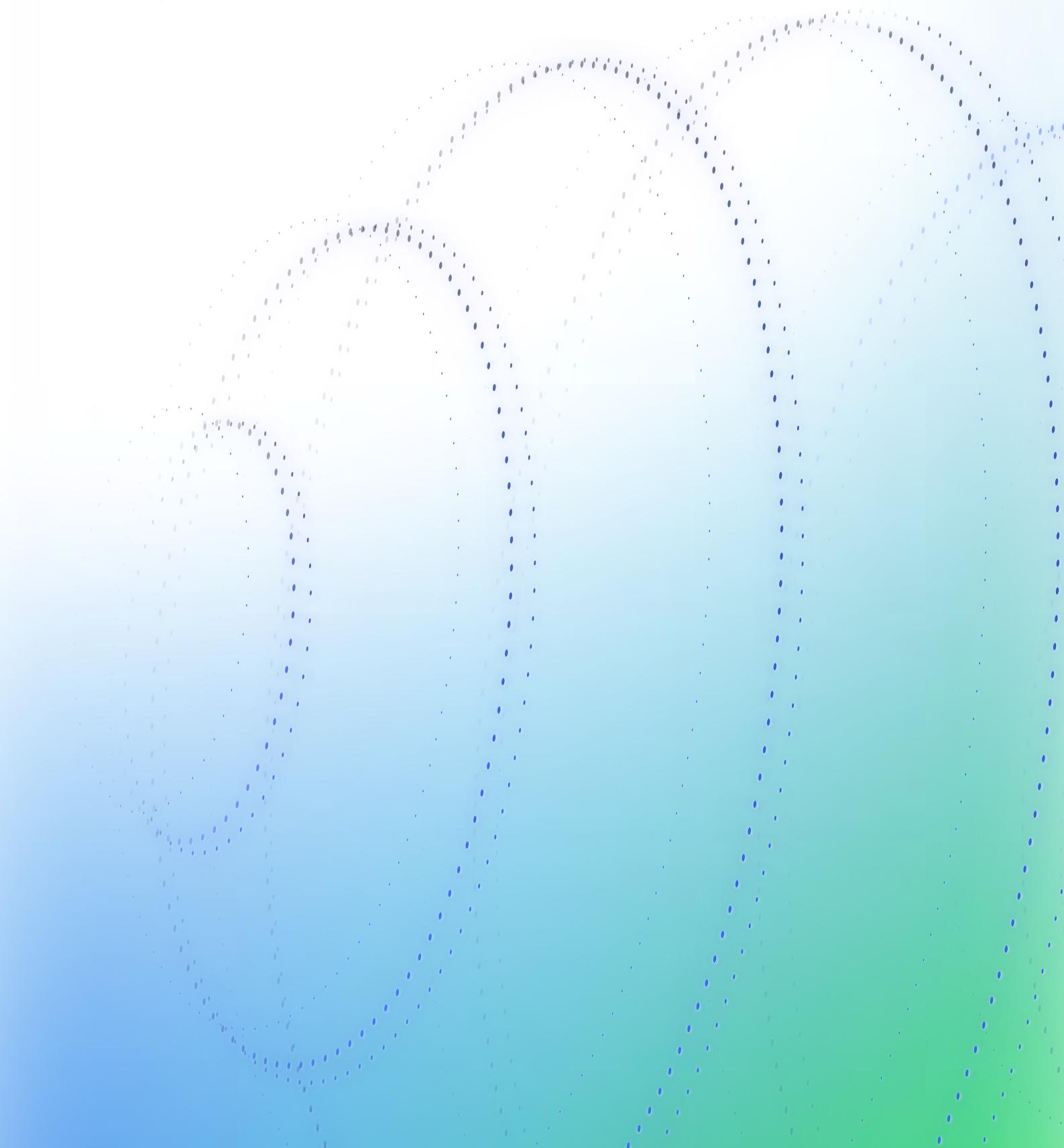




# Lightpaper

v 1.1.0



# **Disclaimer**

This document is a Light Paper that presents the current status and future plans for Botopya platform. The sole purpose of this document is to provide information, and is not to provide a precise description on future plans.

Unless explicitly stated otherwise, the products and innovative technologies organized in this document are still under development and are yet to be incorporated.

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# **Powering the next generation ecosystem for trading automations**

Botopya is a trading automation platform which allows anyone to create, upgrade and monetize their own trading strategies or tools using a modular framework designed for traders, investors and developers alike.

## **Problem Statement**

The trading landscape is continuously evolving along with the rapid advancements in technology. Automations are becoming the norm and every aspect of the trading process is becoming less reliant on the human factor. In order to stay relevant, traders are migrating to solutions that streamline the trading experience and provide an edge for a better outcome.

There are multiple issues associated with trading, but one of the main pain points can be summarized as follows:

### **① Difficulty and stress of manual trading**

Every manual action requiring human input is unable to scale and can lead to trading errors especially in a stressful environment accentuated by fear, uncertainty and doubt.

### **② Limited access to advanced trading strategies, AI models and data sources**

Due to the competitive nature of trading, users, especially beginners or those with very limited time or technical background usually have a steep learning curve to adopt more sophisticated tools that will help them achieve better results.

### **③ Cumbersome monetization of trading strategies, AI models, analytics and data sources**

The lack of marketplaces for trading automations is preventing the adoption of such tools in a scalable and efficient manner. Moreover, the lack of standardized tools and frameworks necessary to develop and bring strategies, AI models and data sources in one place is hindering the evolution, and consequently their monetization.

#### ④ Fragmented access to forex, stocks, and crypto markets

The fragmentation of global markets and exchanges is another factor in slowing down the adoption of automation tools by traders. Exchanges from the stock and cryptocurrency markets are leading the way in providing extensive APIs required by performant automation tools, but even so there are only a few plug-and-play aggregators.

### Solution

Botopya Platform is aiming to address the deficiencies presented above and improve the adoption of trading automations by proposing a new approach consisting of two distinct components:

- A Modular Framework to create & develop trading automations
- An Universal Marketplace to find & monetize trading automations

### Platform Overview

Developers will have access to a user-friendly modular framework to create bots, trading modules and bring new data sources for traders. They will have the possibility to list their automations in the marketplace, opening up new monetization pathways.

Traders will be able to gain new insights and trade smarter by leveraging multiple data sources and trading automations by browsing the marketplace. Moreover, traders will have the possibility to collaborate in order to better navigate complex scenarios and increase their chances of success in the markets.

The core building block of a Botopya powered bot is an automation module. The automation module is a piece of code that fulfills a single, straightforward objective:

- 1 Fetch data: gathering data from a data source
- 2 Process data: performing computations on available data
- 3 Execute trade: performing the execution of the trading order

The Botopya Platform is comprised of three types of participants:  
**Traders, Strategists, and Developers with different skills and objectives.**  
**Each of the mentioned participants have different motivations for using the platform.**



Traders have capital willing to risk by executing trades to obtain a profit. They can be further classified into:

- **Investors:** well capitalized long term traders
- **Scalpers:** short term traders
- **High frequency trading:** fully automated algorithmic trading bots
- **Copy-traders:** usually beginners or unexperienced traders

Another participant in the platform is represented by the **strategist**; they are a subset intersection of traders and developers that have the know-how to build and back-test trading strategies. Their main motivation is to develop and monetize trading strategies.

Finally, developers have the know-how to build complex automation solutions, but lack trading experience. The most important types of developers required to build trading automations are represented by the following categories:

**Data mining and data extraction developers** e.g. web scraping

**AI/ML developers** e.g. data scientists, ML engineers, etc.

**Blockchain developers**

## How is Botopya helping those participants achieve better results?

We will start with **traders**: they are looking for successful strategies (including copy-trading) and for data sources to help them make better trading decisions. They are also looking to test strategies (backtesting) and are able to execute orders manually.

**Strategists** are mainly looking to develop a successful strategy that they are able to monetize by either giving access to it or its source code. They are also looking for data sources to improve their strategies in order to obtain better results.

**Developers** are generally looking to monetize their skills or create more revenue streams by building trading automations. They can supply powerful AI models to strategists and monetize them accordingly.

Now let's dive deep into the three types of automation modules:

## 1. Data sources

Data sources are the backbone of the entire platform. They must be supplied as valid time-series in a standard format. An API will be available to send and receive data with optional SDKs for the most popular programming languages. Also a data storage layer will enable persistance and provide historical data for interested parties.

Data sources can be classified depending on their access type:

**Private access:** internal data, for example account usage data (the strategy can be aware if your account information in real time e.g. how many traders were successful); restricted access

**Public access:** everyone can use the data source

Data sources can be further classified by usage:

- **Public usage:** the data source can be shared with others
- **Private usage:** the data source is used internally, for example for a proprietary strategy

An important built-in data source is represented by a two-way exchange data acquisition that will provide both real-time account information and exchange data.

## 2. Data Processing

Insights on data will be enabled by a state-of-the-art processing layer based on a custom execution environment powered by a WebAssembly Virtual Machine (WASM VM) with built-in data source discovery. The business logic will be compiled into efficient WebAssembly bytecode and ran accordingly. The infrastructure is comprised of high-performance execution runners that will operate all the automations in a safe and predictable environment.

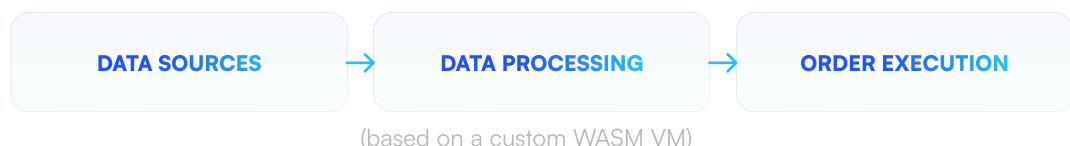
Data processing can be classified by access type:

**Public access:** share the access for monetization; the source code can be either closed or open source

**Private access:** only authorized entities have access

### 3. Order Execution

The last piece of the puzzle is represented by the order execution component, represented by exchange connectors. The platform will provide plug-and-play modules for the most popular exchanges and the community will be able to extend the area of connectors.



### Strategy backtesting & execution, visualization & analytics

Any data from any source, public or private, available in standardized format and ready to be used to generate the best strategies, reports and analytics.

Public data sources examples:

- **Social media data source:**
  - Twitter sentiment analysis for BTC/USD
  - Reddit activity for a particular topic
  - Number of tweets/posts for BTC/USD
- **Blockchain data source:**
  - On-chain exchange inflow of assets BTC
  - On-chain Whale activity for addresses >100 BTC
- **Exchange data source:**
  - Orderbook depth
  - Orderbook size
  - Orderbook activity
- **Private data sources examples:**
  - OTC/Dark Pool activity
  - Predictive AI/ML models
- **Data processing examples:**
  - Compute the correlation coefficient between on-chain activity and total trading volume for BTC/USD
  - Predicting price movements based on inflows/outflows of BTC from exchanges

Any business logic, public or private can integrate any of the data sources available, get monetized independently and provide useful insights such as interactive graphs and detailed reports.

### Order execution examples:

#### Cryptocurrency CEX/DEX:



#### Stocks, bonds, ETFs:



All automation modules must adhere to the following set of properties:

**Interoperability:** must be interoperable with all other automation modules

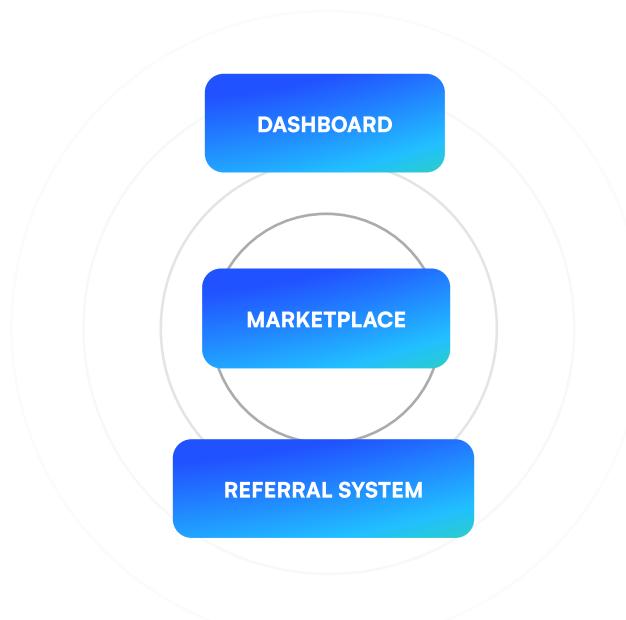
**Compatibility:** must be compatible with the WasmVM

**Objective:** must adhere to a clear objective and the business logic must adhere to that particular proclaimed objective

**Validity:** Data source: must provide uniform time-series

Order execution: must trigger an order

### The Minimum Viable Product is based on the following components:



The end-to-end flow for the user in the platform will look like this:



## Token Utility

The project is divided into two phases: the first stage is designed to bootstrap the initial community, while the second stage will focus on scaling the user base. To accomplish those objectives an incentivization mechanism and a referral system based on Proof-of-Trade are required. During the first phase, data sources will be incentivized based on usage (quality) and metering (quantity).

The Proof-of-Trade system is based on the trading volume that a user generates within the platform.

### 1. Incentivizing data sources

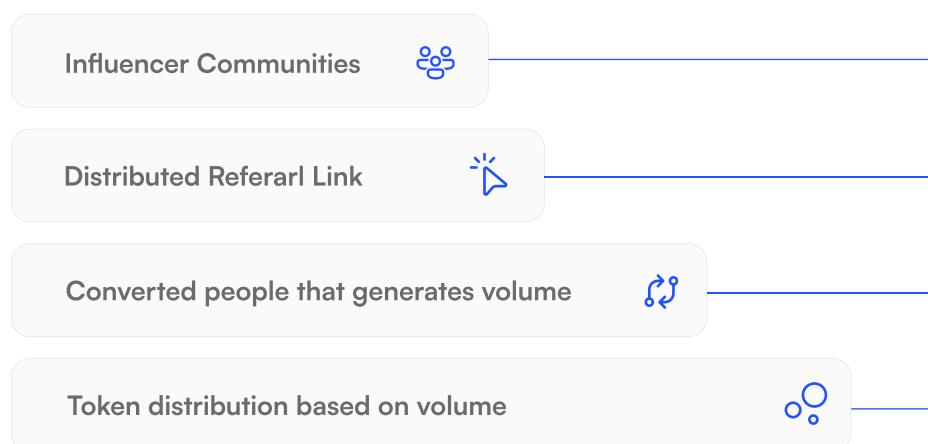
Data sources will be incentivized based on usage (quality) metering on how much they're used and they'll get from fees (gas used by execution in the Virtual Machine)

### 2. Membership paid with token

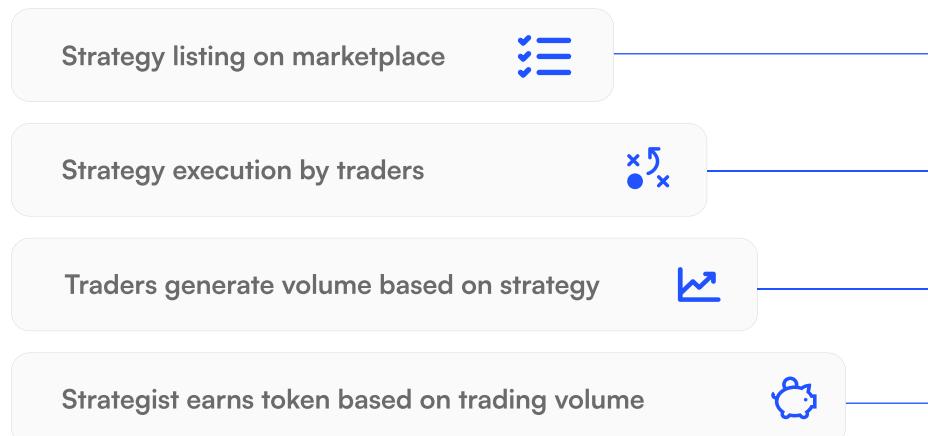
### 3. Execution (gas metering)

There are three categories of community members:

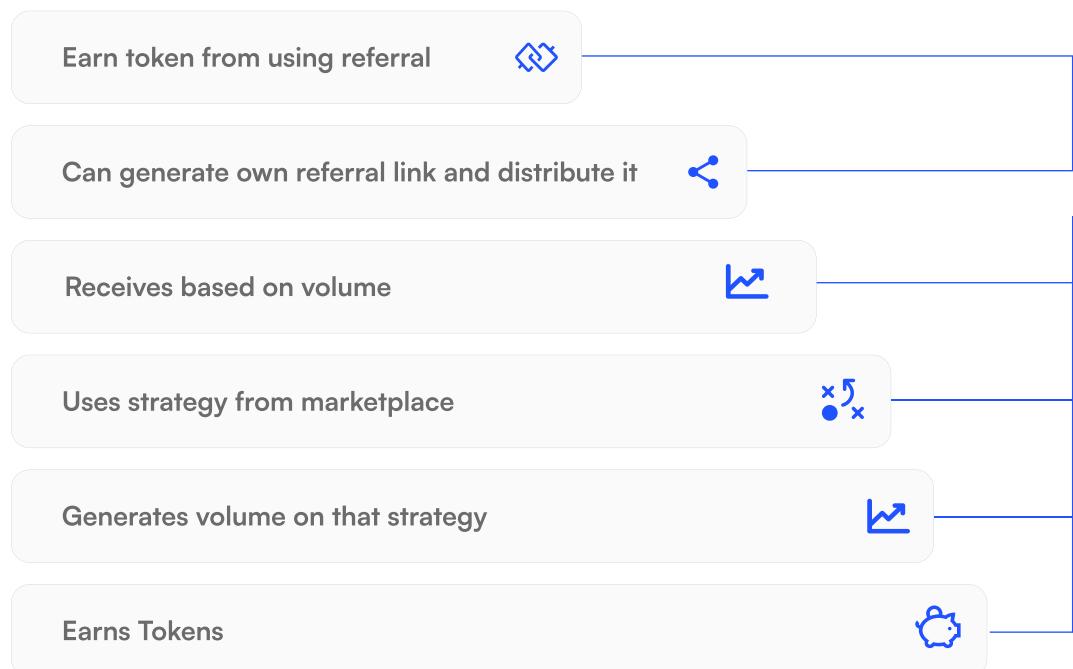
#### Type 1: Influencers



## Type 2: Strategists



## Type 3: Traders



Botopya Membership Plans will be divided into 3 tiers based on a freemium model as follows:

	FREE TIER	STANDARD TIER	UNLIMITED TIER
Users will have the possibility to analyze charts, combine indicators and data sources	✓	✓	✓
* ** Strategy can run less than <40s & Limited number of data sources	✗	✓	✓
*Strategy more than >40s & Unlimited number of data sources	✗	✗	✓

Other payment details:

\*monthly/yearly membership payments; all plans can be fully paid with token; automatic fiat to token conversion in the background

\*\*possibility of fiat payment for standard membership