Blockchain-as-a-Service
Whitepaper v0.8

Charles

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The purpose of this White Paper is to present Nikoin, its technology, business model and the NIK token to potential token holders in connection with the proposed ICO. The information set forth below may not be exhaustive and does not imply any elements of a contractual relationship. Its sole purpose is to provide relevant and reasonable information to potential token holders in order for them to determine whether to undertake a thorough analysis of the company with the intent of acquiring NIK Tokens. All relevant legal information is contained in the Token Purchase Terms and the Token Purchase Agreement.

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2. Introduction

Fat Protocol, Thin Applications

Comparing the differences between the Internet and the Blockchain. The previous generation of shared protocols (TCP/IP, HTTP, etc.) produced gigantic amounts of value, but most of it got re-aggregated on top at the applications layer, largely in the form of data (like Google, Facebook and so on). The Internet stack, in terms of how value is distributed, is composed of "thin" protocols and "fat" applications. As the market developed, it became evident that investing in applications produced higher returns whereas investing directly in protocol technologies generally produced low returns.

This relationship between protocols and applications is reversed in the blockchain application stack. Value concentrates at the shared protocol layer and only a fraction of that value is distributed along at the applications layer. It's a stack with "fat" protocols and "thin" applications.

This can be seen very clearly in the two dominant blockchain networks, Bitcoin and Ethereum. The Bitcoin network has a $260B market cap yet the largest companies built on top are worth a few hundred million at best, and most are probably overvalued by “business fundamentals” standards. Similarly, Ethereum has a $77B market cap even before the emergence of a real breakout application on top and only few years after its public release.

There are two things about most blockchain-based protocols that cause this to happen: the first is the shared data layer, and the second is the introduction of cryptographic “access” token with some speculative value.

By replicating and storing user data across an open and decentralized network rather than individual applications controlling access to disparate silos of information, we reduce the barriers to entry for new players and create a more vibrant and competitive ecosystem of products and services on top. As a concrete example, consider how easy it is to switch from Poloniex to GDAX, or to any of the dozens of cryptocurrency exchanges out there, and vice-versa in large part because they all have equal and free access to the underlying data, blockchain transactions. Here you have several competing, non-cooperating services which are interoperable with each other by virtue of building their services on top of the same open protocols. This forces the market to find ways to reduce costs, build better products, and invent radical new ones to succeed.

HTTP as the underlying protocol of the web allows for decentralized publishing. Anyone can operate a web server and publish their own content. And anybody with a web browser can access that content (subject to governments and ISPs imposing limitations). But as a stateless protocol, HTTP needs a data layer for any application functionality, which until recently was provided by companies such as Google (search), Facebook and Twitter (social), Amazon and eBay (commerce). Because we didn’t know how to maintain state in a decentralized fashion it was the data layer that was driving the centralization of the web that we have observed.

3. ICO Details

The Nikoin token also abbreviated as NIK is an ERC-20 standard-based Ethereum token. Nikoin tokens grant their holders a Systematic Return Plan (SRP), which entitles them to:

- Receive **10% monthly payouts** on the principle amount invested in the ICO, for **15 months**. Token holders will get 50% growth on the principle invested over 15 months. The amount is calculated as per the number of tokens purchased.
    - Token holders can liquidate monthly payouts from the exchanges Nikoin is listed on in any of the cryptocurrencies/fiat currencies depending on the local laws and exchange regulations.
    - Enrolling in SRP is optional, ICO token holders can also opt for one-time liquidation of tokens. In this case, all tokens bought during ICO will be credited to token holders wallet at the Token Distribution Event. Token holders opting for liquidation will not receive any returns/dividends.
- Participate in the beta launch of Nikoin, use Nikoin BaaS Platform at the beta stage and get ahead of the curve.
- Avail Nikoin main-net* tokens equivalent to the Nikoin ICO tokens held at the snapshot time at the main-net public deployment event.

Tokens are offered in Phases, namely:

Presale

- Pre-sale Phase I - Nikoin tokens available at 0.00018 ETH, for 15 Days, starting from 15th December 2017 (12 PM GMT) to 15th February 2017 (11:59:59 AM GMT).
- Pre-sale Phase II - Nikoin tokens available at 0.0002 ETH for 30 Days, starting from 15th February 2018 (12 PM GMT) to 30th April 2018 (11:59:59 AM GMT).

ICO

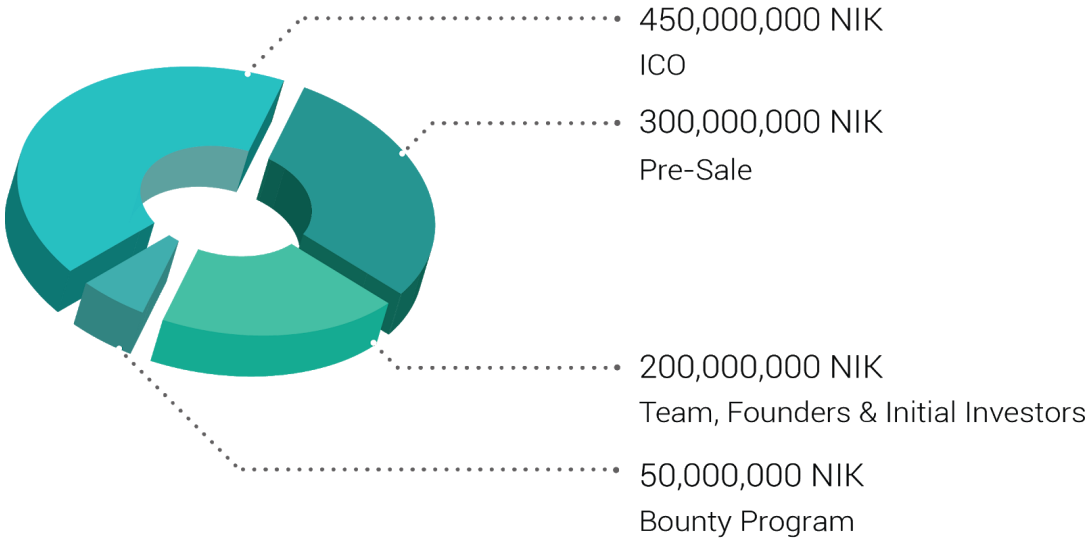
- ICO Phase I - Nikoin tokens available at 0.00022 ETH, for 30 Days, starting from 01st May 2018 (12 PM GMT) to 30th May 2018 (11:59:59 AM GMT).
- ICO Phase II - Nikoin tokens available at 0.00026 ETH, for 15 days, starting from 01st June 2018 (12 PM GMT) to 15th June 2018 (11:59:59 AM GMT).

Token price at listing would be approximately[1] 0.0004 ETH, depending upon the market liquidities and the total amount raised in the ICO. Nikoin would be listed primarily on decentralised exchanges to promote the decentralised ecosystem.

Tokenomics

NIK Total Supply
1,000,000,000 NIK

Contract Creation Date
15th December 2017



Pre-Sale	**300,000,000**
ICO	**450,000,000**
Team, Founders & Initial Investors	**200,000,000**
Bounty Program[2]	**50,000,000**
Total	**1,000,000,000**

[1]This is an approximation of the speculative listing of the Nikoin price, it may be higher or lower, but not less than the closing price of the ICO.

[2]Bounty Program details are available on our Website, Medium, and bitcointalk announcement page.

Use of Proceeds

- **30% - Invested into cryptocurrency collaterals.**
  Nikoin is investing 30% of the entire raised capital, into cryptocurrencies. This fund, called **"Agnosco"** which is India's first cryptocurrency & cryptoassets focused investment fund, which is exclusively being capitalising and investing in blockchain-oriented startups and cryptocurrencies.

  Agnosco team, with it's experience is focused on understanding how the blockchain as a technology and blockchain related companies will impact the future. The team understands the shifting paradigm of the blockchain ecosystem, keeping pace with the coin and token economics.

  Agnosco is actively working on appreciating this fund, by trading and investing the gains.

- **30% - Invested in building state-of-art, professional mining farms.**
  Nikoin is investing 30% of the entire raised capital in setting up state-of-art, profesional mining farms **"Partum"** in the Himalayas. Himalayas are the perfect ground for mining in India, optimum temperature, good air quality, cheap and undisrupted electricity supply and 24x7 high speed internet connectivity.

  Digitising the revenue is the most safe and secure way, these farms are scientifically designed to reduce the cooling costs, increase mining throughput and scale efficiencies on Mining operations.

  All the gains from mining are pumped inside Agnosco fund, thus strategically appreciating the fund in accordance with the cryptocurrency markets. Exact composition of the Mining Machines, cryptocurrencies being mined and live mining status will be shared on a transparent dashboard[3].

- **40% - Consumed for Company operations, building the platform and giving incentives to the contributors of the ecosystem.**
  Nikoin, as a company will be consuming 40% of the raised capital for building technology the Nikoin Whitepaper talks about. Refer to the Nikoin Whitepaper for more details on the technology platform and further distribution of this 40% capital.

[3]By transparent Dashboard, all the shared mining status will consist of the actual stats from the pools, these are not accurate to the outputs, token holders are advised no to speculate on the mining outputs.

Nikoin Security Tokens (NST)

Nikoin Security Tokens (NST) are special tokens, distributed with the ICO token (NIK). These tokens play a special role of securitising the principle amount of the token holders.
In the scenario of a huge liquidation event, market crisis, or any other inevitable catastrophic event in which Nikoin, as a cryptocurrency loses value, and the token holders lose the complete amount with which they purchased ICO tokens, NST guarantees the return of their Purchase amount[3].

Every Token holder is given NST on the token purchase, number of NST is the USD[4] equivalent of the token purchase amount. Only if the token holder has not transferred/liquidated NIKs from the token sale platform in the due course of SRP timeline is able to claim for returns under NST.
Nikoin Security Token (NST) is technically a smart contract which contains the addresses of all the ICO token holders, and the amount of NIK purchased with timestamp of purchase. To claim for return of principle under NST, token holders must be having NIK with the same timestamp as NST credited as a proof of holding.

A detailed report on NST, is published as a separate paper, which the token holders can reference for better understanding and for resolution of any discrepancies.
A special time of 24 hours, after the closing of SRP will be announced for Token holders to claim NST and get the principle return.
NST is also a cryptocurrency which can have a speculative value, token holders are advised not to speculate on NST and keep them as a security.

[3]Purchase amount is the USD equivalent of the total amount token holder has paid to buy NIK during the Pre-sale/ICO period.

[4]USD equivalent is just for the speculative and conversion purpose, it does not signify the USD Fiat currency and thus is not bound by any of the Regulatory Frameworks/Agencies/Authorities.

4. Agnosco

Agnosco is a Nikoin fund. Agnosco is actively working on appreciating this fund, by trading and re-investing the gains.

Agnosco is India's first cryptocurrency & cryptoassets focused investment fund, which is exclusively being capitalising and investing in blockchain-oriented startups and cryptocurrencies.

PHILOSOPHY.

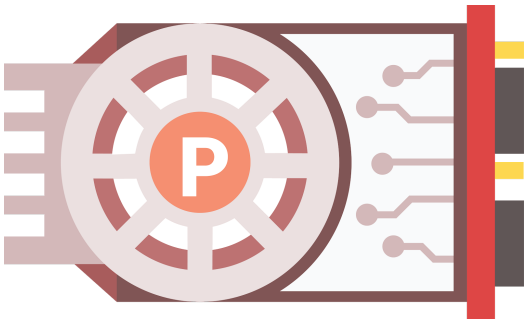
Bottom-up fundamental research and valuations – the core of our philosophy:
We seek to identify assets whose prices differ materially from our estimate of intrinsic value, based on through-the-cycle, normalised cash flows and earnings, and where we think that there is a catalyst for the asset's price to revert to our estimate of intrinsic value over the medium term. However, when using a valuation-driven asset picking process, we acknowledge the risk of investing in so-called value traps and seek to mitigate this risk by focusing on catalysts, downside risk, technology behind, value proposition and development team, and taking all of these factors into account when considering portfolio construction.

Top-down views – an important overlay:
Identifying and taking advantage of economic cycles and market trends is an important contributor to the generation of superior long term and short term investment returns, and is complementary to bottom-up research. However, cycles and trends are often unpredictable and are subject to change. Therefore the risk of being wrong must be acknowledged and managed.

Trading – a part of both bottom-up and top-down research:
The market is right most of the time, but regular inefficiencies arise in the short term. Shorter term inefficiencies may present trading opportunities, irrespective of a asset's intrinsic value. These opportunities often arise due to large flows of capital, news flow and emotions, structural inefficiencies, development actions, and other special situations or events.

30% of the total funds raised in the Nikoin ICO will be secured into cryptoassets, and transferred to Agnosco. Agnosco's modus operandi is to grow whatever fund it has through every possible way.

5. Partum



Partum is the Proprietary Nikoin Mining Operation. It constitutes of state-of-art mining farm, capable of mining multitude of cryptoassets and a proprietary algorithm for switching between cryptoassets depending on the profitability.

We are convinced that the global community deserves a share in the profits of cryptocurrency mining and not just a handful of anonymous players from oligopolistic cartels in authoritarian states. We believe that crypto mining has to be a decentralized, democratic, and evenly distributed operation - one that is open to everyone who is willing to support the network and benefit from supporting it.

Based on these principles we have created the NIK token. This grants investors the right to receive the pay-outs of our proprietary mining operation. Payouts from Mining can only be received by the investors opting for SRP.

Nikoin will be deploying fully customised “Industry 4.0”, remotely monitored, Internet of Things enabled mining farms in Himalayan Hilltowns, in Uttarakhand, India.
The Himalayas have an undisrupted and reasonably cheap power supply, good internet connection, low air pollution, and low temperature around the year.
Mining requires a temperature controlled environment with low dust and particulate matter in the air for better performance. We will be deploying a total of 4,200 GPUs with a cumulative hash power of 105,000 Mh/s in Phase I.
Partum is also developing a proprietary algorithm, which automatically finds the maximum profitability and mines that particular asset. It will help in maximizing the mining profits. Further, future crypto-mining operations need to reduce the systemic risks that result from being bound to certain coins or mining pools. Thus, Partum strives to hand the decisive power back to the crypto community. It must be possible for individuals to take part in crypto-mining without tremendous investments in hardware and technology. Besides broad ownership of mining operations, Partum strives to involve the community in making decisions about key mining decisions. We, therefore, strive to reduce the hurdles for larger audiences to take part in the crypto community.

Partum’s central hub or Unified Mining Interface (UMI) manages the automated, decentralized operation of mining farms worldwide. It supports the Mining Farms in finding the optimal mining strategy depending on the traded price of the cryptocurrency, mining difficulty, real-time energy price at the location, hardware generation and many more factors. Besides data aggregation, control and optimization of Mining Farms, UMI also handles and supervises all service & maintenance operations throughout the Nikoin network.

5. Blockchain-as-a-service(BaaS)

Nikoin Blockchain as a Service Platform provides enterprise/developers with the Blockchain protocol layer as microservices which can be deployed on few clicks, scalable to production environment allowing them to develop, deploy and scale fast, saving time and resources. Nikoin BaaS platform is built to perform.

It promotes an array of business blockchain technologies including distributed ledger platforms, smart contract engines and digital assets transfer frameworks. Nikoin BaaS umbrella strategy encourages the reuse and agility of common building blocks and enables rapid innovation of Distributed Ledger Technologies (DLT), intended to be a foundation for developing applications with a modular architecture, Nikoin BaaS allows DLT components to be ‘Plug n Play’.

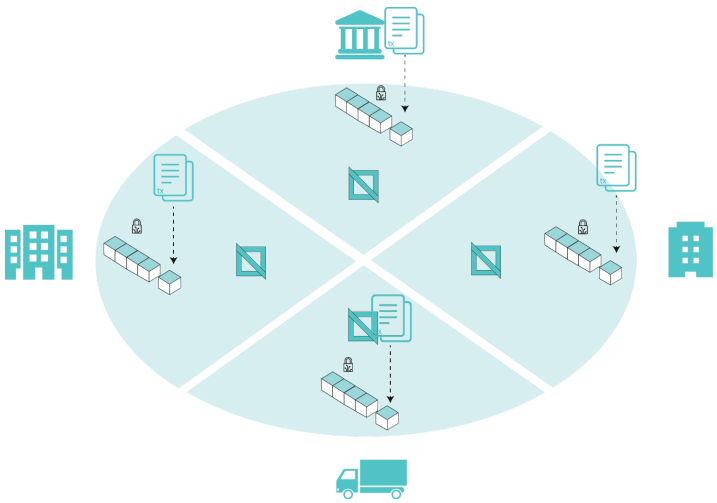
Like other blockchain technologies, it has a ledger, uses smart contracts, and is a system by which participants manage their transactions. With the basics, it provides various pluggable modules of different blockchain services platform to be clubbed together, feeding every appetite of an enterprise application.

Before getting to the technicalities, understanding Blockchain and it’s use is really important. So,

What is Blockchain?

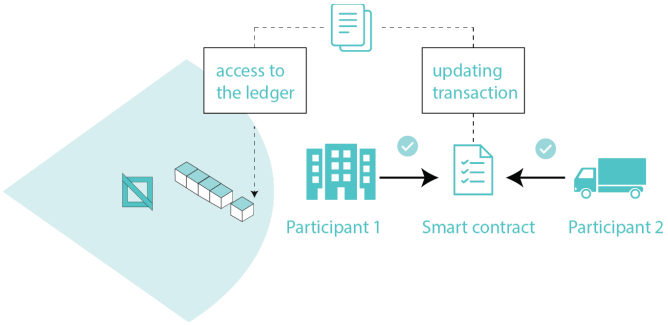
Distributed Ledger

At the heart of a blockchain network is a distributed ledger that records all the transactions that take place on the network.
A blockchain ledger is often described as decentralized because it is replicated across many network participants, each of whom collaborate in its maintenance. We’ll see that decentralization and collaboration are powerful attributes that mirror the way businesses exchange goods and services in the real world.



In addition to being decentralized and collaborative, the information recorded to a blockchain is append-only, using cryptographic techniques that guarantee that once a transaction has been added to the ledger it cannot be modified. This property of immutability makes it simple to determine the provenance of information because participants can be sure information has not been changed after the fact. It's why blockchains are sometimes described as systems of proof.

Smart Contracts



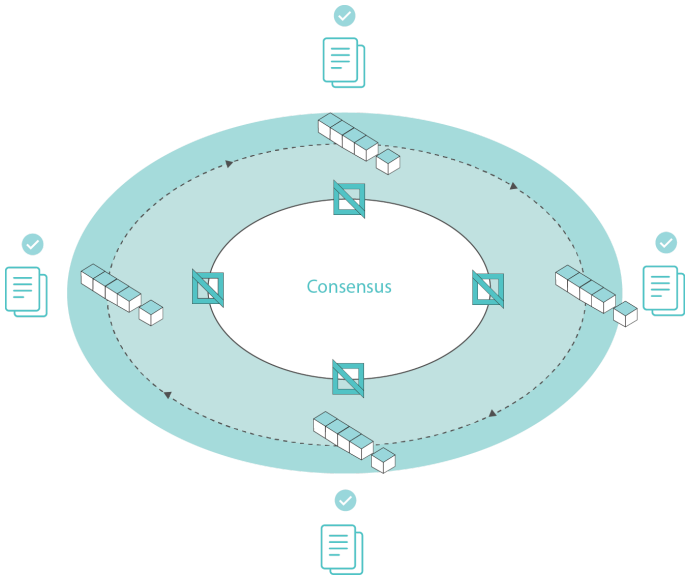
To support the consistent update of information – and to enable a whole host of ledger functions (transacting, querying, etc) – a blockchain network uses smart contracts to provide controlled access to the ledger.

Smart contracts are not only a key mechanism for encapsulating information and keeping it simple across the network, they can also be written to allow participants to execute certain aspects of transactions automatically.

A smart contract can, for example, be written to stipulate the cost of shipping an item that changes depending on when it arrives. With the terms agreed to by both parties and written to the ledger, the appropriate funds change hands automatically when the item is received.

Consensus

The process of keeping the ledger transactions synchronized across the network – to ensure that ledgers only update when transactions are approved by the appropriate participants, and that when ledgers do update, they update with the same transactions in the same order – is called consensus.

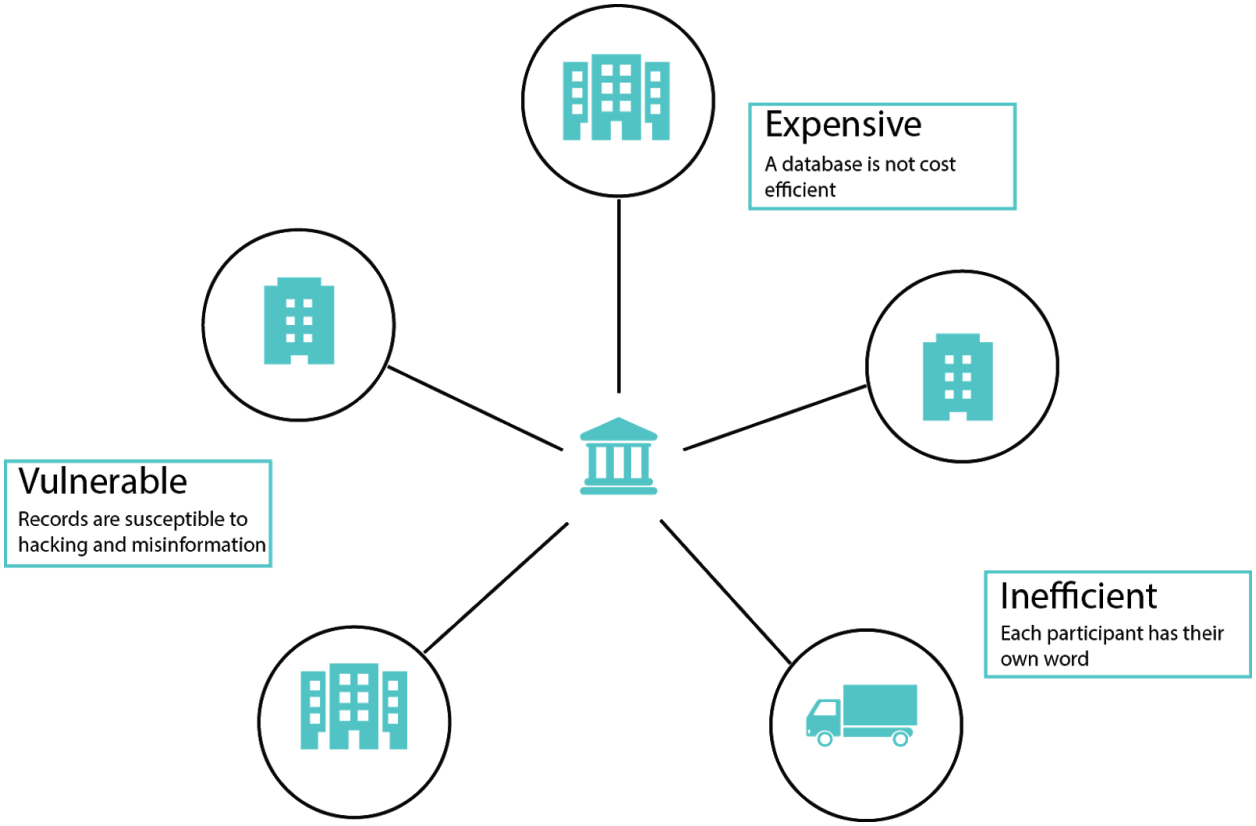


Why is Blockchain useful?

Today's Systems of Record

The transactional networks of today are little more than slightly updated versions of networks that have existed since business records have been kept. The members of a Business Network transact with each other, but they maintain separate records of their transactions. And the things they're transacting – whether it's Flemish tapestries in the 16th century or the securities of today – must have their provenance established each time they're sold to ensure that the business selling an item possesses a chain of title verifying their ownership of it.

What you're left with is a business network that looks like this:



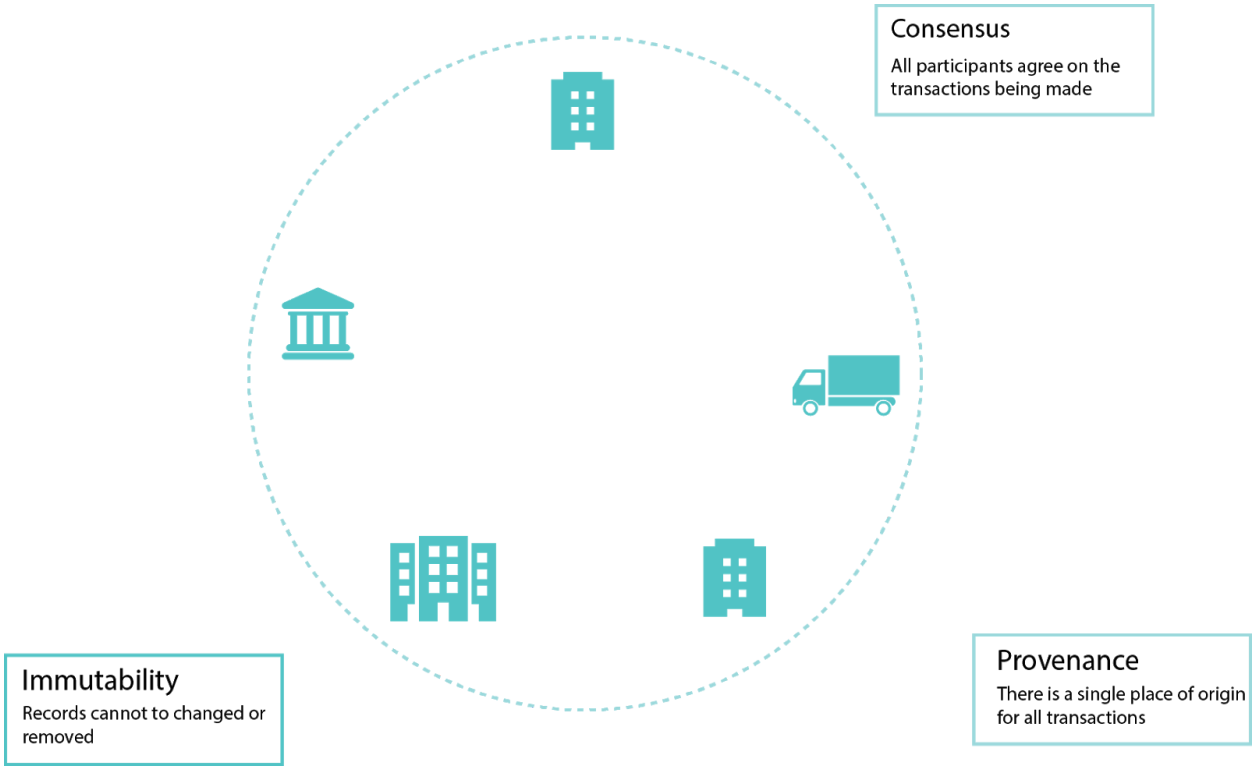
Modern technology has taken this process from stone tablets and paper folders to hard drives and cloud platforms, but the underlying structure is the same. Unified systems for managing the identity of network participants do not exist, establishing provenance is so laborious it takes days to clear securities transactions (the world volume of which is numbered in the many trillions of dollars), contracts must be signed and executed manually, and every database in the system contains unique information and therefore represents a single point of failure.

It's impossible with today's fractured approach to information and process sharing to build a system of record that spans a business network, even though the needs of visibility and trust are clear.

The Blockchain Difference

What if instead of the rat's nest of inefficiencies represented by the "modern" system of transactions, business networks had standard methods for establishing identity on the network, executing transactions, and storing data? What if establishing the provenance of an asset could be determined by looking through a list of transactions that, once written, cannot be changed, and can therefore be trusted?

That business network would look more like this:

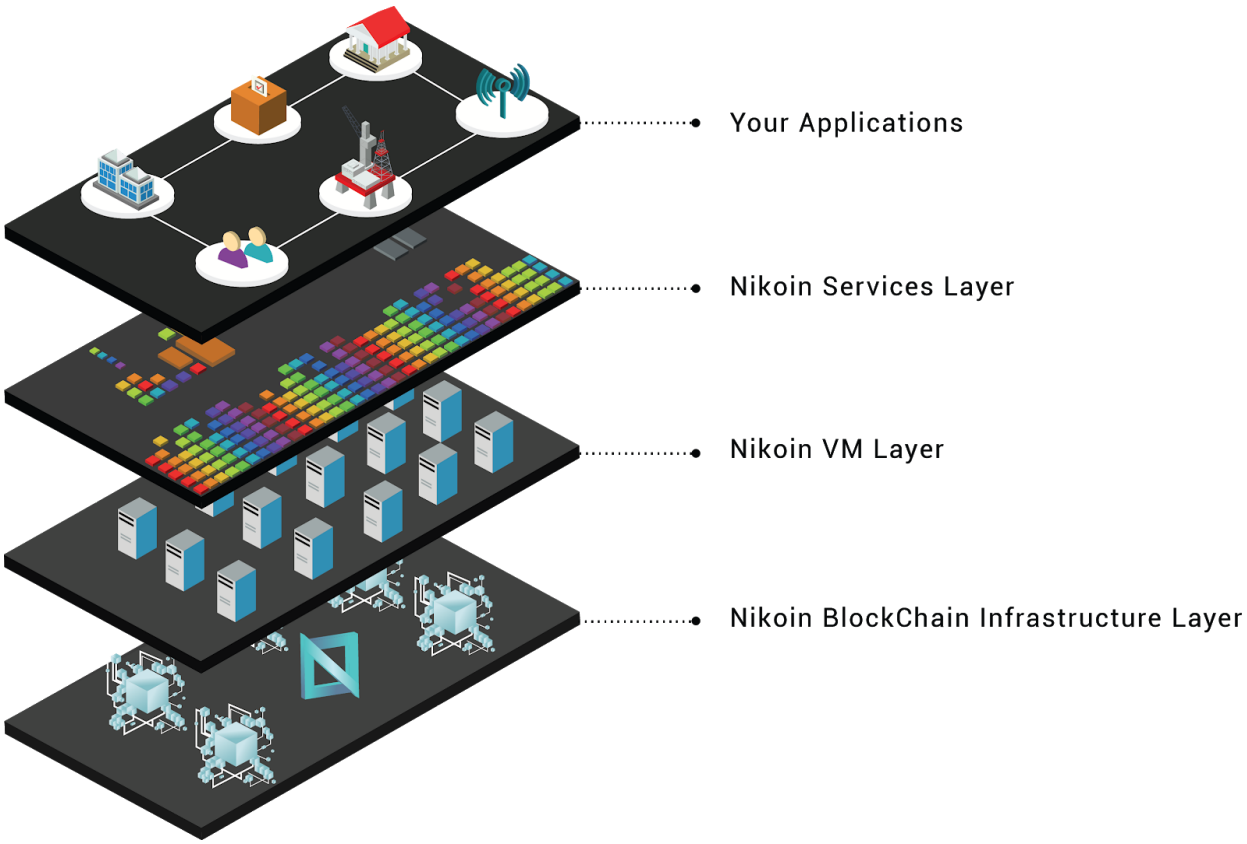


This is a blockchain network. Every participant in it has their own replicated copy of the ledger. In addition to ledger information being shared, the processes which update the ledger are also shared. Unlike today's systems, where a participant's private programs are used to update their private ledgers, a blockchain system has shared programs to update shared ledgers.

With the ability to coordinate their business network through a shared ledger, blockchain networks can reduce the time, cost, and risk associated with private information and processing while improving trust and visibility.

6. BaaS Layers

Nikoin BaaS provides with different layers to accommodate all the needs of an enterprise.

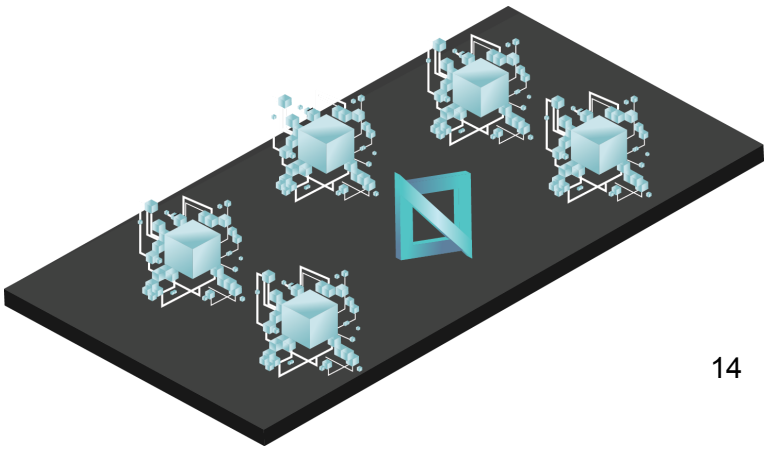


These layers are designed to run frictionless secure applications with blockchain. Nikoin is a state-of-art platform to construct the right infrastructure for a blockchain in easier and more efficient way.

The Platform consists of :

Nikoin Blockchain Infrastructure Layer

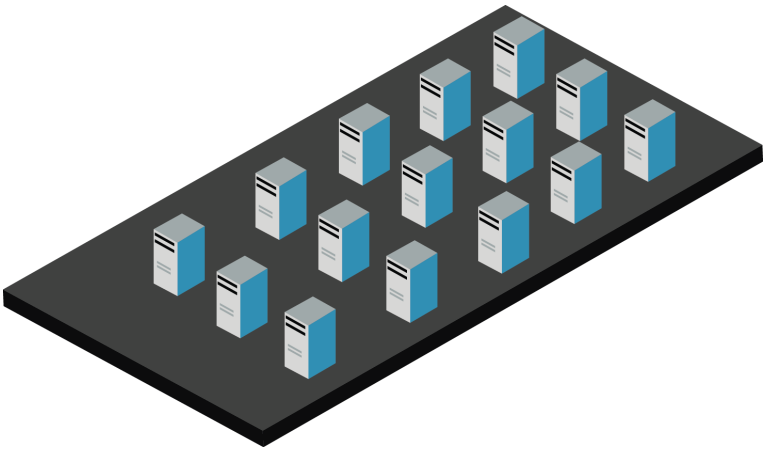
Nikoin Blockchain infrastructure layer, the Nikoin Main-net and respective sidechains are deployed at this layer. Nikoin Infrastructure Layer supports a rapidly growing number of distributed ledger



technologies that address specific business and technical requirements for security, performance, and operational processes.

Hyperledger and Openchain based containerised blockchain instances, which allow scalable operations and customizability to promote varied classes of applications. Manifesting Storage, Computation and communications.

Nikoin VM layer



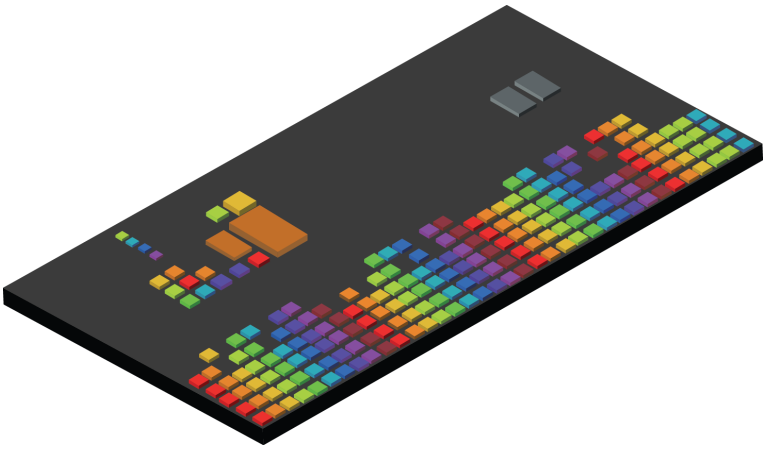
Nikoin VM Layer allows cross execution of decentralised applications, into varied environments.
It allows the services to run securely and allows easy deployment of sidechains and assistive services.
This allows applications to use blockchain layer without being bound to any particular framework.

Docker and Kubernetes with additional layer of Yandex.Cocaine for easy access to platformification of VM services and easy running of containers.

Nikoin Services Layer

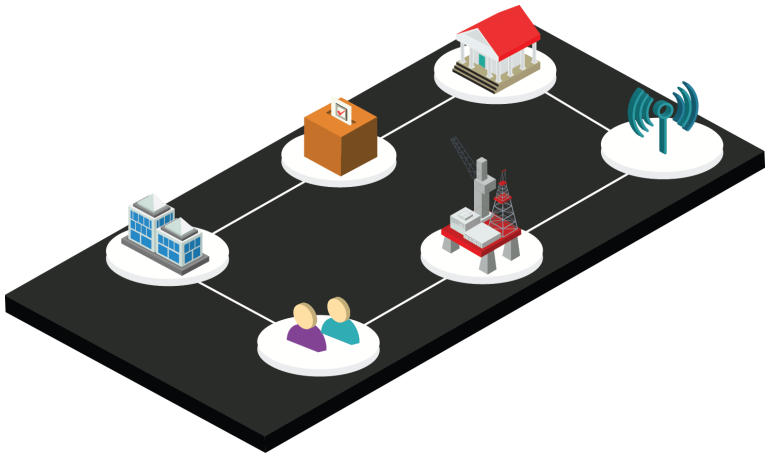
Nikoin Services layer runs different services based on the application requirement. This layer verify generated block and transactions, and perform consensus algorithm.
We are starting of with a few modules, but will eventually add more as the platform gets more acceptance. Current installed modules are :

- Transaction Module
- Verification Module
- Consensus Module
- Smart Contracts Engine
- Data Engine
- Data flow controller



- Decentralised File Storage system

Further, vision is to add AI, ML, super computing services on the services layer. Adding up more power to the applications.



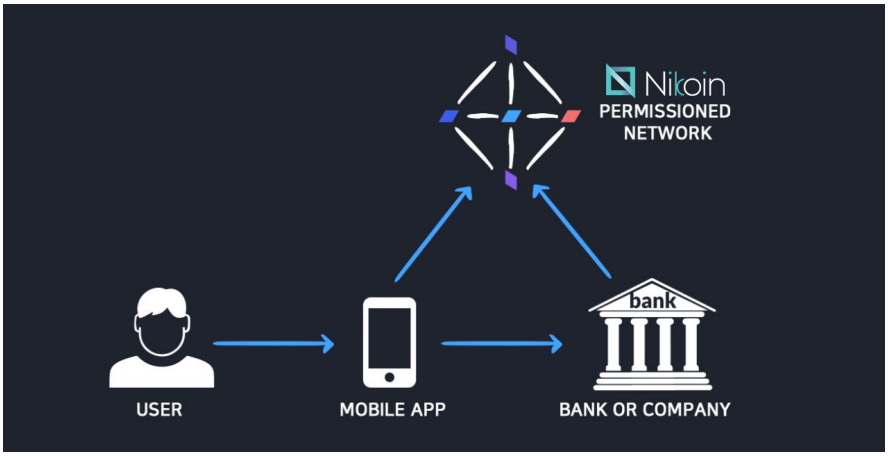
User Applications Layer

User Applications have to install Nikoin SDK to enable communication with the Nikoin BaaS, this layer basically generates and query blocks and transactions, and performs verification and recording data for smart contract.

This layer allows :
High Compatibility with existing legacy system : Nikoin BaaS is designed to be plugged into already built enterprise infrastructure.
Short Deployment Period : Nikoin provides ready-made enterprise-use APIs and SDKs, requiring little or no cumbersome burden for a short period.

7. Nikoin BaaS Use Cases

Secured Simple Login



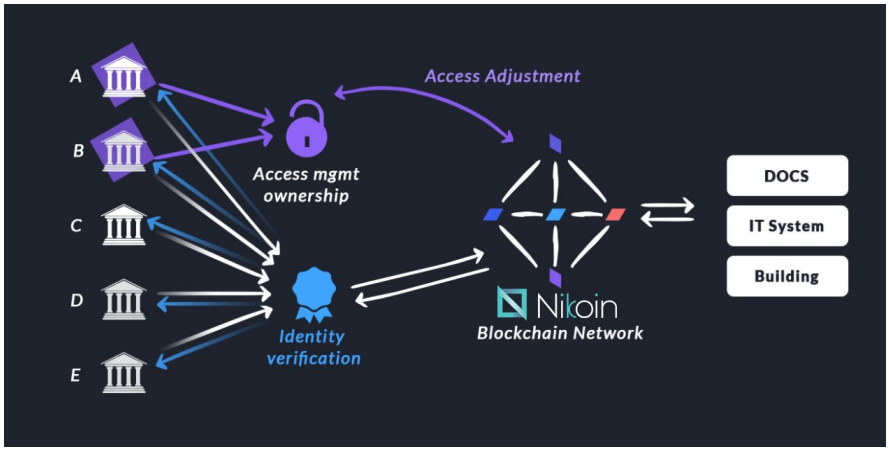
Nikoin smart contract-based authentication solves security issues of traditional systems. It supports not only simple log-in services for a single entity, but also OAuth services connecting and sharing authentication information among multiple entities.

- Prevents third-party intrusions and deliberate changes through smart contract-based authentication tokens and access management.
- Able to track issurances, modifications and access for Tokens based on a UTXO model.
- Guarantees unlimited scalability for connected applications, services and devices.

This also enables Blockchain Single Sign-On (SSO).
By distributing a ledger among all members of the network, blockchain authentication eliminates someone from maliciously altering the ledger. Every time a ‘transaction’ or block of data is added to the chain a majority of the network must verify its validity. This guarantees the integrity of the ledger. One could then use public key encryption, such as the extremely secure RSA encryption, to securely send their credentials. The recipient could then verify this against an entry in the immutable blockchain resulting in an incredibly secure and reliable way to handle verification of identity. These principles could be applied to transition everything from the electoral process to state identification cards to dual-factor authentication into a secure, fast, reliable, and readily available service.

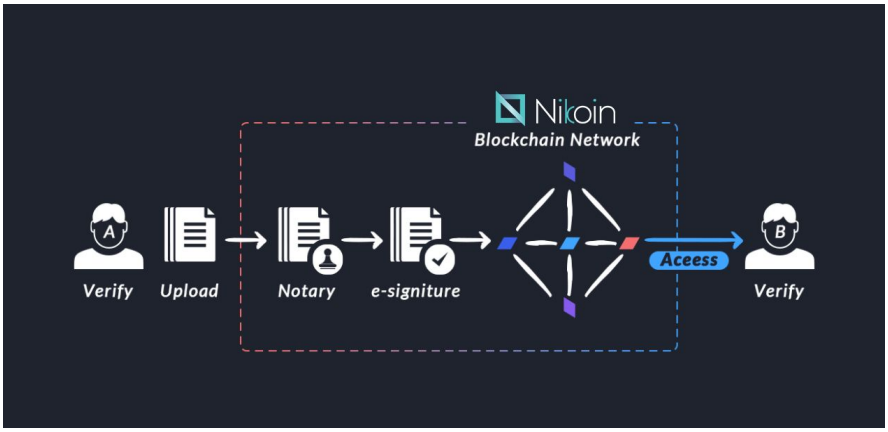
Shared Access Management

Nikoin BaaS allows for mutual access management by all participating entities.
You can easily manage access to documents, IT Systems, and physical buildings/spaces.



- Real-time management of access for individuals within specific entities through smart contract based authentication to token issurances and rights.
- Automatic log of accessed subjects, individuals with access rights, and the history of changes to access rights.

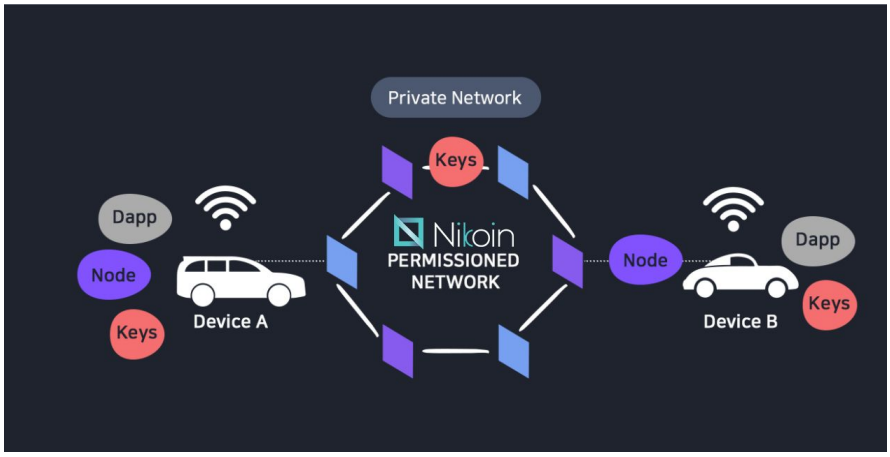
e-Document Management



Nikoin's e-Document solution uses blockchain-based e-Signatures to notarize various formal agreements and security documents, providing safe and efficient document management.

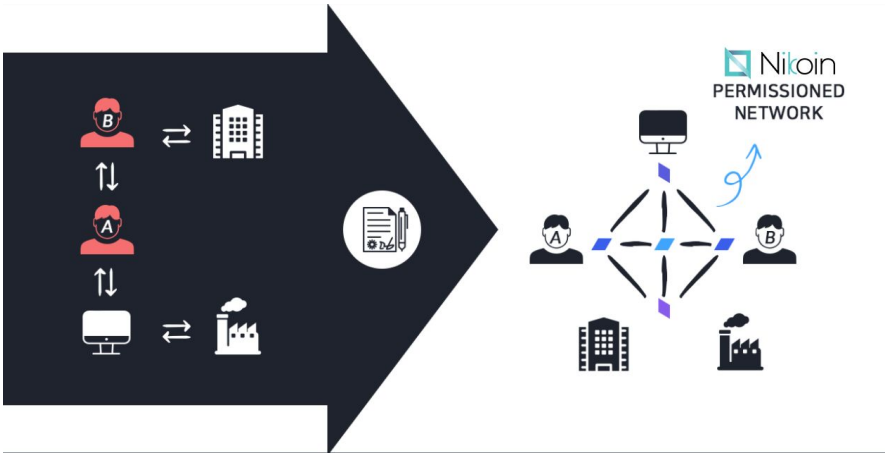
- Blockchain-based e-Signatures and timestamping for tamper-proof document management.
- No need for third party notary services.
- Functional advantage as well as cost-efficiency in comparison to existing EDMS.

Control and Manage Your Connected Devices



Quicker and more accurate management of connected devices and interactions among your devices. Also, rule-based process automation is easier with smart contracts.
Creating a private network among your devices, enables the exchange, transaction, and management of information. All transactions are verified through consensus, and when a transaction occurs storage and time-stamping occurs immediately through the blockchain. By embedding rules, you can easily automate interactions and management.

e-Contracting Solution

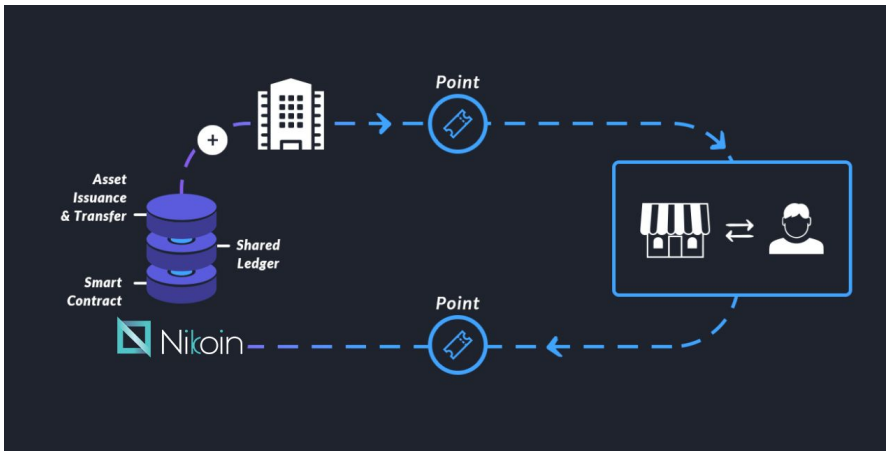


Trust-based e-Contracting Solution provides integrated contract management and workflow automation that follows business rules.

- An independent E-contract mechanism that uses Ethereum and other Smart contracts.
- Independent contracts without the need of a central 3rd party that allows for the contracting parties to share agreement provisions monitor the record.
- Guarantees transparency and security as the contract is carried out.
- Can be in P2P, P2B, B2B forms can also be implemented through IoT device communications that allow for the adjustment of conditions.

Building a Blockchain-Based Reward System and Service Partner Management

Build your own digital asset system and payment infrastructure using a blockchain-based distributed asset transaction platform.



- Issue and circulate any type of digital assets including local currency, coupons and cryptocurrency.
- Prevent double spending issues by leveraging Open Assets protocol which operates on top of Bitcoin protocol.
- Support the issuance and use of digital points for partners and affiliates within the platform and increase scalability by securing additional partners.
- Real-time clearing and settlement with usage tracking and data recording.