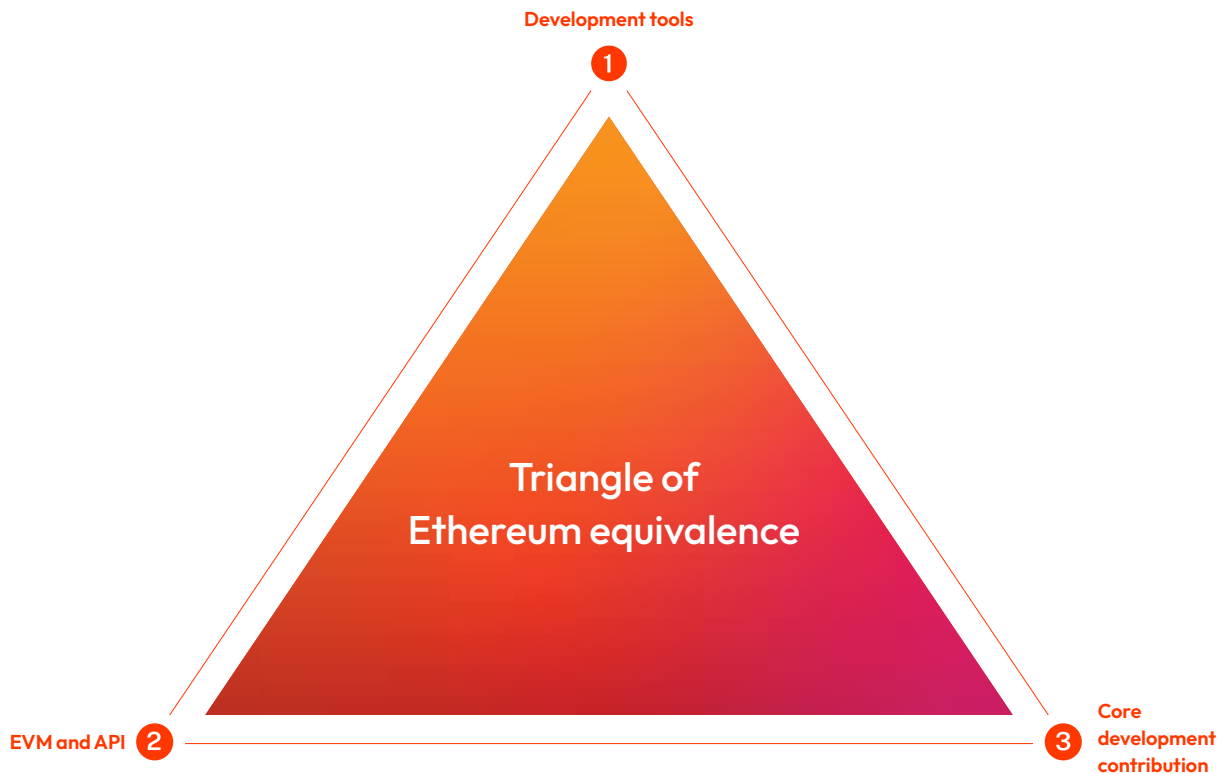
User Experience

Klaytn delivers a superior end-user experience by providing fast transaction processing suitable for mobile environments, the ability to update exposed keys to mitigate risks, and fee delegation to transfer the transaction fee burden.

Developer Experience

Klaytn supports Ethereum equivalence, which provides access to the complete stack of Ethereum development tools and enables effortless migration of Ethereum projects. In addition, fast and inexpensive multi-signature functionality is also supported at a protocol level without requiring a smart contract implementation.

We support Ethereum equivalence



1 Development tools

Any tooling that can run on Ethereum will run seamlessly within the Klaytn ecosystem by making Klaytn's technical stack equivalent, from an interfacing and execution perspective, to the existing Ethereum stack. New tooling created in the Klaytn ecosystem could be reciprocally adopted within the Ethereum ecosystem.

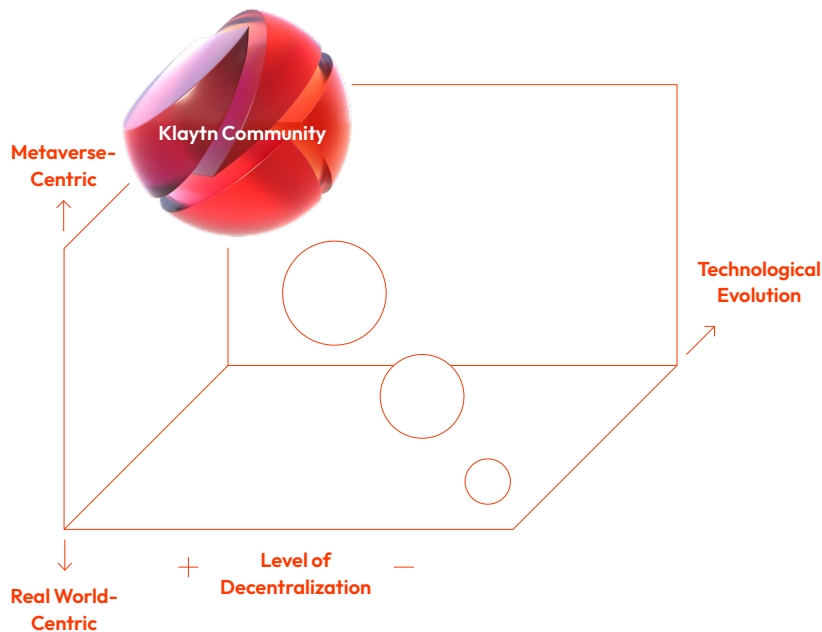
2 EVM and API

By building on top of existing Ethereum stacks; we inherit any improvements made to the open-source codebases of EVM and supporting libraries. Supporting such equivalent Opcodes and stack logic in the Klaytn EVM environment would see execution behaviour is guaranteed equivalent; and supporting a set of JSON-RPC APIs with equivalent endpoint payload syntax guarantees full Ethereum interfacing equivalence.

3 Core development contribution

Supporting Ethereum equivalence translates most to the mutual benefit to both the Klaytn and Ethereum ecosystems. The majority of Ethereum Improvement Proposals (EIPs) could be migrated and adopted to the Klaytn core development agenda, and in turn Klaytn Improvement Proposals (KIPs) could contribute to the advancement of Ethereum and EVM. When the development community contributes to one ecosystem, they are indeed contributing to both.

Our unique governance structure delivers decentralization with stability



Response to the growth of non-traditional entities

With technological advancement, we will live in a more metaverse centric world where the influence of non-traditional entities such as builders contributing to the operation of the metaverse and DAOs as a major form of organization in the metaverse will continue to grow.

Diversification of governance participants

In addition to traditional enterprises, by bringing on DAOs into the Klaytn Governance Council (GC), we are opening up the potential to rebuild the entire Klaytn governance structure in an unprecedented way with hundreds of governance participants.

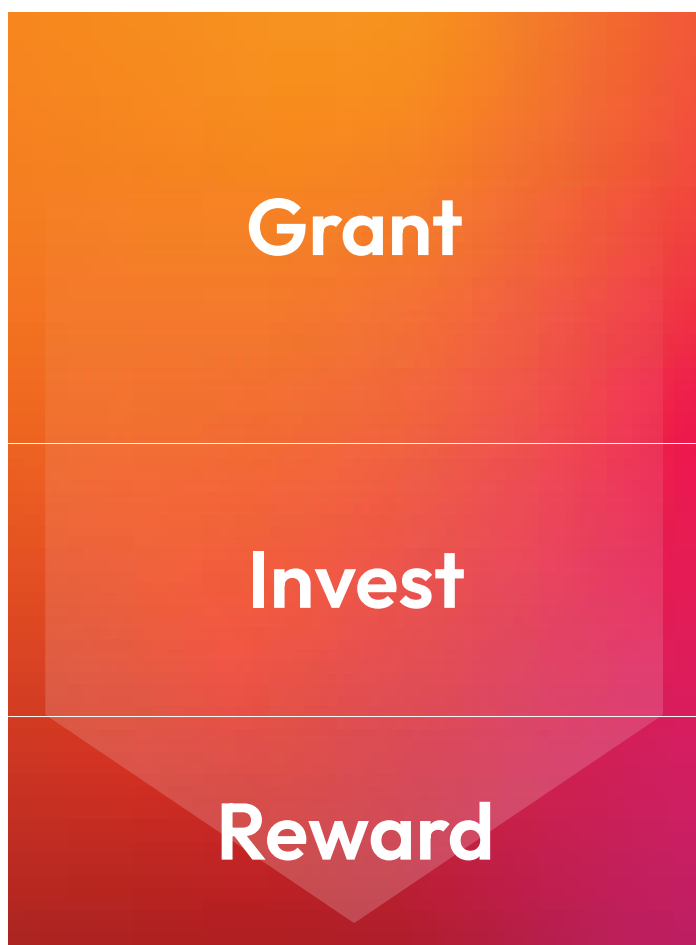
Voting power that scales with community support

A stake-based governance model will be introduced to enable governance participants who can gather more support from Klaytn Communities to shape Klaytn in line with their preference. The Gini Coefficient will be discontinued soon. Entities who can make a proper decision in a Metaversified world will have more influence in the Klaytn GC. We believe DAOs and builders will lead the scene in the future.

Ultimate goal of decentralization

With the level of metaverse mainstream acceptance and real world integration crosses the critical threshold into widespread adoption, Klaytn governance will in tandem become fully decentralized with its community of DAOs and builders. Ultimately, Klaytn will evolve into a DAO of DAOs and a platform for DAOs to communicate the voices of Klaytn Communities through on-chain mechanisms.

Our full-suite, protocol-level \$1B+ Eco Fund



Klaytn Improvement Reserve (KIR)

- Our grant program that supports public goods such as infrastructure, tools and services that improve the quality of Klaytn L1
- 12% of the newly issued tokens are the main financial resource

Klaytn Growth Fund (KGF)

- Faucet resources for initial service testing and marketing - quickly applied and easily approved
- Paid cumulative \$9M in 4Q of 2021

KGF Investment Program

- Invests in early-stage projects with potential to have a positive impact on Klaytn
- 54% of the newly issued tokens are the main financial resource of the Klaytn Growth Fund

Proof of Contribution (PoC) Program

- Rewards builders of smart contracts that contribute to the growth of on-chain activities on Klaytn

Klaytn is the first and the largest example in which the incentives supporting the ecosystem are encoded in an on-chain protocol tokenomics. 66% of the newly minted tokens are reinvested in the ecosystem.

Initially issued reserve tokens will also be used as a resource for investment in the ecosystem expansion.

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Our journey from Kakao to Klaytn Foundation

kakao

Krust
UNIVERSE

 klaytn foundation

Kakao's growth from a tech startup to a \$60 billion business was guided by the five pillars of its philosophy: Willing to Venture, Back to Basics, Trust to Trust, Act for Yourself, and Tech for Good. Even though Kakao sits comfortably as Korea's 6th largest enterprise, these same values drove it to pursue innovation in Web3.

Predicting that a more decentralized, democratic world of Web3 would arrive shortly, Kakao brought together some of the brightest developers in the industry and established Ground X, a subsidiary for their blockchain endeavors.

Since then, Ground X has built a suite of products including the Klaytn network (a public blockchain that is widely adopted in South Korea), Klip (a messenger built-in wallet with a massive user base), Klip Drops (an NFT marketplace for fine art), and more.

Eventually, the necessity for an independent organization that is solely focused on Klaytn's growth became evident, and the Klaytn Foundation—a non-profit entity devoted to the Klaytn network and its ecosystem—was established. The Klaytn Foundation is supported by its main sponsor Krust Universe, whose mission is to invigorate the Klaytn ecosystem on a global scale.

A dream team of blockchain industry legends

Team Klaytn



SANGMIN SEO

Director,
Klaytn Foundation
CTO, Ground X
Computer Scientist,
Argonne National Lab
Ph.D. in CS, SNU



DAVID SHIN

Global Adoption
Head of Asia, Tezos
Head of Exchange,
Bitcoin.com
Served as Director &
VP in investment banks



YOUNHO LEE

Klaytn Strategy &
Treasury
Lead of Klaytn
Business, Ground X
Investment Director,
Huobi Korea
Investment Manager,
Lindeman Asia



JUNGHYUN KIM

Core Development
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Samsung
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TERRY WILKINSON

Ecosystem Solutions
Founder & CEO,
Polytree
VP of Engineering,
Anchor Neural World
Foundation
Blockchain Lead, ADDX



NEO C.K. YIU

Technology Advocacy
Group Blockchain
Lead, De Beers Group
Director of
Technology, Oxford
Blockchain Society
Ph.D. in Engineering,
University of Cambridge

Advisors



JIHO SONG

Representative,
Krust Universe
Founder & CFO,
Kakao Corp.



JUNYEAR KANG

CEO, Krust Universe
CEO, Bass Investment
CSO, Kakao Corp
Board of Director,
Dunamu(Uppbit)

DeFi	Sheepfarm KlayCity KLAYMeta BirdTornado Dicast Tank Royale Klay Genome Mudol FiveStar for Klaytn CrypTornado Honor of Kingdoms CaiShen ChuanQi Jun Meta SlimeFarm	MakerDAO NEOPLY Netmarble Pearl Abyss SK Networks Shinhan Bank VNG WeMade Worldpay	OpenSea Klapes Klip Drops NFTBank MetaKongz Doge Sound Club Little Orbit Klubs Treasures Club KrafterSpace ElectroPixelKongz Joseon Dynasty NewKlayPUNKS Meta Cats V1 Cat Town Punks CyberTHUG Cases by Kate Animal Punks V2 Per Friends MyTems Clubrare 3space Art Klay Hub Treasurer Ulmaya Hypesalt KlayMint MyPics	BSN <th style="background-color: #ff7f0e;">DApp</th> HABL ProjectWITH SomeSing TESSA REDi TEMCO Airbloc PetCompany Quiztok Cloudbrick Cryptobirc Chainfix Pibble	DApp	Others				
KLAYswap KLAYSTATION KlayFi Kokoa Finance ClaimSwap Kronos dao Finance Definix Pala Swap KLAYportal BINANCE Staking eklipse.finance Kai Protocol nBlocks Wallet Qubit Kai Auto Donkey Fund UFOswap Orca Finance Turtle King Finance Kleva Finance Klaybank Swapsanner Bluewhale Protocol i4i Finance TaalSwap Transit Swap Jun Protocol Klaywatch Clink Fleta Connect Injective Protocol Klaymore Stakehouse	<th style="background-color: #ff7f0e;">Governance Council</th> AhnLab Amorepacific Binance Celltrion Cocone Everrich FSN GS Retail GroundX Gumi Hanwha Systems Hashed & Ozys Hashkey Kakao Kakao Entertainment Kakao Games Kakao Pay Kakao Space Korea Economic Daily LG Electronics LX International Maekyung Media Group	Governance Council	<th style="background-color: #ff7f0e;">Wallet</th> MetaMask Klip Kaikas TokenPocket Huobi Wallet Coin98 D'Cent Biport Dekey	Wallet	<th style="background-color: #ff7f0e;">Exchange/Payment</th> BINANCE OKX Upbit Global Bithumb Coinone Kucoin Bybit korbit FMFW.io Gate.io HitBTC Crypto.com MEXC Indodax WazirX CoinDCX Liquid Bittrex Banxa Moonpay ChangeNow Bitpanda	Exchange/Payment	#HASHED Hashed CoinMarketCap CoinGecko Genesis Block Quantstamp FIO FIO Hex Trust Xangle Likelion Korea Society of Blockchain Seoul National University KAIST KAIST HAECHE LABS Haechi Labs Hexlant. Hexlant ZKrypto S2W LAB Copper HCB KODA Uppsala Security			
<th style="background-color: #ff7f0e;">Gaming</th> <td> WEMIX Mir4 PoQ Syltare </td> <td> <th style="background-color: #ff7f0e;">Tools / Infrastructures</th> DappRadar State of the Dapps Klaytnscope KAS Henesis Octet Tatum Dexata LoremBoard To The M KlUV Ranked </td> <td> <th style="background-color: #ff7f0e;">Entertainment</th> East NFT MetaWeek Animal Concerts ALTAVA Fantrie </td> <td> <th style="background-color: #ff7f0e;">Enterprise</th> GMO Salim Group </td> <td> <th style="background-color: #ff7f0e;">Caveat</th> <p>This snapshot shows the current status of the Klaytn ecosystem as of Jan 22, 2022. As Klaytn is a public blockchain that can be used by anyone, we cannot vouch for the reliability of every individual project in our rapidly growing ecosystem. We advise everyone to DYOR on projects that you are interested in.</p> </td>	Gaming	WEMIX Mir4 PoQ Syltare	<th style="background-color: #ff7f0e;">Tools / Infrastructures</th> DappRadar State of the Dapps Klaytnscope KAS Henesis Octet Tatum Dexata LoremBoard To The M KlUV Ranked	Tools / Infrastructures	<th style="background-color: #ff7f0e;">Entertainment</th> East NFT MetaWeek Animal Concerts ALTAVA Fantrie	Entertainment	<th style="background-color: #ff7f0e;">Enterprise</th> GMO Salim Group	Enterprise	<th style="background-color: #ff7f0e;">Caveat</th> <p>This snapshot shows the current status of the Klaytn ecosystem as of Jan 22, 2022. As Klaytn is a public blockchain that can be used by anyone, we cannot vouch for the reliability of every individual project in our rapidly growing ecosystem. We advise everyone to DYOR on projects that you are interested in.</p>	Caveat
				<th style="background-color: #ff7f0e;">Contact</th> <p>For any inquiries regarding adjustments or inclusion of your project, contact us at contact@klaytn.foundation</p>	Contact					

Interested to learn more?

LEARN MORE ABOUT KLAYTN

Visit the Klaytn Foundation website
Blog

GET INVOLVED IN OUR COMMUNITIES

Telegram (Global / Korean)
Discord
Twitter
Facebook
LinkedIn

CONTRIBUTE AND BUILD ON KLAYTN

Build DApps: Klaytn Docs, Forum
See recent updates and tech articles: Tech Blog
Contribute to core code: Github

APPLY FOR GRANTS

Public goods for the ecosystem:
Klaytn Improvement Reserve
NFT, DeFi, DAOs, other interesting things:
Klaytn Growth Fund

GENERAL ENQUIRIES

contact@klaytn.foundation

PARTNERSHIPS AND GOVERNANCE COUNCIL PARTICIPATION

partnership@klaytn.foundation