Agrow

WHITE PAPER

Version 0.1.0

EXECUTIVE SUMMARY

According to specialists' research, observation, and analysis, the agricultural sector accounts for approximately 25% of the global GDP and regularly expands. By the outcome value and volume of investments, the agricultural sector lies at the top of the macro-economic complexes of the majority of developed countries, with the global development of Block chain in various industries. The global trade volume in agricultural products is predicted to continue in stable growth in the impending decade, hence, influencing a rise in trade on the levels and nature of food security in all regions of the world. This gives Agrow a purpose & motivation to deliver unique solutions with advanced technology (Blockchain), which will be beneficial to all the stakeholders involved in different agricultural activities, starting from the supply of raw material to delivering it to the end consumer.

However, despite the existing possibility of traditional trading, small and medium-sized businesses face a number of challenges such as:

- **The requirement for an in-depth analysis of international legislation trading rules**
- **The requirement to involve proper professional specialists; lawyers and international economists**
- **Intermediaries with elevated purchase prices.**
- **Inferior production capacity, which would enable producing and supplying extensive volumes to foreign markets**
- **The impossibility to fast sell goods due to unavailability of trusted platforms.**

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EXECUTIVE SUMMARY

Agrow blockchain-driven ecosystem is specially designed for the agriculture sector network. It allows farmers to sell their products directly via Agrow Marketplace to multicultural merchants, exporters/importers, supermarkets chain, hotel industries, consumers, and other industries on the Agrow platform. Agrow is a powerful way to manage and share data related to agriculture. Also, it supplies valuable information to farmers, exporters/importers, supermarkets chain, and any other industry in real-time.

Since Agrow's main methodology & strength is Blockchain, it solves many issues with its unique solutions that make everyone's life easy. The following are Agrow's unique solutions:

Round the clock transactions

Low transaction cost

Reliability of accounting

Global market access

Hedge against inflation

No chargeback

Consumer trust

Transaction speed

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ABOUT AGROW

Agrow is a distributed ledger technology-based, decentralized, and encrypted platform that enables trading of agricultural commodity supply chains from growers to consumers and other intermediaries in the industry. This blockchain-driven ecosystem is specially designed for the agriculture sector, which allows farmers to market their products directly to merchants, exporters/importers, supermarkets chain, hotel industries, consumers, etc., without relying on the traditional multi-level distribution structure. Each farmer, emissary (agribusiness agent), retailer, manufacturer, etc., on the platform is registered using biometric verification and allotted a unique meta ID. In the long run, this meta-information provides businesses and master distributers with a complete description of farmers' land and the quality of crops they harvest (organic or non-organic). They will also be able to preserve their crops using the facilities of a brick-and-mortar cold storage and warehouse network.

In future, Agrow plans on taking its platform to a new level in a digital world - Agrowverse where everyone will be able to buy & sell products in a virtual reality world.

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WHAT IS A SUPPLY CHAIN?

A supply chain entails planning procurement and logistics (inbound logistics, outbound logistics, and physical distribution). It is predominantly connected with the flow of products and information between supply chain associates like Producers, Inspection & Insurance agencies, Logistics & Shipping agencies, Manufacturers, and Importers (merchants, exporters/importers, supermarkets chain, hotel industries). The supply chain process includes:

- **Acquiring raw materials from farmers/suppliers.**
- **Transforming them into finished products.**
- **Distributing them to retailers/wholesalers.**

In today's data-driven era, supply chains help organizations diminish additional costs, increase product valuation, expand resources, market the product with the fixed value, and pull customers.

The main motive of supply chains is how activities correspond and make greater value for consumers with the profitability of all the connections in the supply chain system.

However, the supply chains of different agricultural commodities are fraught with challenges, stemming from the inherent problems of the agriculture sector. The agricultural supply chain system is defined by various sartorial issues like the superiority of small/marginal farmers, fragmented supply chains, dearth of scale economies, low level of processing/value addition, the inadequacy of marketing infrastructure, etc. Early processing-based supply chain management success included improved relationships between warehousing and transportation within companies due to reduced inventory and better response time to customer requests for products and services. Supply chain management entered a logistics stage where other functional areas within companies joined forces to incorporate manufacturing, procurement, transportation, distribution, and marketing to compete in the marketplace effectively. This stage was aided by telecommunications, electronic data interface, and other technological advances that made the transfer of information more transparent across the functional areas between companies.

WHAT IS A BLOCKCHAIN SUPPLY CHAIN?

When we talk about a Blockchain supply chain, it implies that an organization running a supply chain business uses blockchain technology (distributed ledger) for the purpose to store & verify information related to the procedures & transactions through the entire supply chain process, which comes right from farmers supplying raw material to retailers/ultimate consumers. It enables parties to record price, date, site, quality, certification, and other relevant data to more effectively supervise & manage the supply chain. The availability of this data on the blockchain can advance transparency, traceability, trust, security, preservation, accountability & profit of the material supply chain. Further, it reduce losses from the counterfeit and dismal market, enhance visibility and adherence over outsourced agreement manufacturing, and potentially improve an organization's position as a leader in responsible manufacturing.

"We believe in the power of data. We verify your product, receive it, perform data analysis, reporting, and actionable insights back to you, and give you placement for your product on our platform."

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USES OF BLOCKCHAIN IN AGRICULTURE

Contract between Farmers & master distributors/ retailers

On the Agrow platform, framers will get business on getting approached by master distributors registered on our site. A digital contract will be made between the framer and master distributor/retailers on confirmation and availability of the required material.

Inspection certificate & Insurance papers

Every farmer will add details about their produce, such as harvest & yield data, demand & sales price data, and request inspection & insurance. Once the inspection is complete, Agrow will formulate a Blockchain inspection & insurance certificate.

Purchase invoice

Once the contract is made between both parties and the order for the required material is confirmed, a purchase invoice will be made stating the prices set and sold by the farmers, which will also be stored on Blockchain.

Optimization of supply chain

We allow farmers to set their own prices properly and optimize their own produce. Prices will differ based on the party; if he's buying the produce in bulk or limited quantity (wholesaler or retailer).

Wallet Transactions details between merchants

Agrow helps farmers sell their produce at a low transaction cost, and faster payments prevent price coercion and retroactive payments. Transactions between both parties are recorded in real-time, making it easier to due diligence with each other.

Transportation Invoice

Transportation activities from shipment requests to the bill of lading will be documented and stored on the blockchain.

USES OF BLOCKCHAIN IN AGRICULTURE

- TRANSPARENCY
- TRACEABILITY
- TRUST
- DATA
- SECURITY
- PRESERVATION
- ACCOUNTABILITY
- PROFIT

MISSION

The mission is to connect growers, coordinators, suppliers, processors, and consumers at one marketplace by utilizing blockchain technology, making it easier to track and store data for fair trades in a safe, secure, and trusted platform.

VISION

We envision reshaping and revolutionizing the current agricultural landscape by fixing some of the key inefficiencies faced by farmers, such as difficult access to certain resources and problems with quality assurance.

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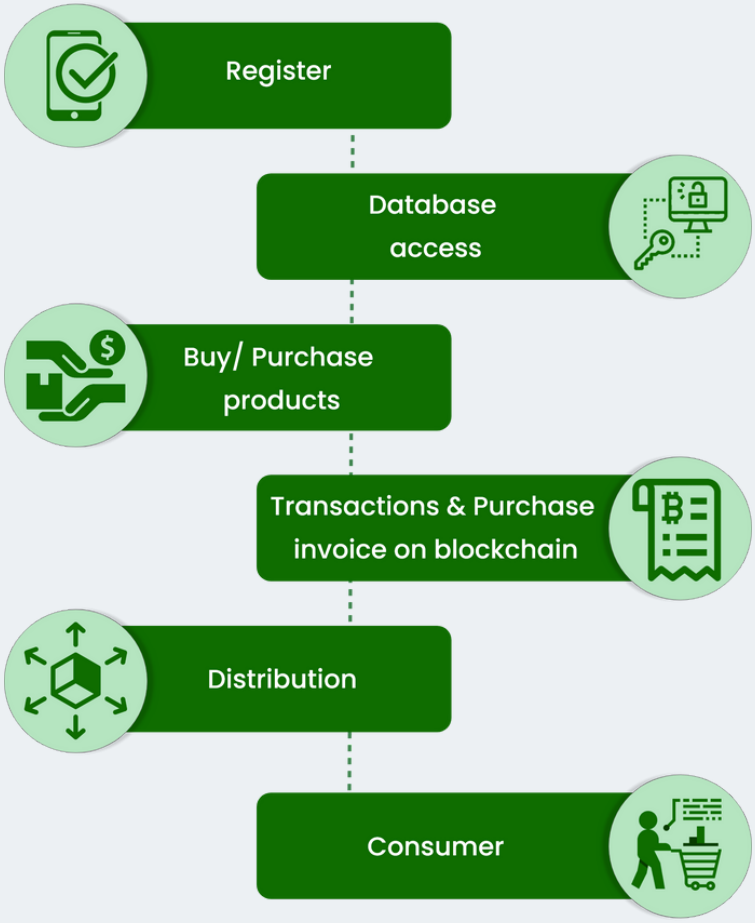
HOW DOES THE PLATFORM WORK?

- The user registers at Agrow.io, upon which they get access to the database of Producers or Buyers of food products.
- The buyer purchases his/hers desired products through the in-built commercial platform. When finding a suitable quality, quantity, and price offer, the buyer concludes a smart contract to purchase products with the seller.
- Agrow starts the transaction processing; communicates with the logistics partners to ensure the transaction and arrange for the delivery of the products.
- The cryptocurrency is frozen until the receipt of goods by the buyer.
- The cryptocurrency is unfrozen and the seller withdraws the earned money through the online commercial store.



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MARKET RESEARCH & INDUSTRY OVERVIEW

In 2020, blockchain in agriculture and supply chain market scope was evaluated to be USD 133 million globally. By 2025, it is predicted to reach USD 948 million with a CAGR of 48.1% during the prognosis period.

Blockchain technology has been revolutionizing the food and agricultural sectors by enhancing the company's decision-making abilities in today's world. It locates several conceivable web pages in these sectors, some of which have already been explored. The significant webpage of blockchain technology in food and agriculture include payment and settlement, tracking and visibility, product traceability, security, smart contract, governance, risk, and compliance management. Due to improved supply chain transparency demand, the blockchain market is expected to grow. The significant motorist of the blockchain market is the increasing number of food scam cases. The rate of small and medium-sized enterprises is greater as several startups invest in this market across the globe and understand the advantages this technology offers.

Product traceability, visibility & tracking are predicted to be the most significant market development during the estimation period through the webpage.

By utilizing blockchain technology, establishments can assert and substantiate their products by giving the end consumers knowledge about the product's entire journey - from birth to the shelf. Also, the importance of these blockchain-based supply chain websites grew tremendously with the widespread of the COVID-19 pandemic. The blockchain market is calculated only to see a peak in the post-pandemic world, as traceability & transparency of the food value chain are observing a growing need in the global food industry.

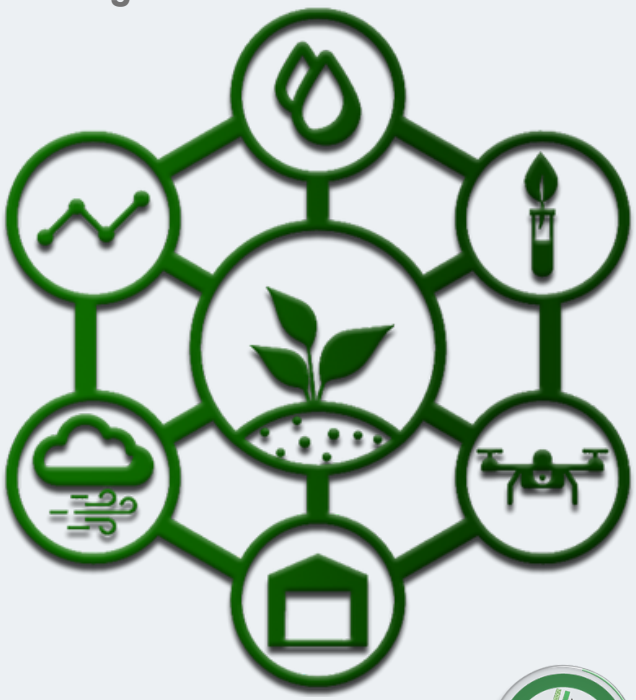
MARKET RESEARCH & INDUSTRY OVERVIEW

Third-party service providers for agricultural blockchain are predicted to be the fastest-growing segment in the supply chain market.

Organizations that provide blockchain services for businesses across the agriculture and food industry will experience a hike in blockchain demand
and are likely to deliver high business value to the company by decreasing transactional fees and duplication of data, providing occasional reconciliation and authentication for saleable and regulatory needs.

Big organizations are forecasted for the highest market share in the agricultural blockchain and food supply chain market.

Large organizations have adequate revenues and capital to invest in new technologies; therefore, industry giants such as Walmart (US), Bumble Bees (US), Nestle (Switzerland), and JD.com (China) are adopting blockchain technology on a pilot basis directing to the dominance of this segment.



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TARGET AUDIENCE

Our target audience comprises everyone involved in the agricultural sector of the supply chain. Every individual mentioned below plays a vital role starting from getting raw material, transforming it into finished goods, and delivering it to the consumers.

- Farmer (Producer)
- Processing faculty
- Fertilizer provider
- Supplier
- Equipment provider
- Inspection & Insurance agencies
- Manufacturer
- Mobile Remittance for Small Farmers
- Incentivizing Sustainable Practices
- Importer (merchants, supermarkets chain, hotel industries, etc.)

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CHALLENGES CONNECTING & CONVINCING FARMERS

Problem:

Farmers find it difficult to build trust and confidence to work with new technology since they believe and have complete faith in the traditional multi-level distribution structure.

Solution:

Our team assures and keeps reassuring framers with real results and helps them build their trust in blockchain technology.

TRACING THE LOCATION OF ORIGIN, COMPONENTS, AND QUALITY OF THE PRODUCT.

Problem:

IImporters find it challenging to trace provenance to comprehend the place of origin and quality of the imported products.

Solution:

Any activity can be documented, recorded & stored in the distributed ledger only with concurrence among all partaking merchants. Thus keeping track of the activities and having an evident A-Z understanding of the place of origin and the quality of the produce.

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TRACKING CUSTODIAN INFORMATION

Problem:

As the produce transports between multiple merchants, the ownership or custodian information becomes complicated to delineate.

Solution:

Every activity is technically verified and documented, and encrypted on the blockchain giving the whole outline of all the custodian information, origin, proof of transfer, transactions, and insurance.

TRUST BETWEEN MERCHANTS

Problem:

Centralized bodies, especially private agencies that certify crop produce, may not be trusted by international importers

Solution:

To solve this issue, Agrow brings in smart contracts in our blockchain without the need for a centralized body.

INFORMATION FLOW BETWEEN MERCHANTS

Problem:

Information flow between merchants consecutively directs potential delays in downstream decision-making.

Solution:

Every merchant will have a copy of the same distributed ledger, enabling a quick flow of information and access in near real-time from any part of the world.

TRANSPARENCY

Problem:

Overall, merchants lack clearness in this process and lose track of essential transactions

Solution:

Every transaction made starting from the origin of the product till the bill of lading will be securely be stored on Blockchain, where data will be kept forever.

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UNIQUE SOLUTIONS

1)Smart agriculture advisor

Agrow provides smart agricultural advisors who can educate and advise individuals about any problem related to their agriculture, such as their product, pricing structure, product placement, marketing, etc.

2)Market Engagement

To improve income gains from production gains, smallholder farmers need to sell their products as efficiently as possible, for the best possible price, without taking time away from farming or their families. To make this possible, Agrow provides everyone a platform to retail their product for the best price and drive market engagement.

3)Invoices through blockchain

We bring the best blockchain solutions to keep a track of transactions. Agrow Holdings provides a platform for businesses to simplify the trading process, including documentation and data exchange, to achieve automated trade. Agrow businesses will use blockchain technology to streamline sales contracts, reduce costs, and maintain transparency.

4)Round the clock transactions

As the first of its kind, Agrow is a platform for farm-agents-marketplace-logistics-table product purchases delivered anywhere. Banking hours and holidays do not apply to this platform. Cryptocurrencies, by design, are decentralized. Transactions can take place at anytime from anywhere in the world and it is peer-to-peer, making them completely secure.

5) Low transaction fee

Agrow is a cryptocurrency for global agribusiness and food production that significantly reduces the transaction costs inherent in commodity trading. Agrow is powered by the Binance blockchain and provides transparent, fast, confidential, and fraud-resistant financial transactions that benefit producers, processors, suppliers, and consumers.

UNIQUE SOLUTIONS

6)Global Transaction

You can send the required tokens to any recipient in any country with a single command. There's no transaction passport, as the transaction will be immediate and there's no need to pass financial controls (unless defined explicitly by you). All records are immutable and transparent, so each participant can prove that he sent or received his tokens exactly when he should have.

7)Reliability of accounting

The Agrow is a cryptocurrency that uses peer-to-peer technology to operate with no central authority or banks. Several acts of unfairness and dishonesty have been associated with unregulated and centralized financial organizations. The lack of regulation makes it easier for the public to be scammed by people who, although their interests are non-financial, are willing to take advantage of their clients' naivety at first sight. Decentralized digital currencies allow individuals to gain more control over their wealth, better privacy protection, and greater independence from financial institutions.

8)Transaction speed

Anyone can transfer value from A to B, but at Agrow, the quick and simple transaction process is only a small part of what makes cryptocurrencies unique. Fast transactions; intercorporate transactions can take anywhere from one to 10 days, whereas cryptocurrency transactions can take anywhere from 10 minutes to an hour.

9)No chargeback

Digital currency is stored in a digital wallet called a blockchain. When you accept payments in digital currency, there will be no chargebacks. As a result, firms that use blockchain technology for transactions don't have to worry about chargebacks. In any case, as a reputable business, you have the option to refund if you believe it is a reasonable business decision to make.

UNIQUE SOLUTIONS

10)Hedge against inflation

Inflation appears to be a constant occurrence in the old financial system. However, in reality, it is a big problem in numerous third world countries, as central banks inflate their currencies to keep their heads above water. This may be demonstrated in the United States, where some say that inflation is considerably higher than the consumer price index shows on numerous items. There is no inflation with digital currency because of the system's strict supply limits and algorithms. No entity will inflate digital currency because there is no regulating authority or intermediary. As a result, inflation risk is lessened when digital currency is used.

11)Consumer trust

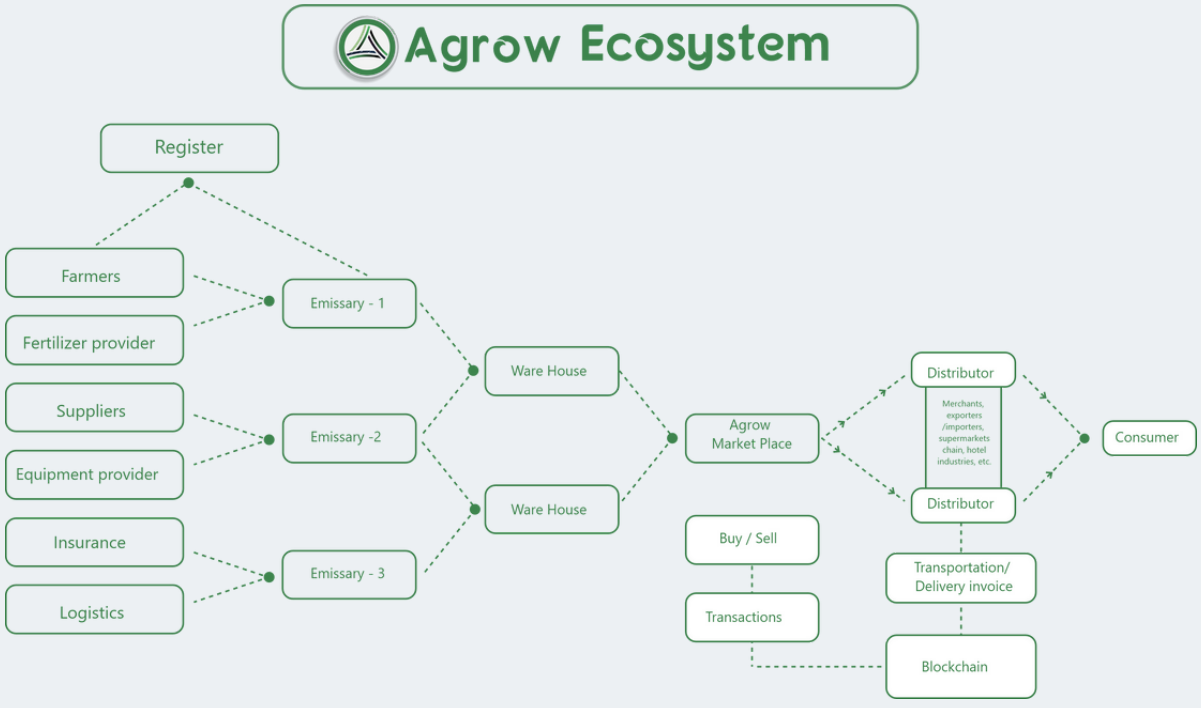
Digital Currencies give you the ability to offer an additional payment process for your customers. Since digital currency is not backed by a bank, it provides a payment system that offers instant transactions, lower fees and fraud protection. Consumers will have peace of mind knowing that their personal financial information is safe with processing systems.

AGROW ECOSYSTEM

Agrow Blockchain makes it easy to connect with and conduct business with other entities effectively, efficiently, and securely. Agrow ecosystem is a power of the agricultural industry - farmers, traders, and manufacturers unite to form this innovative cooperation network between all agrarian market participants in the supply chain.
It begins with the registration of every individual on the Agrow website. Upon registration, individuals can connect with our emissaries (Agribusiness agents), communicate about their product, pricing structure, logistics, and come to a settlement followed by a contract between the entities, which will be verifiable on Blockchain. One unique thing about Agrow ecosystem is its in-built marketplace, where everyone will be able to buy and sell agricultural products. All transactions on purchasing any item along with their transportation invoice will be stored on the blockchain.

AGROW TOKEN USAGE

- A local currency between farmers and merchants, and resellers.
- Payment and purchase of goods from our marketplace.
- Rewards on the platform.



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BLOCKCHAIN UTILIZATION

STATUS: TOKENIZATION IS READY, BLOCKCHAIN TRANSACTION LEDGER IS PLANNED

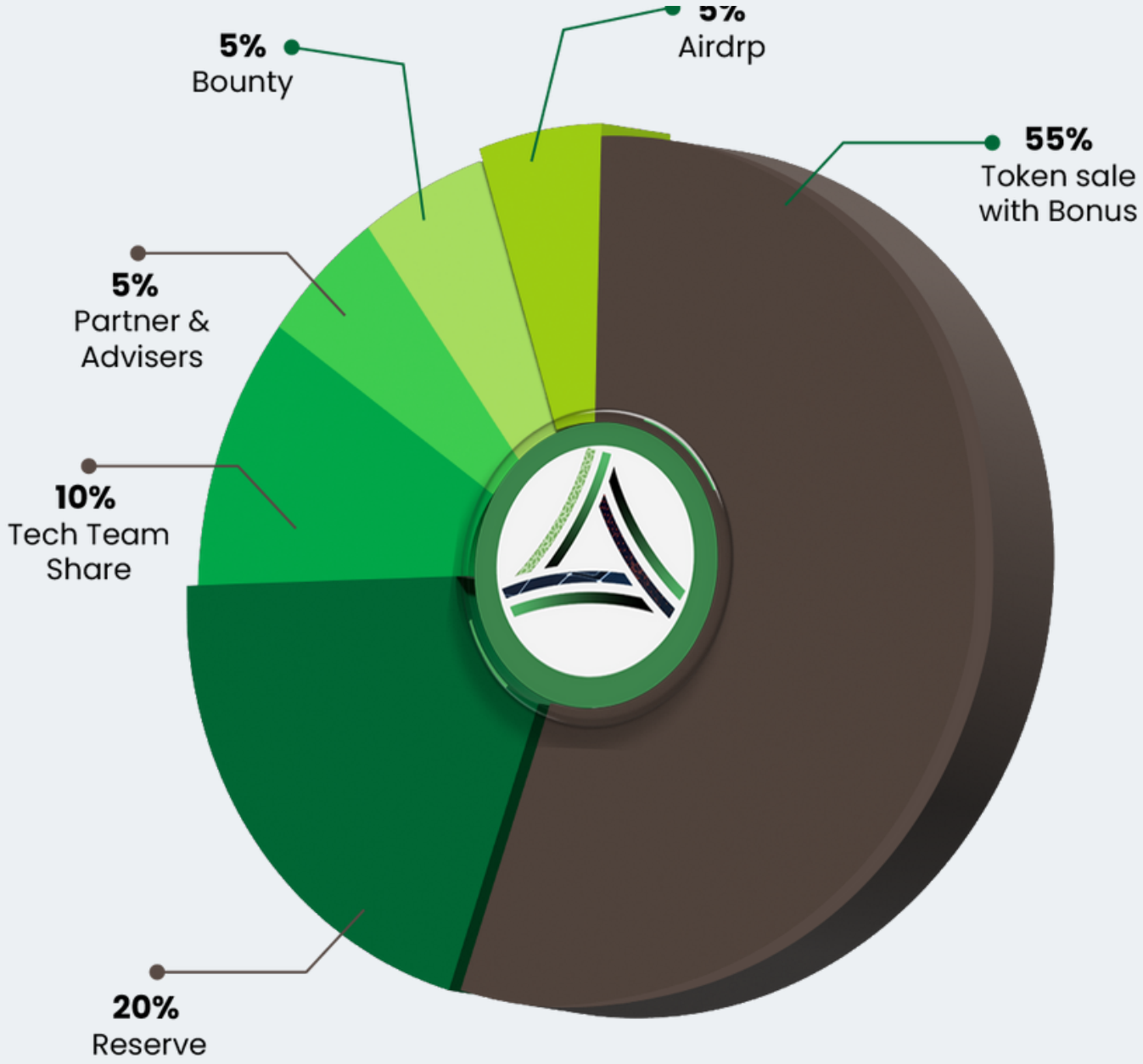
Because the data provided by the supply chain participants must be unmodifiable. Due to the significant distrust and suspiciousness among consumers, supply chain companies, and authorities (caused by several food frauds and corruption), only technically unalterable logistics and food quality data can provide credibility.
Because the data in the system is a common property of all participants. It must be stored in a shared, distributed ledger to provide transparency. Because the food safety related data all over the world is a property of all us, and data accessibility must be public and democratic. Because the economic inequality is one of the largest social problems and we need a technology which helps to create a fair access to data, know-how, and income. Because corruption is a global economic problem, and the food sector in emerging countries is one of the most affected sectors. Incorruptible food history information leads to transparent food supply chains, which can make a difference in public health, and literally save lives.

"If you're buying some food, for example, you have this complex global supply chain... Ideally, you'd want to have some kind of common shared network that you could use to get all the information about where each individual thing came from so you could trace every part of the product back to where it came from. You could have a smartphone app that you could check everything about the product and see if it satisfies your needs. To do this kind of thing, you need to have a shared network and the blockchain is a great way to do it."

-VITALIK BUTERIN
Founder of Ethereum

AGRONOMICS

TOKEN DISTRIBUTION



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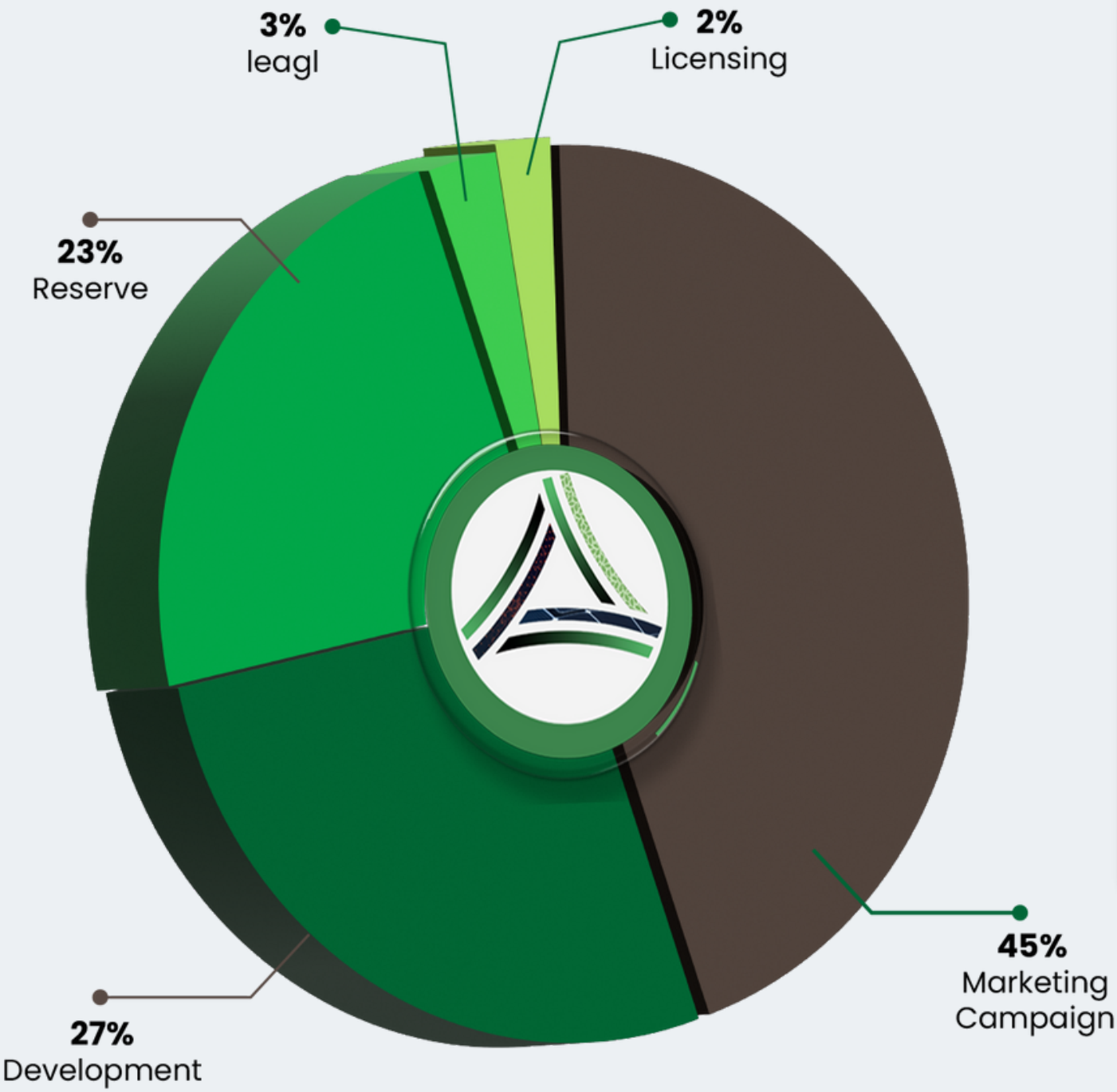
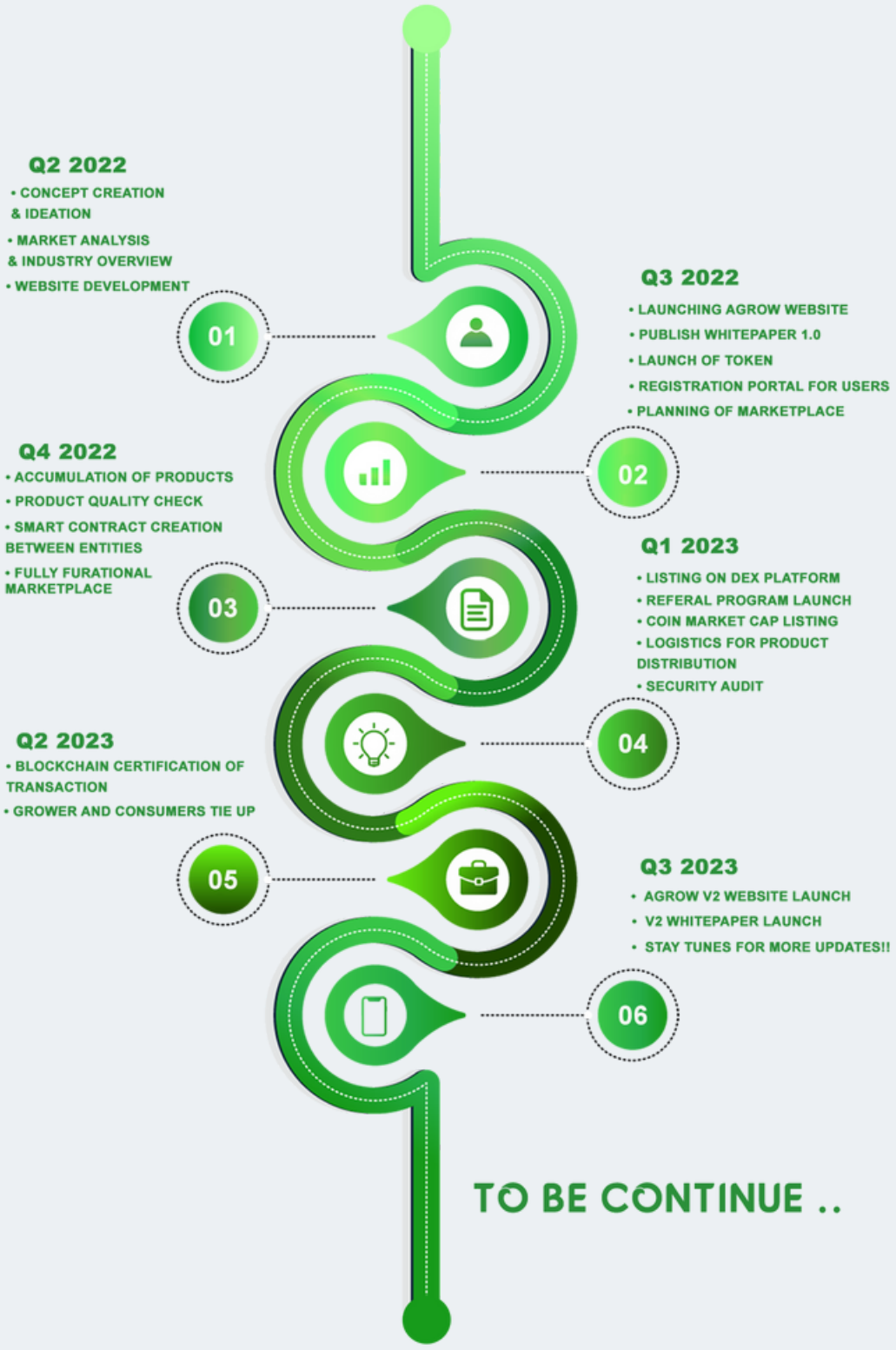
AGRONOMICS

FUND ALLOCATION



AGROW ROADMAP



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