Metis Whitepaper

Metis Runs Decentralized Companies

Version 3.0

Dec 2020

Context

Driving the mass adoption of applications onto the blockchain is the vision and mission of many projects. However, after over ten years' development, the barrier is still too high for the builders to launch and operate their decentralized applications (DApps) on the blockchain.

The challenges do not just lie in the technology perspective. Although many DApps find it hard to convert complex business logic into the code of smart contracts without worrying about the performance, security, cost, functionalities, and scalability of the Layer 1 network, the real challenge is how to cater to the user experience cultivated by the internet applications and make the DApps appealing–to–adopt and easy–to–use. And more importantly, what kind of organization structure underneath should be implemented to leverage the community's participation and manage the business process in these DApps in a decentralized way.

With the launch of Ethereum 2.0, many other high–performance public blockchains, such as Polkadot, Casper Network, Solana, Near, etc., and the optimization of the developing environment and tools, the long–term–being–criticized bottleneck of Layer 1 network has found the way to breakthrough. However, the Layer 1 network's evolution only serves to solve parts of the puzzle and does not naturally entail the mass adoption of DApps.

To solve the most challenging part, if we refer to the developing stages of mobile applications becoming popular, we found that more work should be done to construct an easy–to–use framework or templates to enable builders, no matter how well they understand the blockchain technology, to launch their applications freely and effortlessly. And what's more important is that a new organization structure and management framework should also be applied to coordinate the decentralized collaborations in the DApps.

And Metis is going to solve the most challenging part.

Metis Way and Use Cases

Metis Way

Metis focuses on serving the niche market of Collaborative Economy to change the way of distributed collaborations.

Metis is building a decentralized framework on top of the Layer1 network to erases the difficulty of people using blockchain.

Metis enables builders to create their decentralized company (a Management DAO) on the blockchain, buildup trust (via Optimistic Governance) among distrustful community members, and manage the collaborations (via ComCo Framework) by incentivizing community members' involvement and contribution.

Key Advantages

- Easy-to-use framework

Builders with no technical background only need to click some buttons to launch their decentralized company and manage the community operation without worrying about the development and deployment. Teams with coding capabilities can call the protocol, APIs, and templates to create their own DApps to satisfy various user experiences.

- Cater to the UX of internet applications

No need to worry about connecting with the MetaMask, remembering private key or public key, and executing complicated on-chain operations, Metis builds up the framework to implement most of the communication with Layer1 network, erases the difficulty of using blockchain, leaving it very easy for the users to use the DApps, just like operating other internet applications.

- High scalability

By hard forking the Optimistic Rollup (OR) sidechain, Metis has constructed an event-driven framework, which does not need to place every transaction on the Layer1 network. OR sidechain will significantly empower more functions to be developed and implemented with the support of the Layer1 network.

Meanwhile, Metis applies the microservice framework to support various management tools for community collaborations. New tools can be easily plugged and unplugged from the framework to satisfy different use scenarios.

As Metis's framework is constructed on top of the Layer1 network, Metis can support and run on multiple public blockchains, which also adds the scalability for Metis to drive the mass adoption of DApps.

- Low cost

Most operations are conducted on the OR sidechains, and transactions are packed and rolled up to communicate with the Layer1 network, significantly reducing the operational cost for the DApps.

Use Cases

Metis can be applied to any collaborative economy project or business, such as Defi, Internet Communities (like developers' group, music group, food group, volunteers' group, makers group, affiliate group, etc.), Sharing Economy, Gig Economy, Crowdsourcing, etc. Metis is the enabler for all these use cases to build their decentralized company and manage their community activities.

Metis System Framework

Overall Framework
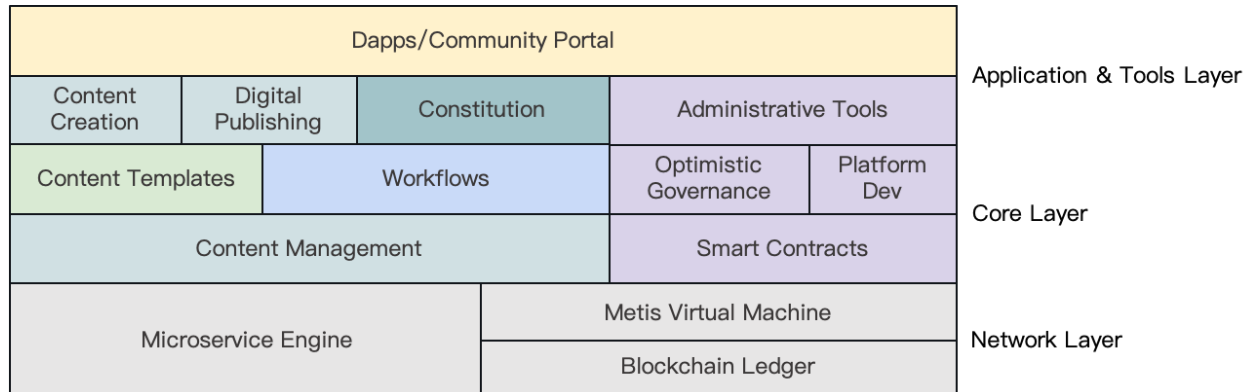
Metis system framework is aiming to lower the barrier for end users and builders. Metis will do most of the framework construction work and support multiple Layer1 networks so builders can use the platform directly or use the templates, APIs and tools to integrate into their own DApps.

Metis adopts a two–tier layered approach to construct the framework.

Metis VM

Metis VM is an extended version of the Ethereum Layer2 OVM (Optimistic Virtual Machine), adding specialized instruction sets for managing collaborations.

- Adding the support for deposit and withdraw of Layer1 Metis Token to and from Layer2.
- Introducing dynamic minimum bond for aggregators to prevent block tempering.
- Adding a data scrambling layer to protect confidential collaboration data.
- Integrating the governance protocol with the rollup process.

Besides Ethereum, Metis VM plans to support more Layer1 network infrastructures.
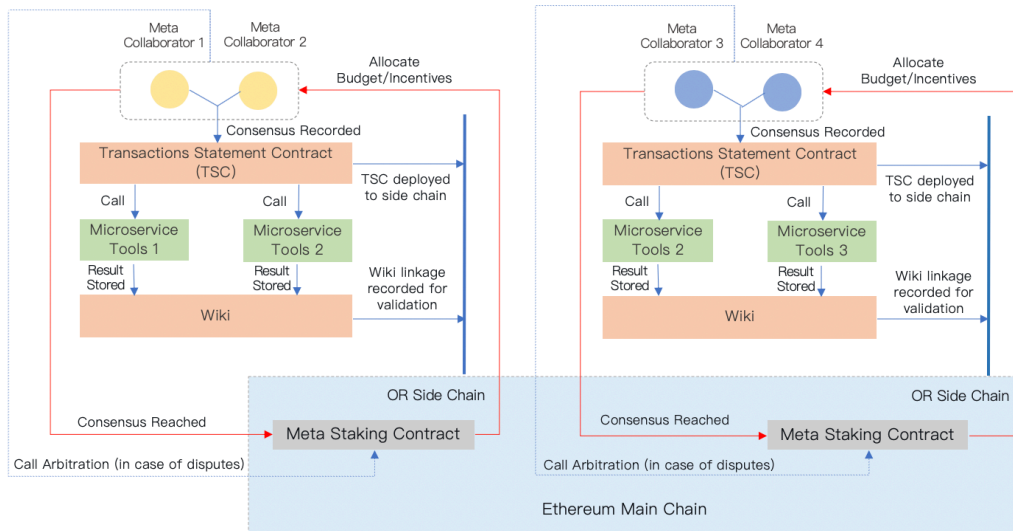
ComCo Framework

ComCo Framework is a software framework built on top of Metis VM to model and program complex collaborations for managing decentralized companies. ComCo Framework provides various on–chain tools for collaboration and management, and it serves to make the collaboration happen and hold people accountable. And the system will act as the accounting department to provide proof for disputes resolution and proof for profit sharing.
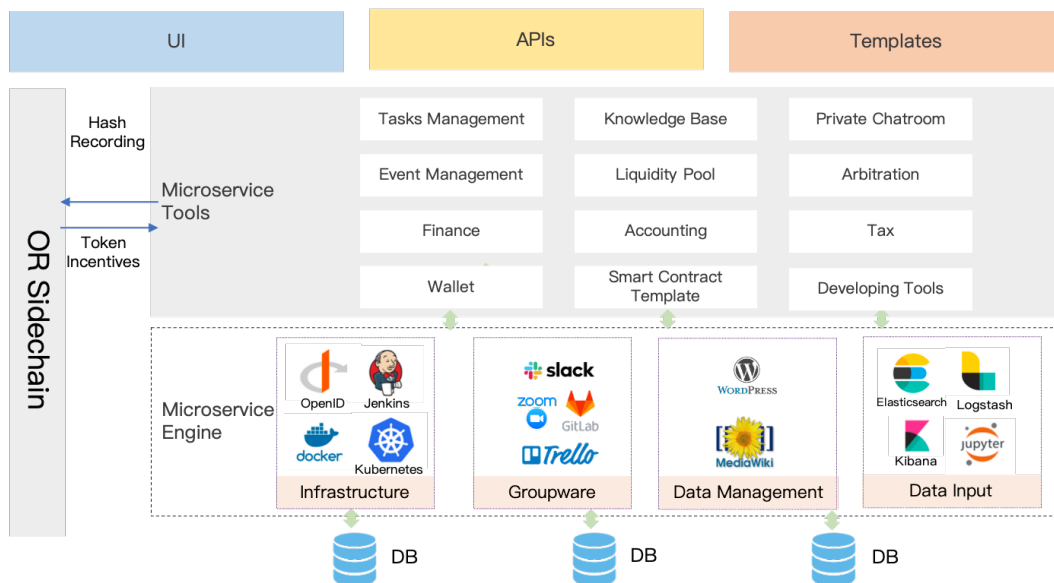
Management DAO

Metis is leveraging the mechanism of Decentralized Autonomous Organization (DAO) to construct the decentralized company.

DAO is a great concept to solve the issue of decentralized organization structure, which is featured by autonomous execution of the smart contract, community–involved collaborations, and contribution–based token incentives.

However, in practice, most DApps tend to use DAO only as a governance vehicle, where community members can submit proposals and vote. The potential of DAO, especially the power from community collaborations, is not fully exploited.

Metis takes DAO differently. Metis thinks DAO should be used to manage all the collaborations (community activities) so that the community members' power can be unleashed to support the project's development.

To do that, Metis is constructing a trusted and protected environment for DAO members to build up trust and upgrade the mission of DAO from Governance to Management.

Under the Management DAO framework, different tools can be used to activate and organize all the community members to get engaged in various tasks, activities, events that align with the project development and get incentivized based on the contribution they deliver.

Metis names Management DAO as the fundamental business unit in the Metis ecosystem. As Management DAO is very similar to a Decentralized Autonomous Company (DAC), we also call Management DAO as DAC.

Optimistic Governance

Metis deems that minimum or even no governance involved in the DAC is the best practice, so it introduces a mechanism called Optimistic Governance.

Referring to the algorithm of Optimistic Rollup, Metis leverages the staking bonds as the guarantee for each Meta Collaborator to act as their promise. Both Meta Collaborators should stake bonds into the escrow account of the Meta Staking Contract to establish the Meta Collaboration. In the collaboration process, by default, both Meta Collaborators are acting coordinately and as their promise, and the bonds will be automatically returned when the Meta Collaboration is finished. However, if any collaborator (aka "Bad Party") defaults, the other collaborator (Good Party) can apply for Arbitration service right away, the to–be–allocated bonds will be revoked, the Meta Staking Contract will be suspended. According to the arbitration result, the Bad Party's bonds will be taken away as a penalty. The revoking and arbitration mechanism of Metis enables every distributed collaborator to establish a collaborative relationship with anyone else in the world quickly, protectively, and permissionlessly.

Reputation Power

Reputation Power is an important index to evaluate the contribution of a community member. At the current stage, the algorithm of Reputation Power includes two indicators[1]: the amount and token days of the staked bonds, the protocol fee the DAC or DAC member generated.

In a DAC, Reputation Power represents the ranking of a member. A higher Reputation Power means more exposure to different collaboration opportunities and more profit sharing.

RP will also work as a social contract to prevent bad behavior or defaults.

Token Economics

- Token Name: Metis Token (Metis)
- Total Supply: 10 Million
- Value Proposition: Governance token of Metis Protocol ecosystem
- Minting Mechanisms

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[1] More indicators will be added to the algorithm of Reputation Power.

- o Any valuable transactions leveraging Metis Protocol will mint new Metis Tokens, which will be distributed among all the collaborators
- Rights of Metis Token Holders
  - o Participate in DAC operation, Governance, and Use of Data
- Use of Metis Token
  - o Metis Token is used to STAKE when you create a DAC or intent to build up a collaborative relationship with DACs.
- Protocol Fee
  - o All the collaborations (economic activities) in the DAC are built on the staking/pullback mechanism backboned by the Metis Protocol, so Metis Protocol will collect a protocol fee (0.05%) for every transaction[2] as the tax. With the increase of DAC numbers and transaction numbers, the accumulated protocol fee would offer the value base for Metis Token.
- Token Allocations Breakdown in Different Ages

		Percentage	Amount	Locked	Ways of Minting
Stone Age (15%)	Founding Team	2%	200,000	Yes	Based on Contribution (resource and funds)
	Metis Lab	2%	200,000	Yes	
	P8S	2%	200,000	Yes	
	Advisors	1%	100,000	Yes	
	Private Investors	2%	200,000	Yes	
	Community Development	3%	300,000	Yes	
	UniSwap	2%	200,000	Yes	
	Yield Farming	1%	100,000	Yes	
Bronze, Firearm and Discovery Age		85%	8,500,000	Yes	Based on Transaction in the DAC
Total			10,000,000		

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[2] Payment activities.

Development Stages and Plan

Stages	Milestones
Stone Age Dec 2018–Dec 2020	• Building up the cornerstone for Metis Protocol with the Genesis version of White Paper, Purple Paper, Meta Staking Contract, the POC ComCo Framework, and Initial Funding.
Bronze Age Jan 2021–Mar 2021	• Project cold launch • Public test net launch • Founding members join and use Metis Protocol to stake and create their DAC, and mint NFT for the ownership • Incentivize community projects to join and start collaborations to mint Metis Token incentives • API connection with Defi projects and joint promotion with Defi communities • Launch POC Layer 2 version using OR
Firearm Age Apr 2021–Jul 2021	• Main net launch with Layer 2 solution • Support DACs to issue their own tokens • DApps/Community onboard program • Microservice tools community development program
Discovery Age Starting from Aug 2021	• Enroll more DApps/Community onboard • Integrate open source microservice tools and launch Data Assets Market • Buildup DAC ecosystem

The Way Ahead

As more and more applications adopt blockchain, decentralized company will become as important as the traditional company in the real–world. Metis aims to enable various use cases to easily launch their decentralized companies on the blockchain and change the way of managing decentralized collaborations among anyone and any organizations in the world.

Metis runs decentralized companies.