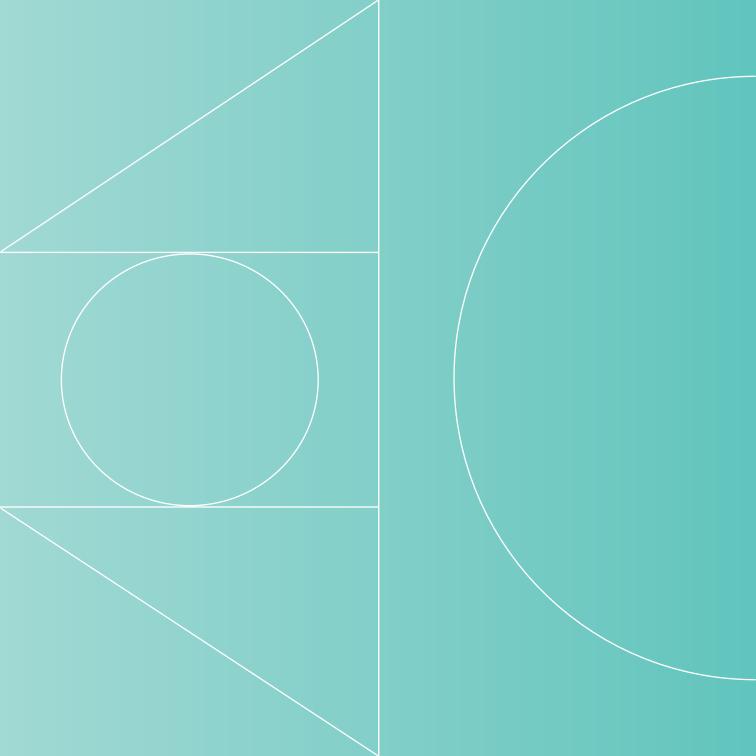
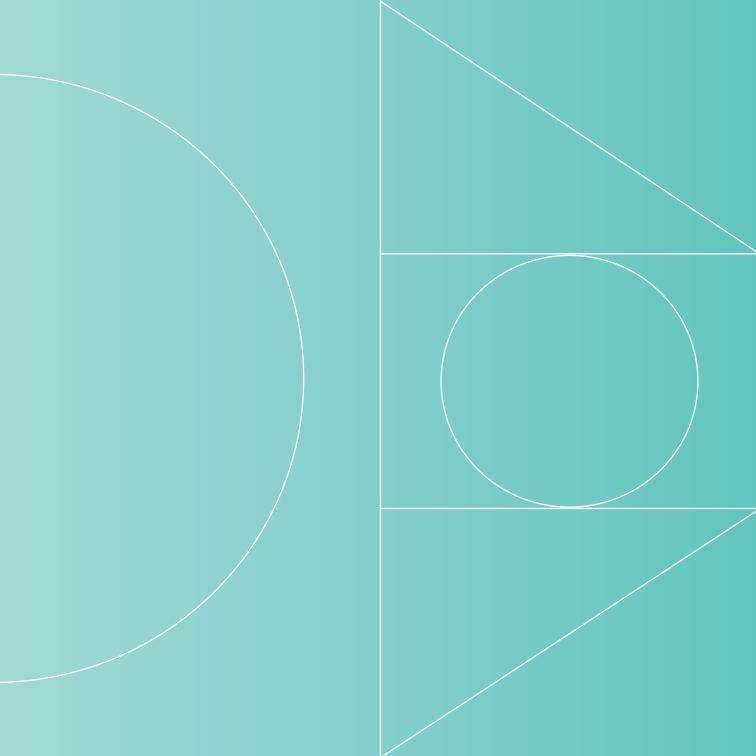
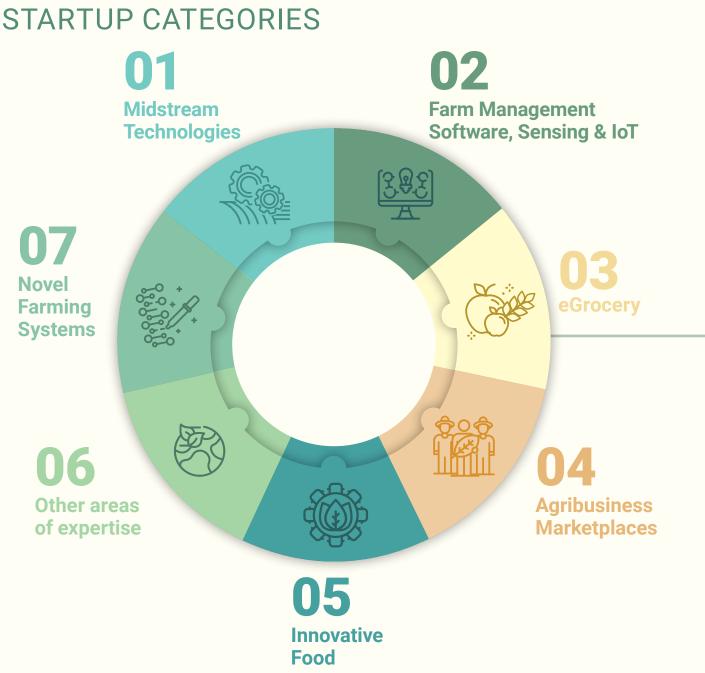


# The ultimate guide

35 Greek businesses leading the game in agtech and foodtech









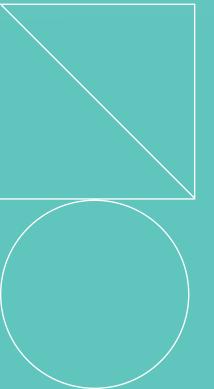
#### WHO WE ARE

Foodscale Hub is an **Impact Venture Studio** with offices in Greece and Serbia, working to accelerate the shift towards tech-enabled innovations in the agrifood sector.

At Foodscale Hub, we believe that by choosing the food we eat today, we decide what our world will look like in the future. Our commitment to building and improving scalable solutions, as well as creating disruptive business models that reshape the agrifood sector, and have a positive impact on society, is the essence of who we are. We are harnessing the power of technology and entrepreneurship to prepare a fair, resilient, and sustainable future for Europe's agrifood sector while building a prosperous ecosystem of partners.

By participating in numerous research and innovation projects, we are shaping the future of food systems and supporting founders to gain access to funding, knowledge and a broad network in Europe and the USA.





#### WHY THE STARTUP GUIDE?

Investing in startups is risky, but if you do your research and invest in a company you believe in, you may be able to see significant rewards in the future. To help founders connect with investors and funds, we have created a guide to Greek agtech and foodtech startups, featuring all the startups (and some scaleups) in one comprehensive list.

#### Disclaimer

This startup guide is based on our own research and the experiences of selected startups. Inclusivity is the key value of this startup guide, and we tried to collect input from as many startups as possible. In case you haven't found your startup in these pages, please feel free to contact us! We are really looking forward to meeting you and your innovation and include your company in the next edition of our startup guide.

We are at your disposal for any further information. Contact information: **info@foodscalehub.com** 

#### STARTUP CATEGORIES

- Agribusiness Marketplaces: Commodities trading platforms, online input procurement, equipment leasing
- Farm Management Software, Sensing & IoT: Ag data capturing devices, decision support software, big data analytics
- **Midstream Technologies:** Food safety & traceability tech, logistics & transport, processing tech
- Novel Farming Systems: Indoor farms, aquaculture, insect & algae production
- Innovative Food: Cultured meat, novel ingredients, plant-based proteins
- In-Store Retail & Restaurant Tech: Shelf-stacking robots, POS systems, food waste monitoring IoT
- **Restaurant Marketplaces:** Online tech platforms delivering food from a wide range of vendors
- **eGrocery:** Online stores and marketplaces for sale & delivery of processed & unprocessed ag products to consumer
- Home & Cooking Tech: Smart kitchen appliances, nutrition technologies, food testing devices
- **Online Restaurants & Mealkits:** Startups offering culinary meals and sending pre-portioned ingredients to cook at home
- **Cloud Retail Infrastructure:** On-demand enabling tech, ghost kitchens, last-mile delivery robots & services
- Other areas of expertise



#### METHODOLOGY

35 Startups participated in this guide. To make sure this guide is as inclusive as possible, we followed these 5 simple steps:



Collected info about all officially registered companies in Greece in the agritech and foodtech sectors

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Sent an email with a questionnaire to startups, to get info on their innovation, future plans, and mission

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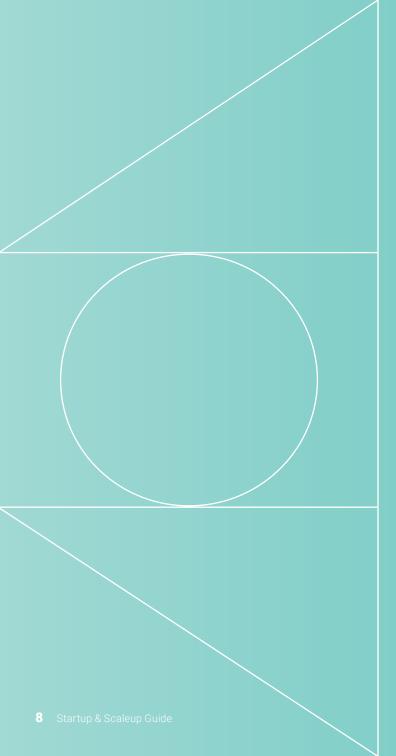
Collected and edited all submitted materials



Sent the final text to all participants for approval

•

Collected finalised material and gave it to our graphic designer to do their magic!



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### **01** Midstream Technologies

03 eGrocery **06** Other areas of expertise

**04** Agribusiness Marketplaces

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05 Innovative Food **07** Novel Farming Systems



#### About the startup

By combining smart, connected sensors and artificial intelligence (AI), Centaur's Internet-of-Crops® platform enables farmers and traders to remotely predict and prevent post-harvest spoilage and pest threats, months in advance, ensuring hard-earned crops remain pristine. Centaur currently protects several million metric tons of cereals, oilseeds, animal feed, rice, flour, fruit and nut crops, which are stored in silos and warehouses or are transported overseas.

#### **Flagship products/services**

Centaur monitors crop conditions in situ, with smart wireless devices that measure and transmit data about temperature, humidity, and gases to prevent loss and keep the food at your table free from pests, mould, odours and excessive chemical use.

- Safe, Online Monitoring: Centaur sensors eliminate the need for humans to inspect storage containers themselves. The sensors also detect fumigation chemical leaks in order to alarm personnel in plants, farms and logistics facilities.
- **Data-Driven Spoilage Prevention:** driven by a digital twin approach, our online platform issues alarms and notifications, instigative corrective actions and remediations.
- Precise Remediation: Centaur prescribes optimal remediations such as aeration and fumigation and uses the sensor data to ensure their precise application, preventing excessive use of chemicals and surviving insects.

# The plan to revolutionise the agrifood industry

Through proprietary sensors and Al-driven pest treatment recommendations, Centaur reduces post-harvest losses by up to 80%, allowing farmers, commodity traders, shippers, and resellers to increase their earning potential by 5-20%. Its sensors are immersed in bulk crops, where they transmit data from silos, shipping containers, and vessel holds for up to 2 years on a single battery. These sensors allow, not only for remote monitoring of fumigation treatments, but also, detect temperature fluctuations and excessive humidity, conditions which can lead to rot and infestation. Centaur's cloud platform analyses this real-time sensor data and merges it with geo-location information, weather forecasts, and user inputs such as, crop type and volume to predict spoilage weeks or months before it occurs. For the first time, customers can find personalised answers to questions like "when could my grain spoil?" or "what dosage of fumigant should I use to treat my grain for insects?" Moreover, Centaur integrates with clients' existing equipment, allowing them to remotely manage and automate fumigation, storage, and logistics processes.

Field of expertise: Midstream Technologies Date of establishment: 01.08.2016 Team members: 20 Webpage: www.centaur.ag

#### **Goals for the future**

Centaur aims for leadership in the postharvest IoT and quality analytics space.



#### FresCon Technologies

#### About the startup

Frescon Technologies is a food technology oriented company, focused on the key values of sustainability, ecosystem balance, responsible consumption and production, and food waste reduction. The company's mission is to create production efficiencies for fresh fish so it can be enjoyed by a wider population. Frescon Technologies cooperates with universities, businesses, research teams and individuals for the development of its technology spectrum to expand the outreach and effect of its innovation. The company never ceases researching for supplementary or new technologies aiming for the improvement of the whole food productionconsumption chain for the benefit of all key stakeholders involved.

#### **Flagship products/services**

Frescon Technologies' solution addresses the problem of limitation in the fresh fish sources. Open sea fishing has reached its maximum production capacity in the last few decades and aquaculture tends to be the solution to fulfil the global fish demand while inadequate processing, improper handling and hygiene results in discarding a significant part of fish production. The company's solution is a post harvest technology to prolong the shelf-life of fish (e.g.,Computer Vision System, UV-C radiation, Y-aminobutyric Acid and Active Modified Atmosphere Packaging), which extends the shelf-life of fish by 3-4 times than conventional methods. The production line Frescon Technologies offers is a fully automated process, supported by AI, cameras, and other technological innovations with which they can achieve a high production rate with minimum production residuals. This process:



- Decreases food waste due to the shelf-life extension, thus increase the EU's self-sufficiency
- Offers a solution to the decrease of the aquaculture production shrinking quantity, since it will "multiply" the existing capacity by prolonging fish shelf life
- Enhances production efficiencies thus minimise production wastes, resulting from existing inefficient process and low standards of hygiene.

#### The plan to revolutionise the agrifood industry

Frescon Technologies innovation is a Post-harvest technology applied to fresh fish that:

- Maintains the sensory quality: taste, firmness, colour and odour
- Nutritional quality of fish: Crude Protein, Lipids, Fatty acid
- And increases the shelf-life by 3-4 times compared to existing technologies.

The confirmed test results are the following:

- Successfully extending the shelf-life of seabream up to 40 days
- Successfully extending the shelf-life of seabass up to 30 days
- Successfully extending the shelf-life of shrimps up to 21 days.



#### **Goals for the future**

The company's technology can be easily adopted and incorporated by existing production lines with the addition of specific parts in the production process or it can be offered as a new installation of a complete production line. The benefits for the Fresh Fish Process and Packaging Businesses are significant and of immediate effect. Frescon Technologies plans to equip at least 20 fish processing facilities in Southern Europe Countries.

Funds raised: EU Grant

Field of expertise: Midstream Technologies Date of establishment: 25.10.2021 Team members: 2 Webpage: www.frescon-tech.com

# MOBASE

# 1.3

#### About the startup

Mobase is a spin-off company that operates under the umbrella of the Institute of Applied Biosciences at the Centre for Research and Technology Hellas (INAB|CERTH), with support from the Center for Innovation & Entrepreneurship of NKUA - Archimedes and collaborations with several Greek universities. The mission is to provide innovative and reliable identification and traceability services for plant and animal-based products to agrifood and cosmetics companies. Cutting-edge technology is used and best practices, to help customers prevent fraud, protect their brands, and ensure the authenticity of their raw materials and ready-forconsumption products. The vision is to become the leading provider of these innovative DNA-based traceability services and to build long-term partnerships with clients, supporting their success.

#### **Flagship products/services**

Mobase offers a genetic verification service for the identity and authenticity of animal or plant-based products in the food and cosmetics industry. This service utilises DNA analysis to prevent product fraud, adulteration, and counterfeiting, while providing added value and credibility to producers, retailers, and traders. The genetic identification can be applied throughout the manufacturing chain, as well as in the final product, and can be integrated with artificial intelligence and blockchain technologies to facilitate the control of specific manufacturing and trading chains for food products, such as wine and olive oil. In addition, DNAbarcode products are provided as an additive for cosmetics to prevent counterfeiting. Verified products can be accompanied by a DNA Verified Sign for marketing purposes. Mobase is capable of identifying over 600 species, varieties, and final products, and can develop custom DNA markers for any plant or animal-based product.

#### The plan to revolutionise the agrifood industry

Mobase aims to transform the agrifood industry by offering a reliable and legally accepted solution for verifying the identity and authenticity of animal and plant-based products. The genetic verification service uses DNA analysis to prevent product fraud, adulteration, and counterfeiting, while providing added value and credibility to producers, retailers, and traders. In addition, this service can be integrated with artificial intelligence and blockchain technologies to facilitate the control of specific manufacturing and trading chains for food products. Mobase believes that the solution offered has the potential to greatly improve the transparency and traceability of the agrifood industry, while helping to protect the quality of food and cosmetic products, protecting both the industry and the consumers and leading to a safer and more sustainable food supply.



#### **Goals for the future**

In five years, there is great potential to become a leading provider of genetic verification solutions for the agrifood industry, with widespread adoption, not only by private sector producers, retailers, and traders, but also by public sector organisations. This comprehensive and reliable service will be integrated into the global supply chain for food products, and will be essential for ensuring the safety and sustainability of the global food supply. Mobase will continue to innovate and develop new technologies, such as the integration of artificial intelligence and blockchain, to further improve the transparency and traceability of the agrifood industry.

#### Field of expertise:

Midstream Technologies in food safety & traceability technology via biotechnology, with Ag biotechnology as a direct extension

Date of establishment:

03.01.2023

Team members: 5

Webpage: www.mobase.eu



#### About the startup

Field of expertise: **Midstream Technologies** Date of establishment: **31.08.2020** Team members: **6** Webpage: www.oliveex.io

Oliveex Private Company is a Greek, VC-Backed startup that focuses on food and beverages industries' digital transformation, using Internet of Things and AI-related technologies. The core of the Oliveex team currently comprises members with high-level academic backgrounds and specialisations. The team has been working together for more than five years and has a strong knowledge of cloud services, data analytics, machine learning, embedded systems, and LPWANs. In late 2022, Oliveex launched its IIoT platform, which transforms existing industrial setups into industry4-ready with 0 hardware cost.

Oliveex's IIoT platform (SaaS) integrates software-only modules into production lines to real-time analyze them and allow them to be data-driven. The platform provides several AI-enabled mechanisms focusing on fully automated digital traceability & production reporting, production transparency enhancement, and predictive data analytics focusing on sustainability and quality improvement. The platform is being used by F&B industries, helping them reduce working hours, automate workflows, and improve quality.

#### **Flagship products/services**

Oliveex offers a software solution that transforms any industrial setup into IoT by integrating it into industrial setups, collecting their data, and forwarding them to the cloud. The platform includes the following core features:

- Live data from every industrial asset and sensor are available remotely in real time for extensive monitoring
- Digital Traceability: The collected data are classified using Machine Learning models and are stored under a "digital file" for its industrial operation or batch without the need for user input. The platform



identifies in real time exactly what the end-user is doing and stores data of every batch for further analysis

• Al-Engine: After analysing the collected data, the platform exports actionable insights that include equipment performance, certain operation efficiency, equipment failure alerts, and more. Using them, the user can proactively identify production threats and proceed to actions that improve quality or prevent production downtime.

# The plan to revolutionise the agrifood industry

Oliveex's main competitive advantage, which offers great added value for Greece and for other non-early adopting countries, is that the platform can transform the existing equipment into industry4-ready without needing further investments in hardware or new hardware. Specifically, the platform collects data from the existing setup and transforms every component that is connected to it into a virtual, cloud-connected, Internet of Things device. With cloud-connected equipment, the industry can have real-time & remote monitoring and AI-enabled data analytics that export actionable insights for sustainability and productivity improvement with immediate improvements in efficiency, power consumption, and quality.

Oliveex's platform acts as a supervisor over any industrial facility simplifying the logging/monitoring operations and quality control. A user can have immediate optimisation in the following fields:

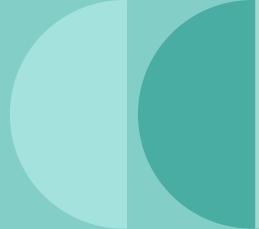
- Efficient Logging/Monitoring: Leveraging continuous real-time analytics with current and historical data to optimize resources, people, equipment, and materials.
- Enabling proactive actions instead of reactive in possible malfunctions, production threats, or every sign that will be evaluated by the algorithm as an anomaly based on historical data.
- Sustainability: By analysing data from every subsystem, we can immediately provide insights related to the power efficiency of its system. Malfunctions can also be identified by preventing downtime.
- Productivity: Knowing exactly what operation runs in every industrial asset, the next step is to combine that data to export productivity reports that evaluate past process performance and better planning of upcoming processes.

#### **Goals for the future**

Oliveex's Digital Transformation platform has been launched in the Greek market in Q3 2022 serving food and beverages industries like breweries, wineries, dairy, and more. The main use case of the platform is the integration in existing automation/industrial setups for upgrading proposes, enabling them to have IoT and AI capabilities using a highly scalable software solution that does not require initial & substantial investments. In the next five years, Oliveex members see the platform expanding in more food-related use cases globally with high expectations on the alternative proteins and plant-based foods market which uses high technology and sophisticated production methods to create sustainable products.

#### **Funds raised:**

In April 2022, Oliveex secured \$300.000 pre-seed funding led by the Industry 4.0-focused Venture Capital "TECS Capital" with EIT Digital participating. Prior funding includes grants from EIT Food, The People's Trust NPO, and other startup competitions with a total amount of approximately \$30.000.







#### Field of expertise:

Midstream technologies (Foodtech) Date of establishment: 15.12.2021 Team members: 1

#### About the startup

Serve Sterile, has developed and patented an innovative technology of a sterile-filter bottle pourer, which addresses the problem of microbial growth in non-alc spirits, once the bottle is opened. This enables preservative-free non-alc spirits that can be classified as organic/bio as well.

The technology, being a mechanical solution, extends the in-use stability and shelf life of the product, as if the bottle was literally never opened and also enables 100% preservative free spirits. The technology enables unlimited bottle servings/openings safely at all conditions.

As a producer of non-alc spirits, I encounter everyday the problems and challenges of preservation/shelf life and having chemical preservatives, and I personally know that these are common amongst all brand owners/ spirits companies. The vision is that technology would help reshape and develop new opportunities in the non-alc industry.

#### **Flagship products/services**

A new emerging category of spirits, which behave in a drinkability perspective like alcoholic spirits, are 0% alcohol. The formulation in the absence of alcohol is an excellent source of nutritional requirements for microorganisms to grow. Other parameters, like alkalinity pH >3,5, and non controlled storage temperature, increase the risks of microbial growth in the products. As a result almost all of the non-alc products use preservatives to ensure the stability, safety and shelf life of the product, before first opening, while contributing to the prevention of microbial growth once the bottle is opened. Preservatives in the back label harm the marketability and brand value of such products, and in the end do not work properly as their potency and efficiency is not enough for 30-or more openings and storage at room temperature for weeks, which may well happen at a restaurant/bar/hotel and also home use, since the consumer perception is that they behave like old school spirits.

#### Cutting edge of low- and no-alcohol innovation

#### **Benefits for Brand Owners:**

Aligned with the ever-growing trend towards health awareness and wellbeing,

- "No Preservatives" is the top "clean label" claim, and preservatives is the the most unwanted food additive. Their absence gives competitive advantage over competition and "natural" claim amplifies key message and gives value to the product
- "Clean label" will become more important for non alcoholic spirits, along with transition and establishment of distribution from on- to off-trade mainstream channels
- Polishes the health and wellness key message, (e.g., no alcohol which is healthy, but preservatives, which never existed in alcoholic spirits).

#### **Bottlers:**

Sodium benzoate "E211" most commonly used in non alcoholic beverages, and other preservatives, will soon be not regulatory compliant with authorities.

#### **Benefits for the Value Chain:**

- Durability & Shelf life
- Expiration once opened
- Not refillable.



#### **Benefits for Consumers:**

Proper handling by consumer (refrigerators, short shelf life once opened) is usually neglected, but with sterile pourer these can be surpassed

#### **No allergens**

Better taste, as preservatives alter taste

#### Food safety

Can be verified through the mobile apps that scan label, and inform about side effects and "bad additives"

# The plan to revolutionise the agrifood industry

The patended technology is applyied during the bottling of a product, within the neck of the bottle, a pourer with 2 nozzles/orifices.

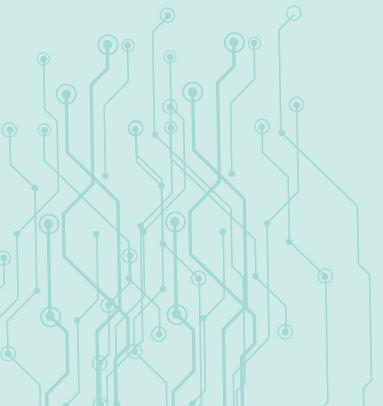
**Technical Benefits:** preservative free non-alc spirits Innovative technology with airclean barrier, guarantees that drink inside the bottle is intact even with cap opened, and at all possible circumstances.

It prevents the non-alc spirits from growing microorganisms/yeasts/moulds even after unlimited openings/servings. Does increase the shelf-life/ durability and guarantees food safety of the non-alc spirit after bottle's first opening.

It is a cost-effective solution that can be "snap on" during bottle filling & capping. Brand Owners Benefits Aligned with the ever-growing trend towards health awareness and wellbeing, no product recalls, and bad reputation for 0% products.

#### **Goals for the future**

Because of the IP and successful tests, there are market barriers for competition that solve this problem. Serve Sterile has technological lead and the pre-orders from big clients prove that. In a growing market of 35% annual CAGR, which started just 4 years ago and today is 0,5BN, the prospects are quite high, given the benefit of our solution across all the value and supply chain, 360 (stakeholders, end consumer, producer, health & wellness, prolonged expiration, food safety, less alcohol consumption eventually).



#### Magdalini Krokida, Professor | School of Chemical Engineering, NTUA, CEO of PRINSUS

**Contribution to the sector:** I am a Professor at the School of Chemical Engineering of the National Technical University of Athens, and I specifically work on food processing and engineering. With our post-doc team members we have established a company, PRINSUS, whose aim is the development of innovative functional ingredients, on the one hand, and on the other hand, the development of platforms to assist food companies in the creation of new products - considering of course the environmental factor.

I am the CEO of the spin-off, which was established about 6 months ago, and there are two more members, while NTUA is a shareholder with 10%. At the moment, we have already been awarded our first grant, in collaboration with other Greek universities, and started discussions with big food brands to develop innovative food products and patents for their production.

**The best way to support startups and scaleups:** New funds are definitely a very important tool to support startups and scaleups. I also believe that innovation offices that provide consultation services are a great way to

help these companies develop, too. The EU and global markets can also nurture ideas and help them grow, as well as products or patents.

The development of agrifood in the coming years in Greece / Trends and new technologies: This is a great point to discuss. We are moving towards a new tier in food production. First of all, alternative protein sources will become more and more popular. Moreover, I find very important the upcoming developments on food waste or byproducts of certain foods. These could either be utilised through extraction or to produce energy. The development of the agrifood sector will change in the areas of protein production, food waste utilisation, packaging with environmentally friendly materials, while low-energy technologies and low-maintenance foods will be further developed.



The use of technologies that run on low energy will also become widespread, which means that the food produced needs to be maintained in low energy conditions, e.g., no freezing or deep freezing. The produced food needs to be maintained, transferred and remain consumable in countries where climate conditions might be extreme. I believe this is the future and we are inevitably going in this direction. Another very significant issue is packaging, using environmentally friendly materials and plastics in packaging, which will be able to replace existing packaging. This has already started, but I also think it's one of the most important domains of evolution.



# \Lambda Agritrack

Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

01.09.2020

Team members: 11

Webpage:

www.agritrack.io

#### About the startup

A post-harvest automation platform that optimises perishable food value chains such as fish and dairy, improving food safety and quality, reducing costs and securing traceability compliance. Agritrack uses AI to predict the expiration date, Immutable Ledger (e.g., Blockchain) to secure traceability, and leverages a QR Code on product packaging to share the product's farm to fork provenance and quality to consumers.

The company's vision is a transparent and more efficient food value chain, where food losses are limited and we can trust what we eat. Agritrack's mission is to digitise the agrifood value chain towards a net positive  $CO_{2}$  "handprint" and a circular economy for:

- Increased quantity/quality of food
- Better utilisation of resources and harvested food
- Improved consumer trust on Quality Labels and reduction on food fraud
- Reduced operating and production costs for the agrifood value chain.

#### Flagship products /services

A platform that combines 3 core modules: Traceability Automation, Quality & Consumer Engagement.

• The traceability automation module uses IoT and Cloud to track and improve operations across the food value chain (farm to fork) while ensuring compliance.



- The Quality module uses predictive food microbiology to assess food shelf life and safety (risk assessment) and AI to evaluate food quality characteristics.
- The Consumer Engagement module is staged to provide a holistic view of the product's story (provenance & quality) to consumers in order to enhance marketing, improving brand recognition and consumer loyalty.

# The plan to revolutionise the agrifood industry

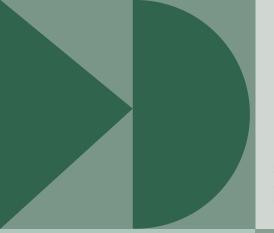
Food quality & traceability are major global issues, where the lack of information in the supply chain leads to the loss of ~15% of the food from production before it even reaches the consumer. We digitise post harvest operations and incorporate additional business intelligence with food quality characteristics By combining traceability information with quality information (e.g., fish expiration date or soon % of protein or % of fat for dairy) in real time, decision makers can decide early on how to process, where to ship or even how to sell and promote their product, as well as provide a fully fledged provenance and quality story to consumers. As they call it, this Food Value Chain Intelligence, allows our users to better monitor food quality and reduce food downgrading and returns, which eventually lead to food waste. It also optimises operations and reduces supply chain costs that come with a high CO<sub>2</sub> impact. Finally, it also helps consumers trust food quality labels, by interactively informing them of their food's provenance and quality (hence also addressing food fraud).

#### Goals for the future

In five years Agritrack envisions itself as the EME leader in the specific vertical of quality and traceability for the aquaculture and dairy industry.

#### Funds raised:

Institutional & private Investors: €220,000 Grants: €153,000 Starting Equity: €200,000





#### About the startup

AgroApps was founded in 2015 by a team of experienced agronomists, experts in remote sensing, numerical weather forecasting, as well as IT specialists, who had a deep understanding of the agricultural sector and saw the growing need for technological support and for effective forwardthinking IT solutions. AgroApps' mission is to put technology in the services of the agricultural sector through the development of sustainable solutions. The company's high level of expertise in combination with the constant research and the drive for excellence enables AgroApps to offer a wide range of solutions that help farmers and other industry stakeholders understand the agricultural ecosystem in ways that were not possible before. Passionate about applying ICT, AgroApps uses and combines sophisticated mathematical models, AI technologies, satellite and meteorological data, and crop development models, to build solutions and customised services for farmers, agricultural consultants, agrifood and agricultural insurance companies, as well as for the public sector.

#### Flagship products/services

AgroApps has developed a number of solutions for the agrifood sector:

• **AgroApps 360** is a crop monitoring and management system. From the beginning of the growing season until harvest it offers personalised suggestions, tips and warnings on crop development, irrigation, fertilisation, crop protection and tillage. The system estimates crop yield and quality, as well as CO<sub>2</sub> emissions from any agricultural activity. The services are based on the processing of big data, such as continuous streams of satellite images, meteorological and in situ data. AgroApps 360 supports the interconnection, reception and processing of data from IoT devices and agricultural machinery. The use of AgroApps 360 helps producers, agricultural consultants and companies in the decisionmaking process, while at the same time it can reduce production costs and the environmental footprint of agricultural activity.

- AgroApps Hydro is a system that supports water resources management. It calculates the daily and seasonal crop water requirements. At the same time, it provides information on the functionality of water intakes and their readiness to serve water. demand, as well as on the total water balance in an area, in real time. With AgroApps Hydro, the organisations responsible for the control and management of water resources can design effective strategies for the optimal allocation / distribution of water and the energy management of the irrigation networks. Accordingly, producers have at their disposal an irrigation plan, based on the current and short-term crop water demand. The implementation of the irrigation plan by the producers can minimise over-irrigation, reduce production cost and contribute to the sustainable use of natural resources.
- AgroApps Risk&Rate is an innovative system for the Fintech sector. AgroApps Risk & Rate services provide information that support financial institutions in evaluating potential customers

   agribusinesses during the lending process.
   To achieve this, it combines future climate data

with crop growth models and calculates the cost of producing the crop for subsequent growing seasons, relative to its expected yield. With AgroApps Risk & Rate, financial institutions have a more complete profile for each potential borrower – farmer, which incorporates, among other things, climate risk, which affects future yields and costs of farming activities.

AgroApps Agl is a comprehensive system supporting insurance providers towards more effective management of crop insurance contracts. As early as the moment an insurance contract is signed and the risk is assessed, to the stage of remotely estimating damages and compensation, agricultural insurance companies know at any given point in time the status of the insured fields and can better prepare to tackle future risks. AgroApps Agl ensures an automated, valid and objective process of planning and monitoring agricultural insurance contracts.

#### Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

05.05.2015

Team members: 31

Webpage:

www.agroapps.gr

AgroApps Climate provides meteorological and climate information at a high spatial and temporal resolution. In the short term, by running regional numerical weather forecasting models on a daily basis, it produces 7-day horizon meteorological forecasts, capturing with great precision the microclimatic variation of Greece. At the same time, using satellite data, it displays the current weather conditions of each region. In the long term, it offers seasonal climate forecasts with a horizon of 6 months. AgroApps Climate uses agro-climatic indicators to estimate the future impact of climate on agricultural production, as well as historical data from the last 30 years to provide analyses of an area's climatology, with

an emphasis on extreme weather events.

AgroApps Climate provides high spatial & temporal resolution meteorological and climate information. AgroApps Climate services can be utilised by farmers, cooperatives, and agrifood businesses to support their daily schedule of crop-cultivation operations and their planning for the next growing season. On a larger scale, AgroApps Climate services can be integrated into any information system for the purpose of guiding companies, organisations and agencies to reach optimal decisions considering climate and meteorological risk.

# The plan to revolutionise the agrifood industry

AgroApps team is highly motivated and trained to tackle different challenges, and readily meet the incessant changes of today's increasingly demanding international market environment. All the members of the team bring energy, fresh ideas and creativity in their work. AgroApps solutions are already in the market and their team works in order to improve them and accelerate the transition to sustainable digital agriculture. Their goal is to support farmers, companies of the agrifood sector, organisations and policy makers to use technology, so as to address everyday challenges and make the way we produce more sustainable and environmentally friendly.

#### Goals for the future

AgroApps goal is to further improve their solutions and expand in additional European countries, in order to create a network of partners that will use their solutions.

#### Funds raised:

In 2020, Space Hellas, a dynamic, established System Integrator and Value Added Solutions Provider, invested in AgroApps acquiring 35% of the company.



#### Field of expertise:

#### Farm Management Software, Sensing & IoT

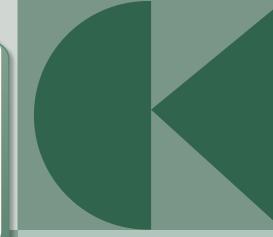
Date of establishment:

04.01.2021

Team members: 1

Webpage:

www.agrobox.gr



#### About the startup

Agrobox deals with precision agriculture. It is a constantly evolving and developing company, using cutting-edge technology that measures up to the demands of contemporary farmers. It provides agricultural professionals (farmers, agronomists, advisors) complete innovative solutions that are studied, materialised, overseen and supported by the exceptionally trained personnel, which is equipped with a unique skill set and know-how. Being experienced in IT and having deep knowledge of the agricultural sector, the goal is to providesubstantial solutions in the field of precision agriculture to cover clients' needs.

#### Flagship products/services

There are Agrobox sensors in the agricultural fields that send non-stop measurements of the air, soil and plants. The Virtual-Box measurements (virtual sensors) are received by satellite and meteorological stations.

The satellite data is taken from satellites Landsat-8 and Sentinel-2.

- Meteorological data is taken from the known global network.
- Consulting services are provided by well-trained Agrobox agronomists.
- Agricultural data is taken from farmers using simple and automated systems of data input.
- Sensors are installed by IoT companies.

#### The plan to revolutionise the agrifood industry

Better information for agriculture is revolutionary.



#### Goals for the future

Agrobox aspires to be one of the best companies in the field of precision agriculture. 3,125 Farmers 2,587 Agricultural Fields 8,967 Care Plans 128,597,800 Measurements





Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

14.09.2022

Team members: 1

Webpage:

www.agroverse.tech

#### About the startup

Agroverse envisions a world where farmers can afford to rest. The aim is to help farmers feed the 8 billion people on Earth in a sustainable way without getting tired anymore.

#### **Flagship products/services**

Agroverse revolutionises agriculture by introducing electric-powered robots as a service to the farmers.

#### The plan to revolutionise the agrifood industry

Agroverse robots are unique because

- You don't buy them
- You don't operate them
- While you get some rest, Agroverse robots get the job done.

#### Goals for the future

Automating most of the labour-intensive works in farms and providing a means to precision agriculture



# Eden Core

#### About the startup

EdenCore Technologies Private Company is a spin-off company of the Agricultural University of Athens and with their product initiative Eden Library, the company delivers AI-driven solutions in the domain of smart farming and crop protection. EdenCore Technologies' vision is to help farmers reduce reliance on agrochemicals and adopt a per-plant cultivation model, which reduces environmental impact and is also economically profitable.

#### Flagship products/services

Eden Library proposes a paradigm shift in the use of images and fieldcollected data, in order to foster AI adoption. With their digital solutions, they redefine crop protection, helping farmers reduce costs and produce food in a sustainable way. The company's solutions:

- The Viewer: a novel camera-based system for sustainable crop protection and effortless plant monitoring, offers real-time pest and enemy detections through embedded AI models and machine vision.
- Eden Library: an industry-leading platform, hosts thousands of expert-annotated datasets for enabling AI in agriculture. The Dataas-a-Service (DaaS) model allows the farming industry, agritech companies and farmers to access valuable data assets and unlock the market value of high-quality agridata.



Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

01.06.2021

Team members: 4

Webpage:

#### www.edenlibrary.ai

# The plan to revolutionise the agrifood industry

The company's plan is to leverage the power of AI and vision technologies in order to help farmers make more informative decisions, reduce the amount of inputs used for typical farming operations (e.g., plant protection, fertilisation) and finally help farmers move towards a more digital-enabled and sustainable direction, without compromising user friendliness and simplicity in the adoption of novel technologies.

#### Goals for the future

EdenCore's team members envision EdenCore as an established company in the market segment of plant monitoring and inputs application. They aim for sales on a global scale, by offering a clear value proposition to farmers willing to adopt novel solutions, while also planning to include more crops in their portfolio and additional services that span from crop protection, fertilisation and irrigation monitoring.





#### About the startup

farmB company was founded with a vision to close the gap between technological research and everyday practices in the agricultural sector.

farmB offers technological solutions for all types of agri-businesses (from producers to consultants and processors) and focuses on the development of IoT and AI applications for the holistic assessment of the information collected in the field from sensors, drones, electronic pest traps, meteorological stations, agricultural vehicles and more.

As a spin-off company of the Institute for Bio-economy and Agritechnology (IBO) of the Centre for Research and Technology – Hellas (CERTH), incorporates deep scientific knowledge into its operations, while promoting the integration of sustainability and circularity into the agricultural practice.

#### Flagship products/services

farmB provides a single stop access point to digital agriculture, from satellite imagery to proprietary in-house developed algorithms creating meta-products based on data collected from users, sensors, and other sources. A web app provides access to eight modules, interconnected and open to receive data from external sources. **farmB.view** offers an overview of all assets; **farmB.eye** visualises data on plot-level, allowing assessment of operational status; **farmB.sat** integrates processed satellite data, providing grounded decision support; **farmB.clima** offers reliable climatological data, from shared and/or private <u>sensor networks</u>;



#### Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

05.11.2020

Team members: 7

Webpage:

www.farm-b.com

farmB.fleet is a bridge between actionable farmB information and machinery (conventional to robotics); farmB.insta enables accurate visual geo-referenced data exchange; farmB.prox handles proximal data regarding soil and yield; farmB.log, a digitised cultivation log covering all recording needs in detail.

# The plan to revolutionise the agrifood industry

farmB aspires to further integrate existing technological frameworks used in machinery, sensors and other data sources as well as enabling users of all links in the agrichain to record their actions and have access to structured and actionable information.

#### Goals for the future

In five years, the goal is to furthermore build upon this unified interconnected ecosystem towards metadata products. In the near future a series of innovative and practice-oriented algorithms will be rolled out that will enhance decision making in operations and value of agricultural products. Furthermore, there is constant progress on integrating mars from now farmB aims to be in position to shape and standardise digital agriculture processes and products. Steps are made towards tighter integration with hardware/machinery manufacturers, and the aim is to become the platform of preference for the industry when new products are developed. Part of the 5-year plan is also to be the go-to solution for agri-businesses that are active in contract-farming and/or operate within regulatory and quality assurance frameworks.



#### About the startup

Future Intelligence (FINT) is an Information and Communications Technology (ICT) company that provides IoT and data solutions in the fields of smart infrastructure, smart agrifood, digital security for physical infrastructure, revolutionising their remote monitoring and management processes with minimal capital and operations costs.

FINT actively participates in the digital transformation agenda of the European Commission, due to its expertise, its specialisation in the field of applied research and development and its collaborations with public and private organisations from all over Europe.

#### Flagship products/services

Future Intelligence (FINT) provides IoT devices and solutions for the digital transformation of agriculture. In detail, the company builds the sensor controller or the actuators that acquire the data from 3rd party sensors and also engineers various industrial-like actuators to remotely send commands back to the fields (automation). FINT has been in the agrifood domain since 2015 when it pivoted its Wireless Sensor Network (WSN)/IoT Smart City platform technology to cover farmers and processors day2day needs. Since 2020, the company commercially offers its devices in Cyprus and Greece, being the only IoT original equipment manufacturer active in these markets. Its best selling products are IoT Weather Stations, IoT microclimate/agro-environmental stations, while FINoT irrigation controller has recently gained considerable market attraction. The firm continuously designs and builds new IoT sensors and actuators to cover more (niche) needs and builds in parallel a strong network of reputable resellers.

Field of expertise:

#### Farm Monitoring Software, Sensing & Controlling & IoT

Date of establishment:

11.07.2009

Team members: 18

Webpage:

www.f-in.gr

#### The plan to revolutionise the agrifood industry

Apart from FINT's innovative and -most importantly- applied offerings for the primary sector that optimise farming practices for small scale food producers, FINT works on post-farm and processing phases through various technologies currently under a testing phase. The company targets to reduce food loss during processing stage working with food quality experts and food manufacturers while it already championed a globally recognized prototype service on farm upstream traceability chain of events by integrating global standards (GS1) with open-source -thus interoperable- software modules (FIWARE). Hence, through its value-added technology it aims to ensure quality products grown under sustainable practices; promote this to consumers for a fair distribution of incomes to farmers preserving and unveiling their significant role for the rural economies and countries' food and nutritional security and overall well-being; reduce (economic) losses of the value chain and contribute to collaborative business models. In the near future, food waste and resource circularity are also company's priorities.

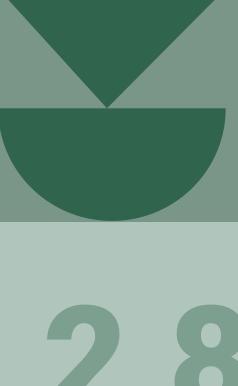
#### Goals for the future

The agrifood and environment branch of FINT to become a separate entity with a portfolio of IoT products and solutions in the markets of food production, food processing, traceability and waste management/circular control with revenues close to 2M half of which coming from exports and a team of 15 people. One third of them will work in the RnD division.



### About the startup

Gaia Robotics is leveraging on the experience and knowledge of its multidisciplinary core members, working in numerous RnD activities. GAIA's main focus is a holistic vision of innovation, generated by efficiency, scientific curiosity and expert knowledge where ideas, techniques, tools and methods from different disciplines are integrated to make innovative, secure and responsible technology. GAIA's main area of expertise lies in ICT, Green and Environmental Tech, Agritech, Robotics, Artificial Intelligence and Sustainability Applications. The company particularly works on crossing the gap between booming cuttingedge technology and the real efficiency it brings at a low cost and has managed to become a leading Precision Agriculture technology solutions provider in Greece, having collaborated with a multitude of customers and types of crops, successfully addressing their specific needs. Gaia Robotics has already completed complex large-scale projects utilising the vast experience of its remote sensing and geospatial analysis experts using advanced scientific sensors and unmanned aerial vehicles (UAV) in acquiring, processing, and analysing remote sensing and computer vision data. This scientifically calibrated, accurate and timely data clearly depict current conditions of the study area and give the ability to forecast future developments to those involved in the production cycle in a way and time frame that is impossible through human observation. Combined, these services add up to complex challenges for Gaia Robotics as an innovative technology developer, but through our in-house research and



#### Field of expertise:

### Farm Management Software, Remote Sensing & IoT, Machine Learning & Big Data

Date of establishment:

#### 18.03.2018

Team members: 6

Webpage:

#### www.gaiarobotics.gr

development, we produce unique and actionable data for our customers both from developing applications such as tailormade Decision Support Systems that help farmers efficiently manage their crops by providing insights extracted from drone-collected images leveraging state of the art AI, various Machine Learning and Augmented Reality technology solutions. Gaia Robotics is actively engaged in innovation projects and case studies and its team constantly conducts research and development on emerging technologies. This highly skilled team is responsible for the development of MyGaia Cloud Platform, COLT Weather Station, MyGaia360 robotic solution as well as for the introduction and trial of innovative Precision Agriculture technology services and analytics.

### **Flagship products/services**

MyGaia is a proprietary cloud-based Platform for uploading, analysing and sharing Data created by Gaia Robotics software developers and remote sensing specialists. Its purpose is to turn imagery into actionable information using powerful analytics and visualisation tools. MyGaia provides a farm management web application, integrated with a pipeline of advanced analysis and multispectral processing algorithms, ensuring end users awareness and also providing treatments and cultivation practices. The required data is collected by remote and multispectral sensing via unmanned aerial vehicles, allowing end users to identify plants with non-visible symptoms, so that the timely management of the identified disease can take place, guiding the farmers towards the effective management of their crops, minimising their economic losses and farming practices

environmental footprint. This platform is utilised for easy sharing and mobile access.

- **COLT** is an autonomous weather station designed and constructed with the main focus on the continuous provision of meteorological data at reduced cost and minimal energy footprint and MyGaia platform compatibility. The station provides unlimited recording and wireless data transmission capabilities with minimal power consumption. The sensor assembly has been installed in a waterproof case created through custom 3D printing for the maximum exploitation of available space and prolonged outdoor use.
- MyGaia360 is a small-scale farming robotic platform designed to bring industrial automated farming technology into the average consumer's backyard that plants, waters, weeds, grows and harvests vegetables autonomously. It works by moving dedicated tools within a circular area through a series of rails and linear actuators supported by custom developed software. You choose the crops, and MyGaia360 does the rest, alerting you when it is harvested.

## The plan to revolutionise the agrifood industry

The worldwide agricultural industry will undergo substantial changes in the next few years. The protection of the environment and the fight against species extinction will lead to new technologies, laws and greater sustainability in our work processes and human behaviour. At the same time, we expect the human population to reach 11BN by 2100, with the majority of people living in cities. Sustainably feeding the world will become a key challenge for the future

generations. In order to protect our planet and secure a healthy environment for global food security, methodologies like precision agriculture play a key role towards improved sustainability. One answer to the challenge of the resulting higher food production demand, while minimising the environmental footprint in arable farming, is the concept of variable rate applications. A detailed understanding of the growth state, stress factors, diseases, and pests for parts of a field or even individual crops will allow specific and "smart" applications of water, fertilisers, and pesticides according to the actual needs. The principle of applying agrochemicals and water only where needed and up to the amount required will help reduce the environmental impact of arable food production while saving operational expenses for farmers. Furthermore, collaboration in the agrifood supply chain for achieving sustainability is essential. Having the right tools speeds up the process of sharing and integrating the new practices but also helps to build the awareness around the importance of sustainability. Spatial information helps to explain where, what and why certain things need to be done and visually aids to see the bigger picture of what fields and crops need.

### Goals for the future

Gaia Robotics believe that agri-focused startups that offer a pragmatic and tangible value proposition will be reappreciated in the near future and, thus, the company is optimistic and truly curious to find out what this future holds.





# 2.9

### About the startup

Grabi Smart provides custom and innovative solutions that improve the quality of life in a sustainable manner. The products and services allow professionals (e.g., farmers, engineers, store managers) to save time and resources and to improve their product through collected data and live notifications and automations.

### Flagship products/services

Grabi Smart's products allow users to remotely monitor their devices/ produce and take action via their mobile or web if there is an alarm or if they need to perform a specific task, such as starting the irrigation system, turning heating or air conditioning on/off, turning on/off the lighting system, window opening/closing, door locking/unlocking etc. It's like a smart home, but for professionals. All the above actions can be activated automatically through scheduling or manually by the user.

## The plan to revolutionise the agrifood industry

Farmers, engineers, shop and production managers and other professionals sometimes need to travel many kilometres and spend a lot of time just to check their products or an error in their field or property. This situation is very stressful and expensive. GRABI devices come to cover this need.

### Goals for the future

In five years, Grabi Smart hopes to have gained several collaborators and distributors in Greece and abroad and to have more than five custom projects completed and under subscription. The goal is to automate processes and provide custom solutions to farmers and professionals so that they can save resources and time and improve their produce without having to worry about what's happening with their products.

**Farm Management Software, Sensing & IoT** Date of establishment:

Field of expertise:

**10.11.2021** Team members: **1** 

Webpage:

www.grabi.gr





### HELLENIC DRONES

Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

01.01.2017

Team members: 20

Webpage:

www.hellenicdrones.gr

### About the startup

Hellenic Drones is focused on providing cutting-edge, high-quality UAV services and products on a wide spectrum of industrial and commercial applications. Hellenic Drones' vision is to drive innovation and progress in every field and pave the way toward digitalisation and sustainability. Regarding agriculture, the mission is to utilise drones and other emerging technologies to revolutionise the agricultural industry, empower farmers to make better-informed decisions, reduce costs, and increase yields by providing them with real-time insights into their farming operations.

### Flagship products/services

Hellenic Drones provides a wide spectrum of services with the use of drone technology: indoor & outdoor asset inspection and monitoring, aerial safety & surveillance, aerial 3D mapping, photography and videos, Al Solutions, and precision agriculture services. Currently a holistic phytosanitary and plant protection system is being developed, and more specifically, a drone-based data collection system that uses advanced computer vision and artificial intelligence algorithms to monitor crops, identify diseases & water stress, spot spray where necessary, and provide actionable insights to farmers.

The system is integrated with various sensors, cameras, and other data sources to provide farmers with a comprehensive view of their fields.

# 2.10



### The plan to revolutionise the agrifood industry

Hellenic Drones plans to change the agrifood landscape by providing farmers with the tools and insights necessary to make datadriven decisions that result in increased yields and reduced costs. The drone-based system will enable farmers to identify problems earlier, reduce the need for manual labour, and optimise resource usage while ensuring compliance with environmental regulations. This way Hellenic Drones' proposed Precision Agriculture service will lead to a more sustainable business model for the farming industry.

### Goals for the future

In five years, the product will have been fully developed and commercialised and Hellenic Drones as the leading provider of drone-based data collection and analytics solutions for the agricultural industry. The aim is to expand provided services to other industries and develop additional products and services to help farmers maximise their yields and reduce costs.

### **Funds raised**

Funds have been raised from participation in projects funded by the European Union regarding precision viticulture.





### About the startup

Inagros is a technological tool aimed at modernising and organising agricultural production, as well as reducing the consumption of water, pesticides, fertilisers and energy. The vision is Inagros to become the technological link among farmer's experience and agronomist's knowledge.

### **Flagship products/services**

It is an electronic platform that provides real time data from the crop. Through the tools it provides, it allows the agronomist to remotely monitor his customers' crops, keep a complete history of them and assign tasks that need to be carried out (such as spraying, fertilising, etc.) to the farmers easily and quickly through an automatic notification system . There is also the possibility of automating the irrigation system as well as notification in case of faults. The platform has the ability to collect satellite data as well as through sensors that can be installed in the crop.

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## The plan to revolutionise the agrifood industry

Everyone is looking for the farmer of the future to find solutions and feed us in the following years, but Inagros does not think about the present farmer and how he will evolve. Inagros aims to bring precision farming to every farmer in a manageable way.

### Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

14.11.2017

Team members: 9

Webpage:

www.inagros.com

### Goals for the future

In the coming years the aspiration is for our platform to be established as a complete and efficient farm management information system in the European market, contributing greatly to the modernisation of agriculture. Inagros' next step is the launch of the next version of its platform, which will include additional tools aimed at measuring, certifying and improving the environmental footprint of each crop, giving the produced products a significant competitive advantage in the market.



### About the startup

IONOS is a startup company active in research and experimental development services in agricultural science. The company's goal is the safe and effective use of agricultural drones with innovative training and research practices as well as the development of new farming methods and standards. The IONOS team is constantly adapting to the constantly changing environment, with faith in our principles, judicious use of cutting-edge technologies, and above all, respect for Earth. The rapid development of technology and the ability of precision allows them to move on to a new model while reducing the human footprint on the environment.

Field of expertise:

Date of establishment:

Team members: 3

www.ionos.com.gr

Sensing & IoT

02.01.2019

Webpage:

Farm Management Software,

### Flagship products/services

IONOS is active in the area of agriculture drones and is the official representative of "TTAviation" in Greece. Specifically, IONOS provides expertise and sophisticated equipment in R&D, training remote pilots and consulting. IONOS operates and strives to:

- Support the UN Sustainable Development goal
- Contribute to research and development in the agricultural sector
- Ensure biodiversity
- Reduce the use of harmful substances
- Participate in the knowledge society through education



## The plan to revolutionise the agrifood industry

IONOS has developed an innovative method of applying precision bait sprays with Unmanned Aircraft Systems (drones). This innovative method has a minimal environmental footprint and gives access to sloping and hard-to-reach areas, compared to traditional spraying methods and ground means. Additionally, IONOS in collaboration with Robotopia pioneers, with the implementation of autonomous drone platforms, which will cause revolutionary effects in the agricultural domain. Furthermore, IONOS with its skilled and proficient staff has the unique experience and ability to train drone pilots, capable of operating efficiently and safely within the context of EASA (EU Aviation Safety Agency) regulations.

### Goals for the future

IONOS' vision for the future is to leverage its unique experience and expertise in drone spraying in order to become a pioneer in this field beyond its borders. The next steps concern the consolidation of the partner network in southern Balkan countries and the further dissemination of safe and effective applications with drones to more producers throughout Greece. IONOS will continue to support the development and evolution of the knowledge and innovation ecosystem that surrounds it, through sustainable partnerships with research institutions, government agencies and technologically specialised groups for the development and documentation of new methods in agriculture using drones, thus contributing to the evolution of the primary sector. Finally, a very important field that will be activated even more, is the training and certification of Agricultural Drone operators in order to create a safe operating environment on the ground and in the air.

## NEUROPUBLIC

Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

12.02.2003

Team members: 120

Webpage:

www.neuropublic.gr/en

### About the startup

NEUROPUBLIC is a Greek pioneering Computer & Information Technology company, specialising in the development of highperformance Cloud and Web integrated IT systems & applications. It has extensive experience & expertise in the development of IT products & services for the agrifood sector, while providing high-quality services to organisations & companies. Currently, over 800.000 end users in agriculture & Public Administration are successfully using its products & services. NP holds a leading position in the field of agriculture, by bringing a broad range of technological services to the private & public sector. At the same time, it is investing largely in R&D, by focusing on the creation and evolution of the innovative gaiasense smart farming system, which aims to digitise & reform agricultural production in Greece. The company has created the first & only large-scale Internet of Things infrastructure in Greece, using thousands of wireless sensors of its own design & manufacture, installed on agricultural land.

### Flagship products/services

gaiasense is an integrated smart farming system. Its technological infrastructure consists of thousands of IoT sensors, designed & manufactured by NEUROPUBLIC, which have been installed in a large number of plots in Greece and Europe. The gaiasense system allows farmers to enjoy one of the most advanced smart farming advisory services in Europe through a subscription, which depends on the size of their holding, and without having to invest in any technological equipment. The gaiasense system combines numerous information technologies, such as Big Data, Machine Learning, Cloud Computing & IoT with multidisciplinary sectors such as agricultural engineering, soil science and meteorology. NEUROPUBLIC develops all technological components of the gaiasense system: software, telemetric stations, sensors, computer systems and data analytics; moreover, the company has the operational responsibility for the development and operation of its network of stations that cover an extensive area across Greece.

### The plan to revolutionise the agrifood industry

NEUROPUBLIC aims to be a dynamic part of the global, European and national ecosystem for the green and digital transformation of agriculture, with respect for humanity and the natural environment. More specifically, NP aims to continue to innovate in the field of IT systems and form a key pillar in the restructuring of the agricultural sector. By becoming a leading force in the sector of smart farming and agriculture in general, both in Greece and in Europe, it aims to offer innovative services for the development of the agrifood sector. With its gaiasense smart farming system, NP allows farmers to produce "more with less", making the best out of the available natural resources & agrochemicals, improving their income and competitiveness in the global markets, and reducing the environmental impact of their production. Using gaiasense, farmers can meet the requirements set by the EU Green Deal and Farm to Fork strategy, towards a more sustainable agrifood sector.

### Goals for the future

The activities undertaken to date by NEUROPUBLIC in the agricultural sector have enabled the company to enter an ever-increasing part of the Greek and international market, related to the development of new smart farming products and services. The company's next steps include a state-of-the-art fully automated production unit, which allows the company to study, develop and produce technological products for the agrifood and other sectors, while maintaining full control of the quality and cost, and directly offering highly reliable and competitively priced solutions made in Greece. Over the next few years, NEUROPUBLIC will work to make its smart farming services accessible to all producers, producer organisations and agricultural cooperatives in Greece, thus making the digital and green transformation of Greek agriculture a reality as a whole, and to continue expanding the use of the gaiasense smart farming system abroad.



### About the startup

Proud Farm was established at the end of 2018 as an official group of farmers, with the aim of developing new technologies for dairy sheep and goat farming and creating alternative business models for the entry of young people into this field. Proud Farm is a founding member of the Mediterranean Agrofood Competence Center (MACC), the InoFA (Internet of Food Alliance) Innovation Cluster and the first non-profit energy community Proud Farm. It is also the first official startup company of Western Macedonia, registered in the national database of Elevate Greece.

### Flagship products/services

Proud Farm has started the effort to reverse the conditions of the economic system that invites young people to invest significant amounts of money for their entry into dairy sheep and goat farming, and to highlight a model that will feed back and can create sustainable farmers with minimal capital, through the establishment of the world's first dairy goat and sheep incubator. This is the only initiative in dairy sheep and goat farming that is organised at this level and has a clear social orientation. The incubator structure will itself be a product that can be replicated in different areas. The social dimension will be the vehicle for the more efficient development of the network, the securing of raw materials and the promotion of the produced products.

Proud Farm operates as a first distributor of sheep and goat milk, collecting and reselling from local producers. In addition, it is the first to present to the Greek market the organic fertiliser made from sheep's wool, initially processing Greek wool in Austria, and then developing its own production unit in Kozani. Proud Farm also develops in collaboration with the American Farm School of Thessaloniki the educational platform for elementary and high school children " $\Phi$ άρμα εν Τάξη" which can be translated as "Farm in Order". Last but not least, it develops the first integrated system for the calculation of the dairy sheep and goats operations IOFC (Income Over the Feed Cost), with the aim of promoting it to farms in Greece and abroad.

### Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

10.05.2018

Team members: 2

Webpage:

www.proudfarm.gr





## 2.15

### Field of expertise:

### Farm Management Software,Sensing & IoT (Agricultural Robotics, Precision Agriculture & AI)

Date of establishment:

### 07.08.2020

Team members: 5

Webpage:

www.terrarobotics.io



### About the startup

TERRA ROBOTICS is an Agritech startup based in Northern Greece -Thessaloniki, specialising in Robotics and Al. Its team members have extensive experience in the Automotive & Mechatronics, Robotics & Machine Learning and Agronomy industries as also they share the vision to participate in the transformation of the agriculture sector with sustainable Agritech solutions and products. Its vision is to create a digital-twin for the farmers, through powerful Al algorithms and a userfriendly web platform in order to increase productivity, efficacy and our food quality, aiming for a greener agriculture future through integrated crop management practices and herbicides usage minimisation. In modern agriculture, the rapidly growing field of agricultural robots deeply participates in the integrated crop management and this is highly aligned with our goal to contribute to the weed control problem through precision agriculture and herbicides usage minimisation.

### Flagship products/services

TERRA ROBOTICS' core product is a fully autonomous and electric robotic platform for high precision organic weed-management. It is highly extendable with already existing farming equipment and thus it can also be used as a farming assistant. It is also equipped with different sensors which during its field operation collect a vast amount of data. This data are processed in real time from smart algorithms and used to produce important statistics and field information - both of them critical aspects for the optimization of the production and the optimal field/crop conditions. The goal is to provide these solutions in both small and large producers and, thus, the business model includes direct sales of the robotic platform with its full capabilities as well as services (weeding, crop monitoring, farming assistance) through the Robotics-as-a-Service model. This hybrid business model gives TERRA ROBOTICS the ability to have a large customer base and a significant recurring revenue stream.

### The plan to revolutionise the agrifood industry

TERRA ROBOTICS' solution is fully aligned with the EU Green Deal direction for herbicide usage minimization, organic farming and novel solutions to increase farming production. Organic weed management under the umbrella of Integrated Weed Management has become a necessity in the last years for the following reasons: i) Environmental impact of the agriculture sector, where herbicides contribute a lot to it, has come to an alarming state ii) Weeds are becoming more and more resistant to the herbicides and thus their treatment is becoming extremely difficult if not impossible iii) Regulations have become very strict and thus the R&D cost for herbicides development is extremely large. Finally TERRA ROBOTICS' smart platform through smart analytics provides significant information for the optimal crop state and natural resources management and thus the combination of the above objectives makes it a unique solution towards the transformation of the agriculture sector.

### Goals for the future

TERRA ROBOTICS has been operating since the summer of 2020 and has succeeded in many different aspects of both business and technical development. Despite many distinctions in national and international pitching and business competitions as highlights are considered its participation in the John and Mary Pappajohn Business Plan Competition, NBG Seeds Business Development program, Bayer Level-Up Accelerator and EIT-Food Seedbed Incubator programs. These programs, despite the financial contribution through grants to the technical development of the initial idea, also provided the team with important knowledge in business development, financial planning, team building and go-to-market strategies. TERRA ROBOTICS' focus from now on is to finalise the MVP development and start its first field trials. On top of this, the team with its mentors will develop a solid business plan to seek for pre-seed funding and secure the first clients in order to fully commercialise its products.

### Funds raised:

Received grants from John & Mary Pappajohn competition and the EIT-FOOD Seedbed incubator.





Field of expertise:

Farm Management Software, Sensing & IoT

Date of establishment:

27.07.2021

Team members: 6

Webpage:

www.refarm.online

### About the startup

REFARM is established in Syros Island of Cyclades as a living laboratory to validate and upscale technologies making farming autonomous, self-sufficient and sustainable. The company introduces a software to assess, handle and manage self-guided farming needs integrating our platform with robotics and nanotech. REFARM's vision is to deliver automated and autonomous farms of any size through emerging technologies such as EO (Earth Observation), IoT, AI and BDA (Big Data Analytics). REFARM is engaging 3 test sites in Greece as living laboratories. These test beds are in suburban or remote areas examining autonomy for water, energy and crop efficiency.

### Flagship products/services

REFARM will deliver autonomous sustainable farms of any size. These will be operated through emerging technologies such as EO (Earth Observation), IoT, AI and BDA (Big Data Analytics) or manually. Creation starts from the concept by advising on what type of cultivation would suit the convergence of a particular field. REFARM members search tradition, the related microhabitat and the market needs. The endpoint is recycling and support of an Agricultural Sector towards minimisation of Carbon Footprint. In between are the pillars of REFARM's services:

• Design complementary plantations to optimise cultivating growing factors.

## 2.16

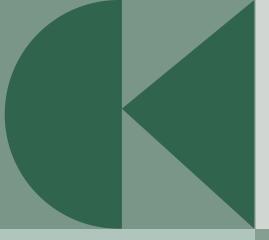
- Creation of pipelines for best quality of selfproduced fertilisers with plants or animal farming
- Full autonomy on energy, water and communications services
- Potential for complete automation from tilling to harvesting, packaging and recycling,
- Options for manual operations at any point through guided support on operational uncertainties.

## The plan to revolutionise the agrifood industry

REFARM will provide turn on key solutions for the overall farming process. From the start of selecting appropriate cultivation for a particular field, up to consumption and recycling. For farming commercially, the company can automate selection and packaging ready for distribution and waste management. Even small fields of less than 4.000m<sup>2</sup> can deliver enough farming space to feed a family with organic vegetables, livestock and fruit. In case interested customers have no clue, we can create an Auto and Robo Farm Model (ARFM) to do everything. On the far end, REFARM can provide its services for extensive types and combinations of cultivations. Extending this network with an annual subscription, the company provides support from experienced farmers and agronomists on a 24/7 basis even at the most distant areas. This is done remotely on a first instance and if necessary, our advisors will come in person to guide and propose personalised solutions to "farmers", according to needs! The company collaborates with farmers and agronomists to provide support locally, wherever local is.

### Goals for the future

REFARM is operating in a new but ancient field of operation where everybody starts from the starting line now. Automation in farming is one way and combined with autonomy is the most promising way. The company is small and agile and this is a privilege compared to big companies, and aims to validate the concept and create a task force in 3 years time that will be able to operate globally. The 4th year we will carry out mass marketing, train personnel and establish branches or at least agreement with local agriculturalists in many countries. The 5th year REFARM will be able to operate globally automating farms all over the world. With its pricing policy development, growth will come from its own resources. After the 4th year a growth rate of 15% is expected following an exponential growth for years 6 to 9. In terms of company social responsibility and personal culture, REFARM is interested in the environment and keen on a circular economy, aiming for a sustainable future for our children.





Field of expertise:

Farm Management Software, Sensing & IoT Date of establishment: 30.10.2018 Team members: 1 Webpage:

www.zenagropc.com

### About the startup

ZenAgroPc was founded in 2018 with main objectives the digital transformation, the adaptation to precision agriculture and the provision of advisory services to agricultural holdings.

The development of software has been based on research results and methodologies proposed by FAO. Precision irrigation is already applied successfully in 6 cooperatives growing olives under conventional and biological patterns. With high reputation scientific partners from agricultural research, mechanical engineers, scientists of Information Technology and Communication.

### Flagship products/services

The company has developed software for precision irrigation, providing specific advice for irrigation for all kinds of crops (trees, vegetables, row crops, etc). The information is specialised for each parcel and is communicated via SMS and e-mail to the producer or directly to automatic electro valves with water-metre.







### The plan to revolutionise the agrifood industry

The software contributes to the reduction of inputs in agricultural production, not only in terms of water but also inputs related to nutrients and through them to protect the environment and reduce production costs. Open data is also used and provided. By opening environmental data it is not necessary for each farmer to have their sensors and so there is a cost reduction.

### Goals for the future

The company has started an important collaboration with an Irrigation automation company in order to provide complete precision irrigation solutions. At the same time, it has also started the development of software for pest forecasting for the olive sector. Those will be the axes of company development for the next few years.

### Angelos Rezos, Founder & CEO of Rezos Brands

Contribution to the sector: I started the company Rezos Brands SA, an agrifood SME superfood and functional food company in 1989, along with experienced professionals, adopting the vertical business model: "From farm to fork". Motivated by our will to contribute to the agrifood sector, we cultivate superfoods at our farm in Meteora, Greece. We established precision agriculture to develop, monitor and analyse high nutritional value crops, which we process with innovative techniques (nonthermal osmotic procedure a.o) to keep all vitamins. We develop novel functional foods, package and distribute them to Greek, European and, recently, global markets. Via our European R&D department, we provide training, mentoring, and coaching to several stakeholders and startups through innovative platforms. Dedicated to our mission to always support environmental protection, we have also developed gasifier infrastructures for the valorization of agri waste, rainwater management system with sensors and an urban innovative greenhouse.

The best way to support startups and scaleups: Small businesses are the backbone of the economy by creating jobs, driving innovation, and spur economic growth. However, they need dedication and a strong support system for advice, mentorship, coaching and resources. The most effective support systems for startups are: i) business incubators or accelerators, providing access to workspace, Starting a small business is difficult, but it's not impossible. With the right support system in place, you can turn your dream into a reality!

mentorship, funding and a community of like-minded entrepreneurs, **ii**) online communities dedicated to helping small businesses succeed, **iii**) a team of managers/entrepreneur's accountants, lawyers and business consultants, who can provide advice on bureaucracy issues for a business to be legally listed and run smoothly.

The development of agrifood in the coming years in Greece/ Trends and new technologies: According to extensive study, the sector should feed 40% more people and have increased food production by 70%, while arable land will have increased by just 10%. By then, 68% of the global population will live in urban areas, while 12% will be malnourished, with arable land per capita estimated to have fallen from 0.23 hectares acres today to 0.15. The Agrifood sector contributes significantly to Greek exports, presenting, for the first time in several years, in 2020, a trade balance with a surplus of €207 million. The climate crisis is leading us to take immediate action to address serious agrifood issues, such as food waste, reckless use of water resources, greenhouse gas emissions, soil degradation and biodiversity reduction.

A growing number of entrepreneurs and technology experts have joined agritech in recent years, as the traditional approach of the food industry needs to undergo a fundamental transformation. European Agrifood startups attracted investments of about \$1.6 billion in 2018, of which \$900 million for startups operating from farming to food processing – a huge 200% increase over the prior year! The Upstream tech trends -related to farming and food processing-, are the ones facing the main agricultural challenges of the coming years, and they include new farming systems, precision farming, alternative proteins, and agricultural biotechnology. Al and robotics, Agricultural biotechnology, Vertical farming, Precision farming and Alternative sustainable protein production are technologies that ensure smarter use of resources, reduced amount of resources, increasing the productivity and sustainability of the agricultural processes.

Healthy foods and snacks with no added salt and sugar, plant-based, insect-based, cell-based, 3D-printed, personalised, and gene-edited foods, as well as foods resulting from by-products are the ongoing food trends. All these are supported by extensive technological innovations, undertaken by the 4th industrial revolution technologies. Eating habits are also changing rapidly, as consumers are

> now more aware of health, wellness, and nutrition, as well as environmental and social issues. Their access to websites, mobile apps, and social media provide consumers with the possibility of faster and more complete information, influencing their attitude and their commitment to the products they choose.



Produced Locally • Sold Globally

Field of expertise: **eGrocery** Date of establishment:

25.03.2017

Team members: 6

Webpage:

www.managi.eu, www.b2bmanagi.com

### About the startup

ManaGi is the first outsourced exports department for Greek producers and the first one stop solution hub for International buyers (B2B & B2C).

### **Flagship products/services**

ManaGi facilitates extroversion for Greek SMEs striving to enter global markets while simplifying the access to high quality and nutritional value products to International buyers.

### The plan to revolutionise the agrifood industry

By facilitating the business model of cooperative economy the plan is to create the largest producer's cluster in the world, achieving economies of scale, ultimately and hugely increasing the competitiveness of their products and the extroversion of their businesses as well as Greece's balance of trade in total.



## 3.1

### **Goals for the future**

ManaGi strongly believes that they will be the largest marketplace for Greek products worldwide.

### Funds raised:

Grant of 85,000 from the government



Field of expertise: **Agribusiness Marketplaces** Date of establishment: **01.09.2017** Team members: **22** Webpage: www.wikifarmer.com

### About the startup

Wikifarmer is a global platform aiming to empower farmers by educating them and offering them access to the open market to sell their products at fair prices. Currently, Wikifarmer has more than 16.2 million unique users online, 10.000 registered producers, and 19.500 products, as well as free educational material available in 16 languages. The platform's Library is the biggest open source for agricultural knowledge for farmers globally, while Wikifarrmer's effort has been recognised by the International Food and Agriculture Organization (F.A.O.) of the United Nations by characterising it as "The Wikipedia of Farming." The Wikifarmer Marketplace gives access to the local & global agricultural markets, enabling thousands of farmers across countries to create more distribution channels for their products, gain direct access to thousands of businesses and reduce their dependence on intermediaries with no value. Offering its dual service - a Library that serves as the first farming encyclopaedia and a marketplace where farmers can sell their produce globally, Wikifarmer aims to provide convenience and transparency in the agricultural realm.

### Flagship products/services

Wikifarmer aims to enable farmers across countries to create more product distribution channels, gain direct access to thousands of businesses and reduce their dependence on intermediaries.

By simplifying transactions in the agricultural sector, Wikifarmer allows

## 4.1

everyone to have equal access to whatever information they need. Farmers can register and upload their products for free in the platform and Wikifarmer acts as their sales and marketing department, by promoting their products to thousands of B2B buyers. If a sale comes, Wikifarmer helps them fulfil the order and receives a commission out of this sale. This is how they manage to help producers sell at a higher price and buyers purchase at a much lower one. Wikifarmers also helps buyers purchase products with more transparency, safety, and responsibility, offering them all the necessary tools to productively source multiple products from multiple suppliers, acting as an extension of the sourcing department. The innovation behind this is that Wikifarmer is trying to create a 360 ecosystem to enable farmers to learn, sell, and make their lives easier in terms of logistics, financing, and other areas of their daily business lives.

## The plan to revolutionise the agrifood industry

Wikifarmer's long-term goal is to create a fair, transparent, and rewarding environment for all people involved in Agriculture. Higher profitability for farmers means more investments in their production capabilities, higher employment, and more sustainable farming. Fighting climate change is something the company strives for, and its members strongly believe that helping farmers learn modern and sustainable best practices while aiding them to get a larger value out of the supply chain can become the main driver toward a more sustainable agricultural world. In addition to that, by connecting farmers with the end buyer, they extract more value out of the supply chain with the digitization of farming commerce. Higher producers' profitability means an increase of investment in new technologies, new techniques, and better quality of products – which will eventually lead to a more sustainable agriculture from all dimensions.

### **Goals for the future**

Wikifarmer's main milestone is to become the leading platform for agricultural outputs in Europe, adding more than 100.000 farmers to our platform, so that anyone who searches for an agrifood product can easily find it on the platform. The second milestone is to develop their technological product in a way that buyers and sellers minimise all the effort and time needed to make a B2B transaction by automating most of the processes that are involved. In a 5-year period, Wikifarmer's ambition is to also enter markets where farmers really need them, such as Africa and Latin America.

### **Funds raised:**

"We believe what distinguishes Wikifarmer is the connection between the Library and the Marketplace. Becoming a hub for farmers and their potential buyers is what really makes the potential of the platform unlimited in terms of future offerings to these two audiences."

### Sotiris Siagas, CEO of Venture Stories Partners | TECS Fund, Partner

**Contribution to the sector:** Agriculture is one of the most critical and challenging industries due to factors such as climate change, limited resources, and increasing demand for production. Agritech, as the applied technology that addresses key challenges in the agrifood sector, aims to lead to more efficient and sustainable farming practices. As an engineer, entrepreneur and early-stage investor, I am always trying to identify opportunities based on solving a real problem and having a positive impact on the world. As a partner of TECS Capital, I have recently led the pre-seed round of two emerging Agtech startups, Agroverse and Oliveex.

**The best way to support startups and scaleups:** There are several ways to support startups and scaleups. Ultimately, the best way always depends on their specific needs and the resources available in their community. By working together to provide better funding, mentorship, resources, networking opportunities and policy support, we can help companies succeed and drive innovation and growth in our economy.

The development of agrifood in the coming years in Greece/ Trends and new technologies:

Greece has a strong tradition in agriculture, with a variety of products that are highly valued internationally. In recent years, there has been a growing interest in sustainable agriculture practices as people are looking for ways to increase efficiency and reduce waste from farm to table. We have seen an increasing interest in agritech and innovation to develop new techniques and products. Precision agriculture and vertical farming are areas that are gaining momentum in Greece. Blockchain and Al have the potential to improve everything from transparent tracking and efficient supply chain to optimisation of crop yields and increase in food safety. Key trends in consumer habits include emphasis on health, wellness and convenience, increased demand for plant-based products (meat alternatives), growing interest in organic and traceable products and sustainability. Overall, the development of agrifood in Greece in the coming years is likely to be shaped by a combination of technological innovation, sustainable practices, and diversification of crops and markets.

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Field of expertise: **Agribusiness Marketplaces** Date of establishment: **06.08.2021** Team members: **2** Webpage: **www.agro-u.com** 

### About the startup

Agro-U is a platform that connects farmers and agricultural cooperatives with seasonal or permanent staff. The company uses technology to make the process easier and more efficient for everyone involved.

Through Agro-U, employers can seamlessly connect with the right candidates at the right time, minimising the stress and hassle associated with labour sourcing. Meanwhile, employees benefit from Agro-U's comprehensive suite of services, including timely and guaranteed salary payments, proper working conditions, and even opportunities to extend their seasonal employment.

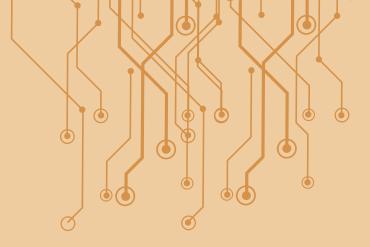
The company's platform has already proven successful, and as more and more farmers and cooperatives turn to technology to find staff, its members are excited about the opportunity to grow and make a real impact in the agricultural sector.

### **Flagship products/services**

Agro-U marketplace facilitates seamless communication between farmers and workers, providing a reliable solution for agricultural labour needs. With just a few clicks, farmers can access a pool of available workers, communicate with them effectively, and efficiently schedule them for harvest or other agricultural jobs.

Within just two years, over 64.000 users have utilised Agro-U's service to either find their desired agricultural job or hire the right staff. This impressive traction demonstrates the market demand and the scalability

4.2



of our solution, making it an exciting investment opportunity for those looking to tap into the rapidly growing agricultural sector.

### The plan to revolutionise the agrifood industry

Agro-U innovative web app represents a significant breakthrough in the hiring process, revolutionising the way employers find the right candidates for their workforce in the agrifood sector. Unlike the limited and outdated options currently available, their platform streamlines the process, enabling employers to secure staff in mere minutes.

With the use of technology, the company's platform provides a seamless, user-friendly experience for employers, eliminating the frustration and delay typically associated with the hiring process. Their solution is both efficient and effective, saving valuable time and resources while ensuring employers secure the ideal candidates for their agricultural-related jobs.

Moreover, Agro-U is aiming to align with the United Nations' Sustainable Development Goals (SDGs), contributing to the different Goals and particularly to Goal 8 - Decent Work and Economic Growth. Their mission is to promote sustainable agricultural practices and support the growth of the agricultural industry.



### **Goals for the future**

Agro-U's goal is to provide its service globally, starting from the European market. Within the next 5 years, the company's goal is to provide their service in Greece, Italy and Spain and have 35.000 registered employers.

### Funds raised:

Agro-U has received grants from startup competitions and is currently seeking an Angel investor.



Field of expertise:

Innovative Food (Coffee Beverages) Date of establishment: 24.04.2019

Team members: 3

Webpage:

www.firstcoldbrew.com

### About the startup

First Cold Brew was founded by coffee specialists with a vision of offering the best possible quality of coffee everywhere and at everytime. Its purpose is to offer the direct and easy access of the consumer and the professional to innovative ready to drink coffee products.

Founders saw the market gap and the opportunity of making something unique, feeling that their mission is to change the way that people see bottled coffee, so they created the first and only cold brew company in Greece.

### Flagship products/services

First Cold Brew The Original Coffee, comes in various flavours and packaging depending on consumer needs.

- It is an authentic coffee ready to be consumed.
- It stands out because it is a natural coffee that does not contain sugar, has no preservatives or food additives.
- It is made with high quality coffee beans 100% Arabica "Specialty Grade".
- Coffee beans are roasted and extracted with modern and innovative methods.

The cold brew method by First Cold Brew is the most natural method of coffee preparation, in which high temperature is not used at any stage of production, nor pressure.

What is achieved through the innovative extraction method is a sweet and mild coffee with a lasting aftertaste and low in acids.

That is, a coffee that firmly holds its taste characteristics over a long shelf life, breaking down the failures that traditional methods of preparation or correspondingly bottled coffee products usually have.

### The plan to revolutionise the agrifood industry

First Cold Brew products are a game changer in the market. For the first time people have the chance to taste an original coffee in a bottle or can. First Cold Brew plans that with great distribution and the proper marketing, people will learn about First Cold Brew and its purpose, so not only will they consume the products but they will change their coffee-drinking habits and choose better quality coffee wherever they buy it from.

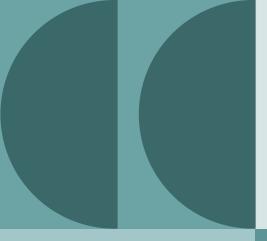
### **Goals for the future**

The company in those four years has achieved more than it was believed at the start. In the next five years First Cold Brew aspires to be a synonym of Cold Brew Coffee in Greece, through upgrading their facilities continuously and expanding their distribution.

### **Funds raised:**

Two times Epanek ESPA subsidy







Field of expertise: Innovative Food Date of establishment: 18.04.2018 Team members: 14 Webpage: www.nutree.gr

### About the startup

NUTREE is one of the most innovative companies in the agrifood sector of Greece. NUTREE was founded in 2018 with the vision to integrate raw healthy snacks –which combine real, Mediterranean-inspired raw materials and authentic flavours– in everyone's daily eating habits. NUTREE operates within its integrated offices and production facilities in Athens (ISO 22000 certified). What makes NUTREE special is its unique know-how in researching and developing delicious healthy snacks as well as the modern equipment it uses for their reliable production, packaging and distribution in the market.

### **Flagship products/services**

One of the main innovations of NUTREE plant-based snacks (both organic and 100% natural) –handmade raw energy bars and protein fudge bars– is their unique combination of high nutritional value, exceptional taste and sense of satiety, all in a premium on-the-go package with aesthetic design. NUTREE raw bars are a vegan & gluten-free blend of unsweetened dried fruits, nuts, spices and unique flavours made of real, 100% natural and raw ingredients that retain all their valuable nutrients (vitamins and minerals).

### The plan to revolutionise the agrifood industry

NUTREE's vision is to integrate healthy snacks - which combine real, Mediterranean-inspired (mostly Greek) raw materials and authentic flavours - in everyone's daily eating habits. The company aims to constantly develop innovative solutions and become a leader in the snack industry sector.

### **Goals for the future**

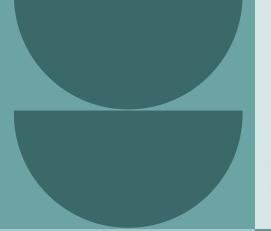
Within the next five years NUTREE aims to develop a wide range of product portfolio and export its products globally. Within the next two years NUTREE expects to have a new round of investment to further increase our production facilities.

### **Christos Stamatis, CEO of Stevia Hellas**

Contribution to the sector: Stevia Hellas started out in 2011. Our innovation at the time was uniting two diverse groups of professionals, producers and the business world, which I came to represent. This practice was innovative because at that time agricultural cooperatives were formed solely by producers - and I believe that our success is owed by 90% to this practice. In our 12 years of activity, we are proud to have helped tobacco producers shift to stevia cultivation in Greece. We have led the initiative, which started two years ago, in cooperation with Philip Morris and Papastratos, to encourage tobacco producers to shift to stevia cultivation. Investing in the human capital, through practical training, is our priority, and we train producers not only to address cultivation issues, but also farming management and environmental issues. Having led many initiatives in environmental, economic and societal sustainability we continue to grow, while our latest investment is creating the new Stevia Hellas facilities in Lamia, whose construction started a year ago.

**The best way to support startups and scaleups:** For the Greek ecosystem of startups and scaleups to develop, there needs to be a strategy in place form the government that will create more and more funding opportunities. If there are no guidelines for the right direction, it is impossible to boost enterpreneurship. Apart from a unified strategy, training is also essential; I am talking about real, substantial training - not nominal, where producers are given clear and concise guidance by agronomists.

The development of agrifood in the coming years in Greece/ Trends and new technologies: As mentioned before, it is crucial to have a strategy, while technology seems to be of primary importance in the agrifood sector, with more initiatives emerging. However, great changes arise from a change in mindsets; the technology is here but unless mindsets change, it is very difficult to move forward. Investing in the human capital through training means that this generation of producers will raise a next generation that will think and act very differently from the previous ones, towards innovation.





### About the startup

Physis Ingredients was founded in 2017 in Serres, Greece. The scope of the company was to exploit the rich Greek flora and produce innovative ingredients. It started its journey from the field, with 40 acres of aromatic plants cultivation, while focusing on scientific research so as to develop innovative plant extracts. The vision of Physis Ingredients is to contribute to the industrial transition towards the "clean label" products; a movement that has arisen due to the increased market demand for products with no artificial additives and more natural ingredients. The mission of the company is to provide Greek, natural, scientifically validated innovative ingredients to industries, so that they offer added value products to their own clients.

### **Flagship products/services**

The main products are plant extracts. Physis Ingredients holds contract farming cultivations of aromatic plants, therefore it has vertical production of its products and can ensure their quality. In addition, after years of research and collaboration with the A.U.Th., the company has developed three innovative branded ingredients with technological actions; an antioxidant blend, a colouring food out of cornelian cherry and a feed supplement for ruminants, found to enhance milk production and overall health of the animals.



### The plan to revolutionise the agrifood industry

The products were developed through thorough scientific research and offer innovative alternatives to already existing ingredients that industries use. The increased market demand for clean label products with natural ingredients will finally be met. Physis Ingredients' innovation stands in the custom-developed process and unique ingredients that come from locally-owned fields.

### **Goals for the future**

In five years time, Physis Ingredients should be able to move to a new factory with increased production capacity in order to cover a bigger part of the foreign market. Field of expertise:

Innovative Food

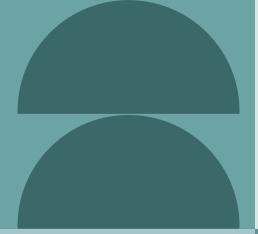
Date of establishment:

17.05.2017

Team members: 1

Webpage:

www.physisingredients.gr





Field of expertise: Innovative Food Date of establishment: 21.05.2019 Team members: 12

### About the startup

Solmeyea is a multiply-awarded company intersecting with Biotech & Climatech providing the best in class white plant-based proteins which are 3 things:

- 29x more efficiently produced vs conventional crops
- better quality in terms of functionality, colour, taste
- a negative carbon footprint

### Flagship products/services

How does Solmeya achieve this in two steps?

- Based on the IP-protected technology of utilising CO<sub>2</sub> volumes from heavy CO<sub>2</sub> emitters
- By growing proprietary microalgae strains vertically using Glass tubular Photo-BioReactors and Biofermentors

5.4

The production of food proteins is domestically localised out of simultaneous assimilation of  $CO_2$ , instead of importing the heavily commoditised soy or glucose, so as to ferment any sort of biomass.

As a result, our produced proteins end up having the lowest environmental impact in terms of carbon, water and land.





#### **Goals for the future**

In 5 years, most of the IP-protected technologies are expected to have reached at a mature and evolved stage and licenced to affiliated  $CO_2$  emitting companies, utilising most of their emissions, converting them into premium bio-based food, feed, cosmetics and 3rd generation of biofuels, as well as providing  $CO_2$ allowances to the Aviation and Shipping / Maritime industry.

## Funds raised:

Startup & Scaleup Guide 7



Field of expertise: Innovative Food Date of establishment: 15.10.2019 Team members: 6 Webpage: www.stymon.com

#### About the startup

The startup company STYMON Natural Products, specialises in research, development and marketing of innovative products based on natural products the Greek nature offers us. The company aims to market products that contribute to sustainable development and reduce, to the extent possible, the environmental footprint of the industry. The aromatic, nutritional, nutraceutical and pharmaceutical value of a variety of Greek natural products is widely known and undisputed. The aim is to exploit these products to supply customers with products of high value. Using the state-of-the-art method of lyophilisation (freezedrying), quality products are offered to the food, feed, cosmetics and pharmaceutical industries.

#### Flagship products/services

**StymonPhen:** Natural flavour with the organoleptic characteristics of olive oil, that also has secondary unique antioxidant and antimicrobial characteristics. It is an innovative product (clean label), used primarily in vegan products as well as in any products using only natural ingredients.

**StymonPhen-Feed:** The product StymonPhen-Feed, is available as an additive in animal feed. It has antioxidant and antimicrobial properties, as well as the organoleptic characteristics of olive oil.

Fruits and vegetables freeze-dried to retain their valuable ingredients, colour and aroma.

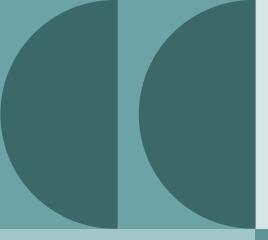
# 5.5

With circular economy practices, the utilisation of by-products of the olive-mill industry, which present an environmental hazard, STYMON manufactures high added value products.

#### **Goals for the future**

To be the innovative, preferred supplier of natural olive polyphenols and natural lyophilised (freezedried) products from Greek fruit, vegetable and olive cultivation for customers in both Greece and the international markets.







#### **Goals for the future**

The main goals are a new and bigger production line, presence in the most important Greek cities and maybe abroad as well.



Field of expertise: Innovative Food Date of establishment: 10.06.2021 Team members: 2 Webpage: www.wildferments.gr

#### About the startup

Wild Ferments PC produces sourdough and raw materials for the food industry with probiotic characteristics. The company engages in breadmaking, flour-making, pastry and ice-cream production, since the 1980s, maintaining the same curiosity and positivity to bring out the best possible results.

In 2012 the company experimentally started engaging in research and development of products with probiotic characteristics. That goes to say that in a targeted manner, Wild Ferments PC grinds seeds, microorganisms, sourdough, ferments, smells, tastes and special nutritional characteristics. The outlook that nutrition is a definitive factor for health and life quality is something firmly supported by the compnay. Wild Ferments is the actualisation of this outlook and is proud to be supporting an everyday life towards this direction.

#### Flagship products/services

Wild Ferments PC researches, develops and produces solutions for field professionals driven by quality quality assurance, nutritious and professional best interests.

Through the services and products that are offered amateurs interested in honing their skills can also benefit and acquire extensive experience and control over nutrition.

#### The plan to revolutionise the agrifood industry

Wild Ferments PC provides special organoleptic characteristics through the products, and special knowhow through technical support.

### Antonis Andronikakis, journalist in "Ypaithros - Chora" newspaper

Contribution to the sector: As a journalist, I've been following tech, innovation and entrepreneurship in agriculture since 2018, writing articles in Ypaithros -Chora newspaper and ypaithros.gr website. Through this exciting journey I've met and interviewed numerous startuppers, mentors, government representatives and other people related to the ecosystem. I've tried to provide readers with valuable insights and statistics that can give "the bigger picture", as well as interesting unique stories that accompany many Greek startups. I've seen the early days of the agritech sector, when only a handful of enterprises existed, and I've witnessed the growth of the ecosystem that led to the creation of the national startup registry, "Elevate Greece". We live in times of rapid changes and high uncertainty. But these are also exciting times, of breakthroughs in the agrifood sector, led by technology and innovation. I'm happy to be a part of it and keep informing people.

#### The best way to support startups and scaleups:

Through my experience, some of the major challenges that need to be addressed are the following:

i) More funding from VCs: Over the past few years, the Greek agri startups have made huge progress in the investments they attract. However, there is more room for growth and prosperity. As far as the VC funding option and availability is concerned, only a few players have managed to secure such financing. With the recent achievements of Greek agritech startups from a financial result perspective, there is great momentum for attracting additional foreign VCs in the space to invest in Greece, but also for making VCs already operating in Greece, to include the specific industry in their portfolios.

**ii) Less bureaucracy:** There is a need for improving the bureaucratic process related to grant review, approval and award. A typical issue concerning Greek startups is that funds are received several months after obtaining approval. Further digitisation

and optimisation of the documentation process throughout all grant phases, in the relevant platforms would drastically increase their efficiency.

iii) Decentralisation of the ecosystem: Due to the fact that most agritech startups are based in major, populated Greek cities, there is a necessity for decentralization. In other words, there is a need for more infrastructure and support beyond Athens and Thessaloniki, so that more startups can be created in other rural and less developed areas of Greece.
iv) Raising awareness and attract more talent to the industry: It is of great importance that the agritech and foodtech sector gain the attention they deserve.

The Greek market has a large pool of high caliber professionals and talents that are not even aware of the prospects, the opportunities and the meaningful challenges that the agrifood innovation industry can offer.

The Greek market has a large pool of high caliber professionals and talents that are not even aware of the prospects, the opportunities and the meaningful challenges that the agrifood innovation industry can offer. Educational institutions, the media and large scale recurring conferences can increase awareness and visibility of the sector.

The development of agrifood in the coming years in Greece/ Trends and new technologies: During the last decade, we've seen how far Greek startups have gone. Year after year, they've raised their capacity and ambitions, even though they have passed through rough times and unfavorable conditions. Economic recession in Greece, the pandemic and the war crisis in Ukraine were some of the biggest hurdles a company could face. Bearing in mind that only one out of ten startups can survive the early stages and enter the growth stage we should be positive and optimistic for the Greek agritech ecosystem. The recent acquisition of Augmenta from CNH Industrial is a bright example that Greek talent, teamwork and persistence can make the difference so we can see more success stories in the immediate future.



## **Digital Bites**

Field of expertise:

## Consumer insights for Food and Retail

Date of establishment:

30.08.2022

Team members: 3

Webpage:

www.digitalbites.eu

#### About the startup

Digital Bites creates an all-in-one tool to enable food market researchers to test New Product Developments effortlessly, while gathering data of the highest quality. To do so, Virtual Reality simulations are automatically generated acting as immersive consumer experiments, in which the conscious and subconscious reactions of the users are measured and analysed.

The vision is to allow customer multisensory research within VR, meaning for all five senses, including taste and smell, through the use of immersive VR and electricity. This means enabling customers to taste and smell food over the internet!

#### Flagship products/services

Digital Bites creates immersive VR simulations that replicate consumer food choices, making them measurable. You can easily test different food concepts, packaging designs, formulations, shelf performance and the usability of the products you want to launch.

The best part is that you don't even need a physical prototype - you simply need 2D designs of your idea.

The possibility to integrate qualitative & quantitative, neuromarketing or any other data is given, according to your needs.

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Using Digital Bites' tool for conducting market and customer research, food companies will have the opportunity to utilise unprecedented zero-party data that are of the highest quality. Companies that invest in this type of tools, will be able to:

- Become much more agile, as they will be able to test multiple NPD concepts without the need to physically develop them
- Become more data-driven, getting both qualitative and quantitative data on the conscious and subconscious decisions of their target-consumers, increasing the success rate of NPDs
- Remove all biases and inconsistencies in product research and enable NPD researchers to focus only on the development of concepts that are expected to perform well in the end!

#### Goals for the future

In five years, Digital Bites aims to offer VR and Metaverse users the ability to experience immersive, multisensory, experiences. By this, it is meant to enable metaverse users to taste and smell (food) objects they interact with within the metaverse. At the same time, the company aims to enable product development researchers within the food industry to use Digital Bites' platform as an all-in-one tool, to conduct all types of product research, including sensory research.



#### About the startup

The firm was created in 2019 by Professor Dimitris Kouretas and a core team of researchers of the Laboratory of Animal Physiology of the University of Thessaly (LAP/UTh). FoodOxys, which was initially supported by Uni.Fund, aims to become a highly innovative company that will provide state-of-the-art services within the areas of nutritional wellness, testing and/or controlling bioactivity of food and beverages. Although new, the firm is based on highly skilled and experienced scientists that have a solid track record of their domain expertise on biochemistry and nutrition. They have already published more than 240 papers in world-renowned scientific journals and have developed a range of services that have been passed with success in their pilot phase. FoodOxys is targeting the enrichment of its current service portfolio within two discrete market segments:

- The wellness service providers with specific focus on Wellness Institutes, Medical Centers and Dieticians.
- The agrifood value chain with specific focus on producers of primary sector products and manufacturing companies of food and beverages.

Since 2021 FoodOxys is one of the companies of Elevate Greece.

#### Flagship products/services

The first set of services relates to the identification of health-related metabolic biomarkers in the human body. In each human body, there



#### Field of expertise:

Ensuring nutritional wellness in an individualised level, Testing agrifood products and dietary supplements bioactivity

Date of establishment:

#### 21.02.2019

Team members: 3

Webpage: www.foodoxys.com

is a redox status which is determined by its ability to produce antioxidants and to restore the damage caused by free radicals. The metabolic control of redox status informs the need of each human body in antioxidants and specifies the possible damages due to inadequate antioxidant capacity. The second set of services applies to food products, beverages and dietary supplements; it covers a wide range of topics on improvement of wellness based on the consumption of food by humans. FoodOxys has developed a certification method, the Activity FoodOxys Quality (AFQ). AFQ has been registered as a European Union certification mark by the European Union Intellectual Property Division. With this mark, products can be certified for the properties contained in their regulation of use. The European AFQ certification mark introduces a new innovative system for rating and classifying the quality of agricultural products from around the world.

## The plan to revolutionise the agrifood industry

FoodOxys' mission is to improve the nutritional wellness of the global ageing population through personalised diets and fasting. FoodOxys delivers its mission by building on world-class scientific research on the effects of antioxidants by the Laboratory of Animal Physiology at the University of Thessaly, serving both individuals seeking to pursue personalised diets matching their antioxidant profiles, and food/beverage manufacturers to enhance, validate and certify the nutritional content of their products. The AFQ marking system aims to introduce a new innovative tool in labelling that will enable consumers to compare the different products of each category and choose the best. Moreover the food companies will take action for the creation of more individualised products based on consumers needs.

#### Goals for the future

The company is currently serving clients in Greece and the EU and has set the goal to become one of the key players within the global market directly or by engaging in strategic alliances with other major corporations. Furthermore, more marks investigating the critical endogenous properties of foods are also coming up from FoodOxys. In the sector of human health the company is planning to create a wellness centre. Clients will have the ability to measure the antioxidant status of human blood, calculate the consumption of antioxidants and create an individual diet based on the person's needs. The whole idea behind the creation of our device is in accordance with a new international trend, that of individualised medicine and nutritional intervention.

#### Funds raised:

Uni.fund proceeded to a pre-seed funding in our company.

### Thomas Bartzanas, Vice Rector of Research, Finance & Development, Associate Professor, Agricultural University of Athens, Chair of Board of Directors, SmartAgroHub S.A

**Contribution to the sector:** I have been dealing with research and educational activities in the agrifood sector for more than 25 years. I am currently Associate Professor and Vice-Rector for Research, Finance and Development in Agricultural University of Athens. With a vision to see our research results to be part of the agrifood supply chain as products or services, we have recently launched a competence center in the area of smart farming in sustainability as a spin off of Agricultural University of Athens jointly with eleven innovate agritech Greek companies, in which I serve as Chair of Boards of Directors.

**The best way to support startups and scaleups:** Innovation in the agrifood value chain is hard. Startups in the agrifood sector have to face price competition, in combination with low margins and long payback periods. Access to finance, knowledge and networks are key elements for agrifood startups to grow and develop. Finding the right partners to unlock new potential in the marketplace globally can be a critical step towards viability and scaleup. For scaling up facilities that a technology/product has been initially developed, may not be as easily replicable from an entry market into expansion markets. Building a business strategy to overcome these issues requires different skills and resources than founding teams have or have readily available. So, developing the proper skills and acquiring access to funding is of a major importance for scaleups.

The development of agrifood in the coming years in Greece/ Trends and new technologies: The Greek agrifood sector is vital for the Greek economy and one of the strongest societal pillars in Greece. The Greek agrifood sector is composed of both agriculture & farming and food processing activities. In the face of depletion of natural resources, climate change, demographic change, the challenge remains the same: sustainable food production. The "4.0 revolution", driven by digitalisation, is leading economic sectors towards deep business transformations, with radical changes to business models, strategies, processes, products and services. Advanced technologies are essential in enabling the agrifood industry to increase efficiency (utilisation of time and resources) in production, while limiting the global impact of food production on the environment and reducing crop losses. In this aspect major innovation trends and emerging technologies are:

Smart farming technologies, Controlled environment agriculture, Regenerative agriculture, Internet of Things, Robotics, Drones, Big data and analytics

SCiO

#### About the startup

Data Management and Data Analytics Date of establishment: 15.02.2019 Team members: 14 Webpage: www.scio.systems

Field of expertise:

SCiO is a deep-tech company, providing innovative data-driven, AI-enabled services for the digital transformation of agrifood. SCiO specialises in different facets of data management and their analysis, from multi-parameter Descriptive Analytics to complex Predictive Analytics over large data volumes. Furthermore, it pushes the envelope on Prescriptive Analysis, building novel methodologies for determining, verifying and explaining analytical results. SCiO builds, customises and offers innovative machine learning methods that harness the power of deep learning without the need of huge data volumes for training such models. To do so, SCiO employs hybrid neural architectures in food production and food safety problems with global impact.

#### Flagship products/services

Via its products and services, SCiO aims to leverage digital and specifically data-centric technologies at the service of the agrifood industry. Via its dataX suite and the supporting infrastructure, the company offers complete technological solutions for the two core branches of data-driven agricultural research and practice. The suite incorporates tools that enable the collection, annotation and publishing of harmonised, interoperable data across agrifood relevant disciplines. Harnessing the power of its Qvantum platform, data are harmonised and pre-processed in record times, making it readily available for applying Al-powered analytics and facilitating decision making. Furthermore, via our collaborative data science platform, we enable agriculture and food scientists to work together using datasets securely

# 6.3

transferred from different trusted sources. The platform offers advanced services for data sharing and discovery, seamless integration with tools from different disciplines, and incorporates state-of-the-art technologies for data preservation, security and privacy.

#### The plan to revolutionise the agrifood industry

SCiO's services are built with a greater vision in mind; to enable truly cross-disciplinary, data-driven science for agrifood, in a landscape that is in dire need to face the continuously pressing environmental challenges. Towards this, the company aims to bring together scientists from different domains and countries, and make available to them critical, huge, and valuable data in a form that will enable them to use them effectively for their work and share their outcomes in the same FAIR-driven, and semantics-aware data ecosystem. Its members strongly believe that facilitating collaboration and data sharing and understanding will allow science to make leaps towards achieving global sustainability and environmental goals, while contributing to health and well-being for the people of the present and the future.

#### Goals for the future

As the company's vision for its product suite matures, SCiO strives to position itself in the global agrifood science community as strong and dedicated support for its datadriven endeavours. As such, its overarching goal for the next 5 years is to become global leaders in the provision of digital applications and infrastructures for agrifood data management and analysis.

#### **Funds raised:**

SCiO has received seed funding from Group on Earth Observations (GEO) as it was the winner of UNCCD GEO-LDN Competition for designing and building LUP4LDN a monitoring tool for Land Degradation (SDG 15.3.1). Moreover, SCiO has received grants for its participation in Horizon 2020 and Horizon Europe funded projects.



#### Field of expertise:

Novel Farming Systems, In-Store Retail & Restaurant, Tech, Restaurant Marketplaces, eGrocery, Home & Cooking Tech

Date of establishment:

11.11.2015

Team members: 7

Webpage: www.citycrop.io

#### About the startup

CityCrop is a company that specialises in the development of indoor gardening systems for urban environments. Their systems use hydroponic technology to allow plants to grow without soil, and are designed to be compact and energy-efficient. The systems also use artificial intelligence to optimise growth conditions for plants, such as light and temperature. CityCrop's goal is to make it easy for people living in urban areas to grow their own fresh produce, regardless of space constraints or lack of access to outdoor gardening spaces.

#### Flagship products/services

CityCrop's solution is an indoor gardening system that utilises hydroponic technology and AI, facilitating the cultivation of fresh produce in urban environments. The system is designed to be compact and energy-efficient, allowing it to fit in small spaces such as apartments and balconies. It uses hydroponic technology, which allows plants to grow without soil, using nutrient-rich water instead. This not only saves space but also allows for more efficient use of water and other resources. The system also uses artificial intelligence to optimise growth conditions for plants, such as light and temperature, ensuring that the plants receive the right amount of light and other resources they need to grow healthy.

Vertical farming, which is what CityCrop is, has the potential to revolutionise the agrifood landscape by providing a sustainable and efficient way to grow fresh produce in urban areas. By using vertical space, hydroponic systems, and LED lighting, CityCrop can produce crops year-round with a smaller environmental footprint than traditional agriculture. In addition to reducing transportation costs and greenhouse gas emissions associated with food transportation, vertical farming can also increase food security by providing locally-grown produce in areas with limited access to fresh fruits and vegetables.

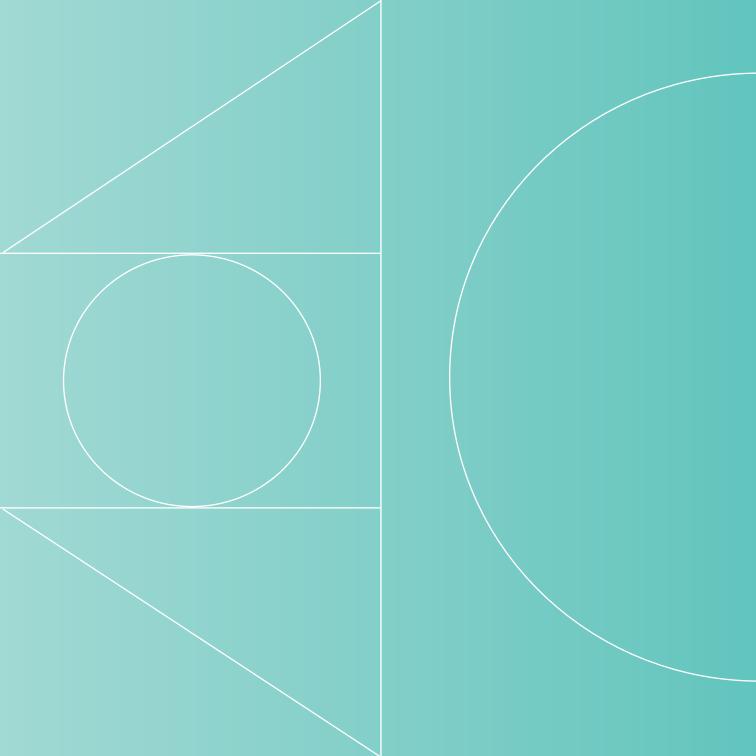
Furthermore, CityCrop's technology allows for precise control of growing conditions such as temperature, humidity, and lighting, which can lead to higher crop yields and better-quality produce. Overall, the implementation of the CityCrop vertical farming system has the potential to significantly impact the agrifood landscape by increasing sustainability, efficiency, and accessibility of fresh produce.

#### Goals for the future

As urbanisation continues to increase and the demand for locally grown, fresh produce rises, CityCrop's business model will be in high demand in the coming years. Additionally, as concerns about the environmental impact of agriculture and food transportation continue to grow, CityCrop's focus on sustainable and efficient farming methods may become increasingly important. In the next five years, CityCrop will expand its operations and partnerships globally to meet the growing demand for its products and services. The company will also continue to develop and refine its technology to make it more efficient, cost-effective, and accessible to a wider range of customers.

Additionally, CityCrop could potentially explore new applications of their technology beyond traditional agriculture, such as in the production of medicinal plants or even in space exploration. The possibilities are endless. In addition to reducing transportation costs and greenhouse gas emissions associated with food transportation, vertical farming can also increase food security by providing locally-grown produce in areas with limited access to fresh fruits and vegetables.

Furthermore, CityCrop's technology allows for precise control of growing conditions such as temperature, humidity, and lighting, which can lead to higher crop yields and better-quality produce. Overall, the implementation of the CityCrop vertical farming system has the potential to significantly impact the agrifood landscape by increasing sustainability, efficiency, and accessibility of fresh produce.





"By choosing the food we eat today, we choose how our world will look like in the future.,,



www.foodscalehub.com

Communication Partner:

