

# FullOn Network Protocol White Paper

***Building a Highly Scalable, Interoperable Layer-1 Blockchain***

Version: v1.1

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## 01. Abstract

**FullOn** is a layer-1 decentralization protocol, destined to become the platform of choice to host real-world applications for Web3, A.I. and Metaverse ecosystems targeting global users. In order to meet this ambitious goal, FullOn protocol focuses on providing scalability, usability and interoperability in addition to ensuring security and decentralization. FullOn achieves scalability by first ensuring the layer one by itself is highly performant and scalable and introducing side-chains or layer two protocols only when the layer one is not best suited to support certain requirements like super low-latency, large data storage consumption or different on-chain consensus algorithms. FullOn also takes usability and interoperability very seriously through introducing new features like sovereign and proxy accounts for fast user onboarding process and universal on-chain interoperability virtually with all other blockchains and crypto wallets to achieve the deploy-once-run-anywhere effect for all DAPPs.

## 02. Introduction

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The world is now standing at the brink of the Web3 and A.I. era in which major economic and financial activities could entirely happen atop a blockchain-powered technological foundation. Apart from launching blockchain networks and issuing cryptocurrencies that can be invested or speculated by crypto fans amongst themselves, it has been rigorously sought by many industry pioneers to tokenize and issue real-world assets on-chain, which would certainly open up an infinite amount of opportunities to rejuvenate the world economy. It has been projected by some large financial firms like Citi bank that by 2035 the real-world assets to be issued on-chain would amount to \$4 trillion in value. By contrast, the global crypto market capital has surpassed \$3.6 trillion as of written and will certainly grow much larger and faster. Blockchain technology and cryptocurrencies have been not only embraced by many early brave individuals but also recent financial institutions from around the globe. However, as of today, there are at least hundreds of blockchain networks existing but most of them still lack real-world use cases or applications, not to mention propelling the realization of

Web3. There are many technical or non-technical reasons that lead to this phenomenon. FullOn protocol is hailed to overcome the challenges and become the decentralization platform of choice to power the Web3, A.I. and Metaverse ecosystems.

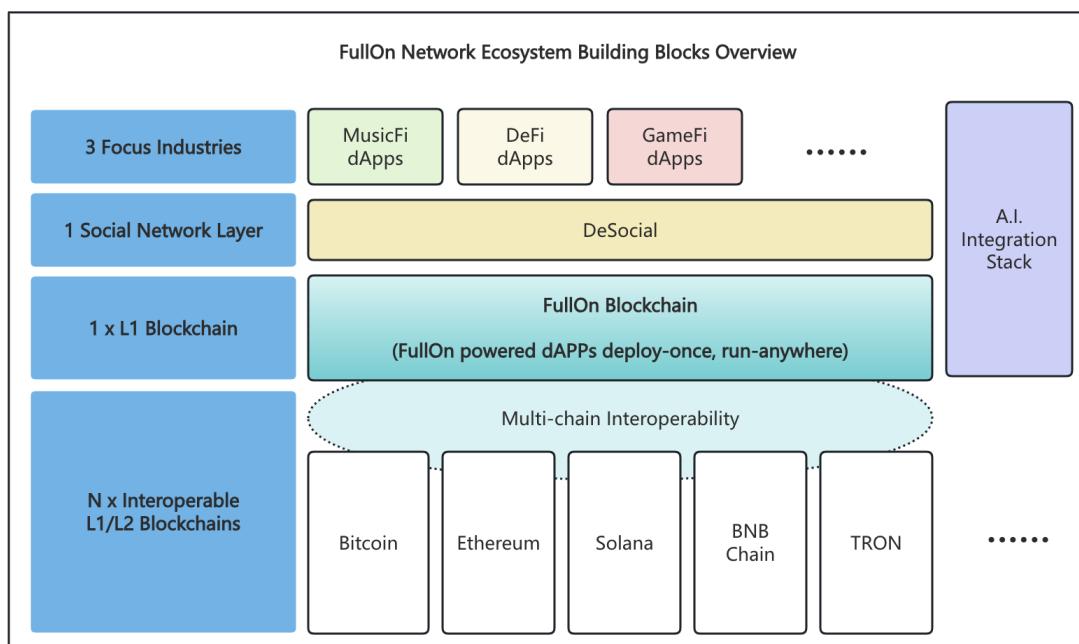


Figure-1: FullOn Ecosystem Bulding Blocks Overview

## 03. Why FullOn

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By looking into all the popular blockchains, it is not hard to find out that they have met at least some of the following problems:

1. **Scalability problem:** sub-kilo TPS that couldn't meet the requirements of many real-world applications demanding thousands and even tens of thousands TPS;
2. **High latency problem:** large block intervals like some value exceeding 10 seconds or minutes that are simply not acceptable for most users and couldn't meet the user experience requirement set by most traditional applications;
3. **Long finality problem:** many blockchains require over a minute to finalize or confirm a block, which greatly hurts the user experience and could also lead to the double-spending problem if not handled properly;
4. **High transactional cost:** due to limited TPS, much higher gas fees are usually paid by users in order to make sure their transactions will get accepted into a block faster than other peer users. That kind of competition could result in gas fees skyrocketing in network congestion events, which deters the mass adoption by users.
5. **Front-running issue:** due to the gas-fee model that allows users to specify the gas fee price for their transactions, users could pay a higher gas fee price in order to front-run others, which violates the principle of conducting fair trading on-chain!
6. **Lack of abstract accounts:** most blockchains adopt public-key derived addresses as on-chain account entities, which couldn't handle the cases of account recovery when a private key gets stolen or lost. Some try to implement the abstract account feature through smart contract, which lacks standards among users and developers.
7. **Poor interoperability:** most heterogeneous blockchains and their DAPPs do not work with others, which result in building similar applications for target blockchains repeatedly or having to limit the DAPPs to one blockchain only. Users also have to create private keys and accounts repeatedly for each different blockchains;
8. **Minuscule smart-contract developer base:** Many blockchains tend to come up with brand new smart contract languages and limit developers to a small set of early adopters. That limitation of developer base hinders a wide adoption among majority developers that have already mastered popular and well-tested coding languages.
9. **Lack of applications/ecosystems:** It is ultimately the applications that make the underlying blockchain shine. However, most blockchains have no real value other than being an asset to be held and traded by crypto investors or market speculators, expecting to get rich in doing so. Most blockchain teams do not have the know-how of what ecosystems to be enabled or built and thus do not have an idea of how to optimize the protocol for the target ecosystems. Eventually it results in the protocol itself becoming useless and obsolete!

The FullOn protocol will address all of the above problems with innovative solutions so that applications built on top of FullOn protocol will be more capable, accessible and easy-to-use while retaining all the good parts of blockchain technology like transparency, decentralization and security.

## 04. Design Principles

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Both the design and development of the FullOn platform are guided by a handful of key principles. These principles reflect the problems inherent in both the centralized and decentralized systems of today.

1. **Scalability:** The platform should scale with no upper limit as long as there is economic justification for doing so in order to support enterprise-grade, globally-used applications.
2. **Usability:** Applications deployed to the platform should be seamless to use for end users and seamless to create for developers. Wherever possible, the underlying technology itself should fade to the background or be hidden completely from end users. Wherever possible, developers should use familiar languages and patterns during the development process. Basic applications should be intuitive and simple to create while more robust applications should still be secure.
3. **Affordability:** As FullOn is set to be an application platform instead of just being a store of value, it must make sure the cost of using the network is relatively affordable by the majority of users.
4. **Sustainable decentralization:** The platform should encourage significant decentralization both in the short term and the long term in order to properly secure the value it hosts. The platform and community should be widely and permission-lessly inclusive and actively encourage decentralization and participation. To maintain sustainability, both technological and community governance mechanisms should allow for practical iteration while avoiding capture by any single parties in the long run.
5. **Upgradability:** The protocol should be easy to upgrade once the mainnet network has been launched. It would be ideal not to change the node software in order to upgrade the system configurations or even protocol-level logic.
6. **Modularity & Extensibility:** The overall system software shall be well organized by clean-cut modules, each of which can be easily swapped out and replaced with new ones for customizability and extensibility. Last but not least, it is expected that regardless of the underlying technological implementations and protocol specifications, the above design principles must be strictly adhered to unless otherwise revised within this paper.

## 05. How FullOn Works

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FullOn is commissioned to host virtually an infinite amount of DAPPs and support billions of users from around the world to become forever citizens in a Web3 and AI powered metaverse that connects the real world and virtual realities.

To meet the goal, FullOn comes up with a scalable and extensible architecture where applications shine the most and FullOn protocol serves as a foundation and infrastructure to foster a safe, open and dynamic environment meanwhile delivering the best developer and user experiences.

### Overall architecture

As shown in the following diagram, FullOn as a layer-one protocol can directly host all sorts of DAPPs that can possibly be imagined and created. However, FullOn protocol compatible layer-two blockchains can be also built to support a unique set of DAPPs like high-frequency and ultra-low-latency transactional applications. Moreover, FullOn itself can play as a universal layer-2 blockchain or side chain to other popular protocols like Bitcoin, Ethereum, Solana, Binance Chain and BASE Chain etc.

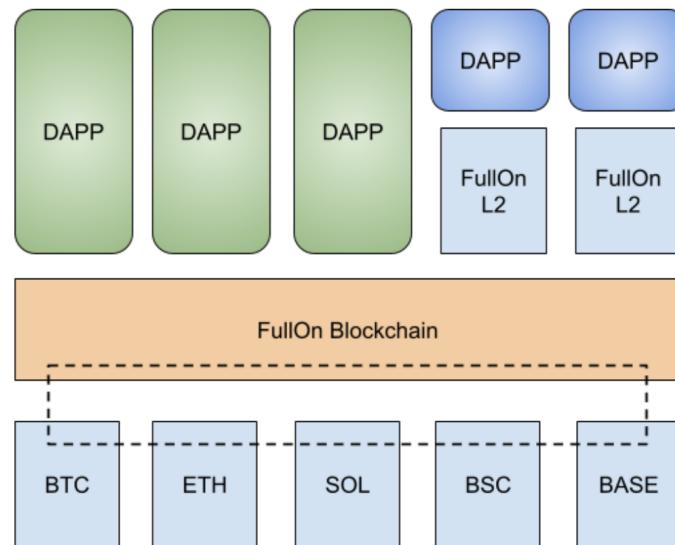


Figure-2: FullOn Ecosystem High-level Architecture

## Technical specifications

Key aspect	Value	Description
<b>Block Interval</b>	0.5 sec	A subtle balance between ultra-low latency and high reliability
<b>Block Finality</b>	1-1.5 sec	Optimized for applications to resist double-spending and other attacks
<b>TPS</b>	10,000+	Single-threaded execution, scalable via multi-threading, multi-sharding, Layer-2, and sidechains
<b>Consensus Algorithm</b>	DPoS+Savanna	High throughput and instant finality
<b>Virtual Machines</b>	Dual-VM	WASM (native) + EVM (100% compatible)
<b>Native token</b>	\$FLON	Total supply: <b>10 billion</b>

## Core designs

### Account types

In order to meet various application needs, FullOn protocol support following versatile account types:

Account type	Description
Canonical account	Native on-chain 12-alphanumeric personalized account names, a.k.a. abstract account or sovereign account, which can only be created through an existing account owner who pays a certain amount of account resources in \$FLON tokens. One abstract account can be

Account type	Description
	single-signed by a corresponding private key or multi-signed by multiple keys.
EVM-address account	EVM type of addresses can be derived from public keys and all FullOn EVM accounts are just addresses and meaningful only within EVM code. Hence there requires a bridging of assets between EVM address accounts and FullOn accounts
Proxy account	Users holding a private key to a third-chain like Ethereum can get a proxy account from FullOn through a binding process. Once it gets created, the proxy account holder can bridge assets onto the FullOn network or bridge them back securely

## Interoperability

By looking at all existing DAPPs one can easily find out that DAPPs built for one blockchain cannot be easily migrated to other blockchains when they are incompatible or heterogeneous to each other. Thus reinventing the wheel has instead become a norm for the Web3 industry as DAPP developers want to harvest the maximum application values by deploying the applications onto as many popular blockchains as possible.

FullOn takes a rather different approach to this by achieving the deploy-once-run-anywhere effect through the built-in proxy account interaction mechanism as shown in the following diagram:

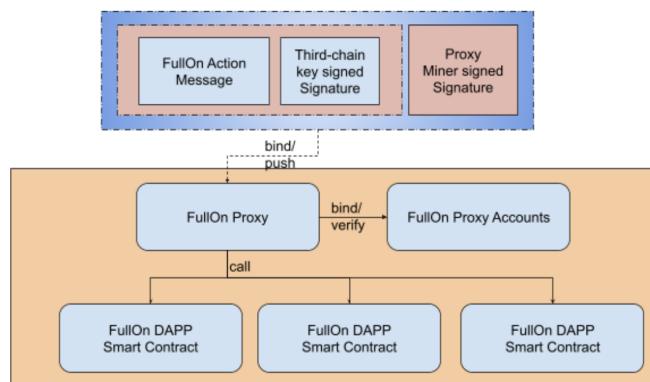


Figure-3: FullOn Interoperability Achieved through Proxy aAcounts

The overall process goes like this:

1. A user named Alice has been holding assets from another blockchain discovers the FullOn network and wants to participate in some DAPPs deployed on the FullOn network;
2. Without understanding the account models available inside FullOn network, Alice utilizes her existing crypto wallet and existing private key to sign into an DAPP that runs on FullOn network, which will result in a FullOn proxy account to be automatically created for her through a binding process that registers Alice's public key and address with an auto-allocated proxy account for her;

3. Alice can bridge her crypto assets from the other blockchain onto the FullOn network to be bound with her proxy accounts.
4. With the assets available from Alice's proxy account, Alice can start interacting with the FullOn DAPPs; Each transaction has two signing steps: one to be signed by Alice's private key for interaction messages and another to be signed by FullOn proxy miners for submitting Alice's transaction onto FullOn network on behalf of Alice.
5. Whenever Alice would like to withdraw assets from the FullOn network, Alice can initiate the process to bring back the assets from the proxy account to Alice's original blockchain address or account. Meanwhile, Alice's FullOn proxy account remains valid and can receive bridged assets from the original network or native assets from the FullOn network.

FullOn protocol ensures the security of the above process through verifying the two signatures from each transaction as mentioned above. As different blockchains may choose different hashing algorithms, signing algorithms and message serialization formats, FullOn protocol implements the verification by taking care of these subtleties for all blockchains where FullOn protocol likes to have interoperability with.

## Scalability

In order to support meet the growth demand and real-world experience, the net throughput of a blockchain protocol must be scalable. FullOn addresses scalability through different levels:

- ***Single threading***: FullOn achieves 10,000 TPS on a single thread to execute all verified transactions;
- ***Multi-threading***: FullOn applies multi-threading by segregating resource-independent transactions to different execution threads to achieve parallelization. Allocation of 10 such threads can yield 100 K TPS for a commodity level FullOn node to achieve;
- ***Multi-sharding***: Through applying sharding, i.e. same blockchain but multiple state shards, FullOn can further increase the scalability at least 10x times, i.e. achieve 1 million TPS;
- ***Layer-2 or sidechains***: as introduced in early sections, layer-2 chains or even side-chains can be introduced in the future to run on top of or side-to-side with FullOn layer-1 network. These chains can be created for specific DAPPs or some vertical ecosystems. FullOn protocol will be implemented to scale up the network by applying the above techniques to meet the overall application demands at the right pace.

## Resource model

Most blockchains employ a single transaction fee charging model which is applying varying gas fees each transaction to prevent anyone from spamming/congesting the network. This approach however can be rather unfriendly to certain applications due to issues like front-running, which creates unfairness in trading and can be against the basic trading principle as rigorously exercised in traditional financial environments.

There are in general three types of resources in the FullOn network that cost a certain amount of \$FLON for each transaction to be logged on-chain successfully:

- ***CPU***: measured by the time spent in executing the transaction
- ***NET***: measured by the size of each transaction
- ***RAM***: measured by the overall state storage allocation during execution of each transaction

FullOn requires a certain amount of GAS that are converted from \$FLON to cover the consumed resources for each transaction. The smallest unit of GAS is called ELON, which is also the smallest unit of FLON, i.e. 1

**FLON = 100,000,000 ELON, or 1 ELON = 0.00000001 FLON.**

GAS for both CPU and NET will be burnt rightway while RAM resources can be still returned or recycled in the form of GAS kept to the user account upon users returning the state database allocation to the FullOn network. Users do not have to buy GAS in advance for their transactions but the FullOn system will spend the available GAS from their accounts first and automatically convert the available \$FLON balance of an account to GAS in order to sufficiently cover the GAS expenses for the entire transaction resource usage. Transactions would fail and do not get recorded on-chain at all upon either logic failure or GAS insufficiency issues.

This unique design creates a friendly and transparent user experience in interacting with the FullOn network. In addition, there will be no competition in transaction GAS payment as the GAS expenditure for each transaction is solely determined by the system and users have no chance to give any extra FLON tokens to incentivize the block producers so that their transactions can be prioritized over others.

For transactions submitted by canonical account holders, only the intrinsic system resource costs are compensated by the GAS payment. However, for transactions related to other types of accounts, there are other factors to be considered like paying extra service charges as following:

- **Proxy accounts:** only the proxy miners are responsible for signing their transactions and submitting them onto the network. Hence, each proxy account owner must deposit in advance a certain amount of **\$FLON** tokens to cover both GAS cost and miner fees as predetermined within the system. A user won't be able to submit further such transactions if an insufficient amount of **\$FLON** tokens are left with the proxy account to cover GAS and miner fees. In order to make it easier for new users to experience the proxy account feature, each proxy account users are provisioned 1000 times without any charge for submitting transactions on-chain.
- **EVM-address accounts:** must pay EVM type of varying GAS fees to the proxy miners.

Last but not least, FullOn is determined to be application friendly by being super low-cost in the fee mode and stay competitive among the most popular blockchains.

## Governance

### 1. Governance process

FullOn embraces a community-driven decentralized governance (DeGov) process for all issues that matter to the advancement and prosperity of FullOn's protocol and entire ecosystem. Any user within the community can make proposals to improve the protocol or network system and even get rewarded for successful implementation of their proposals. FullOn foundation oversees the governance process and makes sure all proposals can be timely and appropriately processed till full completion or closure.

Following are a few examples of the proposals:

- Making adjustment of certain protocol parameters like network validator staking threshold, CPU, NET and RAM unit cost in GAS amount, proxy miner charging fees in \$FLON amount..., etc.
- Increasing the total number of network validators
- Inflating \$FLON tokens once mining allocation has been exhausted
- Introducing new feature or enhancement of existing features to the protocol

Each proposal shall have the following governing parameters determined only by the network validators:

- Deposit a certain amount of \$FLON tokens in order to be able to propose
- Proposal topic and details, issued in the form of a NFT
- The quorum of voters to approve a proposal
- The amount of votes to approve a proposal
- The expiry time before votes are counted and the voting result determined
- Status update to the proposal after implementation
- Amount of rewards in \$FLON tokens for successful implementation of the proposal

## 2. Governance structure

In general, there will be three topmost decentralized autonomous organizations (DAOs) under the constant supervision of FullOn Network Foundation:

- **TechDAO:** represented by the core development team of FullOn network protocol, holds 40% voting power, mainly responsible for technology advancement of the protocol as well as support developers for building their applications on top of FullOn network;
- **OpsDAO:** represented by the leading marketing and operation team members that directly interact with the global FullOn users, holds 30% voting power, mainly responsible for introducing and/or establishing new ecosystems, onboarding new users and supporting all existing users of FullOn technologies and applications;
- **InvestDAO:** represented by all investors, holds 30% voting power, focusing on ensuring appropriate usage of investment funds and a healthy development/evolution of the overall tokenomics. Investors must stake their \$FLON tokens in order to get VOTE tokens in order to vote. Once voting is finished, users can keep their VOTE tokens for future voting or return to the stake pool to redeem their \$FLON tokens back.

More specifically, TechDAO will be run by FullOn Labs, which focuses on delivering software and hardware solutions for FullOn blockchain platform, infrastructure and its ecosystems. OpsDAO will be run by another subsidiary of FullON Network Foundation, which takes care of the day-to-day operations that contribute to decentralization, security and growth of the FullOn network.

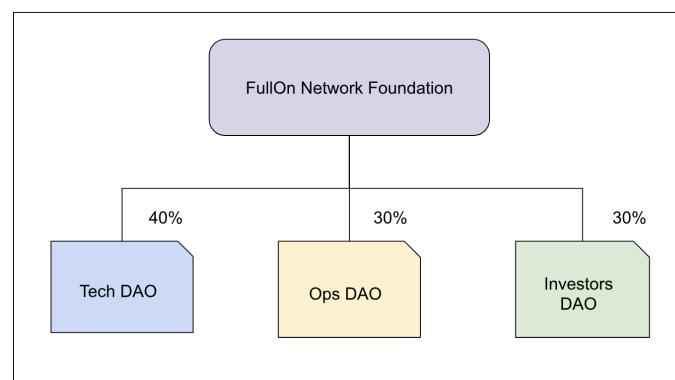


Figure-4: FullOn Network Foundation and Three DAOs

In order to pass any protocol or foundational level proposals, at least 60% of voting power must be gained out of the abovementioned three DAOs. In addition, within each DAO, there must be more than 50% of voting power to be gained in order to reach consensus and later participate in the voting process among the three DAOs. If no consensus can be made within a DAO, it will be deemed as a NO vote for that DAO.

Last but not least, it is the FullOn Network Foundation that initiates the network and guides the development of the protocol as well as oversees the governance process. Even after the full quorum of network validators have been elected and in full operation, the FullOn Network Foundation continues to exist and operate as a non-profitable organization to propel the evolution of the protocol and advancement of the entire ecosystem. The members of three DAOs or the FullOn Network Foundation can be elected or replaced through foundation organized governance processes. Notwithstanding the foregoing, the holders of \$FLON or \$VOTE tokens shall not be entitled to make any proposal or vote on matters related to distribution of profits or dividends of FullOn, the distribution of surplus assets in the event of a winding up, or any other matters that could potentially result in \$FLON tokens or \$VOTE tokens being deemed as "securities" or similar under applicable laws.

## Vertical ecosystems

FullOn encourages community developers to build all kinds of applications and services on top of the FullOn network that would bring tremendous value to the users and the society. Following are the major ecosystems FullOn Network Foundation will provide the most support from technical and non-technical effort perspective:

Web3 ecosystems:

- MusicFi: connecting music fans with artists and building a tokenomics to rejuvenate the music industry
- DeFi: providing decentralized exchanges, staking, borrowing and lending applications
- GameFi

As A.I. technology has been rapidly maturing and advancing, virtually all applications including web3 dApps can be rewritten with A.I. components for content generation and process automation...etc. capabilities unique with A.I. Therefore, an A.I. integration stack that includes A.I. agents with on-chain identities and tokenomics can be provided for ecosystem developers to employ in building their applications.

Following diagram shows an example of how autonomous A.I. agents and FullOn blockchain can be integrated together to deliver agent tokenomics:

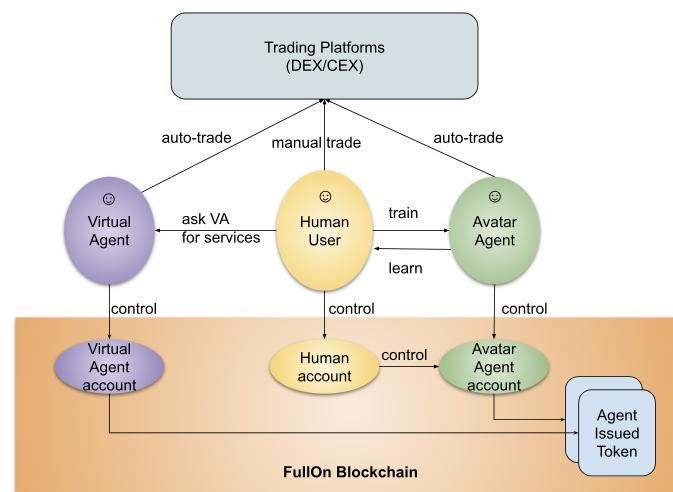


Figure-4: A.I. Agent integration with FullOn blockchain

## Implementation

As the whole blockchain industry has been maturing for most of the technical components like peer-to-peer networking, distributed consensus algorithms and virtual machines to power execution of smart contracts. After researching the most popular existing open source blockchain software, the core development team has made a decision to build FullOn's unique features on top of the latest version of Antelope Leap (formerly known as EOSIO) for its modular architecture design, superb performance and extensibility. FullOn embraces the open source software model and will collaboratively evolve the code with developers from around the world.

However, as the FullOn protocol governs the major design specifications and means to be implementation neutral. It is also welcomed that the FullOn node software can be developed from scratch or based out of the software implementation of other blockchains while retraining the integrity of the protocol design.

## 06. Tokenomics

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### Token distribution

The total supply for FullOn's native asset **\$FLON** is set at **10 billion** and the overall distribution of the total supply is shown in the following chart:

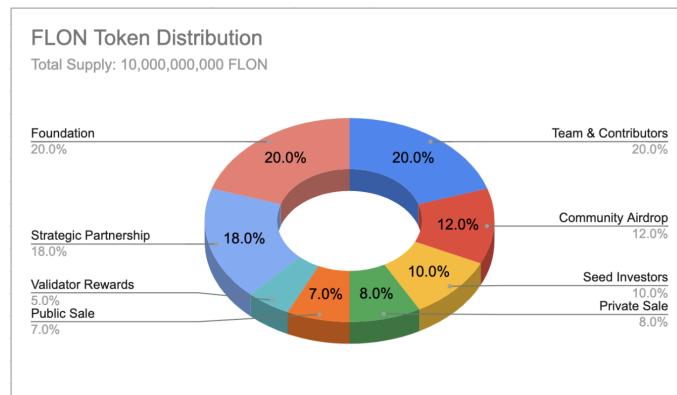


Figure-5: FLON token distribution chart

However, not all FLON tokens are available yet. There will be FLON token releases occurring periodically or conditionally in the future. The release schedule is determined by the needs of the network. Below gives the token distribution plan and corresponding cliff & unlock schedules:

Category	Ratio	TGE Unlock	Cliff & Vesting Schedule
Team and contributors	20%	0%	1.5-year cliff, 5-year linear vesting after TGE
Community airdrop	12%	0%	1.2% × 10 years, 1-year linear vesting (DID required)
Seed investors	10%	0%	1.5-year cliff, 5-year linear vesting after TGE
Private sale	8%	0%	1.5-year cliff, 4-year linear vesting after investment
Public sale	7%	0%	N/A
Validator rewards	5%	0%	N/A
Strategic partnership	18%	0%	Conditional release
Foundation	20%	10%	10%: 10-year linear vesting after TGE

**Total allocation: 100%**

[!NOTE]

- TGE stands for FLON token generation event which will be decided by FullOn Network Foundation after the FullOn mainnet launch;
- Unlocks for the lockup tokens happen in a linear, per-block fashion, through smart contract implementation.;
- Conditional release for community airdrops for each target user will only commence upon the user notifying the airdrop token locking contract after acquiring a DID NFT issued from the foundation designated DAPP.
- Strategic partnership includes ecosystem partnership establishment and mutual exchange of tokens with cliff and unlock schedule to be determined case by case.
- Release Schedule will be subject to further adjustment based on negotiation with the exchanges and the opinion of legal counsel based on compliance reason.

Following gives the FLON circulating supply according to the above FLON cliff and unlock schedules.

Tentatively the cliff and unlock schedule for strategic partnership has been simplified in a pure linear unlock fashion.

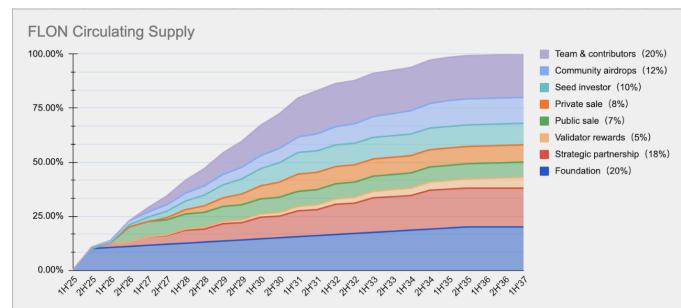


Figure-6: FLON Circulating Supply chart

[!Note]

- **Circulating Supply** is every token that isn't subject to a lockup at a particular time.
- This chart does not take the deflation factor into consideration for simplicity's sake.

## Category Detail

Each category is explained in more detail below.

### Team and core contributors

There are 20% of the total supply, i.e. 2,000,000,000 FLON tokens allocated in this category.

FullOn's core team is composed of not only top-notch blockchain developers but also seasoned crypto leaders that have gone through ups and downs of many crypto market cycles. Core team members have been important in the early success of the protocol and they are incentivized to remain active with its development for a long time afterwards. It is also open for new industry leaders to join the team to help with the long-term and strategic growth of the network and ecosystem.

This endowment is not expected to be accessed during the early days and will be deployed in ways which preserve principle wherever possible to ensure long-term availability rather than systematically sold for

short-term capital. Every single member has the identical 5-year linear vesting schedule with a 18-month cliff after the TGE date.

## Community airdrops

There are 12% of the total supply, i.e. 1,200,000,000 FLON tokens allocated in this category.

A large portion of tokens is devoted to fund marketing efforts for acquiring or onboarding more new users, more on-chain activities and more influx of funds from third chains. This spans from completing on-chain account registration for either canonical, proxy or DID types of accounts, to completing marketing promotional tasks like social media posting about FullOn network, to bridging major assets from other chains, to trading actively on DEX or Swap pools that run directly atop FullOn network.

The total amount of tokens will be gradually granted to the market programs to spend within 10 consecutive years. The tokens received by participants during the airdrop events or schemes will be first locked until the user has finished getting DID for the account and then undergo a 1 year linear vesting period. It is however subject to FullOn topmost DAO governance body to make appropriate adjustments to the release schedule under the guidance of FullOn Network Foundation.

## Seed investors

There are 10% of the total supply, i.e. 1,000,000,000 FLON tokens allocated in this category. These earliest backers are required to have a 5-year linear vesting schedule with an 18-month cliff after FullOn TGE date.

## Private sale

There are 8% of the total supply, i.e. 800,000,000 FLON tokens allocated in this category. FullOn raises from backers that can meet following conditions:

1. Long-term success oriented
2. Able to add value to both the project (E.g. via actively supporting the team, helping listing the tokens in top exchanges) and the network (E.g. via validating or delegating stake).
3. No single player should control an undue amount of stake

The backers have the 4-year linear vesting schedule with an 18-month cliff after their investment date.

## Public sale

There are 7% of the total supply, i.e. 700,000,000 FLON tokens allocated in this category. Top exchanges, be it centralized ones or decentralized ones built on top of FullOn network itself can list FLON to let traders publicly trade for the first time to get the initial tranche of FLON tokens.

## Validators rewards

There are 5% of the total supply, i.e. 500,000,000 FLON tokens allocated in this category. The FullOn network validators are rewarded with newly issued FLON tokens per block for their work in keeping the network in operation. It is expected the overall amount is to be totally mined in a course of 10 years, after which 0.1% of the total supply, i.e. 10,000,000 FLON can be further inflated to reward the validators each year. The inflation rate can be appropriately adjusted through the topmost FullOn DAO governance body to ensure each validator has a reliable and reasonable amount of profit by operating FullOn validator nodes.

## Strategic partnership

There are 18% of the total supply, i.e. 1,800,000,000 FLON tokens allocated in this category.

In order to greatly promote Web3, A.I. and Metaverse etc...vertical ecosystems to be developed atop the FullOn network, FullOn Network Foundation effortlessly looks for strategic partnership within the specific industry to find big or potential players and help them to build and grow within the FullOn ecosystem. Moreover, for each partnership established, a certain amount of FLON tokens can be mutually swapped for the tokens issued for the partners while each side agrees to implement a common plan of lock and vesting schedule. Lockup and unlocks for these efforts are typically 6- or 48-months.

## Foundation endowment

There are 20% of the total supply, i.e. 2,000,000,000 FLON tokens allocated in this category.

The FullOn Network Foundation stood up the initial network nodes and spun them down to focus on coordinating the governance of the ecosystem, funding projects and kicking off remaining distribution activities. The Endowment represents a pool of tokens which are meant to support the Foundation's operations in the long term and which might be deployed in a wide range of ways.

This endowment is split into 2 pieces. The first half, which is not locked up, will likely be deployed across multiple strategies to help ensure the network operates smoothly during its early phases. The second half is subject to a 10-year linear vesting schedule since it is not expected to be accessed during the early days beyond delegation to support decentralization. Both tranches are meant to be deployed in ways which preserve principle wherever possible to ensure long-term availability rather than systematically sold for short-term capital.

As part of the initial rollout, the Foundation accounts will be setting up the lockups and accounts for the rest of holders. Some tokens may still be in these accounts during rollout if recipients are delayed in setting up their respective custody solutions.

## Inflation

There will be no extra inflation of FLON tokens except the mining reserve for validator rewards. After exhausting the mining reserve, which is 5% of the total supply, 0.1% of the total supply will be newly issued or inflated each year in order to keep incentivizing the network validators.

## Deflation

FLON has following deflationary forces:

- In order to submit transactions on-chain, FLON must be one-way traded to get sufficient GAS resources for consumption of CPU, NET and RAM storage, which makes FLON deflational;
- The same goes for the proxy accounts or EVM-based address accounts, each transaction requires burning away proxy miners fees converted from FLON tokens on top of the intrinsic gas fees charged in each transaction.

FLON as the native token to FullOn protocol will be continuously used/consumed in unlimited ways, including activities like staking FLON tokens for getting voting power for validator election or DAO governance...etc. These types of activities result in FLON tokens getting locked for a while and thus creates

a temporary deflationary effect but can be also helpful to the growth and stability of the FLON market capital.

## 07. The Future

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FullOn has already baked a lot of wonderful elements into the platform with the mainnet launch. But to meet the growing demand from various ecosystem communities or challenges from the new environment, FullOn will continuously evolve through seeking relentless research and innovation by being open with new ideas, suggestions as well as critics.

Following are some of the protocol-level features FullOn team plans to work on in a near future:

- Synchronous WASM inline calls: Currently WASM inline calls are all asynchronous, which adds to the implementation inflexibility in smart contract composability.
- Parallel transaction executions: With say 10 threads concurrently running transactions that are independent from account states perspective, at least 10x of 10 K TPS, i.e. 100 K TPS can be easily achieved
- Multi-sharding: This is another-level of scalability to hit say 1 million TPS through state-level multi-sharding on a single-chain network. This feature shall be readily implemented and get upgraded into the protocol upon the network becoming congested on a daily basis.
- Validator node clustering: This is to provide reliability and availability to each validator node to ensure the highest availability to ensure the smooth network operation.

There are also some infrastructure level ideas that are worth pursuing in order to benefit the entire ecosystems running atop the FullOn network. They include but are not limited to the following:

- Decentralized Social Identity and Credit store: The social network composed of real human or virtual A.I. agents with their credibility scores accumulated and computed in a decentralized manner through social network binding and feedback factors. Once developed, it can become the cornerstone to the entire society to conduct a safe collaborative environment;
- Decentralized File Storage: There are always cases where users need to put their files or contents somewhere but not from a centralized datastore provider
- Decentralized Network Service: Network functions like DNS, CDN, Proxy etc. services can be done in a decentralized manner.
- Decentralized Digital Asset Marketplace: This is indispensable for all FT or NFT assets, virtual or RWA assets. This marketplace will be built right atop FullOn L1 at the early stage and then migrated to a high-frequency and ultra-low-latency L2 or side-chain to host as many as possible number of trading pairs for both spot and derivative assets.
- Decentralized A.I. Compute Rental Marketplace: A marketplace where globally distributed A.I. computing power can be registered, rented or exchanged;
- Decentralized A.I. Agent Marketplace: A marketplace where purpose-built A.I. agents with Web3 identities can be traded between buyers and sellers.

More great ideas will emerge once FullOn and the world get to newer stages and FullOn Labs are always ready to conquer the challenges ahead and create values together with the entire community under the leadership of FullOn Network Foundation.

## 08. Disclaimer

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