## **WHITEPAPER**

World's First AgriTech & Food Science Project
Powered by
Disruptive Decentralized Platform

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# I.INTRODUCTION



### **Welcome to ATFS Project**

#### I. INTRODUCTION

By 2050, the world's population is expected to reach 9.7 billion, 34% higher than today. Nearly all of this population increase is to occur in developing countries. Urbanization continues as well at an accelerated pace and about 70% of the world's population will be concentrated in urban environments, compared to the 49% today. Plus, income levels will be many multiples than now. In order to feed this larger, more urbanized and richer population, food production—net of food used for biofuels—must increase by a whopping 70%.

So, how do we support the green corps we eat, and meet the increased protein needs of the planet's growing population? It's no secret that the developed world is obsessed with protein, with the average person in the U.S. consuming double the recommended daily amount (103 grams per day), of which two-thirds comes from animal sources. The challenge intensifies with the rise of animal protein consumption in developing countries like China and India due to their rising incomes and improved quality of life.



Another issue that goes hand in hand with population explosion is the aging population. According to "World Population Prospects", the number of people in the world aged 60 years or over is projected to grow by 56%, from 901 million to 1.4 billion, between 2015 and 2030. By 2050, this group is to reach nearly 2.1 billion, more than double its number from 2015. East Asian nations like China and Japan is projected to suffer from a sharp decrease of population fit for agricultural activities due to its rapid increase of elderly population (+65 years of age). Therefore, the aging population undoubtedly will lead to significant reduction of agricultural productivity in the world.

This is the future of the world we live in today. We must get together at the forefront of agricultural revolution to solve imminent problems of food supply chain, food security, supply of meat and agricultural productivity

Our team proposes an integrated approach with three organically linked missions as a solution:

- Mission 1 Smart Farm 2.0
- Mission 2 Disruptive Decentralized Platform
- Mission 3 Plant-Based Meat



## II. WHAT IS ATFS PROJECT?



#### **II. WHAT IS ATFS PROJECT?**

ATFS Project is the world's first decentralized AgriTech & Food Science crowdfunding project built on Ethereum Blockchain and Smart Contracts.

We are bringing Industrial Revolution 4.0 to the crypto world with ATFS Token. The issuance of ATFS Token finances the establishment of Smart Farm 2.0, development of Disruptive Decentralized Platform, and production of Plant-Based Meat. The project is an all-around solution to the world's growing food crisis by providing relevant technological advances in agriculture, new revenue base and supply systems, and a socially-acceptable alternative to meat consumption.

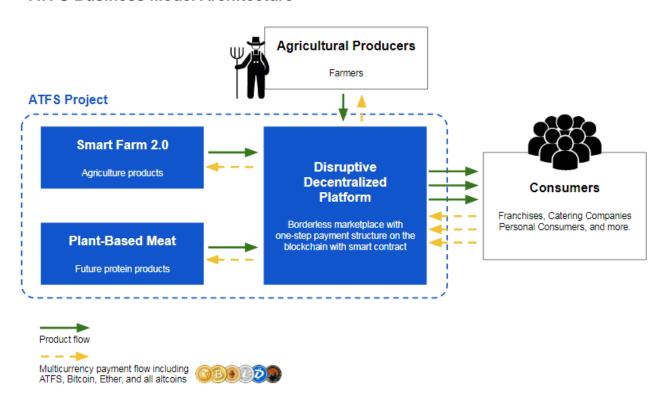
ATFS Project and its team members vow to enhance people's quality of life all around the world by revolutionizing the current food system. Therefore, it is necessary and critical to secure funding during our crowdfunding period. By participating, you are joining a group of like-minded pioneers who knows of the benefits that the next agricultural revolution will generate. The profits from all stages of the ATFS Project will be shared based on ATFS Token's smart contracts.

We are fully confident that the ATFS Project is a win-win model for both agriculture industry and the crypotoworld.



#### 1. CORE FEATURES

#### **■ ATFS Business Model Architecture**



#### ■ Launching the Largest Smart Farm 2.0 Project in Asia

Smart Farm 2.0 is an intelligent farm powered by deep learning by combining information, communication, technology (ICT), IoT, Big Data, and more within the agriculture industry. It automatically and tactically controls proper temperature, humidity, sunlight, carbon dioxide, water and so on of a crop cultivation facility by utilizing IoT technology, sensors and analytic software with networked environment. In other words, Smart Farm 2.0 enables proactive prediction, real-time response and situation-specific simulation 24/7/365.

Following the plant breeding and genetics revolution in the agricultural industry, Smart Farm 2.0 leads the "Third Green Revolution" in agriculture by providing optimal growth environment and directing its controls based on relevant big data analysis. It creates high added value by improving productivity, efficiency, and quality throughout the entire production life-cycle, distribution and consumption process of an agricultural product.

ATFS Project's first goal is to build the largest Smart Farms in Asia, where smart farms are still in its early entry stage.

#### ■ Disruptive Decentralized Platform (DDP)

The purpose of Disruptive Decentralized Platform is to completely destroy the food distribution problems that have been occurring in all stages of current distribution channels, and to recreate the distribution structure of new models. It will become the best profit model for both producers (farmers) and consumers by drastically eliminating the complicated, high-cost and multi-level distribution structure with entry barriers and inefficiency of information by directly connecting the two players.

The Disruptive Decentralized Platform is an easy-to-use platform with convenient access running on the apps and web anytime, anywhere. The payment gateway of this platform is conducted on the blockchain by Bitcoin, Ethereum, and all ERC20 based altcoins as well as fiat currencies. We know that more commercial platforms will gradually accept cryptocurrencies in the future, just like how a couple of pizzas cost 10,000 bitcoins at first.

#### ■ Plant-Based Meat (First, Asia Pacific and then the rest of world)

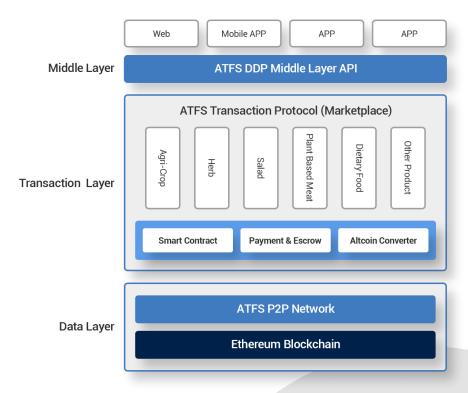
Plant-Based meat is going to be the future's top protein alternative and the solution to the world's pending meat shortage issue. AFTS Project aims to first launch types of oriental meats befitting to the Asian region and culture, and plans to expand our Plant-Based Meat assortments to the rest of the world.

The project's blueprint for Plant-Based Meat (vegetable protein) utilizes biotechnology and synthetic biology combined with agricultural cultivation capability and technology accumulated from Smart Farm 2.0 operations. For optimal results, we will establish a specialized and dedicated Research & Development Center in collaboration with leading universities and research institutes at home and abroad.

#### 2. TECHNOLOGY

#### ■ ATFS DDP (Pick&Go) Conceptual System Architecture

The conceptual system architecture of ATFS Pick & Go (which is called Disruptive Decentralized Platform) is composed of three layers: Transaction Layer, Data Layer, Middle Layer.



**Transaction Layer** describes a set of fundamental rules that govern decentralized transaction on Pick&Go between two or more trading related partners. . Each transaction refers to a product category sold on the DDP's marketplace.

Transaction Layer protocol is made of 3 major sub-components

- Smart Contracts
- Formalizes trading terms
- Payment and Escrow
- Payment with altcoins, fiat currencies
- Escrow selection
- Altcoin Converter
- Exchange between Representative Coins and other altcoins

**Data Layer** consists of ATFS P2P Network and Ethereum blockchain. Peer-to-peer connection will be scalable in design, supporting people to find goods that they need and offer to others locally to all around the world. The blockchain ensures transparency, data evidence.

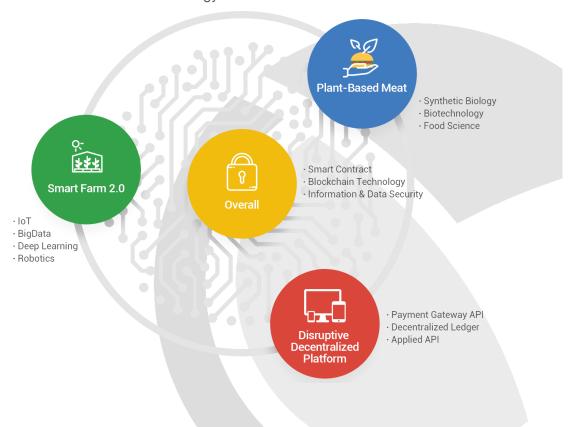
**Middle layer** is responsible for connecting to the web and app's front-end by executing ATFS Trading Protocol with other users on the network. It can also be optimized for ATFS Pick&Go by utilizing commercial and/or open source APIs.

And the web/app enables users to fulfill any desired role on the network (merchant, buyer, and verifier). The UI/UX flow will vary on the type of trading to be conducted.

So far, this is an overview of Pick&Go's conceptual architecture. In the future, we may disclose more detailed technical plans when necessary.

#### ■ Required Technologies for ATFS Project

Required technologies are allocated to four categories depending on project characteristics: overall element technology; Smart Farm 2.0 technology; Disruptive Decentralized Platform technology; and Plant-Based Meat technology.



# ш. Ісо



#### III. ICO

#### 1. ICO STRUCTURE

ATFS Project is crowdfunding to support the establishment of Smart Farm 2.0, Disruptive Decentralized Platform, and Plant-Based Meat to tackle the impending food crisis. For this reason, ATFS LAB plans to issue "ATFS Token (ATFS)" through the smart contract system operated by Ethereum Blockchain.

ATFS Token (ATFS) will be distributed at a rate of 2,500 per 1 ETH to participate during the crowdfunding period. ATFS Project aims to crowdfund from 25,000 ETH (Soft Cap) to 99,000 ETH (Hard Cap). Participation Period will last for 30 days. If hard-cap is reached, the crowdfunding will close automatically. After closing crowdfunding period, unsold tokens will be burned.

ATFS LAB is a public registered legal body with legal responsibilities and is subject to audits when necessary. This will be ensured by the transparency of operation of the ATFS project and the secure custody of the funds.

#### Token Name: ATFS Token (ATFS) - ATFS LAB Profit Share Smart Contract

ATFS Token (ATFS) represents the right to receive a part of distributable profits of ATFS LAB. All tokens in aggregate will have the right to receive 20% of such profits. The tokens will be assigned pro-rata to the funds provided to the ATFS LAB during Initial Coin Offering.

#### **Payout Structure**

According to the bylaws, ATFS Token participators may receive certain rewards at the discretion of ATFS BOD with a limit of 20% of distributable profit of ATFS LAB to the official Ethereum (ETH) wallet at the end of each fiscal year. In other words, the token owners will receive the applicable profit equal to the holding ratio of ATFS Tokens automatically calculated by smart contract.

#### **Token Supply**

The total supply of token is not locked. After the crowdfunding period of token sales ends, the unreleased tokens are burned.

#### **Initial Rate**

1 ETH = 2,500 ATFS Tokens

The price of ATFS Token (ATFS) is set forth in Bitcoin (BTC) / Ethereum (ETH) / other Altcoins on our authorized Website only. WE DO NOT accept fiat currencies for ATFS Token.

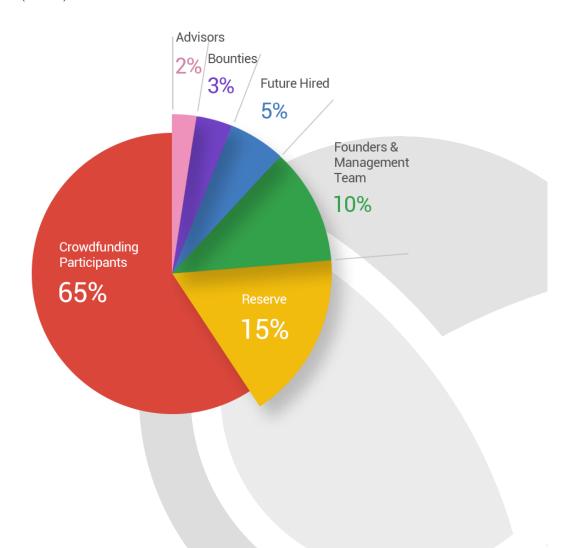
#### **Minimum Purchase Amount**

0.1 ETH at least

#### **Token Distribution**

At the end of the crowdsale all allocated ATFS Token (ATFS) is considered to be 65% of the total supply. The remaining 35% is then allocated among Reserve, Future hired, Founders, Advisors, and Bounties as shown below.

The ATFS Token (ATFS) will be allocated as below:



| 65% | Crowdfunding<br>Participants     | Tokens will be immediately distributed at the end of Crowdfund ends  |
|-----|----------------------------------|--|
| 15% | Reserve                          | For Treasury, Strategic Investors, Tokens swaps, liquidity for exchange, etc Excepting above reasons, this portion will be vesting 12 months schedule, |
| 10% | Founders &<br>Management<br>Team | Will be vesting 24 months schedule, 6 months cliff   |
| 5%  | Future Hired                     | Will be vesting 12 months schedule   |
| 3%  | Bounties                         |  |
| 2%  | Advisors                         | Will be vesting 2 months schedule  |

Crowdfunding Participants (65%): It will be issued through a public crowdfunding with an approximate amount of 380 million ATFS Tokens with bonus rates. This ATFS Tokens sold in the crowdfunding represents a portion of 65% of the total supply. Once the crowdfunding is over, there will be no further opportunity to get ATFS Tokens until listed on Exchange. The supply of ATFS Token created and committed to participants will be distributed through on Ethereum Smart Contract terms. Unsold amount of tokens will be burned after the crowdfunding ends.

**Reserve (15%):** This portion of the total token supply will be kept in reserve for Strategic Investors and Venture or Hedge Funds like Google Ventures, Amazon Venture Capital, Softbank Investment and other financial institutions. Additional uses include needs for treasury, token swaps, and liquidity supply for exchange. Excepting for those strategic reasons, this portion will be vesting 12 months schedule.

**Founders & Management Team (10%):** This portion will be kept within the ATFS Lab, divided among the founders and management team and will be vesting 24 months schedule with 6-month cliff.

**Future Hired (5%):** This portion will be allocated to the future hired, for strengthening senior engineers & proactive directors. Locking up with our smart contract for 12 months schedule is mandatory.

**Advisors (2%):** Advisors' portion will be compensated for their dedication & enthusiasm. Tokens are split and distributed to advisors, and are allocated after the crowdfunding ends. This portion will be vesting 2 months.

Bounties (3%)

7% Facebook Campaign

7% Twitter Campaign

3% Telegram Campaign

10% Creative (Artwork and Videos) & Bug Hunt Campaign

15% BitcoinTalk Signature & Avatar Campaign

18% BitcoinTalk Translation Campaign (Website, Whitepaper, ANN)

20% Media Support Campaign (Articles, Reviews, Publications)

20% Exclusive Support

All bounties will be allocated after the crowdfunding ends.

#### **Bonus**

Bonus rates during the crowdfunding period is as below,



EARLY BIRD (Day  $1\sim3$ ): 1 ETH = 3,500 tokens (+40% Bonus)

STAGE 1 (Day 4~8): 1 ETH = 3,250 tokens (+30% Bonus)

STAGE 2 (Day  $9\sim15$ ): 1 ETH = 3,000 tokens (+20% Bonus)

STAGE 3 (Day 16~22): 1 ETH = 2,750 tokens (+10% Bonus)

STAGE 4 (Day 23~27): 1 ETH = 2,625 tokens (+5% Bonus)

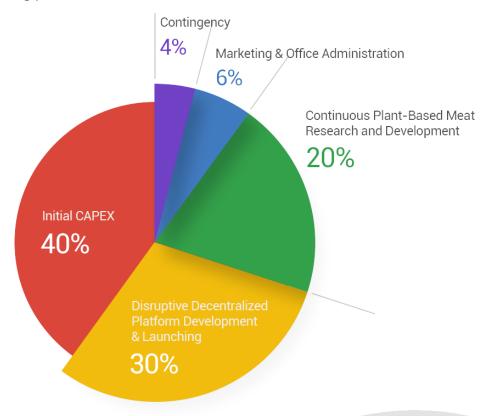
STAGE 5 (Day 28~30): 1 ETH = 2,500 tokens (0%)

#### 2. FUND ESCROW

All payments received for ATFS Tokens in connection with this crowdfunding event will be held in escrow in a multi-signature address, with a multi key structure. No single person can handle tokens without the keys from another key management.

#### 3. USE OF CROWDFUNDS

The actual use of crowdfunding total is subject to change depending on actual total amount after the crowdfunding period.



#### 40%: Initial CAPEX

Initial set-up of cost-effective and highly productive Smart Farm 2.0 with agricultural IoT instruments and deep learning technology, plus the fresh corps warehouses is estimated to cost approximately 40% of total funding.

#### 30%: Disruptive decentralized Platform Development & Launch

Used for building and promoting our platform, which includes securing a more qualified development team able to meet Disruptive Decentralized Platform's milestone objectives.

#### 20%: Continuous Plant-Based Meat Research and Development

Used to build up Plant-Based Meat R&D Center and its operations of analyzing and decomposing molecular structure of plant protein. Also used for managing and maintaining sustainable standards in production and supply chains.

#### 6%: Marketing & Office administration

Most of this 6% portion is allocated for raising brand awareness and acquiring newcomers to our disruptive decentralized platform, and a minor portion finances administration, account services, legal, et al.

#### 4%: Contingency

Set aside for unforeseen costs.



#### 4. ATFS PROJECT ROADMAP



# IV. MEET THE ATFS PROJECT TEAM



#### IV. MEET THE ATFS PROJECT TEAM

The ATFS Project is driven by a number of experts of with a common vision. The team brings extensive professional experience in the areas of Venture Capital, Management Consulting, Financial Institution, FinTech, Legal Affairs, Marketing, Cryptocurrency and Blockchain, as well as disruptive decentralized platform. Such combined knowledge and professional background of the founders are essential for ATFS Project's success.

#### Find ATFS Lab on LinkedIn

Additional AgriTech & Food Science professionals have committed to join the project upon ICO closing. They are not yet actively involved nor listed below due to their arrangements with current employers and conflicts of interest.

#### 1. FOUNDER AND MANAGEMENT TEAM

#### David (DJ) KIM / Chief Executive Officer, Founder

After over a decade of business strategist experience within the Strategic Planning Department of Samsung Group, David moved on to Korean VC firms like HOSEO Venture Capital and Benex Investment. From there, he has been in VP positions at Korea's largest video service company, BNCP Co., and many innovative internet games and B2C start-up's: Candle Media, A2X Games, and Creants. As an entrepreneur with a VC background, he firmly believes in disruptive customer services and the potential of the cryptocurrency market. Thus, he founded the ATFS Lab as its CEO and initiated the ATFS Project. David strongly encourages you to join the ATFS Project to bring revolutionary change to the agriculture industry in which there are huge demographic opportunities.

#### Jay (WJ) CHOI / Chief Operating Officer, Co-Founder

Jay has over 20 years of experience in management consulting and finance industry, specializing in banking, security, insurance, and card/capital sectors. He began his career as an analyst at Korea Investment Bank, and moved on to consulting positions at Ernst&Young, IBM and KPMG. As a representative partner at KPMG, he led the management consulting division for 5 years, becoming an expert in business strategy, process innovation, new channels and program

management office. Jay left the corporate world five years ago and has dedicated his time to startup firms in Fin-Tech and IoT development, ultimately joining ATFS LAB as co-founder and COO.

#### Austin H. CHUNG / Chief Financial Officer, Co-Founder

Austin's 16+ years of experience spans from the financial sector to top management roles in lifestyle goods manufacturing, marketing and bio-venture companies. His extensive career provides him with full understanding of commodity distribution sector in East Asia, financial management, accounting and legal risk, compliance affairs, as well as skillsets in cross-border M&A's, fundraising & refinancing of projects, and start-up & mid-size company management. Austin joined ATFS LAB as co-founder and CFO to utilize his well-rounded background.

#### Allen SUNG / Chief Technology Officer, Co-Founder

After completing Master of Electrical Engineering at Seoul National University, Sung powered through more than 20 years of corporate engineering career in Korea working for Daewoo Electronics, DSPG, RealNetworks and DesignIt. He specializes in system architecture, security and information protection, MPEG and Deep Learning Technologies. As one of ATFS Lab's cofounders and CTO, his focus in recent years has been blockchain technology and its decentralized applications.

#### Han REW / Graphic Designer & Web Developer

Han is a passionate UI/UX Designer with a background in computer science. He has web and mobile design experience of over 15 years, bringing to the team his strong expertise of unique designs catered to differentiated customer experiences. Han is a recipient of Ministry of Information and Communication Award from the Korean government. He leads ATFS Lab's website and Disruptive Decentralized Platform's UX/UI development.

#### **Anthony KIM / Software Developer**

Anthony is a well-seasoned software developer and architect with more than 15 years of experience in the fields of web development, JavaScript and P2P network systems. He is excited to be involved with ATFS Lab's Smart Farm 2.0 and Disruptive Decentralized Platform project in developing a system that profits both the cryptoworld and the real world.

#### **Rachel CHUNG / Marketing Planner**

Rachel's a marketing superstar with experience working with top-tier global brands in various industries including tech, fashion, leisure and home furnishing. She spends her time between Vancouver and Seoul, searching for projects outside her career that require her passion and skill set. As an excellent communicator and hardcore believer in the cryptoworld, she joined ATFS Lab to facilitate a revolution into a better world. She is ready to communicate all-things ATFS Project & token related to anyone, anywhere, anytime.

#### 2. ADVISORY

#### James PARK / Master Gardener

As a master gardener business specialist working with the Korean National Rural Development Administration for the past five years, James is responsible for analyzing trends in agritech industry. Previous to this position, he served as a consultant to the Korean Agricultural Engineers Association, a group that holds an alliance with HanNong. There, he led a nationwide group of agritech experts for the establishment of standardized hydroponic cultivation system in Korea. He joins ATFS Lab to aid in implementing cutting-edge technology like Smart Farm 2.0 into the real agriculture production cycle.

#### Seong Wook KIM / Strategy & Financial Advisor

Seong Wook's extensive investment banking experience includes positions at Korea Stock Exchange, the Research Center of SK Securities, and SIMONE Investment Manager Company. He has invested in some of the leading, world-class fintech funds and is a strategic investor of a major Korean B2C commerce company. Currently, he is the managing director of a private equity fund of USD \$150 million, and he acts as a financial advisor for ATFS Lab.

#### Kyle R. KEUM / Legal Advisor, Lawyer

Kyle is a registered lawyer in Korea with specialization in corporate legal advising on crowdfunding for start-ups and investors. His expertise in legal affairs related to new business set-up, web

services and HR management within the IT and Fin-Tech industries has been appreciated by many groups in Korea. Kyle is the official legal counsel for the company, overseeing all legal matters like terms & conditions and privacy policy.

#### Jin Chul PARK / Financial Advisor, CPA

Jin Chul is a registered Certified Public Accountant with experience working for major accounting firms: Ernst & Young and Hannul Accounting. He is a strong auditor with prolific experience, and skills in funding deals for start-ups and developing the M&A deal structure for SME. And he acts as ATFS Lab's financial advisor.

#### **Chang Hoon Lee / Marketing Advisor**

Chang Hoon is a serial entrepreneur and one of the most influential Korean advisors working in Japan. His ventures within the IoT and ICT business landed him a position at Japan Communication Group. Chang Hoon is keen to add ATFS Lab to his list of successes in high-tech, commercial companies, and he acts as ATFS Lab's marketing advisor and Japan's communication liaison.



# V. ATFS PROJECT DETAILED DESCRIPTION



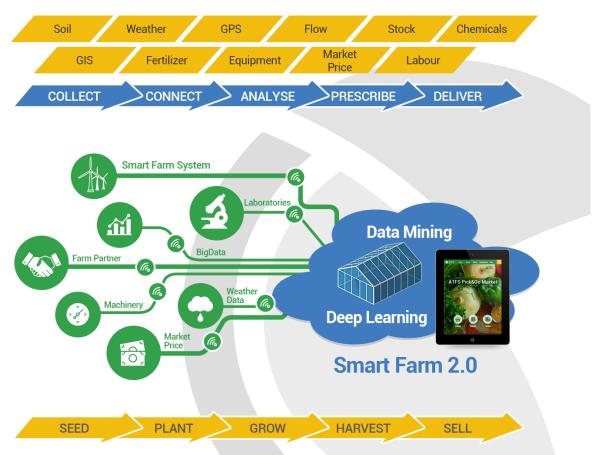
#### V. ATFS PROJECT DETAILED DESCRIPTION

## 1. SMART FARM 2.0 EMPOWERED BY DEEP LEARNING WITH IoT, Big Data

#### **■** Overview

The agricultural sector is going to face enormous challenges in order to feed the 9.7 billion people inhabiting the planet by 2050. According to FAO predictions, food production should be increased by 70% to sustain the world population in spite of limited availability of arable lands, increasing needs for freshwater (agriculture consumes 70% of the world's freshwater supply), and other less predictable factors such as the impact of climate change.

Smart Farm 2.0 represents the application of deep learning with cutting edge Information and Communication Technologies (ICT) into agriculture industry, leading to what may be called the "Third Green Revolution", following the plant breeding and genetics revolutions. The application of combining precision system equipment, IoT, sensors and actuators, geo-positioning systems, big data, unmanned vehicles (UVs, drones), robotics is shaping the future of agriculture.



#### ■ Market Insights

Agriculture is wrongly perceived and usually categorized as a low-tech sector. However, Smart Farms involve technology-driven information analysis of data acquired from the fields, plus the application of inputs according to data analysis for optimal crop productivity. Smart Farms help improve quality of food and increase farm yields through high technology.

The smart agriculture market is expected to grow from USD 5.18 billion in 2016 to USD 11.23 billion by 2022, at a CAGR of 13.27% between 2017 and 2022. Major restraining factors against the growth of smart agriculture market are high initial investments and lack of technical awareness among the growers.

Asia Pacific Region (APAC) is a prospective market for smart agriculture. This region has large farmlands and is witnessing a high population growth rate. Its large regional spread comprises of China, Japan, India, Australia, and South Korea among others. The smart agriculture market in APAC is in an early stage, and expected to grow at a double digit rate between 2017 and 2022. Currently, India, Australia, China and Japan hold a major share of the smart agriculture market with their high growth rate.



#### ■ Smart Farm Technologies

#### Cloud IoT



Internet of Things (IoT) is transforming the agriculture industry and enabling farmers to contend with the enormous challenges they face. Innovative IoT applications enable quality improvement, quantity increase, sustainability, and cost effectiveness of agriculture production.

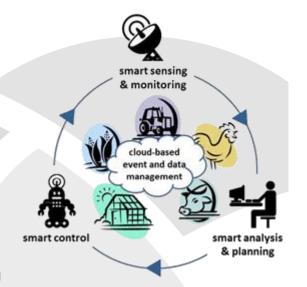
Today's farms—no matter the size—may use IoT to remotely monitor sensors. The sensors detect soil moisture, crop growth and nutrient state levels as well as manage and control connected harvest and irrigation equipment. The data from the sensors are analyzed with

Al-based learning to aid decision making. Third party information such as weather services provides deeper insights.

#### BigData

In smart agriculture, big data influence the entire food supply chain. Use of big data provides predictive insights in farming operations, and effectively drives real-time operations. As smart machines and sensors crop up on farms, and farm data grow in quantity and scope, farming processes will become increasingly data-driven and data-enabled.

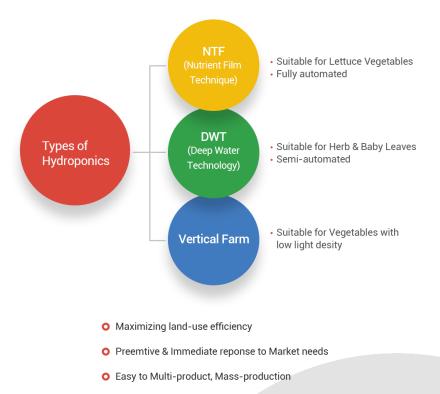
While precision agriculture just takes in-field variability into account, smart farming goes beyond by collecting contextual data in real-time events. Real-time assisting



reconfiguration features are required to carry out agile actions, especially in cases of suddenly changed operational conditions or other circumstances (e.g. weather or disease alert). Big data also include market data and competitive farm benchmarks. Using all of the data provided and by installing smart devices across the farm, the day-to-day operations would become almost autonomous. However, humans would still be involved in the implementation and maintenance stages of the technology.

#### Our Approach for Smart Farm 2.0

ATFS will adopt Best of Breed approach considering the optimized production method according to characteristics of each agricultural product. This approach enables the maximization of land use efficiency, the preemptive and immediate responding to market demand, and mass production of multiple products.



In addition, our Smart Farm 2.0 has advantages in both the quantitative and qualitative aspects. The details are as follows:



#### ■ Hot Investment in the Current Times

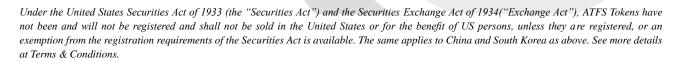
Nowadays, bold and symbolic large-scale investments are taking place in advanced agriculture like smart farms by world-class investment companies. Masayoshi Son, chairman of Softbank, recently invested USD \$200 million in a vertical farm start-up in the U.S. called, Plenty, through the Vision Fund of the Softbank Group.

#### Reference article on Smart Farm: Bloomberg News update



Son is particularly interested in how this kind of company can help nations grow sufficient food to support the population.

"We believe Plenty's team will remake the current food system to improve people's quality of life", said Son in his statement.



#### 2. DISRUPTIVE DECENTRALIZED PLATFORM (DDP)

#### ■ Market Insights

The global food market is expected to grow from \$ 4.8 trillion in 2011 to \$ 5.3 trillion in 2014, growing at an annual average rate of 3.9 percent, to \$ 5.6 trillion in 2015 and \$ 6.3 trillion in 2018.

The food market in the Asia-Pacific region grew at an average annual rate of 5.9%, and exceeded the size and weight of the world's largest European food market for the first time in 2014. Compared to other major industries, the global food industry's market size in 2011 is larger than the global automobile market (\$1.7 trillion), the global IT market (\$2.9 trillion), and the global steel market (\$1 trillion) by 3.2 times, 1.8 times, and 5.1 times, respectively.



We take advantage of the global food market's tremendous size and its potential growth by creating a Disruptive Decentralized Platform which links to smart agriculture and plant-based meat sectors that we have been preparing to create in Asia.

We believe it will be possible to expand the DDP's operations into all areas of food industry based on our experiences in the field, know-how's, and accumulated data.

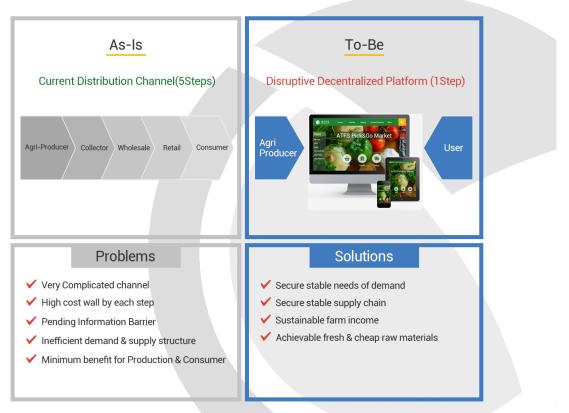
A significant portion of the food market traded in the current e-commerce market is expected to be traded on our platform gradually due to the various benefits that Disruptive Decentralized Platform offer. We do not know the absolute amount at this point of time, but we expect the DDP to occupy a key area of the food supply chain, thus contributing to the sales and profitability of ATFS Lab as well as to the company's sustainable growth

#### ■ Our Approach for DDP – Creation of a New and Sustainable Distribution Cycle

One of ATFS Project's objectives is to build a virtuous cycle structure for supply chain between the agriculture producer and urban consumer. The Disruptive Decentralized Platform is required to achieve sustainable transactions as it eliminates intermediate steps between the producers and consumers with its O2O feature. It takes a role as sales & logistics for producers, warehouses for consumers. It is a win-win model to all parties concerned in efficiency and profitability.

The current agricultural distribution channels consist of more than five steps. However, the Disruptive Decentralized Platform links producers and consumers in one step. It eliminates unnecessary high-cost problems that occur in the middle steps of distribution, such as collector, wholesale, retailer and breaks down barriers and information unfairness of multiple distribution channels. Disruptive Decentralized Platform holds the structure of live direct order and delivery system.

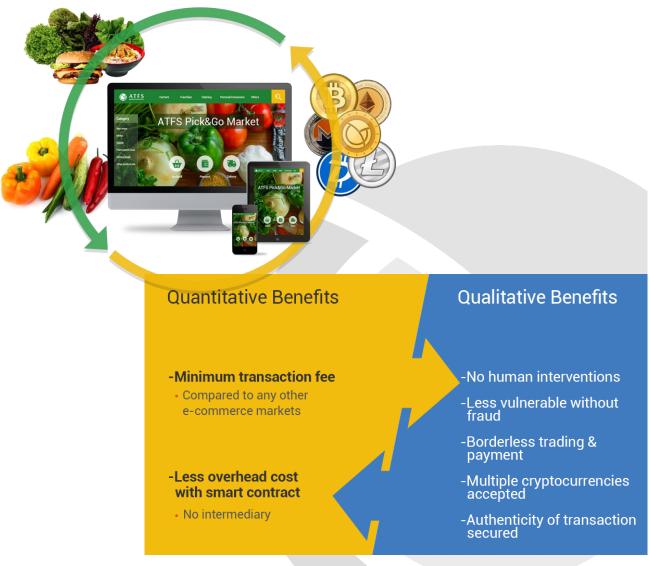
Upon its launch, Disruptive Decentralized Platform will collect all operational data to create more relevant and accurate databases related to agricultural production and consumption. Regular analysis of collected data would be able to measure estimated supply and demand for specific products or users, and calculate better inventory management. Thus, Disruptive Decentralized Platform ensures increasingly efficient and proactive exchanges between producer and consumer with less risk for both parties.



#### ■ Less Fees, More Profit with ERC 20 tokens & Cryptocurrencies

Nowadays, most e-commerce platforms allow multiple payment options at check-out. The most popular secondary payment option in the U.S. is PayPal. This is great as many people have PayPal accounts, and most of them prefer to pay by PayPal rather than entering in credit card details on yet another website. On our side of the world, as the cryptoworld grows by issuing more altcoins, there will be a need for platforms that take all sorts of altcoins. Therefore, the Disruptive Decentralized Platform accepts all altcoins based on ERC20 Tokens with less fees, more easily.

Forget the various fees like monthly fees, fixed fees per transaction, chargebacks, payments from international cards, and more that the conventional payment gateways and merchants charge. Disruptive Decentralized Platform accepts all ERC20 Tokens for our merchant products with less fees than any other e-commerce platforms and existing payment gateways.



#### 3. PLANT-BASED MEAT

#### ■ Market Insights

The global meat substitute market is growing steadily at a CAGR of 6.8%. The market was valued at USD 3.75 billion in 2015 and is expected to reach USD 5.89 billion by 2022. Currently, the global trend of campaigning 'go vegetarian' is the most powerful influencer on the demand for meat substitute products. Health benefits of cholesterol-free plant protein, with meat-like texture is the main factor promoting the growth of meat substitutes. Soy-based products such as tofu, miso, yaso, natto, and seitan are fast becoming popular among consumers. The market is fragmented; the top five players occupied 41% of total market share in 2015. Product innovation and artificial meat taste are two factors driving market growth.





#### **■** Solution

Innovations in the plant-based protein have the power to transform food as we know it and write the story of the future of food. By choosing Plant-Based Meat as a direct source of protein, we would use less of our planet's finite resources, drastically cut down our carbon footprint and give thousands of species a fighting chance at survival. Most importantly, we could redirect enough grain to feed our entire growing population over the course of the next 30 years and beyond.

If you look closely at our current food system and livestock production, in particular, you will learn that producing enough food is not the problem. The fact is that the world currently produces about enough calories for 10 to 11 billion people, except that a significant portion of the calories from our

staple crops are used to feed animals. If all current crop production used for animal feed and other non-food uses (including biofuels), were targeted for direct consumption, around 70 percent more calories would become available – potentially providing enough calories to meet the basic needs of an additional four billion people!

The answer would be to encourage people to cut down on meat consumption and eat more plant-based Foods, which is undoubtedly the right advice. But what about the billions of people that just refuse to cut down or give up on meat because of its cultural significance or because of their love for its taste and texture? The answer can be found in the plant kingdom.

#### ■ Plant-Based Protein Tech Revolution

Today's food scientists aren't just extracting protein from soy and wheat to produce meaty alternatives. They are breaking down the structural components of meat and other animal sources of protein, turning to the plant base and using computing capability to find viable replicas or combinations that can result in a product that tastes, feels, and even smells like the real thing with an identical (or even more enhanced) nutritional profile.

**TARGET CONSUMERS** are uncompromising meat lovers, not vegetarians or vegans. Consumers don't recognize it if it is raw-meat or Plant-Based Meat. So, advancements in Plant-Based Meat are the kind of technological innovations the world desperately needs.

## Major non-animal derived Protein Source

| Types of Protein          | Sources                                    | References            |
|---------------------------|--|-----------------------|
| Beta-conglycinin          | Bean                                       | Sun et al., 2008      |
| Glycinin, Vicilin         | Legumes                                    | Kang et al., 2007     |
| Legumin, Albumins         | Oil Crops                                  | Marcone, 1999         |
| Globulins                 |  |                       |
| Glutelins                 |  |                       |
| Gluten                    | Wheat, Rye, Barley                         | Green & Cellier, 2007 |
| Gliadins                  |  |                       |
| Glutenins                 |  |                       |
| Microbial derived Protein | Fusarium venenatum<br>(Filamentous fungus) | Denny et., 2008       |

### Typical ingredients and purposes of Plant-Based Meat

| Ingredients   | Purposes   | Contents(%) |
|---|--|-------------|
| Moisture  | Material distribution, Oil & Juice painting  | 50~80%      |
| Plant based protein with Texture like meat;<br>soybean flour, concentrated soybean<br>protein, wheat gluten, wheat gluten mixed | Moisture binding, texture, appearance, protein / nutrition reinforcement                   | 10~25%      |
| Non-Texture;<br>Soy protein isolate, functional soy protein<br>concentrate, wheat gluten, egg whites,<br>whey protein mixed     | Insoluble fiber,Moisture binding   | 4~20%       |
| Seasonings/Spices   | Flavor enhancement<br>(meat flavor, smoked etc.)   | 3~10%       |
| Oils for fat and artificial fragrance   | Texture, flavor, maillard reaction, caramelization   | 10~15%      |
| Wheat Gluten, Egg White, Hydrocolloid,<br>Enzyme, Starch  | Texture / moisture binding affects dietary fiber content and product processing conditions | 1~5%        |
| Synthetic flavoring agent   | Appearance, illusion effect,<br>natural / artificial                                       | 0~0.5%      |



**LEADING PRACTICES** of tech-driven plant-based proteins that are already in grocery stores or hitting the market soon include Beyond Meat, which uses technology to transform pea protein into beefy meat crumbles, burgers, and chicken strips. Impossible Foods stumbled across the ultimate plant-based answer to animal protein in the form of a molecule called heme that gives meat its incredible flavor and smell. Although this chemical is exceptionally abundant in meat, heme is essential to every branch of life, including plants. Using a heme-containing protein naturally found

in plants, Impossible Foods is making a burger that looks, tastes, and is even so close to the real thing that most people would never guess its base is all vegetables.

#### ■ ATFS Project's Unique Research & Development Product

Aligned with our strategy of launching Plant-Based Meat in the APAC region first, ATFS Project aims to R&D a variety of Asian Plant-Based Meat dishes appealing to mass audience. This menu will be the representative eastern meat substitutes like the products of Impossible Foods and Beyond Meat.

It is very important to keep the flavor, maintain the texture and even sizzling sounds for Asian Plant-Based Meat. And this approach for regional basis will be successful.

See below for proposed menu:

#### Bulgogi Gyudon (Korean & Japanese style cuisine)

Bowl of rice topped with beef and onion simmered in a mildly sweet sauce flavored with dashi (fish and seaweed stock), soy sauce and sweet rice wine



#### **Dumplings (Eastern Asian cuisine)**

Dumplings consisting of a filling wrapped in thin, unleavened dough. The dough can be based on bread, flour, or potatoes, and may be filled with fish, meat, sweets, or vegetables.



#### Holodets (Russian cuisine)

a dish in which ingredients are set into a gelatin made from meat stock.

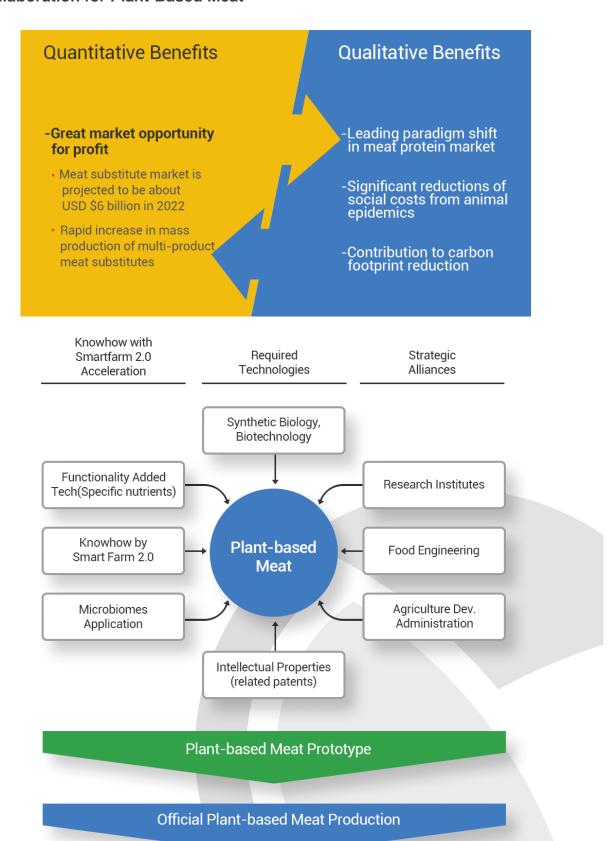


#### Pirozhok (Russian cuisine)

Baked stuffed buns made from yeast dough typically containing beef or mashed



#### ■ Collaboration for Plant-Based Meat



#### ■ Plant-Based Meat is the Future of Food:

Bill Gates was an early adopter (and investor in Beyond Meat). He not only wrote about it two years ago and pointed out that there's plenty of protein and necessary amino acids in plants, including the world's four major commodity crops – rice, maize, wheat and soy, but he added, "The problem is that instead of feeding these crops to people, we're feeding most of them to livestock. And so we're caught in an inefficient protein-delivery system. For every 10 kilograms of grain we feed cattle, we get 1 kilogram of beef in return. The calorie kick-back is just too low to feed a growing world population."

#### Reference article on plant base protein on Bill Gate's blog



"Like most people, I don't think I can be easily fooled. But that's just what happened when I was asked to taste a chicken taco and tell whether the meat inside was real or fake. The meat certainly had the look and the smell of chicken. I took a bite and it had the taste and texture of real chicken, too. But I was surprised to learn that there wasn't an

ounce of real chicken it. The 'meat' was made entirely of plants. And yet, I couldn't tell the difference. What I was experiencing was more than a clever meat substitute. It was a taste of the future of food."

"The demand for meat is going through the roof, and the world is not going to be able to satisfy that using animals - there's just not enough space, not enough water," says Brown, Impossible Foods' founder and CEO.

# VI. ESTIMATED FINANCIAL STATMENT



#### VI. ESTIMATED FINANCIAL STATEMENT

The plan is to establish ATFS's signature Smart Farm 2.0 and Plant-Based Meat R&D center as soon as possible after ATFS Crowdfunding Project. As with all new businesses, it is not easy to get a firm position in the market no matter the level of preparation.

The prospects and financial statements of Smart Farm 2.0 and the Plant-Based Meat R&D center in the early stages of the project is difficult to evaluate with accuracy. Therefore, we prepared two scenarios that are tightly coupled with financial data forecasting as the foundation, and is up to the team to tailor the settings for each scenario for the best.

Each scenario is expected to go through the same 3 steps described below:

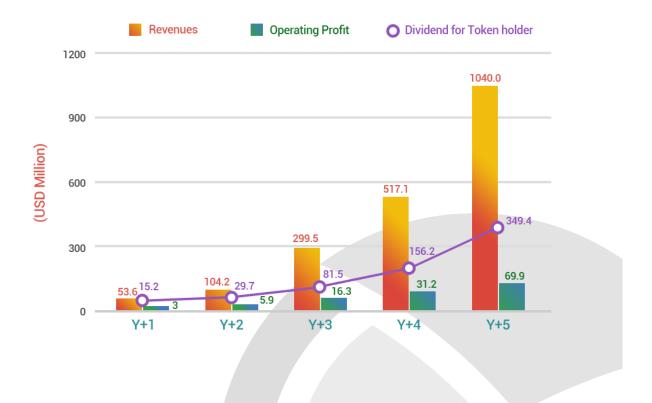
- 1. Business base is built by implementing Smart Farm 2.0, which produces constant and homogeneous agriculture products 24/7/365. This generates more profit than other traditional agriculture producers due to the Disruptive Decentralized Platform that takes payment in altcoins and fiat currencies.
- 2. Expand product mix, especially dietary functional beverages with microbiome, and supply directly to consumers with third party alliances and Disruptive Decentralized Platform. Maximize profits by launching AFTS LAB's brand of salad-based home meal replacement (HMR) & functional beverages through direct and affiliate stores as a franchise system.
- 3. Create a plant-based food revolution system that brings radical change to the food industry through Plant-Based Meat R&D center and product factory, which can be directly supplied to consumers.

#### 1. OPTIMISTIC FORECASTING

In the perspective of optimistic scenario, it is expected that ATFS Lab supplies the agriculture crops of Smart Farm 2.0, Plant-Based Meat and other product mix to over 1,300 franchise stores total in domestically and/or more through the Disruptive Decentralized Platform in 3 years.

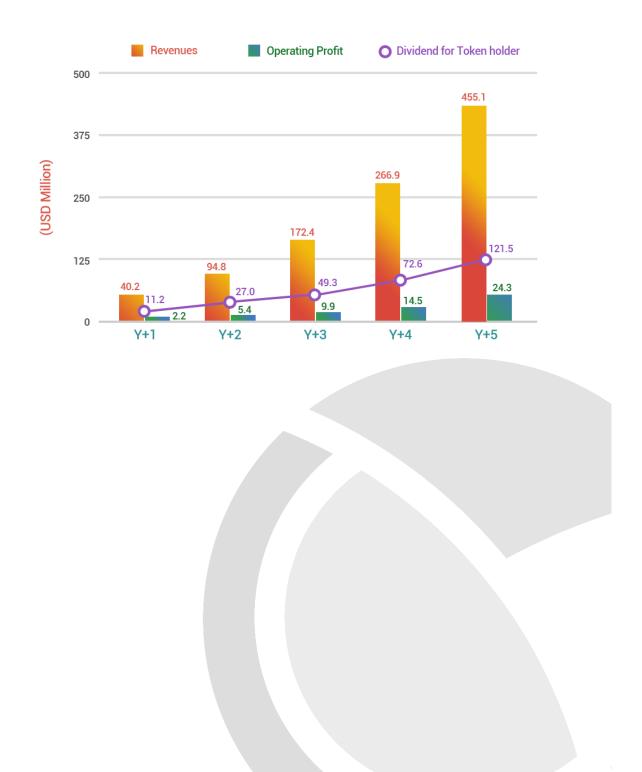
Here, product mix refers to salad brunch, functionally enhanced vegetables, and dietary foods tailored to specific symptoms and diseases, high quality detox drinks, etc.

If Plant-Based Meat market grow as well as expected within 5 years, ATFS Lab could offer and expand our branded Plant-Based Meat & other product mix outside APAC region.



#### 2. CONSERVATIVE FORECASTING

In the perspective of conservative scenario, the team may take more time to achieve scheduled performance, but the end outcome is not much different from the best scenario. However, to achieve results with limited funds, ATFS Lab will prioritize in better efficiency, time gap reduction and best possible collaboration to maximize the team's expertise.



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#### VII. REFERENCES

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