What is a tokenization platform?

A tokenization platform combines the roles of investment bank, exchange, payment system, custodian, CRM, and wallet.

It can be seen as a decentralized representation of a central counterparty for an industry (such as Kickstarter, IATA, SWIFT etc) that facilitates payments and settlements while completing this transparently for all participants by utilising blockchain technology.

What are the sustainable advantages provided by a tokenization platform?

1. Facilitating raising of capital
2. Increasing transparency for investors
3. Evaluating projects - by platform experts and crowd wisdom
4. Unifying the processes of issuance, settlement, trading, and storage of obligations
5. Increasing the liquidity of assets
6. Transparent profit generation by the platform (for investors in the platform)
7. Simplifying settlements between industry players
8. Creating a marketplace for certain types of business, and for certain types of transactions
9. Providing an open API for extending the capabilities of third-party developers

Key functionality

1. Issuance of tokenized assets
2. Management of tokenized assets
3. Management of businesses and users
4. Underwriting services
5. Trading, providing facilities to list tokens on exchanges, and market-making tools
6. Monitoring and audit of all tokenized assets

General token classification

By token function

Different platforms require different token structures and roles. The most common are:
1. Payments between platform participants
2. Digitized obligations of the project (convertible notes, debt)
3. Digitized equity in a project
4. Key indicators of project performance

5. Participation in a platform's profits
6. Digitized rights to use the platform
7. Fee collections
8. Prevention of attacks in a decentralized environment

By local regulation classification

Depending on the jurisdiction chosen, available functionality, trading limitations and KYC procedures, tokens can be recognized as:
1. Utility
2. Security
3. Commodity (for the US market commodity equals security)

By the issuer

1. Native platform token
2. Token, issued by the business

Roles on the platform

The platform usually supports these roles, which can be performed by independent entities.

- Platform - establishes and supports all governance and administrative processes
- Business - secures physical assets by means of issuance of digital tokens on the platform and accepts them as payment for products and/services
- User - uses tokenized assets to access services, or to buy products
- Exchange - supports liquidity, maintains an order book, provides tools for market-makers and merchants
- Merchant - accepts tokenized assets as a payment method
- Investor - buys tokenized assets with expectation of price increase
- KYC provider - validates the identities of entities registered on the platform
- Custodian - maintains 1:1 ratio of physical assets and digital tokens
- Escrow - holds assets and provides an ability to resolve disputes
- Payment institution - provides licensed ability for execution of payments
- Auditor - approves documents and financial statements
- Regulator - monitors activity on the platform

Processes on the platform

The processes performed by the platform are derived from the processes in each digital asset management system (http://tokend.org/pdf/TokenD-Digital-assets-classification.pdf). They are:
1. Governance
2. Custody

3. Issuance and initial distribution
4. Transaction processing and exchange
5. Audit

Governance

KYC

KYC can be performed either by:
1. A third party KYC provider
2. A Business
3. The platform itself

The registration and management of customers

1. The platform performs the registration of users
2. Information is stored securely and can only be updated by a few admins

Relations with regulators

1. It is possible to give "watch only" or "validation" rights to a regulator
2. The regulator will be able to access all transactions real time
3. The regulator will not be able to alter the transaction history or impersonate users
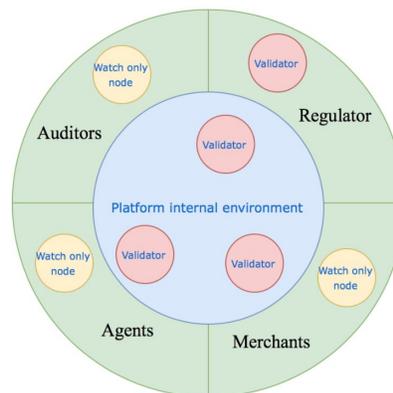
Integration of new participants into the platform

1. Initially only the creator of the platform (usually also a business owner) supports it
2. When other businesses join, and after they are comfortable with using it, control can be decentralized between them
3. The system can grow organically, involving more and more businesses, thus making the platform independent from its creator, who in any case continues to receive benefits from its growth
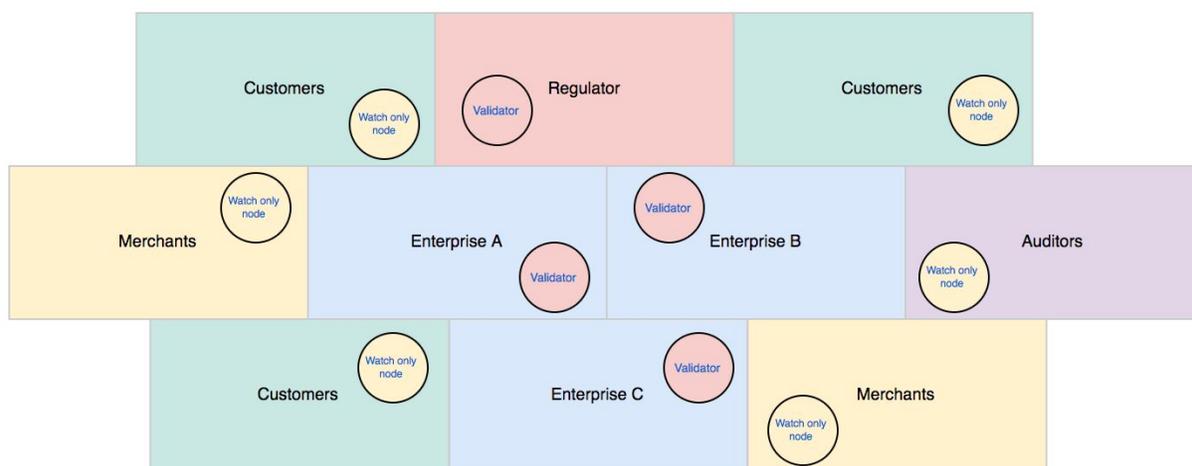
Asset lifecycle management

1. The platform can set up global fees, limits, business rules
2. Businesses can set fees and business rules for their own assets

Custody

Deposit and custody of funds

1. Funds can be deposited in fiat or crypto
2. Fiat can be deposited in a banking account of the platform or business
3. Crypto can be deposited in an escrow account that the auditor, platform, or business control jointly

Redemption

1. A user creates a redemption request to receive the physical assets, secured by the digital tokens
2. The request is approved by the issuer, the tokens are redeemed from the user and the secured assets are transferred/delivered to the user

Escrow and arbitration

1. Escrow may be needed if there are some operations that cannot be directly executed by the platform (for example, delivery of goods or SEPA bank transfer)
2. In order to guarantee payment, funds can be deposited to a special escrow account
3. There could be many escrow agents present in the platform, and they can be selected by the transaction counterparties upfront
4. If an external system provides an API, the platform could read the state of the external transaction and release the funds
5. Each escrow agent may require a fee for their standard service, or an additional fee for conflict resolution

Issuance and initial distribution

Issuance of the native platform token

1. If the native platform token is required, it is issued during the platform set up
2. Native tokens can be distributed among partners or sold to investors

Issuance of tokens by a business

1. Business creates a token issuance request, according to their abilities to deliver services or/products in the future, or in exchange for equity/debt
2. The auditor verifies the ability to deliver promises and approves the request
3. The platform issues the relevant number of tokens
4. In certain cases insurance might be needed to cover risk of default

Transaction processing and exchange

Buying tokens - from an user's point of view

1. The user registers on the platform
2. KYC info of the user is approved by a KYC provider
3. The user selects a project they like and can access the auditor's report
4. The user deposits fiat/crypto to the platform or an exchange
5. The user buys platform tokens (if they exist)
6. The user buys project tokens
7. Now the user has tokens in their wallet and can trade them on the exchange

Investment decisions

1. Investors can make decisions themselves and invest in a particular project
2. Investors can invest in index
3. Investors can follow the advice of the platform or crowd wisdom

P2P transactions

1. A registered user is able to send transactions to other users or merchants
2. Transactions are validated by the platform
3. Transactions are not alterable, and users always have proof of their completion

Price discovery

1. Before selling a token, business can create a list to which investors can sign up
2. Investors can mention their desired price and amount of tokens
3. Investors can place a deposit into escrow to guarantee the transaction

Exchange of assets

1. There are many asset pairs available in the order book
2. Users can create offers to exchange tokenA to tokenB, tokenB to tokenC

The platform enables exchange of tokenA to tokenC even if there is no direct exchange rate available

Liquidity and arbitration

1. The platform provides its own exchange technology, which can be run by the platform owner or partners
2. The platform can be connected to many external exchanges, and tokens can be listed there
3. The platform provides tools to monitor the token price on multiple exchanges at the same time

Adding tokens to an external exchange

1. The platform contains all the tools necessary for an exchange to list a token
2. The platform provides the ability to manage balances on an exchange from the wallet (if the exchange provides an API)

Audit

Audit from a third party (investor, customer etc) point of view

1. A third party may be granted the ability to validate all transactions in the system
2. An investor cannot access the confidential data of transactions

Token and business evaluation

1. The auditor performs an audit of the business that issued tokenized obligations
2. An auction can be conducted to fill the underwriting book

Possible platform monetization options

1. Fees for every payment made on the platform
2. A success fee from the capital raised via token sales
3. Trading fees
4. Appreciation of the native currency of the platform (if such exists)
5. Data mining
6. Revenue sharing with third party services (insurance etc)