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 **Rovaa**  
[WWW.ROVAA.IO](http://WWW.ROVAA.IO)

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# EXECUTIVE SUMMARY

# 1. Executive Summary

## 1.1 The Rovaa Vision

The cryptocurrency ecosystem has grown massively since the birth of Bitcoin in 2009. New crypto traders are entering the market to take advantage of the DeFi (Decentralized Finance) economy but the majority of the traders lack the tools needed to analyze and assess the opportunity available in digital assets.

The Rovaa vision is to provide its clients with an array of solutions that facilitate smooth trading and investing in digital assets through self-learning algorithms and artificial intelligence-equipped software.

Our Mission Statement is: “Trade Digital Assets with an Edge”. The goal is to help every user on Rovaa amass the “smart money” by utilizing state-of-the-art tools and analytics. It will aim to address the issue of liquidity & volume and become a premium trading platform that offers fast order execution and a large option of tradable assets.

Our platform’s 3 main pillars are:

- True Decentralization
- Liquidity
- Machine Learning

## 1.2 The Rovaa Solution

Rovaa offers the next generation peer-to-peer decentralized trading platform. It has been designed for both active traders and beginners and optimized with AI and ML powered tools to help crypto community maximize their trading profits. Tools offered to users will include predictive algorithms, trading bots, algorithmic trading, sentiment analysis scores and graphs and a host of other allied features.

The lynchpin at RovaaDecentralized Exchange is the state-of-the-art global, borderless, open source, public and decentralized Ethereum Blockchain. Rovaa engine is powered by the Hydro Protocol, which facilitates the exchange of tokens, while not holding its user's assets directly within the decentralized exchange, which means that the exchange does not hold the keys to the users' tokens, hence it's trustless. Our system allows traders to retain control of their funds throughout the trading process.

Hydro Protocol is an open source framework that is used to build high performance DEXs. Hydro is a ready-made protocol which can be customized to the needs of any Decentralized Exchange. Hydro Smart contracts are also open source, efficient, secure and flexible for exchanging ERC20 tokens. The Hydro Smart Contracts used in Rovaa Exchange are professionally audited.

Rovaa is developed along off-chain order book with on-chain settlement process. Basically, this means that practically anyone with a MetaMask wallet and ERC20 token can start trading on our platform, instantaneously. While the execution of actual trade occurs on the Ethereum blockchain, giving traders full control of their funds until the exchange takes place, the order books are hosted by a component called Relayers, causing drastic reduction in overall trading fees and facilitating broadcast of information to the public using any medium, website, app etcetera.

Artificially Intelligent powered trading bot - Rovaabot, is a major step towards facilitating Decentralized trading. It's a proprietary tool which allows users to create and customize automated trading. Since Rovaabot will need access to your sensitive digital asset private keys and exchange API keys to operate on your behalf, its design will be user-operated local or hosted client, and even cloud based model, similar to a cryptocurrency mining node. This, in turn, means that our bot can continue trading even if your computer is turned off. We will facilitate traders to back-test their trading portfolios, set trailing stop loss thresholds to aid with portfolio composition

Rovaabot is aimed at cryptocurrency enthusiasts who want to earn passive income. We want our traders to use this specialized service for a profit. Our trading bot will solve one of the most inherent problems of market makers – change bid and ask prices to reflect factors such as changes in market conditions, trades executed, and risk exposure. Rovaabot will mitigate the decision making problem which market makers often face when they have an information disadvantage.

The trading specialists who are constructing this platform are aware of liquidity and fully understand what it means. This was a key architectural decision, our trading advisors put forward from a DEX perspective, to ensure that the trader can submit as many orders as he wants, without incurring any gas fee and trading fee, in order to play the role of a market maker on Rova. Our trading strategists with a trading mindset wanted to make sure we add as much liquidity, whilst ensuring it costs nothing to be a maker on Rova. This is the real benefit from the lens of the traders. All other options (cancelling an order, doing a trade, withdrawing, taking liquidity) involve a gas fee. But we've got our traders covered. We will use a percentage of the profit from a trade itself (e.g. 5% of the profit) to contribute to the traders as reimbursement for the gas fees until the token burn has been completed.

# INTRODUCTION



## 2. Introduction

### 2.1 Introduction and Market Overview

Cryptocurrency and Blockchain technology, with their unprecedented array of merits, seized the attention of Fintech industry post-haste. Transactions, which are executed via seamless, decentralized ledger, can finally bestow users the privilege of trading in an ecosystem free of any centralized bodies. The endmost result of this sovereignty generated a remunerative digital asset system which is exempt from any government regulations, interest rates, and charge-backs. Once developed, these digital assets can be used for making transactions globally with no apparent restrictions in sight. Transaction data is stored on the blockchain, which is practically impenetrable to any hacking attempts, but also guarantees fast, feeless, and streamlined solution for online payments.

With a drastic upsurge of these digital assets, there has been an increasing demand of platforms to buy and sell them. Presently, about 500 cryptocurrency exchanges are operating globally, each having their own benefits in terms of digital asset pairs, volume, buy/sell fees, fiat currency option, jurisdiction coverage, customer support, trading instruments, etc. Even if we take into account major players such as Binance, Kraken, BitMax, or Huobi, whose daily trading volume easily exceeds \$1B, it won't suffice as they all incorporate some share of limitations. The exchange sector is one of the most widespread and utilized. However, a demand for new technology and solutions keeps piling up hand-in-hand with its users. MeterQubes is set off to meet these demands and provide a safe haven for cryptocurrency traders in a quest of compact exchanges with intelligent trading instruments.

Having a centralized architecture empowers them to have a complete control over the platform along with the users' funds. This further implies that the whole idea behind the process of decentralization and what blockchain really stands for - is going down the drain with centralized authorities dictating rules and regulations while users are kept in the dark. Developed for the purpose of prevailing over the aforementioned challenges, brings an outstanding crypto exchange to the public's eyes by capitalizing on the decentralized peer-to-peer blockchain ecosystem. The goal of the platform is to utilize this disruptive technology in order to create user-friendly, trustless, and secured environment in which both novice and advanced users will be able to trade effortlessly. Similarly, we also believe that the mainstream adoption and a long-standing sustainability of blockchain protocol solely depend on the users to not only indulge in trading digital assets, but also find a way to utilize them on a day-to-day basis.<sup>1</sup>

Global Cryptocurrency Charts - Total Crypto Market Cap and Volume<sup>1</sup>



Figure 1

<sup>1</sup> CoinCheckup. Global Cryptocurrency Charts - Total Crypto Market Cap and Volume. Co-inCheckup (Online) May 22, 2019. <https://coincheckup.com/global>

## 2.2 Centralized vs Decentralized cryptocurrency exchanges

Centralized exchanges operate as intermediaries, similar to third-party providers working as middlemen, so as to streamline trading on their platform. As a result, centralized exchanges collect trading fees which are usually the main revenue source for them. The process of trading is self-explanatory (matching buy and sell orders in an orderbook); however, the ecosystem itself has ample restrictions.

The biggest drawback that is attributed to centralized exchanges is stemming from their centralized architecture, which grants an absolute control over user's funds to a single entity, thereby rendering users vulnerable in the event of any adversities occurring on an exchange. So far, there have been multiple reports of such instances, in which malicious tampering led to the outbreak of mistrust, suspicion, and doubt. The year 2018 was a record-breaking for centralized crypto exchange hacks having almost \$1B worth of crypto stolen from the users. Centralized blockchain data is stored on a single server which opens a window of opportunity for hackers to exploit the platform's susceptibility and cause financial loss for both the user and the platform.

In addition to security loopholes, centralized exchanges have constant native price slippages which detracts the trading experience altogether. Having only one central entity not only to determine terms and conditions, but also rules and procedures, makes the value of digital assets more liable to fluctuation than that of the other financial markets. To top it all off, in order to fully process the transaction, each centralized crypto exchange platform implements a KYC (Know Your Customer) procedure through which users' personal information is perused, and can be later misemployed or abused by the central authority.

In contrast to centralized entities, decentralized counterparts grew through shared mutual interest. In lieu of buy and sell orders, decentralized exchanges work by pairing the users behind those buy and sell orders respectively. Furthermore, the share of interest empowers users to trade in an almost non-fee-existent environment. Furthermore, decentralized exchanges don't demand any documents required for proof of identity (KYC) whatsoever.

Having nodes with robust structure renders decentralized platforms immune to hacking – such is Rovaa. To make the system even more user-oriented, decentralized exchanges are non-custodial; meaning that the users will always be in full control over their funds and the buy and sell orders will be executed directly from their wallets rather than the platform itself. Showcasing the avant-garde decentralized exchange consisted of the prior-mentioned advantages in addition to newly crafted disruptive features; Rovaa spearheads the market and presents unparalleled exchange tailor-made for users who want to remain in the borders of safety, anonymity, and low fees.

## 2.3 Problems and Challenges

Cryptocurrency exchanges, unlike hedge funds, are still missing out on major trader-centric tools necessary for enhanced and automated trading environment. AI-based algorithms have only been theoretically applied within the cryptocurrency exchanges and no actual MVP has been launched to date. Another major pain point is the lack of advanced analytical tools in the hands of crypto traders. Beginners and advanced traders alike have to do with basic charting tools that do not provide any edge in the market. There are multiple vendors touting trading solutions but they are either unreliable or too limited in scope.

As of May 2019, there are more than 500+ exchanges according to CoinGecko, an increase from around 70 exchanges in 2014.<sup>2</sup> The current exchange ecosystem is dominated by centralized exchanges like Binance, OKEx, Bitfinex etc. The structure of the centralized cryptocurrency exchanges is identical to that of the general stock markets, where the trader is dependent on a central authority for matching and clearing the trade. Even more critical is that the trader funds need to be deposited with the exchange. This goes against the basic ethos of blockchain and decentralization. Recent history of centralized exchanges showed their level of susceptibility to cyber-attacks. Binance had \$40 million in Bitcoin stolen in May 2019. CoinCheck was hacked out of 500 million NEM tokens worth \$530 million in 2018. Exchanges lost a total of \$1 billion to hackers in 2018. Furthermore, a recent study reported<sup>3</sup> that 36% of crypto traders are upset with the problem of liquidity on prevailing exchanges. To compound the problem, small order books and large bid/ask spreads can slow trading down or bring it to a grinding halt, in some cases, further driving away customers who bring more liquidity. Ultimately, everything from canceling orders, to transferring crypto requires paying gas on Ethereum and waiting for block confirmations — at least a few minutes, sometimes hours. Aside from cost and speed issues, this is also vulnerable to front-running. You can see when someone is trying to execute against an order as their message shows up in the Ethereum mempool and you can get ahead of it by spending more gas to be mined first.

<sup>2</sup>HackerNoon. Trading Crypto: Centralized Vs. Decentralized. HackerNoon (Online) February 15, 2019.

<https://hackernoon.com/trading-crypto-centralized-vs-decentralized-ca657b4d9063>

<sup>3</sup>Newconomy.Media. Liquidity Problems in Current Cryptocurrency Exchanges: Fiction or Reality? Newconomy.Media (Online) November 17, 2018.

<https://newconomy.media/news/liquidity-problems%E2%80%8A-in-current-cryptocurrency-exchanges-fiction-or-reality/>

## 2.4 Opportunity

Binance reported annual profits to the tune of \$446 million in 2018. Coinbase had reported revenue of more than \$500 million for 2018. Crypto trading volumes are touching all-time highs and with the prospect of institutional investors entering the crypto-investing space, the industry is poised to grow multi-fold in the next decade.

As per a report by CryptoCompare in October 2018<sup>4</sup>, the total average 24h-volume produced by the top 5 decentralized exchanges totals just under 2.4 million USD. This constituted just 0.4% of total exchange volume. The top 3 decentralized cryptocurrency exchanges on CryptoCompare by 24h volume included Waves Dex, IDEX and Dex. Though in May 2019, 24 hour volumes have increased substantially for DEXs, none of them are a major player with Waves DEX at a distant 24th on overall volume rankings.

The current players are driven only to increase liquidity and enhance security; no exchange has prioritized helping traders generate profits. Decentralized exchanges offer primitive analytics to traders and the tools comprise of simple charts and market information. An exchange focused on trader experience and profitability will be able to capture a sizeable share of the market.

<sup>4</sup> CryptoCompare. CCCAGG Exchange Review. CryptoCompare (Online) October 31, 2018. [https://www.cryptocompare.com/media/34836036/cryptocompare\\_exchange\\_review\\_october\\_2018.pdf](https://www.cryptocompare.com/media/34836036/cryptocompare_exchange_review_october_2018.pdf)

## 3. The Rovaa Solution

### 3.1. The Rovaa Platform

Rovaa is developing a Decentralized Exchange that will offer both trading and direct token swap facilities to its users. It will use the Atomic Swap for executing transactions; the swap will be powered by Hydro Protocol's smart contracts.

Phase 1 of the Rovaa undertaking will be dedicated to launching the web platform. Rovaa uses the ERC-20 standard and Ethereum-based smart contracts written in the native "Solidity" language. Solidity is the language of choice for writing smart contracts for the Ethereum platform and provides a secure framework for creating contracts for voting, funding, blind auctions, etc. The dApp will be built on Web3.js and will interact with MetaMask. MetaMask allows you to run Ethereum dApps on your browser without running a full Ethereum node. The aim is to sharpen and simplify the experience while introducing a new standard when it comes to trading digital assets.

Phase 2 will involve implementing an app (desktop and mobile) with a built-in wallet. We will also launch Rovaa' set of proprietary trading tools: AI Predictive tool, AI Recommendation Algorithm and Crypto-Focused Sentiments Analytics. Quboid, the trading bot will also be introduced to allow traders to have the bot auto-execute their trades. The social element of the platform will be built by enabling traders to follow trading algorithms integrated by other quantitative traders for a certain fee.

Phase 2 will also see the launch of the Initial Exchange Offerings (IEOs). This will allow the platform to curate attractive investing opportunities for its trader base. The IEOs will go through due diligence from reputed third parties to ensure only those investments are presented which have a high probability of delivering superior returns to traders.

The goal for phase 2 will be to enhance the decentralized exchange's functionality for both retail and institutional traders by adding AI powered bots having machine learning capabilities using data from state-of-the-art predictive and Algorithmic Trading bots. This will help maximize the network effect and improve adoption among the trader base.

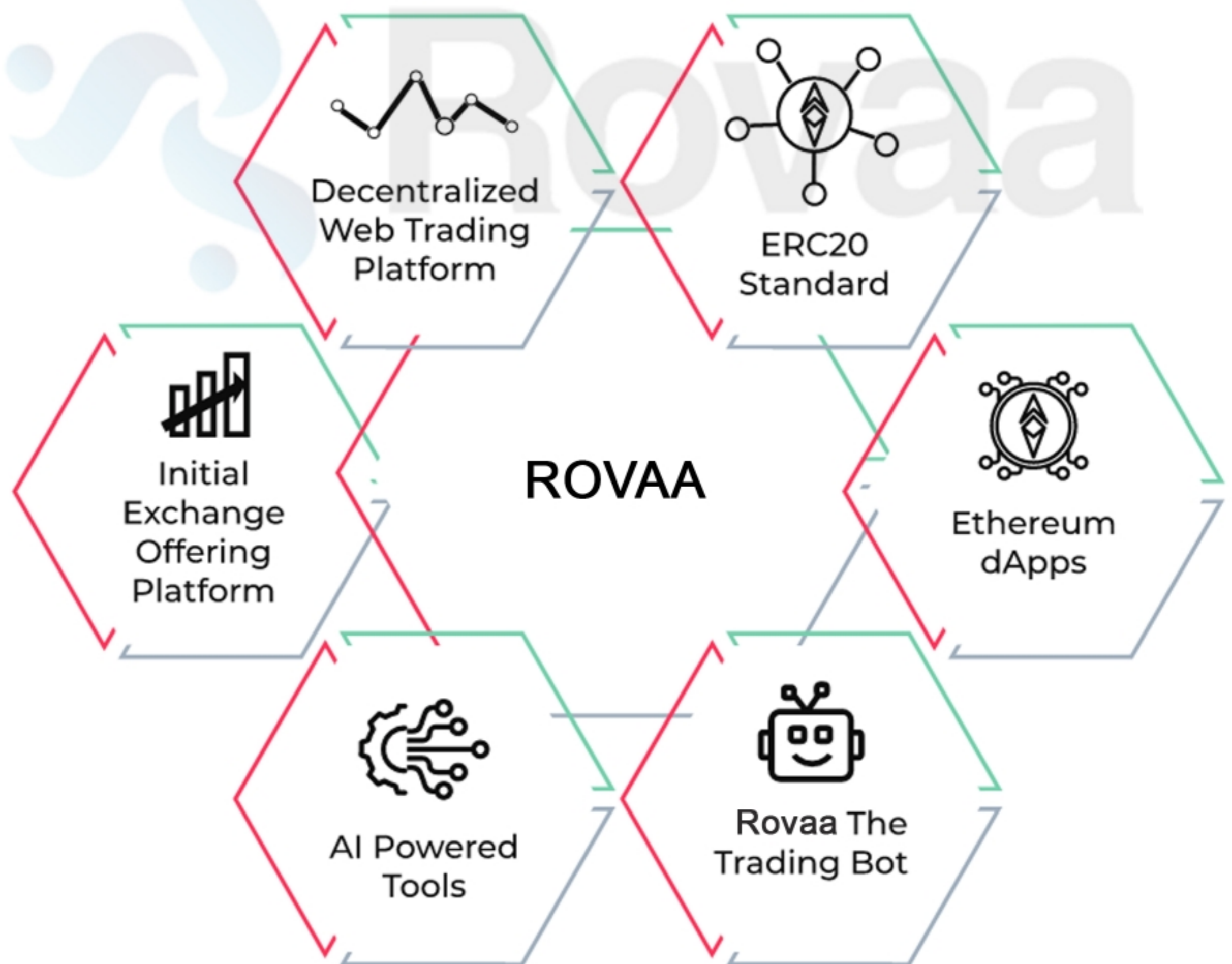


Figure 2



### 3.2 The Rovaa Framework

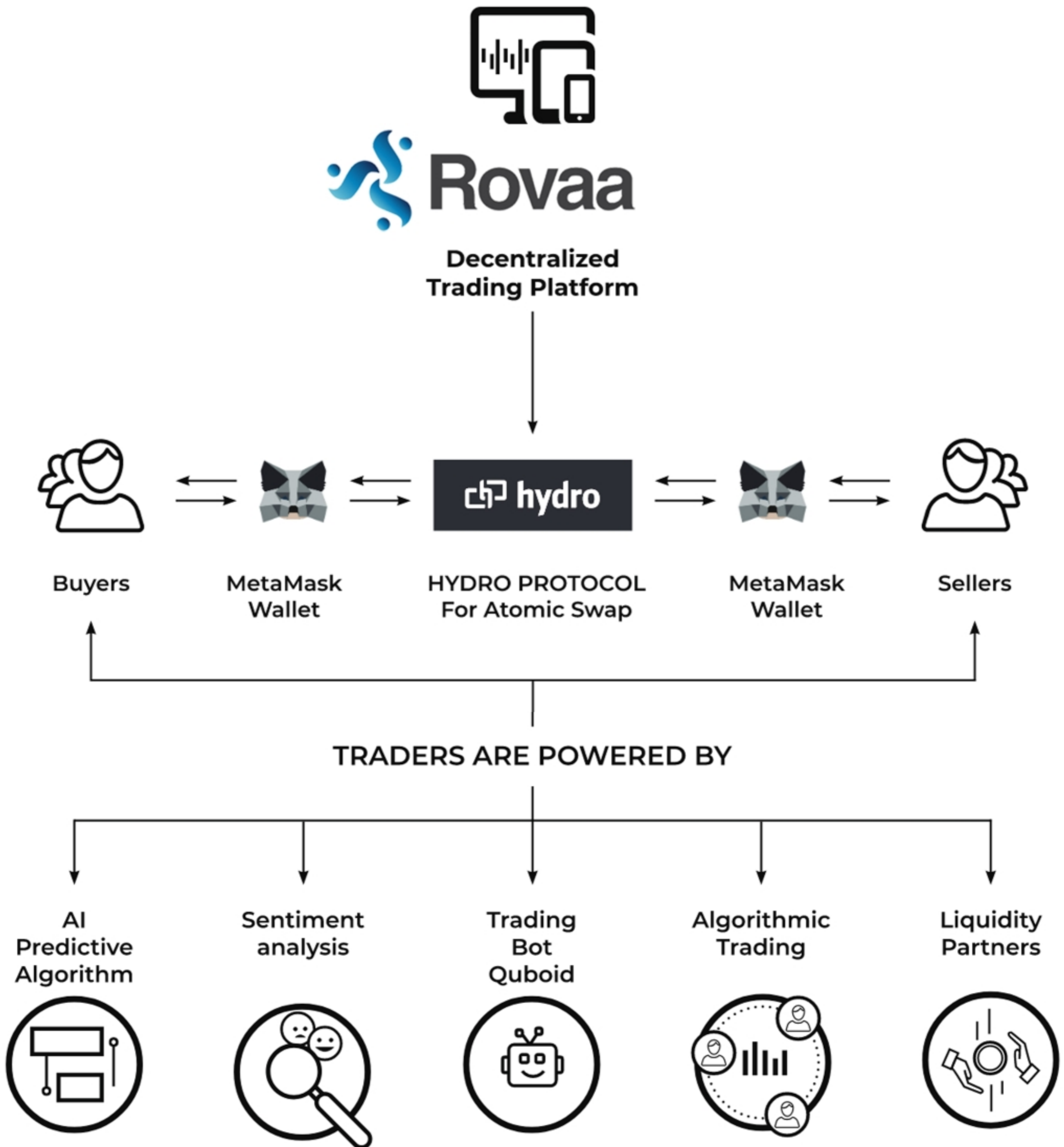


Figure 3

## 3.3 The Rovaa Decentralized Ecosystem

### 3.3.1 Web Platform

The web platform of Rovaa is based on the Ethereum Blockchain and it uses the Hydro Protocol. Hydro Protocol defines the rules for executing decentralized orders and provides the mechanism for order matching. This will power “peer-to-peer swaps” a.k.a atomic swaps that allows trades to be made directly from one user’s wallet to another. This removes the need for escrow, deposit or any third party service. The stored tokens in the traders’ wallet will be eligible for atomic swap via smart contracts once the consent of both the maker and taker has been confirmed.

The platform will be accessible via desktop website and mobile application. Initially, until the company launches its own wallet, MetaMask will be used as an external wallet. From the second year of operations, the Rovaa’ mobile application will have MQ-Wallet support installed and MetaMask will provide support on the website as the external wallet.

The platform will currently support ERC-20 tokens. In Phase 2, it will also look to onboard other major blockchain infrastructures like TRON, Bitcoin, and EOS. ERC-20 tokens are standard tokens that are used for smart contracts on the Ethereum blockchain for token implementation. The standard defines how tokens will be transferred and how a consistent record of these transfers among tokens in the Ethereum Network will be recorded.

MetaMask will be used to convert the ETH to Wrapped ETH (WETH) and trade on the platform. ERC-20 standard was developed after ETH release. The ETH tokens need to be wrapped as it is not compliant with the ERC-20 standard and wrapping ETH is necessary for trading directly with ERC-20 tokens.

The mobile responsive user experience will be designed using React Native. The server communications and the website libraries will be built using the popular Node.js. Rovaa plans to use MongoDB for off-chain database. This will enhance the overall turnaround time. The solution architecture of the platform rests on Amazon Elastic Cloud, where the system will auto scale depending on the load.

### 3.3.2 RAV-Wallet

Rovaa' wallet app will be introduced on both Android & iOS. Cross-Chain Trading will be enabled through the implementation of the RAV Protocol, linking multiple blockchain infrastructures.

As mentioned earlier, the MetaMask wallet will be used as the wallet on the website initially but will be replaced by Rovaa' in-house developed wallet, RAV-Wallet. Later, Metamask will only function in the web-app and shall be replaced by RAV-Wallet on mobile application, which will function on both the web and mobile applications.

#### RAV-Wallet:

- Will be able to facilitate the auto execution functions
- Cross-chain trading will be enabled through the development and implementation of Qubes protocol which will work towards bridging the different infrastructures that will be added to the trading

## Rovaa Trading Architecture

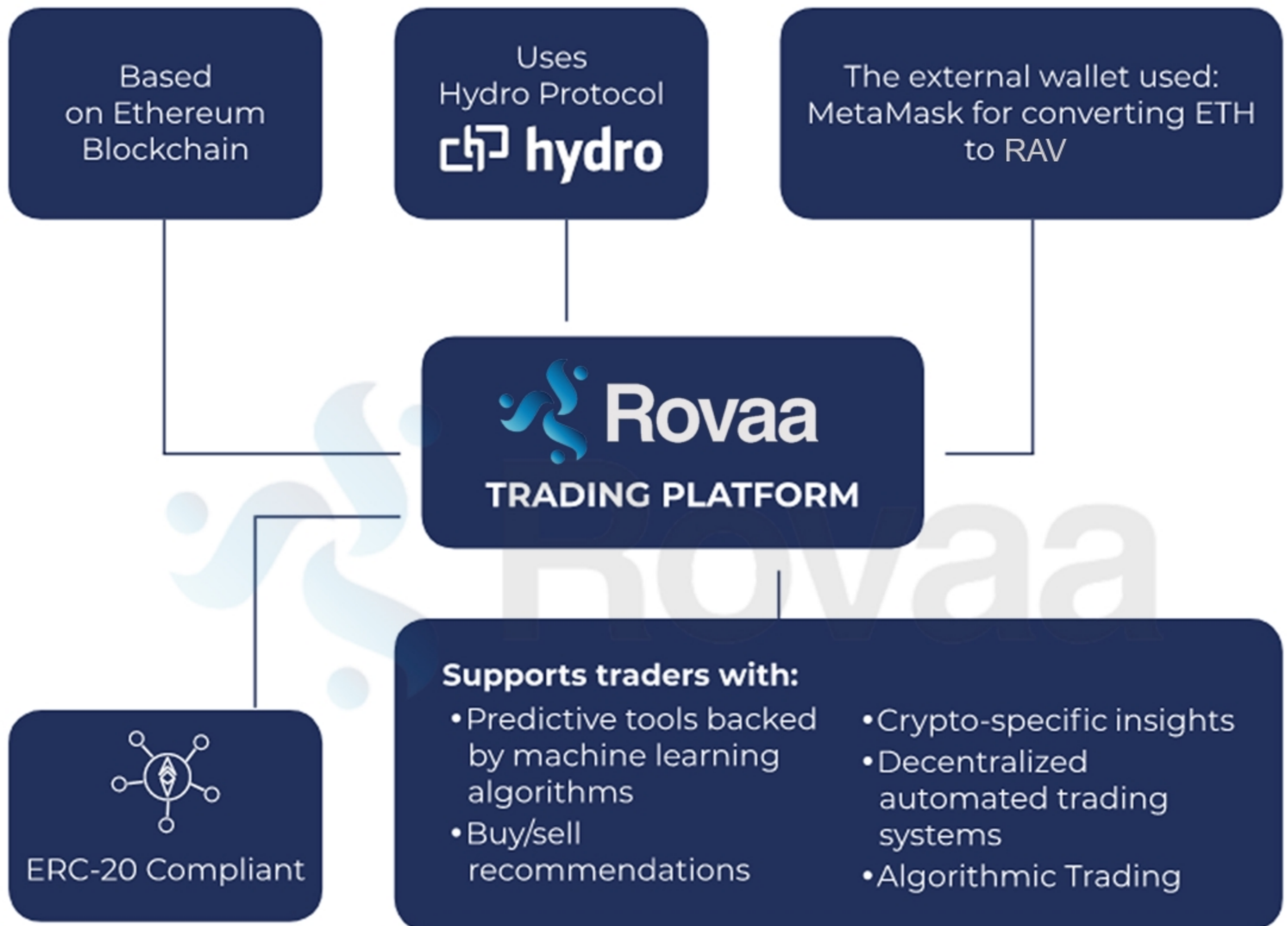


Diagram 1

### 3.3.3 Decentralized Automated Trading

Decentralized automated trading can be defined as the absolute automation of the trading process without any human intervention. It allows traders to establish specific rules for both trade entries and exits and automatically execute those entries via a computer. Rovaa is planning to assimilate decentralized automated trading onto its platform via two different pathways

### 3.3.4 Rovaabot: The Intelligent Trading Bot

Rovaabot is Rovaa flagship trading bot that is currently being developed. It is a data driven automated trading engine that uses a well-balanced mix of machine learning algorithms, neural networks, natural language processing, artificial intelligence, technical analysis, on-chain data, and fundamental analysis to identify trading opportunities and execute trades with the maximum probability of success.

Rovaabot's advanced deep learning algorithms coupled with natural language processing and neural networks study the Cryptocurrency space via news & blogs, forums, social media, and research reports to identify artificial intelligence based market sentiments. The system will then categorize the sentiments of particular assets based on a proprietary sentiment score which will indicate bullish, bearish and neutral market conditions.

Concurrently, fundamental and technical data will also be analyzed thoroughly by Rovaabot using the intelligent tools to observe market directions and price movements. The system will intelligently track and analyze combination of fundamental research reports, on-chain data, leading & lagging technical indicators, chart patterns & formations, Fibonacci levels, and several other data funnels across masses of Cryptocurrency pairs simultaneously to provide exceptionally accurate and reliable predictions for the price movements. Some of the key indicators out of hundreds of technical indicators used within the Rovaabot in aggregation are listed below:

- Moving Averages
- Relative Strength Index (RSI)
- Moving Average Convergence Divergence (MACD)
- Stochastic Oscillators
- Average Directional Index (ADX)
- Average True Range (ATR)
- Commodity Channel Index (CCI)
- Ichimoku Clouds

# Rovaabot Trading Architecture

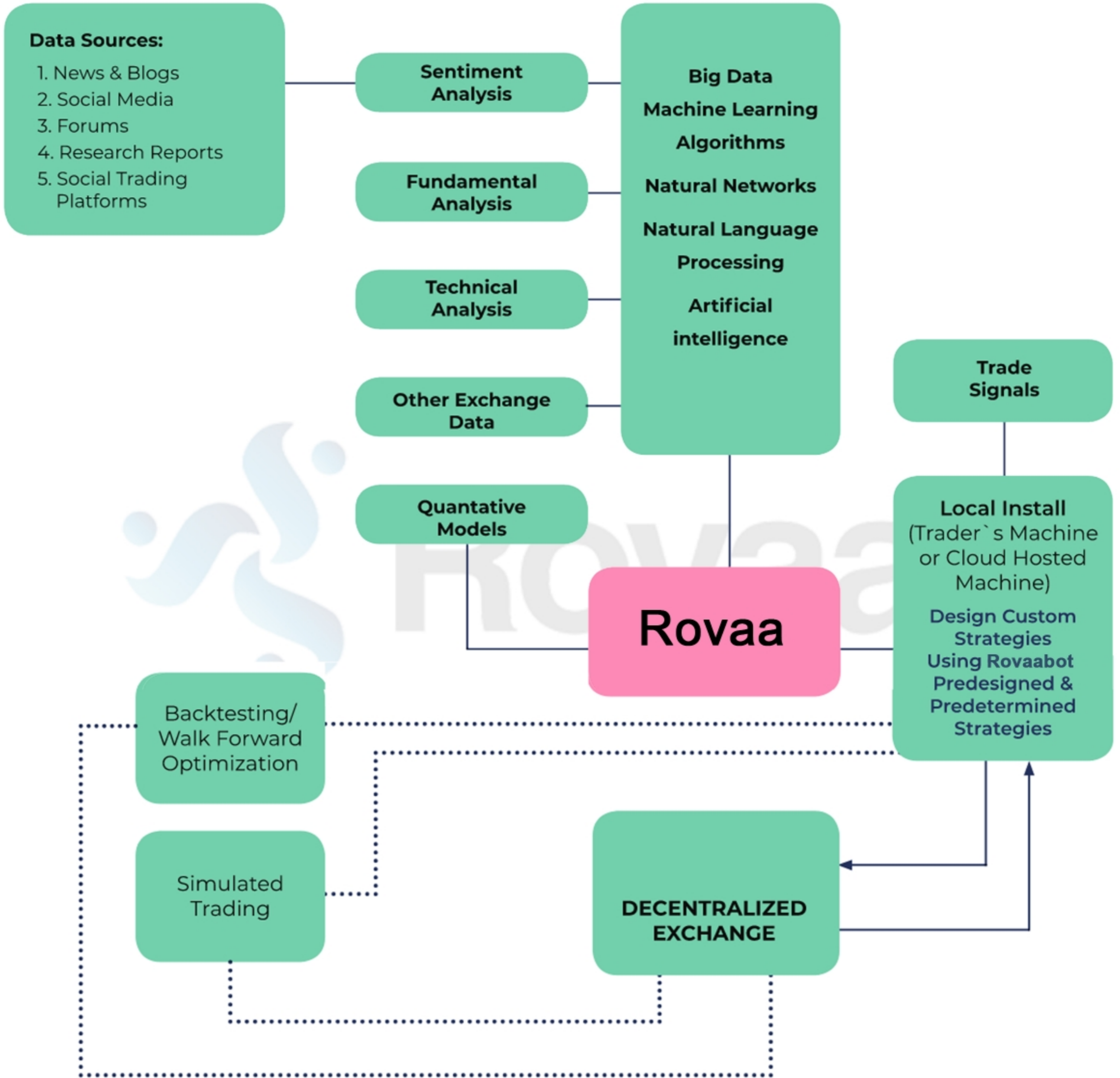


Diagram 2

- Parabolic SAR
- Bollinger Bands (BB)
- Fibonacci Levels

Simultaneously, Rovaabot will also track multiple Cryptocurrency exchanges, analyzing real-time data such as market & order-book depths, trades, and buy/sell orders, etc. to form an outlook on relevant Cryptocurrency pairs. This will facilitate a foreseeable and real-time view of the Cryptocurrency space from the overall standpoint of the trader's operating in the space.

Quantitative trading comprises of trading strategies built on quantitative analysis and models. The Rovaabot system will implement mathematical computations to identify trading opportunities and help traders implement customized strategies such as execution algorithms, scalping and market-making strategies. Quantitative trading is becoming more frequently used by individual traders although it was mainly used by institutional traders previously. Hence, individual traders will be able to access Rovaabot and implement much sophisticated quantitative models based on algorithmic trading without having to build expensive quantitative systems.

Additionally, Rovaabot's proprietary algorithms are designed to learn and adapt to the dynamic Cryptocurrency market environment continuously and help automated strategies to harvest consistent results. Rovaabot will be constantly scanning and self-learning from the immense collection of data and is expected to be highly reliable and effective.

Equally, Rovaabot will be highly augmented to create and execute personalized trading strategies based on above benchmarks and this intelligent trading system will scan, analyze and interpret all available information with its cutting-edge intelligent tools to identify entry and exit points of Cryptocurrency pairs according to trader's individual preferences. It is designed to allow traders to configure or customize settings and strategies based on their trading styles.

Rovaabot can be personalized to cater to trader's preferences where they can select, mix and match different types of AI based analysis tools, hundreds of trading instruments, multiple order types, different trading & holding time horizons (short, medium and long term), risk levels, indicators, strategies and many more features to create user specific tailored strategies.

Rovaabot will also facilitate a Walk Forward Optimization tool to determine the best user defined parameters to use in the personalized trading strategy. It involves multiple in and out samples to comprehend how the trading bot will adapt over time.

Some of the most important features that Rovaabot carries are;

- **Easy to use (No coding experience required)**

The Rovaabot will be extremely easy to use and the traders will not require any programming experience to trade through it and is designed to be installed and used by non-technical traders.

- **Build personalized trading strategies**

Traders can build a trading strategy to deploy depending on their personal preference. Rovaabot can be customized according to order types, trading & holding times/periods, risk levels, indicators, trading strategies and dozens of more features.

- **Server-based automation**

The traders have the option to run their trading systems server side and let the system do everything residing on the server. This will allow traders to be in the market 24/7 and not worry about missing out any trading opportunities. This will also allow potentially faster and more reliable order entries.

- **Walk Forward Optimization**

This will allow traders to evaluate the system involving multiple in and out samples to comprehend how the trading bot will adapt over time.



### 3.3.5 Trading API and Algorithmic Trading

Application Programming Interface, commonly referred to as API, has become increasingly popular among automated traders in today's financial ecosystem. An API consists of a set of rules describing how one software application can interact with another, and using an API, traders will be able to automate trading, employ complex algorithmic systems or secure connectivity via direct market access (DMA).

Trading APIs are predominantly popular amongst institutional traders such as hedge funds and proprietary trading firms due to their use of algorithmic trading programs. These sophisticated professional traders and institutions are currently entering the Cryptocurrency trading space and API's are becoming an integral part of their Cryptocurrency trading requirements. Therefore, Rovaa Hybrid API (Mix of REST & WebSocket) will allow traders to connect their trading applications to the Rovaa Decentralized Exchange.

These traders who use API access can be divided into two categories;

- **Developer Applications** – In this category, traders will be developing their own decentralized automated trading systems using any preferred programming language and interact through Rovaa API to access pricing data while placing and executing trades.
- **Third Party Applications** – In this instance, traders have the ability to connect third-party decentralized automated trading applications to MeterQubes API in order to secure real-time pricing data while placing and executing trades.

### 3.3.6 Rovaa Trading API

Rovaa will devise a hybrid API using REST (Representational State Transfer) and Websocket API technologies. REST is a standardized way of creating API's that uses HTTP requests to GET, PUT, POST and DELETE data and is an architectural approach to communications used in web services development. The REST API will allow traders to take advantages of HTTP methodologies where they can use GET to retrieve a resource, PUT to change or update a resource, POST to create a resource, and DELETE to remove a resource.

Websocket API allows creating and managing a connection to a server for sending and receiving data. Unlike REST, Websocket is a bi-directional protocol offering fastest real-time streaming market data updates and allows traders to build real-time applications. Rovaa will be implementing its trading API mixing the best of both REST and Websocket API's in order for traders to connect their automated systems more reliably and efficiently. Hence, Rovaa trading API will permit users to access Rovaa DEX and manage trades using any kind of a custom-written user interface or a trading bot.

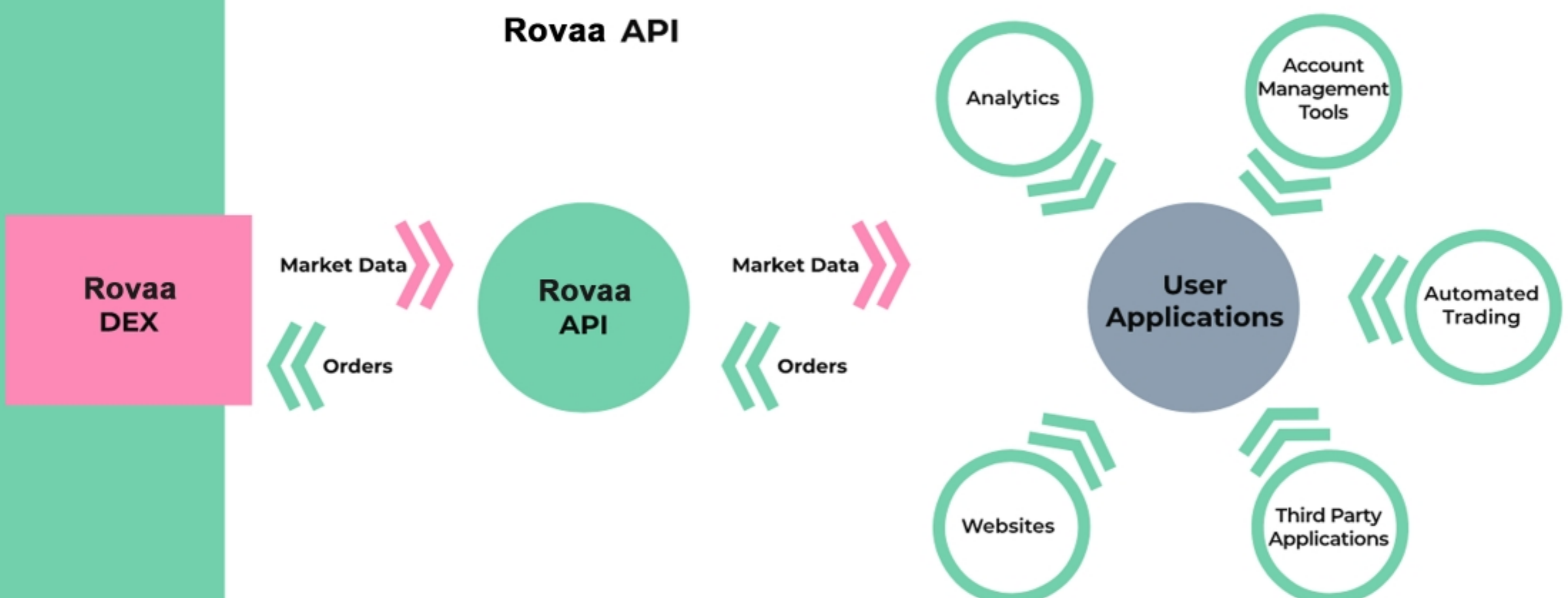


Diagram 3

Apart from trade automation, users can also use the API to connect to analytical tools such as charting packages where they will be able to integrate advanced charting options, proprietary tools, indicators, etc. Similarly, another convenient feature that Rovaa API will offer traders is that they will be able to build their own customized account management tools, profitability metrics, and portfolio diversification tools, etc.

### 3.3.7 Algorithmic Trading

It is estimated that around 80% of US equities trades are placed by computer algorithms. The number has been expanding rapidly ever since algorithmic trading or algo trading was founded several years ago and is expected to continue to do so. Algo trading can be described as a method of trading in securities using intricate mathematical models and formulas to initiate high-speed, automated financial transactions.

The most common algo trading strategy can be identified as the implementation of execution-based algorithms where traders focus on getting the best price for their executions without impacting the market price. Secondly, there are high-frequency strategies which include scalping, market making and arbitrage. Finally, machine learning and artificial intelligence based on trading algorithms that uses market sentiment to execute trades can be identified as another type of algo trading strategy.

Irrespective of traders customized algo strategy, Rovaa will be facilitating products and services for the traders to implement their strategies on Rovaa DEX. As witnessed above, traders could either utilize Rovaa exclusive intelligent bot, the Rovaabot or its Hybrid API for their own custom developed applications to fulfill their algorithmic trading requirements.

Crypto markets are becoming increasingly competitive and more and more traders are using decentralized automated trading tools to automate their strategies. Therefore, Rovaa has identified the importance of decentralized automated trading and has decided to implement it via Rovaabot and the API access. Rovaabot, the trading bot will be focused more on retail traders who do not have programming experience and API trading will mainly focus on technical savvy professionals and institutional traders.



TOKEN  
ECONOMICS



## 4. Rovaa Token

### 4.1 Rovaa Token

At Rovaa, we are designing a cryptocurrency based on definitive market rules and fundamental economic principles. Rovaa reconciles a high-performance protocol with integral price stability features.

#### 4.1.1 Token Supply

A fixed amount of Rovaa tokens are created as Ethereum based ERC-20 tokens. Following the network's inception, there is no possibility to create tokens. Tokens can be burned based on decisions from the management. The total supply of Rovaa to be distributed during the launch is 5,600,000,000 Rovaa.

#### 4.1.2 Token Allocation

TOKEN ALLOCATION	INTENDED USE	LOCK-UP PERIOD
35% Token Sale	Covers the private & public sale (IEO)	Lock-up period is 18 months for Private sale only (released every 6 months)
40% Incentives & Liquidity reserve	Incentive program for users, Traders, partners & support early adoption	x
15% Team	The team will be allocated tokens as a compensation for early involvement	36 months. Locked up for first 12 months, then released proportionately every quarter
10% Advisors	Tokens are allocated to recognize efforts & resources contributed by key partners & Advisors	24 months. Locked up for first 6 months, then released proportionately every quarter

## 4.1.5 Rate Stability

As previously mentioned, Rovaa will have an additional token reserve. Our analysis of possible cyber-attack scenarios shows that these reserves can firmly sustain any possible attack or unexpected market event thereby producing the winning strategy. Rovaa will implement a floor and ceiling strategy so reserves can be used within supported levels. As such, Rovaa cannot be considered a stablecoin but is rather a standard cryptocurrency with limited volatility.

As a result, Rovaa' price corridor will be  $\pm 20\%$  of the price (e.g. EU-R/USD three month volatility). To execute this in a decentralized way, Rovaa will use several independent market-makers for the strategy outlined above.

## 4.1.6 Raised Funds' Allocation

Rovaa will allocate the funds raised during the contribution period solely for the benefit of the company. The budget below represents the scenario in which the soft cap is reached.

- 45% of funds raised will be allocated to fund the platform's marketing purposes.
- 30% will be utilized for development of the platform.

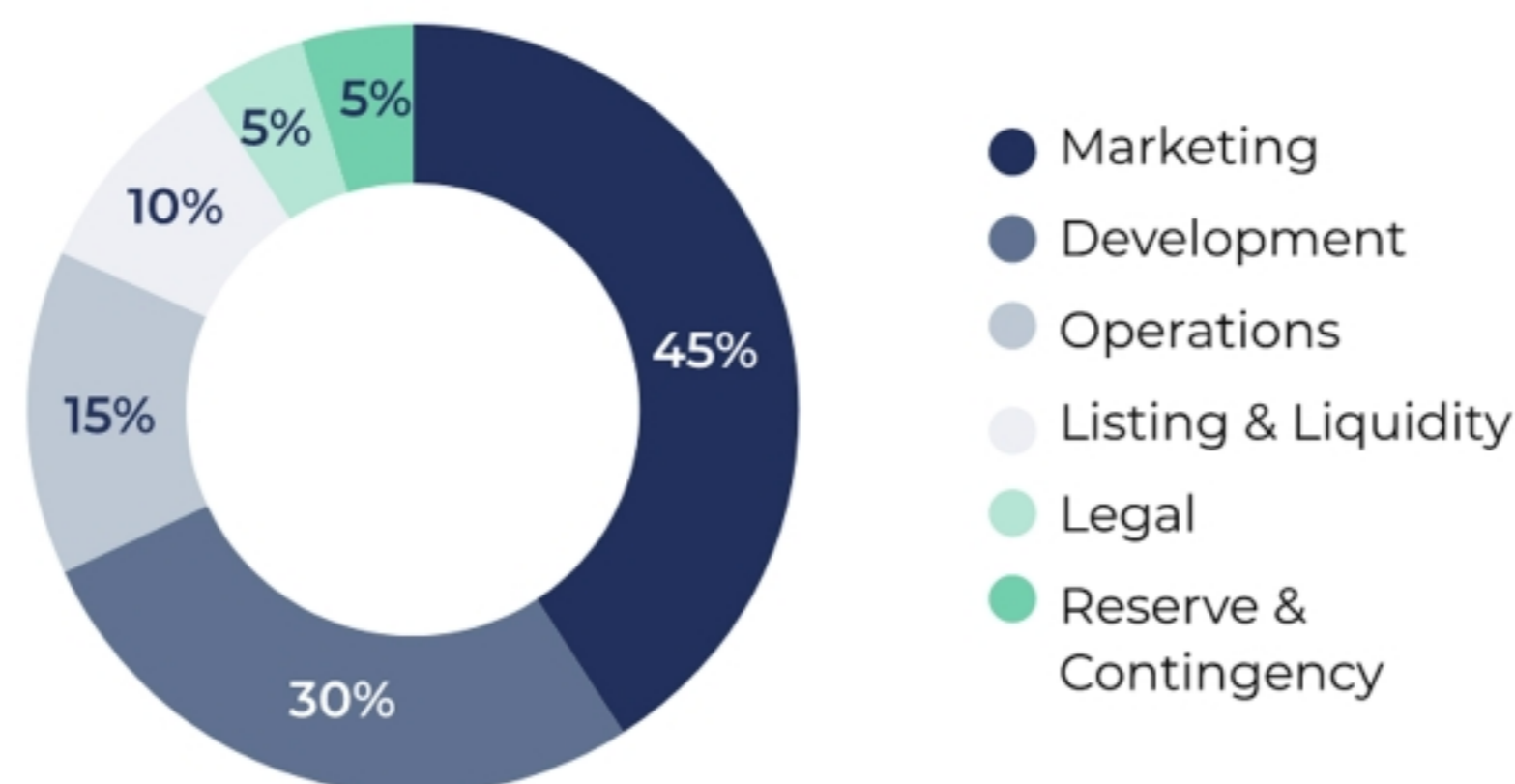


Figure 5

## 4.1.4 Token Velocity Evaluation

Token velocity evaluation represents the average number of times that a coin changes hands per unit of time<sup>5</sup>. Exchange traded currency velocity is one of the most significant economic variables that cannot be directly measured, as there is no reliable estimation of this parameter for cryptocurrencies.

Notwithstanding the foregoing, it can still be evaluated compared to other currencies traded in other decentralized exchanges. We are taking USD as a fiat base for this evaluation. Adding EUR, GBP will provide additional justification for the velocity.<sup>6, 7, 8</sup>

CURRENCY TYPE	VELOCITY/YEAR
USD - M1 (US primary money supply)	5.0 - 10.0
BTC/ USD	20
Altcoins / USD	50 - 100

Figure 5

<sup>5</sup>Vitalik.ca. On Medium-of-Exchange Token Valuations. (Online) October 17, 2017.  
<https://vitalik.ca/general/2017/10/17/moe.html>

<sup>6</sup>Multicoin.capital. New Models for Utility Tokens. (Online) February 13, 2018.  
<https://multicoin.capital/2018/02/13/new-models-utility-tokens/>

<sup>7</sup>MultiCoinCapital. Understanding Token Velocity. (Online) December 8, 2017.  
<https://multicoin.capital/2017/12/08/understanding-token-velocity/>

<sup>8</sup>Econlib. Purchasing power of money as related to the equation of exchange. (Online) October 18, 2018.  
[https://www.econlib.org/library/YPDBooks/Fisher/fshPPM.html?chapter\\_num=1#book-reader](https://www.econlib.org/library/YPDBooks/Fisher/fshPPM.html?chapter_num=1#book-reader)



## Token Allocation

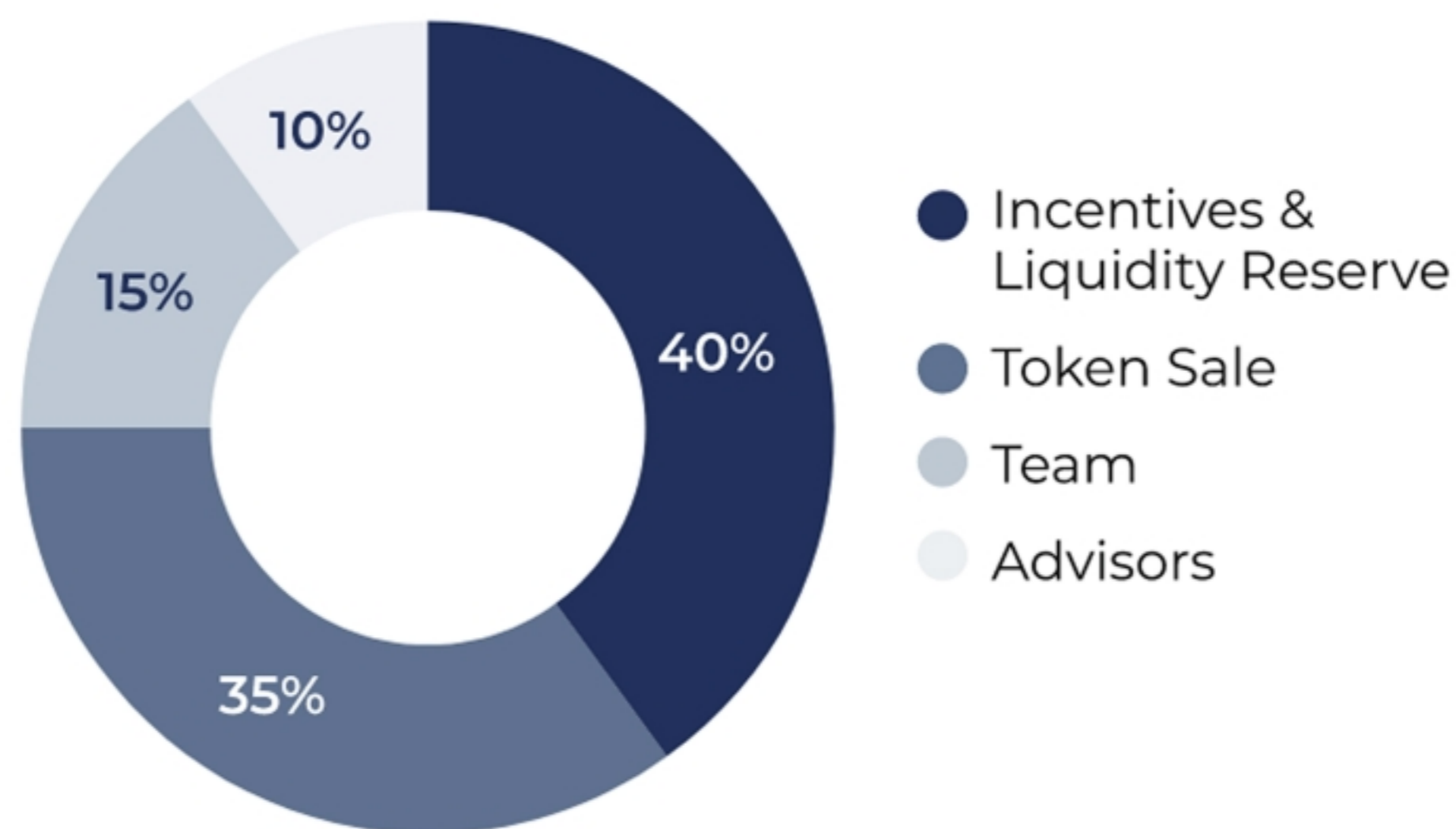


Figure 4

### 4.1.3 Token Utility and Value

$$R=PQ/V$$

In this equation, PQ is the value of goods and services traded for the payment or transaction means or the market share. V is the money velocity. Using this calculation (see below), we can evaluate the money velocity to be incrementing 15 times per year. Using the market share from the 'Rovaa adoption estimation' and this velocity evaluation, we came to the conclusion that the estimated value of Rovaa' total tokens in circulation will be equivalent to  $R=PQ/V = 5.6$  billion USD three years following the mainnet launch.

This is the intrinsic value of the currency given only by its usage for payment purposes. According to the Rovaa token allocation (see above), the amount of Rovaa in free circulation is estimated to be approximately 5.6bln tokens. This estimation provides us with a token price equilibrium that will not be less than 1.0-1.5 USD after three years if no additional reserves are released. Another estimation we have is the number of required reserve tokens to be sold in order to stabilize the token price at the desired levels.

- 15% towards operations.
- 10% will be used for listing and liquidity purposes.
- Remaining 10%: 5% towards legal purposes and 5% towards reserve and contingency purposes.

## 4.1.7 Burning Tokens

Rovaa plans to perform quarterly coin burns through a smart contract to stabilize the token price. The management has modeled its burn on Binance's burn function. The Company plans to use 15% of the profits made from the trading fees every quarter to buy-back tokens and burn them until 35% of the tokens of the total token supply are burnt.

Burning the tokens has multiple strategic benefits. It reduces the overall supply, leading to a sustainable increase in token prices over the long term. It also establishes the hegemony of the token in the platform's trading environment and incentivizes traders to hold the tokens for the long term.

### Rovaa Token use-case and Distribution Model

**The Rovaa tokens will be distributed to users and partners that add value to the overall eco-system of the platform as follows**

- Gas Fee Reimbursement
- Affiliates & Referrals
- Market Makers
- Liquidity Partners
- Quant. & Algorithmic Traders who publicize their algorithms

# **BUSINESS MODEL**

## 5. Business model

Rovaa's Decentralized Exchange model generates revenue through trading, direct token to token swaps, the tier programs for MQ tools and IEO offerings.

### THESE REVENUE STREAMS ARE FURTHER BRIEFED BELOW

#### **Trader fees**

A percentage fee is subtracted from both the maker and the taker of each trade.

#### **Token Swap**

A percentage fee is subtracted for each token exchange on the platform.

#### **Rovaa tools**

Proprietary tools will come in the form of tiers, each levying a certain fee.

# REVENUE STREAMS OF ROVAA

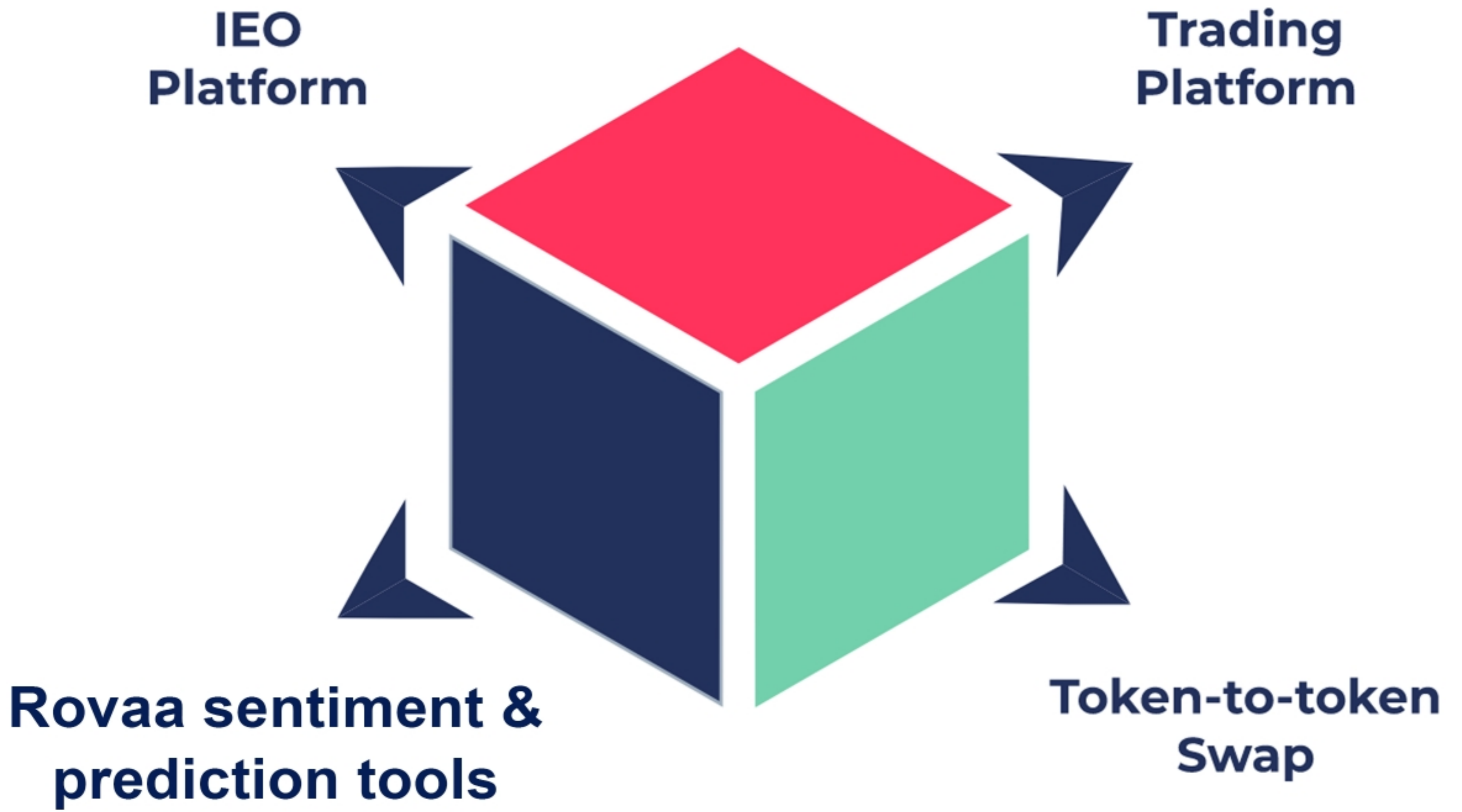


Figure 6

## IEO Trading Environment

Rovaa plans to create an IEO environment embedded in the Trading environment for the ultimate user experience. This will enable other coin offerings to conduct token sale on the platform, and any user to easily participate in the sale.

This will be executed through in-house approval and voting by the users and will be fee-based or % of raised IEO.

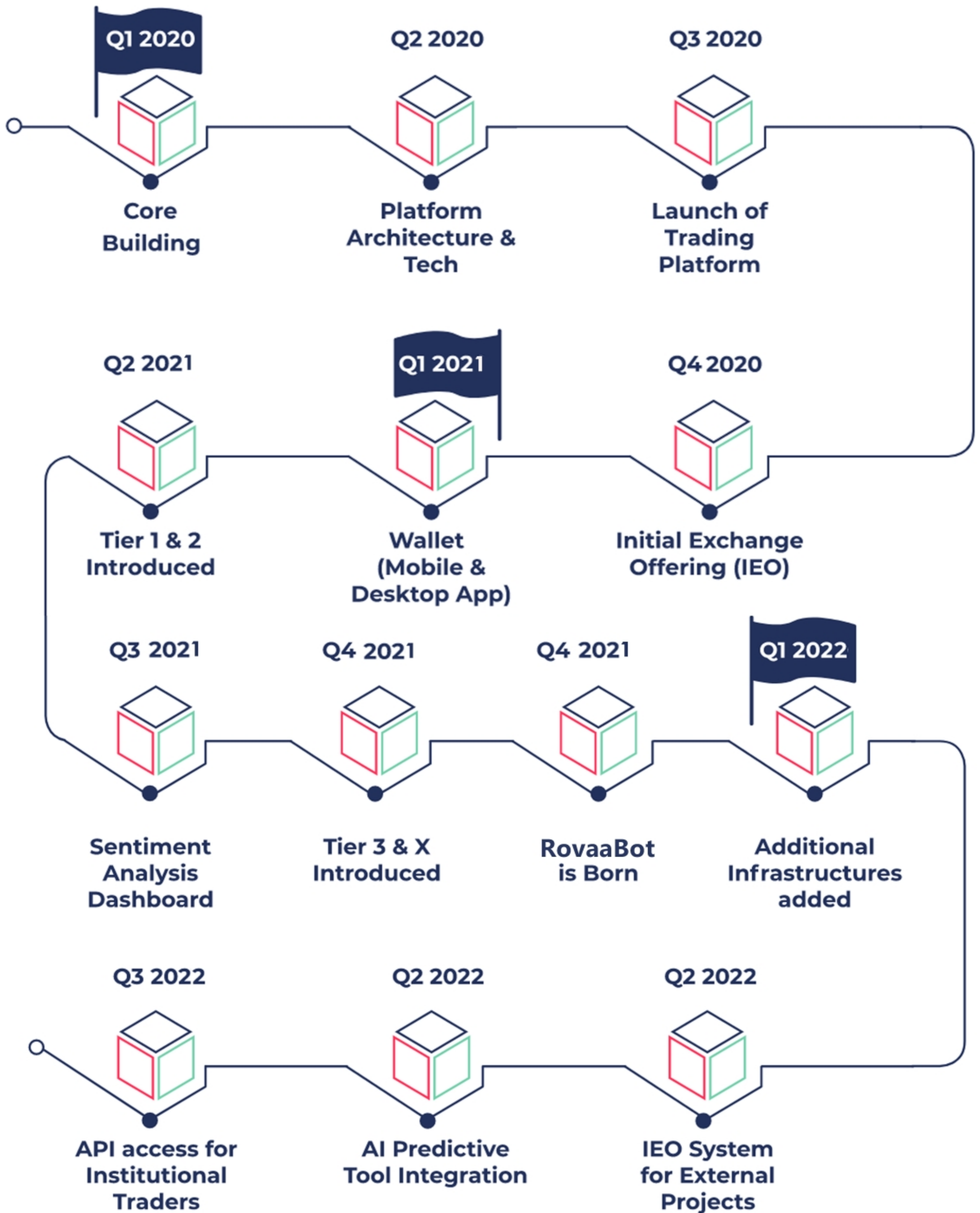
- It will be percentage-based if the company puts it up for votes.
- It will be fee-based if it has been vetted-for internally, and the project doesn't go through the votes.

### Affiliation & Discounts

- Holding a certain fixed amount of the Rovaa token will provide a discount on the trading fees
- The Affiliate Program Bringing a certain number of Traders will provide discounts on trading fees and access to Tier 2 or 3 (Depending on how many users join through the affiliate)
- High-level Market Makers

# ROADMAP

# 7. Roadmap







[WWW.ROVAA.IO](http://WWW.ROVAA.IO)

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