



# LiquiChain™

**First community-based  
blockchain**

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## LITEPAPER

This Litepaper represents general information about Liquichain. Due to confidentiality limitations, some information is not portrayed in full. Please ensure you first read the disclaimer and risk factors at the end of the document to fully understand the purpose, status, and limitations of this Litepaper.

## MISSION

# WE ARE AN EVM\*-BASED SUSTAINABLE BLOCKCHAIN FOR COMMUNITIES, ENABLING FAST TRANSACTIONS AND EVOLUTIVE SMART CONTRACTS

Since we are social animals, communities are everywhere. Families, schools, social networks, sports clubs, affinity groups, churches, coffeehouses, even companies are communities. And all these communities are places where blockchain can be deployed positively, with confidence.

In the meantime, blockchain has raised environmental concerns. The energy consumption is huge and may cause increased carbon emissions and climate change. This causes other technological issues: blockchain is slow and transfers little.

By redesigning the trust path among peers and the mining, Liquichain has both cracked the environmental issue and provided an agile community tool.

And since utility is key, we also found an easy way to build and quickly deploy smart blockchain applications in an interoperable way with other blockchain networks.

**Secret Story :** the name Liquichain [lɪkwɪtʃeɪn] is derived from the concept of liquid democracy whereby you can engage in collective decision-making through direct participation, but also can trust the people in your communities.

\*EVM = Ethereum Virtual Machine





## ABSTRACT

# INTRODUCING LIQUICHAIN.

Liquichain is an innovative and green EVM-based blockchain for communities which will use a new Proof of Peers consensus mechanisms.

Some crypto projects have been extremely successful because of the power of their community. Liquichain is a community-based blockchain. Your communities, your circles, your clusters are your validators.

Liquichain is meant for sponsors that want to offer a unique utility to their communities. They know their ecosystems; they know their real needs. **These communities are huge, and they are full of members who trust them.**

By redesigning trust path among peers, replicating states only in a small number of nodes and allowing partial storage of these states, Liquichain allows smart contracts to be executed much faster. It also allows to store much larger amounts of information on nodes with much more limited storage capacities than servers (e.g. a smartphone).

Each user is a potential green “miner of resources” and can decide (opt-in system) the mining fees for the usage of his resources (computing power, message relay, storage space), depending on the app and the degree of separation with the applicant.

### Fields of innovation

- Community-based and Proof of Peers
- Dynamically sharded blockchain
- Low energy consumption and “green mining”
- Agile DAO management
- Interoperability
- Forkless
- Extended notion of smart contracts
- Unlimited dApps and user-friendly key features
- Management by the users of their accounts and their documents/certificates

### Blockchain applications

Thanks to an open source and low code platform, several applications have already been built on Liquichain, first in PDL mode, then they will be deployed in Proof of Peers mode: Klubcoin, Liquivote, Liquichat, Liquishare, Trail (invoicing)...

## SOLUTION

### PROOF OF PEERS, A NEW CONSENSUS ALGORITHM.

Blockchain is based on trust. Six degrees of separation is the idea that all people on average are six social connections away from each other.

Why do we need to be validated by a vast number of miners or stackers if a set of trust path is created with trustful peers?

#### **Accounts are associated to profiles that are validated by peers.**

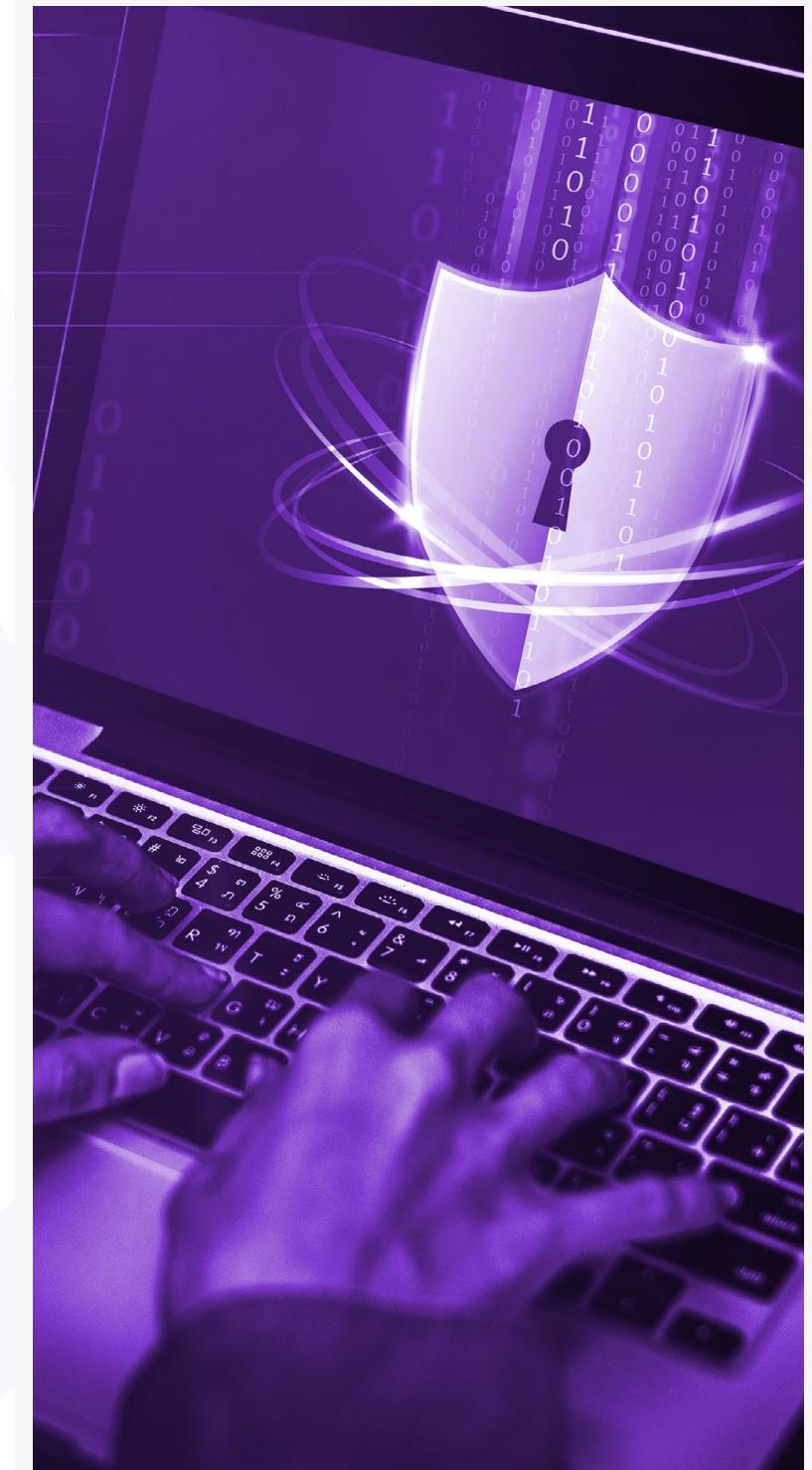
Degrees by degree, everybody can be trustfully included and validated in the blockchain, with far less energy consumption and in a community spirit. Liquichain reinvents the concept of membership.

When a transaction is to be performed between two nodes, a set of trust paths are created and the transaction is signed along the paths, avoiding involvement of majority of nodes and delay of block forging.

Due to the very fast and low consumption of smart contract engine each node in the system is active (no such thing as difference between miners and clients).

#### **Liquichain network contains two types of nodes :**

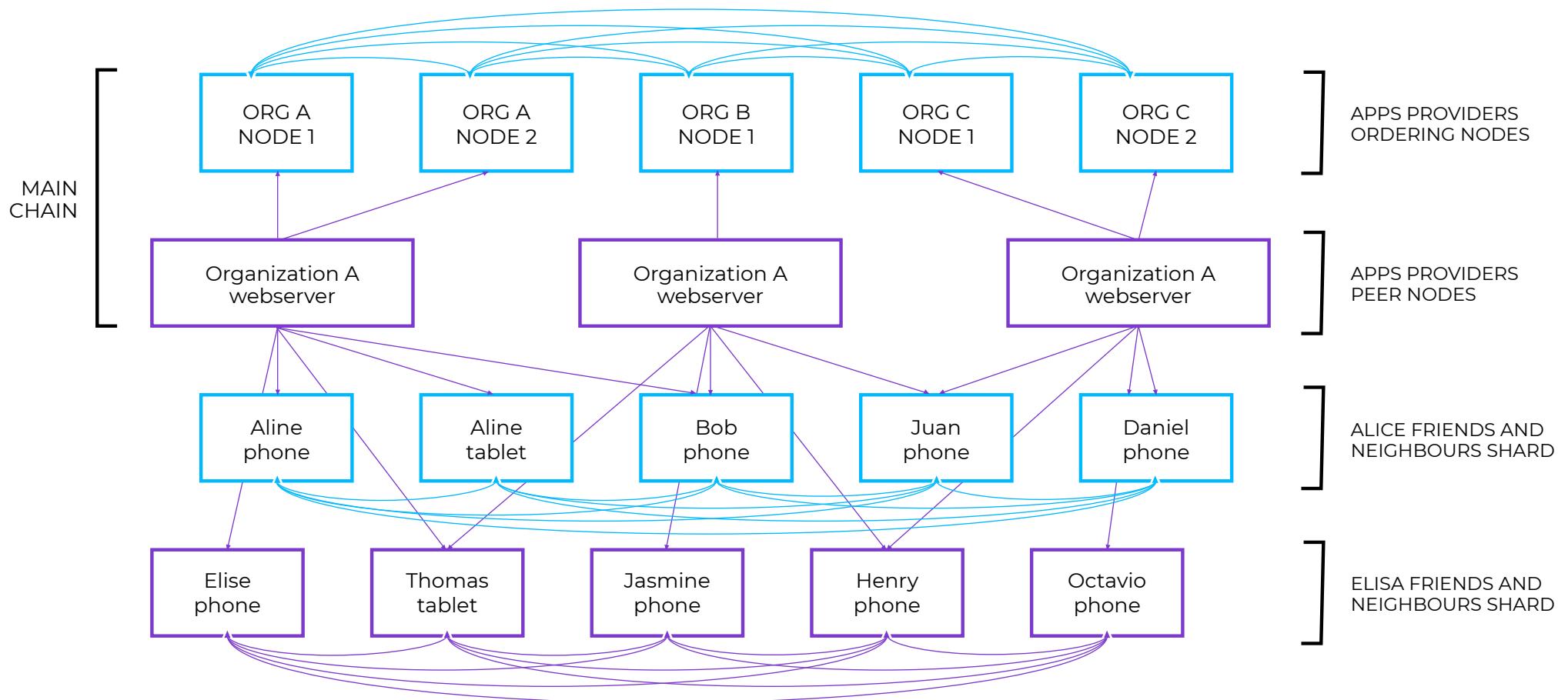
- Devices owned by end users. The end user devices are part of the chain in the sense that they store data, execute apps and relay messages. They use peer to peer protocols to communicate between each other (over websocket and webrtc) in order to exchange data needed by the apps.
- Servers owned by apps providers and organizations. The servers are nodes that are part of a permissioned ledger, based (in a first step) on Hyperledger Besu, with consensus based on raft protocol.



## DYNAMICALLY SHARDED BLOCKCHAIN.

A network of user and organization nodes allow for complex app execution and online interaction between users.

The shards constituted by organization peer nodes and user nodes allow apps to store large files without encumbering the blockchain.





## APPLICATIONS

### EXTENDED NOTION OF SMART CONTRACTS.

Liquichain proposes an extended notion of smart contract including not only the code executed in the blockchain but also the screens and business logic executed in the users' applications allowing them to interact with the blockchain's smart contract.

**dApps (“Decentralized Applications”) are auditable, open source, packages.**

They contain:

- Smart contracts coded in JavaScript, Java, Go, ... that run on the main chain
- Services and storage that run on organization peer nodes
- Logic, Screen and storage that run on user wallet app

Liquichain allows smart contracts to evolve (integrating workflows) according to the agreements of the parties.

This smart contracts which can contain a lot of information like authentication certificates, etc., allow much more interaction with community members.

## APPLICATIONS

### USER-FRIENDLY KEY FEATURES.

Liquichain relies on an open source and low code platform that can develop and execute back and front applications.

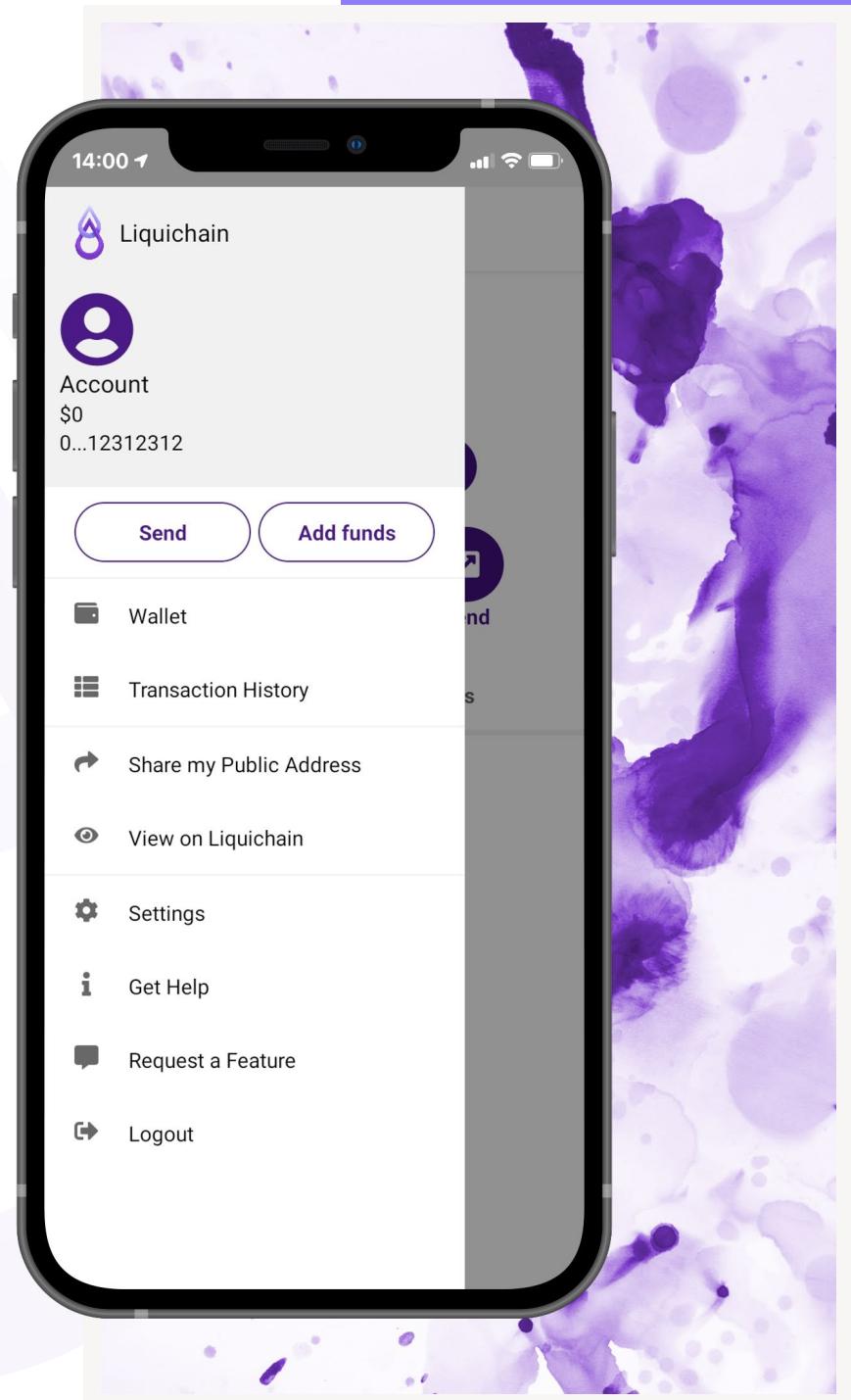
It allows to quickly create and iterate prototypes, and to improve the apps. Therefore, Liquichain can be a plug and play solution for all communities willing to interact with their members through the blockchain (in an interoperable way with other blockchain networks).

Liquichain is an EVM-based sidechain. This implies that smart contracts built for mainnet Ethereum will function on Liquichain with few, if any, adjustments.

**Liquichain wallet** is therefore compatible with Ethereum. It offers facilities to backup and restore private keys in a simple and secure way.

It can be enhanced with unlimited dApps like :

- Friend requests
- Membership cards or authentication certificates management
- File sharing, Vaults (secure p2p app for sharing documents, pics among peers)
- Smart Chat (secure p2p Instant messaging used for instant payment)
- DAO inside your communities (voting dApp enabling DAO, off-chain polls and votes)
- Marketplace (p2p marketplace without the need of central servers)
- Group buying, money pots, auctions, contests





## APPLICATIONS

### MANAGEMENT BY THE USER OF HIS ACCOUNT.

#### Profile management

Users can manage different accounts with different level of KYC (from full anonymity to more ID info), depending on the apps they use In the Liquichain network.

The profile data (name, addresses, contacts, bank details,...) can be modified at any time by users and only them. Users can store their membership cards or certificates in their profile to automatically access the associated benefits.

They decide if they want to remain anonymous, what they share and with whom (depending on the apps he uses) by offering access tokens.

These tokens allow parties (customers, suppliers, partners, institutions, etc.) to access the identity elements they need at any time by reading the chain.

Each use of a token for access to profile information is recorded in the chain as a transaction.

#### Document management

Liquichain relies on secure peer-to-peer management of document storage between a user's devices, members of their circles, and the servers of the organizations they interact with. This ensures redundancy and accessibility of documents.

## USE CASE

# LIQUIVOTE, A FLEXIBLE WEB3 VOTING APP AND FRAMEWORK (DAO).

Liquivote is used to build voting solutions and DAO in decentralized apps that empower communities to express their opinion or take collective decisions.

### Ready to use and ecological

Liquivote provides a simple way for any user to create a proposal and push it to a vote if it receives enough support from the community.

The core of Liquivote is the distributed vote counting algorithm, both as a smart contract in organization nodes of the main chain and as distributed app in users' devices. The ecological impact of the algorithm can be adapted depending on the needs for anonymity, replication, audit or speed of the vote process.

### Community book

Although a vote could be organized for any kind of group decision, like electing the best Pâtissier of the year in a village, it is generally a decision that affect the organization rules of the community.

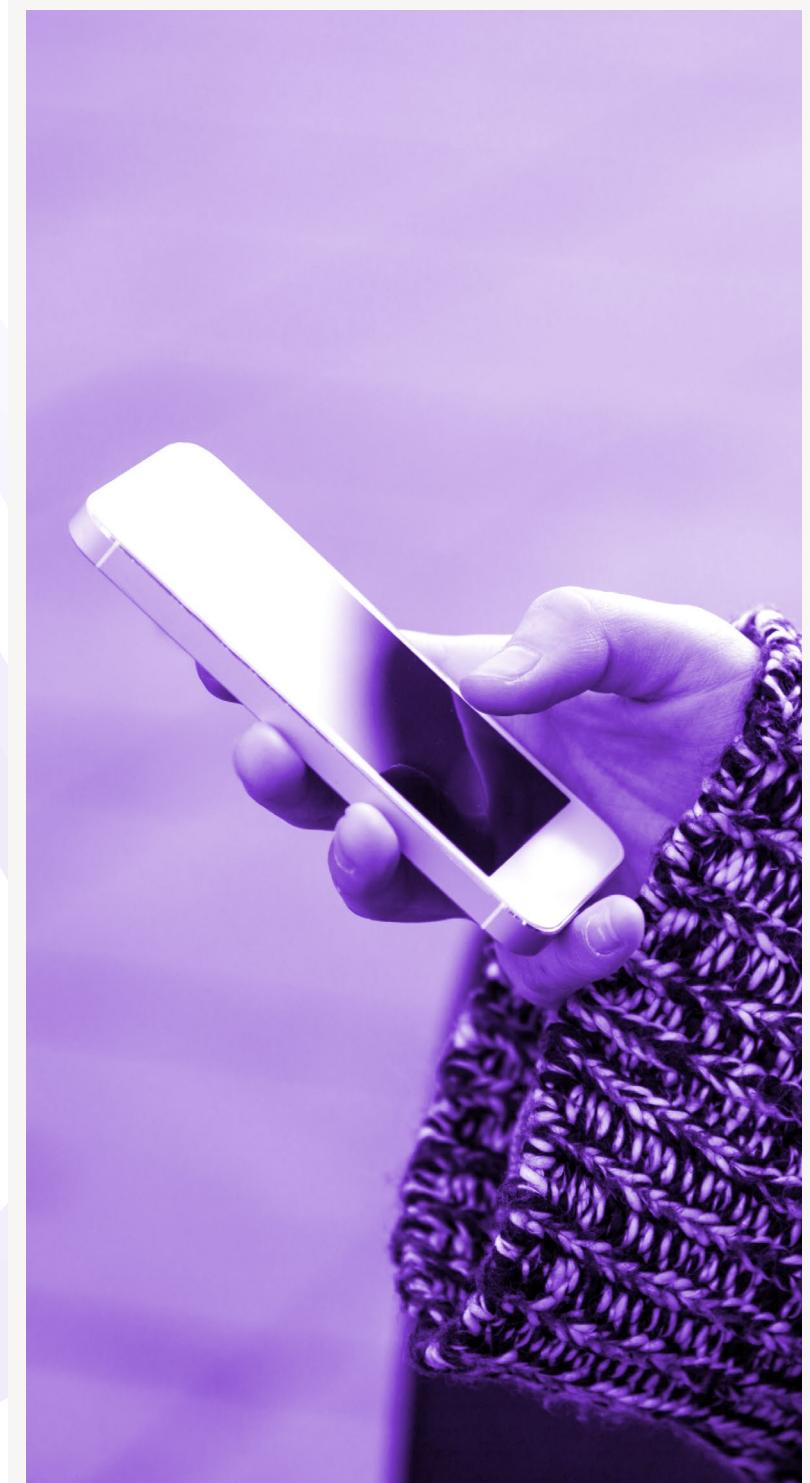
We can always see a vote as a decision to accept the modification of an existing law book, whether it is the bylaws of a company, the status of an association or the budget of a municipality.

Liquivote allow to handle the set of documents constituting this community book as a set of versioned files.

### Community rules

With Liquivote, you can define the rules that determine who can do what on the files of the community book.

For instance, the bylaws of a company can be modified only if the proposal is accepted by at least 75% of the board of directors, or a chair of a supporter's association can be elected only if 50% of the members vote for her.



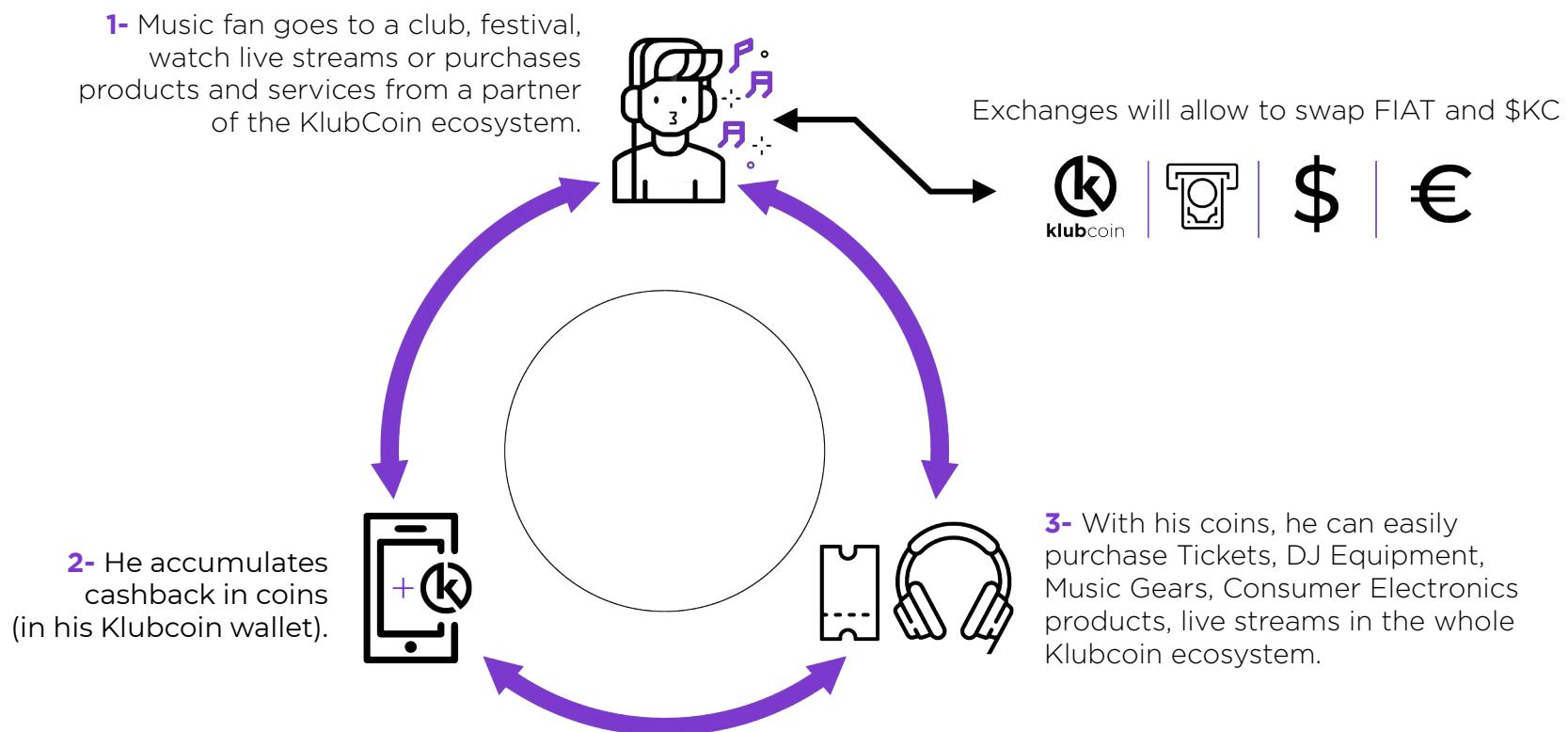
## KLUBCOIN IS IN THE AIR.

Based on Liquichain, klubcoin is the first crypto currency dedicated to nightlife, clubbing, festivals and players of the electronic music industry.

Just like airlines miles, klubcoin establish a rich token-based economy. It offers instant cashback and rewards when users purchase products and services from partners of the klubcoin family. It is non only a new and efficient way to trade within the community, but also to manage your membership cards, have access to exclusive offers, participate in votes...

The team behind klubcoin has a long history in the Dance music industry and its high-end relationships network spans the globe. Clubbing TV, Amnesia Ibiza, Djenerates or Festicket are among the first partners of the project.

### How does it work





## USE CASE

# TRAIL. IS THE FIRST TOKEN FOR BUSINESS TRANSPARENCY

TRAIL is a FREE technological solution to easily certify invoices.

TRL is the PAYABLE crypto token that allows access to this verified data.

We live in an uncertain world, fraud is everywhere. TRAIL makes it easy to record invoices securely. This service is free of charge as a common good for a safer economic world. All partners who wish to access the certified data will have to acquire a crypto-token, called TRL, based on Liquichain.

By 2024, all invoices in Europe will need to be digitally certified. Trail is the only free and flexible solution to comply with this new regulation. And it offers to partners the easy access to this information.

Business partners - and even businesses - need trust. Here are some examples of uses of TRL token

- Banks that want to secure their invoice-based credits,
- Software companies that want to offer a complete e-invoicing service
- Institutions that want electronic reporting,
- Online marketplaces that are required to track the VAT payments of their vendors
- Companies that want proof of authenticity before paying...

### How does it work



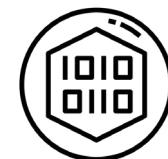
#### The Compliance Box

A free safe, with a unique identity certificate registered on the blockchain. This tool is user-driven and controls access to the data.



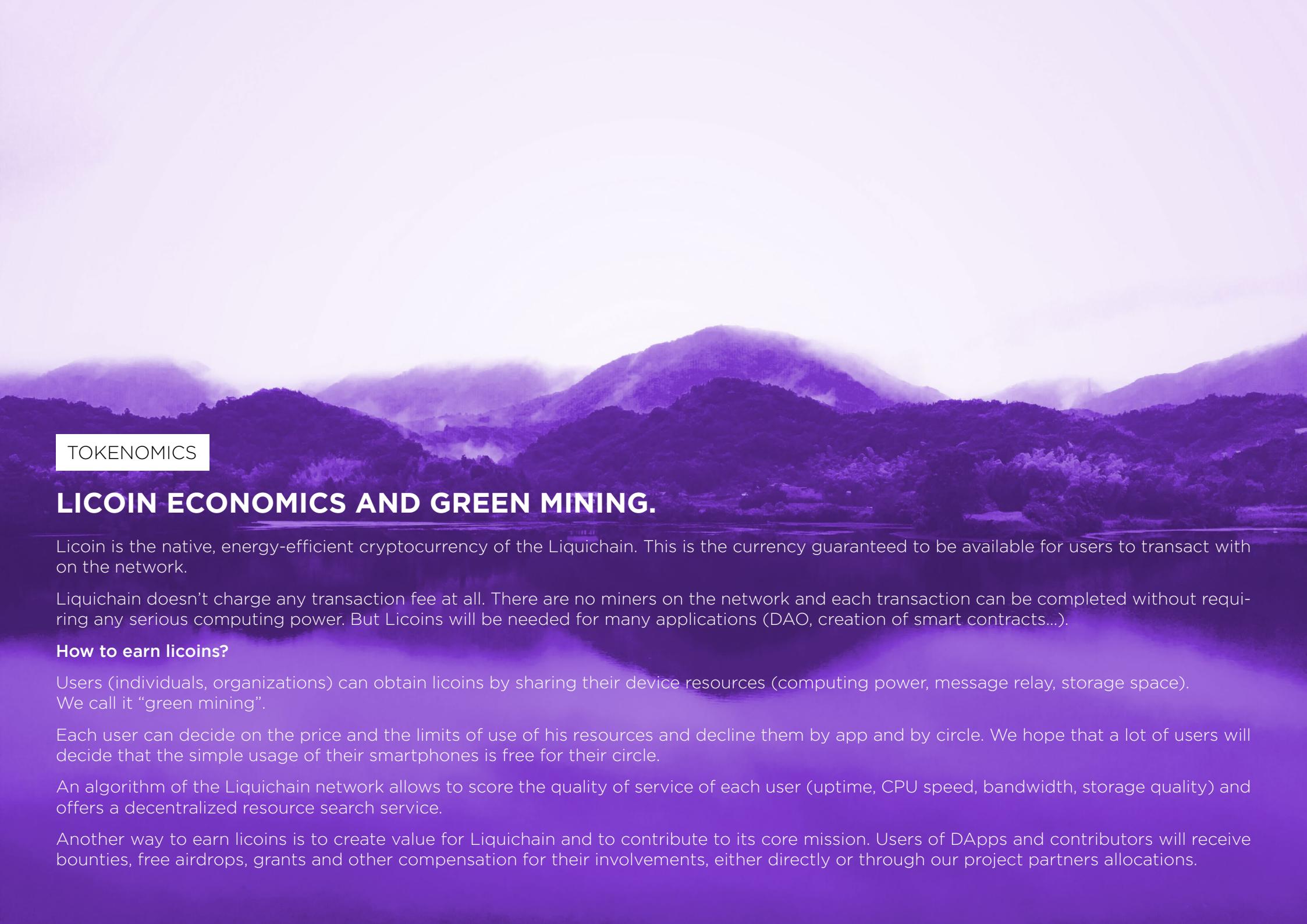
#### Access via API or drive

Invoices are certified by a simple deposit on a drive. Or via API by the invoice publisher (ERP, accounting software, etc....). Free of charge!



#### The TRL token

Banks, Fintechs, software companies, customers - buy TRL tokens to have secure and certified access to accessible data.



TOKENOMICS

## LICOIN ECONOMICS AND GREEN MINING.

Licoin is the native, energy-efficient cryptocurrency of the Liquichain. This is the currency guaranteed to be available for users to transact with on the network.

Liquichain doesn't charge any transaction fee at all. There are no miners on the network and each transaction can be completed without requiring any serious computing power. But Licoins will be needed for many applications (DAO, creation of smart contracts...).

### How to earn licoins?

Users (individuals, organizations) can obtain licoins by sharing their device resources (computing power, message relay, storage space). We call it "green mining".

Each user can decide on the price and the limits of use of his resources and decline them by app and by circle. We hope that a lot of users will decide that the simple usage of their smartphones is free for their circle.

An algorithm of the Liquichain network allows to score the quality of service of each user (uptime, CPU speed, bandwidth, storage quality) and offers a decentralized resource search service.

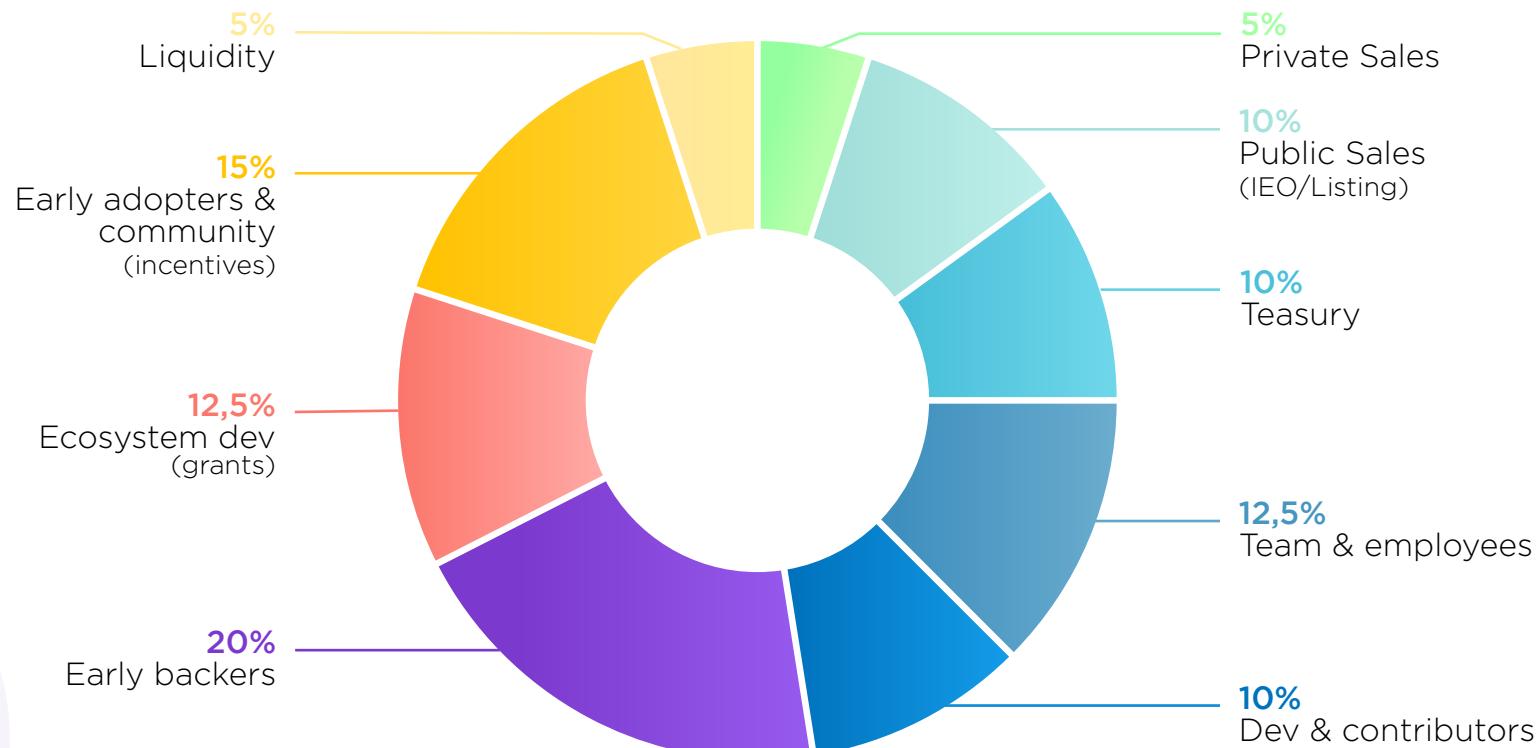
Another way to earn licoins is to create value for Liquichain and to contribute to its core mission. Users of DApps and contributors will receive bounties, free airdrops, grants and other compensation for their involvements, either directly or through our project partners allocations.

# LICOIN SUPPLY ALLOCATION.

The token allocation is based on utility.

Licoins is a virtuous circle designed specifically for third-party companies and platforms, and their end users.

The total supply of licoins is 500 millions and is distributed as follows (but allocated over vesting periods) :



Project partners (community) will regularly put their licoins back into the system via the rewards they will offer to their circles' members.

The dev team (protocol contributors) built the platform and the whole ecosystem and will continue to support the project.

Private sales are purchase agreements through the sale of Simple Agreements for Future Tokens ("SAFTs").

Early adopters are the early users in the network and early backers are pre-launch backers of the project.

Public sale will be held on several DEX/CEX thanks to a multichain ecosystem.

Treasury Reserve (controlled by the Liquichain DAO) contains pre-minted licoins for a particular purpose.

## GOVERNANCE

# GOVERNANCE MODEL AND CONSENSUS ALGORITHM.

The Liquichain protocol will have off-chain governance when it first launches: the development team (Psiome) will work autonomously, with the goal of building for the decentralized community.

**In this first step**, anyone can propose improvements on the Liquichain GitHub project, which are subsequently assessed by the Psiome core development team.

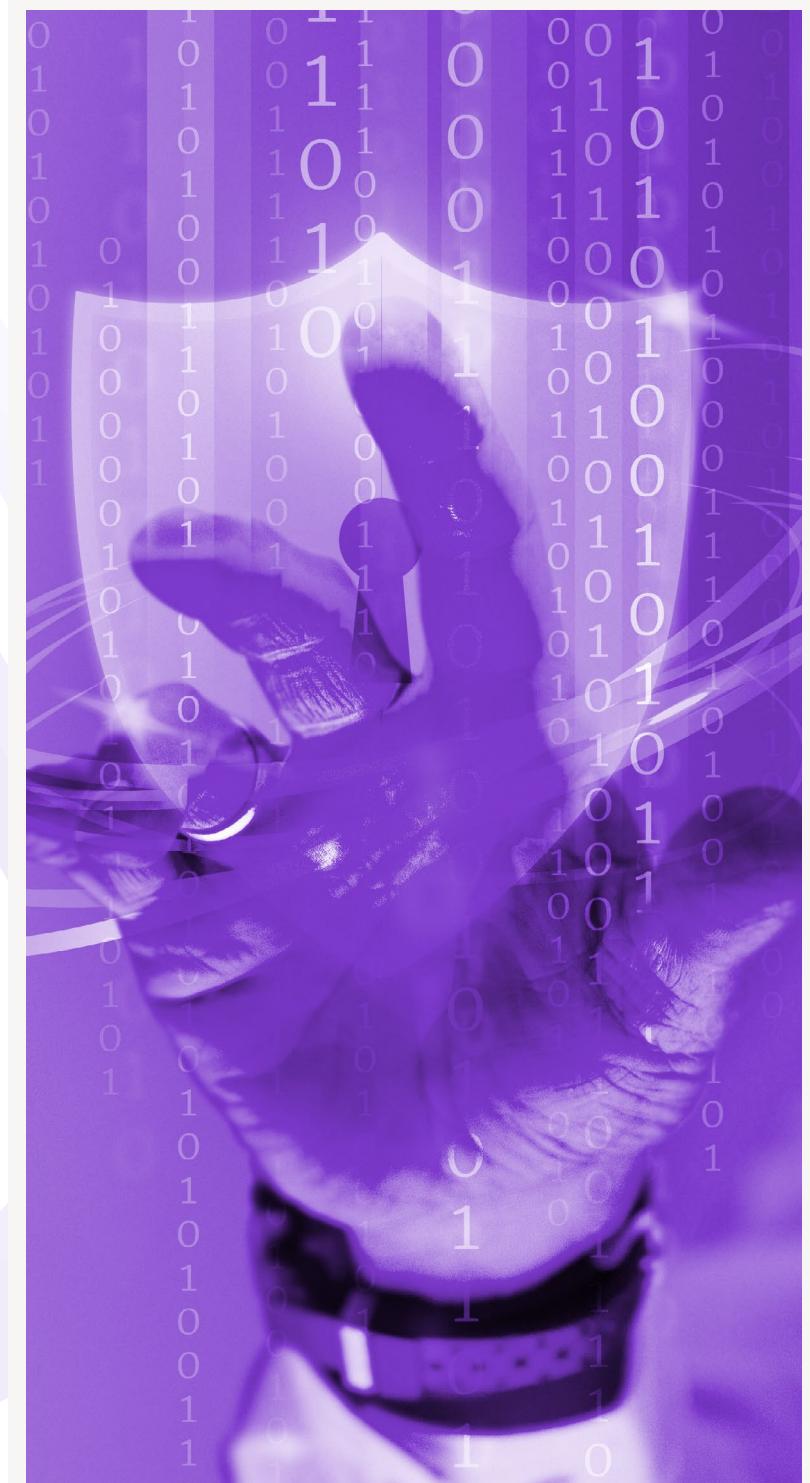
Projects partners have shown a significant commitment to Liquichain. Their collaboration with our blockchain ecosystem will help Liquichain achieve its full potential. At this stage, we focus on DApps that provide more functionality to the community. As a result, we'll choose a diverse group of well-known decentralized block producers (technical and corporate) with consideration.

As the end user is sometimes unaware of or concerned about the underlying technology, Liquichain will set up a governing council with Psiome and the first projects partners to govern software changes.

But we want our technology to be as open as possible for our users. We keep the objective of developing and implementing simple blockchain applications. All decisions, however, will be made in front of a public audience.

**In a second step** when our loyal community is sufficient, we will introduce the Liquichain DAO (based on Liquivote) where users will have a voice about protocol developments and treasury management.

It is important that the network and its cryptocurrency maintain a no-fork guarantee. This ensures stability of development for application builders, and long-term confidence in the network.





## TOKENOMICS

### MULTICHAIN PRESENCE.

We want to facilitate the arrival of users from other popular chains.

We will create coin smart contracts on different chains and a liquichain bridge to easily use ERC 20 or BEP 20 coins in our ecosystem, to allow swap on different exchanges, and to have partners on other chains.

#### How does a bridge work?

A bridge facilitates transfer of tokens from one chain to another. As an overview, our Ethereum bridge works as followed:

- A user sends their Ethereum coins to the Ethereum chain's bridge. These tokens are held in the bridge smart contract.
- The secure deposit is received via the Liquichain bridge.
- The user can now withdraw an equivalent amount of tokens into their Liquichain wallet.
- Token holders will be able to exchange their Liquichain tokens for Ethereum tokens in the same manner.

## ROADMAP

### OUR STRATEGY AND PROJECT PLAN.



## EXECUTIVE TEAM.



### Sébastien Michea

Co-founder

Chief Architect, Liquichain

CTO, Webdrone | PhD Maths | IT Architect

Creator of Meveo, a successful open-source telecom billing project

**Focus :** innovation, blockchain



### Thomas Jauffret

Market strategy

Entrepreneur | Early investor in fintech, blockchain and media projects

Finance expert and long-time crypto advocate

**Focus :** Strategy, bizdev, legal



### Stéphane Schweitzer

Community

CEO, ClubbingTV

Cofounder, Klubcoin

Cofounder, Atlanticus NFT Growth, Djenerates (NFT)

Community expert

**Focus :** blockchain, music industry



### Guillaume Massis

Business development

Head of sales, Intuit  
Cofounder, Airtag (acquired by Safran)

BtoB expert

**Focus :** fintech payment

The team has a long history of working together and is a mix of complementary skills.  
On top of that, they share the same vision of what blockchain can do to contribute to a better world.

## ENDORSED BY INDUSTRY AND TECH ADVISORS.

**Ammar Qaffaf**

CTO

Founder, Carrier Grade  
Ex VP of Engineering, Virgin Mobile LATAM

Focus : Product

**Stéphane Dine**

CEO, Telecel Pay

Focus : innovation

**Oren Ayende**

CEO RavenDB

Database expert

Focus : innovation

**Gérald Poitevineau**

Cofounder Webdrone

Focus : ops, Cybersecurity

**Alexander Medvednikov***Vlang creator*

25k Github stars

Focus : dev community

**Hervé Putigny**

Cofounder Webdrone

Cybersecurity expert

Focus : cybersecurity

**Nina Caput**

Blockchain &amp; NFT strategist

Head of Bizdev, Arianee

Founder, Equineledger

Focus : bizdev, blockchain

**Damien Chalret du Rieu**

CEO Playgraal.eth

Ex Co-founder Viadeo

Focus : BtoB

## DISCLAIMER

### TOKEN DISCLAIMER

Licoin Tokens (the “Tokens”) does not constitute an investment and is not a security. The Tokens do not represent any claim for repayment of a monetary sum against the Issuer, nor have persons holding Tokens (“Token Holders”) any claim against the Issuer for payment of interests or for sharing of profits generated by the Issuer. A total loss of the value of Licoin Tokens or any investment due to various causes cannot be excluded.

The Issuer will undertake best efforts to have the Licoin Token listed at a cryptocurrency exchange or trading platform but cannot guarantee if and when such listing will take place. Until a listing has been completed, Token Holders can dispose of tokens only by way of selling them on a bilateral basis. There is no guarantee that buyers for Tokens will be available or that they will be willing to pay the price paid by the Token Holder at the time of the acquisition of the token.

Acquisition of Tokens is suitable only for experienced persons who are able to evaluate the risks, including the risks related to the underlying technology, and who have sufficient resources to be able to bear any losses, including a complete loss, which may result from such acquisition. Before subscribing to or otherwise acquiring any Tokens, prospective investors should specifically ensure that they understand the structure of and the risk inherent to the Tokens.

Prior to the acquisition of Licoin Token, persons should independently assess any possible risks, seek advice with respect to the economic, legal, regulatory and tax implications of the purchase of Licoin Token and should consult with his/her own investment, legal, tax, accounting, or other advisors to determine the potential benefits, burdens, risks and other consequences of a purchase of Licoin Token.

Prospective Token Holders are required to study the white paper, the website, the FAQ's and all other available information sources and are encouraged to clarify all their questions prior to the acquisition of Tokens.

