

Blockchain Technology-Based Agricultural
Aquatic, and Livestock Production-Distribution Innovation

MOSAIC Whitepaper

Whitepaper ver.1

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MOSAIC

Blockchain Technology-Based Agricultural Aquatic, and Livestock Production-Distribution Innovation



01. Part I

Beginning of MOSAIC

Agricultural products symbolize wealth and copiousness. In the history of humanity, the first properties were mostly agricultural products. The Code of Hammurabi, the world's first legal code, and clay tablets inscribed with Sumerian script both mention the practice of lending grains and receiving interest. From ancient times to the modern era, the ruling class's power was often measured by their agricultural produce. Before corn was introduced, the production of rice served as a measure of power for kings and lords. In the past, grains were used as currency. With advancements in rice cultivation and agricultural technology, a new economic system emerged, linking agricultural production and finance.

From the late Tang to the Northern Song dynasty (960-1127), active development in the Jiangnan area led to a significant increase in rice production. This coin shortage prompted a Sichuan merchant to create the first banknote. A Northern Song official noticed and regulated that only the state could issue banknotes. The sharp increase in grain production eventually led to the creation of the world's first banknote. During the transition from the Song to the Yuan dynasty (1271-1368), it was mandated that only paper money, called Jiaozi, would be used.

During the exploration era of the 16th and 17th centuries, ships bringing cotton, spices, and black tea from the New World were issued profits written on paper. This was the beginning of what is now known as "stocks".

After Japan was unified following the Warring States period, rice from across the country converged in Osaka. The Dojima rice market, established in 1694, emerged as Japan's central hub of commerce. During this period, the significant volume of rice transactions led to the emergence of a new financial practice: rice futures were created then exchanged between lords, who later faced challenges in transporting all their rice and merchants in Osaka. These rice futures and payment checks widely circulated with Japanese coins until the Edo period.

Just like that, agricultural products symbolized the beginning of financial revolution. In the 21st century, the emergence of Bitcoin is bringing new innovations to finance. **We propose another financial revolution by adding blockchain technology to agricultural products produced with advanced technology and the latest facilities.**

01. Part I

Market Issues

A wise scholar named Wendell Berry once stated, "a sustainable agriculture does not deplete soils or people." Nevertheless, modern agriculture is unsustainable, leading to soil pollution. Furthermore, limited agricultural productivity compared to the growing population poses a significant challenge to human development. Although customers demand high-quality agricultural products, global warming is inevitably stirring up the agricultural environment. Both the quantity and quality of agricultural production, as well as their prices, are crucial to our survival. The threatening issues to sustainable human growth are the new challenges of modern civilization.



First, abnormal weather events are occurring frequently around the world. The world is experiencing serious climate changes (flood, rising sea level, etc.), posing a great threat to the agricultural production and distribution. According to the Food and Agriculture Organization, the FAO Food Price Index (FFPI) has risen from 95.9 in 2018 to 140.7 in 2022, an increase of 1.5 times.



Pears damaged by hail (Jeollanam-do, Naju)

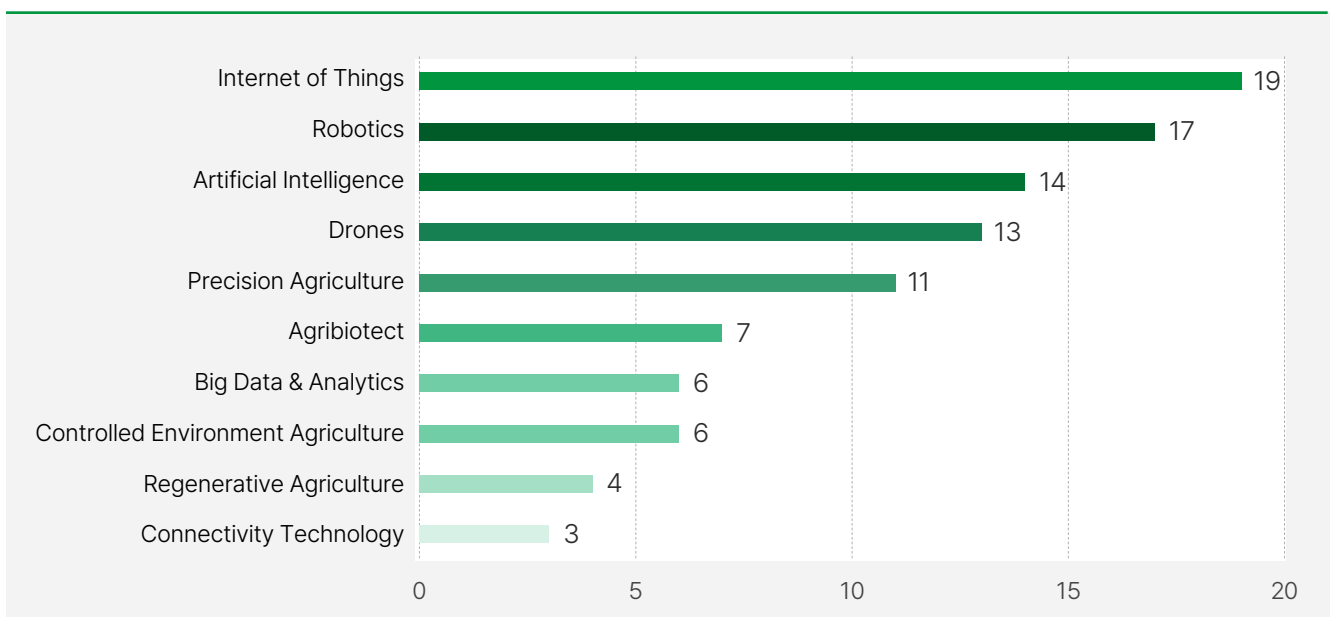
This is due to a global reduction in cultivable land. Since 1981, 24% of the Earth's total land area has already been desertified, while 75% of total land is experiencing desertification. Joint Research Centre of the European Commission states in World Atlas of Desertification that more than 90% of the land could be infertile by 2050. Consequently, among the global population, approximately 282 million to 735 million people, around 9% of humanity, go to bed hungry every night due to acute hunger.

Next is the decline in the agricultural population. A contributing factor is the declining and aging population in rural communities. South Korea's rapidly aging population is projected to increase from 20.6% in 2025, to 30.1% in 2035, and later to 40% by 2050. Additionally, the farming population has sharply decreased from 3.062 million in 2000 to 2.215 million in 2021. The shortage of agricultural labor is prompting the emergence of new agricultural methods. A transition from labor-intensive farming practices of the past to a modern technology-infused farming methods is required.

01. Part I

Market Issues

Agri-Tech (Agriculture + Technology), or AgTech, is also shaping the future with the emergence of new technologies. According to StartUs Insights, innovations such as the Internet of Things (IoT), robotics, drones, biotechnology, and artificial intelligence are driving the innovation in agriculture. In a global survey of AgTech's share of ICT technologies, scientists identified the Internet of Things (IoT) as the most influential agricultural technology of 2022. IoT enables real-time monitoring of crop management through sensors, which previously required humans to manually check. Robotics and artificial intelligence were identified as the second and third most influential AgTech technologies in 2022. Automated unmanned robots on farms are now performing tasks once done by humans.



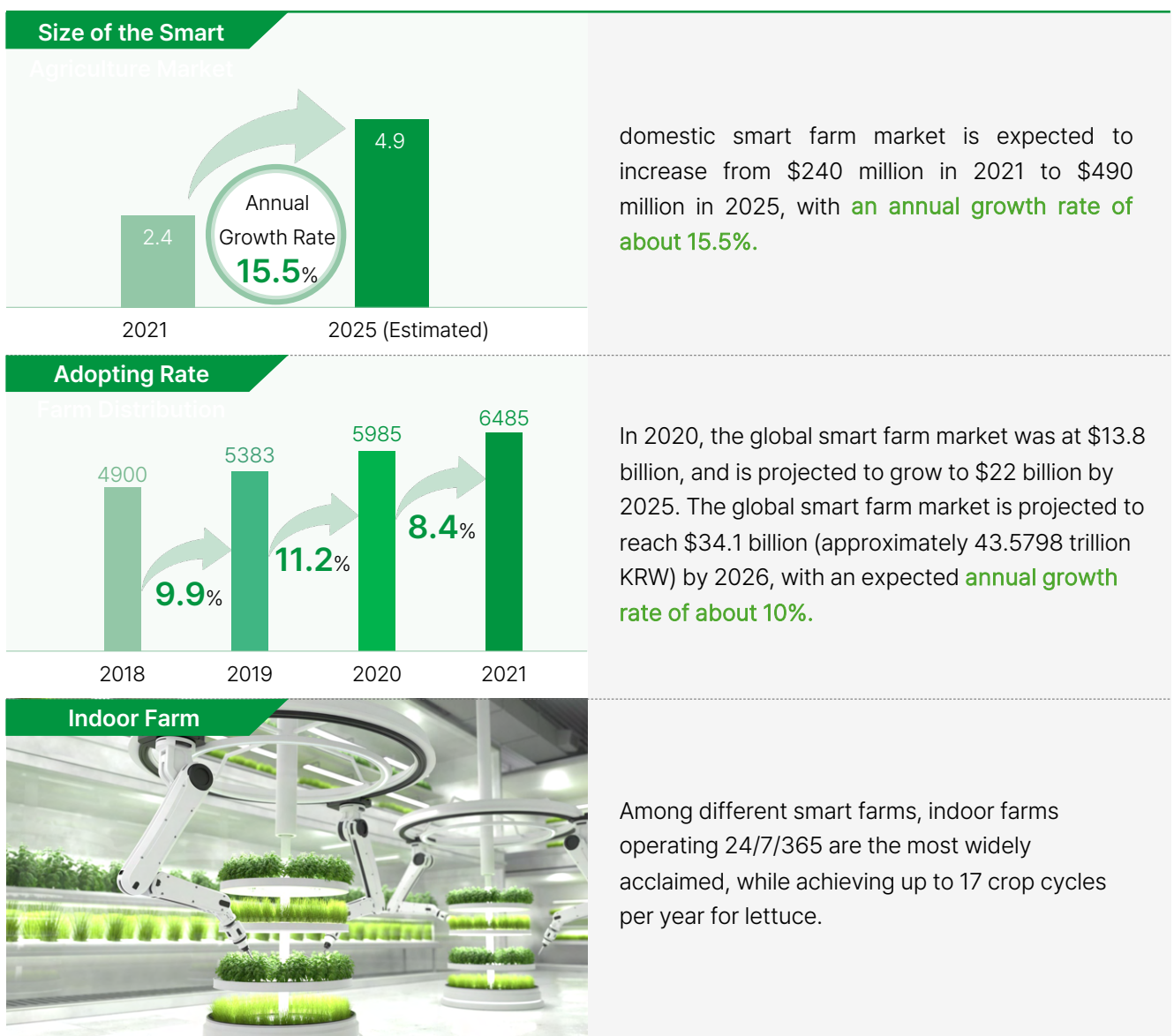
World Agri-Tech ICT Technology Market Share (2022) (Unit: %) Source: StartUs Insights

As a solution to climate impacts, smart farms incorporating advanced technologies have emerged. Smart farms come in various types, but a key feature is their enclosed facilities automatically regulating and maintaining an independent environment from the outside. This frees them from natural disasters such as pests, droughts, cold waves, and heat waves that affect traditional farming. Moreover, the technology-intensive production environment integrates biotechnologies in nutrient solutions and sensors connected with artificial intelligence for high-quality product monitoring. Smart farms have been recognized as a future method of food supply. MOSAIC focuses on enabling and verifying the transparent production and distribution of agricultural products from smart farms. With this background, MOSAIC aims to use blockchain technology to manage and ensure transparency throughout the entire process from production to delivery to consumers of agricultural, fishery, and livestock products.

01. Part I

Growth of SmartFarm

Smart Farms are farms enhanced with information technology. Using ICT technologies, it measures and analyzes conditions such as temperature, humidity, sunlight, carbon dioxide, and soil in crop cultivation facilities. Based on these analysis, it operates control devices to optimize growing conditions. Smart farms can create high value by enhancing productivity, efficiency, and quality throughout the agricultural production, distribution, and consumption processes. **Plant factory-type smart farms can save up to 92% of water compared to traditional fields and are free from soil and groundwater pollution issues associated with soil-based agriculture.** Smart farms are inevitably emerging as the solution for future food crisis. The market size and R&D technology for smart farms are both growing globally.

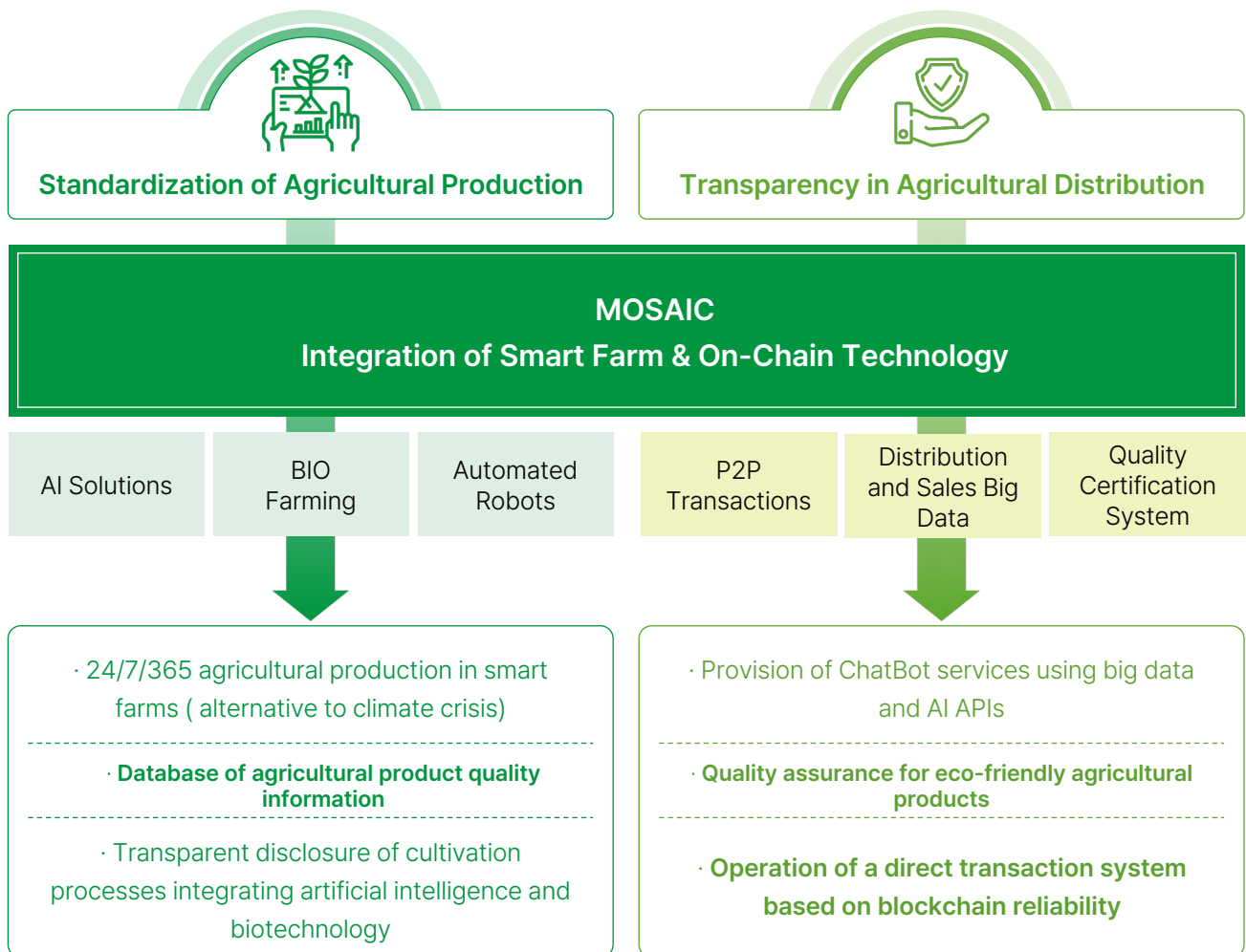


Source: Status of Domestic and International Smart Agriculture Market (2020), Ministry of Agriculture, Food and Rural Affairs

01. Part I

Goal of MOSAIC

MOSAIC's vision is to produce crops that are resilient to climate change and to provide high-quality agricultural, aquatic, and livestock products through direct transactions between consumers and producers. We aim to take a step closer to this by building a communicative, agriculture-centered ecosystem that integrates various technologies and platforms, while transcending the traditional boundaries between production and consumption. The following goals have been set to achieve this.



Our project MOSAIC embodies the convergence of medicine, biotechnology, robotics, drones, ICT, and agricultural technology. By integrating technology and business with an ICT infrastructure that connects production areas and demand sites in real time, we aim to enhance food security and improve consumers' health and safety.

02. Part II

Introduction to the MOSAIC Project for Web3.0 Farm

MOSAIC aims to have users at the center of agricultural production, distribution, and consumption, safeguarding safe and reliable future food supplies. For users to be central in agricultural production and distribution, transparency and fairness in ledgers and transactions must be ensured through blockchain technology.

MOSAIC applies blockchain technology to the production, distribution, and consumption of agricultural products through a dedicated platform. The applied MOSAIC platform technology ensures food safety and reliability, reduces intermediary margins, and provides higher quality products at better prices.

Decentralized ✔ Trading Platform	Using Web3.0's decentralized web technology, MOSAIC provides a decentralized trading platform, meaning transaction records are transparently managed and securely stored through blockchain. The blockchain's distributed ledger feature allows all transaction records to be accessed in real-time by users, helping to verify the origin and quality of agricultural products.
✔ Data Collection and Rewards	MOSAIC utilizes the data ownership and reward concepts of Web3.0 to encourage users to voluntarily provide agricultural-related data. This data, used as information on climate change and agricultural production, serves as big data for enhancing the quality of agricultural products and sustainable agriculture. Users receive tokens as compensation for providing data, which promotes active data sharing among users.
Decentralized ✔ Market Services	Leveraging the decentralized features of Web3.0, MOSAIC enables direct transactions between producers and consumers. This allows producers to sell products directly to consumers without middlemen. Additionally, within the platform, consumers can purchase or exchange agricultural products among themselves. This enhances the efficiency of the supply chain and provides consumers with better prices and quality of agricultural products.

The integration of Web3.0 and MOSAIC will revolutionize the agricultural market, creating a more transparent, safe, and sustainable agricultural ecosystem.

02. Part II

Technical application on MOSAIC

MOSAIC is a convergence platform where advanced technologies and services are applied.

▶ Application of Blockchain Technology

Through blockchain technology, all transaction records are transparently managed, ensuring the safety and reliability of food. Additionally, it enables direct transactions between producers and consumers, reducing intermediary margins and providing high-quality products at better prices.

▶ Production Process Monitoring

To address the issue of crop contamination due to climate change, data on crops with excellent characteristics is collected and compiled into big data. This data is made publicly available and monitored in real time. Anyone can access this data to receive reports on the production status, quality, environment, and safety of the agricultural products. This system promotes the production of high-quality crops and realizes sustainable agriculture.

▶ Market Services

Producers can directly sell agricultural products to consumers through this platform, and consumers can directly purchase or exchange produce within the platform. This enhances the efficiency of the supply chain and provides consumers with better quality and priced agricultural products.

▶ Internet of Things (IoT) Technology

In smart farms, the status of crops is monitored and controlled in real-time through sensors and devices. IoT technology collects various data such as crop growth, soil condition, and weather, helping farmers to farm more efficiently.

▶ Big Data and Artificial Intelligence (AI)

Data collected in smart farms can be used for big data analysis and AI technology to predict the health status of crops and suggest optimal cultivation conditions. For example, farmers can use AI algorithms for early diagnosis and prevention of crop diseases.

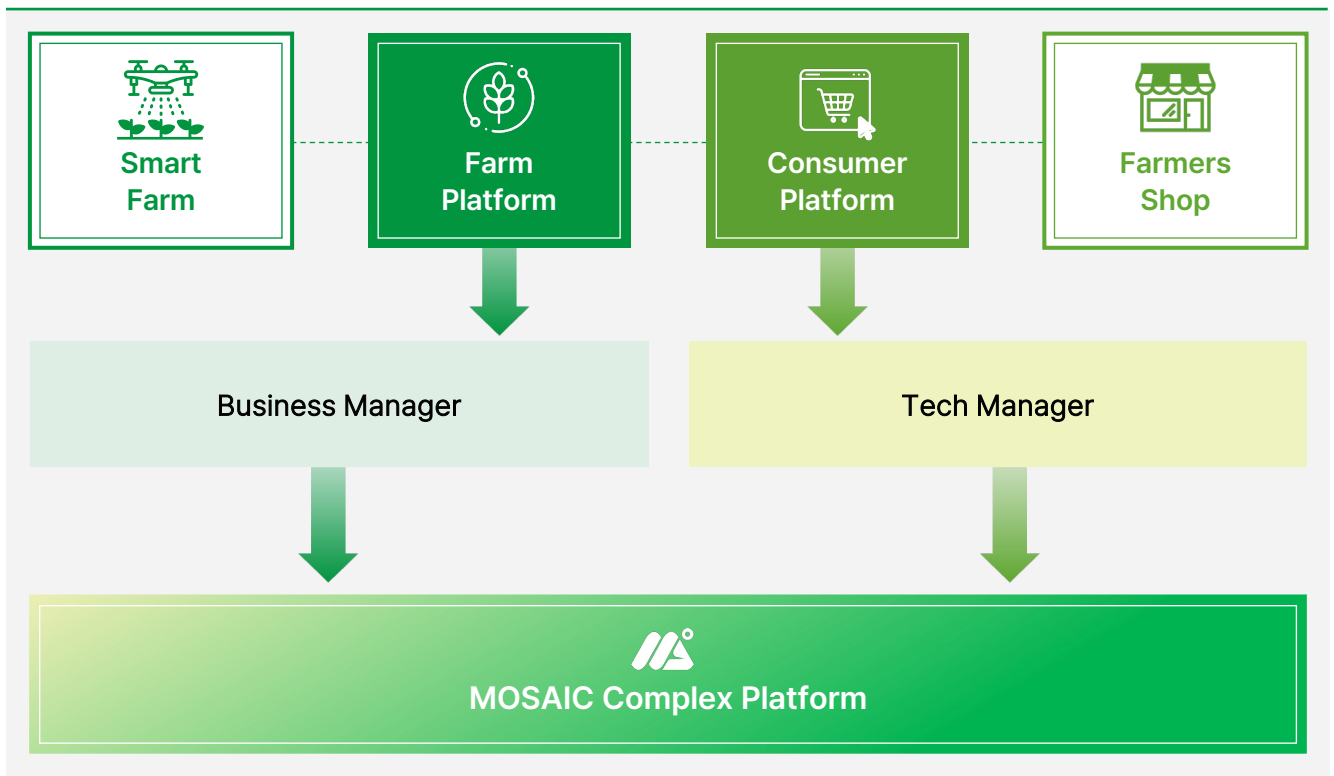
▶ Drone and Automation Control Technology

In smart farms, autonomous robots or drones are used to automate and streamline farming operations. This saves labor and time and enables more accurate work.

02. Part II

MOSAIC Platform

The MOSAIC platform is a convergence platform where production, distribution, technology, and business platforms are interconnected. Each platform is focused on agricultural producers, agricultural consumers, bio-research labs, and manufacturers based on agricultural technology. Through the connection between these platforms, agricultural products can safely and conveniently reach consumers.



Farm Platform

MOSAIC

Consumer Platform

MOSAIC

02. Part II

Business Center

MOSAIC



02. Part II

MOSAIC Labs

MOSAIC maintains high productivity and quality through its R&D laboratories. Its own R&D center, MOSAIC Labs, is responsible for performance evaluation and monitoring, as well as quality certification of applied technologies. Additionally, it reviews technologies and products before their application and supports stable technological dissemination through pre-simulation at collaborative R&D centers.



02. Part II

Ecosystem value

MOSAIC continuously supplies high-quality agricultural products directly from smart farms around the world, maintaining the health, convenience, and food self-sufficiency of nearby consumers. This connection is not one-time but ongoing and cyclical. MOSAIC aims to present a new paradigm in the distribution of agricultural, aquatic, and livestock products through blockchain technology. By utilizing this technology, we ensure transparency in the distribution process and enable direct transactions between consumers and producers, thereby reducing intermediary costs and providing high-quality agricultural products. Our goal is to realize sustainable agriculture and protect agricultural products from the threats posed by climate change.

We will continue to enhance the sustainability of agriculture in line with technological advancements. A traceability and transparent distribution system utilizing blockchain technology will increase the reliability of agricultural products and gain consumer trust. Additionally, through smart farm technologies and big data analysis, we will maximize agricultural efficiency and develop crops adapted to climate change, thereby redefining the future of agriculture.

The blockchain-based distribution platform for agricultural, aquatic, and livestock products provides transparency, reliability, and sustainability. Through this, we will build a new future for agriculture and create an ecosystem where all stakeholders can coexist. We are confident that our technology and vision will bring innovation to the agriculture and food industries and contribute to the protection of the global environment.



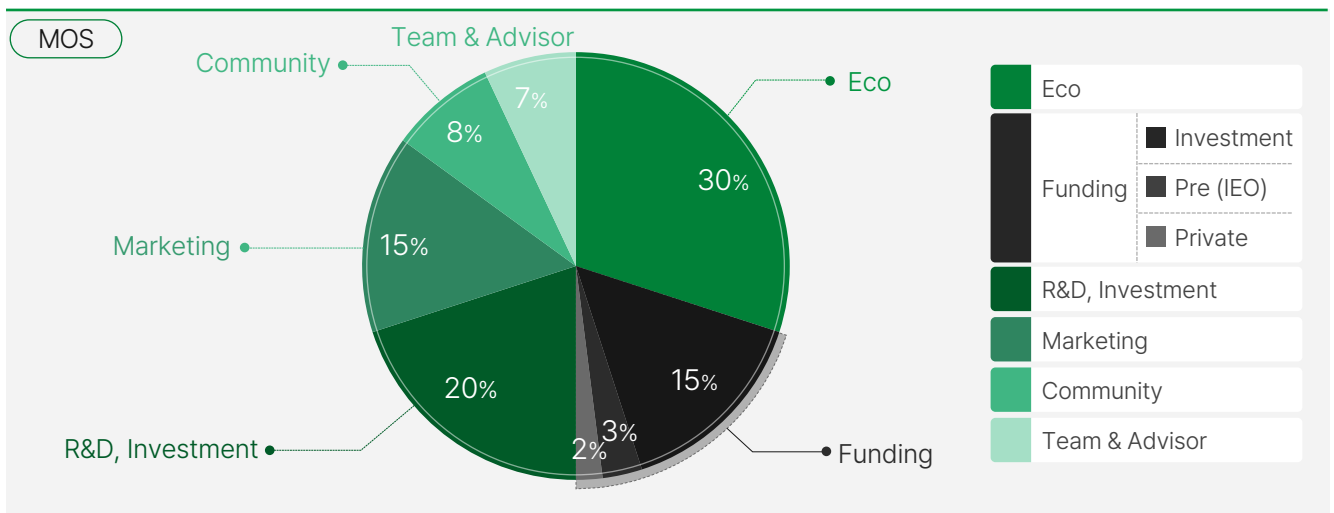
03.Part III

Token Spec

The MOSAIC token is the central currency of the ecosystem and a utility token for the agricultural economy. Detailed information about the MOSAIC token is as follows:

MOSAIC Token		
Token Information	✔ Project Name	The MOSAIC Project
	✔ Tiger	MOS
	✔ Issuance Basis	BEP-20
	✔ Issuance Volume	10 billion

Allocation



Distribution Policy

Category	Percentage (%)	Quantity	Remarks
Eco	30	3 billion	
Funding	Investment	15	1.5 billion
	Pre (IEO)	3	300 million
	Private	2	200 million
R&D, Investment	20	2 billion	
Marketing	15	1.5 billion	
Community	8	800 million	
Team & Advisor	7	700 million	
Total	100	10 billion	

03.Part III

Teams of MOSAIC

Members



KIM JONG CHUL
CEO
Chief Executive Officer

- Master's in Information and Communication, Sungkyunkwan University
- CEO of MOSAICICT
- Researcher at Daesung Group Central Research Institute
- Adjunct Professor, Kookmin University
- Adjunct Professor, Seoul Cyber University
- Education in AI, Blockchain, Metaverse, Gaming
- Statistics Education Institute, Korea Testing Laboratory (KTL), Korea Customs Service, Educational Broadcasting System (EBS)



KWON HEE CHUL
COO
Chief Operating Officer

- Master's in Information and Communication, Sungkyunkwan University
- Computer Room, Sahmyook Health University
- Professor (Permanent Expert), Korea Productivity Center
- Head Professor, Anyang University Lifelong Education Center
- Director (ERP), Uperni Ltd.



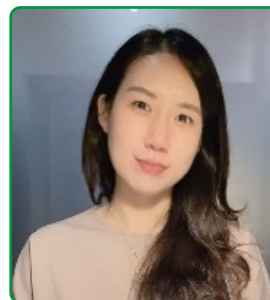
KIM JONG KEUN
CIO
Chief Information Officer

- Electrical Engineering, Seoul Science and Technology University
- Hanwha S&C
- IDC Center Director
- Network and Integrated Security System Operations
- UC Business (Sales) Team Leader
- IBS Consulting Team Engineer
- Development and Operations, Hyundai Oilbank



KIM JUNG HWAN
CFO
Chief Finance Officer

- Tax and Accounting Office
- Haein Tax Corporation
- Yein The K Tax Corporation
- Hwarim Tax Accounting



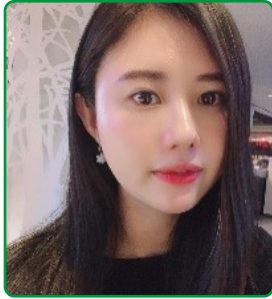
KIM JI HYE
CMO
Chief Marketing Officer

- Master's in Japanese Language and Literature, Silla University
- Busan Cultural Foundation
- Operation of Joseon Tongsinssa History Museum
- Korea-Japan Cultural Exchange Projects
- Publication of the Foundation's Quarterly Magazine
- Related Work for Busan City Council

03.Part III

Teams of MOSAIC

Members



LEE YUN JIN

CDO

Chief Design Officer

- Developed Kolon Mall website
- Built SSF Shop for Samsung C&T Fashion
- Constructed Louis Quatorze brand mall
- Developed the UNICEF website
- Built CU Convenience Store site
- Constructed the Skinfood website
- Maintained Thursday Island operations
- Developed the Korean Air Hawaii Tourism Board site



YOO YOUNG CHUL

R&D CENTER CHIEF

- Ph.D. in Plant Pathology, Kyung Hee University
- Postdoctoral Researcher, Korea Research Institute of Chemical Technology
- Postdoctoral Researcher, National Institute of Agricultural Sciences
- Senior Researcher, Korea Atomic Energy Research Institute
- Academic Research Professor, Kyung Hee University

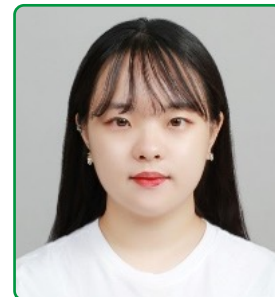


SHIN HEE WON

CCO

Chief Content Officer

- Ground staff, Emirates Airlines
- Ground staff team, ANC Flight Attendant Academy
- Tidesquare
- Airfare filing and monitoring
- Airline operations and management
- Management of international partnerships



KIM JI WOO

CAO

Chief Accounting Officer

- Department of Business Administration, Accounting major, Kangwon National University
- Dokyong Tax and Accounting Office

03.Part III

Teams of MOSAIC

Advisors



CHO SEONG IL

· President of Incheon YMCA



SHIN SEUNG JUNG

· Professor at Hoseo University Graduate School of Venture



OH DUK SHIN

· Special Professor at Sahmyook University
· Vice Chancellor of Sahmyook University
· Director of the SW Convergence Education Center, Sahmyook University
· President of the Sahmyook University Alumni Association



JUNG IN HAK

· Professor at Korea Polytechnic University
· Dean of Korea Polytechnic Hwaseong Campus
· Director of Industry-Academia Cooperation at Korea Polytechnic
1st University Gangseo Campus



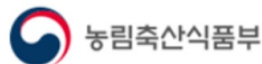
PARK JUM SIK

· Chairman of Cheonji Tax Corporation

03.Part III

Partners of MOSAIC

MOSAIC seeks collaboration with investors and partners for the successful implementation and expansion of the platform. We will realize our vision through cooperation with companies, technology developers, and government agencies that wish to contribute to sustainable agriculture and food safety.



03.Part III

Roadmap 일정

MOSAIC

Preparation Period	2020. 5 ~ 23. 11	R&D for Agricultural, Fishery, and Livestock Distribution Innovation and Breeding Improvement	
	2023. 12 ~ 24. 1	Feasibility Study and Verification of Distribution Innovation Project	
	2024. 2	Blockchain Ecosystem Configuration and Design	
	2024. 3	Team Building (Technology, Finance Personnel, and Design/Operation, etc.)	
	2024. 4	Creation of Mosaic White Paper	
	2024. 5	1st Token Sale Start of Platform Mainnet (L2) Development Sale of Jeongseon Apple Farms	
	2024. 6	1st Listing on Global Exchanges & 2nd IEO Token Sale Launch of Yeongdong Livestock Sales Sales in Connection with Incheon Large Mom Cafes	
	2024. 7	Launch of Indi&Korea Agricultural, Fishery, and Livestock Products Sales	
	2024. 8	Launch of SK Benefia Agricultural, Fishery, and Livestock Products Sales	
	2024. 9	Start of Metaverse World Development Launch of CU/Emart24 Agricultural, Fishery, and Livestock Products Sales	
Project Launch	2024. 10	L2 Platform Test and API Integration Test 2nd Listing on Global Exchanges Launch of Samyuk Foundation and Samyuk Alumni Agricultural, Fishery, and Livestock Products Sales	
	2024. 11	Launch of Incheon YMCA Agricultural, Fishery, and Livestock Products Sales	
	2024. 12	Completion of Platform Mainnet (L2) Development Test Open of NFT Membership Service Launch of Distribution Platform DApp Launch of Gyeongwoe Agricultural, Fishery, and Livestock Products Sales	
	2025. 1	Participation in Incheon City Blockchain Hub City	
	2025. 2	Participation in Busan City Blockchain Governance Open of Metaverse World Prototype	
	2025. 5	Metaverse World Closed Beta	
	Growth Period	2025. 6	Metaverse World Open
	Maturity Period		

03.Part III

Legal Notice

MOSAIC Token (hereinafter referred to as MOS Token) Disclaimer and General Business Notice:

MOS Token is regulated by international laws, and the acquisition of licenses, permits, and approvals is not guaranteed in all jurisdictions where MOS Token is used. The operation of MOS Token strives to fully comply with relevant laws and regulations, and efforts are made to obtain the necessary licenses and approvals needed for operation. Services related to MOS Token are subject to the regulations and policies of each country, and no perfect guarantee can be made regarding the acquisition of regulatory licenses and approvals. Therefore, if the appropriate licenses and approvals cannot be obtained in the jurisdiction of service, MOS Token's services may be restricted or denied on platforms such as the Play Store or App Store.

1. **Cryptocurrency Value Fluctuations:** The value of cryptocurrencies such as MOS Token changes daily. Cryptocurrency trades or balances can sharply increase or decrease. Please be aware of the price volatility of cryptocurrencies like MOS Token.
2. **Exchange Policy:** Cryptocurrency exchanges may decide to halt trading or delist MOS Token based on their policies. MOS Token assumes no responsibility for these situations.
3. **Transaction Risks:** There is a possibility that transactions between individuals may fail or become difficult if interest in trading drops. Market conditions or scale can lead to hostile pricing, posing a risk to trading liquidity.
4. **Trading Conditions:** MOS Token transactions can only occur at specific times when similar prices are formed between trading counterparts, meaning only during certain periods where trading is viable.
5. **Account Access:** If a user loses the password or key to their MOS wallet account, they may be unable to access their MOS Token account. MOS Token assumes no responsibility for such situations.
6. **Service Operations:** MOS Token services and platforms operate on AMAZON IDC. Efforts are made to comply with international security regulations including security audits, patches, and service checks. However, service access difficulties or outages may occur due to vulnerabilities, zero-day attacks, DDoS, etc., for which MOS Token assumes no responsibility.
7. **Business Continuity Risks:** External changes may pose risks that make it difficult to continue operations. If this occurs, it may become impossible to continue business operations. All procedures, including customer assets, are governed by U.S. laws, including bankruptcy law, corporate law, corporate rehabilitation law, personal rehabilitation law, and other relevant laws.
8. **Taxes and Income Tax:** Laws and tax regulations concerning virtual currencies vary globally and may not be finalized. For verification, please consult with law firms, tax advisors, or qualified professionals in your country. Payment or financial services have specific tax regulations—please verify these as well. MOS Token assumes no responsibility related to customer tax liabilities. For additional tax-related information, consult relevant tax advisors or qualified professionals in your country. The MOS Foundation cannot advise or guide individual tax obligations. Cryptocurrency regulations and payment regulations in each country may lead MOS Token and the MOS platform to withdraw or terminate operations in specific countries.
9. **Exclusion of Security Tokens:** MOS Token white papers and supplementary documents are not investment prospectuses or financial service proposals. They cannot be treated as securities or regulated products in any country.
10. **Management and Operations:** The operation and management of the MOS platform and MOS Token are conducted through financial institutions (banks) and multi-signature wallets according to each business purpose. The multi-signature private key is managed and operated by the MOS Foundation and cannot be sold, transferred, used as collateral, or seized.

03.Part III

Legal Notice

11. Pre-Issuance Sales

The MOS platform can proceed with sales of unissued coins or bonds through legal advice, such as SAFT (Simple Agreement for Future Tokens). These contractual details may not be disclosed publicly as per the agreements.

12. Translations

This document and supplementary materials are issued in English. All translations are for reference only and do not carry legal liability. The accuracy and completeness of translations cannot be guaranteed. In case of discrepancies between translations and the original English documents, the English versions hold legal precedence.

13. Transmission Restrictions

This document and supplementary documents should not be taken or transmitted to regions or countries where their distribution is prohibited or restricted. If accessed online, the MOS Foundation disclaims comprehensive liability.

Transmissions are restricted in countries where ICOs are prohibited, such as the People's Republic of China.

14. Third-Party Information

This document and supplementary documents include data and reference information obtained from third-party sources. The management believes that such data are accurate and reliable, however, they have not undergone independent audits, verifications, or analysis by professional legal, accounting, engineering, or financial advisors. Therefore, no guarantees are made regarding the accuracy, reliability, or safety of such data.

15. Views of MOS Token

The views and opinions expressed in this document and supplementary materials are those of MOS Token and do not reflect the official policies or positions of any government, semi-government, authorities, public institutions, or regulatory bodies in any jurisdiction. This document has not been reviewed by any regulatory authority.

16. Professional Advice

Decision-making regarding the purchase of MOS Tokens should always involve consultation with lawyers, accountants, tax professionals, and other expert advisors as necessary.

17. AML and CFT Laws

The MOS Foundation complies with Anti-Money Laundering (AML) and Counter-Financing of Terrorism (CFT) policies of each country. If funds suspected of money laundering or financing terrorism are detected, the Foundation is obligated to notify the relevant regulatory and legal authorities within 7 days. The MOS Foundation also has obligations to report suspicious transactions to the Wyoming State Police in the USA and international police, and actions such as denying ICO participation and withholding MOS platform services to selected individuals or organizations may be required based on various regulations including the Terrorist (Finance Prevention) Act (cap. 325) and resolutions of the UN Security Council.

18. Disability Compensation

The MOS Foundation team is not obligated to compensate for user losses due to blockchain approval delays, connection delays, node failures, etc., on the MOS platform including services, exchanges, and wallets. Furthermore, the MOS Foundation does not have an obligation to compensate for damages due to cyber-attacks, service failures, database losses, or server failures. The MOS Foundation does not assume any responsibility for the risks mentioned above, the services, or the derived financial risks. Investors are advised to carefully assess the risks due to regulatory changes, market fluctuations, and the volatility of cryptocurrencies, and to seek appropriate tax and legal advice.

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Aquatic, and Livestock Production-Distribution Innovation

